

CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

DRYER PIPING MODIFICATIONS

Volume 2 of 2
Drawings



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**BOWEN COLLINS
& ASSOCIATES**



N

1300 W

215

PROJECT LOCATION

15

89

48

7200 S

300 E

MURRAY

MIDVALE

IMAGE: BING

PROJECT VICINITY MAP

[illegible]

500111 STREET WATER VALVE/IGNITION FACILITY DRYER PIPING MODIFICATIONS WEST JORDAN, UTAH	DESIGN	REVIEW	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 1"=10'
	DESIGN D. COWELL	CHECKED B. MAYERS	
	DRAWN T. ANDERSON	APPROVED B. MAYERS	

DATE: SEPTEMBER 2020	PROJECT NUMBER 177-17-01.02
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DRAWING NO.
G-01

SHEET 01 OF 26

[illegible]

(1) SECTION CUT SHOWN ON DRAWING AS:

SECTION LETTER

DRAWING NUMBER WHERE THE SECTION IS SHOWN (SEE NOTE A)

(2) THIS SECTION IS IDENTIFIED AS:

SECTION LETTER

SECTION

SCALE: AS DESIGNATED

DRAWING NUMBER WHERE THE SECTION CUT IS SHOWN (SEE NOTE A)

(1) DETAIL IDENTIFICATION SHOWN ON DRAWING AS:

DETAIL NUMBER ———

DRAWING NUMBER
WHERE THE DETAIL
IS SHOWN ———

THE DETAIL NAME IS
OPTIONAL AND LOCATED
HERE, FOLLOWING
DETAIL CALLOUT

(2) THIS DETAIL IS IDENTIFIED AS:

DETAIL

SCALE: AS DESIGNATED

DETAIL NUMBER ———

DRAWING NUMBER
WHERE THE DETAIL IS
SHOWN (SEE NOTE A) ———

TYPICAL DETAIL

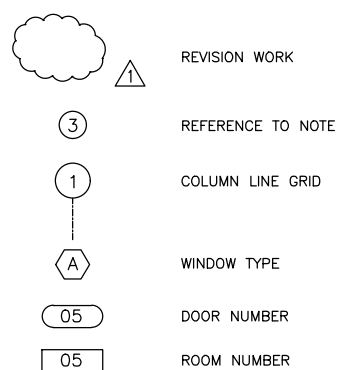
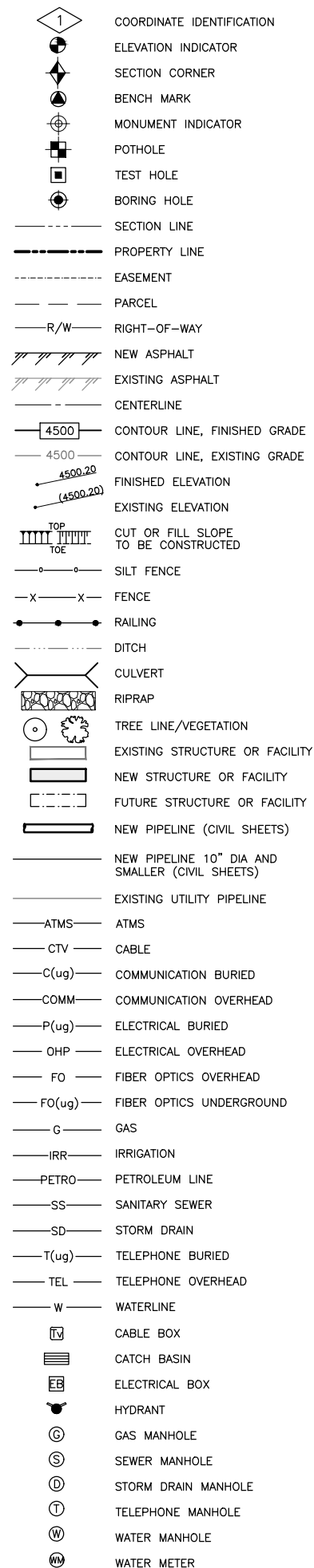
NTS

TYPICAL DETAIL NUMBER, SEE
INDEX OF DRAWINGS FOR
LOCATION OF GENERAL DRAWINGS

LETTER	DISCIPLINE
G	GENERAL
C	CIVIL
GC	GENERAL CIVIL
A	ARCHITECTURAL
GA	GENERAL ARCHITECTURAL
S	STRUCTURAL
GS	GENERAL STRUCTURAL
M	MECHANICAL
GM	GENERAL MECHANICAL
H	HVAC
E	ELECTRICAL
GE	GENERAL ELECTRICAL DETAILS
I	INSTRUMENTATION

NOTES:

- A. IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.
- B. ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL DRAWINGS. FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.



GENERAL NOTES:

[illegible]

PIPE MATERIAL AND PRESSURE TESTING SCEDULE					
SYMBOL	PIPE	FITTINGS	PRESSURE TEST REQUIREMENTS		
			MIN TEST PRESSURE	TEST MEDIUM	NOTES
N (24)	ASTM B88, HARD TEMPERED TYPE K COPPER	SOLDER JOINT	150 PSIG	WATER	0 LEAKAGE; 5% LOSS IN 24 HOURS. TEST NITROGEN PIPING BY BLOCKING ENDS FROM EQUIPMENT AND PRODUCT PIPING
PRD (33)	ASTM A53 OR OA106, SCHEDULE 40 CARBON STEEL, PLAIN END	WELDED FLANGE OR COUPLING RING	50 PSIG	WATER	5% LOSS IN 24 HOURS. TEST PRODUCT PIPING BY BLOCKING ENDS FROM EQUIPMENT AND AIR SAVER OPENINGS

EQUIPMENT AND FITTING SCHEDULE		
KEYNOTE NO.	ITEM	DESCRIPTION
①	○ AIR SAVERS	DC-5 AIR SAVER WITH FLOW CONTROLLER AND TUBING
②	15' SUPERSLIK BEND	SUPERSLIK ABRASION RESISTANT TUBING BEND WITH SPLIT FLANGES, SERIES 442
③	30' SUPERSLIK BEND	SUPERSLIK ABRASION RESISTANT TUBING BEND WITH SPLIT FLANGES, SERIES 442
④	LATERAL (WYE)	WEAR RESISTANT LATERAL, 550 BHN
⑤	END RECEIVER	SERIES 106 END RECEIVER WITH COUPLING RING, INFLATABLE BUTTERFLY VALVE AND ACTUATOR
⑥	 COUPLING	TUF-LOK RING GRIP PIPE COUPLING, SERIES 688, SST
⑦	 GROUNDING JUMPER	#2 AWG WIRE, INSULATED STRANDED COPPER CONDUCTOR. STRAP SHALL BE 1-1/4" X 1/16" THICK

