

SEDGWICK COUNTY, KANSAS
CITY OF WICHITA PROJECT NO. 468-2020-030568
GARY JANZEN, P.E., CITY ENGINEER




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PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS



PLANT TWO - UV LIGHTNING PROTECTION
CITY OF WICHITA, KANSAS

Issue:		
	REVISION #1	11/3/20
JOB NO.	197043-009	
DATE	JANUARY 2020	
PM	RWWW	
DESIGNED BY	CJV	
DRAWN BY	ABP	
CHECKED BY	SMS	

COVER SHEET

G001

LIGHTNING PROTECTION GENERAL NOTES

1. LOCATE AIR TERMINALS AS SHOWN. TAKE CARE TO INSURE THAT ALL POINTS ARE WITHIN 2'-0" OF OUTSIDE BUILDING EDGE, OUTSIDE CORNERS, AND RIDGE ENDS, AND THAT MAXIMUM SPACING DOES NOT EXCEED 20'-0", AND THAT MINIMUM PROJECTION ABOVE OBJECT PROTECTED IS 10". (POINTS PROJECTING 24" MAY BE SPACED AT 25" MAXIMUM).
2. MAINTAIN HORIZONTAL OR DOWNWARD COURSING OF MAIN CONDUCTOR.
3. ALL CONDUCTOR BENDS SHALL HAVE AT LEAST AN 8" RADIUS AND SHALL FORM A FINAL INCLUDED ANGLE OF NOT LESS THAN 90 DEGREES.
4. ATTACH ALL EXPOSED ROOF, DOWN LEAD AND BONDING CABLES AT 3'-0" ON CENTER MAXIMUM. VERIFY COMPATIBILITY OF ADHESIVE ON MEMBRANE ROOF APPLICATIONS PRIOR TO INSTALLATION. DO NOT VOID ROOF WARRANTY.
5. GROUND ELECTRODES SHALL BE INSTALLED AS SHOWN, BUT IN NO INSTANCE SHALL THEY BE LESS THAN 2'-0" BELOW GRADE AND 2'-0" FROM FOUNDATION WALL. DRIVEN GROUND RODS SHALL PENETRATE THE EARTH AT LEAST 10'-0".
6. BOND TO WATER SERVICE AND OTHER PIPING SYSTEMS AS SHOWN AND AS REQUIRED BY CODES.
7. INTERCONNECT LIGHTNING PROTECTION GROUND TO ELECTRIC, TELEPHONE, AND OTHER BUILDING GROUND SYSTEMS AS SHOWN OR AS REQUIRED BY CODE.
8. SYSTEM SHALL BE INSTALLED AS SHOWN TO INSURE PROPER CODE COMPLIANCE AND SYSTEM CERTIFICATION. ANY MAJOR VARIANCE SHALL REQUIRE RESUBMITTAL AND NEW APPROVAL.
9. AS-BUILT DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH CERTIFICATION PROCEDURES.
10. ALL MATERIALS SHALL BE UNDERWRITERS LABORATORIES APPROVED WITH LABELS ON CONDUCTORS AT 10'-0" INTERVALS AND LABELS ON ALL AIR TERMINALS.
11. ALL MATERIALS SHOWN SHALL BE EQUAL TO THOSE AS MANUFACTURED BY THOMPSON LIGHTNING PROTECTION (TLP) INC.
12. METAL BODIES OF INDUCTANCE LOCATED ABOUT THE ROOF, SUCH AS: METAL FLASHING, GRAVEL STOPS, ROOF DRAINS, SOIL PIPE VENTS, INSULATION VENTS, LOUVERS AND DOOR FRAMES SITUATED WITHIN 6'-0" OF A LIGHTNING CONDUCTOR OR BONDED METAL BODY SHALL BE INTERCONNECTED TO THE LIGHTNING CONDUCTOR SYSTEM.
13. CONDUCTORS SHALL INTERCONNECT ALL AIR TERMINALS AND SHALL FORM A TWO-WAY PATH FROM EACH AIR TERMINAL HORIZONTALLY OR DOWNWARD TO CONNECTIONS WITH GROUND TERMINALS.
14. BARE COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM ROOF OR SIDING OR OTHER ALUMINUM SURFACES AND VICE VERSA, ALUMINUM LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON COPPER ROOFING OR COPPER SIDING OR OTHER COPPER SURFACES.
15. 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. DOWNLOADS SHALL BE RUN INTERNALLY WHERE POSSIBLE. ROUTING PATHS MUST MEET APPROVAL OF ENGINEER AND OWNER PRIOR TO ROUGH-IN.
16. THE DESIGN LAYOUT AND INSTALLATION DETAILS SHOWN HEREON SHALL MEET THE REQUIREMENTS OF UNDERWRITERS LABORATORIES STANDARD 96A FOR MASTER LABELED LIGHTNING PROTECTION SYSTEMS. THE ACTUAL MASTER LABEL WILL BE DELIVERED UPON COMPLETION OF INSTALLATION.
17. THE LIGHTNING PROTECTION INSTALLATION SHALL COMPLY IN ALL RESPECTS TO LIGHTNING PROTECTION INSTITUTE STANDARD 175. THE INSTALLATION SHALL BE MADE BY OR UNDER THE SUPERVISION OF AN L.P.I. CERTIFIED MASTER INSTALLER. THE COMPLETED INSTALLATION WILL RECEIVE SYSTEM CERTIFICATION SUBMITTAL FORM LPI 176.

