

DEPARTMENT OF TRANSPORTATION

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April 11, 2003

08-SBd-210-R21.8/R27.3
08-4437U4
ACNH-S210(004)N

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN BERNARDINO COUNTY IN FONTANA AND RIALTO FROM 2.3 KM WEST OF SIERRA AVENUE OVERCROSSING TO 0.1 KM EAST OF LINDEN AVENUE OVERCROSSING.

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 April 24, 2003. The original bid opening date was previously postponed indefinitely under Addendum No. 1 dated March 3, 2003.

This addendum is being issued to set a new bid opening date as shown herein and revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 104, 237, 310, 391, 392, 394, 395, 396, 397, 398, 399, 400, and 401 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 253A and 253B are added. Half-sized copies of the added sheets are attached for addition to the project plans.

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES," the following paragraphs are added after the fourth paragraph:

"All work shown in Stage 1 of the plans shall be diligently prosecuted to completion before the expiration of 65 working days beginning on the fifteenth calendar day after approval of the contract.

The Contractor shall pay to the State of California the sum of \$2,000 per day, for each and every calendar day's delay in finishing the Stage 1 work in excess of the number of working days prescribed above."

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

In the Special Provisions, Section 10-1.03, "COOPERATION," is replaced as attached.

In the Special Provisions, Section 10-1.25A, "EROSION CONTROL (TYPE D)," is added as attached.

In the Special Provisions, Section 10-3.19A, "SIGN LIGHTING FIXTURES-INDUCTION," is added as attached.

In the Proposal and Contract, the Engineer's Estimate Items 96 and 117 are revised, Items 189, 190, 191, 192, 193, and 194 are added and Items 115 and 188 are deleted as attached.

Addendum No. 2
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To Proposal and Contract book holders:

Replace pages 7, 8, and 12 of the Engineer's Estimate in the Proposal with the attached revised pages 7, 8, and 12 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 LEO MARTINEZ FOR:

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

Attachments

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.

Construction of Casmalia St. from station 704+65 to station 707+70 shall be in accordance with staging plans and shall commence no earlier than June 1, 2003.

For construction of Alder Avenue and Locust Avenue, where the Cactus channel crosses them, the Contractor shall cooperate and coordinate with the Contractor of Contract No. 08-443844. Linden Avenue construction, where the Cactus Channel crosses it shall be as shown on the plans. Attention is directed to Cooperation of these special provisions.

Attention is directed to "Miscellaneous Concrete Construction" of these special provisions regarding constructing a 660 mm by 600 mm test panel prior to constructing curb ramps with detectable warning surfaces.

Temporary railing (Type K) shall be secured in place prior to commencing work for which the temporary railing is required.

Attention is directed to "Water Pollution Control" of these special provisions regarding the submittal and approval of the Storm Water Pollution Prevention Plan prior to performing work having potential to cause water pollution.

The first order of work shall be to place the order for the communication, closed circuit television, ramp metering, and traffic signal equipment. The Engineer shall be furnished a statement from the vendor, within 15 days of acceptance of contractor's submittals, that the order for the communication, closed circuit television, ramp metering, and traffic signal equipment has been received and accepted by the vendor.

The uppermost layer of new pavement shall not be placed until all underlying conduits and loop detectors have been installed.

Prior to commencement of the ramp metering or traffic signal functional test at any location, all items of work related to signal control shall be completed and all roadside signs, pavement delineation, and pavement markings shall be in place at that location.

Attention is directed to "Maintaining Traffic" and "Temporary Pavement Delineation" of these special provisions and to the stage construction sheets of 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 10 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 the stages of construction shown on the plans. Nonconflicting work in subsequent stages may proceed concurrently with work in preceding stages, provided satisfactory progress is maintained in the preceding stages of construction.

In each stage, after completion of the preceding stage, the first order of work shall be the removal of existing pavement delineation as directed by the Engineer. Pavement delineation removal shall be coordinated with new delineation so that lane lines are provided at all times on traveled ways open to public traffic.

Before obliterating any pavement delineation (traffic stripes, pavement markings, and pavement markers) that is to be replaced on the same alignment and location, as determined by the Engineer, the pavement delineation shall be referenced by the Contractor, with a sufficient number of control points to reestablish the alignment and location of the new pavement delineation. The references shall include the limits or changes in striping pattern, including one- and 2-way barrier lines, limit lines, crosswalks and other pavement markings. Full compensation for referencing existing pavement delineation shall be considered as included in the contract prices paid for new pavement delineation and no additional compensation will be allowed therefor.

