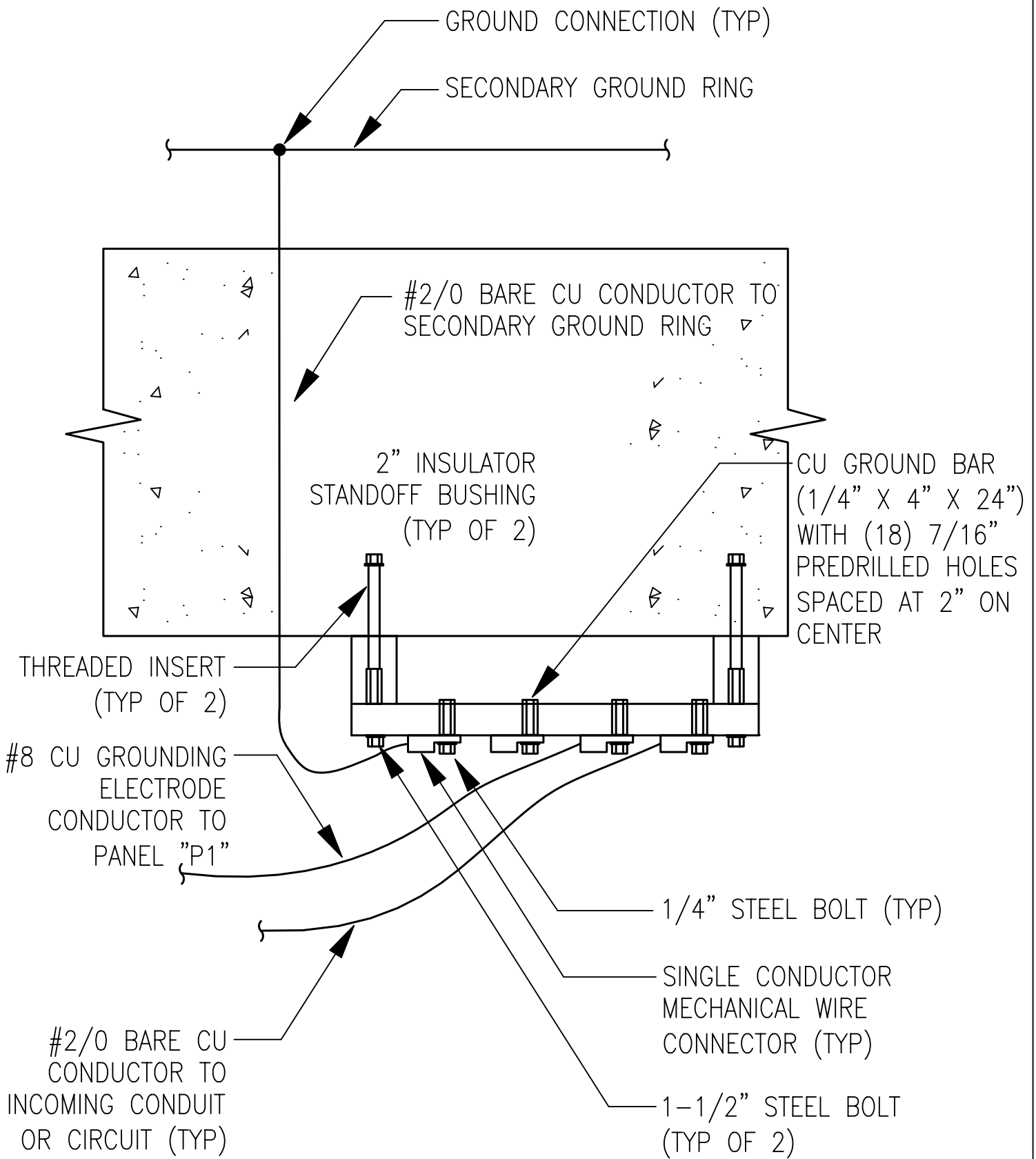


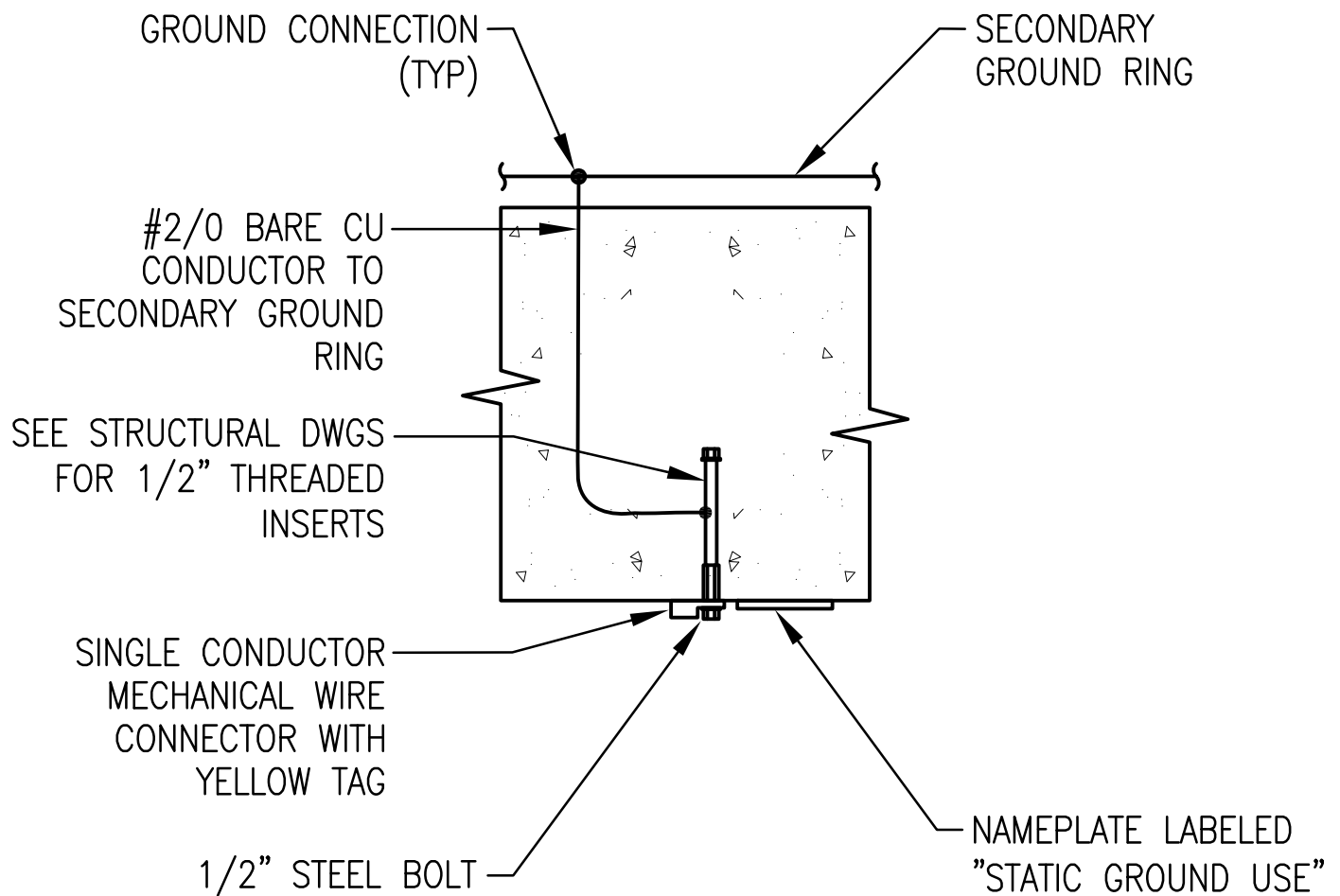
BONDING

1. ALL STEEL DOORS AND FRAMES SHALL BE ELECTRICALLY BONDED TO THE MAGAZINE REBAR CAGE.
2. ALL STRUCTURAL AND MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE SHALL BE ELECTRICALLY BONDED TO THE REBAR CAGE BY A MINIMUM OF WIRE TIES.
3. THE REBAR CAGE SHALL BE MADE ELECTRICALLY CONTINUOUS BY A MINIMUM OF WIRE TIES AT 4'-0" ON CENTERS IN ANY DIRECTION.
4. ALL WALL AND CONSTRUCTION JOINTS REQUIRE BONDING. REFER TO THE ELECTRICAL DRAWINGS FOR DETAILS.