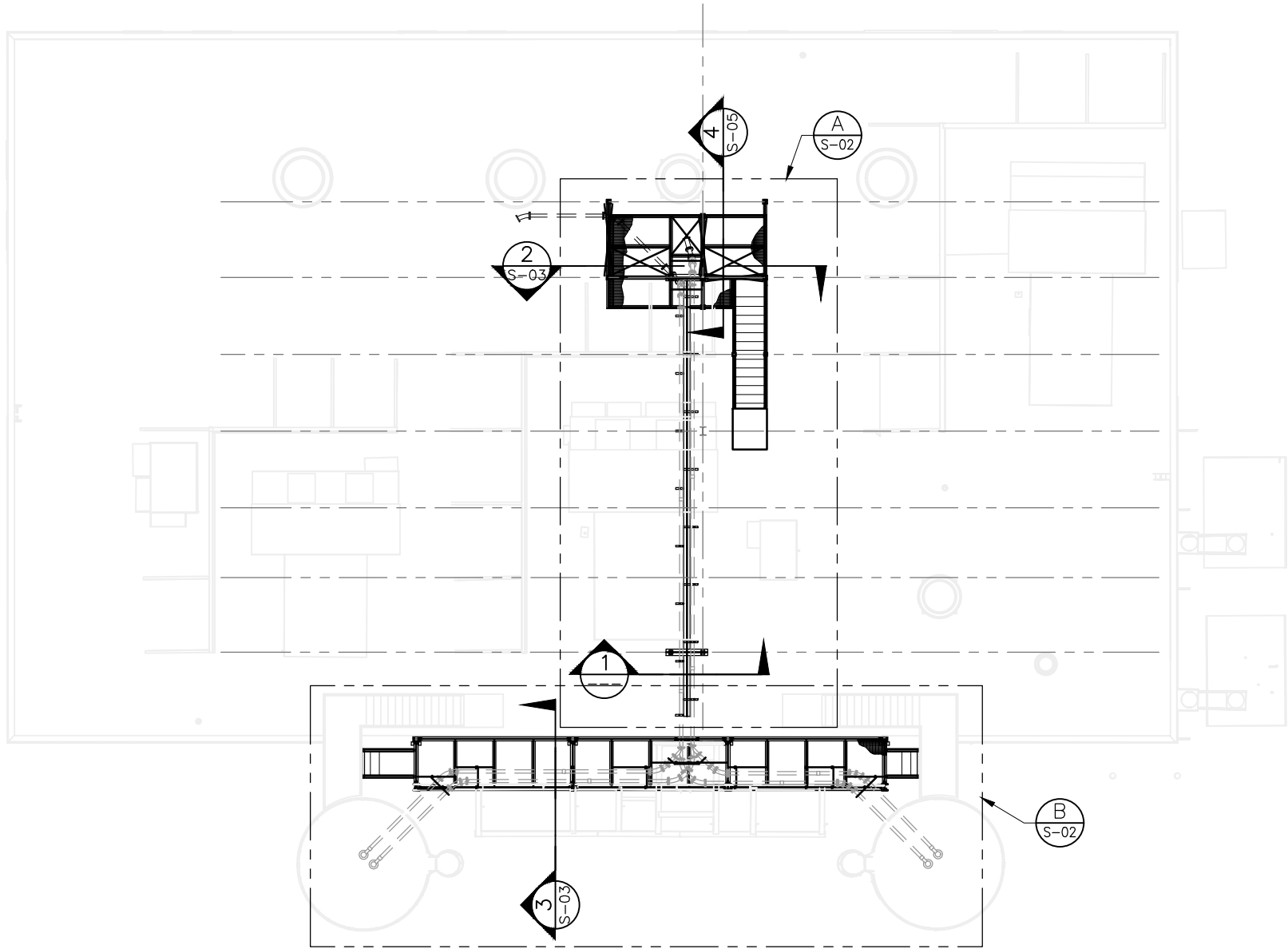
GENERAL NOTES

1. SYMBOLS FOR STRUCTURES, PIPE, ETC. USED FOR IDENTIFICATION ARE SHOWN IN LEGENDS AND SHALL BE FOLLOWED THROUGHOUT THE PLANS WHENEVER APPLICABLE. NOT ALL OF THE VARIOUS COMPONENTS SHOWN IN THESE LEGENDS ARE NECESSARILY USED IN THE PROJECT.
2. SCALE OF THE DRAWINGS OR DETAILS ARE SHOWN IN THE TITLE BLOCK OR DIRECTLY UNDER THE PLAN OR DETAIL. THE SIZE OF THE ORIGINAL PLOTTED DRAWINGS IS 22"x34". CARE SHOULD BE TAKEN TO VERIFY THE SCALE BAR IN THE TITLE BLOCK AREA TO DETERMINE THE SCALE OF REDUCED REPRODUCTIONS.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PERFORM CONSTRUCTION ACTIVITIES PER THE CONTRACT DOCUMENTS. ANY ADDITIONS, DELETIONS, OR MODIFICATIONS SHALL FIRST MEET WITH THE WRITTEN APPROVAL OF THE ENGINEER AND THE OWNER.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE WHICH ARE TO REMAIN IN PLACE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTORS OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
5. NOT USED.
6. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN A WORKMANLIKE AND SAFE MANNER AND IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND JOB-SITE RELATED CONSTRUCTION CONDITIONS AND REQUIREMENTS. OBTAIN PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY JURISDICTIONAL AGENCIES AND PAY ALL ASSOCIATED FEES. CONTRACTOR AND INSTALLERS SHALL BE LICENSED AS REQUIRED BY STATE AND LOCAL JURISDICTIONS, AND BONDED AS DETERMINED BY PROJECT REQUIREMENTS.
7. SEE PIPE SCHEDULE FOR PRESSURE TEST REQUIREMENTS. ALL FLANGES, VALVES, FITTINGS, ETC. SHALL BE RATED APPROPRIATELY. IN THE CASE OF PIPELINES THAT FAIL TO PASS THE LEAKAGE TEST, THE CONTRACTOR SHALL DETERMINE THE CAUSE OF THE EXCESSIVE LEAKAGE, SHALL TAKE CORRECTIVE MEASURES NECESSARY TO REPAIR THE LEAKS, AND SHALL AGAIN TEST THE PIPELINES, ALL AT NO COST TO THE OWNER.
8. PIPE, FITTINGS, COUPLINGS, CONNECTIONS, EXISTING EQUIPMENT, STRUCTURES AND OTHER ELEMENTS ARE SHOWN BASED ON A LASER SCAN SURVEY PERFORMED TO IDENTIFY AND LOCATE THESE FEATURES FOR THIS PROJECT. LOCATIONS, DIMENSIONS, ELEVATIONS AND OTHER PARAMETERS ARE BELIEVED TO BE ACCURATE WITHIN THE CAPABILITIES OF THIS TECHNOLOGY. HOWEVER, FIELD CONFIRMATION OF THIS INFORMATION BY THE CONTRACTOR IS MANDATORY, AND ADJUSTMENTS WILL BE NEEDED TO ACCOUNT FOR ANY INACCURACIES OR CHANGES IN THE INFORMATION, ASSUMPTIONS, MATERIALS, MANUFACTURING, FABRICATING, ETC.

AIR SAVER NO.	TRANSPORTER 100 (WEST SIDE)	TRANSPORTER 200 (EAST SIDE)
A1	535	466
A2	529	461
A3	523	456
A4	517	451
A5	511	446
A6	506	442
A7	500	437
A8	494	432
A9	488	427
A10	482	422
A11	476	417
A12	470	412
A13	464	407
A14	458	402
A15	452	397
A16	447	393
A17	441	388
A18	435	383
A19	429	378
A20	423	373
A21	417	--
A22	411	--
A23	406	--
B1	360	367
B2	354	359
B3	348	352
B4	342	344
B5	336	337
B6	330	329
B7	324	--
C1	398	367
C2	391	359
C3	384	351
C4	377	343
C5	370	335
C6	363	328
C7	--	320
C8	--	312

*AIR SAVER SETTINGS ARE ESTIMATED AND ARE SUBJECT TO REVIEW, REVISION AND FURTHER ADJUSTMENT BY THE MANUFACTURER FOR PROPER OPERATION

GENERAL		SOUTH VALLEY WATER RECLAMATION FACILITY WEST JORDAN, UTAH		 BOWEN COLLINS & ASSOCIATES	
GENERAL NOTES AND PIPE SCHEDULE DATE: SEPTEMBER 2020 PROJECT NUMBER 177-17-01.02		DESIGN D. COWELL DRAWN T. ANDERSON		REVIEW B. MAYERS APPROVED B. MAYERS	
		VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING			
DRAWING NO. G-04		NO. DATE REV. BY DESCRIPTION		REVISIONS 9-08-2020	
SHEET 04 OF 26					

