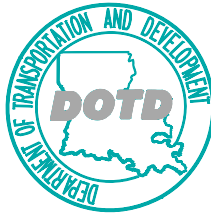


FOR INFORMATIONAL PURPOSES ONLY

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

CONSTRUCTION PROPOSAL



STATE PROJECT NO. 737-95-0036

**TRAFFIC LOOP DETECTOR
MAINTENANCE (CM)
VARIOUS ROUTES**

DISTRICT 05

FOR INFORMATIONAL PURPOSES ONLY

STATE PROJECT NO(S). 737-95-0036

TABLE OF CONTENTS

	Page No.
Title Sheet	A-1
Table of Contents	B-1
Notice to Contractors	C-1 thru C-2
Special Provisions	D-1 thru D-2
Supplemental Specifications:	
General Provisions (10/07)	E-1 thru E-19
Plans (17 sheets)(includes Loop Repair Specifications).....	F-1 thru F-17
Construction Proposal Returnables:	
Title Sheet.....	G-1
Schedule of Items	H-1
Bid Bond.....	I-1
Construction Proposal Signature and Execution Form.....	J-1 thru J-2

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NOTICE TO CONTRACTORS

Sealed bids for construction of the following project will be received by the Louisiana Department of Transportation and Development (DOTD), 8010 DeSiard Rd., Monroe, Louisiana 71211 until 1:30 p.m. on Thursday, October 23, 2008, at which time and place bids will be publicly opened and read in the front conference room. No bids will be received after 1:30 p.m. Any person requiring special accommodations shall notify the Department of Transportation and Development (DOTD) at (318) 342-0100 not less than 3 business days before bid opening.

STATE PROJECT NO.: 737-95-0036

PROJECT NAME: TRAFFIC LOOP DETECTOR REPAIR/REPLACEMENT

ROUTE: VARIOUS ROUTES

DISTRICT 05

WORK TO BE DONE: Traffic loop detector repair/installation, signs and barricades and related work.

ESTIMATED COST: \$30,000.00

**PROJECT ENGINEER: MR. JOHN H. EASON, P.E.
8010 DESIARD RD.
MONROE, LA 71211
318.342.0105**

COST OF PROPOSAL FORMS: FREE

COST OF PLANS: Included in proposal (no additional charge)

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.

07/02
Form CS-4A

FOR INFORMATIONAL PURPOSES ONLY

NOTICE TO CONTRACTORS (continued)

Plans and/or proposals may be obtained from the District 05 Traffic Section in Monroe, or by contacting the DOTD; Email: johneason@dotd.la.gov, Phone 318.342.0105, Fax 318.342.0260, or by written requests sent to the Louisiana Department of Transportation and Development, District 05 Traffic Section, P. O. Box 4068, Monroe, LA 71211-4068. Proposals will not be issued later than 24 hours prior to the time set for opening bids. Plans and specifications may be seen at the Project Engineer's office. 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.

07/02
Form CS-4AA

FOR INFORMATIONAL PURPOSES ONLY

STATE PROJECT NO. 137-95-0036

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.

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 local traffic at all times and shall also conduct his operations in such manner as to cause the least possible interference with traffic at junctions with roads, streets and driveways. The contractor will not be required to provide for or maintain through traffic.

FOR INFORMATIONAL PURPOSES ONLY

STATE PROJECT NO. 137-95-0036

SPECIAL PROVISIONS

ITEM S-001, LOOP REPAIR: This item consists of furnishing all labor, materials, and equipment necessary to accomplish saw cutting pavement, loop wire installation (including any additional wiring to connect to the controller), sealant installation, conduit installation, connections, testing to verify the repair, traffic control during the repair, pavement repair, cleanup, and all other incidentals. The contractor will also be required to furnish all conduit, junction boxes, and conduit fittings to complete repair of the loop.

Payment will be made at the contract unit price under:

Item S-001, Loop Repair, per linear foot.

CONTRACT TIME: This contract shall commence upon the issuance of a Notice of Contract Execution and shall continue through June 30, 2009 unless renewed, or until contract funds are expended, whichever occurs first. The DOTD shall have the option to renew this contract on an annual basis for a maximum of three (3) years. Renewal will require a fully executed Renewal Contract and Payment/Performance/Retainage Bond.

FOR INFORMATIONAL PURPOSES ONLY ^{10/07)}

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

TABLE OF CONTENTS

SECTION 101 – GENERAL INFORMATION, DEFINITIONS, AND TERMS	
Subsection 101.03 – Definitions	1
SECTION 102 – BIDDING REQUIREMENTS	
Subsection 102.09 – Proposal / Bid Guaranty	1
SECTION 108 – PROSECUTION AND PROGRESS	
Subsection 108.04 – Prosecution of Work.....	2
SECTION 202 – REMOVING OR RELOCATING STRUCTURES AND OBSTRUCTIONS	
Subsection 202.06 – Plugging or Relocating Existing Water Wells	2
SECTION 302 – CLASS II BASE COURSE	
Subsection 302.05 – Mixing	2
SECTION 308 – IN-PLACE CEMENT TREATED BASE COURSE	
All Subsections	2
SECTION 502 – SUPERPAVE ASPHALTIC CONCRETE MIXTURES	
Subsection 502.02 – Materials	2
SECTION 704 – GUARD RAIL	
Subsection 704.03 – General Construction Requirements	3
SECTION 713 – TEMPORARY TRAFFIC CONTROL	
Subsection 713.06 – Pavement Markings.....	3
SECTION 729 – TRAFFIC SIGNS AND DEVICES	
Subsection 729.02 – Materials.....	4
Subsection 729.04 – Fabrication of Sign Panels and Markers.....	5
SECTION 804 – DRIVEN PILES	
Subsection 804.08 – Construction Requirements	5
SECTION 901 – PORTLAND CEMENT CONCRETE	
Subsection 901.06 – Quality Control of Concrete	5
Subsection 901.08 – Composition of Concrete.....	6
SECTION 1003 – AGGREGATES	
Subsection 1003.02 – Aggregates for Portland Cement Concrete and Mortar.....	6
SECTION 1005 – JOINT MATERIALS FOR PAVEMENTS AND STRUCTURES	
Subsection 1005.04 – Combination Joint Former/Sealer	7

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications - Table of Contents (10/07)

SECTION 1006 – CONCRETE AND PLASTIC PIPE

Subsection 1006.09 – Plastic Yard Drain Pipe8

SECTION 1013 – METALS

Subsection 1013.09 – Steel Piles8

SECTION 1015 – SIGNS AND PAVEMENT MARKINGS

Subsection 1015.04 – Sign Panels8

Subsection 1015.05 – Reflective Sheeting.....9

Subsection 1015.11 – Preformed Plastic Pavement Marking Tape.....12

SECTION 1020 – TRAFFIC SIGNALS

Subsection 1020.01 – Traffic Signal Heads.....13

Subsection 1020.04 – Poles for Traffic Signal Systems14

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)
Page 1 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)
Page 2 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 3 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 4 of 14

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

		Two-lane Highways	Undivided Multilane Highways	Divided Multilane Highways
S H O R T T E R M	ADT<1500; or ADT>1500 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>1500; 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
L O N G T E R M	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.

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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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 5 of 14

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.

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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

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 6 of 14

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).

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 7 of 14

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.

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(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:

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Supplemental Specifications (October 2007)

Page 8 of 14

<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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 9 of 14

(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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 10 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 11 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 12 of 14

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.

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 13 of 14

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

FOR INFORMATIONAL PURPOSES ONLY

Supplemental Specifications (October 2007)

Page 14 of 14

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.

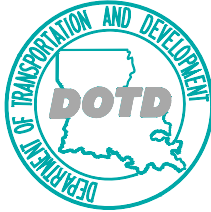
Subsection 1020.04 – Poles for Traffic Signal Systems (06/07), Pages 890 – 894.

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.

FOR INFORMATIONAL PURPOSES ONLY

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



**CONSTRUCTION PROPOSAL
RETURNABLES
FOR**

**STATE PROJECT NO. 737-95-0036
TRAFFIC LOOP DETECTOR
MAINTENANCE (CM)
VARIOUS ROUTES**

DISTRICT 05

BID BOND
FOR INFORMATIONAL PURPOSES ONLY

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. 737-95-0036, Traffic Loop Detector Maintenance; which consist of traffic loop detector repair/installation, signs and barricades and related work, 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

FOR INFORMATIONAL PURPOSES 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).

737-95-0036

NAME OF PROJECT

Traffic Loop Detector Maintenance (CM)

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 (2000 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

04/01

J-1

FOR INFORMATIONAL PURPOSES ONLY

STATE PROJECT NO(S). 737-95-0036

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)

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)

(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)

(Signature)

(Printed Name)

(Title)

(Date of Signature) 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
04/01

FOR INFORMATIONAL PURPOSES ONLY

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STANDARD PLANS TO
BE USED ON THIS PROJECT

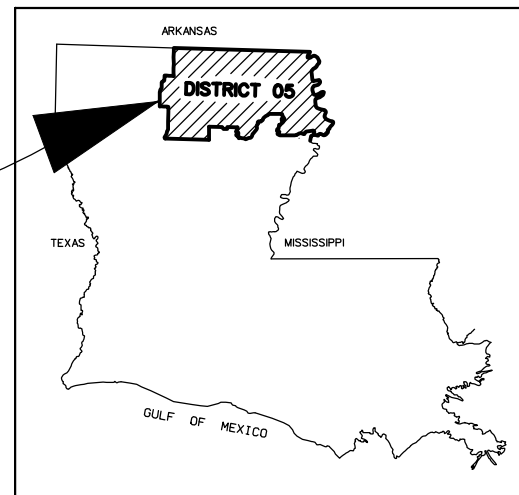
STANDARD REV. DATE
EC-01 01-14-94

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY

STATE PROJECT NO. 737-95-0036
TRAFFIC LOOP DETECTOR MAINTENANCE (CM)
VARIOUS ROUTES
DISTRICT 05

PROJECT LOCATION



TRAFFIC DATA
A.D.T. =
A.D.T. =
D = %
K = %
T = %

TYPE OF CONSTRUCTION:

DATE	REVISIONS	DATE	RECOMMENDED	DATE	APPROVED

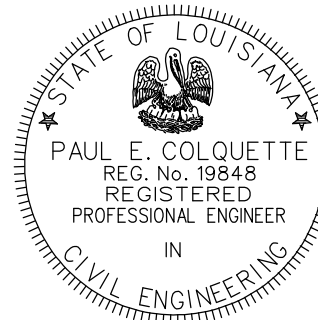
RECOMMENDED FOR APPROVAL

DISTRICT DESIGN, WATER RESOURCES
AND DEVELOPMENT ENGINEER

DISTRICT ADMINISTRATOR

CHIEF ENGINEER

DATE



SHEET NUMBER	I
DISTRICT 05	
PARISH	
FEDERAL PROJECT	
STATE PROJECT	737-95-0036
DESIGNED CHECKED	
DETAILED CHECKED	
DATE	
SHEET	

TITLE SHEET

BY

REVISION DESCRIPTION

DATE

NO.

THE 2006 LOUISIANA DOTD STANDARD SPECIFICATIONS
FOR ROADS AND BRIDGES, AS AMENDED BY THE PROJECT
SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT.

FOR INFORMATIONAL PURPOSES ONLY

LOCATION NO.	PARISH	TOWN	INTERSECTION	T.S.I. NO.	NO. OF APPROACH LANES WITH LOOPS
1	East Carroll	Lake Providence	US 65 (Lake St.) @ LA 883-2 (Gould Blvd.)	2	1
2	East Carroll	Lake Providence	US 65 (Lake St.) @ LA 596 (Hood)	3	2
3	Jackson	Chatham	LA 34 @ LA 4	14	2
4	Jackson	Jonesboro	US 167 @ Hudson Ave.	29	3
5	Jackson	Jonesboro	US 167 @ LA 147 (Walker Rd.)	30	5
6	Jackson	Jonesboro	US 167 @ LA 4	31	10
7	Lincoln	Ruston	US 80 (W. California Ave.) @ Adams Blvd.	3	3
8	Lincoln	Ruston	US 167 @ Kentucky Ave.	24	3
9	Lincoln	Ruston	LA 150 (Alabama St.) @ Everett St.	30	2
10	Lincoln	Ruston	US 80 (W. California Ave.) @ Bond	44	2
11	Lincoln	Grambling	LA 149 @ College Drive	45	2
12	Lincoln	Grambling	LA 149 @ LA 150	50	2
13	Lincoln	Ruston	US 167 @ Vaughn St.	54	5
14	Lincoln	Ruston	LA 544 (Cooktown Rd.) @ I-20 Westbound Off Ramp	57	2
15	Lincoln	Ruston	US 80 (W. California Ave.) @ S. Homer St.	65	2
16	Lincoln	Ruston	LA 150 (Alabama Ave.) @ Western Ave.	69	2
17	Madison	Tallulah	US 80 (W. Green St.) @ Lexing St.	1	1
18	Madison	Tallulah	LA 601 (Johnson St.) @ Monroe Street	10	2
19	Madison	Tallulah	LA 601 (Johnson St.) @ Cleveland Street	11	1
20	Morehouse	Bastrop	US 165 (E. Madison Ave.) @ LA 830-6 (McCreight St.) & Prat	10	4
21	Morehouse	Bastrop	US 165 (E. Madison Ave.) @ Cox St.	11	2
22	Morehouse	Bastrop	US 165 (W. Madison Ave.) @ LA 830-4 (Cooper Lake Rd.)	31	3
23	Morehouse	Bastrop	US 165 @ Madison Plaza	32	2
24	Ouachita	Monroe	US 165 Bus. (Jackson) @ Standifer	20	2
25	Ouachita	West Monroe	US 80 (Cypress St.) @ Church St.	67	1
26	Ouachita	West Monroe	US 80 (Cypress St.) @ Cryer St.	68	2
27	Ouachita	West Monroe	US 80 (Cypress St.) @ Travis St.	69	2
28	Ouachita	West Monroe	US 80 (Cypress St.) @ Crosley St.	70	2
29	Ouachita	West Monroe	US 80 (Cypress St.) @ LA 617 (Warren Drive)	91	6
30	Ouachita	Monroe	US 165 Bus. @ Wood St.	98	7
31	Ouachita	Monroe	US 80 (DeSiard St.) @ Lowery St.	106	1
32	Ouachita	West Monroe	US 80 @ LA 546	114	2
33	Ouachita	West Monroe	US 80 (Cypress St.) @ Wallace Rd. & Clay Dr.	117	3
34	Ouachita	Monroe	LA 139 @ Rowland Road	125	6
35	Ouachita	Sterlington	US 165 @ LA 2	127	6
36	Ouachita	West Monroe	LA 617 (Warren Dr.) @ Wellerman Rd.	133	2
37	Ouachita	West Monroe	LA 34 (Jonesboro Rd.) @ Riverwood Truck Ent.	142	3
38	Ouachita	West Monroe	LA 34 (Jonesboro Rd.) @ Riverwood Main Gate	143	2
39	Ouachita	West Monroe	LA 616 (Ark. Rd.) @ Forty Oaks Farm Rd. & Sherwood Dr.	158	2
40	Ouachita	Sterlington	US 165 @ LA 134 (Keystone Rd.)	177	8
41	Ouachita	Monroe	LA 594 @ North 18th Street	180	6
42	Ouachita	Monroe	US 165 Bus. @ I-20 WB Off-ramp (Calypso St.)	183	2
43	Ouachita	Monroe	LA 594 (Millhaven Rd.) @ Powell Ave.	184	6
44	Ouachita	West Monroe	LA 15 @ LA 616 (Ark. Rd.)	185	2
45	Ouachita	West Monroe	US 80 @ Harrell Road	186	3
46	Richland	Rayville	LA 137 @ I-20 Eastbound Off Ramp	24	4
47	Richland	Rayville	LA 137 @ I-20 WB On-Ramp	27	3

SHEET NUMBER		2	
DISTRICT		05	
PARISH	FEDERAL PROJECT	STATE PROJECT	737-95-0036
DESIGNED	CHECKED	DATE	SHEET
LOOP DETECTOR LOCATIONS			
NO.		DATE	
REVISION DESCRIPTION			

[illegible]

FOR INFORMATIONAL PURPOSES ONLY

S. P. NO. 737-95-0036

LOOP REPAIR SPECIFICATIONS

1.0 GENERAL REQUIREMENTS:

- 1.1 The contractor will be notified in writing of all loops to be repaired on an as-needed basis. Notification will consist of the following:

A certified letter with an annotated copy of the TSI (Traffic Signal Inventory) form showing loops to be repaired and any notes or other information that may be pertinent to the repair. Any information that cannot be shown on the TSI form will be included on an attachment to the form. Annotations shall be in a manner that will survive copying.

