

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 AND 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 CABLE, 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.

2) **CONDUIT**

- A) ALL UNDERGROUND CONDUIT INCLUDING ELBOW SHALL BE HDPE OR PVC SCHEDULE 80.
- B) USE AN E-LOC COUPLING WHEN CONNECTING HDPE TO PVC.
- C) ALL ABOVE GROUND CONDUIT AND FITTINGS SHALL BE RIGID STEEL AND HOT DIP GALVANIZED ACCORDING TO ANSI C80.1.
- D) SIGNAL CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24"
- E) FIBER OPTIC CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36"
- F) ALL CONDUIT SHALL BE INSTALLED AT THE DEPTHS LISTED ABOVE FOR DITCH INVERT.
- G) ALL CONDUIT CONNECTIONS SHALL BE SEALED WITH A WATERPROOF SEALING COMPOUND.
- H) ALL CABLE AND WIRE ENTRANCES SHALL BE DUCT SEALED IN CABINET AFTER INSTALLATION.
- I) NO MORE THAN 270 DEGREES OF BENDS IN CONDUIT WITHOUT A JUNCTION BOX.

3) **FOUNDATIONS**

- A) USE CLASS S CONCRETE WITH AN 8" SLUMP IN ACCORDANCE WITH SECTION 901.

4) **FOUNDATION DISPOSAL**

- A) 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.

5) **INTERSECTION SPECIFIC NOTES**

- A) SEE INDIVIDUAL INTERSECTION PLAN SHEETS.

6) **JUNCTION BOXES**

- A) THE MAXIMUM DISTANCE BETWEEN SIGNAL JUNCTION BOXES SHALL BE 500 FEET.
- B) THE MAXIMUM DISTANCE BETWEEN JUNCTION BOXES USED FOR COMMUNICATIONS CABLE SHALL BE 1000 FEET.

7) **PROPERTY DAMAGE**

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

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. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND POINTS OF ATTACHMENT BEFORE INSTALLATION IN ACCORDANCE WITH LADOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
- C) FROM THE POWER DISCONNECT, A 1" CONDUIT WITH THREE #6 AWG-IC STRANDED COPPER, SHALL BE TURNED UP 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.
- D) THE CONTRACTOR SHALL COORDINATE POWER SERVICE CONNECTION WITH UTILITY COMPANY.

9) **POWER DISCONNECT**

- A) FROM THE POWER DISCONNECT TO THE CONTROLLER, A 2" CONDUIT WITH THREE #6 AWG-IC SHALL BE INSTALLED. MEASUREMENT FOR SIGNAL SERVICE PAYMENT WILL BE IN ACCORDANCE WITH SIGNAL SERVICE (PEDESTAL MOUNTED) FOR POWER DISCONNECT.

- B) A POWER DISCONNECT MUST BE LOCATED WITHIN THE SAME QUADRANT AS THE SIGNAL CONTROLLER CABINET AND MUST BE ABLE TO BE ACCESSED SAFELY WITHOUT OBSTACLES BETWEEN THE DISCONNECT AND THE CONTROLLER. IF THIS CONDITION CANNOT BE MET, A SEPARATE SIGNAL SERVICE (PEDESTAL MOUNTED) POWER DISCONNECT SHALL BE PROVIDED AT THE CONTROLLER LOCATION FOR EMERGENCY POWER SHUT-OFF.

10) **RIGHT-OF-WAY**

- A) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE STATE RIGHT-OF-WAY LIMITS AND MAINTAINING ALL CONSTRUCTION WITHIN THESE LIMITS.

