

VICINITY MAP

PROJECT LOCATION
MONTICELLO GATE STATION MZ0003

MAOP DETERMINATION (STANDARD PRACTICES 1-01-02, 1-90-01, 1-97-04)				
MAOP SEGMENT NAME:	720 MAOP	266 MAOP		
PIPELINE FACILITY CLASSIFICATION:	PIPELINE	PIPELINE		
DESIGN CLASS LOCATION:	CLASS 1	CLASS 1		
MINIMUM TEST PRESSURE:	900	900		
TEST FACTOR:	1.25	1.25		
PRESSURE LIMITS		PRESSURE LIMITS		
	PSIG	%SMYS	PSIG	%SMYS
A. PIPE = (2S/D) * F * E * T	3943	71.99%	3943	71.99%
	S=52000	t=0.237	D=4.5	T=1
	F=0.72	E=1	T=1	
	S=52000	t=0.237	D=4.5	T=1
	F=0.72	E=1	T=1	
B. FITTING = (2S/D) * F * E * T	3943	71.99%	3943	71.99%
	S=52000	t=0.237	D=4.5	T=1
	F=0.72	E=1	T=1	
	S=52000	t=0.237	D=4.5	T=1
	F=0.72	E=1	T=1	
C. RATED ITEM	1333	N/A	1333	N/A
	GASKET		GASKET	
D. MAXIMUM DESIGN PRESSURE	720	13.15%	720	13.15%
E. REGION PRESSURE LIMITATION	720	13.15%	266	4.86%
MAOP (MIN A, B, C, D, E)	720	13.15%	266	4.86%

TEST SPECIFICATION (STANDARD PRACTICE 1-90-01 FOR HP OR 3-10-04 FOR IHP)		
TEST SPECIFICATION DESIGNATION:	TS-1	
PRESSURE-TEST PRESSURES:	PSIG	%SMYS
MINIMUM REQUIRED:	1080	19.72%
MAXIMUM (WATER):	1300	23.73%
MAXIMUM (NITROGEN):	1300	23.73%
MAXIMUM (CNG):	N/A	N/A
PRESSURE-TEST DURATIONS:	SHOP	FIELD
MINIMUM DURATION:	1 HR	1 HR
SMYS CALCULATION INPUTS:	S=52000 t=0.237 D=4.5	

FABRICATION SPECIFICATION (STANDARD PRACTICE 2-10-01)		
WELD REQUIREMENTS:	API 1104	
POST WELD HEAT TREATMENT:	NO	
WELD INSPECTION:	VISUAL	NDE
GD-OM-E-010-001	100%	100% > 2"
INSPECTION AND TESTING OF WELDS	100%	100% > 2"
ALL IN-SERVICE WELDING SHALL BE COMPLETED UTILIZING LOW HYDROGEN ELECTRODES (SP 2-10-01 AND SP 2-10-02)		

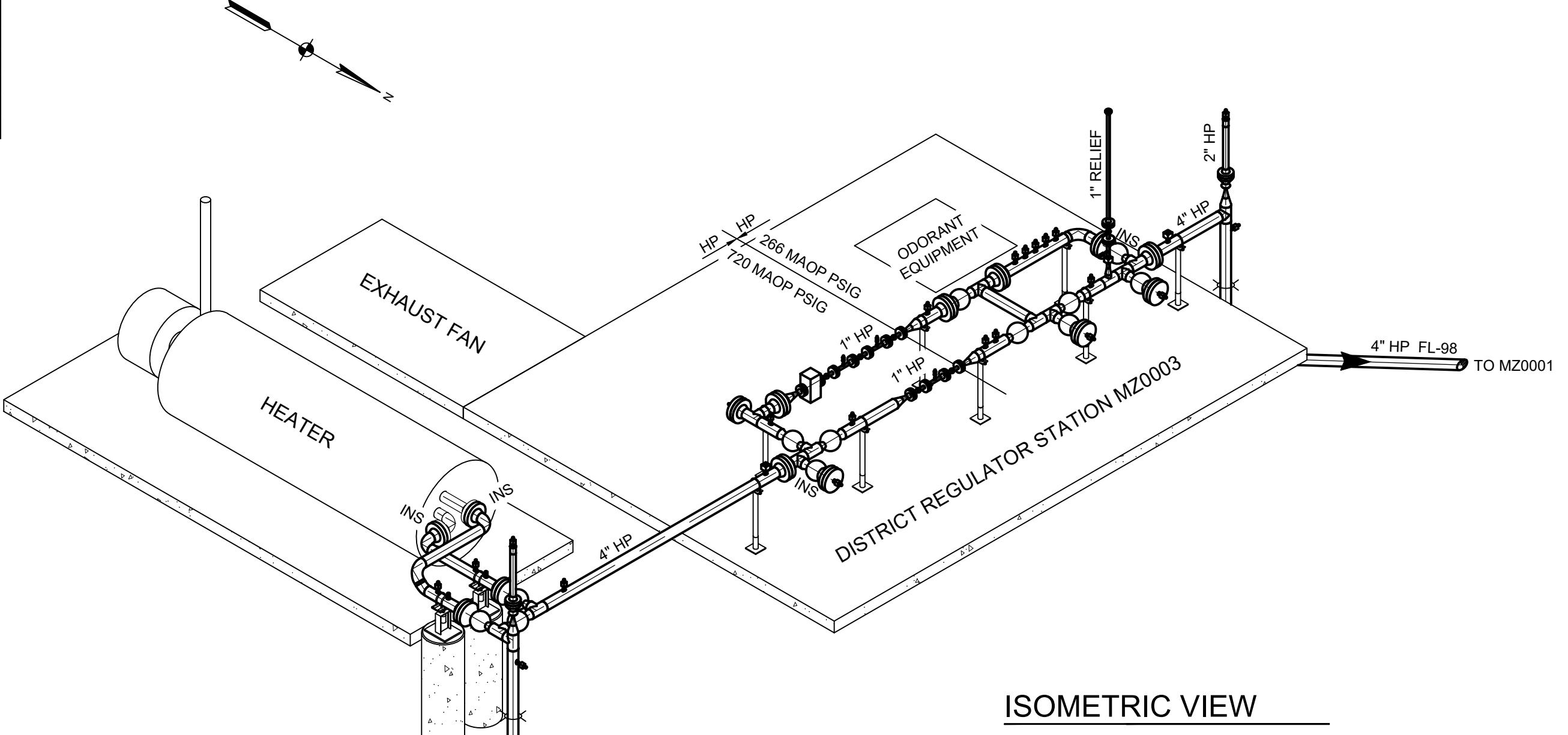
MATERIAL LIST NOTE 3						
ITEM #	QTY	SIZE	DESCRIPTION	MAWP NOTE 14	MATL NOTES NOTE 4	WH #
WO#: 90659.22						
1	72	4"	BOLT, STUD, 7/8 x 5 3/4" LG, ASTM A193 GR-B7, W/2 HEX NUTS, 7/8, ASTM A194 GR-2H	N/A	7	Q3400164
2	40	4"	BOLT, STUD, 7/8 x 6 1/4" LG, ASTM A193 GR-B7, W/2 HEX NUTS, 7/8, ASTM A194 GR-2H	N/A	7	Q3400168
3	3	4"	ELL, CS, 45 DEG LR, BW, 4.500 OD 0.237 WT, Y-52, ASTM A694, MSS SP75	2738	3	Q1754005
4	10	4"	ELL, CS, 90 DEG LR, BW, 4.500 OD 0.237 WT, Y-52, ASTM A694, MSS SP75	2738	3	Q1754002
5	3	4"	FLANGE BLIND, 4" ND, 600 LB, RF, ASME B16.5 W/ 1/2" TAP	1480	5	Q1804099
6	14	4"	FLANGE RFWN, CL600, 4 NPS, 0.237 WT, F-52, ASTM A694, MSS SP44	1480	6	Q1804007
7	9	4"	GASKET, 4" ND, 600 LB, GARLOCK 9900 (320 FT LBS)	1333	9	Q1904006
8	5	4"	GASKET, 4" ND, 600 LB, GARLOCK 9900 (320 FT LBS)	1480	10	Q4434061
9	6	4"x2"	REDUCER, CS, CONC, BW, 4.500 OD 0.237 WT x 2.375 OD 0.218 WT, Y52, ASTM A694, MSS SP75	2738	3	Q2254024
10	1	4"x2"	TEE, CS, ROOD, BW, 4.500 OD 0.237 WT x 2.375 OD 0.218 WT, Y-52, ASTM A694, MSS SP75	2738	3	Q2324614
11	11	4"	TEE, CS, STRT, BW, 4.500 OD 0.237 WT, Y-52, ASTM A694, MSS SP75	2738	3	Q2554003
12	5	4"	VALVE, CS, BALL, CL600, 4 NPS, FULL PORT, BW x BW, 0.237 WT, CAMERON, FIG 800602-1-1, API 6D	1480	1	Q2705044
13	7	4"	VALVE, CS, BALL, CL600, 4 NPS, FULL PORT, BW x RF, 0.237 WT, CAMERON, FIG 800603-1-1, API 6D	1480	1	Q2705042
14	1	4"	VALVE, CS, FLUG, CL600, 4 NPS, BW x RF, NORDSTROM, 2245 1/4, W/ LOCKING DEVICE #3710701	1480	1	Q2744247
15	16	2"	BOLT, STUD, 5/8 x 4 1/4" LG, ASTM A193 GR-B7, W/2 HEX NUTS, 5/8, ASTM A194 GR-2H	N/A	7	Q3400112
16	2	2"	CAP, CS, BLANKING, BW, CL600, 2 NPS, 0.218 WT, HUBER-YALE W/ 1/2" TAP	1480	16	Q1182303
17	2	2"	FLANGE, RFWN, CL600, 2 NPS, 0.218 WT, GR-B, ASME B16.5, ASTM A105	1480	5	Q1802070
18	2	2"	GASKET, 2" ND, 600 LB, GARLOCK 9900 (108 FT LBS)	1333	9	Q1902203
19	5	2"x1"	REDUCER, CS, ES, CONC, BW, 2.375 OD 0.218 WT x 1.375 OD 0.179 WT, GR-B, ASTM A234 WFB	3212	2	Q2252013
20	2	2"	VALVE, CS, FLUG, CL600, 2 NPS, (XH 218), BW x RF, NORDSTROM, 2245 1/4, W/ LOCKING DEVICE # 3710701	1480	1	Q2742214
21	48	1"	BOLT, STUD, 5/8 x 3 1/2" LG, ASTM A193 GR-B7, W/2 HEX NUTS, 5/8, ASTM A194 GR-2H	N/A	7	Q3400106
22	4	1"	BOLT, STUD, 5/8 x 4" LG, ASTM A193 GR-B7, W/2 HEX NUTS, 5/8, ASTM A194 GR-2H	N/A	7	Q3400110
23	1	1"	CAP, WEATHER, FLIP LID, 1"	150	N/A	Q1141001
24	12	1"	FLANGE, RFWN, CL600, 1 NPS, 0.133 WT, GR-B, ASME B16.5, ASTM A105	1480	5	SO
25	13	1"	GASKET, 1" ND, 600 LB, GARLOCK 9900 (67 FT LBS)	1333	9	42414302
26	1	1"	VALVE, CS, BALL, 2200 CWP, 1 NPS, SWE x SWE, SWAGelok, S-65TSW16P, W/ LOCKING DEVICE	2200	N/A	Q2701024
27	2	3/4"	NIPPLE, CS, NPT x NPT, 3/4 NPS x 2.0 LG, 0.308 WT, GR-B A106 SMLS	8367	19	Q2000853
28	2	3/4"	TEMPERATURE WELL, SS, 3000# MNPT THD, 3/4 NPS, 3" PROBE (FOR 4" PIPE)	3000	11	Q1457907
29	4	3/4"	THREADOLET, 3/4 NPS 3000# OUTLET, F-52, FOR RUN SIZES 1-1/2 TO 36, ASTM A694, MSS SP97	3000	4	Q1281047
30	2	3/4"	VALVE, CS, BALL, 2200 CWP, 3/4 NPS, FNPT x FNPT, SWAGelok, S-65TF12, W/ LOCKING DEVICE	2200	N/A	Q2700822
31	35	1/2"	NIPPLE, CS, NPT x NPT, 1/2 NPS x 2 LG, XXH, 0.294 WT, GR-B A106 SMLS	9875	19	Q2000553
32	35	1/2"	PARKER BLEED PLUG, CS, 10000#, MNPT, 1/2", BV10N4-80	10000	17	Q2700510
33	17	1/2"	THREADOLET, 1/2 NPS 3000# OUTLET, F-52, FOR RUN SIZES 3/4 TO 36, ASTM A694, MSS SP97	3000	4	Q1250510
34	35	1/2"	VALVE, CS, BALL, 2200 CWP, 1/2 NPS, FNPT x FNPT, SWAGelok, S-63TF8, W/ LOCKING DEVICE	2200	N/A	Q2700522
35	4	1/4"	BULL PLUG, CS, 3000# MNPT THD, 1/4 NPS, SOLID, ASTM A105, SAW CUT INT THDS	3000	11	Q2130201
36	4	1/4"	NIPPLE, CS, NPT x NPT, 1/4 NPS x 2 LG, 0.119 WT, GR-B SMLS, A106	4796	19	Q2000015
37	4	1/4"	THREADOLET, 1/4 NPS 3000# OUTLET, GR-B, B16.9, ASTM A105, FOR RUN SIZE 1/2 TO 36	3000	4	Q1250201
38	4	1/4"	VALVE, CS, NEEDLE, 3000# FNPT THD, 1/4 NPS, ANDERSON GREENWOOD, H8RC-2	3000	-	Q2730251
39	2	4"	PIPE SUPPORT, EZ LINE, 4" DOUBLE U-BOLT, MODEL# 204-FR ("D" = 1'-4 1/4")	N/A	N/A	42331213

EQUIPMENT / INSTRUMENT LIST						
ID	QTY	SIZE	DESCRIPTION	MAWP NOTE 14	MATL NOTES NOTE 4	WH #
WO#: 90659.22						
STR-9001	1	4"	STRAINER, CS, T-TYPE, CL600, 4 NPS, BW x BW, 0.237 WT, WEAMCO	1480	N/A	Q7435312
FE-10188	1	1"	METER, CL600, RFWN, MICRO MOTION, CMF-SERIES, CORIOLIS, MODEL CMF100M330N2BAZZZ	1480	14	SO
PV-9001	1	1"	REGULATOR, CL600, 1 NPS, RF x RF, FISHER EZHSO	1480	N/A	SO
PV-9002	4	1"	REGULATOR, CL600, 1 NPS, RF x RF, FISHER EZR, W/ INLET STRAINER (161EB PLOT TO BE REMOVED)	1480	N/A	42416951
PV-9004						
PV-9005						
PC-9001	5	1/4"	PLOT, MOONEY SERIES 20 BRASS PLOT FR-7, (25-90 PSIG) BLUE SPRING (BACK PRESSURE MODE) (PRESSURE LIMITS [PSIG]: INLET = 1500, LOADING = 1500, OUTLET = 1500, SENSING = 1000, SET = 450)	1500	N/A	Q7420102
PC-9002						
PC-9003						
PC-9004						
PC-9005						
PSV-9001	1	1"	REGULATOR, CL600, 1 NPS, RF x RF, FISHER EZR, W/ INLET STRAINER (161EB PLOT TO BE REMOVED)	1480	N/A	42416951
FBH-4000	1	4"	HEATER, CL600, SKID MOUNTED, J.W. WILLIAMS 1.0 MMBTU / HR INDIRECT GAS HEATER	1480	N/A	SO

PRESSURE PIPING NOTE 6								
ITEM #	SIZE	DESCRIPTION	FOOTAGE	O.D.	SMYS	W.T.	MAWP NOTE 14	WH #
WO#: 90659.22								
P1	4"	PIPE, CS, BARE, 4.500 OD, 0.237 WT, X52, A193L PS2, ERW	39'	4.500"	52,000	0.237"	2738	Q0104003
P2	4"	PIPE, CS, FBE CTG, 4.500 OD, 0.237 WT, X52, A193L PS2, ERW	501'	4.500"	52,000	0.237"	2738	Q0204007
P3	2"	PIPE, CS, BARE, 2.375 OD, 0.218 WT, GR-B, ASTM A106, SMLS	4'	2.375"	35,000	0.218"	3212	Q0102031
P4	1"	PIPE, CS, BARE, 1.315 OD, 0.179 WT, GR-B, ASTM A106, SMLS	6'	1.315"	35,000	0.179"	4764	Q0101007

PROJECT CONTACTS			
PROJECT MANAGER:	Blake Haslam		(801) 560-9960
PROJECT ENGINEER:	Blake Haslam		(801) 560-9960
CATHODIC PROTECTION:	Kelly Facer		(801) 201-5528
MEASUREMENT & CONTROLS:	JACE ANDERSON		(801) 243-8302
HP SURVEYOR:	ENOCH CLEMENCE		(801) 793-7950
LEAD INSPECTOR:	JASON SMITH		(435) 393-5024
HP SUPERVISOR:	Kevin Mulvey		(801) 592-5808
RIGHT OF WAY AGENT:	N/A		
ACCOUNT MANAGEMENT / BUSINESS DEVELOPMENT:	STEPHAN RYDER		(330) 813-8805
ENVIRONMENTAL COMPLIANCE:	Carrie Christofferson		(385) 910-7749
SAFETY:			

- ### NOTES
- (ALL NOTES MAY OR MAY NOT PERTAIN TO THIS DRAWING)
- BOLD LINES AND/OR CLOUDS REPRESENT NEW PIPING.
 - Ø IDENTIFIES GUIDE BARRED TEES.
 - ANY MATERIAL SUBSTITUTION OR FIELD DESIGN CHANGES REQUIRE ENGINEERING APPROVAL.
 - SEE SPECIFICATION 9-00-01 FOR MATERIAL NOTE NUMBERS LISTED.
 - LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
 - CORROSION CONTROL: BURIED FABRICATION PIPING SHALL BE CLEANED AND COATED PER SP 2-13-10. THE RECOMMENDED FIELD APPLIED COATING FOR BURIED FBE PIPING IS 2-PART EPOXY AND FOR BURIED ARO PIPING POWERCRETE J APPLIED COATING. COATING TRANSITIONS ARE TO BE APPLIED PER ENB-TYP-GEN-PIP-001. SOIL TO AIR INTERFACES (TRANSITIONS FROM BELOW TO ABOVE GROUND) REQUIRE AN OVERCOAT OF TRENTON WAX TAPE NUMBER 2 APPLIED PER SP 2-13-11. ALL BURIED PIPING TO BE CATHODICALLY PROTECTED WITHIN ONE YEAR OF INSTALLATION. ABOVE GROUND PIPING IS TO BE COATED PER SP 2-13-11. CONSULT CORROSION ENGINEERING FOR PIPELINE COATING EQUIVALENTS.
 - FIELD VERIFY WALL THICKNESS AT ALL TIE-IN LOCATIONS.
 - ALL VALVES MUST HAVE APPROPRIATE LOCKING DEVICES.
 - BALL VALVES - REMOVE ALL MANUFACTURER VENT PLUGS AND REPLACE WITH SMALL BALL VALVES.
 - ALL CHECK VALVES TO BE VENTED.
 - INSULATE GAUGE AND CONTROL LINES, RELIEF STACK, SUPPORT BRACKETS, ETC.
 - ENSURE INSULATION POINTS ARE NOT SHORTED /BYPASSED THROUGH FUEL GAS PIPING, ELECTRICAL CONDUIT, ETC. THAT ARE ATTACHED TO THE PIPE SUPPORTS.
 - ALL PIPE SHALL HAVE MILL TEST REPORTS (MTR'S) AS DEFINED WITHIN STANDARD PRACTICE 3-95-01.
 - THE FORMULA USED TO CALCULATE THE MAWP FOR ALL STEEL PIPE AND NON-RATED FITTINGS IS P=(2S/D) x F x E x T, WHERE F=0.5 FOR A CLASS 3 LOCATION, E=1, AND T=1.
 - 2" IN SERVICE FILLET WELDS SHALL RECEIVE 100% NDE.
 - PIPE IS DESIGNED TO WITHSTAND ANTICIPATED EXTERNAL PRESSURES AND LOADS FOLLOWING SP 1-01-02.



