

GCAM - WELDING LAB EXPANSION

GEORGETOWN, SOUTH CAROLINA

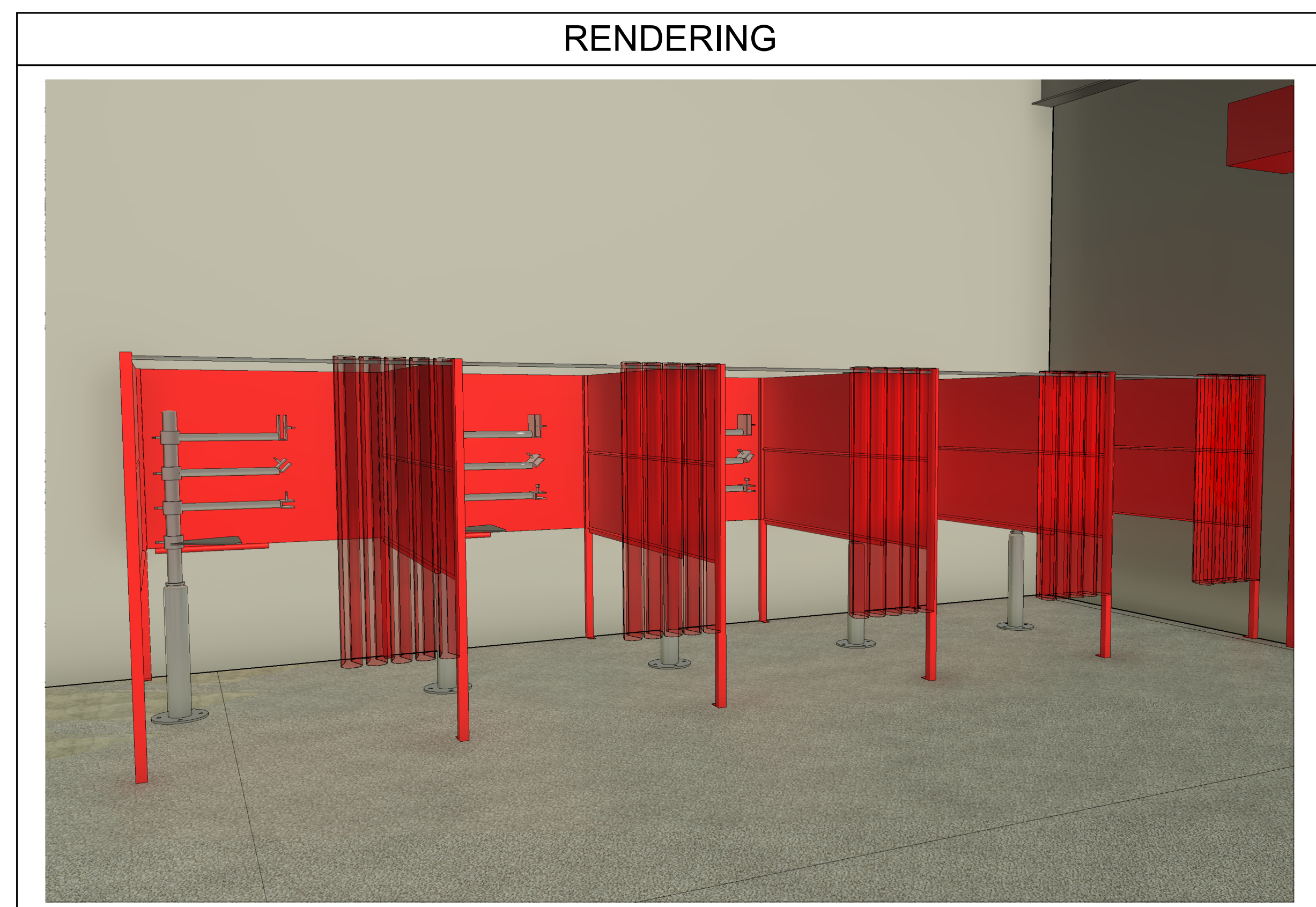
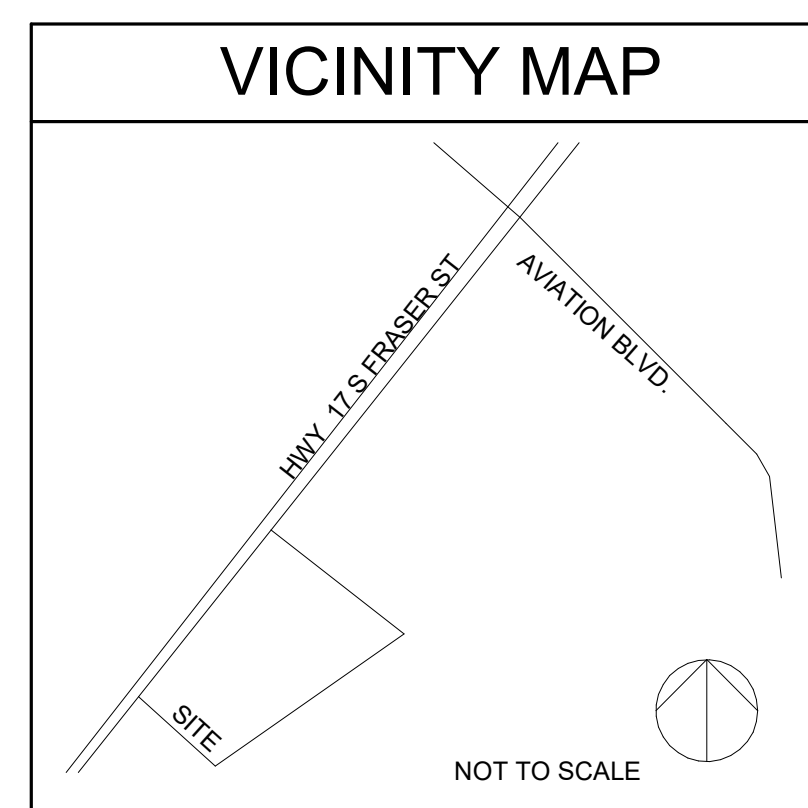
OSE PROJECT#: H59-N219-CB



