

LAYTON HIGH SCHOOL BID SET

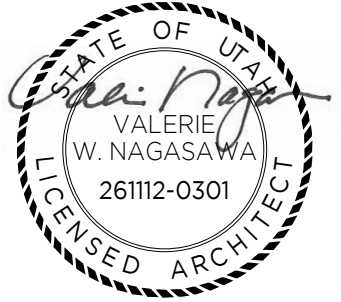


DRAWING INDEX	
SHEET NUMBER	SHEET NAME
ARCHITECTURE	
A000	DRAWING INDEX, SYMBOLS AND ABBREVIATIONS
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A401	ENLARGED FLOOR PLAN
A402	ENLARGED ROOF PLAN OVER WELDING SHOP
A403	WELDING BOOTHS ENLARGED PLANS AND ELEVATIONS
A404	INTERIOR ELEVATIONS
6	

REVISIONS:



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ABBREVIATIONS

ABV	ABOVE	DTL.	DETAIL	GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED	MTL.	METAL	SHR.	SHOWER
A.F.F.	ABOVE FINISH FLOOR	Ø	DIAMETER			MIN.	MINIMUM	SIM.	SIMILAR
ADJ.	ADJUSTABLE	DIA.	DIAMETER	GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED	MISC.	MISCELLANEOUS	STC	SOUND TRANSMISSION COEFFICIENT
ALUM.	ALUMINUM	DBL.	DOUBLE			N.I.C.	NOT IN CONTRACT		
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	DWGS.	DRAWINGS	GND.	GROUND	N.T.S.	NOT TO SCALE	SPEC.	SPECIFICATION
		EA.	EACH	GYP. BD.	GYPSON BOARD	#	NUMBER	STD.	STANDARD
AB	ANCHOR BOLT	E.F.	EACH FACE	GW.B.	GYPSON WALL BOARD	NO.	NUMBER	STRUCT.	STRUCTURAL
<	ANGLE	E.S.	EACH SIDE	HC.	HANDICAPPED	O.C.	ON CENTER	SUPER.	SUPERVISOR
APPROX.	APPROXIMATE	E.W.	EACH WAY	HDWR.	HARDWARE	OWSJ	OPEN WEB STEEL JOIST	SUSP.	SUSPENDED
ARCH.	ARCHITECTURAL OR ARCHITECT	EWC	ELECTRIC WATER COOLER	HSA	HEADED STUD ANCHOR	OPP.	OPPOSITE	THRU	THROUGH
@	AT	EL.	ELEVATION	HVAC	HEATING/VENTILATION/AIR CONDITIONING	O.D.	OUTSIDE DIAMETER	T.O.	TOP OF
BP	BASE PLATE	ELEV.	ELEVATION			O.F.	OUTSIDE FACE	T.O.A.	TOP OF ASPHALT
BRG.	BEARING	EQ.	EQUAL	HT.	HEIGHT	O.H.	OVERHEAD	T.O.C.	TOP OF CURB
B.M.	BENCHMARK	EXIST.	EXISTING	H.M.	HOLLOW METAL	OHD	OVERHEAD DOOR	T.O.F.	TOP OF FOOTING
BTWN	BETWEEN	EXP.	EXPANSION	HORIZ.	HORIZONTAL	PNT	PAINTED OR PAINT	T.O.S.	TOP OF SLAB OR SIDEWALK
BITUM.	BITUMINOUS	E.J.	EXPANSION JOINT	HR.	HOUR	PTN	PARTITION	T.O.W.	TOP OF WALL
BD.	BOARD	EXT.	EXTERIOR	HYD	HYDRANT	PERP.	PERPENDICULAR	TYP.	TYPICAL
BOT.	BOTTOM	IN.	INCHES OR INCH	IN.	INCHES OR INCH	PLAM	PLASTIC LAMINATE	U.N.O.	UNLESS NOTED OTHERWISE
B.O.	BOTTOM OF	INFO.	INFORMATION	INSUL.	INSULATION	PL.	PLATE	VEN.	VENEER
BLDG	BUILDING	I.D.	INSIDE DIAMETER	I.F.	INSIDE FACE	PCF	POUNDS PER CUBIC FOOT	V.I.F.	VERIFY IN FIELD
CLG.	CEILING	INSUL.	INSULATION	PLF	POUNDS PER LINEAL FOOT	PSF	POUNDS PER SQUARE FOOT	VERT.	VERTICAL
CL	CENTER LINE	FF	FINISH FLOOR	PSI	POUNDS PER SQUARE INCH	PROT.	PROTECTION	VEST.	VESTIBULE
CLR.	CLEAR	FE	FIRE EXTINGUISHER	PTN	PARTITION	QTY.	QUANTITY	VCT	VINYL COMPOSITION TILE
COL	COLUMN	FEC	FIRE EXTINGUISHER CABINET	PERP.	PERPENDICULAR	RAD.	RADIUS	WWF	WELDED WIRE FABRIC
CONC	CONCRETE	FLR.	FLOOR	PLAM	PLASTIC LAMINATE	R.D.	ROOF DRAIN	W/	WITH
CMU	CONCRETE MASONRY UNIT	FD	FLOOR DRAIN	PL.	PLATE	REINF.	REINFORCED	WD.	WOOD
CONST.	CONSTRUCTION	FTG.	FOOTING	PCF	POUNDS PER CUBIC FOOT	REQ.	REQUIRED		
CONT.	CONTINUOUS	FDN.	FOUNDATION	PLF	POUNDS PER LINEAL FOOT	R.D.	ROOF DRAIN		
C.J.	CONTROL JOINT	GA.	GAGE/GAUGE	PSF	POUNDS PER SQUARE FOOT	RM.	ROOM		
COORD.	COORDINATE	GAL.	GALLON	PSI	POUNDS PER SQUARE INCH	R.O.	ROUGH OPENING		
DBA	DEFORMED BAR ANCHOR	GPM	GALLONS PER MINUTE	PROT.	PROTECTION	SCHED.	SCHEDULE		
DEPT	DEPARTMENT	GALV.	GALVANIZED	LT.	LIGHT	SHT.	SHEET		
		GOVT.	GOVERNMENT	LT. WT.	LIGHT WEIGHT				
				MAINT.	MAINTENANCE				
				MANUF.	MANUFACTURER				
				MFR.	MANUFACTURER				
				M.O.	MASONRY OPENING				
				MAT.	MATERIAL				
				MAX.	MAXIMUM				
				MECH.	MECHANICAL				

GRAPHIC SYMBOLS

	GRID	GRID LINES
	DETAIL SYMBOL	DETAIL NUMBER/ SHEET WHERE DETAIL IS DRAWN
	BUILDING SECTION SYMBOL	SECTION REFERENCE/ SHEET WHERE SECTION IS DRAWN
	WALL SECTION SYMBOL	SECTION REFERENCE/ SHEET WHERE SECTION IS DRAWN
	EXTERIOR ELEVATION SYMBOL	ELEVATION IDENTIFICATION SHEET WHERE ELEVATION IS DRAWN
	INTERIOR ELEVATION SYMBOL	ELEVATION IDENTIFICATION SHEET WHERE ELEVATION IS DRAWN
	ELEVATION CONTROL POINT	OR DATUM POINT
	DOOR TAG	DOOR NUMBER
	WINDOW TAG	WINDOW OR STOREFRONT NUMBER
	ROOM TAG	ROOM NAME ROOM NUMBER
	REVISION TAG	
	VIEW NAME	VIEW TITLE VIEW NUMBER/ SHEET WHERE VIEW IS LOCATED VIEW NAME/ VIEW SCALE

MATERIALS/LEGEND

	CONCRETE MASONRY UNIT
	FACE BRICK
	CONCRETE (POURED IN PLACE)
	GYPSON BOARD OR SETTING BEDS
	INSULATION (BATT & BLANKET)
	INSULATION (RIGID/SEMI-RIGID)
	PLYWOOD
	CONTINUOUS ROUGH WOOD
	BLOCKING, ROUGH WOOD
	METAL (LARGE SCALE)
	GRAVEL
	EARTH
	COMPACTED FILL
	QUARRY/CERAMIC TILE
	FIREPROOFING
	WOOD

BID SET

LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 WASATCH Dr, LAYTON, UTAH 84041

Davis School District

70 EAST 100 NORTH FARMINGTON
UTAH, 84025

GSBS PROJECT NO.: 2018.029.00
CEA PROJECT NO.: 2018.014.00
ISSUED DATE: 11.06.2018

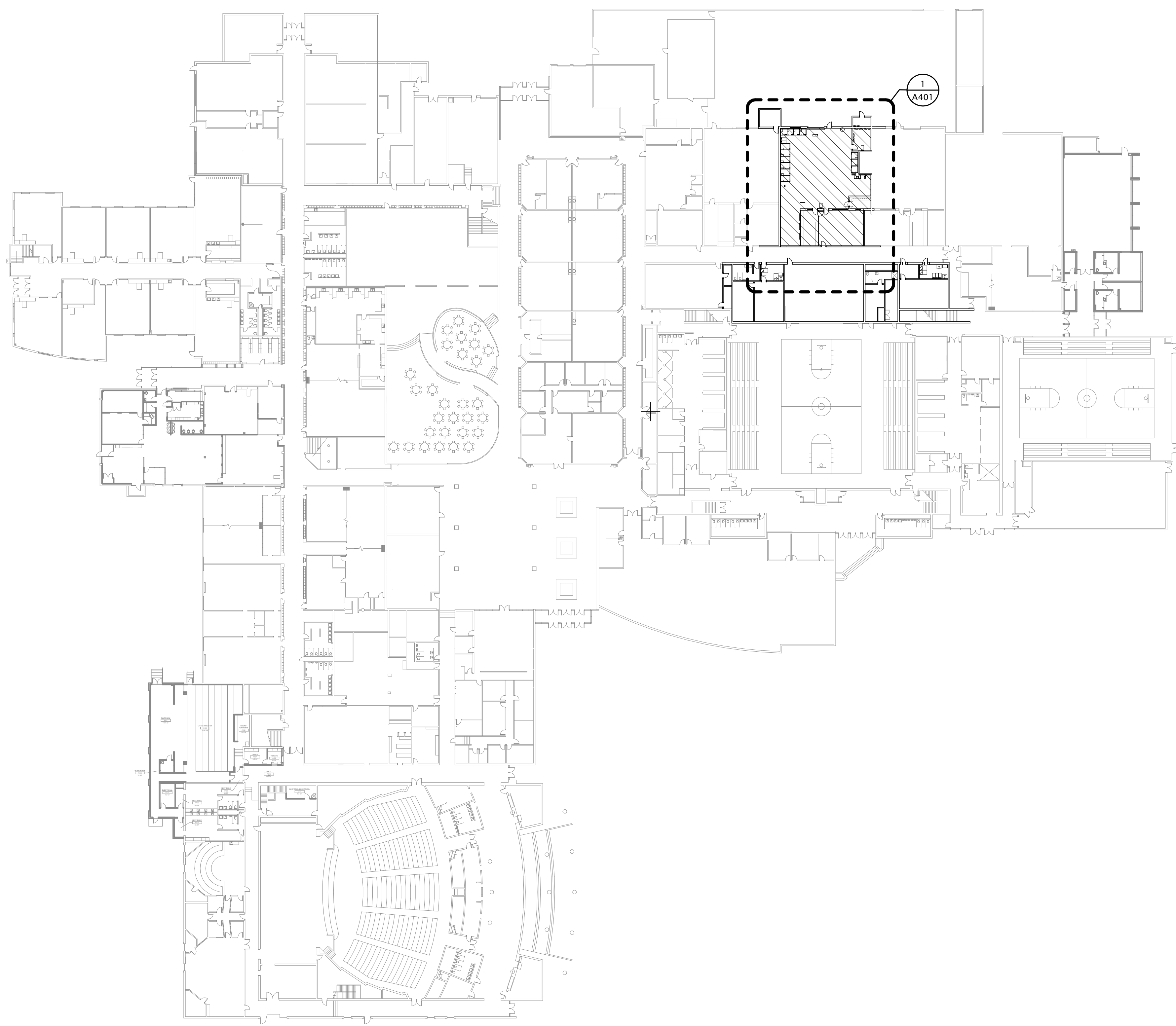
DRAWING INDEX, SYMBOLS AND ABBREVIATIONS

A000

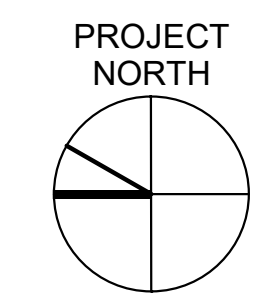
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REVISIONS:



1 FLOOR PLAN - LEVEL ONE
A100 1" = 40'-0"



BID SET

**LAYTON HIGH SCHOOL
WELDING SHOP
REMODEL**

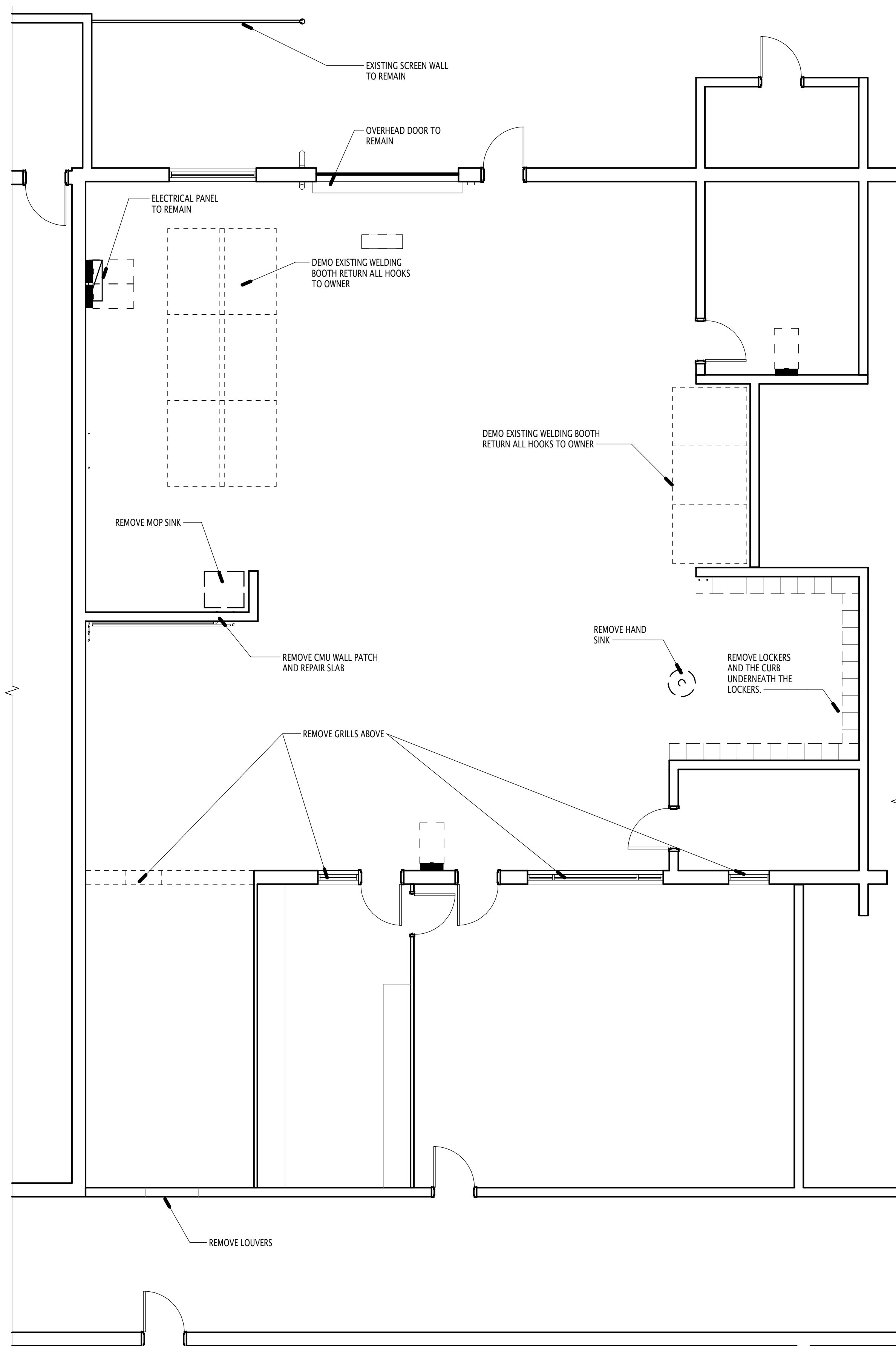
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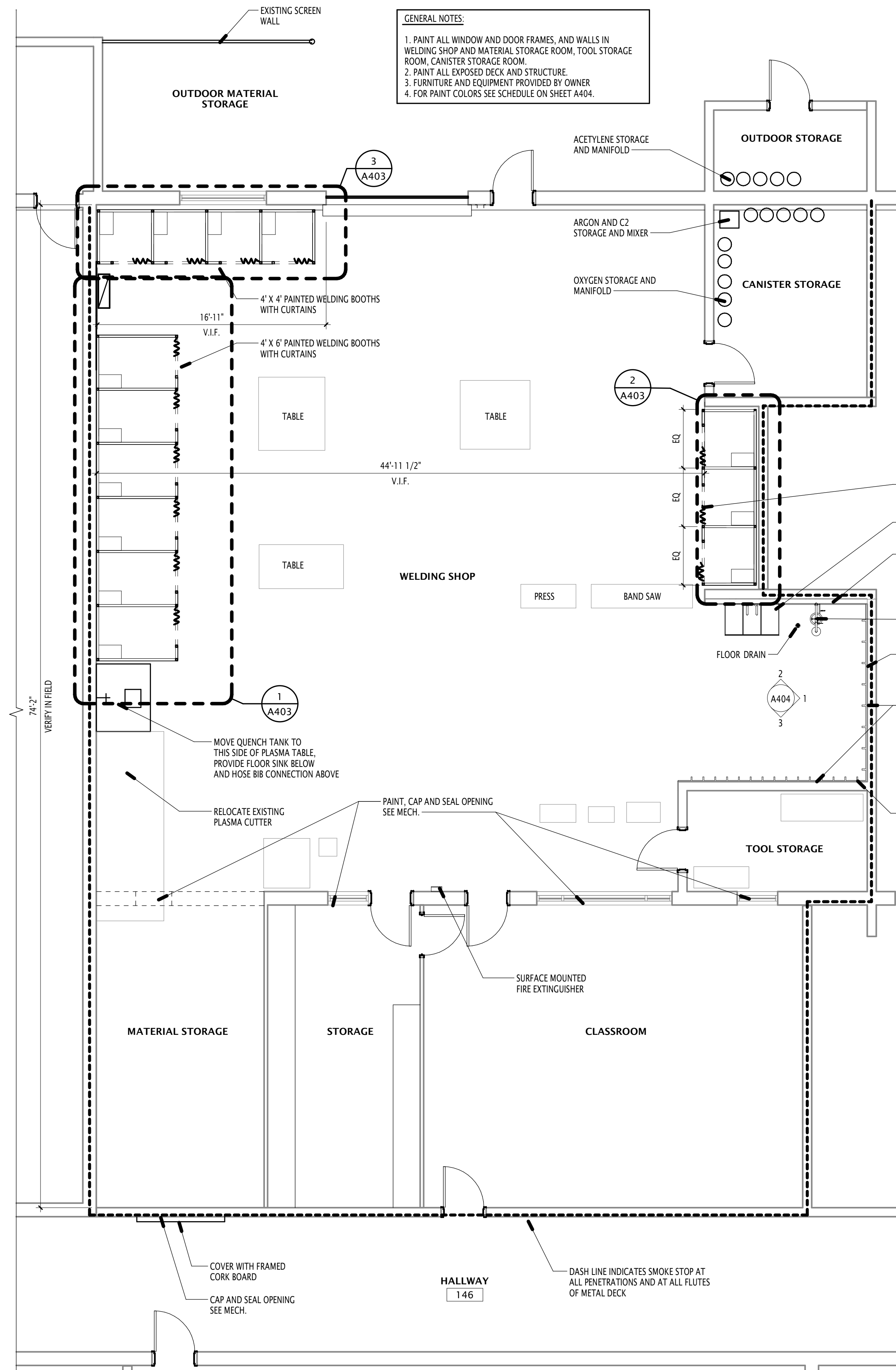
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FLOOR PLAN

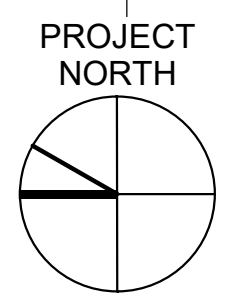
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2 ENLARGED DEMOLITION FLOOR PLAN
A401 3/16" = 1'-0"

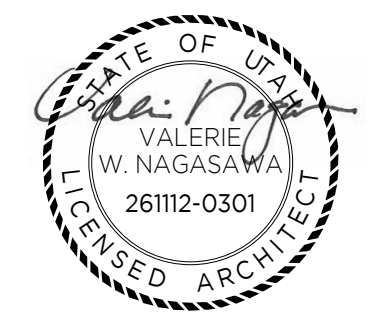


1 ENLARGED FLOOR PLAN
A401 3/16" = 1'-0"



REVISIONS:

NO.	DESCRIPTION



BID SET
LAYTON HIGH SCHOOL
WELDING SHOP
REMODEL

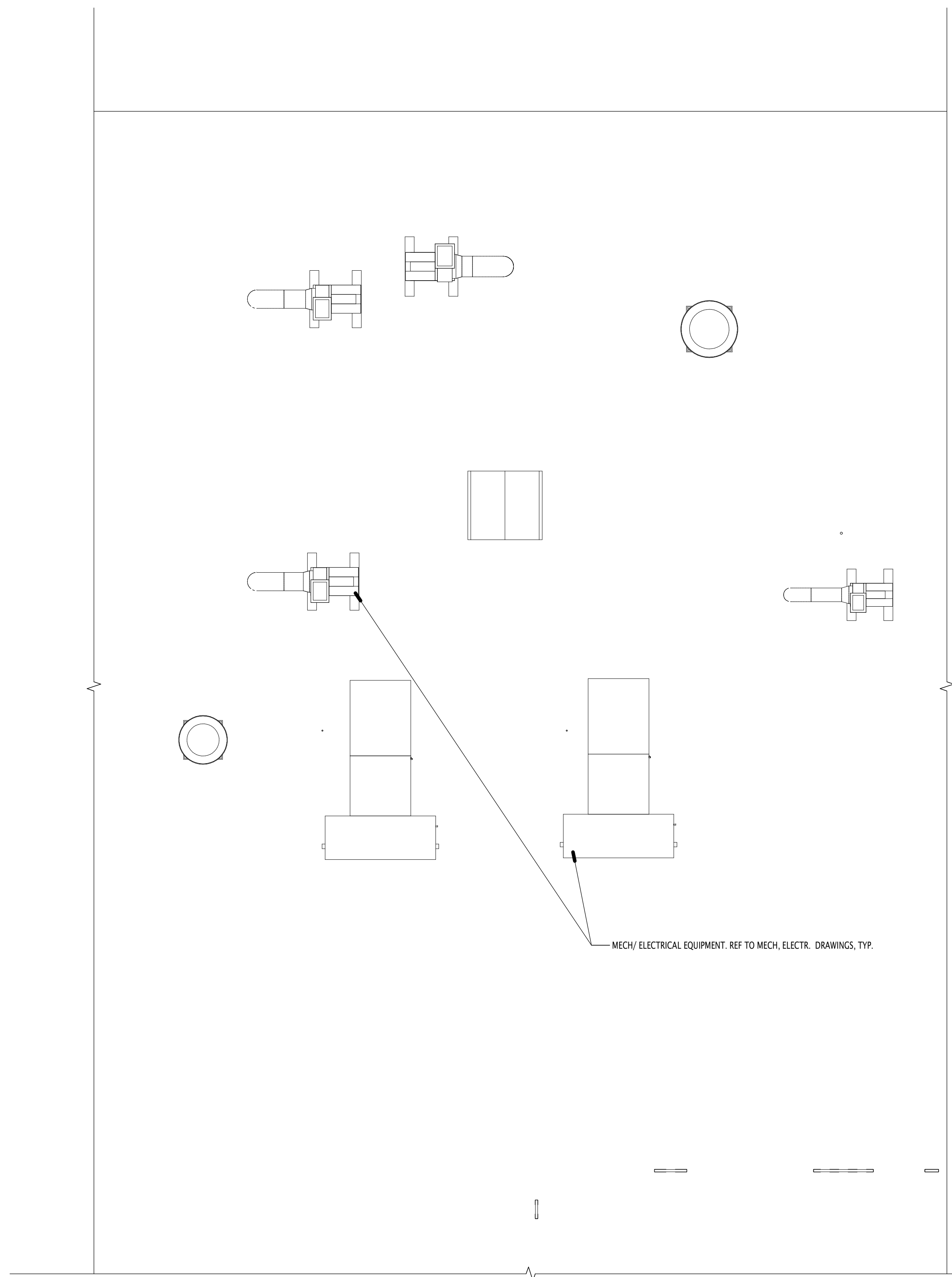
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ENLARGED FLOOR PLAN

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NOTE:
PATCH AND REPAIR ALL ROOF PENETRATIONS.
PROVIDE PREFABRICATED PIPE FLASHING AS RECOMMENDED BY ROOFING MANUFACTURER AT ALL PIPE PENETRATIONS. INSTALL PER MANUFACTURER'S RECOMMENDATION FOR A WATER-TIGHT INSTALLATION.
REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR CURB REQUIREMENTS.



REVISIONS:

NO.	DESCRIPTION	DATE



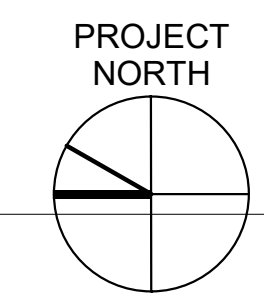
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LAYTON HIGH
SCHOOL
WELDING SHOP
REMODEL

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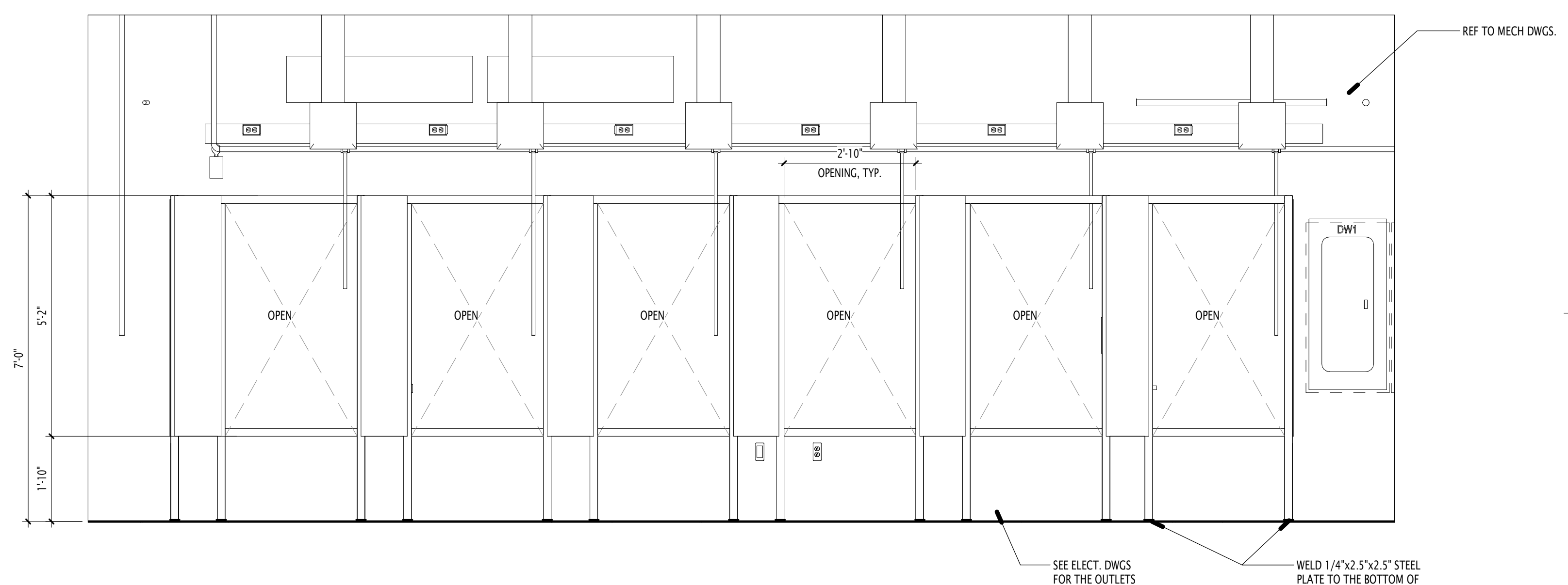
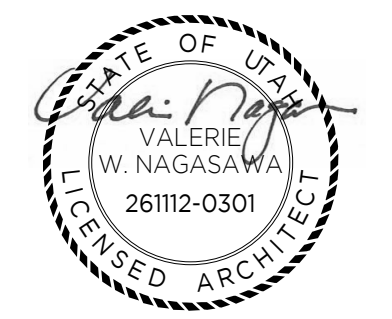
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**ENLARGED ROOF PLAN
OVER WELDING SHOP**

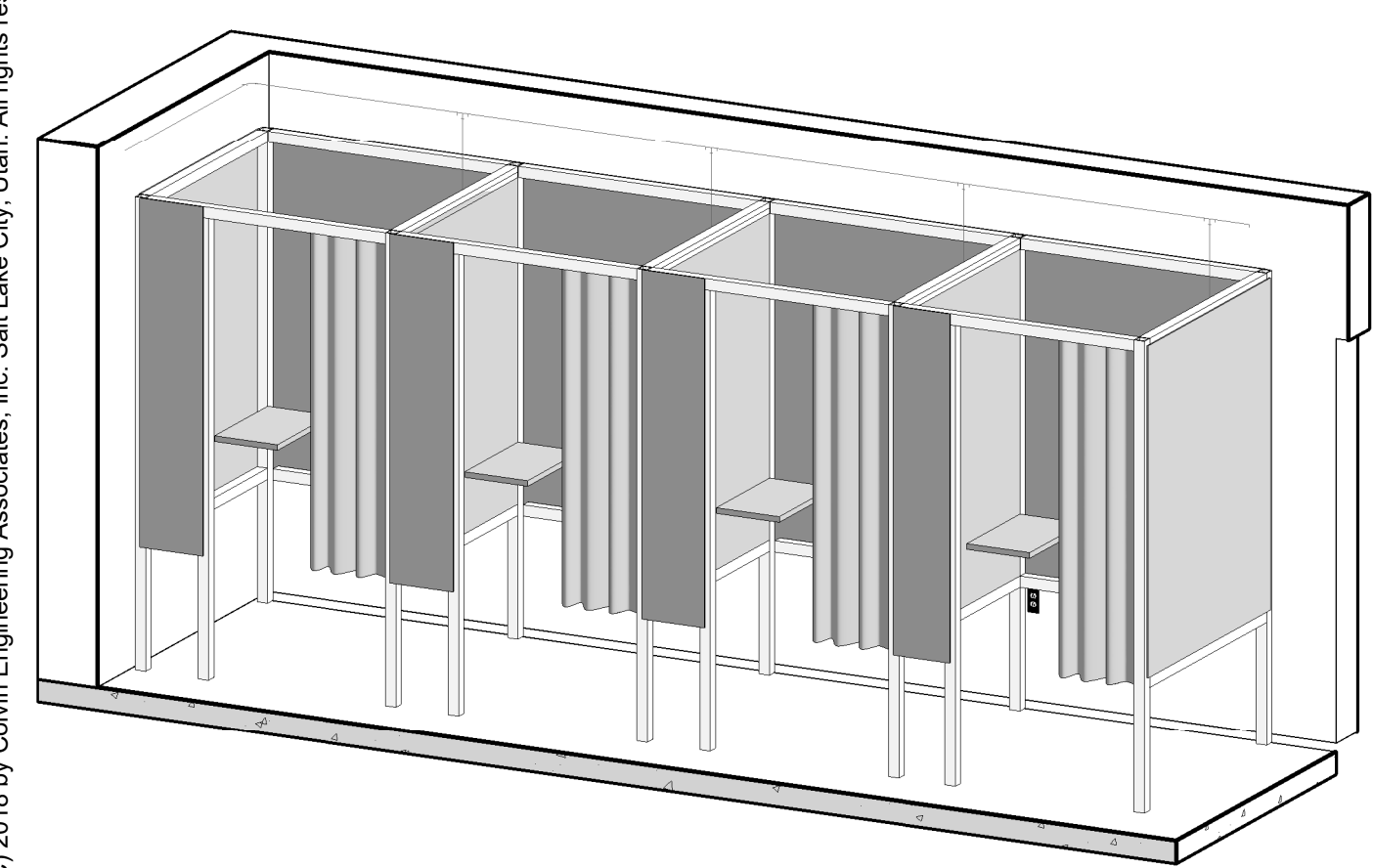
1
A402 ENLARGED ROOF PLAN
3/16" = 1'-0"



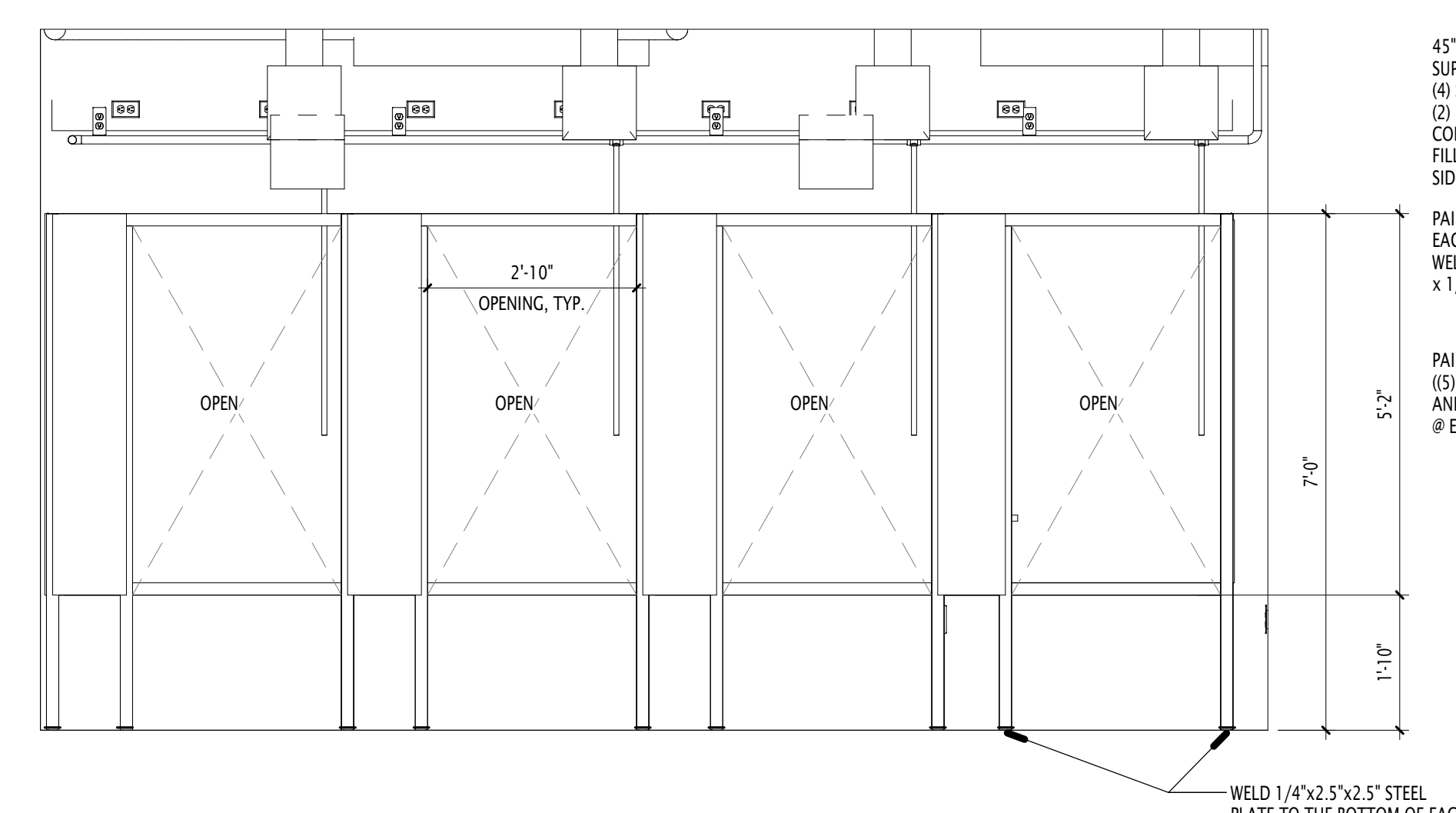
REVISIONS:



