

**STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND
DEVELOPMENT**

**RE-ADVERTISEMENT
FOR
CONSTRUCTION PROPOSAL**



Kevin J. Reed
3/11/08

**FEDERAL AID PROJECT
ER-ERP1(028)**

**STATE PROJECT NO. 450-90-0210
PONTCHARTRAIN PUMP STATION
REPAIRS DUE TO HURRICANE KATRINA
ROUTE: I-10
ORLEANS PARISH**

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NOTICE TO CONTRACTORS (08/07)

Either sealed paper bids or electronic bids for the following project will be received by the Department of Transportation and Development (DOTD). Paper bids can be delivered to the DOTD Headquarters Administration Building, 1201 Capitol Access Road, Room 405-L, Baton Rouge, Louisiana 70802 until 8:00 a.m on **WEDNESDAY, APRIL 30, 2008**. After 8:00 a.m., paper bids will be received in the Headquarters Auditorium until 10:00 a.m. Electronic bids must be submitted through www.bidx.com prior to the electronic bidding deadline. Beginning at 10:00 a.m., all bids will be publicly opened and presented in the Headquarters Auditorium. No bids will be received after 10:00 a.m. Any person requiring special accommodations shall notify DOTD at (225) 379-1111 not less than 3 business days before bid opening.

STATE PROJECT NO. 450-90-0210

FEDERAL AID PROJECT NO. ER-ERP1(028)

DESCRIPTION: ELECTRICAL & MECHANICAL REPAIRS TO PONTCHARTRAIN PUMP STATION DUE TO HURRICANE KATRINA

ROUTES: I-10

PARISH: ORLEANS PARISH

TYPE: PUMP STATION REPAIRS

ESTIMATED COST RANGE: \$1,000,000.00 TO \$2,500,000.00

PROJECT ENGINEER: Fred Wetekamm, P.E., P.O. Box 9180, Bridge City, Louisiana, 70094. Phone: (504) 437-3112

PROJECT MANAGER: Kevin J. Reed, P.E., P.O. Box 94245, Baton Rouge, Louisiana 70804. Phone: (225) 379-1916

COST OF PROPOSAL FORMS: \$25.00

COST OF PLANS: FREE

Bids must be prepared and submitted in accordance with Section 102 of the 2006 Louisiana Standard Specifications for Roads and Bridges as amended by the project specifications, and must include all information required by the proposal.

NOTICE TO CONTRACTORS (CONTINUED)

Plans and/or proposals may be obtained in Room 101-A of the DOTD Headquarters Administration Building, 1201 Capitol Access Road in Baton Rouge, or by contacting the DOTD; Email: sharonknight@dotd.la.gov, Phone (225) 379-1111, FAX: (225) 379-1714, or by written requests sent to the Louisiana Department of Transportation and Development, Project Control Section, P. O. Box 94245, Baton Rouge, LA 70804-9245. Proposals will not be issued later than 24 hours prior to the time set for opening bids. The purchase price for plans and proposals is non-refundable. Plans and specifications may be seen at the Project Engineer's office or in Room 101-A of the DOTD's Headquarters Administration Building in Baton Rouge. Upon request, the Project Engineer will show the work.

The U. S. Department of Transportation (DOT) operates a toll free "Hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should call 1-800-424-9071. All information will be treated confidentially and caller anonymity will be respected.

STATE PROJECT NO. 450-90-0210
SPECIAL PROVISIONS

GENERAL BIDDING REQUIREMENTS (08/06): The specifications, contract and bonds governing the construction of the work are the 2006 Edition of the Louisiana Standard Specifications for Roads and Bridges, together with any supplementary specifications and special provisions attached to this proposal.

Bids shall be prepared and submitted in accordance with Section 102 of the Standard Specifications.

The plans herein referred to are the plans approved and marked with the project number, route and Parish, together with all standard or special designs that may be included in such plans. The bidder declares that the only parties interested in this proposal as principals are those named herein; that this proposal is made without collusion or combination of any kind with any other person, firm, association, or corporation, or any member or officer thereof; that careful examination has been made of the site of the proposed work, the plans, Standard Specifications, supplementary specifications and special provisions above mentioned, and the form of contract and payment, performance, and retainage bond; that the bidder agrees, if this proposal is accepted, to provide all necessary machinery, tools, apparatus and other means of construction and will do all work and furnish all material specified in the contract, in the manner and time therein prescribed and in accordance with the requirements therein set forth; and agrees to accept as full compensation therefore, the amount of the summation of the products of the quantities of work and material incorporated in the completed project, as determined by the engineer, multiplied by the respective unit prices herein bid.

It is understood by the bidder that the quantities given in this proposal are a fair approximation of the amount of work to be done and that the sum of the products of the approximate quantities multiplied by the respective unit prices bid shall constitute gross sum bid, which sum shall be used in comparison of bids and awarding of the contract.

The bidder further agrees to perform all extra and force account work that may be required on the basis provided in the specifications.

The bidder further agrees that within 15 calendar days after the contract has been transmitted to him, he will execute the contract and furnish the Department satisfactory surety bonds.

If this proposal is accepted and the bidder fails to execute the contract and furnish bonds as above provided, the proposal guaranty shall become the property of the Department; otherwise, said proposal guaranty will be returned to the bidder; all in accordance with Subsection 103.04.

DBE PARTICIPATION IN FEDERAL AID CONSTRUCTION CONTRACTS (07/00): This project has not been selected for a specific DBE Goal. The contractor shall meet the obligations of the Required Contract Provisions for DBE Participation in Federal Aid Construction Contracts contained elsewhere herein.

DEFINITIONS AND TERMS (07/07): Subsection 101.03 of the Standard Specifications is amended as follows.

The definition for "Proposal/ Bid Guaranty" is deleted and following substituted.

Proposal/Bid Guaranty. The required security furnished with a bid. The only form of security acceptable is a Bid Bond.

BIDDING REQUIREMENTS (07/07) Section 102 of the Standard Specifications and the Supplemental Specifications thereto, is amended as follows.

STATE PROJECT NO. 450-90-0210
SPECIAL PROVISIONS

Subsection 102.09, Proposal/Bid Guaranty is deleted and the following substituted.

102.09 PROPOSAL/BID GUARANTY. Each bid shall be accompanied by a proposal/bid guaranty in an amount not less than five percent of the total bid amount when the bidder's total bid amount as calculated by the Department in accordance with Subsection 103.01 is greater than \$50,000. No proposal/bid guaranty is required for projects when the bidder's total bid amount as calculated by the Department is \$50,000 or less. The official total bid amount for projects that include alternates is the total of the bidder's base bid and all alternates bid on and accepted by the Department. The proposal/bid guaranty submitted by the bidder shall be a bid bond made payable to the contracting agency as specified on the bid bond form provided in the construction proposal. No other form of security will be accepted.

The bid bond shall be on the "Bid Bond" form provided in the construction proposal, on a form that is materially the same in all respects to the "Bid Bond" form provided, or on an electronic form that has received Department approval prior to submission. The bid bond shall be filled in completely, shall be signed by an authorized officer, owner or partner of the bidding entity, or each entity representing a joint venture; shall be signed by the surety's agent or attorney-in-fact; and shall be accompanied by a notarized document granting general power of attorney to the surety's signer. The bid bond shall not contain any provisions that limit the face amount of the bond.

The bid bond will be written by a surety or insurance company that is in good standing and currently licensed to write surety bonds in the State of Louisiana by the Louisiana Department of Insurance and also conform to the requirements of LSA-R.S. 48:253.

All signatures required on the bid bond may be original, mechanical reproductions, facsimiles or electronic. Electronic bonds issued in conjunction with electronic bids must have written Departmental approval prior to use. The Department will make a listing of approved electronic sureties providers on the Bidx.com site.

MAINTENANCE OF TRAFFIC (08/06): Subsection 104.03 of the 2006 Standard Specifications is amended to include the following requirements.

The contractor shall provide for and maintain through and local traffic at all times and shall conduct his operations in such manner as to cause the least possible interference with traffic at junctions with roads, streets and driveways.

DETERMINATION AND EXTENSION OF CONTRACT TIME (01/04): Subsection 108.07 Determination and Extension of Contract Time is amended to include the following.

The contractor shall document for each month of scheduled construction, the occurrence of adverse weather conditions having an impact on controlling items of work. An adverse weather day is one on which rainfall or wet soil conditions will prevent construction operations from proceeding for at least 5 continuous hours of the day or 65 percent of the normal work day, whichever is greater, with the normal working force engaged in performing the controlling item of work. If the contractor submits a written request for additional contract time due to adverse weather conditions, the contractor's request will be considered only for adverse weather days in excess of the allowable number of days per month stated below. An equitable adjustment in contract time will be made at the conclusion of the project by comparing the total number of excess adverse weather days requested by the contractor to the number of adverse weather days that were included in the construction schedule but were not used. Contract time will not be reduced due to the adjustments for adverse weather. An adjustment in the contract time due to adverse weather will not be cause for an adjustment in the contract amount.

STATE PROJECT NO. 450-90-0210
SPECIAL PROVISIONS

The following are anticipated adverse weather days that the contractor shall include in each month of his calendar day construction schedule.

January	<u>11</u> days	May	<u>5</u> days	September	<u>4</u> days
February	<u>10</u> days	June	<u>6</u> days	October	<u>3</u> days
March	<u>8</u> days	July	<u>6</u> days	November	<u>5</u> days
April	<u>7</u> days	August	<u>5</u> days	December	<u>8</u> days

CONTRACT TIME (10/01): The contractor will be issued a "Conditional Notice to Proceed" as defined in Subsection 101.03. The "Conditional Notice to Proceed" will expire **FORTY FIVE (45) CALENDAR DAYS** after its issuance, whereupon a "Notice to Proceed" will become effective, unless the contractor begins regular construction at an earlier date at which time the Notice to Proceed becomes effective.

The entire contract shall be completed in all details and ready for final acceptance in accordance with Subsection 105.17(b) within **NINETY (90) WORKING DAYS** after the effective date of the "Notice to Proceed".

LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
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(FOR 2006 STANDARD SPECIFICATIONS)

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LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SUPPLEMENTAL SPECIFICATIONS

The 2006 Louisiana Standard Specifications for Roads and Bridges and supplemental specifications thereto are amended as follows.

SECTION 101 – GENERAL INFORMATION, DEFINITIONS, AND TERMS:

Subsection 101.03 – Definitions (07/07), Pages 3 – 13).

Delete the definition for “Proposal/Bid Guaranty” and substitute the following.

Proposal / Bid Guaranty. The required security furnished with a bid. The only form of security acceptable is a Bid Bond.

SECTION 102 – BIDDING REQUIREMENTS:

Subsection 102.09 – Proposal / Bid Guaranty (07/07), Page 19.

Delete the contents of this subsection and substitute the following.

PROPOSAL/BID GUARANTY. Each bid shall be accompanied by a proposal/bid guaranty in an amount not less than five percent of the total bid amount when the bidder's total bid amount as calculated by the Department in accordance with Subsection 103.01 is greater than \$50,000. No proposal/bid guaranty is required for projects when the bidder's total bid amount as calculated by the Department is \$50,000 or less. The official total bid amount for projects that include alternates is the total of the bidder's base bid and all alternates bid on and accepted by the Department. The proposal/bid guaranty submitted by the bidder shall be a bid bond made payable to the contracting agency as specified on the bid bond form provided in the construction proposal. No other form of security will be accepted.

The bid bond shall be on the "Bid Bond" form provided in the construction proposal, on a form that is materially the same in all respects to the "Bid Bond" form provided, or on an electronic form that has received Department approval prior to submission. The bid bond shall be filled in completely, shall be signed by an authorized officer, owner or partner of the bidding entity, or each entity representing a joint venture; shall be signed by the surety's agent or attorney-in-fact; and shall be accompanied by a notarized document granting general power of attorney to the surety's signer. The bid bond shall not contain any provisions that limit the face amount of the bond.

The bid bond will be written by a surety or insurance company that is in good standing and currently licensed to write surety bonds in the State of Louisiana by the Louisiana Department of Insurance and also conform to the requirements of LSA-R.S. 48:253.

All signatures required on the bid bond may be original, mechanical reproductions, facsimiles or electronic. Electronic bonds issued in conjunction with electronic bids must have written Departmental approval prior to use. The Department will make a listing of approved electronic sureties providers on the Bidx.com site.

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SECTION 108 – PROSECUTION AND PROGRESS:

Subsection 108.04 – Prosecution of Work (03/05) Pages 74 and 75.

Add the following sentence to the third paragraph of Heading (b).

Should the surety or the Department take over prosecution of the work, the contractor shall remain disqualified for a period of one year from the completion of the project, unless debarment proceedings are instituted.

When the Department of Transportation and Development is not the contracting agency on the project, the second paragraph under Heading (c) is deleted.

SECTION 202 – REMOVING OR RELOCATING STRUCTURES AND OBSTRUCTIONS:

Subsection 202.06 – Plugging or Relocating Existing Water Wells (03/04), Page 105.

Delete the first sentence and substitute the following.

All abandoned wells shall be plugged and sealed at the locations shown on the plans, or as directed by the engineer, in accordance with the “Water Well Rules, Regulations, and Standards, State of Louisiana.” This document is available at the Department of Transportation and Development, Water Resources Section, P. O. Box 94245, Baton Rouge, Louisiana 70804-9245. The Water Resource Section’s telephone number is (225) 274-4172.

SECTION 302 – CLASS II BASE COURSE:

Subsection 302.05 – Mixing (08/06), Pages 152 and 153.

Delete the first sentence of Subheading (b)(1), In-Place Mixing, and substitute the following.

In-place mixing shall conform to Heading (a)(1) except that the percentage of Type I portland cement required will be 6 percent by volume.

SECTION 308 – IN-PLACE CEMENT TREATED BASE COURSE:

All Subsections within Section 308 – (07/07), Pages 191 – 198.

Whenever the reference to “DOTD TR-432, Method D” is used, it shall mean “DOTD TR-432”.

SECTION 502 – SUPERPAVE ASPHALTIC CONCRETE MIXTURES:

Subsection 502.02 – Materials (08/06), Pages 210 – 213.

Delete Table 502-3, Aggregate Friction Rating under Subheading (c)(1) and substitute the following.

Table 502-3
Aggregate Friction Rating

Friction Rating	Allowable Usage
I	All mixtures
II	All mixtures
III	All mixtures, except travel lane wearing courses with plan ADT greater than 7000 ¹
IV	All mixtures, except travel lane wearing courses ²

¹ When plan current average daily traffic (ADT) is greater than 7000, blending of Friction Rating III aggregates and Friction Rating I and/or II aggregates will be allowed for travel lane wearing courses at the following percentages. At least 30 percent by weight (mass) of the total aggregates shall have a Friction Rating of I, or at least 50 percent by weight (mass) of the total aggregate shall have a Friction Rating of II. The frictional aggregates used to obtain the required percentages shall not have more than 10 percent passing the No. 8 (2.36 mm) sieve.

² When the average daily traffic (ADT) is less than 2500, blending of Friction Rating IV aggregates with Friction Rating I and/or II aggregates will be allowed for travel lane wearing courses at the following percentages. At least 50 percent by weight (mass) of the total aggregate in the mixture shall have a Friction Rating of I or II. The frictional aggregates used to obtain the required percentages shall not have more than 10 percent passing the No. 8 (2.36 mm) sieve.

SECTION 704 – GUARD RAIL:

Subsection 704.03 – General Construction Requirements (01/05), Pages 368 and 369.

Add the following to Heading (d), Guard Rail End Treatments.

All end treatments shall bear a label indicating the manufacturer and exact product name of the end treatment along with its assigned NCHRP 350 test level. This label shall resist weathering and shall be permanently affixed to the railing in such a way as to be readily visible.

SECTION 713 – TEMPORARY TRAFFIC CONTROL:

Subsection 713.06 – Pavement Markings (08/06), Pages 400 – 403.

Delete Table 713-1, Temporary Pavement Markings and substitute the following.