- 1.2 All work shall conform to the latest DOTD Standard Specifications for Roads and Bridges and Traffic Signal and Installation Details.
- 1.3 Before commencing work at each location, the contractor shall contact the Project Engineer and advise him of the dates and hours that work in the roadway will take place.
- 1.4 The contractor shall submit material brochures for approval prior to repairs being made. Brochures shall be required for loop wires, sealant, connector hardware, junction boxes, and any other items deemed necessary by the Project Engineer.

2.0 LIMITS OF CONTRACTOR'S WORK: The limits of the contractor's work are defined as follows:

- 2.1 The Project Engineer will layout and mark the locations of the required sawcuts for loop wire installations. It will be the DOTD's responsibility to locate the lead-in wire, conduits, pull boxes, and condulets. The DOTD electricians will typically do this at the time the loop outage is discovered, and the lead-in wire will be marked by a stake or by paint on the pavement. In the event that DOTD is unable to find these items, or if there is an existing condulet, these items shall be installed by the contractor in accordance with the plans and specifications, with all conduit fittings, and junction boxes furnished by the contractor in accordance with the following provisions.
- 2.2 If the lead-in wire is present from controller to the condulet, the contractor will be required to replace the condulet with a junction box and make connections in the junction box.
- 2.3 If the lead-in wire cannot be found, the contractor will be required to install a new junction box and install the lead-in wiring from controller to the new junction box. The contractor will make the connection in the new junction box.

FOR INFORMATIONAL PURPOSES ONLY

S. P. NO. 737-95-0036

LOOP REPAIR SPECIFICATIONS

3.0 SPECIAL PAVEMENT DETAILS: For roadway sections that involve both concrete and bituminous pavements, the following procedure will be utilized:

- 3.1 ROADWAYS WITH ASPHALT SHOULDERS: One-half inch conduit will run the full width of the shoulder within the saw cut. The shoulder shall be saw cut before breaking and removing asphalt in order to prevent cracking or damage to adjacent areas of the shoulder.
- 3.2 CONCRETE ROADWAY ADJOINING ASPHALT ROADWAY: Separate loops will be utilized for each pavement type and will be connected in a junction box to function as one loop.
- 3.3 PAVEMENT DAMAGE: Any damage to the shoulder or roadway resulting from the contractor's work shall be repaired in accordance with DOTD standards. Damaged or removed shoulders shall be repaired with cold mix.
- 3.4 SAW CUTS: Saw cuts shall be made adjacent to existing saw cuts in lieu of cutting directly into previous cuts, and shall be made no closer than 3 inches to existing parallel cuts.

4.0 VERIFICATION AND APPROVAL OF WORK: The following procedure will be used to complete and verify repairs.

- 4.1 The contractor shall repair the traffic signal loops so that all vehicles are detected by the traffic signal controller for that intersection.
- 4.2 After splicing loop wires in the junction box, or making the connection at the controller, the contractor will verify that the loop is operational. The Project Engineer will contact the DOTD electrician who will make confirmation within 2 working days, at which time the contractor will be released as having satisfactorily completed the repair for that loop.

5.0 CONTRACTOR DEADLINES AND PENALTIES: The contractor shall be given deadlines with each transmittal of loops to be repaired. These deadlines shall be established as follows. The deadlines shall consist of a 2-week start-up time plus 2 days per repair site. Specific deadlines for each loop repair will be noted in the transmittal for that batch of loops. Penalties shall be assessed on a per diem basis for all repairs completed past the deadline on a \$50/day rebate. However, all DOTD time that delayed the contractor will be subtracted from the contractor's late time. All time charges and DOTD time deductions past the deadline shall be assessed as calendar days.

6.0 PAY ITEM: All payment for loop repairs shall be made under the following pay item:

LOOP REPAIR (Lin. Ft.): Includes all labor, materials, and equipment necessary to accomplish saw cutting pavement, loop wire installation (including any additional wiring to connect to the

FOR INFORMATIONAL PURPOSES ONLY

S. P. NO. 737-95-0036

LOOP REPAIR SPECIFICATIONS

controller), sealant installation, conduit installation, connections, testing to verify the repair, traffic control during the repair, pavement repair, cleanup, and all other incidentals. The contractor will also be required to furnish all conduit, junction boxes, and conduit fittings to complete repair of the loop.

7.0 INVOICING:

7.1 The contractor shall be required to invoice on a per loop basis. Only completed repairs may be invoiced.

7.2 Each invoice shall include the following information:

- a) The full payment for each loop (including linear feet of repair) being invoiced.
- b) The same information for all previous loops invoiced, plus the total of all monies invoiced to date.

E-7

NO. 1 CONDUCTORS/CABLES

- A. ALL CONDUCTORS AND CABLES FROM SIGNAL HEADS AND DETECTORS SHALL BE RUN IN UNDERGROUND CONDUIT, RISERS ON POLES OR ON MESSENGER CABLE SHALL BE RUN IN THE MOST DIRECT ROUTE TO THE CONTROLLER CABINET IN ACCORDANCE WITH THE PLANS.
- B. A SPARE LENGTH OF CABLE SHALL BE INSTALLED AS SHOWN ON LADOTD STANDARD DETAIL SHEETS LABELED "SPAN WIRE INSTALLATION DETAILS" AND "JUNCTION BOX AND PULL BOX". SIX FEET OF SPARE SIGNAL, LOOP LEAD-IN, COMMUNICATION, AND SERVICE CABLE, SHALL BE INSTALLED IN EACH BASE MOUNTED CABINET IN ACCORDANCE WITH LADOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

NO. 2 CONDUIT

- A. ALL UNDERGROUND CONDUIT AND ELBOWS SHALL BE SCHEDULE 80, PE (POLYETHYLENE) CONDUIT, SCHEDULE 80, SHALL BE USED FOR JACKING OR BORING. PVC (POLYVINYL CHLORIDE) CONDUIT, SCHEDULE 80, SHALL BE USED FOR TRENCHING AND BACKFILLING.
- B. CONDUIT SHALL HAVE BELL BUSHINGS INSTALLED ON OPEN ENDS, AND INSTALLED AT A MINIMUM DEPTH OF 18". ALL CONDUIT SHALL BE INSTALLED BELOW DITCH INVERT WHERE APPLICABLE.
- C. ALL CONDUIT CONNECTIONS SHALL BE SEALED WITH A WATERPROOF SEALING COMPOUND. ALL CABLE AND WIRE ENTRANCES SHALL BE SEALED AFTER INSTALLATION.

NO. 3 FOUNDATION DISPOSAL

THE CONTRACTOR SHALL DISPOSE OF ALL EXISTING CONTROLLER AND POLE BASE FOUNDATIONS. POLE BASE FOUNDATIONS SHALL BE SHAVED 24" BELOW NATURAL GROUND AND BACK FILLED. REMOVAL OF FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 202 OF THE LADOTD STANDARD SPECIFICATIONS.

NO. 4 HORIZONTAL CLEARANCE

- A. MINIMUM CLEARANCES FOR TRAFFIC SIGNAL SUPPORTS AND APPARATUS SHALL BE IN ACCORDANCE WITH THE CURRENT ADOPTED EDITION OF THE MUTCD
- B. IN RURAL AREAS OR UNCURBED URBAN AREAS, THE REQUIRED POLES SHALL BE LOCATED AS FAR AS PRACTICABLE BEYOND THE PAVEMENT EDGE. A MINIMUM CLEARANCE OF 2 FEET OUTSIDE THE SHOULDER OR A MINIMUM CLEARANCE OF 10 FEET OUTSIDE THE PAVEMENT EDGE, WHICHEVER IS GREATER, SHALL BE PROVIDED.
- C. IN CURBED AREAS, POLES SHALL BE PLACED AS FAR AS PRACTICABLE FROM THE EDGE OF THE TRAVEL LANE. A MINIMUM CLEARANCE OF 2 FEET BEHIND CURB SHALL BE MAINTAINED.

NO. 5 INTERSECTION SPECIFIC NOTES

SEE INDIVIDUAL INTERSECTION PLAN SHEETS

NO. 6 JUNCTION BOXES

- A. JUNCTION BOXES SHALL BE HEAVY DUTY DESIGN AND SHALL CONFORM WITH CURRENT LADOTD STANDARD DETAILS.
- B. THE MAXIMUM DISTANCE BETWEEN JUNCTION BOXES SHALL BE 50 FEET. THE MINIMUM DISTANCE BETWEEN JUNCTION BOXES USED FOR FIBER OPTIC INTERCONNECT COMMUNICATIONS SHALL BE 100 FEET.

NO. 7 PROPERTY DAMAGE

ANY PROPERTY DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE THE CONTRACTORS RESPONSIBILITY.

NO. 8 POWER SERVICE

- A. THE POWER SOURCE SHOWN ON THE DRAWINGS IS APPROXIMATE AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF THE POWER SOURCE.
- B. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH AND PAY THE POWER COMPANY FOR TEMPORARY AND PERMANENT ELECTRICAL SERVICE AND SHALL VERIFY THE EXACT LOCATION AND POINTS OF ATTACHMENT BEFORE INSTALLATION IN ACCORDANCE WITH LADOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

NO. 9 POWER DISCONNECT

- A. FROM THE POWER DISCONNECT, A 1" CONDUIT WITH THREE #6 AWG-IC STRANDED COPPER TYPE THHN OR THWN INSULATION SHALL BE TURNED UP TO THE POWER COMPANY SERVICE POLE TO A HEIGHT DESIGNATED BY THE POWER COMPANY. THE CONTRACTOR SHALL TERMINATE THE CONDUIT WITH A THREADED SERVICE ENTRANCE FITTING (WEATHER HEAD) AND WIRES SHALL BE A MINIMUM OF 2 FEET BEYOND THE WEATHER HEAD TO ALLOW CONNECTION TO POWER COMPANY WIRING WITH A DRIP LOOP.
- B. THE CONTRACTOR SHALL COORDINATE POWER SERVICE CONNECTION WITH UTILITY COMPANY.
- C. FROM THE POWER DISCONNECT TO THE CONTROLLER, A 1" CONDUIT WITH THREE #6 AWG-IC SHALL BE INSTALLED. MEASUREMENT FOR SIGNAL SERVICE PAYMENT WILL BE IN ACCORDANCE WITH PEDESTAL MOUNTED POWER DISCONNECT.
- D. A POWER DISCONNECT MUST BE LOCATED WITHIN 20 FEET OF THE SIGNAL CONTROLLER CABINET, IF THE POWER SOURCE IS OVER 20 FEET FROM THE CONTROLLER, A SEPARATE PEDESTAL MOUNTED POWER DISCONNECT MUST BE PROVIDED AT THE CONTROLLER LOCATION.

NO. 10 RIGHT-OF-WAY

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORKING WITHIN THE RIGHT-OF-WAY LIMITS.
- B. THE RIGHT-OF-WAY LIMITS SHOWN ON THE PLANS IS NOT GUARANTEED TO BE ACCURATE. A THOROUGH RIGHT-OF-WAY INVESTIGATION IS RECOMMENDED TO BE DONE BY THE USER AGENCY PRIOR TO CONSTRUCTION OF THESE PLANS TO DETERMINE IF ADDITIONAL RIGHT-OF-WAY IS REQUIRED.

NO. 11 SIGNAL CONTROLLER

ALL SIGNAL CONTROLLERS SHALL BE NEMA, 8 PHASE. CONTROLLERS THAT MEET CURRENT LADOTD STANDARDS AND SPECIFICATIONS, AND LADOTD TRAFFIC CONTROL STANDARD 18A.

NO. 12 SIGNAL CONTROLLER CABINET

- A. ALL CABINETS SHALL BE LADOTD TYPE 6 CABINETS UNLESS OTHERWISE NOTED.
- B. THE CONTROLLER CABINET SHALL BE ORIENTED SUCH THAT TRAFFIC ENGINEERING AND SIGNAL PERSONNEL CAN FACE THE INTERSECTION WHEN OPENING THE CABINET. THE BACK OF THE CONTROLLER SHALL PARALLEL THE MAIN ROADWAY.
- C. A 3' x 5' x 4" CONCRETE PAD SHALL BE POURED IN FRONT OF CONTROLLER BASE ABOVE GROUND LEVEL TO PROVIDE AN ALL WEATHER STANDING AREA FOR SERVICE PERSONNEL.

