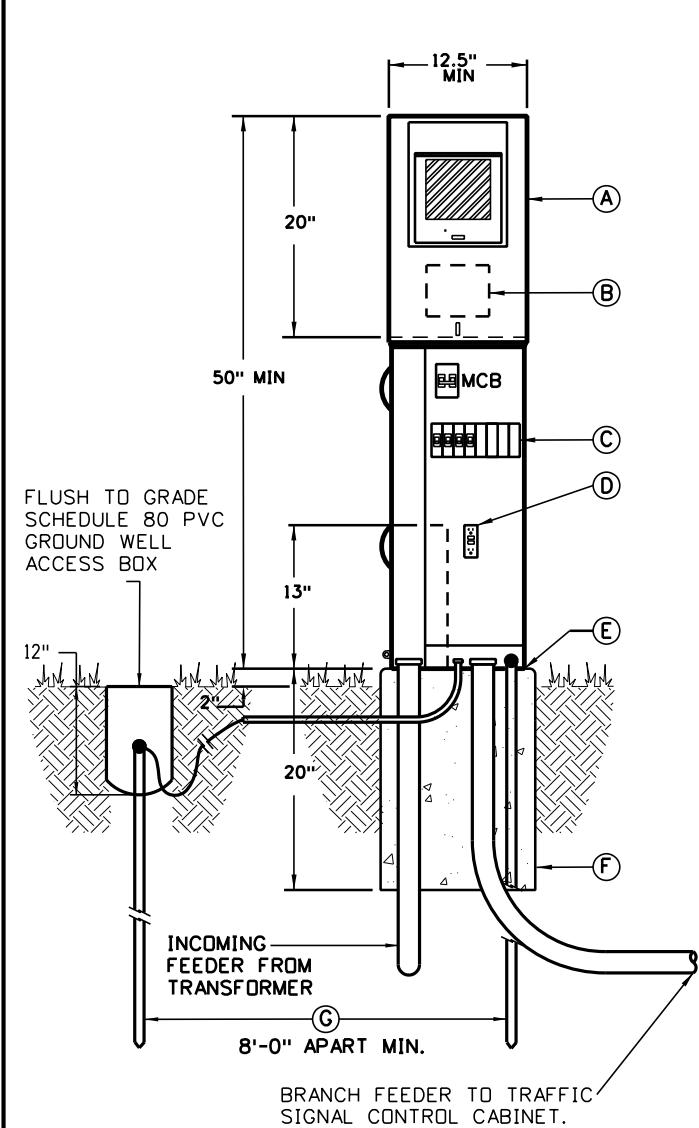


INDIVIDUAL COLD SEQUENCE MPP FAULT CURRENT TABLE FOR TRAFFIC CABINET									
METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER		SERVICE LATERAL FEEDER	MIN. CONDUCTOR LENGTH TO MPP ~	MAX. CONDUCTOR LENGTH TO MPP^	INTERRUPT SHORT CIRCUIT AMPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT BREAKER	
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE	1				
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	20-FT	240-FT	6,566 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	20-FT	305-FT	6,712 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

~ = MINIMUM SERVICE LATERAL CONDUCTOR LENGTH FOR THE ISCA VALUE GIVEN. IF CONDUCTOR LENGTH IS LESS THAN THIS VALUE THE PANEL SHALL BE BRACED AT THE NEXT HIGHER AIC RATING CALCULATED BY AN ELECTRICAL ENGINEER.

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP.



Cold Sequence Meter Power Pedestal Elevation Detail for Traffic Signal

Not To Scale

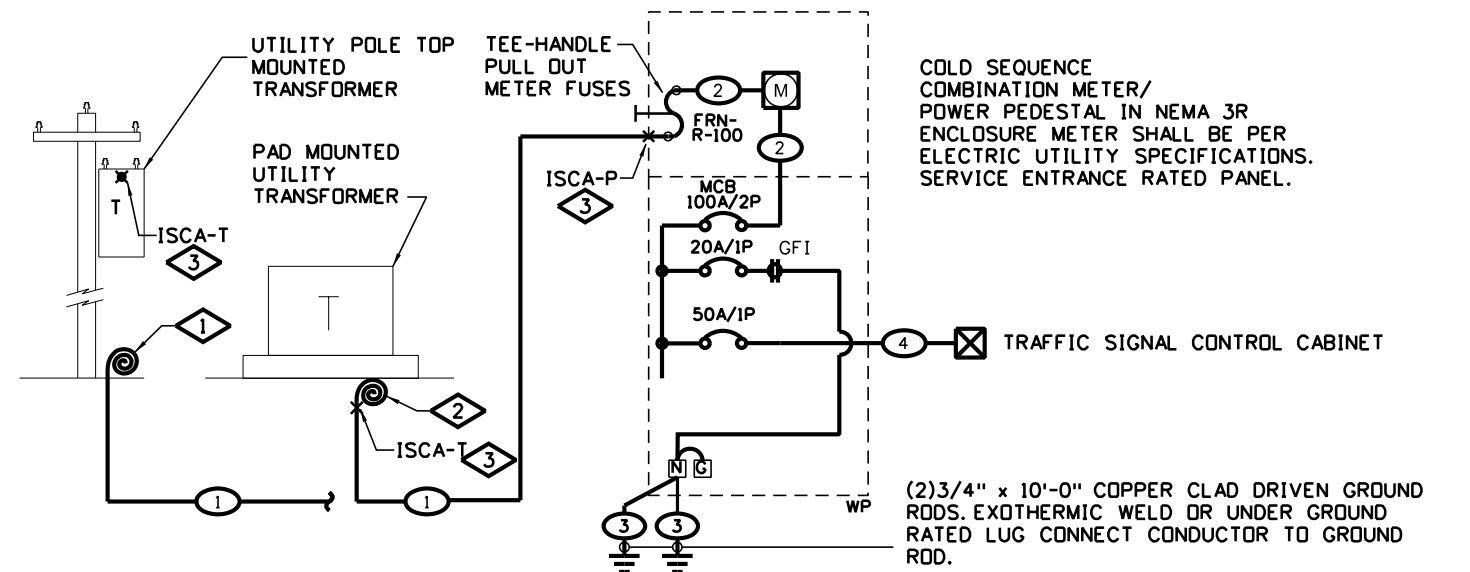
Component List

- (A) 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, cold sequence, meter/power pedestal with lever bypass, load center, MCB and fused tee-handle pull out disconnect ahead of meter. See panel schedule on this sheet for size of main and number and size of branch breakers. Set on new concrete pad plumb and level.
- (B) Tee-handle, pull-out fuse type, disconnect flush mounted into the back side of the enclosure with tab for seal.
- (C) Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- (D) Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- (E) Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.
- (F) Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.
- Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.
- (G) 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld or underground lug connect conductor to rod. (2) rods required.