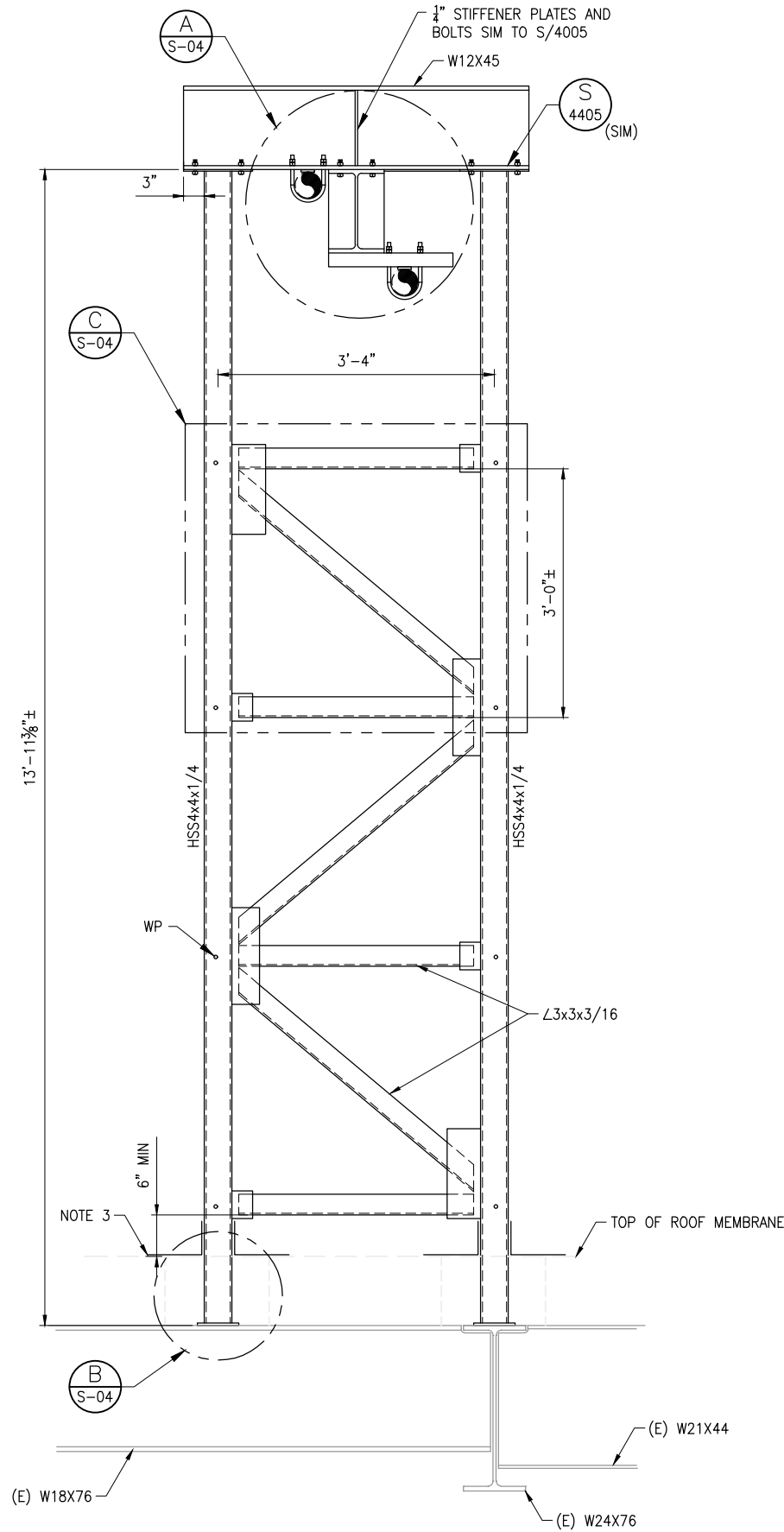


PLAN

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

PLAN NOTES

1. SEE GS-01 FOR ADDITIONAL NOTES.
2. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.
3. CONTRACTOR SHALL EXPOSE STRUCTURAL STEEL FOR WELDING NEW COLUMNS. CONTRACTOR SHALL PROTECT EXISTING ROOFING DURING CONSTRUCTION AND WELDING FROM DAMAGE. OPENINGS IN ROOF SHALL BE DRIED IN DAILY TO KEEP WEATHER OUT OF BUILDING. PATCH ROOF MEMBRANE AND INSULATION AFTER INSTALLATION TO MAINTAIN ROOF WARRANTY.



SECTION

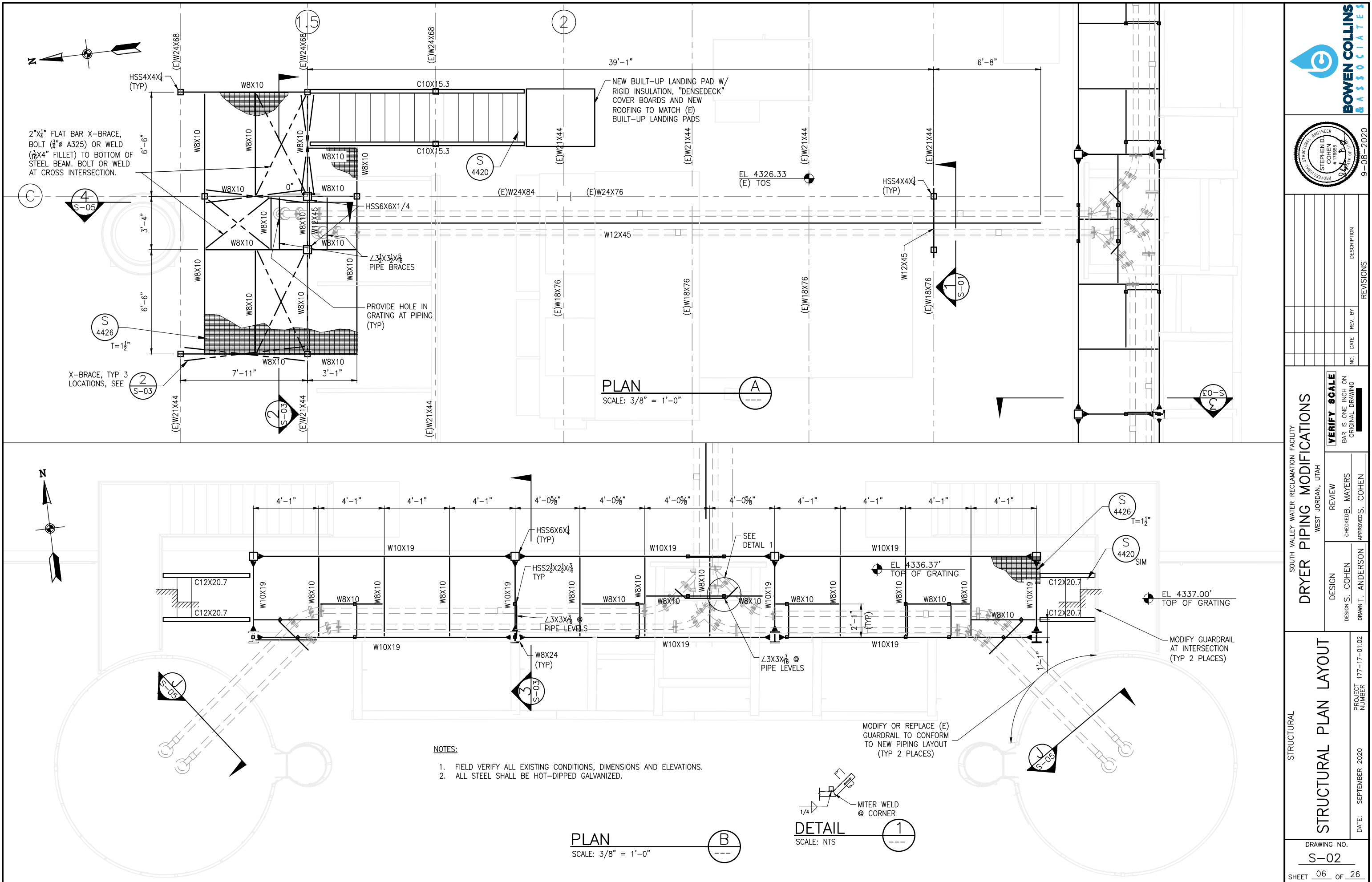
SCALE: 1" = 1'-0"