BONDING DETAILS



SINGLE POINT GROUND BAR DETAIL



STATIC GROUND INSERT DETAIL NOTES:

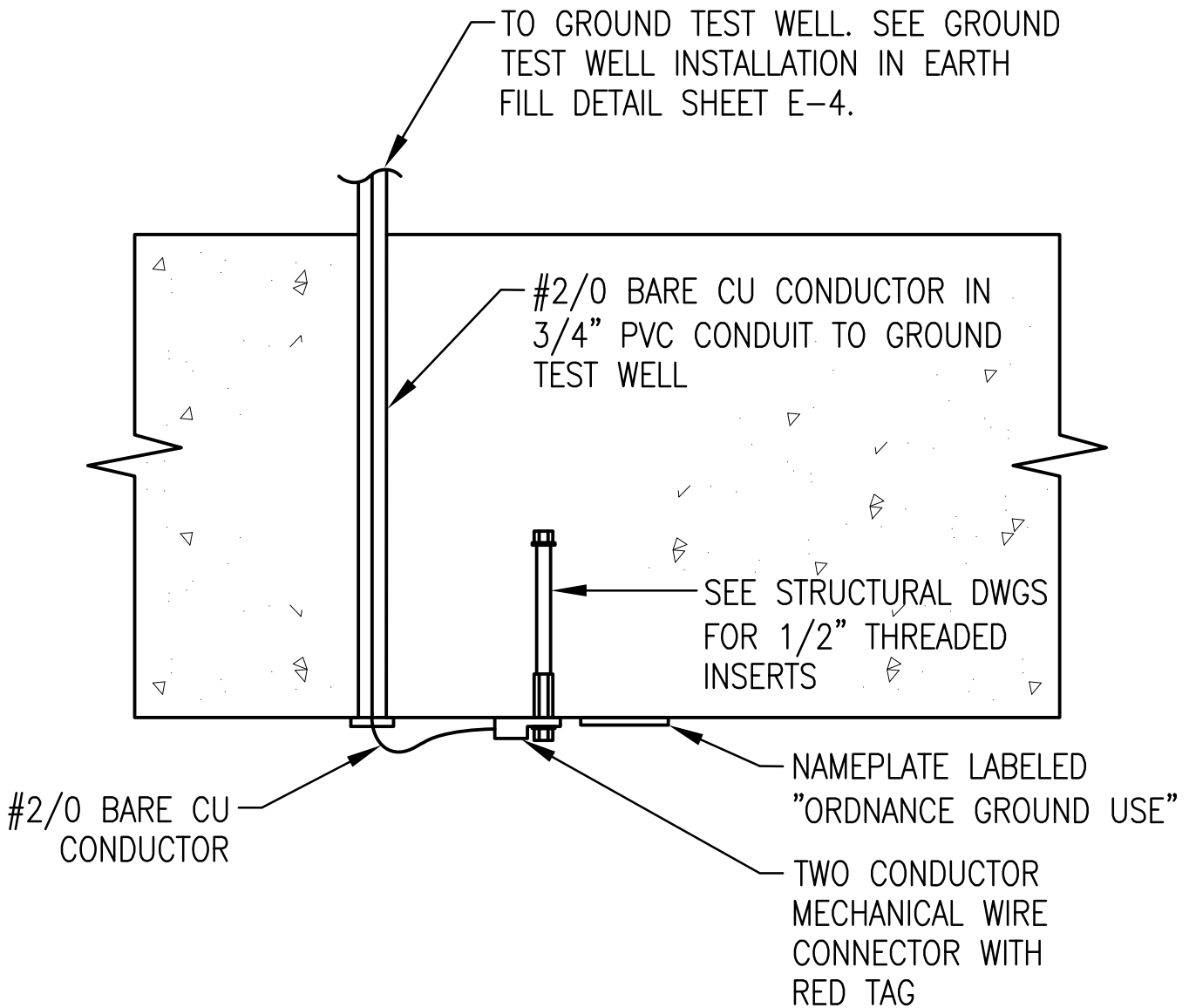
1. PROVIDE A REMOVABLE YELLOW MELAMINE PLASTIC TAG THAT ATTACHES TO THE STATIC GROUND INSERT. THE TAG SHALL INCLUDE THE FOLLOWING INFORMATION:

"NOT IN SERVICE. NO MAINTENANCE REQUIRED.

INSTALLATION MEETS STATIC/FACILITY GROUND REQUIREMENT PER NAVSEA OP-5. ACTIVITY SHALL PERFORM TESTING PER NAVSEA OP-5 AND ENACT MAINTENANCE SCHEDULE WHEN THE STATIC/FACILITY GROUND INSERT IS PLACED IN SERVICE.

RETAIN THIS TAG TO REATTACH WHEN REMOVED FROM SERVICE."

STATIC GROUND INSERT DETAIL



ORDNANCE GROUND INSERT DETAIL NOTES:

1. PROVIDE A REMOVABLE RED MELAMINE PLASTIC TAG THAT ATTACHES TO THE ORDNANCE GROUND INSERT. THE TAG SHALL INCLUDE THE FOLLOWING INFORMATION:

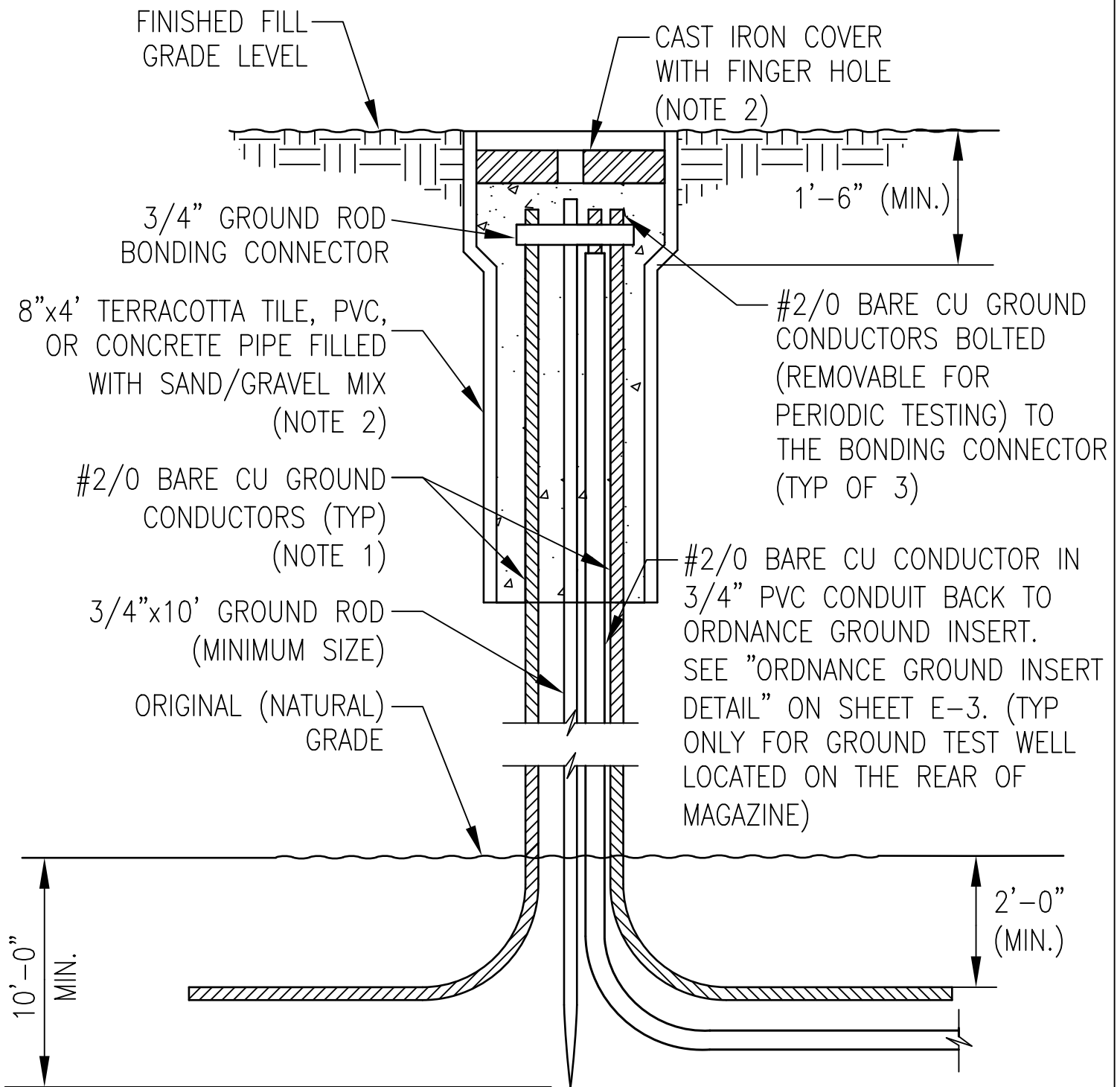
"NOT IN SERVICE. NO MAINTENANCE REQUIRED.