Note:
All components listed shall be included in the pay item '613-50109 Meter Power Pedestal'. All components shall meet current National Electric Code (NEC) and be UL listed for the application.

MOUNTING: PEDESTAL				PANEL "MPP_"						120/240V-1PH-3W			
NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED													
FEEDER: BOTTOM				BRANCH BREAKER						100 AMPS MAIN BREAKER			
				LEFT PHASE LOAD			RIGHT PHASE LOAD						
DESCRIPTION	Size	P	Ckt#	L1	L2		L1	L2	Ckt#	Size	P	DESCRIPTION	
SPARE	20	1	1				180		2	20	1	MPP_ MAINTENANCE RECEPT.	
SPARE	20	1	3					4800	4	50	1	TRAFFIC CONTROL CABINET	
SPACE ONLY			5						6			SPACE ONLY	
SPACE ONLY			7						8			SPACE ONLY	
				0	0		180	4800					
				180	4800	Total Connected V.A.							
				4980			=Total Connected VA Both Phases						
LOAD	CONNECTED	D.FACT.	Est. KVA	AMPS	180 VA=Total Receptacle Load NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E, AND ALL OTHER LABELS REQUIRED BY NFPA 70.								
LIGHTING	0 VA	1.25	0.00										
RECEPTACLES (1ST 10000)	180 VA	1.00	0.18										
RECEPTACLES (REMAINING)	0 VA	0.50	0.00										
MOTOR (LARGEST)	0 VA	1.25	0.00										
MOTORS (REMAINING)	0 VA	1.00	0.00										
ELECTRICAL HEATING	0 VA	1.25	0.00										
ELECTRICAL MISC.	4800 VA	1.00	4.80										
TOTAL ESTIMATED LOAD	4980 VA		4.98	21									

NOTE:
ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E, AND ALL OTHER LABELS REQUIRED BY NFPA 70.



Feeder Schedule

- (1) See the "Individual Cold Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.
- (2) Internal feeder supplied with pedestal
- (3) 1•4 stranded bare copper through feeder enclosure to ground rods.
- (4) (2•6THWN CU & 1•10GND) 2 inch PVC conduit

One-Line Notes:

- (1) Coil enough conductors at the base of the pole to reach the transformer terminals at the top of the pole. Final routing of conductors up the pole and connection to transformer by electric utility.
- (2) Coil minimum of 5 feet of conductors at the transformer base. Final connection to transformer by electric utility.
- (3) See the "Individual Cold Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.

Cold Sequence Meter Power Pedestal One-line Diagram for Traffic Signal

Not To Scale

Computer File Information		○ ○ ○ ○ ○	Sheet Revisions		Colorado Department of Transportation  Traffic Safety & Engineering Services 2829 West Howard Place Denver, CO 80204 EB	Traffic Signal One-Line Diagrams	Standard Plan No.	
Creation Date: 06/14/2023			Date:	Comments			S-613-4	
Created By: KUCZKOWSKI							Standard Sheet No. 1 of 6	
Last Modification Date: 07/01/26							Issued by the Traffic Safety & Engineering Services: July 01, 2026	Project Sheet Number:
Last Modified By: GLY								
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English								

METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER			SERVICE LATERAL FEEDER 1	MIN. CONDUCTOR LENGTH TO MPP ~	MAX. CONDUCTOR LENGTH TO MPP^	INTERRUPT SHORT CIRCUIT CAPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT BREAKER
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE					
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	20-FT	240-FT	6,566 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	20-FT	305-FT	6,712 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP.

- (A) 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, cold sequence, meter/power pedestal with lever bypass, load center, MCB and fused tee-handle pull out disconnect ahead of meter. See panel schedule on this sheet for size of main and number and size of branch breakers. Set on new concrete pad plumb and level.
- (B) Tee-handle, pull-out fuse type, disconnect flush mounted into the back side of the enclosure with tab for seal.
- (C) Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- (D) Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- (E) Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.
- (F) Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.

Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.
- (G) 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld or underground lug connect conductor to rod. (2) rods required.
- (H) Built-in photocell for on/off control of luminaires on signals poles.
- (J) Built-in, 2-pole 20A, lighting contactor for on/off control of lights on signal poles
- (K) Optional hand-off-auto switch when items 'H' and 'J' above are used. Provide this HOA switch with the photocell control wired in the auto position.

Not To Scale

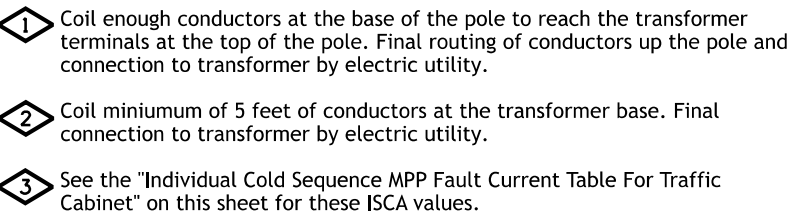
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Creation Date: 06/14/2023	 	Date:	Comments
Created By: KUCZKOWSKI			
Last Modification Date: 07/01/26			
Last Modified By: GLY			
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English			

EB

Issued by the Traffic Safety & Engineering Services: July 01, 2026

Project Sheet Number:

MOUNTING: PEDESTAL				PANEL "MPP_"				120/240V-1PH-3W				
NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED												
FEEDER: BOTTOM				BRANCH BREAKER				100 AMPS MAIN BREAKER				
				LEFT PHASE LOAD		RIGHT PHASE LOAD						
DESCRIPTION	Size	P	Ckt#	L1	L2		L1	L2	Ckt#	Size	P	DESCRIPTION
TRAFFIC SIGNAL POLE LIGHTING	20	1	1	240			180		2	20	1	MPP_ MAINTENANCE RECEPT.
TRAFFIC SIGNAL POLE LIGHTING	20	1	3		240			4800	4	50	1	TRAFFIC CONTROL CABINET
MPP_ LIGHTING CONTROL CKT.	15	1	5	200					6			SPACE ONLY
SPARE	20	1	7						8			SPACE ONLY
				440	240		180	4800				
				620	5040	Total Connected V.A.						
				5660		=Total Connected VA Both Phases						
LOAD	CONNECTED		D. FACT.	Est. KVA	AMPS	180 VA=Total Receptacle Load NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E-2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.						
LIGHTING	480 VA		1.25	0.60								
RECEPTACLES (1ST 10000)	180 VA		1.00	0.18								
RECEPTACLES (REMAINING)	0 VA		0.50	0.00								
MOTOR (LARGEST)	0 VA		1.25	0.00								
MOTORS (REMAINING)	0 VA		1.00	0.00								
ELECTRICAL HEATING	0 VA		1.25	0.00								
ELECTRICAL MISC.	5000 VA		1.00	5.00								
TOTAL ESTIMATED LOAD	5660 VA			5.78	24							