ISOMETRIC VIEW



CALL THREE BUSINESS DAYS BEFORE YOU DIG TO HAVE UTILITIES LOCATED 811 OR 1-800-862-4111

REFERENCE DRAWINGS		WORK ORDERS		REVISIONS			ENGINEERING RECORD			
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY
ENB-G-MNTCLO-PIP-001	0	PIPING AND INSTRUMENTATION DIAGRAM	90659.22	INSTALL GATE STATION WITH REGULATION, METERING, AND ODORANT	B	ISSUE FOR OVERSIGHT REVIEW	1-29-25	BJP	DGB	B POWELL
ENB-STD-GEN-CCS-002	3	STANDARD DRAWING - EZ LINE PIPE SUPPORTS								CHECKED BY: D BROX
ENB-STD-GEN-CCS-010	0	STANDARD DRAWING - CHAIN-LINK FENCING								PROJECT ENGR: B HASLAM
ENB-STD-COR-COR-009	2	STANDARD DRAWING - CATHODIC PIPELINE CROSSING								SURVEYOR: E CLEMENCE
ENB-STD-COR-COR-011	4	STANDARD DRAWING - TEST STATION WITH ANODES								ENGR MNGR: J MCGEE
										CONSTR MNGR: D FRANCIS
										MEAS & CTRLS: J ANDERSON
										AUTOM ENGR: J DONE

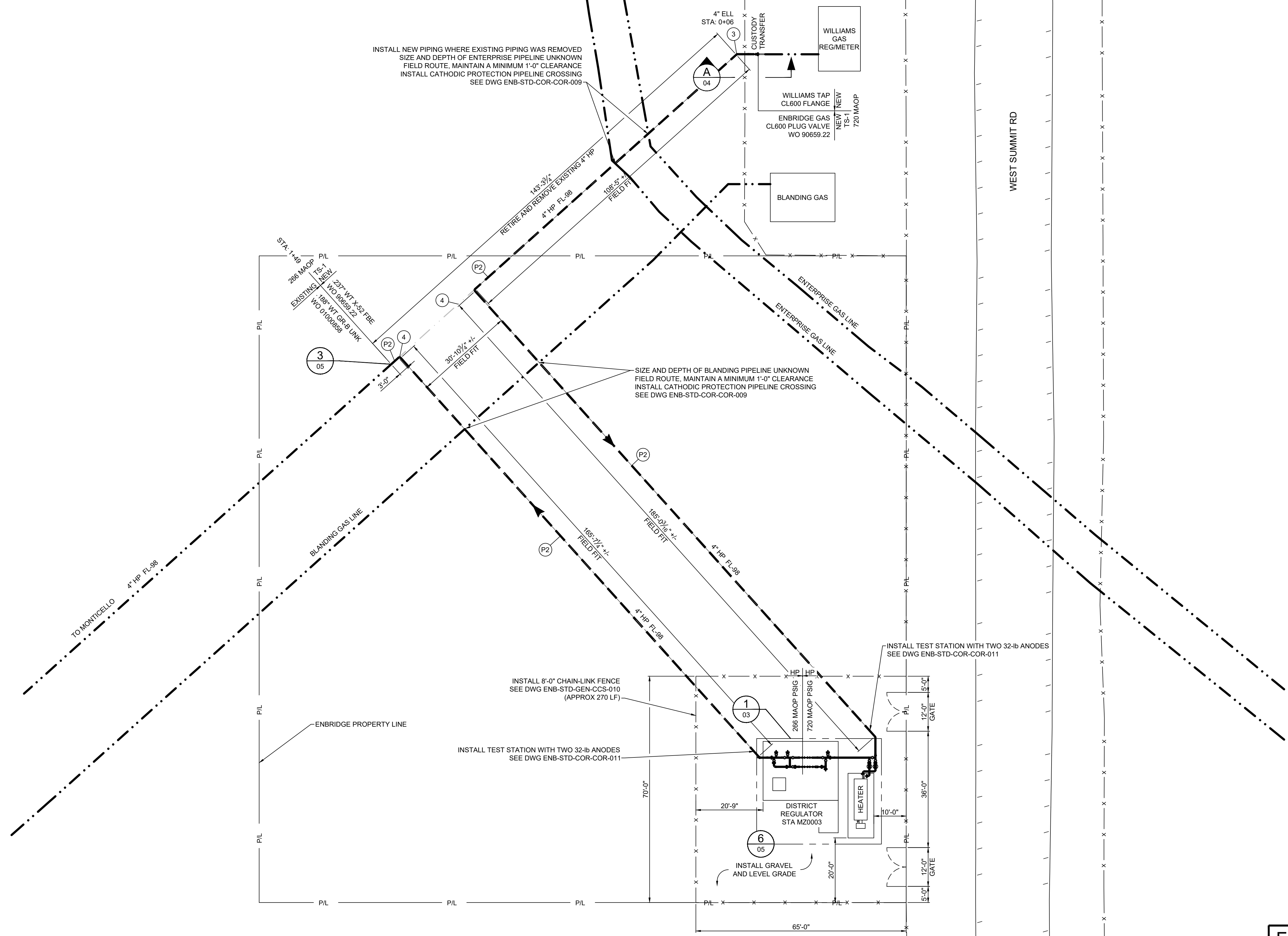
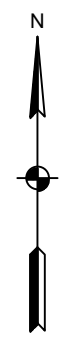


SECTION: 25	T32S	R 25E
ELEVATION: 6890'		
LAT: 37.97262	LONG: -109.11810	
SCALE: NONE		

PRELIMINARY FOR OVERSIGHT REVIEW

LINE NUMBER: FL- 98		
FACILITY: MONTICELLO GATE STATION MZ0003		
TITLE: 1"x1" REGULATOR STATION, HEATER, AND ODORANT		
DESCRIPTION: VICINITY MAP, ISOMETRIC VIEW, AND MATERIALS		
ADDRESS: COUNTRY RD 329 (HYDE RD) & WEST SUMMIT RD		

CITY: MONTICELLO	COUNTY: SAN JUAN	STATE: UTAH
DRAWING NUMBER: ENB-G-MNTCLO-PIP-001		
SHEET: 1 OF 5	REVISION: B	



INSTALL NEW PIPING WHERE EXISTING PIPING WAS REMOVED
 SIZE AND DEPTH OF ENTERPRISE PIPELINE UNKNOWN
 FIELD ROUTE. MAINTAIN A MINIMUM 1'-0" CLEARANCE
 INSTALL CATHODIC PROTECTION PIPELINE CROSSING
 SEE DWG ENB-STD-COR-COR-009

SIZE AND DEPTH OF BLANDING PIPELINE UNKNOWN
 FIELD ROUTE. MAINTAIN A MINIMUM 1'-0" CLEARANCE
 INSTALL CATHODIC PROTECTION PIPELINE CROSSING
 SEE DWG ENB-STD-COR-COR-009

INSTALL TEST STATION WITH TWO 32-lb ANODES
 SEE DWG ENB-STD-COR-COR-011

INSTALL 8'-0" CHAIN-LINK FENCE
 SEE DWG ENB-STD-GEN-CCS-010
 (APPROX 270 LF)

INSTALL TEST STATION WITH TWO 32-lb ANODES
 SEE DWG ENB-STD-COR-COR-011

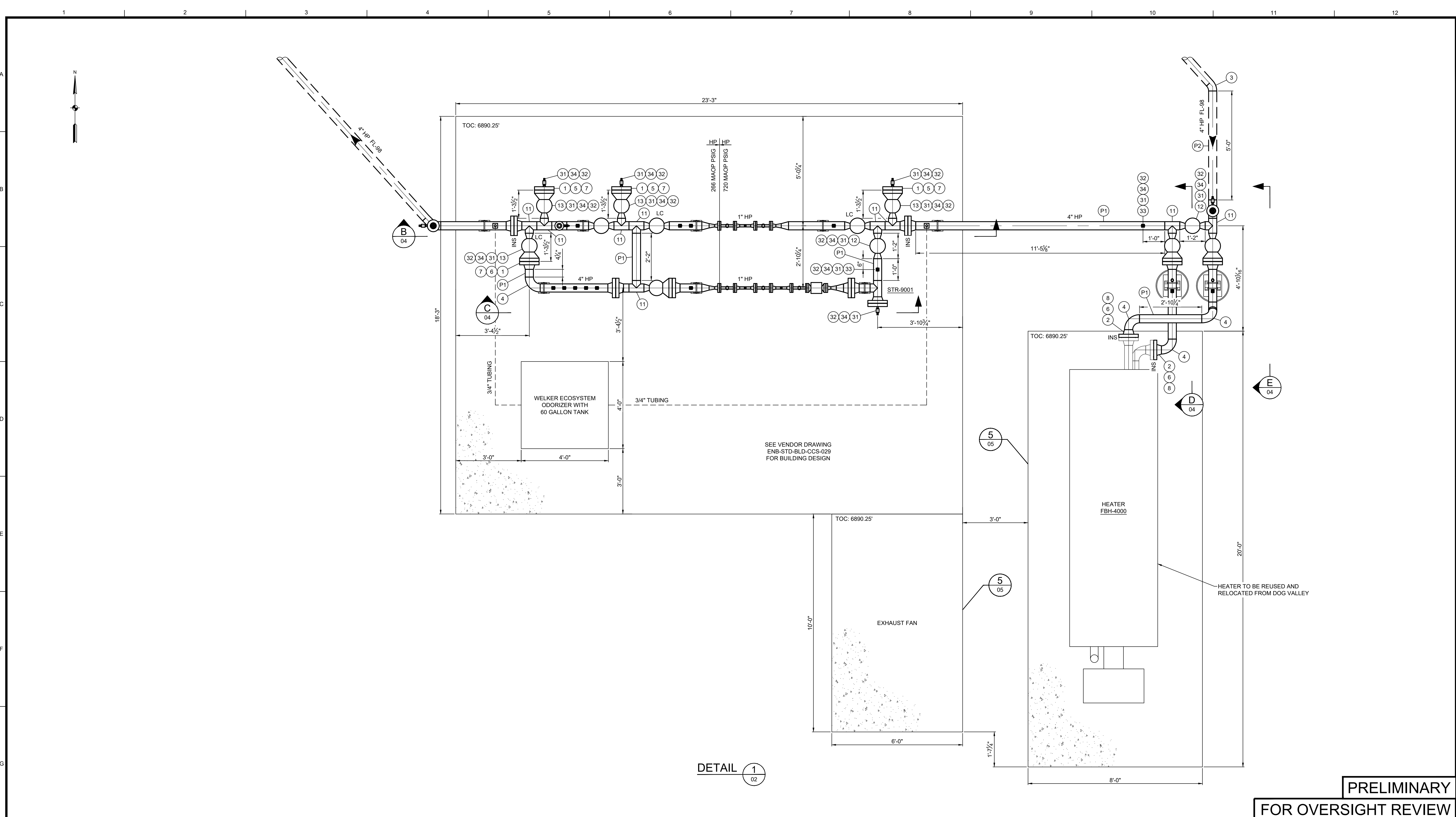
PRELIMINARY
FOR OVERSIGHT REVIEW

DRAWING NUMBER		REV		DRAWING DESCRIPTION		WO NUMBER		DESCRIPTION		NO		DESCRIPTION		DATE		BY		CHECK		ENGINEERING RECORD	
ENB-G-MNTCLO-PIP-001	0	PIPING AND INSTRUMENTATION DIAGRAM	90659.22	INSTALL GATE STATION WITH REGULATION, METERING, AND ODORANT	B	ISSUE FOR OVERSIGHT REVIEW	1-29-25	BJP	DGB	DRAWN BY: B POWELL											
ENB-STD-GEN-CCS-002	3	STANDARD DRAWING - EZ LINE PIPE SUPPORTS								CHECKED BY: D BROX											
ENB-STD-GEN-CCS-010	0	STANDARD DRAWING - CHAIN-LINK FENCING								PROJECT ENGR: B HASLAM											
ENB-STD-COR-COR-009	2	STANDARD DRAWING - CATHODIC PIPELINE CROSSING								SURVEYOR: E CLEMENCE											
ENB-STD-COR-COR-011	4	STANDARD DRAWING - TEST STATION WITH ANODES								ENGR MNGR: J MCGEE											
THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.											MEAS & CTRLS: J ANDERSON										
											AUTOM ENGR: J DONE										

REFERENCE DRAWINGS		WORK ORDERS		REVISIONS				ENGINEERING RECORD								
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY	CHECKED BY	PROJECT ENGR	SURVEYOR	ENGR MNGR	CONSTR MNGR	MEAS & CTRLS	AUTOM ENGR

SECTION: 25 T32S R25E
 ELEVATION: 6890'
 LAT: 37.97262 LONG: -109.11810
 SCALE: 1/16" = 1'-0"

LINE NUMBER: FL-98		
FACILITY: MONTICELLO GATE STATION MZ0003		
TITLE: 1"x1" REGULATOR STATION, HEATER, AND ODORANT PLAN VIEW		
DESCRIPTION: COUNTRY RD 329 (HYDE RD) & WEST SUMMIT RD		
CITY: MONTICELLO	COUNTY: SAN JUAN	STATE: UTAH
DRAWING NUMBER: ENB-G-MNTCLO-PIP-001		SHEET: 2 OF 5
		REVISION: B



DETAIL 1
02

PRELIMINARY
FOR OVERSIGHT REVIEW

REFERENCE DRAWINGS		WORK ORDERS		REVISIONS				ENGINEERING RECORD	
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK
ENB-G-MNTCLO-PIP-001	0	PIPING AND INSTRUMENTATION DIAGRAM	90659.22	INSTALL GATE STATION WITH REGULATION, METERING, AND ODORANT	B	ISSUE FOR OVERSIGHT REVIEW	1-29-25	BJP	DGB
ENB-STD-GEN-CCS-002	3	STANDARD DRAWING - EZ LINE PIPE SUPPORTS							
ENB-STD-GEN-CCS-010	0	STANDARD DRAWING - CHAIN-LINK FENCING							
ENB-STD-COR-COR-009	2	STANDARD DRAWING - CATHODIC PIPELINE CROSSING							
ENB-STD-COR-COR-011	4	STANDARD DRAWING - TEST STATION WITH ANODES							

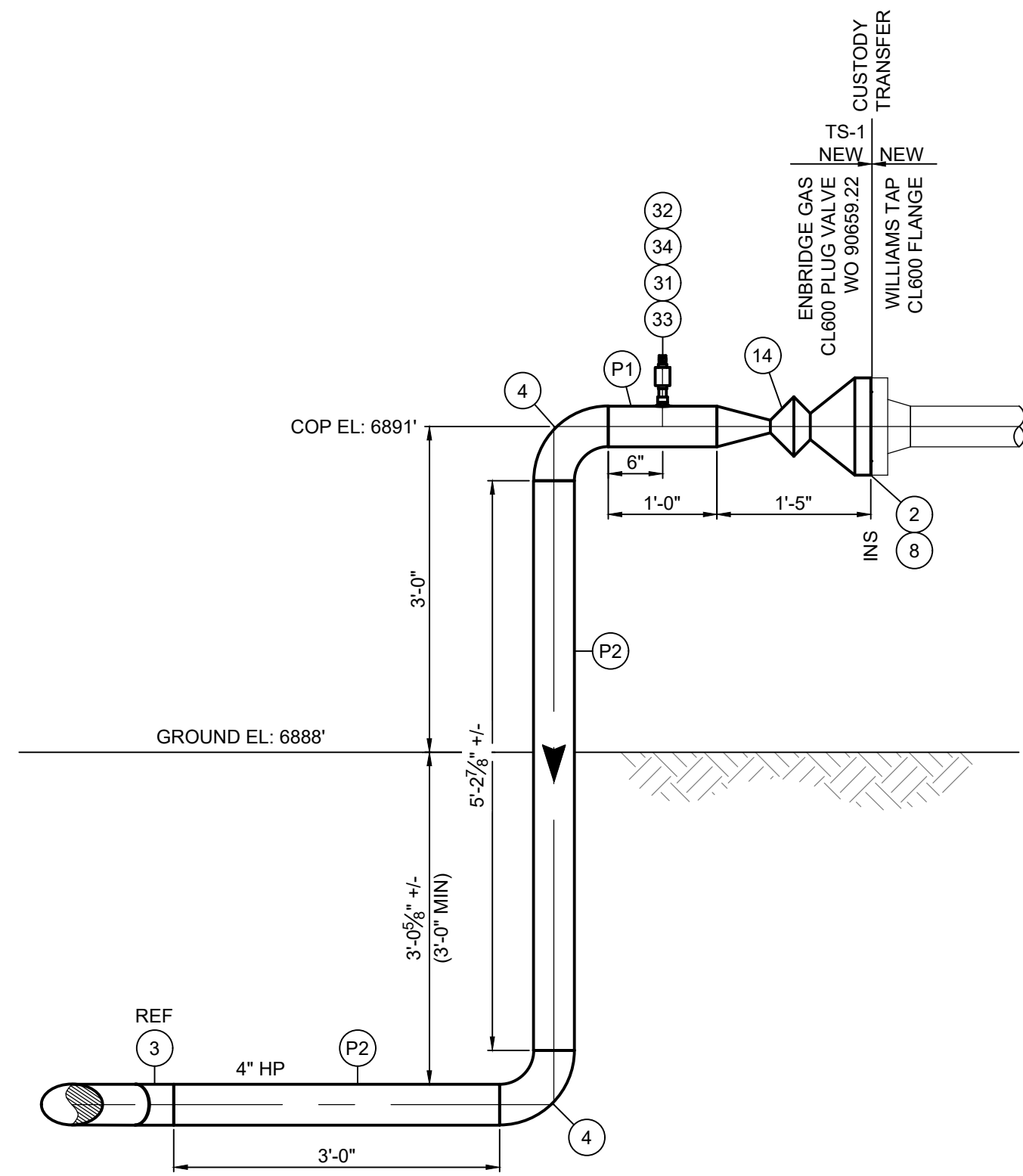
DRAWN BY: B POWELL		CHECKED BY: D BROX		PROJECT ENGR: B HASLAM		SURVEYOR: E CLEMENCE		ENGR MNGR: J MCGEE		CONSTR MNGR: D FRANCIS		MEAS & CTRLS: J ANDERSON		AUTOM ENGR: J DONE	
SECTION: 25	T32S	R25E		CITY: MONTICELLO		COUNTY: SAN JUAN		STATE: UTAH		DRAWING NUMBER: ENB-G-MNTCLO-PIP-001		SHEET: 3 OF 5		REVISION: B	

SECTION: 25 T32S R25E
ELEVATION: 6890'
LAT: 37.97262 LONG: -109.11810
SCALE: 1/2" = 1'-0"

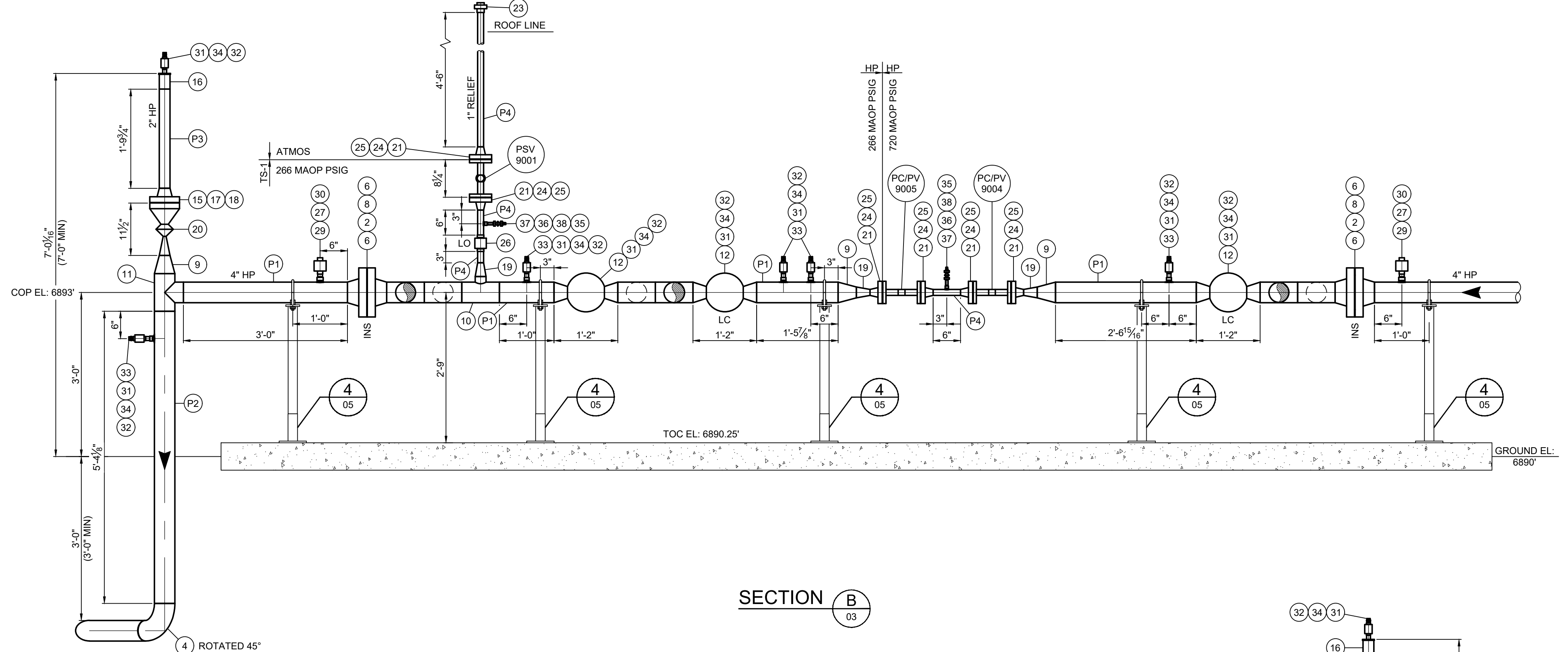
LINE NUMBER: FL-98		FACILITY: MONTICELLO GATE STATION MZ0003		TITLE: 1"x1" REGULATOR STATION, HEATER, AND ODORANT PIPING PLAN DETAIL		DESCRIPTION: COUNTRY RD 329 (HYDE RD) & WEST SUMMIT RD	
CITY: MONTICELLO		COUNTY: SAN JUAN		STATE: UTAH		DRAWING NUMBER: ENB-G-MNTCLO-PIP-001	
SHEET: 3 OF 5		REVISION: B					

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.

