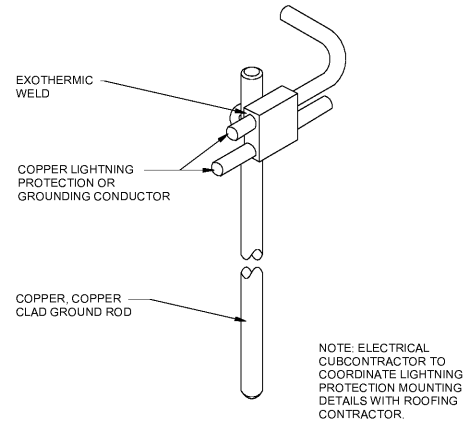
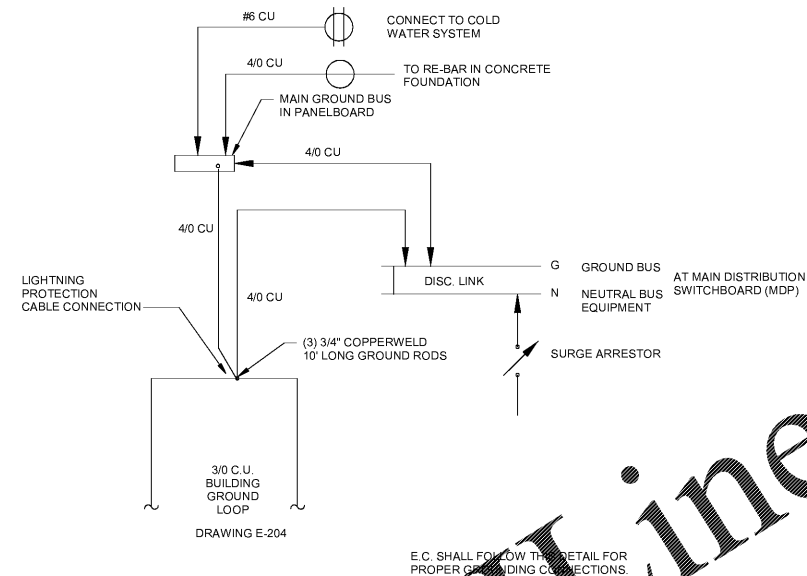


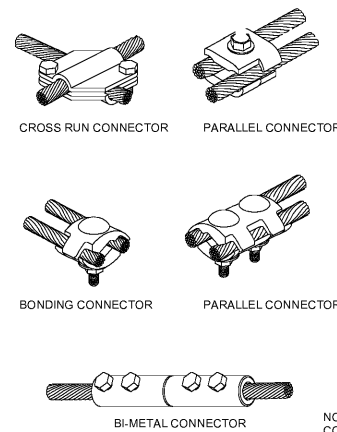
3 EXOTHERMIC WELD CONNECTIONS
SCALE: NTS