NO. 13 SIGNAL DETECTORS

- A. LOOPS SHALL CONSIST OF A CONTINUOUS LENGTH OF INSA 51-7 #14 AWG, COPPER INSULATED WIRE WITH 19 STRANDS, INSULATION SHALL BE 0.035 INCH XLPE WITH POLYETHYLENE LOOSE TUBE. THE TUBE SHALL HAVE A MAXIMUM O.D. OF 250 MILS.)
- B. SLOTS SHALL BE DRY AND CLEANED OF LOOSE MATERIAL AND THE WIRE SHALL BE CAREFULLY INSTALLED TO ENSURE INSULATION IS NOT DAMAGED. LOOP WIRE SHALL BE INSTALLED USING WOOD INSTRUMENTS. METAL OBJECTS SHALL NOT BE USED WHILE PLACING WIRE IN SLOTS.
- C. THE PROJECT ENGINEER SHALL APPROVE THE DEPTH AND CLEANLINESS OF EACH DETECTOR LOOP SLOT BEFORE THE CONTRACTOR PLACES WIRE IN THE SLOT.
- D. SHIELDED CABLE SHALL BE SPLICED TO LOOP WIRE AT A PULL BOX NEAREST THE LOOP (OR LOCATION SPECIFICALLY DESIGNATED ON THE PLANS) AND SHALL BE CONTINUOUS TO THE TERMINATION PANEL IN THE CONTROLLER CABINET. NO SPLICE SHALL BE PERMITTED BETWEEN THE LOOP LEAD-IN AND THE TERMINATION PANEL.
- E. LOOPS OPERATING ON THE SAME PHASE SHALL BE WIRED IN SERIES. A SINGLE LOOP LEAD-IN WIRE SHALL BE RAN FROM THE JUNCTION BOX TO THE CONTROLLER.

NO. 14 SIGNAL EQUIPMENT LOCATION

- A. LOCATIONS OF POLES, SIGNALS, LOOP DETECTORS, SYSTEM SENSORS, CONTROLLERS AND JUNCTION BOXES ARE APPROXIMATE. EXACT LOCATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER.
- B. THE CONTRACTOR SHALL STAKE THE LOCATION OF EACH POLE FOUNDATION AND NOTIFY THE PROJECT ENGINEER FOR CONCURRENCE IN THE LOCATION BEFORE PROCEEDING WITH THE INSTALLATION OF THE POLE FOUNDATION.
- C. ONCE THE POLE FOUNDATION IS INSTALLED, THE MINIMUM LENGTHS SPECIFIED ON PLANS ARE TO BE VERIFIED TO ORDER THE MATERIALS. IF A THE EXTENSION IS NEEDED, IT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER TO DETERMINE THE EXTENSION.

NO. 15 SIGNAL EQUIPMENT REMOVAL

- A. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT AND CONTROL DEVICES AT EACH INTERSECTION SHALL BE REMOVED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER.
- B. THE CONTRACTOR SHALL DELIVER ALL SALVAGEABLE TRAFFIC SIGNAL EQUIPMENT AND TRAFFIC CONTROL DEVICES TO THE OWNER.
- C. THE REMOVAL AND DELIVERY OF THE EXISTING TRAFFIC SIGNAL EQUIPMENT AND TRAFFIC CONTROL DEVICES TO THE OWNER SHALL BE PAID FOR UNDER ITEM FOR "REMOVAL OF TRAFFIC SIGNAL EQUIPMENT".

NO. 16 SIGNAL POLE HEIGHT

- A. THE CONTRACTOR SHALL PROVIDE HEIGHTS THAT ARE SUFFICIENT TO ENSURE THAT THE BOTTOM OF THE LOWEST SIGNAL ON AN ASSEMBLY IS NOT LESS THAN 17' ABOVE THE PAVEMENT. FOR MAXIMUM HEIGHT REFER TO THE MUTCD, CURRENT ADOPTED EDITION.
- B. SIGNAL HEAD ALIGNMENT AND CLEARANCE SHALL BE IN ACCORDANCE WITH THE LADOTD SIGNAL MANUAL.

NO. 17 SIGNAL POLE LOADING

ALL FURNISHED METAL STRAIN POLES SHALL HAVE A MINIMUM WORKING LOAD CAPACITY OF 4,000 POUNDS APPLIED ONE (1) FOOT BELOW TOP OF POLE, UNLESS OTHERWISE SPECIFIED.

NO. 18 SIGNAL POLE FINISH REPAIR

IF HOT-DIPPED GALVANIZED STEEL POLES ARE DAMAGED, THE DAMAGED GALVANIZED AREA SHALL BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH SUBSECTION 811.12 OF THE LADOTD STANDARD SPECIFICATIONS.

NO. 19 SIGNAL POLE ELECTRICAL CLEARANCES

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER CLEARANCES FROM EXISTING UTILITY LINES AND LUMINARIES IN ACCORDANCE WITH THE NATIONAL ELECTRICAL SAFETY CODE.

NO. 20 STANDARDS

- A. ALL WORK SHALL CONFORM TO LADOTD'S LATEST EDITION OF THEIR STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AND THE PROJECT SPECIAL PROVISION SPECIFICATIONS.
- B. ALL SIGNS, SIGNALS, PAVEMENT MARKINGS AND TEMPORARY TRAFFIC CONTROL DEVICES ARE TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (MILLENNIUM EDITION AND ALL SUBSEQUENT ADOPTED REVISIONS).

NO. 21 TRAFFIC CONTROL, EXISTING SIGNALS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL OPERATION OF THE EXISTING OR TEMPORARY TRAFFIC SIGNALS DURING THE PERIOD OF CONSTRUCTION WHICH INCLUDES RELOCATING POLES, DETECTORS, SIGNAL HEADS, AND OTHER ITEMS, AND SHALL PROVIDE TEMPORARY POLES OR OTHER MATERIALS NECESSARY TO ENSURE THE CONTINUAL OPERATION OF THE SIGNAL AND COMMUNICATION EQUIPMENT AT ALL TIMES. WHERE VEHICLE DETECTORS ARE PRESENT, VEHICLE DETECTION MUST BE MAINTAINED.
- B. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT THE CHANGEOVER FROM THE EXISTING SIGNAL EQUIPMENT TO THE NEW SIGNAL EQUIPMENT SHALL BE DONE PROMPTLY.
- C. THE CHANGEOVER SHALL BE SCHEDULED DURING NON PEAK HOUR TRAFFIC CONDITIONS UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER, AS ADVISED BY THE OFFICE OF THE DISTRICT TRAFFIC OPERATIONS ENGINEER.

NO. 22 TRAFFIC CONTROL, POLICE ASSISTANCE

THE CONTRACTOR SHALL PROVIDE POLICE SUPERVISION OF TRAFFIC ANYTIME THE TRAFFIC SIGNAL SYSTEM IS NOT IN OPERATION, IN ACCORDANCE WITH LADOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

NO. 23 UTILITIES, UNDERGROUND

- A. UNDERGROUND UTILITIES MAY EXIST IN THE CONSTRUCTION AREAS. THE LOCATION AND TYPE SHOWN IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE INFORMATION IS SHOWN SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE ENGINEER DOES NOT GUARANTEE ACCURACY OR GUARANTEE THAT ALL UTILITIES ARE SHOWN.
- B. BEFORE ANY EXCAVATIONS, THE CONTRACTOR SHALL CONTACT "LOUISIANA ONE CALL". THE APPROPRIATE UTILITY COMPANY, AND LADOTD TRAFFIC SERVICES (225)935-0100 FOR LOCATION OF THE UNDERGROUND SERVICE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE "LOUISIANA ONE CALL" NUMBER IS 1-800-272-3020.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, AND SIZE OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND SHALL BE LIABLE FOR ANY DAMAGES CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAKING INDEPENDENT INVESTIGATIONS, INCLUDING ANY SUBSURFACE INVESTIGATIONS AS NECESSARY.

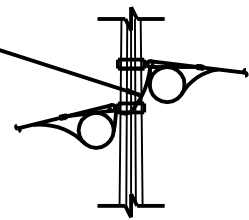
FOR INFORMATIONAL PURPOSES ONLY



SHEET NUMBER		7	
DISTRICT 05		737-95-0036	
DESIGNED	S. MCCAMMILL	DESIGNED	S. MCCAMMILL
CHECKED	S. MCCAMMILL	CHECKED	S. MCCAMMILL
DETAILS	S. MCCAMMILL	DETAILS	S. MCCAMMILL
DATE	10/20/2008	DATE	10/20/2008
TRAFFIC SIGNAL AND INSTALLATION DETAILS		SIGNAL NOTES	
TSD-00		TSD-00	
TRAFFIC ENGINEERING		TRAFFIC ENGINEERING	

POLE HEIGHT (PH) = ED + S + SHH + C + 1 FOOT SEE NOTE 6

ATTACH SIGNAL CABLE TO POLE
WHEN POLE BANDS ARE MORE
THAN 18" APART. USE NONCONDUCTING
MATERIAL. HEAVY DUTY TIE WRAP
SHALL BE 1/2" WIDE. SELF-LOCKING.
ULTRA VIOLET. AND WEATHER
RESISTANT. EXCESS WRAP MATERIAL
SHALL BE TRIMMED.



SPAN ATTACHMENT TO STEEL POLE SHALL BE A FOUR(4) OR TWO(2) PIECE BAND DESIGNED FOR 4000 LB LOAD. POLE BAND ATTACHMENT SHALL HAVE A SHEAVE WHEEL.

SIGNAL CABLE SHALL BE LASHED TO SUPPORTING SPAN WIRE USING 0.062" ALUMINUM WIRE 3 TURNS PER FOOT. LASHING WIRE SHALL BE USED TO TIE CABLE TOGETHER AT BOTTOM OF EACH DRIP LOOP. WRAPPED CABLE SHALL BE STRAIGHT AND ON BOTTOM OF SPAN.

POLE HEIGHT SHALL NOT EXCEED 2' ABOVE HIGH SPAN WIRE BAND

SLOPE ON BOTH SIDES OF SIGNAL HEADS SHALL BE A MAXIMUM SAG OF 10% AND A MINIMUM OF 5% WHEN APPROVED BY THE DISTRICT TRAFFIC ENGINEER FROM POLE TO CENTER OF SIGNAL HEADS ON SPAN.

POLE HEIGHT SHALL NOT
EXCEED 2' ABOVE HIGHEST
SPAN WIRE BAND

HEIGHT SHALL NOT
2' ABOVE HIGHEST
WIRE BAND
SEE NOTE 5
VARIES AS REQUIRED
FOR PROPER SAG

SIEMENS MARTIN GRADE $\frac{1}{8}$ " GALVANIZED SPAN WIRE (7 STRAND)

**- POLE TO BE PLUMB WHEN INSTALLATION IS COMPLETE
(RAKING OF POLES REQUIRED, BEFORE STRAIN IS APPLIED).**

—GROUT INSTALLED BETWEEN BASE & FOUNDATION
FOR ALL STEEL POLE INSTALLATIONS.

— 4" MINIMUM BETWEEN GROUND AND TOP OF
FOUNDATION OR AS DIRECTED BY THE
PROJECT ENGINEER

- PROVIDE 1/2" DRAIN HOLE IN GROUT

POLE FOUNDATION SHALL EXTEND A MINIMUM
OF 12' BELOW GROUND LEVEL.

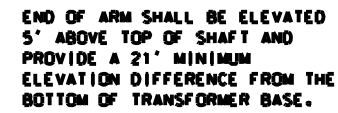
CROWN OF ROADWAY—

**2" BOTTOM OF POLE
BASE TO TOP OF
FOUNDATION**

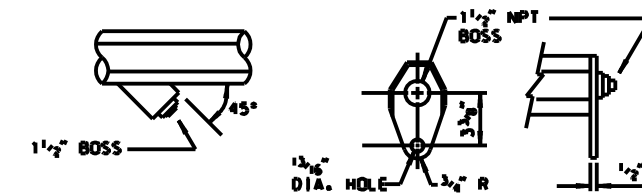
1. REFER TO THE LAOTO SIGNAL DESIGN MANUAL FOR SIGNAL HEAD TYPE, NUMBER AND PLACEMENT. (SEE SECTION 21, FIGURES 1-15)
2. ALL SIGNAL HEADS SHALL BE 17' MINIMUM HEIGHT. FOR MAXIMUM HEIGHT, REFER TO THE MUTCO CURRENT ADOPTED EDITION.
3. SIGNAL HEADS FOR PRIMARY MOVEMENT ON SPECIFIC APPROACH SHALL BE CENTERED OVER APPROACH. TURN LANE HEADS SHALL BE PLACED WITH ADEQUATE SPACING FROM LEFT MOST PRIMARY HEAD.
4. SIGNAL CABLE SHALL ENTER POLE BY WIRE WAY PROVIDED ON POLE. WEATHER HEAD SHALL BE SIZED ACCORDING TO THE NUMBER OF CABLES IN 3" BOSS PROVIDED WITH NECESSARY REDUCERS.
5. A SEPARATE POLE BAND MAY BE REQUIRED TO ATTACH PERPENDICULAR SPAN TO POLE MEETING THE REQUIREMENTS FOR SIGNAL HEIGHT AND SAC.
6. IN ALL CASES, THE MAXIMUM STRAIN POLE HEIGHT SHALL BE USED TO MEET THE 17' SIGNAL HEIGHT BEFORE ANY FOUNDATION ADJUSTMENTS ARE MADE. ADJUSTMENTS TO THE FOUNDATION MUST BE APPROVED BY THE PROJECT ENGINEER.

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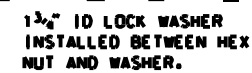
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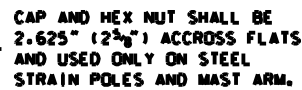
TRANSFORMER BASE DETAIL



ANCHOR BOLT DETAILS



TWO (2) WASHERS INSTALLED.
1 $\frac{1}{8}$ " ID AND 3 $\frac{1}{8}$ " OD. AT TOP
AND BOTTOM OF POLE BASE
PLATE OR (1) WASHER ON TIE-
DOWN LUG.



1 3/4" - 5NC THREADS 105 KPSI
- YIELD HOT DIPPED GALVANIZED.
TOP 18"

REMOVABLE POLE CAP.

TWO BOSSES, 3" AND 1". TO BE LOCATED 18" BELOW TOP OF POLE. ENTRANCE SHALL BE THROUGH HDC. THREADED WEATHER HEADS.