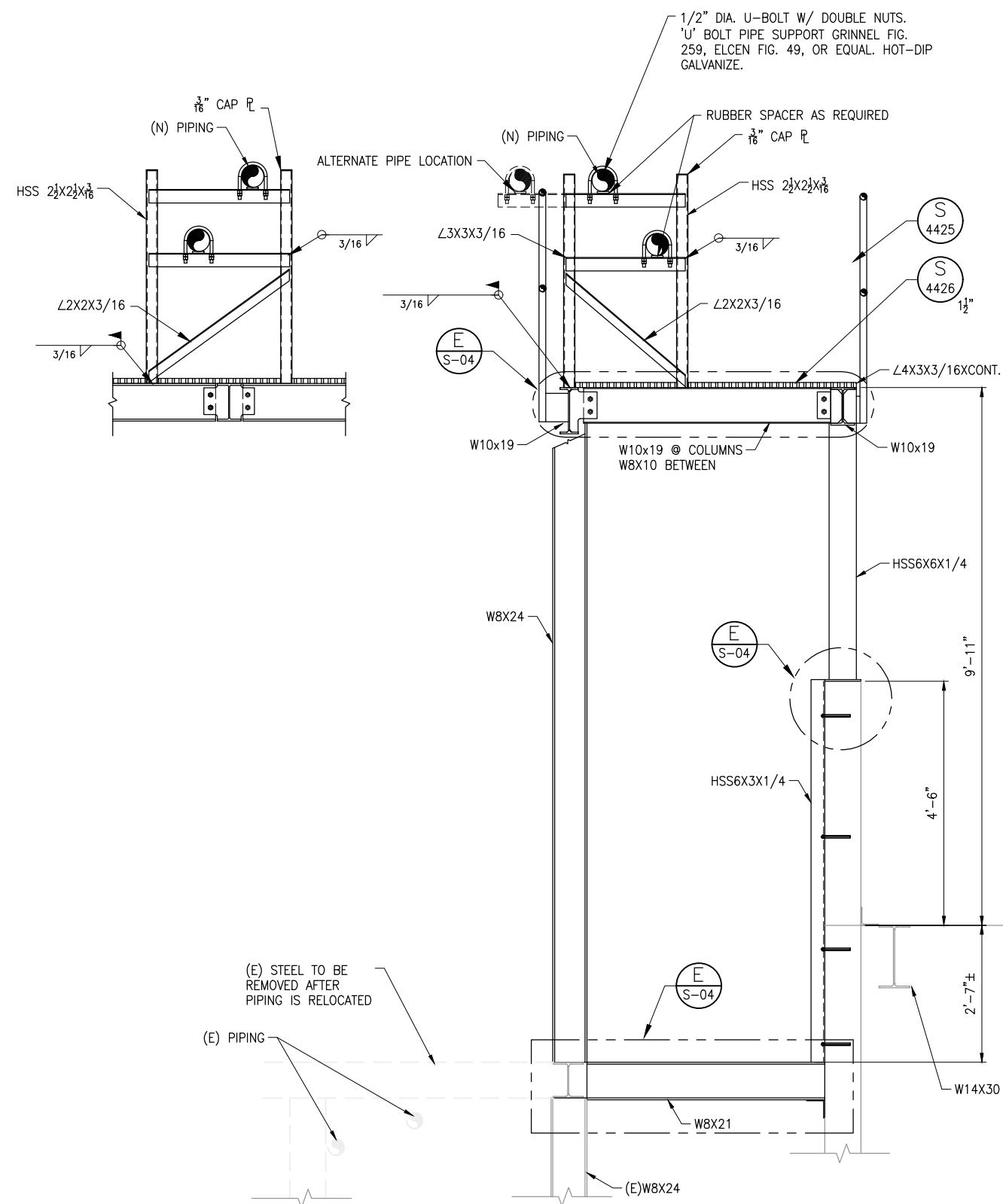
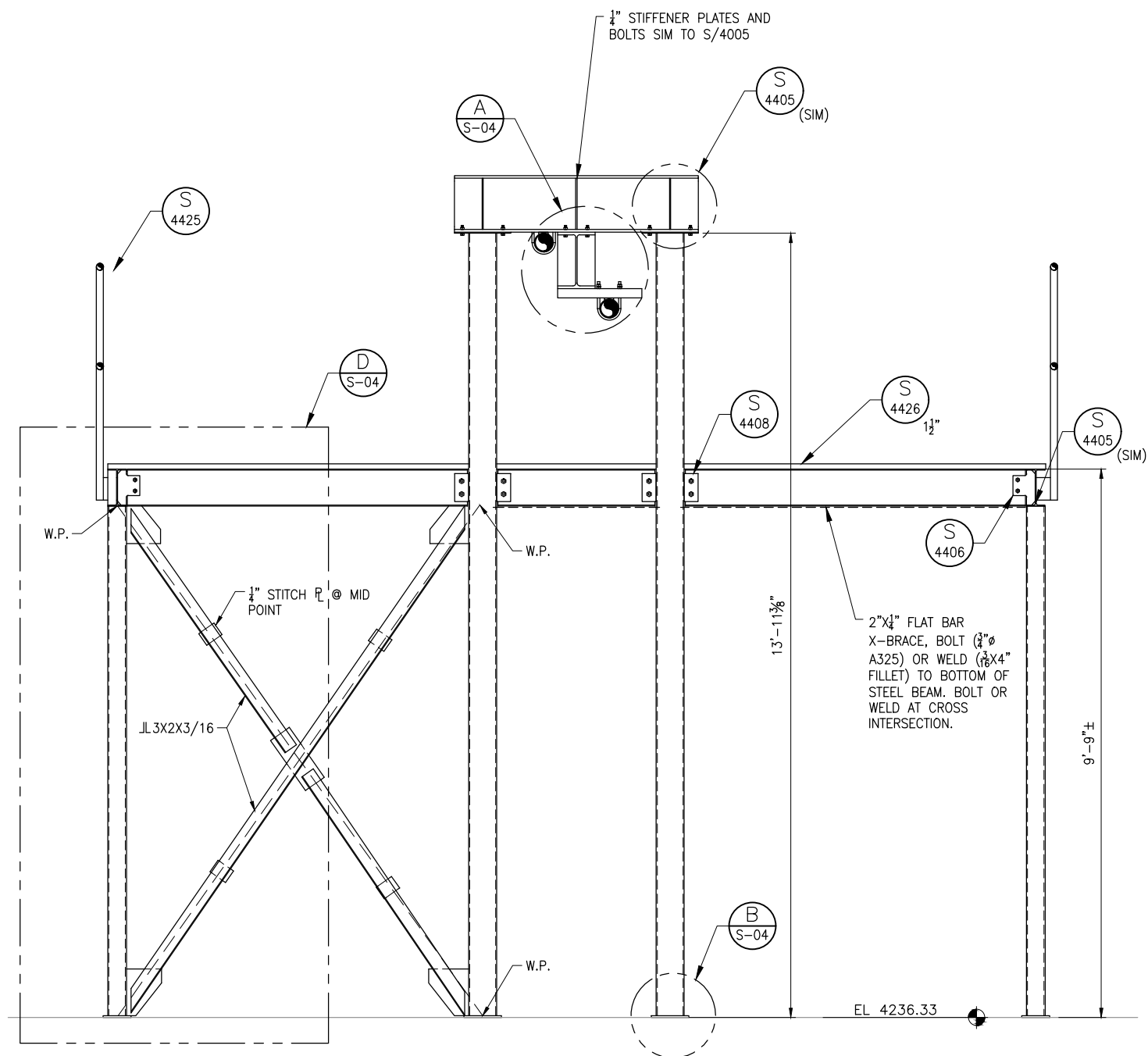
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REVISIONS			
NO.	DATE	REV. BY	DESCRIPTION

SOUTH VALLEY WATER RECLAMATION FACILITY WEST JORDAN, UTAH			
DRYER PIPING MODIFICATIONS			
DESIGN S. COHEN	CHECKED B. MAYERS	REVIEW B. MAYERS	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING
DRAWN T. ANDERSON	APPROVED S. COHEN		

STRUCTURAL		BUILDING PLAN LAYOUT	
DATE:	SEPTEMBER 2020	PROJECT NUMBER	177-17-01.02





SECTION
SCALE: 3/4" = 1'-0"

2
S-01

SECTION
SCALE: 3/4" = 1'-0"

3
S-01

[illegible]