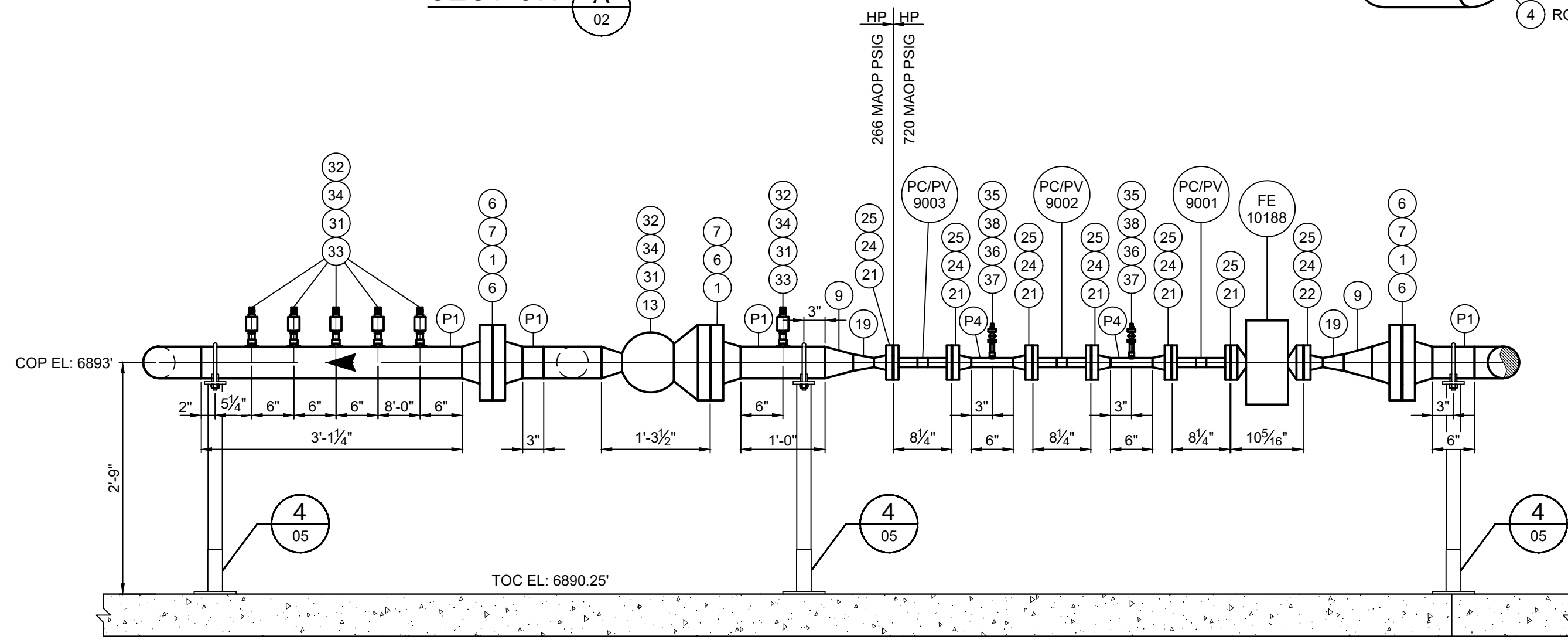
ENBRIDGE GAS-ANS-1.D



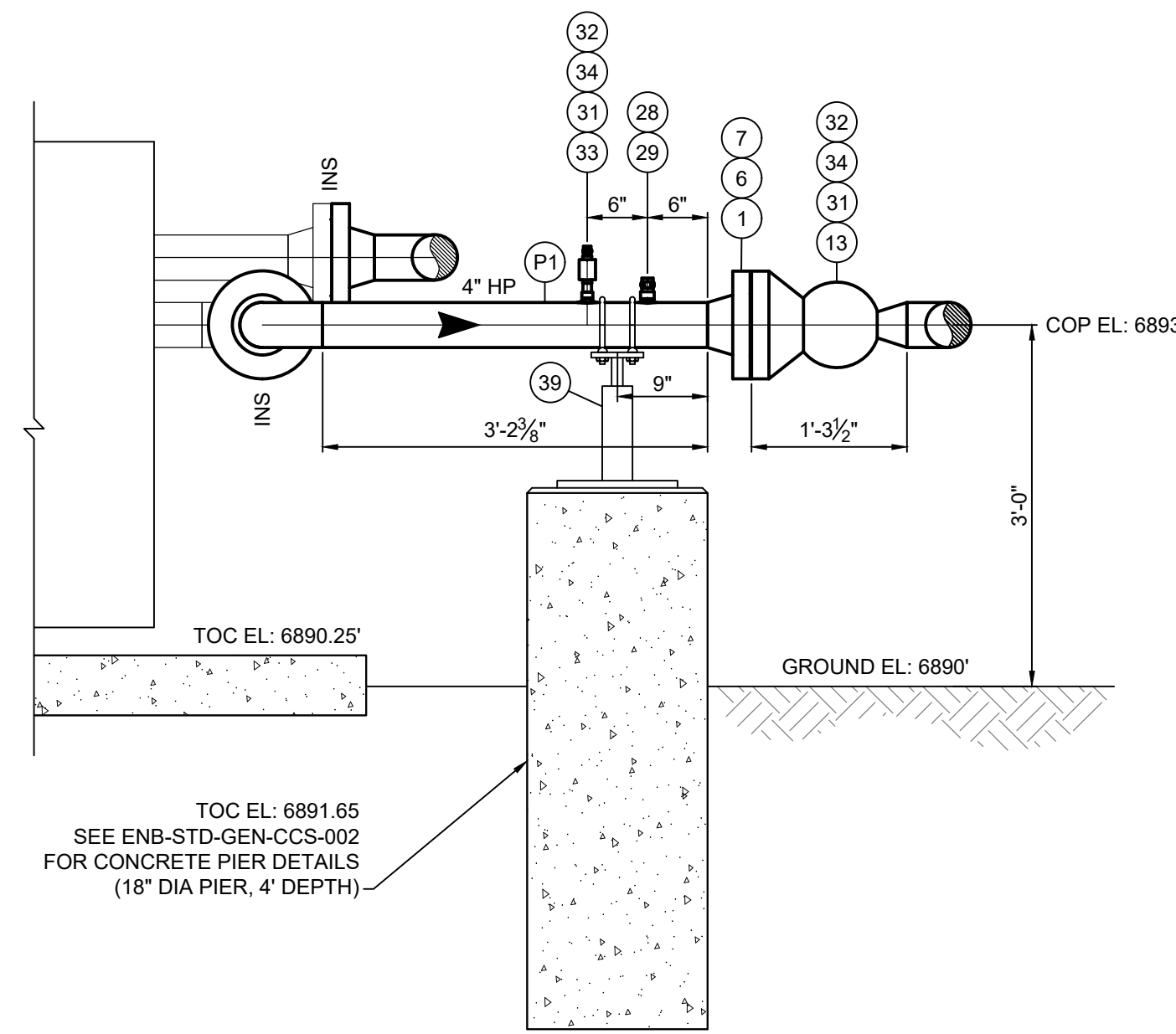
SECTION A
02



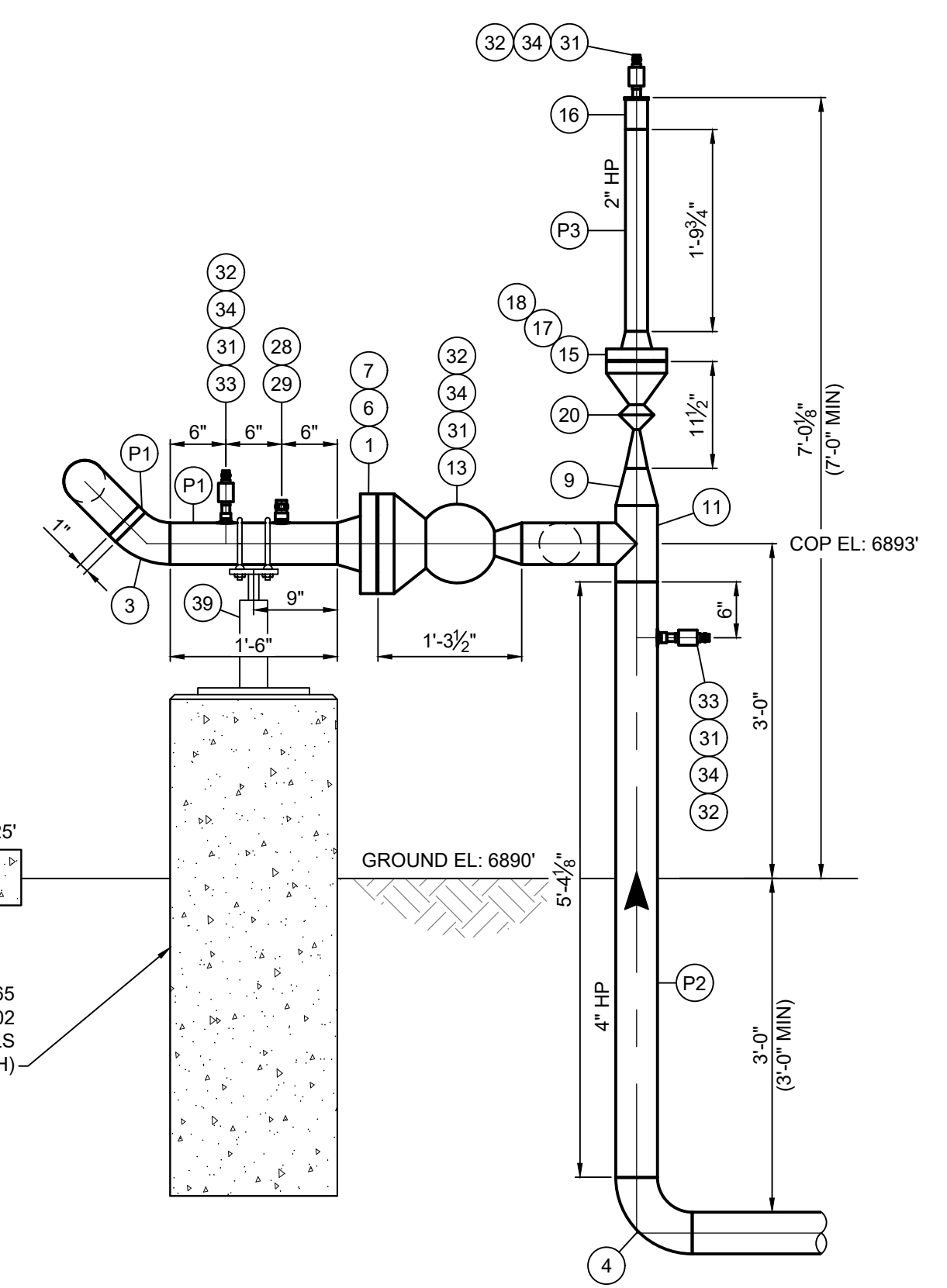
SECTION B
03



SECTION C
03



SECTION D
03



SECTION E
03

PRELIMINARY FOR OVERSIGHT REVIEW

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD	
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY: B POWELL
ENB-G-MNTCLO-PIP-001	0	PIPING AND INSTRUMENTATION DIAGRAM	90659.22	INSTALL GATE STATION WITH REGULATION, METERING, AND ODORANT	B	ISSUE FOR OVERSIGHT REVIEW	1-29-25	BJP	DGB	CHECKED BY: D BROX
ENB-STD-GEN-CCS-002	3	STANDARD DRAWING - EZ LINE PIPE SUPPORTS								PROJECT ENGR: B HASLAM
ENB-STD-GEN-CCS-010	0	STANDARD DRAWING - CHAIN-LINK FENCING								SURVEYOR: E CLEMENCE
ENB-STD-COR-COR-009	2	STANDARD DRAWING - CATHODIC PIPELINE CROSSING								ENGR MNGR: J MCGEE
ENB-STD-COR-COR-011	4	STANDARD DRAWING - TEST STATION WITH ANODES								CONSTR MNGR: D FRANCIS
										MEAS & CTRLS: J ANDERSON
										AUTOM ENGR: J DONE

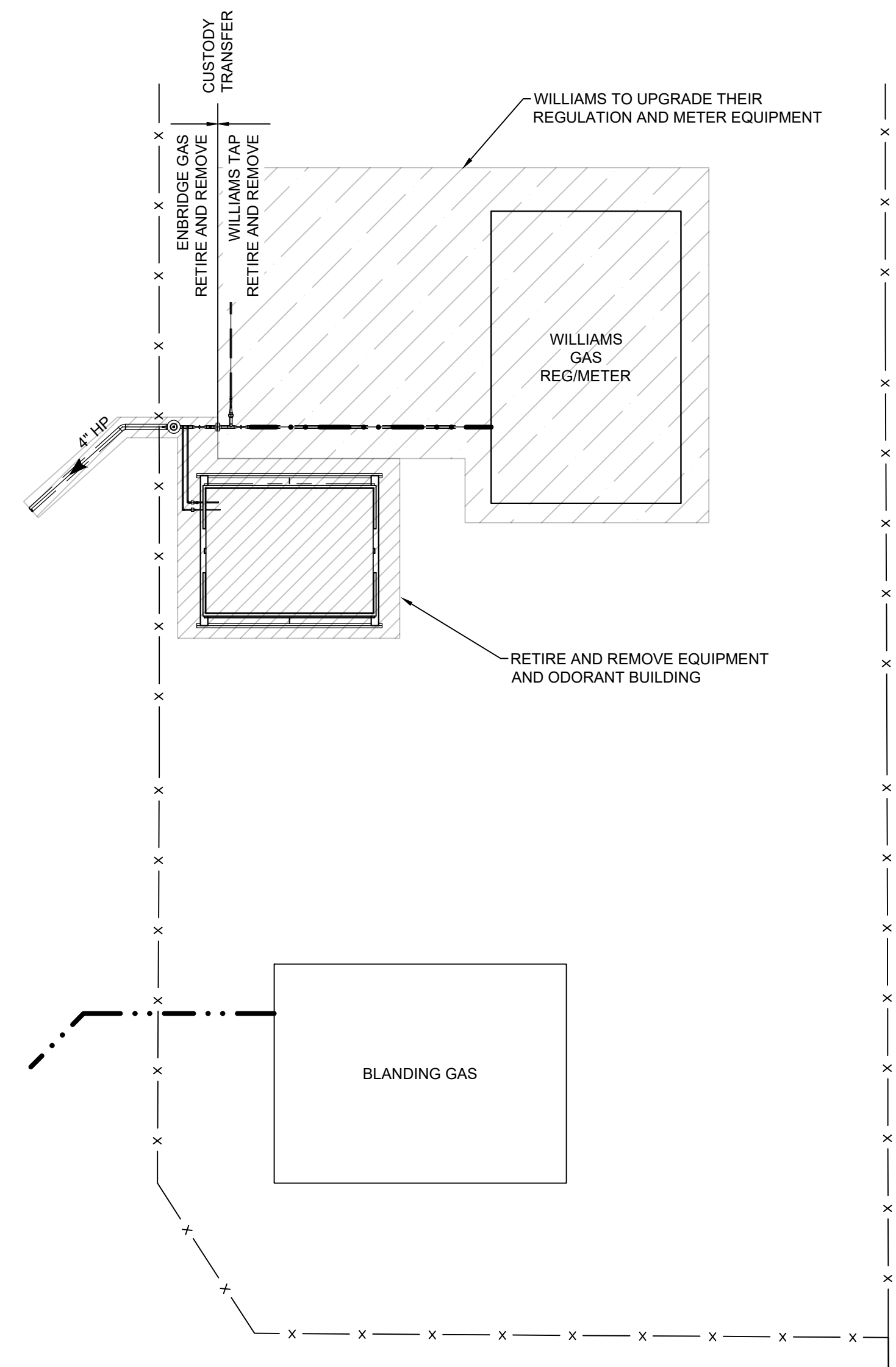
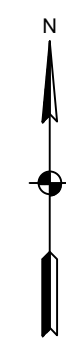
THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.



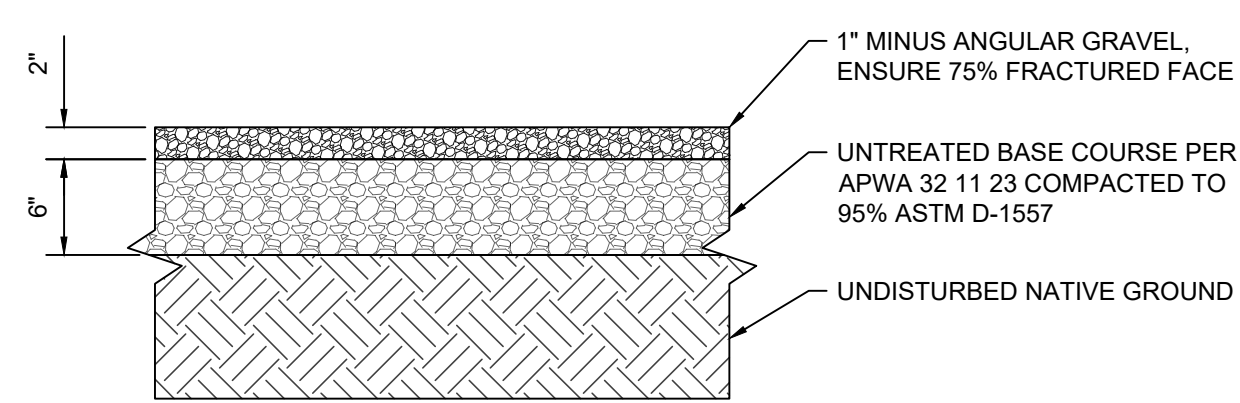
SECTION: 25 T32S R25E
ELEVATION: 6890'
LAT: 37.97262 LONG: -109.11810
SCALE: 3/4" = 1'-0"

LINE NUMBER:	FL- 98		
FACILITY:	MONTICELLO GATE STATION MZ0003		
TITLE:	1"x1" REGULATOR STATION, HEATER, AND ODORANT SECTION VIEWS		
DESCRIPTION:	COUNTRY RD 329 (HYDE RD) & WEST SUMMIT RD		
CITY:	COUNTY:	STATE:	
MONTICELLO	SAN JUAN	UTAH	
DRAWING NUMBER			
ENB-G-MNTCLO-PIP-001			REVISION
			B