**Table 713-1
Temporary Pavement Markings^{1,2}**

		Two-lane Highways	Undivided Multilane Highways	Divided Multilane Highways
SHORT TERM	ADT < 150 0; or ADT > 150 0 and time < 3 days	Lane lines 4-foot (1.2 m) tape on 40- foot (12 m) centers; with "Do Not Pass" and "Pass With Care" signs as required		
	ADT > 150 0; Time > 3 days and < 2 weeks	Lane lines 4-foot (1.2-m) tape on 40- foot (12-m) centers with no passing zone markings		
	All ADT's with time < 2 weeks		Lane lines 4-foot (1.2m) tape on 40-foot (12 m) centers; double yellow centerline	Lane lines 4- foot (1.2 m) tape on 40- foot (12 m) centers
LONG TERM	All ADT's with time > 2 weeks	Standard lane lines, no-passing zone markings, legends and symbols and when pavement width is 22 feet (6.7 m) or greater, edge lines	Standard lane lines, centerlines, edge lines, and legends and symbols	Standard lane lines, centerlines, edge lines, and legends and symbols.

¹No-passing zones shall be delineated as indicated whenever a project is open to traffic.

²On all Asphaltic Surface Treatments that are open to traffic and used as a final wearing course or as an interlayer, temporary pavement markings (tabs) on 20-foot (6 m) centers shall be used, in lieu of the 4-foot (1.2 m) tape, on 40-foot (12 m) centers.

SECTION 729 – TRAFFIC SIGNS AND DEVICES:

Subsection 729.02 – Materials (04/07), Pages 456 and 457.

Delete the contents of Heading (a), Sign and Marker Sheeting, and substitute the following.

(a) Sign and Marker Sheeting: Sheeting material for sign panels, delineators, barricades and other markers shall comply with Section 1015. All permanent signs shall meet the requirements of ASTM D 4956, Type III, except as follows:

Reflective sheeting for the permanent signs of Table 729-1 shall meet the requirements of ASTM D 4956, Type IX or Type X as modified in Subsection 1015.05.

**Table 729-1
Permanent Signs for Use With Type IX or X (modified) Reflective Sheeting**

Sign	MUTCD Number
Stop	R1-1
Yield	R1-2
4-Way	R1-3
All Way	R1-4
Do Not Enter	R5-1
Wrong Way	R5-1a
Chevrons	W1-8
No Passing Zone Pennants	W14-3
Type 3 Object Marker	OM-3 (Right & Left)
Type 2 Object Marker	-----
Guardrail End Decals	-----

Subsection 729.04, Fabrication of Sign Panels and Markers (04/07), Pages 458 – 460.

Delete the third paragraph of Heading (c), Sheeting Application and substitute the following.

ASTM D 4956 Type IX or X (modified) reflective sheeting shall be applied with an orientation determined by the engineer to obtain the optimum entrance angle performance. Fabricated vertical splices in ASTM D 4956 Type IX or X (modified) reflective sheeting will be allowed only when the horizontal dimension of the sign face or attached shield is in excess of the maximum manufactured width of the sheeting. Fabricated vertical splices in ASTM D 4956 Type IX or X (modified) reflective sheeting will also be allowed when the specified orientation will create excessive sheeting waste.

SECTION 804 – DRIVEN PILES:

Subsection 804.08 – Construction Requirements (04/07), Pages 548 – 554.

Delete the first sentence of Heading (a), Preboring and substitute the following.

Preboring by augering, wet-rotary drilling, or other methods used to facilitate pile driving will not be permitted unless specified in the plans or allowed by the engineer.

Delete the first sentence of Heading (b), Jetting and substitute the following.

Jetting will not be permitted unless allowed in the plans or allowed by the engineer.

SECTION 901 – PORTLAND CEMENT CONCRETE:

Subsection 901.06 – Quality Control of Concrete (08/06), Pages 726 – 731.

Add the following to the contents of Heading (b), Quality Control Tests.

The contractor shall be responsible for monitoring the components (cement, mineral and chemical admixtures, aggregates) in their mix to protect against any changes due to component variations. As component shipments arrive, the contractor shall verify slump, air content and set

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time by testing at ambient temperatures. The contractor shall make adjustments to the mix design to rectify any changes which would adversely affect constructability, concrete placement or the specifications. The contractor shall submit test results to the Department for review each day of paving. Testing to validate component consistency will be documented on the control logs. Conformance or variation in mix parameters (workability, set times, air content, etc.) shall be noted on the control logs. The contractor shall provide a copy of the proposed testing plan to the engineer for record. Acceptance of the plan does not relieve the contractor's responsibility for consistency.

Subsection 901.08 – Composition of Concrete (12/05), Pages 732 – 734.

Add the following to Heading (a).

The blended cement containing up to 50 percent of grade 100 or grade 120 ground granulated blast-furnace slag must be in compliance with Subsection 1001.04 for portland blast-furnace slag cement.

SECTION 1003 – AGGREGATES:

Subsection 1003.02 – Aggregates for Portland Cement Concrete and Mortar (07/07),

Pages 763 – 766.

Delete the contents of Heading (c), Aggregates for Types B and D Pavements, and substitute the following.

(c) Aggregates for Types B and D Pavements: For the combined aggregates for the proposed portland cement concrete pavement mix, the percent retained based on the dry weight (mass) of the total aggregates shall meet the requirements of Table 1003-1A for the type of pavement specified in the plans. Additionally, the sum of the percents retained on any two adjacent sieves so designated in the table shall be at least 12 percent of the total combined aggregates. The maximum amounts by weight (mass) of deleterious materials for the total aggregate shall be the same as shown in Subsection 1003.02(b).

Table 1003-1A
 Aggregates for Types B and D Pavements

U.S. Sieve	Metric Sieve	Percent Retained of Total Combined Aggregates	
		Pavement Type	
		Type B	Type D
2 1/2 inch	63 mm	0	0
2 inch	50 mm	0	0-20
1 1/2 inch	37.5 mm	0-20	0-20
1 inch	25.0 mm	0-20	5-20
3/4 inch	19.0 mm	5-20	5-20
1/2 inch	12.5 mm	5-20	5-20
3/8 inch	9.5 mm	5-20	5-20
No. 4	4.75 mm	5-20	5-20
No. 8	2.36 mm	5-20	5-20
No. 16	1.18 mm	5-20	5-20
No. 30	600 μm	5-20	5-20
No. 50	300 μm	0-20	0-20
No. 100	150 μm	0-20	0-20
No. 200	75 μm	0-5	0-5

Note: For the sieves in the shaded areas, the sum of any two adjacent sieves shall be a minimum of 12 percent of the total combined aggregates.

Each type of aggregate to be used in the proposed mixture shall be sampled and tested individually. The percent of total combined aggregates retained shall be determined mathematically based on the proportions of the combined aggregate blend. All gradation calculations shall be based on percent of dry weight (mass).

SECTION 1005 – JOINT MATERIALS FOR PAVEMENTS AND STRUCTURES:

Subsection 1005.04 – Combination Joint Former/Sealer (11/05), Pages 782 and 783.

Delete Heading (a) and substitute the following.

(a) Description: This joint former/sealer is intended for use in simultaneously forming and sealing a weakened plane in portland cement concrete pavements.

The material shall consist of an elastomeric strip permanently bonded either mechanically or chemically at the top of each of two rigid plastic side frames and covered with a removable plastic top cap. Side frames shall be of such configuration that when the sealer is inserted into plastic concrete and vibrated, a permanent bond forms between side frames and concrete.

Delete Heading (b)(1) and substitute the following.

(1) Elastomer: The elastomer strip portion of the material shall be manufactured from vulcanized elastomeric compound using polymerized chloroprene or thermoplastic vulcanizate as the base polymer, and shall comply with the following requirements:

<u>Property</u>	<u>ASTM Test Method</u>	<u>Requirements</u>	
		<u>Polymerized Chloroprene</u>	<u>Thermoplastic Vulcanizate</u>
Tensile Strength, kPa, Min.	D 412	12,400	7,400
Elongation at Break, % Min.	D 412	200	400
Hardness, Shore A	D 2240	65 ± 10	65 ± 10
Properties after Aging, 70 h @ 100°C	D 573		
Tensile Strength, % Loss, Max.		20	20
Elongation, % loss, Max.		25	25
Hardness, pts. increase, Max.		10	10
Ozone Resistance, 20% strain or bentloop, 300 pphm in air, 70 h @ 40°C	D 1149	no cracks	no cracks
Oil Swell, IRM 903, 70 h @ 100°C, wt change, % Max.	D 471	45	75

Delete Headings (b)(2) and (b)(3) and substitute the following:

(2) Bond of Elastomer to Plastic: The force required to shear the elastomer from the plastic shall be a minimum of 5.0 pounds per linear inch (90 g/mm) of sealer when tested in accordance with DOTD TR 636.

(3) Bond of Plastic to Cement Mortar: This bond will be evaluated and shall meet the following requirements:

The force required to separate the cement mortar from the plastic shall be a minimum of 5.0 pounds per linear inch (90 g/mm) of sealer when tested in accordance with DOTD TR 636.

SECTION 1006 – CONCRETE AND PLASTIC PIPE:

Subsection 1006.09 – Plastic Yard Drain Pipe (06/07), Page 789.

Delete the contents of Subheading (a)(3), Ribbed Polyvinyl Chloride Pipe (RPVCP) and substitute the following.

Ribbed Polyvinyl Chloride Pipe (RPVCP): Ribbed Polyvinyl Chloride Pipe shall comply with ASTM F 794, Series 46 or ASTM F 949 (46 psi).

SECTION 1013 – METALS:

Subsection 1013.09 – Steel Piles (08/06) Page 822.

Delete the title and references to “Steel Piles” in this subsection and substitute “Steel H Piles”.

SECTION 1015 – SIGNS AND PAVEMENT MARKINGS:

Subsection 1015.04 – Sign Panels (05/07), Pages 832 and 833.

Delete the contents of Heading (a), Permanent Sign Panels and substitute the following.

(a) Permanent Sign Panels: Flat panels shall be aluminum sheets or plates complying with ASTM B 209, Alloy 6061-T6 or Alloy 5052-H38. Extruded aluminum panels shall comply with ASTM B 221 (ASTM B 221M), Alloy 6063-T6 and after fabrication, have a flatness equal to or less than 0.031 inch per foot of length and 0.004 inch per inch of width.

Subsection 1015.05 - Reflective Sheeting (05/07), Pages 833 – 838.

Add the following to Heading (a), Permanent and Temporary Standard Sheeting.

Type X (Modified) (White, Yellow, Red) - A super high-intensity retroreflective sheeting having highest retroreflectivity characteristics at medium distances. This sheeting is typically an unmetalized microprismatic retroreflective element material. This material shall meet the requirements of ASTM D 4956 Type X except as modified below.

(1) Retroreflectivity: Minimum Coefficients of Retroreflection for Type X (Modified) White, Yellow, and Red sheeting shall be as specified in Table 1015-a.

Table 1015-a
Coefficients of Retroreflection for Type X (Modified) Sheeting¹

Observation Angle, degrees	Entrance Angle, degrees	White	Yellow	Red
0.2	-4	600	450	90
0.2	+30	300	225	45
0.5	-4	240	180	36
0.5	+30	120	90	18

¹Minimum Coefficient of Retroreflection (R_A) ($\text{cd lx}^{-1}\text{m}^{-2}$)

Heading (d), Accelerated Weathering.

Delete Table 1015-3, Accelerated Weathering Standards and substitute the following.

**Table 1015-3
Accelerated Weathering Standards¹**

Type	Retroreflectivity ²				Colorfastness ³	
	Orange		All colors, except orange		Orange	All colors, except orange
III	1 year	80 ⁴	3 years	80 ⁴	1 year	3 years
III (for drums)	1 year	80 ⁴	1 year	80 ⁴	1 year	1 year
VI	1/2 year	50 ⁵	1/2 year	50 ⁵	1/2 year	1/2 year
IX	Not used		3 years	80 ⁶	Not used	3 years
X (Fluorescent Orange)	1 year	80 ⁷	Not used		1 year	Not used
X (Modified)	Not used		3 years	80 ⁸	Not used	3 years

¹At an angle of 45° from the horizontal and facing south in accordance with ASTM G 7 at an approved test facility in Louisiana or South Florida.

²Percent retained retroreflectivity of referenced table after the outdoor test exposure time specified.

³Colors shall conform to the color specification limits of ASTM D 4956 after the outdoor test exposure time specified.

⁴ASTM D 4956, Table 8.

⁵ASTM D 4956, Table 13.

⁶ASTM D 4956, Table 3.

⁷ASTM D 4956, Table 4.

⁸DOTD Standard Specifications, Table 1015-a.

Heading (e), Performance.

Delete Table 1015-4, Reflective Sheeting Performance Standards and substitute the following.

**Table 1015-4
Reflective Sheeting Performance Standards**

Type	Retroreflectivity ¹ -- Durability ²				Colorfastness ³
	Orange		All colors, except orange		
III	3 years	80 ⁴	10 years	80 ⁴	3 years
IX	Not used		7 years	80 ⁵	3 years
X (Fluorescent. Orange)	3 years	80 ⁶	Not used		3 years
X (Modified)	Not used		7 years	80 ⁷	3 years

¹Percent retained retroreflectivity of referenced table after installation and the field exposure time specified.

²All sheeting shall maintain its structural integrity, adhesion and functionality after installation and the field exposure time specified.

³All colors shall conform to the color specification limits of ASTM D4956 after installation and the field exposure time specified.

⁴ASTM D4956, Table 8.

⁵ASTM D 4956, Table 3.

⁶ASTM D 4956, Table 4.

⁷ DOTD Standard Specifications, Table 1015-a.

Heading (g), Sheeting Guaranty.

Delete Table 1015-5, Manufacturer's Guaranty-Reflective Sheeting and substitute the following.

**Table 1015-5
Manufacturer's Guaranty-Reflective Sheeting**

Type	Manufacturer shall restore the sign face in its field location to its original effectiveness at no cost to the Department if failure occurs during the time period ¹ as specified below		Manufacturer shall replace the sheeting required to restore the sign face to its original effectiveness at no cost to the Department if failure occurs during the time period ¹ as specified below
	Orange	All colors, except orange	All colors, except orange
III	<3 years	<7 years	7-10 years
IX	Not used	<5 years	5-7 years
X (Fluorescent Orange)	<3 years	Not used	Not used
X (Modified)	Not used	< 5 years	5-7 years

¹From the date of sign installation.

Subsection 1015.11 - Preformed Plastic Pavement Marking Tape (06/07), Pages 842 – 844.

Delete the contents of this subsection and substitute the following.

1015.11 PREFORMED PLASTIC PAVEMENT MARKING TAPE.

(a) General: Preformed plastic pavement marking tape shall be approved products listed on QPL 64 and shall comply with ASTM D4505 Retroreflectivity Level I or Level II, or DOTD Intersection Grade (as specified below), except as modified herein. The marking tape shall be Class 2 or 3. The type and color shall be in accordance with the plans and the MUTCD.

(b) Thickness: All preformed plastic pavement marking tape shall have a minimum overall thickness of 0.060 inches (1.5 mm) when tested without the adhesive.

(c) Friction Resistance: The surface of the Retroreflectivity Level II preformed plastic pavement marking tape shall provide a minimum frictional resistance value of 35 British Polish Number (BPN) when tested according to ASTM E303. The surface of the Retroreflectivity Level I and DOTD Intersection Grade preformed plastic pavement marking tape shall provide a minimum frictional resistance value of 45 BPN when tested according to ASTM E303. Values for the Retroreflectivity Level I material with a raised surface pattern as defined in ASTM D4505 are calculated by averaging values taken at downweb and at a 45 degrees angle from downweb.

(d) Retroreflective Requirements: The preformed plastic pavement marking tape shall have the minimum initial specific luminance values shown in Table 1015-7 when measured in accordance with ASTM D 4061.

Table 1015-7
Specific Luminance of Preformed Plastic Tape

Type	Observation Angle, degrees	Entrance Angle, degrees	Specific Luminance (mcd/sq m/lx)	
			White	Yellow
Retroreflectivity Level I	1.05	88.76	500	300
DOTD Intersection Grade	1.05	88.76	375	250
Retroreflectivity Level II	1.05	88.76	250	175

(e) Durability Requirements: The DOTD Intersection Grade preformed plastic pavement marking tape shall show no appreciable fading, lifting or shrinkage for a least 12 months after placement when placed in accordance with the manufacturer's recommended procedures on pavement surfaces having a daily traffic count not to exceed 15,000 ADT per lane.

