

GROUND ELECTRODE MEASUREMENT

SCOPE:

GROUNDING TESTS SHALL BE DONE FOR MANHOLE GROUNDS, GROUND ROD CONNECTIONS AND COUNTERPOISE CONNECTIONS TO ENSURE THE INTEGRITY OF THE ELECTRODE INSTALLATION. TESTING OF THE GROUND SYSTEM AND CONNECTIONS SHALL BE DONE USING THE CLAMP-ON RESISTANCE TEST METHOD FOR GROUND RODS AND COUNTERPOISE.

CLAMP-ON GROUND RESISTANCE TEST (NORMAL TEST)
THREE POINT FALL OF POTENTIAL TEST (NORMAL TEST)

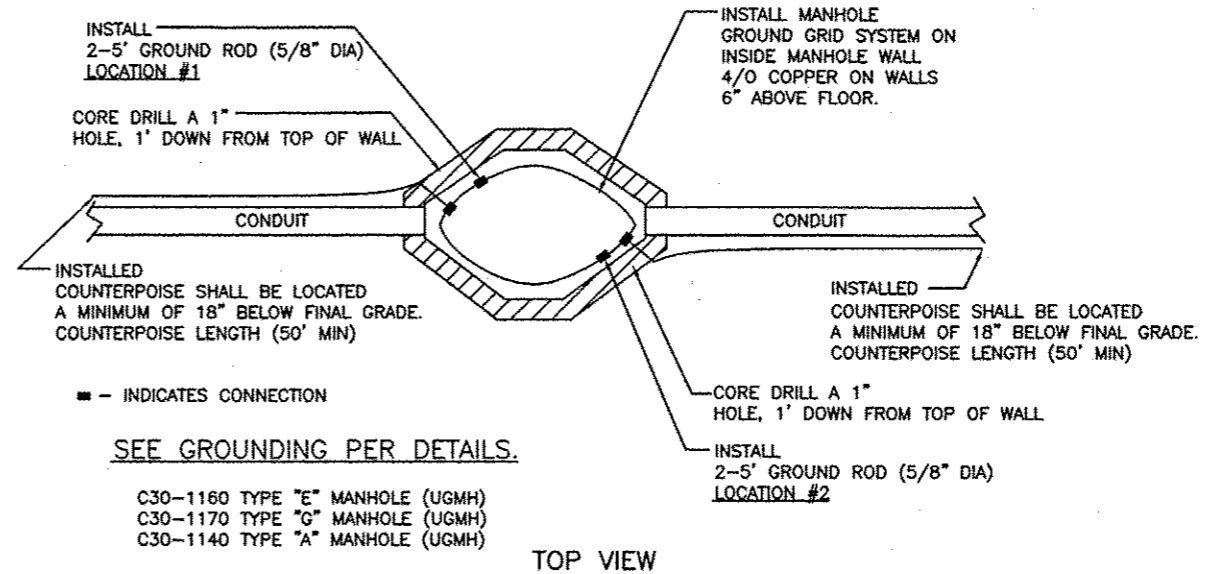
TESTS SHALL BE PERFORMED WHEN THE GROUND IS NOT FROZEN TO ELIMINATE HIGH RESISTANCE READINGS IN THE MANHOLES. THE CLAMP ON TEST SHALL BE DONE AT EACH GROUND ROD AND COUNTERPOISE CONNECTION AND FROM THE MANHOLE PERIMETER GROUND CABLE TO THE GROUND ROD. AEMC INSTRUMENT MODEL 3710, 3730, OR EQUIVALENT MAY BE USED. THE CLAMP ON GROUND METER SHALL CLAMPED ON TO THE POWER NEUTRAL BETWEEN THE UTILITY TRANSFORMER, POLE GROUND, SWITCH GEAR GROUND AND THE SITE GROUND. THE USER MUST BE AWARE THAT A 0.7 READING INDICATION A CONTINUITY LOOP AND NOT A GROUND RESISTANCE. IF A POWER NEUTRAL IS NOT CLOSE TO THE NEW INSTALLATION THEN THE THREE POINT FALL OF Ω POTENTIAL, GROUND RESISTANCE CAN BE USED.

ALL TESTING MATERIAL AND TOOLS ARE FURNISHED BY THE CONTRACTOR. THIS SPECIFICATION IS USED TO TEST HANDHOLES, SWITCH GEAR VAULTS, MANHOLES, TRANSFORMER VAULTS AND OTHER EQUIPMENT AS DIRECTED.