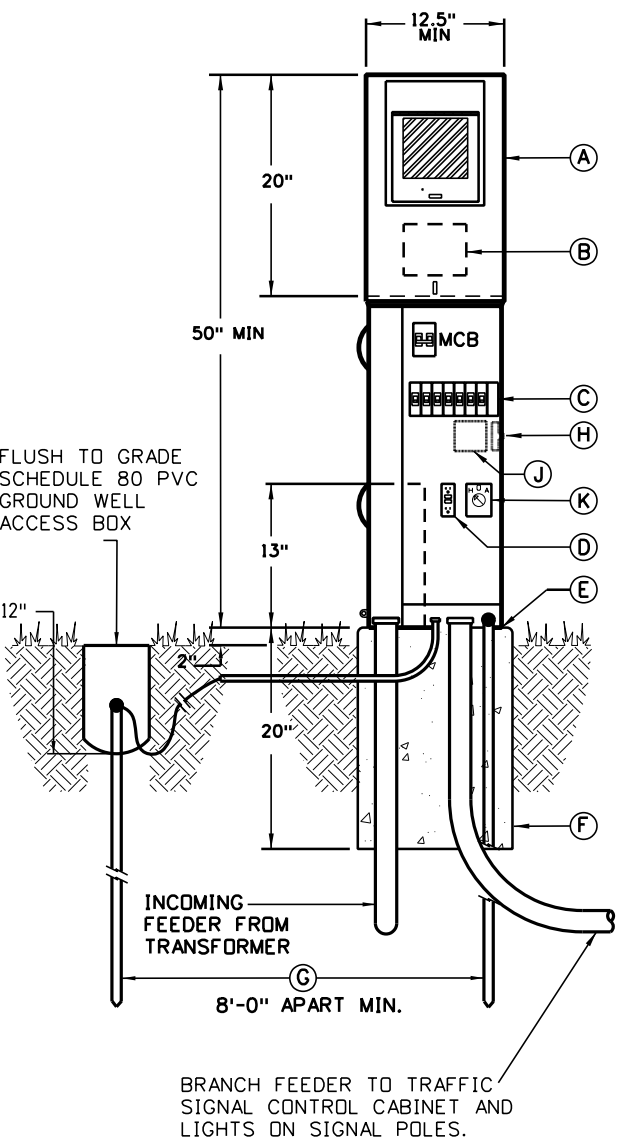
Not To Scale

INDIVIDUAL COLD SEQUENCE MPP FAULT CURRENT TABLE FOR SIGNAL WITH LUMINAIRES AND CAMERA

METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER			SERVICE LATERAL FEEDER	MIN. CONDUCTOR LENGTH TO MPP~	MAX. CONDUCTOR LENGTH TO MPP^	INTERRUPT SHORT CIRCUIT AMPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT BREAKER
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE					
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	20-FT	240-FT	6,566 A	10,000 A
NEW-MPP_	100A-2P	25kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	20-FT	305-FT	6,712 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

~ = MINIMUM SERVICE LATERAL CONDUCTOR LENGTH FOR THE ISCA VALUE GIVEN. IF CONDUCTOR LENGTH IS LESS THAN THIS VALUE THE PANEL SHALL BE BRACED AT THE NEXT HIGHER AIC RATING CALCULATED BY AN ELECTRICAL ENGINEER.

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP.



Component List

- (A) 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, cold sequence, meter/power pedestal with lever bypass, load center, mcb and fused tee-handle pull out disconnect ahead of meter. See panel schedule on this sheet for size of main and number and size of branch breakers. set on new concrete pad plumb and level.
- (B) Tee-handle, pull-out fuse type, disconnect flush mounted into the back side of the enclosure with tab for seal.
- (C) Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- (D) Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- (E) Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.
- (F) Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.
- Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.
- (G) 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld or underground lug connect conductor to rod. (2) rods required.
- (H) Built-in photocell for on/off control of luminaires on signals poles.
- (J) Built-in, 2-pole 20A, lighting contactor for on/off control of lights on signal poles
- (K) Optional hand-off-auto switch when items 'H' and 'J' above are used. Provide this HOA switch with the photocell control wired in the auto position.

Note:
All components listed shall be included in the pay item '613-50109 Meter Power Pedestal'. All components shall meet current National Electric Code (NEC) and be UL listed for the application.

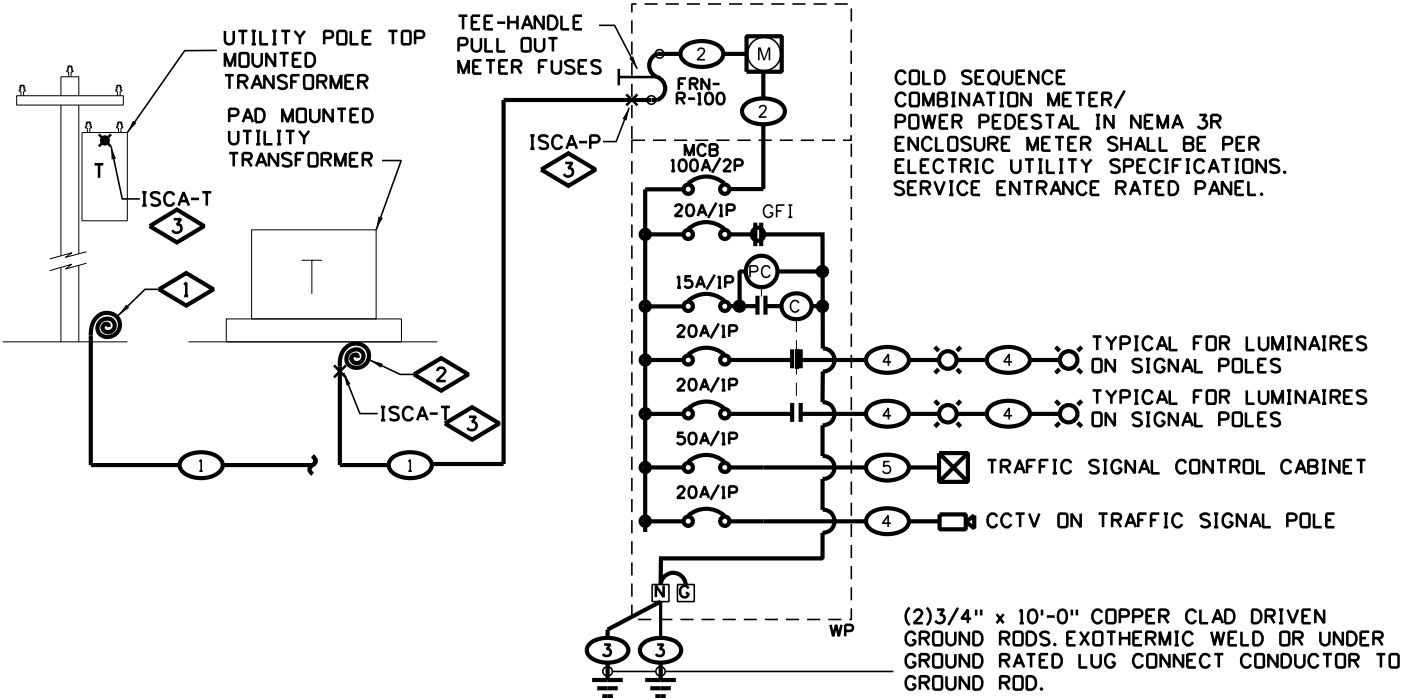
Cold Sequence Meter Power Pedestal Elevation Detail for Traffic Signal with Camera