INSTALLATION MEETS ORDNANCE GROUND REQUIREMENT PER NAVSEA OP-5. ACTIVITY SHALL PERFORM TESTING PER NAVSEA OP-5 AND ENACT MAINTENANCE SCHEDULE WHEN THE ORDNANCE GROUND INSERT IS PLACED IN SERVICE.

RETAIN THIS TAG TO REATTACH WHEN REMOVED FROM SERVICE."

2. MAINTAIN THREADED INSERT ISOLATION. DO NOT ALLOW THE THREADED INSERT TO TOUCH REBAR OR OTHER METALLIC OBJECTS IN THE WALL.

ORDNANCE GROUND INSERT DETAIL

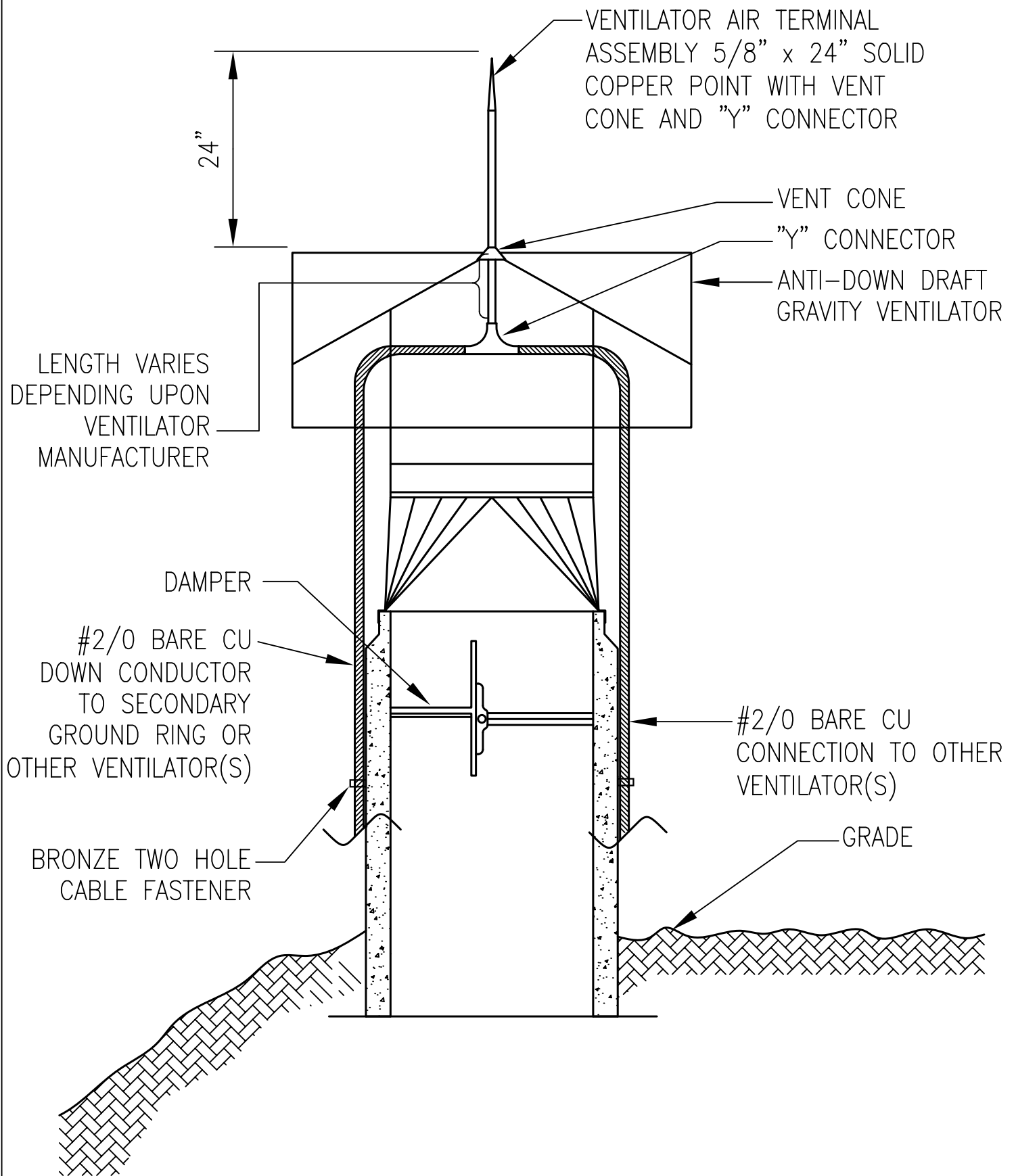


THE DEPTH OF GROUND ROD BELOW NATURAL GRADE SHALL BE SITE ADAPTED TO SUIT LOCAL SOIL CONDITION. AT NO TIME SHALL THE MINIMUM DEPTH BE LESS THAN 10'-0".

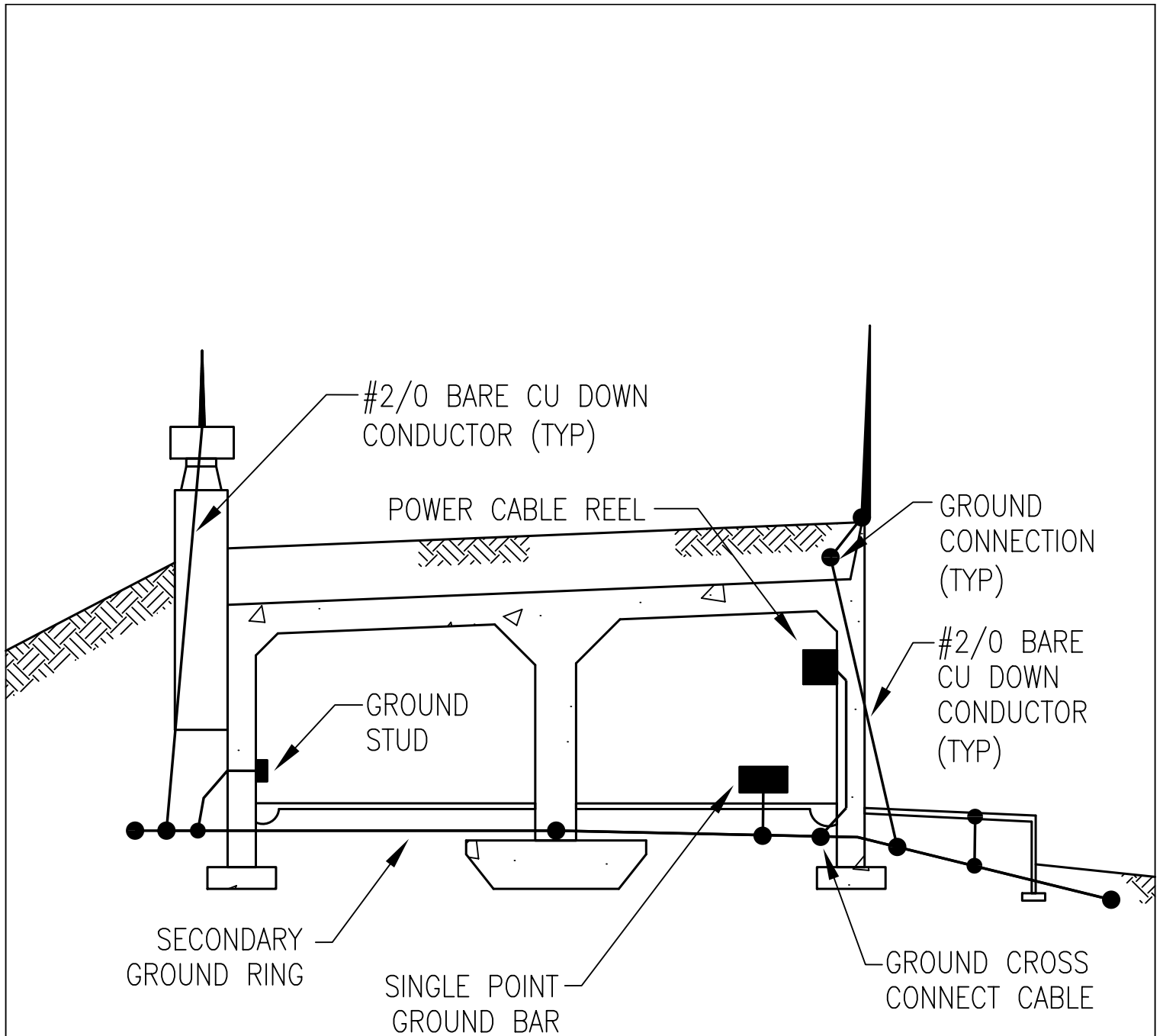
NOTE 1: MAINTAIN THE GROUND CONDUCTORS ISOLATED FROM THE GROUND ROD UNTIL THE BOND CONNECTION AT THE TOP.