GENERAL NOTES






1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
2. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
3. ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.

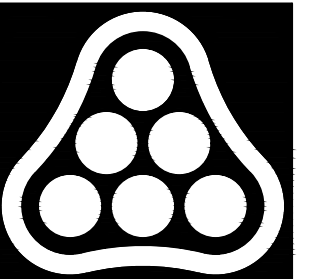
LIGHTNING PROTECTION SYSTEM NOTE:

THE LIGHTNING PROTECTION SYSTEM SHALL BE DESIGNED BY A LIGHTNING PROTECTION ENGINEER. SEE SPECIFICATION SECTION 264113 - LIGHTNING PROTECTION FOR STRUCTURES - FOR ADDITIONAL INFORMATION. SUBMIT LIGHTNING PROTECTION SYSTEM SHOP DRAWINGS FOR REVIEW. SHOP DRAWINGS TO INCLUDE PLANS, DETAILS, RISERS, ETC. REQUIRED FOR SYSTEM DESIGN AND INSTALLATION.

THE INSTALLATION SHALL BE MADE BY OR UNDER THE
SUPERVISION OF AN UL CERTIFIED MASTER INSTALLER. THE
COMPLETED INSTALLATION WILL RECEIVE UL MASTER LABEL.

SYMBOL LIST


SYMBOL	DESCRIPTION	MOUNTING
	SERVICE BONDING CONNECTION	
	EXPOSED/PITCHED DOWNLOAD TO GROUND	
	AIR TERMINAL & DETAIL DESIGNATION	
	MAIN CONDUCTOR	
	COUNTERPOISE / GROUND CABLE	



