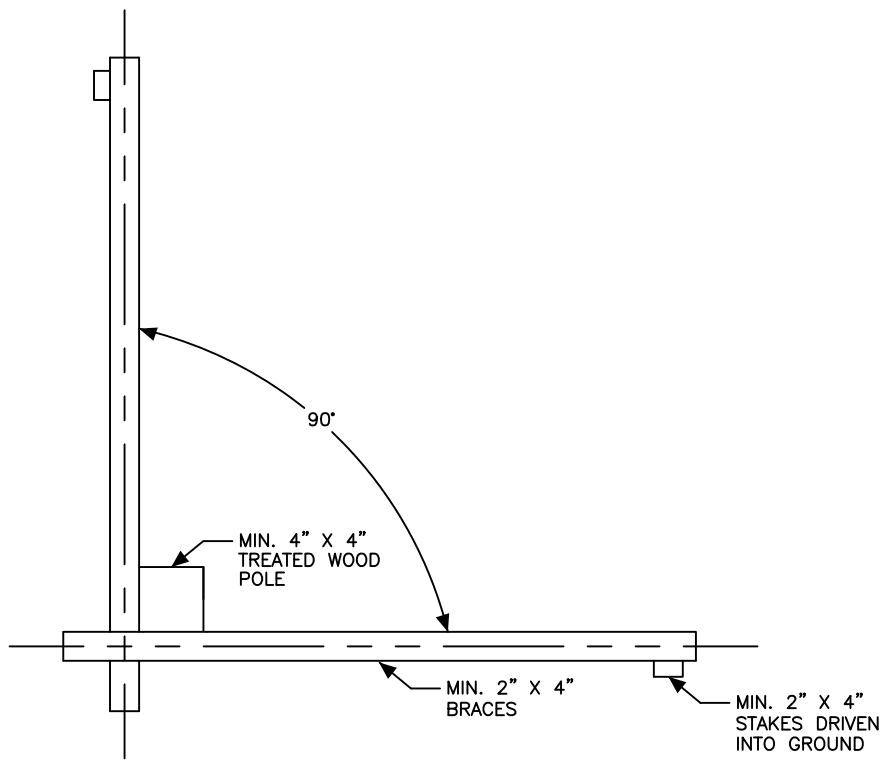




Engineering Technical Drawings

REVISED:

May 17, 2021



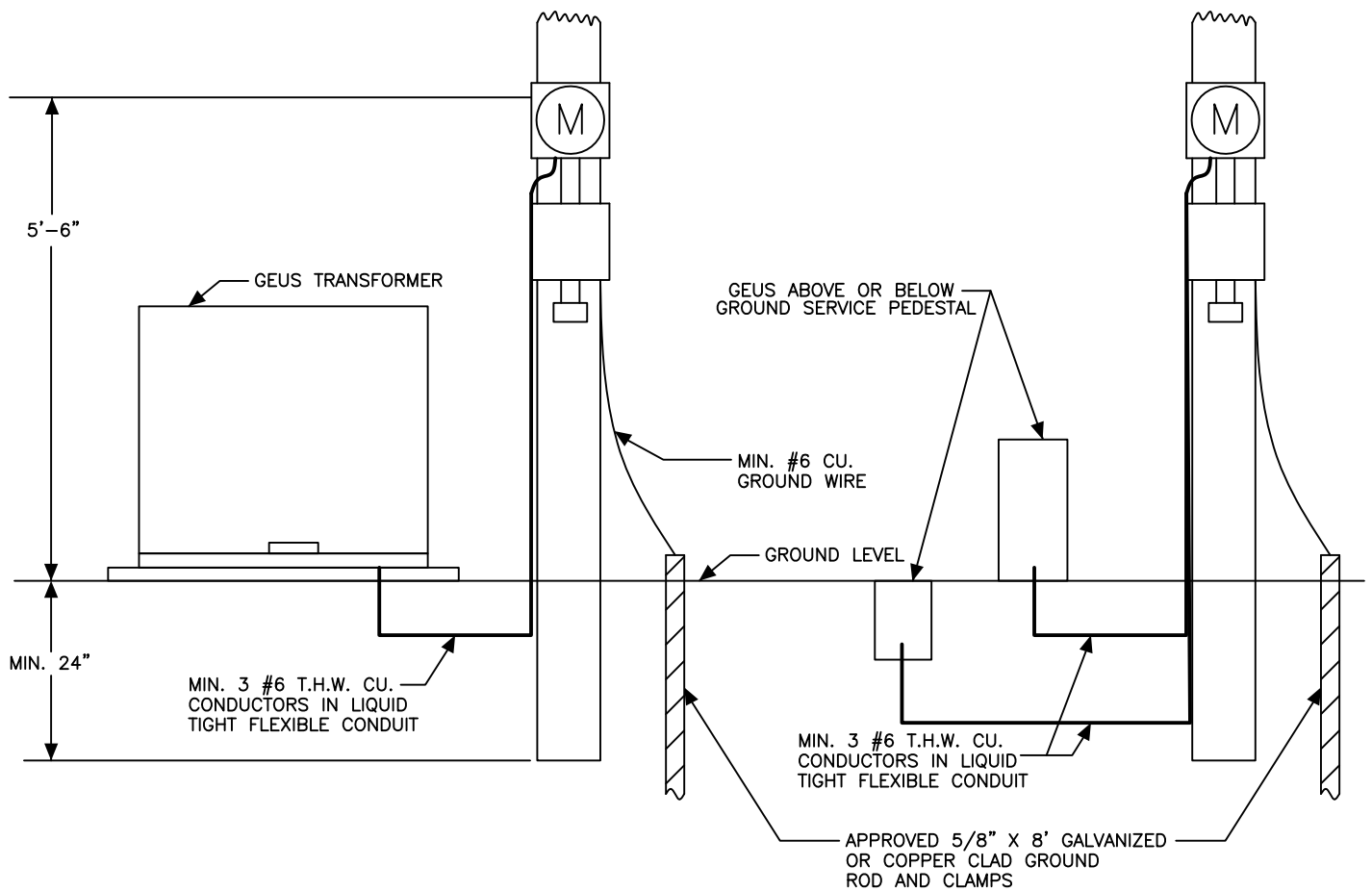
TOP VIEW



DRAWN BY
JKS
CHK'D BY
ZVM
APPROVED BY
ADC

TEMPORARY SERVICE FROM
OVERHEAD SYSTEM

DATE
6/20/2016
DWG NO.
Q1.1.2



NOTES:

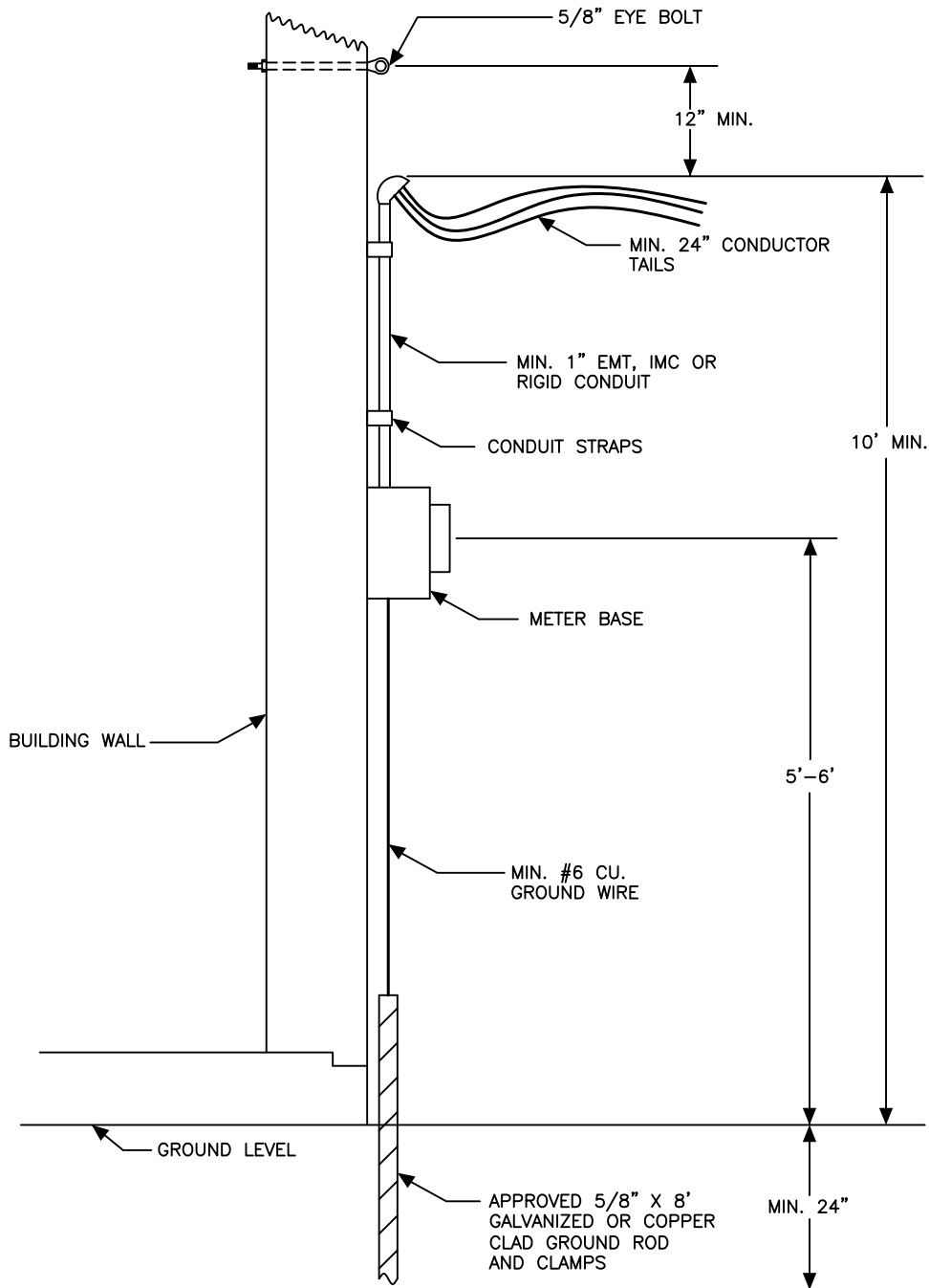
- 1.) DUAL ELEMENT FUSES OR CIRCUIT BREAKERS SHALL BE USED IN RAIN-TIGHT ENCLOSURE. NO PLUG TYPE FUSES ALLOWED G.F.I. PROTECTION REQUIRED ON 120V RECEPTACLE.
- 2.) CUSTOMER SHALL BE RESPONSIBLE FOR PROVIDING PROPER IDENTIFICATION AT THE SERVICE LOCATION PRIOR TO SERVICE BEING RENDERED.
- 3.) CUSTOMER TO PROVIDE 36" OF SERVICE ENTRANCE CONDUCTOR BEYOND CONDUIT.
- 4.) CUSTOMER MUST CONTACT ALL UTILITIES TO OBTAIN LOCATES PRIOR TO EXCAVATION.



DRAWN BY JKS
CHK'D BY ZVM
APPROVED BY ADC

TEMPORARY SERVICE FROM
UNDERGROUND SYSTEM

DATE 6/20/2016
DWG NO. UQ1.1



NOTES:

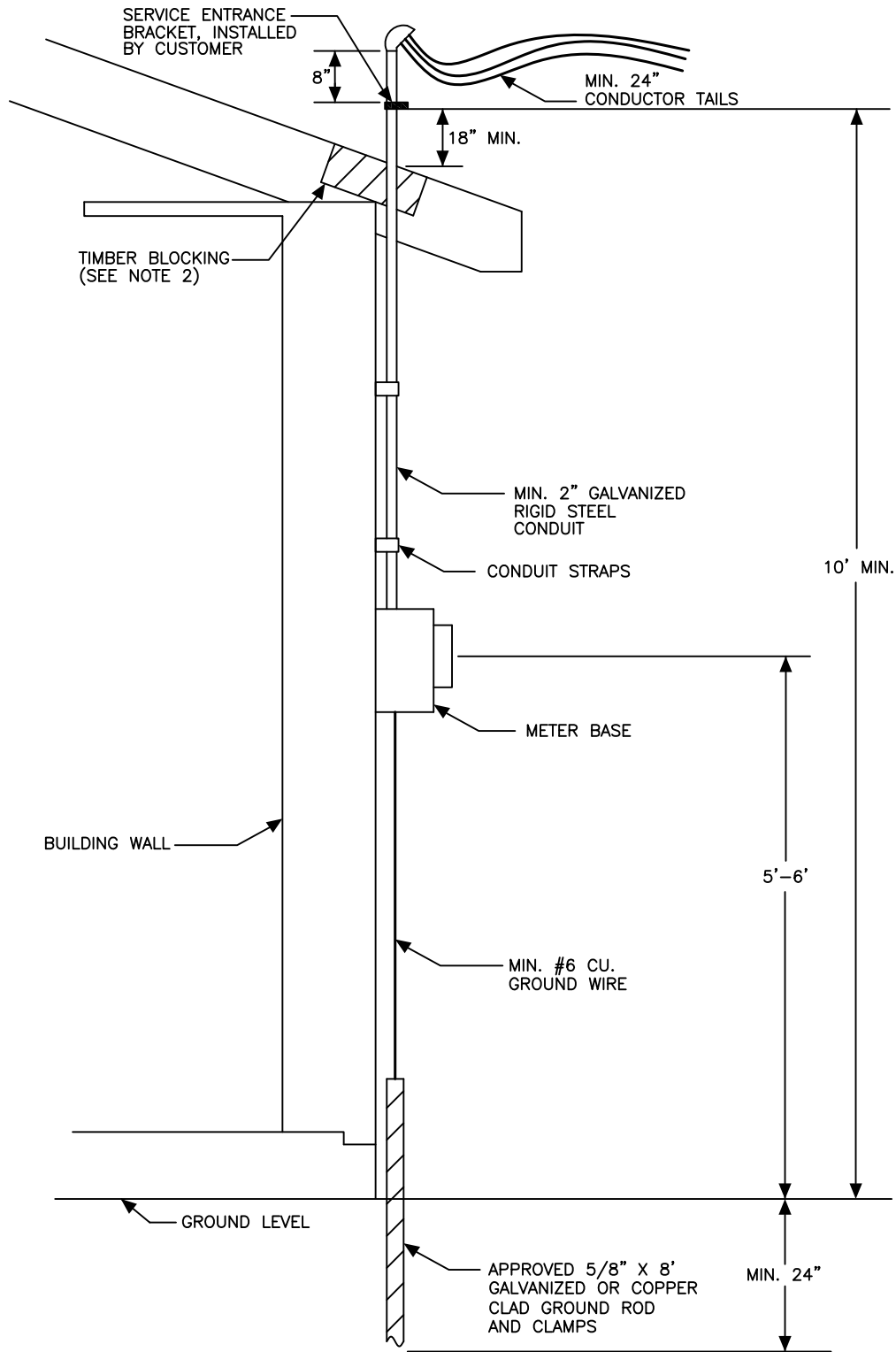
- 1.) EYE BOLT TO BE INSTALLED BY CUSTOMER.
- 2.) A MINIMUM 24" CONDUCTOR EXTENDED FROM WEATHER HEAD, WITH NEUTRAL CONDUCTOR PLAINLY IDENTIFIED.
- 3.) METER BASE MUST BE SECURELY AND PERMANENTLY MOUNTED TO EXTERIOR OF BUILDING WALL.