PROJECT TEAM			
OWNER: Horry-Georgetown Technical College 2050 Highway 501 East Conway, South Carolina 29526 www.hgtc.edu	CIVIL ENGINEER: NO CIVIL WORK IN SCOPE	architecture planning interiors 2815 Coliseum Centre Drive, Suite 500 Charlotte, North Carolina 28217 p 704.379.1919 f 704.379.1920	STRUCTURAL ENGINEER: NO STRUCTURAL WORK IN SCOPE
		PLUMBING, MECHANICAL, ELECTRICAL, & FIRE PROTECTION: CMTA 8801 J.M. Keynes Drive, Suite 240 Charlotte, NC 28262 704.376.7072 www.cmta.com	

DRAWING SYMBOLS

ELEVATION MARK		DETAIL NUMBER
SECTION MARK		SHEET NUMBER
DETAIL CALLOUT MARK		DETAIL NUMBER
COLUMN GRID REFERENCE		SHEET NUMBER
ROOM NAME & NUMBER		
REVISION CLOUD & NUMBER		
WALL TYPE		
DOOR TYPE		
WINDOW TYPE		
ELEVATION		
MATCH LINE		
FINISH MARK		



SHEET INDEX

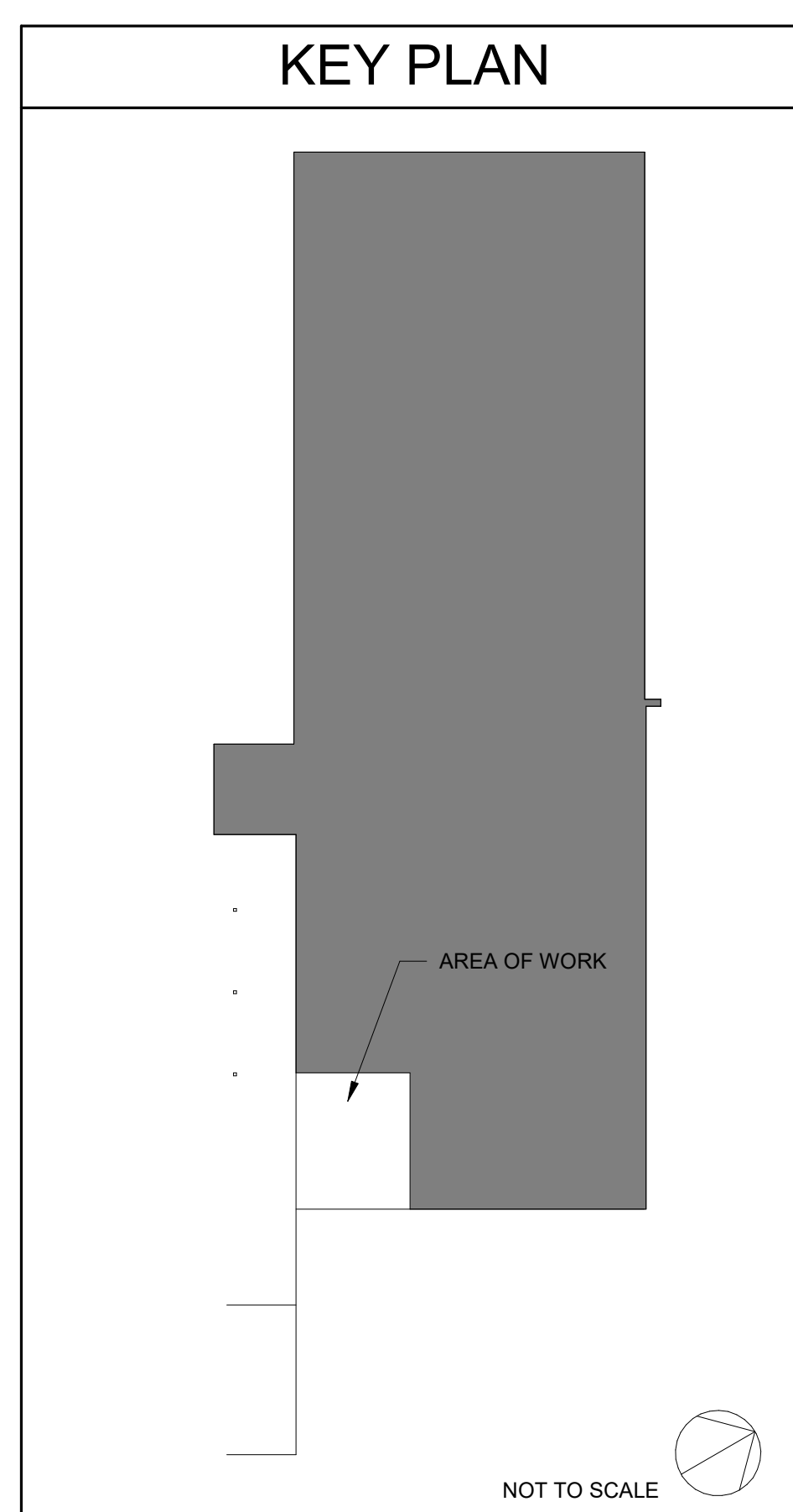
SHEET NO.	SHEET TITLE	Sheet Issue Date	REVISION	SHEET NO.	SHEET TITLE	Sheet Issue Date	REVISION
GENERAL				PLUMBING			
A000	COVER SHEET	04/28/2023		P001	PLUMBING NOTES, SYMBOLS, SCHEDULES	04/28/2023	
A001	CODE INFORMATION	04/28/2023		P101	FIRST FLOOR PLAN - WEST - WATER AND WASTE PIPING	04/28/2023	
A002	LIFE SAFETY PLAN	04/28/2023		P201	WASTE WATER AND VENT PIPING ISOMETRIC	04/28/2023	
ARCHITECTURAL				MECHANICAL			
A100	WELDING EXPANSION PLANS AND DETAILS	04/28/2023		M001	LEGEND, SYMBOLS, NOTES AND DRAWING LIST - MECHANICAL	04/28/2023	
A102	EXTERIOR CONCRETE SLAB	05/12/23		M101	FIRST FLOOR PLAN - EAST - HVAC DUCTWORK	04/28/2023	
				ELECTRICAL			
				E001	LEGEND, NOTES, SCHEDULES, PARTIAL POWER RISER & LIGHTING PLAN	04/28/2023	