The Retroreflectivity Level I preformed plastic pavement marking tape shall show no appreciable fading, lifting or shrinkage for a least 4 years after placement for longitudinal lines and at least 2 years after placement for symbols and legends.

The Retroreflectivity Level I preformed plastic pavement marking tape shall also retain the following reflectance values for the time period detailed in Table 1015-8.

Table 1015-8
Retained Specific Luminance for Retroreflectivity Level I
Preformed Plastic Pavement Marking Tape

Time	Observation Angle, degrees	Entrance Angle, degrees	Specific Luminance (mcd/sq m/lx)	
			White	Yellow
1 year	1.05	88.76	400	240
4 years (2 years for symbols and legend)	1.05	88.76	100	100

(f) Plastic Pavement Marking Tape Guaranty (DOTD Intersection Grade and Retroreflectivity Level I): If the plastic pavement marking tape fails to comply with the performance and durability requirements of this subsection within 12 months for DOTD Intersection Grade and 4 years for Retroreflectivity Level I, the manufacturer shall replace the plastic pavement marking material at no cost to the Department.

SECTION 1020 – TRAFFIC SIGNALS:

Subsection 1020.01 – Traffic Signal Heads (06/07), Pages 873 – 884.

Delete the contents of Heading (a), General Requirements and substitute the following.

(a) General Requirements: Traffic signal sections, beacon sections and pedestrian signal sections shall be of the adjustable type. Materials and construction of each section shall be the same.

Signals shall be constructed for either 8 or 12-inch (200 mm or 300 mm) lens in accordance with the plans. Signal sections shall have three to five sections per face and beacon

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sections have only one section per face. Signal sections and associated brackets shall be finished inside and out with two coats of high grade dark olive green enamel, color number 14056 according to Federal Standard No. 595b with each coat independently baked. Visors shall be coated green on the outside and black on the inside. Edges shall be deburred and smooth with no sharp edges.

Subsection 1020.04 – Poles for Traffic Signal Systems (06/07), Pages 890 – 894.

Delete the sixth paragraph of Heading (a), Pedestal Support Signal Poles, and substitute the following.

Pedestals shall be finished with at least one coat of rustproofing primer, applied to a clean surface and one coat of dark olive green enamel, color number 14056 according to Federal Standard No. 595b.

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SUPPLEMENTAL SPECIFICATIONS**

FEMALE AND MINORITY PARTICIPATION IN CONSTRUCTION

The following notice shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the director of OFCCP. Execution of the contract by the successful bidder and any subsequent subcontracts will be considered the contractor's and subcontractor's commitment to the EEO provisions contained in this notice.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

AREA	PARISH OR COUNTY	GOAL (%)
FEMALE PARTICIPATION		
-	All Covered Areas	6.9
MINORITY PARTICIPATION (UNDER NEW ORLEANS PLAN)		
-	* See Note Below	20 to 23
MINORITY PARTICIPATION (NOT UNDER NEW ORLEANS PLAN)		
1	Jefferson LA, Orleans LA, St. Bernard LA, St. Tammany LA	31.0
2	Assumption LA, Lafourche LA, Plaquemines LA, St. Charles LA, St. James LA, St. John the Baptist LA, Tangipahoa LA, Terrebonne LA, Washington LA, Forrest MS, Lamar MS, Marion MS, Pearl River MS, Perry MS, Pike MS, Walthall MS	27.7
3	Ascension LA, East Baton Rouge LA, Livingston LA, West Baton Rouge, LA	26.1
4	Concordia LA, East Feliciana LA, Iberville, LA, Pointe Coupee LA, St. Helena LA, West Feliciana LA, Adams MS, Amite MS, Wilkinson, MS	30.4
5	Lafayette LA	20.6
6	Acadia LA, Evangeline LA, Iberia LA, St. Landry LA, St. Martin LA, St. Mary LA, Vermillion LA	24.1
7	Calcasieu LA	19.3
8	Allen LA, Beauregard LA, Cameron LA, Jefferson Davis LA, Vernon LA	17.8
9	Grant LA, Rapides LA	25.7
10	Avoyelles LA, Bienville LA, Bossier LA, Caddo LA, Claiborne LA, DeSoto LA, Natchitoches LA, Red River LA, Sabine LA, Webster LA, Winn LA	29.3
11	Ouachita LA	22.8
12	Caldwell LA, Catahoula LA, East Carroll LA, Franklin LA, Jackson LA, LaSalle LA, Lincoln LA, Madison LA, Morehouse LA, Richland LA, Tensas LA, Union LA, West Carroll LA,	27.9

*These goals apply only to those contractors signatory to the New Orleans Plan and only with respect to those trades which have unions participating in said Plan. The New Orleans Plan Covered Area is as follows: The parishes of Orleans, Jefferson, St. Bernard, St. Tammany, St. Charles, St. John the Baptist, Plaquemines, Washington, Terrebonne, Tangipahoa (that area east of the Illinois Central Railroad), Livingston (that area southeast of the line from a point off the Livingston and Tangipahoa Parish line adjacent from New Orleans and Baton Rouge), St. James (that area southeast of a line drawn from the Town of Gramercy to the point of intersection of St. James, Lafourche and Assumption Parishes), and Lafourche.

These goals are applicable to all the contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor is also subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor, or from project to project, for the purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Regional Administrator of the Office of Federal Contract Compliance Programs (555 Griffin Square Building, Dallas, TX 75202) within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and geographical area in which the contract is to be performed.

4. As used in this Notice and in the contract, the "covered area" is that area shown in the foregoing table in which the project is located.

The following Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts in excess of \$10,000. Execution of the contract by the successful bidder and any

subsequent subcontracts will be considered the contractor's and subcontractor's commitment to the EEO provisions contained in these Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. If the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, he shall include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation.
3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is required to comply with his obligations under the EEO clause, and to make good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractor or subcontractors toward a goal in an

approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any OFCCP office or from federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women, shall excuse the contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications will be based on his effort to achieve maximum results from its actions. The contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

- a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign 2 or more women to each construction project. The contractor shall ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.
- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to

- community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the contractor has taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or woman set by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting his EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendent, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the contractor's EEO policy externally by including it in ny advertising in the news media, including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than 1 month prior to the date for the acceptance of

- applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above describing the openings, screening procedures and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women, and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet his goals and timetables and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.
9. A goal for minorities and a separate goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a group is employed

in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Executive Order if a minority group of women is underutilized).

10. The contractor shall not use the goals or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The contractor shall not enter into a subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling his obligations under these specifications, shall implement specific affirmative actions steps, at least as extensive as the standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors will not be required to maintain separate records.

15. Nothing herein shall be construed as a limitation on the application of other laws which establish different standards of compliance or on the application of requirements for hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. In addition to the reporting requirements set forth elsewhere in this contract, the contractor and subcontractors holding subcontracts (not including material suppliers) in excess of \$10,000

shall submit for every month of July during which work is performed, employment data as contained under Form FHWA-1391 in accordance with instructions included thereon.

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SUPPLEMENTAL SPECIFICATIONS**

NEW ORLEANS PLAN

Each bidder, contractor or subcontractor (hereinafter called the contractor) must fully comply with these bid conditions as to each construction trade intended to be used on this construction contract and all other construction work (both federal and nonfederal) in New Orleans Plan Area during the performance of this contract or subcontract. The contractor commits to the minority and female employment utilization goals set forth herein and all other requirements, terms and conditions expressed herein by submitting a properly signed bid.

The contractor shall appoint a company executive to assume the responsibility for implementation of the requirements, terms and conditions of these bid conditions.

These specifications implementing the New Orleans Plan for employment of minorities and females have been imposed by the U. S. Department of Labor by order on September 8, 1971, as amended, for all nonexempt federal and federally assisted construction contracts to be awarded in the area of jurisdiction of the Southeast Louisiana Building and Construction Trades Council in the City of New Orleans and Southeast Louisiana. This area consists of the parishes of Orleans, Jefferson, St. Bernard, St. Tammany, St. Charles, St. John the Baptist, Plaquemines, Washington, Terrebonne, Tangipahoa (that area east of the Illinois Central Railroad), Livingston (that area southeast of the line from a point off the Livingston and Tangipahoa Parish line adjacent from New Orleans and Baton Rouge), St. James (that area southeast of a line drawn from the Town of Gramercy to the point of intersection of St. James, Lafourche and Assumption Parishes), and Lafourche.

The provisions of these bid conditions apply to contractors which are party to collective bargaining agreements with labor organizations which together have agreed to the New Orleans Area Construction Program (hereinafter called the New Orleans Plan) for equal opportunity and have jointly made a commitment to goals of minority and female utilization. The New Orleans Plan is a voluntary agreement between (1) Southeast Louisiana Building and Construction Trades Council; (2) contractors and subcontractors who are signatory to the New Orleans Plan; (3) the Urban League of Greater New Orleans and representatives of the minority community; and (4) the City of New Orleans. The New Orleans Plan, together with all implementing agreements that have been and may hereafter be developed pursuant thereto, are incorporated herein by reference.

The requirements set forth herein shall constitute the specific affirmative action requirements for activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.

The contractor and all subcontractors holding contracts in excess of \$10,000 shall comply with the following minimum requirement activities of equal employment opportunity. The contractor shall include these requirements in every subcontract in excess of \$10,000 with such modification of language as necessary to make them binding on the subcontractor.

Each contractor and subcontractor shall submit a monthly employment utilization report, Standard Form 257, covering the contractor's entire work force employed on all contracts (both federal and nonfederal) held in the New Orleans Area. In addition, a list of the federal and nonfederal contracts which are covered by the report shall be furnished. The report shall be submitted to the engineer no later than the 10th day following the end of the month being reported. The report shall end on the next to the last Saturday in the month being reported and shall reflect all hours worked between this date and the close out date in the preceding month. Copies of all payrolls and personnel data shall be retained for 3 years after final acceptance of the project. These records and documents, or copies thereof, shall be made available at reasonable times and places for inspection by an authorized representative of the State or Federal Government and shall be submitted upon request with any other compliance information which such representative may require.

In addition to the reporting requirements set forth above, the contractor and the subcontractors holding subcontracts, not including material suppliers, in excess of \$10,000 shall submit for every month of July during which work is performed, employment data as contained under Form FHWA-1391, and in accordance with the instructions included thereon.

A contractor may be in compliance with these bid conditions by its participation in the New Orleans Plan and applicable provisions contained in the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)" and Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all

major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the

discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If

on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor

and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage

rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize

trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated

damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof of the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of

apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each apprentice, trainee, and helper) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering

services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

Notice to all Personnel engaged on Federal-Aid Highway Projects

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person,

association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 92-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions: (Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions: (Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction

originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

**Certification Regarding Debarment, Suspension,
Ineligibility and Voluntary Exclusion--Lower Tier
Covered Transactions:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

**XII. CERTIFICATION REGARDING USE OF
CONTRACT FUNDS FOR LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any

Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT**

**REQUIRED CONTRACT PROVISIONS FOR
DBE PARTICIPATION IN FEDERAL AID CONSTRUCTION
CONTRACTS
(DBE NO GOAL PROJECT)**

A. AUTHORITY AND DIRECTIVE: The Code of Federal Regulations, Title 49, Part 26 (49 CFR 26) as amended and the Louisiana Department of Transportation and Development's (DOTD) Disadvantaged Business Enterprise (DBE) Program, are hereby made a part of and incorporated by reference into this contract. Copies of these documents are available upon request, from DOTD, Compliance Programs Office, P. O. Box 94245, Baton Rouge, LA 70804-9245.

B. POLICY: It is the policy of the DOTD that it shall not discriminate on the basis of race, color, national origin, or sex in the award of any United States Department of Transportation (US DOT) financially assisted contracts or in the administration of its DBE program or the requirements of 49 CFR Part 26. The DOTD shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of US DOT assisted contracts. The DBE program, as required by 49 CFR Part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification of failure to carry out the approved DBE program, the US DOT may impose sanctions as provided for under 49 CFR Part 26 and may in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq).

C. DBE OBLIGATION: The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DOTD deems appropriate.

The preceding policy and DBE obligation shall apply to this contract and shall be included in the requirements of any subcontract. Failure to carry out the requirements set forth therein shall constitute a breach of contract and, after notification by DOTD, may result in termination of the contract, a deduction from the contract funds due or to become due the contractor or other such remedy as DOTD deems appropriate. The contractor is encouraged to use the services offered by banks in the community which are owned and controlled by minorities or women when feasible and beneficial.

The term DBE is inclusive of women business enterprises (WBE) and all obligations applicable to DBE shall apply to firms certified and listed as WBE.

D. SPECIFIC CONTRACTOR REQUIREMENTS: This project has not been selected for a specific DBE goal; however, the contractor is required to meet the following obligations and by signing this bid gives the assurances that:

(1) The contractor shall not discriminate on the basis of race, color, national origin, or sex in subcontracting work on this project.

(2) The contractor shall promptly pay subcontractors and suppliers, including DBE, their respective subcontract amounts within 14 calendar days after the contractor receives payment from DOTD for the items of work performed by the subcontractors in accordance with Louisiana Revised Statute 9:2784.

a. Contractors shall pay subcontractors for work satisfactorily performed by the subcontractor within 14 calendar days after receipt of payment from the DOTD for subcontracted work. Retainage may be withheld by the contractor pending completion of a subcontractor's work in accordance with the terms of the subcontract. Retainage must be released by the contractor within 30 calendar days after satisfactory completion of the subcontractor's work for which payment for the completed work has been received from the DOTD.

b. Acceptance of the subcontracted work by the Project Engineer shall constitute satisfactory completion of subcontracted work. Delay or postponement of payment to the subcontractor may be imposed by the contractor when there is evidence that the subcontractor has failed to pay its labor force and suppliers for materials received and used on the project. Delay or postponement must have written approval by the Project Engineer.

(3) The contractor shall submit DOTD Forms OMF-1A, Request to Sublet, and OMF-2A, Subcontractor's EEO Certification and have them approved by the DOTD prior to any subcontracting work being performed. The requirements of Subsection 108.01, Subletting of Contract, of the Project Specifications shall be met.

(4) The contractor understands that these provisions are applicable to all bidders including DBE bidders.

**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

GENERAL DECISION: **LA20080008** 02/08/2008 LA8

Date: February 8, 2008

General Decision Number: **LA20080008** 02/08/2008

Superseded General Decision Number: LA20070012

State: Louisiana

Construction Type: Heavy

Counties: Jefferson, Orleans, Plaquemines, St Bernard, St Charles, St James, St John the Baptist and St Tammany Counties in Louisiana.

HEAVY CONSTRUCTION PROJECTS (includes flood control, water & sewer lines, and water wells; excludes elevated storage tanks, industrial construction-chemical processing, power plants, and refineries)

Modification Number	Publication Date
0	02/08/2008

CARP1846-006 02/01/2006

	Rates	Fringes
CARPENTER		
(formbuilding/formsetting).....	\$ 19.92	5.00
Millwright/Piledriverman.....	\$ 19.92	5.00

ELEC0130-005 12/01/2006

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JAMES, AND ST. JOHN THE BAPTIST PARISHES

	Rates	Fringes
ELECTRICIAN (including low voltage wiring).....	\$ 22.09	7.90

ELEC1077-002 09/01/2007

ST. TAMMANY PARISH

	Rates	Fringes
ELECTRICIAN (including low voltage wiring).....	\$ 20.00	5.46

ENGI0406-018 07/01/2007

Rates	Fringes
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**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

Power equipment operators:

Bulldozer.....	\$ 20.26	4.95
Mechanic.....	\$ 22.31	4.95

PLAS0567-003 07/01/2006

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JOHN THE BAPTIST, AND ST. TAMMANY PARISHES:

	Rates	Fringes
Cement Mason/Concrete Finisher...	\$ 18.06	2.89

PLAS0812-003 06/01/2004

ST. JAMES PARISH:

	Rates	Fringes
Cement Mason/Concrete Finisher...	\$ 21.85	0.00

* PLUM0060-002 12/01/2007

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JAMES (Southeastern Portion), ST. JOHN THE BAPTIST, and ST. TAMMANY PARISHES

	Rates	Fringes
PLUMBER/PIPEFITTER (excluding pipe laying).....	\$ 24.27	7.43

* PLUM0198-005 01/01/2008

ST. JAMES PARISH (Northwestern Portion):

	Rates	Fringes
PLUMBER (excluding pipe laying).....	\$ 22.64	6.88

SULA2004-007 05/13/2004

	Rates	Fringes
CARPENTER (all other work).....	\$ 13.75	2.60

Laborers:

Common/Landscape.....	\$ 9.88	0.00
Fence.....	\$ 11.24	0.00
Flagger.....	\$ 8.58	0.00
Mason Tender.....	\$ 7.00	0.00
Pipelayer.....	\$ 9.84	0.00

PIPEFITTER (excluding pipelaying).....	\$ 17.52	4.51
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**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

Power equipment operators:

Backhoe/Excavator.....	\$ 14.42	0.00
Crane.....	\$ 16.34	3.30
Dragline.....	\$ 16.50	0.00
Front End Loader.....	\$ 13.89	0.00
Oiler.....	\$ 10.03	0.00

Truck drivers:

Dump.....	\$ 11.01	0.00
Pickup.....	\$ 12.25	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor

**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

GENERAL REQUIREMENTS

Scope of Work: The contractor shall perform all necessary repair work in order to restore the pump station to its operational condition prior to Hurricane Katrina. This work shall include repairs to the pumps and motors, replacement of electrical equipment, replacement of the generator, transfer switch, and generator building, restoration of the electrical service, replacement of the existing SCADA system and pump controls, as well as other miscellaneous repairs included in the specifications elsewhere herein.