Prior to applying asphalt concrete, the Contractor shall cover all manholes, valve and monument covers, grates, or other exposed facilities located within the area of application, using a plastic or oil resistant construction paper secured to the facility being covered by tape or adhesive. The covered facilities shall be referenced by the Contractor, with a sufficient number of control points to relocate the facilities after the asphalt concrete has been placed. After completion of the paving operation, all covers shall be removed and disposed of in a manner satisfactory to the Engineer. Full compensation for covering manholes, valve and monument covers, grates, or other exposed facilities, referencing, and removing temporary cover shall be considered as included in the contract price paid per ton for asphalt concrete, and no additional compensation will be allowed therefor.

The Contractor shall note and understand that progress of this project depends on certain conditions being attained at various stages of the project. Below is a listing of some conditions.

The Contractor shall not detour traffic from existing Highland Avenue to Easton Street prior to the completion of widening along Highland Avenue and construction of a transition roadway from Easton Street to Highland Avenue by another Contractor under Contract No. 08-443844. It is anticipated that this work will be complete not later than 65 working days after notice to proceed of this contract.

The Contractor shall plan his work to accommodate storm water runoff from north of Casmalia Street. Accommodation shall mean either the conveyance of storm water through the site or containment of off-site storm water on site during the project. Such work shall be in accordance with "Water Pollution Control" of these special provisions.

Drainage systems 34, 35, 37 and 38 shall not be allowed to flow to Cactus Flood Control Channel (CFCC) until the portion of CFCC from Alder Street to its down stream tie-in point near Easton Street is operational. It is anticipated that this portion of the CFCC will be operational 220 working days after notice to proceed.

Closure of Locust Ave. between Casmalia St. and Easton Ave. is limited to an overall duration of 120 working days. This closure will allow for the construction of the Locust Avenue Overcrossing (Bridge No. 54-649), street improvements to Locust Ave. (including storm drains), and the Cactus Flood Control Channel reinforced concrete box crossing Locust Ave. by Contract No. 08-443844.

10-1.03 COOPERATION

It is anticipated that work listed below by other contractors may be in progress adjacent to or within the limits of this project during progress of the work on this contract.

Construction of the Cactus Flood Control Channel (CFCC), as shown on the plans between Casmalia Street and Route 210, running from Sierra Ave. in Fontana (KP 24.0) to Spruce Ave. in Rialto (KP 28.6) will be a part of Contract No. 08-443844. Channel construction includes box culvert construction crossing Alder Avenue at station 103+72±, crossing Locust Avenue at station 102+54±, and crossing Linden Avenue at station 101+28±.

Close coordination will be necessary with portions of the CFCC project which runs adjacent to this contract. Several drainage systems which run north-south are included in this contract will be tied into the CFCC by another contractor. Coordination between the Contractor and the Contract No. 08-443844 contractor when working close to each other is the responsibility of each contractor. Attention is directed to Section 7-1.14, "Cooperation," of the Standard Specifications.

Installation of telephone cable and related facilities by Pacific Bell along Camalia St. from Sierra Ave. to Locust Ave.

Installation of 300 mm waterline by West San Bernardino County Water District along Casmalia street from Sierra Ave. to Linden Ave.

Installation of electrical cable within the cells of box girder bridges and underground cable from bridge abutments to tie-in points by Southern California Edison at Alder Ave. Overcrossing (Bridge No. 54-649), Locust Ave. Overcrossing (Bridge No. 54-651) and Linden Ave. Overcrossing (Bridge No. 54-652).

Installation of 102 mm gas line in 305 mm steel pipe casing within the cells of box girder bridges and 102mm underground gas line from bridge abutments to tie-in points by Southern California Gas Company at Alder Ave. Overcrossing (Bridge No. 54-649) and Linden Ave. Overcrossing (Bridge No. 54-652).

The handling and detouring of vehicular traffic around the project and the conveyance of storm water through the project limits are also highly dependent on close coordination. Multiple contractors will be working in close proximity during the closures of Locust Avenue, Alder Avenue, and Linden Avenue.