NEAR SIDE

LOAD

12"

GROUNDING NUT $\frac{1}{2}$ "-13NC INSIDE LEFT & HORIZONTAL WITH HANDHOLE FOR GROUND LUG. FARGO GC202 OAE. ITT BLACKBURN TTC3 BURNDY EDC 632C

COVER H. x 6 CONTINUOUS WELDS

2 $\frac{1}{2}$ " DIA. BOLT HOLE

16" DIA. BOLT CIRCLE

SECTION A-A

NEAR SIDE

FAR SIDE

18"

MANUFACTURER'S NAME AND POLE HEIGHT

HANDHOLE

GROUNDING NUT

1" BOSS

3" FPT BOSS

32 DEGREES

35 DEGREES

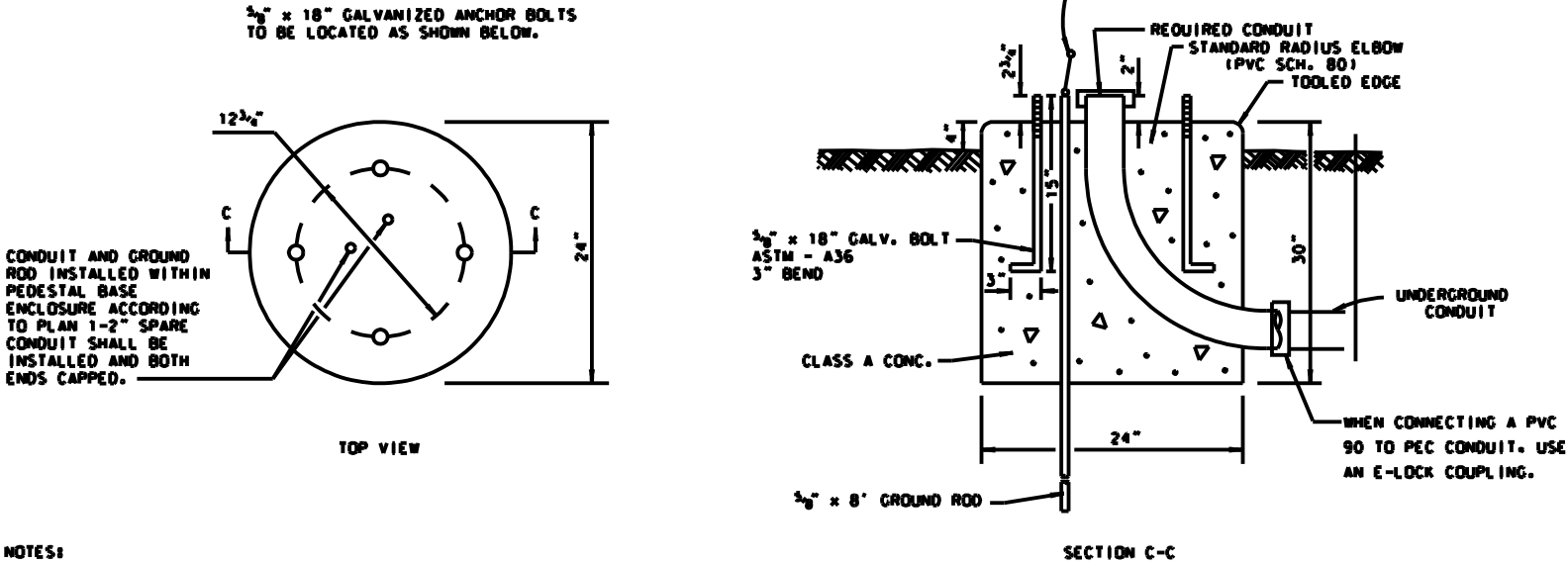
SECTION A-A

NOTE:

1. ALL POLES AND HARDWARE SHALL BE HOT DIPPED. GALVANIZED STEEL.
2. STEEL POLE BASEPLATES SHALL HAVE A 16" DIAMETER BOLT CIRCLE.
3. STEEL POLES SHALL HAVE A MINIMUM DESIGN LOAD OF 4000 POUNDS.
4. HARDWARE SHALL CONFORM TO ANSI/ASME STANDARDS AND BE A193-B7 GRADE STEEL
5. SEE TCS (TRAFFIC CONTROL STANDARD) #10 FOR MORE INFORMATION.
6. STEEL POLES SHALL BE OCTAGONAL IN SHAPE.
7. VENDORS SHALL BE ALSO CERTIFIED.

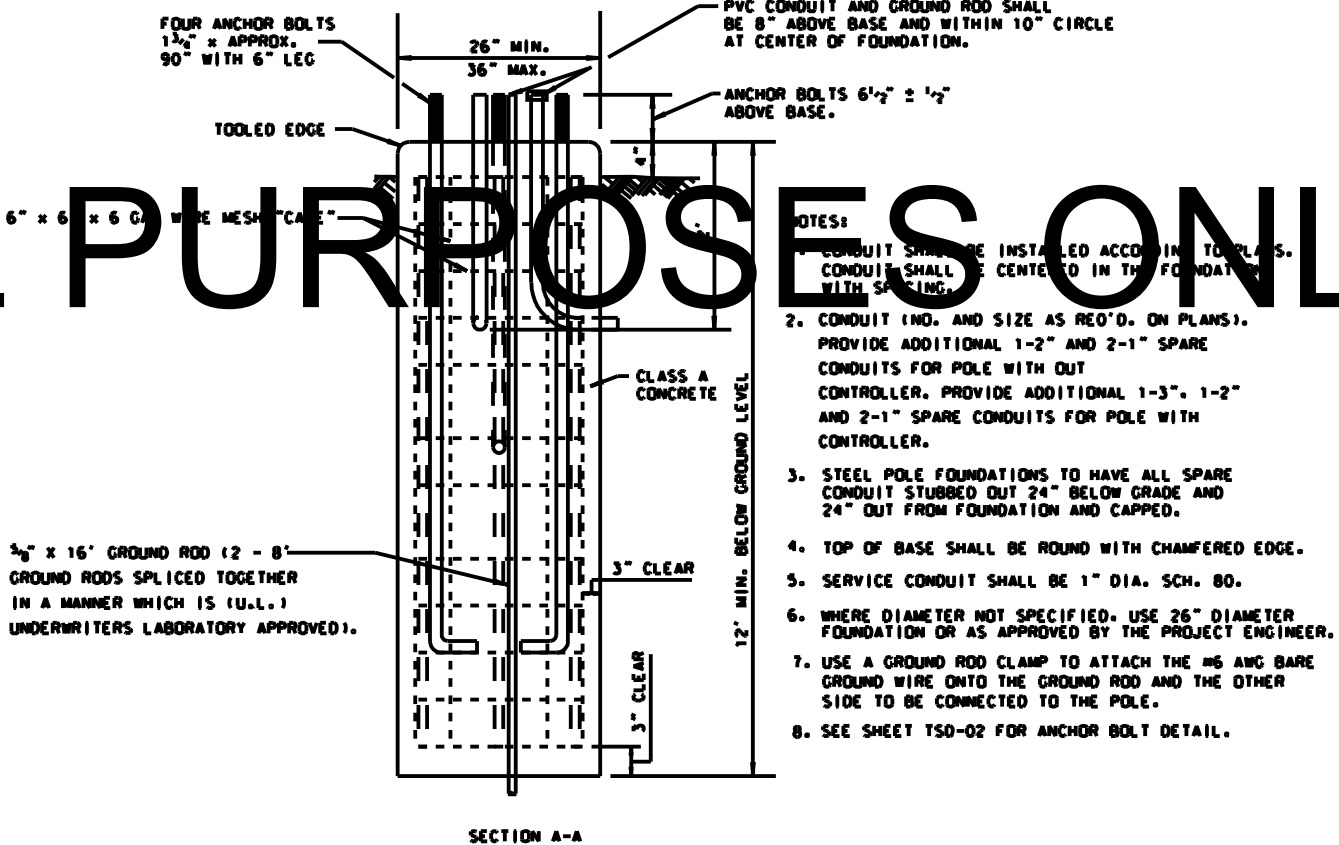
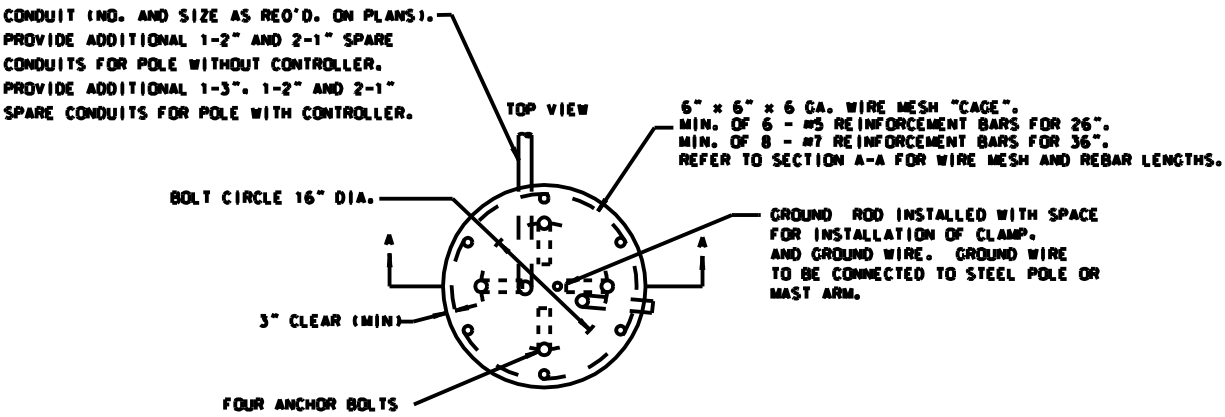
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SIGNAL PEDESTAL FOUNDATION



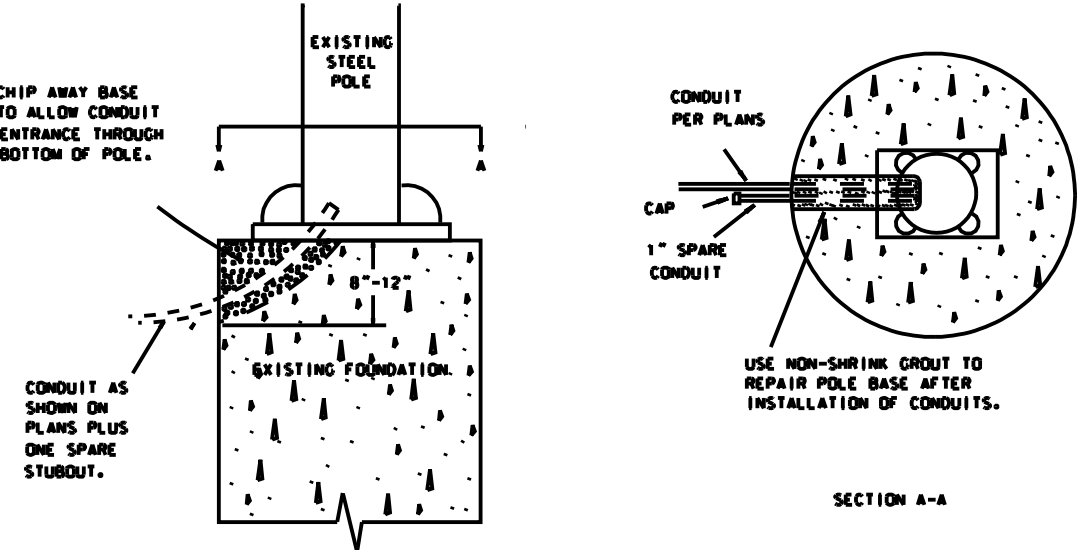
- NOTES:
1. FORMS MUST BE APPROVED BY THE PROJECT ENGINEER BEFORE POURING CONCRETE INTO ANY FOUNDATION FORM OR BEFORE COVERING ANY CONDUIT.
 2. TRAFFIC SIGNAL ANCHOR BOLTS SHALL PROTRUDE 2 3/4" MIN. - 3" MAX. ABOVE FINISHED PEDESTAL FOUNDATION. CONDUIT AND GROUND RODS SHALL PROTRUDE 2" ABOVE FINISHED FOUNDATION.
 3. BACKFILL OVER CONDUIT RUNS SHALL BE OF SOIL OR SAND AND SHALL NOT CONTAIN ROCKS OR CONCRETE.
 4. ALL 90° ELLS TO BE STANDARD RADIUS.

STEEL STRAIN POLE & MAST ARM POLE FOUNDATION



- NOTES:
1. CONDUIT SHALL BE INSTALLED ACCORDING TO PLANS. CONDUIT SHALL BE CENTERED IN THE FOUNDATION WITH SPACING.
 2. CONDUIT (NO. AND SIZE AS REQ'D. ON PLANS). PROVIDE ADDITIONAL 1-2" AND 2-1" SPARE CONDUITS FOR POLE WITH OUT CONTROLLER. PROVIDE ADDITIONAL 1-3", 1-2" AND 2-1" SPARE CONDUITS FOR POLE WITH CONTROLLER.
 3. STEEL POLE FOUNDATIONS TO HAVE ALL SPARE CONDUIT STUBBED OUT 24" BELOW GRADE AND 24" OUT FROM FOUNDATION AND CAPPED.
 4. TOP OF BASE SHALL BE ROUND WITH CHAMFERED EDGE.
 5. SERVICE CONDUIT SHALL BE 1" DIA. SCH. 80.
 6. WHERE DIAMETER NOT SPECIFIED, USE 26" DIAMETER FOUNDATION OR AS APPROVED BY THE PROJECT ENGINEER.
 7. USE A GROUND ROD CLAMP TO ATTACH THE #6 AWG BARE GROUND WIRE ONTO THE GROUND ROD AND THE OTHER SIDE TO BE CONNECTED TO THE POLE.
 8. SEE SHEET TSD-02 FOR ANCHOR BOLT DETAIL.