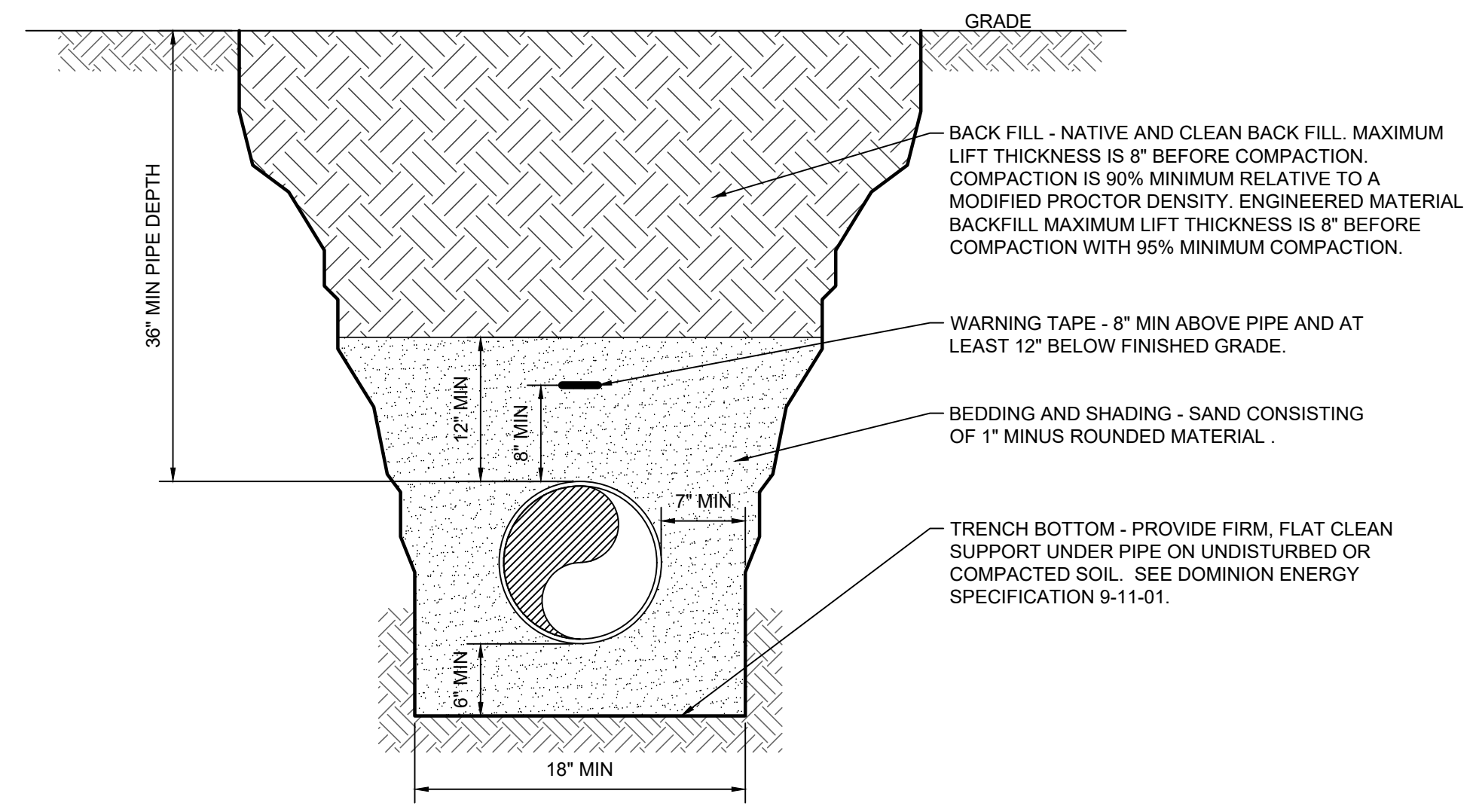
ENBRIDGE GAS-ANSLD



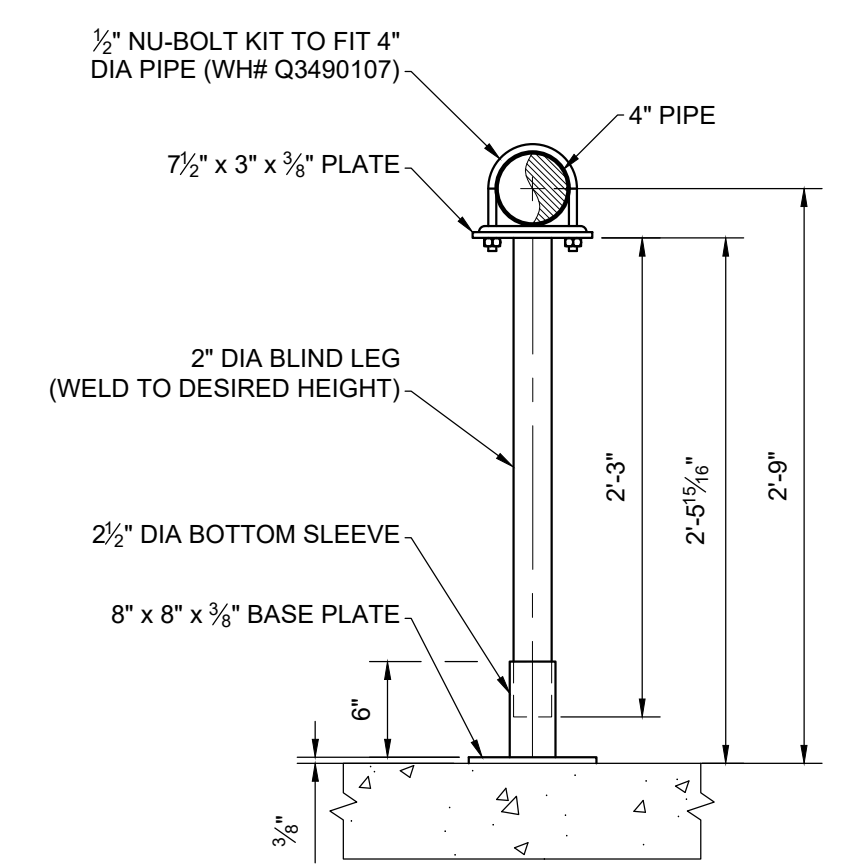
RETIREMENT PLAN
SCALE: 1/8" = 1'-0"



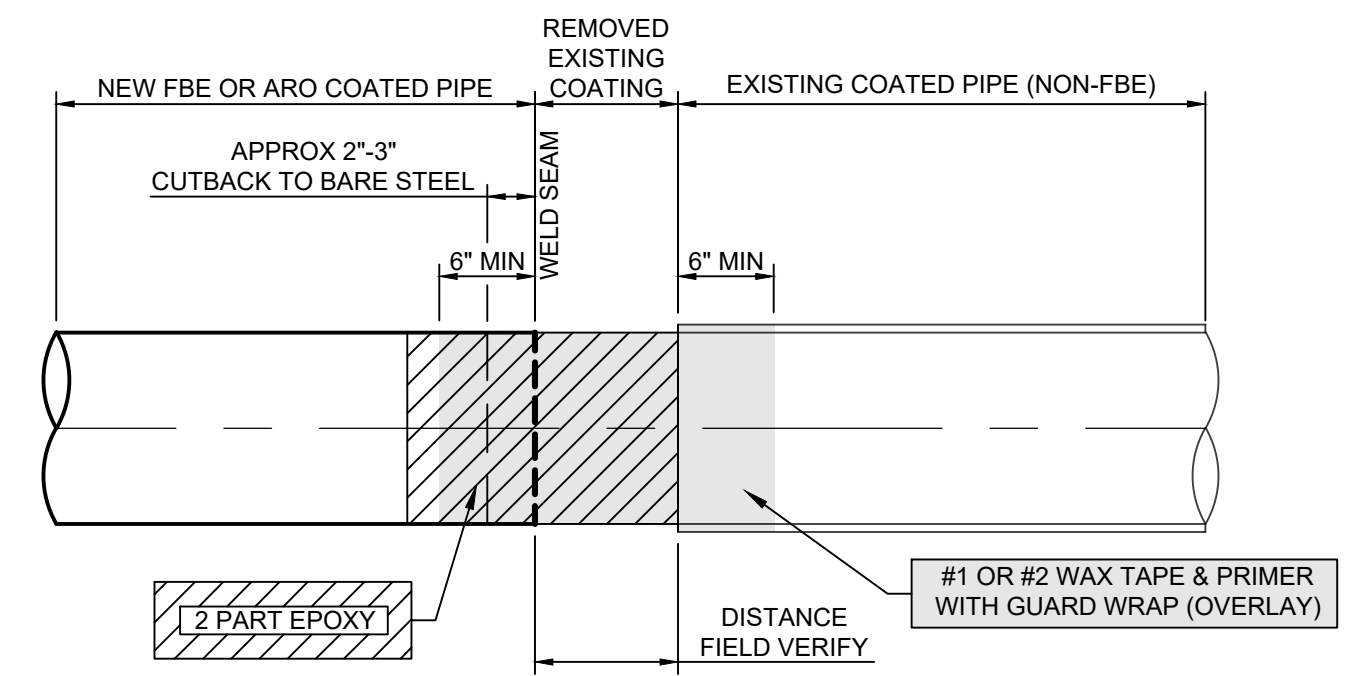
TYPICAL GRAVEL DETAIL
SCALE: NONE



GRANULAR BACK FILL TYPICAL TRENCH DETAIL
SCALE: NONE

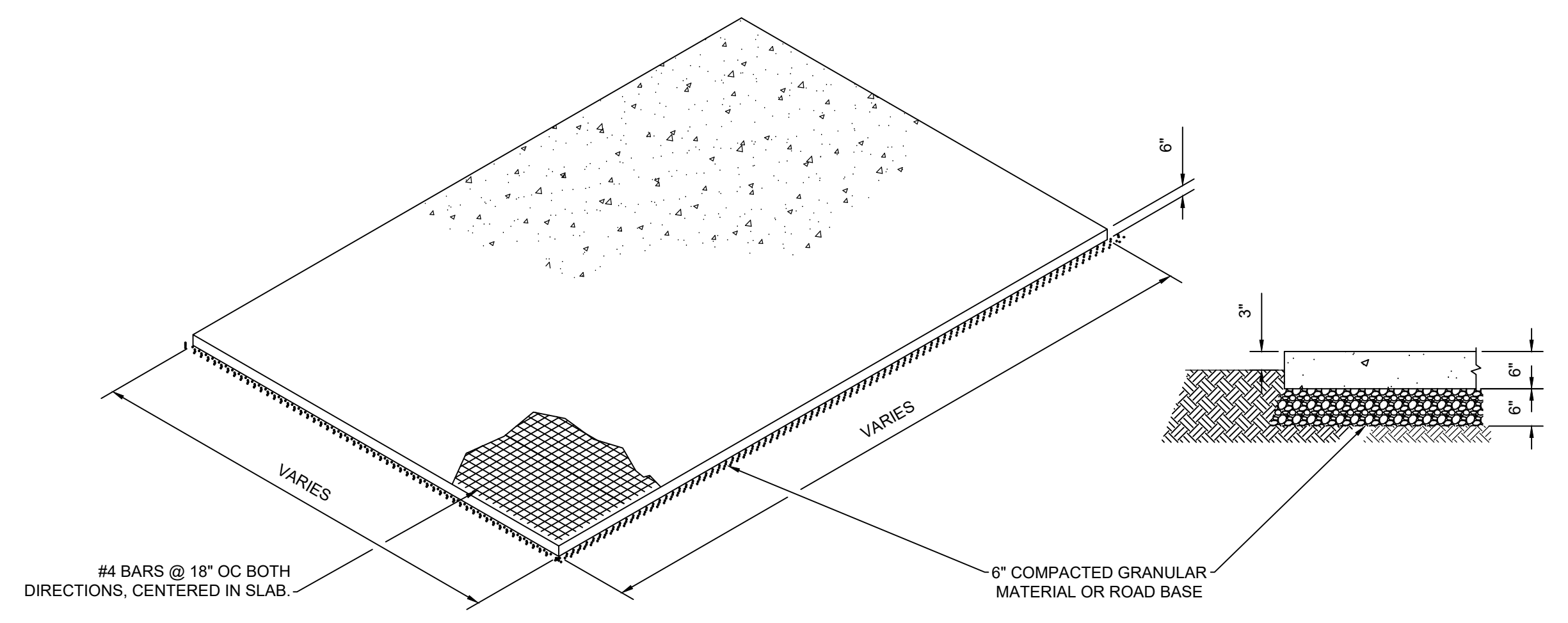


4" PIPE SUPPORT DETAIL
(8 REQUIRED) SCALE: NONE



COATING DETAIL
FBE OR ARO TO NON-FBE PIPE (NOT FOR BORE APPLICATIONS) SCALE: NONE

NOTE: WHEN ARO COATED PIPE IS USED, THE 2 PART EPOXY COATING THICKNESS DURING SINGLE APPLICATION SHALL NOT EXCEED 40 MILS. BUILD UP TO MAX 70 MILS, WITH TARGET OF 60 MILS.



TYPICAL CONCRETE PAD DETAIL
SCALE: NONE

PRELIMINARY
FOR OVERSIGHT REVIEW

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD	
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY: B POWELL
ENB-G-MNTCLO-PIP-001	0	PIPING AND INSTRUMENTATION DIAGRAM	90659.22	INSTALL GATE STATION WITH REGULATION, METERING, AND ODORANT	B	ISSUE FOR OVERSIGHT REVIEW	1-29-25	BJP	DGB	CHECKED BY: D BROX
ENB-STD-GEN-CCS-002	3	STANDARD DRAWING - EZ LINE PIPE SUPPORTS								PROJECT ENGR: B HASLAM
ENB-STD-GEN-CCS-010	0	STANDARD DRAWING - CHAIN-LINK FENCING								SURVEYOR: E CLEMENCE
ENB-STD-COR-COR-009	2	STANDARD DRAWING - CATHODIC PIPELINE CROSSING								ENGR MNGR: J MCGEE
ENB-STD-COR-COR-011	4	STANDARD DRAWING - TEST STATION WITH ANODES								CONSTR MNGR: D FRANCIS
										MEAS & CTRLS: J ANDERSON
										AUTOM ENGR: J DONE

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.			SECTION: 25 T32S R25E ELEVATION: 6890' LAT: 37.97262 LONG: -109.11810 SCALE: AS SHOWN	LINE NUMBER: FL- 98 FACILITY: MONTICELLO GATE STATION MZ0003 TITLE: 1"x1" REGULATOR STATION, HEATER, AND ODORANT RETIREMENT PLAN AND DETAILS DESCRIPTION: COUNTRY RD 329 (HYDE RD) & WEST SUMMIT RD ADDRESS:	CITY: MONTICELLO COUNTY: SAN JUAN STATE: UTAH DRAWING NUMBER: ENB-G-MNTCLO-PIP-001 SHEET: 5 OF 5 REVISION: B
---	--	--	--	--	---

ENBRIDGE GAS-ANL-D

GENERAL STRUCTURAL NOTES

1. 2021 International Building Code Design Criteria (ASCE 7-16)

- A. Total Roof Dead Load 5 psf
- Roof Dead Load 4 psf
- Roof Collateral Load 1 psf
- Roof Solar Panel Dead Load 0 psf
- B. Floor Dead Load N.A. psf
- C. Roof Live Load 20 psf
- D. Floor Live Load N.A. psf
- E. Roof Snow Load Data
 - Ground Snow Load P_g 21.2 psf
 - Flat-roof Snow Load P_f 21.2 psf
 - Slope Factor C_s 1.0
 - Exposure Factor C_e 1.0
 - Importance Factor I_s 1.2
 - Thermal Factor C_t 1.2
- F. Rainfall Intensity 1.5 Inches Per Hour
- G. Wind Design Data
 - Ultimate Design Wind Speed V_{ult} 114 mph
 - Nominal Design Wind Speed V_{nom} 88 mph
 - Risk Category IV
 - Exposure C
- H. Earthquake Design Data
 - Risk Category IV
 - Importance Factor I_e 1.5
 - Mapped Spectral Parameters
 - S_s 1.535g
 - S_1 0.543g
 - Site Class D (Default)
 - Design Spectral Parameters
 - S_{DS} 1.228g
 - S_{D1} 0.636g
 - Seismic Design Category D
 - Seismic Force Resisting System Steel ordinary moment frames
 - Seismic Response Coefficient C_s 0.527
 - Response Modification Factor R 3.5
 - Analysis Procedure Equivalent Lateral Force Procedure
 - Frost Depth 2'-6"

2. Structural Steel

- A. Materials:
 - i. Angles, Plates, and Channels: ASTM A36 ($F_y = 36$ k.s.i.)
 - ii. Wide Flanges: ASTM A992 ($F_y = 50$ k.s.i.)
 - iii. Tubes (HSS): ASTM A500, Grade B ($F_y = 46$ k.s.i.)
 - iv. Pipes: ASTM A53, Grade B ($F_y = 35$ k.s.i.)
- B. Fabrication and construction shall comply with the latest edition of the following Codes and Standards:
 - i. American Institute of Steel Construction (AISC) "Specification for Structural Steel Buildings," (360-16)
 - ii. AISC "Seismic Provisions for Structural Steel Buildings," including supplement No. 1 (341-16)
 - iii. AISC "Code of Standard Practice."
 - iv. RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
 - v. Steel Joist Institute (SJI), "Standard Specifications and Code of Standard Practice."
 - vi. American Welding Society (AWS), Structural Welding Code (specific items do not apply when they conflict with the AISC requirements).
 - vii. American Iron and Steel Institute (AISI), "Specification for the Design of Cold-Formed Steel Structural Members."
- C. Welding:
 - i. Certification of Welders: All shop and field welding shall be executed by AWS certified welders. Certification shall be considered current if dated within the past 12 months. Welders will be considered certified if they have been certified by AWS and their work records are current within every six month period thereafter as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the inspector prior to beginning work.
 - ii. Electrodes: E-70XX or as noted otherwise. E-60XX may be used for welding steel floor and roof decks.
 - iii. Minimum Welds: All intersecting steel shapes which are not bolted shall be connected by a fillet weld all around, unless noted otherwise.
 - iv. Welded reinforcing bars shall be ASTM A706 Grade 60.
- D. Bolted Connections:
 - i. Use ASTM A325N bolts for hot-rolled steel to steel (e.g. girder to column, rafter to column/ceiling plate, beam to beam, etc.) connections unless noted otherwise in the drawings. All connections shall conform to the RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts".
 - ii. A325 bolts shall be pretensioned using an acceptable method such as "Turn of the Nut" as per the RCSC Specification Section 8.2 at all 8-bolt wide flange to wide flange ridge and haunch connections only.
 - iii. All other A325 bolts shall be fully tightened to the "Snug Tight" condition

- in accordance with the RCSC Specification Section 8.1.
- E. Provide full height web stiffener plates to each side of all beams bearing on top of columns. Plate thickness shall match the thickness of the beam web except that the thickness need not exceed 1/4" unless noted otherwise on drawings.
- F. All structural steel, except plates embedded in concrete or masonry, to have one coat (min.) of gray shop primer, 1.5 mil minimum thickness.
- G. Cold Formed Girts & Purlins:
 - i. All cold formed cees, zees, and eave struts shall be MBSI standard or equal.
 - ii. All girt and purlin connection bolts shall be GR-5 or equal.
 - iii. Use 26 gage roof and wall panels with trims as required.
- J. Flange braces as shown by marks UB and FB to be 2"x2"x3/16" angle.
- K. Steel Stairs, Handrails, and Guardrails:
 - i. Design of steel stairs, handrails, and guardrails is not by Mountain View Engineering.
 - ii. All stairs, handrails, and guardrails shall comply with the requirements of the 2015 IBC unless noted otherwise in the project specifications.
 - iii. The fabricator shall be responsible for the design and certification of all steel stairs, handrails, and guardrails, including member sizes and connection details.
 - iv. See the architectural plans for all stair information including, but not limited to, stair layout, dimensions, and style.

3. Miscellaneous

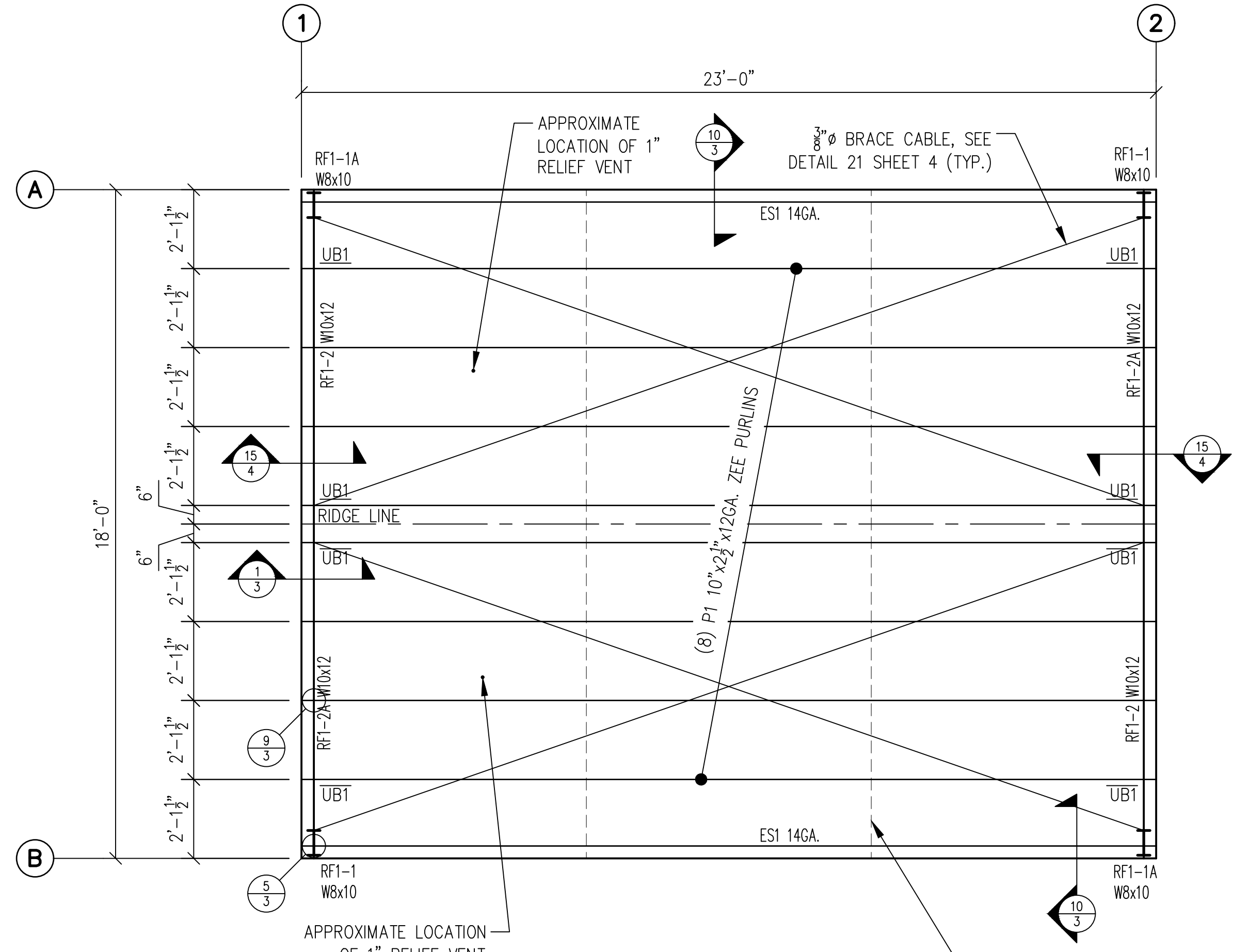
- A. The project specifications are not superseded by the General Structural Notes. Notes and details on the drawings shall take precedence over General Structural Notes and typical details. Should any of the detailed instructions shown on the plans conflict with the General Structural Notes, or with each other, the strictest provisions shall govern.
- B. It is solely the responsibility of each contractor to follow all applicable safety codes and regulations during all phases of construction. The engineer is not engaged in, and does not supervise, construction.
- C. Erection, Shoring, and Bracing:
 - i. It is the contractor's responsibility to determine erection procedures and sequence, and to ensure the stability of the building and its component parts during erection.
 - ii. It is solely the contractor's responsibility to provide any temporary shoring, bracing, guys, and tie downs that may be necessary to provide adequate vertical and lateral support. Such material is not shown on the drawings. Shoring and bracing shall remain in place until all permanent members are in place and all final connections are completed, including all roof and floor attachments.
 - iii. The building shall not be considered stable until all connections are complete.
 - iv. The engineer has no expertise in, and takes no responsibility for, construction means and methods or job site safety during construction. Approval of submittals made by the contractor which may contain information related to construction methods or safety issues, or participation in meetings where such issues might be discussed, shall not be construed as voluntary assumption by the engineer of any responsibility for safety procedures.
- D. Equipment framing loads, openings, and structure in any way related to mechanical, plumbing, or electrical requirements are shown for bidding purposes only. The contractor shall coordinate this information with the involved trades before proceeding with such portion of the work. Excess cost related to variation in these requirements shall be borne by the appropriate contractor.
- E. The contractor shall notify engineer of any variations in dimensions.
- F. The engineer is not responsible for any deviations from these plans unless such changes are authorized in writing by the engineer.