It shall be the responsibility of the Contractor to plan his work such that storm water runoff that enters the project site from the area north of the project limits is accommodated and conveyed through the project site or contained on site. The existing drainage channel that runs east-west from Locust Avenue to beyond Linden Avenue shall remain operational to convey storm water until the CFCC is constructed. It is anticipated that a sufficient portion of the CFCC will be able to convey storm flows from Alder Avenue to the easterly limit of this project 220 working days after notice to proceed.

Attention is directed to Section 10-1.01 Order of Work of these special provisions for additional information.

Installation of telephone cable and related facilities by Pacific Bell along Casmalia St. from Sierra Ave. to Locust Ave.

Installation of 300 mm waterline by West San Bernardino County Water District along Casmalia street from Sierra Ave. to Linden Ave.

Installation of electrical cable within the cells of box girder bridges and underground cable from bridge abutments to tie-in points by southern California Edison at Alder Avenue Overcrossing (Bridge No. 54-649), Locust Avenue Overcrossing (Bridge No. 54-651), and Linden Avenue Overcrossing (Bridge No. 54-652).

Installation of telephone cable within the cells of box girder bridges by Pacific Bell at Alder Avenue Overcrossing (Bridge No. 54-649), Locust Avenue Overcrossing (Bridge No. 54-651), and Linden Avenue Overcrossing (Bridge No. 54-652).

Installation of 102 mm gas line in 305 mm steel pipe within the cells of box girder bridges and underground gas line from bridge from bridge abutments to tie-in points by Southern California Gas Company at Alder Avenue Overcrossing (Bridge No. 54-649) and Linden Avenue Overcrossing (Bridge No. 54-652).

Installation of 200 mm petroleum line along Linden Ave. and crossing Rte. 210 by CAL-NEV.

10-1.25A EROSION CONTROL (TYPE D)

Erosion control (Type D) shall conform to the provisions in Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions and shall consist of applying erosion control materials to non paved areas disturbed by construction activities. Seed mix 'A' shall be applied to floors and adjacent banks to one meter (1m) above the floor elevation of detention basins shown on plans. Seed mix 'B' shall be applied to all remaining disturbed areas.

If the slope on which the erosion control is to be placed is finished during the rainy season as specified in "Water Pollution Control" of these special provisions, the erosion control shall be applied immediately to the slope.

Prior to installing erosion control materials, soil surface preparation shall conform to the provisions in Section 19-2.05, "Slopes," of the Standard Specifications, except that rills and gullies exceeding 50 mm in depth or width shall be leveled. Vegetative growth, temporary erosion control materials, and other debris shall be removed from areas to receive erosion control.

MATERIALS

Materials shall conform to the provisions in Section 20-2, "Materials," of the Standard Specifications and these special provisions.

Seed

Seed shall conform to the provisions in Section 20-2.10, "Seed," of the Standard Specifications. Individual seed species shall be measured and mixed in the presence of the Engineer.

Seed shall be delivered to the project site in unopened separate containers with the seed tag attached. Containers without a seed tag attached will not be accepted.

A sample of approximately 30 g of seed will be taken from each seed container by the Engineer.

Legume Seed

Legume seed shall be pellet-inoculated or industrial-inoculated and shall conform to the following:

- A. Inoculated seed shall be inoculated in conformance with the provisions in Section 20-2.10, "Seed," of the Standard Specifications.
- B. Inoculated seed shall have a calcium carbonate coating.
- C. Industrial-inoculated seed shall be inoculated with Rhizobia and coated using an industrial process by a manufacturer whose principal business is seed coating and seed inoculation.
- D. Industrial-inoculated seed shall be sown within 180 calendar days after inoculation.
- E. Legume seed shall consist of the following:

Seed Mix 'A' LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Lotus scoparius Deerweed	30	2.0

Seed Mix 'B' LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Lotus scoparius Deerweed	30	2.0
Lupinus succulentus Arroyo Lupine	40	4.0
Lupinus bicolor Pigmy-Leaved Lupine	40	2.0

Non-Legume Seed

Non-legume seed shall consist of the following:

Seed Mix 'A' NON-LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Nassella lipida Foothill Needlegrass	30	5.0
Aristida purpurea Purple Three-Awn	30	2.5
Artemisia douglasiana Mugwort	25	.5

Seed Mix 'B' NON-LEGUME SEED

Botanical Name (Common Name)	Percent Germination (Minimum)	Kilograms Pure Live Seed Per Hectare (Slope Measurement)
Abronia villosa Hairy Sand verbena	20	2.00
Salvia columbariae Chia	30	.50
Eriophyllum confertiflorum Golden Yarrow	30	2.00
Eschscholzia californica California Poppy	40	4.00
Phacelia camphanularia California Blue Bells	40	4.00
Layia platygossa Tidy Tips	30	2.00
Nassella lipida Foothill Needlegrass	30	5.00

Straw

Straw shall conform to the provisions in Section 20-2.06, "Straw," of the Standard Specifications and these special provisions.