DRAWN BY
JKS
CHK'D BY
ZVM
APPROVED BY
ADC

SERVICE ENTRANCE FOR HOUSES
WITH ADEQUATE HEIGHT

DATE
6/20/2016
DWG NO.
Q1.2



NOTES:

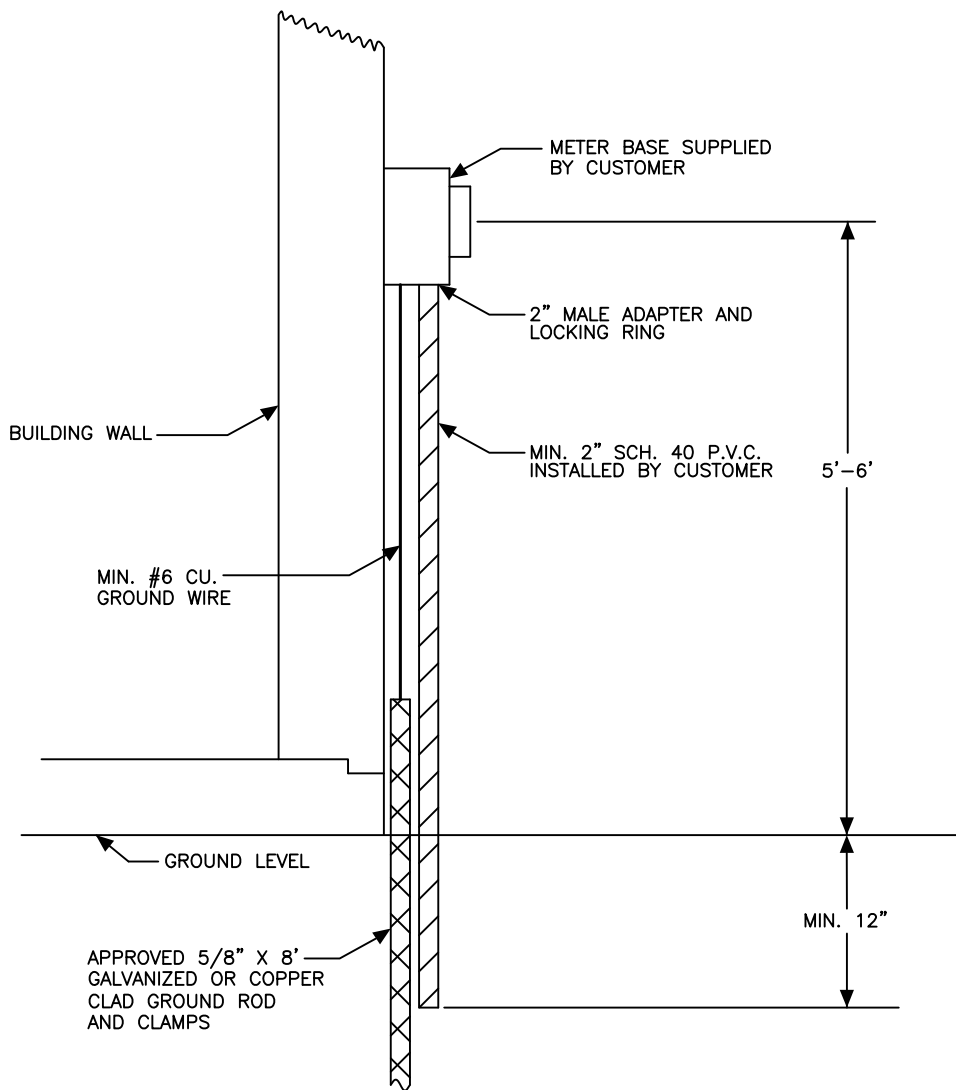
- 1.) A MINIMUM CLEARANCE OF 18' IS REQUIRED OVER COMMERCIAL DRIVEWAYS OR PARKING LOTS AND 22' OVER PUBLIC STREETS.
- 2.) MAST SHALL HAVE SUFFICIENT SUPPORT (EX. 2" X 6" FRAMING BETWEEN RAFTERS TO REINFORCE ROOF DECKING). WHERE SERVICE IS LONG OR EXTRA HEAVY, THE ELECTRICAL INSPECTOR MAY REQUIRE ADDITIONAL SUPPORT.
- 3.) FOR ROOF OVERHANG GREATER THAN 48" CONSULT GEUS ENGINEERING DEPARTMENT.
- 4.) METER BASE MUST BE SECURELY AND PERMANENTLY MOUNTED TO EXTERIOR OF BUILDING WALL.