Equipment and Materials: Equipment and materials shall be suitable for the intended use and shall be furnished with all necessary hardware and components. The contractor shall be responsible for all modifications or fabrications necessary for proper repair and installation. All material shall be new, unless specified.

The provided plans are for informational purposes only, and do not necessarily reflect existing conditions. The contractor is strongly encouraged to visit the site, and examine all components to determine the existing conditions and shall allow for such conditions in computing his bid.

All measurements included in the specifications are approximate, and should be field-verified by the contractor before ordering of materials.

The contractor shall comply with the Department's confined space policy at all times. For a copy of the confined space policy, contact the project engineer

Warranties and Guaranties: The contractor shall furnish all warranties and guaranties for the materials and equipment furnished, including the manufacturers' standard written warranties.

Submittals: The contractor shall submit descriptive data, brochures and samples as soon as possible after the award of the contract and before the beginning of work.

Clean up: The contractor shall be responsible for the removal of all debris, trash, and waste caused by his construction operation. Excess construction debris shall not be allowed to accumulate at the work site. All tools, equipment, and surplus materials shall be removed from the work site prior to completion of the contract. Any material and equipment that is declared salvageable by the project engineer shall remain property of the department and shall be stored at a location as directed by the project engineer. The remaining material and equipment shall become the property of the contractor and shall be removed and disposed of by the contractor at no direct pay.

CONDUCTORS

All single conductor wire shall be AWG stranded annealed copper with standard 600 Volt, 75° C, moisture and heat resistant insulation, NEC designation – XHHW, unless noted otherwise.

All conductors shall be appropriately sized per NEC, to handle the maximum continuous current capabilities of the associated loads.

STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS

The contractor shall identify all conductors that are accessible at pull, splice, and termination points by painting, taping, tagging, or marking according to the following color code:

Power Phase Conductors-----Black
Neutral Conductors-----White
Control Conductors-----Red, Blue, Yellow
Grounding Conductors-----Green

The insulated conductors shall be treated with a non-deteriorating insulation lubricant such as Ideal's "Wire-Lube" or equal to facilitate pulls.

All enclosed splices shall be made with compression type connectors. All splices and terminal connections shall be covered with multi-layers of PVC electrical tape such as Scotch No. 33 or equal.

CONDUIT

All wiring shall be installed in galvanized rigid aluminum conduit outdoors, and PVC underground unless noted otherwise.

Conduit supports shall be rigid galvanized aluminum, one or two hole straps provided at a maximum of five (5) feet apart. A support shall be provided within six (6) inches of every coupling and at each end of every bend.

Bends and offsets in conduit shall be avoided wherever possible, and when unavoidable, an approved conduit bending machine shall be used. The use of pipe tee or vise for bending will not be permitted. Conduit deformed or crushed in any way shall not be installed and shall be removed from the premises.

Conduits shall be cut true and square with a hacksaw, with threads cut and cleaned before reaming. Conduits shall be joined with approved conduit couplings and shall be butted in all cases where couplings are used. Where conduits cannot be joined by standard threaded couplings, approved unions shall be used. All couplings and unions shall be mechanically strong and shall make good electrical grounds between the conduits connected. All threaded joints of the conduit system shall be painted with oxide inhibiting compound before making up.

Conductors shall not be installed until all work which could cause damage to the conductors or conduits has been completed. The contractor shall exercise the necessary precautions to prevent the accumulation of water, dirt, and foreign matter in the conduits.

Conduits installed outdoors, in damp locations, or exposed to the weather, shall have moisture tight fittings.

Myers "Scru-Tite" Hubs, or equal, shall be used on all outdoor conduit-box terminations.

**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

Contractor shall determine in the field, means and methods of conduit routing and support. Conduit shall be routed parallel and perpendicular to structural members so as to blend with the surroundings. Suspended conduit and diagonal runs will not be acceptable. Cutting of structural members will not be permitted without the approval of the Project Engineer.

Conduits, fittings, outlet bodies, and junction boxes shall be corrosion resistant ferrous with covers and gaskets suitable for outdoor/indoor applications, as manufactured by Crouse-Hinds, Appleton, Killark, or approved equal.

RESTORATION OF ELECTRIC SERVICE

The contractor shall provide and install all necessary equipment, as well as coordinate with the appropriate local utility company, to restore the electrical service to the pump station. The contractor shall coordinate with the utility company to provide and install a new transformer, service pole, meter pan, and main disconnect as necessary. A suitable surge suppression system shall be provided as specified elsewhere herein to protect the panel equipment from lightning and utility power surges. Contractor shall also provide new conductors and conduit from the main disconnect to the new automatic transfer switch. The new transfer switch shall be located inside the pump house. The existing junction box/wall penetration shall be utilized to complete this connection.

Existing Transformer

500 KVA, 3 phase, 13.8 kV: 480 V

PUMP STATION BUILDING REPAIRS

- The contractor shall replace all existing lighting as indicated. All wiring from the distribution panel to the lights shall be replaced in the existing conduits. All light switches shall also be replaced. Quantity, location, and type of lights are:

	Quantity	Fixture Location & Type
L1	8	Machinery Floor Level – 500 W, metal halide
L2	8	Grating Floor Level – 200 W, compact fluorescent
L3	4	Sump Lights – 100 W, compact fluorescent
L4	4	Exterior Lights – 150 W, compact fluorescent

- The contractor shall also replace all receptacles and wiring from the distribution panel to the receptacles in the existing conduit. Quantity, location, and type of receptacles are:

	Quantity	Receptacle Location & Type
R1	7	Machinery Floor Level – 20 A, 125 VAC, Duplex GFCI Receptacle
R2	6	Grating Floor Level – 20 A, 125 VAC, Duplex GFCI Receptacles w/ Cast Weatherproof Cover
R3	4	Building Exterior – 20 A, 125 VAC, Duplex GFCI Receptacles w/ Cast Weatherproof Cover

- Contractor shall replace 48" x 48" metal fixed louver for building exhaust fan
- Contractor shall replace two (2) broken windows, measurements approximately 3'1" W x 3'2" H, and two (2) broken windows, measurements approximately 3'1" W x 6'10" H.
- Contractor shall replace the existing chain link intake trash screen

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- New intake trash screen shall be constructed with a galvanized angle iron framework and galvanized serrated grating
- Grating shall be galvanized steel bearing bars 1" deep x 3/16" thick, spaced at 1-7/8"; crossbar shall be spaced at 4"
- Contractor shall attach with grating clips or tack-weld to framing angles

DIESEL GENERATOR AND GENERATOR BUILDING SPECIFICATIONS

The contractor shall remove the existing generator and transfer switch. The contractor shall also provide and install a standby diesel generator and transfer switch which meets or exceeds the specifications listed below, to replace the existing damaged units.

The generator shall be installed in the newly constructed generator house and the new transfer switch shall be installed in the pump house. The contractor shall install new conduit and conductors from the generator output to the new transfer switch. Separate conduit for generator power and start circuit wiring is required. The contractor may utilize both the existing section of underground conduit and the existing junction box/wall penetration to pull these conductors.

The contractor shall also install new conductors and conduit from the load side of the new transfer switch to the new main switchboard.

All other conductors, conduit, and any miscellaneous hardware or materials necessary to complete installation of the generator and transfer switch in good working order shall be included in the contractor's bid price.

The contractor shall also dispose of any fuel remaining in the fuel tank, shall flush and clean both the existing diesel storage tank and existing fuel lines, and shall provide a new fuel pump at the diesel storage tank to sufficiently supply fuel to the generator for operation. The contractor shall properly dispose of all debris in accordance with federal and state regulations.

Diesel Standby Generator

Model: Generac SD400 or approved equal

400 KW Diesel Standby Generator Set

Automatic Transfer Switch, No Fuel Supply

Electronic Governor, Voltage Regulation: $\pm 2\%$, Alternator Frequency: ± 3 Hz

Water cooled with mounted radiator, fan and water pump.

Shall include 12 lead broad range re-connectable electric generating set rated for continuous standby service at:

400 KW, 500 KVA, 0.8 PF,

Connected for 3 phase, 4 wire,

277/480 Volts, 60 Hz, 3 phase, 1800 RPM

The generator shall have a minimum capability of 1350 KVA at a maximum instantaneous voltage dip of 35% for motor starting.

The provided generator set shall be UL 2200 compliant.

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Manufacturer

Single vendor shall be responsible for complete engine-generator set, automatic transfer switch, controls, factory tests, factory service and shipping. Coordination between manufacturer, service firm and the Department is mandatory.

General

Contractor shall furnish four (4) sets of operation and maintenance manuals for the owner's operating personnel.

Heater

The engine shall have at least a 1000 W, single phase, 120/240 Volt water jacket heater.

Meter Package

Meter package shall be provided with the following:

1. AC Voltage Indicator
2. AC Amperage Indicator
3. Frequency Indicator
4. Phase Selector Switch with "Off" Position

DC Starting System

System shall include 12 or 24 Volt DC starting system and battery charger.

Critical Silencer

Vendor shall furnish a section of stainless steel, seamless, flexible exhaust tubing with adapter to engine and silencer, that is at least 2.5" in diameter, (sized to allow no greater than 1.5" of mercury back pressure) and at least 2.5" long, but no longer than 18".

Automatic Transfer Switch

Automatic Transfer Switch shall be Generac GTS1000, or approved equal. The automatic transfer switch shall be rated at no less than 1000 A continuous at 3 phase, 4 wire, 277/480 Volts, and shall be UL listed (Std. 1008). The transfer switch shall be rated for 600 Volts. The transfer switch enclosure shall be NEMA 4X.

Startup and Load Bank Testing

Supplier of the electric generating plant and associated items shall provide factory trained technicians to check out the completed installation and perform the initial startup of the system. They shall meet with the department personnel to discuss the installation and shall provide the owner's personnel with operating & maintenance instructions at the time of start up.

At the time of initial start up and check out of the standby power system by the supplier, they shall furnish load banks as required with an operator to perform the following:

1. Test speed and voltage regulation for instantaneous on and off load changes with loads of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and full load rating.

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2. Continuous operational test at full stabilizer load for up to five (5) hours with voltage, frequency, oil pressure, and engine temperature being recorded at no load, beginning of test and hourly thereafter through duration of test.
3. After the above tests have been performed, reconnect the generator to the building loads, test complete system for proper operation with emergency loads.
4. All electrical reconnections are to be made by the supplier.

Warranty

5 years or 1500 hours parts & labor, warranty shall become effective upon successful completion of previously described startup and load bank testing.

Generator Building

The contractor shall provide and install a lightweight steel building which meets the following minimum specifications. The steel building shall be sized to be installed utilizing the existing concrete slab. The existing slab is approximately 11'9" W x 23'6" L.

Roof Design

2" x 6", 16 gauge galvanized roof joist on 16" centers
22 gauge R-panel, hunter green or similar color
Roof shall be installed to a minimum 130 mph wind load rating

Wall Design

2" x 4", 16 gauge galvanized steel studs with wind bracing straps as required
Studs are on 16" centers throughout
Exterior siding is 24 gauge R-panel, hunter green or similar

The building shall comply with all manufacturer recommendations to house the diesel generator, including:

- Personnel entrance door shall be 18 gauge galvanized steel, 36" wide, provide a heavy duty lock set rated for exterior use and similar hardware.
- Building shall also have an 18 gauge galvanized double steel doors, sufficiently sized to allow the generator to be installed and/or removed as necessary
- Building shall be properly ventilated in accordance with the generator manufacturer's air flow requirements, (i.e. properly sized louvers)
- Interior light shall include four (4) appropriately spaced, 4 ft., 2-tube, 40 W fluorescent fixtures with wrap-around lens
- Interior receptacles shall include four (4) appropriately spaced, 20 A, 120 Volt, Duplex receptacles
- 120/240 Volt load center shall be installed to service the lighting, outlets, and generator's battery charger and water jacket heater
- The load center shall be serviced from the load side of the 10 KVA transformer in the Motor Control Center.

Bathroom

5' x 6' bathroom with toilet, sink, internal to generator housing

- Self-contained water treatment plant shall be installed

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- ¾" plywood flooring raised above existing concrete slab enough to allow room for piping from toilet to sewer plant
- Interior walls for bathroom shall be constructed with 16 gauge metal studs (2" x 4"), and 5/8" plywood walls
- Light and vent combination unit shall be installed
- Bathroom unit shall have include 20 A, 120 V, duplex GFCI receptacle
- Entrance door to bathroom unit shall be inside the generator building, and provide a commercial grade lockset and hardware.

REPAIR OF EXISTING PUMPS

Existing Pumps #1, #2, #3

Fairbanks Morse
24" Centrifugal Submersible (5710W)
26" diameter impeller
14000 GPM @ 35 feet, 502 RPM

Existing Pumps 'A' & 'B'

Fairbanks Morse
10" Centrifugal Submersible (5710W)
12 ½" diameter impeller
2000 GPM @ 25 feet, 860 RPM

The contractor shall remove, repair, and re-install the existing pumps. The following scope includes the minimum amount of work to be performed on each pump. Any additional repairs necessary shall be accomplished as directed by the Project Engineer.

Lower Pump Housing (Bowl)

1. Disassemble, clean, and inspect all components.
2. Sandblast and prime the interior and exterior of the pump housing, per Red Book Louisiana Standard Specifications for Roads and Bridges, 2006 ed.
3. Remove the case ring from the pump bowl.
4. Machine new case ring, install, and check for proper clearance
5. Re-tap threaded holes and replace with new bolts.
6. Remove existing eye bolts and replace with new.
7. All sleeve bearing fits and boss fits shall be running true.

Upper Housing

1. Machine new packing gland.
2. Check the upper bearings for proper clearances.
3. Repair the packing.
4. Drill and tap to next larger size and install stainless steel bolts in pump housing to secure packing gland.

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Impeller Repairs

1. Polish the impeller shaft, check for true.
2. Machine new stainless steel sleeve for packing and install on impeller shaft.
3. Check the impeller for balance, machine if necessary.

Drive Shafts

1. Remove coupling nuts between shafts.
2. Polish shafts and check for true. Check threaded end of shaft to ensure the nuts fit properly.
3. Check the clearances on the bronze bushings between shafts.
4. Machine new coupling nuts.
5. Reassemble the pump and prove in good working condition.

REPAIR OF EXISTING VALVES

Existing Gate & Check Valves

- Qty. 4 - 24" Gate Valves**
Qty. 3 - 24" Check Valves
Qty. 2 - 12" Gate Valves
Qty. 2 - 12" Check Valves

Repair of each existing gate and check valve shall include, but not be limited to:

1. Disconnect the valve, remove from pump station
2. Disassemble, clean, and inspect all components
3. Replace remote operating linkage
4. Sandblast and paint with epoxy paint
5. Replace damaged, non operational components
6. Remove and replace seals
7. Re-assemble and ensure proper operation
8. Reinstall the valve in the pump station

REPAIR OF EXISTING PUMP MOTORS

Motors #1, #2, #3

Each pump motor shall be repaired according to the below listed procedures & specifications. All electrical conductors from the power control center to the electric motor shall be replaced in the existing conduit.