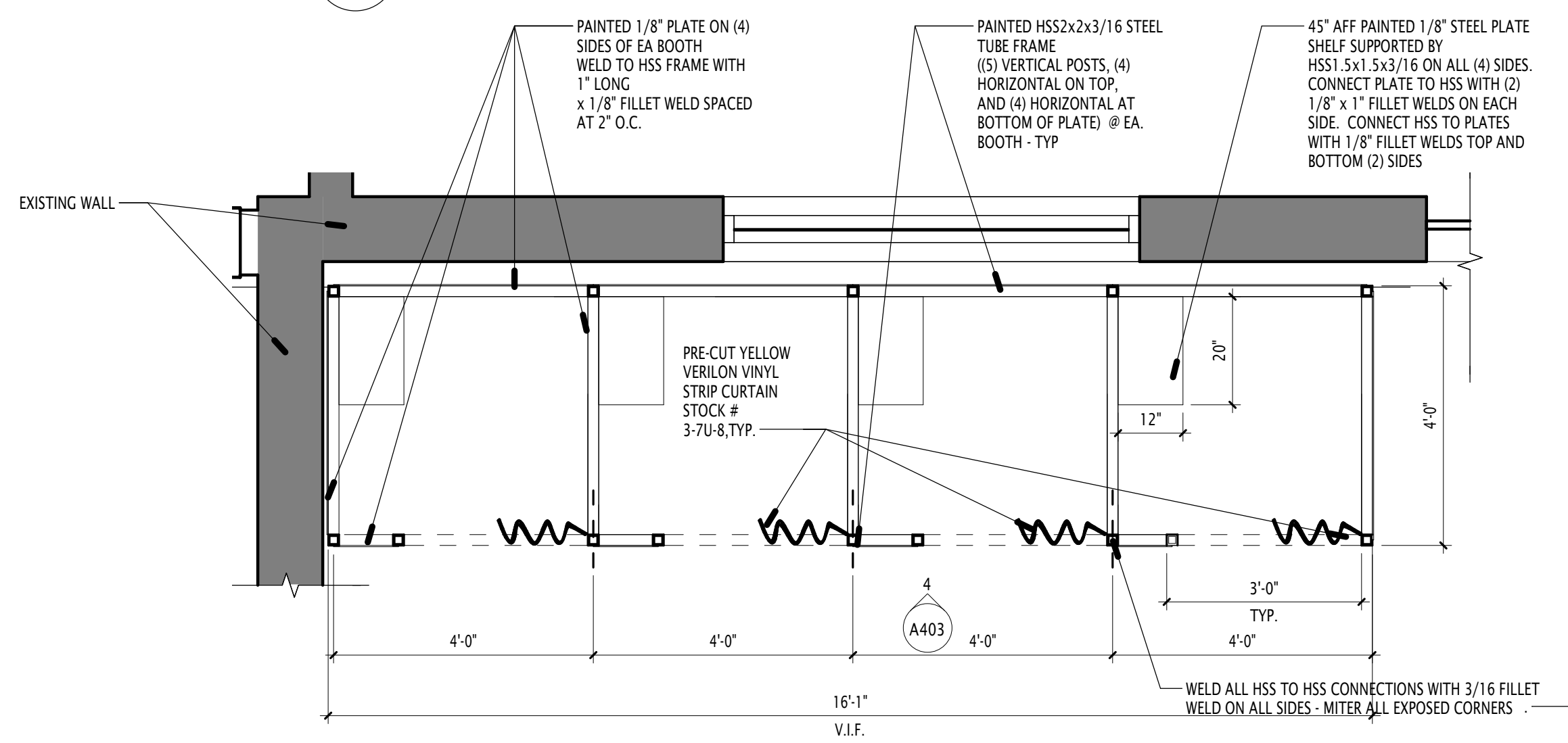
5 WELDING BOOTHS ELEVATION
A403 1/2" = 1'-0"



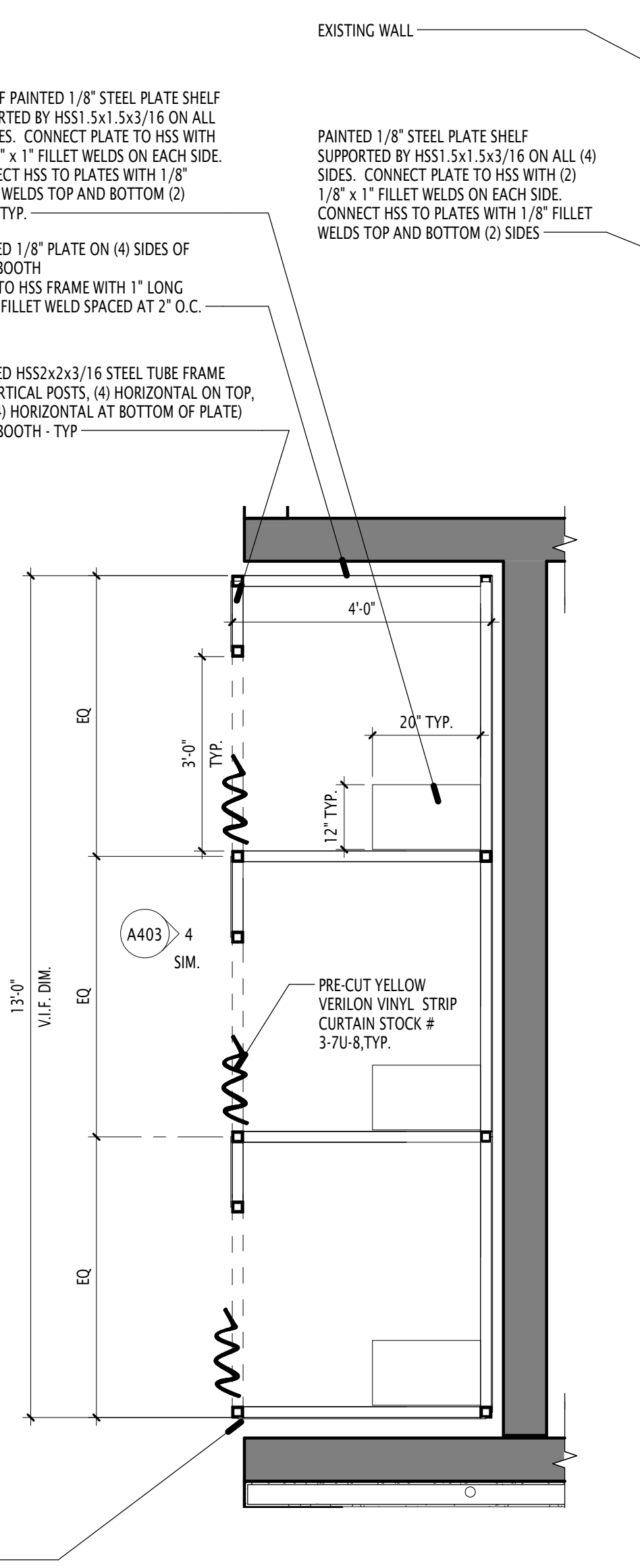
6 WELDING BOOTH 3D VIEW
A403



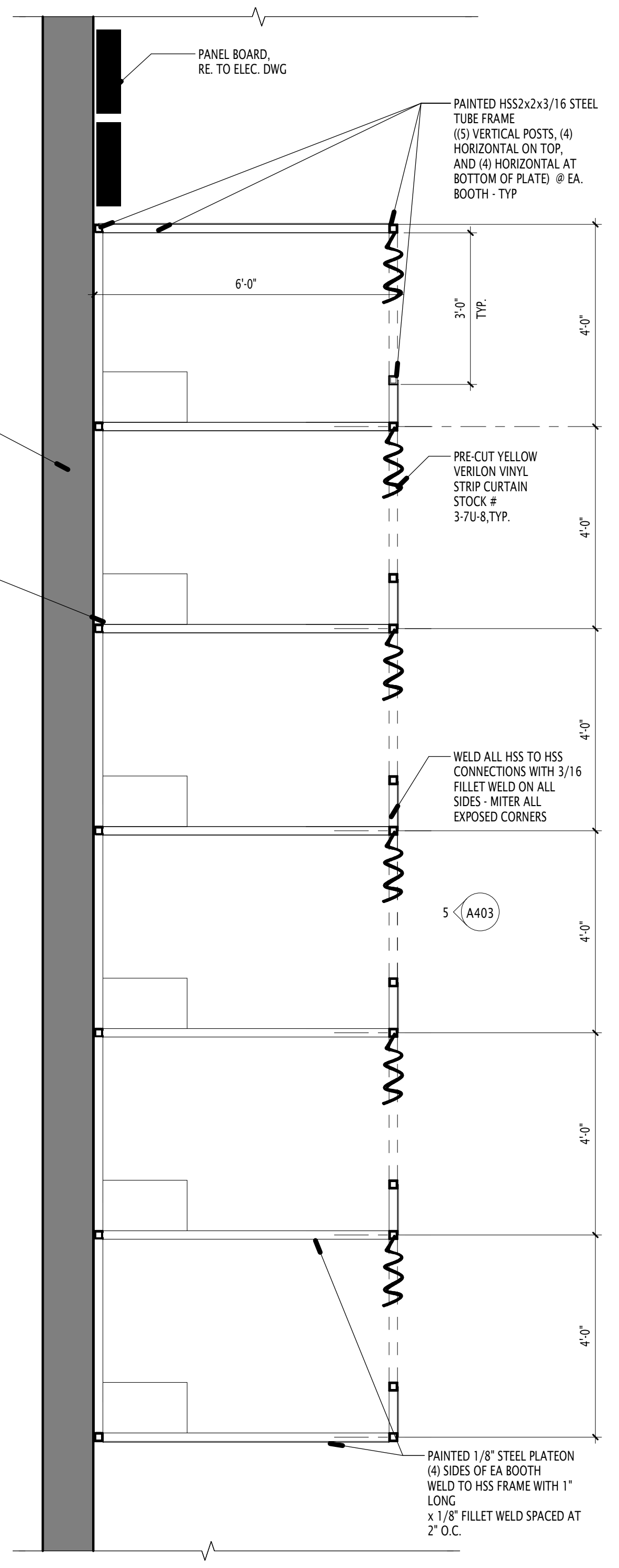
4 WELDING BOOTHS ELEVATION
A403 1/2" = 1'-0"



3 4'X4' WELDING BOOTHS ENLARGED PLAN
A403 1/2" = 1'-0"



2 WELDING BOOTHS PLAN
A403 1/2" = 1'-0"



1 6'X4' WELDING BOOTHS PLAN
A403 1/2" = 1'-0"

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WELDING BOOTHS ENLARGED PLANS AND ELEVATIONS

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GENERAL STRUCTURAL NOTES

GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any affected elements.
4. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
5. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.
6. The structural drawings are not all-inclusive and do not contain all dimensions, elevations, openings, mechanical shafts and penetrations needed to build the structure. The contractor shall coordinate these items with the Architectural, Mechanical and Electrical drawings.
7. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.
8. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the roof system is completed.
9. Site observations by BHB Consulting Engineers, P.C.'s field representative shall not be construed as approval of construction procedures nor special inspection.
10. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Some dimensions and elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. All dimensions shown on structural drawings shall be verified by contractor with architectural, mechanical and electrical drawings.
11. Review of shop drawing submittals by BHB Consulting Engineers, P.C. is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents.
12. Shop drawings made from reproductions of the contract drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed.
13. Only an authorized representative of BHB Consulting Engineers, P.C. may make changes to these contract drawings. BHB Consulting Engineers, P.C. shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of BHB Consulting Engineers, P.C.

BASIS OF DESIGN

1. Governing Code
 - a. Risk Category International Building Code 2015
II
2. Snow Loads
 - a. Ground Snow Load $P_g = 43$ psf
 - b. Snow Importance Factor $I_s = 1.1$
 - c. Snow Exposure Coefficient $C_e = 1.0$
 - d. Thermal Exposure Coefficient $C_t = 1.0$
 - e. Roof Snow Load $P_f = 0.7 * C_e * C_t * I_s * P_g = 33$ psf plus Snow Drift
3. Dead Loads
 - a. Roof Dead Load 12 psf

STRUCTURAL STEEL

1. Material:
 - a. All Thread Rods, Angles & Plates ASTM A36 (36 ksi)
 - b. Deformed Bar Anchors (DBA) ASTM A496
 - c. Anchor Rods ASTM F1554, Grade 36, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers Grade A
 - d. Bolted Connections: ASTM F3125 Grade A325 with ASTM A563 nuts and ASTM F436 hardened washers.
2. Fabrication and construction shall comply with the latest edition of the following Codes and Standards:
 - a. American Institute of Steel Construction (AISC), "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings," with "Commentary".
 - b. AISC "Code of Standard Practice" excluding the following: Section 3.2, Section 4.4, Section 4.4.1,
 - c. AISC "Specification for Structural Joints Using High-Strength Bolts"
 - d. American Welding Society (AWS), Structural Welding Code (specific items do not apply when they conflict with the AISC requirements).
 - e. AISC "Seismic Provision for Structural Steel Buildings"- ANSII/AISC 341
3. Welding
 - a. Field weld flags that have been put in these documents are for suggestion only. The contractor has the option to substitute shop welding for field welding or vice versa. The steel fabrication and steel erection drawings must clearly distinguish between shop welds and field welds prior to any work being performed.
 - b. Steel fabricators shall indicate the shop welds that are excluded from their bids. Steel erectors shall indicate the field welds that are excluded from their bids. It is the responsibility of the contractor to coordinate shop welding and field welding with the appropriate subcontractors.
 - c. All welding and cutting shall be performed by AWS certified welders.
 - d. Use E-70 XX or as noted otherwise. E60 XX may be used for welding steel roof decks.
 - e. All intersecting steel shapes which are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Where fillet weld sizes are not shown they shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected part.
 - f. Reinforcing Bars: Do not weld rebar. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
 - g. Do not weld anchor bolts, including "tack" welds.
 - h. Headed Stud Anchors (HSAs) welding and deformed bar anchor welding shall conform to the manufacturer's specifications.
4. Bolted Connections:
 - a. Use ASTM A325N bolts for steel to steel connections, as noted herein or as noted on the drawings. A325N bolts shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. Tighten bolts to a snug tight condition.

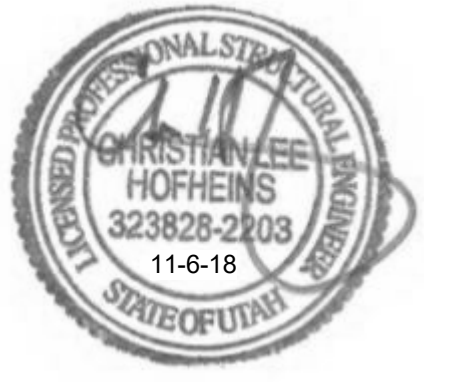
- b. Use hardened washers beneath the turned element of all bolts or nuts. Use hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. At oversized holes hardened washers or plates shall conform with ASTM F-436 and shall completely cover the slot after installation.
- c. Where a steel to steel beam connection is not shown, provide a standard AISC framed connection for one half the total uniform load capacity of the beam for the span and steel specified.
- d. Bolts, nuts and washers shall not be reused.

LEGEND OF MARKS AND ABBREVIATIONS

AB	ANCHOR BOLT(S)	k	KIP(S) = 1000 POUNDS
ABV	ABOVE	KLF	KIPS PER LINEAL FOOT
ALT	ALTERNATE	KSF	KIPS PER SQUARE FOOT
APPROX	APPROXIMATE		
ARCH	ARCHITECT(URAL)	LBS	POUNDS
		LF	LINEAL FOOT
BLDG	BUILDING	LLH	LONG LEG HORIZONTAL
BLW	BELOW	LLV	LONG LEG VERTICAL
BM	BEAM		
BOT	BOTTOM	MAX	MAXIMUM
BRG	BEARING	MECH	MECHANICAL
BTWN	BETWEEN	MFR	MANUFACTURER
		MIN	MINIMUM
CC.	CENTER-TO CENTER	MISC	MISCELLANEOUS
CONST	CONSTRUCTION		
CTR	CENTER	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
DB	DECK BEARING		
DBE	DECK BEARING ELEVATION	O.C.	ON CENTER
DBL	DOUBLE	O.F.	OUTSIDE FACE
DET	DETAIL	OPNG	OPENING
DIA	DIAMETER	OPP	OPPOSITE
DIM	DIMENSION	OWSJ	OPEN WEB STEEL JOISTS
DN	DOWN		
DWG	DRAWING	PAF	POWDER-ACTUATED FASTENER
		PCF	POUNDS PER CUBIC FOOT
(E)	EXISTING	PL	PLATE
EA	EACH	PLF	POUNDS PER LINEAL FOOT
ELEV	ELEVATION	PSF	POUNDS PER SQUARE FOOT
E.O.D.	EDGE OF DECK	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PT	POINT
EQ	EQUAL		
E.W.	EACH WAY	REQD	REQUIRED
EXST	EXISTING	R.D.	ROOF DRAIN
		RTU	ROOF TOP UNITS
FT	FOOT		
		SHT	SHEET
GA	GAUGE	SI	SPECIAL INSPECTION
GALV	GALVANIZED	SIM	SIMILAR
GSN	GENERAL STRUCTURAL NOTES	SMU	SUSPENDED MECHANICAL UNITS
		SQ	SQUARE
HORIZ	HORIZONTAL	STAG	STAGGERED
HSA	HEADED STUD ANCHOR	STD	STANDARD
HT	HEIGHT	STL	STEEL
		STR	STRUCTURAL
ICC	INTERNATIONAL CODE COUNCIL	THDS	THREADS
IBC	INTERNATIONAL BUILDING CODE	TOD	TOP OF DECK
I.F.	INSIDE FACE	TYP	TYPICAL
IN.	INCH		
INT	INTERIOR	UNO	UNLESS NOTED OTHERWISE
JT	JOINT	VERT	VERTICAL
JST	JOIST		
		W/	WITH



REVISIONS:	



BID SET

LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr. Layton, UT 84041

Davis School District

BHB PROJECT NO.: 181160
 CEA PROJECT NO.: 2018-014.00
 ISSUED DATE: 11/06/18

GENERAL STRUCTURAL NOTES

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STATEMENT OF SPECIAL INSPECTION AND QUALITY ASSURANCE

Special inspection and quality assurance, as required by section 1704 and 1705 of the 2015 IBC, shall be provided by an independent agency employed by the owner unless waived by the building official.	
The names and credentials of the Special Inspectors to be used shall be submitted to the Building Official for approval.	
Responsibilities of the Special Inspector	
	Special Inspector shall review all work listed in the special inspection schedules herein for conformance with the approved construction plans, specifications and 2015 IBC. All testing and inspection reports shall be sent within 24 hours of the test to the architect, engineer, building official and contractor for review. All items not in compliance shall be brought to the immediate attention of the contractor for correction, and if uncorrected, to the architect, engineer and building official. Once corrections have been made by the contractor, the special inspector shall submit a final signed report to the building official stating that the work requiring special inspection was, to the best of the special inspector's knowledge, in conformance with the approved construction plans, specifications and 2015 IBC.
Responsibilities of the Contractor	
	The contractor shall submit a written statement of responsibility to the owner and the building official prior to the commencement of work in accordance with 2015 IBC section 1704.4. This statement shall indicate that the contractor will coordinate and cooperate with the required inspections contained herein.
	The contractor shall notify the designated special inspector that work is ready for inspection at least 24 hours before said inspection is required.
	All work requiring special inspection shall remain open and accessible until it has been observed by the special inspector and deemed acceptable through inspection report.
	Special inspection during fabrication is not required if the fabricator is registered and approved to perform such work without special inspection.

STEEL BOLTED CONNECTIONS INSPECTIONS

High Strength bolted connections (2015 IBC section 1705.2.1, section 1705.11.1 and section 1705.12.2 and AISC 360-10 Chapter N and AISC 341-10 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Inspection Tasks Prior to Bolting (Operations need not be delayed pending these inspections.)			
Manufacturer's certifications available for fastener materials	-	X	
Fasteners	-	X	Marked in accordance with ASTM requirements
Proper fasteners selected for the joint detail	-	X	Including grade, type, bolt length if threads are to be excluded from shear plane.
Proper bolting procedure selected for joint detail	-	X	
Connecting elements	-	X	Including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements
Proper storage	-	X	Storage provided for bolts, nuts, washers and other fastener components
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	X	-	Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-10]
Inspection Tasks During Bolting (Operations need not be delayed pending these inspections.)			
Fastener assemblies, of suitable condition,	-	X	Verify that fasteners placed in all holes and washers (if required) are positioned as required.
Joint	-	X	Verify that joint brought to the snug-tight condition (min) unless noted otherwise.
Fastener component	-	X	Verify that fastener component not turned by the wrench prevented from rotating
Pretensioned Fasteners	-	X	Verify that pretensioned fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges (Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-10]; Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators or twist-off type tension)
Inspection Tasks After Bolting			
Document acceptance or rejection of bolted connection	X	-	

STEEL WELDED CONNECTIONS INSPECTIONS

Structural Welding (2015 IBC section 1705.2 and section 1705.12.1 and section 1705.13.1 and AISC 360-10 Chapter N and AISC 341-10 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Inspection Tasks Prior to Welding (Operations need not be delayed pending these inspections.)			
Welding procedures specifications and manufacturer certifications for welding consumables shall be available	X	-	
Material identification (type/grade)	-	X	Inspection tasks required to be performed for each welded joint or member.
Welder identification system	-	X	Verify there is a system in place to identify the welder who has welded a joint or member.
Fit-up of groove welds	-	X	Including joint geometry, joint preparation, dimensions, cleanliness, tacking and backing type and fit; to be performed for each welded joint or member.
Configuration and finish of access holes	-	X	Verify configuration and finish.
Fit-up of fillet welds	-	X	Including alignment, gaps at root, dimensions, cleanliness and tacking; to be performed for each welded joint or member.
Check welding equipment	-	X	Operations need not be delayed pending these inspections.
Inspection Tasks During Welding			
Use of qualified welders	-	X	
Control and handling of welding consumables	-	X	Including packaging and exposure control
Cracked tack welds	-	X	Verify no welding over cracked tack welds.
Environmental conditions	-	X	Including wind speed within limits and precipitation and temperature
WPS followed	-	X	Including settings on welding equipment, travel speed, selected welding materials, shielding gas type/flow rate, preheat applied, interpass temperature (min./max.) maintained, proper position (F, V, H, OH)
Welding techniques	-	X	Including interpass and final cleaning, each pass within profile limitations, each pass meets quality requirements
Single-pass fillet welds less than 3/8"	-	X	
Single-pass fillet welds equal or greater than 3/8"	X	-	
Multipass fillet welds	X	-	
Complete and partial penetration groove welds	X	-	
Inspection Tasks After Welding (Operations need not be delayed pending these inspections.)			
Welds cleaned	-	X	
Size, length and location of welds	X	-	Inspection tasks required to be performed for each welded joint or member.
Welds meet visual acceptance criteria such as: crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut and porosity	X	-	Inspection tasks required to be performed for each welded joint or member.
Arc strikes, k-area, backing removed and weld tabs removed (if required), repair activities	X	-	Inspection tasks required to be performed for each welded joint or member.
Document acceptance or rejection of welded joint or member	X	-	Inspection tasks required to be performed for each welded joint or member.

STRUCTURAL OBSERVATION PROGRAM

If structural observations are required, they shall be done by the Engineer of Record or an approved subordinate at the stages of construction listed in the Construction Notification Phases section of these notes. At the conclusion of the project, the designated structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that to the best of the structural observer's knowledge have not been resolved (See IBC 2015 1704.6).

STRUCTURAL OBSERVATION PROGRAM REQUIRED BY CODE:	YES	NO

CONSTRUCTION MILESTONE SCHEDULE

CONTRACTOR TO NOTIFY ENGINEER AT THE FOLLOWING CONSTRUCTION PHASES:	
STEEL	
Roof framing	After framing is erected

DEFERRED SUBMITTALS

For the purpose of this section, deferred submittals are defined as per section 107.3.4.1 of the IBC 2015. Submittal documents for deferred submittal items shall be submitted to the engineer, architect and building official for their review for general conformance with the design of the building.

DEFERRED STRUCTURAL SUBMITTALS FOR THIS PROJECT ARE:
None

REVISIONS:



BID SET

LAYTON HIGH SCHOOL
WELDING SHOP
REMODEL

440 Wasatch Dr., Layton, UT 84041

Davis School District

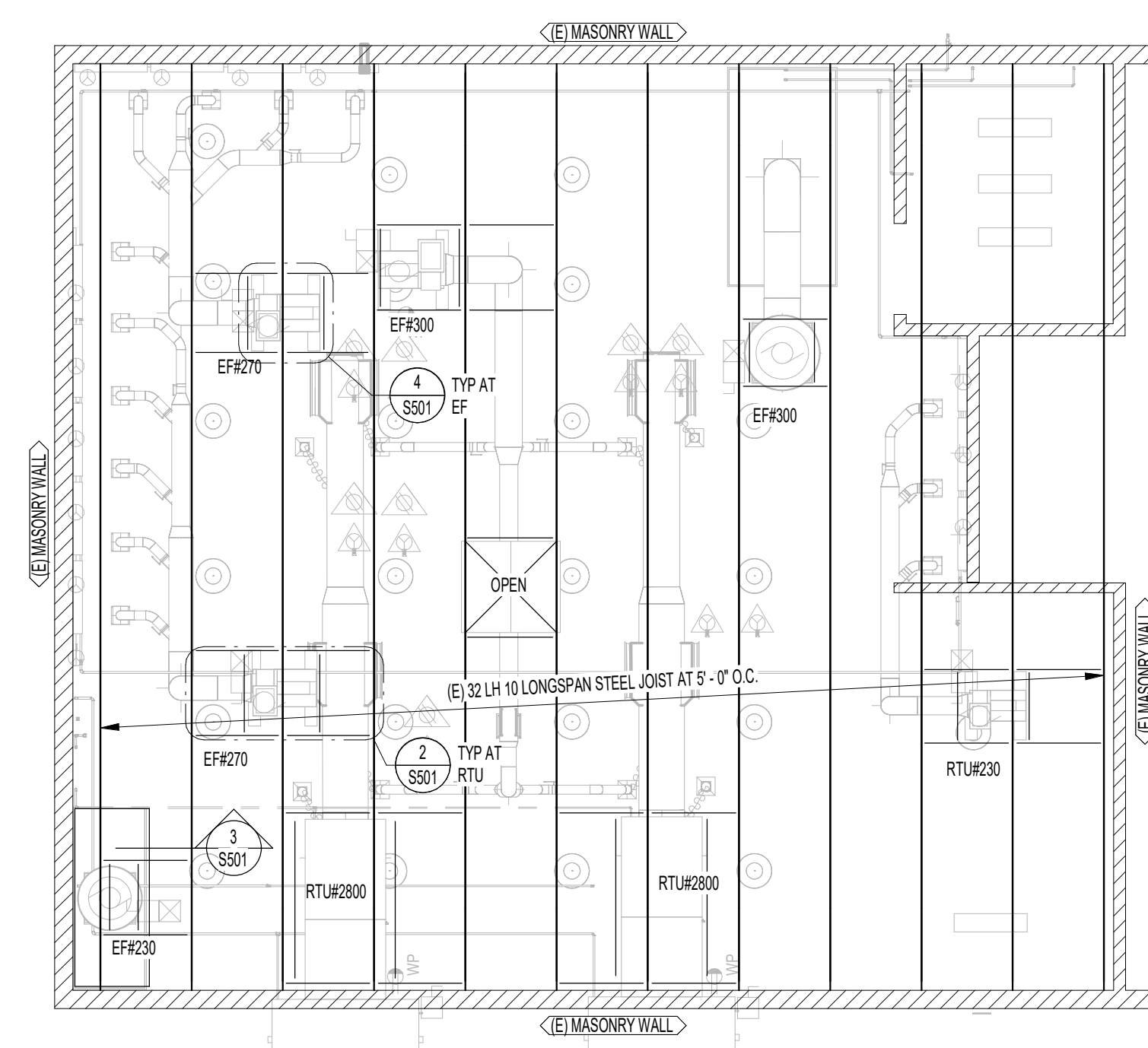
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CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/18

SPECIAL INSPECTIONS

REVISIONS:



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MARKS AND SYMBOLS LEGEND	
	SECTION MARK
	SHEET NUMBER
	INDICATES EXISTING WALL
RTU#	INDICATES ROOF TOP UNIT AND ITS WEIGHT IN LBS
EF#	INDICATES EXHAUST FAN AND ITS WEIGHT IN LBS

ROOF FRAMING PLAN NOTES	
1.	VERIFY ALL ROOF OPENINGS FOR MECHANICAL SHAFTS, DRAINS, ETC. WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2.	SEE DETAIL 1SS01 FOR TYPICAL JOIST REINFORCING DETAIL FOR LOADS GREATER THAN 100 POUNDS
3.	SEE DETAIL 2SS01 FOR ROOF TOP MECHANICAL UNIT SUPPORT AT EXISTING ROOF.
4.	SEE DETAIL 3SS01 FOR TYPICAL HANGING MECHANICAL UNIT SUPPORT DETAIL.
5.	SEE DETAIL 4SS01 FOR TYPICAL ROOF OPENING IN EXISTING ROOF.

