

GENERAL NOTES

SIGN MATERIALS, COLOR AND REFLECTORIZATION

MATERIALS FOR SIGNS AND REFLECTIVE SHEETING REQUIRED FOR SIGN BACKGROUNDS AND COPY (LETTERS, DIGITS, ROUTE MARKERS, SYMBOLS, BORDERS AND OUTLINES) SHALL BE OF COLOR AND TYPE SHOWN ON PLANS AND DESCRIBED BELOW:

SIGN TYPE	BACKGROUND	COPY	MATERIAL
B	RSB	DCU	ALUM. EXTRUSHEET
D	RSG	DCU	ALUM. EXTRUSHEET
E-10			.100" ALUM. SHEET
E-08			.080" ALUM. SHEET
E-06			.060" ALUM. SHEET
G	SEE NOTE SHEET No. 3		
D-MOD	RSY	SPBK	ALUM. EXTRUSHEET

BACKGROUND & COPY FOR "E" TYPE SIGNS

SIGN CODE	BACKGROUND	COPY
R-1	RSR	RSW
R-2	RSY	SPBK
ALL OTHER R'S	RSW	SPBK
W	RSY	SPBK
M-5	RSRB	RSW
IM	RSTB	RSW
X	RSW	SPBK
	SEE DRAWING SHEET No. 124	

KEY

RSB-TYPE F REFLECTIVE SHEETING (BLUE)
 RSG-TYPE F REFLECTIVE SHEETING (GREEN)
 RSW-TYPE F REFLECTIVE SHEETING (SILVER-WHITE GRADE B)
 RSR-TYPE F REFLECTIVE SHEETING (SILVER-WHITE GRADE A WITH REVERSE SCREEN TRANSPARENT RED)
 RSY-TYPE F REFLECTIVE SHEETING (YELLOW)
 RSTB-TYPE F REFLECTIVE SHEETING (SILVER-WHITE GRADE A WITH REVERSE SCREEN TRANSPARENT BLUE)
 RSRB-TYPE F REFLECTIVE SHEETING (SILVER-WHITE GRADE A WITH REVERSE SCREEN TRANSPARENT RED AND BLUE)
 SPBK-SILK SCREEN PASTE (BLACK)
 DCBK-DEMOUNTABLE COPY (OPAQUE) WITH ENAMEL (BLACK)
 *DCU-DEMOUNTABLE COPY (REFLECTIVE UNIT TYPE), WHITE

*DEMOUNTABLE COPY

SHALL INCLUDE LETTER, DIGITS, ROUTE MARKERS, SYMBOLS, BORDERS AND OUTLINES.
 INTERSTATE ROUTE MARKERS MOUNTED ON SIGNS SHALL BE OF REFLECTIVE SHEETING TYPE, MOUNTED AS SEPARATE AND COMPLETE UNITS USING TYPE F REFLECTIVE SHEETING (SILVER-WHITE GRADE A) WITH REVERSE SCREEN TRANSPARENT OVERLAY OF THE COLOR SHOWN ON THE PLANS. OHIO AND US MARKERS SHOWN SHALL BE SILVER WHITE GRADE B REFLECTIVE SHEETING TYPE F WITH BLACK NUMERALS. THEY SHALL BE MOUNTED AS A SEPARATE AND COMPLETE UNIT.

CABLE MARKERS

MARKER TO CONFORM WITH SECTION 625.16.
 MARKERS ARE TO SET FLUSH WITH FINISHED SURFACE AT THE FOLLOWING LOCATIONS:

- CROSSOVER END WHERE PULL BOX IS NOT WARRANTED.
- ABRUPT CHANGE IN DIRECTION OF DUCT OR CONDUIT.
- AT NOT MORE THAN 200' INTERVALS BETWEEN ADJOINING MARKER, POLE, PULL BOX OR SIGN FOUNDATION.

COST OF FURNISHING AND INSTALLING CABLE MARKERS SHALL BE INCLUDED IN PRICE BID FOR 625 CABLE TRENCH.