11) **SIGNAL CONTROLLER CABINET**

- A) THE CONTROLLER CABINET SHALL BE ORIENTED SUCH THAT SIGNAL PERSONNEL CAN FACE THE INTERSECTION WHEN OPENING THE CABINET. THE BACK OF THE CABINET SHALL PARALLEL THE MAIN ROADWAY.
- B) A 3' X 5' X 4" CONCRETE PAD SHALL BE POURED IN FRONT OF CONTROLLER CABINET FOR A TYPICAL BASE MOUNTED CABINET FOUNDATION AND NEXT TO THE CONTROLLER CABINET POLE FOR POLE MOUNTED CABINETS, PAD SHALL BE INSTALLED ABOVE GROUND LEVEL TO PROVIDE AN ALL WEATHER STANDING AREA FOR SERVICE PERSONNEL.

12) **SIGNAL DETECTORS - LOOPS**

- A) THE PROJECT ENGINEER SHALL APPROVE THE DEPTH AND CLEANLINESS OF EACH DETECTOR LOOP SLOT BEFORE THE CONTRACTOR PLACES WIRE IN THE SLOT.
- B) 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.
- C) 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.

13) **SIGNAL DETECTORS - VIDEO**

- A) ADJUST CAMERA IMAGE 10 FEET TO 15 FEET BEFORE STOP BAR TO ALLOW COUNT DETECTION TO BE PROGRAMMED AT A LATER DATE.

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 RIGHT-OF-WAY, EDGE OF THE PAVEMENT/CURB, LANE LINES, UTILITY MARKUP, AND ELEVATION & LOCATION OF EACH POLE FOUNDATION FOR THE PROJECT ENGINEER'S APPROVAL DURING THE ASSEMBLY PERIOD. ANY EXCEPTION HAS TO BE APPROVED BY THE PROJECT ENGINEER AFTER APPROVAL THE CONTRACTOR MAY PROCEED WITH THE INSTALLATION OF THE POLE FOUNDATION.
- C) ONCE THE POLE FOUNDATION IS INSTALLED, MAST ARM LENGTHS SPECIFIED ON PLANS ARE TO BE VERIFIED TO ORDER THE MATERIALS. IF A TIME EXTENSION IS NEEDED, IT SHALL BE AT THE DISCRETION OF THE PROJECT ENGINEER TO GRANT THE EXTENSION.

15) **SIGNAL EQUIPMENT REMOVAL**

- A) ALL EXISTING TRAFFIC SIGNAL EQUIPMENT, CONTROL DEVICES, AND COMMUNICATIONS 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 EQUIPMENT TO THE OWNER.
- C) THE REMOVAL AND DELIVERY OF EQUIPMENT TO THE OWNER SHALL BE PAID FOR UNDER ITEM FOR "REMOVAL OF TRAFFIC SIGNAL EQUIPMENT".

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 CURRENT ADOPTED EDITION OF THE MUTCD.
- B) SIGNAL HEAD ALIGNMENT AND CLEARANCE SHALL BE IN ACCORDANCE WITH THE LADOTD TRAFFIC SIGNAL DESIGN MANUAL.

17) **SIGNAL POLE FINISH REPAIR**

- A) 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.

18) **SIGNAL POLE ELECTRICAL CLEARANCES**

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

19) **TRAFFIC CONTROL - EXISTING SIGNALS**

- A) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL OPERATION OF THE NEW, EXISTING, OR TEMPORARY TRAFFIC SIGNALS DURING THE PERIOD OF CONSTRUCTION. THIS INCLUDES RELOCATING POLES, DETECTORS, SIGNAL HEADS, AND OTHER ITEMS. PROVIDE TEMPORARY POLES OR OTHER MATERIALS AS 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 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.

20) **UTILITIES**

- A) UNDERGROUND UTILITIES MAY EXIST IN THE CONSTRUCTION AREAS. THE LOCATION AND TYPE IF 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 OPERATIONS SECTION AT (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.