ABBREVIATIONS

A.F.F. ABOVE FINISH FLOOR	EL. ELEVATION	IN. INCH	R.H. RIGHT HAND
APPROX. APPROXIMATE	ELEC. ELECTRICAL	INFO. INFORMATION	R.H.R. RIGHT HAND REVERSE
ARCH. ARCHITECTURAL	ELEV. ELEVATOR	INSUL. INSULATION	REFRIG. REFRIGERATOR
AUTO. AUTOMATIC	ENGR. ENGINEER	INV. INVERT	REINF. REINFORCE
AUX. AUXILIARY	EQ. EQUAL	JT. JOINT	REGD. REQUIRED
AVG. AVERAGE	EQUIP. EQUIPMENT	L.H. LEFT HAND	S.D. STORM DRAIN
B.O. BOTTOM OF	EXH. EXHAUST	L.H.R. LEFT HAND REVERSE	SHT. SHEET
BD. BOARD	EXIST. EXISTING	L.L. LIVE LOAD	SIM. SIMILAR
BLDG. BUILDING	EXP. EXPANSION	LAB. LABORATORY	SPEC. SPECIFICATION
BOT. BOTTOM	EXP. JT. EXPANSION JOINT	LB. POUND	SQ. SQUARE
BRG. BEARING	F. FAHRENHEIT	M.H. MAN HOLE	SQ. FT. SQUARE FEET
BTU. BRITISH THERMAL UNITS	F.D. FLOOR DRAIN	M.O. MASONRY OPENING	SQ. IN. SQUARE INCHES
C. CELSIUS	F.E. FIRE EXTINGUISHER	MAINT. MAINTENANCE	ST. STREET
C.B. CATCH BASIN	F.E.C. FIRE EXTINGUISHER CABINET	MAX. MAXIMUM	STD. STANDARD
C.L. CENTERLINE	F.F.J. FLOOR FORMED JOINT	MECH. MECHANICAL	STL. STEEL
C.L. TO CENTERLINE TO	F.J. FLOOR JOINT	MEMO. MEMORANDUM	STRUCT. STRUCTURAL
C.L. CENTERLINE	F.O. FACE OF	MEZZ. MEZZANINE	SYM. SYMBOL
CJ. CONTROL JOINT	F.O.C. FACE OF CHANNEL	MFG. MANUFACTURE(R)	T&G. TONGUE & GROOVE
CLG. CEILING	F.O.S. FACE OF STUD	MIN. MINIMUM	T.O. TOP OF
CLR. CLEAR	F.P.M. FEET PER MINUTE	MISC. MISCELLANEOUS	T.V. TELEVISION
CMU. CONCRETE MASONRY UNIT	F.P.S. FEET PER SECOND	MTL. METAL	TEL. TELEPHONE
CO2. CARBON MONOXIDE	F.R. FLOOR RECEPTACLE	N.A. NOT APPLICABLE	TYP. TYPICAL
COL. COLUMN	FAB. FABRICATE	N.I.C. NOT IN CONTRACT	U.N.O. UNLESS NOTED OTHERWISE
CONC. CONCRETE	FED. FEDERAL	N.T.S. NOT TO SCALE	V.V.L. VINYL COMPOSITION TILE
CONST. CONSTRUCTION	FIG. FIGURE	NEG. NEGATIVE	V.C.T. VERTICAL
CST. CONCRETE STAIN	FIN. FINISH	NO. NUMBER	V.O.C. VOLATILE ORGANIC COMPOUND
CTR. CENTER	FIN. FLR. FINISH FLOOR	O.C. ON CENTER	VERT. VERTICAL
CU. FT. CUBIC FEET	FIN. GRD. FINISH GRADE	O.D. OUTSIDE DIAMETER	VOL. VOLUME
CU. IN. CUBIC INCHES	FLR. FLOOR	O.F.C.I. OWNER FURNISHED CONTRACTOR INSTALLED	W.C. WATER CLOSET
CU. YD. CUBIC YARD	FT. FEET	O.F.O.I. OWNER FINISHED OWNER INSTALLED	
D.F. DRINKING FOUNTAIN	G.P.H. GALLONS PER HOUR	O.H. OPPOSITE HAND	
D.S. DOWN SPOUT	G.P.M. GALLONS PER MINUTE	OPP. OPPOSITE	
DBL. DOUBLE	G.W.B. GYPSUM WALL BOARD	P.A. PUBLIC ADDRESS	
DEPT. DEPARTMENT	GA. GAUGE	P.S.F. POUNDS PER SQUARE FOOT	
DIA. DIAMETER	GAL. GALLON	PL. PLATE	
DIM. DIMENSION	GALV. GALVANIZE(D)	PRELIM. PRELIMINARY	
DWG. DRAWING	GEN. GENERAL	PROJ. PROJECT	
E.D. EQUIPMENT DRAIN	GOVT. GOVERNMENT	R (RAD). RADIUS	
E.E. EMERGENCY EYEWASH	GYP. GYPSUM	R.A. RETURN AIR	
E.E.J. EXTERIOR EXPANSION JOINT	GYP. BD. GYPSUM BOARD	R.D. ROOF DRAIN	
E.F. EXHAUST FAN	HDW. HARDWARE		
E.O.S. EDGE OF SLAB	HGT. HEIGHT		
E.W.C. ELECTRIC WATER COOLER	HORIZ. HORIZONTAL		
EA. EACH	HR. HOUR		
	HVAC HEATING VENTILATION, AC		

DETAIL NUMBERING SYSTEM

20	16	12	08	04
19	15	11	07	03
18	14	10	06	02
17	13	09	05	01



SC OSE - FORM 3E

2023 Edition

TABLE 3E CODE INFORMATION FOR ADDITIONS, ALTERATIONS, OR CHANGE OF OCCUPANCY TO AN EXISTING STRUCTURE

TYPE OF PROJECT:
 Alteration (IEBC Chaps. 7, 8 & 9) Addition (IEBC Chap. 11) Change of Occupancy (IEBC Chap. 10)

METHOD OF COMPLIANCE:
 (Check only one Option and all items that apply under that Option.)
 Option 1: Prescriptive Compliance Method (IEBC Chapter 5)
 Option 2: Work Area Compliance Method (IEBC Chaps. 6-12)
 Option 3: Performance Compliance Method (IEBC Chap. 13)

Aggregate area of building: 30,424 SF
 Work area: 1,149 SF

Original Building Code and Edition Applicable at time of Construction: IEBC 2015

Existing Sprinkler System?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Existing Fire Alarm System?	<input checked="" type="checkbox"/> Manual	<input type="checkbox"/> Auto
Seismic Evaluation Required?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Major Facility Project? (See §48-52-810(10)(a))	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Change of Occupancy:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Existing Occupancy Classification(s):		
New Occupancy Classification(s):		
Historic Building (IEBC Chapter 12):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Preservation <input type="checkbox"/> Rehabilitation <input type="checkbox"/> Restoration <input type="checkbox"/> Reconstruction		

BIDDING DOCUMENTS

COVER SHEET

DATE: 05/16/2023
 PROJECT NO: 23007

REVISIONS
 NO: DATE: DESCRIPTION:

SHEET NUMBER
A000

ORIGINAL BUILDING CODE INFORMATION SHOWN FOR REFERENCE. NO CHANGE WITH CURRENT SCOPE OF WORK.