SOUTH VALLEY WATER RECLAMATION FACILITY
DRYER PIPING MODIFICATIONS
WEST JORDAN, UTAH

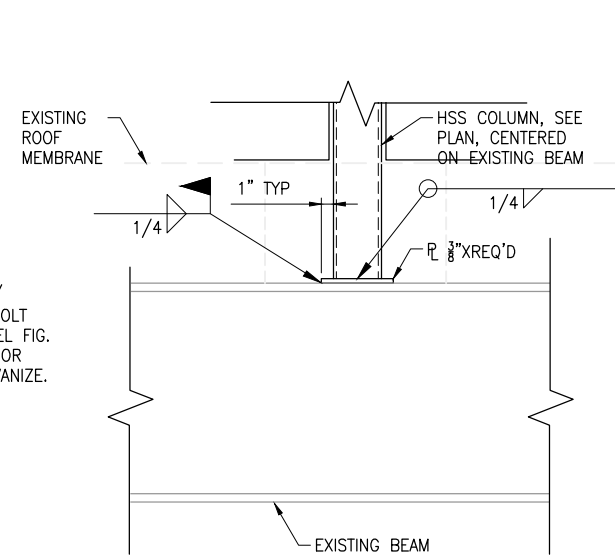
SOUTH VALLEY
DRYER P

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

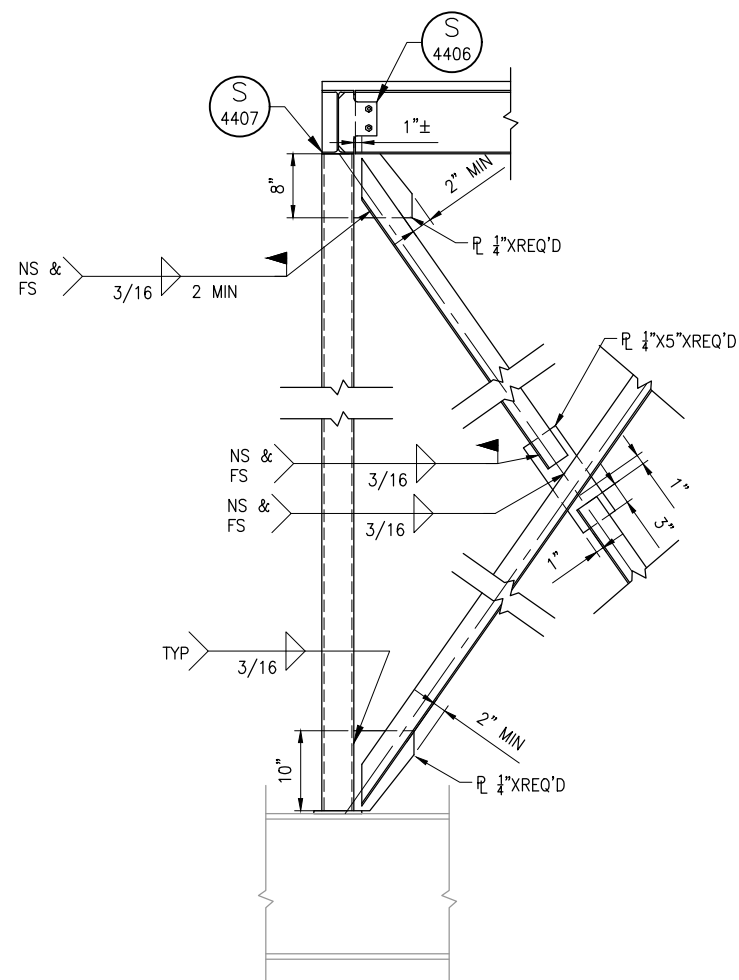
STRUCTURAL SECTIONS

DATE:	SEPTEMBER 2020	PROJECT NUMBER	177-17-01.02
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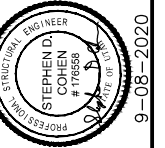
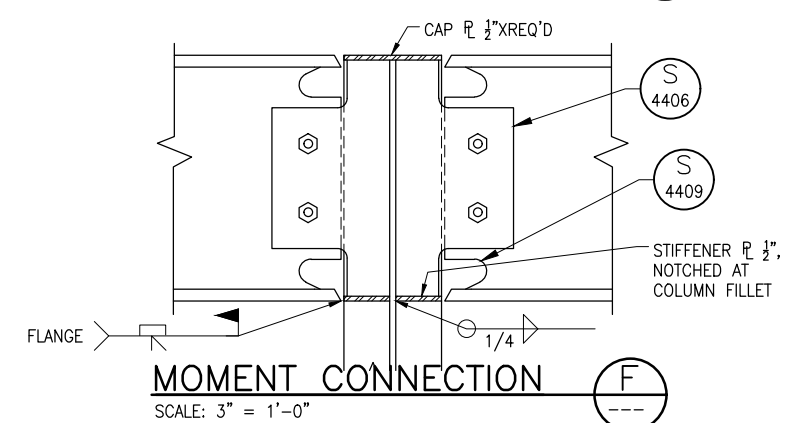
DRAWING NO.
S-03



BASE P CONNECTION (B)
SCALE: 1 1/2" = 1'-0" S-01, S-03



BRACING CONNECTIONS D
SCALE: 1" = 1'-0" S-03

[illegible]

DRYER PIPING MODIFICATIONS
WEST JORDAN, UTAH

DESIGN S. COHEN	CHECKED B. MAYERS	BAR IS ONE INCH ON ORIGINAL DRAWING 
DRAWN T. ANDERSON	APPROVED S. COHEN	

STRUCTURAL DETAILS

DATE: SEPTEMBER 2020 NUMBER 177-17-01.02

DRAWING NO.
S-04

GENERAL STRUCTURAL NOTES

GENERAL

1. THE SPECIFICATIONS AND REQUIREMENTS INDICATED ON THIS SHEET ARE INTENDED AS A BASIC SUMMARY OF THE MATERIAL CONSTRUCTION AND INSPECTION REQUIREMENTS FOR THIS PROJECT. ADDITIONAL REQUIREMENTS ARE GIVEN IN THE PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THESE GENERAL NOTES AND THE REQUIREMENTS GIVEN IN THE PROJECT SPECIFICATIONS, THE ENGINEER SHALL BE CONTACTED TO DETERMINE WHICH PROVISION GOVERNS.
2. EXISTING AS-BUILT CONDITIONS, DIMENSIONS, ELEVATIONS, PIPING, ETC SHALL BE FIELD VERIFIED BEFORE PROCEEDING WITH WORK.
3. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, DUCTS, ETC. UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
4. DESIGN DETAILS AS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND APPLY TO ALL SIMILAR SITUATIONS OCCURRING ON THE PROJECT, WHETHER OR NOT THEY ARE SPECIFICALLY REFERENCED IN EACH LOCATION. CONSULT THE ENGINEER FOR CONCURRENCE PRIOR TO CONSTRUCTION.
5. SUBMIT STRUCTURAL STEEL FABRICATION DRAWINGS FOR REVIEW AND COMMENT PRIOR TO ERECTION OR CONSTRUCTION.
6. APPLICABLE BUILDING CODE FOR THE PROJECT IS THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC). ANY CHANGES MADE DURING CONSTRUCTION TO THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE APPROVED BY THE ENGINEER.

STRUCTURAL STEEL

1. UNLESS NOTED OTHERWISE, PROVIDE STRUCTURAL STEEL CONFORMING TO ASTM A36. ROLLED WIDE FLANGE SHAPES TO CONFORM TO ASTM A992. PIPE TO CONFORM TO ASTM A53, TYPE E OR S, GRADE B. STRUCTURAL TUBING TO CONFORM TO ASTM A1085. FABRICATE AND ERECT ALL STRUCTURAL STEEL IN CONFORMANCE WITH AISC SPECIFICATIONS.
2. USE A325 OR F1852 BOLTS FOR STEEL TO STEEL CONNECTIONS, F1554 GR36 FOR ANCHOR BOLTS, AND A307 BOLTS FOR ALL OTHER CONNECTIONS (UNLESS SPECIFIED OTHERWISE ON DRAWINGS). USE 3/4" DIAMETER MINIMUM.
3. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS." THE TURN-OF-NUT METHOD MAY BE USED. PROVIDE CARBONIZED WASHERS UNDER THE TURNED ELEMENT.
4. USE ONLY CERTIFIED WELDERS FOR ALL WELDING WORK. USE FILLER METAL HAVING A MINIMUM TENSILE STRENGTH OF 70 KSI AND PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT STRUCTURAL WELDING CODE (AWS D1.1).
5. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
6. MINIMUM THICKNESS FOR GUSSET PLATES IS 3/8 INCH.
7. STRUCTURAL STEEL, WHICH IS TO BE EMBEDDED INTO CONCRETE TO BE CLEAN AND FREE OF PAINT, OIL, OR DIRT.

ALUMINUM

1. WHERE REQUIRED, PROVIDE ALLOY 6061-T6 FOR ALL ALUMINUM STRUCTURAL MATERIALS.
2. COAT ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS AS DETAILED IN THE SPECIFICATIONS TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION.
3. PERFORM ALUMINUM WELDING TO CONFORM TO THE PROVISIONS OF THE LATEST STRUCTURAL WELDING CODE (AWS D1.2).

EPOXY ANCHORS

1. EPOXY ANCHORS SHALL BE AN ADHESIVE ANCHOR SYSTEM AS LISTED BELOW:
 - A. HILTI HIT-HY 200 FOR CONCRETE
 - B. HILTI HIT-HY 70 FOR MASONRY
 - C. ITW RED HEAD C6+
 - D. SIMPSON AT, SET OR SET-3G
 2. ANCHOR RODS SHALL BE ASTM A193 GRADE B7, DIAMETER AS INDICATED ON DRAWINGS, THREADED AND GALVANIZED.
 3. FOR UNGROUTED MASONRY UNITS OR UNREINFORCED MASONRY WALLS PROVIDE SCREEN TUBES. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. AS A MINIMUM INSTALLATION SHALL BE AS FOLLOWS:
 - A. DRILL PER MANUFACTURER'S INSTRUCTIONS.
 - B. CLEAN THE HOLE WITH A WIRE BRUSH AND COMPRESSED AIR.
 - C. BEGINNING AT THE BOTTOM, FILL THE SCREEN TUBE FROM BOTTOM TO TOP.
 - D. INSERT THE FILLED SCREEN TUBE INTO THE DRILLED HOLE.
 - E. PUSH THE TREADED ROD INTO THE FILLED SCREEN TUBE.
- TESTING: A MINIMUM OF 25% OF ALL ANCHORS SHALL BE TESTED TO 60 FOOT-POUNDS TORQUE USING A CALIBRATED TORQUE WRENCH. TESTING SHALL BE PROVIDED BY AND PAID FOR BY THE OWNER.