NOTE 2: PROVIDE "TRAFFIC RATED" TEST WELL AND COVER FOR PAVED AREAS.

GROUND TEST WELL INSTALLATION IN EARTH FILL



TYPICAL VENTILATOR DETAIL



NOTE 1: IF USING MAGAZINE WITHOUT A PLATFORM, REMOVE THE PLATFORM FROM THE DETAIL.

GROUNDING SECTION DETAIL

A1

FLAT SURFACE POINT BASE  
MADE OF COPPER BRONZE  
WITH CLAMP TYPE FASTENER

5/8" x 24" LONG SOLID  
COPPER LIGHTNING  
PROTECTION AIR TERMINAL  
THREADED

TOP OF PARAPET

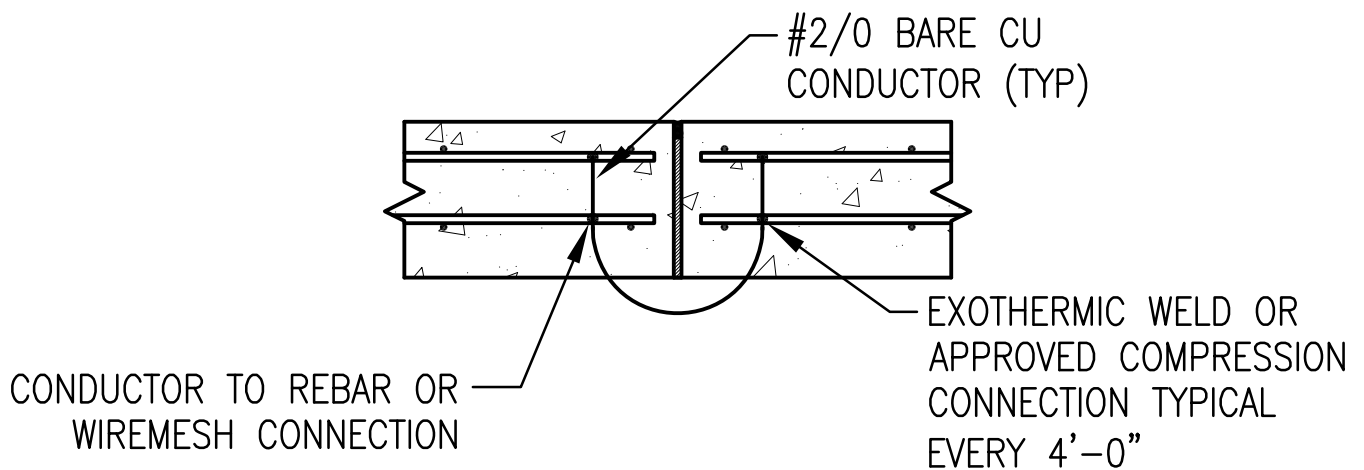
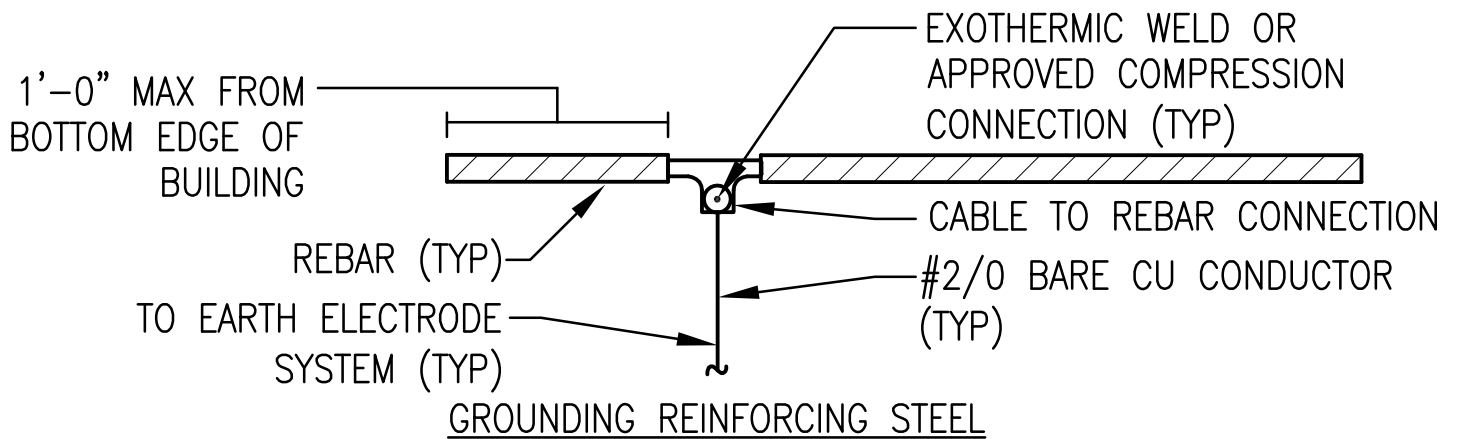
EXPANSION ANCHOR  
WITH FLAT HEAD  
BOLT 3/8" x 1-1/2"  
LONG

MOUNTING DETAIL

#2/0 BARE CU  
CONDUCTOR

CABLE CONNECTION DETAIL A1

LIGHTNING PROTECTION AIR TERMINALS



TYPICAL AT EACH EXPANSION JOINT IN  
PLATFORM SLAB-ON-GRADE

NOTE 1: ALL REINFORCING STEEL IN BUILDING AND PLATFORM IN FRONT OF MAGAZINE SHALL BE BONDED WITH #2/0 BARE COPPER CONDUCTORS TO EARTH ELECTRODE SYSTEM (SECONDARY GROUND RING).