DRAWN BY
JKS
CHK'D BY
ZVM
APPROVED BY
ADC

SERVICE ENTRANCE FOR HOUSES
WITH LOW ROOF

DATE
6/20/2016
DWG NO.
Q1.3



NOTES:

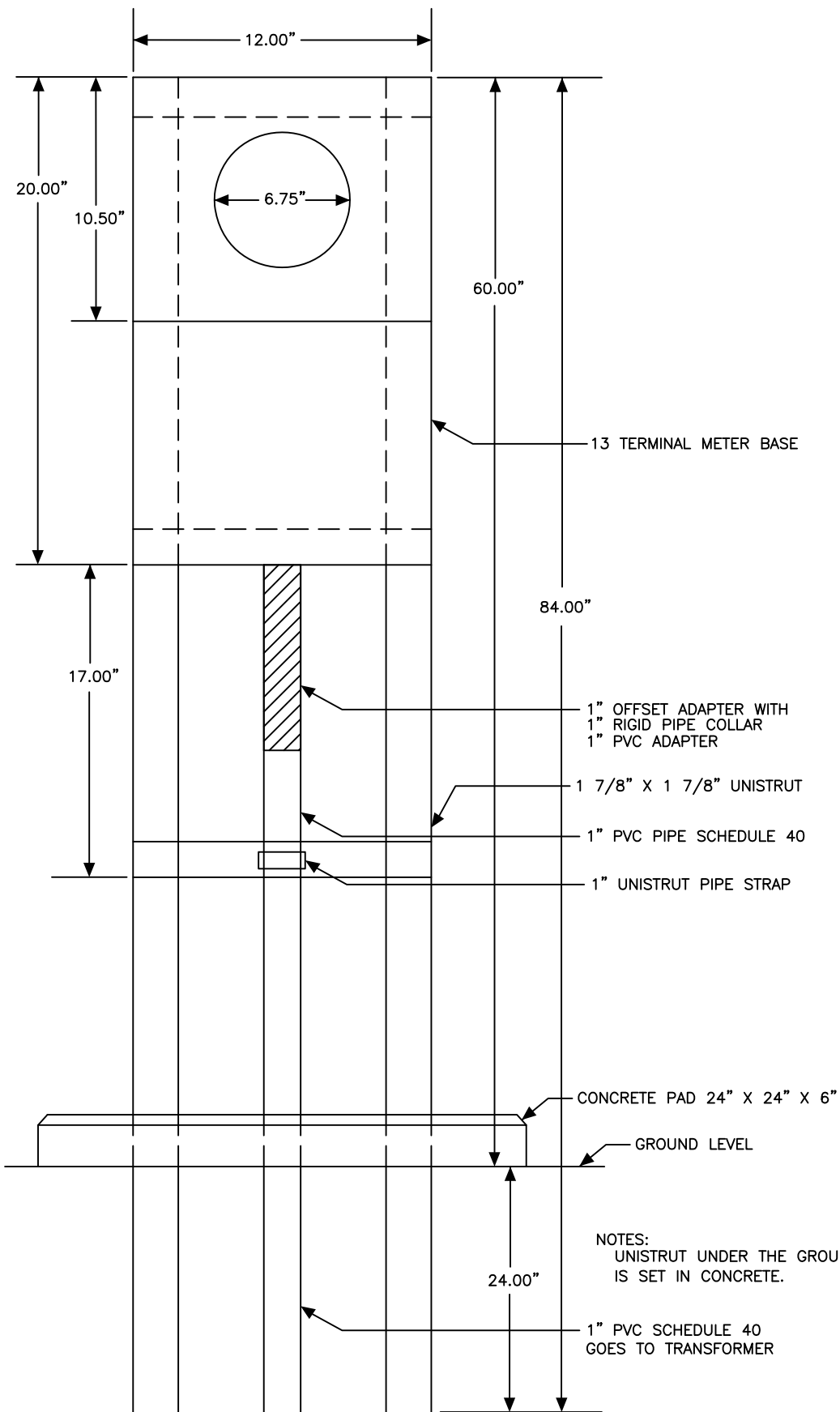
- 1.) METER BASE MUST BE SECURELY AND PERMANENTLY MOUNTED TO EXTERIOR OF BUILDING WALL.
- 2.) CUSTOMER MUST CONTACT ALL UTILITIES TO OBTAIN LOCATES PRIOR TO EXCAVATION.



DRAWN BY	JKS
CHK'D BY	ZVM
APPROVED BY	ADC

RESIDENTIAL UNDERGROUND SERVICE

DATE	6/20/2016
DWG NO.	UQ1.2



FRONT VIEW

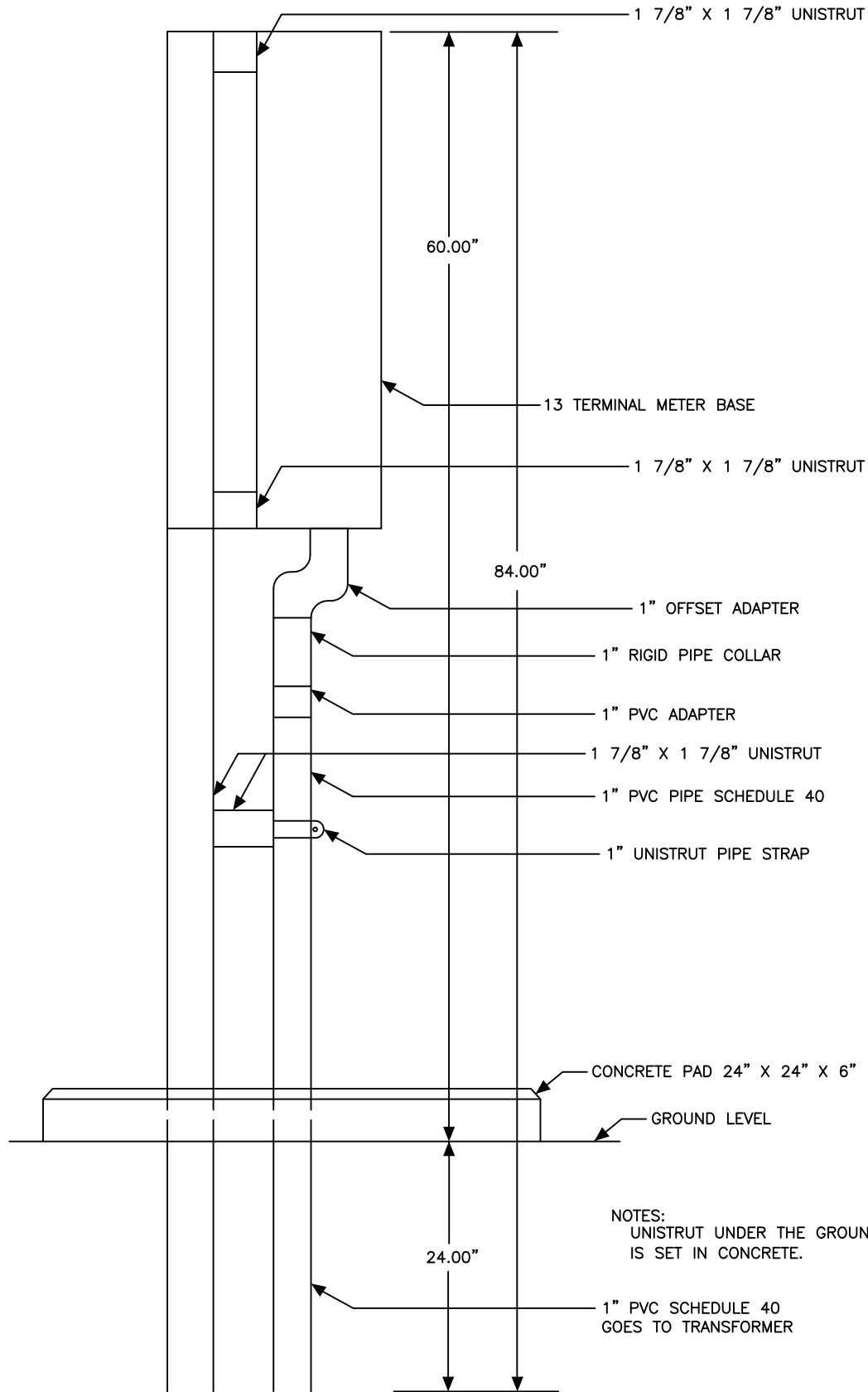
NOTES:
UNISTRUT UNDER THE GROUND
IS SET IN CONCRETE.