Not To Scale

MOUNTING: PEDESTAL				PANEL "MPP_"										120/240V-1PH-3W									
				NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED																			
FEEDER: BOTTOM				BRANCH BREAKER										100 AMPS MAIN BREAKER									
				LEFT PHASE LOAD				RIGHT PHASE LOAD															
DESCRIPTION	Size	P	Ckt#	L1	L2			L1	L2	Ckt#	Size	P	DESCRIPTION										
TRAFFIC SIGNAL POLE LIGHTING	20	1	1	240				180		2	20	1	MPP_ MAINTENANCE RECEPT.										
TRAFFIC SIGNAL POLE LIGHTING	20	1	3		240				4800	4	50	1	TRAFFIC CONTROL CABINET										
MPP_ LIGHTING CONTROL CKT.	15	1	5	200				300		6	20	1	CCTV CAMERA ON SIGNAL POLE										
SPARE	20	1	7							8			SPACE ONLY										
				440	240			480	4800														
				920	5040	Total Connected V.A.																	
				5960 =Total Connected VA Both Phases																			
LOAD	CONNECTED	D.FACT.	Est. KVA	AMPS																			
LIGHTING	480 VA	1.25	0.60																				
RECEPTACLES (1ST 10000)	180 VA	1.00	0.18																				
RECEPTACLES (REMAINING)	0 VA	0.50	0.00																				
MOTOR (LARGEST)	0 VA	1.25	0.00																				
MOTORS (REMAINING)	0 VA	1.00	0.00																				
ELECTRICAL HEATING	0 VA	1.25	0.00																				
ELECTRICAL MISC.	5300 VA	1.00	5.30																				
TOTAL ESTIMATED LOAD	5960 VA		6.08	25																			
					180 VA=Total Receptacle Load																		
					NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E- 2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.																		

180 VA=Total Receptacle Load

NOTE:
ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E-2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.



Feeder Schedule

- 1 See the "Individual Cold Sequence MPP Fault Current Table For Signal With Luminaries And Camera" on this sheet for these ISCA values.
- 2 Internal feeder supplied with pedestal
- 3 1•4 stranded bare copper through feeder enclosure to ground rods.
- 4 (2•10THWN CU & 1•10GND) 2 inch PVC conduit
- 5 (2•6THWN CU & 1•10GND) 2 inch PVC conduit

One-Line Notes:

- 1 Coil enough conductors at the base of the pole to reach the transformer terminals at the top of the pole. Final routing of conductors up the pole and connection to transformer by electric utility.
- 2 Coil minimum of 5 feet of conductors at the transformer base. Final connection to transformer by electric utility.
- 3 See the "Individual Cold Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.

Cold Sequence Meter Power Pedestal One-Line Diagram for Traffic Signal with Camera

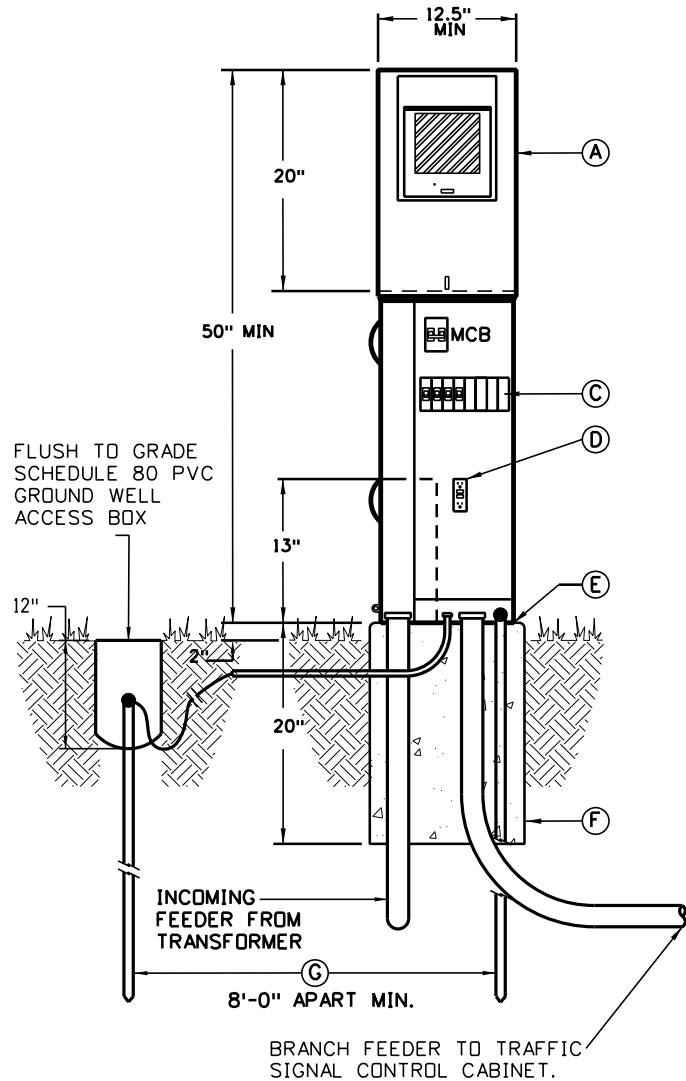
Not To Scale

Computer File Information			Sheet Revisions		Colorado Department of Transportation			Traffic Signal One-Line Diagrams		Standard Plan No.	
Creation Date: 06/14/2023			Date:	Comments		Traffic Safety & Engineering Services 2829 West Howard Place Denver, CO 80204	EB			S-613-4	
Created By: KUCZKOWSKI										Standard Sheet No. 3 of 6	
Last Modification Date: 07/01/26											
Last Modified By: GLY											
CAD Ver.: ORD 10.12	Scale: Not to Scale	Units: English								Project Sheet Number:	

INDIVIDUAL HOT SEQUENCE MPP FAULT CURRENT TABLE FOR TRAFFIC CABINET									
METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER			SERVICE LATERAL FEEDER ①	MIN. CONDUCTOR LENGTH TO MPP ~	MAX. CONDUCTOR LENGTH MPP^	SHORT CIRCUIT AMPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE					
NEW-MPP_	100A-2P	15 kVA	4464 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	4,253 A	10,000 A
NEW-MPP_	100A-2P	15 kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	15-FT	240-FT	4,212 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	30-FT	305-FT	6,399 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

~ = MINIMUM SERVICE LATERAL CONDUCTOR LENGTH FOR THE ISCA VALUE GIVEN. IF CONDUCTOR LENGTH IS LESS THAN THIS VALUE THE PANEL SHALL BE BRACED AT THE NEXT HIGHER AIC RATING CALCULATED BY AN ELECTRICAL ENGINEER.