4. Special Inspections

- A. Special inspections, as required by Section 1705 of the IBC, shall be provided by an independent agency employed by the owner unless waived by the building official. The contractor shall coordinate and cooperate with the required inspections. Items requiring special inspection are:
 - i. Steel Construction (AISC 360-16 Chapter N)
 - a. Field welding (if any is used).
 - b. High-strength bolts (if any are used).
 - ii. Concrete Construction (IBC 1705.3)
 - a. Special inspections of concrete footings, grade beams, walls, and slabs are not required as per Exceptions 1, 2.3, 3, 4, & 5 to IBC Section 1705.3. Third party special inspection of reinforcing placement need only be performed where specifically required by the building official.
 - b. Special inspection of anchor rods/bolts is required per IBC Table 1705.3. Special inspection may be waived subject to the approval of the building official.
 - c. Special inspection of rebar welding is required (if any is used).
- B. Special inspector must be qualified and approved by local building department.

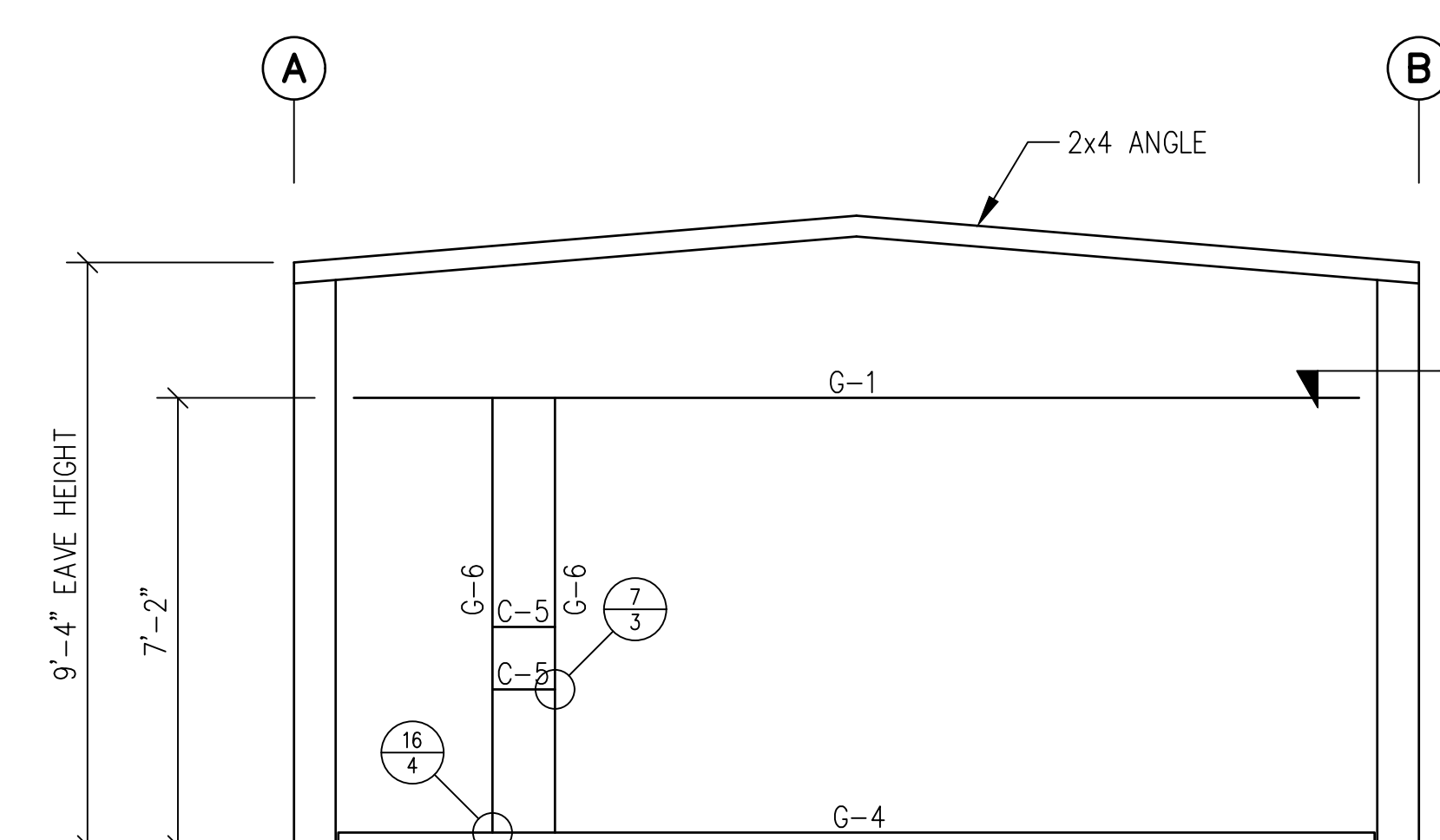
NOTE: ALL GIRTS TO BE 8" 16 GAGE ZEES OR CEES UNLESS OTHERWISE NOTED.

PAINT COLOR FOR ROOF, WALLS AND TRIMS WILL BE MBSI SADDLE TAN.



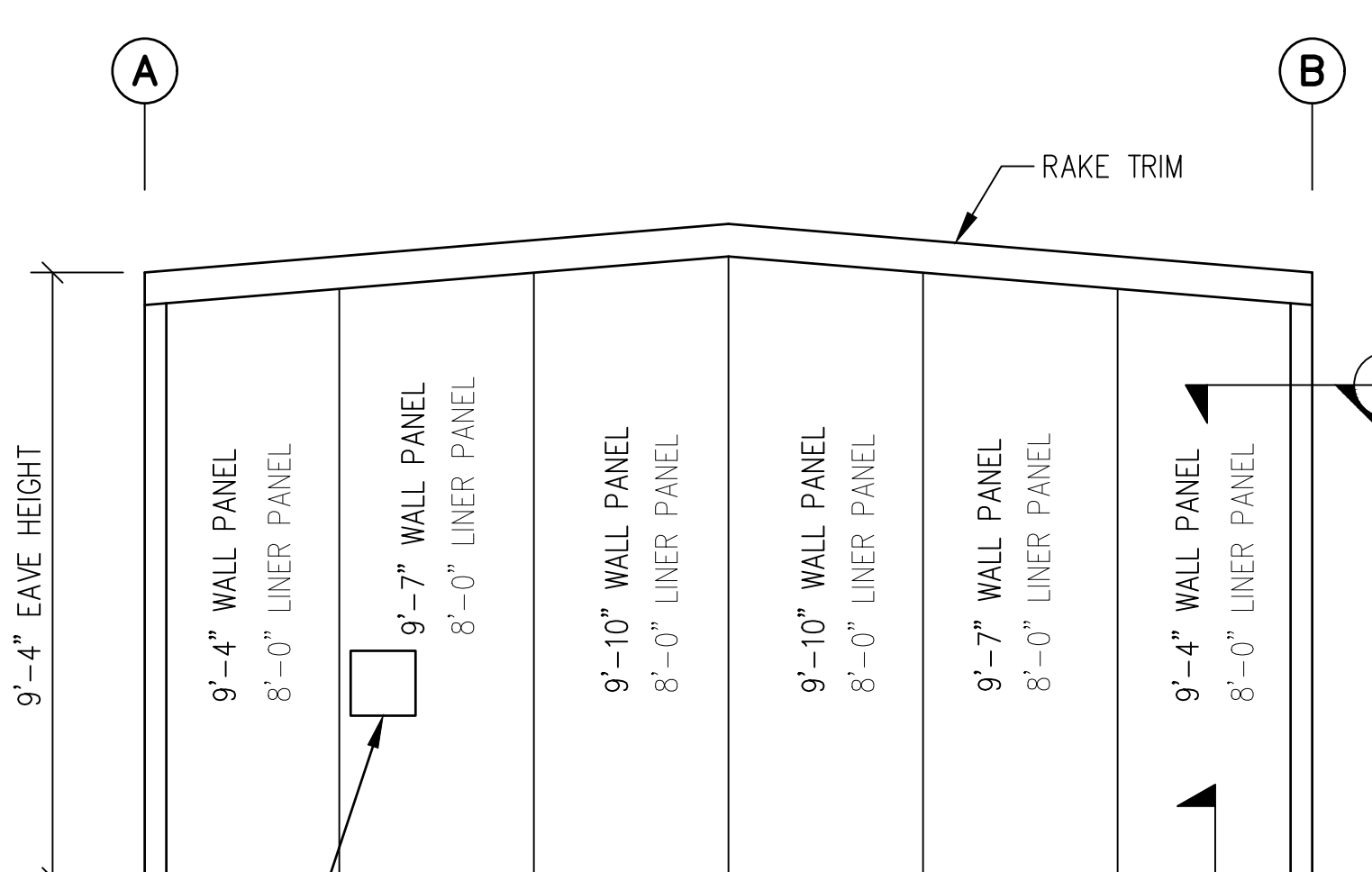
ROOF FRAMING PLAN
SCALE: 3/8"=1'-0"

(3) ROWS OF 1x1x18GA. ANGLE CONTINUOUS FROM RIDGE TO EAVE EQUALLY SPACED, SEE DETAIL 20

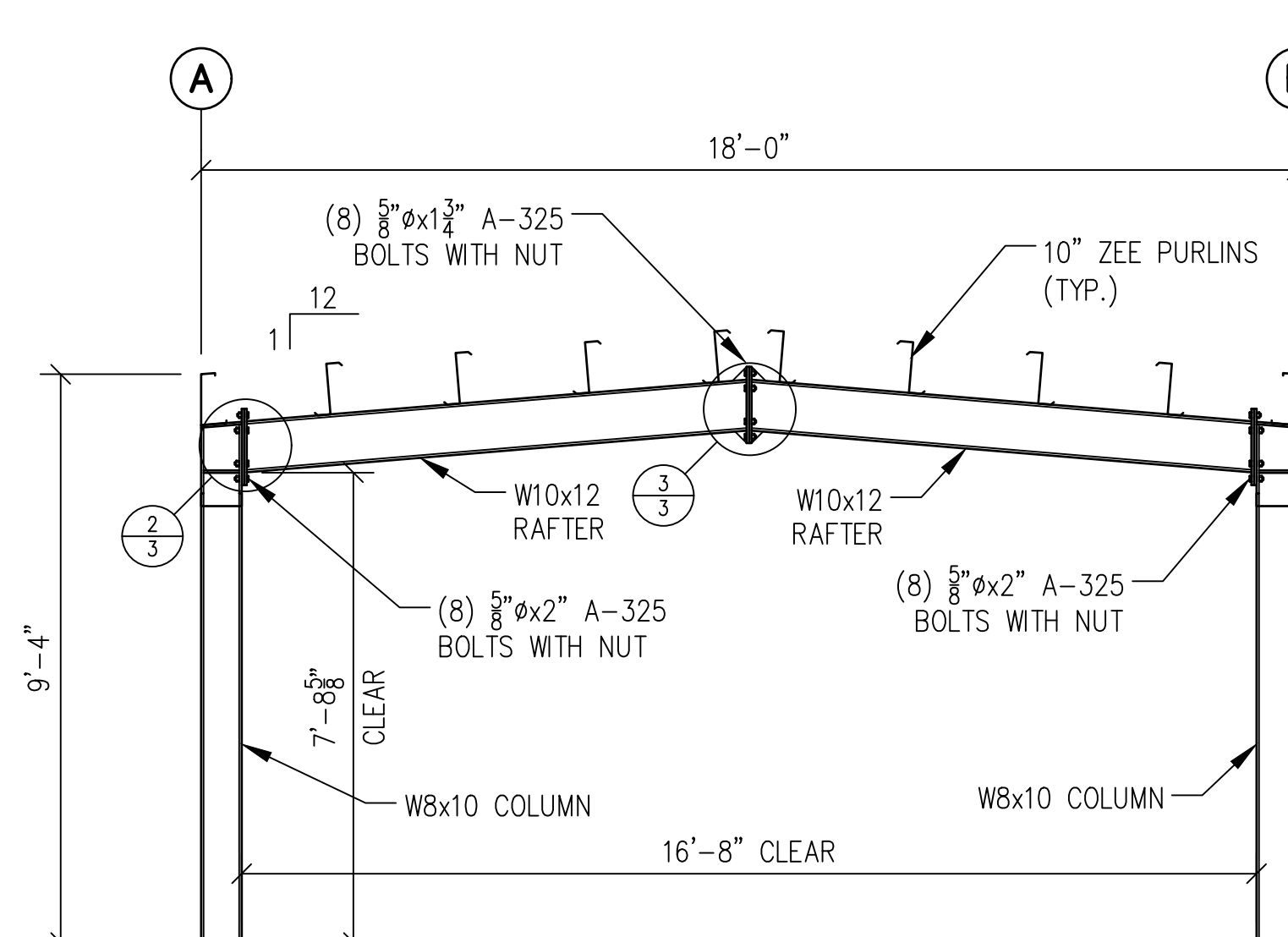


FRAMING AT LINES 1 & 2
SCALE: 3/8"=1'-0"

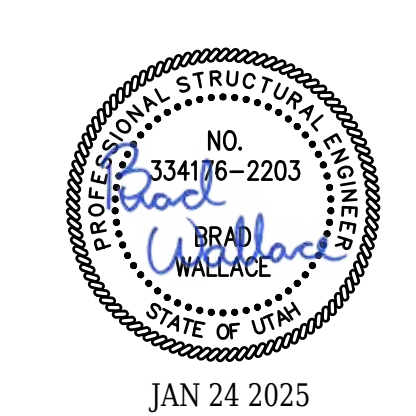
(2) PIPE OPENINGS MAY BE LOCATED IN ANY WALL AT ANY LOCATION AS REQUIRED



SHEETING AT LINES 1 & 2
SCALE: 3/8"=1'-0"



BUILDING SECTION AT LINES 1 & 2
SCALE: 3/8"=1'-0"



Construction
3064 South Hunter Canyon DR
West Valley City, UT 84128
801-567-9661

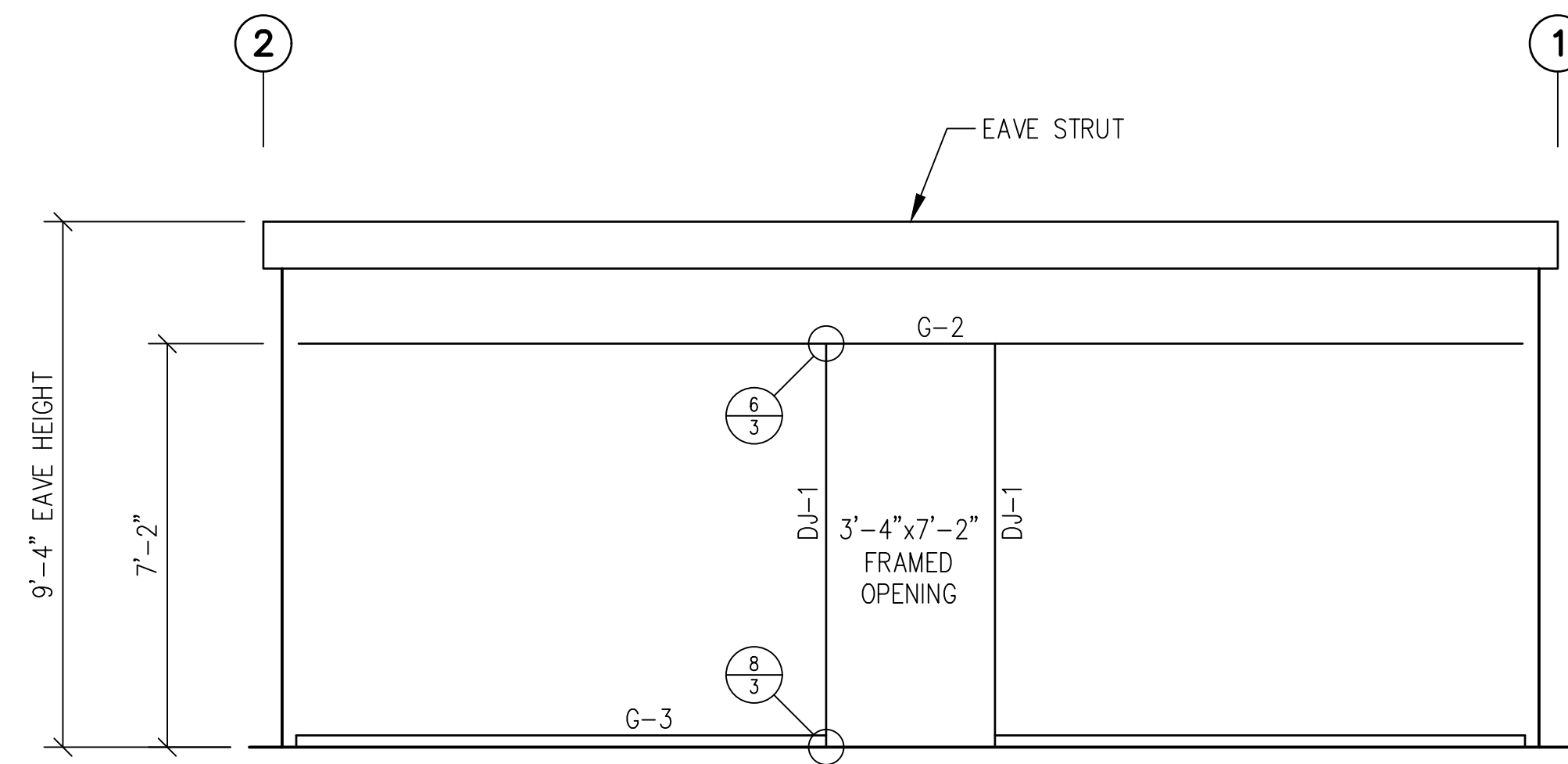
Design by
MOUNTAIN VIEW ENGINEERING, INC.
345 No. Main St., Suite A
Brigham City, Utah 84302
Phone (435) 734-9700
Fax (435) 734-9519
MVE JOB NUMBER: **25-0007**

REFERENCE DRAWINGS		WORK ORDERS		REVISIONS				ENGINEERING RECORD	
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK
					1	FOR PERMIT	1-23-25	J.J.	