DRAWN BY
JKS
CHK'D BY
ZVM
APPROVED BY
ADC

METER UNISTRUT INSTALL DETAIL
FRONT VIEW

DATE
8/5/2015
DWG NO.
UQ3.1F



SIDE VIEW

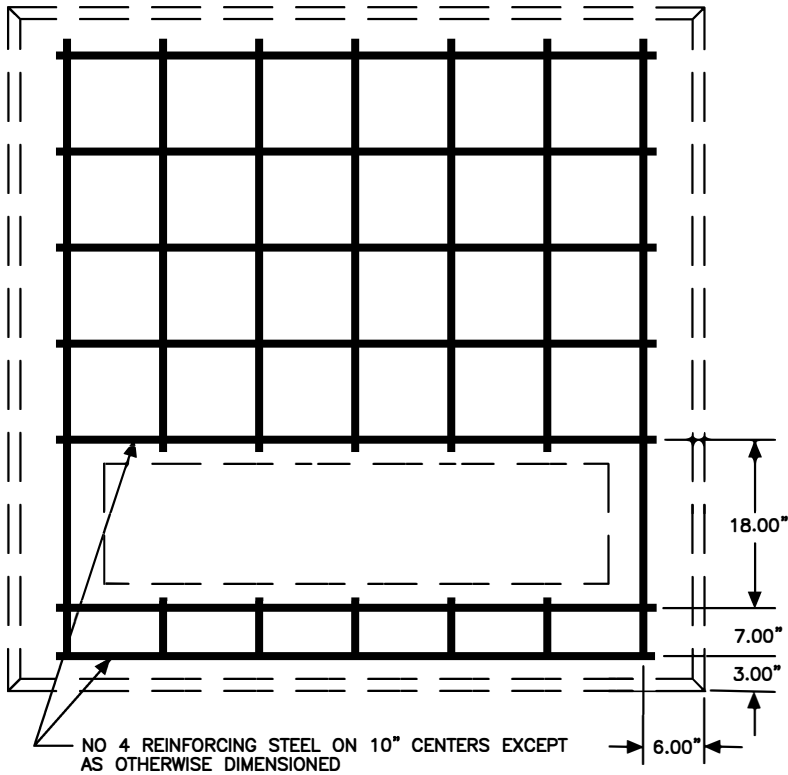


DRAWN BY
JKS
CHK'D BY
ZVM
APPROVED BY
ADC

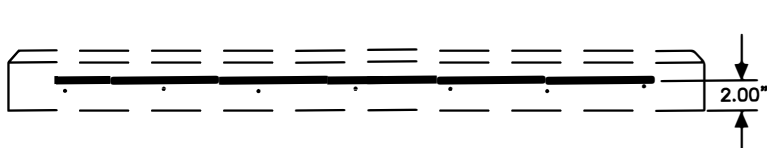
METER UNISTRUT INSTALL DETAIL
SIDE VIEW

DATE
8/5/2015

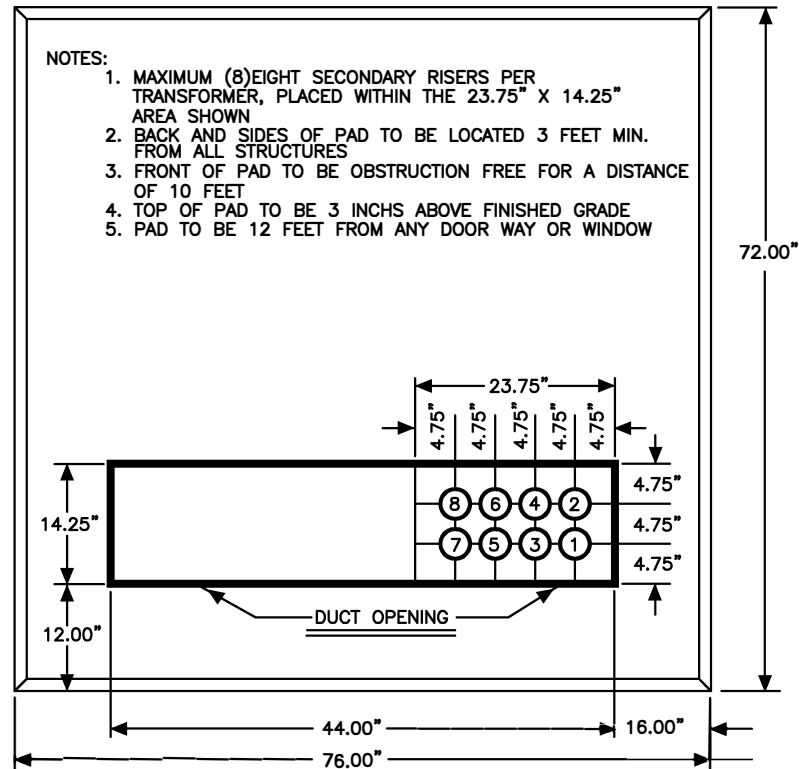
DWG NO.
UQ3.1S



TOP VIEW
STEEL LAYOUT



FRONT VIEW



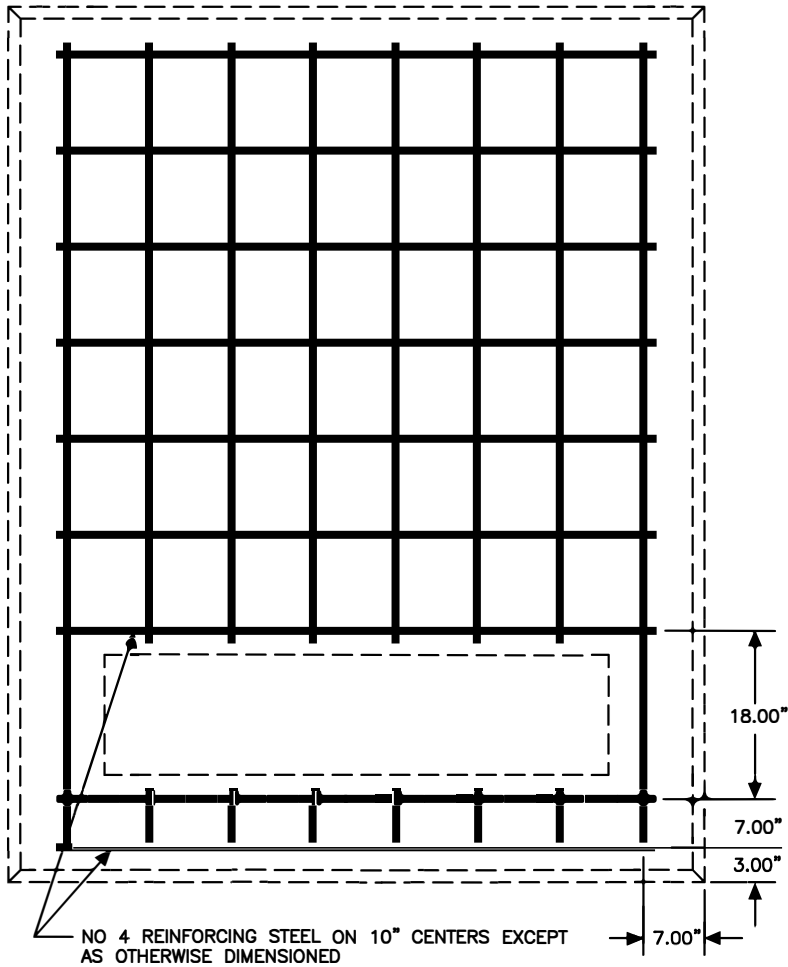
- NOTES:
1. MAXIMUM (8)EIGHT SECONDARY RISERS PER TRANSFORMER, PLACED WITHIN THE 23.75" X 14.25" AREA SHOWN
 2. BACK AND SIDES OF PAD TO BE LOCATED 3 FEET MIN. FROM ALL STRUCTURES
 3. FRONT OF PAD TO BE OBSTRUCTION FREE FOR A DISTANCE OF 10 FEET