5.1.3 CODES AND STANDARDS

- Starting July 1 2016, State design and construction must comply with the codes and standards, along with their published errata and other requirements listed in this Chapter.
- If there is any conflict between the codes, standards, and/or regulations listed herein, the more stringent requirement controls.
- Designers and Agency reviewers should ensure they have the latest errata for indicated editions to International Codes, other codes and standards.
- Codes editions in force at the time of first submittal govern throughout the project, unless:
 - Otherwise permitted by OSE; or
 - Design is delayed for more than 6 months and OSE adopted editions that are more current in the interim. No project may use a code that is older than one previous adopted edition.
- In accordance with SC Code Ann § 1-34-10 thru 70 & § 10-1-180, OSE has adopted the following codes:
 - International Building Code (IBC), 2015 Edition,
 - International Existing Building Code (IEBC), 2015 Edition,
 - International Fire Code (IFC), 2015 Edition,
 - International Energy Conservation Code (IECC), 2009 Edition,
 - International Fuel Gas Code (IFGC), 2015 Edition,
 - International Mechanical Code (IMC), 2015 Edition,
 - International Plumbing Code (IPC), 2015 Edition, with the following insertions:
 - Section 305.4.1, insert "18" and insert "18"
 - Section 903.1, insert "8"
 - International Private Sewage Disposal Code (IPSDC), 2015 Edition,
 - International Property Maintenance Code (IPMC), 2015 Edition,
 - International Residential Code for One and Two Family Dwellings (IRC), 2015 Edition, with the following insertions:
 - P2603.5.1, insert "12" and insert "24"
 - International Wildland - Urban Interface Code (IUIWC), 2015 Edition, Note: *The IUIWC does not supersede existing statutory requirements.*
 - International Code Council Performance Code (ICCPC), 2015 Edition, upon State Engineer's approval.
 - International Swimming Pool and Spa Code (ISPS), 2015 Edition,
 - Standard for Bleachers, Folding and Telescopic Seating, and Grandstands, ICC 300-2012 Edition
 - National Electrical Code (NEC) [NFPA-70], 2014 Edition
 - National Electrical Safety Code, IEEE-C2-2012 Edition
 - Latest edition of the American National Standards Institute, Inc. (ANSI) document A117.1, Accessible and Usable Buildings and Facilities. Note that this standard is the standard adopted by the South Carolina Accessibility Act but this requirement does not relieve the Agency or the design professional from the Federal Statutory requirements that design and construction comply with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities. See <http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards-ada-standards>
 - State Fire Marshal rules, regulations, and policies. See <http://www.scfremarshal.llronline.com>
 - South Carolina Elevator Code, & Regulations, 1. See <http://www.lle.state.sc.us/Labor/Elevator/Investment/index.asp?file=hungee.htm>
 - State of SC Telephone Equipment Room and Communications/Data Systems Policies as formulated by the Division of State Information Technology (DSIT).
 - Governor's executive Order No. 82-19 (April 1982) - State of SC Building Standards in Floodplain Areas.
 - The South Carolina Modular Buildings Construction Act S.C. Code § 23-43-10 et. Seq.

TABLE 5-1 FLOOD HAZARD INFORMATION & FLOOD LOADS

FLOOD HAZARD AREA

Flood Map Information: Flood Zone: X Community Number: 450085
 (A Floodplain Permit is required for A and V Zones)
 Is the Project Site in a 100-Year Flood Plain? Yes No NGVD or FIRM
 Base Flood Elevation 22.00 MSL IBC 1612.3 and ASCE 24
 Design Flood Elevation 22.00 MSL

NON HIGH-VELOCITY WAVE ACTION

Elevation of Lowest Proposed Floor 40.0 MSL Meet ASCE 24 Section 2.6.2.1/ 2.6.2.2
 Dry floodproofing Yes No per ASCE 24

HIGH-VELOCITY WAVE ACTION

Elevation of bottom of Lowest Horizontal Structural Member of lowest floor _____ MSL
 Flotation resistant Yes No per ASCE 24
 Breakaway wall Yes No per ASCE 24

IBC 1612 and SE-510, as applicable

ZONING CERTIFICATION

"I hereby certify that, to the best of my knowledge, these plans comply with applicable zoning ordinances, and that plans have been submitted to appropriate authority for their review and/or approval."

Signed: [Signature] Date: 12 MARCH 2018
 Architect/Engineer

If the project does not require a National Pollution Discharge Elimination System (NPDES) permit from SCDHEC, include the following certification on the Site Plans:

EROSION AND SEDIMENT REDUCTION/STORMWATER MANAGEMENT

Designer's Certification:
 "I hereby certify that the measures in this plan are designed to control erosion, retain sediment on the site, and manage stormwater in a manner that neither any on-site nor off-site damage or problem is caused or increased, that all structural measures are designed to the minimum standards for health and safety, and that all the provisions of the plan are in compliance with the Regulations contained in Chapter 72, Article 2, SC Code of Regulations (Erosion and Sediment Reduction and Stormwater Management Regulations)."