LOADING CRITERIA

- | | |
|---|--|
| 1. BUILDING RISK CATEGORY | III |
| 2. DEAD LOAD | CALCULATED FROM UNIT WEIGHT |
| 3. LIVE LOADS:
STAIRS / PLATFORMS | 50 PSF |
| 4. WIND LOAD:
BASIC WIND SPEED
EXPOSURE | 110 MPH
C |
| 5. SNOW LOAD:
GROUND SNOW LOAD
FLAT ROOF SNOW LOAD
SNOW EXPOSURE COEFFICIENT
SNOW IMPORTANCE FACTOR
SNOW THERMAL FACTOR | 43 PSF
33 PSF
1.0
1.1
1.0 |
| 6. SEISMIC LOAD:
PROCEDURE: EQUIVALENT LATERAL FORCE
SITE CLASS:
IMPORTANCE FACTOR:
SEISMIC DESIGN CATEGORY:
SPECTRAL RESPONSE COEF:
S _{DS}
S _{D1} |

D
1.25
D

0.92g
0.47g |
| BASIC SEISMIC-FORCE-RESISTING SYSTEM:
ORDINARY BRACED STEEL FRAMES
R = 3¼, OMEGA = 2, C _d = 3¼
ORDINARY MOMENT STEEL FRAMES
R = 3½, OMEGA = 3, C _d = 3 | |

SPECIAL INSPECTIONS

1. SPECIAL INSPECTION IN ACCORDANCE WITH APPROPRIATE SECTIONS OF IBC 2018, CHAPTER 17 IS REQUIRED FOR THE PROJECT.
2. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE, TO THE BUILDING OFFICIAL AND THE ENGINEER.
3. AN APPLICATION FOR OFF-SITE FABRICATION SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.
4. A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION SHALL BE COMPLETED AND SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO ERECTION OF PREFABRICATED COMPONENTS. SPECIAL INSPECTION REQUIRED PER IBC SECTION 1704.2.
5. SPECIAL INSPECTION ITEMS REQUIRED PER LIST BELOW. CONTINUOUS OR PERIODIC INSPECTIONS IS DESIGNATED WITH A (C) OR (P).

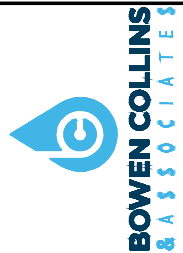
STEEL: (CHAPTER N, AISC 360-10)

- A. VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS, INCLUDING IDENTIFICATION MARKINGS TO CONFIRM ASTM REQUIREMENTS SPECIFIED IN APPROVED CONSTRUCTION DOCUMENTS. _____ P
- B. MANUFACTURERS' CERTIFIED MILL TEST REPORTS. _____ P
- C. FIELD WELDED CONNECTIONS. _____ P
FILLET WELDS _____ C
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS _____ C
- D. INSTALLATION OF HIGH-STRENGTH BOLTED CONNECTIONS. _____ P
SNUG-TIGHT BOLTS _____ P
- E. SLIP-CRITICAL BOLTS _____ P

STRUCTURAL OBSERVATION

BOWEN COLLINS & ASSOCIATES SHALL BE NOTIFIED BY THE CONTRACTOR 5 BUSINESS DAYS BEFORE THE COMPLETION OF THE ITEMS LISTED IN THIS SECTION SO THAT STRUCTURAL OBSERVATION MAY BE PERFORMED IN ACCORDANCE WITH IBC SECTION 1704.5. THE OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF BOWEN COLLINS & ASSOCIATES. COMPLETED OBSERVATION REPORTS WILL BE SUBMITTED TO THE BUILDING OFFICIAL.

- ### 1. STRUCTURAL STEEL AFTER COMPLETION OF FIELD WELDING AND BOLTING.

[illegible]

SOUTH VALLEY WATER RECLAMATION FACILITY

DRYER PIPING MODIFICATIONS

WEST JORDAN, UTAH

DESIGN S. COHEN

DRAWN T. ANDERSON

REVIEW

CHECKED B. MAYERS

APPROVED S. COHEN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

STRUCTURAL

GENERAL STRUCTURAL

NOTES

DATE: SEPTEMBER 2020

PROJECT NUMBER 177-17-01.02

DRAWING NO.
GS-01
SHEET 10 OF 26

3/16

3/16

1'-0" TYP

SHEARTAB, FOR SIZE & BOLTS SEE

1 1/2" TYP

1/2" MAX

1/4" STIFF PL EA SIDE OF WEB AT BRG

STEEL BEAMS, TYP, SEE PLAN

STEEL COL, SEE PLAN, W/ CAP PL 3/4" x REQD W/ (4) 3/4" Ø BOLTS

3/16

S 4406

COLUMN CONNECTION

SCALE: NTS

S
4405

NOTE: OTHER FRAMING MEMBERS NOT SHOWN

STEEL COLUMN,
SEE PLAN,
W/ $\frac{3}{4}$ " x REQD
CAP PL W/ (2) $\frac{3}{4}$ " $\varnothing$
THRU BOLTS

$\frac{1}{2}$ "

$\frac{3}{4}$ "

$\frac{3}{16}$ "

$\frac{1}{4}$ " STIFFENER PL EA
SIDE OF WEB

STEEL BEAM,
SEE PLAN

COLUMN CONNECTION (S)
SCALE: NTS 4407

BOLT SCHEDULE		
W8, W10	(2) ¾"Ø	1. SEE FRAMING PLANS FOR BEAM SIZES. 2. ALL BOLTS SHALL BE A325-N, UNO. 3. STEEL DECK & JOISTS NOT SHOWN. 4. BEAM MAY OCCUR HIGHER FOR DECK BEARING, COORD W/PLAN.
W12, W14	(3) ¾"Ø	
W16, W18	(4) ¾"Ø	
W21, W24	(5) ¾"Ø	
W27	(6) ¾"Ø	

BEAM CONNECTION

SCALE: NTS

S
4406

(2) $L3\frac{1}{2} \times 3\frac{1}{2} \times 5\frac{5}{16}$ x REQD
AT HSS8x8 AND LARGER

(2) $L3\frac{1}{2} \times 2\frac{1}{2} \times 5\frac{5}{16}$ x REQD
AT HSS6x6

(2) $3\frac{1}{2} \times 2 \times 5\frac{5}{16}$ x REQD
BENT @ AT HSS 5x5

$\frac{1}{4}$ " RETURN AT
TOP OF L, TYP

$\frac{1}{4}$ "

$\frac{1}{2}$ " MAX
TYP

USE MAX NO OF $\frac{3}{4}$ "
A325-SC BOLTS IN A
SINGLE LINE, TYP

$1\frac{1}{2}$ "
TYP

3"
TYP

$1\frac{1}{2}$ " TYP

2" TYP

STEEL BEAMS, TYP,
SEE PLAN, W/ END(S)
COPED AS REQD

HSS COL, SEE PLAN

NOTE: OTHER FRAMING

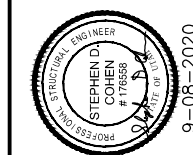
COLUMN CONNECTION

SCALE: NTS

S
4408

- ① 30° BEVEL AS REQUIRED BY *AWS D1.1* FOR SELECTED GROOVE WELD PROCEDURE
- ② LARGER OF t_{bf} OR $\frac{1}{2}" (\pm \frac{1}{4}" t_{bf})$
- ③ $\frac{3}{4} t_{bf}$ TO t_{bf} , $\frac{3}{4}"$ MINIMUM ($\pm \frac{1}{4}"$)
- ④ $\frac{3}{8}"$ MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0)
- ⑤ $3 t_{bf}$ ($\pm \frac{1}{2}"$)
- ⑥ SEE AISC SEISMIC GUIDELINES FOR CUTTING AND SMOOTHNESS REQUIREMENTS.

