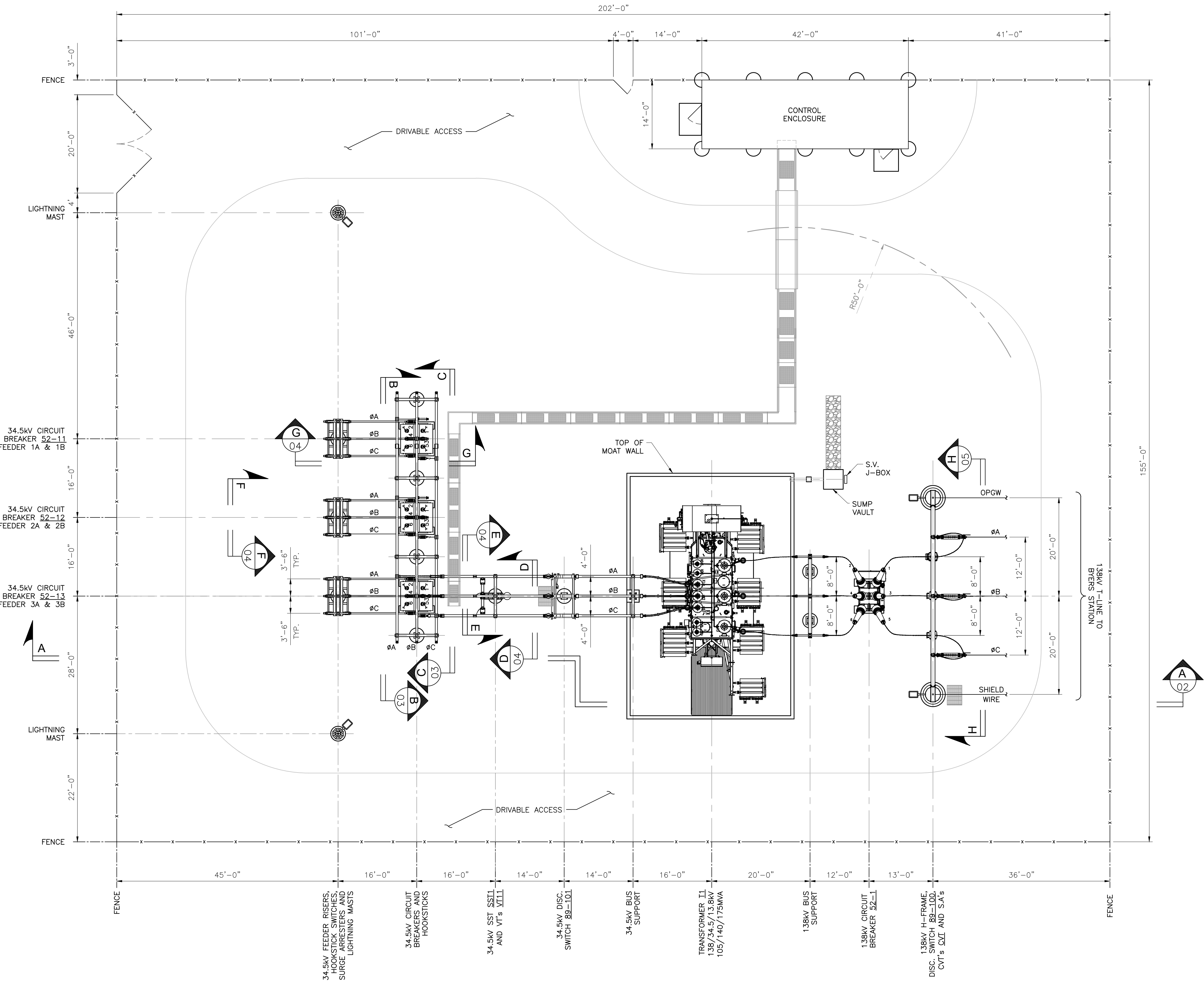


Appendix D

Facility Schematics

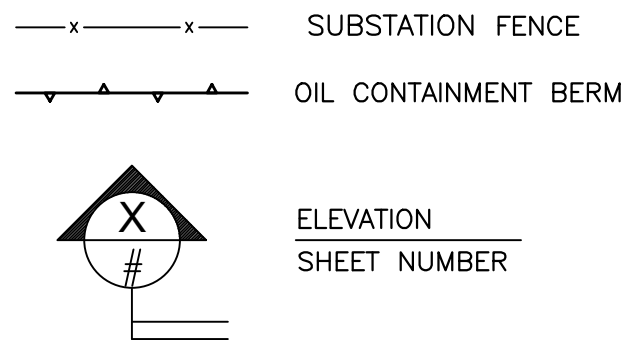
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Figure A



GENERAL ARRANGEMENT PLAN

LEGEND



DESIGN CRITERIA

SUGGESTED CLEARANCES PER APPLICABLE INDUSTRY STANDARDS

138kV CLEARANCE (650KV BIL):