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP.



Hot Sequence Meter Power Pedestal Elevation Detail for Traffic Signal

Not To Scale

Component List

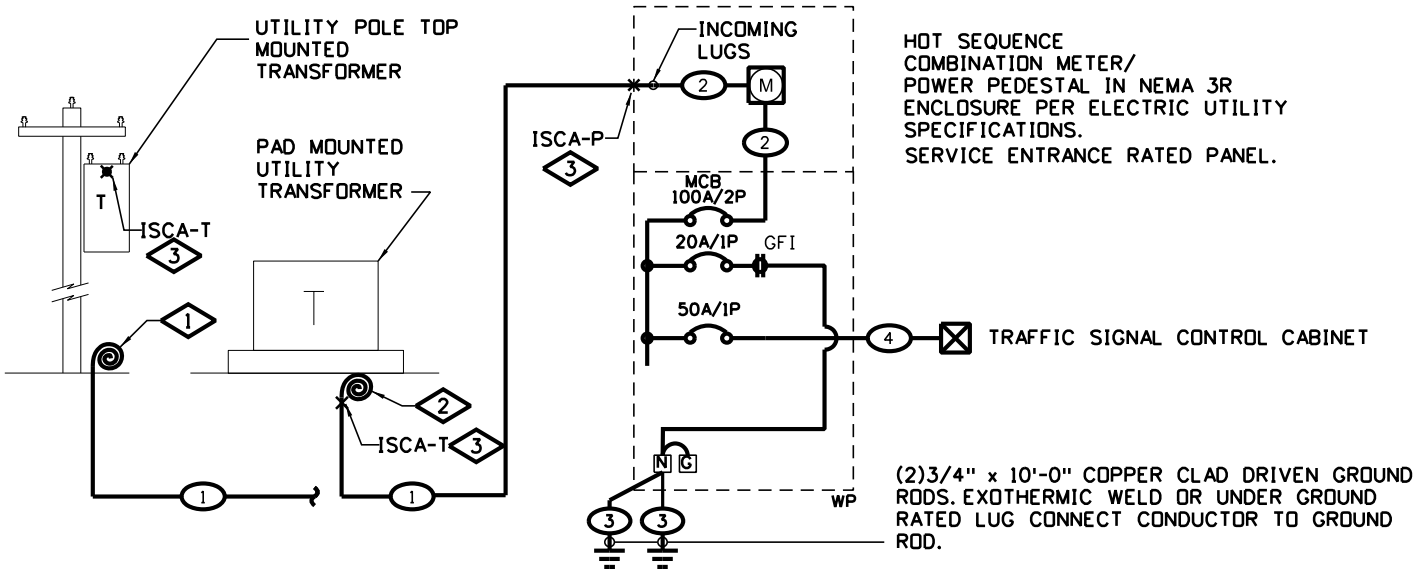
- Ⓐ 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, hot sequence, meter/power pedestal with lever bypass, load center, and MCB. See panel schedule on this sheet for size of main and number and size of branch breakers. Set on new concrete pad plumb and level.
- Ⓒ Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- Ⓓ Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- Ⓔ Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.
- Ⓕ Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.
- Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.
- Ⓖ 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld or underground lug connect conductor to rod. (2) rods required.

Note:
All components listed shall be included in the pay item '613-50109 Meter Power Pedestal'. All components shall meet current National Electric Code (NEC) and be UL listed for the application.

MOUNTING: PEDESTAL				PANEL "MPP_"				120/240V-1PH-3W				
NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED												
FEEDER: BOTTOM								100 AMPS MAIN BREAKER				
BRANCH BREAKER												
				LEFT PHASE LOAD			RIGHT PHASE LOAD					
DESCRIPTION	Size	P	Ckt#	L1	L2		L1	L2	Ckt#	Size	P	DESCRIPTION
SPARE	20	1	1				180		2	20	1	MPP_ MAINTENANCE RECEPT.
SPARE	20	1	3					4800	4	50	1	TRAFFIC CONTROL CABINET
SPACE ONLY			5						6			SPACE ONLY
SPACE ONLY			7						8			SPACE ONLY
				0	0		180	4800				
				180	4800	Total Connected V.A.						
				4980			=Total Connected VA Both Phases					
LOAD	CONNECTED	D.FACT.	Est. KVA	AMPS	180 VA=Total Receptacle Load NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E, AND ALL OTHER LABELS REQUIRED BY NFPA 70.							
LIGHTING	0 VA	1.25	0.00									
RECEPTACLES (1ST 10000)	180 VA	1.00	0.18									
RECEPTACLES (REMAINING)	0 VA	0.50	0.00									
MOTOR (LARGEST)	0 VA	1.25	0.00									
MOTORS (REMAINING)	0 VA	1.00	0.00									
ELECTRICAL HEATING	0 VA	1.25	0.00									
ELECTRICAL MISC.	4800 VA	1.00	4.80									
TOTAL ESTIMATED LOAD	4980 VA		4.98	21								

180 VA=Total Receptacle Load

NOTE:
ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E, AND ALL OTHER LABELS REQUIRED BY NFPA 70.



Feeder Schedule

- ① See the "Individual Hot Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.
- ② Internal feeder supplied with pedestal
- ③ 1•4 stranded bare copper through feeder enclosure to ground rods.
- ④ (2•6THWN CU & 1•10GND) 2 inch PVC conduit

One-Line Notes:

- ① Coil enough conductors at the base of the pole to reach the transformer terminals at the top of the pole. Final routing of conductors up the pole and connection to transformer by electric utility.
- ② Coil minimum of 5 feet of conductors at the transformer base. Final connection to transformer by electric utility.
- ③ See the "Individual Hot Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.