 4. TOP OF PAD TO BE 3 INCHS ABOVE FINISHED GRADE
 5. PAD TO BE 12 FEET FROM ANY DOOR WAY OR WINDOW

DATE 1/14/2019
DWG NO. UM3.1

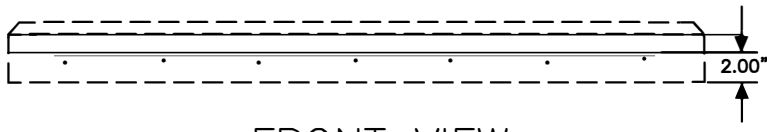
CONCRETE PAD FOR THREE-PHASE
500 KVA AND SMALLER
PAD-MOUNTED TRANSFORMER

DRAWN BY JAD
CHK'D BY ZJM
APPROVED BY ADC

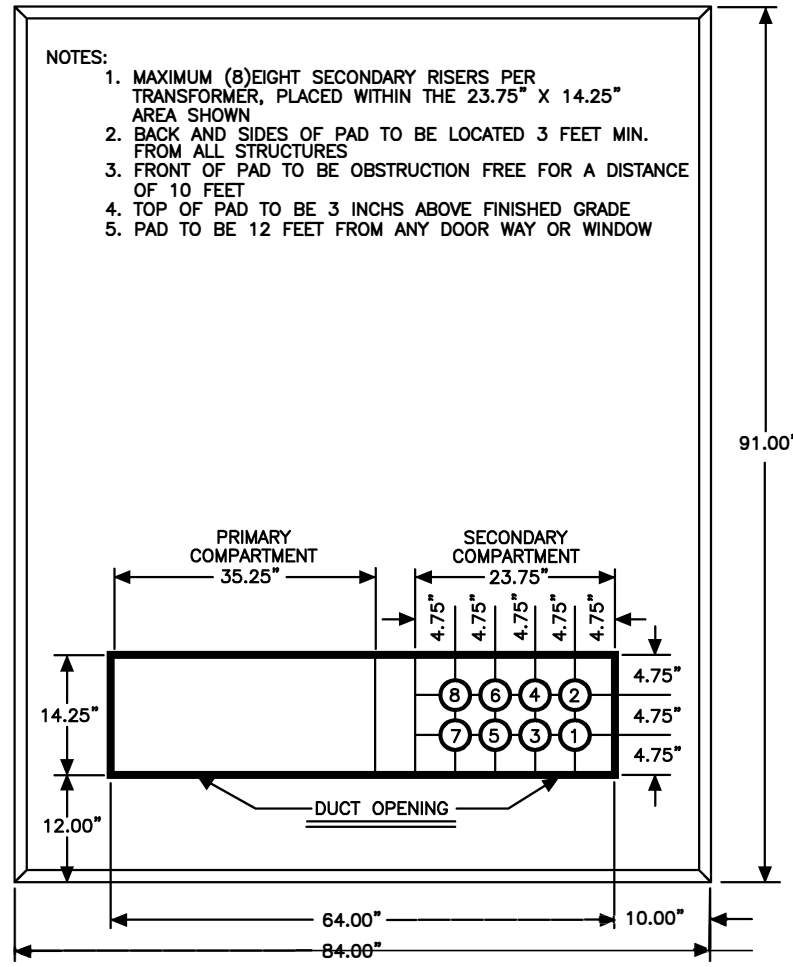




TOP VIEW
STEEL LAYOUT



FRONT VIEW



NOTES:

1. MAXIMUM (8)EIGHT SECONDARY RISERS PER TRANSFORMER, PLACED WITHIN THE 23.75" X 14.25" AREA SHOWN
2. BACK AND SIDES OF PAD TO BE LOCATED 3 FEET MIN. FROM ALL STRUCTURES
3. FRONT OF PAD TO BE OBSTRUCTION FREE FOR A DISTANCE OF 10 FEET
4. TOP OF PAD TO BE 3 INCHS ABOVE FINISHED GRADE
5. PAD TO BE 12 FEET FROM ANY DOOR WAY OR WINDOW

