

ELECTRICAL GENERAL NOTES

- PRIOR TO COMMENCING CONSTRUCTION OF ANY COMPONENT OF THE PROPOSED TRAFFIC SIGNAL SYSTEM, ALL UNDERGROUND UTILITIES SHALL BE FIELD LOCATED ACCORDING TO ARTICLE 107.31 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS ARE LISTED IN THE GENERAL NOTES OF THE PLANS. CALL J.U.L.I.E. (800) 892-0123 ONE WEEK BEFORE PLANNING TO DIG. IT MAY BE NECESSARY TO HAND DIG TEST HOLES TO EXPOSE EXISTING UTILITIES AT SOME LOCATIONS.
- STREET NAME SIGNS SHALL BE FABRICATED, DELIVERED AND INSTALLED AS SHOWN ON THE PLANS. SIGNS AND INSTALLATION SHALL CONFORM TO SECTION 720 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND HIGHWAY STANDARDS 720001 AND 720016.
- TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER UNLESS OTHERWISE SPECIFIED. TERMINAL ENDS SHALL HAVE CRIMPED-ON RING TONGUE CONNECTORS.
- THE QUANTITIES SHOWN FOR TRAFFIC SIGNAL CABLE IN CONDUIT AND REMOVAL OF ELECTRIC CABLE FROM CONDUIT ASSUME THAT ALL CABLE IN EXISTING CONDUIT WILL NEED TO BE REPLACED. IF IT IS DETERMINED IN THE FIELD THAT THIS CABLE IS SUITABLE FOR USE AND IT WILL NOT BE DAMAGED WHILE PULLING ADDITIONAL CABLE THROUGH THE CONDUIT, WORK ON THESE ITEMS WILL BE UNNECESSARY.
- MOUNTING HARDWARE, SIGNAL POSTS AND BASES SHALL BE UNPAINTED ALUMINUM. BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI-SEIZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD CONNECTIONS.
- THE LOCATION OF MAST ARM SUPPORTS SHALL BE APPROVED BY THE ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR 2 FEET FROM THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. IN CURBED SECTIONS, THE MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM THE FACE OF THE CURB. THESE DISTANCES ARE TO THE NEAR FACE OF THE MAST ARM POLE.
- THE DEPTH OF THE CONCRETE FOUNDATION FOR THE MAST ARM POLE HAS BEEN DETERMINED FROM SOIL BORING DATA TO BE 15'0". SOIL BORING DATA IS INCLUDED IN THE SPECIAL PROVISIONS.
- THE LOCATION OF SIGNAL HEADS ON MAST ARMS SHALL BE APPROVED BY THE ENGINEER BEFORE MAST ARMS ARE INSTALLED.
- BACKPLATES SHALL BE ABS PLASTIC
- INDUCTIVE LOOP DETECTORS SUPPLIED FOR THIS PROJECT SHALL BE RACK MOUNTED AND SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED.
- CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE. "CALL CARRY-OVER" SHALL FUNCTION ONLY WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
- THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.
- DETECTOR LOOPS LOCATED WITHIN HOT-MIX ASPHALT SURFACE LIMITS SHALL BE INSTALLED IN THE PAVEMENT PRIOR TO HMA SURFACE PLACEMENT. DETECTOR LOOPS SHALL BE A MAXIMUM OF 4 INCHES DEEP, MEASURED FROM THE FINAL PAVEMENT SURFACE ELEVATION.
- PROPOSED CONDUIT SHALL BE PVC UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL BE PLACED AND BACKFILLED PRIOR TO CONSTRUCTION OF NEW PAVEMENT, SHOULDER AND CURB. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PUSHING OR PULLING CONDUIT AFTER SUCH WORK HAS BEEN COMPLETED.
- A 1/4" DIAMETER NYLON PULL ROPE SHALL BE INSTALLED IN ALL CONDUITS.
- HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE ACCORDING TO ARTICLE 814.03(B) OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". HANDHOLE COVERS SHALL BE SLOPED TO MATCH PROPOSED CONTOURS.
- WHEN CUTTING PROPOSED DETECTOR LOOPS, THE CONTRACTOR SHALL CONTROL DUST SO THAT DUST DOES NOT BECOME AIRBORNE AND BLOW ONTO PRIVATE PROPERTY.
- SEE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND CONSTRUCTION STAGING REQUIREMENTS.