CONDUIT ENTRANCE DETAIL TO EXISTING FOUNDATION

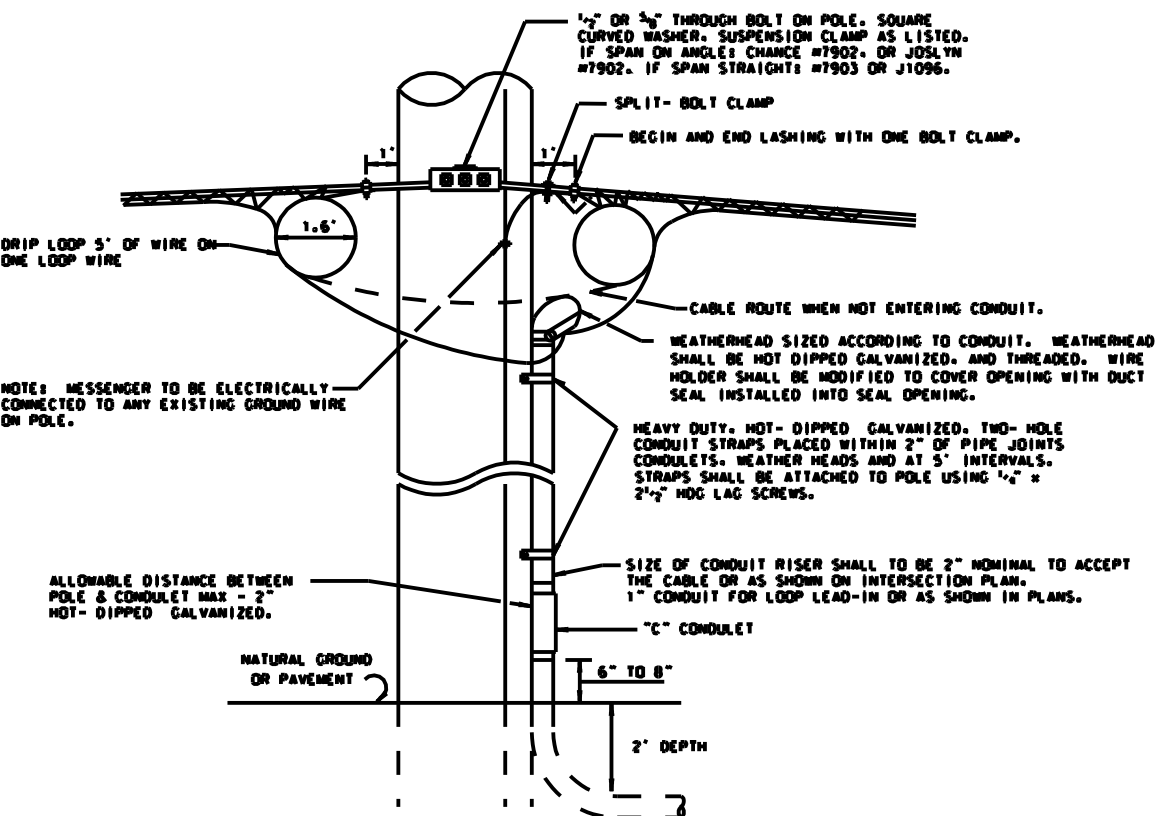


F-10

FOR INFORMATIONAL PURPOSES ONLY

SHEET NUMBER	10
DISTRICT	05
PARISH	
DESIGNED BY	S. MCCAMMILL
CHECKED BY	S. MCCAMMILL
DATE	10/20/05
PROJECT	737-95-0036
STATE	LA
BY	
REVISION DESCRIPTION	
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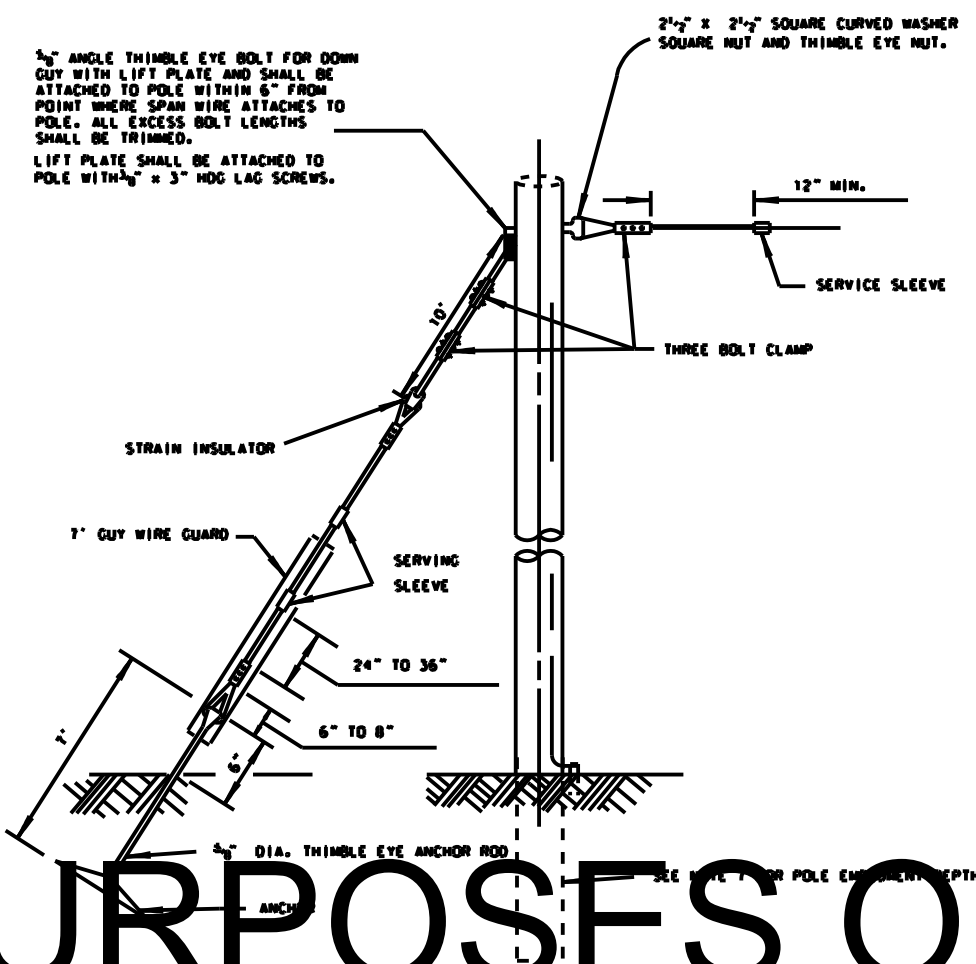
TYPICAL CONDUIT RISER ASSEMBLY & INTERCONNECT DETAIL



- NOTES:
1. HARDWARE SHALL BE CHANGED TO APPROVED PRODUCTS WHEN INTERCONNECT CABLE TYPE FIG. 8 HAS BEEN APPROVED. ALL OTHER REQUIREMENTS REMAIN THE SAME.
 2. PROVIDE DRIP LOOPS ON BOTH SIDES OF SPLICE AND ON BOTH SIDES OF INTERSECTING STREETS.
 3. 1/2" SIEMENS MARTIN GRADE GALVANIZED SPAN WIRE. ASTM 475.
 4. STAINLESS STEEL LASHING WIRE 0.045" DIAMETER FOR INTERCONNECT TO HOLD CABLE TIGHT AGAINST THE SPAN.
 5. MAXIMUM SAG FOR INTERCONNECT MESSENGER CABLE SHALL BE 2% WITH MINIMUM CLEARANCE ABOVE ROADWAY OF 18'.
 6. SHOULD UNUSUAL CIRCUMSTANCES BE ENCOUNTERED, SPLICING SHALL BE APPROVED BY THE PROJECT ENGINEER.
 7. WHEN INTERCONNECT IS DEAD ENDED AT POLE, HARDWARE AS SHOWN FOR WOOD POLE DETAIL SHALL BE USED.
 8. INSTALLATION SHALL BE CLASSIFIED AS 120 VAC SECONDARY LOCATED BELOW POWER COMPANY EQUIPMENT ABOVE OTHER UTILITIES IN ACCORDANCE WITH NATIONAL ELECTRIC SAFETY CODE.

WOOD POLE DETAIL

FOR EXISTING AND NEW



- NOTES:
1. TIEBACK ANCHORS MAY BE REQUIRED AS DIRECTED BY THE PROJECT ENGINEER.
 2. TOP OF POLE SHALL BE CAPPED WITH MALLEABLE ALUMINUM 0.032" MATERIAL.
 3. TOP OF POLE TRIMMED LEAVING A MAXIMUM OF 18" OF POLE ABOVE ATTACHMENT POINT OF SPAN.
 4. THE ANCHOR ROD SHALL BE A MINIMUM OF 3/8" DIA. 7' LONG. ACCEPTABLE ANCHORS ARE: CHANCE 8-WAY EXPANSION ANCHORS OR 3 HELICAL 12"-10"-8", 7,000# CAPACITY 1 1/2" ROD AND ANY EXTENSION NEEDS TO MEET THE REQUIREMENTS IN THE LA0010 SPECIFICATIONS.
 5. ALL POLES INSTALLED SHALL HAVE A #6 AWG BARE COPPER WIRE INSTALLED THE LENGTH OF POLE WITH BUTT GROUND (APPROVED BY INSPECTOR PRIOR TO INSTALLATION OF POLE) OR CONNECT TO 3/8" x 8' GROUND ROD USING LUG.
 6. CLASS 3 POLE SHALL BE USED AND CREOSOTED IN ACCORDANCE WITH D.O.T.D. STANDARDS.
 7. GENERALLY, ANCHORS ARE 20' TO 30' BEHIND THE POLE IN LINE WITH THE SPAN. RESTRICTION TO THIS WILL BE PROPERTY LINES OR OBSTRUCTIONS. ALL ATTACHMENT FITTINGS SHALL BE HOT-DIPPED GALVANIZED UNLESS STATED OTHERWISE. POLES EMBEDDED IN GROUND AS FOLLOWS: 35' POLE - 6', 40' POLE - 7', 45' POLE - 8'.

F-11

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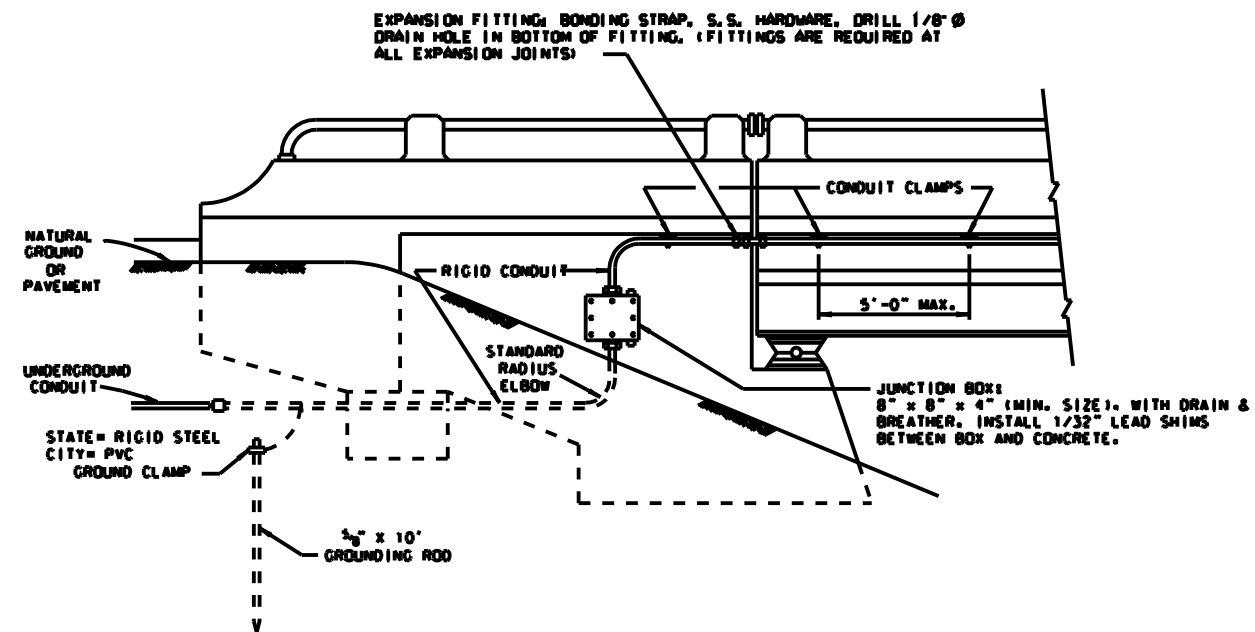
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PARISH	
DESIGNED	S. MCCABILL
CHECKED	S. MCCABILL
DATE	10/20/05
PROJECT	FEDERAL PROJECT
STATE PROJECT	737-95-0036
DATE	10/20/05
SHEET	5 OF 11
REVISION DESCRIPTION	
NO.	DATE
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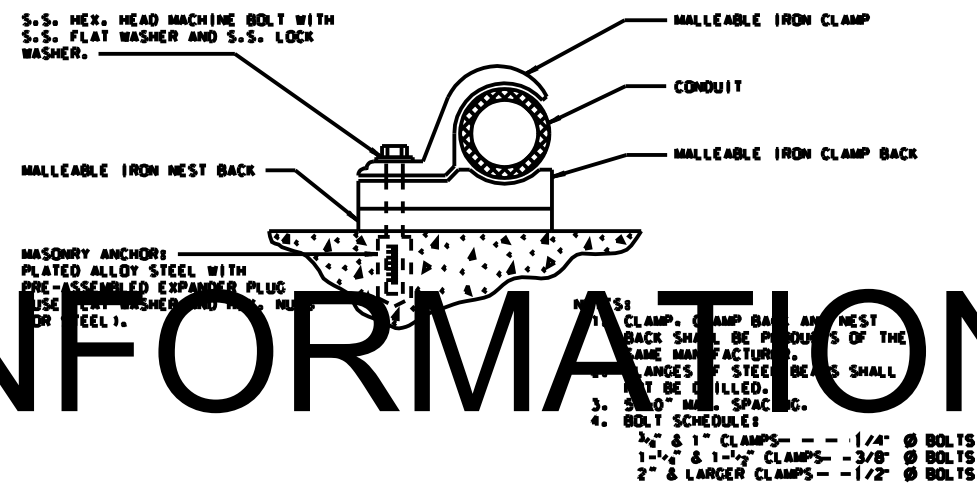


- NOTES:**
1. PEDESTRIAN PUSH BUTTONS SHALL BE FURNISHED AND INSTALLED WITH PEDESTRIAN SIGNALS AT INTERSECTIONS WITH VEHICLE ACTUATED CONTROLLERS. PEDESTRIAN PUSH BUTTONS MAY ALSO BE REQUIRED AT OTHER INTERSECTIONS, AND THOSE SO REQUIRED ARE DESIGNATED ON INTERSECTION LAYOUT SHEETS.
 2. THE CONTRACTOR SHALL FURNISH AND INSTALL A R10-44(L) OR R10-44(R), LEFT OR RIGHT SIGN (AS APPROPRIATE), ABOVE EACH PEDESTRIAN PUSH BUTTON. THE DIRECTIONAL ARROW SHALL BE PLACED IN THE DIRECTION OF CROSSWALK.
 3. PEDESTRIAN SIGNALS MAY BE PLACED EITHER ON TOP OF PEDESTAL OR ON THE SIDE OF A MAST ARM OR STRAIN POLE AS REQUIRED BY PLANS.
 4. STATE AND CITY INTERSECTIONS WILL USE ONE-SECTION PEDESTRIAN SIGNAL INDICATIONS.
 5. CLEARANCE FROM THE BOTTOM OF PEDESTRIAN SIGNAL HEADS TO SIDEWALK OR NATURAL GROUND SHALL BE 8' OR SHALL CONFORM TO THE CURRENT ADOPTED EDITION OF THE MUTCD.