PHASE TO PHASE (CENTER TO CENTER):	8'-0"
MINIMUM METAL TO METAL (PHASE TO PHASE):	5'-3"
PHASE TO GROUND:	4'-2"
VERTICAL CLEARANCE TO LIVE PARTS FOR PERSONAL ACCESS:	13'-0"
HORIZONTAL CLEARANCE TO LIVE PARTS FOR PERSONAL ACCESS:	6'-8"
VERTICAL CLEARANCE TO LIVE PARTS OVER ROADWAY:	27'-0"
SAFETY CLEARANCE ZONE TO SUBSTATION FENCE:	14'-0"

34.5kV CLEARANCE (200KV BIL):

PHASE TO PHASE (CENTER TO CENTER):	3'-0"
MINIMUM METAL TO METAL (PHASE TO PHASE):	1'-6"
PHASE TO GROUND:	1'-1"
VERTICAL CLEARANCE TO LIVE PARTS FOR PERSONAL ACCESS:	10'-0"
HORIZONTAL CLEARANCE TO LIVE PARTS FOR PERSONAL ACCESS:	4'-0"
VERTICAL CLEARANCE TO LIVE PARTS OVER ROADWAY:	23'-0"
SAFETY CLEARANCE ZONE TO SUBSTATION FENCE:	11'-0"

GENERAL CLEARANCE:

VERTICAL CLEARANCE TO INDETERMINATE VOLTAGE:	8'-6"
(MEASURED FROM TOP OF STRUCTURE BASE PLATE)	

REFERENCE DRAWINGS:

OVERALL SITE PLAN	CRS-C-100-01
ONE LINE SWITCHING DIAGRAM	CRS-E-001-01

NO	DATE	REVISION	BY	CHK'D	APPR'D
C	09/11/24	ISSUED FOR 90% REVIEW	SDD	MRC	BRB
B	06/27/24	ISSUED FOR 60% REVIEW	SDD	MRC	BRB
A	03/04/24	ISSUED FOR 30% REVIEW	SDD	MRC	BRB