WELD ACCESS HOLES

[illegible]

SOUTH VALLEY WATER RECLAMATION FACILITY
DRYER PIPING MODIFICATIONS
WEST JORDAN, UTAH

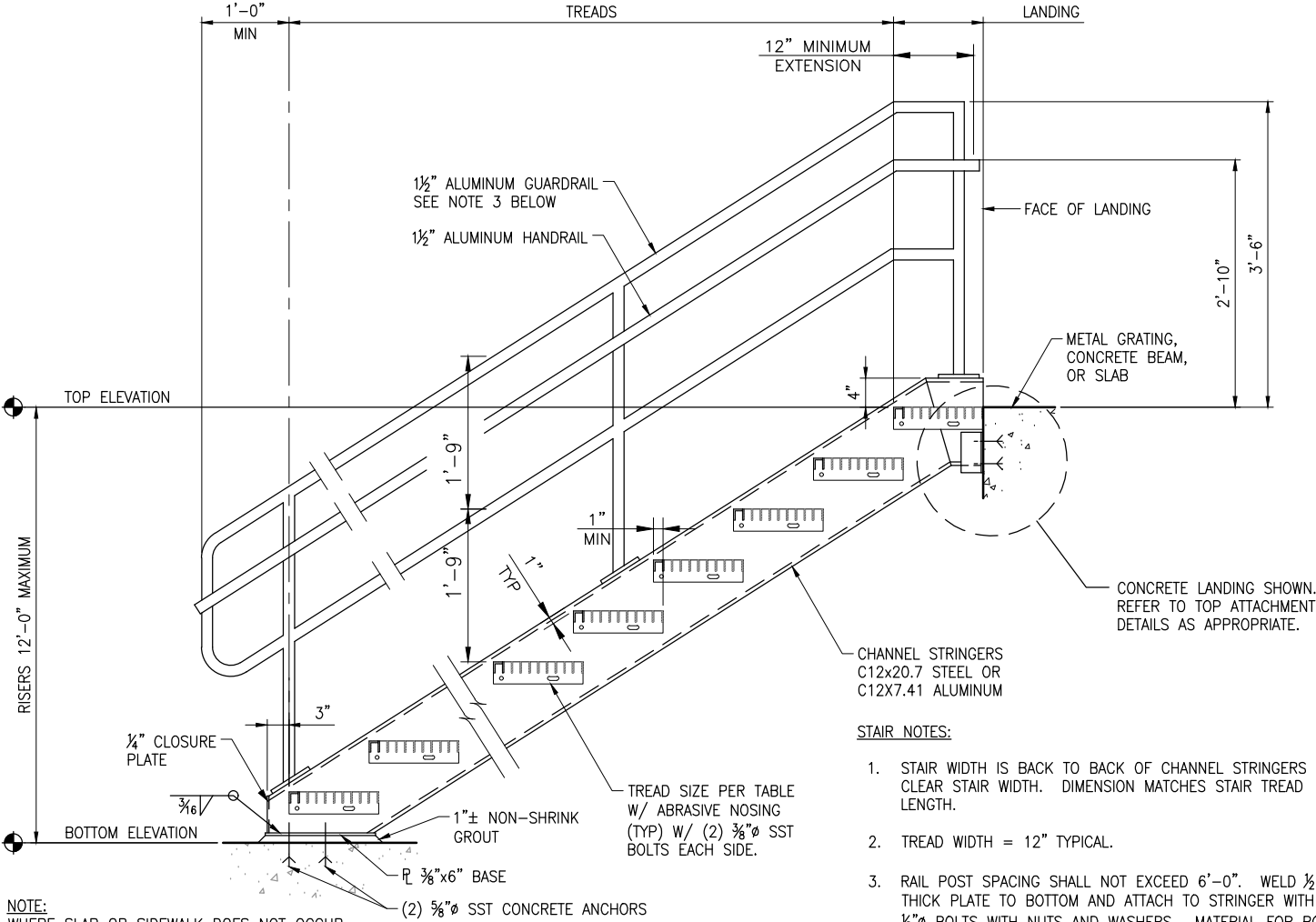
VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

REVIEW
CHECKED B. MAYERS
APPROVED S. COHEN

STRUCTURAL	GENERAL STRUCTURAL DETAILS - 01	DATE: SEPTEMBER 2020	PROJECT NUMBER 177-17-01.02
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DATE:	SEPTEMBER 2020	PROJECT NUMBER	177-17-01.02
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DRAWING NO.
GS-02



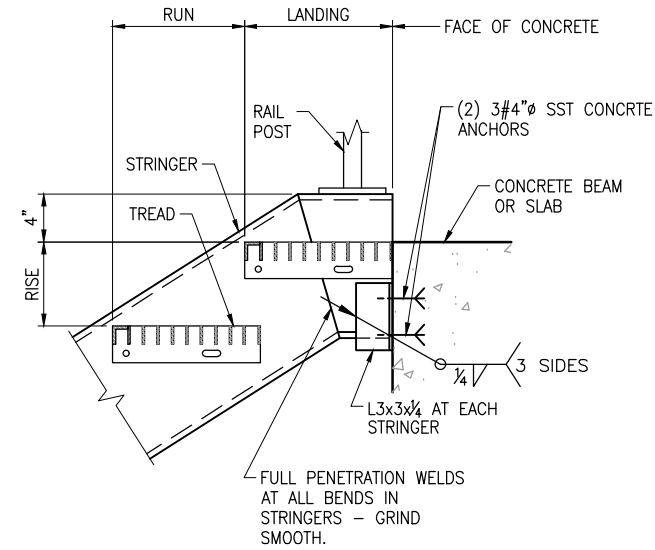
NOTE:
WHERE SLAB OR SIDEWALK DOES NOT OCCUR
PROVIDE 4'-6"x2'-0"x10" PAD W/ #4@12" EW
CENTERED.

METAL STAIR

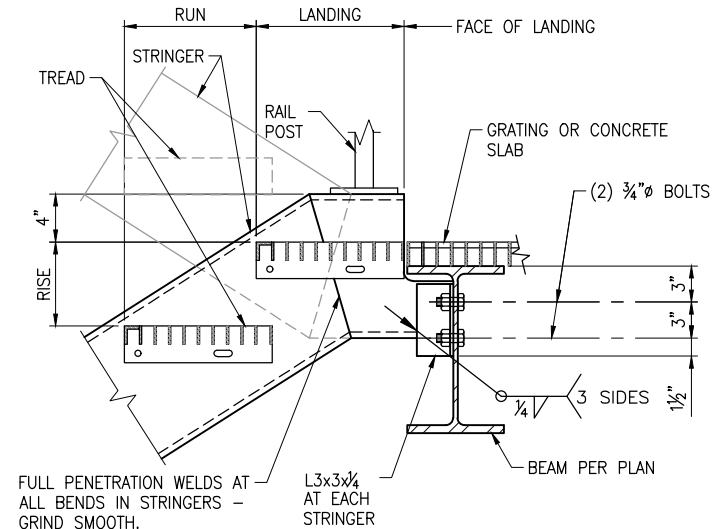
NOT TO SCALE

STAIR NOTES:

1. STAIR WIDTH IS BACK TO BACK OF CHANNEL STRINGERS CLEAR STAIR WIDTH. DIMENSION MATCHES STAIR TREAD LENGTH.
2. TREAD WIDTH = 12" TYPICAL.
3. RAIL POST SPACING SHALL NOT EXCEED 6'-0". WELD 1/2" THICK PLATE TO BOTTOM AND ATTACH TO STRINGER WITH (2) 1/2"Ø BOLTS WITH NUTS AND WASHERS. MATERIAL FOR BOLTS, NUTS, AND WASHERS TO BE STAINLESS STEEL EXCEPT FOR GALVANIZED STEEL, USE GALVANIZED BOLTS.
4. COAT ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE PER SPECIFICATIONS.



STAIR TOP
(CONCRETE LANDING)



STAIR TOP/BOTTOM
(STEEL/AL LANDING)

S
4420

STEPHEN D. COHEN
#17858
9/8/2020
DATE: 9-08-2020

PROFESSIONAL ENGINEER
STATE OF UTAH

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

REVIEW
CHECKED B. MAYERS
APPROVED S. COHEN

DESIGN
DESIGN S. COHEN
DRAWN T. ANDERSON

DATE: SEPTEMBER 2020
PROJECT 177-17-01.02
NUMBER

STRUCTURAL
GENERAL STRUCTURAL
DETAILS - 02

DRAWING NO.
GS-03

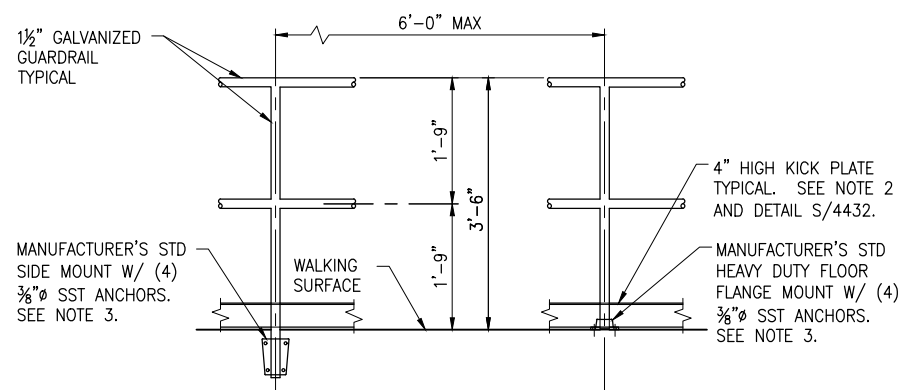
SOUTH VALLEY WATER RECLAMATION FACILITY
DRYER PIPING MODIFICATIONS
WEST JORDAN, UTAH