Signed: [Signature] Date: 12 MARCH 2018
 Engineer or Registered Landscape Architect (Circle one)

TABLE 5-2 SOILS & SITE

SOILS INVESTIGATION (if required) Yes No per IBC 1803.2

SOILS CLASSIFICATION

Site Class D per IBC 1613.3.2
 Classes Soil of Materials (UCS System) A per IBC 1803.5.1
 Allowable Footing Bearing Pressure 4000 psf

MINIMUM DESIGN SOIL BEARING LOAD N/A psf per IBC table 1806.2

COMPACTION

Subgrade: 95 Percent ASTM D698 ASTM D1557 AASHTO (only for paving & roads)
 Base: 95 Percent ASTM D698 ASTM D1557 AASHTO (only for paving & roads)
 Other: _____ Percent ASTM D698 ASTM D1557 AASHTO (only for paving & roads)

MINIMUM DESIGN SOIL LATERAL LOAD N/A psf per IBC 1610.1

FOOTINGS

Undisturbed footings Yes No
 Compacted Fill Material Yes No per IBC 1804.6

ELEVATIONS

Elevation of Water Table: _____ MSL
 Elevation of lowest footing: _____ MSL
 Elevation of lowest floor or basement: _____ MSL

TABLE 5-3 BASIC BUILDING CODE INFORMATION

CONSTRUCTION CLASSIFICATION	Type: II-B _____ (IBC 602)
OCCUPANCY CLASSIFICATION (indicate all) (Note IBC 504.2)	B _____ (IBC 302)
MOST RESTRICTIVE OCCUPANCY CLASSIFICATION	N/A _____ (IBC Tables 504.3, 504.4 & 506.2)
Does building require Incidental Use Area Separation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (IBC 509.1)
Does building have Accessory Occupancy (ies)? If so, what percent of story is Accessory Occupancy?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (IBC 508.2) _____ SF _____ %
Mixed Occupancy	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (IBC 508)
Non separated	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (IBC 508.3)
Separated	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (IBC 506.2.2) (IBC 506.2.4) (IBC 508.4)
Fire Apparatus Access and Water Line	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (IFC 503 & 507)

OTHER FIRE PROTECTION SYSTEMS, DEVICES or FEATURES
 If the building has any special or notable fire protection or safety feature or hazard the designers should list them here, describe the performance characteristics and refer to locations in construction documents. (e.g. fire extinguishers, smoke-evacuation/control/compartments. Note IBC 414.1.3.)

- Automatic Fire Protection Sprinklers
- Portable Fire Extinguishers

TABLE 5-4 BUILDING AREA

AREA LIMIT BY TABLE 506.2 OF IBC	92000 _____ SF (area limitation per story)
AREA INCREASES BY SECTION 506.2 AND 506.3 OF IBC	_____ SF (maximum modified area per story)
EXPLANATION OF INCREASES: <u>N/A</u>	
AREA AS ALLOWED IN IBC PER STORY	_____ SF (area per story)
Story/Level: <u>1</u>	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
TOTAL ALLOWED AREA OF BUILDING (summary of all stories)	92000 _____ SF
AREA AS DESIGNED PER STORY	_____ SF (area per story)
Story/Level: <u>1</u>	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
Story/Level: _____	_____ SF (area per story)
TOTAL DESIGNED AREA OF BUILDING	30424 _____ SF

TABLE 5-5 BUILDING HEIGHT

	AS DESIGNED		AS ALLOWED BY IBC	
	In Feet	In Stories	In Feet	In Stories
PER TABLE 504.3	25' 8"	N/A	75'	N/A
PER TABLE 504.4	N/A	1	N/A	4
Total Height, including any Allowable Increase	N/A	N/A	N/A	N/A

TABLE 5-6 BUILDING DESIGN OCCUPANT LOAD

STORY/LEVEL	FUNCTION OF SPACE (1)	FLOOR AREA (2) (NSF or GSF)	MAX AREA ALLOWED PER OCCUPANT (3) (NSF or GSF)	OCCUPANTS ON FLOOR FOR THIS FUNCTION (4)	DESIGN OCCUPANT LOAD (5)
1	BUSINESS - VOCATIONAL 1	8548	50	173	
	BUSINESS - VOCATIONAL 2	5338	50	89	
	BUSINESS - VOCATIONAL 3	4129	50	64	
	BUSINESS - AREAS	1,248	100	18	
Subtotal Design Occupant Load for This Story					344
1	BUSINESS - ACCESSORY	1825	300	12	
	BUSINESS - CLASSROOM	796	20	40	
	BUSINESS - LOCKER ROOM	337	50	7	
	BUSINESS - ASSEMBLY UNCON.	1413	15	95	
Subtotal Design Occupant Load for This Story					154
TOTAL BUILDING DESIGN OCCUPANT LOAD					498 (6)

FOOTNOTES:

- Provide the complete name of the Function of Space using the left column of Table 1004.1.2 of the IBC (1)
- Design Area per each occupant of this Function on this Story in either Gross (GSF) or Net (NSF) Square Footage (2)
- Allowed Floor Areas in SF per Occupant per right column in Table 1004.1.2 of the IBC (3)
- Divide Column A (2) by Column B (3) for each function and enter result, rounded up to the nearest whole person (4)
- Subtotal all Column C values for this floor to yield the Design Occupant Load (5)
- Total Building Design Occupant Load—sum of all Column D value (6)

TABLE 5-7 GENERAL FIRE PROTECTION REQUIREMENTS

SEPARATIONS		
Fireblocking Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 718
Draftstopping Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 718
Smoke Control System Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 909
Smoke Barriers Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 407 and 408
Smoke Partitions Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 407
Fire Partition Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 708
Fire Barrier Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IBC Section 707
ALARM & DETECTION		
Fire Alarm System Required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	per IFC Section 907
Emergency Alarm System Required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	per IFC 908
SUPPRESSION		
Standpipes Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IFC Section 905
Sprinklers Required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IFC Section 903
Sprinklers Provided	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____
Portable extinguishers required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	per IFC 906
Other suppression systems required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IFC 904
Smoke & heat vents required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	per IFC 910

OTHER: (Indicate other provided fire and life safety features not listed above, if any)

TABLE 5-8 FIRE RESISTANCE RATING OF BUILDING ELEMENTS

BUILDING ELEMENT	RATING AS REQUIRED (in hours)	RATING AS DESIGNED (in hours)	TESTING AGENCY & DESIGN NO. (UL, FM, etc)	DESIGNERS WALL/PARTITION KEY CODE
Primary Structural Frame (per IBC Table 601)	0	0	N/A	N/A
Bearing Walls Exterior Interior (per IBC Table 601)	0 0 0	0 0 0	N/A N/A N/A	N/A N/A N/A
Nonbearing Walls & Partitions Exterior Interior (per IBC Table 601 & 602) Note footnote "d" from Table 601.	0 0 0	0 0 0	N/A N/A N/A	N/A N/A N/A
Floor Construction including supporting beams & joists (per IBC Table 601)	0	0	N/A	N/A
Roof Construction including supporting beams & joists (per IBC Table 601)	0	0	N/A	N/A
Fire Walls (per IBC Section 706)	0	0	N/A	N/A
Fire Barriers (per IBC Section 707)	0	0	N/A	N/A
Shaft Enclosures (per IBC Section 713)	0	0	N/A	N/A
Fire Partitions (per IBC Section 708)	0	0	N/A	N/A
Opening & Protective Listing by Category (fire shutters, doors, etc. per IBC Section 716)	0	0	N/A	N/A
Others (as required by Designer)	0	0	N/A	N/A