FRONT VIEW

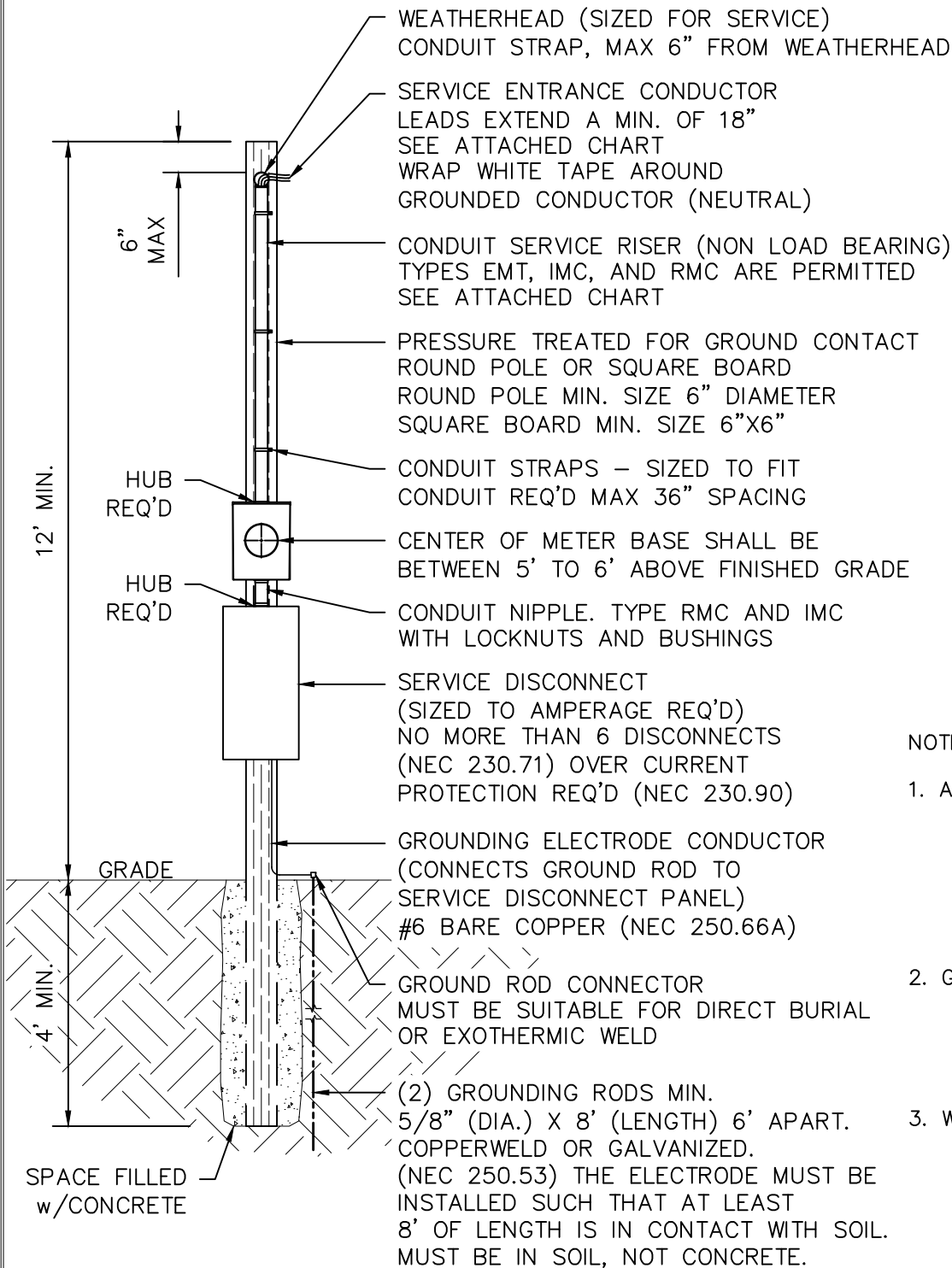
DATE 1/14/2019
DWG NO. UM3.2

CONCRETE PAD FOR THREE-PHASE
750 KVA AND LARGER
PAD-MOUNTED TRANSFORMER

DRAWN BY JAD
CHK'D BY ZVM
APPROVED BY ADC



PERMANENT OVERHEAD SERVICE – DWELLINGS (METER POLE)



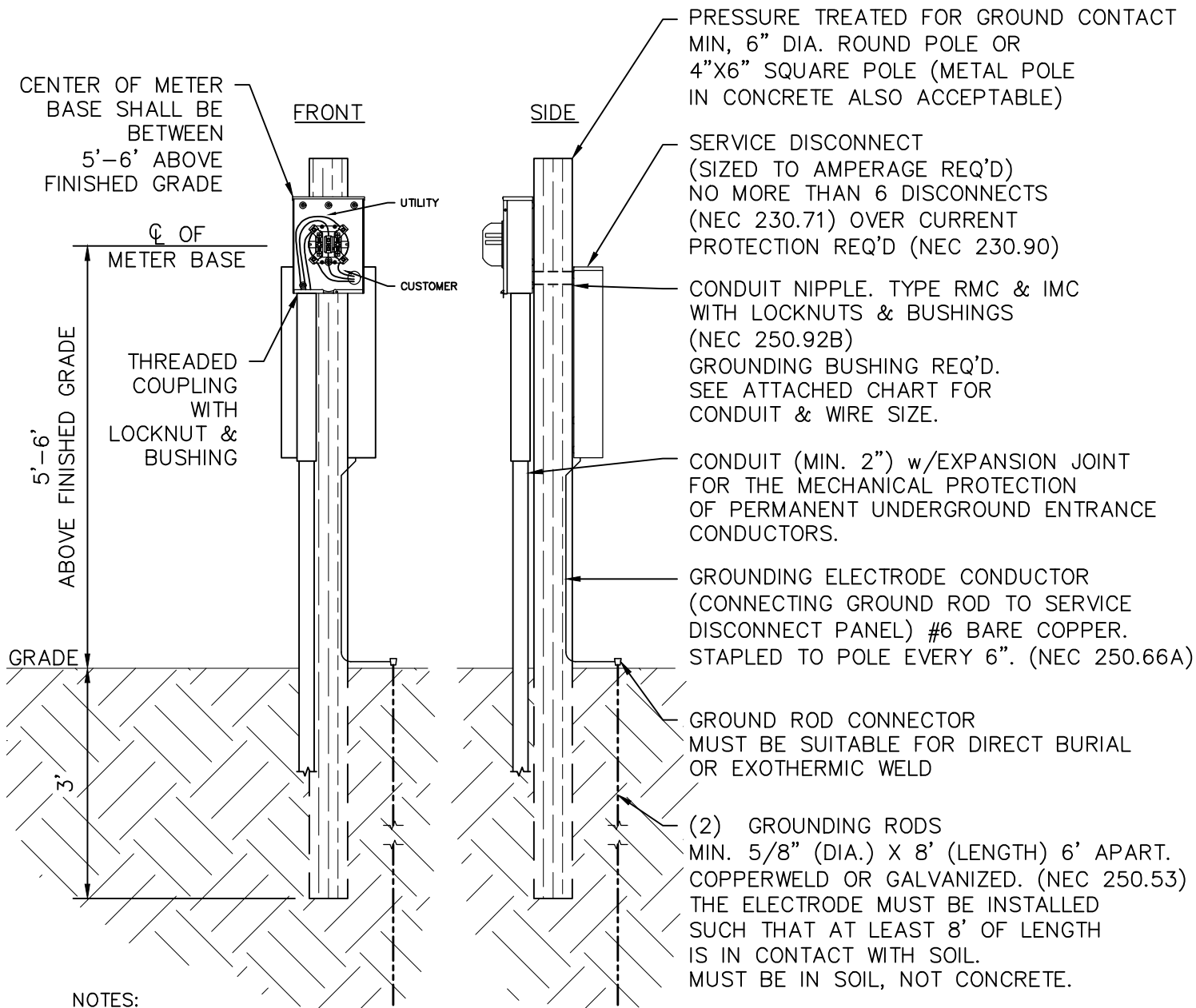
NOTES:

1. ALL 125V, SINGLE-PHASE SERVICE RECEPTACLES INSTALLED OUTDOORS SHALL HAVE GROUND-FAULT-CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.
2. GOVERNING BODIES SUCH AS COUNTIES, MUNICIPALITIES, ETC. WITH LEGAL JURISDICTION; MAY ENFORCE ADDITIONAL RULES AND REGULATIONS
3. WHERE LOCAL INSPECTION AUTHORITY IS NOT INVOLVED, METER INSTALLATIONS SHOULD BE WIRED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE OR GEUS SPECIFICATIONS WHEN THE GEUS SPECIFICATIONS EXCEED THOSE OF THE NATIONAL ELECTRIC CODE.

SHEET # 001	MULTI SHEET DRAWING INFORMATION:		DRAWN BY: JAD	APPROVED BY: JS	SHEET INFORMATION: PERMANENT OH SERVICE DWELLINGS (METER POLE)	
			DATE: 03/22/21	SCALE: 3/8" = 1'0"		
			REVISION DATE:	DWG NAME: Permanent Overhead Service Meter Pole (Dwellings).dwg		



PERMANENT UNDERGROUND SERVICE (METER POLE)



NOTES:

1. ALL 125V, SINGLE-PHASE SERVICE RECEPTACLES INSTALLED OUTDOORS SHALL HAVE GROUND-FAULT-CIRCUIT- INTERRUPTER PROTECTION FOR PERSONNEL.
2. GOVERNING BODIES SUCH AS COUNTIES, MUNICIPALITIES, ETC. WITH LEGAL JURISDICTION; MAY ENFORCE ADDITIONAL RULES AND REGULATIONS
3. WHERE LOCAL INSPECTION AUTHORITY IS NOT INVOLVED, METER INSTALLATIONS SHOULD BE WIRED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE OR GEUS SPECIFICATIONS WHEN THE GEUS SPECIFICATIONS EXCEED THOSE OF THE NATIONAL ELECTRIC CODE.

SHEET # 001	MULTI SHEET DRAWING INFORMATION:		DRAWN BY: JAD	APPROVED BY: JS	SHEET INFORMATION: PERMANENT UG SERVICE (METER POLE)
			DATE: 03/22/21	SCALE: 1/2" = 1'0"	
			REVISION DATE:	DWG NAME: Permanent Underground Service (Meter Pole).dwg	



Customer Wire Size for Full Service Capability based on NEC

Breaker rating (amps)	Min Meter socket rating (amps)	Single Phase Dwelling unit (entire load) per NEC 310.15(B)(7)		Non Dwelling unit and individual panels of dwelling unit		Parallel conductors (Minimum of 1/0 AWG)			
		Copper	Aluminum	Copper	Aluminum	Same Conduit		Different Conduit	
						Copper	Aluminum	Copper	Aluminum
100	100	4 AWG (102 amps)	2 AWG (108 amps)	3 AWG (100 amps)	1 AWG (100 amps)				
125	125	2 AWG (139 amps)	1/0 AWG (145 amps)	1 AWG (130 amps)	2/0 AWG (135 amps)		2-1/0 AWG (216 amps)		2-1/0 AWG (240 amps)
150	125	1 AWG (157 amps)	2/0 AWG (163 amps)	1/0 AWG (150 amps)	3/0 AWG (155 amps)		2-1/0 AWG (216 amps)		2-1/0 AWG (240 amps)
175	150	1/0 AWG (181 amps)	3/0 AWG (187 amps)	2/0 AWG (175 amps)	4/0 AWG (180 amps)	2-1/0 AWG (272 Amps)	2-1/0 AWG (216 amps)	2-1/0 AWG (300 amps)	2-1/0 AWG (240 amps)
200	200	2/0 AWG (211 amps)	4/0 AWG (217 amps)	3/0 AWG (200 amps)	250 MCM (205 amps)	2-1/0 AWG (272 Amps)	2-1/0 AWG (216 amps)	2-1/0 AWG (300 amps)	2-1/0 AWG (240 amps)
300 (2-150 or 100 & 200)	320	250 MCM (307 amps)	350 MCM (301 amps)	350 MCM (310 amps)	500 MCM (310 amps)	2-2/0 AWG (312 Amps)	2-4/0 AWG (328 amps)	2-1/0 AWG (300 amps)	2-4/0 AWG (360 amps)
325 (200 & 125)	320	300 MCM (343 amps)	400 MCM (325 amps)	400 MCM (335 amps)	600 MCM (340 amps)	2-3/0 AWG (360 Amps)	2-4/0 AWG (328 amps)	2-2/0 AWG (350 amps)	2-4/0 AWG (360 amps)
400 (2- 200)	320	400 MCM (404 amps)	600 MCM (410 amps)	600 MCM (420 amps)	900 MCM (425 amps)	2-4/0 AWG (416 amps)	2-300 MCM (368 amps)	2-3/0 AWG (400 amps)	2-250 MCM (410 amps)

Conduit size for 3 wire single phase service (6 wires if parallel)	1.25"	1.5"	2"	2.5"	3"	4"
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Meter sockets are rated for 100% load continuously and 120% load for short periods of time. Breakers are rated for 80% load continuously and 100% load for short periods of time.

Wires are sized for fully loaded service. Smaller wire sizes may be permitted in certain situations depending on calculated load and NEC rules. If smaller wire is provided the burden of proof is on the installer.

320 amp meter socket for GEUS customers must be single phase.