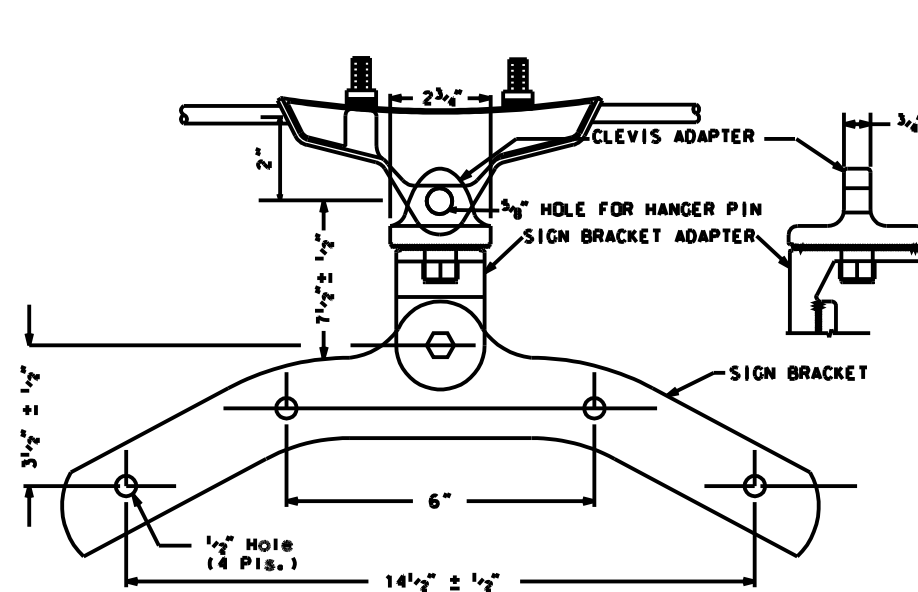
TYPICAL CONDUIT INSTALLATION ON BRIDGE STRUCTURE



CONDUIT FASTENING DETAIL



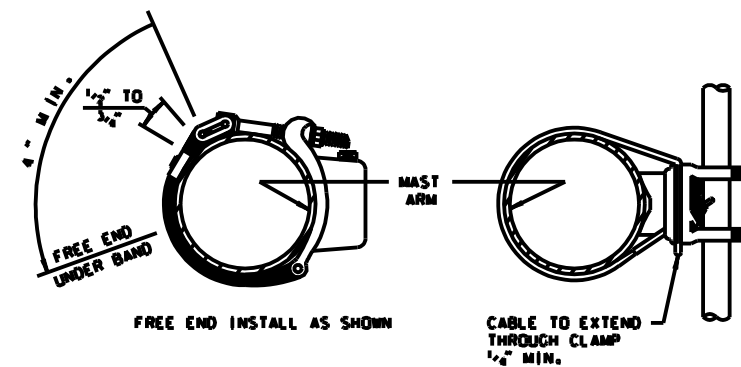
SPAN WIRE SIGN BRACKET



NOTES:

1. 3/8" SUSPENSION (HANGER) PIN, WITH INTEGRAL COTTER PIN, NOT SHOWN ABOVE BUT SHALL BE INCLUDED WITH THE DEVICE.
2. ALL MATERIAL FOR DEVICES SHOWN SHALL BE CAST ALUMINUM CONSTRUCTION WITH COATING TO PREVENT OXIDATION.
3. ALL HARDWARE FOR DEVICES SHOWN TO BE OF HOT DIPPED, GALVANIZED STEEL CONSTRUCTION.
4. SIGN MOUNTING BRACKET PRE-DRILLED WITH 1/2" HOLES (SEE DRAWING).
5. SIGN BRACKET TO BE DESIGNED TO ROTATE 360 DEGREES AROUND THE VERTICAL AXIS AND HAVE A PERPENDICULAR SWING OF NOT MORE THAN 75 DEGREES ON EACH SIDE OF THE VERTICAL AXIS.
6. BOTTOM OF SIGN SHALL BE WEIGHTED WITH STEEL BAR PAINTED TO RESIST CORROSION. BRACKET AND WEIGHT SHALL BE ATTACHED TO SIGN WITH HDG OR STAINLESS STEEL 3/8" BOLTS, WASHERS, AND NUTS.
7. SPAN WIRE SADDLE SHALL BE DESIGNED TO FIT A CABLE RANGE OF 1/4" - 3/8".
8. BRACKET SHALL BE INSTALLED SO THAT THE SIGN IS PLUMB AND PERPENDICULAR TO THE DRIVERS LINE OF VIEW.
9. SEE TCS# 33 WRITTEN SPECIFICATIONS FOR MORE INFORMATION.

INSTALLATION DETAIL OF MAST ARM ATTACHMENTS FOR SIGN AND SIGNAL BRACKETS

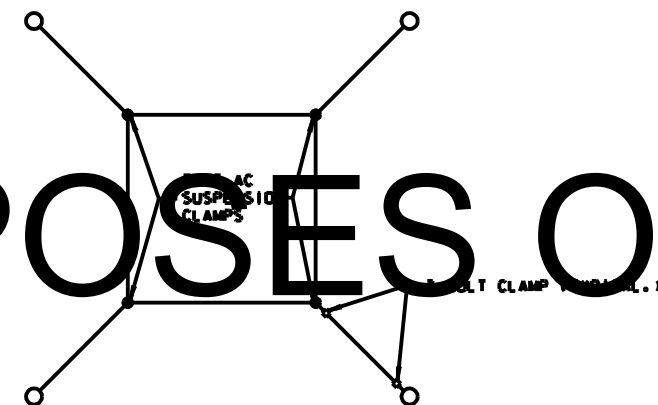


NOTES:

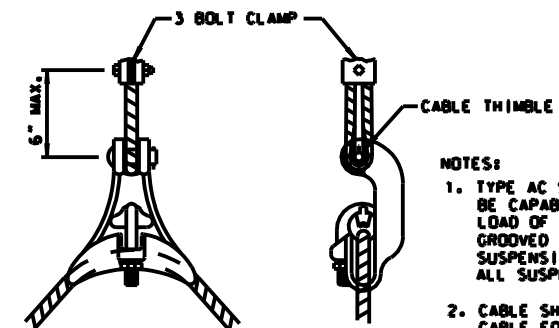
1. ATTACHMENTS SHALL BE ADJUSTABLE TO PLUMB.
2. ADDITIONAL SIGN BACKING MAY BE REQUIRED FOR SIGNS LARGER THAN STANDARDS. APPROVAL OF PROJECT ENGINEER REQUIRED PRIOR TO INSTALLATION.

SUSPENDED BOX INSTALLATION

ALSO USED ON BRIDLE SPAN INSTALLATION



TYPE AC SUSPENSION CLAMP

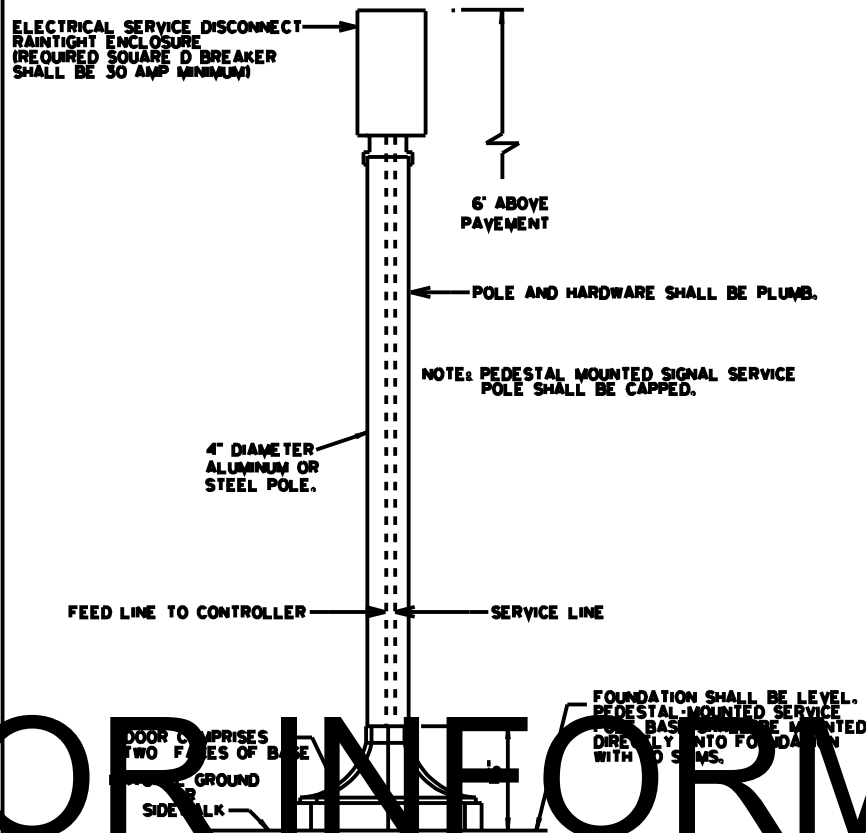


NOTES:

1. TYPE AC SUSPENSION CLAMPS SHALL BE CAPABLE OF WITHSTANDING A TENSILE LOAD OF 25,000 POUNDS AND SHALL BE GROOVED FOR 3/8" CABLE. TYPE AC SUSPENSION CLAMPS SHALL BE USED FOR ALL SUSPENDED BOX INSTALLATIONS.
2. CABLE SHALL HAVE 3' OF SPARE CABLE FORMED AS A LOOP ON EACH SIDE OF CLAMP.

FOR INFORMATIONAL PURPOSES ONLY

PEDESTAL-MOUNTED
SIGNAL SERVICE POLE INSTALLATION

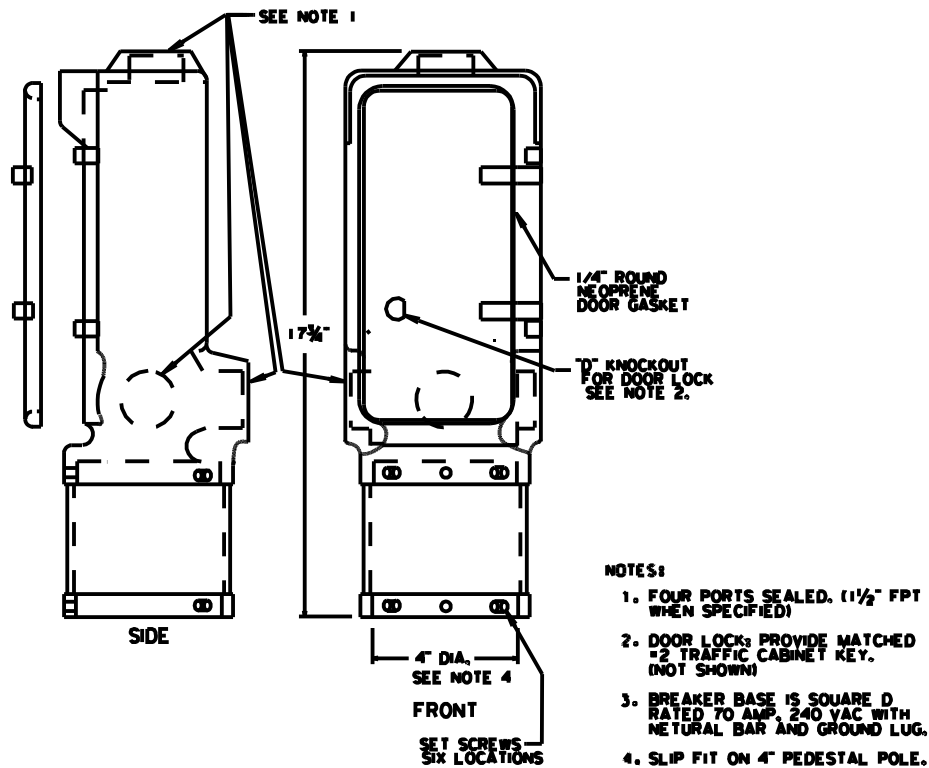


(FOR FOUNDATION USE STANDARD DETAIL FOR SIGNAL PEDESTAL FOUNDATION)

NOTES:

1. UNDERGROUND CONDUIT SHALL BE INSTALLED IN A STRAIGHT LINE FROM START TO FINISH. ANY DEVIATION FROM A STRAIGHT LINE WILL REQUIRE PRIOR APPROVAL BY THE PROJECT ENGINEER.
2. THE CONTRACTOR SHALL NOT RECEIVE DIRECT PAY FOR VERTICAL RUN AT THE START AND FINISH POINTS AS WELL AS ADDITIONAL CONDUIT DUE TO A DEVIATION FROM A STRAIGHT LINE INSTALLATION.
3. ALL CONCRETE SHALL BE "CLASS A" IN ACCORDANCE WITH SECT. 901 OF THE STD. SPEC'S.
4. ALL SERVICE POLES SHALL BE GROUNDED WITH #6 AWG BARE SOLID GROUNDING WIRE.
5. INSTALL NEW GROUND WIRE AND GROUND ROD. CONNECT GROUND ROD TO SIGNAL PEDESTAL BY GROUND WIRE.
6. SERVICE SHALL BE 120/240 V. AC AND WIRED WITH THHN-THWN OR XHHW #6 AWG, TWO BLACKS, AND ONE WHITE NEUTRAL, 3 CONDUCTOR. CONCENTRIC CABLE SHALL BE INSTALLED WHERE SERVICE WILL ATTACH TO OR ENTER STEEL SIGNAL POLE.
7. SERVICE CONDUCTORS SHALL BE RUN IN A SEPARATE CONDUIT TO CONTROLLER BASE.
8. ALL EXPOSED METAL SHALL BE LADOTD GREEN

ELECTRICAL SERVICE DISCONNECT
RAINTIGHT ENCLOSURE FOR
PEDESTAL MOUNTED SIGNAL SERVICE POLE



NOTES:

1. FOUR PORTS SEALED. (1 1/2" FPT WHEN SPECIFIED)
2. DOOR LOCKS PROVIDE MATCHED #2 TRAFFIC CABINET KEY. (NOT SHOWN)
3. BREAKER BASE IS SQUARE D RATED 70 AMP, 240 VAC WITH METAL BAR AND GROUND LUG.
4. SLIP FIT ON 4" PEDESTAL POLE.

WIRING DETAIL FOR FLASHING BEACON



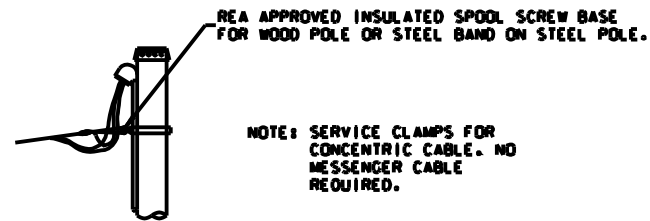
WIRING DETAIL FOR TRAFFIC SIGNAL
HEADS & HANGERS

INDICATIONS	TERMINAL BLOCK	2-6 CONDUCTOR CABLES		1-10 CONDUCTOR CABLE	
HEAD 1	1	GREEN	CABLE 1	GREEN	
	2	YELLOW	CABLE 1	YELLOW	
	3	RED	CABLE 1	RED	
HEAD 2	4	GREEN	CABLE 2	G/BBLACK	
	5	YELLOW	CABLE 2	Y/BBLACK	
	6	RED	CABLE 2	R/BBLACK	
COMMON	7	WHITE	CABLE 1 & 2	WHITE	
	8	BLACK	CABLE 1	BLACK	
	9	BLACK	CABLE 2	W/ BLACK	
GREEN ARROW	10				
	11				
	12				
CASE GROUND		BLUE	CABLE 1 & 2	BLUE	

NOTE: EIGHTEEN CIRCUIT DISCONNECT HANGERS SHALL BE SIMILARLY WIRED WITH SOLID INDICATIONS WIRED FIRST FOLLOWED BY ARROW INDICATIONS. ON SPAN MOUNTED SIGNAL INSTALLATIONS. ALL BULBS SHALL BE INDIVIDUALLY WIRED FROM CONTROLLER. ALL CABLES SHALL BE CONTINUOUS RUN WITHOUT SPLICES EXCEPT AS SHOWN FOR MAST ARM INSTALLATIONS AT DISCONNECT HANGERS SHOWN ON PLANS OR WHERE JUNCTIONS ARE SHOWN ON THE PLANS. ALL WIRES SHALL BE TERMINATED IN HANGER. CONDUCTORS THAT ARE UNUSED IN SIGNAL THAT DO NOT HAVE INDICATIONS SHOWN ABOVE SHALL BE SPARE CONDUCTORS AND SHALL NOT BE USED. THE HARNESS FROM THE SIGNAL TERMINAL BLOCK SHALL BE WIRED IN ACCORDANCE TO THE ABOVE TABLE. UNUSED CONDUCTORS SHALL BE BONELESS IN HEAD WITH ENDS TAPED TO PREVENT GROUNDING TO CASES.