Wheat and barley straw shall be derived from irrigated crops.

Prior to delivery of wheat or barley straw to the project site, the Contractor shall provide the name, address and telephone number of the grower.

Compost

Compost shall be derived from green material consisting of chipped, shredded or ground vegetation or clean processed recycled wood products or a Class A, exceptional quality biosolids composts, as required by the United States Environmental Protection Agency (EPA), 40 CFR, Part 503c regulations or a combination of green material and biosolids compost. The compost shall be processed or completed to reduce weed seeds, pathogens and deleterious material, and shall not contain paint, petroleum products, herbicides, fungicides or other chemical residues that would be harmful to plant or animal life. Other deleterious material, plastic, glass, metal or rocks shall not exceed 0.1 percent by weight or volume. A minimum internal temperature of 57°C shall be maintained for at least 15 continuous days during the composting process. The compost shall be thoroughly turned a minimum of 5 times during the composting process and shall go through a minimum 90-day curing period after the 15-day thermophilic compost process has been completed. Compost shall be screened through a maximum 9.5-mm screen. The moisture content of the compost shall not exceed 35 percent. Compost products with a higher moisture content may be used provided the weight of the compost is increased to equal the compost with a moisture content of 35 percent. Moist samples of compost on an as received basis shall be dried in an oven at a temperature between 105°C and 115°C until a constant dry weight of the sample is achieved. The percentage of moisture will be determined by dividing the dry weight of the sample by the moist weight of the sample and then multiplying by 100. Compost will be tested for maturity and stability with a Solvita test kit. The compost shall measure a minimum of 6 on the maturity and stability scale.

Stabilizing Emulsion

Stabilizing emulsion shall conform to the provisions in Section 20-2.11, "Stabilizing Emulsion," of the Standard Specifications and these special provisions.

Stabilizing emulsion shall be in a dry powder form, may be reemulsifiable, and shall be a processed organic adhesive used as a soil tackifier.

APPLICATION

Soil areas to receive erosion control seeding shall be roughened by mechanical means (rolling, trackwalking or scarifying) prior to application of hydroseed mix. Roughing of slope shall be performed perpendicular to the direction of runoff. Erosion control materials shall be applied in 3 separate applications in the following sequence:

The following mixture in the proportions indicated shall be applied with hydro-seeding equipment within 60 minutes after the seed has been added to the mixture:

Seed Mix 'A'

Material	Kilograms Per Hectare (Slope Measurement)
Legume Seed	2.0
Non-Legume Seed	8.0
Fiber	350
Compost	150

Seed Mix 'B'

Material	Kilograms Per Hectare (Slope Measurement)
Legume Seed	8
Non-Legume Seed	19.5
Fiber	350
Compost	1500

- C. The Contractor may dry apply compost at the total of the rates specified in the preceding table and the following table instead of including it as part of the hydro-seeding operations. In areas where the compost is dry applied, all compost for that area shall be applied before the next operation.
- D. Straw shall be applied at the rate of 4 tonnes per hectare based on slope measurements. Incorporation of straw will not be required. Straw shall be distributed evenly without clumping or piling.
- E. The following mixture in the proportions indicated shall be applied with hydro-seeding equipment:

Material	Kilograms Per Hectare (Slope Measurement)
Fiber	500
Compost	2000
Stabilizing Emulsion (Solids)	150

The ratio of total water to total stabilizing emulsion in the mixture shall be as recommended by the manufacturer.

Once straw work is started in an area, stabilizing emulsion applications shall be completed in that area on the same working day.

The proportions of erosion control materials may be changed by the Engineer to meet field conditions.

MEASUREMENT AND PAYMENT

Compost (erosion control) will be measured by the kilogram as designated in the Engineer's Estimate. The weight will be as determined by the Engineer from marked mass and sack count or from scale weighings.