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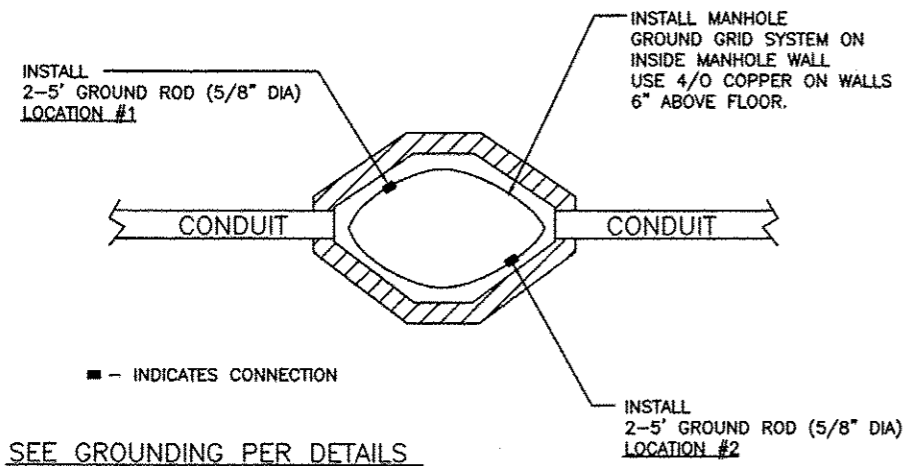
CLAMP ON METER TEST STANDARD MANHOLE

(GROUNDING WITH GROUND RODS AND COUNTERPOISE)



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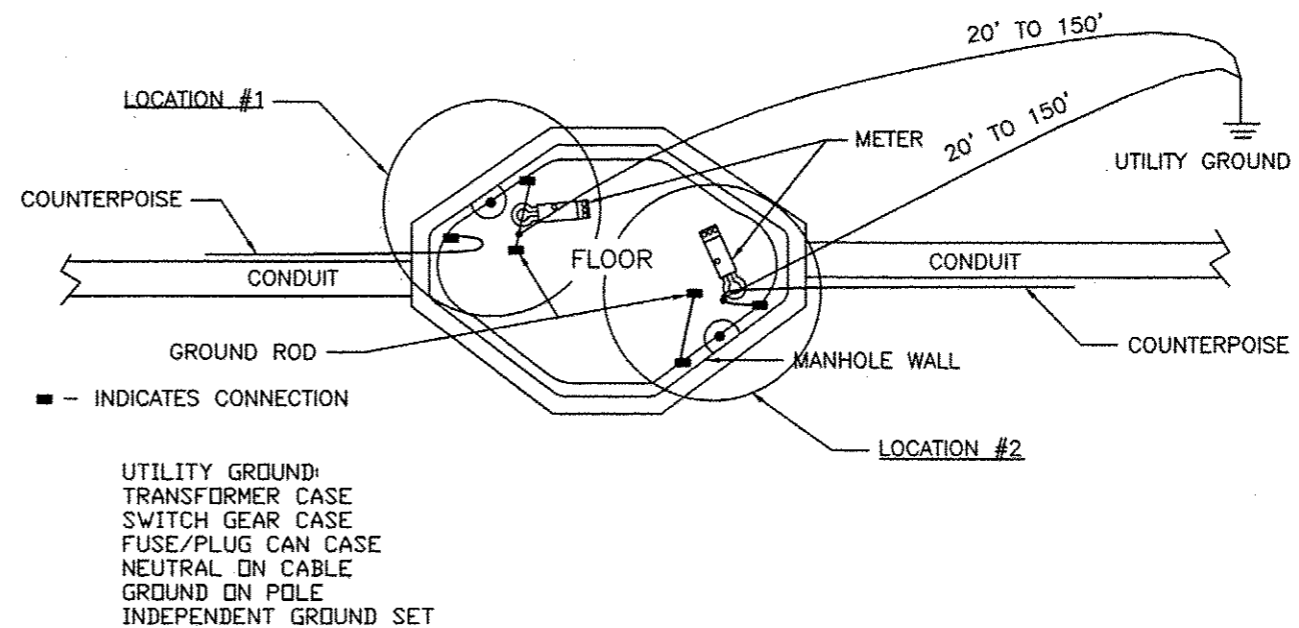
STANDARD MANHOLE (GROUNDING WITH RODS)



C30-1160 TYPE "E" MANHOLE (UGMH)
C30-1170 TYPE "G" MANHOLE (UGMH)
C30-1140 TYPE "A" MANHOLE (UGMH)

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PLACEMENT OF METER FOR READING



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PROJECT TITLE ROUTE 59 ROAD IMPROVEMENTS			
PROJECT DESCRIPTION DETAILS AND STANDARDS			
ENGINEER BCC	DRAWING DATE 5-11-12	MAP # 4211,4212,4223	SCALE N.T.S.
DESIGN BY DL PSM	REVISIONS DATE	AT&T JOINT AGREEMENT # N/A	PROJECT # EU-12
CHECKED BY	APPROVED BY	CAD FILE 0060648001D133.DWG	SHEET # 33 OF 63
Naperville Department of Public Utilities Electric Division			WORK REQUEST # 60468