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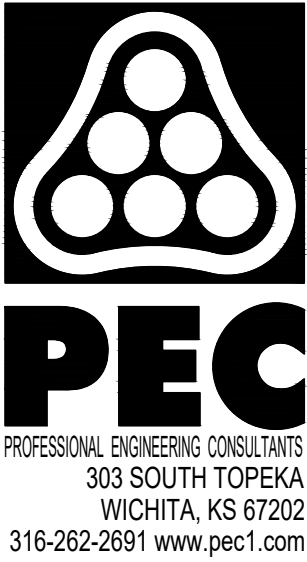
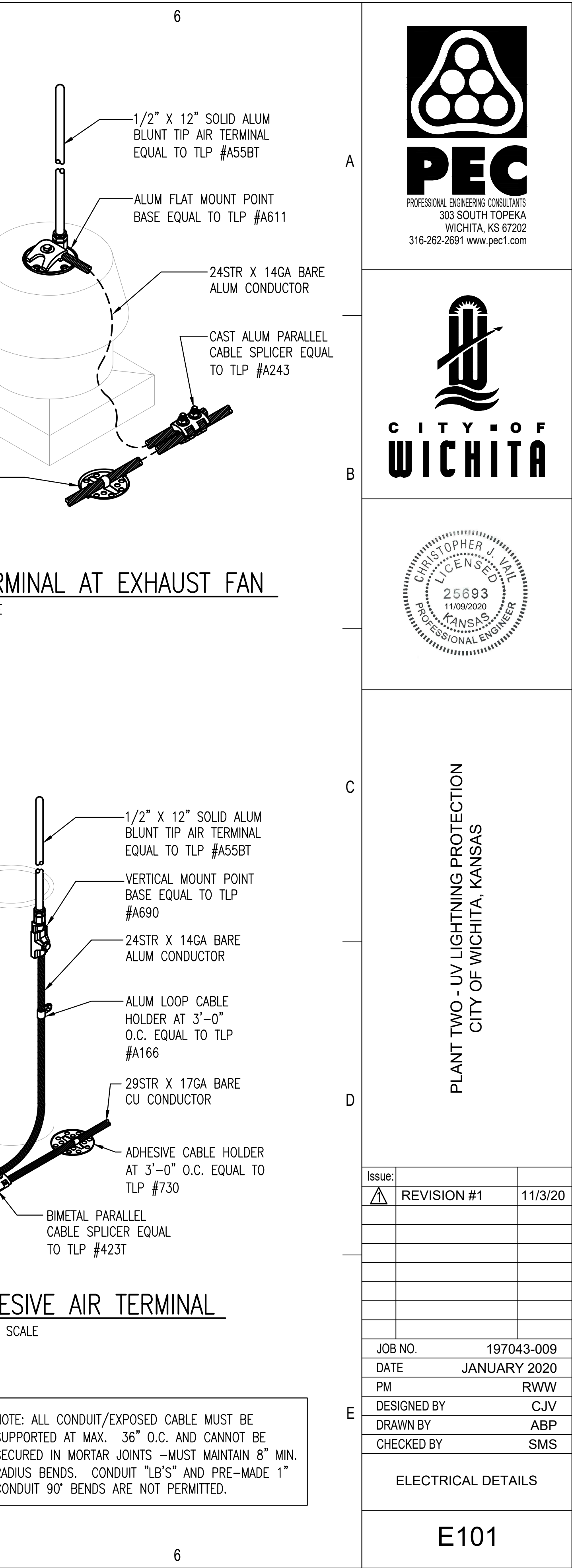
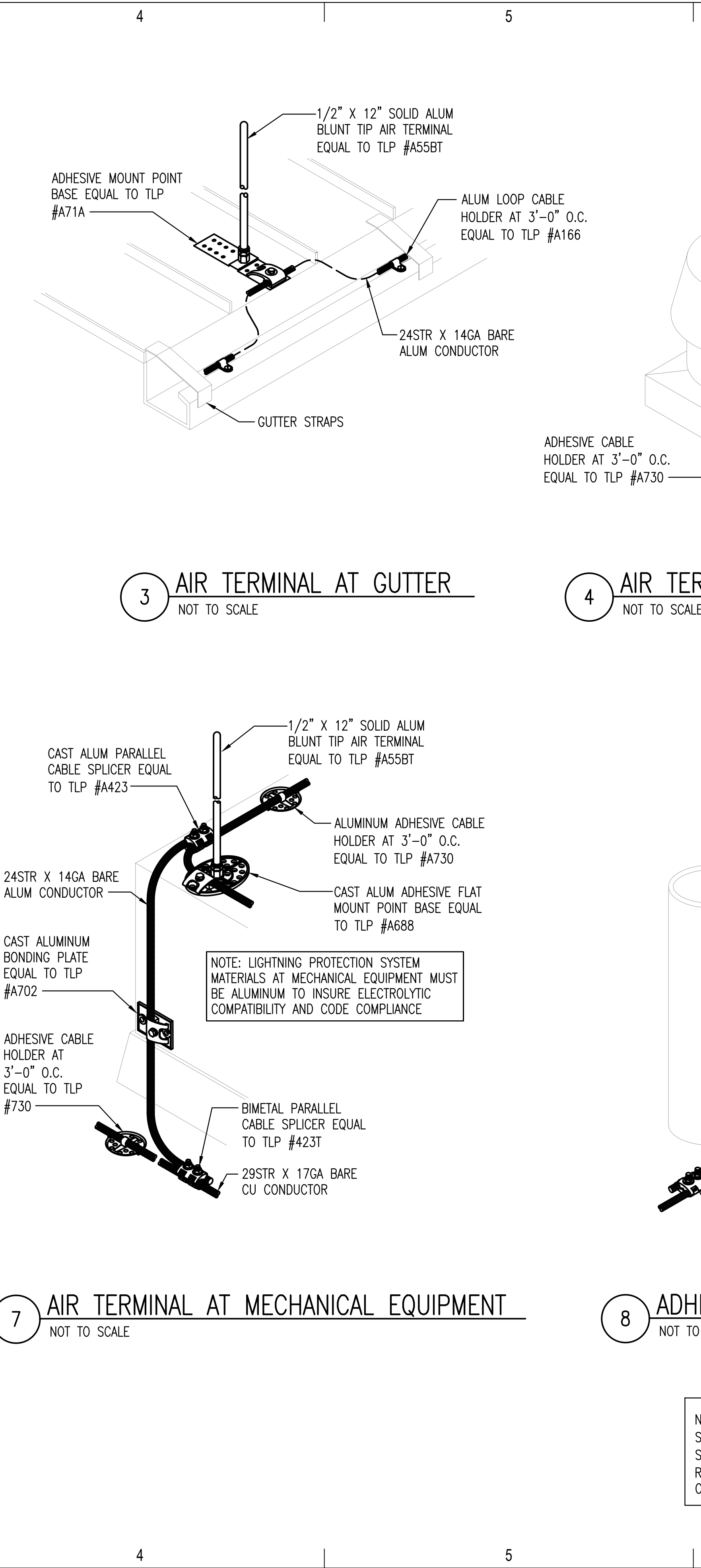
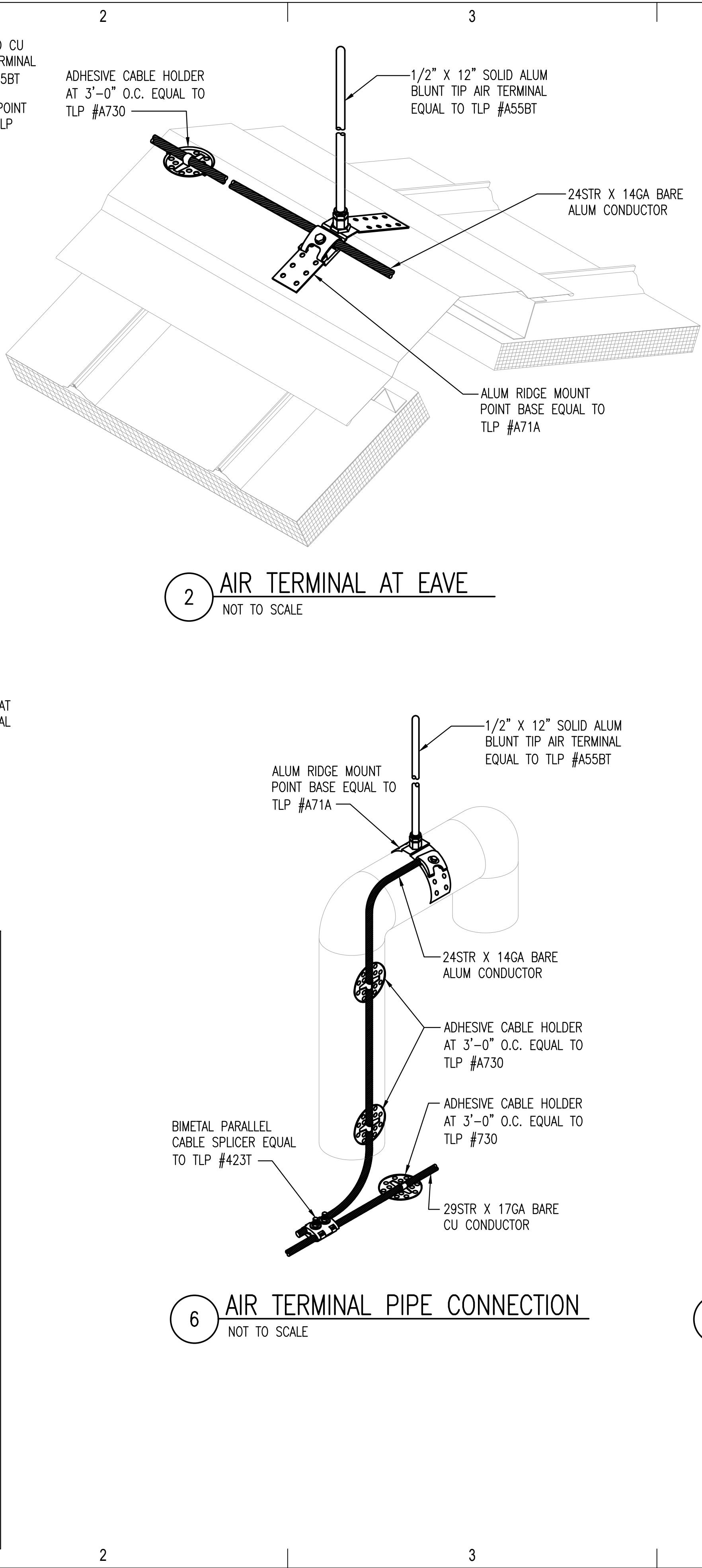