TABLE 5-9 STRUCTURAL DESIGN INFORMATION

RISK CATEGORY: II IBC Table 1604.5

LIVE LOADS

Floor Live Load(s) - List the F_l for each occupancy/use.
 Occupancy/Use: 6" - TYP SLAB ON GRADE F_l = 400 PSF
 Occupancy/Use: 8" - INDUSTRIAL SLAB ON GRADE F_l = 1500 PSF
 Occupancy/Use: _____ F_l = _____ PSF
 Occupancy/Use: _____ F_l = _____ PSF

Roof Live Load R_l = 20 PSF
 Ground Snow Load P_g = 10 PSF IBC Figure 1608.2 (or ASCE 7)

WIND LOADS

Analysis Procedure: IBC 2015 ASCE 7 or IBC 1609
 Ultimate Design Wind Speed: V_{ULT} = 143 MPH IBC Fig's. 1609.3(1)-(3)
 Exposure Category: C IBC 1609.4.3
 Internal Pressure Coefficient: GC_{pi} = 0.18 ASCE 7
 External Pressure Coefficient: GC_{pe} = VARIES ASCE 7
 Protection of Openings Required Yes No
 If "Yes", check one: Impact Resistant Glazing
 Impact Resistant Covering

SEISMIC LOADS

Seismic Importance Factor: I_e = 1.0 ASCE 7 Table 1.5-2
 Site Class: D IBC 1613.3.2
 Mapped Spectral Response Accelerations: S₁ = 0.77 S_i = 0.26
 Design Spectral Response Acceleration Parameters: S_{us} = 0.61 S_{us} = 0.32
 Seismic Design Category: D IBC Tables 1613.3.5(1) & 1613.3.5(2)
 Basic Seismic Force Resisting System: STEEL SPECIAL BRACED FRAMES ASCE 7 Chapter 12
 Design Base Shear: 542 KIPS
 Seismic Response Coefficient(s): C_s = 264 ASCE 7 Response Modification
 Factor(s): R = 6 ASCE 7

Analysis Procedure: EQUIVALENT LATERAL FORCE

ARCHITECTURAL-MECHANICAL-ETC. LOADS

Provide as applicable: architectural items, mechanical, plumbing, etc. per ASCE 7

SPECIAL LOADS

Provide as applicable: abnormal items, moving loads, impact, hoisting, etc. per ASCE 7

*per IBC Chapter 16 and ASCE 7 - Information may be shown on initial Structural Sheet of the drawings or on Sheet with other code information. List floor design loads on structural plans.

TABLE 5-10 PLUMBING INFORMATION

WATER SYSTEM: Service Line Size: 2 1/2 Inches
 Peak Flow: 20 GPM
 Total Demand: 202 No. Fixture Units

SANITARY SEWER SYSTEM: Loading: 1000 (DFU) GPD
 Service Line Size: 4 Inches
 Slope: 1/8" min inches/ft

MINIMUM PLUMBING FIXTURES REQUIRED/PROVIDED: (Per IPC Section 403 & Table 403.1)
 Occupancy Classification(s) (as shown in Table 5-3): 200/800/1000
 Total Building Design Occupant Load (as shown in Table 5-6): 498

1. Occupancy: <u>200/800/1000</u>	Total Load for this Occupancy: <u>498</u>	Male: <u>299</u>	Female: <u>199</u>
Water Closets	Male-REQUIRED <u>3</u>	Male-PROVIDED <u>3</u>	Female-REQUIRED <u>3</u>
Lavatories	Male-REQUIRED <u>4</u>	Male-PROVIDED <u>4</u>	Female-REQUIRED <u>4</u>
Urinals*	Male-REQUIRED <u>2</u>	Male-PROVIDED <u>2</u>	Female-REQUIRED <u>0</u>
OTHER FIXTURES (Per IPC Section 403 & Table 403.1)	REQUIRED <u>3</u>	PROVIDED <u>3</u>	
Drinking Fountains	_____	_____	_____
Unisex Toilet	_____	_____	_____
Service Sink	_____	_____	_____
Other (list) _____	_____	_____	_____
2. Occupancy: _____	Total Load for this Occupancy: _____	Male: _____	Female: _____
Water Closets	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
Lavatories	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
Urinals*	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
OTHER FIXTURES (Per IPC Section 403 & Table 403.1)	REQUIRED _____	PROVIDED _____	
Drinking Fountains	_____	_____	_____
Unisex Toilet	_____	_____	_____
Service Sink	_____	_____	_____
Other (list) _____	_____	_____	_____
3. Occupancy: _____	Total Load for this Occupancy: _____	Male: _____	Female: _____
Water Closets	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
Lavatories	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
Urinals*	Male-REQUIRED _____	Male-PROVIDED _____	Female-REQUIRED _____
OTHER FIXTURES (Per IPC Section 403 & Table 403.1)	REQUIRED _____	PROVIDED _____	
Drinking Fountains	_____	_____	_____
Unisex Toilet	_____	_____	_____
Service Sink	_____	_____	_____
Other (list) _____	_____	_____	_____

* Urinals - See IPC 419.2

TABLE 5-11 MECHANICAL INFORMATION

AIR COMFORT SYSTEMS

Overall Thermal Transfer Value (OTTV): 2.72 Roof/15.16 Glass BTU/(HR x F x SF)
 Building Cooling Load: 306.1 SF / Ton
 Building Heating Load: 28.5 BTU/(HR x SF)

OTHER LOADING FEATURES

Glass: U Factor: 0.45 Window to wall ratio: 28.7
 Insulation Values: Roof: 0.036 Exterior Walls: 0.190 - MASS

Outside Air minimum while occupied: 5850 CFM 277 Occupants

MECHANICAL SYSTEMS, SERVICE SYSTEMS & EQUIPMENT

Briefly describe mechanical system: Rooftop packaged equipment with gas and electric heat.
 (The above data shall be considered a minimum and any special attribute required to meet the mechanical codes.)