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WELDING SHOP
REMODEL

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Davis School District

BHB PROJECT NO.: 181160
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/18

ROOF FRAMING PLAN

1 ROOF FRAMING PLAN

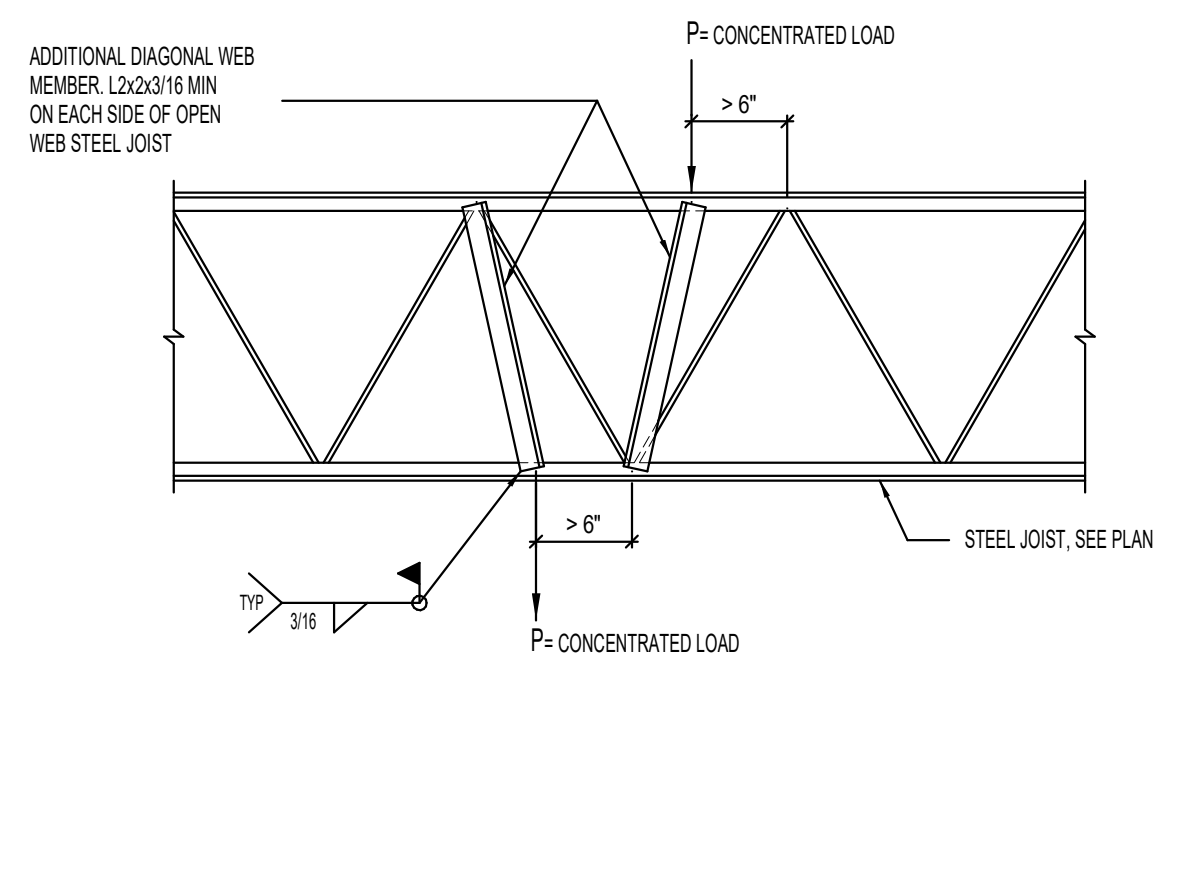
1/8" = 1'-0"
0" 4'-0" 8'-0" 16'-0"

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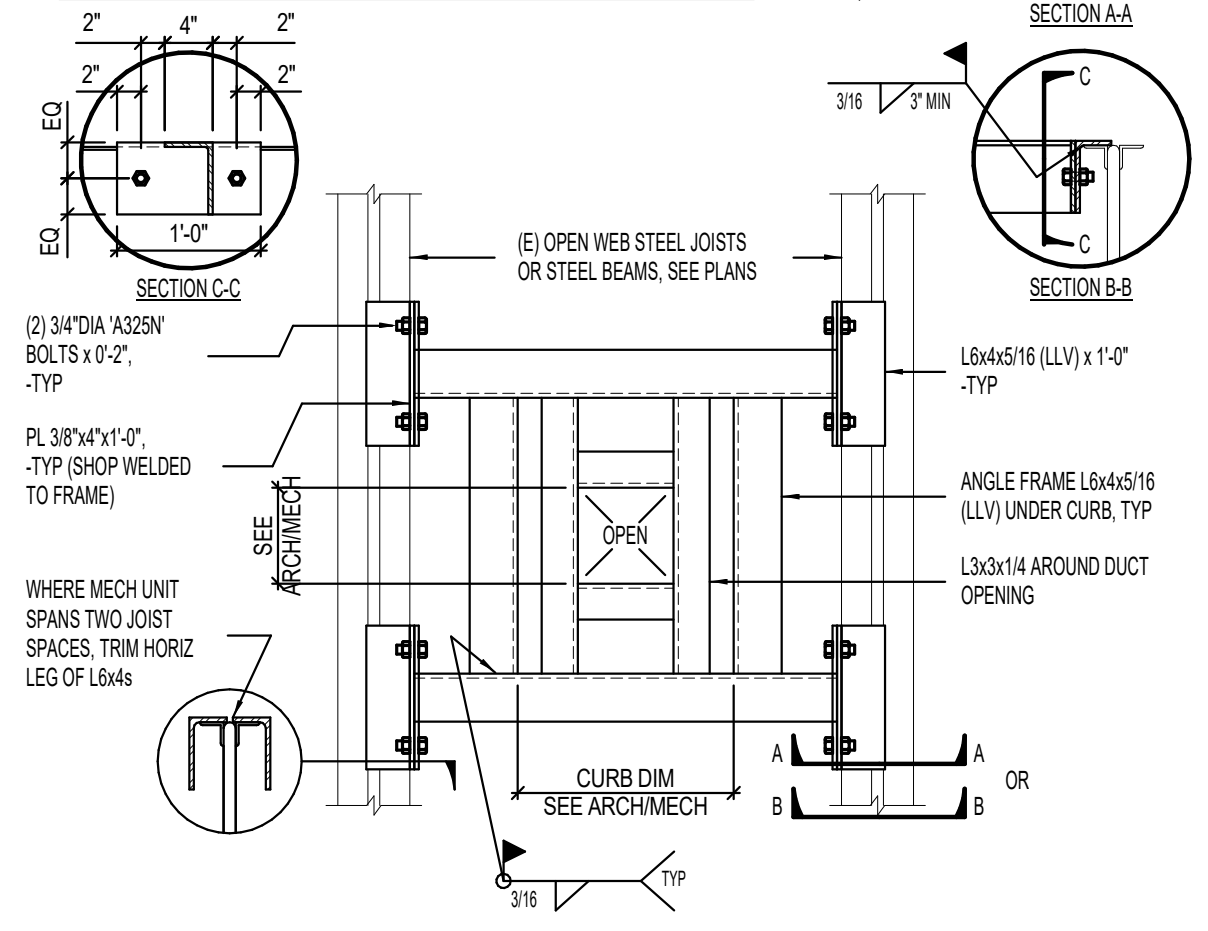


NOTE: WHERE LOADS OVER 100# ON OPEN WEB JOISTS ARE LOCATED MORE THAN 6" FROM THE PANEL WORK POINTS AT EITHER THE TOP OR BOTTOM CHORD, THE CONTRACTOR SHALL INSTALL ADDITIONAL DIAGONAL WEB MEMBERS AT THE LOCATION OF THE CONCENTRATED LOAD. CONNECTIONS FOR LOADS OVER 100LB MUST BE A CONCENTRIC ATTACHMENT



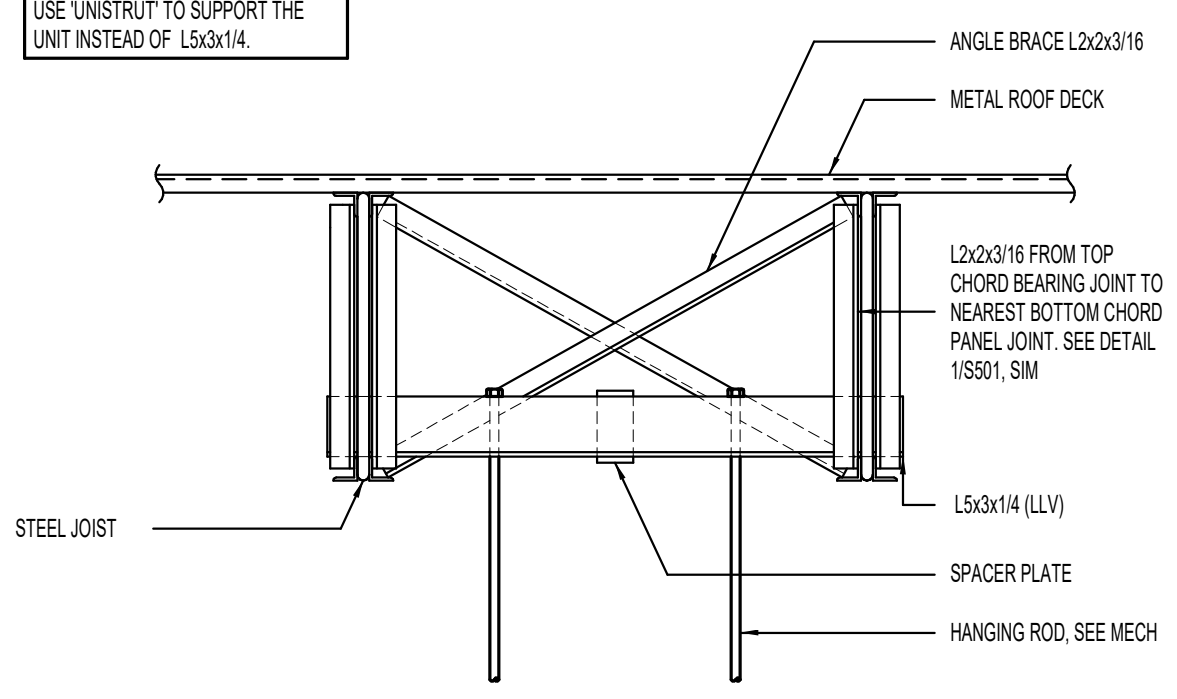
1 TYPICAL JOIST REINFORCING DETAIL FOR LOADS GREATER THAN 100 POUNDS NO SCALE

NOTES:
1. SOLID BLOCK THE FLUTES OF THE STEEL DECK UNDER THE CURB OF THE MECHANICAL UNIT. THIS MAY BE DONE WITH A HSS1.1/2x1.1/2x3/16 x 0'-4" TACK WELDED TO THE STEEL DECK OR WITH SOLID BLOCKING CONNECTED TO THE STEEL DECK.
2. ROOF DECK TO BE ATTACHED TO ANGLE FRAMING WITH #12 STS SCREWS AT 6" O.C.



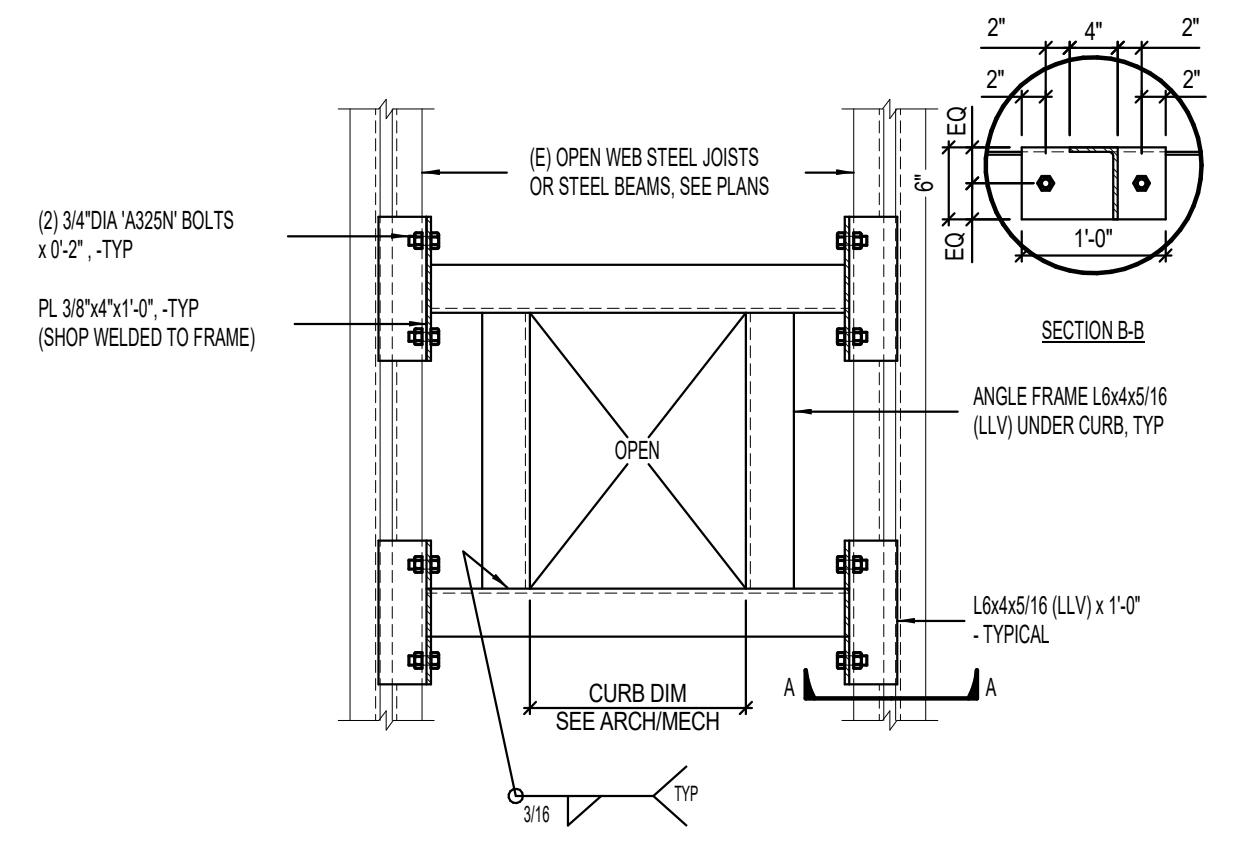
2 ROOF TOP MECHANICAL UNIT SUPPORT AT EXISTING ROOF [PLAN VIEW] NO SCALE

NOTE: WHERE MECHANICAL UNIT WEIGHS LESS THAN 300 lbs. USE UNISTRUT TO SUPPORT THE UNIT INSTEAD OF L5x3x1/4.



3 TYPICAL HANGING MECHANICAL UNIT SUPPORT DETAIL NO SCALE

NOTES:
1. WHERE THE MECHANICAL UNIT WEIGHS LESS THAN 700 lbs. THE L6x4 SUPPORT ANGLES MAY BE CHANGED TO L5x3x1/4.
2. SOLID BLOCK THE FLUTES OF THE STEEL DECK UNDER THE CURB OF THE MECHANICAL UNIT. THIS MAY BE DONE WITH A HSS1.1/2x1.1/2x3/16 x 0'-4" TACK WELDED TO THE STEEL DECK OR WITH SOLID BLOCKING CONNECTED TO THE STEEL DECK.
3. ROOF DECK TO BE WELDED TO ANGLE FRAMING.



4 TYPICAL ROOF OPENING IN EXISTING ROOF DETAIL [PLAN VIEW] NO SCALE

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LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr. Layton, UT 84041
Davis School District

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DETAILS

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ELECTRICAL LEGEND

	DUPLEX RECEPTACLE - 7 CORD DROP
	SPECIAL RECEPTACLE - 7 CORD DROP
	LINEAR SUSPENDED PENDANT FIXTURE
	LINEAR SUSPENDED PENDANT FIXTURE (EMERGENCY POWER)
	RECESSED DOWN LIGHT
	RECESSED DOWNLIGHT (EMERGENCY POWER)
	RECESSED LIGHT FIXTURE
	RECESSED LIGHT FIXTURE (EMERGENCY FIXTURE)
	RECESSED WALL MOUNTED LIGHT FIXTURE
	RECESSED WALL MOUNTED LIGHT FIXTURE (EMERGENCY POWER)
	CEILING SURFACE / PENDANT SUSPENDED FIXTURE
	EMERGENCY BATTERY LIGHT FIXTURE
	LIGHT TRACK WITH LIGHT FIXTURE
	STRIP LIGHT FIXTURE
	SURFACE LIGHT FIXTURE
	SURFACE LIGHT FIXTURE (EMERGENCY POWER)
	WALL MOUNTED FLOODLIGHT
	WALL MOUNTED LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE (EMERGENCY POWER)
	EXIT LIGHT CEILING
	WALL MOUNTED EXIT LIGHT
	DUAL POLE MOUNTED LIGHT FIXTURE
	POLE MOUNTED LIGHT FIXTURE
	POLE TOP MOUNTED FIXTURE
	3-WAY SWITCH
	SINGLE POLE SWITCH
	CONTACTOR
	DIMMER SWITCH, WALL MOUNT
	EMERGENCY CONTROL RELAY UNIT
	OCCUPANCY SENSOR, CEILING MOUNT
	OCCUPANCY SENSOR, WALL MOUNT
	PHOTO CELL
	POWER PACK
	SLAVE POWER PACK
	COMBO FLOORBOX WITH DUPLEX RECEPTACLE AND DATA
	COMBO FLOORBOX WITH QUADRUPLEX RECEPTACLE AND DATA
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE (EMERGENCY POWER)
	DUPLEX RECEPTACLE, FLUSH CEILING
	DUPLEX RECEPTACLE, FLUSH CEILING ISOLATED GROUND
	DUPLEX RECEPTACLE, FLUSH IN FLOOR
	DUPLEX RECEPTACLE, PEDESTAL MOUNTED
	POKE-THRU DEVICE

	QUADRUPLEX RECEPTACLE
	RANGE RECEPTACLE
	SINGLE RECEPTACLE
	SPECIAL OUTLET TO MATCH EQUIPMENT PLUG
	SPECIAL OUTLET TO MATCH EQUIPMENT PLUG, FLUSH IN FLOOR
	EMERGENCY POWER OFF BUTTON, 46" AFF
	GENERATOR ANNUNCIATOR
	JUNCTION BOX
	JUNCTION BOX, FLUSH IN FLOOR
	MANUAL STARTER
	METER BASE
	MOTOR CONNECTION
	MULTI OUTLET ASSEMBLY
	POWER SUPPLY
	PULL BOX
	RELAY
	THERMAL SWITCH
	TRANSFORMER (FLOOR PLAN)
	COMBINATION STARTER/FUSED DISCONNECT SWITCH
	COMBINATION STARTER/NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	NONFUSE DISCONNECT SWITCH
	LIGHTING ARRESTOR
	RECESSED ELECTRICAL PANELBOARD
	RECESSED EQUIPMENT CABINET AS NOTED
	SURFACE ELECTRICAL PANEL
	SURFACE EQUIPMENT CABINET
	19" TELECOM EQUIPMENT RACK WITH VERTICAL WIRE MGMT.
	COMMUNICATIONS OUTLET - ABOVE COUNTER: D=DATA, P=TELEPHONE, F=FIBER, # INDICATES QTY, NO DESIGNATION=(2) DATA OUTLET, (1) TELEPHONE OUTLET
	COMMUNICATIONS OUTLET - FLUSH IN FLOOR: D=DATA, P=TELEPHONE, F=FIBER, # INDICATES QTY, NO DESIGNATION=(2) DATA OUTLET, (1) TELEPHONE OUTLET
	COMMUNICATIONS OUTLET: D=DATA, P=TELEPHONE, F=FIBER, # INDICATES QTY, NO DESIGNATION=(2) DATA OUTLET, (1) TELEPHONE OUTLET
	DATA OUTLET-ABOVE COUNTER: # INDICATES QTY.; NO DESIGNATION=(2) DATA OUTLET
	DATA OUTLET-FLUSH IN FLOOR: # INDICATES QTY.; NO DESIGNATION=(2) DATA OUTLET
	DATA OUTLET: # INDICATES QTY.; NO DESIGNATION=(2) DATA OUTLET
	TELEPHONE OUTLET - ABOVE COUNTER: # INDICATES QTY.; NO DESIGNATION=(1) TELEPHONE OUTLET
	TELEPHONE OUTLET - FLUSH IN FLOOR: # INDICATES QTY.; NO DESIGNATION=(1) TELEPHONE OUTLET
	TELEPHONE OUTLET: # INDICATES QTY.; NO DESIGNATION=(1) TELEPHONE OUTLET
	19" TELECOM EQUIPMENT RACK
	CABLE TRAY FOR DATA TELEPHONE AND SOUND/PAGING ONLY (NO CONTROL WIRING)
	CLOCK
	CLOCK, WALL MOUNTED
	INTERCOM STATION, SECURITY
	RESCUE ANNUNCIATOR STATION
	RESCUE CALL STATION

	SECURITY MOTION SENSOR, CEILING MOUNTED
	SECURITY MOTION SENSOR, WALL MOUNTED
	WIRELESS TRANSMITTER
	PUSH BUTTON
	START-STOP BUTTON
	UP-DOWN-STOP BUTTON
	PROGRAM HORN
	CARD READER
	DOOR CONTACT
	KEYCARD
	MAGNETIC DOOR HOLDER (WALL OR FLOOR MOUNT)
	MAGNETIC LOCK
	ROUND T.V./SECURITY CAMERA
	SECURITY REQUEST TO EXIT
	T.V./SECURITY CAMERA
	FIRE ALARM CONTROL MODULE
	FIRE ALARM FSD CONTROL RELAY
	FIRE ALARM MONITOR MODULE
	FIRE SMOKE DAMPER
	DUCT SMOKE DETECTOR
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM PRESSURE SWITCH
	FLOW SWITCH
	O.S. & Y. VALVE TAMPER SWITCH
	PHOTO ELECTRIC SMOKE DETECTOR
	RATE OF RISE/THERMAL DETECTOR
	FIRE ALARM BELL

	FIRE ALARM CHIME
	FIRE ALARM CHIME/VISUAL
	FIRE ALARM HORN
	FIRE ALARM VISUAL SIGNAL
	FIRE ALARM VISUAL SIGNAL WITH HORN
	FIRE ALARM VISUAL SIGNAL WITH SPEAKER
	FIRE ALARM ANNUNCIATOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM VOICE EVACUATION PANEL
	NOTIFICATION APPLIANCE CIRCUIT EXTENDER
	REMOTE FIRE COMMAND CENTER
	DRAWING NOTE DESIGNATOR
	LIGHT FIXTURE DESIGNATION
	MECHANICAL EQUIPMENT DESIGNATION
	CONDUIT CONCEALED IN SLAB, UNDERGROUND OR UNDERFLOOR
	CONDUIT CONCEALED IN WALLS, CEILING OR FLOOR
	EQUIPMENT GROUND CONDUCTOR
	EXISTING CONDUIT
	FLEXIBLE CONDUIT
	STUB DOWN
	STUB OUT
	STUB UP
	BREAKER
	BREAKER ENCLOSED
	G&W UNIVERSAL CE SPLICE (15KV)
	G&W UNIVERSAL CE TERMINATION (15KV)
	MEDIUM VOLTAGE SPLICE (15KV HEATSHRINK OR LOADSHRINK)
	TRANSFORMER (ONE-LINES)

ELECTRICAL ABBREVIATIONS

Key Name	Comments
(E)	EXISTING
(F)	FUTURE
(N)	NEW
(R)	RELOCATED
(X)	DEMOLISH/DELETE
AF	ABOVE FINISHED FLOOR
AIC	AMP INTERRUPTING CURRENT (SYMMETRICAL)
AL	ALUMINUM
BG	BELOW GRADE
C	CONDUIT
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CTR	ABOVE COUNTER DEVICE
CU	COPPER
EM	EMERGENCY
EWC	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
IG	ISOLATED GROUND
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
NAC	NOTIFICATION APPLIANCE CIRCUIT
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
PNL	PANEL
S	SWITCHED
SPD	SURGE PROTECTIVE DEVICE
ST	SHUNT TRIP
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VR	VANDAL RESISTANT
WG	WIRE GUARD
WP	WEATHER PROOF
XFMR	TRANSFORMER

REVISIONS:



BID SET LAYTON HIGH SCHOOL WELDING SHOP REMODEL

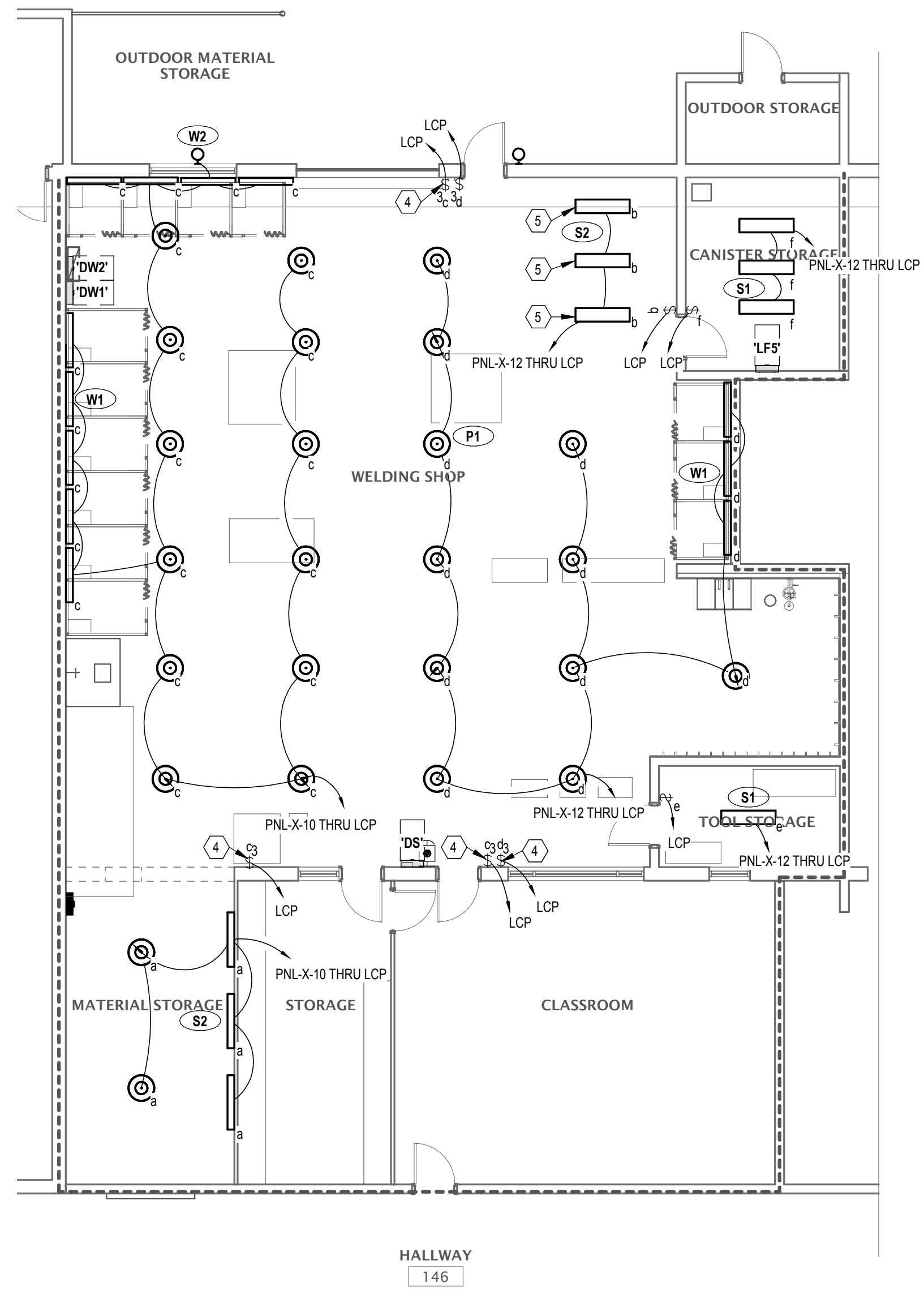
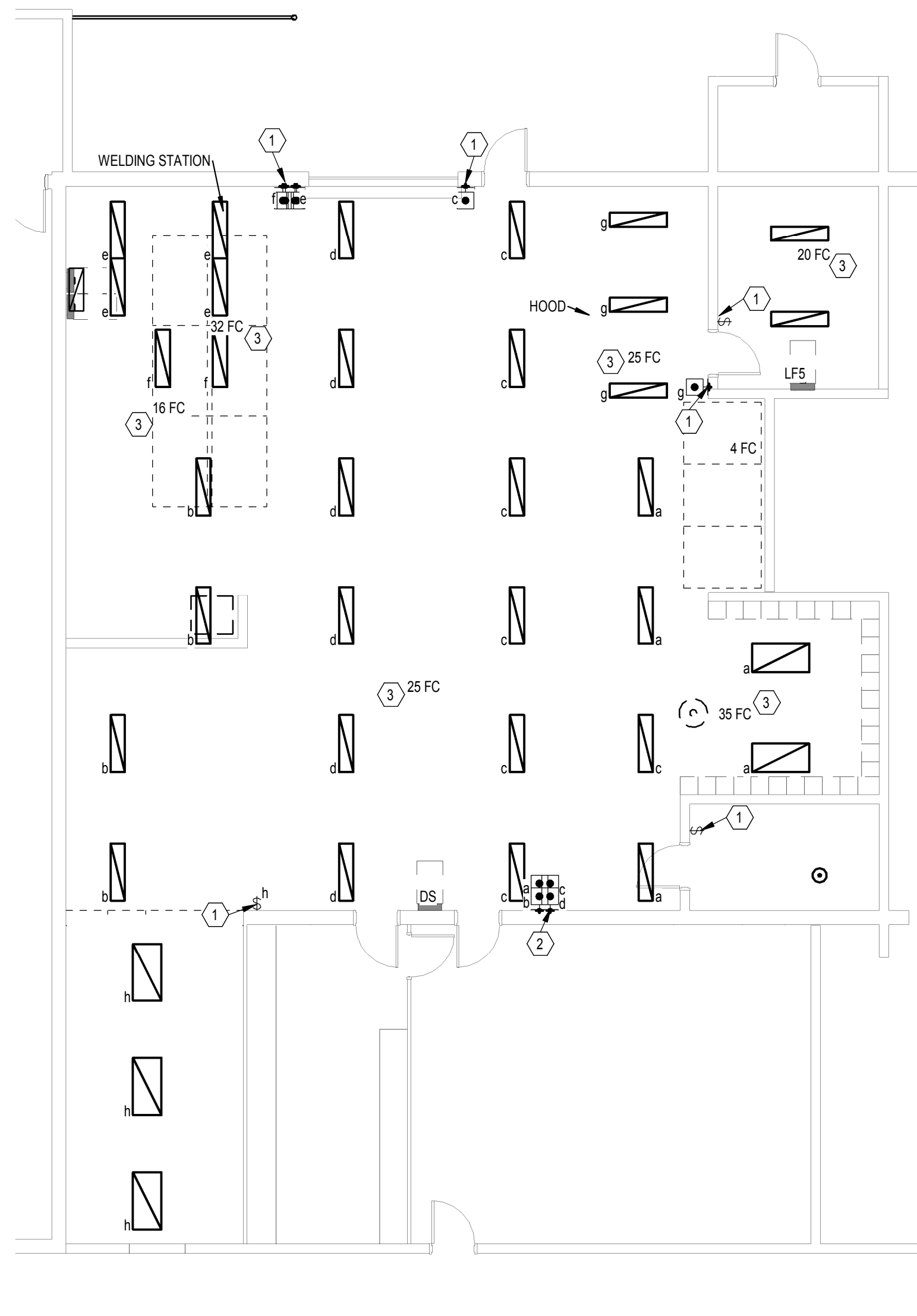
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OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014-00
ISSUED DATE: 11/06/2018

ELECTRICAL LEGEND, SYMBOLS & ABBREVIATIONS

#	SHEET NAME
EG001	ELECTRICAL LEGEND, SYMBOLS & ABBREVIATIONS
EL101	WORKSHOP LIGHTING FLOOR PLAN
EP101	WORKSHOP POWER OVERALL PLAN
EP102	WORKSHOP POWER OVERALL ROOF PLAN
EX101	ELECTRICAL ONE LINE DIAGRAM
EX102	ELECTRICAL POWER SCHEDULES
EX103	ELECTRICAL POWER SCHEDULES
EX104	ELECTRICAL LIGHTING SCHEDULES
EXS01	ELECTRICAL DETAILS
EY101	WORKSHOP SYSTEMS OVERALL PLAN

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KEYED NOTES

- 1 EXISTING SWITCH TO BE REMOVED.
- 2 EXISTING LIGHTING CONTROL SYSTEM TO BE REPLACED WITH NEW LIGHTING SWITCH.
- 3 SPOT FOOT CANDLE MEASUREMENTS SHOW EXISTING ILLUMINATION. EXISTING SHOP LIGHTING DOES NOT MEET MINIMUM STANDARDS.
- 4 NEW SURFACE MOUNTED LIGHT SWITCH CONTROLLER TO BE CONNECTED TO EXISTING RELAY PANEL. AUTOMATION BY OWNER. LIGHT SWITCH SHALL BE EATON GMDS OR EQUAL.
- 5 LIGHT FIXTURES LOCATED UNDER MECHANICAL EQUIPMENT.

GENERAL NOTES

- A. SWITCHES ARE TIED TO EXISTING LIGHTING RELAY PANEL. EXISTING RELAY PANEL BY OWNER. EXISTING LCP LOCATED IN SOUTH ELECTRICAL ROOM.
- B. NEW LIGHT FIXTURE TO BE POWERED FROM EXISTING LIGHTING PANEL, PANEL X, AND CONTROL VIA LCP. NEW LIGHT SWITCH SHALL BE EATON GMDS WHITE, OR EQUAL.



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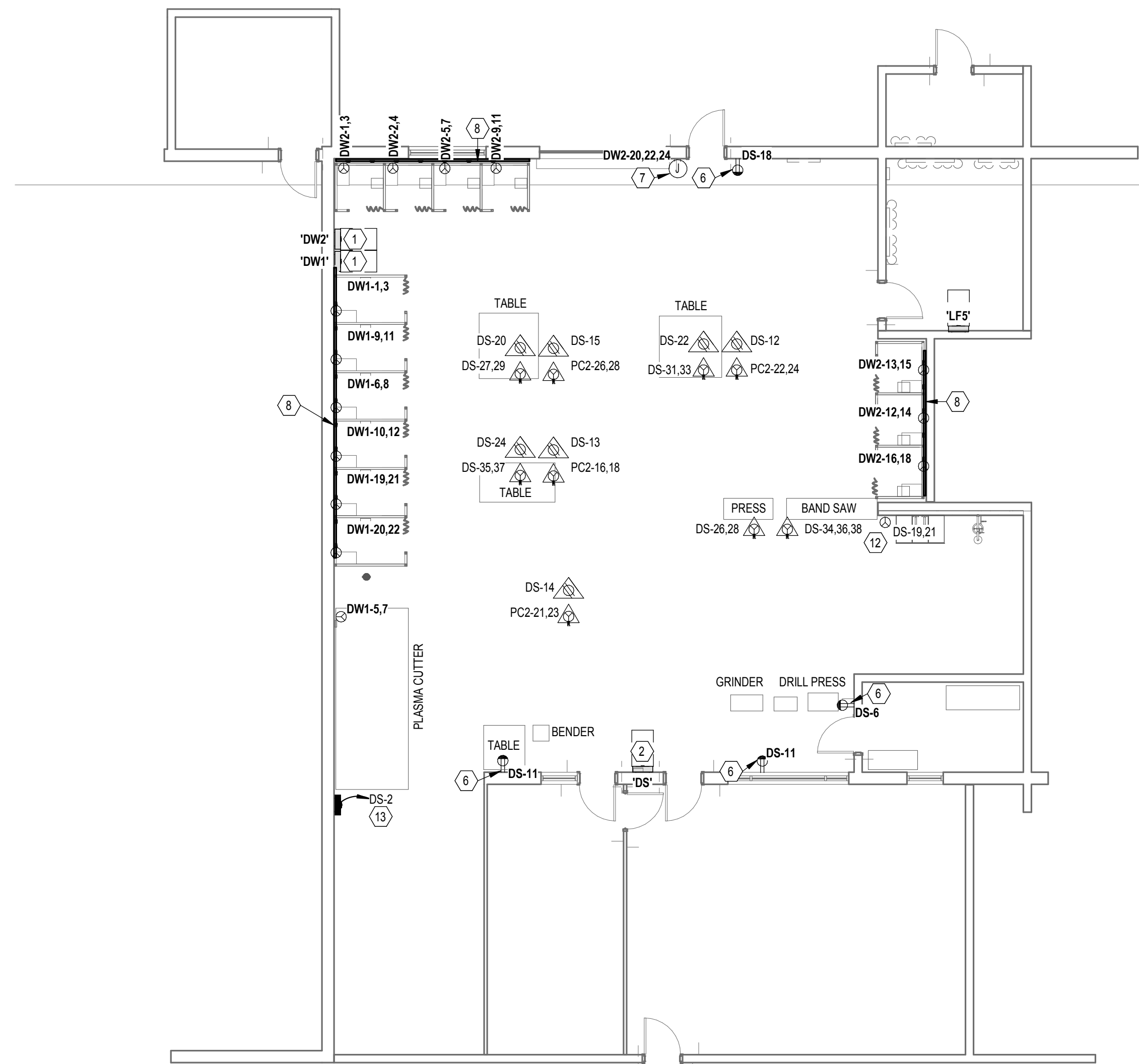
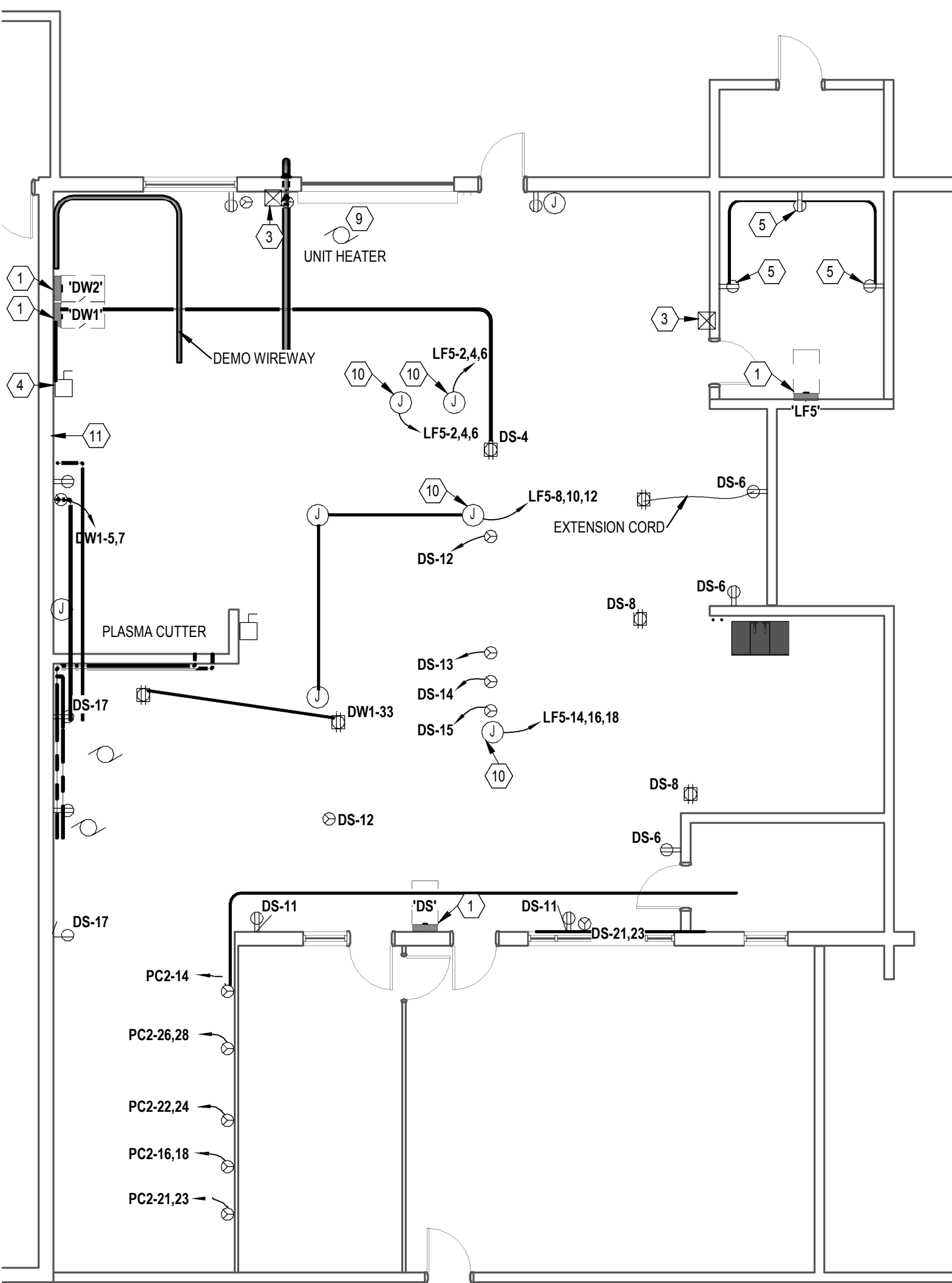
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WORKSHOP LIGHTING FLOOR PLAN

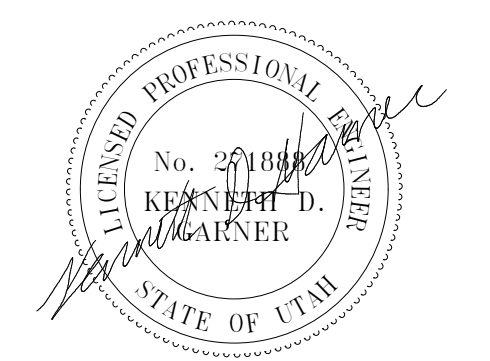
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- KEYED NOTES**
- EXISTING PANEL TO REMAIN. PROVIDE NEW BREAKERS AS SHOWN ON SHEET EX102 AND EX103.
 - REPLACE PANEL WITH NEW. REUSE CONDUIT AND FEEDER. EC SHALL UTILIZE EXISTING CONDUIT WHERE POSSIBLE BUT REPLACE ALL WIRING WITHIN SHOP AREA. TIE NEW WIRE TO NEW BREAKER SAME AS PREVIOUS PANEL.
 - DEMO 2 SPEED STARTERS WITH HOOD FAN.
 - NEMA 3R DISCONNECT WITH AUXILIARY CONTACTS. ELECTRICAL CONTRACTOR TO INSTALL AND FURNISH NEW DISCONNECT. PROTECT AND MAINTAIN EXISTING DEVICES.
 - REPLACED EXISTING RECEPTACLE.
 - JUNCTION BOX TO BE INSTALLED FOR FUTURE POWERED ROLLUP DOOR.
 - NEW 6-50R RECEPTACLES TO POWER EXISTING WELDING EQUIPMENT. NEW RECEPTACLE POWER PLACE BY NEW 6 IN X 6 IN RACEWAY.
 - EXISTING UNIT HEATER POWER BY PANEL BS. UNIT HEATER PROTECT AND MAINTAIN WHILE CONSTRUCTION.
 - 480 VOLT CIRCUITS ARE UNUSED. J-BOXES ON CEILING. CONDUIT MAY BE REUSED FOR ROOF EQUIPMENT.
 - RELOCATED CONDUIT TO ABOVE 8 FEET TO AVOID PARTITIONS. EXTEND TO NEW LOCATION.
 - COORDINATE VOLTAGE WITH PROVIDED OWNER EQUIPMENT.
 - MECH PNL BY ATC CONTRACTOR. VERIFY EXACT LOCATION OF PANEL PRIOR POWERED CONNECTIONS.