STANDARDS FOR TRAFFIC SIGNAL SHEETS

- 720001 SIGN PANEL MOUNTING DETAILS
- 720016 MAST ARM MOUNTED STREET NAME SIGNS
- 805001 ELECTRICAL SERVICE INSTALLATION DETAILS
- 814001 HANDHOLES
- 814006 DOUBLE HANDHOLES
- 857001 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 873001 TRAFFIC SIGNAL GROUNDING & BONDING
- 876001 PEDESTRIAN PUSH BUTTON POST
- 877001 STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 878001 CONCRETE FOUNDATION DETAILS
- 880006 TRAFFIC SIGNAL MOUNTING DETAILS
- 886001 DETECTOR LOOP INSTALLATIONS
- 886006 TYPICAL LAYOUTS FOR DETECTION LOOPS

TRAFFIC SIGNAL LEGEND

- PROPOSED SIGNAL HEAD WITH BACKPLATE (SEE HIGHWAY STANDARD 880006)
- EXISTING SIGNAL HEAD WITH BACKPLATE
- PROPOSED HANDHOLE
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- PROPOSED DETECTOR LOOP (SEE HIGHWAY STANDARDS 886001 & 886006)
- EXISTING DETECTOR LOOP (SEE HIGHWAY STANDARDS 886001 & 886006)
- PROPOSED CONDUIT: "T" TRENCH, "P" PUSHED, SIZE SPECIFIED
- EXISTING CONDUIT: SIZE SPECIFIED
- PVCC POLYVINYL CHLORIDE CONDUIT
- GSC GALVANIZED STEEL CONDUIT
- REC REMOVE ELECTRIC CABLE FROM CONDUIT
- PROPOSED SIGN
- EXISTING MAST ARM
- PROPOSED MAST ARM
- EXISTING SIGNAL HEAD, PEDESTRIAN
- EXISTING PEDESTRIAN PUSHBUTTON DETECTOR
- EXISTING CONTROLLER
- EXISTING SIGNAL POST
- PROPOSED SIGNAL POST
- PROPOSED STREET NAME SIGN/TRAFFIC SIGN MOUNTED ON MAST ARM

TRAFFIC SIGNAL SCHEDULE

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES
72000100	SIGN PANEL - TYPE 1	SQ FT	7.8
81012300	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	225
81012400	CONDUIT IN TRENCH, 1 1/4" DIA., PVC	FOOT	23
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	48
81013100	CONDUIT IN TRENCH, 5" DIA., PVC	FOOT	10
S 81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	107
S 81018800	CONDUIT PUSHED, 3 1/2" DIA., GALVANIZED STEEL	FOOT	135
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	308
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	586
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	600
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,161
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,554
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4,134
87502680	TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	1
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	3
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
87900200	DRILL EXISTING HANDHOLE	EACH	3
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	1
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	1
88500100	INDUCTIVE LOOP DETECTOR	EACH	2
S 88600100	DETECTOR LOOP, TYPE I	FOOT	633
89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	3
89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	1
89502200	MODIFY EXISTING CONTROLLER	EACH	1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6,902
S 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
S 89502380	REMOVE EXISTING HANDHOLE	EACH	2
S 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
S X7240500	RELOCATE EXISTING SIGNS	EACH	2
S X8880010	ADA PEDESTRIAN PUSH-BUTTON	EACH	1

NOTES:
S SEE PROJECT SPECIFIC SPECIAL PROVISIONS