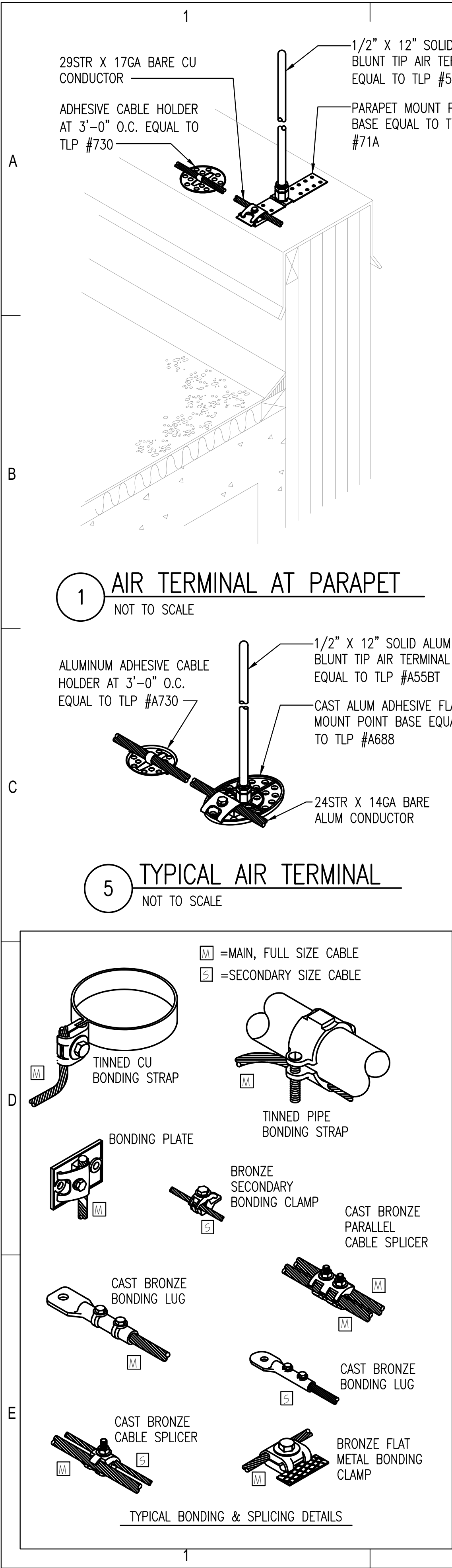
PLANT TWO - UV LIGHTNING PROTECTION
CITY OF WICHITA, KANSAS