Hot Sequence Meter Power Pedestal One-Line Diagram for Traffic Signal

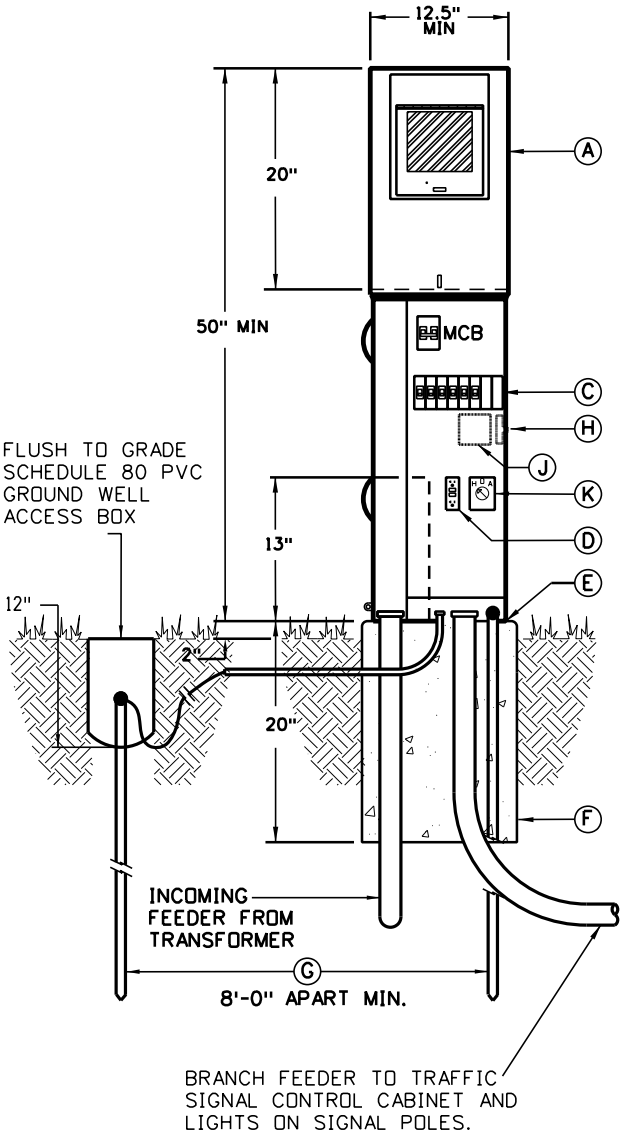
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Computer File Information		Sheet Revisions		Colorado Department of Transportation Traffic Safety & Engineering Services 2829 West Howard Place Denver, CO 80204 EB	Traffic Signal One-Line Diagrams	Standard Plan No.	
Creation Date: 06/14/2023		Date:	Comments			S-613-4	
Created By: KUCZKOWSKI						Standard Sheet No. 4 of 6	
Last Modification Date: 07/01/26						Project Sheet Number:	
Last Modified By: GLY							
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English							

INDIVIDUAL HOT SEQUENCE MPP FAULT CURRENT TABLE FOR TRAFFIC SIGNAL WITH LUMINAIRES									
METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER			SERVICE LATERAL FEEDER ①	MIN. CONDUCTOR LENGTH TO MPP ~	MAX. CONDUCTOR LENGTH MPP^	SHORT CIRCUIT AMPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE					
NEW-MPP_	100A-2P	15 kVA	4464 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	4,253 A	10,000 A
NEW-MPP_	100A-2P	15 kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	15-FT	240-FT	4,212 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	30-FT	305-FT	6,399 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

~ = MINIMUM SERVICE LATERAL CONDUCTOR LENGTH FOR THE ISCA VALUE GIVEN. IF CONDUCTOR LENGTH IS LESS THAN THIS VALUE THE PANEL SHALL BE BRACED AT THE NEXT HIGHER AIC RATING CALCULATED BY AN ELECTRICAL ENGINEER.

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP.



Component List

- Ⓐ 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, hot sequence, meter/power pedestal with lever bypass, load center, and MCB. See panel schedule on this sheet for size of main and number and size of branch breakers. Set on new concrete pad plumb and level.
- Ⓒ Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- Ⓓ Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- Ⓔ Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.
- Ⓕ Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.
- Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.
- Ⓖ 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld or underground lug connect conductor to rod. (2) rods required.
- Ⓗ Built-in photocell for on/off control of luminaires on signals poles.
- Ⓙ Built-in, 2-pole 20A, lighting contactor for on/off control of lights on signal poles
- Ⓚ Optional hand-off-auto switch when items 'H' and 'J' above are used. Provide this HOA switch with the photocell control wired in the auto position.

Note:
All components listed shall be included in the pay item '613-50109 Meter Power Pedestal'. All components shall meet current National Electric Code (NEC) and be UL listed for the application.

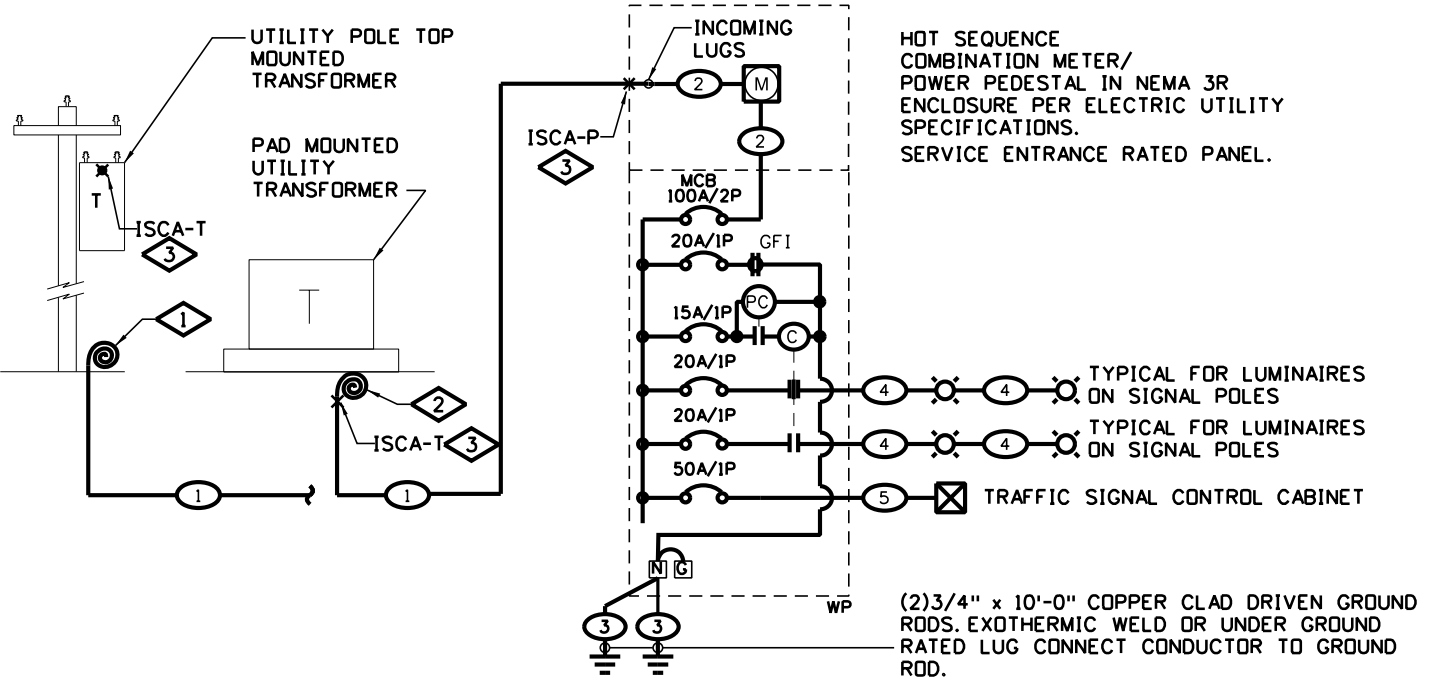
Hot Sequence Meter Power Pedestal Elevation Detail for Traffic Signal with Luminaires