PRELIMINARY:
NOT FOR CONSTRUCTION

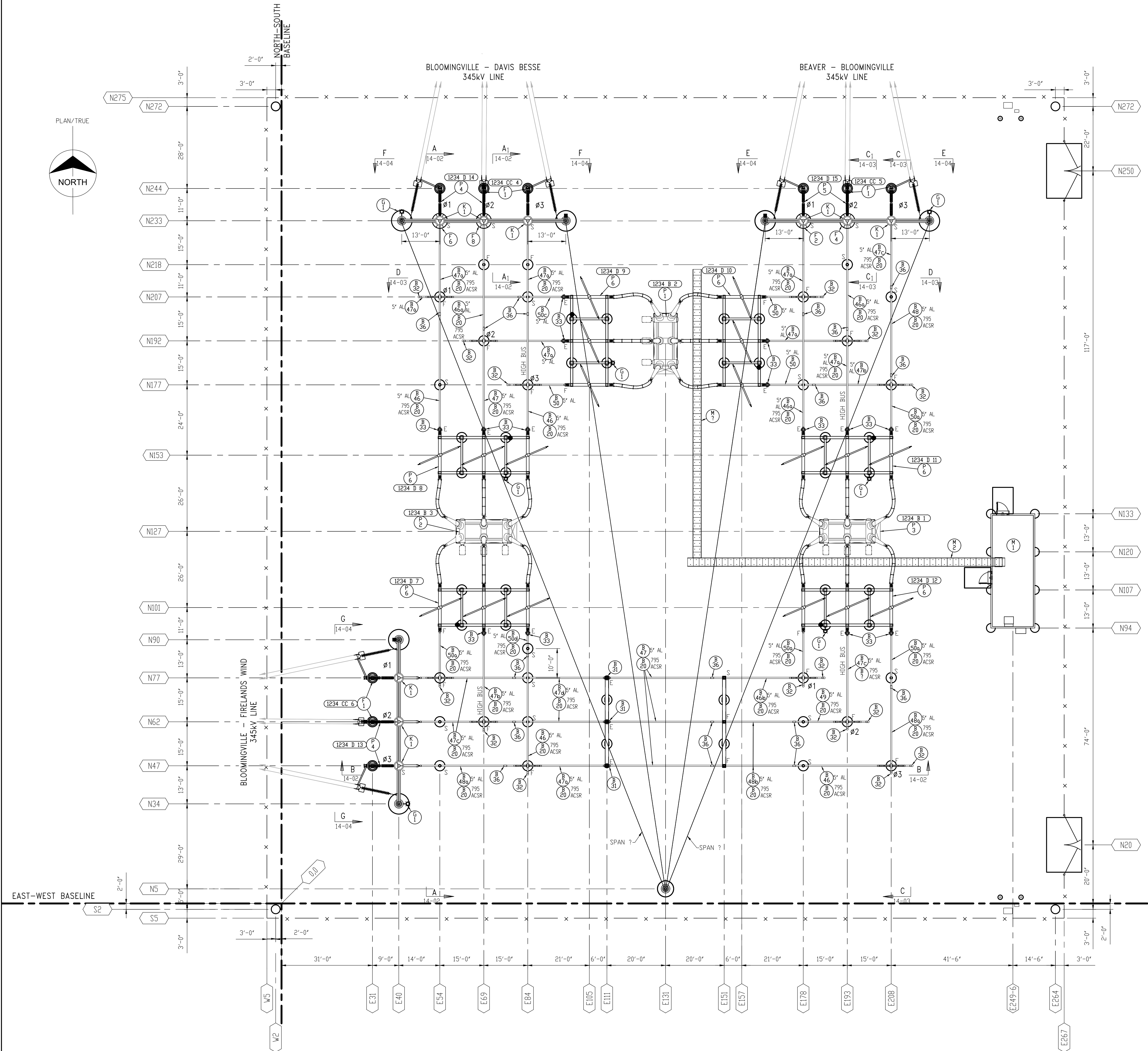


CONTRACT
19317

SUBSTATION GENERAL
ARRANGEMENT PLAN PLAN
VIEW

DRAWN DATE	SCALE	DRAWING NUMBER	REV
02/02/24	3/32" = 1'-0"	CRS-E-101-01	C

Figure B



- NOTES:
- IF THE CONNECTOR IS SUBJECT TO FREEZING AND IS INSTALLED SUCH THAT THE BARREL MAY COLLECT WATER (UPRIGHT POSITION OR IF THE CONDUCTOR IS ENTERING THE FITTING FROM ABOVE), THEN A 1/2" DIAMETER WEEP HOLE SHOULD BE DRILLED FROM THE LOWEST POINT OF THE BARREL INTO THE END OF THE BORE.
 - DRILL 1/2" DIAMETER WEEP HOLE AT THE LOWEST POINT OF EACH BUS SECTION FOR DRAINAGE.
 - BUS LENGTHS SHOWN ARE ESTIMATED AND THAT EXACT FIELD MEASUREMENTS MUST BE TAKEN SO THAT ACCURATE BUS LENGTHS CAN BE CUT.
 - BUS DAMPER WIRE MUST BE INSTALLED IN ALL BUSES NOTED ON THE DRAWING. BUS DAMPER WIRE SHOULD BE PRE-STRETCHED AND TACK WELDED AT BOTH ENDS INSIDE THE TUBING.
 - ALL CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - LEVELING DISTANCE SHALL BE 3' MEASURED FROM TOP OF CONCRETE TO BOTTOM OF BASEPLATE UNLESS OTHERWISE SPECIFIED. LEVELING HEIGHT SHALL NOT EXCEED 3-1/4". CONTACT ENGINEER ABOUT ANY LEVELING HEIGHTS THAT EXCEED THIS REQUIREMENT.
 - SUBCONTRACTOR FURNISH & INSTALL JUNCTION BOX FOR YARD LIGHT WIRING CONNECTIONS AS NEEDED.

- LEGEND:
- E - EXPANSION FITTING
 - F - FIXED FITTING
 - S - SLIP FITTING
 - - MANUAL OPERATING SHAFT LOCATION
 - - MOTOR OPERATING SHAFT LOCATION

ALL SPANS - 235'-0" STRINGING CHART: (NETWORK #16774902)

TEMP. (°F)	0	10	20	30	40	50	60	70	80	90	100
APPROX. TENSION (lb)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

ELECTRICAL DESIGN CLEARANCES

MAX. SYSTEM VOLTAGE	MINIMUM	DESIGN	MINIMUM	DESIGN
	Ø-G	Ø-G	Ø-Ø	Ø-Ø
362 KV 1300 BIL	104'	106'	119'	174'

FE ENGINEERING TO BE CONTACTED BEFORE LESS THAN DESIGN CLEARANCES NEED TO BE USED.

FOR REVIEW

NOT FOR CONSTRUCTION

BY: AMH APP: RT DATE: 11/19/21 ISSUE REVIEW	FirstEnergy Energy Delivery Technical Services	PROJECT CODE: SCALE: 1/16"=1'-0" SIZE: 36x24	OPERATING COMPANY: OHIO EDISON (OE)	REGION: OH-CE	AREA: VERMILLION
PRELIMINARY LAYOUT BY BURNS & MCDONNELL			FACILITY: BLOOMINGVILLE		
			TITLE: ELECTRICAL LAYOUT 345KV PLAN VIEW		
SAP NETWORK NO: 16774902			DOC ID: 0-1234-14-01 REV: -		