ISSUE:		
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JOB NO.	197043-009	
DATE	JANUARY 2020	
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ELECTRICAL COVER SHEET

E001

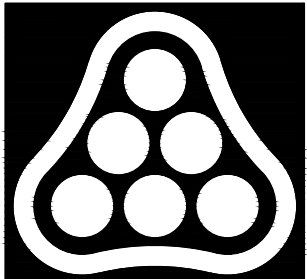
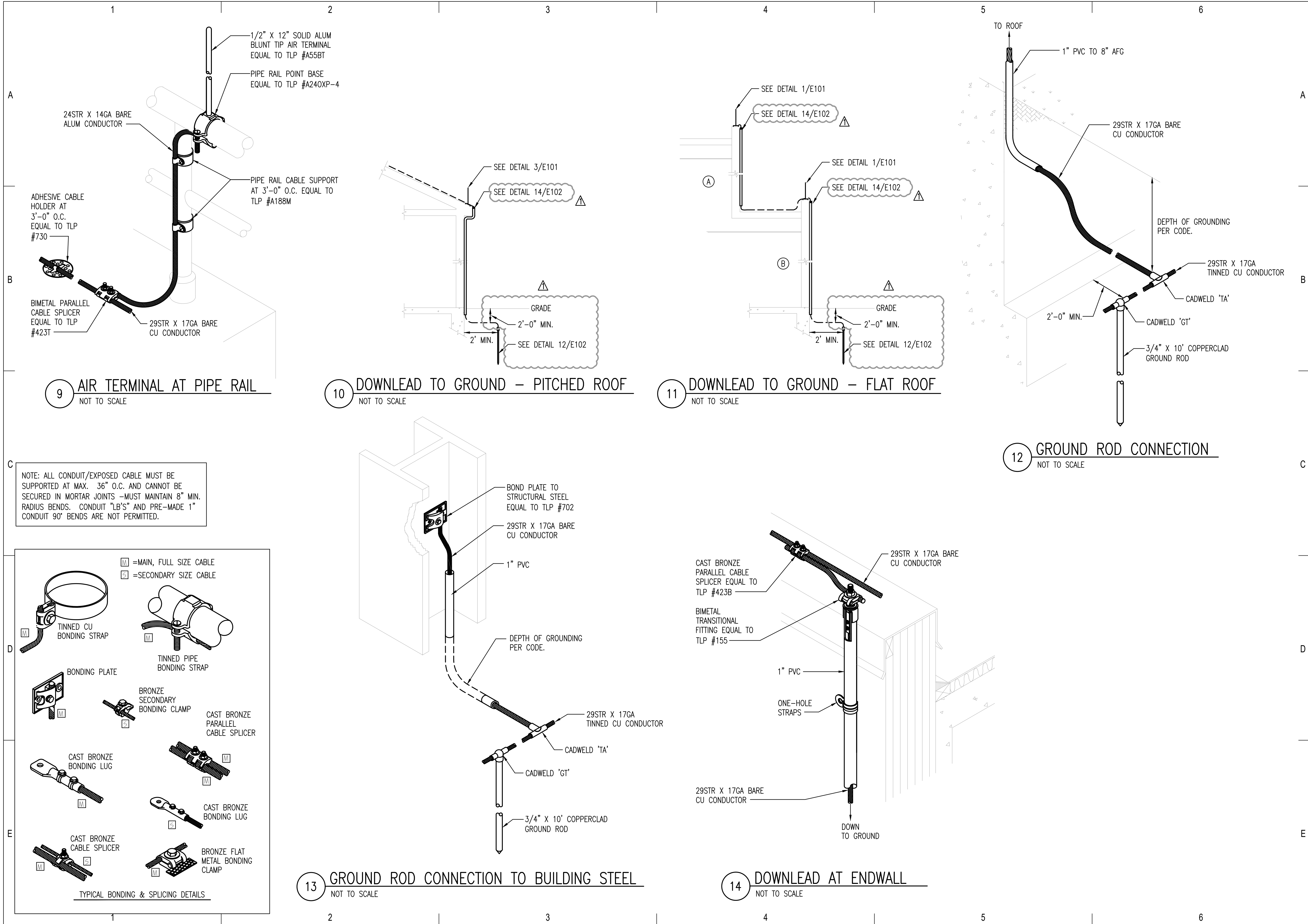
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PLANT TWO - UV LIGHTNING PROTECTION
CITY OF WICHITA, KANSAS

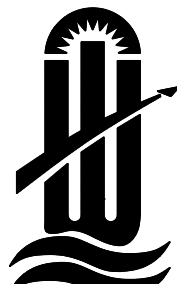
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ELECTRICAL DETAILS		
E101		