DATE: SEPTEMBER 2020
PROJECT 177-17-01.02
NUMBER

SHEET 12 OF 26

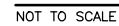
BOWEN COLLINS
& ASSOCIATES

P:\South Valley WRF\Dryer Piping Modifications\Drawings\Sh1\1771701_GS-03.dwg Plotted: 9/8/2020 3:39 PM By: Tim Anderson



NOT TO SCALE

4425



442

1. GRATING DEPTH "T" AS NOTED ON DRAWINGS.
2. ALL EDGES AND OPENINGS ARE TO BE BANDAED.
3. WEIGHT OF INDIVIDUAL GRATING SECTION SHALL NOT EXCEED 80 LBS.
4. METAL BEARING BARS ARE TO BE DEPTH "T"x $\frac{3}{16}$ " @ $1\frac{1}{8}$ " OC. CROSS BARS ARE TO BE AT 4" OC.
5. PROVIDE A MINIMUM OF 4 CLIPS PER GRATING PANEL AND LOCATE APPROXIMATELY 4" FROM PANEL CORNERS. MAXIMUM SPACING OF CLIPS IS 3'-0".
6. MATERIALS:
ALUMINUM GRATING - USE ALUMINUM ANGLE SUPPORTS AND STAINLESS STEEL BOLTS AND CLIPS.

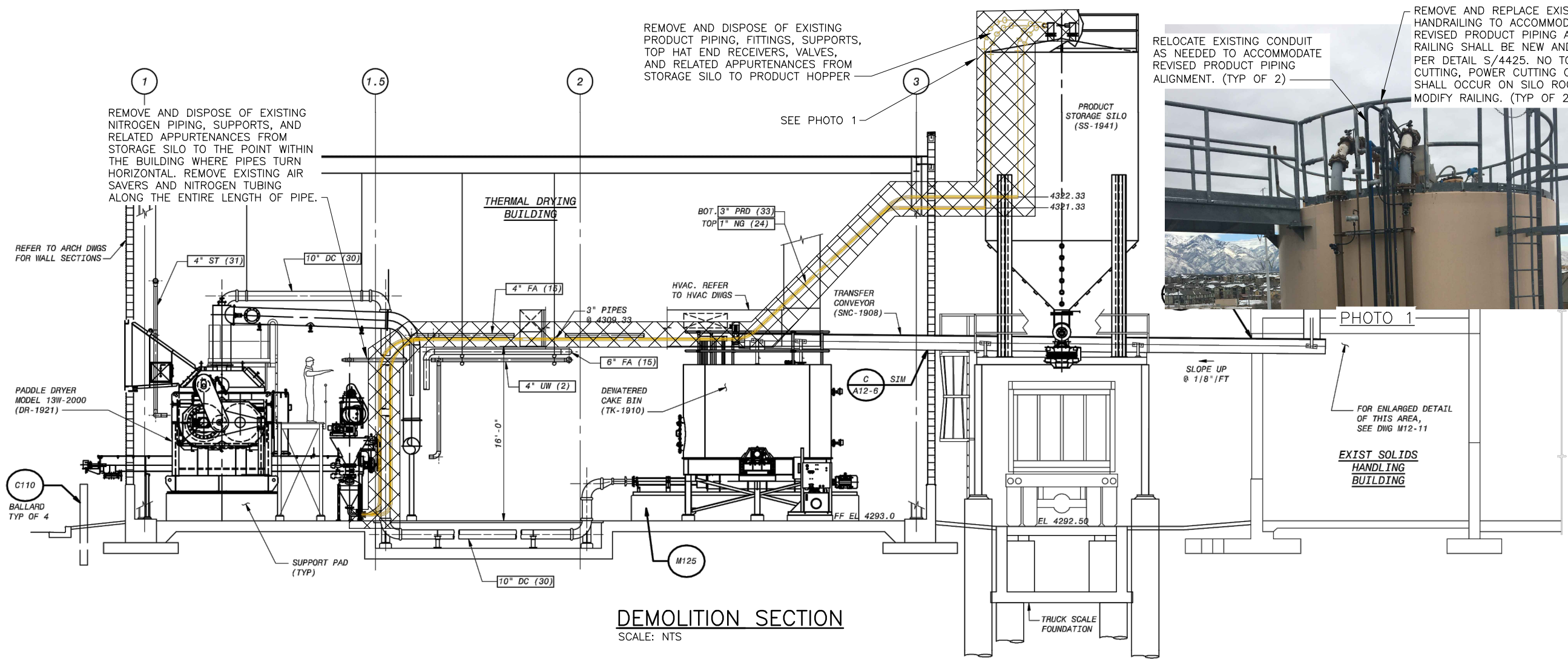
1. COPE KICK PLATE AROUND GUARDRAIL.
2. MANUFACTURER'S STANDARD 4" KICK PLATE MAY BE SUBSTITUTED.
3. PLATE MATERIAL TO MATCH RAIL MATERIAL.



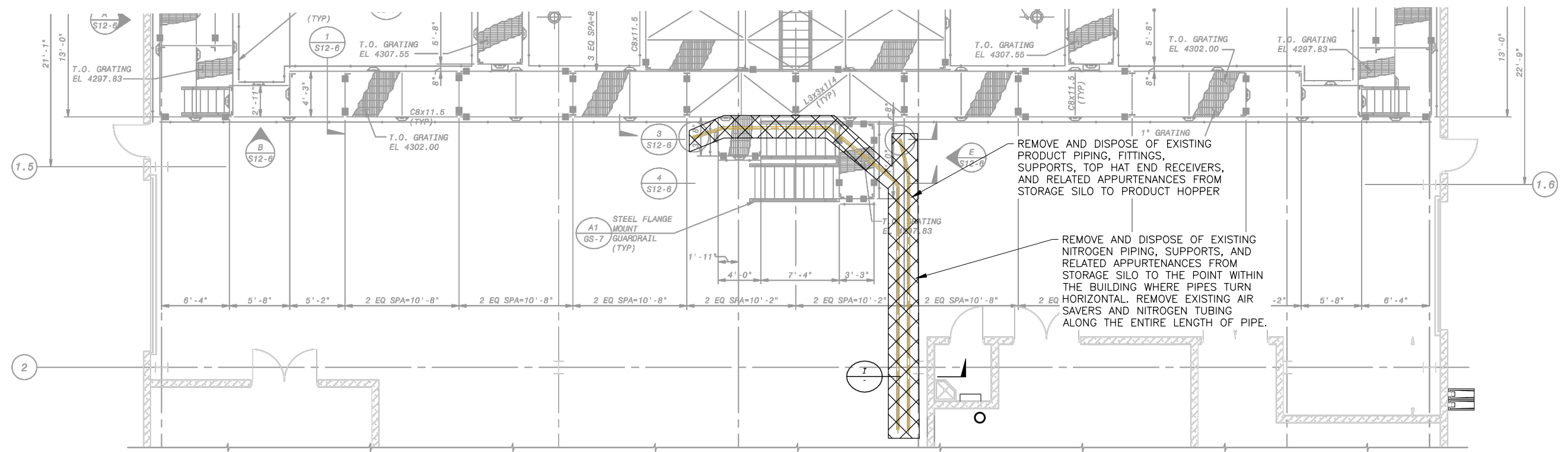
44



44



DEMOLITION SECTION
SCALE: NTS



DRYER BUILDING DEMOLITION PLAN
SCALE: NTS

BOWEN COLLINS ASSOCIATES

REGISTERED PROFESSIONAL ENGINEER
#174438
ROBERT M. MAYERS
STATE OF UTAH
9-08-2020

9-08-2020

REVISIONS			
NO.	DATE	REV. BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW: B. MAYERS
CHECKED: B. MAYERS
APPROVED: B. MAYERS

DRYER PIPING MODIFICATIONS
WEST JORDAN, UTAH

DESIGN: D. COWELL
DRAWN: T. ANDERSON

DEMOLITION PLAN - 1

PROJECT NUMBER: 177-17-01.02
DATE: SEPTEMBER 2020

DRAWING NO. M-01

SHEET 14 OF 26