- GENERAL NOTES**
- ALL DEMO DEVICES SHALL BE SAFELY DISCONNECTED AND REMOVED FROM SOURCE PANEL. PANEL SCHEDULE LABEL SHALL BE UPDATED.
 - CONTROLS BY ATC CONTRACTOR.

REVISIONS:



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LAYTON HIGH SCHOOL WELDING SHOP REMODEL

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WORKSHOP POWER OVERALL PLAN

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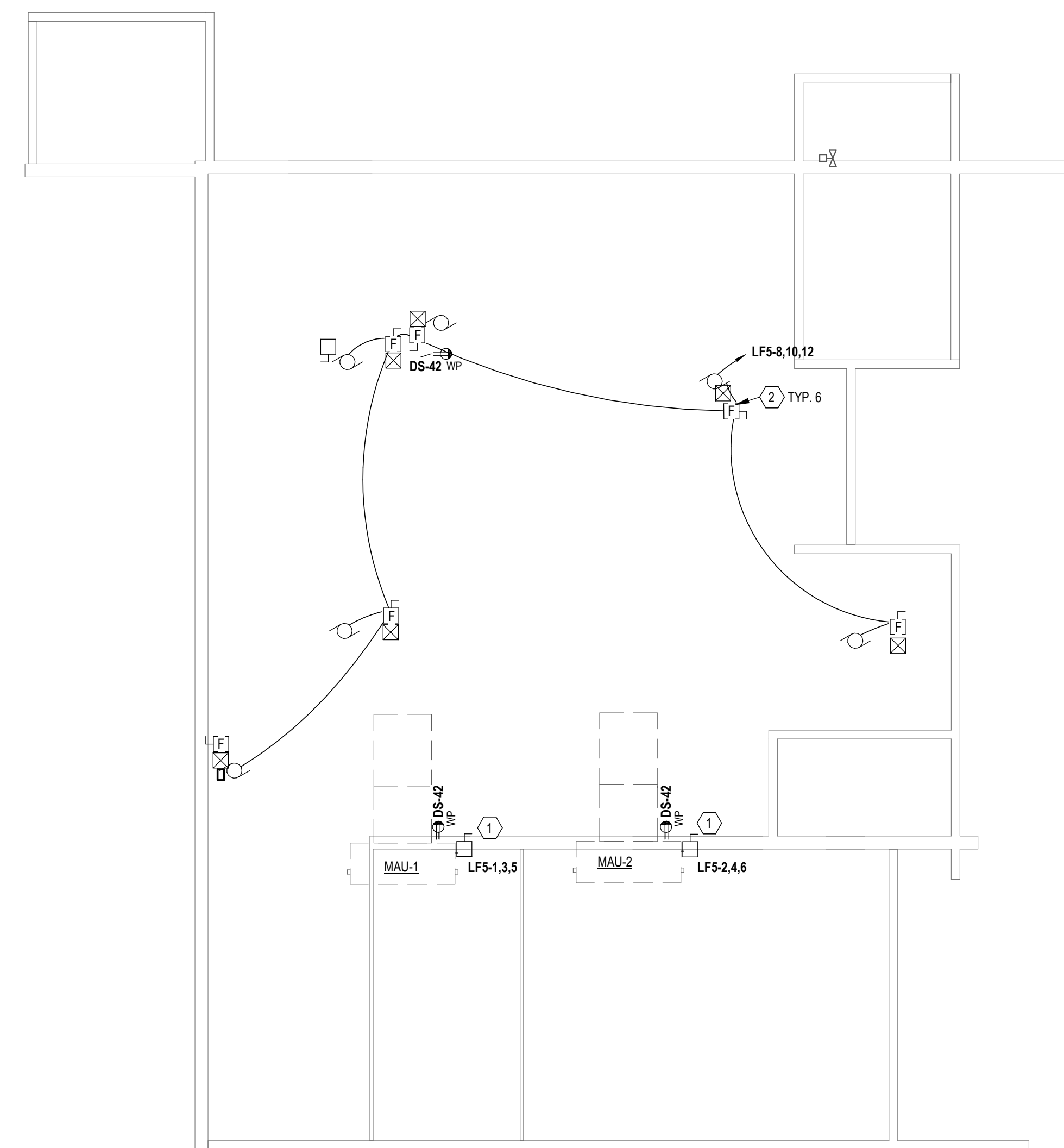
KEYED NOTES

- 1 DISCONNECT PROVIDED BY MECHANICAL.
- 2 NEMA 3R DISCONNECT WITH AUXILIARY CONTACTS. ELECTRICAL CONTRACTOR TO INSTALL AND FURNISH NEW DISCONNECT.

GENERAL NOTES

- A. ALL DEMO DEVICES SHALL BE SAFELY DISCONNECTED AND REMOVED FROM SOURCE PANEL. PANEL SCHEDULE LABEL SHALL BE UPDATED.
- B. CONTROLS BY ATS CONTRACTOR.

REVISIONS:



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WORKSHOP POWER OVERALL ROOF PLAN

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MECHANICAL EQUIPMENT SCHEDULE																								
ID #	DESCRIPTION NAME	VOLT	PH	HP		WATTS		MCA	FLA	AMPS	DISCONNECT			STARTER			WIRING REQUIREMENTS				NOTES			
				RATING	AMPS	RATING	AMPS				MANUAL STARTER	SIZE	FUSE SIZE	FURN. BY	TYPE	SIZE	FURN. BY	WIRES	GROUND	CONDUIT		BREAKER		
EF-1	EXHAUST FAN	480	3	3	4.8							30	6	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
EF-2	EXHAUST FAN	480	3	2	3.4							30	6	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
EF-3	EXHAUST FAN	480	3	7 1/2	11.0							30	15	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
EF-4	EXHAUST FAN	480	3	7 1/2	11.0							30	15	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
EF-5	EXHAUST FAN	480	3	7 1/2	11.0							30	15	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
EF-6	EXHAUST FAN	480	3	7 1/2	11.0							30	15	w/ Starter	On./Off/Auto		Div 26	3	#	12	1 # 12	3/4"	20	2.11
MAU-1	MAKE UP AIR UNIT	480	3	10	14.0							30	20	w/ Unit	VFD		w/ Unit	3	#	10	1 # 10	3/4"	25	6.7
MAU-2	MAKE UP AIR UNIT	480	3	10	14.0							30	20	w/ Unit	VFD		w/ Unit	3	#	10	1 # 10	3/4"	25	6.7
RV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES	
1	PROVIDE MANUAL MOTOR STARTER.
2	PROVIDE COMBINATION STARTER & DISCONNECT (H0A) W(2) N.O. & N.C. CONTACTS.
3	PROVIDE VFD WITH INTEGRAL LOCKABLE IN OFF POSITION DISCONNECT. NEMA 3R ENCLOSURE.
4	TIE-IN TO FIRE ALARM SYSTEM FOR AUTOMATIC OPERATION THROUGH ATC.
5	TO BE INTERLOCKED WITH OZONE EQUIPMENT. (SHUTOFF ZONE EQUIPMENT IF FAN SHUTS OFF.)
6	UNIT COMES WITH SITE DISCONNECT.
7	PROVIDE DUPLEX OUTLETS.
8	PROVIDE DUCT DETECTOR WITH SAMPLING TUBE IN RETURN DUCT.
9	INTERLOCK WITH EMERGENCY VENTILATION CONTROLS.
10	PROVIDE EARLY BREAK AUXILIARY CONTACT KIT AT DISCONNECT AND INTERLOCK WITH REMOTE VFD SO THAT THE VFD POWERS DOWN THE DRIVE PRIOR TO OPENING THE MOTOR DISCONNECT.
11	INSTALL AND WIRE CONTROL SWITCH WHICH WILL BE PROVIDED BY OTHERS. REFER TO MECHANICAL DRAWING FOR LOCATION.

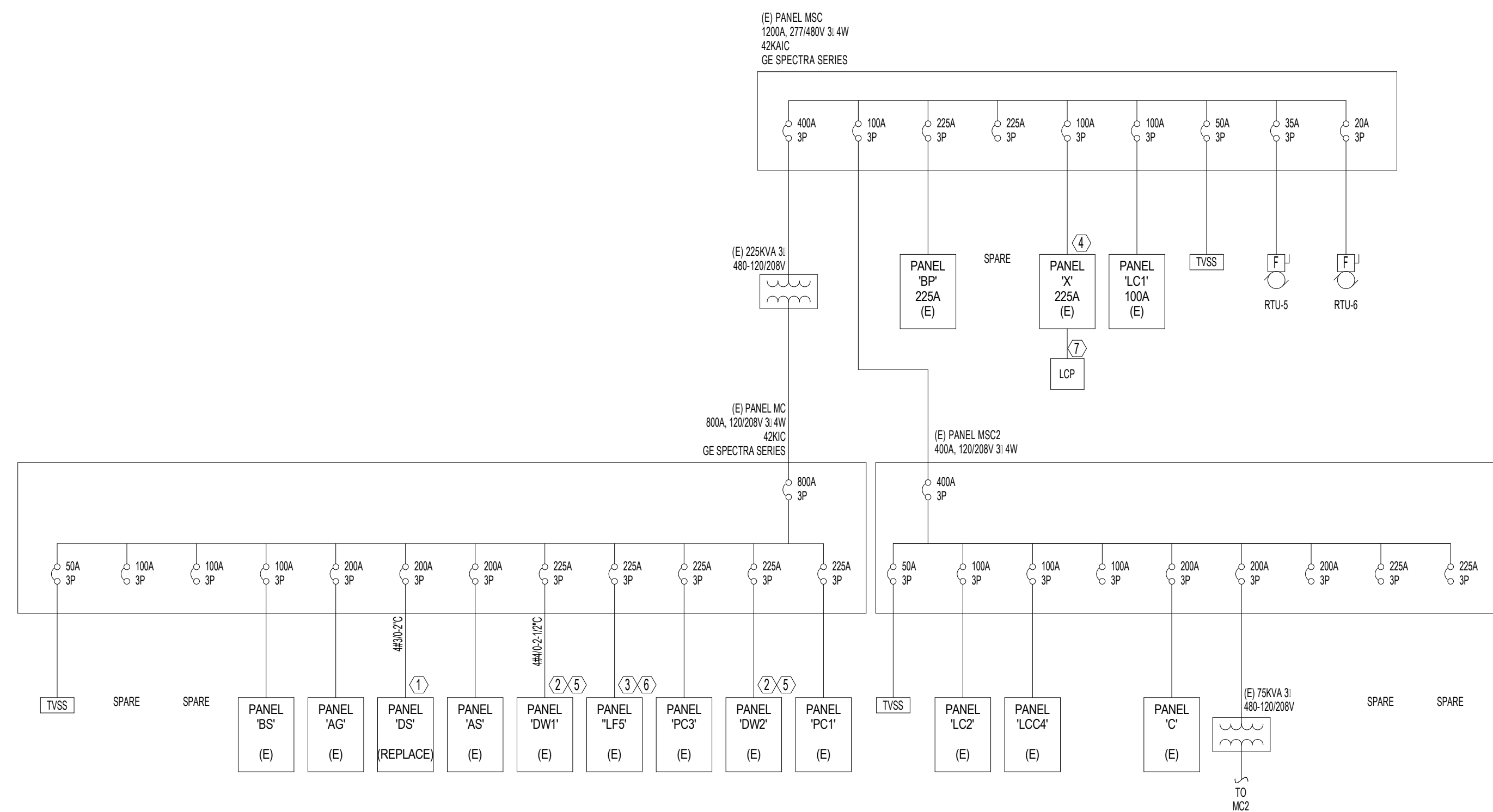


REVISIONS:



KEYED NOTES

- REPLACE PANEL WITH NEW. REUSE CONDUIT AND FEEDER. EC SHALL UTILIZE EXISTING CONDUIT WHERE POSSIBLE BUT REPLACE ALL WIRING WITHIN SHOP AREA. TIE NEW WIRE TO NEW BREAKER SAME AS PREVIOUS PANEL.
- EXISTING PANEL TO REMAIN. PROVIDE NEW BREAKERS AS SHOWN ON SHEET EX102 AND EX103.
- EXISTING PANEL TO POWER NEW MECHANICAL EQUIPMENT.
- EXISTING WESTINGHOUSE ELECTRIC CORPORATION CAT NO. A378132.
- EXISTING SQUARED D COMPANY CAT NO. NQOB-42MKKA.
- EXISTING CUTLER HAMMER CAT NO. EZB204BR.
- NEW LIGHTING CONTACTOR BY OWNER.



BID SET
LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr, Layton, UT 84041
Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018

ELECTRICAL ONE LINE DIAGRAM

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PANEL: DS-(E)																			
120	/	208	4	W	3	PH	225 Amps			Main Lugs				EXISTING	KIAC				
DESCRIPTION	TYPE	LOAD	BKR	P	OKT	A	B	C	OKT	BKR	P	TYPE	LOAD	DESCRIPTION					
E OUTLET	R	180	20	1	1	360			2	20	1	R	180	CORD DROP					
RECEPTACLES	R	180	20	1	3	360			4	20	1	R	180	HANGING OUTLETS NW					
RECEPTACLES	R	180	20	1	5		360		6	20	1	R	180	SE OUTLIES					
PAINT EXCHANGE FAN	R	180	20	1	7	360			8	20	1	R	180	HANGING OUTLETS SE					
OFFICE & HALL OUTLETS	R	900	20	1	9		1800		10	20	1	R	180	HANGING OUTLETS SE (TIG)					
RECEPTACLES	R	180	20	1	11			1800	12	20	1	R	1800	BANDSAW					
RECEPTACLES	R	180	20	1	13	180			14	20	1			SPARE					
N OUTLETS	R	360	20	1	15		360		16	20	1			SP					
N OUTLETS - CUT OFF SAW	R	182	20	1	17			362	18	20	1	R	180	N OUTLETS					
GRINDER DISCONNECT	R	792	20	2	19	792			20	20	1			SPARE					
-	R	792	-	-	21		792		22	20	1			SPARE					
BLUE MILLER MIG MACH	R	792	20	3	23			792	24					SPACE					
-	R	792	-	-	25	792			26					SPACE					
-	R	792	-	-	27		792		28	20				SPACE					
SPACE					29		0		30					SPACE					
SPACE					31		0		32					SPACE					
SPACE					33		0		34	20	3			BAND SAW					
SPACE					35		0		36					SPACE					
SPACE					37		0		38	20	1			SPACE					
NO LUG					39		0		40	20	1			SPACE					
SPACE					41		0		42					SPACE					
CONNECTED LOAD		94	KVA			26.0	Amps												
NEC DEMAND LOAD		94	KVA			26.0	Amps												

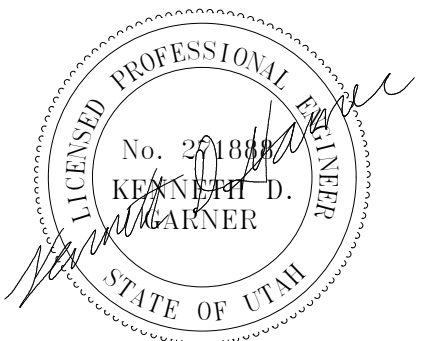
PANEL: DW1 (E)																			
120	/	208	4	W	3	PH	225 Amps			Main Lugs				EXISTING	KIAC				
DESCRIPTION	TYPE	LOAD	BKR	P	OKT	A	B	C	OKT	BKR	P	TYPE	LOAD	DESCRIPTION					
NOTE 2. ARC-3	R	4000	50	2	1	8000			2	70	2	R	4000	NOTE 2. ARC-4					
	R	4000	-	-	3		8000		4	-	-	R	4000						
NOTE 2. PLASMA CUTTER	R	3610	50	2	5			6682	6	70	2	R	3072	NOTE 1. WELDING RECEPTACLE					
	R	3610	-	-	7	6682			8	-	-	R	3072						
NOTE 1. WELDING RECEPTACLE	R	3072	70	2	9		6144		10	70	2	R	3072	NOTE 1. WELDING RECEPTACLE					
	R	3072	-	-	11			6144	12	-	-	R	3072						
SPARE					13	0			14	20	1			SPARE					
					15	0			16	20	1			SPARE					
					17	0			18	20	1			SPARE					
NOTE 1. WELDING RECEPTACLE	R	3072	70	2	19	6144			20	70	2	R	3072	NOTE 1. WELDING RECEPTACLE					
	R	3072	-	-	21		6144		22	-	-	R	3072						
SPARE					23	0			24	70	2			SPARE					
					25	0			26	-	-			SPACE					
NOTE 3. GRINDER					27	0			28					SPACE					
					29	0			30					SPACE					
SPACE					31	0			32					SPACE					
NOTE 3. OUTLET BY GRINDER					33	0			34					SPACE					
SPACE					35	0			36					SPACE					
SPACE					37	0			38					SPACE					
SPACE					39	0			40					SPACE					
SPACE					41	0			42					SPACE					
CONNECTED LOAD		53.9	KVA			149.7	Amps												
NEC DEMAND LOAD		52.0	KVA			88.7	Amps												

PANEL: DS-NEW																			
120	/	208	4	W	3	PH	225 Amps			Main Lugs				EXISTING	KIAC				
DESCRIPTION	TYPE	LOAD	BKR	P	OKT	A	B	C	OKT	BKR	P	TYPE	LOAD	DESCRIPTION					
NOTE 2. E OUTLET	R	180	20	1	1	1800			2	20	1	N	1800	MECH PNL CONTR					
NOTE 2. RECEPTACLES	R	180	20	1	3		180		4	20	1			SPARE					
NOTE 2. RECEPTACLES	R	180	20	1	5			360	6	20	1	R	180	NOTE 1. RECEPTACLE					
SPARE					7	0			8	20	1			SPARE					
NOTE 2. OFFICE & HALL OUTLETS	R	900	20	1	9		900		10	20	1			SPARE					
NOTE 1. RECEPTACLE	R	360	20	1	11			360	12	20	1			SPARE					
NOTE 1. CORD DROP	R	1400	20	1	13	2800			14	20	1	R	1400	NOTE 1. CORD DROP					
NOTE 1. CORD DROP	R	1400	20	1	15			1400	16	20	1			SPARE					
SPARE					17	0			18	20	1	R	180	NOTE 1. RECEPTACLE					
HAND DRYER	N	700	20	2	19	2100			20	20	1	R	1400	NOTE 1. CORD DROP					
	N	700	-	-	21		2100		22	20		R	1400	NOTE 1. CORD DROP					
SPARE					23	50	2	23	24	20	1	R	1400	NOTE 1. CORD DROP					
					25	792			26	20	2	R	792	NOTE 1. GRINDER DISCONNECT					
WELDING STATION	R	3072	50	2	27		3694		28	-	-	R	792	NOTE 1. BAND SAW					
	R	3072	-	-	29			3072	30	20	2			SPACE					
	R	3072	50	2	31	3072			32	-	-			SPACE					
	R	3072	-	-	33		4972		34	20	3		1500						
	R	3072	50	2	35			4972	36	-	-		1500	NOTE 1. BAND SAW					
	R	3072	-	-	37	4572			38	-	-		1500						
SPARE					39	0			40	20	1			SPACE					
SPARE					41	0			42	20	1	R	540	RECEPTACLE BY MECH EQUIPMENT					
CONNECTED LOAD		38.8	KVA			107.7	Amps												
NEC DEMAND LOAD		23.8	KVA			65.9	Amps												

PANEL: DW2 (E)																			
120	/	208	4	W	3	PH	225 Amps			Main Lugs				EXISTING	KIAC				
DESCRIPTION	TYPE	LOAD	BKR	P	OKT	A	B	C	OKT	BKR	P	TYPE	LOAD	DESCRIPTION					
NOTE 2. ARC-1	R	8610	50	2	1	8686			2	70	2	R	5376	NOTE 2. ARC-4					
	R	8610	-	-	3		8686		4	-	-	R	5376						
NOTE 1. WELDING RECEPTACLE	R	3072	50	2	5			3072	6					SPACE					
	R	3072	-	-	7	3072			8	20	1			SPACE					
NOTE 2. ARC-7	R	5376	100	2	9		5376		10					SPACE					
	R	5376	-	-	11			8448	12	50	2	R	3072	NOTE 1. WELDING RECEPTACLE					
NOTE 3. WELDING RECEPTACLE	R	3072	50	2	13	6144			14	-	-	R	3072						
	R	3072	-	-	15		6144		16	50	2	R	3072	NOTE 3. WELDING RECEPTACLE					
SPACE					17	0			18	-	-	R	3072						
SPARE					19	0			20	30	3			ROLL UP DOOR - FUTURE					
					21	0			22	-	-								
SPARE					23	0			24	-	-								
					25	0			26	30	3								
SPARE					27	0			28	-	-			SPACE					
					29	0			30	-	-								
SPACE					31	0			32					SPACE					
SPACE					33	0			34					SPACE					
SPACE					35	0			36					SPACE					
SPACE					37	0			38					SPACE					
SPACE					39	0			40					SPACE					
SPACE					41	0			42					SPACE					
CONNECTED LOAD		63.3	KVA			147.9	Amps												
NEC DEMAND LOAD		31.7	KVA			87.9	Amps												



REVISIONS:



BID SET

LAYTON HIGH SCHOOL WELDING SHOP REMODEL

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Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018
ELECTRICAL POWER SCHEDULES

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PANEL: PC2 (E)																
120	/	208	4	W	3	PH	225 Amps			Main Lugs				22	KAC	
DESCRIPTION	TYPE	LOAD	BKR	P	CKT	A	B	C	CKT	BKR	P	TYPE	LOAD	DESCRIPTION		
EXISTING CIRCUIT			20	1	1	0			2	20	1			ATC PANEL		
SPARE			20	1	3				4	20	1			EF-10		
EXISTING CIRCUIT			20	1	5				6	20	1			SPARE		
SPARE			20	1	7	0			8	20	1			SPARE		
SPARE			20	1	9				10	20	2			SPARE		
SPARE			20	1	11				12	-	-			SPARE		
EXISTING CIRCUIT			20	1	13	0			14	20	1			SPARE		
SPARE			20	1	15				16	50	2			NOTE 1: WELD RECEPTACLE		
OUTLETS IN CHILLER ROOM			20	1	17				18	-	-					
"L" LIGHTING CONTACTOR			20	1	19	0			20	20	1			SPARE		
NOTE 1: WELD RECEPTACLE			50	2	21				22	50	2			NOTE 1: WELD RECEPTACLE		
EXISTING CIRCUIT			-	-	23				24	-	-					
EXISTING CIRCUIT			20	1	25	0			26	50	2			NOTE 1: WELD RECEPTACLE		
EXISTING CIRCUIT			20	1	27				28	-	-					
EXISTING CIRCUIT			20	1	29				30	20	1			SPARE		
EXISTING SPOLE			20	3	31	0			32	20	1			EXISTING CIRCUIT		
-			-	-	33				34	-	-					
-			-	-	35				36	20	1			WEST WALL OUTLET DRAFTING RM		
EXISTING SPOLE			20	3	37	0			38	20	1			BOYS RESTROOM OUTLETS HALL		
-			-	-	39				40	20	1			SPARE		
-			-	-	41				42	20	1			EXISTING CIRCUIT		
CONNECTED LOAD			0.0	KVA		0.0	Amps									
NEC DEMAND LOAD			0.0	KVA		0.0	Amps									
NOTE 1: EXISTING LOADS																

PANEL: LF5 (E)																
277	/	480	4	W	3	PH	225 Amps			Main Lugs				EXISTING	KAC	
DESCRIPTION	TYPE	LOAD	BKR	P	CKT	A	B	C	CKT	BKR	P	TYPE	LOAD	DESCRIPTION		
MAU-1	M	2533	20	3	1	1367			2	60	3	M	11333	MAU-2		
	M	2533	-	-	3				4	-	-	M	11333			
	M	2533	-	-	5				6	-	-	M	11333			
EF-1 AND EF-3	M	4133	50	3	7	8267			8	50	3	M	4133	EF-3 AND EF-4		
	M	4133	-	-	9				10	-	-	M	4133			
	M	4133	-	-	11				12	-	-	M	4133			
SPARE			50	3	13	3667			14	50	3	M	3667	EF-4		
			-	-	15				16	-	-	M	3667			
			-	-	17				18	-	-	M	3667			
SPACE					19	0			20			3		SPACE		
					21				22							
					23				24							
SPACE					25	0			26			3		SPACE		
					27				28							
					29				30							
CONNECTED LOAD			77.4	KVA		53.1	Amps		25800					R		
NEC DEMAND LOAD			77.4	KVA		53.1	Amps		25800							
NOTE 1: PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANELBOARD OF SAME MANUFACTURER AND AIC RATING AS EXISTING																

PANEL: PNL-X (E)																
277	/	480	4	W	3	PH	225 Amps			Main Lugs				42	KAC	
DESCRIPTION	TYPE	LOAD	BKR	P	CKT	A	B	C	CKT	BKR	P	TYPE	LOAD	DESCRIPTION		
S. HALF SHOP S-18			20	1	1	0			2	20	1			S. AG SHOP		
N. HALF SHOP S-18			20	1	3				4	20	1			N. AG SHOP		
HALL AUTO SHOP, OFFICE, AUTO CLASS 18 FORMER EXT. WALL PACKS			20	1	5				6	20	1			N AUTO SHOP		
WELDING OFFICE CLASSROOM S-18 AG OFFICE S-22 CLASSROOM S-22			20	1	7	0			8	20	1			SPARE		
S. AUTO CLASS			20	1	9			958	10	20	1	L	958	NOTE 1: WELDING SHOP LIGHTING - NORTH		
S. AUTOSHOP			20	1	11			1239	12	20	1	L	1239	NOTE 1: WELDING SHOP LIGHTING - SOUTH		
AG SHOP			20	3	13	0			14	20	1			SPACE		
			20	15					16	20	1			SPACE		
			20	17					18	20	1			XFMR		
SPARE			20	1	19	0			20	20	1			-		
-			20	1	21				22	20	1			-		
-			20	1	23				24	20	1			EX FAN WELDING SHOP		
SPACE			20	1	25	0			26	20	1			-		
SOUTH EXHAUST FAN WELDING SHOP			20	1	27				28	20	1			-		
-			20	1	29				30	20	1			SPACE		
-			20	1	31				32	20	1			SPACE		
SPARE			20	1	33				34	20	1			SPACE		
SPACE			20	1	35				36	20	1			SPACE		
CONNECTED LOAD			2.2	KVA		0	Amps	958	1239							
NEC DEMAND LOAD			2.7	KVA		3.3	Amps									
NOTE 1: NEW LOAD																



REVISIONS:



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LAYTON HIGH SCHOOL WELDING SHOP REMODEL

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45 E State St, Farmington, UT 84025
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 CEA PROJECT NO.: 2018-014.00
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ELECTRICAL POWER SCHEDULES

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RELAY PANEL SCHEDULE				
LOCATION:	NORTH ELECTRICAL ROOM		PANEL ID:	LCP-01
MOUNTING:	SURFACE MOUNTED			
RELAY	DESCRIPTION	CIRCUIT	SCHEDULE	CONTROL DEVICE
1	WELDING SHOP - ZONE A	a	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
2	WELDING SHOP - ZONE B	b	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
3	WELDING SHOP - ZONE C	c	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
4	WELDING SHOP - ZONE D	d	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
5	WELDING SHOP - ZONE E	e	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
6	WELDING SHOP - ZONE F	f	SWITCH ON / SWITCH OFF / TIME CLOCK	SWITCH / TIME CLOCK
Notes:				
1	COORDINATE FINAL PROGRAMMING SCHEDULE WITH OWNER. PROVIDE 3 HOURS OF TRAINING TO OWNER INCLUDING A TRAINING VIDEO.			
2	INCLUDE FOLLOWUP PROGRAMMING VISIT 3 MONTHS AFTER OCCUPANCY FOR ANY MODIFICATIONS REQUESTED BY OWNER.			
3	PROGRAMMING AND FURNISHED OF NEW RELAY INTO EXISTING RELAY PANEL BY OWNER.			

LUMINAIRE SCHEDULE							
TYPE	DESCRIPTION		LAMP(S)/BALLAST(S)	INPUT (VA)	VOLTAGE	MANUFACTURER	CATALOG #
P1	DESCRIPTION:	VANDALL RESISTANCE LOW BAY ROUND FIXTURE	LED	47	277	KENALL-ENVIROPRO	EPLB-16-E-PM-CP-GW-47L-40KT-DCC-DV-WG
	SIZE:						
	HOUSING:	DIE-CAST					
	FINISH:						
	LENS:	HIGH IMPACT POLYCARBONATE					
	ACCESSORIES:	PENDANT MOUNTED HOOK AND MIN. OF 4' CORD 40W LED BULB WIRE GUARD					
MOUNTING:	PENDANT MOUNTED						
S1	DESCRIPTION:	VANDAL RESISTANCE SURFACE MOUNTED	LED	39	277	EATON-METALUX	4APVTLD-40L840
	SIZE:	12 IN. X 48 IN.					
	HOUSING:	DIE-CAST					
	FINISH:						
	LENS:	HIGH IMPACT POLYCARBONATE					
	ACCESSORIES:	GALVANIZED MOUNTING SUPPORT BRAKETS WIRE GRILL					
MOUNTING:	CEILING SURFACE MOUNTED						
S2	DESCRIPTION:	VANDAL RESISTANCE SURFACE MOUNTED	LED	34	277	EATON-FAIL SAFE	FV\$4M-4-LD4-30-1STD-PFS125-UNV-P187-EDC1
	SIZE:	12 IN. X 48 IN.					
	HOUSING:	DIE-CAST					
	FINISH:						
	LENS:	HIGH IMPACT POLYCARBONATE					
	ACCESSORIES:	GALVANIZED MOUNTING SUPPORT BRAKETS WIRE GRILL					
MOUNTING:	UNDER HOOD						
W1	DESCRIPTION:	VANDAL RESISTANCE WALL MOUNTED	LED	45	277	KENALL-MIGHTY MAC	WCU-4-1/1-1/1-45L40K-DCC-2-DV-Y1B-1
	SIZE:	12 IN. X 48 IN.					
	HOUSING:	DIE-CAST					
	FINISH:						
	LENS:	HIGH IMPACT POLYCARBONATE					
	ACCESSORIES:	GALVANIZED MOUNTING SUPPORT BRAKETS WIRE GRILL					
MOUNTING:	WALL BRAKETS						
W2	DESCRIPTION:	EXTERIOR WALL FIXTURE TYPE II	LED	20	277	EATON-MCGRAW EDISON	ISS-AF-350-LED-E1-T2-8K-TR-P
	SIZE:	12 IN. X 48 IN.					
	HOUSING:	DIE-CAST					
	FINISH:						
	LENS:	HIGH IMPACT POLYCARBONATE					
	ACCESSORIES:	PHOTOCONTROL TAMPER RESISTANT HARDWARE					
MOUNTING:	WALL BRAKETS						
NOTES:							
1	ALL LIGHT FIXTURES SHALL HAVE A MINIMUM 5 YEAR WARRANTY.						
2	ALL LED LIGHT FIXTURES SHALL HAVE REPLACEABLE AND UPGRADABLE LED MODULES, LM79 AND LM80 LISTED, WITH 50,000 HR MIN. L70 RATING.						
3	LIGHT FIXTURE DESCRIPTION TAKES PRECEDENCE OVER CATALOG NUMBER. LIGHT FIXTURES SHALL MEET DESCRIPTION REQUIREMENTS.						
4	PROVIDE ADDITIONAL BALLAST/DRIVER FOR FIXTURES INDICATED AS EMERGENCY. REFER TO PLANS FOR QUANTITIES.						
5	UNLESS INDICATED OTHERWISE, COLOR TEMPERATURE OF FLUORESCENT LAMPS TO BE 4100K.						
6	NOT USED						
7	NOT USED						
8	ROUGH-IN OPENINGS TO BE COORDINATED WITH APPROVED SHOP DRAWINGS PRIOR TO ROUGH-IN.						