The contract price paid per kilogram for compost (erosion control) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in applying compost for erosion control, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-3.19A SIGN LIGHTING FIXTURES-INDUCTION

GENERAL

Induction sign lighting fixture shall conform to the provisions for mercury sign lighting fixtures in Section 86-6.05, "Sign Lighting Fixtures-Mercury," of the Standard Specifications and these special provisions.

Each fixture shall consist of a housing with door, a reflector, refractor or a lens, a lamp, a power coupler, a high frequency (HF) generator and a fuse block.

The system lifetime shall be rated at 60 000 hours with a failure rate of less than 10 percent. The system shall be rated at a nominal wattage of 87 W, 120/240 V (ac). The power factor of the system shall be greater than 90 percent and the total harmonic distortion (THD) shall be less than 10 percent. The system shall be UL approved for wet locations and be FCC Class A listed.

The mounting assembly shall be either cast aluminum, hot-dip galvanized steel plate or steel plate that has been galvanized and finished with a polymeric coating system or the same finish that is used for the housing.

The overall weight of the fixture shall not exceed 20 kg. The manufacturer's brand name, trademark, model number, serial number and date of manufacture shall be located on the packaged assembly and on the outside and inside of the housing.

HOUSING

The housing shall have a door designed to hold a refractor or lens. The housing door shall be designed to be opened without the use of tools. The housing and door shall have a powder coat or polyester paint finish of a gray color resembling unfinished fabricated aluminum.

REFLECTOR

The reflector may be designed to be removed as a unit that includes the lamp and power coupler.

REFRACTOR

Refractors (or lenses, if used) shall have smooth exteriors. The lens shall be flat or convex. Convex lenses shall be made from high-impact resistant, tempered glass.

The convex lens shall be so designed or shielded that no fixture luminance is visible when the fixture is approached directly from the rear and the viewing level is the bottom of the fixture. When a shield is used it shall be an integral part of the door casting.

LAMP

Each fixture shall be furnished with a 85-W induction lamp. The interior lamp walls shall be fluorescent phosphor coated. Lamp light output shall be not less than 70 percent at 60 000 hours. Lamps shall have a color-rendering index (CRI) of not less than 80. Lamps shall be rated at a color temperature of 4000°K. Lamps shall be removable without the use of tools.

POWER COUPLER

The power coupler shall consist of a construction base with antenna, heat sink and electrical connection cable.

The power coupler shall be designed so that it can be removed with no more than common hand tools.

HIGH FREQUENCY GENERATOR

High frequency (HF) generators shall provide reliable lamp starting and operation at ambient temperatures down to -25°C for the rated life of the lamp.

The generator output frequency shall be 2.65 MHz +/- 10 percent. The generator radio frequency interference shall meet the requirements of Part 18 of the FCC.

High frequency generators shall be designed for continuous operation at ambient air temperatures from -20°C to 25°C without reduction in generator life. High frequency generators shall have a design life of not less than 100 000 hours at 55°C.

A Certificate of Compliance, conforming to the provisions in Section 6-1.07, "Certificates of Compliance," and a copy of the high frequency generator test methods and results shall be submitted by the manufacturer with each lot of sign lighting fixtures. The certificate shall state that the high frequency generators meet, in every respect, the above requirements and the generator specifications of the lamp manufacturer.

High frequency generators shall also conform to the following:

- A. High frequency generators shall be capable of being easily replaced. All conductor terminals shall be identified as to the component terminal to which they connect.
- B. High frequency generators shall be mounted so as to use the portion of the sign lighting fixture upon which they are mounted as a heat sink.

RETROFIT KIT

Each fixture retrofit kit shall consist of a reflector, a lamp, a power coupler and a high frequency (HF) generator. The installation of the retrofit kit shall not require modification of the existing housing and door.

WARRANTY

Each fixture shall be warranted by the fixture manufacturer for a period of not less than four years (against mechanical and electrical defects) and with component warranties as follows: lamps for not less than four years; power couplers for not less than four years; high frequency generators for not less than four years; and housing and door surface finish for not less than four years.