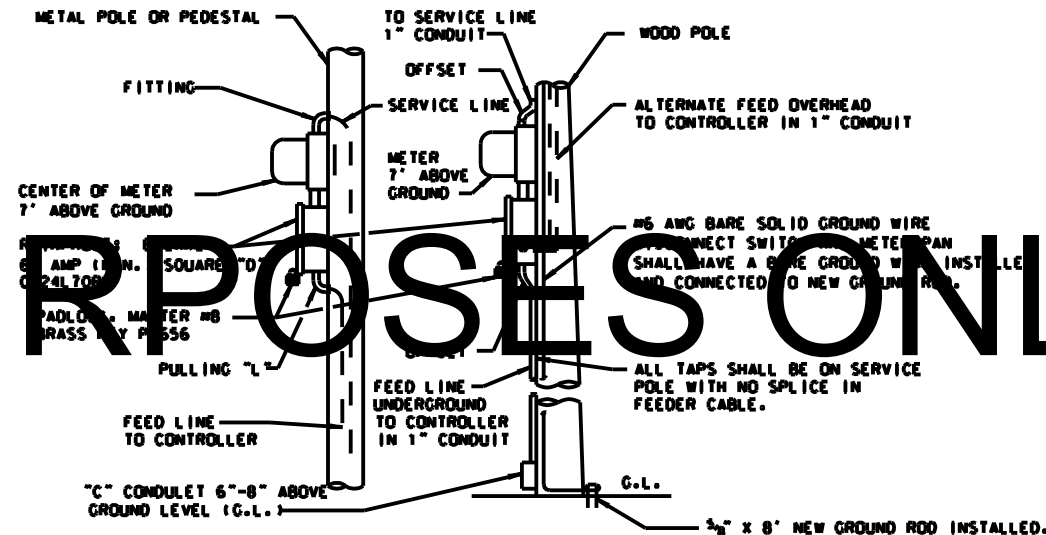
OVERHEAD SERVICE TO CONTROLLER

(AS CALLED FOR IN THE PLANS OR APPROVED BY PROJECT ENGINEER)



TYPICAL ELECTRICAL SERVICE

(BREAKER SIZED ACCORDING TO THE LOAD WITH MINIMUM BREAKER SIZE OF 60 AMP)

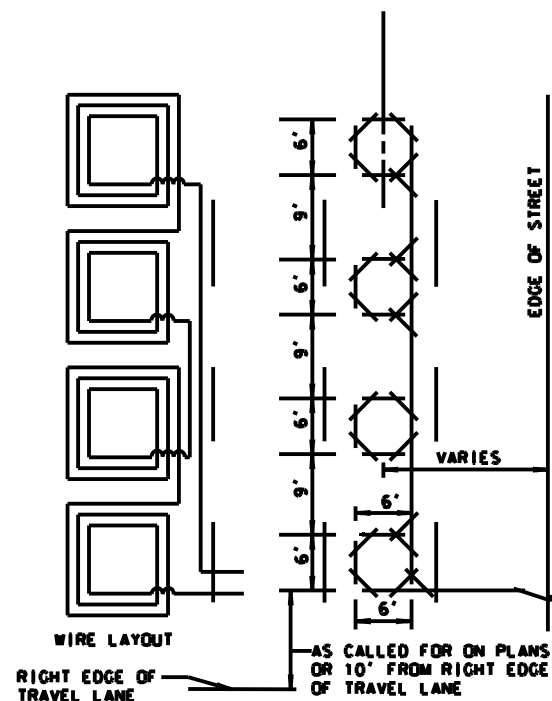


NOTES:

1. UNDERGROUND CONDUIT SHALL BE INSTALLED IN A STRAIGHT LINE FROM START TO FINISH. ANY DEVIATION FROM A STRAIGHT LINE WILL REQUIRE PRIOR APPROVAL BY THE PROJECT ENGINEER.
2. ALL CONCRETE SHALL BE "CLASS A" IN ACCORDANCE WITH SECT. 901 OF THE STD. SPEC'S.
3. ALL SERVICE POLES SHALL BE GROUNDED WITH #6 AWG BARE SOLID GROUNDING WIRE.
4. INSTALL NEW GROUND ROD AND WIRE.
5. SERVICE SHALL BE 120/240 V. AC AND WIRED WITH THHN-THWN OR XHHW #6 AWG, TWO BLACKS, AND ONE WHITE NEUTRAL, 3 CONDUCTOR. CONCENTRIC CABLE SHALL BE INSTALLED WHERE SERVICE WILL ATTACH TO OR ENTER STEEL SIGNAL POLE.
6. SERVICE CONDUCTORS SHALL BE RUN IN A SEPARATE CONDUIT TO CONTROLLER BASE.
7. CONDUIT STRAPS SHALL BE 2 HOLE, HEAVY DUTY AND SHALL BE INSTALLED BEGINNING AT FITTING OFFSET OR COUPLING. SPACED AT 5' INTERVALS MAXIMUM ON EACH SIDE OF CONDULETS AND ADJACENT TO CABINET. 1/2" x 3" HOG LAG SCREWS SHALL BE USED ON STRAPS.
8. ALL EQUIPMENT SHALL BE ATTACHED TO POLE WITH HDG LAG SCREWS.

TYPICAL SAW CUT LAYOUT

NOTE: LOOPS CENTERED ON LANE WIDTH WILL VARY DEPENDENT ON LANE WIDTH AND WILL NOT BE UNIFORM OVER LENGTH OF LOOP SHALL FIT DETECTION ZONE AS SHOWN ON PLANS.



NOTES:

1. LOOPS SHALL CONSIST OF A CONTINUOUS LENGTH OF NO. 14 AWG. 19-STRAND WIRE INSULATED BY A CROSS-LINKED THERMOSETTING BLACK POLYETHYLENE COMPOUND (ASTM D-2655-80).
2. THE CONDUCTOR SHALL BE COPPER AND SHALL, BEFORE INSULATING, CONFORM TO THE REQUIREMENTS OF ASTM B-3.
3. THE STRANDED CONDUCTOR SHALL UTILIZE EITHER CONCENTRIC OR BUNCH STRANDING AND SHALL CONFORM TO THE CIRCULAR MIL AREA AND PHYSICAL REQUIREMENTS SPECIFIED IN ASTM DESIGNATION B-8, OR ASTM DESIGNATION B-174, FOR BUNCH STRANDING.
4. THE INSULATION SHALL BE APPLIED CONCENTRICALLY ABOUT CONDUCTOR. THE THICKNESS OF THE INSULATION SHALL BE NOT LESS THAN 0.030 INCHES AT ANY POINT WITH A MINIMUM AVERAGE THICKNESS OF 0.035 INCHES. THE METHOD OF MEASUREMENT AND THE APPARATUS USED SHALL BE IN ACCORDANCE WITH UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL62 (ANSI C33.11).
5. THE INSULATION OF THE FINISHED CONDUCTOR SHALL WITHSTAND WITHOUT BREAKDOWN THE APPLICATION OF A 60 OR 3000 HERTZ, 7500 VOLT (RMS) ESSENTIALLY SINUSOIDAL SPARK TEST POTENTIAL IN ACCORDANCE WITH THE METHOD AND USING EQUIPMENT SPECIFIED IN UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL83 (ANSI C33.81).
6. LOOP WIRE SHALL CONFORM TO INSA SPECIFICATION 51-7 EXCEPT WHERE MODIFIED BY THESE SPECIFICATIONS.
7. THE INSULATED CONDUCTOR SHALL BE COMPLETELY ENCASED IN A TUBE OF LOW DENSITY POLYETHYLENE CONFORMING TO THE FOLLOWING DIMENSIONS:

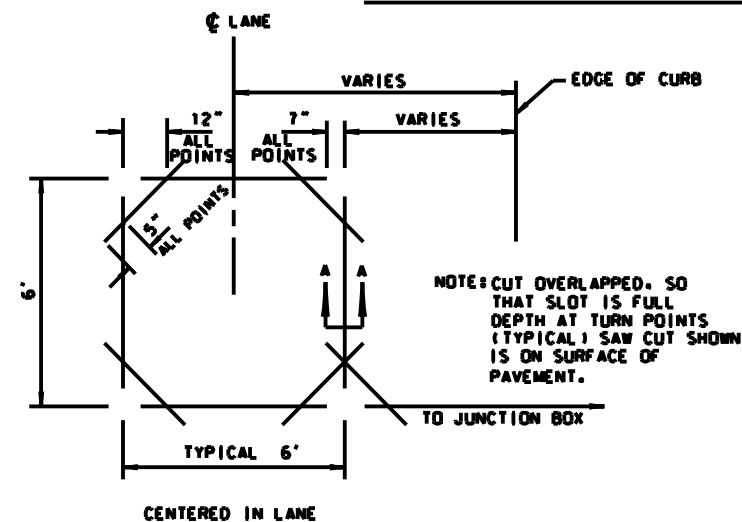
NOMINAL OUTSIDE DIAMETER	.24 INCH
MAXIMUM OUTSIDE DIAMETER	.25 INCH
NOMINAL INSIDE DIAMETER	.173 INCH
MAXIMUM INSIDE DIAMETER	.190 INCH
NOMINAL WALL THICKNESS	.030 INCH
MAXIMUM WALL THICKNESS	.035 INCH

THE NAME OF THE MANUFACTURER, THE YEAR OF MANUFACTURE, AND ANY APPLICABLE PART NUMBER SHALL BE PRINTED ON THE ENCASED TUBE AT INTERVALS OF 27 INCHES OR LESS.
8. SLOTS SHALL BE CLEANED OF LOOSE MATERIAL. THE WIRE SHALL BE CAREFULLY INSTALLED TO ENSURE THE INSULATION IS NOT DAMAGED.
9. LOOPS POSITIONED PART IN ASPHALT AND PART IN CONCRETE SHALL BE SEPARATED. SEPARATE LOOPS SHALL TERMINATE AT THE JUNCTION BOX AND SHALL BE WIRED IN SERIES.

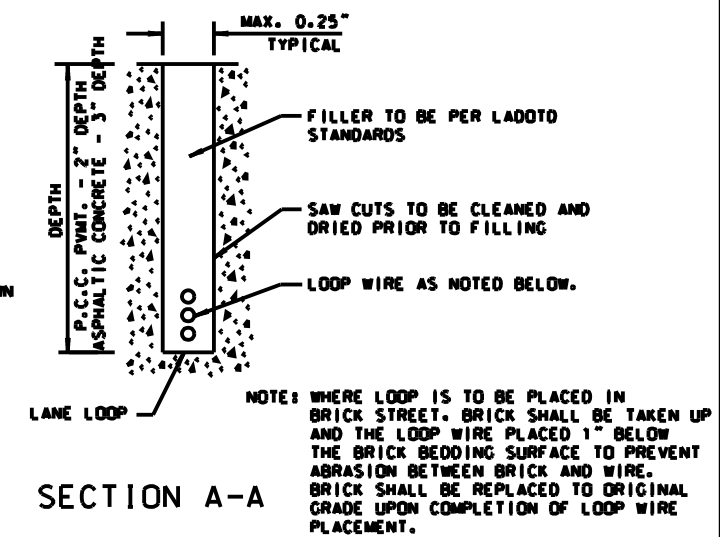
1/2" PVC SCH. 80 CONDUIT. SEE NOTE CONCERNING ASPHALTIC SHOULDERS.

SEE TYPICAL LOOP LEAD-IN INSTALLATION FOR TERMINATION.

LOOP SAW-CUT CONFIGURATION

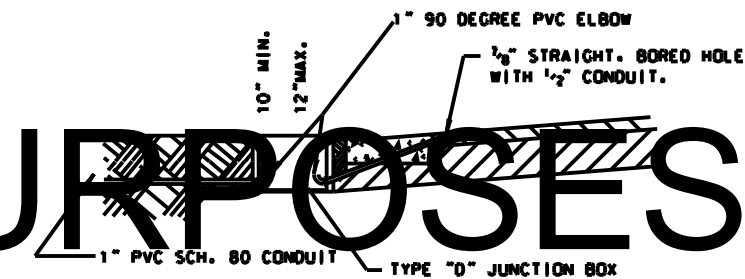


NOTE: SAW CUTS DO NOT MEET AT CORNER OF RECTANGLE. DIMENSIONS SHOWN ARE REQUIRED FOR USING 12" SAW BLADE. LARGE BLADES REQUIRE LONGER DISTANCES THAN SHOWN AT CORNERS. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CORRECT DEPTH REGARDLESS OF BLADE SIZE, UNLESS OTHERWISE NOTED IN PLANS.

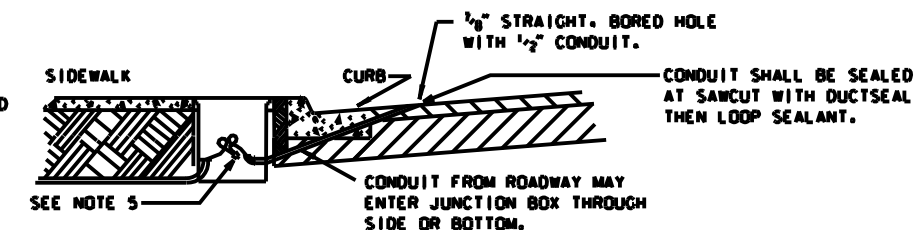


SECTION A-A

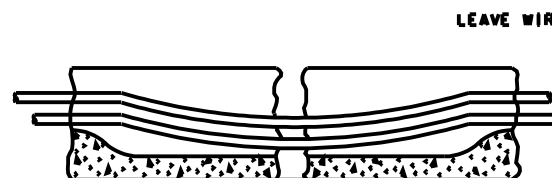
TYPICAL LOOP LEAD-IN INSTALLATION



NOTE: TYPE D 12"x12"x13" FOOTED JUNCTION BOX. H-10 LOAD. INSTALL WHERE SIDEWALKS ARE EXISTING.