REVISIONS:



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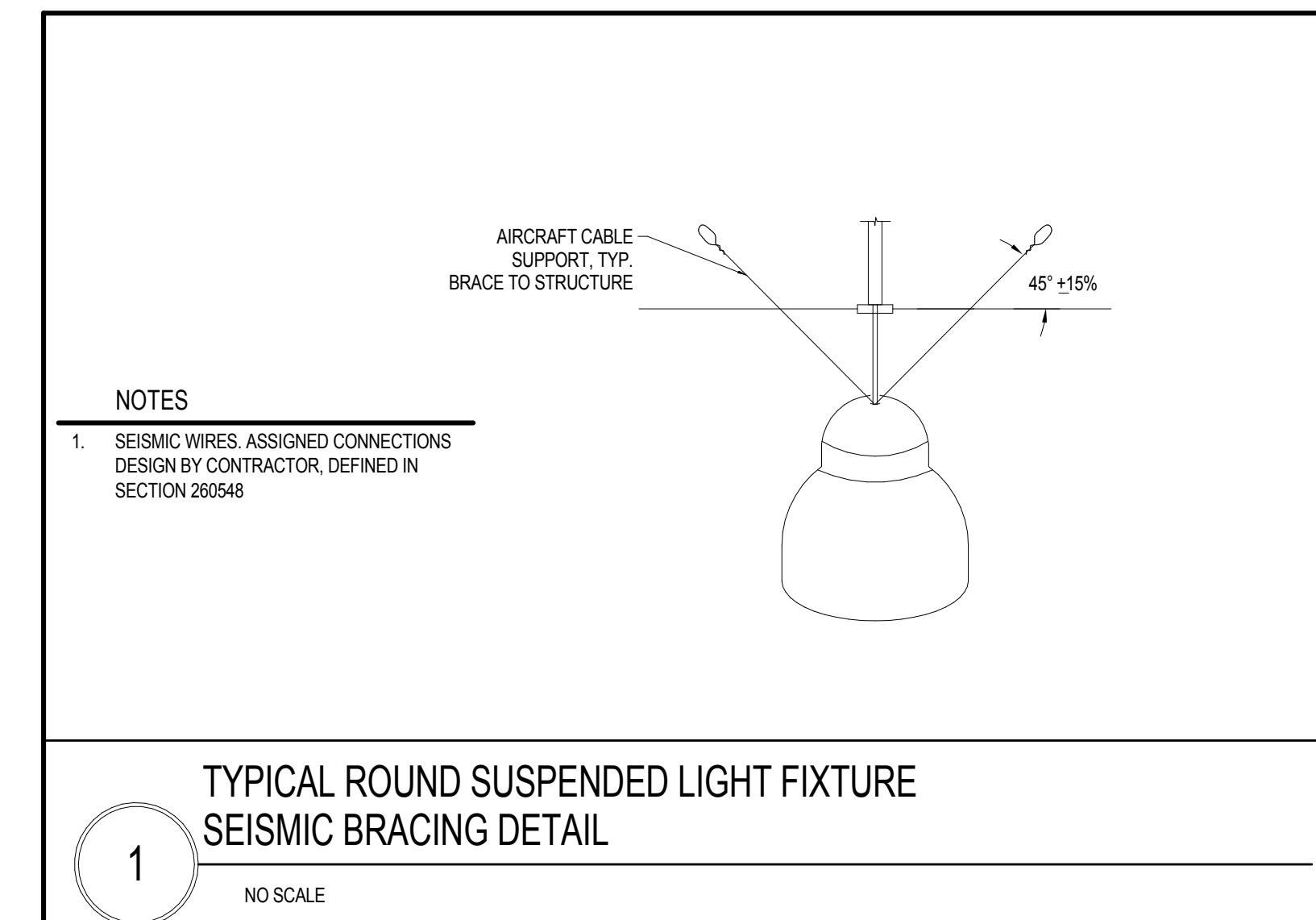
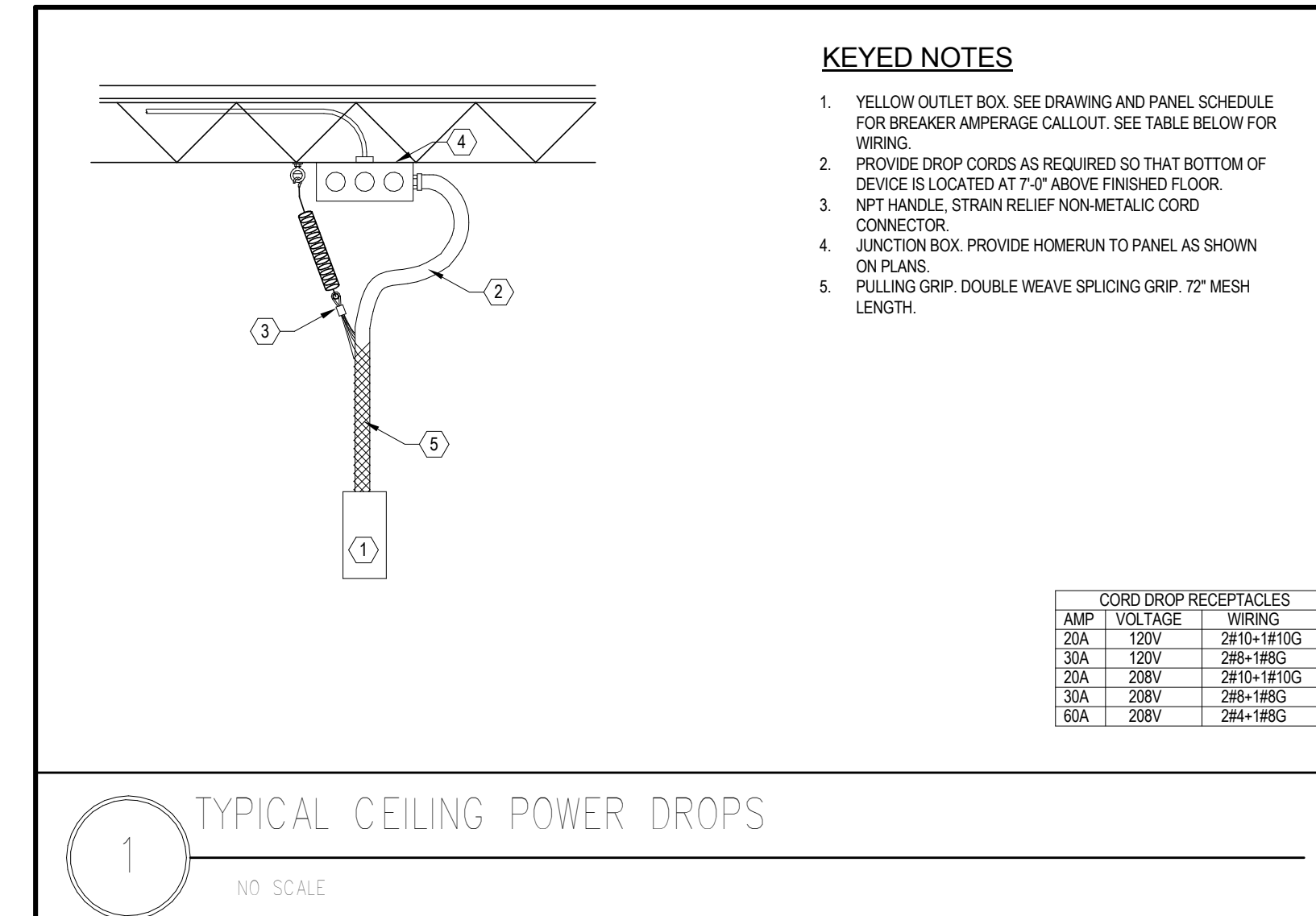
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ELECTRICAL LIGHTING SCHEDULES

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BID SET
LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr, Layton, UT 84041
Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018

ELECTRICAL DETAILS

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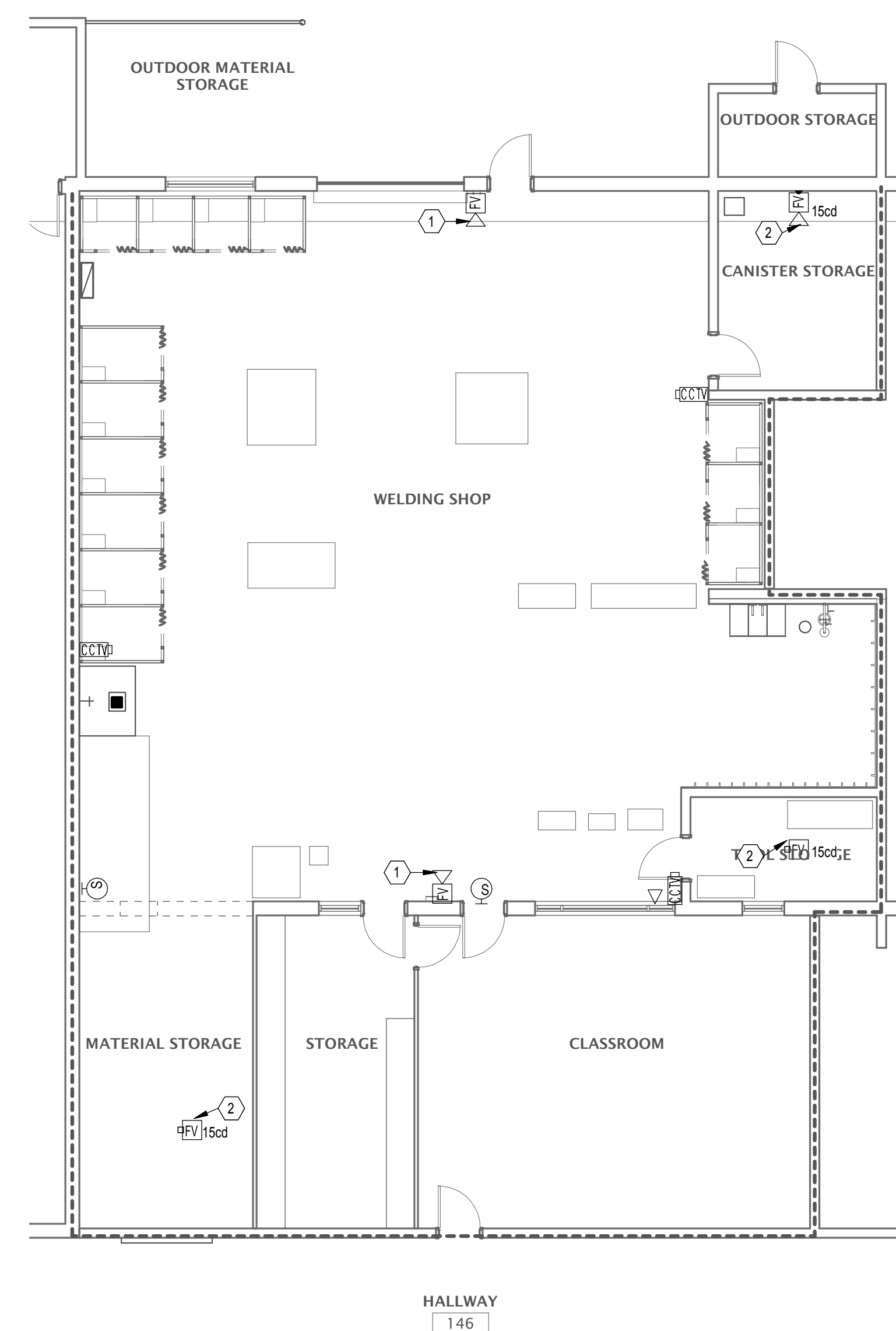
KEYED NOTES

- 1 EXISTING FIRE ALARM DEVICE. PROTECT AND MAINTAIN EXISTING DEVICES.
- 2 NEW FIRE ALARM DEVICE TO BE TIED TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM PANEL LOCATED INSIDE SOUTH ELECTRICAL ROOM.

REVISIONS:

GENERAL NOTES

- A. PROTECT AND MAINTAIN EXISTING DEVICES.



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WORKSHOP SYSTEMS
OVERALL PLAN

MECHANICAL GENERAL NOTES

- DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLAN FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC. CLOSELY COORDINATE NEW MECHANICAL WITH ALL NEW AND EXISTING MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL MEMBERS. DUCTWORK AND PIPE ROUTING IS APPROXIMATE, DIAGRAMMATIC AND IS NOT TO BE SCALED. PROVIDE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS AS REQUIRED FOR COORDINATION OF ALL WORK WITHOUT ADDITIONAL COST TO THE OWNER.
- FIELD VERIFY ALL MECHANICAL AND PLUMBING ITEMS PRIOR TO COMMENCING NEW WORK. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING CONDITIONS.
- ALL MECHANICAL WORK SHALL BE COORDINATED WITH THE WORK PERFORMED UNDER OTHER DIVISIONS TO AVOID INTERFERENCE.
- DO NOT SHUT-OFF/PUT OUT SERVICE ANY SYSTEMS/SERVICES WITHOUT FIRST COORDINATING ALL DOWNTIME WITH THE OWNER'S PERSONNEL.
- INSTALL ALL EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS.
- DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
- INSTRUMENT TEST HOLES SHALL BE LOCATED IN ALL NEW SUPPLY, EXHAUST AND RETURN DUCTS.
- CONSTRUCT ALL OTHER DUCTWORK ACCORDING TO SMACNA STANDARDS FOR LOW PRESSURE DUCT CONSTRUCTION - 2 INWG PRESSURE CLASS, SEAL CLASS "A". FIBERGLASS DUCTWORK IS UNACCEPTABLE.
- LINE ALL LOW PRESSURE RECTANGULAR DUCT WITH 1" - 1.5 LBS/CU.FT. DUCT LINER PIN LINER ON 12" CENTERS. TRIM AND SEAL JOINTS.
- ALL EQUIPMENT, DUCTWORK AND PIPING SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH THE LOCAL CODE. ALL DETAILS AND DRAWINGS REQUIRED BY LOCAL AUTHORITY WILL BE PRODUCED BY LICENSED SEISMIC ENGINEER HIRED BY CONTRACTOR.
- COORDINATE ALL FIRE SPRINKLER, DIFFUSER AND GRILLE LOCATIONS WITH REFLECTED CEILING PLAN AND ELECTRICAL DRAWINGS.
- ALL VALVES AND PIPING SPECIALTIES SHALL BE LINE SIZED UNLESS NOTED OTHERWISE. USE ECCENTRIC REDUCERS ON CONTROL VALVES WHERE REQUIRED.
- ALL PIPING, DUCTS, VENTS, ETC. EXTENDING THROUGH THE WALL AND/OR ROOF SHALL BE FLASHED AND COUNTERFLASHED IN A WATERPROOF MANNER.
- ALL PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOOR, WALLS, AND PARTITIONS.
- ALL PIPING SHALL BE SUPPORTED ADJACENT TO EQUIPMENT, TO PREVENT WEIGHT OF PIPING BEING PLACED ON EQUIPMENT.
- GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORTING ANGLES AND EXTRA SUPPORT BEAMS FOR A.C. UNITS, EXHAUST FANS, ETC.
- HVAC CONTRACTOR SHALL CHANGE OUT THE EQUIPMENT FILTERS AT THE TIME OF POSSESSION OF THE PROJECT BY THE TENANT, USING ONLY NEW FILTERS OF THE PROPER SIZE AND TYPE.
- THE HVAC CONTRACTOR SHALL LEAVE HIS WORK IN PERFECT WORKING CONDITION AND SHALL GUARANTEE SAME FOR A PERIOD OF TWELVE (12) MONTHS FROM DATE OF FINAL ACCEPTANCE.
- PROVIDE IDENTIFICATION LABELS ON ALL EQUIPMENT, PIPING, VALVES, CONTROLS, ETC. TO MATCH EXISTING BUILDING LABELING STANDARD AND INCLUDING TENANT NAME AND SPACE NUMBER.
- DUCT INTERIORS VISIBLE THROUGH REGISTERS, GRILLES, AND DIFFUSERS SHALL BE FLAT BLACK.
- PROVIDE ASBUILT DRAWINGS AND SUBMIT TO ENGINEER.
- PROVIDE SUBMITTALS ON ITEMS LISTED IN MECHANICAL AND PLUMBING EQUIPMENT SCHEDULES TO THE ENGINEER FOR REVIEW PRIOR TO ORDER, PURCHASE OR INSTALLATION.
- CONTRACTOR SHALL REPAIR, REPLACE AND REPAINT TO MATCH EXISTING SURFACES DISTURBED BY THE CONTRACTOR DURING INSTALLATION OF ANY MATERIALS OR EQUIPMENT. THIS INCLUDES CUTTING OF ANY CEILINGS, WALLS OR FLOORS FOR THE INSTALLATION OF ANY PLUMBING OR MECHANICAL MATERIALS OR EQUIPMENT.
- HVAC CONTRACTOR SHALL REMOVE FROM THE JOBSITE ANY MATERIALS NOT ECONOMICALLY RECOVERABLE. ANY MATERIALS REMOVED FROM THE JOBSITE AND SOLD FOR SALVAGE SHALL BE CREDITED TO THE OWNERS ACCOUNT.
- INSTALL ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE, 2015 INTERNATIONAL MECHANICAL CODE, 2015 INTERNATIONAL FIRE CODE AND 2015 INTERNATIONAL PLUMBING CODE.
- PROVIDE OPERATION AND MAINTENANCE MANUALS AND SUBMIT TO ENGINEER.
- ALL ROOF MOUNTED MECHANICAL EQUIPMENT TO BE A MINIMUM OF 10'-0" FROM ROOF EDGE. ALL EXHAUST FANS TO BE A MINIMUM OF 10'-0" FROM ALL INTAKE OPENINGS.

FIRE PROTECTION GENERAL NOTES

- NEW SPRINKLER HEADS TO MATCH CEILING TYPE. COORDINATE ARCHITECTURAL SHEETS.
- FURNISH AND INSTALL NEW PIPE, FITTINGS AND SPRINKLER HEADS AS REQUIRED TO COMPLETE THE WORK.
- ALL PIPING SHALL BE DOMESTIC.
- FITTINGS SHALL BE THREADED, WELDED AND GROOVED IN ACCORDANCE WITH LISTING AND NFPA #13 REQUIREMENTS.
- PLAIN END OR MECHANICAL TEES SHALL NOT BE USED, UNLESS REQUIRED FOR FIELD MODIFICATION OF PIPING SYSTEM.
- THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR INSTALLATION. SPRINKLER PIPING SHALL BE REROUTED AS REQUIRED WHERE CONFLICTS OCCUR. SPRINKLER CONTRACTOR'S PRICING SHALL INCLUDE ANY PIPING OFFSETS, OR REVISED CUT LENGTHS.
- SHOP DRAWINGS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR USING AN REVIT COMPATIBLE FORMAT. SUBMIT TO OWNERS INSURANCE REVIEW CONSULTANT AND ARCHITECT AND ENGINEER. AS-BUILT DRAWINGS AND ELECTRONIC DRAWING FILES SHALL BE PROVIDED AT END OF PROJECT BY CONTRACTOR.
- FIRE SPRINKLER SHOP DRAWINGS, CALCULATIONS AND MATERIALS SHALL BE SUBMITTED AND REVIEWED BY ENGINEER PRIOR TO SUBMITTING TO OTHER AUTHORITIES HAVING JURISDICTION.
- PRESSURE TEST AND CERTIFY SPRINKLER SYSTEM.
- PIPE ROUTING, ELEVATIONS, SPRINKLER LOCATIONS, ARE SCHEMATIC, SHALL BE USED AS REFERENCE ONLY. INSTALLER SHALL FIELD VERIFY CONDITIONS, AND PROVIDE OFFSETS AS REQUIRED FOR INSTALLATION. DEVIATION FROM SCHEMATIC PLAN SHALL BE APPROVED IN WRITING BY THE ENGINEER, PRIOR TO INSTALLATION.
- NEW FIRE PROTECTION WORK TO INCLUDE HEADS AND PIPING SYSTEM AS REQUIRED TO MEET NFPA REQUIREMENTS.
- NEW PIPING TO BE SCHEDULE 40 STEEL PIPE LISTED FOR FIRE PROTECTION.
- SEE ARCHITECTURAL PLANS FOR CEILING HEIGHTS.
- SUBMIT FIRE PROTECTION DRAWINGS TO LANDLORD'S/OWNER'S INSURANCE REVIEW CONSULTANT.
- COORDINATE PIPE ROUTING WITH OTHER TRADES.
- TIGHT CEILING SPACE WILL REQUIRE SOME SPRINKLER LINES TO OFFSET OVER OR UNDER DUCTWORK, PIPE, OR OTHER OBSTACLES. PROVIDE DRAINS AS REQUIRED.

MECHANICAL LEGEND

BURIED OR UNDERFLOOR DUCT		CHILLED WATER SUPPLY	--- X" CHS	ACETYLENE	--- X" C2H2
DUCT SIZE (N/FIRST FIGURE IS SIDE SHOWN)		CONDENSER WATER RETURN	--- X" CR	ARGON	--- X" AR
FLEXIBLE DUCT (HELICAL)		CONDENSER WATER SUPPLY	--- X" CS	CARBON DIOXIDE	--- X" CO2
FLEXIBLE DUCT CONNECTION		HEATING WATER RETURN	--- X" HWR	DEIONIZED WATER RETURN	--- X" DI
SPIN-IN W/ MVD		HEATING WATER SUPPLY	--- X" HWS	DEIONIZED WATER SUPPLY	--- X" DIR
AIR FLOW STATION		RADIANT FLOOR RETURN	--- X" RFR	FUEL OIL RETURN	--- X" FOR
COMBINATION FIRE/SMOKE DAMPER		RADIANT FLOOR SUPPLY	--- X" RFS	FUEL OIL SUPPLY	--- X" FOS
FIRE DAMPER SMOKE DAMPER		REFRIGERANT LIQUID	--- X" RL	HYDROGEN	--- X" H
GRAVITY BACKDRAFT DAMPER		REFRIGERANT SUCTION	--- X" RS	INDUSTRIAL WATER (NON-POTABLE)	--- X" IW
MANUAL VOLUME DAMPER		SNOWMELT RETURN	--- X" SMR	MIXED GAS	--- X" MG
MOTORIZED DAMPER		SNOWMELT SUPPLY	--- X" SMS	NITROGEN	--- X" N
SMOKE DAMPER		STEAM	--- X" S	NITROUS OXIDE	--- X" N2O
THERMOSTAT OR TEMP SENSOR W/ EQUIPMENT TAG		STEAM CONDENSATE RETURN	--- X" SCR	OXYGEN	--- X" O2
RADIAL SUPPLY DIFFUSERS		GROUND LOOP RETURN	--- X" GLR	PROPANE	--- X" P
RETURN GRILLE		GROUND LOOP SUPPLY	--- X" GLS	REVERSE OSMOSIS	--- X" RO
SUPPLY DIFFUSER		HOT GAS	--- X" HG	VACUUM	--- X" VAC
SUPPLY SLOT DIFFUSER		HOT GAS BYPASS	--- X" HGBP	WATER TREATMENT	--- X" WT
DUCT TRANSITION		AQUASTAT		ACCESS PANEL	
ELBOW W/ TURNING VANES		FLOW SWITCH		CARBON DIOXIDE SENSOR	
TEE W/ 45° ENTRY		IN-LINE PUMP		CARBON MONOXIDE SENSOR	
WYE W/ 45° ENTRY		PRESSURE GAUGE W/ GAUGE COCK		HUMIDISTAT OR HUMIDITY SENSOR	
EXHAUST AIR DUCT DOWN		STRAINER		NITROGEN DIOXIDE SENSOR	
EXHAUST AIR DUCT SECTION		TEMPERATURE & PRESSURE TEST PLUG		POINT OF CONNECTION TO EXISTING	
EXHAUST AIR DUCT UP		TEMPERATURE SENSING WELL		POINT OF REMOVAL FROM EXISTING	
RETURN AIR DUCT DOWN		THERMOMETER		AIR VENT (AUTOMATIC)	
RETURN AIR DUCT SECTION		VENTURI FLOW METER		AUTOMATIC CONTROL VALVE (2-WAY)	
RETURN AIR DUCT UP		DIRECTION OF FLOW		AUTOMATIC CONTROL VALVE (3-WAY)	
SUPPLY AIR DUCT DOWN		ELBOW DOWN		BALL VALVE	
SUPPLY AIR DUCT SECTION		ELBOW UP		BUTTERFLY VALVE	
SUPPLY AIR DUCT UP		PIPE CAP		CALIBRATED BALANCE VALVE	
FIRE DEPT. HORN & LIGHT		REDUCER		CHECK (SWING OR LIFT AS REQ'D) VALVE	
FIRE HOSE CABINET		TEE DOWN		CURB COCK	
POST TYPE FDC CONNECTION		UNION		GAS COCK	
WALL TYPE FDC CONNECTION		CONDENSATE DRAIN	--- X" D	GATE OS & Y PATTERN VALVE	
YARD HYDRANT		DOMESTIC COLD WATER	--- X" DCW ---	GATE VALVE	
FLOOR DRAIN		DOMESTIC HOT WATER	--- X" DHW ---	MOTORIZED ACTUATOR	
FLOOR OR GRADE CLEANOUT		DOMESTIC HOT WATER RECIRC.	--- X" DHWR ---	PAT RELIEF VALVE	
FLOOR SINK		FIRE SERVICE	--- X" F ---	PET COCK OR GAUGE COCK	
GRADE CLEANOUT W/ CONCRETE PAD		GREASE WASTE ABOVE GRADE	--- X" GW ---	PLUG VALVE	
HOSE BIBB OR SILLCOCK		GREASE WASTE BELOW GRADE	--- X" GW ---	PRESSURE REDUCING VALVE	
MANHOLE		NATURAL GAS	--- X" G ---	SOLENOID VALVE	
REDUCED PRESSURE BACKFLOW PREVENTOR		OVERFLOW DRAIN	--- X" OD ---	THERMAL EXPANSION VALVE	
VENT THROUGH THE ROOF		ROOF DRAIN	--- X" RD ---	DETAIL TAG	
WALL CLEANOUT		SANITARY (PLBG) VENT	----- X" V -----	KEYED NOTE	
EXPANSION JOINT		SANITARY WASTE ABOVE GRADE	--- X" W ---	SECTION CUT LINE	
FLEXIBLE PIPE CONNECTION		SANITARY WASTE BELOW GRADE	--- X" W ---		
HEAT TRACING		COMPRESSED AIR	--- X" CA ---		
CHILLED WATER RETURN	--- X" CHR ---	TEMPERED WATER	--- X" T ---		

DRAWING INDEX

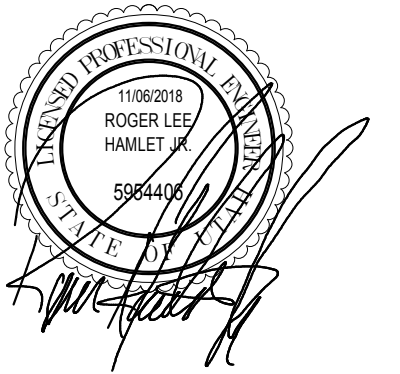
#	SHEET NAME
M001	MECHANICAL LEGEND, SYMBOLS & ABBREVIATIONS
FP101	LEVEL 1 FIRE PROTECTION PLAN
MH101	LEVEL 1 MECHANICAL FLOOR PLAN
MH501	MECHANICAL DETAILS
MH601	MECHANICAL SCHEDULES
PL101	LEVEL 1 WORKSHOP PLUMBING PLAN
PL501	PLUMBING DETAILS

ABBREVIATIONS

Key Name	Comments
AD	ACCESS DOOR
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
BI	BACKWARD INCLINE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CBV	CALIBRATED BALANCE VALVE
CFM	CUBIC FEET PER MINUTE
CV	CONSTANT VOLUME
CV	CONTROL VALVE
DB	DRY BULB
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
DN	DOWN
DSN	DOWN SPOUT NOZZLE
DW	DISHWASHER
E	EXISTING
EA	EACH OR EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
ELEV	ELEVATION
ENCL	ENCLOSURE
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWV	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FO	FLAT OVAL
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLON
GD	GARAGE DRAIN
GEA	GREASE EXHAUST AIR
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HR	HOUR
HT	HEIGHT
IN	INCH
INWC	INCHES OF WATER COLUMN
INWG	INCHES OF WATER GAUGE
L	LAVATORY OR LOUVER
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS
MECH	MECHANICAL
MIN	MINIMUM
MPSA	MEDIUM PRESSURE SUPPLY AIR
MUA	MAKE-UP AIR
MVD	MANUAL VOLUME DAMPER
NC	NOISE CRITERIA OR NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBV	OPPOSED BLADE DAMPER
OD	OVERFLOW DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PD	PRESSURE DROP
PG	PROPYLENE GLYCOL
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RAD	RADIUS
RD	ROOF DRAIN
RLF	RELIEF AIR
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
SA	SUPPLY AIR OR SHOCK ARRESTOR
SEN	SENSIBLE
SF	SQUARE FEET
SIM	SIMILAR
SL	SEA LEVEL
SP	STATIC PRESSURE
SS	SERVICE SINK OR STAINLESS STEEL
TOD	TOP OF DUCT
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
U	URINAL
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THROUGH THE ROOF
W	WASTE
W	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WPD	WATER PRESSURE DROP
WT	WEIGHT
Ø	ROUND OR DIAMETER

REVISIONS:

NO.	DATE	DESCRIPTION



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MECHANICAL LEGEND,
SYMBOLS & ABBREVIATIONS

M001

REV

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KEYED NOTES

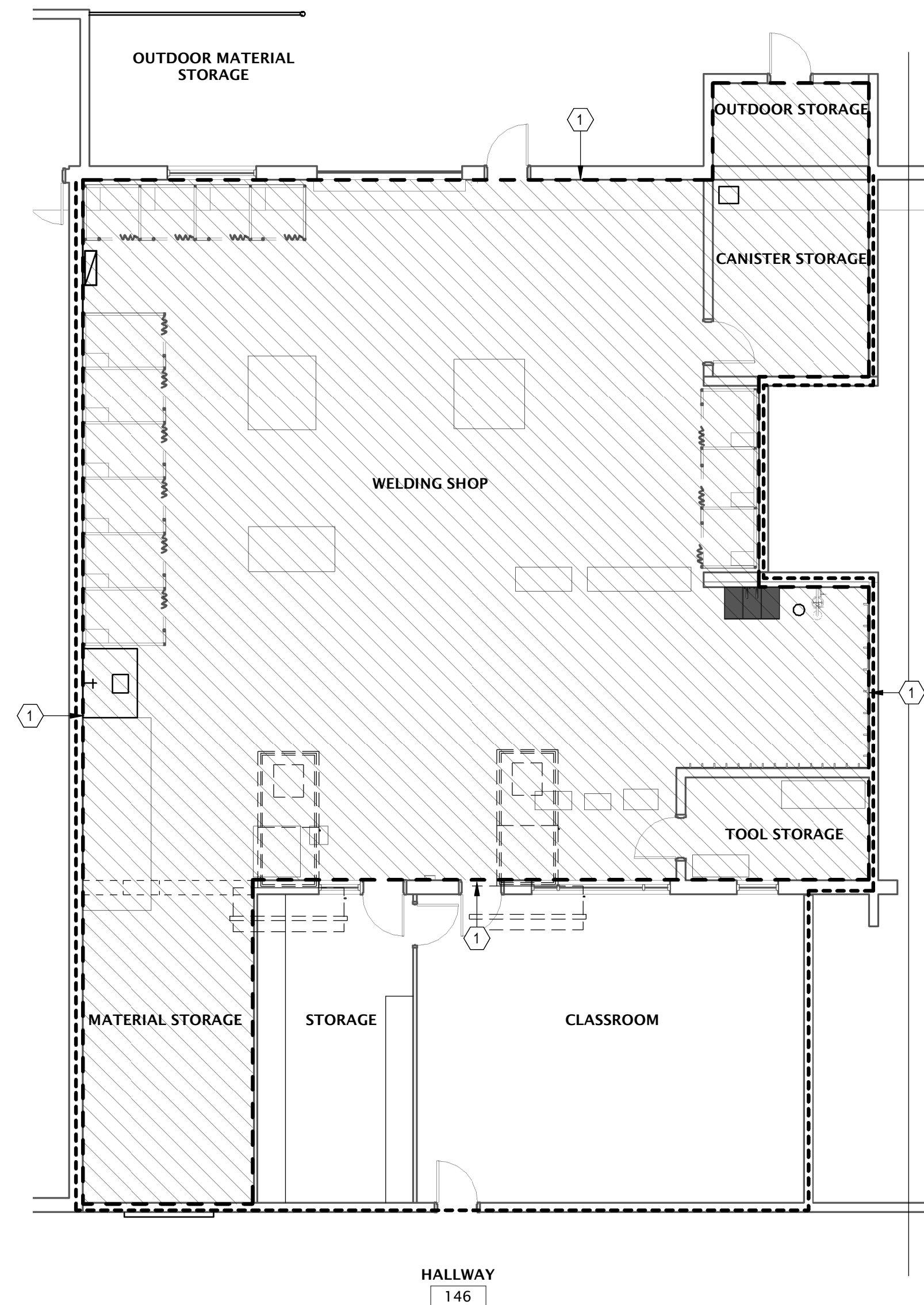
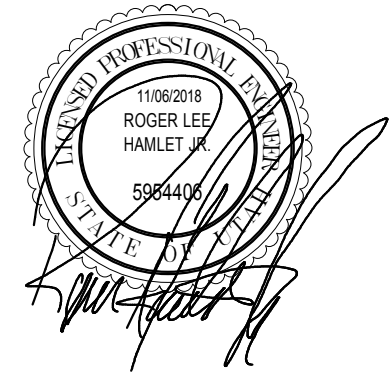
- 1 MODIFY EXISTING FIRE SPRINKLER SYSTEM IN AREA SHOWN AS NEEDED PER NEW EQUIPMENT AND LAYOUT.