Not To Scale

PANEL "MPP_"														120/240V-1PH-3W							
NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED																					
FEEDER:BOTTOM														100 AMPS MAIN BREAKER							
BRANCH BREAKER																					
				LEFT PHASE LOAD				RIGHT PHASE LOAD													
DESCRIPTION	Size	P	Ckt#	L1	L2			L1	L2	Ckt#	Size	P	DESCRIPTION								
TRAFFIC SIGNAL POLE LIGHTING	20	1	1	240				180		2	20	1	MPP_ MAINTENANCE RECEPT.								
TRAFFIC SIGNAL POLE LIGHTING	20	1	3		240				4800	4	50	1	TRAFFIC CONTROL CABINET								
MPP_ LIGHTING CONTROL CKT.	15	1	5	200						6			SPACE ONLY								
SPARE	20	1	7							8			SPACE ONLY								
				440	240			180	4800												
				620	5040	Total Connected V.A.															
				5660		=Total Connected VA Both Phases															
LOAD	CONNECTED		D.FACT.	Est. KVA	AMPS	180 VA=Total Receptacle Load NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E-2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.															
LIGHTING	480 VA		1.25	0.60																	
RECEPTACLES (1ST 10000)	180 VA		1.00	0.18																	
RECEPTACLES (REMAINING)	0 VA		0.50	0.00																	
MOTOR (LARGEST)	0 VA		1.25	0.00																	
MOTORS (REMAINING)	0 VA		1.00	0.00																	
ELECTRICAL HEATING	0 VA		1.25	0.00																	
ELECTRICAL MISC.	5000 VA		1.00	5.00																	
TOTAL ESTIMATED LOAD	5660 VA			5.78	24																

180 VA=Total Receptacle Load

NOTE:
ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E-2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.



Feeder Schedule

- ① See the "Individual Hot Sequence MPP Fault Current Table For Traffic Signal With Luminaires" on this sheet for these ISCA values.
- ② Internal feeder supplied with pedestal
- ③ 1•4 stranded bare copper through feeder enclosure to ground rods.
- ④ (2•10THWN CU & 1•10GND) 2 inch PVC conduit
- ⑤ (2•6THWN CU & 1•10GND) 2 inch PVC conduit

One-Line Notes:

- ① Coil enough conductors at the base of the pole to reach the transformer terminals at the top of the pole. Final routing of conductors up the pole and connection to transformer by electric utility.
- ② Coil minimum of 5 feet of conductors at the transformer base. Final connection to transformer by electric utility.
- ③ See the "Individual Hot Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.

Hot Sequence Meter Power Pedestal One-Line Diagram for Traffic Signal with Luminaires

Not To Scale

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Creation Date: 06/14/2023			Date:	Comments			S-613-4	
Created By: KUCZKOWSKI							Standard Sheet No. 5 of 6	
Last Modification Date: 07/01/26								
Last Modified By: GLY								
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English						Issued by the Traffic Safety & Engineering Services: July 01, 2026	Project Sheet Number:	

METER POWER PEDESTAL	SERVICE MAIN CIRCUIT BRKR.	TRANSFORMER			SERVICE LATERAL FEEDER ①	MIN. CONDUCTOR LENGTH TO MPP ~	MAX. CONDUCTOR LENGTH MPP^	SHORT CIRCUIT AMPACITY 'ISCA-P' @ MIN. CONDUCTOR LENGTH	MINIMUM AIC RATING FOR MAIN CIRCUIT
		KVA	'ISCA-T'	SEC. VOLTAGE-PHASE					
NEW-MPP_	100A-2P	15 kVA	4464 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	4,253 A	10,000 A
NEW-MPP_	100A-2P	15 kVA	7440 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	15-FT	240-FT	4,212 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	6,872 A	10,000 A
NEW-MPP_	100A-2P	25 kVA	7440 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	30-FT	305-FT	6,399 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	10-FT	190-FT	12,768 A	22,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1 XHHW CU) 2" PVC	35-FT	190-FT	9,423 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#1/0 XHHW CU) 2" PVC	40-FT	240-FT	9,711 A	10,000 A
NEW-MPP_	100A-2P	50 kVA	14881 A	120/240V-1PH	(3#2/0 XHHW CU) 2" PVC	50-FT	305-FT	9,646 A	10,000 A

^ = MAXIMUM FEEDER LENGTH TO MAINTAIN LESS THAN 2% VOLTAGE DROP

A 200A meter socket, 100A MCB, 120/240V, NEMA 3R combination service entrance rated, hot sequence, meter/power pedestal with lever bypass, load center, and MCB. See panel schedule on this sheet for size of main and number and size of branch breakers. Set on new concrete pad plumb and level.

- (C) Service entrance panel breaker section, for customer loads. See panel schedules on this sheet for size of breakers and number of poles required.
- (D) Built-in GFCI NEMA 5-20R, duplex, GFCI maintenance receptacle flush mounted in panel dead-front.
- (E) Provide recessed concrete pad mounting plate with L-bolts to match the enclosure base bolt pattern.

⑤ Option 1: Polymer concrete pedestal foundation with fiberglass reinforcement. The pad shall be continuous cloth reinforcement on the inside and outside perimeter. Weight of the foundations shall be stenciled on the sidewall of the foundation.

Option 2: Provide 4000 psi, re-bar re-enforce, concrete with a minimum direct earth bury depth of 18-inch, 2-inch overlap of the enclosure on all sides front and back and 2-inch exposure above grade. Provide 3/4-inch chamfered edges. Provide structural engineered stamped drawing for pad.

- ⑥ 3/4 inch x 10 feet long, copper-clad driven ground rod with exothermic weld on underground lug connect conductor to rod. (2) rods required.

- (H) Built-in photocell for on/off control of luminaires on signals poles.

- (J)** Built-in, 2-pole 20A, lighting contactor for on/off control of lights on signal poles

- (K) Optional hand-off-auto switch when items 'H' and 'J' above are used. Provide this HOA switch with the photocell control wired in the auto position.