SECTION: T R		CITY: MONTICELLO		COUNTY: SAN JUAN COUNTY		STATE: UTAH	
ELEVATION:		DRAWING NUMBER: ENB-STD-BLD-CCS-029		SHEET: 1 OF 5		REVISION:	
LAT: LONG:		DRAWING NUMBER: ENB-STD-BLD-CCS-029		SHEET: 1 OF 5		REVISION:	
SCALE:		DRAWING NUMBER: ENB-STD-BLD-CCS-029		SHEET: 1 OF 5		REVISION:	

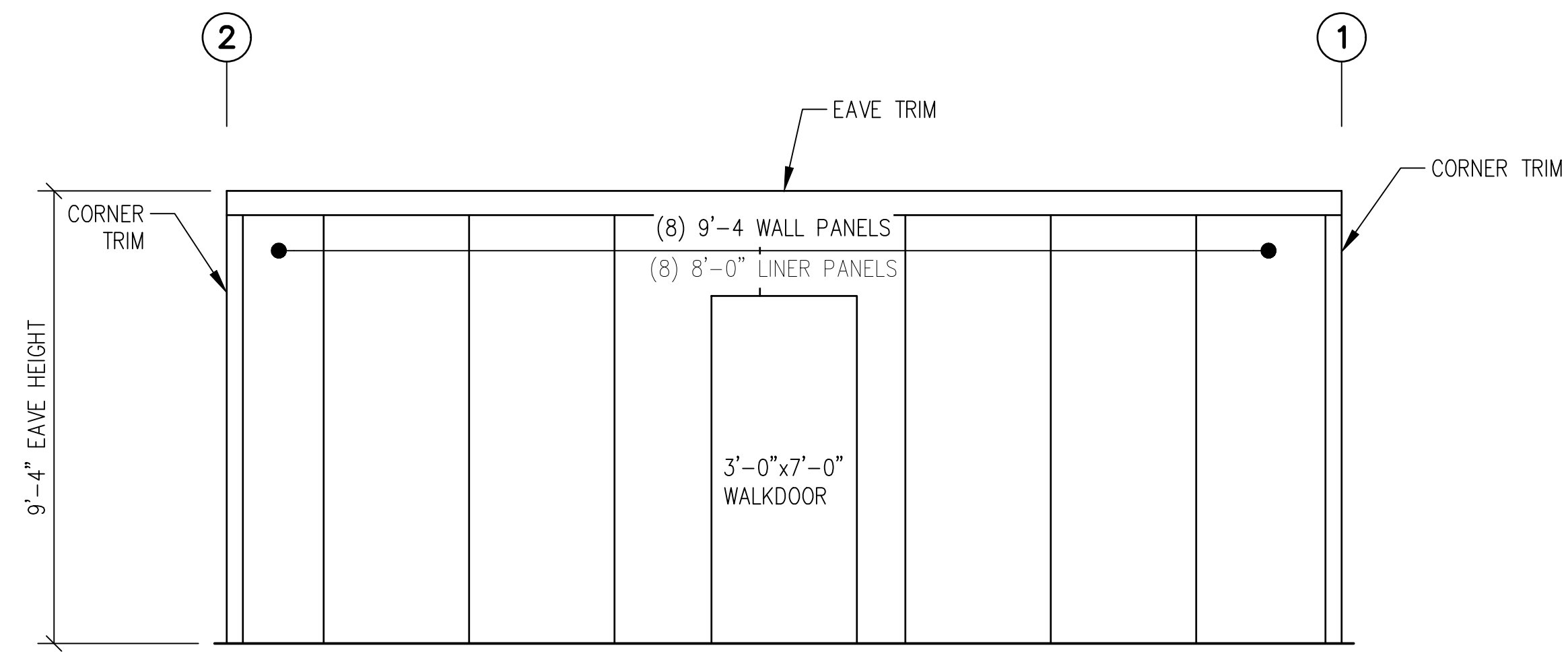
THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.

ENBRIDGE GAS_ANS1.D



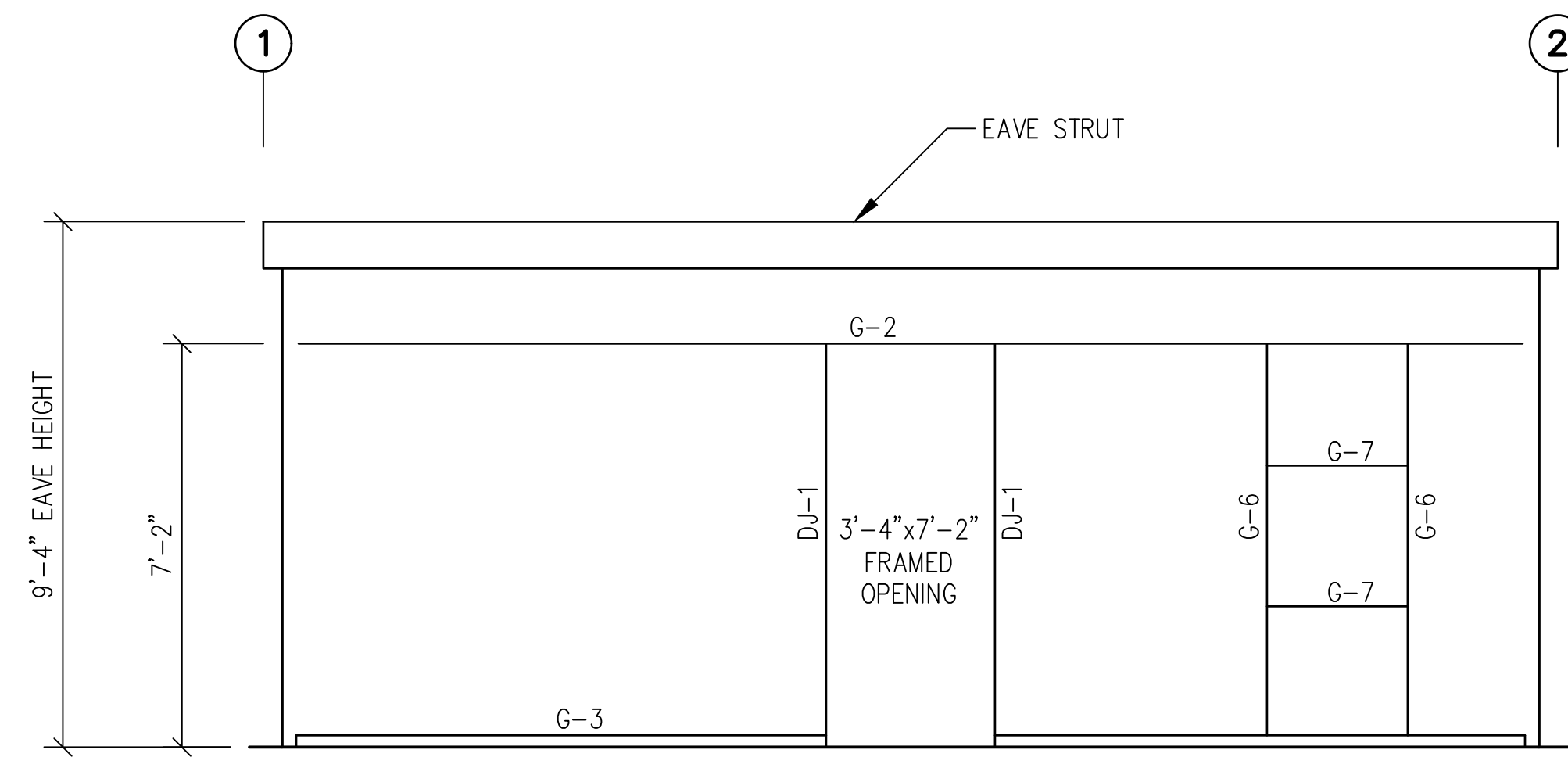
FRAMING AT LINE A
SCALE: 3/8"=1'-0"

NOTE: ALL GIRTS TO BE 8" 16 GAGE ZEES OR CEES UNLESS OTHERWISE NOTED.

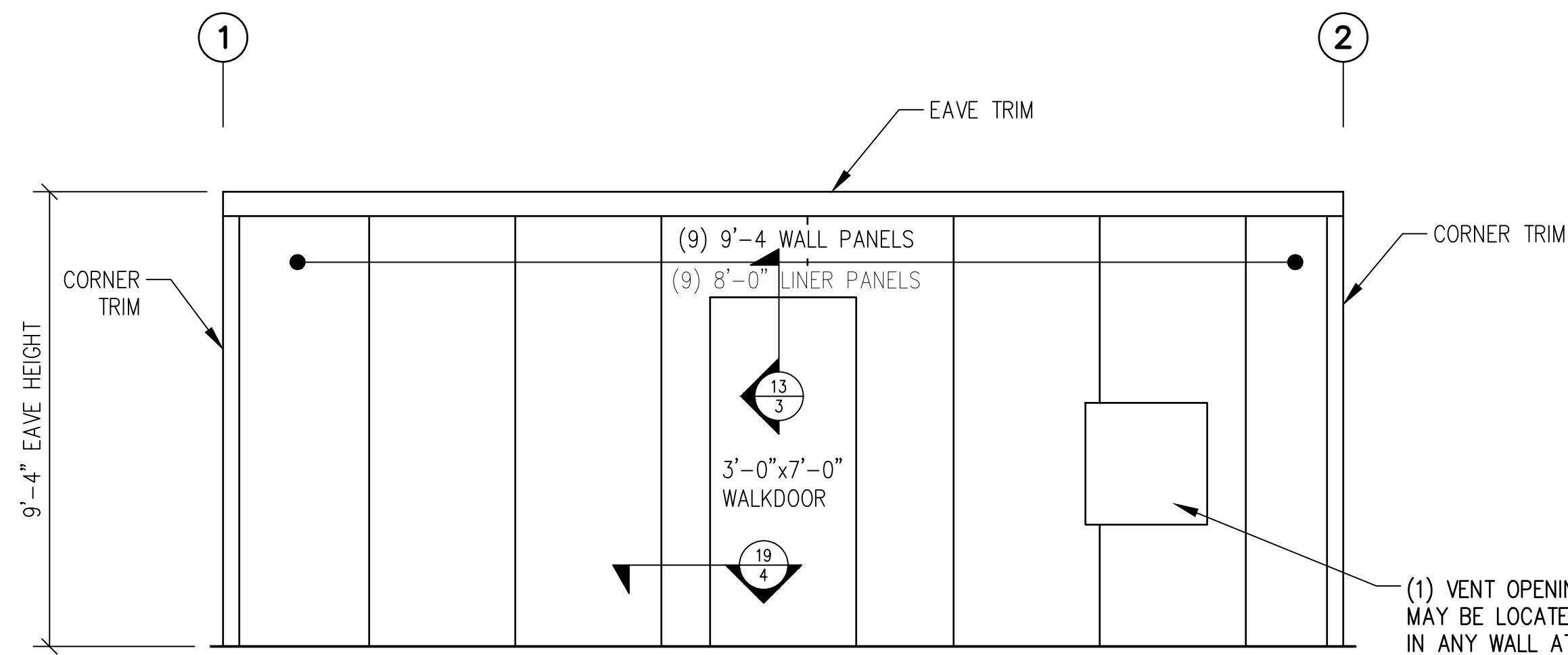


SHEETING AT LINE A
SCALE: 3/8"=1'-0"

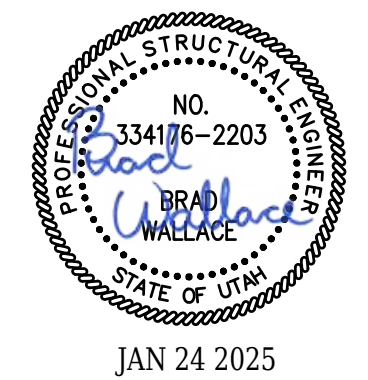
PAINT COLOR FOR ROOF, WALLS AND TRIMS WILL BE MBCI SADDLE TAN.



FRAMING AT LINE B
SCALE: 3/8"=1'-0"



SHEETING AT LINE B
SCALE: 3/8"=1'-0"



Construction
3064 South Hunter Canyon DR
West Valley City, UT 84128
801-567-9661

Design by:
MOUNTAIN VIEW ENGINEERING, INC.
345 No. Main St., Suite A
Brigham City, Utah 84302
Phone (435) 734-9700
Fax (435) 734-9519
MVE JOB NUMBER:
25-0007

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD				
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY:	CHECKED BY:	SURVEYOR:	ENGR MNGR:
					1	FOR PERMIT	1-23-25	J.J.		J.J.			

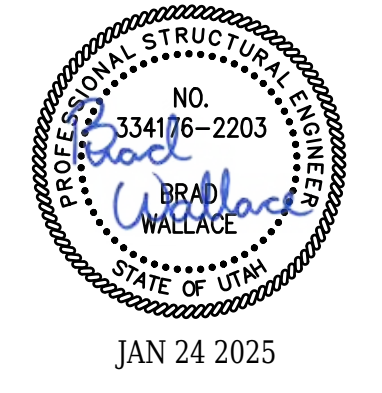
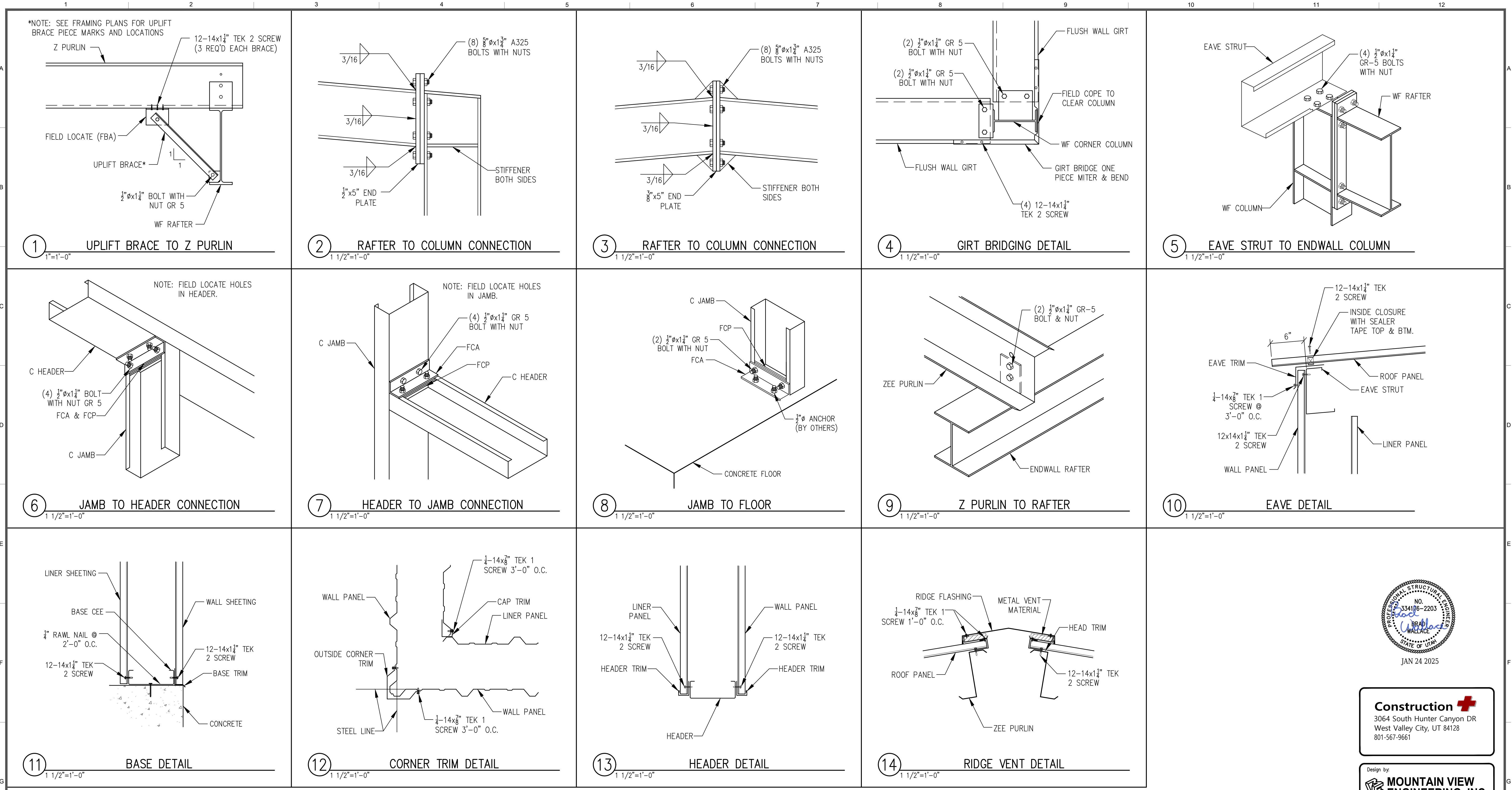


LINE NUMBER:	
FACILITY:	18'-0" x 23'-0" BUILDING
TITLE:	ELEVATIONS
DESCRIPTION:	MONTICELLO, UTAH
ADDRESS:	
CITY:	MONTICELLO
COUNTY:	SAN JUAN COUNTY
STATE:	UTAH
DRAWING NUMBER:	ENB-STD-BLD-CCS-029
SHEET:	2 OF 5
REVISION:	

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.

2.dwg - 01/24/2025 - 03.ksp

ENBRIDGE_GAS_ANS1.D



Construction 
 3064 South Hunter Canyon DR
 West Valley City, UT 84128
 801-567-9661

Design by
MOUNTAIN VIEW ENGINEERING, INC.
 345 No. Main St., Suite A
 Brigham City, Utah 84302
 Phone (435) 734-9700
 Fax (435) 734-9519
 M.E. JOB NUMBER:
25-0007

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD		
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY:	CHECKED BY:
					1	FOR PERMIT	1-23-25	J.J.		J.J.	
										PROJECT ENGR: B. WALLACE	
										SURVEYOR:	
										ENGR MNGR:	
										CONSTR MNGR:	
										MEAS & CTRLS:	
										AUTOM ENGR:	

ENBRIDGE

SECTION: T R
 ELEVATION:
 LAT: LONG:
 SCALE:

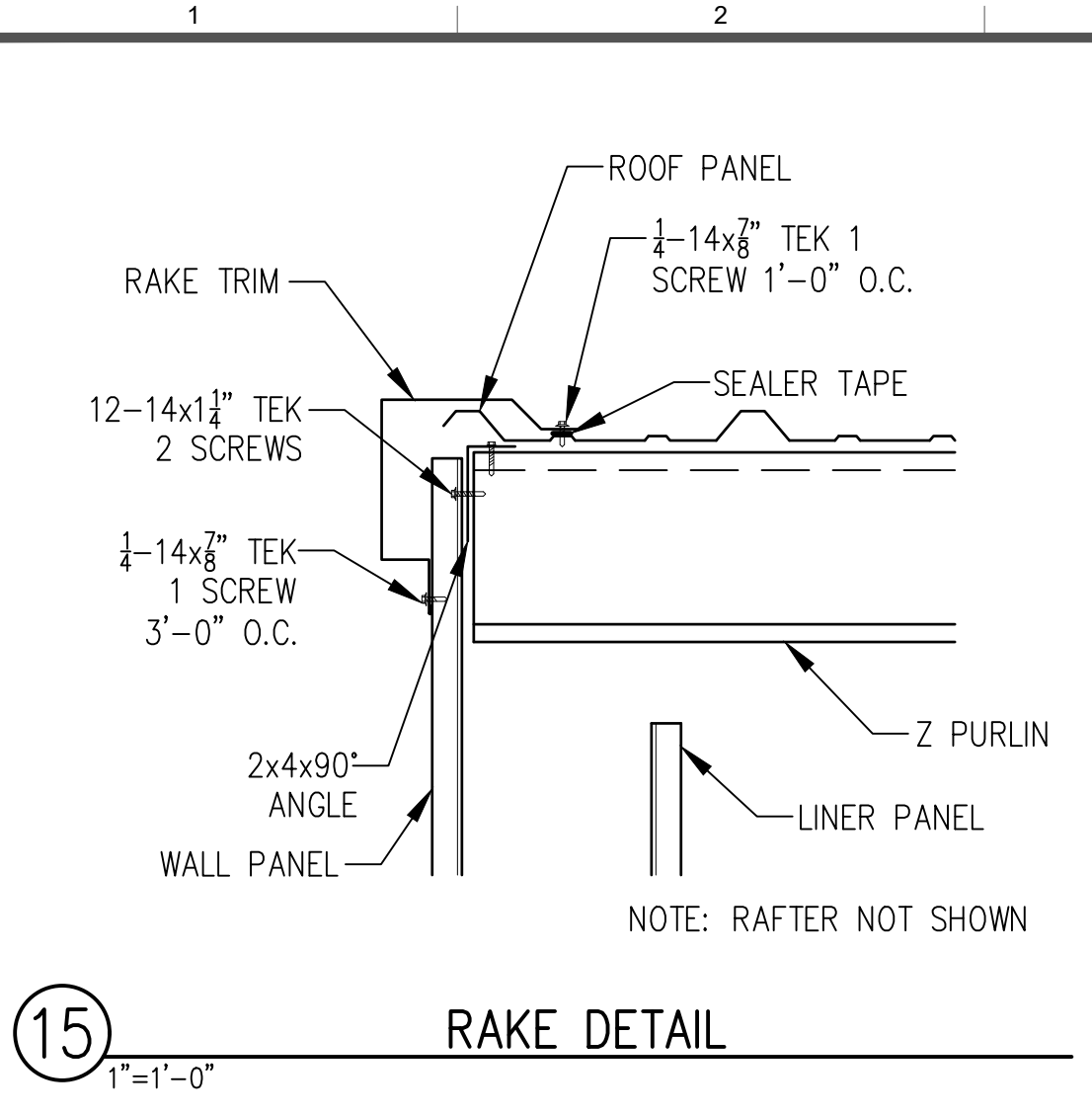
LINE NUMBER:
 FACILITY:
 TITLE: **18'-0" x 23'-0" BUILDING ERECTION DETAILS**
 DESCRIPTION: **MONTICELLO, UTAH**
 ADDRESS:

CITY: **MONTICELLO** COUNTY: **SAN JUAN COUNTY** STATE: **UTAH**

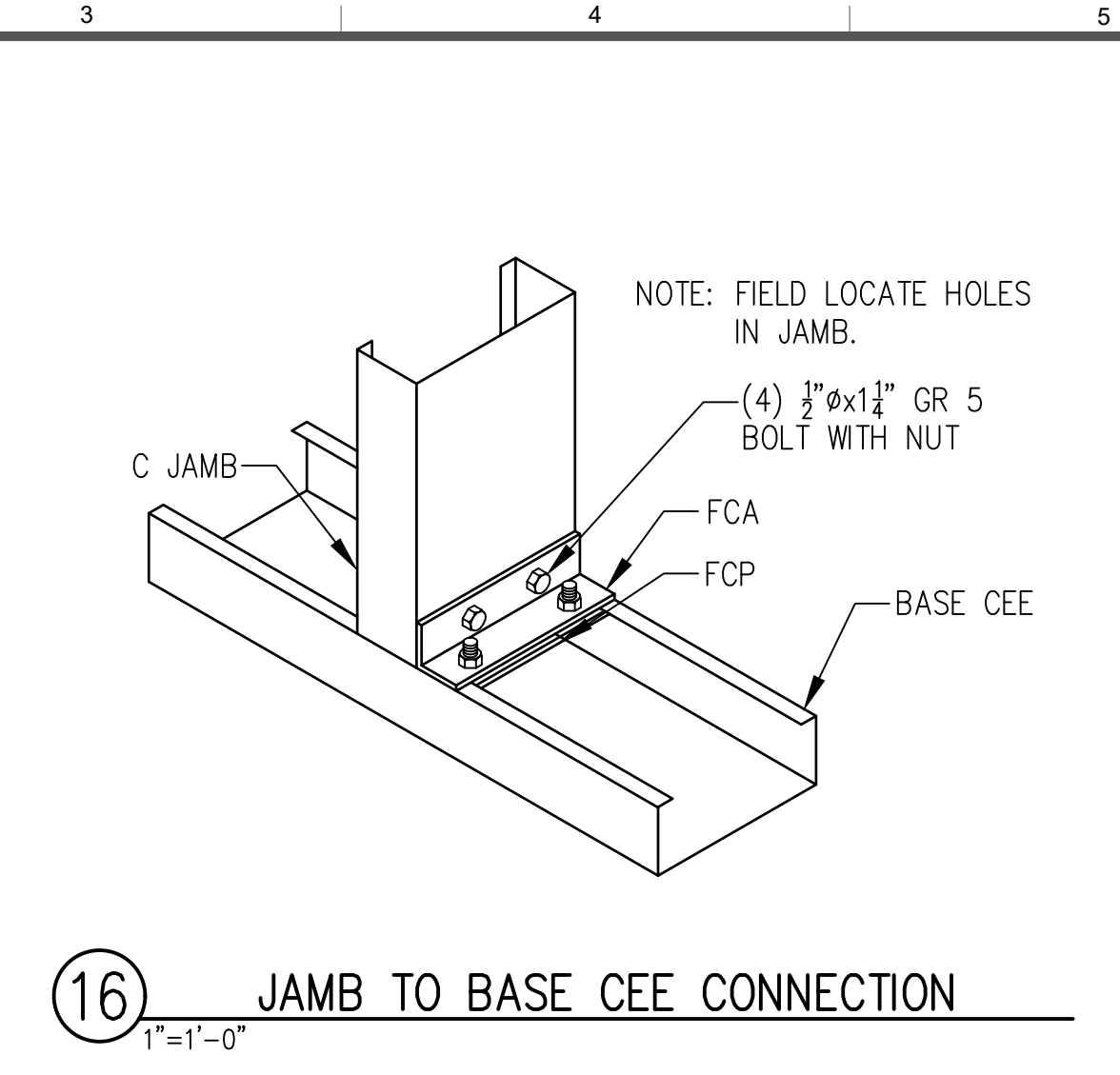
DRAWING NUMBER: **ENB-STD-BLD-CCS-029** SHEET: **3 OF 5** REVISION:

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.

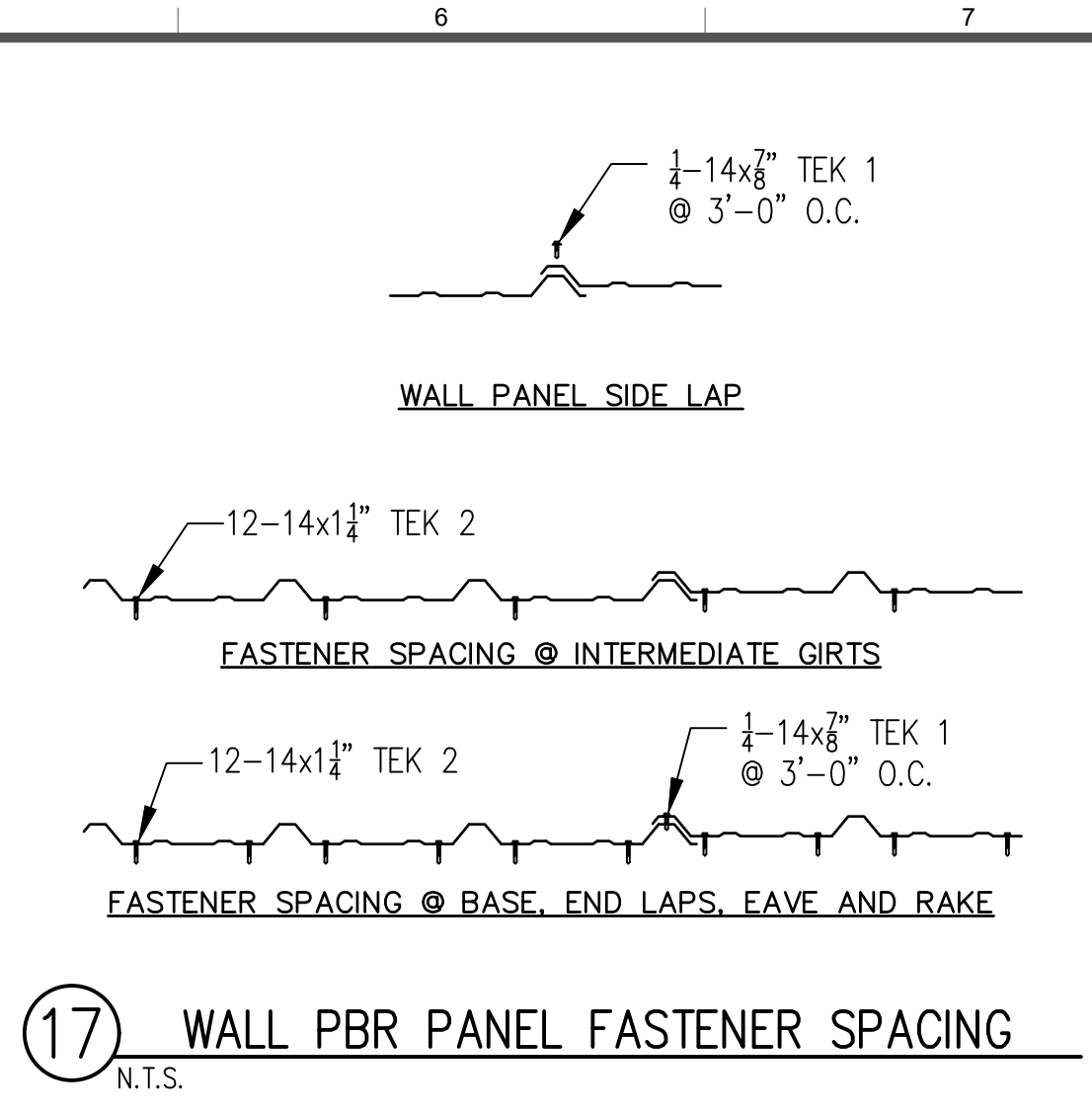
ENBRIDGE GAS_ANS1_D



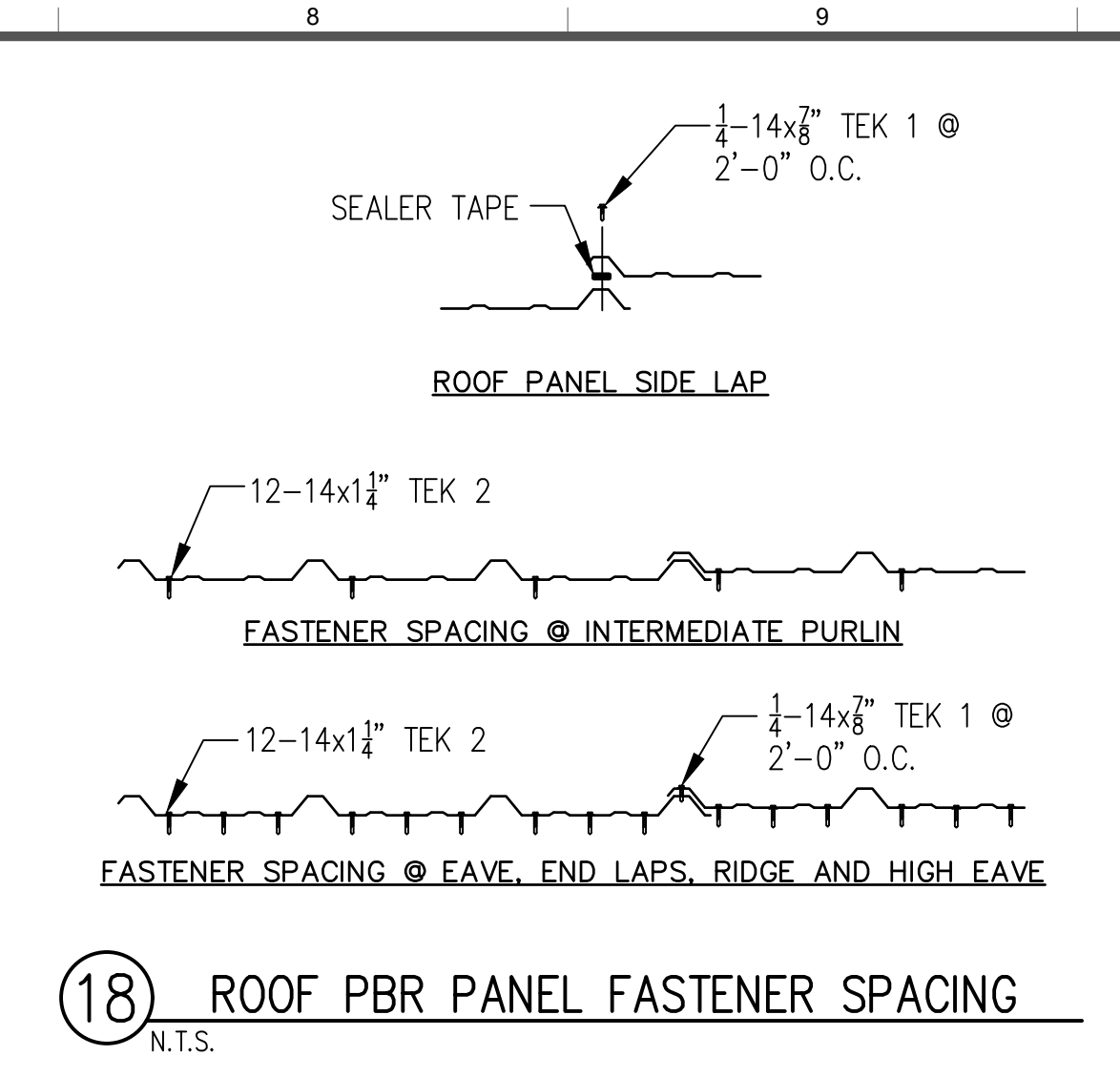
15 RAKE DETAIL
1"=1'-0"



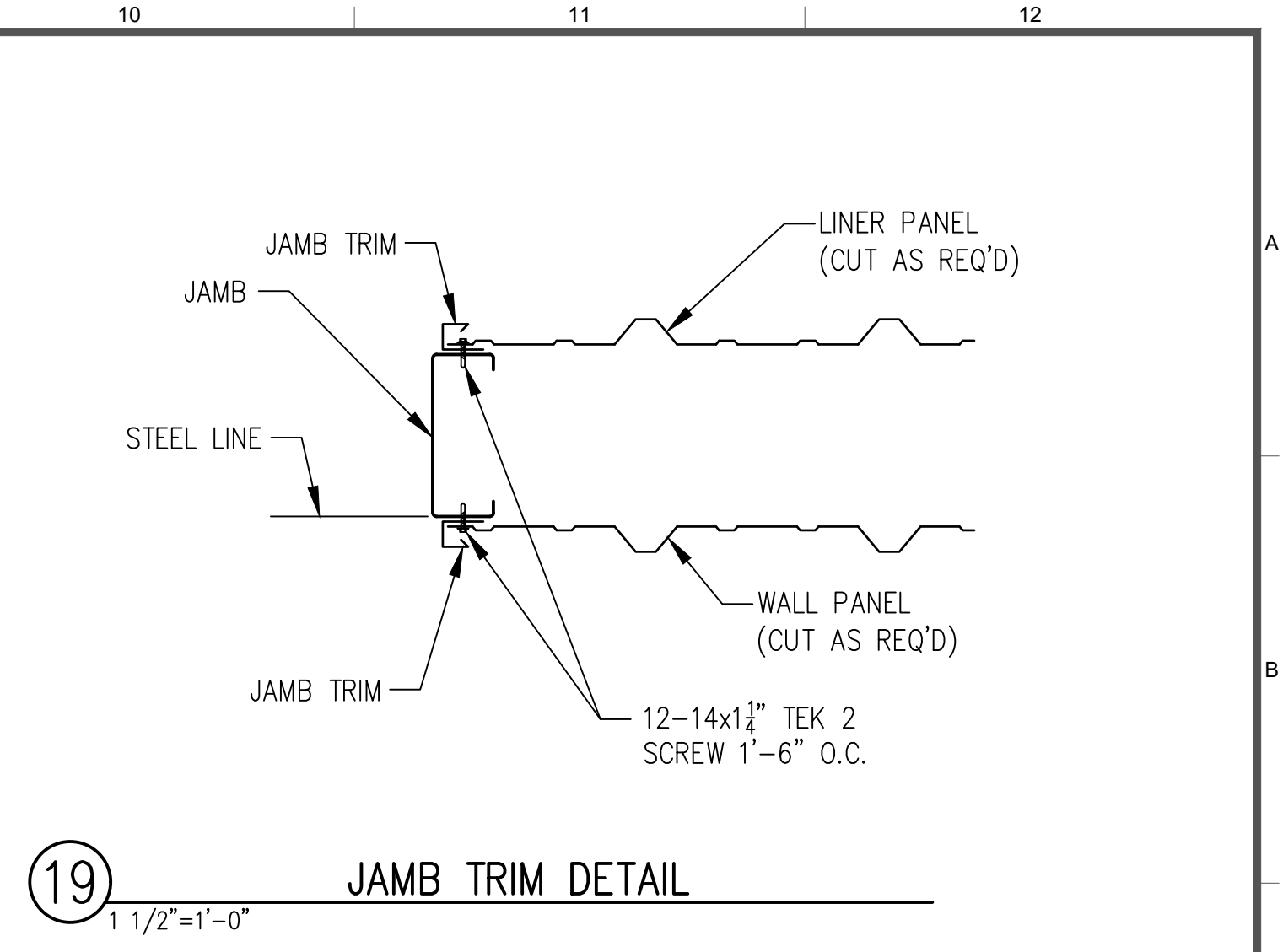
16 JAMB TO BASE CEE CONNECTION
1"=1'-0"



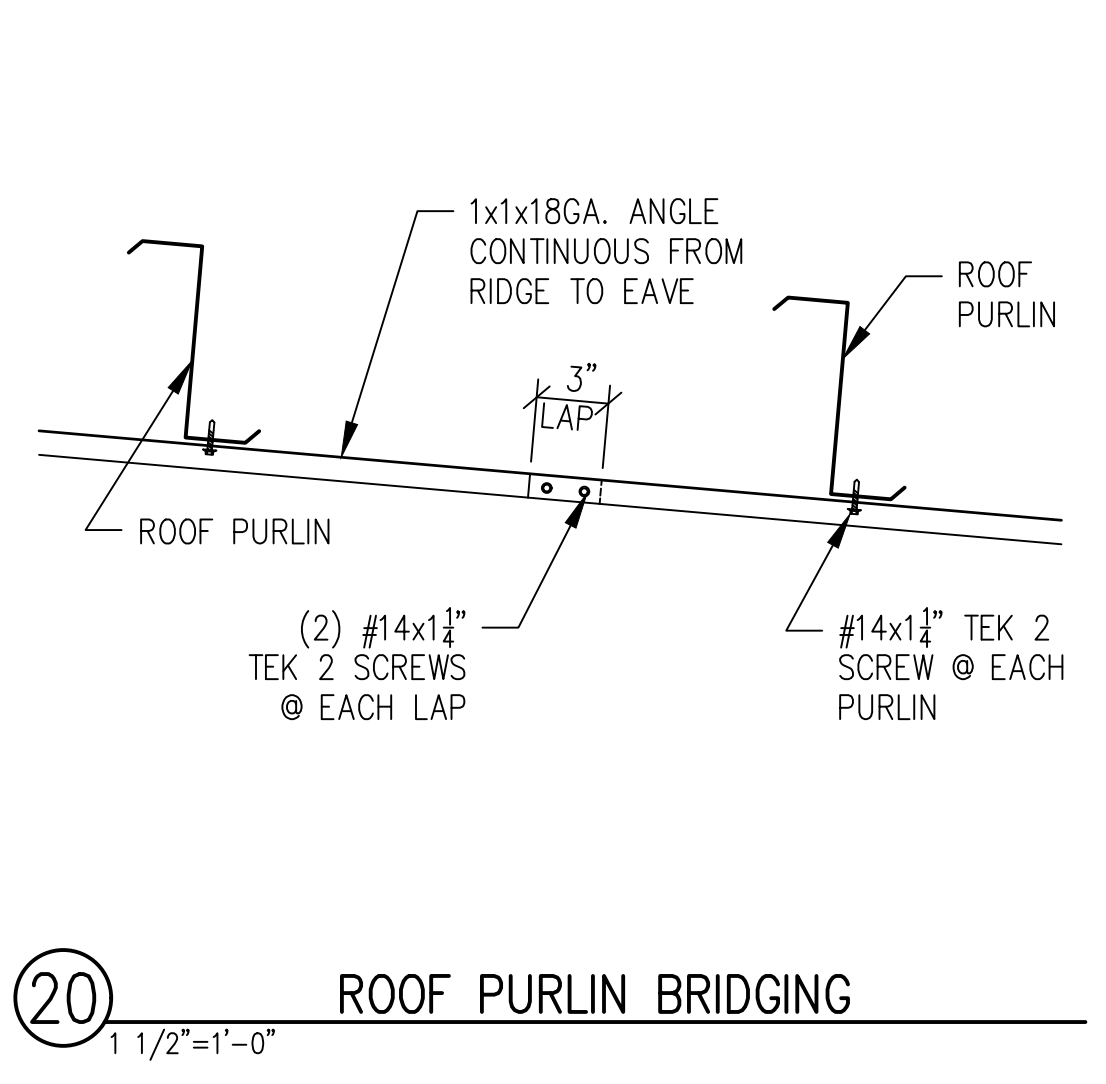
17 WALL PBR PANEL FASTENER SPACING
N.T.S.