Electric Motors

480 Volt, 3 Phase, 60 Hz, 180 Amps @ full load
150 HP, 504 RPM @ full load
1.15 Service Factor, Code F

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Motors 'A' & 'B'

Each pump motor shall be repaired according to the below listed procedures & specifications. All electrical conductors from the power control center to the electric motor shall be replaced in the existing conduit.

Electric Motors

480 Volt, 3 Phase, 60 Hz, 27 Amps @ full load

20 HP, 730 RPM @ full load

1.15 Service Factor, Code E

AC Motor Refurbishing – Checklist of Procedures

1. Disassemble pump motor, and transport to electric repair shop.
2. Treat motor's exterior with an abrasive blast. Ensure that all other surfaces, including the nameplate, are protected from damage.
3. Perform a Megger test and record electrical resistance according to IEEE Standard 43.
4. Check and record shaft run-out.
5. Run a single-phase check to locate any broken rotor bars.
6. Apply voltage to the stator on all slip-ring motors, check secondary voltage.
7. If Megger reading are acceptable, run the motor at no load, check current balance and vibration.
8. Disassemble motor, count rotor bars, and record.
9. Measure all bearings, seal, and coupling fits for proper tolerance. Tolerances required for ball, roller, and angular contact bearings are recommended by the AFBMA.
10. Repair any out-of-spec mechanical tolerances and record final dimensions.
11. Perform surge comparison test on motor windings. Document all results.
12. Clean all motor components with a special steam cleaning process on the stator/winding, followed by a bake cycle.
13. Paint internal parts with a unique insulating epoxy.
14. Once baking is completed, repeat Megger test and record results.
15. Dip motor with a class 'H' varnish, and bake windings a final time.
16. If new windings are required, evaluate data for suitability to applications – including calculation of all flux densities and proper rotor bar/stator slot combination.
17. All coils in new form wound windings are to be manufactured according to Joliet specifications, which include glass over film copper conductors and taped leads.
18. New form wound windings are class H, VPI processed using Joliet's epox-e-clad system. Document all critical process parameters.
19. Rotor is balanced to levels lower than those listed in the NEMA MG-1-1993 specifications.
20. New bearing shall be used if ball, roller, or thrust is required.
21. A high-potential test shall be performed on the completed, assembled motor according to the IEEE Standard.
22. The motor shall be run at rated voltage and frequency until bearing temperatures stabilize.

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23. Bearing temperatures, no-load volts, amps, and rpm's shall be recorded.
24. Vibration analysis shall be performed using IRD 890 equipment at all frequencies to establish a baseline, documenting all results.
25. Shaft nut or key is furnished.
26. Motor shall be painted and placed on a skid for shipment, sleeve bearing motor shafts shall be blocked.
27. Motor shall be transported to pump station, and properly installed. Motors shall be test run to prove in good working order.

MOTOR CONTROL CENTER SPECIFICATIONS

Demolition of Existing Power/Motor Control Center

The contractor shall remove all existing equipment associated with the existing Power/Motor Control Center. The new Motor Control Center and Main Switchboard shall be installed in place of the existing Power/Motor Control Center.

General Requirements

Furnish and install all equipment as shown on drawings in a NEMA type 1 MCC panel. Motor Control Center shall be an integrated system consisting of the main breaker, circuit breakers, combination motor starters with controls, distribution transformer, panelboard, PLC-programmable pump controller, storm water wet well level monitors, power supplies, battery back up, relays, space for future telemetry equipment and other automatic controls and devices. The PLC-pump controller and instrumentation shall be furnished as an integral part of the motor control center by the motor control center manufacture/integrator. There shall be a documented factory test at the manufacture/integrator facility prior to shipment. A factory witness test is an option of the owner and engineer. The manufacture/integrator must be CSIA certified with current certification.

Enclosure

The enclosure shall be compartmentalized such that the controls and power sections are isolated from each other. The compartments containing the programmable pump controller and power sections shall be separated by barriers behind the inner dead front door. Doors shall be hinged on the same side and shall open to greater than 90 degrees. All hinges and screws shall be stainless steel. All dead front latches are 1/4 turn adjustable, screw type fasteners will not be acceptable.

The completed MCC, motor control center, shall contain a U/L 508 label. The MCC shall be rated NEMA 1, fabricated from 304 stainless steel and be U/L labeled Industrial Control to meet all the requirements of local, state and county ordinances. All connections shall be front accessible. All hinges and screws shall be stainless steel. All control devices shall be permanently labeled and door mounted devices shall be labeled with black and white engraved phenolic nameplates, stick on or glue type labels are not acceptable. All components associated with a particular compartment's function shall be mounted in that compartment; i.e. control relays, motor starters, etc. Spacing of these components shall be in accordance with U/L standards.

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Horizontal bussing shall be provided. Bussing shall be copper with silver plated joints by electrolysis method to 0.0002 inches. Ampacity shall be calculated on 1000 amps/square inch of cross sectional area. Bracing shall be for 50,000 AIC minimum.

All wire shall be copper. All wire shall be stranded and labeled with heat shrink plastic wire markers. All miscellaneous control and instrument wiring shall be protected by fuses or circuit breakers. Wiring shall be neatly bundled or run in plastic wireways. Wires shall be color coded and conform to U/L standards. Wires shall also be 600 volt MTH or THHN wire. Terminal strips shall be numbered to match wire numbers. Common wires shall be of a common color and number throughout the system. All wiring shall meet NEMA Class II C requirements. Complete wiring diagrams shall be provided in AutoCAD format.

All circuit breakers and dead front mounted devices (lights and switches) shall be equipped with engraved phenolic nameplates. Provide fluorescent panel light, door switch, GFCI receptacle, PFR power fail relay, enclosure strip heater with heat shield and thermostat. Transformers above 5 KVA shall be vented. Ventilation shall be provided through louvers with bug screens within the MCC panel.

The MCC panel shall house the main circuit breaker. The main circuit breaker and all wiring shall be located behind the dead front door or panel. Circuit breaker operation shall be possible without opening the dead front door or removing the panel.

Finish shall be dry powder, electrostatically applied and baked on. Interior color and exterior color shall be as specified on drawings. The painting process shall include a minimum five stages of metal preparation as follows: 1) Alkaline cleaner, 2) Clear water rinse, 3) Iron phosphate application, 4) Clear water rinse, and 5) Inhibitive rinse to seal phosphate surfaces.

Enclosure shall be a TESCO MCC panel or approved equal with U.L. listing as applicable.

Service Entrance

The control panel manufacturer is responsible to meet the requirements of the local serving utility. Written approval and authorization from the local serving utility must be provided as part of the control panel submittal package.

Surge Suppression System

The contractor shall provide and install a surge suppression system that is designed for main service entrance, distribution panel and branch panel applications. The system shall be of a fail-safe design and shall utilize two suppression technologies: MOV and enhanced transient filter. System shall also include a 30-year unlimited free replacement warranty.

The system shall comply with ANSI/IEEE C62.41 Categories A, B, & C and UL 1449 2nd Edition 2005 Revision. The suppression system shall be field installed at the main service entrance, in accordance with the manufacturer's installation procedures. The system shall be ServiceTrack ST or approved equal.

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Circuit Breakers

All 480-volt circuit breakers shall have interrupting capacities at minimum 14,000 amperes. All 120-volt breakers shall be rated 10,000 amperes interrupting capacity.

Circuit breakers shall be of the indicating type, providing ON, OFF and TRIPPED positions of the operating handle. Circuit breakers shall be quick-make, quick-break, with a thermal-magnetic action, except when protecting motor feeders where motor circuit protector (MCP) breakers could be utilized. All multiple-pole circuit breakers shall be designed so that an overload on one pole automatically causes all poles to open. Circuit breakers shall meet the requirements of UL and NEMA standards. Breakers shall be Eaton/Cutler Hammer, or equal.

All circuit breakers shall be sized per the below chart, unless otherwise directed by the project engineer.

Item	Qty.	Description	Breaker Size
CB1	1	Main Circuit Breaker	800 A, 3P, Thermal-Magnetic
CB2	1	150 HP, 3 Phase Motor (Pump #1)	500 A, 3P, Motor Circuit Protector
CB3	1	150 HP, 3 Phase Motor (Pump #2)	500 A, 3P, Motor Circuit Protector
CB4	1	150 HP, 3 Phase Motor (Pump #3)	500 A, 3P, Motor Circuit Protector
CB5	1	20 HP, 3 Phase Motor (Pump 'A')	70 A, 3P, Motor Circuit Protector
CB6	1	20 HP, 3 Phase Motor (Pump 'B')	70 A, 3P, Motor Circuit Protector
CB7	1	1 HP, 3 Phase Motor (Exhaust Fan)	15 A, 3P, Motor Circuit Protector
CB8	1	10 KVA, 1 Phase, 480 V: 120/240 V (Lighting Transformer)	60 A, 3P, Thermal-Magnetic
CB9	12	Miscellaneous Lighting, Receptacle, & Control Circuits	20 A, 1P, Thermal-Magnetic

Grounding System

The switchboard ground bus and incoming neutral service conductor shall be connected to a "rod" type "ground". The ground rod shall extend up into pedestal for visible connection with an approved "exothermic weld". Grounding and bonding wires shall be installed in all PVC conduit runs and connected to ground bus and all equipment.

(a) Thermite welding materials shall be of size and type recommended by the manufacturer for the intended use. Materials shall be Burndy, Cadweld, manufactured by Erico Products, Inc., or equal.

(b) Grounding conductor - All grounding conductors shall be sized in accordance with NEC Table.

(c) Ground bus - A ground bus shall be provided in the service equipment. It shall be connected to the grounding electrode system by exothermic welded stranded copper grounding conductors. Screw type lugs shall be provided for connection of equipment grounding conductors.

Interior Panel Lighting

Interior panel lighting shall be furnished for each panel section. As a minimum, the interior panel lighting shall be a 15 to 30 watt rapid start fluorescent strip type fixture with warm white lamps. A lens or guard shall be furnished and installed over each lamp. The fixture ballasts shall be capable of providing reliable starts with ambient temperatures down to 30 degrees. Ballast

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noise shall not exceed 50 dBA. "Noisy" ballasts shall be replaced at no additional charge to the owner.

Motor Controls, General

Provide each motor with suitable motor controls and devices that will perform the functions as specified for the respective motors. Motor controls shall conform to the applicable requirements of NEMA ICS, ANSI C19.1, IEEE, NEC, and UL. Anticipated horsepower ratings are as shown on the drawings, check for final horsepower before manufacturing. Horsepower ratings above 150hp will require reduced voltage soft starting. Each 150hp motor will require two soft starters, one as primary pump control and the second as a back up control with a manual bypass switch. This information is for guidance only and does not limit the equipment size. When motors furnished differ from the expected ratings indicated, make the necessary adjustments to wiring, conduit, disconnect devices, motor starters, branch circuit protection, and other affected material or equipment to accommodate the motors actually installed, at no additional cost to the Owner.

Each motor control system shall be equipped with a hand- off-auto control switch, indicating lights, elapsed time meter, motor starter, control transformer with primary fuses and secondary control power fuse.

- a. Control switches and indicating lights shall be U.L. listed oil-tight devices rated heavy duty. Provide Allen Bradley, Eaton/Cutler Hammer or equal.
- b. Elapsed time meters shall be non-resettable with 0.0 to 99,999.9 readout. Provide Remington, Yokogawa, or equal.
- c. Each motor starter shall be NEMA rated with an electrically held contactor and a single reset, 3 phase, overload relay with a normally closed holding contact and a normally open isolated contact for overload alarm. Each overload shall be ambient compensated and shall trip on 600% of full load current in less than 6 seconds. Each motor starter Size 3 and larger shall be furnished with a minimum of 4 auxiliary contacts and provisions for adding 2 more. Each overload relay shall have a test trip push-button built-in and an adjustable calibrated trip with indicating dial. Overload relay manual reset shall be dead front door mounted, unbreakable steel operator, with insulated plastic foot for safety.

Control power transformers shall be sized as shown on the plans, minimum size shall be 100VA where not designated. Provide Micron, G.E., Hevi-Duty, or equal.

Time on delay relays for staggered start. Time delay relays are to delay the pump motors from starting upon resumption of service power, such that only one motor can be started at a time. Time delay relays shall be furnished for pump fail indication, set to interface with limit switches and ride through normal starting time.

Ammeters with phase to phase/phase to ground switch shall be provided for each motor. Appropriately sized current transformers shall be installed. Ammeters with switch shall be mounted on the corresponding motor starter MCC cubicle door.

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Phase Monitor shall be added to each motor starter and installed in the MCC cubicle door. Phase Monitor needs to read all three phases for voltage and current and be able to send that information through Modbus to the PLC for future SCADA. Appropriately sized PT's and CT's shall be installed. Provide Electro Industries – Shark 100 or equal.

Nameplates

Nameplates shall be black phenolic with white lettering. Nameplates shall be mounted with stainless steel screws. Glue type will not be acceptable.

Panelboard

Panelboard shall be circuit breaker type custom constructed to utilize minimum enclosure space with breakers as shown on the plans. Circuit breakers shall be bolted on type. The panelboard shall be furnished with phenolic nameplates. The panelboard transformer shall be dry type construction sized as shown on the plans with primary breaker protection. The panelboard transformer shall be a Jefferson, Eaton/Cutler Hammer, Acme or equal.

Indicating Lights

Furnish and install push-to-test lights to indicate status and alarm conditions locally as shown on the plans. Indicating lights shall be U.L. listed, oil-tight devices rated heavy duty. Provide Allen Bradley, Eaton/Cutler Hammer or equal. Engraved roundel phenolic nameplates shall indicate specific function.

Push-Buttons and Selector Switches

Push-buttons, and selector switches, shall be U.L. listed, oil-tight devices rated heavy duty. Provide Allen Bradley, Eaton/Cutler Hammer or equal. Engraved roundel phenolic nameplates shall indicate specific function.

Receptacles, Duplex

Receptacles shall be of specification grade and of NEMA configuration and rated 2 pole, 3 wire grounding, 20 amperes, 125 volts. Contact arrangement shall be such that contact is made on two sides of each inserted blade. Bases shall be of ivory phenolic composition. Wire terminals shall be suitable for 10 AWG wire and shall be screw type. Receptacles shall be UL listed. The receptacles shall have corrosion resistant conducting parts of nickel-plated brass and other metal parts of stainless steel. All external and dead front receptacles shall be installed on ground fault interrupter circuits "GFCI".

Relays, Control

Control relays shall be Potter and Brumfield, IDEC or equal. Two form-C contacts rated at 10 amp minimum shall be provided on each relay. Provide relay with energized neon lamp inside relay case.

Relays, Power Fail

The power fail relay shall continuously monitor the three phases for power loss, low voltage, phase loss, phase reversal and have automatic reset. The power fail monitor shall have a drop-out

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voltage adjustment and a control and automatic contacts failure indicating LED. Auxiliary contacts for control and alarm shall be included. Provide Diversified, or equal.

Relays, Probe

Probe relays shall be provided for functions as shown on plans, i.e. moisture probes, motor over-temperature, etc. The relay shall be specifically designed for monitoring conductivity, and resistance in switching type devices. The unit shall utilize low current (120 micro amps maximum) and low voltage (12 volts d-c maximum). Unit sensitivity shall allow pick-up on circuit closures of 100 K ohms or less. The probe relay shall be a TESCO 72-144, or equal.

Relays, Time Delay

Time delay relays shall be solid state relays with a timer adjustable over the range 1 to 60 seconds unless other ranges are indicated or required. Provide LED relay energized indicator lamp. Time delay relays shall be IDEC, or equal.

Terminal and Distribution Blocks

Terminal blocks shall be furnished and installed in the control panel. Terminal blocks shall be rated at 600V minimum, din rail mounted, nickel plated corrosion resistant. All wires must be terminated on a terminal block with no more than two conductors per terminal. No butt splices or wire nuts allowed. Terminal blocks shall be Allen Bradley, Connectron or equal.

Power distribution blocks shall be furnished and installed in the control panel as required for distribution of the three-phase power distribution blocks shall be Marathon, IlSCO or equal.

