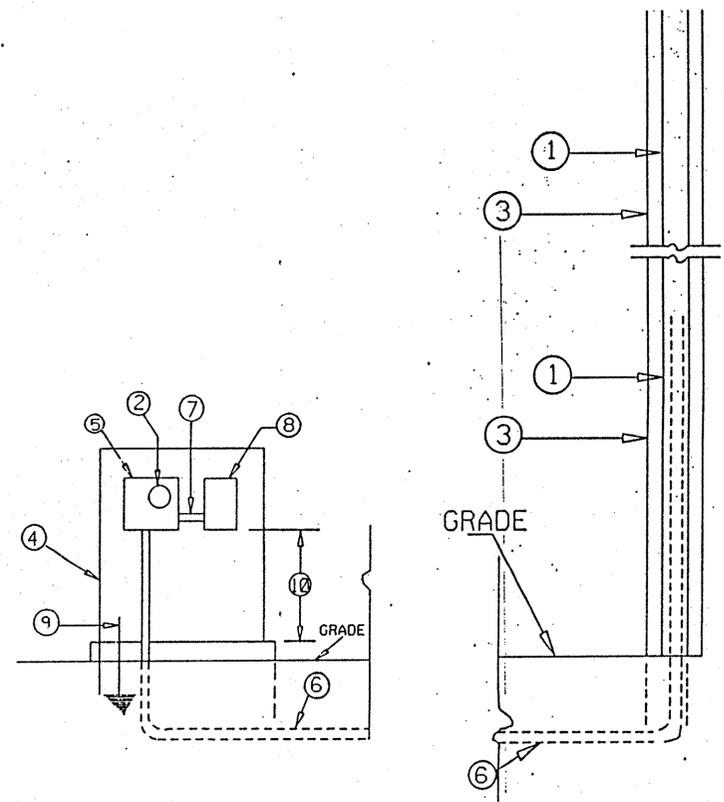


UNDERGROUND ELECTRICAL POWER CONNECTION

CABINET MOUNTING: BASE MOUNTING
 TRAFFIC CONTROL DEVICES: SIGNAL & LIGHTING



CONSTRUCTION DETAILS

POWER COMPANY FURNISHES AND INSTALLS:

1. Power company installed riser or U-Guard to contractor installed service riser wiring.
2. Watthour meter
3. Power company owned wood pole

CONTRACTOR FURNISHES AND/OR INSTALLS:

4. State Highway Administration furnished controller cabinet.
5. Mount power company furnished, 200 ampere rated size, meter socket with two (2) 1/4" UNC stainless steel bolts, lock washers and nuts drilled through the meter socket back and the electric support panel. The bolt locations shall be centered on the meter socket back at one inch above the bottom and one inch below the top.
6. 2" galvanized steel rigid conduit riser flush to the wood pole placed to ten feet above grade and underground to base mounted controller cabinet. Strap the riser at the wood pole 12" above the grade, 12" below the top of the riser and also at 60" maximum spacing. Straps shall be of galvanized steel, two hole type, secured to the power company owned wood pole using 1 1/2" # 12 pan head stainless steel self tapping screws and washers. The riser shall enter the meter socket's bottom's left-most, then if not available the center, bottom opening and secure with double nuts on the riser end entering the meter socket bottom followed by an insulated bonding bushing. Place two (2) individual # 4 AWG copper type THWN wires and one (1) # 6 bare stranded copper wire as electrical service entrance wires from the meter socket line side terminals to the top of the riser and coil 25' of each wire at the top. (Bare for AC neutral, black for one side of the AC+ and red for the remaining AC+ side.)

7. 1 1/4" by shouldered length galvanized steel rigid conduit nipple mounted onto the right meter socket and left disconnect switch sides. The nipple shall enter the meter socket's lowest right side opening and shall enter the disconnect switch's left side at equal to the meter socket back to nipple centerline opening dimension; and also to meter socket bottom to nipple opening centerline dimension. Place double lock nuts on both meter socket and disconnect switch nipple ends followed by insulated bonding bushings on both nipple ends. Place three (3) individual # 4 AWG copper type THWN wires as electrical service entrance wires from the meter socket load side terminals to the disconnect switch line side terminals. (Colored white for AC neutral, black for one side of the AC+ and red for the remaining AC+ side.)
8. Mount disconnect switch with one (1) 1/4" UNC stainless steel bolt, lock washer and nut drilled through the disconnect switch back into the electric support panel. The bolt location shall be centered on the disconnect switch back at one inch below the top. One (1) 1 1/4" Chase nipple shall be drilled through the disconnect switch back, electric support panel and the controller cabinet rear side, and secured by a lock nut followed by an insulated bonding bushing. The Chase nipple location shall be centered on the disconnect switch back at one inch above the bottom. Place two (2) individual #4 AWG copper type THWN wires from the disconnect switch load side terminals to the controller cabinet terminals. (Colored white for AC neutral, black for one side of the AC+.) Place street lighting cables to disconnect switch neutral terminal and unused load side terminal.
9. Ground rod with one piece cast bronze ground rod clamp. Bonding shall be by a single continuous # 6 AWG bare stranded copper wire run from the insulated bonding bushing lug on the trough right side nipple, to through the insulated bonding bushing lug on the disconnect switch left side nipple, to through the disconnect switch neutral bar, to through the insulated bonding bushing lug on the disconnect switch. Chase nipple, to through the controller cabinet grounding bar to the ground rod clamp.

10. The electric support panel shall be centered upon the controller cabinet rear side width. The electric support panel shall be 0.125" thickness aluminum, 20" in height and 30" in width. 1" square aluminum tubing shall separate the electric service panel from the controller cabinet rear side and shall be pushed horizontally flush to the panel top and bottom. Mount the electric support panel with four (4) 1/4" UNC stainless steel bolts, lock washers and nuts drilled through the electric support panel, square tubing and into the controller cabinet rear side. The bolt locations shall be centered on the tubing width at 2" from each end.
11. The meter socket and disconnect switch bottom mounting height shall be equal and shall be above the controller cabinet base top as follows:

Cabinet Size	Mounting Height
5	28"
5 with Extender Base	40"
6	34"
6 with Extender Base	46"

NOTES:

- A. Equipment indicated to be State Highway Administration furnished may be contractor furnished. Refer to Equipment Lists for each item noted.
- B. All exposed galvanized steel rigid conduit ends shall be wire brushed, cleaned of any residue, and an inorganic zinc compound applied.
- C. All galvanized steel rigid conduit insulated bonding bushings shall have bonding lugs of "lay-in" type design.

DRAFT

APPROVALS		REVISIONS		MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION UNDERGROUND ELECTRICAL POWER CONNECTION							
_____ CHIEF, DESIGN SECTION								DRAWN BY: ATRI AMIN	F.A.P. NO. SEE TITLE SHEET	PLAN SHEET NO. 1	SHEET NO. 142 OF 169
_____ ASST. DISTRICT ENGINEER, TRAFFIC								CHECK BY: MORTEZA TADAYON	S.H.A. NO. M 528-503-371	B-16	
_____ CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION								SCALE: NONE	COUNTY:		
_____ DIRECTOR, TRAFFIC & SAFETY											