TABLE 5-12 ELECTRICAL INFORMATION

SERVICE TRANSFORMER: By Utility Company By Agency _____ KVA Primary
 (if by Agency) _____ Voltage/Phase

ELECTRICAL SERVICE INFORMATION

Service Voltage/Phase: 480/277v, 3 phase 2,000 Amperes
 Service Entrance Conductors Size: 350 KCMIL x 7 Quantity per Phase
 Total Connected Load: 1494.4 KVA
 Estimated Maximum Demand: 1473.3 KVA
 Available Fault Current in Symmetrical Amperes: BY UTILITY
 Interrupting Capacity of Service Overcurrent Device: 65,000
 Grounding Electrode System Components: GROUND RODS + COND. (NEC 250)

EMERGENCY SERVICE INFORMATION

Emergency Generator: Yes No _____ KVA _____ Voltage/Phase _____ Fuel
 Exit/Emergency Lights Backup Power Integral Battery Generator
 Fire Alarm System: Manual Automatic Addressable Class A Class B

LIGHTNING PROTECTION PROVIDED Yes No

COMMUNICATIONS COORDINATED Yes Not Required
 Contact DSIT Network/Infrastructure Planning for applicability at (803) 896-0001

TABLE 5-13 DESIGN-RELATED CONSTRUCTION PERMITS/APPROVALS

The following list is not all-inclusive of every permit and standards applicable to each project. Agencies and A/E's must delete non-applicable listings and add others for each specific project.

TYPE OF DEVELOPMENT	SC LAW OR REG.	WHERE TO OBTAIN PERMIT/APPROVAL	STATUS
Building construction, Zoning	6-7-10; 6-9-110	Local Authority	<u>IN REVIEW</u>
Fire Department (Local)	Various local	Servicing Fire Department	<u>IN REVIEW</u>
Fire Protection Sprinkler	40-10	State Fire Marshal	
Storm water discharge, erosion and sediment control	R61-9; R72-100-108	SCDHEC - Water Pollution Control; State Engineer, Local Authority	<u>IN REVIEW</u>

TABLE 5-14 STATEMENT OF SPECIAL INSPECTIONS S003 & S004

The Designer(s) of Record shall determine the material and/or work on the project requiring Special Inspections. The Special Inspection requirements shall be based on Section 1705 of the 2015 International Building Code. Any deviations from the requirements of Section 1705 must be approved by OSE.

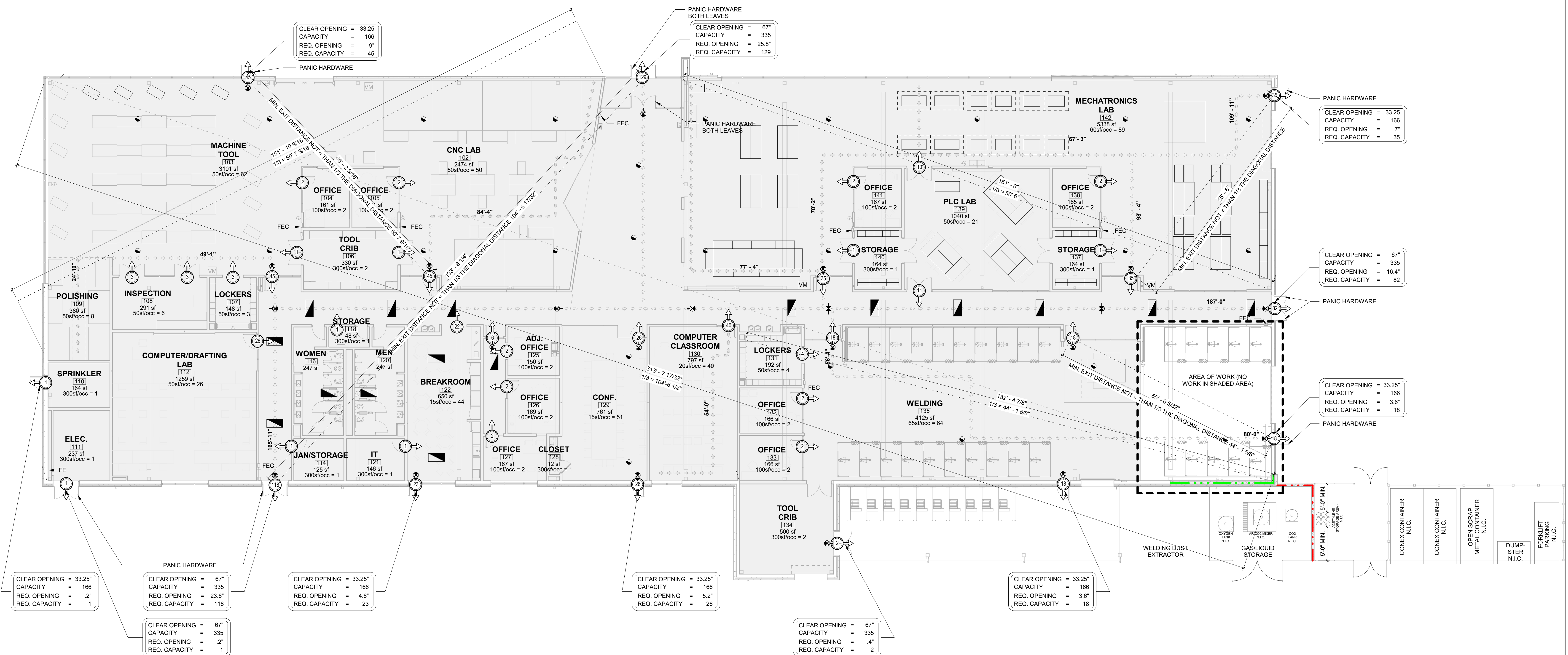
PROJECT NAME: HORRY GEORGETOWN TECHNICAL COLLEGE
PROJECT NUMBER: H59-6128-CA

MATERIAL	TYPE OF INSPECTION	FREQUENCY	SPECIFICATION REFERENCE	INSPECTION BY
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

ORIGINAL BUILDING LIFE SAFETY PLAN SHOWN FOR REFERENCE. NO CHANGE WITH CURRENT SCOPE OF WORK.