21) **INSPECTION**

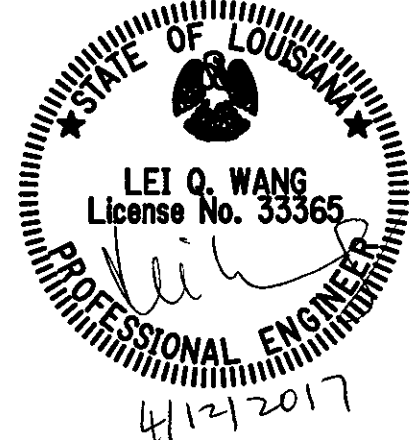

- A) CONTRACTOR SHALL BE REQUIRED TO CALL LADOTD TRAFFIC OPERATIONS SECTION AT (225)935-0100 AT LEAST 7 DAYS BEFORE BEGINNING CONSTRUCTION ACTIVITIES.
- B) CONTRACTOR SHALL BE REQUIRED TO CALL LADOTD TRAFFIC OPERATIONS SECTION AT (225)935-0100 AT LEAST 7 DAYS BEFORE SIGNAL TURN ON TO SCHEDULE FOR A FINAL INSPECTION AND TO SCHEDULE FOR AN INSPECTOR TO BE PRESENT AT SIGNAL TURN ON.

22) **COMMUNICATIONS - FIBER**

- A) ANY FIBER OPTIC CABLE INSTALLED SHALL BE REQUIRED TO HAVE A 10 AWG, GREEN, 600V COPPER CONDUCTOR, STRANDED OR OTHER APPLICABLE TRACER WIRE IN THE SAME CONDUIT. PAYMENT WILL BE MADE UNDER THE FIBER OPTIC CABLE PAY ITEM.

23) **BRIDGE/RAILROAD PREEMPTION**

- A) INSTALL ONE 120VAC RELAY IN THE SIGNAL CABINET. THE RELAY IS ENERGIZED IN ABSENCE OF BRIDGE/RAILROAD PREEMPTION CALLS AND IS DE-ENERGIZED WHEN PREEMPTION CALLS ARE PRESENT. THE RELAY IS ACTIVATED BY THE CONTROL DESK SWITCH THAT CONTROLS BRIDGE FLASHERS OR THE RAILROAD CONTROL HOUSE SWITCH.
- B) RUN A #14 TWO CONDUCTOR WIRE IN A MIN 1" PVC CONDUIT BETWEEN TRAFFIC SIGNAL CABINET TO THE DESIGNATED TERMINAL BLOCKS INSIDE THE RAILROAD HOUSE, BRIDGE CONTROL HOUSE OR THE MAIN BRIDGE JUNCTION BOX WHERE SPARE TERMINAL BLOCKS ARE AVAILABLE. 6' SPARE WIRE IS REQUIRED WHEN CONNECTION IS MADE AT THE JUNCTION BOX. 15' SPARE WIRE IS REQUIRED WHEN CONNECTION IS MADE INSIDE THE BRIDGE OR RAILROAD CONTROL HOUSE.
- C) DESIGNERS SHALL VERIFY BRIDGE CONTROL CONNECTION LOCATIONS WITH LA DOTD BRIDGE ELECTRICAL SECTION.
- D) DESIGNERS SHALL VERIFY TRACK CLEARANCE TIME AND BRIDGE PREEMPTION SEQUENCE WITH THE DISTRICT TRAFFIC OPERATIONS ENGINEER.
- E) BRIDGE OR RAILROAD CONTROL HOUSE PROVIDES NORMALLY-CLOSED CONTACT CONNECTION.

SHEET NUMBER		PARISH		FEDERAL PROJECT		STATE PROJECT	
DESIGNED	CHECKED	S. MCCARROLL	D. LORIO	DETAILED	CHECKED	S. MCCARROLL	L. WANG
DATE	SHEET	04/12/2017	1	DATE	SHEET	04/12/2017	1
REVISION DESCRIPTION							
NO.							
DATE							
BY							
TRAFFIC SIGNAL STANDARD DETAILS							
SIGN NOTES							
TSD-00							
							
							
TRAFFIC ENGINEERING							