PROGRAMMABLE PUMP CONTROLLER (PC)

The PC shall be a microprocessor based unit with capability to accept digital and analog inputs, produce digital and analog outputs, perform local control and data manipulation functions, and perform all other functions required to meet the specified performance and functional requirements of the integrated system. The PC shall be "telemetry ready" for interface directly with a future SCADA System utilizing no other external or peripheral devices. Signal data, setpoints, etc. shall be stored in standardized registers for future SCADA access.

Each controller shall be furnished with all necessary power supplies, processors, memory, process I/O cards, serial communication ports, features etc. to meet its specified functions, requirements and environmental conditions. The pump controller shall contain all of the hardware devices listed below in a single removable integrated unit, and shall be inherently capable of performing all of the features described herein without the need for any additional hardware. The PC's acceptable to be furnished under this contract shall be TESCO L2000 with integral operator interface, or equal. Any proposed PC alternates or substitutions will require approval. Owner reserves the right to reject any or all proposals that are not in the owner's best interest. Owner's decision is final.

The PC shall adhere to the minimum specification requirements. The PC supplier shall submit in detail all information required to establish that the PC meets the minimum requirements set forth

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in the PC specification. The PC supplier shall be prepared to demonstrate all functions specified at the Engineers request. PC's that do not meet the minimum requirements will not be acceptable.

The PC components shall employ a solid-state design. All PC processors and I/O components shall be contained in plug-in modules. Chassis wired logic is not acceptable. The PC and any associated I/O modules shall be removable without disconnecting the I/O wiring.

The PC shall operate correctly under an ambient temperature range of -40 to +200 degrees F without requiring forced air or other special cooling measures. At minimum, each Pump Controller shall be subjected by the manufacturer to a 5 day burn-in procedure at 165 degrees F. Coatings on connectors, component leads, and other materials used in the construction of the PC shall be substantially resistant to atmospheres containing significant amounts of Hydrogen Sulfide gas and Chlorine gas. Each component shall have passed testing and be certified in writing by the manufacturer to be acceptable for use in water treatment and waste water treatment environments.

The PC shall have all of the facilities required to implement the control schemes, I/O and data base shown and specified in the Contract Plans and Documents. PCs shall have floating point math and PID controller modulating capability. The PC shall be guaranteed free from defects for a period of ten years.

Pump Controller Manufacturer

The PC shall be furnished by a manufacturer that has at least 20 years experience manufacturing its own PC's and control systems designed specifically for the water and waste water industry. The PC itself and support for the controller shall be available directly from the manufacturer.

Warranty

The PC manufacturer shall provide a 5 year warranty with the unit. This warranty shall be available in writing directly from the manufacturer before acceptance. The warranty shall provide for direct on-site replacement of the entire PC, complete with the original program and configuration. The replacement controller shall be available within 24 hours, without requiring that the original unit first be removed and returned to the factory.

Telephone Support

The PC manufacturer shall provide telephone support for questions related to any aspect of the controller, including general use, application-specific issues, programming, and use of the programming software. This support shall be available directly from the manufacturer at no extra charge with the purchase of a controller.

PC Hardware

Central Processing Unit (CPU)

The PC CPU shall employ a 32 bit, 16 MHz microprocessor based architecture capable of performing all tasks necessary to perform the specified control functions. It shall be capable of interfacing sufficient discrete inputs, analog inputs, discrete outputs, and analog outputs to meet the specified requirements plus at least 20 percent excess capacity. All PCs shall be provided to

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support and implement closed loop floating point and PID control which is directly integrated into the PC's control program.

Memory

RAM memory shall be (CMOS) semi-conductor memory with 1 year battery backup. The CMOS user programming memory shall be a minimum of 1Mb expandable to 2Mb. The CPU shall be supplied with sufficient memory to implement the specified control functions plus a reserve capacity of 40 percent of the total provided. This reserve capacity shall be totally free from any system use.

ROM memory shall contain the Operating System, Diagnostics, Process I/O, communications and hardware support functions. Sufficient ROM memory shall be supplied to meet all specified requirements.

CPU Fault

The CPU shall provide internal fault analysis with a fail-safe mode and a dry contact output for remote location alarming, and a local indicator on the PC frame in the event of a fault within the PC.

Real Time Clock

The CPU shall employ a real time clock for event time and date stamping. The time and date stamp shall indicate year/month/day/hour/minute/seconds accurate to 1/100 second of the event trigger. The real time clock shall be capable of remote synchronization via the specified communications network. The real time clock accuracy shall be plus/minus one minute/month.

PC Housing and Bus Backplane

The PC CPU, communications, power supply, and I/O modules shall be mounted in a suitable standard housing. Modular housing slots shall be mechanically configurable to prevent insertion of incorrect modules. Each PC system employing modular housing slots shall have a minimum of 3 empty I/O module slots. The PC I/O Bus shall employ a true 16 bit data bus backplane for data transfers between I/O modules and the CPU. Serial Data bus architecture is not acceptable. Project requirements which exceed the minimum rack requirements shall utilize sufficient racks and slots to meet the I/O requirements plus three additional spare slot capacity. Additional racks employing remote I/O processors shall be provided when project I/O exceeds 12 slots.

PC Communications

The PC's shall have multiple onboard communication ports including Ethernet, RS-485 and RS-232 ports. In addition to the required communications ports a dedicated programming and diagnostics port shall be provided for portable programmer access.

Protocol Conversion

In addition to the PC's native communications protocol, software and hardware as required, shall be implemented to employ a communication interface compatible with the existing system. The PC shall be capable of both master or slave RTU communications.

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Power Supply

The PC power supply shall be sized to power all modules mounted in that housing and an "average module load" for any empty housing slots plus 60 percent above that total. The power supply input voltage shall be compatible with the battery back-up system. The programmable controller and its associated communications devices shall be battery backed up for a period of eight hours.

PC Input/Output (I/O) Modules

All integral I/O housings or modules shall be suitable for hostile industrial environments as described. All I/O modules shall be isolated and conform to IEEE Surge Withstand Standards and NEMA Noise Immunity Standards. I/O shall be removable without having to disconnect wiring from the module's terminals by means of a swing-arm or plug-in wiring connector. Sufficient I/O shall be provided to meet the specified requirements plus 20 percent spare capacity.

Discrete Inputs

Discrete inputs defined as contact closure inputs from devices external to the PC module. Individual inputs shall be optically isolated from low energy common mode transients to 1500 volts peak from users wiring or other I/O Modules. The inputs shall have LED's to indicate status of each discrete input. Signal levels shall be 24 VDC or 120 VAC.

Discrete Outputs:

Discrete Outputs defined as contact closure output for ON/OFF operation of devices external to the PC module. The output modules shall be optically isolated from inductively generated, normal mode and low energy, common mode transients to 1500 volts peak. All outputs shall have LED's to indicate status of each output point. Output contact rating shall be 2A minimum, with a momentary surge rating of at least 20A at 120 VAC.

Analog Inputs

Analog inputs shall accept both 4 to 20 mA and 0 - 5 Volt DC signals, where an analog to digital conversion is performed with a minimum of 12-bit precision and the digital result is entered into the processor. The analog to digital conversion shall be updated with each scan of the processor. Analog input modules shall have a minimum of eight differential inputs each.

Analog Outputs

Analog outputs shall be 4 to 20 mA DC output signals where each output circuit performs a digital to analog conversion with each scan of the processor. Each analog output module shall have four isolated output points which shall be rated for loads of up to 1200 ohms.

Operator Interface

An integral operator display and keypad shall be provided to allow operator monitoring and control functions. The operator shall be capable of viewing all internal registers and status flags via a menu driven format without programming. The operator interface shall be configured to provide the following minimum display and control functions:

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Analog Variable Displays

All analog variable registers shall be displayed in engineering units utilizing real numbers with a two decimal precision. All supplied analog inputs including spares shall be preconfigured and calibrated for use by merely wiring the input to the PC input card. Each analog input shall be scalable from the operator interface and preconfigured with High and Low alarm setpoints. All analog variables shall be configured with out of range failure alarms.

Setpoint Displays

All setpoints shall be accessible by the operator for display and modification. Setpoints shall be displayed in engineering units utilizing real numbers with two decimal precision. The operator interface shall employ password protection such that setpoint variables may not be altered without a valid password entry. A numeric keypad shall be provided for direct numerical entry of setpoint values.

Status Displays

All status registers DI and DO shall be displayed continuously and simultaneously identifying the variable name with up to 25 characters and the On/Off condition of the variable.

Alarm Handling and Display

Alarms shall be displayed utilizing a standard ISA sequence for indication and acknowledgment functions. The display shall flash the alarm condition on the current screen or via an LED bar segment until acknowledged with a valid password. Upon acknowledgment the alarm shall go to steady state until reset.

Macro/Function Keys

The operator keypad shall employ a minimum of four macro/function keys. The operator shall be capable of utilizing the macro/function keys to invoke control changes or view commonly accessed data. Macro keys shall be provided for Alarm Acknowledge, Level Input test, Setpoint Configuration and Reactive Air Level Monitoring System Manual Purge.

Timer and Counter Displays

All timers and counters shall be displayed identifying the timer value and timer activity (i.e. timing, not timing)

PC Diagnostics

The operator interface shall employ the means to run diagnostic programs which at a minimum shall verify and detect memory errors, program configuration errors, and communications hardware errors. The Operator Interface shall continuously display the communications traffic transmit and receive status of the PC identifying source address, destination address and message type. The communications status failed/normal shall be continuously displayed.

PC Calibration

The operator interface shall provide the means to test and calibrate analog inputs and outputs in engineering units. The operator shall be capable of calibrating all analog I/O including spares on-line.

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Bar Graph Displays

The operator interface shall support a minimum of four Bar Graph Displays. Bar Graphs shall be configured for Wet Well Level. The barographs shall utilize a bank of 60 high brilliance LED's at a minimum of six inches in height.

Operator Keypad

The keypad shall utilize a sealed membrane overlay employing tactile feedback for positive verification the key has been depressed. The keypad and display shall be impervious to corrosive gases such as those typically found in wastewater applications. The keypad shall support a minimum of 8 keys including arrow control keys for full function menu selection and macro keys.

PC Programming Software

The PC shall be programmed utilizing the PC manufacturers PC programming development software. Two copies of programming development software shall be provided to owner. The development software shall be Microsoft Windows/Windows 95 compatible. The development software shall be provided with the minimum functionality:

PC Programming and Debugging

PC Diagnostics

Program Upload and Download

On-line Communications Monitoring and Diagnostics

Analog Input and Output Calibration

On-line Variable Test Mode (allow user to fix register values on-line)

The PC shall be programmed to meet the functional control requirements specified. In addition to the specified control programming the PC shall be capable of implementing the following control functions without additional software or hardware:

Array Logging

The PC software shall be capable of logging register variables to an array with time and date stamping to 10ms resolution. The arrays shall be configured to allow the user to establish the register to be logged, event condition to begin and end logging, size of the array, logging rate and rollover conditions for a minimum of 10 variables. The user shall select the compression rate for min/max and average in minutes or hours.

Array Retrieval

The arrays shall be retrievable via the programming software and formatted in file accessible by standard windows spreadsheet and database software packages. At a minimum the array file shall be directly accessible via Excel.

Analog Input Filtering

All analog inputs shall be filtered by an adjustable software first order lag filter. The filter constant shall be tunable via a setpoint displayed on the specified Operator Interface.

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Unsolicited Messaging

The PC shall be capable of transmitting information without a poll request for peer-to-peer and quiescent communications. Data shall be transmitted based on user definable parameters for elapsed time, event trigger or differential change in analog value individually for each variable.

Approval of an alternate PC to that of the L2000 does relieve the supplier from meeting all functions supplied with the L2000 Programmable Controller. The functions to be met by the alternative PC shall be at the user's discretion.

Pump Controller Functions

Pump Level Control and Alarms

Start and stop of the storm water lift station pumps shall be controlled by the level in the wet well. There shall be an individually adjustable setpoint for each pump start and stop function. The pump start sequence shall be automatically alternated, with alternation on a first on/first off, first off/first on basis. If a pump fails to start, the next pump in sequence is started. High and low wet well alarms and transducer out of range alarms shall also be furnished. The contractor shall coordinate the pump cycle control scheme with the pump on/off settings as detailed in the provided as-built drawings (Sheet 9 – "Float Switch Details"). Any necessary adjustments to these settings will be determined in the field.

Pump Run and Fail

When a pump is called to run, either through the local hand switch or automatic pump control, a pump run signal shall be generated. If flow is not sensed within an adjustable time period, a pump fail alarm shall be generated.

Bubbler Purge

The Pump Controller shall automatically purge the reactive bell at an operator adjustable time and duration intervals. A manual purge push-button shall be installed to provide the operator capability to manually purge the level monitoring system. Bubbler compressor shall carry a written 10 year warranty.

Common Alarm

The Pump Controller shall activate the common alarm beacon on occurrence of alarms.

Station Flow

The Pump Controller shall have an operator adjustable algorithm which calculates pump station effluent flow based upon level and level rate of change. The software module requires specific pump curve data (10 to 100 points), typically reflected in feet-of-head versus gallons-per-minute. The Pump Controller converts the points into pounds-per-square-inch for precise flow calculations. An additional "wear offset" value(s) shall also be provided to the module for automatic pump output compensation due to physical wear versus periodic changing of data points.

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Battery Backup

Battery back up system shall correctly sized to power the Pump Controller, radio and I/O system for a minimum of 8 hours. Batteries shall be sealed gel cell type lead acid.

Reactive Air Level Monitor System

The contractor shall remove and properly dispose of all materials associated with the existing ultrasonic level sensing system. The ultrasonic level sensing system shall be replaced by a reactive air system as described below.

The level monitoring shall be by a Reactive Air System consisting of an air compressor, compression bell, 3-way solenoid valve, and level transducer. The level transducer senses the back pressure of the static air column set up in the compression bell that is periodically replenished by the purge air compressor. The compression bell shall be designed with high strength non-corrosive plastics and shaped to provide a resistance to buildup of foreign material. The specially designed programmed multi-cycle cleaning system shall prevent the compression bell from plugging while minimizing compressor run time. The reactive air control shall also provide a means of manually actuating the purging cycle when immediate purging and cleaning is necessary. Compressors shall start against a 250 psi head and shall carry a written 10 year warranty.

Float Switch Backup Control System

Provide float switches, stainless steel mounting bracket, mercury switch contact not affected by rotation of float about longitudinal axes, and type 50, neoprene jacket control cable to reach control panel for low level/high level alarm status as a backup for reactive air system and PC level control. The power applied to the level sensors shall be a maximum of 24 VAC with a current of less than 30 mA for intrinsic safety. Electrical connections of sensor leads and signal conditioning shall be in conformance with NEC requirements for intrinsic safety.

Gas Monitoring System

The equipment shall be a fixed monitor, operating at all times. Must have alarms to alert workers to dangerous situations as specified, have the capability to start a ventilation blower when concentrations are too high/low, and activate an alarm in another part of the pump station. When the personnel entrance door is in the open position, an audible alarm shall notify workers to dangerous situations. This function shall be disabled when the entrance door is in the closed position. Readings shall be accurate within 10% error. Provide sensors to detect combustibles (LEL), and 3 gases (oxygen (O₂), carbon monoxide (CO), hydrogen sulfide (H₂S)). The unit should collect readings, data-logging, with on-board storage of up to 90 hours of survey data at one-minute intervals with downloading into a Windows based software platform.

Gas detection systems will consist of individual modules that can be located where required (sump level and control panel level). Sensor transmitters shall be furnished in NEMA 4X enclosures.

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Panel display of LED's indicating the status of each alarm, solid red (marked "Warning Alarm"), yellow (for unit failure) and solid green (marked "Entry OK") shall be located outside, at the entrance door to provide visual notification of alarms. A magnetic security door lock shall engage when levels are out of range and considered unsafe for entry ("Warning Alarm"), and disengaged for entry (Entry OK).