MATERIALS - GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLANS BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. THIS IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR MAY ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

FIXTURES AND LAMPS

ILLUMINATION OF SIGNS ON THIS PROJECT SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS. LIGHT FIXTURES SHALL BE ATTACHED TO BOTTOM OF SIGNS. PROXIMITY OF LIGHT FIXTURES FROM SIGN IS SHOWN IN THE TABLE ON SHEET 58.

625 SIGNS WIRED, COMPLETE AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND/OR INSTALLATION OF THE ELECTRICAL SIGN LIGHTING SYSTEM COMPONENTS FOR EACH ILLUMINATED SIGN.

WORK SHALL INCLUDE THE INSTALLATION OF LIGHT FIXTURES AND BALLASTS, AND INSTALLATION OF ALL RIGID AND FLEXIBLE CONDUIT, CONDULETS, JUNCTION BOXES, WIRE, FASTENERS, HARDWARE, AND ALL OTHER ITEMS REQUIRED TO ENERGIZE THE SIGN LIGHTING SYSTEM. SEE DETAILS ON SHEETS 56 AND 57.

ILLUMINATED SIGNS REQUIRING TWO (2) BALLASTS SHALL BE CONSIDERED AS AN EQUIVALENT OF TWO (2) SEPARATE SIGNS FOR DETERMINATION OF PAY QUANTITIES.

THE COST OF FURNISHING AND INSTALLING WIRE AND NECESSARY FASTENERS FROM THE DISCONNECT SWITCH TO THE SIGNS (OR BETWEEN SIGNS) ON THE SAME SUPPORTS MEMBERS SHALL BE INCIDENTAL TO THE COST OF VARIOUS ITEMS INCLUDED IN THIS WORK.

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH SIGN WIRED WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS TO PROVIDE A COMPLETE AND ACCEPTED ITEM.

PREASSEMBLED POLYETHYLENE DUCT W/2 NO. 4 CONDUCTORS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREASSEMBLED POLYETHYLENE DUCT WITH (2) NO. 4 CONDUCTORS, 600 VOLT, VERSATOL GEOPRENE TYPE AS ANACONDA OR GENERAL ELECTRIC S1-58006.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER LINEAL FOOT INSTALLED AND ACCEPTED.

PHOTOELECTRIC CONTROL

PHOTOELECTRIC CONTROL UNIT SHALL BE CADMIUM SULPHIDE CELL TYPE WITH SEALED WEATHERPROOF CONSTRUCTION AND SEPARATE TWIST LOCK PLUG BASE FOR UNIT REPLACEMENT.

BASES OF PHOTOELECTRIC UNITS USED FOR THE TYPE A SERVICE SHALL BE MODIFIED TO PROVIDE A THREADED HUB FOR CONDUIT ATTACHMENT AS SHOWN ON SHEET NO. 59.

BASES OF PHOTOELECTRIC UNITS FOR TYPE B SERVICE SHALL BE MODIFIED FOR TOP OF POLE MOUNTING AS SHOWN ON SHEET NO. 59.

PHOTOELECTRIC CONTROL UNITS SHALL BE RATED 120 VOLTS, 10 AMPS WITH TIME DELAY EQUIVALENT TO FISHER-PIERCE MODEL 6601-A OR TORK TIME CONTROLS, INC. MODEL 2000. UNITS SHALL BE ADJUSTED TO TURN ON AT 3 FC AND TURN OFF AT 5 FC.

PAYMENT: PHOTOELECTRIC UNITS USED WITH TYPE A ELECTRIC SERVICE SHALL BE INCLUDED IN THE PRICE BID FOR - "ELECTRIC SERVICE TYPE A".

PHOTOELECTRIC UNITS USED WITH TYPE B ELECTRIC SERVICE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER UNIT INSTALLED AND ACCEPTED. INSTALLATION SHALL INCLUDE ALL NECESSARY MATERIAL AND LABOR REQUIRED TO MOUNT THE FIXTURE AS PER PLAN.