PAVEMENT JOINT & CRACK SECTION



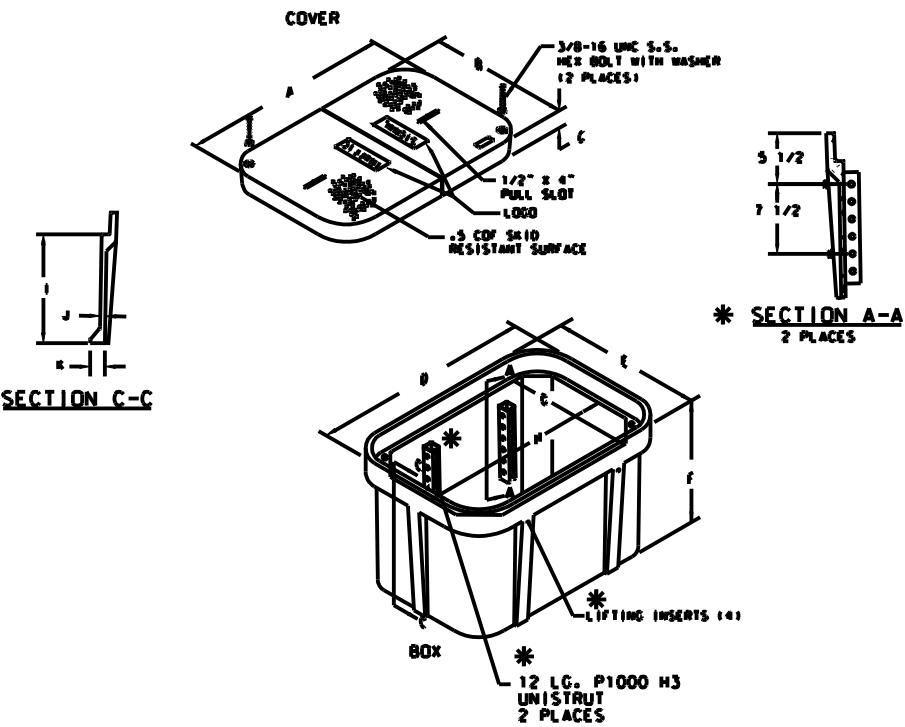
NOTE: DROP SAW BLADE DOWN TO ALLOW SLACK IN CABLE. JOINT LESS THAN 1/2" -- ALL OTHER JOINTS SHALL NOT BE CROSSED EXCEPT AS DIRECTED BY ENGINEER.

NOTES:

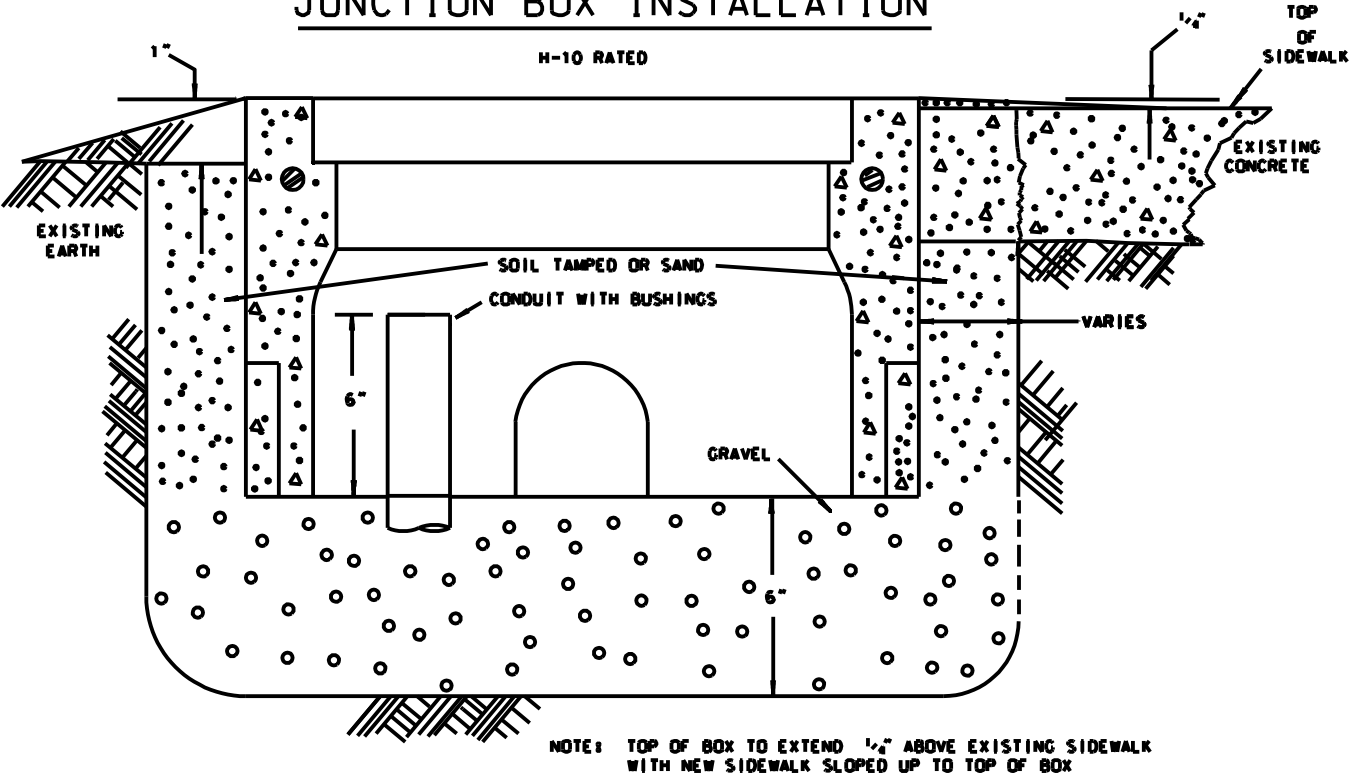
1. CONTRACTOR SHALL PROVIDE 1/2" CONDUIT FROM JUNCTION BOX AND TERMINATE BELOW GROUND SO THAT IT DIRECTLY RECEIVES LOOP LEAD-IN WIRE.
2. FOR A LOOP INSTALLATION IN PAVEMENT WITH OVERLAYS LESS THAN 3" OVER CONCRETE, A DEEPER DEPTH SAWCUT SHALL BE REQUIRED. THE DEPTH REQUIRED SHALL PRODUCE A 1" SAW CUT INTO THE CONCRETE AND SHALL BE DETERMINED AT THE JOB SITE. THE SAW CUT SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO THE WIRE INSTALLATION.
3. FOR LOOP INSTALLATIONS IN ROADWAY THAT HAS ASPHALT SHOULDERS, THE 1/2" CONDUIT SHOWN ABOVE SHALL BE EXTENDED THROUGH A TRENCH IN THE SHOULDER TO A JUNCTION BOX INSTALLED OUTSIDE THE SHOULDER.
4. IDENTIFY LOOP WIRES WITH PERMANENT LABEL MARKED WITH CONTROLLER PHASE.
5. LOOP SPLICE SHALL BE MADE WITH A COPPER OPEN ENDED COMPRESSION SPLICE CAP AND CRIMPED. THE LOOP SPLICE SHALL THEN BE SEALED WITH A SCOTCHCAST ELECTRICAL INSULATING RESIN SYSTEM OR A APPROVED EQUAL.

FOR INFORMATIONAL PURPOSES ONLY

JUNCTION BOX



JUNCTION BOX INSTALLATION

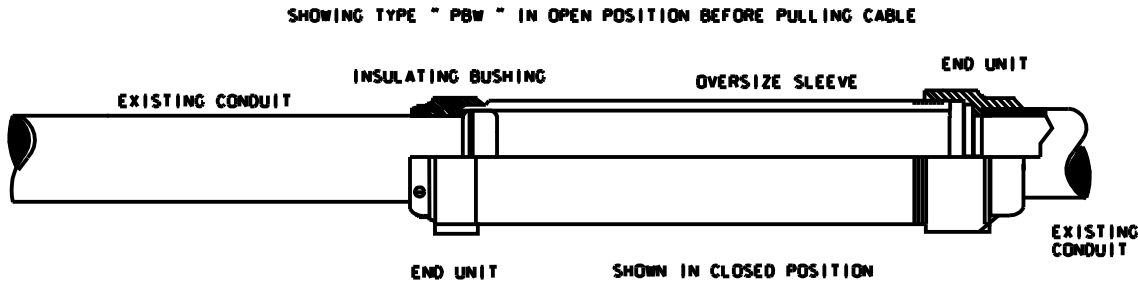


TYPE PBW WEATHERPROOF PULL BOX FITTING

TYPE	DIMENSIONS (IN.) (APPROX.)									
BOX	B	C	D	E	F	G	H	I	J	K
E	23 3/4	13 3/4	2	25	15 1/2	12	11 1/4	21 1/4	10	3 1/4
F	30 1/2	17 1/2	2	32 1/4	19 1/4	12	15 1/2	28 1/2	10	3 1/4
G	35 3/8	24	2	37 3/8	26	18	22 1/4	33 3/8	15	1 1/2
H	35 3/8	24	3	37 3/8	26	36	22 1/4	33 3/8	15	1 1/2
I	47 3/8	30 1/8	3	49 3/8	32 1/8	18	28 1/8	45 3/8	15	1 1/2
J	47 3/8	30 1/8	3	49 3/8	32 1/8	36	28 1/8	45 3/8	15	1 1/2

- NOTE FOR ALL JUNCTION BOXES:
- JUNCTION BOXES AND COVERS SHALL BE CONSTRUCTED OF A CONCRETE COMPOSITE MATERIAL.
 - JUNCTION BOX SHALL HAVE A HOLLOW BASE.
 - NO "MOUSE TYPE" OPENING SHALL BE PRESENT.
 - BOX DIMENSIONS SHOWN ARE NOMINAL.
 - A MINIMUM OF 4' OF SPARE SIGNAL, LOOP LEAD-IN, GPR, AND SERVICE CABLE SHALL BE INSTALLED IN EACH JUNCTION BOX.
 - SEE TCS #22 WRITTEN SPECIFICATION FOR MORE INFORMATION.
- NOTE FOR TYPE G, H, I AND J JUNCTION BOXES:
- INSERTS TO BE CENTERED ON ONE WALL OF BOX, 5.625" FROM THE TOP OF EACH BOX.
 - TWO PIECES OF ALUMINUM OR STEEL PIERCED CHANNEL 11" LONG TO BE SUPPLIED WITH EACH BOX.
 - BOLTS TO BE 1/2"-13 x 3/4" LONG STAINLESS STEEL 1/8" SPACERS TO BE PLACED BETWEEN CHANNELS AND WALL OF JUNCTION BOX.
 - CHANNEL RACKING TO BE FACTORY INSTALLED.
 - PROJECTS WITH FIBER OPTIC COMMUNICATION: INSTALL A MINIMUM OF 50' SPARE FIBER IN TYPE "GG" AND 100' SPARE FIBER IN LARGER JUNCTION BOXES.

FOR INFORMATIONAL PURPOSES ONLY



TYPE PBW- WEATHERPROOF			
CONDUIT (NOM.)	TYPE PBW	SLEEVE (NOM.)	MAX. DIA.
SIZE (IN.)		SIZE (D x L)	
1	PBW 100	1 1/2 x 12	2 3/8
2	PBW 200	3 x 20	4
3	PBW 300	4 x 28	5 1/8

• UNLESS OTHERWISE SPECIFIED ON PLANS.

SHEET 16

DISTRICT 05

PURISH

DESIGNED S. MCCAMMILL

CHECKED S. MCCAMMILL

DATE 10/20/06

PROJECT

DETAILS S. MCCAMMILL

CHECKED D. LENO

DATE 10/20/06

STATE PROJECT

7/37-95-0036

TO OF 11

BY

DATE

DESCRIPTION

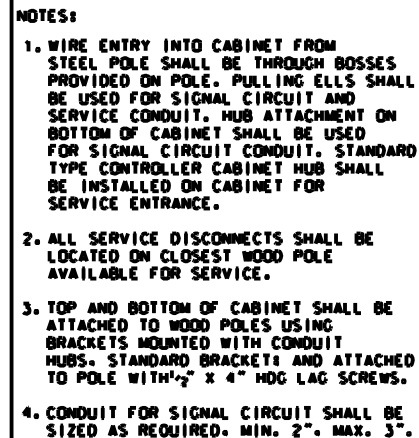
TRAFFIC SIGNAL AND INSTALLATION DETAILS

JUNCTION BOX AND PULL BOX

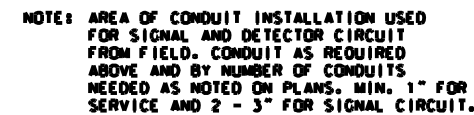
TSD-09

TRAFFIC ENGINEERING

F-17



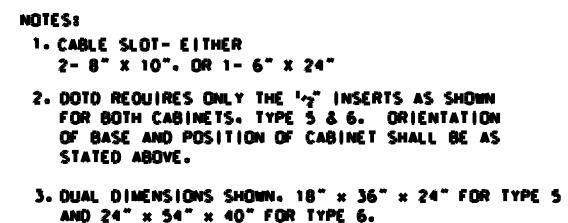
**NOTE: FOR TYPE 5, 6, AND 7 CABINETS
D.O.T.D. - T.C.S. #18**



- NOTES:
1. ALL GROUND MOUNTED CONTROLLERS TO HAVE SPARE 2" CONDUIT STUBBED OUT 24" BELOW GRADE & 24" OUT FROM BACK OF CABINET IN ADDITION TO OTHER REQUIRED CONDUITS. SPARE CONDUIT SHALL BE CAPPED.
 2. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1" CHAMFER.
 3. ALL CONDUIT, GROUND ROD AND ANCHOR BOLTS SHALL BE INSTALLED WITH 1 $\frac{1}{2}$ " EXPOSED ABOVE BASE.
 4. CONTROLLER FOUNDATION SHALL BE MARKED TO SHOW THE LOCATION AND DIRECTION OF ALL SPARE CONDUIT.
 5. FOUNDATION SHALL BE ORIENTATED AS SHOWN ON THE PLANS. TYPICALLY, DOOR SIDE SHALL BE AWAY FROM TRAFFIC.
 6. #6 AWG BARE COPPER WIRE ON GROUND ROD. ONE SIDE TO BE CONNECTED TO GROUND LUG ON PANEL.

ALTERNATE CONTROLLER CABINET BASED FOR TYPE 3 & 6 CABINETS

**NOTE: ALL EQUIPMENT SHALL BE ATTACHED
TO POLE WITH HDG LAG SCREWS.**



LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SCHEDULE OF ITEMS

LEAD PROJECT: 737-95-0036
OTHER PROJECTS:

DATE: 09/29/08 13:39 PAGE: 1

ITEM NUMBER	APPROXIMATE QUANTITY	UNIT OF MEASURE	PAY ITEM UNIT PRICE (IN WORDS, INK OR TYPED)
S-001	1,000	LINEAR FOOT	LOOP REPAIR
			DOLLARS
			CENTS