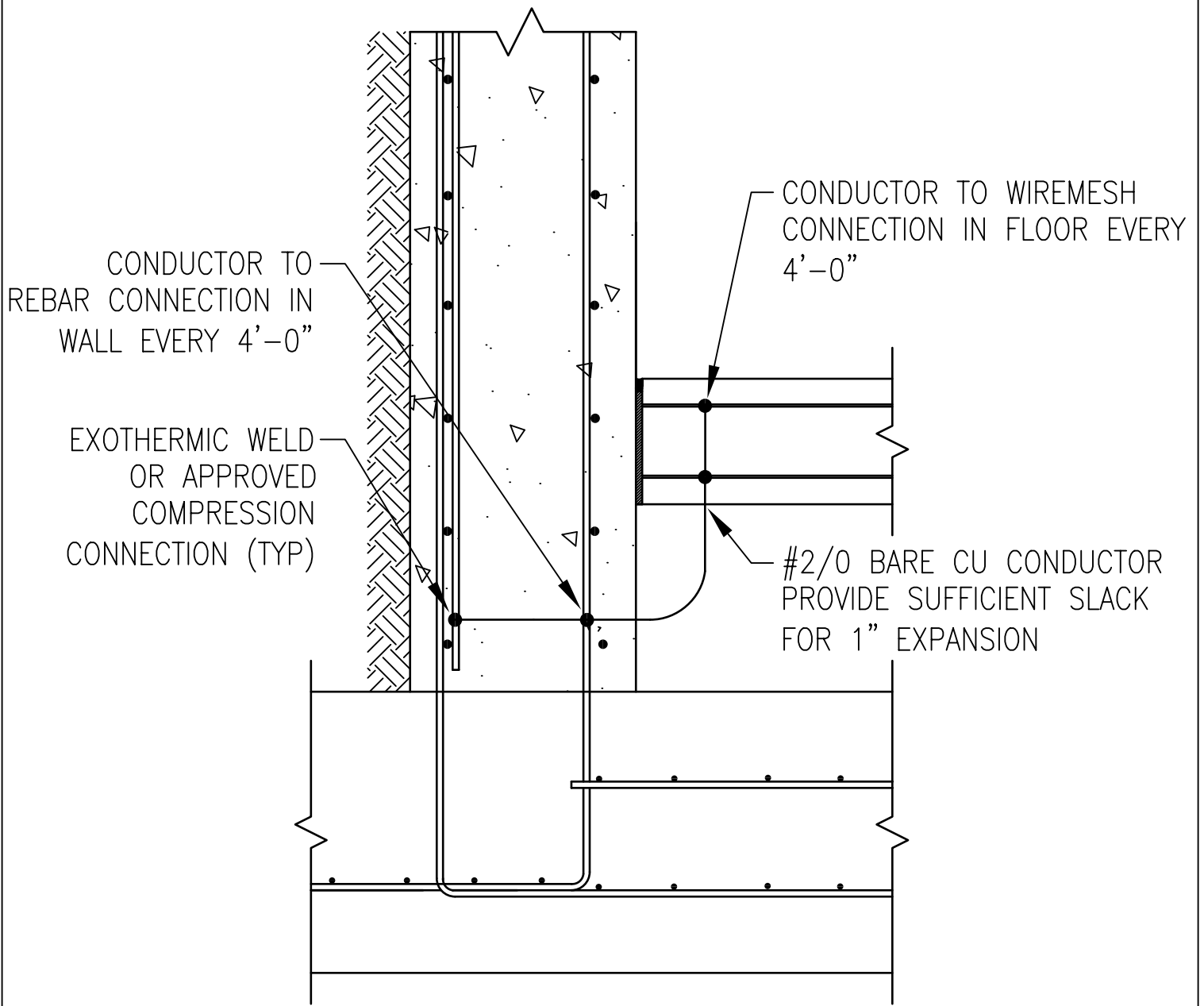
STRUCTURAL GROUNDING DETAILS

REVISED:

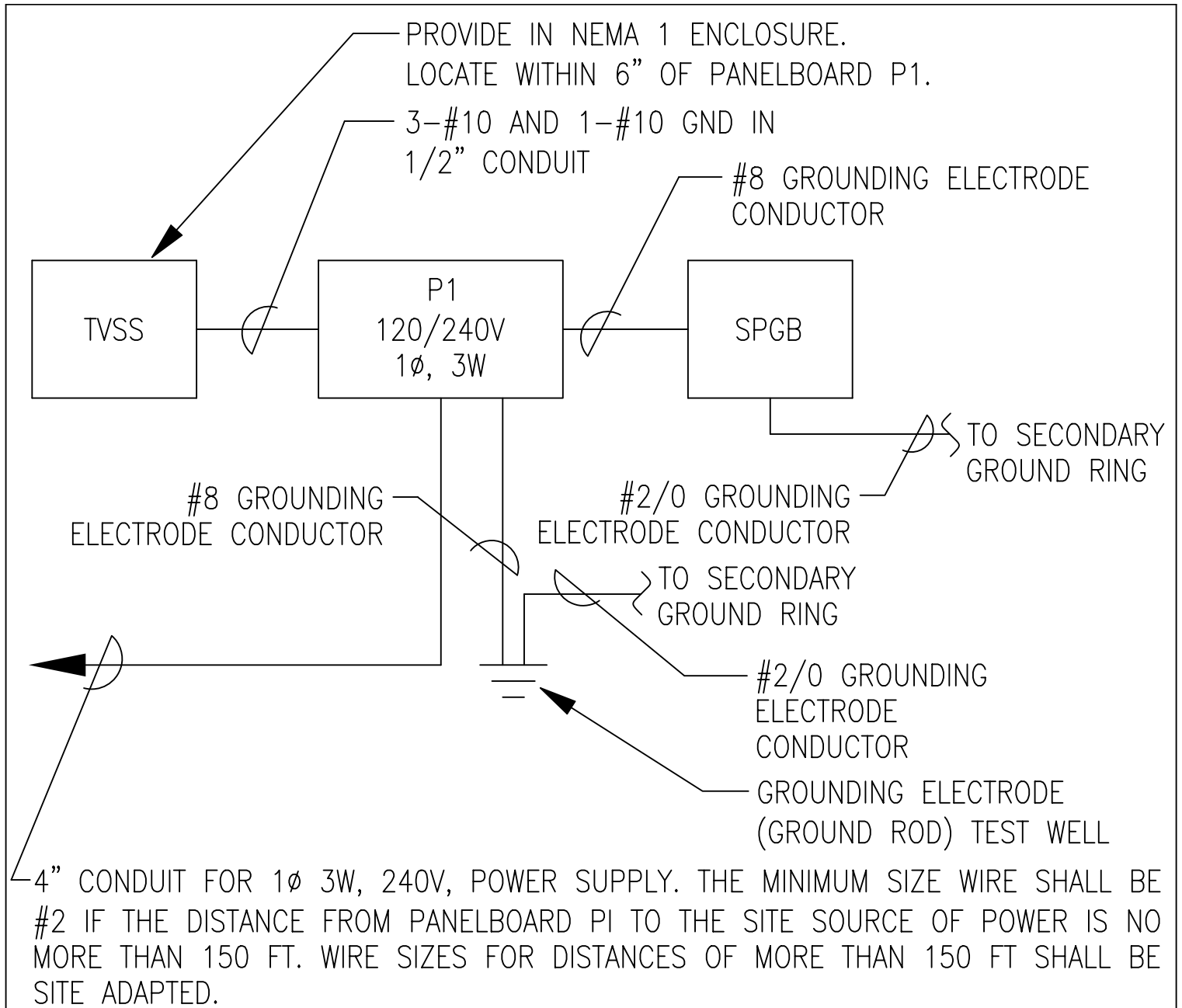
JULY 2009

MAGAZINE PLATE:

E-8



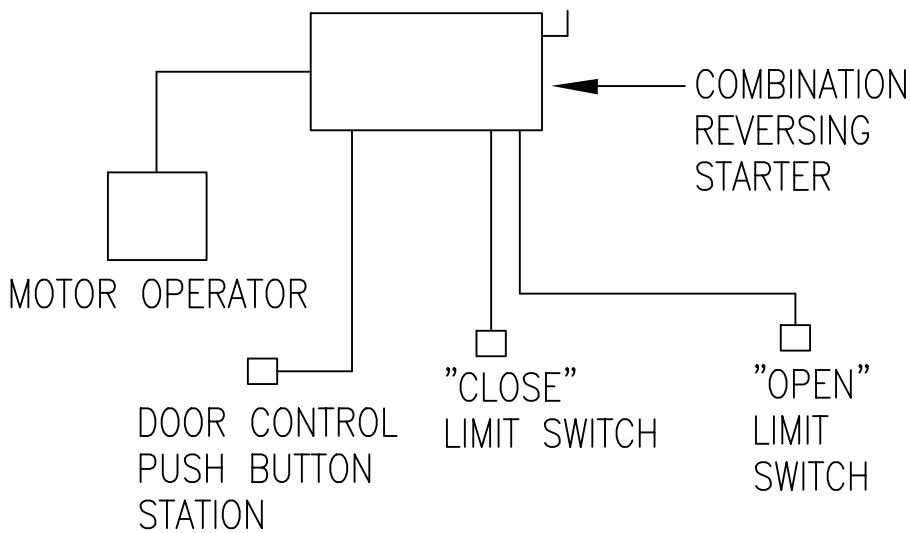
FLOOR TO WALL CONNECTION DETAIL



NOTE 1: THREE FEET WORKING CLEARANCE MUST BE MAINTAINED FOR THE PANELBOARD PER NFPA 70. WHERE MAXIMUM STORAGE SPACE IN THE MAGAZINE IS CRITICAL, PANELBOARD AND SURGE PROTECTIVE DEVICES (SPD/TVSS) MAY BE LOCATED EXTERIOR OF MAGAZINE. COORDINATE WITH ACTIVITY, AND MODIFY DRAWINGS AND PANELBOARD ENCLOSURE ACCORDINGLY.