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CITY OF WICHITA



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ELECTRICAL DETAILS

E102



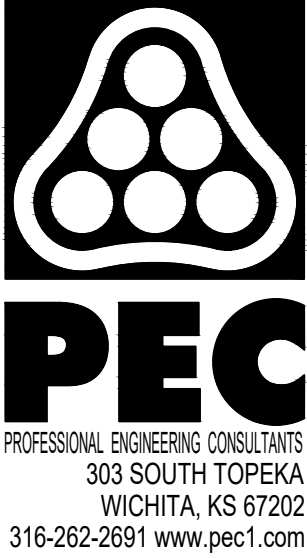
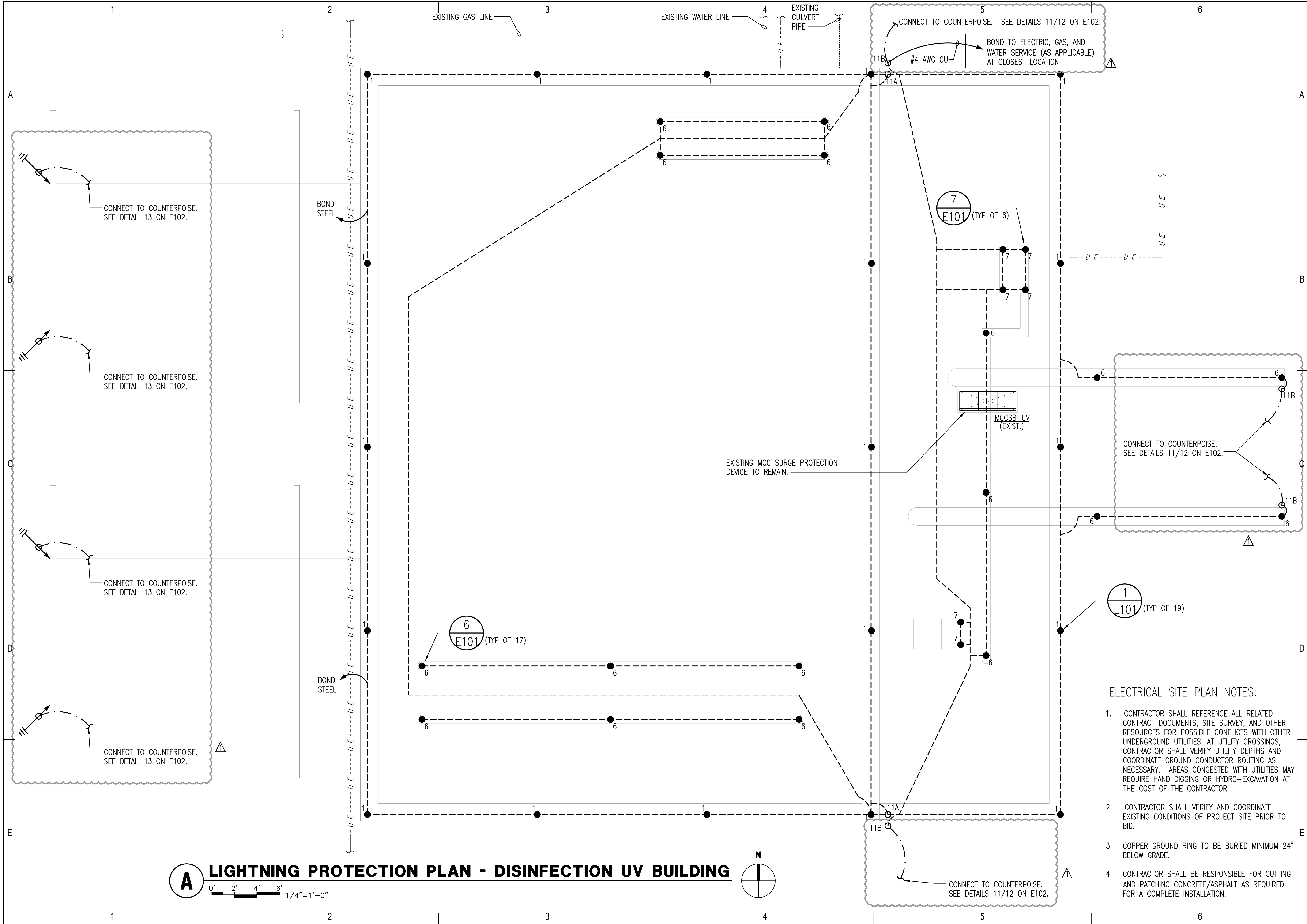
1. CONTRACTOR SHALL REFERENCE ALL RELATED CONTRACT DOCUMENTS, SITE SURVEY, AND OTHER RESOURCES FOR POSSIBLE CONFLICTS WITH OTHER UNDERGROUND UTILITIES. AT UTILITY CROSSINGS, CONTRACTOR SHALL VERIFY UTILITY DEPTHS AND COORDINATE GROUND CONDUCTOR ROUTING AS NECESSARY. AREAS CONGESTED WITH UTILITIES MAY REQUIRE HAND DIGGING OR HYDRO-EXCAVATION AT THE COST OF THE CONTRACTOR.
2. CONTRACTOR SHALL VERIFY AND COORDINATE EXISTING CONDITIONS OF PROJECT SITE PRIOR TO BID.
3. COPPER GROUND RING TO BE BURIED MINIMUM 24" BELOW GRADE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING CONCRETE/ASPHALT AS REQUIRED FOR A COMPLETE INSTALLATION.



Issue:		
	REVISION #1	11/3/2
JOB NO.	197043-009	
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ENLARGED ELECTRICAL PLAN - MCC BUILDINGS		

E401

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PLANT TWO - UV LIGHTNING PROTECTION
CITY OF WICHITA, KANSAS

ELECTRICAL SITE PLAN NOTES:

1. CONTRACTOR SHALL REFERENCE ALL RELATED CONTRACT DOCUMENTS, SITE SURVEY, AND OTHER RESOURCES FOR POSSIBLE CONFLICTS WITH OTHER UNDERGROUND UTILITIES. AT UTILITY CROSSINGS, CONTRACTOR SHALL VERIFY UTILITY DEPTHS AND COORDINATE GROUND CONDUCTOR ROUTING AS NECESSARY. AREAS CONGESTED WITH UTILITIES MAY REQUIRE HAND DIGGING OR HYDRO-EXCAVATION AT THE COST OF THE CONTRACTOR.
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ENLARGED ELECTRICAL PLAN - DISINFECTION UV BUILDING		
E402		