REVISIONS:

NO.	DESCRIPTION

GENERAL NOTES

- A. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA #13, 2012 EDITION.
- B. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA#13, 2012 EDITION. INSTALLATION OF SPRINKLER SYSTEMS.
- C. FURNISH AND INSTALL NEW PIPE, FITTINGS, AND SPRINKLER HEADS AS REQUIRED TO COMPLETE THE WORK. ALL MATERIALS TO MATCH EXISTING.
- D. NEW SPRINKLER HEADS TO MATCH CEILING TYPE. COORDINATE WITH ARCHITECTURAL SHEETS.
- E. ALL PIPING SHALL BE DOMESTIC.
- F. FITTINGS SHALL BE THREADED, WELDED AND GROOVED IN ACCORDANCE WITH LISTING AND NFPA #13 REQUIREMENTS.
- G. SEISMIC BRACINGS AND FLEXIBLE COUPLINGS SHALL BE PROVIDED AS REQUIRED FOR SEISMIC PROTECTION.
- H. PLAIN END OR MECHANICAL TEES SHALL NOT BE USED UNLESS REQUIRED FOR FIELD MODIFICATION OF PIPING SYSTEM.
- I. THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR INSTALLATION. SPRINKLER PIPING SHALL BE REROUTED AS REQUIRED WHERE CONFLICTS OCCUR. SPRINKLER CONTRACTOR'S PRICING SHALL INCLUDE ANY PIPING OFFSETS OR REVISED CUT LENGTHS.
- J. THE ARCHITECT SHALL PROVIDE SCHEMATIC SPRINKLER LAYOUTS ON REFLECTED CEILINGS DRAWINGS FOR AREAS OF CONCERN. PROVIDE SPRINKLER LAYOUT AS PER ARCHITECTURAL DRAWINGS WHILE MEETING SPRINKLER LISTINGS. COORDINATE WITH ARCHITECT AND ENGINEER WHERE LAYOUTS ARE NOT FEASIBLE AS SHOWN.
- K. SHOP DRAWINGS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR USING A REVIT COMPATIBLE FORMAT. SUBMIT TO OWNER'S INSURANCE REVIEW CONSULTANT, ARCHITECT, AND ENGINEER. AS-BUILT DRAWINGS AND ELECTRONIC DRAWING FILES SHALL BE PROVIDED AT END OF PROJECT BY CONTRACTOR.
- L. FIRE SPRINKLER SHOP DRAWINGS, CALCULATIONS, AND MATERIALS SHALL BE SUBMITTED AND REVIEWED BY ENGINEER PRIOR TO SUBMITTING TO OTHER AUTHORITIES HAVING JURISDICTION.
- M. FIRE SPRINKLER CONTRACTOR TO ACQUIRE ALL NECESSARY PERMITS AND/OR APPROVALS FROM CITY, COUNTY, AND STATE.
- N. PRESSURE TEST AND CERTIFY SPRINKLER SYSTEM.
- O. PIPE ROUTING, ELEVATIONS, SPRINKLER LOCATIONS, ARE SCHEMATIC, AND SHALL BE USED AS REFERENCE ONLY. INSTALLER SHALL FIELD VERIFY CONDITIONS, AND PROVIDE OFFSETS AS REQUIRED FOR INSTALLATION. DEVIATION FROM SCHEMATIC PLAN SHALL BE APPROVED IN WRITING BY THE ENGINEER, PRIOR TO INSTALLATION.
- P. NEW FIRE PROTECTION WORK TO INCLUDE HEADS AND PIPING SYSTEM AS REQUIRED TO MEET NFPA REQUIREMENTS.
- Q. NEW PIPING TO BE SCHEDULE 40 STEEL PIPE LISTED FOR FIRE PROTECTION.
- R. SEE ARCHITECTURAL PLANS FOR CEILING HEIGHTS.
- S. SUBMIT FIRE PROTECTION DRAWINGS TO LANDLORD'S/OWNER'S INSURANCE REVIEW CONSULTANT.
- T. COORDINATE WITH AHJ FOR SYSTEM DESIGN REQUIREMENTS.
- U. COORDINATE PIPE ROUTING WITH OTHER TRADES.
- V. TIGHT CEILING SPACE WILL REQUIRE SOME SPRINKLER LINES TO OFFSET OVER OR UNDER DUCTWORK, PIPE, OR OTHER OBSTACLES. PROVIDE DRAINS AS REQUIRED.



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LEVEL 1 FIRE PROTECTION PLAN

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KEYED NOTES

- 1 DEMOLISH PLUMBING FIXTURE, COLD WATER, HOT WATER AND VENT PIPING BACK TO REMAINING WALL OR BELOW FLOOR AND CAP. DEMOLISH WASTE BELOW FLOOR AND CAP. PATCH FLOOR TO MATCH.
- 2 DEMOLISH EXISTING WELDING BOOTHS. COORDINATE ITEMS TO BE RETURNED TO OWNER WITH DSD.
- 3 DEMO EXISTING SA GRILLE AND TAKE OFF BACK TO BRANCH. CAP AND SEAL AT BRANCH. COORDINATE WALL REPAIR WITH ARCHITECTURAL.
- 4 DEMOLISH EXISTING HOOD, ASSOCIATED DUCT WORK AND EXHAUST FAN. PATCH ROOF IN ACCORDANCE WITH OWNERS ROOFING REQUIREMENTS.
- 5 DEMOLISH EXISTING DOMESTIC COLD AND HOT WATER BACK TO EXISTING WALL UP TO HEIGHT THAT WILL NOT CONFLICT WITH INSTALLATION OF NEW WELDING BOOTHS.
- 6 DEMOLISH EXISTING DOMESTIC HOT AND COLD WATER TO BELOW FLOOR AND CAP. DEMOLISH RISERS UP TO HEIGHT OF NEW STUD WALL FOR RE-ROUTING TO NEW SINK AND EMERGENCY EYE-WASH.
- 7 EXISTING COMPRESSED AIR, DEMOLISH DROP UP TO HORIZONTAL SUPPLY AND CAP.
- 8 EXISTING NATURAL GAS, DEMOLISH DROP UP TO HORIZONTAL SUPPLY AND CAP.
- 9 SECURE FUME EXTRACTOR MOUNTING BRACKET TO TOP EDGE OF WELDING BOOTH. BRACKET TO BE CENTERED ALONG SELECTED WALL TO PROVIDE FULL COVERAGE OF WORKING AREA. COORDINATE SELECTED WALL WITH WELDING SHOP INSTRUCTOR.
- 10 10"12 EA DOWN TO EXHAUST GRILLE. PROVIDE OBD IN DROP. HOLD EXHAUST GRILLE AS HIGH AS POSSIBLE.
- 11 DEMOLISH AND SALVAGE EXISTING DOWNSPOUT NOZZLE FOR USE IN NEW CONSTRUCTION PHASE. DEMOLISH EXISTING VERTICAL OVERFLOW ROOF DRAIN PIPING UP TO HORIZONTAL MAIN AND MAKE NEW PENETRATION AND ATTACH EXISTING SALVAGED DOWNSPOUT NOZZLE. PATCH EXISTING LOWER PENETRATION TO MATCH EXISTING CONDITIONS.
- 12 ALL DUCT CONNECTED TO THIS SYSTEM TO MEET SMACNA DUCT CONSTRUCTION STANDARDS FOR DUCT PRESSURE CLASS NEGATIVE 6" W.G OR HIGHER.
- 13 45° CONNECTION FROM VERTICAL TO HORIZONTAL.
- 14 EXISTING COMPRESSED AIR AND NATURAL GAS PIPING RUNS ALONG WALL HIGH OVER HEAD. SHOWN OFFSET FOR CLARITY.
- 15 COORDINATE EXACT SWITCH LOCATION WITH OWNER.
- 16 PROVIDE AND INSTALL CARBON MONOXIDE DETECTOR, ALARM TO BE TIED INTO BUILDING MANAGEMENT SYSTEM.

GENERAL NOTES

A. SEE M001 FOR GENERAL NOTES.

WELDING SHOP SEQUENCE OF OPERATIONS

EXHAUST FAN CFM SCHEDULE

- EF-1: 7200 CFM
- EF-2: 4000 CFM
- EF-3: 3700 CFM
- EF-4: 3000 CFM
- EF-5: 3000 CFM
- EF-6: 1800 CFM
- THE BAS SHALL ENABLE EACH EXHAUST FAN TO OPERATE DURING THE OCCUPIED MODE. ONCE THE EXHAUST FANS HAVE BEEN ENABLED, A 15-90 MINUTE TWIST TIMER (PROVIDED BY BAS CONTRACTOR) FOR EACH EXHAUST FAN, SHALL START ASSOCIATED EXHAUST FAN AS REQUIRED. COORDINATE TWIST TIMER LOCATIONS WITH OWNER.
- THE BAS SHALL MONITOR THE STATUS OF EACH EXHAUST FAN TO MODULATE THE VFD SPEED OF THE ASSOCIATED MAU SUPPLY FAN AS DIRECTED BELOW.

SPACE STATIC PRESSURE

- SPACE STATIC PRESSURE SENSOR TO BE CONNECTED TO BAS.
- BAS TO MONITOR SPACE STATIC PRESSURE.
- BAS TO ALARM IF SPACE STATIC PRESSURE EXCEEDS POSITIVE OR NEGATIVE 0.10" SPACE STATIC PRESSURE.

MAU-1 / MAU-2 SEQUENCE

- MAU-1 TO BE INTERLOCKED WITH OPERATION OF EF-3, EF-4, EF-5, AND EF-6.
- MAU-2 TO BE INTERLOCKED WITH OPERATION OF EF-1 AND EF-2.
- THE BAS SHALL ENABLE EACH MAU TO OPERATE DURING THE OCCUPIED MODE.
- THE BAS SHALL MONITOR THE AMPERAGE OF THE MAU SUPPLY FAN, WITH A CURRENT TRANSDUCER, TO ENSURE THAT THE VFD SPEED IS MODULATING TO MATCH THE OPERATION OF THE ASSOCIATED EXHAUST FANS.
- THE BAS SHALL PROVIDE A SPACE TEMPERATURE SENSOR, DISCHARGE AIR TEMPERATURE SENSOR AND SHALL CONTROL THE MAU GAS HEATING AND EVAPORATIVE COOLING TO MAINTAIN SPACE TEMPERATURE SETPOINT AS DIRECTED BELOW IN THE OCCUPIED AND UNOCCUPIED MODES. WHEN THE SPACE TEMPERATURE IS BELOW THE MAU HEATING SETPOINT, THE BAS SHALL ENABLE THE MAU GAS HEAT. THE MAU FACTORY CONTROLS SHALL STAGE/MODULATE THE GAS HEATING TO MAINTAIN A DISCHARGE TEMPERATURE SETPOINT RECEIVED FROM THE BAS. WHEN THE SPACE TEMPERATURE IS ABOVE THE MAU COOLING SETPOINT, THE BAS SHALL START THE EVAPORATIVE COOLING PUMP. THE EVAPORATIVE COOLING PUMP SHALL NOT RUN IF THERE IS NO WATER IN THE SUMP. THE BAS SHALL GENERATE AN ALARM IF THE EVAPORATIVE COOLING PUMP OPERATION DOES NOT MATCH THE START/STOP COMMAND.
- THE ATC CONTRACTOR TO PROVIDE A FILL AND DRAIN VALVES FOR THE MAU EVAPORATIVE SECTION AND SHALL BE CONTROLLED BY THE BAS. THE SUMP OF THE EVAPORATIVE COOLING SECTION SHALL BE DRAINED AND FILLED EACH DAY THAT IT IS USED. THE FILL SHALL ONLY OCCUR IF THE OUTSIDE AIR TEMPERATURE IS ABOVE 50°F AND THE EVAPORATIVE COOLING IS NEEDED FOR THE DAY. IF THE OUTSIDE AIR TEMPERATURE IS BELOW 40°F, THE SUMP SHALL BE DRAINED.
- OCCUPIED MODE
 - EXISTING UH-1 TO PROVIDE PRIMARY HEATING FOR SPACE. SET TEMPERATURE TO 65°F. TEMPERATURE SET POINT TO BE ADJUSTABLE BY DSD.
 - UPON OPERATION OF INTERLOCKED EXHAUST FAN, MAU FAN TO RUN. SET MAU FAN SPEED TO MATCH SUM OF INTERLOCKED EXHAUST FAN'S CFM PER EXHAUST FAN CFM SCHEDULE
 - IF SUM OF EXHAUST CFM IS LESS THAN THE MAU MIN CFM, SET MAU TO MIN CFM.
 - RELIEF VENT RV-1 TO PROVIDE RELIEF OF ANY EXCESS MUA.
 - EVAP COOLING SECTION OR DIRECT FIRED BURNER TO OPERATE AS NEEDED TO SATISFY OCCUPIED SPACE TEMPERATURE SETTING.
 - ON CALL FOR HEAT WHEN EXHAUST FANS, MAU-1, AND MAU-2 ARE NOT IN OPERATION.
 - MAU TO BE SECONDARY SOURCE OF HEAT. SET HEATING SET POINT 5°F BELOW (E)UH-1 SET POINT.
 - SET COOLING SET POINT TO 80°F.
 - ON CALL FOR HEAT OR COOL FROM THERMOSTAT, MAU-2 TO RUN AT MIN CFM SETTING. RELIEF TO BE PROVIDED THROUGH RV-1.
 - EVAP COOLING SECTION OR DIRECT FIRED BURNER TO OPERATE AS NEEDED TO SATISFY OCCUPIED SPACE TEMPERATURE SETTING.
 - IF MAU-2 IS NOT ONLINE OR FAILS TO RESPOND, SEND ALARM TO BAS AND RUN MAU-1 AT MIN CFM SETTING. RELIEF TO BE PROVIDED THROUGH RV-1.
- UNOCCUPIED MODE
 - EXHAUST FANS TO BE LOCKED OUT FROM OPERATION IN UNOCCUPIED MODE.
 - EXISTING UH-1 TO PROVIDE PRIMARY HEATING FOR SPACE. SET TEMPERATURE TO 55°F. TEMPERATURE SET POINT TO BE ADJUSTABLE BY DSD.
 - MAU-2 TO BE SECONDARY SOURCE OF HEAT. SET HEATING SET POINT 5°F BELOW (E)UH-1 SET POINT.
 - SET COOLING SET POINT TO 85°F.
 - ON CALL FOR HEAT OR COOL FROM THERMOSTAT, MAU-2 TO RUN AT MIN CFM SETTING. RELIEF TO BE PROVIDED THROUGH RV-1.
 - IF MAU-2 IS NOT ONLINE OR FAILS TO RESPOND, SEND ALARM TO BAS AND RUN MAU-1 AT MIN CFM SETTING. RELIEF TO BE PROVIDED THROUGH RV-1.

RELIEF VENT

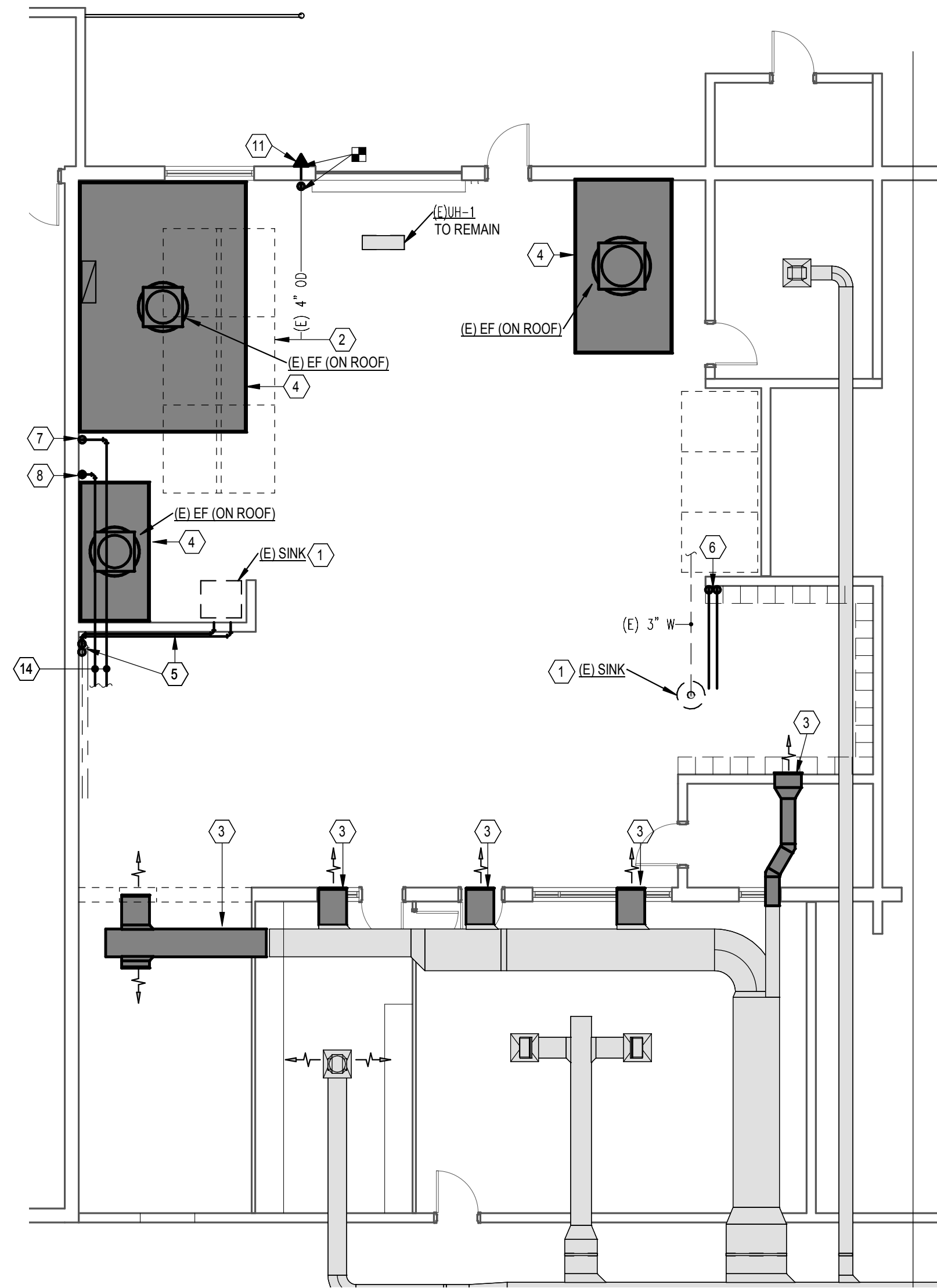
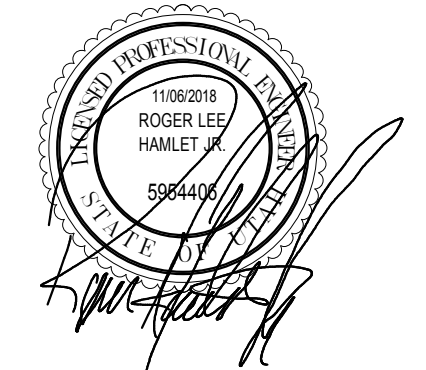
- NOTE: RELIEF VENT, WITH MOTORIZED ATC DAMPER PROVIDED BY THE ATC CONTRACTOR, IS SIZED TO DELIVER UP TO 6000 CFM OF RELIEF AIR AS NEEDED WHEN MAU IS RUNNING TO SATISFY SPACE CONDITIONS WHEN EXHAUST FANS ARE NOT IN OPERATION.
- THE ATC DAMPER SHALL MODULATE TO MAINTAIN A POSITIVE 0.05" SPACE STATIC PRESSURE THROUGH THE BAS SYSTEM.

CARBON MONOXIDE SENSOR

- THE ATC CONTRACTOR SHALL PROVIDE A CARBON MONOXIDE SENSOR TO BE MOUNTED ON THE WALL ADJACENT TO THE SPACE TEMPERATURE SENSOR AND SHALL BE MONITORED BY THE BAS.
- IF THE CARBON MONOXIDE IN THE SPACE EXCEEDS 7PPM, AN ALARM SHALL BE GENERATED IN THE BAS.

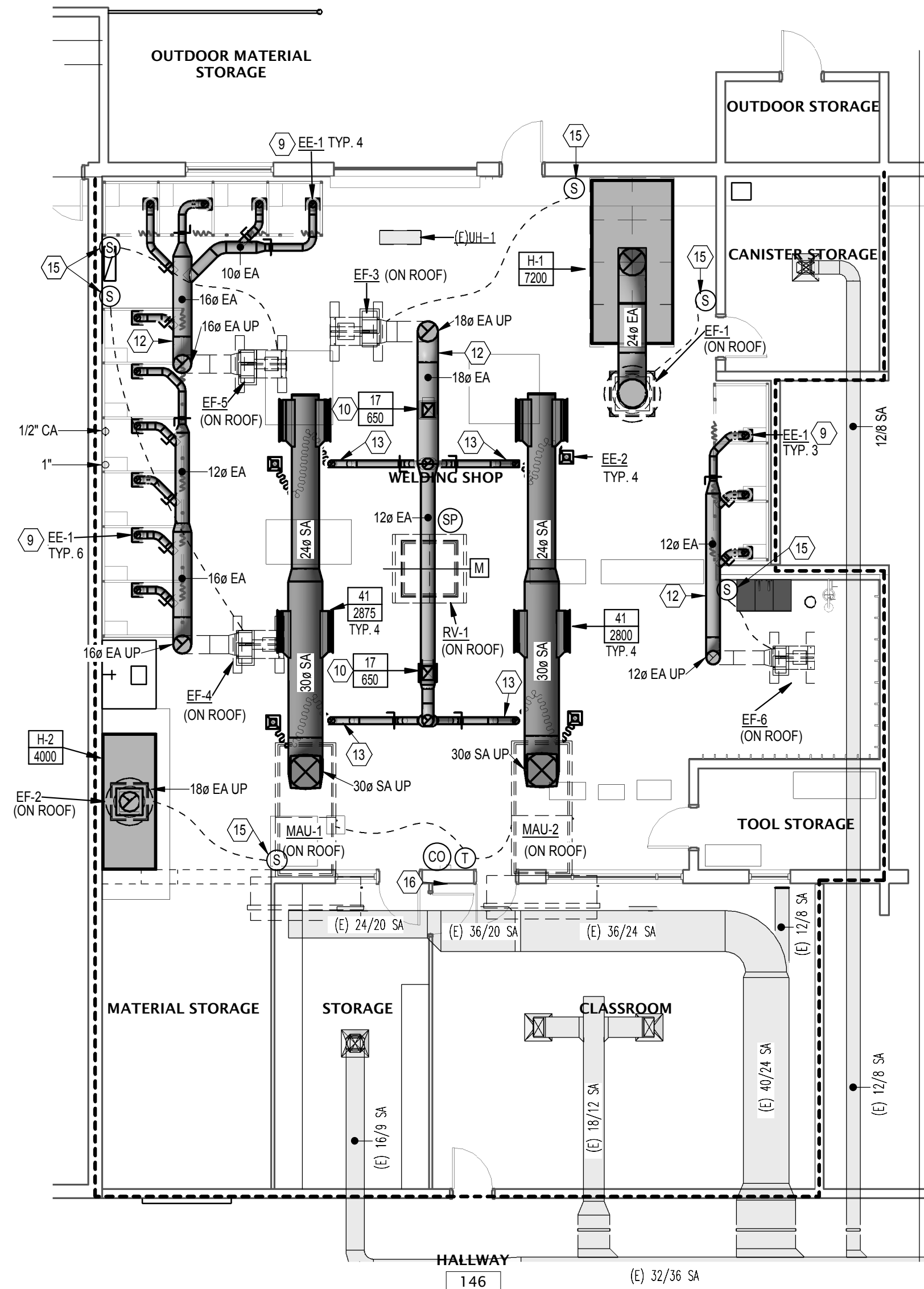
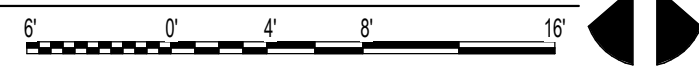
REVISIONS:

NO.	DESCRIPTION



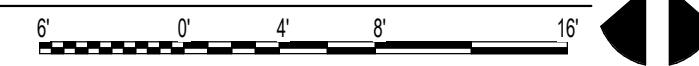
1 WORKSHOP MECHANICAL DEMO FLOOR PLAN

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



2 WORKSHOP MECHANICAL FLOOR PLAN

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



BID SET

LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr, Layton, UT 84041

Davis School District

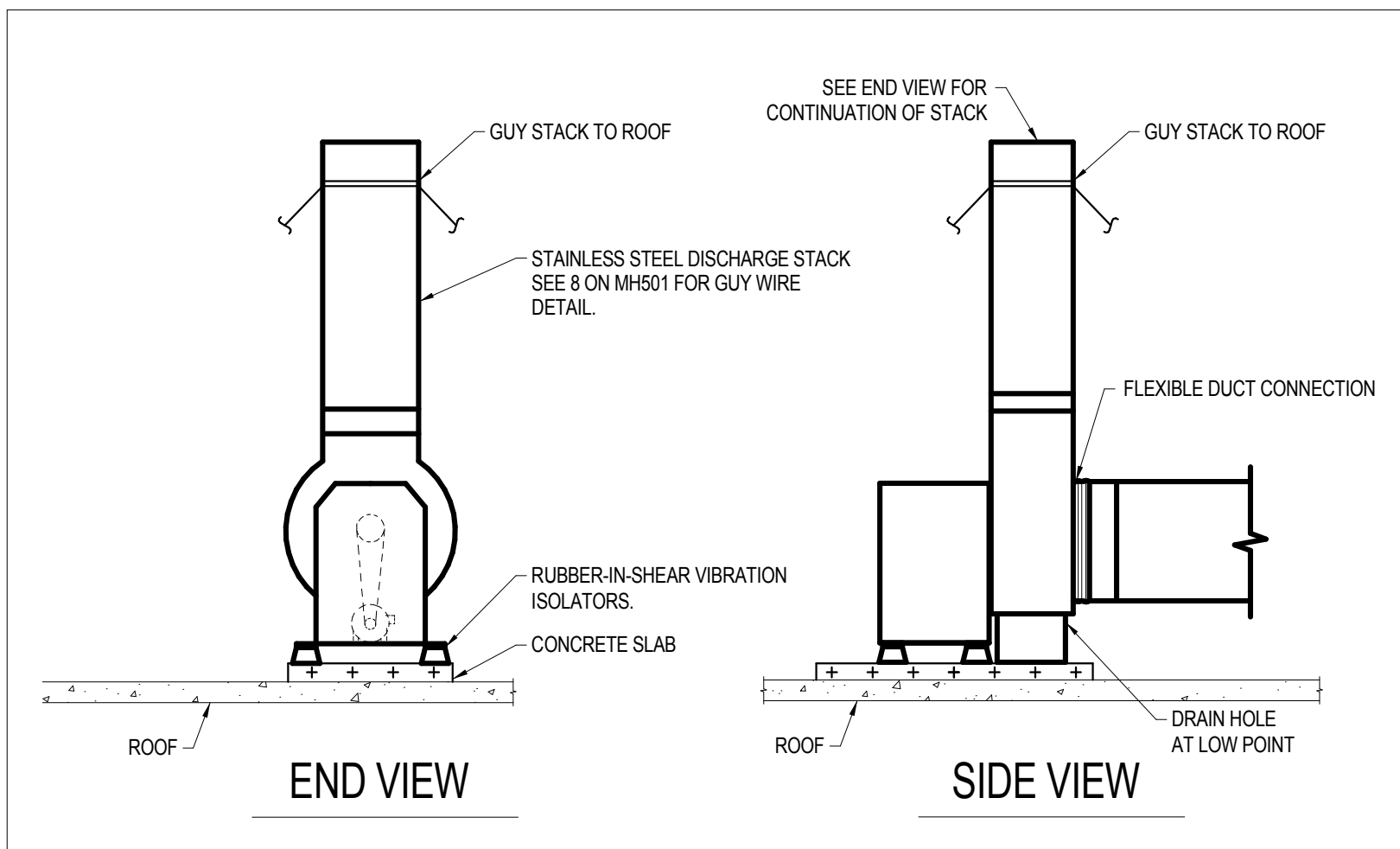
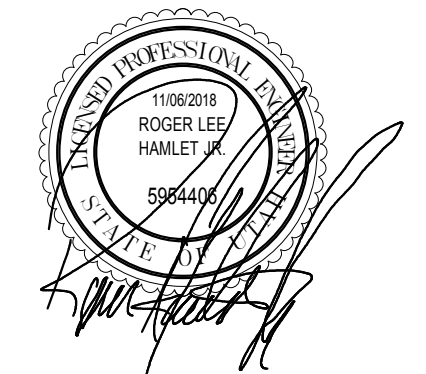
45 E State St, Farmington, UT 84025

OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018

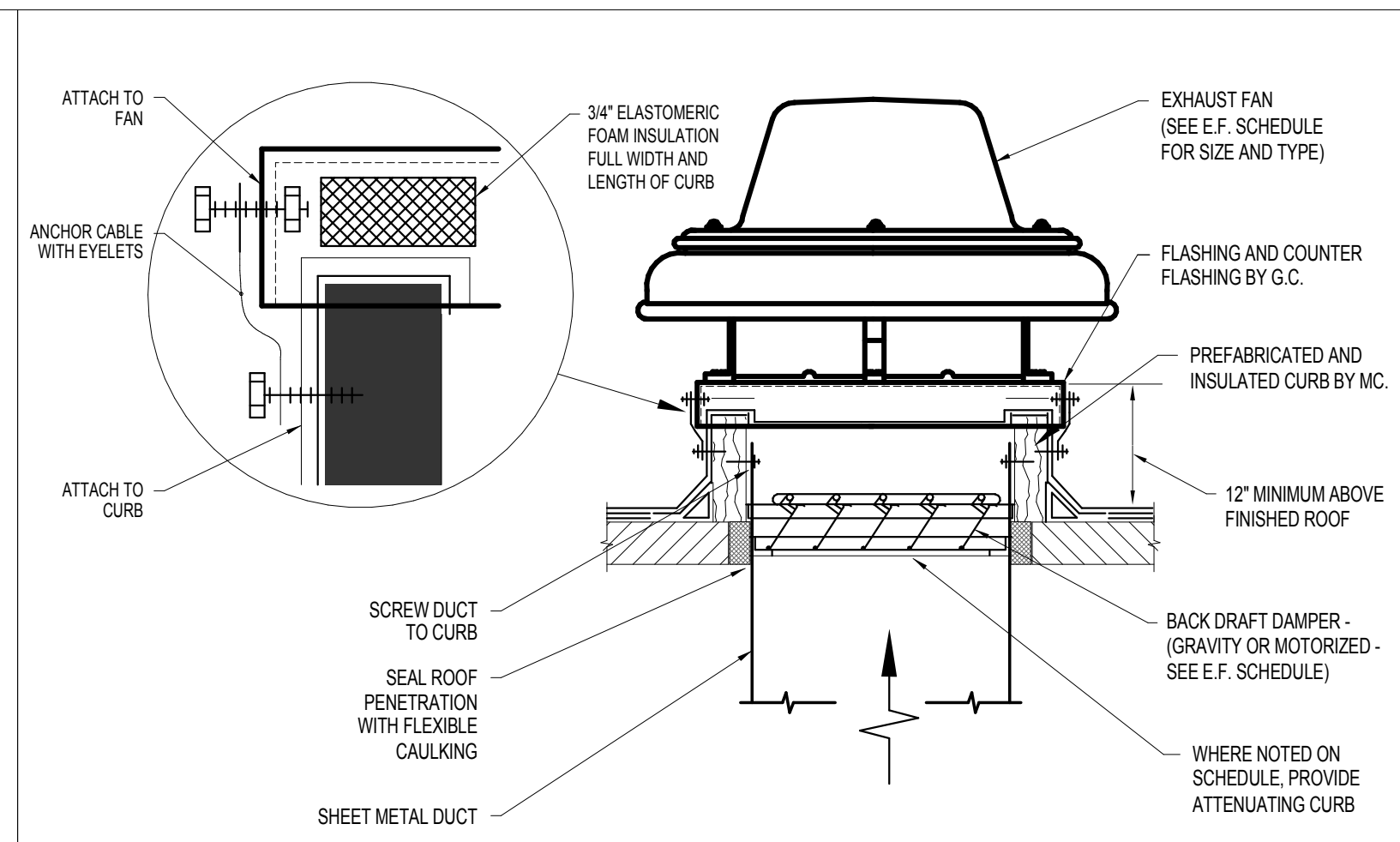
LEVEL 1 MECHANICAL FLOOR PLAN

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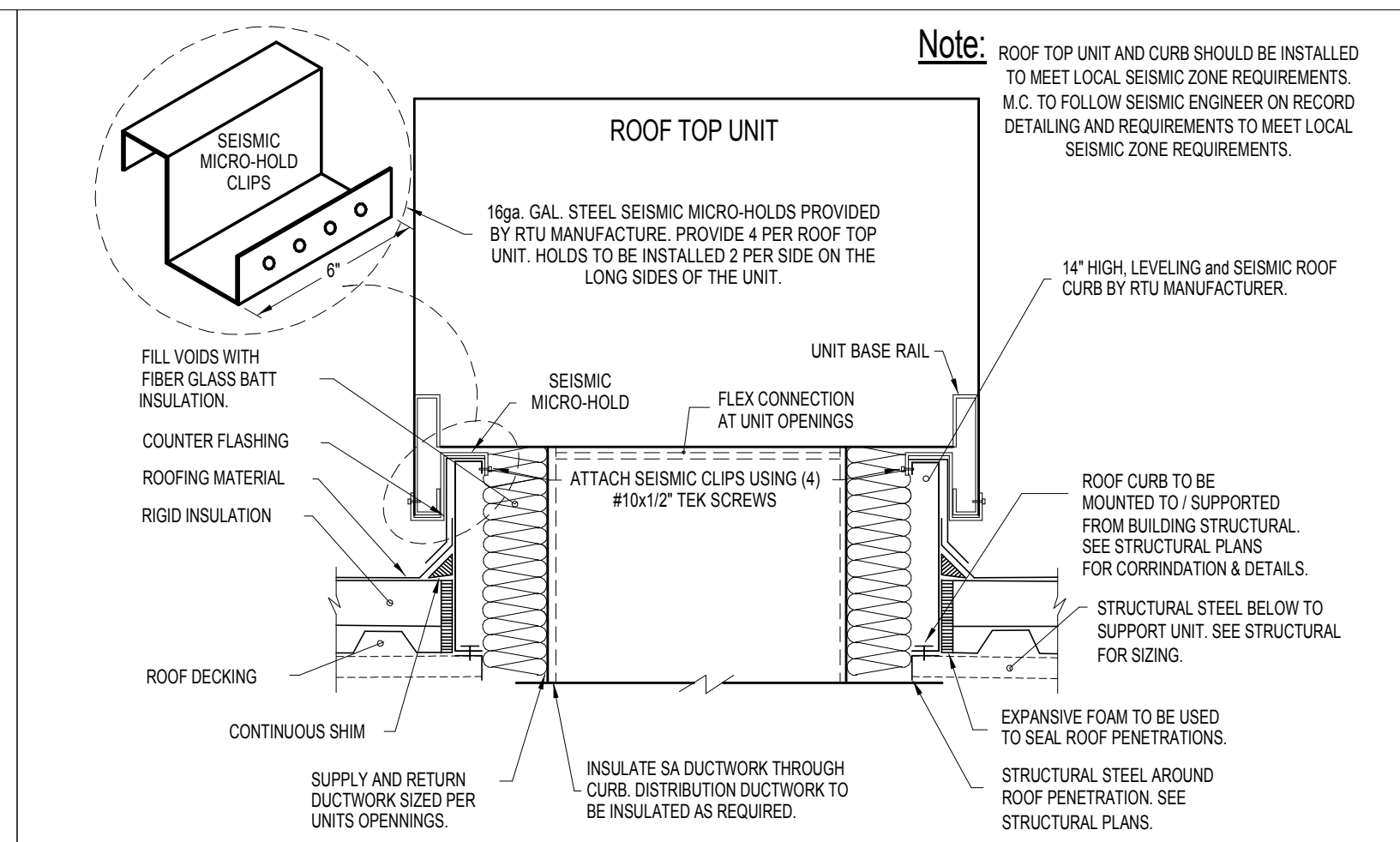
REVISIONS:



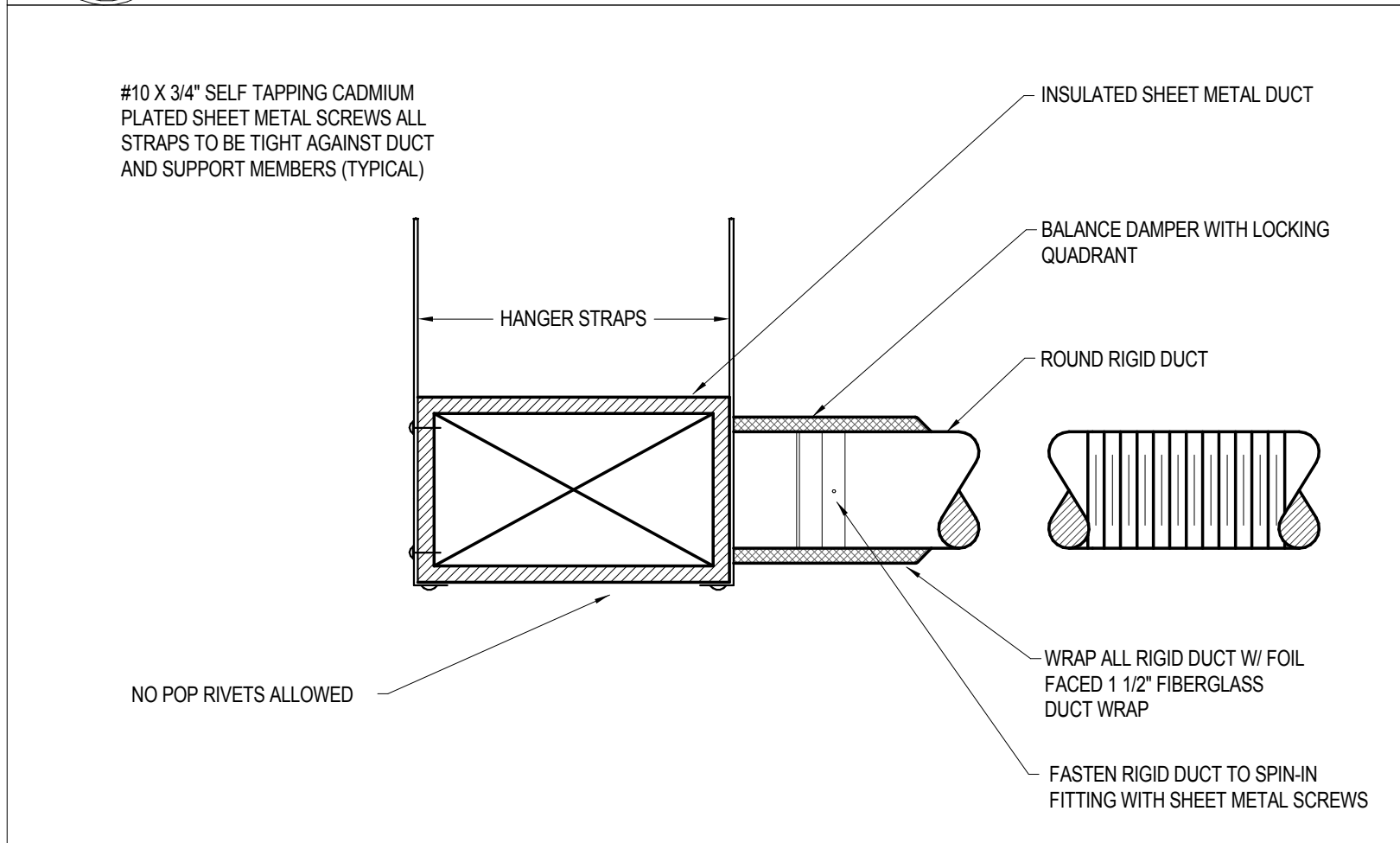
1 UTILITY SET DETAIL
NO SCALE



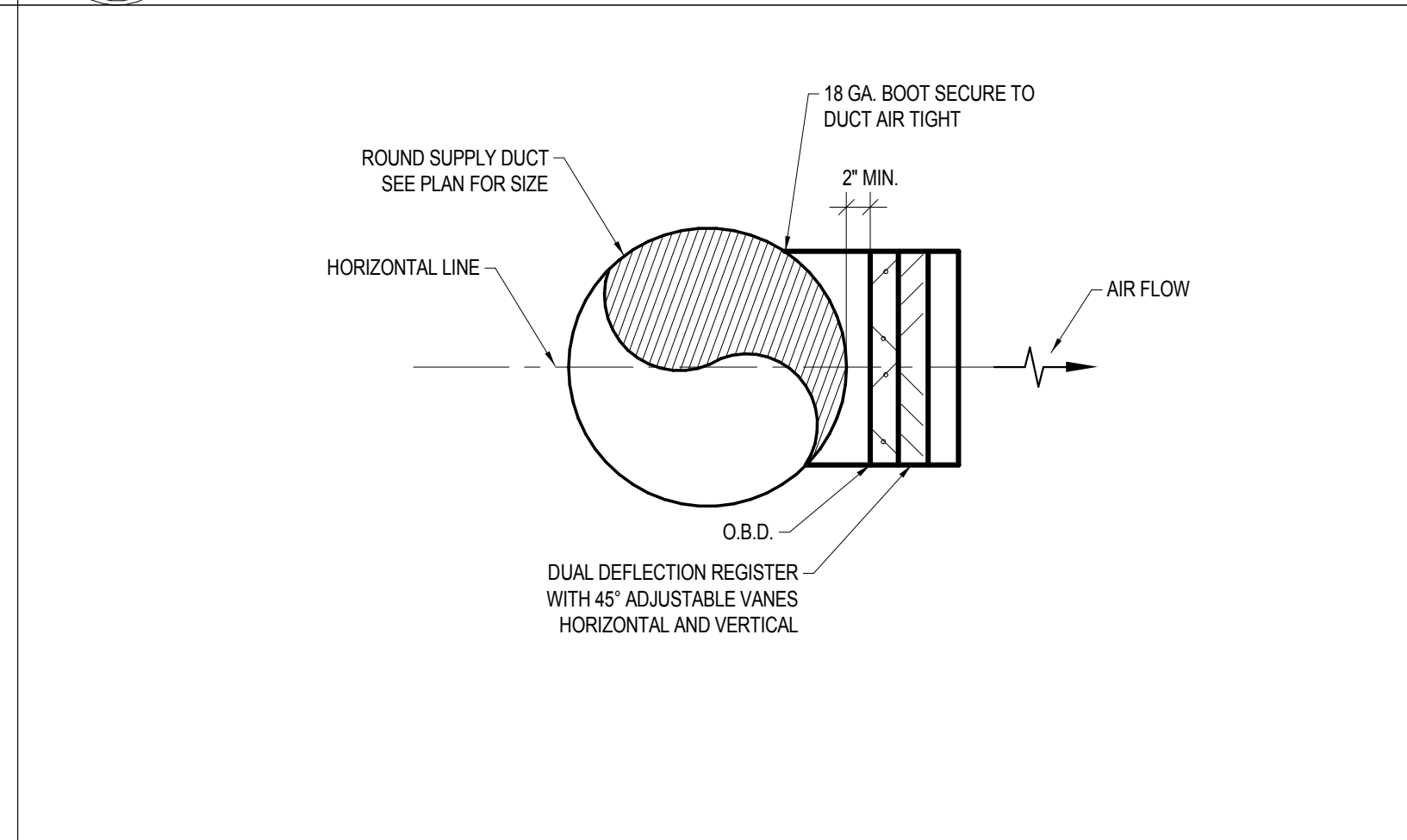
2 EXHAUST FAN AND CURB DETAIL
NO SCALE



3 MAKEUP AIR CURB DETAIL
NO SCALE

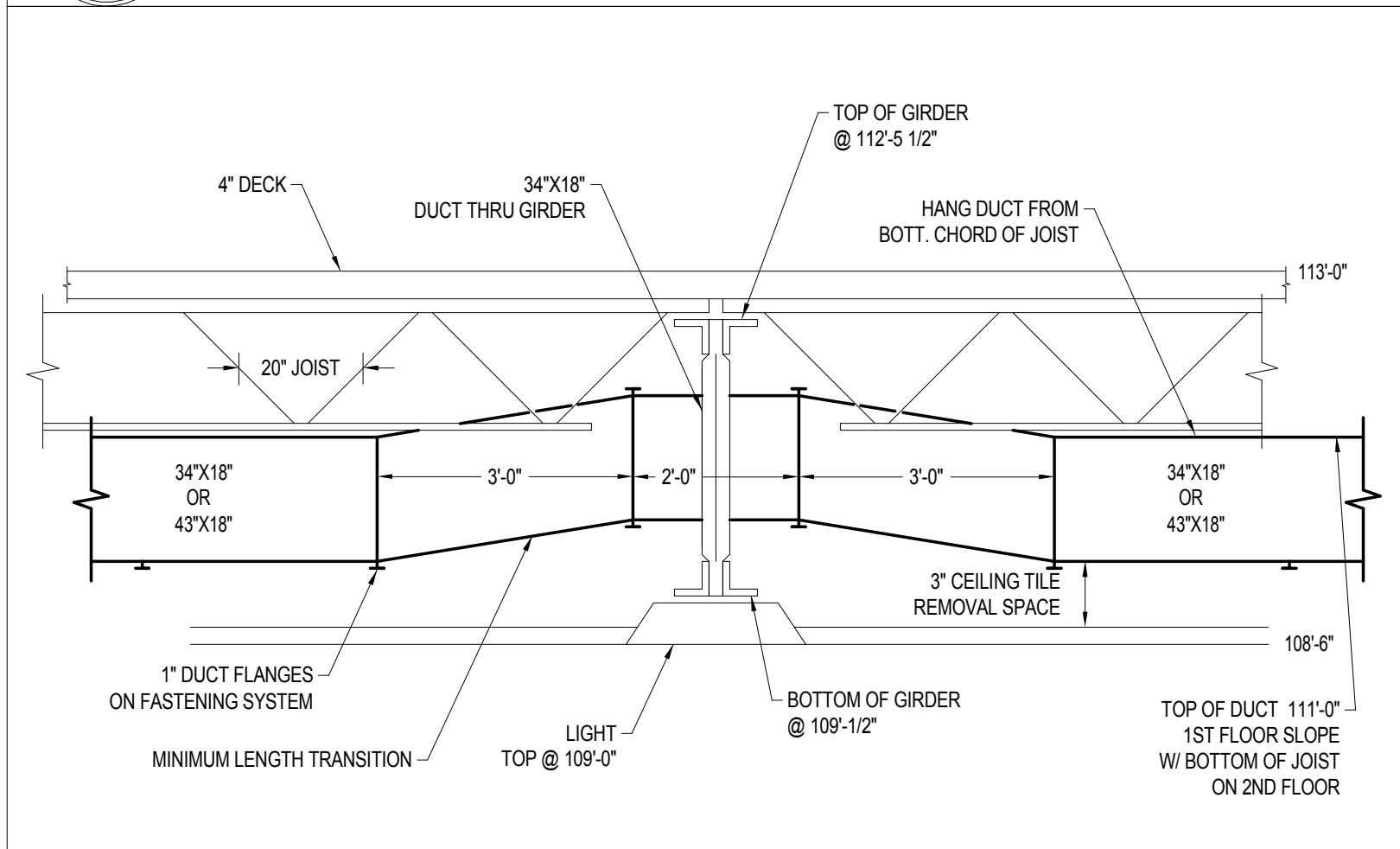


4 FLEX DUCT/SPIN-IN FITTING DETAIL
NO SCALE

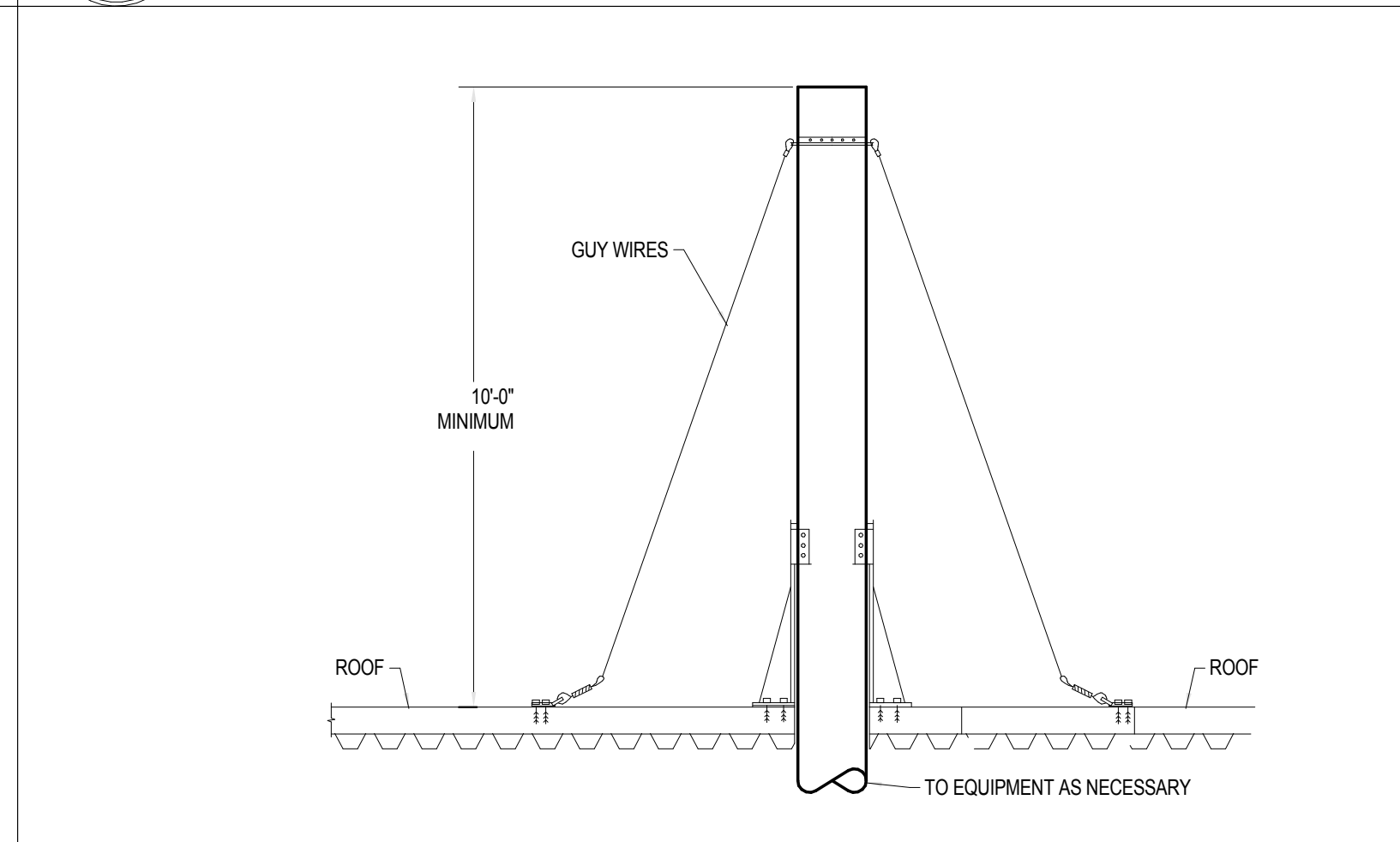


5 DUCT MOUNTED DIFFUSER DETAIL 45°
NO SCALE

6 NO SCALE



7 TYPICAL GIRDER-DUCT PENETRATION DETAIL
NO SCALE



8 GUY WIRE DUCT SUPPORT DETAIL
NO SCALE

9 NO SCALE

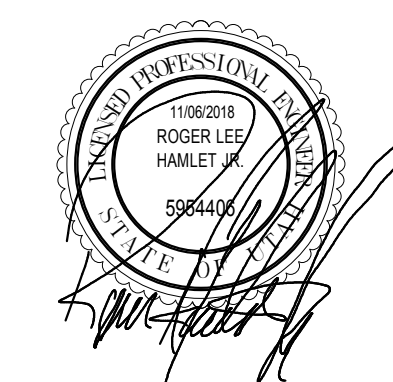
BID SET
LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr., Layton, UT 84041
Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018
MECHANICAL DETAILS

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REVISIONS:



MAKE UP AIR UNIT SCHEDULE																					
PLAN CODE	CFM @ ELEV.	EXTERNAL S.P. (IN WC)	FAN				HEATING			EVAPORATIVE COOLING		DIMENSIONS				ELECTRICAL			MANUFACTURER & MODEL NO.	REMARKS	
			B.H.P.	H.P.	RPM	VOLTAGE & PHASE	TYPE	INPUT MBH	OUTPUT MBH	TEMP. RISE DB	MEDIA THICKNESS	EAT DB / WB	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	OPER. WT. (LBS.)	UNIT MCA (AMPS)	UNIT MOP (AMPS)			VOLT / PH
MAU-1	11,500	1.9	7.7	10	865	460 / 3	DIRECT GAS	800.0	736.0	69.9	12"	98.0 / 62.0	157"	53"	50"	2,400	19.3	30	460 / 3	GREENHECK DGX-120-H32	ALL
MAU-2	11,200	1.8	7.27	10	1725	460 / 3	DIRECT GAS	800.0	736.0	71.8	12"	98.0/62.0	157"	53"	50"	2,400	19.3	30	460 / 3	GREENHECK DGX-120-H32	ALL

1 - PROVIDE SEISMIC BRACE SPRING VIBRATION ISOLATORS . . . 2 - PROVIDE 2" MERV 8 FILTER . . . 3 - INTERLOCKED TO RUN WITH EXHAUST FANS, SEE SEQUENCE OF OPERATIONS ON MH101 . . . 4 - PROVIDE SINGLE POINT POWER CONNECTION . . .
5 - PROVIDE MODULATING BURNER . . . 6 - 14" INSULATED CURB . . . 7 - PROVIDE WITH DISCONNECT . . . 8 - MAU TO CONTROL HEATING AND COOLING TO MAINTAIN ADJUSTABLE DISCHARGE AIR TEMPERATURE . . .
9 - PROVIDE MAKE-UP AIR UNIT WITH AUTO FILL, DRAIN, AND FLUSH VALVES. . . 10 - PROVIDE WITH TERMINAL STRIP FOR CONTROLS CONNECTION, DDC CONTROLS TO BE PROVIDED BY BMS CONTRACTOR.

EXHAUST FAN SCHEDULE (EF)																
PLAN CODE	AREA SERVED	TYPE	CFM @ ELEV.	ESP @ ELEV.	FAN RPM	MOTOR				SONES (OUTLET)	DAMPER (GRAVITY OR MOTORIZED)	METHOD OF CONTROL	OPENING SIZE	MAX OPERATING WT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
						MAX BHP	HP	STATIC EFF %	VOLT/PH							
EF-1	OXY-ACETYLENE HOOD	UP-BLAST CENTRIFUGAL	7,200	1.0	845	2.42	3	50	460 / 3	21	GRAVITY	NOTE 5	30" x 30"	300	GREENHECK CUBE-300HP-30	1, 3, 4
EF-2	PLASMA HOOD	UP-BLAST CENTRIFUGAL	4,000	1.0	960	1.3	2	54	460 / 3	16.3	GRAVITY	NOTE 5	24" x 24"	200	GREENHECK CUBE-220HP-20	1, 3, 4
EF-3	CENTRAL EXHAUST	UP-BLAST UTILITY SET	3,700	5	2543	4.67	7.5	61	460 / 3	38	GRAVITY	NOTE 5	20"Ø	260	GREENHECK USF-416-BI	1, 2, 4
EF-4	NORTH EXHAUST BOOTHS	UP-BLAST UTILITY SET	3,000	5	2,883	4.17	7.5	61	460 / 3	39	GRAVITY	NOTE 5	19"Ø	230	GREENHECK USF-415-BI	1, 2, 4
EF-5	EAST EXHAUST BOOTHS	UP-BLAST UTILITY SET	3,000	5	2,883	4.17	7.5	61	460 / 3	39	GRAVITY	NOTE 5	19"Ø	230	GREENHECK USF-415-BI	1, 2, 4
EF-6	SOUTH EXHAUST BOOTHS	UP-BLAST UTILITY SET	1,800	5	3397	2.42	5	61	460 / 3	35	GRAVITY	NOTE 5	16"Ø	200	GREENHECK CSW-12-BI-21-10-II-50	1, 2, 4

1 - PROVIDE WITH 14" CURB . . .
2 - INTERLOCK WITH MAU-1 . . .
3 - INTERLOCK WITH MAU-2 . . .
4 - PROVIDE MANUAL TWIST TIMER WITH 15-90 MINUTE RANGE, INTERMATIC FF2H, OR EQUAL.

AIR DEVICE SCHEDULE												
PLAN CODE	TYPE & DUTY	FACE SIZE	NECK SIZE	CEILING TYPE (NOTE 2)	MAX CFM	MAX TP (IN WC)	NC LEVEL MAX	MIN THROW T50 (FT)	4-WAY MIN THROW (T50)	2-WAY MIN THROW (T50)	MANUFACTURER & MODEL NO.	REMARKS
17	PERFORATED EXHAUST GRILLE	16" x 16"	14" x 14"	MATCH CEILING	750	0.12	17	-	-	-	TITUS 8F	-
41	DUCT MOUNTED SIDEWALL	38" x 18"	36" x 16"	-	2875	0.10	35	99	-	-	TITUS 300 RL	-

① RECOMMENDED MINIMUM DISTANCE BETWEEN DIFFUSERS IN 9' CEILING.
② VERIFY FRAME TYPE OF ALL AIR DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN BEFORE ORDERING.

PLAN CODE: GRILLE, CFM

RELIEF VENT SCHEDULE (RV)											
PLAN CODE	AREA / FUNCTION	CFM (ALT)	PRESSURE DROP (IN WC)	THROAT SIZE		MAX DIMENSIONS			MAX OPERATING WT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
				LENGTH (IN)	HEIGHT (IN)	LENGTH (IN)	HEIGHT (IN)	WIDTH (IN)			
RV-1	WELDING SHOP	5,600	0.05	44"	44"	65"	25"	65"	250	GREENHECK FGR	1

1 - PROVIDE MOTORIZED DAMPER, WITH 24 V ACTUATOR AND CONTROL.

EXHAUST EXTRACTOR SCHEDULE (EE)								
PLAN CODE	AREA SERVED	TYPE	CFM @ ELEV.	PRESSURE DROP	HOSE LENGTH (FT)	HOSE DIAMETER (IN)	MANUFACTURER & MODEL NO.	REMARKS
EE-1	GENERAL WELDING	BOOTH MTD	600	2.0	7	6	MONOXIVENT TELESCOPING ARM MODEL 15320	1, 2, 4
EE-2	GENERAL WELDING	DUCT MTD	600	3.0	14	6	MONOXIVENT 15000-D	3, 5

1 - TOTAL LENGTH OF ARTICULATING ARM TO BE 84" MINIMUM . . . 2 - TOTAL OF 13 IN PROJECT . . . 3 - TOTAL OF 4 IN PROJECT . . .
4 - TELESCOPING ARM WITH MOUNTING BRACKET . . . 5 - INTERNAL SUPPORT ARM . . .

HOOD (H)								
PLAN CODE	AREA SERVED	EQUIP SERVED	TYPE	CFM @ ELEV.	PRESSURE DROP (INWG)	SIZE LxWxH (FT)	MANUFACTURER & MODEL NO.	REMARKS
H-1	OXY-ACETYLENE WELDING AREA	EF-1	WALL MTD	7,200	0.55	12 x 6 x 2	MONOXIVENT TYPE 2	1
H-2	PLASMA TABLE	EF-2	WALL MTD	4,000	0.55	10 x 4 x 2	MONOXIVENT TYPE 3	1

1 - PROVIDE HANGING BRACKETS.

PLUMBING FIXTURE SCHEDULE								
PLAN CODE	DESCRIPTION	ROUGH IN SIZE					MANUFACTURER & MODEL NO.	REMARKS
		CW	HW	TEMPERED	WASTE	VENT		
S-1	THREE COMPARTMENT, RECTANGULAR STAINLESS STEEL, FREE STANDING SINK, WITH THREE MANUAL FAUCETS WITH WRIST BLADES, 14 GA.	1/2	1/2	-	1 1/2"	1 1/4"	BOWL: OWNER PROVIDED FAUCET: OWNER PROVIDED	EQUIPMENT PROVIDED BY OWNER, INSTALLED BY CONTRACTOR
(E) QT-1	MOBILE QUENCH TANK WITH MANUAL DRAIN PROVIDED BY OWNER. NEW SURFACE MOUNTED FAUCET WITH EXPOSED SERVICE WITH SUPPLY FROM ABOVE AND 3" CROSS METAL HANDLES FAUCET.	3/4"	3/4"	-	-	-	QUENCH TANK: PROVIDED BY OWNER FAUCET: PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	-
FD-1	FLOOR DRAIN	-	-	-	SEE PLAN	2"	FLOOR DRAIN: MIFAB F1100-C-5-3	SEE PLANS FOR OUTLET SIZE, STRAINER GRATE MUST BE HEEL PROOF, PROVIDE WITH DEEP SEAL TRAP GUARD, OR EQUAL.
ESEW-1	EMERGENCY SHOWER WITH EYE WASH STATION, MIXING VALVE	-	-	1 1/4"	-	-	BRADLEY S19314EW MIXING VALVE: S19-2100 EFX25	MOUNT MIXING VALVE AT 62" AFF. SET WATER TEMPERATURE TO 80° F.
FS-1	FLOOR SINK	-	-	-	SEE PLAN	2"	MIFAB FS1720-5 SQUARE FLOOR SINK	FLOOR SINK SHALL BE OF CAST IRON CONSTRUCTION WITH ENAMEL INTERIOR FINISH, MINIMUM INTERIOR DIMENSIONS OF 12"x12"x6"D. PROVIDE WITH NICKEL BRONZE GRATE AND DEEP SEAL P-TRAP AND SEDIMENT BUCKET.

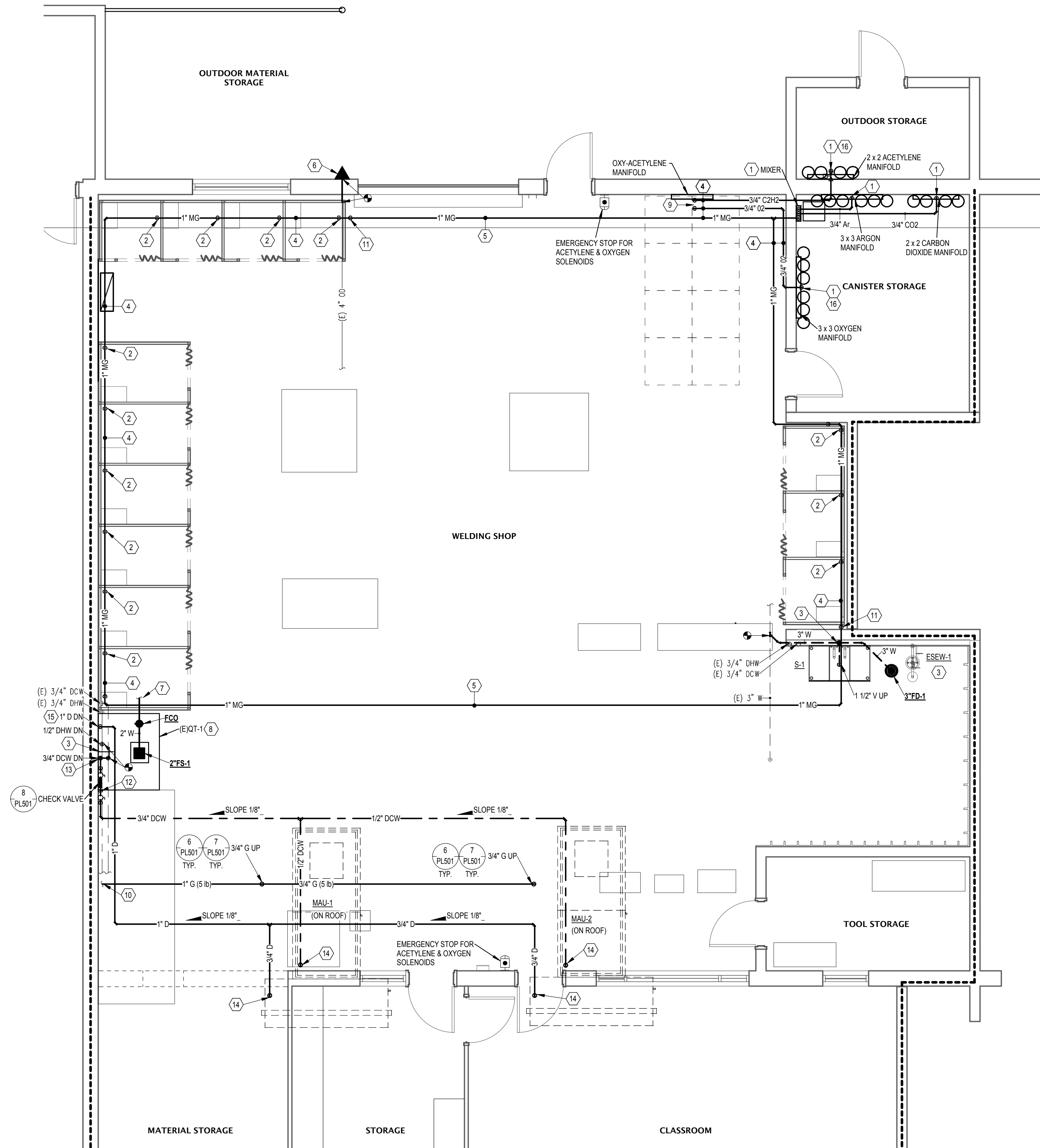
BID SET
LAYTON HIGH SCHOOL WELDING SHOP REMODEL

440 Wasatch Dr, Layton, UT 84041
Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014-00
ISSUED DATE: 11/06/2018

MECHANICAL SCHEDULES

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KEYED NOTES

- 1 CONNECT MAIN WELDING GAS PIPING TO SOURCE EQUIPMENT. CONTRACTOR TO COORDINATE ALL SOURCE EQUIPMENT, MANIFOLDS, VALVES, MIXERS WITH DAVIS SCHOOL DISTRICT WELDING GAS PROVIDER.
- 2 1/2" DROP DOWN. PROVIDE 1/4" NPT CONNECTION FOR TERMINAL EQUIPMENT. CONTRACTOR TO COORDINATE ALL TERMINAL EQUIPMENT WITH DAVIS SCHOOL DISTRICT (DSD) WELDING GAS PROVIDER. CONTRACTOR TO COORDINATE EXACT LOCATION WITH DSD.
- 3 ROUTE AND CONNECT DHW AND DCW FROM NEW FAUCET TO EXISTING DHW AND DCW LINES. ADJUST ROUGH-INS AS REQUIRED. NEW FAUCET FIXTURE PROVIDED BY OWNER INSTALLED BY CONTRACTOR.
- 4 RACK WELDING GAS PIPING ON WALL ABOVE WELDING BOOTHS.
- 5 ROUTE MIXED GAS PIPING ABOVE HVAC SUPPLY AIR DUCT, TIGHT TO UNDERSIDE OF STRUCTURE, ACROSS SHOP. COORDINATE WELDING GAS PIPE ELEVATION WITH MECHANICAL EQUIPMENT AND ARCHITECTURAL.
- 6 EXTEND EXISTING 4" OVERFLOW DRAIN PIPING, HORIZONTALLY, THROUGH EXTERIOR WALL TO SALVAGED DOWNSPOUT NOZZLE FROM DEMOLITION PHASE.
- 7 ROUTE 2" WASTE TO EXISTING 2" OR GREATER EXISTING WASTE PIPE IN THIS APPROXIMATE LOCATION. CONTRACTOR TO FIELD VERIFY EXACT LOCATION ON SITE.
- 8 QUENCH TANK WITH MANUAL SHUTOFF VALVE AND DRAIN TO BE PROVIDED BY OWNER. DISCHARGE THROUGH AIR GAP TO NEW FLOOR SINK.
- 9 3/4" ACETYLENE AND OXYGEN DOWN TO 8 STATION MANIFOLD. CONTRACTOR TO COORDINATE ALL SOURCE EQUIPMENT, MANIFOLDS AND VALVES WITH DAVIS SCHOOL DISTRICT (DSD) WELDING GAS PROVIDER. CONTRACTOR TO COORDINATE EXACT MANIFOLD LOCATION WITH DSD.
- 10 ROUTE 1" GAS PIPING AND CONNECT TO EXISTING 6" (5 PSIG) LOCATED IN CHILLER ROOM, APPROXIMATE DISTANCE = 200 FT.
- 11 ROUTE 1" MIXED GAS DOWN TO JUST ABOVE WELDING BOOTHS.
- 12 PROVIDE 5/8" MALE THREADED END TO DRAIN LINE. SEE DETAIL 8/PL501.
- 13 CONTINUE DOWN TO FAUCET WITH 1/2" PIPING.
- 14 CONTRACTOR TO FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SUPPLY, SUMP DRAIN, AND DRAIN PIPING. SUPPLY, SUMP DRAIN, AND DRAIN SOLENOID VALVES PROVIDED WITH MAU BY MANUFACTURER.
- 15 1" D LINE FROM MAU UNITS SUPPORT AND DROP DOWN FACE OF WALL. DISCHARGE TO FLOOR SINK.
- 16 PROVIDE SOLENOID VALVE IN MANIFOLD FOR EMERGENCY SHUT-OFF. TO BE CONNECTED TO E-STOP SWITCHES LOCATED IN WELDING SHOP. COORDINATE SOLENOID VALVE REQUIREMENTS AND LOCATION WITH DSD WELDING GAS PROVIDER.

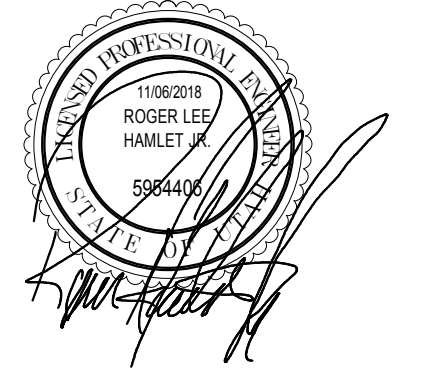
GENERAL NOTES

- A. SEE M001 FOR GENERAL NOTES.