NOTE 2: SINGLE PHASE SYSTEMS IDENTIFIED WILL BE APPROPRIATE FOR MOST MAGAZINES. IF LARGER DOOR MOTORS ARE USED, DESIGNER SHOULD DETERMINE IF MORE EXPENSIVE, THREE PHASE SYSTEM WOULD BE MORE APPROPRIATE AND MODIFY RISER AND DRAWINGS ACCORDINGLY.

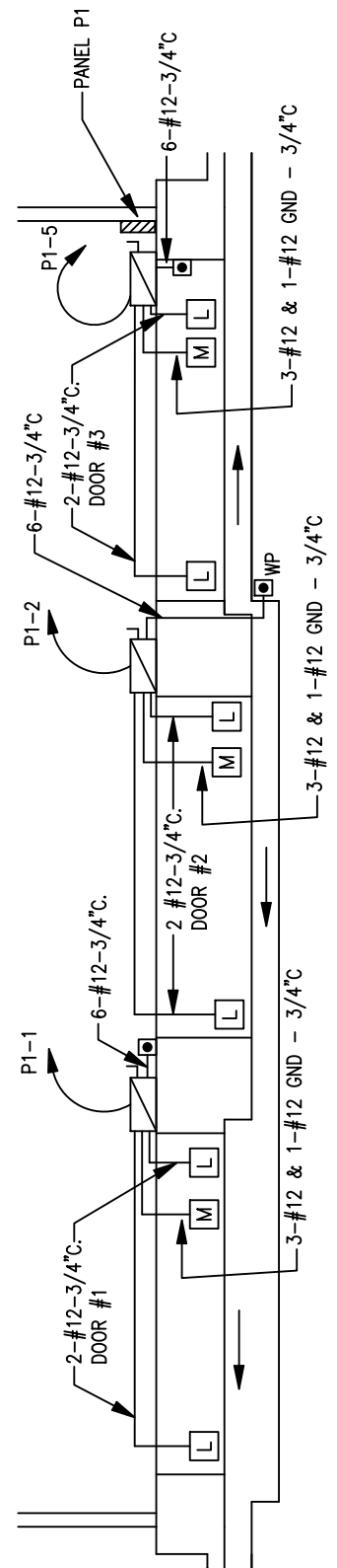
POWER RISER DIAGRAM (WITH TVSS AND SPGB)



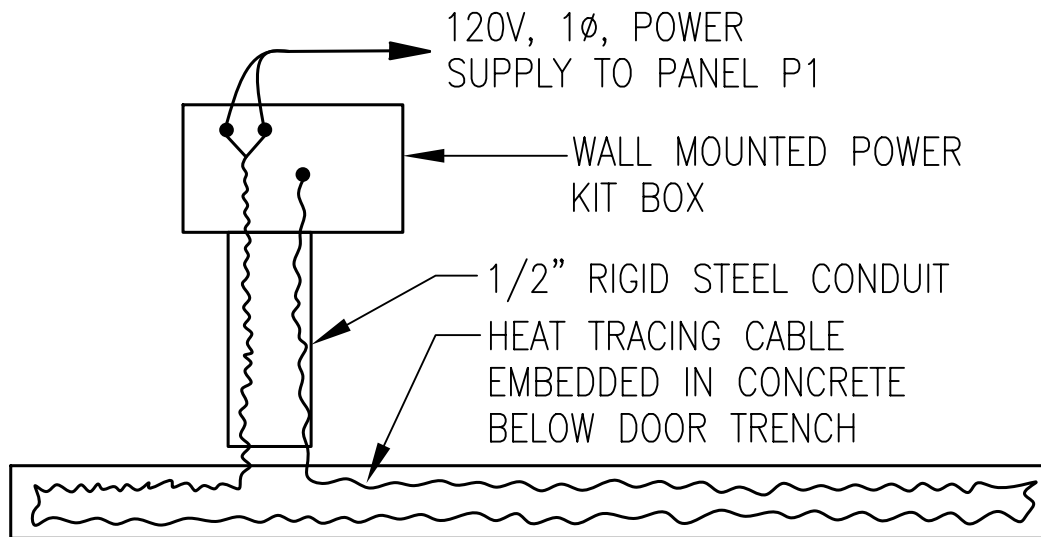
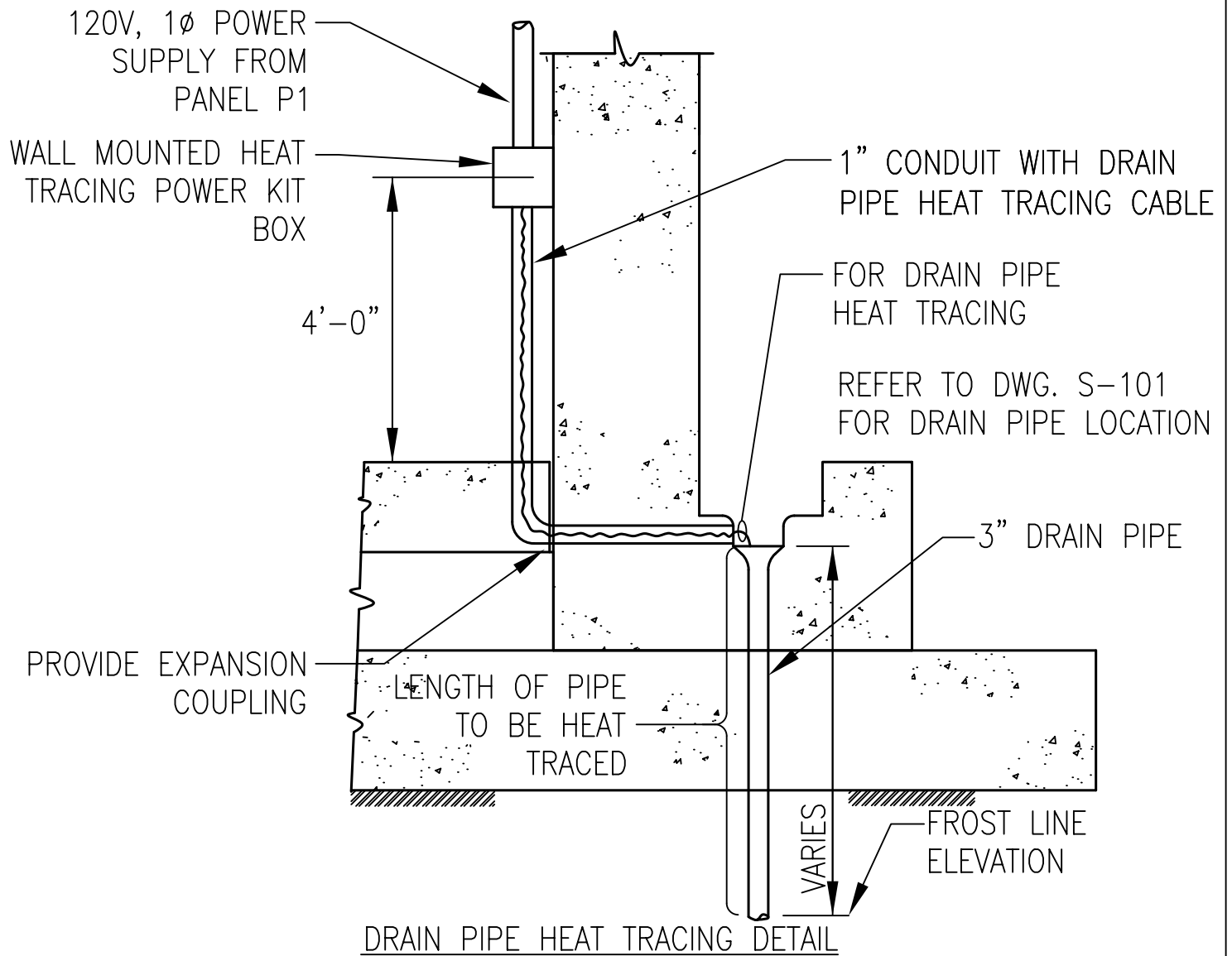
TYPICAL FOR DOOR #1, DOOR #2, AND DOOR #3

SLIDING DOOR WIRING  
INSTALLATION DIAGRAM NOTES

1. DESIGN USES 240V SINGLE PHASE POWER FOR THE MOTOR.
2. INCLUDE OPEN AND CLOSE LIMIT SWITCHES TO TURN OFF MOTOR IN THE MOTOR CONTROL CIRCUIT.
3. DOOR CONTROL PUSHBUTTON STATION SHALL BE MOUNTED 48" ABOVE PLATFORM. ROUTE CIRCUIT CONCEALED OUTSIDE OF THE MAGAZINE BACK TO THE COMBINATION REVERSING STARTER VIA THE SERVICE ENTRANCE PENETRATIONS.
4. THE EXACT LOCATION OF DOOR OPERATOR AND LIMIT SWITCHES SHALL BE IN ACCORDANCE WITH DOOR MANUFACTURER'S REQUIREMENTS.