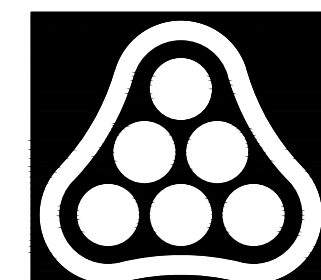
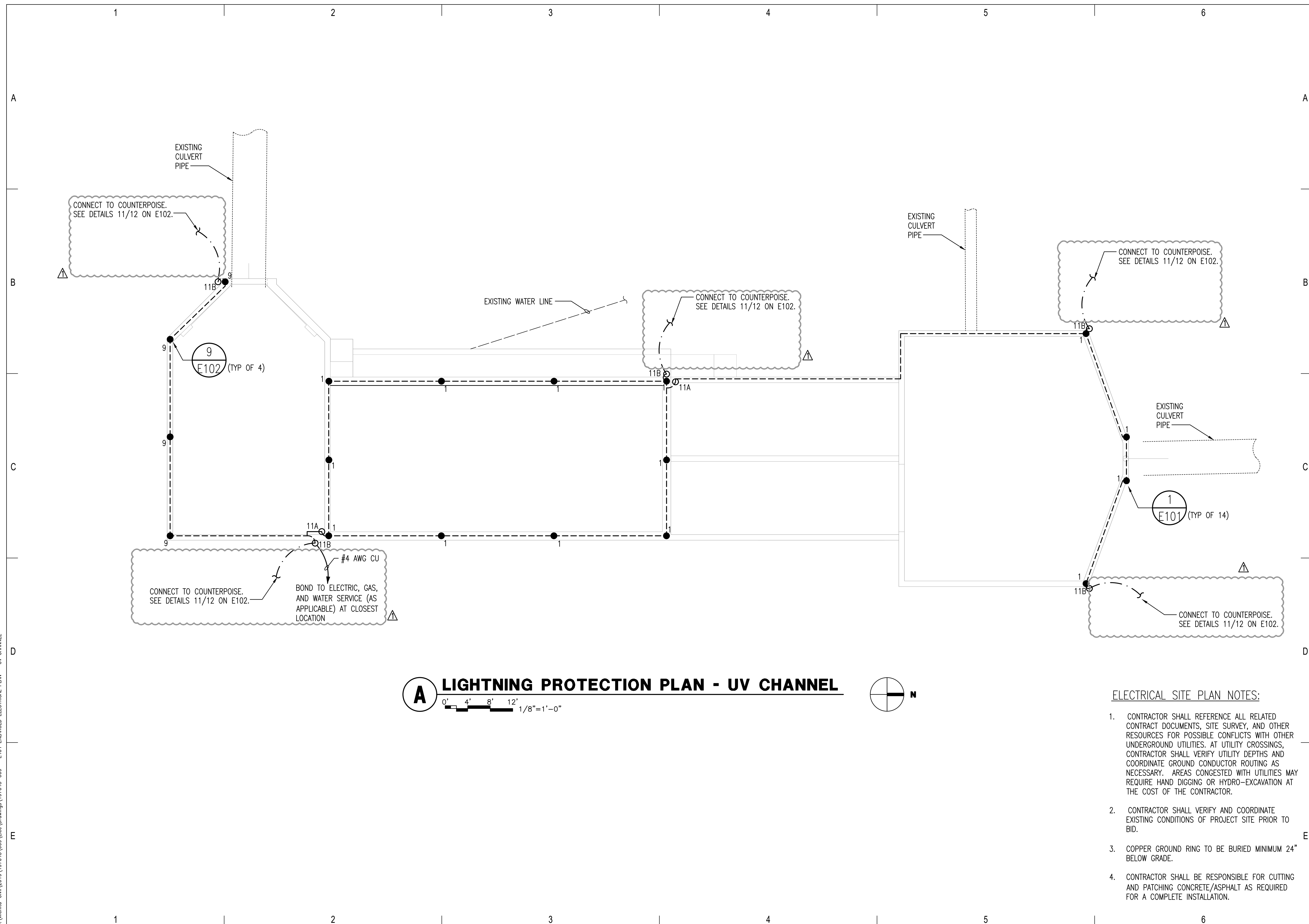



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ENLARGED LIGHTNING PLAN EFFLUENT WATER PUMP STATION (3 WATER)	

E403



Issue:		
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DATE	JANUARY 2020	
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DESIGNED BY	CJV	
DRAWN BY	ABP	
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ENLARGED ELECTRICAL PLAN - UV CHANNEL		