ENGINEER'S ESTIMATE

08-4437U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81 (S-F)	030651	FURNISH CMS SIGN STRUCTURE	KG	7308		
82 (S-F)	030652	INSTALL CMS SIGN STRUCTURE	KG	7308		
83 (S)	561009	920 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	17		
84 (S)	561010	1070 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	14		
85 (S)	030653	1524 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	7		
86	566011	ROADSIDE SIGN - ONE POST	EA	86		
87	566012	ROADSIDE SIGN - TWO POST	EA	18		
88	030654	CONCRETE BARRIER MOUNTED SIGN	EA	23		
89	568001	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA	2		
90	568023	INSTALL ROADSIDE SIGN (LAMINATED WOOD BOX POST)	EA	2		
91	620909	450 MM ALTERNATIVE PIPE CULVERT	M	340		
92	620913	600 MM ALTERNATIVE PIPE CULVERT	M	2680		
93	620919	750 MM ALTERNATIVE PIPE CULVERT	M	160		
94	620924	900 MM ALTERNATIVE PIPE CULVERT	M	580		
95	620930	1050 MM ALTERNATIVE PIPE CULVERT	M	270		
96	620933	1200 MM ALTERNATIVE PIPE CULVERT	M	820		
97	620938	1350 MM ALTERNATIVE PIPE CULVERT	M	880		
98	650075	600 MM REINFORCED CONCRETE PIPE	M	130		
99	650077	750 MM REINFORCED CONCRETE PIPE	M	68		
100	650079	900 MM REINFORCED CONCRETE PIPE	M	29		

ENGINEER'S ESTIMATE

08-4437U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	650084	1200 MM REINFORCED CONCRETE PIPE	M	80		
102	650086	1350 MM REINFORCED CONCRETE PIPE	M	67		
103	650089	1500 MM REINFORCED CONCRETE PIPE	M	220		
104	650091	1650 MM REINFORCED CONCRETE PIPE	M	81		
105	650092	1800 MM REINFORCED CONCRETE PIPE	M	100		
106	650096	2400 MM REINFORCED CONCRETE PIPE	M	160		
107	664090	450 MM BITUMINOUS COATED CORRUGATED STEEL PIPE (2.01 MM THICK)	M	23		
108	664096	600 MM BITUMINOUS COATED CORRUGATED STEEL PIPE (2.01 MM THICK)	M	51		
109	681134	80 MM PLASTIC PIPE (EDGE DRAIN)	M	6760		
110	681137	80 MM PLASTIC PIPE (EDGE DRAIN OUTLET)	M	430		
111	049270	610 MM WELDED STEEL PIPE CASING (BRIDGE)	M	116		
112	705055	450 MM BITUMINOUS COATED STEEL FLARED END SECTION	EA	2		
113 (S)	030655	MANHOLE JUNCTION STRUCTURE	EA	4		
114 (S)	030656	WATER QUALITY OUTLET STRUCTURE	EA	2		
115	BLANK					
116	721012	ROCK SLOPE PROTECTION (BACKING NO. 3, METHOD B)	M3	34		
117	721024	ROCK SLOPE PROTECTION (1/4T, METHOD B)	M3	520		
118 (F)	049271	SLOPE PAVING (COBBLESTONE)	M3	280		
119	729010	ROCK SLOPE PROTECTION FABRIC	M2	48		
120	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	M3	760		

ENGINEER'S ESTIMATE

08-4437U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181 (S)	030683	MODIFY COMMUNICATION HUB D ASSEMBLY	LS	LUMP SUM	LUMP SUM	
182 (S)	030684	MODIFY TRAFFIC MANAGEMENT CENTER	LS	LUMP SUM	LUMP SUM	
183 (S)	030685	DS-1 OPTICAL MODEM	EA	2		
184 (S)	030686	MODIFY EXISTING T-1 MULTIDROP COMMUNICATION SYSTEM	LS	LUMP SUM	LUMP SUM	
185 (S)	030687	FIBER OPTIC TRENCH DELINEATOR	EA	37		
186 (S)	869034	NO. 5(T) PULL BOX	EA	68		
187 (S)	869075	SYSTEM TESTING AND DOCUMENTATION	LS	LUMP SUM	LUMP SUM	
188	BLANK					
189	203014	FIBER (EROSION CONTROL)	KG	19 700		
190	203024	COMPOST (EROSION CONTROL)	KG	81 200		
191	031167	PURE LIVE SEED (EROSION CONTROL), SEED MIX "A"	KG	2		
192	031168	PURE LIVE SEED (EROSION CONTROL), SEED MIX "B"	KG	630		
193	203061	STABILIZING EMULSION (EROSION CONTROL)	KG	3480		
194	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID: _____