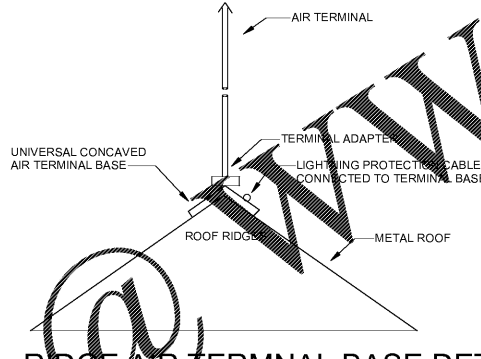
2 GROUND ROD DETAIL
SCALE: NTS



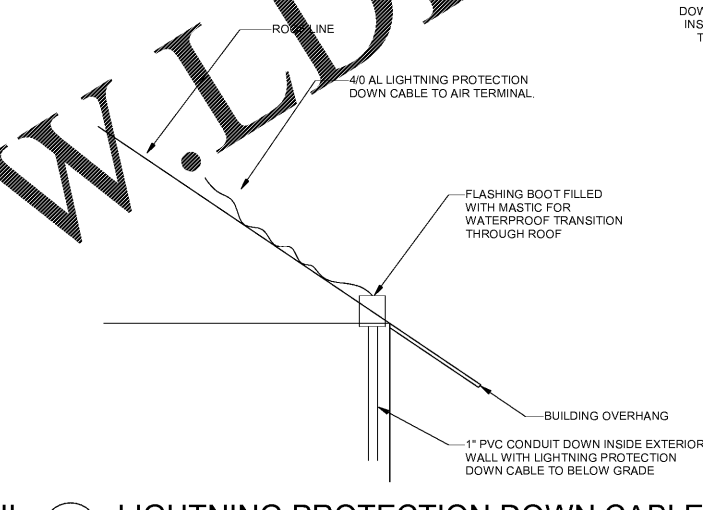
1 GROUNDING DETAIL
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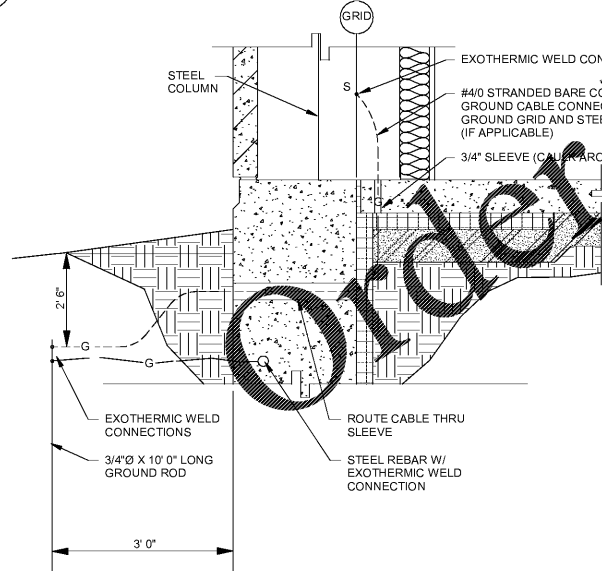
6 TYPICAL LIGHTNING PROTECTION CABLE CONNECTORS
SCALE: NTS



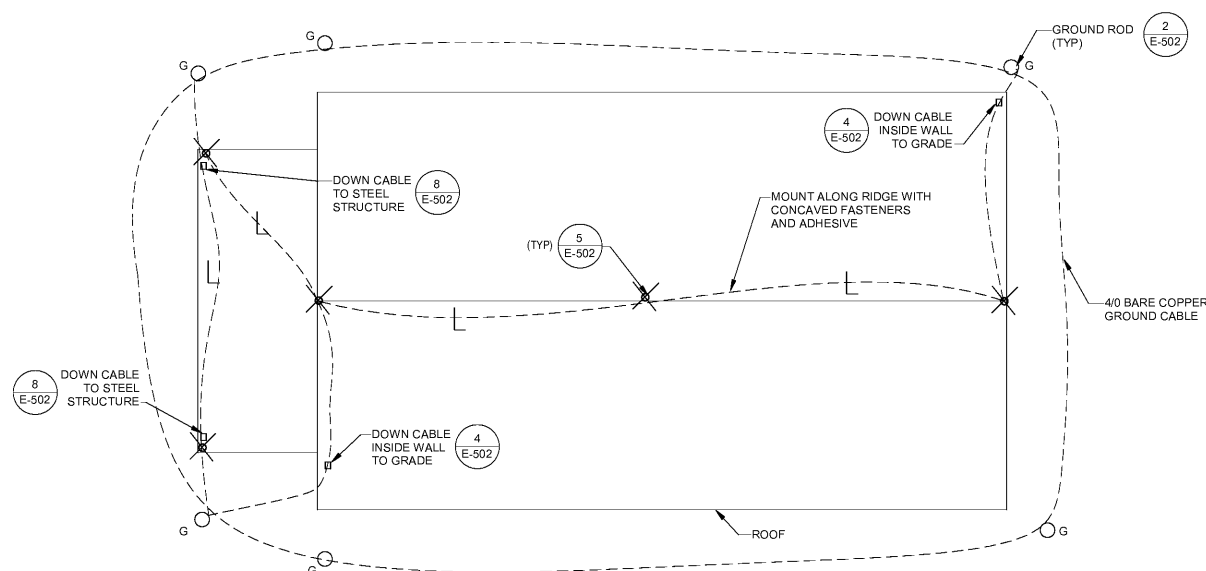
5 RIDGE AIR TERMINAL BASE DETAIL
SCALE: NTS