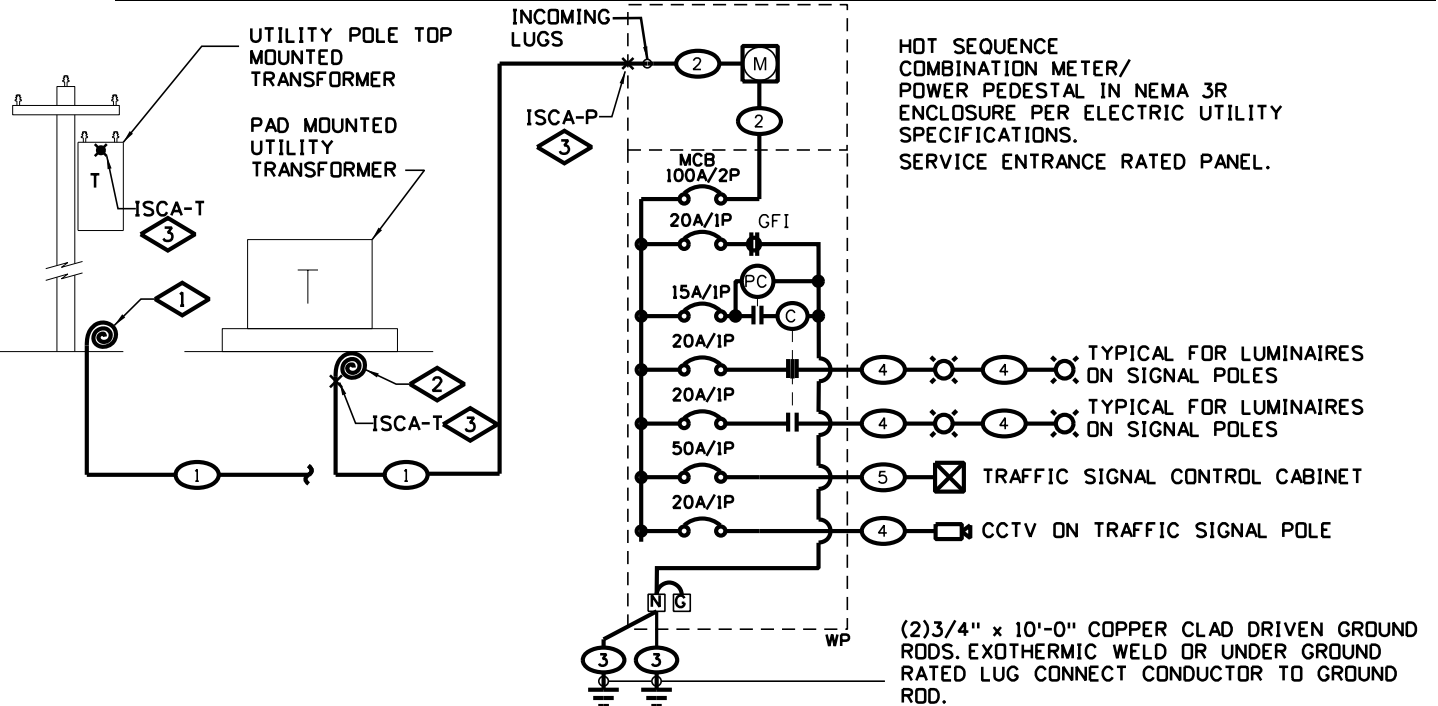
Note:

All components listed shall be included in the pay item '613-50109 Meter Power Pedestal'. All components shall meet current National Electric Code (NEC) and be UL listed for the application.



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MOUNTING: PEDESTAL				PANEL "MPP_"				120/240V-1PH-3W					
NEMA 3R ENCLOSURE SERVICE ENTRANCE RATED													
FEEDER: BOTTOM				BRANCH BREAKER				100 AMPS MAIN BREAKER					
				LEFT PHASE LOAD		RIGHT PHASE LOAD							
DESCRIPTION	Size	P	Ckt#	L1	L2		L1	L2	Ckt#	Size	P	DESCRIPTION	
TRAFFIC SIGNAL POLE LIGHTING	20	1	1	240			180		2	20	1	MPP_ MAINTENANCE RECEPT.	
TRAFFIC SIGNAL POLE LIGHTING	20	1	3		240			4800	4	50	1	TRAFFIC CONTROL CABINET	
MPP_ LIGHTING CONTROL CKT.	15	1	5	200				300		6	20	1	CCTV CAMERA ON SIGNAL POLE
SPARE	20	1	7							8			SPACE ONLY
				440	240			480	4800				
				920	5040	Total Connected V.A.							
				5960		=Total Connected VA Both Phases							
LOAD	CONNECTED		D.FACT.	Est. KVA	AMPS								
LIGHTING	480 VA		1.25	0.60									
RECEPTACLES (1ST 10000)	180 VA		1.00	0.18									
RECEPTACLES (REMAINING)	0 VA		0.50	0.00									
MOTOR (LARGEST)	0 VA		1.25	0.00									
MOTORS (REMAINING)	0 VA		1.00	0.00									
ELECTRICAL HEATING	0 VA		1.25	0.00									
ELECTRICAL MISC.	5300 VA		1.00	5.30									
TOTAL ESTIMATED LOAD	5960 VA			6.08	25								
						180 VA=Total Receptacle Load							
						NOTE: ALL LIGHTING CONTROL CENTERS AND ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH "ARC-FLASH HAZARD WARNING" LABELS PER THE NATIONAL ELECTRIC CODE NEC 110.16 AND NFPA 70E-2015, AND ALL OTHER LABELS REQUIRED BY NFPA 70.							



1 See the "Individual Hot Sequence MPP Fault Current Table For Signal With Luminaires And Cameras" on this sheet for these ISCA values.

- 2 Internal feeder supplied with pedestal
- 3 1•4 stranded bare copper through feeder enclosure to ground rods.
- 4 (2•10THWN CU & 1•10GND) 2 inch PVC conduit
- 5 (2•6THWN CU & 1•10GND) 2 inch PVC conduit

1 Coil enough conductors at the base of the pole to reach the transformer terminals at the top of the pole. Final routing of conductors up the pole and connection to transformer by electric utility.

- 2 Coil minimum of 5 feet of conductors at the transformer base. Final connection to transformer by electric utility.
- 3 See the "Individual Hot Sequence MPP Fault Current Table For Traffic Cabinet" on this sheet for these ISCA values.

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Creation Date: 06/14/2023			Date:	Comments			S-613-4	
Created By: KUCZKOWSKI							Standard Sheet No. 6 of 6	
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Last Modified By: GLY						Project Sheet Number:		
CAD Ver.: ORD 10.12 Scale: Not to Scale Units: English								