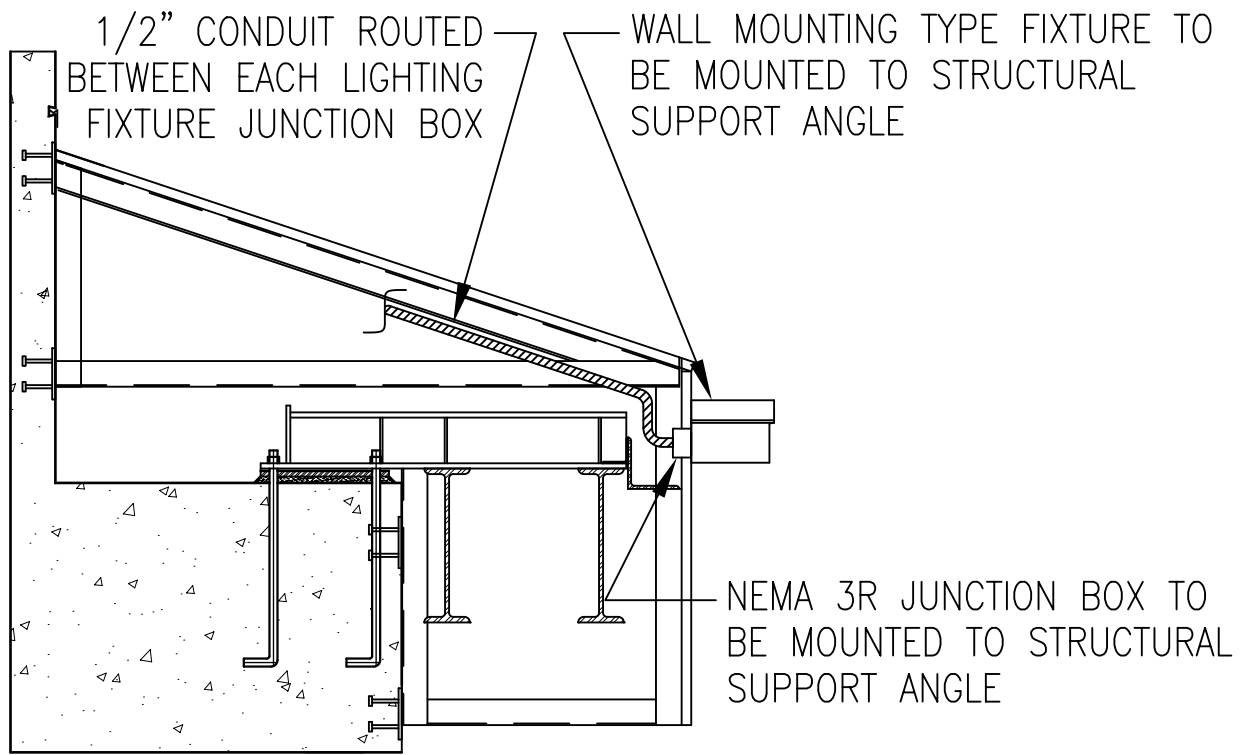


SLIDING DOOR WIRING INSTALLATION DIAGRAM (SINGLE PHASE TYPES)

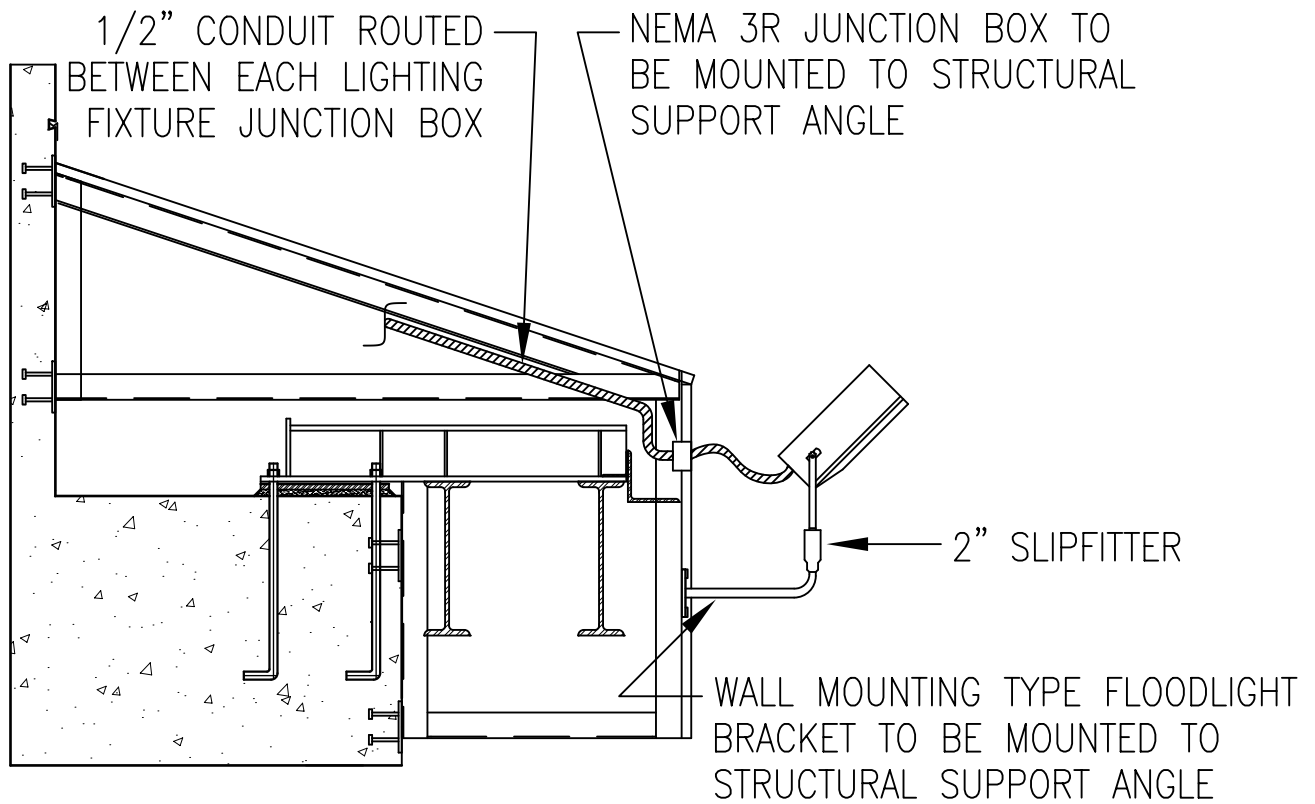


TYPICAL DOOR TRENCH HEAT TRACING WIRING DIAGRAM

HEAT TRACING DETAILS (AT 120 VOLTS)

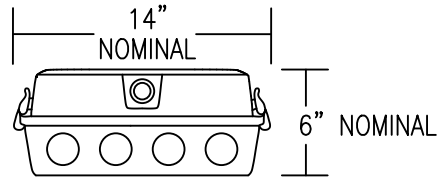
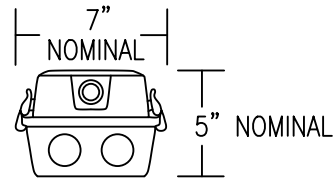
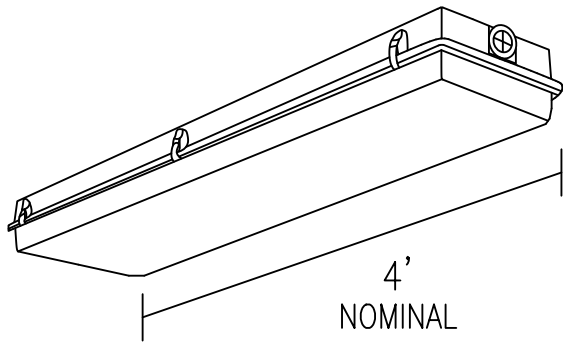