4 LIGHTNING PROTECTION DOWN CABLE DETAIL
SCALE: NTS



8 LIGHTNING PROTECTION AND GROUNDING FOUNDATION DETAIL
SCALE: NTS



7 LIGHTNING PROTECTION AND BUILDING GROUND PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A. METAL BODIES OF INDUCTANCE LOCATED ABOUT THE ROOF, SUCH AS ROOF DRAINS, SOIL PIPE VENTS, ETC., SITUATED WITHIN 6'-0" OF LIGHTNING CONDUCTOR, IF NOT INHERENTLY BONDED THROUGH THE STRUCTURE OR OTHER GROUNDING SYSTEM SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM.
- B. NO BEND OF A CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN 90 DEGREES, NOR SHALL IT HAVE A RADIUS OF BEND LESS THAN 8" (NFPA 780 4.9.5).
- C. ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED NOT MORE THAN 3'-0" MAXIMUM SPACING CONNECTIONS TO GROUND ROD OR GROUND LOOP CONDUCTOR SHALL BE MADE AT A POINT NOT LESS THAN 1'-0" BELOW AND 1'-0" AWAY FROM FOUNDATION WALL.
- E. ACTUAL JOINT CONNECTIONS MAY NECESSITATE SLIGHT ALTERATIONS IN LOCATION, MOUNTING OR TYPE OF TERMINALS, CONDUCTORS, BONDINGS AND THROUGH ROOF ASSEMBLIES.
- F. GROUND ROD LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS OF INSTALLED GROUND RODS MAY VARY AS JOB-SITE CONDITIONS REQUIRE.
- G. AIR TERMINALS SHALL BE PLACED ALONG THE RIDGE OF A SLOPED ROOF AT 25'-0" MAXIMUM INTERVALS. AIR TERMINAL MUST EXTEND A MINIMUM OF 10" ABOVE ANY OBJECT TO WHICH IT IS MOUNTED.
- H. BOND WATER AND GAS PIPING TO THE LIGHTNING PROTECTION SYSTEM, IF NOT INHERENTLY BONDED TO THE BUILDING STEEL FRAMEWORK, OR OTHER GROUNDING SYSTEM.
- I. BARE COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM ROOF OR OTHER ALUMINUM SURFACES AND VICE VERSA. ALUMINUM LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON COPPER ROOFING OR OTHER COPPER SURFACES (PER AFI 32-1036, NFPA 780, & UL 96A).
- J. FOR SAKE OF CLARITY, EACH INDIVIDUAL ITEM OF LIGHTNING PROTECTION MATERIALS ON ROOF PLAN HAVE NOT BEEN LABELED.
- K. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICUOUS MANNER SO THAT ALL COMPONENTS WILL BLEND IN WITH THE APPEARANCE OF THE BUILDING.
- L. OTHER GROUNDING SYSTEMS, SUCH AS ELECTRICAL, SHALL BE INTERCONNECTED TO THE LIGHTNING PROTECTION SYSTEM.
- M. IN THE CASE OF STRUCTURAL STEEL FRAME CONSTRUCTION, DOWN CONDUCTORS MAY BE OMITTED AND ROOF CONDUCTORS SHALL BE CONNECTED TO THE STRUCTURAL STEEL FRAME AT INTERVALS AVERAGING NOT MORE THAN 100 FEET AROUND THE PERIMETER OF THE STRUCTURE. CONNECTIONS TO THE STEEL FRAME SHALL BE MADE WITH BONDING PLATES HAVING 8 SQUARE INCHES OF CONTACT OR BY EXOTHERMIC WELD CONNECTIONS.
- N. ROOF PENETRATIONS REQUIRED FOR DOWN CONDUCTORS OR FOR CONNECTIONS TO STRUCTURAL STEEL FRAMEWORK SHALL BE MADE USING THRU-ROOF ASSEMBLIES WITH SOLID BARS AND APPROPRIATE ROOF FLASHING. CONDUCTORS SHALL NOT PASS DIRECTLY THROUGH THE ROOF. ROOF FLASHING COMPATIBLE WITH THE ROOFING SYSTEM SHALL BE FURNISHED AND INSTALLED BY THE ROOFING CONTRACTOR.
- O. ALL IN-GROUND CONNECTIONS SHALL BE EXOTHERMIC WELD TYPE.
- P. PROVIDE LIGHTNING PROTECTION CONNECTION TO ALL METALLIC OBJECTS PROTRUDING FROM ROOF. VERIFY IN FIELD.
- Q. PROVIDE UL MASTER LEVEL LIGHTNING PROTECTION SYSTEM.



Revisions:

Proj. No.: 80703
Date: 10/09/2020

Sheet Name:
LIGHTNING PROTECTION DETAILS

E-502