REVISIONS:

NO.	DESCRIPTION



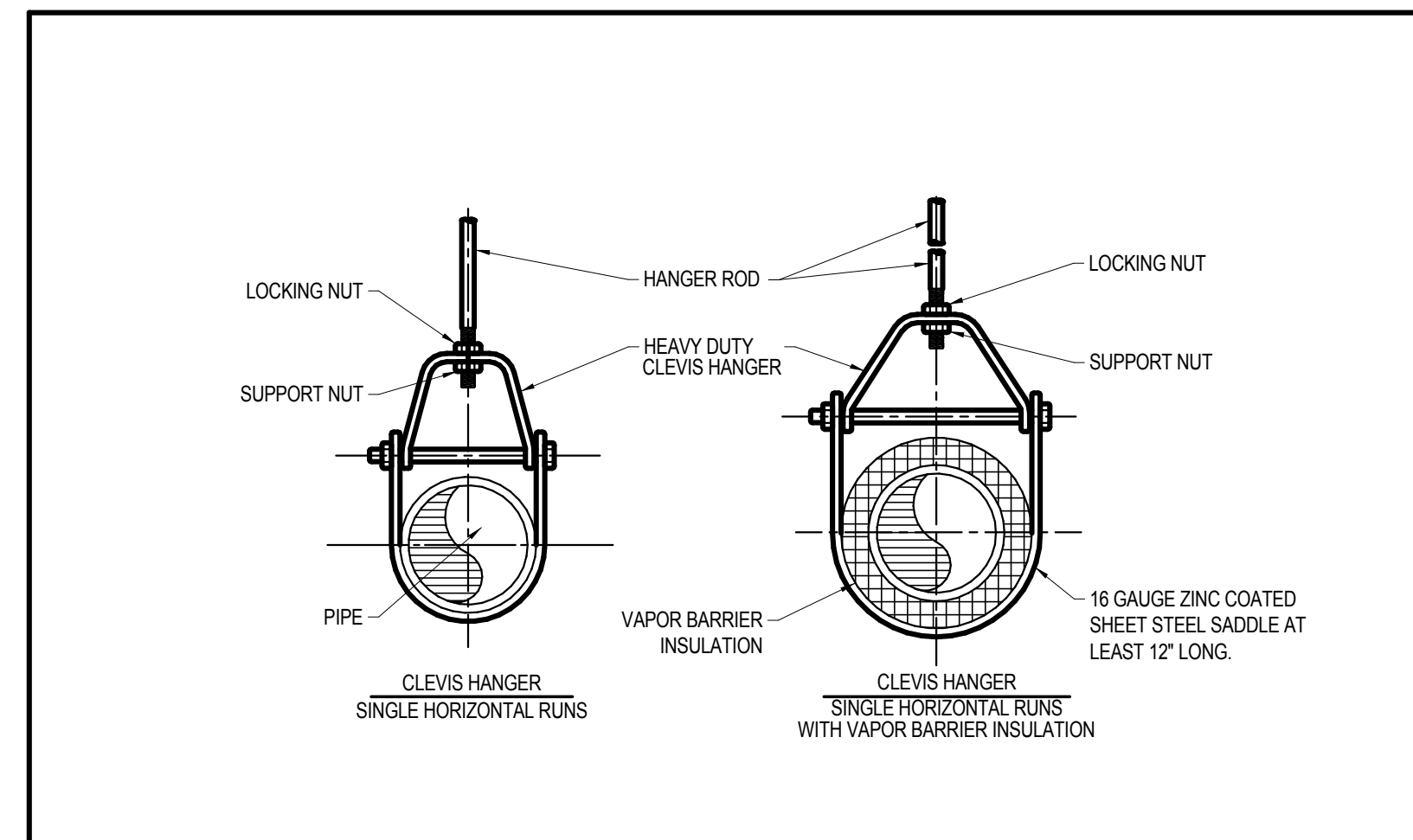
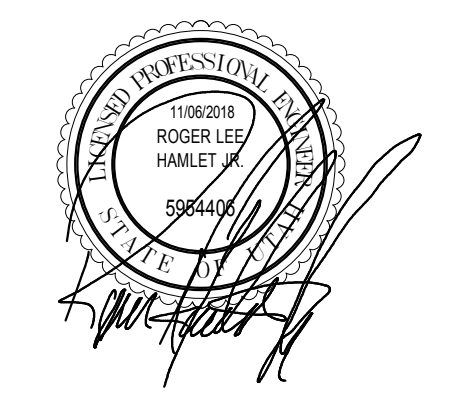
BID SET
LAYTON HIGH SCHOOL WELDING SHOP REMODEL

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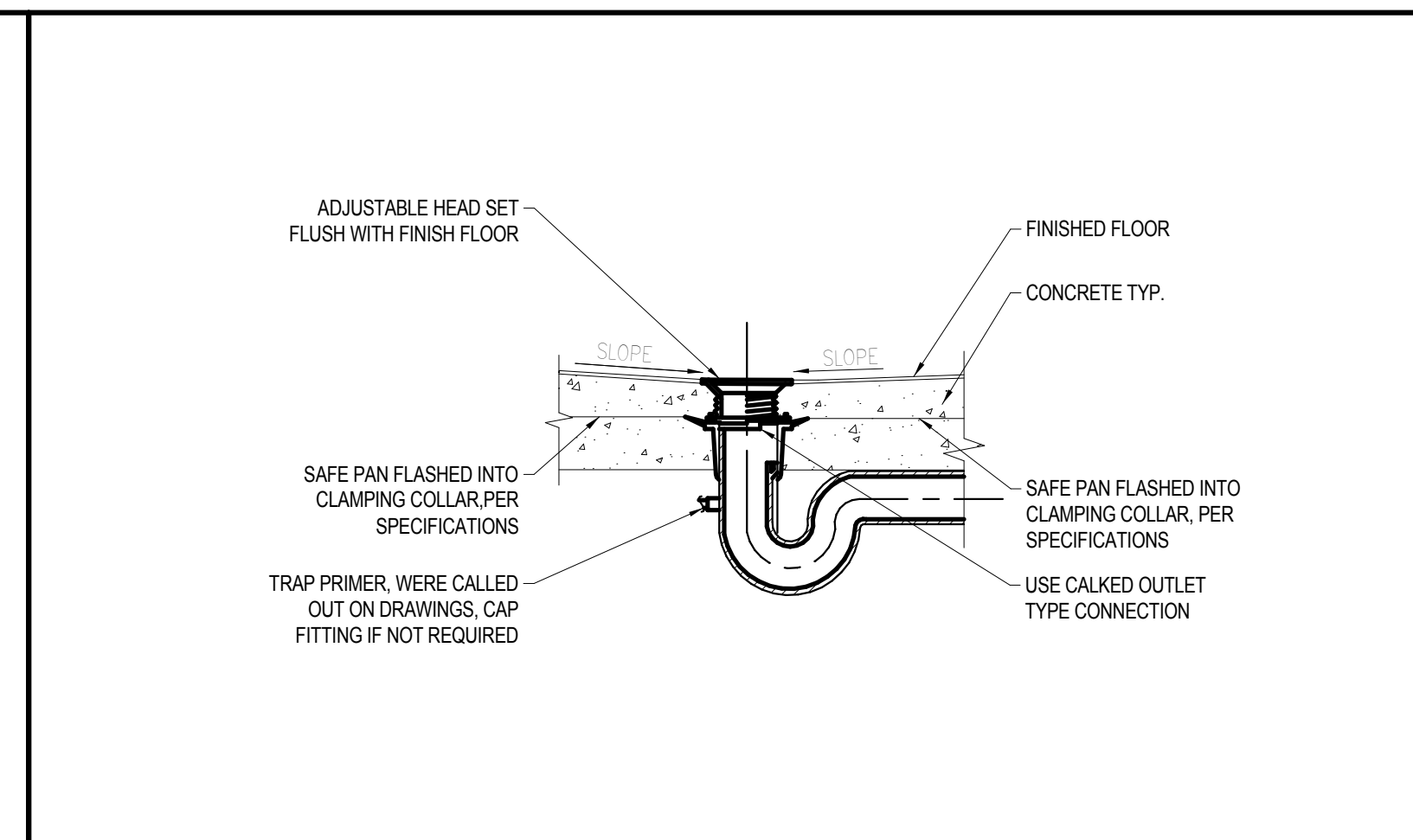
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 OWNER PROJECT NO.:
 CEA PROJECT NO.: 2018-014.00
 ISSUED DATE: 11/06/2018

LEVEL 1 WORKSHOP PLUMBING PLAN

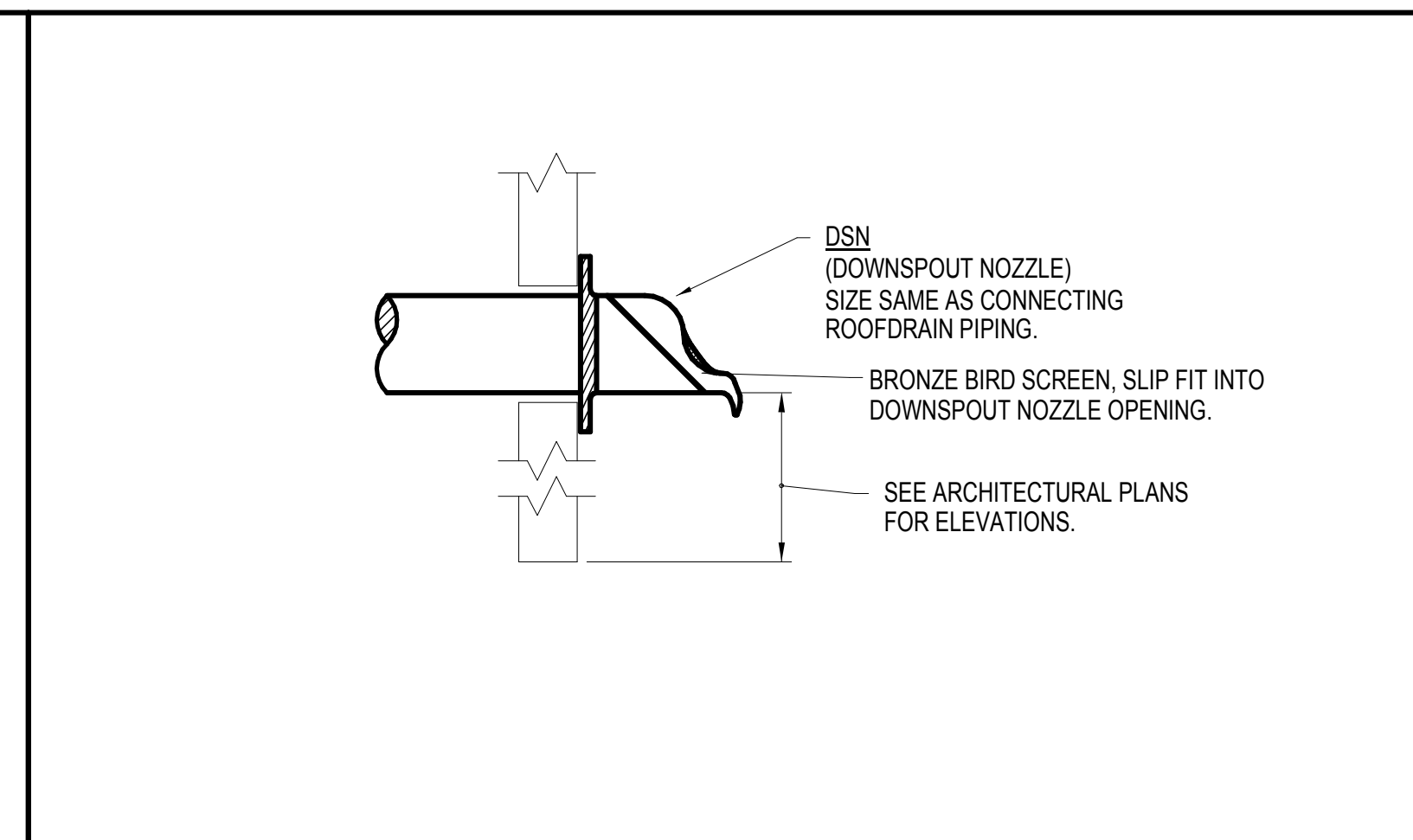
REVISIONS:



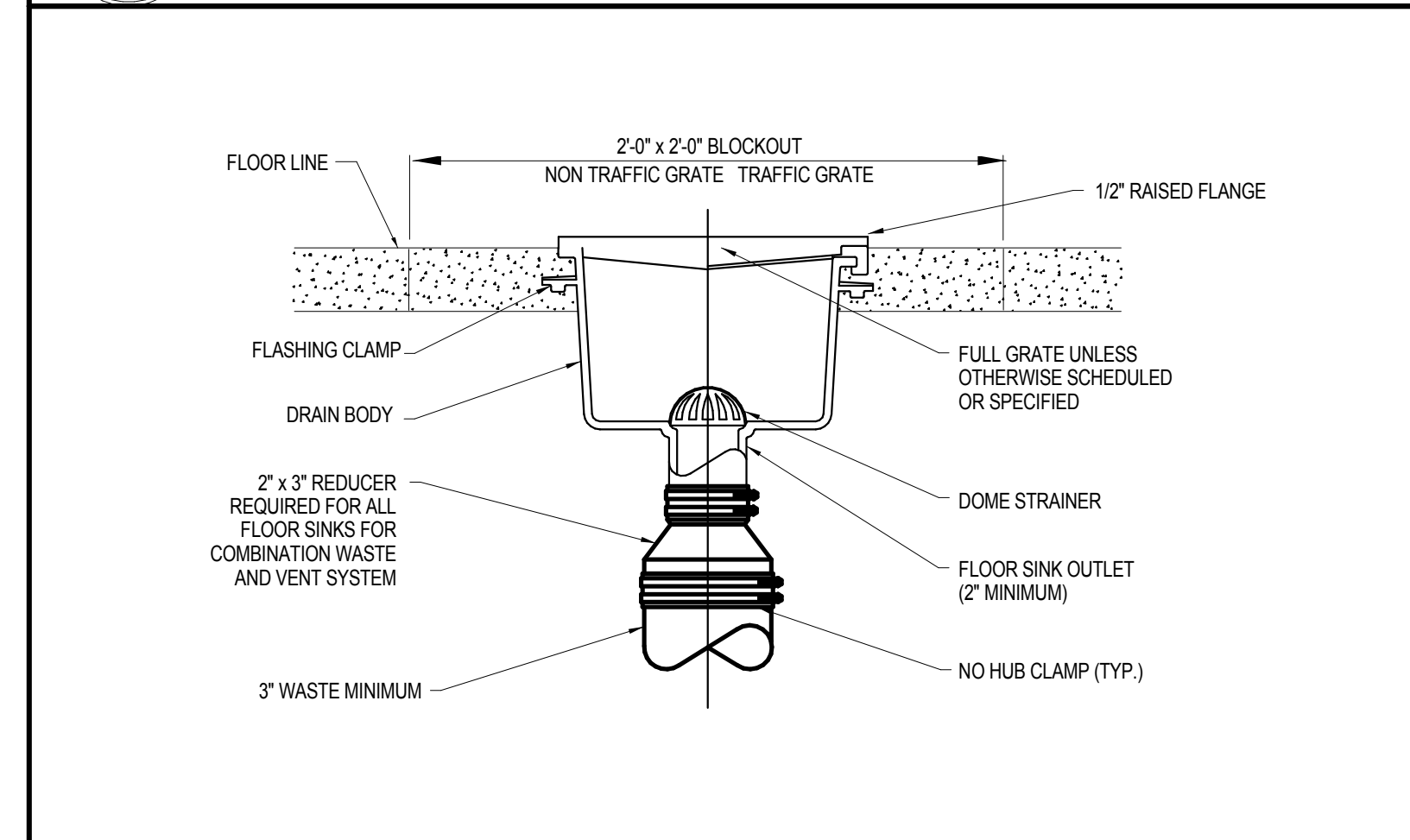
1 CLEVIS PIPE HANGER DETAIL
NO SCALE



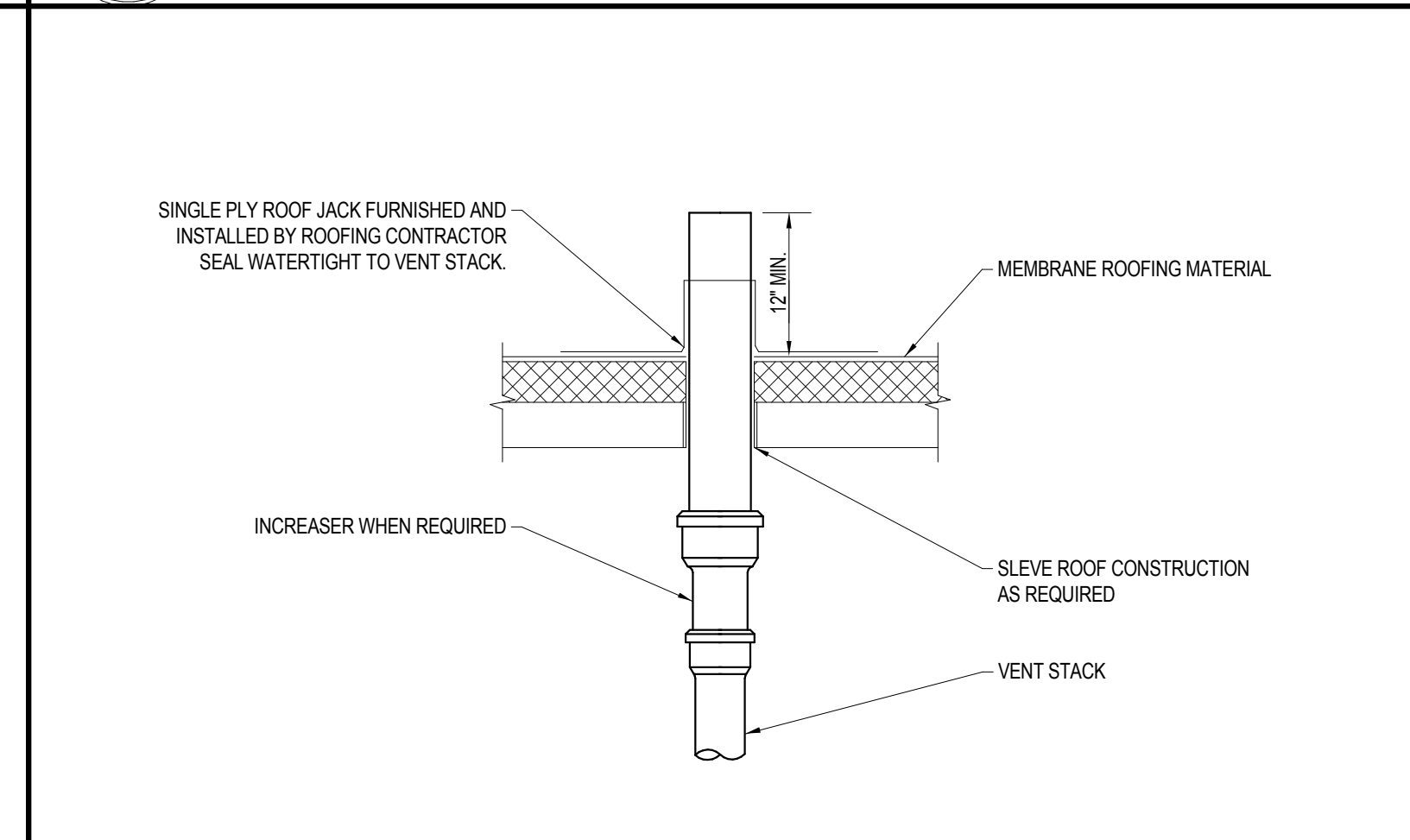
2 FLOOR DRAIN DETAIL
NO SCALE



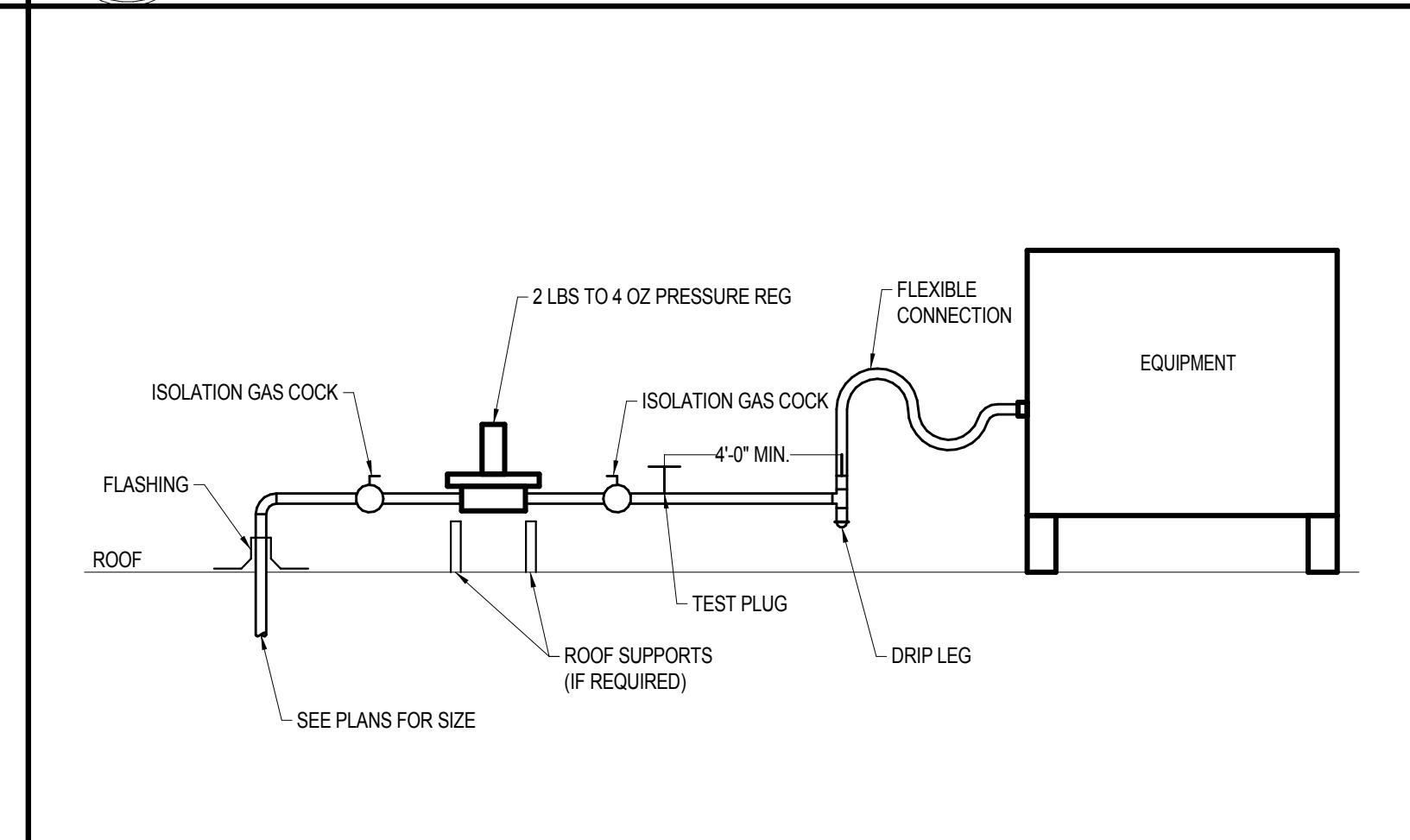
3 DOWNSPOUT NOZZLE DETAIL
NO SCALE



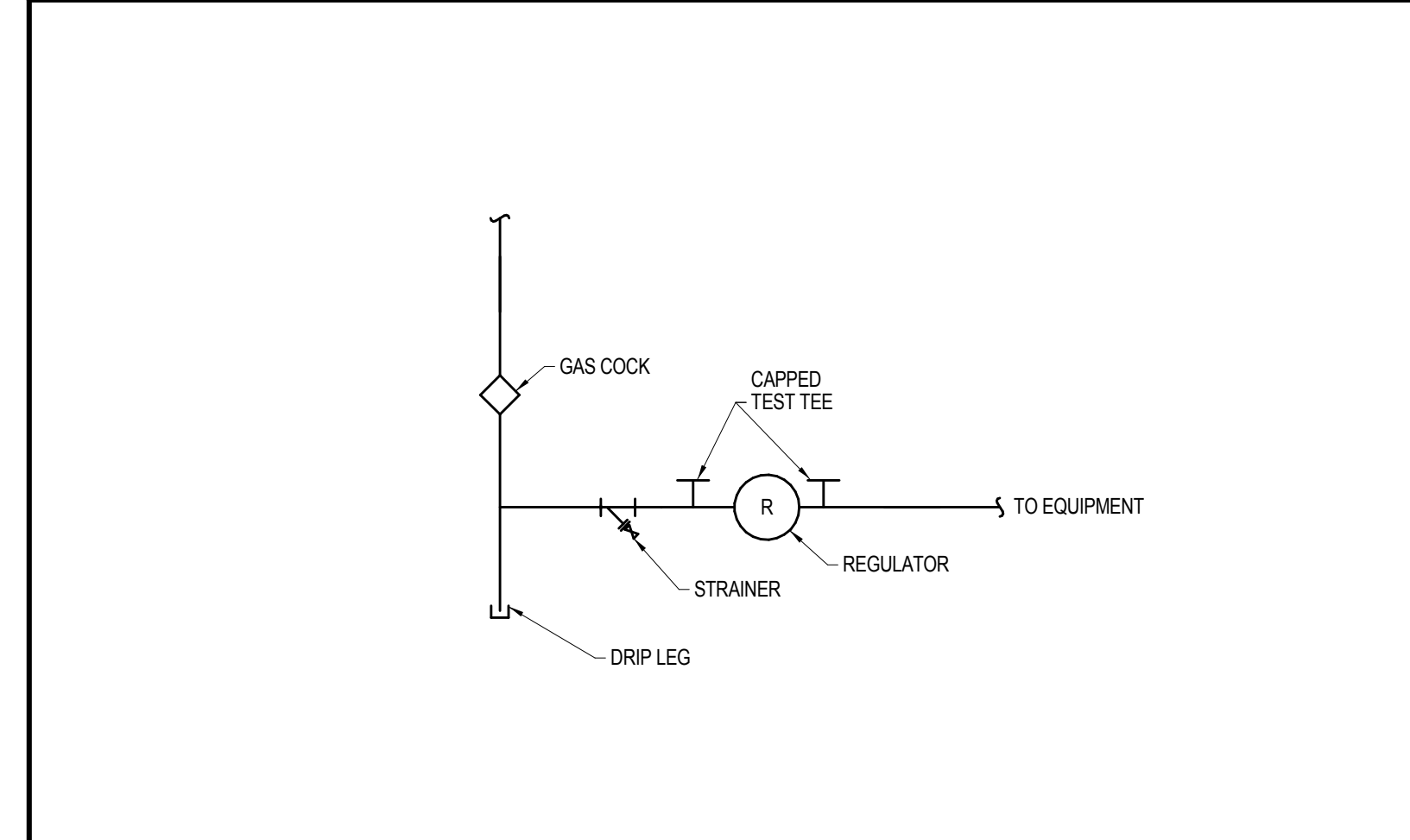
4 FLOOR SINK DETAIL
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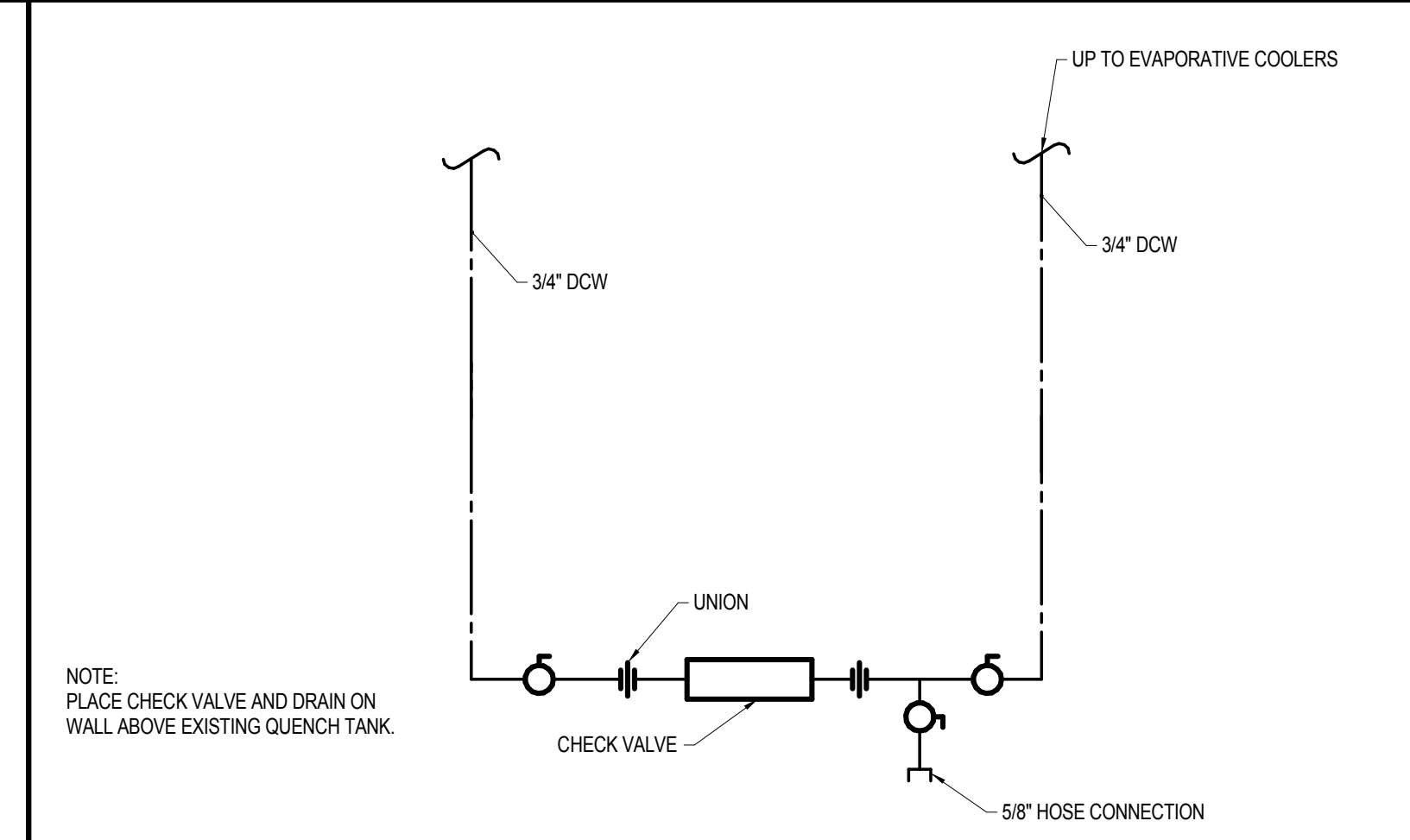
5 VENT THROUGH ROOF DETAIL
NO SCALE



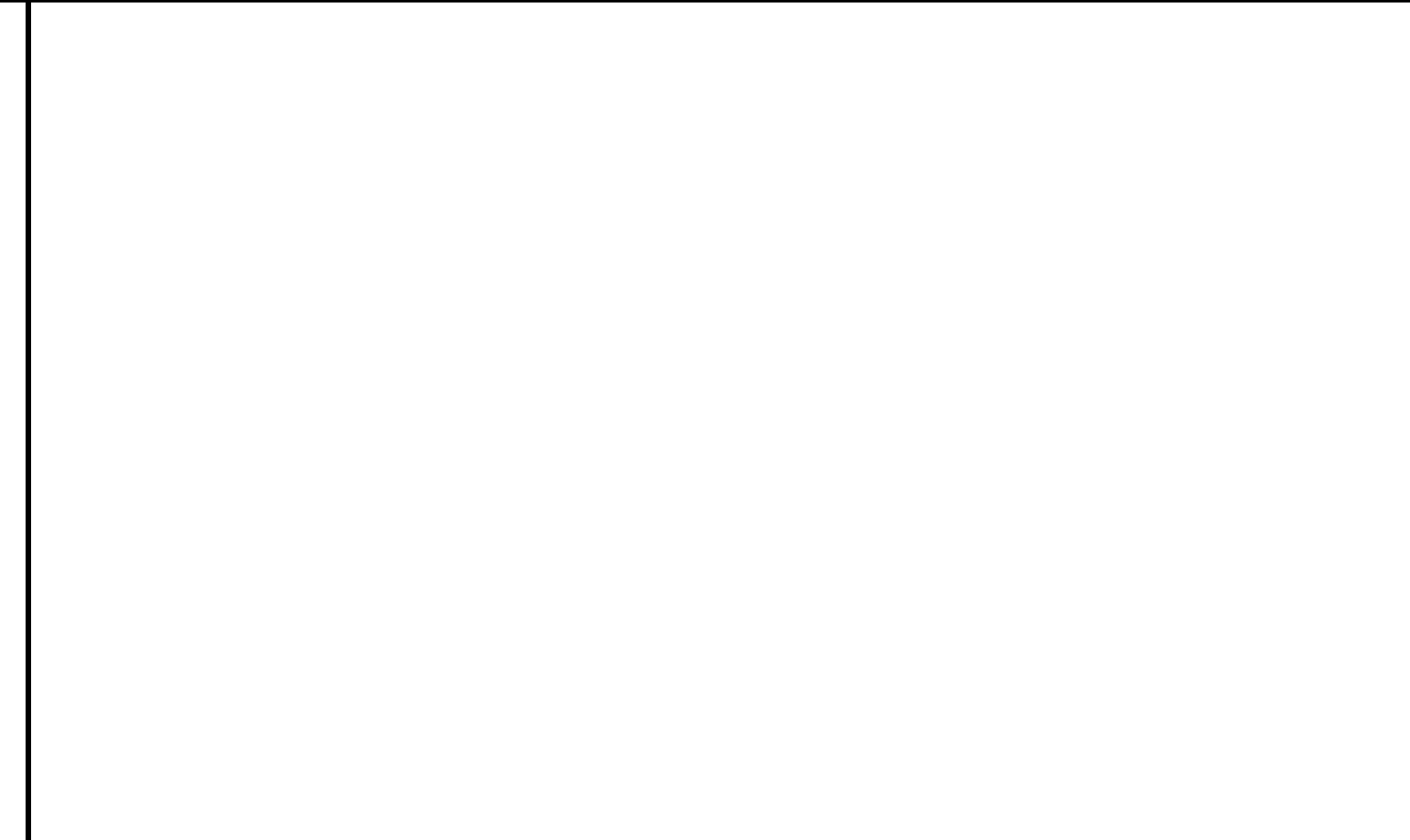
6 GAS TRAIN 2 LBS TO 4 OZ
NO SCALE



7 GAS REGULATOR DETAIL
NO SCALE



8 EVAP COOLER CHECK VALVE PIPING DETAIL
NO SCALE



9 NO SCALE

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LAYTON HIGH SCHOOL WELDING SHOP REMODEL

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Davis School District

45 E State St, Farmington, UT 84025
OWNER PROJECT NO.:
CEA PROJECT NO.: 2018-014.00
ISSUED DATE: 11/06/2018
PLUMBING DETAILS