Waterproof, weather-tight housing, NEMA 4X enclosures, aluminum or stainless steel

Location A: Sump level of the pump station (southwest corner)
Location B: Control panel level (near control panel) of the pump station
Furnish required shielded cable from sensors to PLC
RS232 or 4-20 mA adjustable outputs

Technical Specifications:
Accuracy: $\pm 10\%$
Supply Voltage: 24 VDC
Temperature: 0° to 140° F
Enclosure Rating: NEMA 4X

Magnetic Door Lock

Provide a grade 3 magnetic door lock on the pump station entrance door. Lock shall be capable of a minimum of 500 pounds of holding force. Lock shall be integrated with the controls for energizing/de-energizing and integrated with the outdoor LED indicator.

Pump Control Panel Manufacturer

In order to assume electrical and control system responsibility, the above specified pump control panels shall be furnished completely wired, including all interlocking between motor control, accessory devices, and level systems. In addition to other submitted data, the successful vendor shall submit complete wiring ladder diagrams for approval. All pump control panels furnished for this project shall be of the same manufacturer.

Training

Contractor shall provide the services of a factory-authorized service representative to demonstrate the system and train the owner's maintenance personnel. Personnel shall be trained in the procedures and schedules involved in operating, troubleshooting, servicing, and preventive maintaining of the system. Provide a minimum of 8 hours' training. The contractor shall also furnish four (4) sets of operation and maintenance manuals for the owner's operating personnel.

Warranty

Pump control panel components shall carry a full one (1) year replacement warranty. Programmable pump controller (PC) shall carry a five (5) year replacement warranty.

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Spare Parts

The pump control panel manufacturer shall furnish a complete set of recommended spare parts necessary for the first five (5) years of operation, which shall include at least the following:

- 1 - relay for each type required, mounted in the pump control panel
- 1 - spare set of N.O. contacts on each motor Starter
- 1 - spare 20A circuit breaker mounted in the pump control panel
- 1 - contactor coil and one set of power contacts for each size used.

Loose spare parts shall be properly bound and labeled for easy identifications without opening the packaging and suitability protected for long storage.

**SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM SPECIFICATIONS
(SCADA)**

Demolition of Existing SCADA System Equipment

The contractor shall remove and dispose of all equipment associated with the existing SCADA System, unless otherwise directed by the Project Engineer.

Scope of Work

The SCADA (Supervisory Control And Data Acquisition) monitoring system shall consist of a Remote Terminal Unit (RTU) located at the Pontchartrain Pumping Station, which will have the capability to communicate monitored data to a host PC located at the LADOTD, Bridge City office. The system shall allow control of all functions of equipment listed at the Pump Station from the host PC, telephone, secure web site, or at the Pump Station Touchscreen.

The SCADA system shall also post an interactive web page to the internet/intranet so that any computer with internet/intranet access may view certain data, and password protected access is available for controls and non-public data.

General Requirements

Integrator must have experience in the water and wastewater markets integrating Motor Controls, Instrumentation, PLC's, Telemetry and SCADA Systems including knowledge and experience on how they interrelate with one another as a whole. Integrator must have been in business for at least 25 years under the same name of business performing/implementing the same type of integrated systems in these markets as well as being a certified UL shop with certifications under UL-891 and UL-508 as a minimum.

The integrator shall assume responsibility for the performance of the complete integrated control system. The integrator shall perform a factory test as a complete integrated package prior to shipment at the manufacture place of business. Startup and testing services shall be performed by ISA certified technicians experienced in the above-mentioned areas. The integrator must also be CSIA certified with current certification.

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SCADA System

The Supervisory Control and Data Acquisition (SCADA) system shall be a Networked Single SCADA Server system with separate Historical Data Base Server (HDS), (as shown on the contract plans). The latest version of Wonderware InTouch SCADA software running on Windows XP Professional and the latest version of Wonderware SQL software running on Windows 2003 Server shall be used, communicating over a radio base telemetry link and using Thin-Client access for remote nodes and laptops. The central computer software shall provide the user interface to perform all graphic display presentation, alarm reporting and shall do all background tasks such as report generation, data archiving, and data base maintenance. The SCADA system shall integrate OPC technology to communicate directly with the Programmable Controllers, supporting the controller's native communications protocol, to take full advantage of its capabilities.

The SCADA System Integrator shall install, ready for use, the computer hardware and software system. The system shall be calibrated, tested, programmed and in all aspects setup such that operators of average competence can operate the system after the specified training without the need for SCADA System Integrator assistance. This document describes the function and operation of the system and particular components, but does not necessarily describe all required devices. All components and devices shall be furnished and installed as required to provide a complete operable and reliable system for accomplishing the functions specified herein and meeting the performance standards set forth hereinafter.

SCADA Configuration

The Supervisory Control and Data Acquisition (SCADA) system shall be a Networked System. The SCADA system shall communicate to the field RTU's over a radio communication network. Wonderware InTouch Thin-Client software shall be utilized for remote SCADA access for networked nodes and laptops. The SCADA system communications driver shall utilize the field RTU's native protocol, Data Express Plus, to communicate directly with the programmable controllers. This strategy allows the system to take full advantage of the PLC's built-in communications functions. All RTU and SCADA alarm setpoints, control setpoints, timer settings, and PID settings shall be selectable from the SCADA system screen.

Communications Methods

The system shall be able to communicate data, alarms and other status information using the following methods: Primary communication shall be through wireless radio transmission to the tower at DOTD District 02 Headquarters (1440 Hwy 90, Bridge City, LA 70094). An intermediate communications tower may need to be installed or located. An available tower for intermediate communications is located at State Police Troop B Headquarters (102 Veterans Boulevard, New Orleans, LA 70124). In the event of primary communication failure, secondary communication shall be with telephone dial up through existing standard line.

Screens

Each physical RTU site under this contract shall receive a graphical depiction on the SCADA system encompassing each of the field parameters that are being monitored. Graphical depiction shall include a rendering of the site, including all pertinent physical items such as pumps, tanks,

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meters, etc. Analog values shall be displayed in engineering units. Status points shall be displayed as ON/OFF and color coded per the OWNER'S requirements. Each site screen shall be accessible from the main overview screen via point-and-click functionality built into the overview screen. Other screen types shall be Communications Status, Alarm Summary, Runtime Manager, Trends.

Reports

Process data reports shall consist of Min., Max., and Average values on an hourly, daily, weekly, monthly basis for all pertinent analog values at each site. Totalized flow data where applicable per site, shall be archived in the SCADA system's historical database and displayed in printed report format. Mechanical / maintenance data such as pump run time and number of starts shall also be archived in the historical database and displayed in printed report format.

Trends

Analog points shall be trended on an independent trend screen per site. Historical and real-time trends shall be provided for each analog point. Each variable per screen shall be color coded independently from the other "pen" lines on the graph. The operator shall be able to zoom in and zoom out on any part of the trend for ease of reading. A cursor function shall be included which allows the operator to select a given point on the trend and receive information on the value of the trend at that point. The operator shall be given the ability to scroll forward and backward through the allotted time on any given trend by the day and by the hour.

Alarms

SCADA alarming software shall be configured for notification of field, communications, and system alarms. Alarm notification software shall be SCADAAlarm by Wonderware, Inc. Provide high, low, instrument fail and mechanical malfunction alarms for all analog points in the system. Provide communications fail alarms. Whenever an analog point exceeds its associated alarm limit, or discreet point changes to an alarm state, an alarm message shall be printed on the alarm printer and stored to the historical database. The alarm message shall include, time, date, tag number, and alarm status. When the operator acknowledges alarms, the alarm message shall be stored to the database and printed again. When the alarm point returns to its normal range, the alarm message shall be printed and stored to the database.

Communications

Communications status shall be provided on each SCS display for each RTU that is associated with the points on the active display. Communications status for all RTU's shall be provided on an overview screen. Provide trends for each RTU-SCS communications link and communication alarms for each SCS-RTU communications link. Communications system diagnostic capabilities shall be provided via radio diagnostics software resident in the master radio and remotes. Diagnostic functions shall include: power output, signal strength, deviation, frequency and voltage measurements.

System Database

All field data collected by the new SCADA server, as well as second-order-derived data, shall be stored to a central data repository that resides on the Ethernet network. This central data repository shall be a dedicated historical database server Wonderware Industrial SQL Server.

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This architecture is reserved for applications where data volume is large enough to warrant dedicated data handling - to avoid impedance of the SCADA server in its system control and data collection tasks.

All access to the historical database, regardless of its location, shall be password protected. Access to the server upon which the data is maintained is denied without the proper password and PIN number. Access to the data itself shall be protected with another layer of password protection. Protection of data from intentional outside intervention shall be fairly easy to maintain. No one shall be given write access to the database engine except for those authorized in very unusual maintenance circumstance.

Historical data integrity shall be maintained by archiving each day's, week's and month's data onto one or more storage media. The primary virtue of SCADA system data backup shall be the retention of historical information. This historical data shall be accessible to generate detailed reports on production, energy usage, water quality etc. The data for those reports shall be made available on a type of storage medium that will deliver easy, fast, non-sequential data access. For efficient facilitation of data retrieval, 1 year's worth of data shall be inquired readily available on the hard drive. A 20/40-gigabyte tape backup system will store data for ultimate permanent backup of complete system.

The Historical Database Server (HDS) shall consist of all necessary hardware and software components required to complete the entire SCADA database application. The HDS shall serve as the primary central SCADA data repository for all analog, digital, and event information collected by the SCADA Servers.

The HDS Hardware and Software supplied shall be sufficient to satisfactorily execute the database application. The database application shall perform several functions automatically. These functions are as follows:

Automatic data replication

Automatic data compression w/ generation of min., max., and avg. data tables for every analog variable collected.

Automatic data synchronization

Automatic data links to Microsoft's Access and Excel

The HDS shall integrate seamlessly with the SCADA Server. The Wonderware SCADA application software shall have the ability to log all data and events directly to the HDS system without requiring conversions of any kind. The database application shall monitor the LAN and/or WAN connections between the actual SCADA Servers and the HDS system. Each of the SCADA Servers shall have the MS-SQL Server application installed and fully operational. In the event that the LAN connection is lost between the primary SCADA Server and the HDS system, the SCADA server shall log data locally on its local HDD. As soon as the connection is reestablished, the HDS system shall execute VBA that will handle all database synchronization automatically.

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A front-end GUI application shall be supplied to allow the operators direct access to all of the database application data. This GUI shall provide a complete set of automated scripts and stored procedures that allow MS-Access and Excel direct and automated access to the SQL database engine. Programmable function blocks shall be supplied that automatically insert data arrays into a MS-Access or Excel application. These data arrays shall consist of the analog points in the compressed SQL data tables. The GUI shall also allow direct and seamless interface between the analog trending package and the SQL database engine.

The entire HDS application software shall consist of Windows 2003 Server, SQL Server, VBA scripts, stored procedures, Excel macros, Access Basic, and an integrated RDBMS Enterprise Backup System that is fully compatible with the latest version of Wonderware InTouch software.

SCADA System - Monitored Components

Alarms and polled data shall be transmitted, collected and stored, from the listed locations:

User Identification, event log passwords	
Entrance door open/closed (o/-)	Sump level air gases (O ₂ , CO)*
Battery backup (voltage)*	Control floor level air gases (O ₂ , CO)*
Wind Speed (mile per hour)*	Generator/Shore power (o/-)
Wind Direction (degrees)*	Generator output (volts)*
Rainfall quantity (inches)*	Generator fuel level (gallons)*
Water level in sump (feet)*	Ventilation fan motor (o/-)
Pump 1 – motor electrical, current (amps)*, line voltage (volts)*	
Pump 1 – discharge (gallons per minute)*	
Pump 2 – motor electrical, current (amps)*, line voltage (volts)*	
Pump 2 – discharge (gallons per minute)*	
Pump 3 – motor electrical, current (amps)*, line voltage (volts)*	
Pump 3 – discharge (gallons per minute)*	
Pump A – motor electrical, current (amps)*, line voltage (volts)*	
Pump B – motor electrical, current (amps)*, line voltage (volts)*	
Pump A or B – discharge (gallons per minute)* (from portable unit)	

(o/-) dry contact
* variable output

SCADA System - Controllable Components

The following components shall be capable of being operated with password access, from the host computer, web accessible computers, Touchscreen display at the Pump Station, and/or via telephone:

Location 1: Pump “1” motor, off/on

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Location 2: Pump "2" motor, off/on
Location 3: Pump "3" motor, off/on
Location 4: Pump "A" motor, off/on
Location 5: Pump "B" motor, off/on
Location 6: Ventilation Fan motor, off/on
Location 7: Generator Power, off/on
Location 8: Magnetic door lock, lock/unlock

SCADA System Integrator Supplied Services

Installation

The SCADA System Integrator shall be responsible for final connection of all computer and computer peripheral equipment that would not normally fall within the capabilities of electricians. The SCADA System Integrator shall be available to review installation of all SCADA System Integrator equipment, such as computers, that require delicate handling. All software shall be installed and configured by the SCADA System Integrator.

Startup

The SCADA System Integrator shall be present when the system is brought on-line to correct any hardware, software, or control strategy problems. Personnel present at the start-up shall have the knowledge to diagnose and correct anticipated start-up problems. The SCADA System Integrator shall provide at least 10 days of on-site start-up time by qualified personnel, or until system is operating properly.

Factory Test and Testing

All field electronic components of the instrumentation system shall be thoroughly tested and burned in by the SCADA System Integrator or manufacturer before shipment. All components and remote programmable controllers except for the central computer and peripherals shall be subjected to an elevated temperature test of 165° F while under power for at least 120 hours continuously. Any components or remote programmable controllers that exhibit erroneous behavior shall be repaired and re-tested before shipment.

The SCADA System Integrator shall conduct a factory test of the complete system to be witnessed by the Engineer and/or the End User, at the witness' option, prior to shipment to the job site. The equipment shall not be shipped to the job site unless written notice to ship is received from the Engineer.

Final field testing of system shall include a 30-day acceptance test. The system shall be operated by owner personnel and used to perform the functions described herein. The system will not be accepted unless the system functions as specified, and without failure, to the satisfaction of the Engineer

Training

The SCADA System Integrator shall provide training of system engineering, operations, and maintenance personnel. The training shall consist of the following sessions:

Plant operations (system exercise)
Maintenance and calibration
Engineering system modification

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Programming

Training shall be administered on site using the delivered system in real time situations.

Maintenance and Service

The SCADA System software, components, and peripherals supplied shall be warranted for a 1-year period after final implementation and acceptance. The SCADA System Integrator shall have a staff of experienced personnel available to provide service on 24-hour notice. Such personnel shall be capable of fully testing and diagnosing the hardware and software delivered and of implementing corrective measures. The SCADA System Integrator shall, as a standard provision, make available extended maintenance and warranty agreements subsequent to expiration of the warranty period specified.

INDUSTRIAL ALARM PROCESSOR SPECIFICATIONS

The contractor shall provide and install an alarm processor which meets the following minimum specifications. The industrial alarm processor shall serve as a backup notification system to the SCADA system. Industrial alarm processor shall be Zetron 1550 or approved equal.

Inputs/Outputs

- 16 discrete input/outputs, expandable to 64 & 8 analog inputs

Voice Capacity

- 1 min. of prerecorded messages & 1 min. user recordable voice standard
- 3 minutes optional voice storage with up to 100 user recordable messages

Communication Interfaces

- PSTN telephone interface standard_expandable to two telephone lines
- Radio interface standard

Programming Interfaces

- Front panel keypad and display
- RS-232 port via easy to use PC configuration software
- DTMF compatible radio
- PSTN phone

Enclosure

- NEMA 4X fiberglass/polyester

Approvals

- FCC part 15 and part 68
- Industry Canada

Communication Specifications

Zetron 1550, or approved equal.