DISCONNECT SWITCH WITH TYPE "Y" OR "Z" ENCLOSURE

THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING A 30 AMP. 600 VOLT FUSED DISCONNECT SWITCH OF THE TYPE AND MAKE AS INDICATED ON SHEET NO. 56. IT SHALL BE MOUNTED IN A NEMA (4) STAINLESS STEEL ENCLOSURE TYPE "Y" OR "Z" AND ATTACHED TO EACH SIGN SUPPORT (UNLESS OTHERWISE NOTED) BY A MOUNTING BRACKET AS DETAILED ON THE ABOVE SHEET. ENCLOSURES ON BRIDGES WILL BE FASTENED DIRECTLY TO THE CONCRETE PIERS.

PAYMENT FOR THIS ITEM SHALL BE ON A BID BASIS OF UNITS INSTALLED AND ACCEPTED.

EACH SWITCH ENCLOSURE SHALL BE FURNISHED WITH ONE PADLOCK. PADLOCKS SHALL HAVE A BRASS BODY AND WROUGHT IRON SHACKLE EQUAL TO RUSSWIN NO. 2882 KA OR MASTER NO. 4KA OR APPROVED EQUAL.

PAYMENT FOR LOCKS SHALL BE INCLUDED IN THE COST OF SWITCH ENCLOSURES.

PROPOSED POWER SUPPLY

TYPE "A" ELECTRIC SERVICE:
 THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE OPERATIVE SERVICE SYSTEM ON SERVICE POLES INSTALLED UNDER THIS CONTRACT. TYPE A SERVICE SHALL BE 480 VOLTS AND BE AS SPECIFIED IN DETAIL ON SHEET NO. 59.

TYPE "B" ELECTRIC SERVICE:
 THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE OPERATIVE SERVICE SYSTEM ON THE UTILITY COMPANY OR STATE POLE AS NOTED. TYPE B SERVICE SHALL BE 120 VOLT AND BE AS SPECIFIED IN DETAIL ON SHEET NO. 59.

THE PHOTOELECTRIC CELL, LOCATED ON SIGN NO. 60, WILL ALSO CONTROL THE LIGHTING OF SIGNS NO. 9, NO. 11 AND NO. 59.

FINAL LOCATION OF SERVICE POLES SHALL BE DETERMINED BY THE AREA UTILITY COMPANY AND THE ENGINEER.

BALLAST

BALLAST FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF - 20°F.

PAYMENT FOR THIS ITEM SHALL BE ON A BID BASIS OF DIFFERENT TYPE UNITS FURNISHED.

TRANSFORMERS

TRANSFORMERS TYPES SHALL BE AS SHOWN ON SHEET NO. 56. TRANSFORMERS ARE TO BE MOUNTED IN THE BOTTOM OF THIS SWITCH ENCLOSURE CABINET.

PAYMENT FOR TRANSFORMERS SHALL BE PER CONTRACT UNIT PRICE BID FOR EACH TYPE INSTALLED AND ACCEPTED.

INSPECTION AND TESTING OF SIGN LIGHTING

THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO DEMONSTRATE TO THE ENGINEER THAT ALL CIRCUITS ARE FREE FROM SHORT CIRCUITS AND UNSPECIFIED GROUNDS, AND ARE PROPERLY CONNECTED AND OPERABLE BEFORE ACCEPTANCE. THIS DEMONSTRATION SHALL INCLUDE A MEGGARING TEST TO SHOW THAT ALL CONDUCTORS ARE CLEAR OF GROUNDS AND THAT THE RESISTANCE AT THE GROUND IS NOT MORE THAN 25 OHMS. VOLTAGE AND AMPERAGE TESTS SHALL BE MADE AT THE SIGN SUPPORT SWITCH.

THE COST OF THESE TESTS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE VARIOUS SIGN LIGHTING ITEMS CONTAINED IN THIS PROJECT.

AFTER THE SIGN LIGHTING SYSTEM IS COMPLETED, THE ENTIRE SYSTEM SHALL BE OPERATED CONTINUOUSLY EACH NIGHT UNTIL SEVEN (7) CONSECUTIVE DAYS ELAPSE WITHOUT FAILURE OR DEFECT. THE CONTRACTOR SHALL CORRECT ANY DEFECTS WHICH MAY DEVELOP AT NO EXTRA COST TO THE STATE.