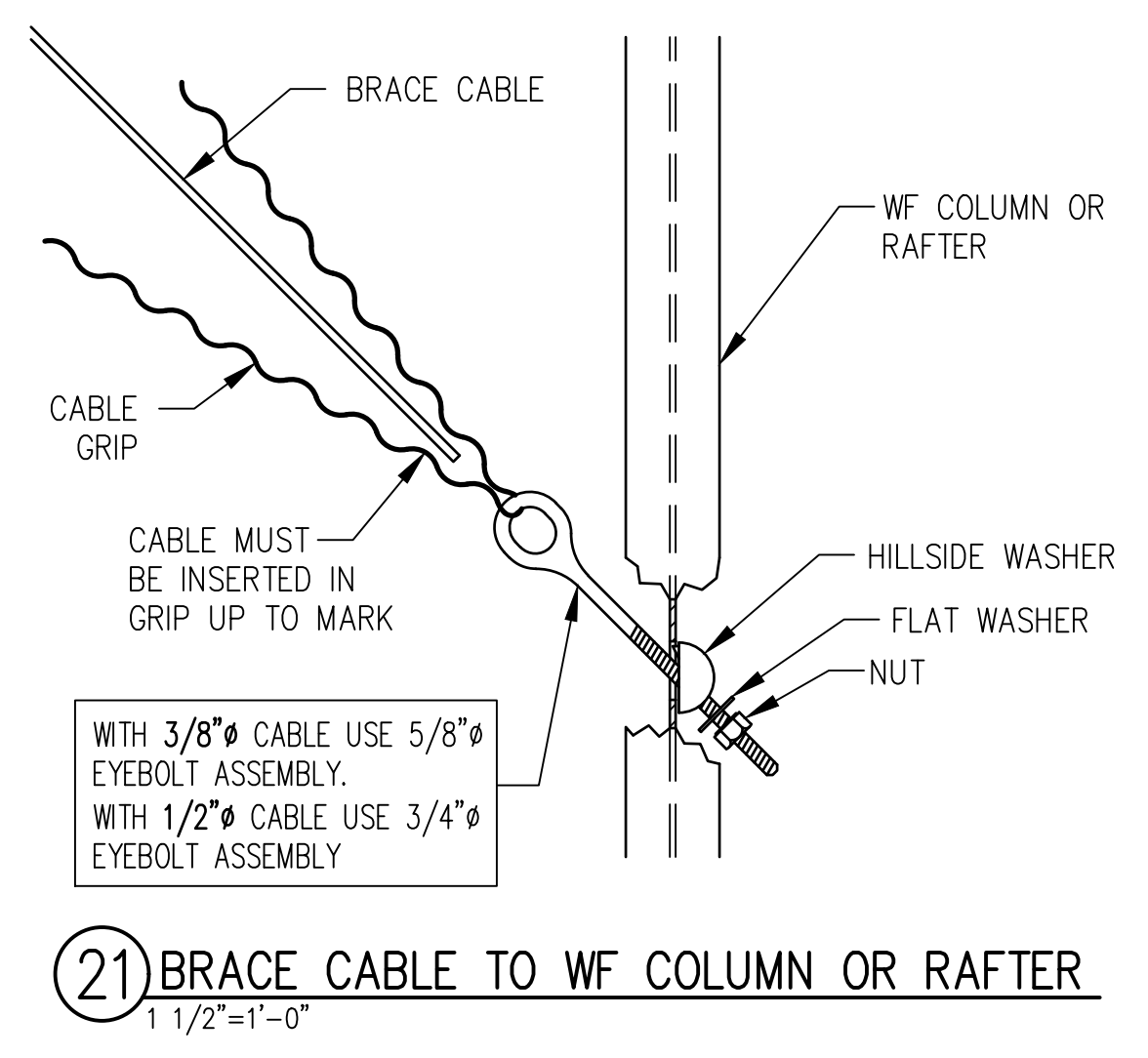
18 ROOF PBR PANEL FASTENER SPACING
N.T.S.



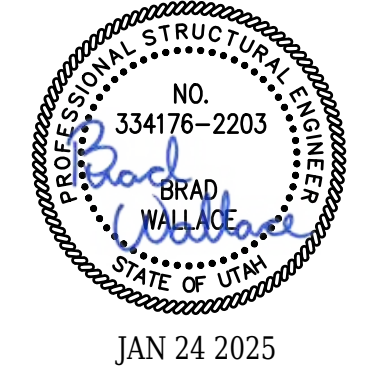
19 JAMB TRIM DETAIL
1 1/2"=1'-0"



20 ROOF PURLIN BRIDGING
1 1/2"=1'-0"



21 BRACE CABLE TO WF COLUMN OR RAFTER
1 1/2"=1'-0"



Construction 
3064 South Hunter Canyon DR
West Valley City, UT 84128
801-567-9661

Design by:
MOUNTAIN VIEW ENGINEERING, INC.
345 No. Main St., Suite A
Brigham City, Utah 84302
Phone (435) 734-9700
Fax (435) 734-9519
MVE JOB NUMBER:
25-0007

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD			
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY: J.J.	CHECKED BY:	PROJECT ENGR: B. WALLACE
					1	FOR PERMIT	1-23-25	J.J.				



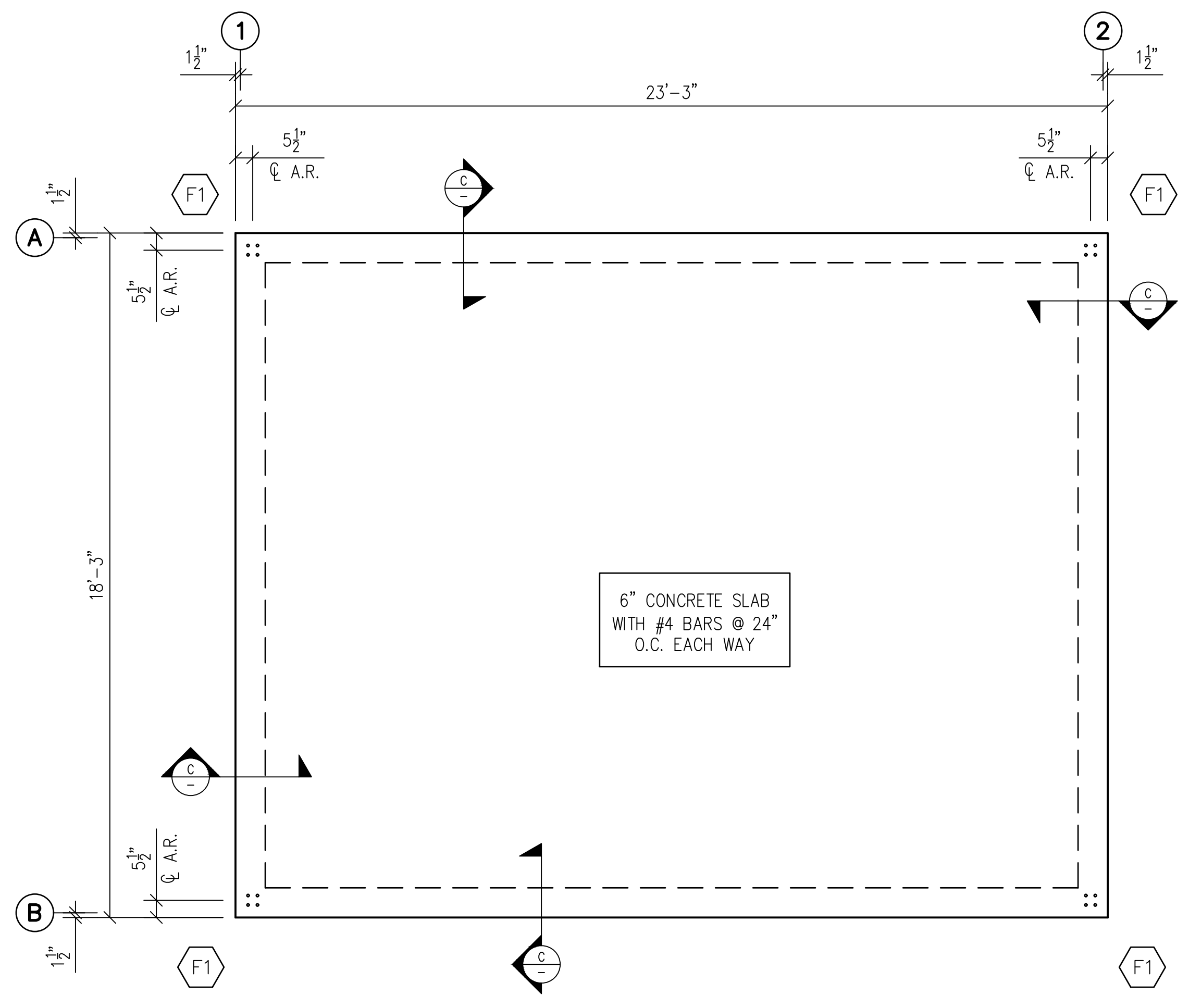
LINE NUMBER:			
FACILITY:			
TITLE:	18'-0" x 23'-0" BUILDING ERECTION DETAILS		
DESCRIPTION:	MONTICELLO, UTAH		
ADDRESS:			
CITY:	MONTICELLO	COUNTY:	SAN JUAN COUNTY
STATE:	UTAH		
DRAWING NUMBER:	ENB-STD-BLD-CCS-029		
SHEET:	4 OF 5	REVISION:	

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.

ENBRIDGE GAS_ANSI.D

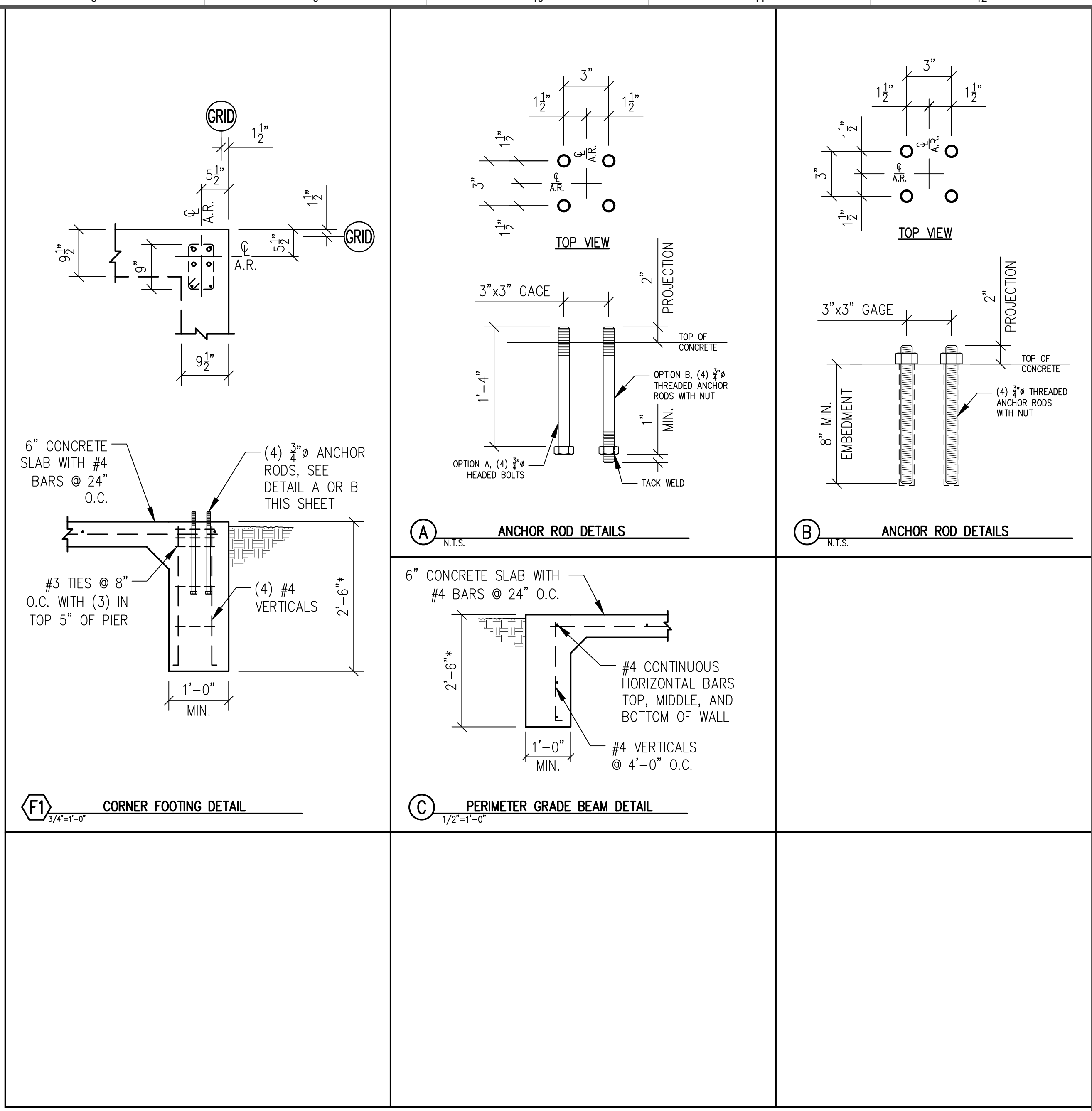
FOUNDATION NOTES

1. Earthwork
 - A. Foundation Design Values (assumed)
 - i. Allowable Soil Bearing Pressure - 1500 psf
 - ii. Coefficient of Friction - 0.25
 - iii. Passive Earth Pressure - 150 psf/ft of depth
 - B. The building pad area shall be stripped of all frozen soil, debris, vegetation, and topsoil. All fill soils and any remaining loose natural soils shall be excavated to expose suitable natural soils.
 - C. Proof roll the entire building pad area to locate and remove all soft spots. Replace with compacted structural fill.
 - D. Place all footings and slabs on undisturbed natural soil or on properly compacted structural fill. Contractor shall verify that soil under footings is suitable to support footings.
 - E. Structural Fill: Structural fill should consist of well-graded sandy gravels with a maximum particle size of 3 inches and 5 to 15 percent fines (materials passing the No. 200 sieve). The liquid limit of fines should not exceed 35 and the plasticity index should be below 15. All fill soils should be free from topsoils, highly organic material, frozen soil, and other deleterious materials. Structural fill should be placed in maximum 8-inch thick loose lifts at a moisture content within 2 percent of optimum and compacted to at least 95 percent of modified proctor density (ASTM D1557) under the building and 95 percent under concrete flatwork.
 - F. It is the responsibility of the contractor to ensure that the depth of the bottom of the foundation is far enough below the adjacent grade to ensure adequate frost protection.
2. Concrete and Reinforcement
 - A. Material Standards
 - i. Concrete
 - a. Footings and foundation walls - $f_c = 3000$ p.s.i.
 - b. Slabs on grade - $f_c = 3500$ p.s.i.
 - * Concrete has been designed using $f_c = 2500$ p.s.i. Special Inspection not required unless noted otherwise, see Special Inspection Notes.
 - c. Normal weight aggregates - ASTM C33
 - ii. Cement
 - a. Use Type I/II cement as per ASTM C150
 - b. Air-entraining admixtures (where required) - ASTM C260
 - c. Calcium chloride shall not be used.
 - iii. Reinforcing
 - a. Rebar - ASTM A615 Grade 60 ($F_y = 60$ ksi)
 - b. Welded wire - ASTM A1064
 - c. Epoxy - Simpson SET-XP (ICC-ES ESR-2508) or Hilti HIT-RE 500-SD (ICC-ES ESR-2322)
 - iv. Anchor Rods/Bolts
 - a. $\frac{3}{8}$ " Simpson Titen HD 6" min. embedment.
 - B. Detail reinforcing to comply with ACI 315 "Manual of Standard Practice for Detailing Reinforcing Concrete Structures" and the Concrete Reinforcing Steel Institute (CRSI) recommendations.
 - i. Minimum clear concrete cover for reinforcement shall be as follows unless noted otherwise:
 - a. Concrete cast directly against and permanently exposed to earth - 3"
 - b. Concrete exposed to weather or earth:
 1. #5 bars or smaller - 1 1/2"
 2. #6 bars or larger - 2"
 - c. Concrete not exposed to weather or in contact with the ground - 3/4"
 - d. Slabs on grade - as shown in details, 3/4" min. from top of slabs not exposed to weather
 - ii. Lap Splice Lengths (unless noted otherwise)
 - a. $f_c = 2500-3500$ p.s.i.
 1. #6 and smaller - 36 bar diameters
 2. #7 and larger - 45 bar diameters
 - b. $f_c = 4000$ p.s.i. or greater
 1. #6 and smaller - 29 bar diameters
 2. #7 and larger - 36 bar diameters
 - c. Lap splice lengths may be decreased by 25% for slabs on grade and horizontal wall reinforcing.
 - d. Increase lap splice lengths by 50% where epoxy coated bars are used.
 - iii. Stagger splices in walls so that no two adjacent bars are spliced in the same location, unless shown otherwise.
 - iv. Make all bars continuous around corners or provide corner bars of equal size and spacing.
 - v. Vertical bars in walls, grade beams, and piers to terminate in footings with ACI standard hooks (12 bar diameters) to within 4" of the bottom of the footing unless noted otherwise.
 - vi. Horizontal wall reinforcing shall terminate at the ends of walls with a 90 degree hook plus a 6 bar diameter extension, unless shown otherwise.
 - vii. Horizontal wall reinforcing shall be continuous through construction and control joints.
 - viii. Splices in horizontal reinforcement shall be staggered. Splices in two curtains (where used) shall not occur in the same location.
 - ix. Use chairs or other support devices as required for proper clearance.
 - x. Unless noted otherwise, openings in walls shall be reinforced with #5 bar on all sides of the opening. Reinforcing shall extend 24" min. past the edge of the opening. For one layer of wall reinforcing provide (1) #5 bar around openings, for two layers provide (2) #5 bars.
 - C. Slabs and grade beams shall not have joints in a horizontal plane. All reinforcement shall be continuous through all construction joints.
 - D. Floor slab thickness and reinforcing shown in these drawings are adequate to support typical uniform loads only. Mountain View Engineering has not designed the slab for any specific concentrated forces such as those from vehicles, storage racks, or heavy equipment (unless noted otherwise).
 - E. Welding of rebar is not allowed unless specifically indicated in the drawings. All embedments, reinforcing, and dowels shall be securely tied to framework or to adjacent reinforcing prior to placement of the concrete. Tack welding of rebar joints in grade beams, walls, or cages is not allowed. Where welding of rebar is shown in the drawings, all rebar to be welded shall be ASTM A706 Grade 60.



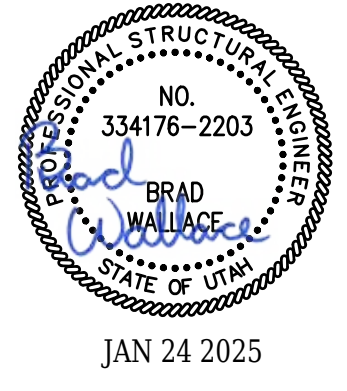
FOUNDATION PLAN
SCALE: 3/8"=1'-0"

F1 INDICATES APPLICABLE FOOTING DETAIL.
* VERIFY FROST DEPTH WITH LOCAL BUILDING DEPARTMENT



EPOXY NOTES

1. THE CONTRACTOR SHALL USE ASTM F1553-36 STEEL 3/4" THREADED ROD ANCHORS OR EQUIVALENT.
2. THE CONTRACTOR SHALL USE SIMPSON SET XP EPOXY SYSTEM.
3. ALL DRILLED AND EPOXIED 3/4" DIAMETER ANCHOR RODS SHALL HAVE A MINIMUM EMBEDMENT OF 8".
4. THE EPOXY SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER RECOMMENDATIONS.
5. SPECIAL INSPECTION (PERIODIC) OF ANCHOR INSTALLATION IS REQUIRED.



Construction +
3064 South Hunter Canyon DR
West Valley City, UT 84128
801-567-9661

Design by
MOUNTAIN VIEW ENGINEERING, INC.
345 No. Main St., Suite A
Brigham City, Utah 84302
Phone (435) 734-9700
Fax (435) 734-9519
MVE JOB NUMBER: **25-0007**

REFERENCE DRAWINGS			WORK ORDERS		REVISIONS				ENGINEERING RECORD		
DRAWING NUMBER	REV	DRAWING DESCRIPTION	WO NUMBER	DESCRIPTION	NO	DESCRIPTION	DATE	BY	CHECK	DRAWN BY:	CHECKED BY:
					1	FOR PERMIT	1-23-25	J.J.		J.J.	
										PROJECT ENGR: B. WALLACE	
										SURVEYOR:	
										ENGR MNGR:	
										CONSTR MNGR:	
										MEAS & CTRLS:	
										AUTOM ENGR:	

ENBRIDGE

LINE NUMBER:
FACILITY:
TITLE: **18'-0" x 23'-0" BUILDING FOUNDATION PLAN, DETAILS, & NOTES**
DESCRIPTION: **MONTICELLO, UTAH**
ADDRESS:

CITY: **MONTICELLO** COUNTY: **SAN JUAN COUNTY** STATE: **UTAH**

DRAWING NUMBER: **ENB-STD-BLD-CCS-029** SHEET: **5 OF 5** REVISION:

THE INFORMATION AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE CONFIDENTIAL AND THE PROPERTY OF ENBRIDGE GAS AND/OR THE CLIENT IDENTIFIED. DUPLICATION OR USE OF THIS INFORMATION AND/OR CONSTRUCTION OF SYSTEMS BASED ON THIS DOCUMENT ARE STRICTLY PROHIBITED WITHOUT WRITTEN AUTHORIZATION FROM ENBRIDGE GAS.