Radio Interface

- PTT, COR, flat RXAUD & ground
- Input levels from 20mV to 3Vpp
- Input impedance > 30Kohms at 1KHz
- Output level 3Vpp maximum with 10K load
- Output impedance < 1Kohm at 1KHz
- Flat audio in and flat audio out

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- COR adjustable from .1 to 4.5VDC
- PTT output relay to ground
- < 300mA max, NO or NC position
- DTMF signaling capable
- DTMF signal: 100msec on/100msec off

Telephone Interface

- 2-wire (Tip/Ring) RJ11 connector
- Ringer equivalents .45B
- Automatic line seizure
- Maximum voice power output to PSTN, -10dBm
- DTMF power output to PSTN, -1dBm max
- DTMF signal: 100msec on/100msec off
- Tone or pulse dialing

RS-232 Interface

- Tx, Rx & ground (Zetron or PC compatible)
- 4800 baud
- 8 bit with one stop bit and no parity TTY
- No hardware or software flow control

Electrical Specifications

Limits

- 45VDC max input into any input

Discrete Input Levels

- < 0.8V low, > 2V high

Discrete Outputs

- Open collector type
- 100mA typical sink current
- 45VDC max collector voltage

Analog Input Levels

- 0-5V or 4-20mA
- 20mV or 80uA resolution

Battery

- 12V, 7-amp-hr, lead-acid gel-cell

Charger

- 500mA float charge, 2amp max fast charge
- Short circuit protected, low battery voltage cutoff

AC Power

- 115VAC, 0.8-amp typical (20-amp in rush current)

DC Power

- 12W max at 13.8VDC

Physical Specifications

Size

- 15.5" x 13.4" x 6.5"

Inside radio or cellphone space

- 10" x 7" x 3"

**STATE PROJECT NO. 450-90-0210
OTHER SPECIFICATIONS**

Weight

- < 22 lbs.

Temperature

- Operating 0-60°C without battery and charger
- 0-40°C with battery and charger

Options

- Expansion modules 16 input/output (limit of 3)
- Real-time clock/printer
- 1 minute of user programmable voice storage
(limit of 4 minutes)
- 2nd PSTN line
- Radio cable for Motorola RNET radio
- Radio cable for Motorola Radius radios
- Paging option: 2-tone, POCSAG through radio and TAP/
IXO for phone
- DeadBolt Phone Line Lighting Arrestor
- International power supply

**STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND
DEVELOPMENT**



**CONSTRUCTION PROPOSAL
RETURNABLES
FOR**

**FEDERAL AID PROJECT
ER-ERP1(028)**

**STATE PROJECT NO. 450-90-0210
PONTCHARTRAIN PUMP STATION
REPAIRS DUE TO HURRICANE KATRINA
ROUTE: I-10
ORLEANS PARISH**

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
 SCHEDULE OF ITEMS

LEAD PROJECT: 450-90-0210
 OTHER PROJECTS:

DATE: 02/20/08 12:44 PAGE: 1

ITEM NUMBER	APPROXIMATE QUANTITY	UNIT OF MEASURE	PAY ITEM UNIT PRICE (IN WORDS, INK OR TYPED)
S-001	LUMP	LUMP SUM	RESTORATION OF ELECTRIC SERVICE _____ DOLLARS _____ CENTS
S-002	LUMP	LUMP SUM	PUMP STATION BUILDING MISCELLANEOUS REPAIRS _____ DOLLARS _____ CENTS
S-003	LUMP	LUMP SUM	PROVIDE AND INSTALL NEW DIESEL GENERATOR AND AUTOMATIC TRANSFER SWITCH _____ DOLLARS _____ CENTS
S-004	LUMP	LUMP SUM	CONSTRUCTION OF NEW GENERATOR BUILDING _____ DOLLARS _____ CENTS
S-005	LUMP	LUMP SUM	REPAIR THREE (3) EXISTING 24" PUMPS _____ DOLLARS _____ CENTS
S-006	LUMP	LUMP SUM	REPAIR TWO (2) EXISTING 10" PUMPS _____ DOLLARS _____ CENTS

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
 SCHEDULE OF ITEMS

LEAD PROJECT: 450-90-0210
 OTHER PROJECTS:

DATE: 02/20/08 12:44 PAGE: 2

ITEM NUMBER	APPROXIMATE QUANTITY	UNIT OF MEASURE	PAY ITEM UNIT PRICE (IN WORDS, INK OR TYPED)
S-007	LUMP	LUMP SUM	REPAIR ALL EXISTING GATE AND CHECK VALVES _____ DOLLARS _____ CENTS
S-008	LUMP	LUMP SUM	REPAIR THREE (3) EXISTING 150 HP PUMP MOTORS _____ DOLLARS _____ CENTS
S-009	LUMP	LUMP SUM	REPAIR TWO (2) EXISTING 20 HP PUMP MOTORS _____ DOLLARS _____ CENTS
S-010	LUMP	LUMP SUM	REPLACE EXISTING MOTOR CONTROL CENTER AND MAIN SWITCHBOARD _____ DOLLARS _____ CENTS
S-011	LUMP	LUMP SUM	REPLACEMENT OF SCADA SYSTEM _____ DOLLARS _____ CENTS
S-012	LUMP	LUMP SUM	PROVIDE AND INSTALL INDUSTRIAL ALARM PROCESSOR _____ DOLLARS _____ CENTS

BID BOND

A Bid Bond is required when the bidder's total bid amount as calculated by the Department in accordance with Subsection 103.01 is greater than \$50,000. *(See Section 102 of the Project Specifications.)*

_____, as Principal
(Bidder) _____ and
_____, as Surety,
are bound unto the State of Louisiana, Department of Transportation and Development, (hereinafter called the Department) in the sum of five percent (5%) of the bidder's total bid amount as calculated by the Department for payment, of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, as solidary obligors.

Signed and sealed this _____ day of _____, 20_____.

The condition of this obligation is such that, whereas the Principal has submitted a bid to the Department on a contract for the construction of **STATE PROJECT NO. 450-90-0210, FEDERAL PROJECT NO. ER-ERPI(028), PONTCHARTRAIN PUMP STATION REPAIRS DUE TO HURRICANE KATRINA**, if the bid is accepted and the Principal, within the specified time, enters into the contract in writing and gives bond with Surety acceptable to the Department for payment and performance of said contract, this obligation shall be void; otherwise to remain in effect.

Principal (Bidder or First Partner to Joint Venture)
By _____
Authorized Officer-Owner-Partner

Typed or Printed Name

If a Joint Venture, Second Partner
By _____
Authorized Officer-Owner-Partner

Typed or Printed Name

Surety
By _____ (Seal)
Agent or Attorney-in-Fact

Typed or Printed Name

To receive a copy of the contract and subsequent correspondence / communication from LA DOTD, with respect to the bid bonds, the following information must be provided:

Bonding Agency or Company Name

Address

Agent or Representative

Phone Number / Fax Number

07/07
Form CS-2A

K-1
FOR INFORMATION ONLY

CONSTRUCTION PROPOSAL SIGNATURE AND EXECUTION FORM

THIS FORM, THE SCHEDULE OF ITEMS, AND THE PROPOSAL GUARANTY MUST BE COMPLETED AS INDICATED AND SUBMITTED TO THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (DOTD) TO CONSTITUTE A VALID BID

STATE PROJECT NO(S). 450-90-0210

FEDERAL AID PROJECT NO(S). ER-ERP1(028)

NAME OF PROJECT PONTCHARTRAIN PUMP STATION REPAIRS DUE TO HURRICANE KATRINA

I (WE) HEREBY CERTIFY THAT I (WE) HAVE CAREFULLY EXAMINED THE PROPOSAL, PLANS AND SPECIFICATIONS, INCLUDING ANY AND ALL ADDENDA, AND THE SITE OF THE ABOVE PROJECT AND AM (ARE) FULLY COGNIZANT OF ALL PROPOSAL DOCUMENTS, THE MASTER COPY OF WHICH IS ON FILE AT DOTD HEADQUARTERS IN BATON ROUGE, LA., AND ALL WORK, MATERIALS AND LABOR REQUIRED THEREIN, AND AGREE TO PERFORM ALL WORK, AND SUPPLY ALL NECESSARY MATERIALS AND LABOR REQUIRED FOR SUCCESSFUL AND TIMELY COMPLETION OF THE ABOVE PROJECT AND TO ACCEPT THE SUMMATION OF THE PRODUCTS OF THE UNIT PRICES BID ON THE SCHEDULE OF ITEMS ATTACHED HERETO AND MADE A PART HEREOF MULTIPLIED BY THE ACTUAL QUANTITY OF UNIT OF MEASURE PERFORMED FOR EACH ITEM, AS AUDITED BY DOTD, AS FULL AND FINAL PAYMENT FOR ALL WORK, LABOR AND MATERIALS NECESSARY TO COMPLETE THE ABOVE PROJECT, SUBJECT TO INCREASE ONLY FOR PLAN CHANGES (CHANGE ORDERS) APPROVED BY THE DOTD CHIEF ENGINEER OR HIS DESIGNEE. THIS BID IS SUBMITTED IN ACCORDANCE WITH THE GENERAL BIDDING REQUIREMENTS IN THE CONSTRUCTION PROPOSAL AND ALL SPECIAL PROVISIONS, PLANS, SUPPLEMENTAL SPECIFICATIONS, AND THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES (2006 EDITION). I (WE) UNDERSTAND THAT THE SUMMATION OF THE PRODUCTS OF THE UNIT PRICES BID ON THE SCHEDULE OF ITEMS MULTIPLIED BY THE ESTIMATED QUANTITY OF UNIT OF MEASURE FOR EACH ITEM, ALONG WITH ANY OTHER FACTORS SPECIFIED TO BE APPLICABLE SUCH AS CONSTRUCTION TIME AND/OR LANE RENTAL, SHALL BE THE BASIS FOR THE COMPARISON OF BIDS. I (WE) UNDERSTAND THAT THE SCHEDULE OF ITEMS MUST CONTAIN UNIT PRICES WRITTEN OUT IN WORDS AND THAT THE SCHEDULE OF ITEMS SUBMITTED AS PART OF THIS BID IS ON THE FORM SUPPLIED BY DOTD IN THE BID PROPOSAL. MY (OUR) PROPOSAL GUARANTY IN THE AMOUNT SPECIFIED FOR THE PROJECT IS ATTACHED HERETO AS EVIDENCE OF MY (OUR) GOOD FAITH TO BE FORFEITED IF THIS BID IS ACCEPTED BY DOTD AND I (WE) FAIL TO COMPLY WITH ANY REQUIREMENT NECESSARY FOR AWARD AND EXECUTION OF THE CONTRACT, AS WELL AS, SIGN AND DELIVER THE CONTRACT AND PAYMENT/PERFORMANCE/RETAINAGE BOND AS REQUIRED IN THE SPECIFICATIONS.

NONCOLLUSION DECLARATION (APPLICABLE TO FEDERAL-AID PROJECTS)

I (WE) DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND THE STATE OF LOUISIANA THAT I (WE) HAVE NOT DIRECTLY OR INDIRECTLY, ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THE CONTRACT FOR THIS PROJECT NOR VIOLATED LA. R.S. 48:254.

BIDDER'S DBE GOAL STATEMENT (APPLICABLE TO DBE GOAL PROJECTS)

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS A DISADVANTAGED BUSINESS ENTERPRISE (DBE) GOAL PROJECT IN ACCORDANCE WITH THE DBE PROVISIONS OF THIS CONTRACT, THE BIDDER ASSURES DOTD THAT HE/SHE WILL MEET OR EXCEED THE DBE CONTRACT GOAL, OR IF THE BIDDER CANNOT MEET THE REQUIRED DBE GOAL, THE BIDDER ASSURES DOTD THAT HE/SHE HAS MADE AND CAN DOCUMENT GOOD FAITH EFFORTS MADE TOWARDS MEETING THE GOAL REQUIREMENT IN ACCORDANCE WITH THE CONTRACT AND DBE PROGRAM MANUAL INCORPORATED HEREIN BY REFERENCE.

THE APPARENT LOW BIDDER SHALL COMPLETE AND SUBMIT TO THE DOTD COMPLIANCE PROGRAMS OFFICE, FORM CS-6AAA AND ATTACHMENT(S) AND, IF NECESSARY, DOCUMENTATION OF GOOD FAITH EFFORTS MADE BY THE BIDDER TOWARD MEETING THE GOAL, WITHIN TEN BUSINESS DAYS AFTER THE OPENING OF BIDS FOR THIS PROJECT. RESPONSIVENESS OF INFORMATION SUPPLIED IN THIS SECTION OF THIS CONSTRUCTION PROPOSAL SIGNATURE AND EXECUTION FORM IS GOVERNED BY THE DBE REQUIREMENTS INCLUDED WITHIN THE SPECIFICATIONS AND DBE PROGRAM MANUAL.

CERTIFICATION OF EMPLOYMENT OF LOUISIANA RESIDENTS TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT (TIME) PROJECTS (APPLICABLE TO TIME PROJECTS)

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS A TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT (TIME) PROJECT AS DEFINED IN ACT NO. 16 OF THE 1989 FIRST EXTRAORDINARY SESSION OF THE LEGISLATURE WHICH ENACTED PART V OF CHAPTER 7 OF SUBTITLE II OF TITLE 47 OF THE LOUISIANA REVISED STATUTES OF 1950, COMPRISED OF R.S. 47:820.1 THROUGH 820.6.

THE BIDDER CERTIFIES THAT AT LEAST 80 PERCENT OF THE EMPLOYEES EMPLOYED ON THIS TIME PROJECT WILL BE LOUISIANA RESIDENTS IN ACCORDANCE WITH LOUISIANA R.S. 47:820.3.

NON PARTICIPATION IN PAYMENT ADJUSTMENT (ASPHALT CEMENT AND FUELS) STATEMENT

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS BEING SUBJECT TO PAYMENT ADJUSTMENT FOR ASPHALT CEMENT AND/OR FUELS, THE BIDDER HAS THE OPTION OF REQUESTING EXCLUSION FROM SAID PAYMENT ADJUSTMENT PROVISIONS THAT ARE ESTABLISHED BY SPECIAL PROVISION ELSEWHERE HEREIN.

IF THE BIDDER DESIRES TO BE EXCLUDED FROM THESE PAYMENT ADJUSTMENT PROVISIONS,

THE BIDDER IS REQUIRED TO MARK HERE

FAILURE TO MARK THIS BOX PRIOR TO BID OPENING WILL CONSTITUTE FORFEITURE OF THE BIDDER'S OPTION TO REQUEST EXCLUSION.

CS-14A

08/06

M-1

FOR INFORMATION ONLY

STATE PROJECT NO(S). 450-90-0210

BIDDER SIGNATURE REQUIREMENTS (APPLICABLE TO ALL PROJECTS)

THIS BID FOR THE CAPTIONED PROJECT IS SUBMITTED BY:

(Name of Principal (Individual, Firm, Corporation, or Joint Venture))

(If Joint Venture, Name of First Partner)

(Louisiana Contractor's License Number of Bidder or First Partner to Joint Venture)

(Business Street Address)

(Business Mailing Address, if different)

(Area Code and Telephone Number of Business)

(Telephone Number and Name of Contact Person)

(Telecopier Number, if any)

(If Joint Venture, Name of Second Partner)

(Louisiana Contractor's License Number of Second Partner to Joint Venture)

(Business Street Address)

(Business Mailing Address, if different)

(Area Code and Telephone Number of Business)

(Telephone Number and Name of Contact Person)

(Telecopier Number, if any)

ACTING ON BEHALF OF THE BIDDER, THIS IS TO ATTEST THAT THE UNDERSIGNED DULY AUTHORIZED REPRESENTATIVE OF THE ABOVE CAPTIONED FIRM, CORPORATION OR BUSINESS, BY SUBMISSION OF THIS BID, AGREES AND CERTIFIES THE TRUTH AND ACCURACY OF ALL PROVISIONS OF THIS PROPOSAL, INCLUSIVE OF THE REQUIREMENTS, STATEMENTS, DECLARATIONS AND CERTIFICATIONS ABOVE AND IN THE SCHEDULE OF ITEMS AND PROPOSAL GUARANTY. EXECUTION AND SIGNATURE OF THIS FORM AND SUBMISSION OF THE SCHEDULE OF ITEMS AND PROPOSAL GUARANTY SHALL CONSTITUTE AN IRREVOCABLE AND LEGALLY BINDING OFFER BY THE BIDDER.

(Signature)

(Printed Name)

(Title)

(Date of Signature)

(Signature)

(Printed Name)

(Title)

(Date of Signature)

CONTRACTOR'S TOTAL BASE BID \$ _____

IT IS AGREED THAT THIS TOTAL, DETERMINED BY THE BIDDER, IS FOR PURPOSES OF OPENING AND READING BIDS ONLY, AND THAT THE LOW BID FOR THIS PROJECT WILL BE DETERMINED FROM THE EXTENSION AND TOTAL OF THE BID ITEMS BY DOTD.

CS-14AA
08/06