SECURITY LIGHTING MOUNTING DETAIL



FLOOD LIGHTING MOUNTING DETAIL

LIGHTING MOUNTING DETAILS



LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE-PIECE, IMPACT-RESISTANT, FIBERGLASS REINFORCED POLYESTER WITH ENCLOSED COLD-ROLLED STEEL WIREWAY.
2. FINISH – STEEL REFLECTOR WITH MULTI-STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. LENS – 100% CLEAR ACRYLIC/DR OPTICAL DIFFUSER. STIPPLED INTERIOR SURFACES AND SMOOTH EXTERIOR. CLOSED CELL NEOPRENE GASKET WITH STAINLESS STEEL CAM ACTION LATCHES TO SECURE LENS TO HOUSING.
4. LAMPS – LINEAR FLUORESCENT T8, TYPICALLY WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
5. BALLAST – CLASS P, THERMALLY-PROTECTED, HIGH POWER FACTOR ( $\geq .95$ ), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION OR LIGHTING FIXTURE SCHEDULE FOR BALLAST OPTIONS AND SPECIFICS.
6. CERTIFICATION – UL LISTED AND LABELED. SUITABLE FOR DAMP OR WET LOCATION AS DESIGNATED IN LIGHTING FIXTURE SCHEDULE.
7. PHOTOMETRICS – MINIMUM VALUE OF COEFFICIENT OF UTILIZATION (CU) AND EFFICIENCY, GIVEN INTERIOR CAVITY REFLECTANCES OF 80-50-20:

2 LAMP (F32/T8)

RCR	CU
1	78
2	67
3	58
4	51

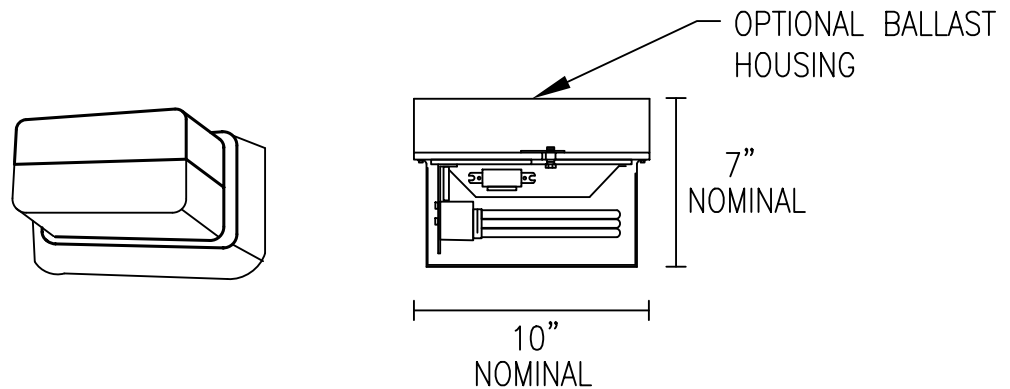
EFFICIENCY – 76%

4 LAMP (F32/T8)

RCR	CU
1	88
2	76
3	67
4	59

EFFICIENCY – 85%

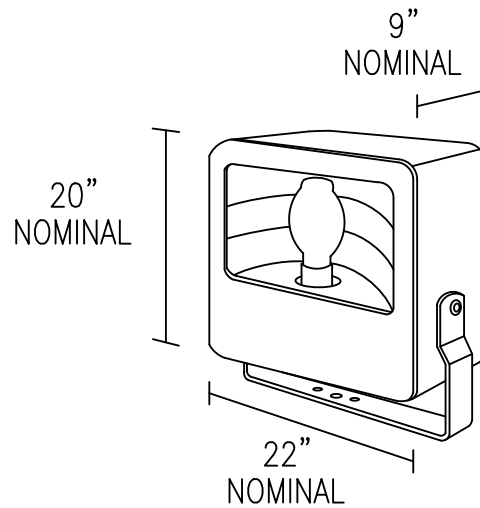
LIGHTING DETAIL A, FIBERGLASS HOUSING  
DAMP/WET LOCATION FLUORESCENT



LUMINAIRE REQUIREMENTS:

1. HOUSING/BACKPLATE – ONE-PIECE, DIE-CAST ALUMINUM WITH BAKED-ON POLYESTER POWDER COAT FINISH IN DARK BRONZE.
2. DIFFUSER – CLEAR PRISMATIC, UV-STABILIZED, INJECTION-MOLDED ACRYLIC LENS PROVIDED WITH SILICON GASKET TO CREATE WEATHERPROOF ENCLOSURE. STAINLESS STEEL SCREWS FASTEN LENS TO HOUSING. POLISHED INTERNAL ALUMINUM SHROUD OVER TOP HALF OF SIDES AND FRONT ALONG WITH TOP OF FIXTURE PROVIDE LOW PROJECTION OF LIGHT OUTPUT.
3. LAMP SOCKET – INTEGRAL, PRE-WIRED PORCELAIN LAMP SOCKET WITH NICKEL-PLATED SCREW AND CENTER CONTACT (HID OPTION). 4-PIN THERMOPLASTIC (COMPACT FLUORESCENT OPTION).
4. BALLAST – CLASS P, HIGH POWER FACTOR ( $\geq .95$ ), PROGRAMMED RAPID START ELECTRONIC TYPE WITH  $\leq 10\%$  TOTAL HARMONIC DISTORTION FOR COMPACT FLUORESCENT LAMPS, OR  
PREWIRED, ENCASED AND POTTED (ENCAPSULATED), CONSTANT-WATTAGE AUTOTRANSFORMER, HIGH POWER FACTOR ( $\geq .90$ ), CORE AND COIL TYPE FOR USE WITH HID LAMP OPTION.
5. LAMPS – COMPACT FLUORESCENT WITH 4-PIN BASE OR METAL HALIDE, TYPICALLY WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
6. CERTIFICATION – UL LISTED AND LABELED FOR WET LOCATIONS.
7. OPTIONS – LENS OPTIONS INCLUDE FULL FACE SHIELD WITH UP OR DOWN LIGHTING OR FULL FACE SHIELD WITH SIDES CLEAR. PHOTOCCELL ALSO OPTIONAL.
8. OTHER – LOW-WATTAGE COMPACT FLUORESCENT FIXTURES DO NOT REQUIRE BALLAST HOUSING AS SHOWN.

WALL-MOUNTED HALF-SHIELDED CUTOFF FIXTURE



LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE-PIECE DIE-CAST ALUMINUM WITH HINGED, DIE-CAST ALUMINUM DOOR. PROVIDE CONTINUOUS, ONE-PIECE SILICONE GASKET TO SEAL DOOR FRAME TO HOUSING.
2. FINISH – MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FIXTURE SHALL PASS 2500 HOUR SALT SPRAY TEST FOR CORROSION RESISTANCE. DARK BRONZE OR BLACK STANDARD FINISHES. OTHER FINISHES AVAILABLE.
3. REFLECTOR – DIE-FORMED, ANODIZED, SPECULAR ALUMINUM. NEMA/IES BEAM SPREAD PATTERN SHALL BE AS INDICATED.
4. LAMP SOCKET – INTEGRAL, PRE-WIRED PORCELAIN LAMP SOCKET WITH NICKEL-PLATED SCREW AND CENTER CONTACT. HORIZONTAL OR VERTICAL AS INDICATED.
5. LENS – CLEAR, TEMPERED GLASS WITH CONTINUOUS ONE-PIECE SILICONE GASKET.
6. LAMPS – METAL HALIDE OR HIGH PRESSURE SODIUM WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
7. BALLAST – PREWIRED, ENCASED AND POTTED (ENCAPSULATED), CONSTANT-WATTAGE AUTOTRANSFORMER, HIGH POWER FACTOR ( $\geq .90$ ), CORE AND COIL TYPE. PROVIDE PULSE-START TYPE FOR USE WITH MH LAMPS.
8. CERTIFICATION – UL LISTED AND CERTIFIED FOR WET LOCATIONS.
9. MOUNTING – TRUNNION, TENON SLIPFITTER, OR FLAT SURFACE KNUCKLE AS INDICATED. PROVIDE 16/3, PRE-WIRED, WEATHERPROOF SO CORD FOR MOUNTING OTHER THAN TENON. SPECIFY LENGTH OF CORD NEEDED.
10. OPTIONS – UPPER OR FULL VISOR, PHOTOCCELL AND RECEPTACLE, QUARTZ RESTRIKE WITH OR WITHOUT TIME DELAY, CUSTOM COLOR AS INDICATED, AND FUSING.

AREA FLOOD LIGHT

REVISED:

AUGUST 2004

LIGHTING PLATE:

XL-3