



10A9: Electrical Details Structure Mount Light Poles Grounded Neutral Systems

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE φ-GROUND	BALLAST WATTAGE	
	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

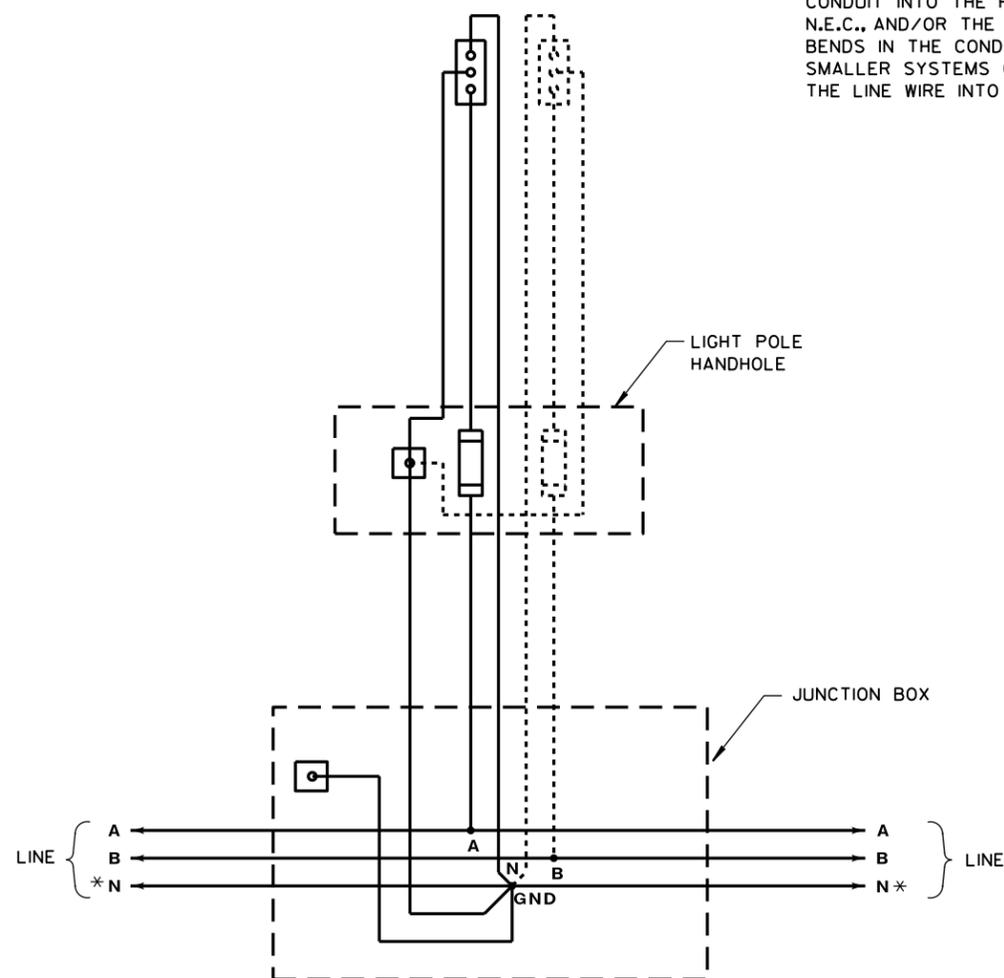
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALLER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM, PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

LEGEND

A, B, X, Y, Z	UNGROUNDING CIRCUIT CONDUCTORS
N	GROUNDING CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
○	TERMINAL
•	SPLICE
—	CONDUCTOR
■	EXOTHERMIC WELD



* INCREASE NEUTRAL BY ONE SIZE FOR LENGTH OF STRUCTURE

TYPICAL WIRING DIAGRAM
GROUNDING NEUTRAL SYSTEM
1-φ 240/480VAC OR 3 WIRE OR 480VAC 2 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
GROUNDING NEUTRAL SYSTEM

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 10/25/2010 DATE /S/ John Corbin
 STATE ELECTRICAL ENGINEER FOR HWYS
 FHWA

Electrical Details Structure Mount Light Poles Grounded Neutral Systems

References:

NONE

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
659.1100 - 1199	Luminaires Utility LED (Category).....	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

[SDD 10a1](#) Electrical Handhole Wiring

Design Notes:

This SDD is generally used for municipal work or for the maintenance of existing State systems built with the grounded neutral wiring method. The State no longer uses this wiring method for new systems. Use this SDD in conjunction with the SDD for Electrical Handhole Wiring.

Contact Person:

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