LIFE SAFETY PLAN LEGEND:

- ASSUMED PROPERTY LINE
- ←←←← COMMON PATH OF TRAVEL DISTANCE
- ⇄⇄⇄⇄ MAXIMUM TRAVEL DISTANCE
- n = MAXIMUM NUMBER OF OCCUPANTS, CALCULATED PER TABLE 1004.1
- FEC SEMI RECESSED FIRE EXTINGUISHER CABINET
- ☉ LIGHT FIXTURE ON EMERGENCY CIRCUIT, LIFE SAFETY BRANCH
- ☉ LIGHT FIXTURE ON EMERGENCY CIRCUIT, LIFE SAFETY BRANCH
- ☉ EXIT LIGHT



GCAM - WELDING LAB EXPANSION

BIDDING DOCUMENTS

OSE PROJECT#: H59-N219-CB

LIFE SAFETY PLAN

DATE: 05/16/2023
PROJECT NO: 23007

REVISIONS

NO: DATE: DESCRIPTION:

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WALL PARTITION LEGEND:

- 1 REFER TO A003 FOR ALL INTERIOR PARTITION INFORMATION
- 2 3 HR. FIRE RATING
- 3 2 HR. FIRE RATING (6' FEET HIGH)
- 4 ALUMINUM CHAIN LINK FENCING

**GCAM -
WELDING
LAB
EXPANSION**

**BIDDING
DOCUMENTS**

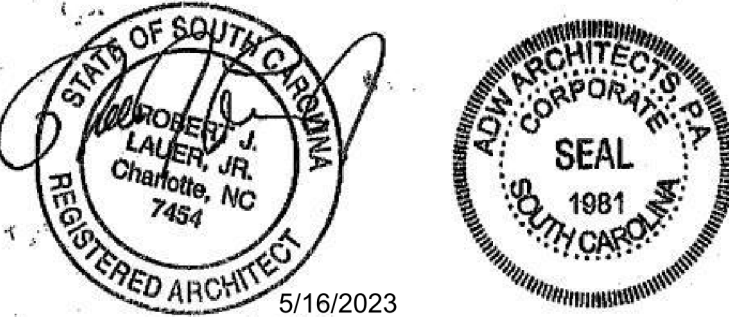
**OSE PROJECT#:
H59-N219-CB**

**EXTERIOR CONCRETE
SLAB**

DATE: 05/16/2023
PROJECT NO: 23007

REVISIONS
NO: DATE: DESCRIPTION:

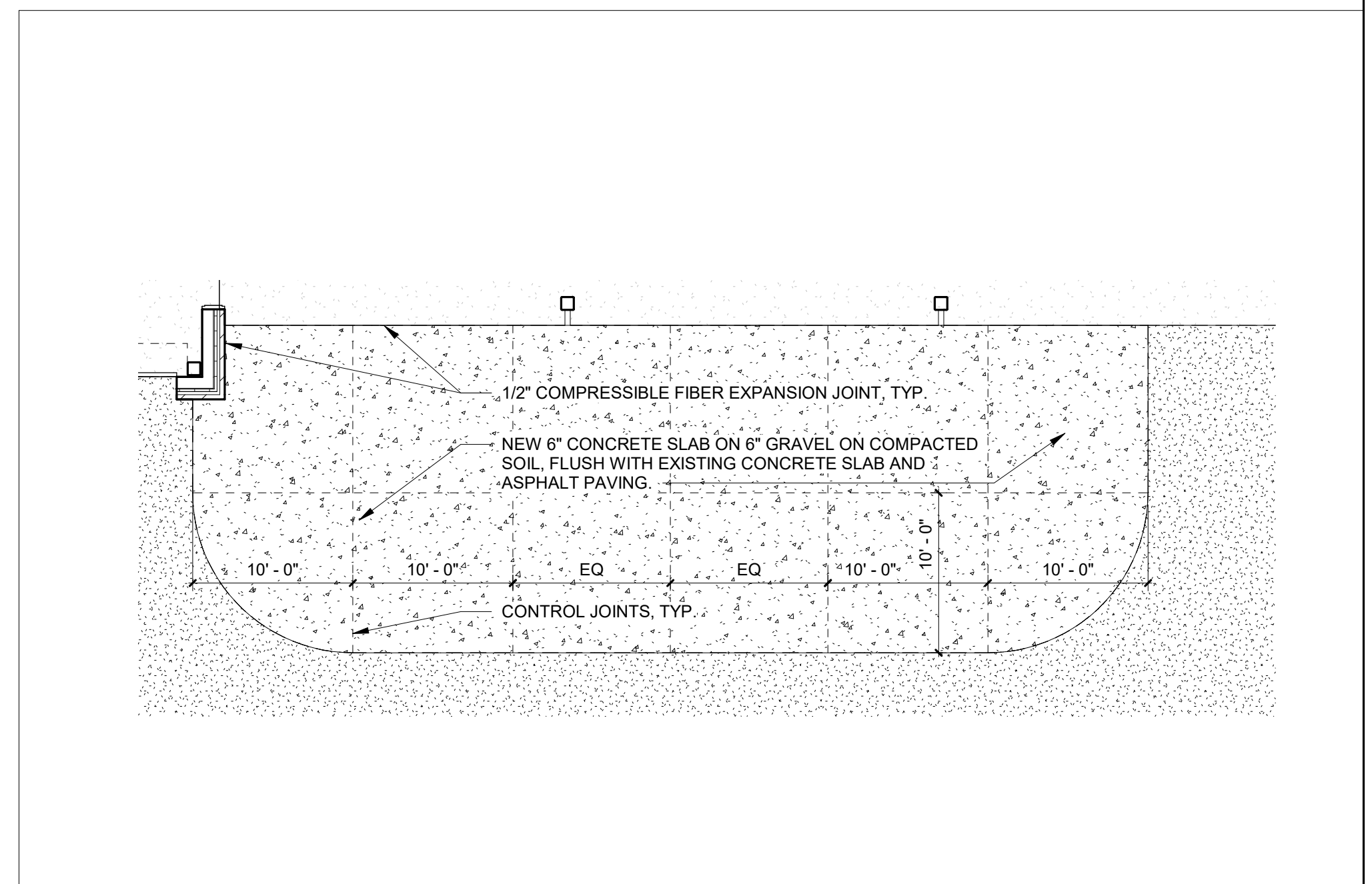
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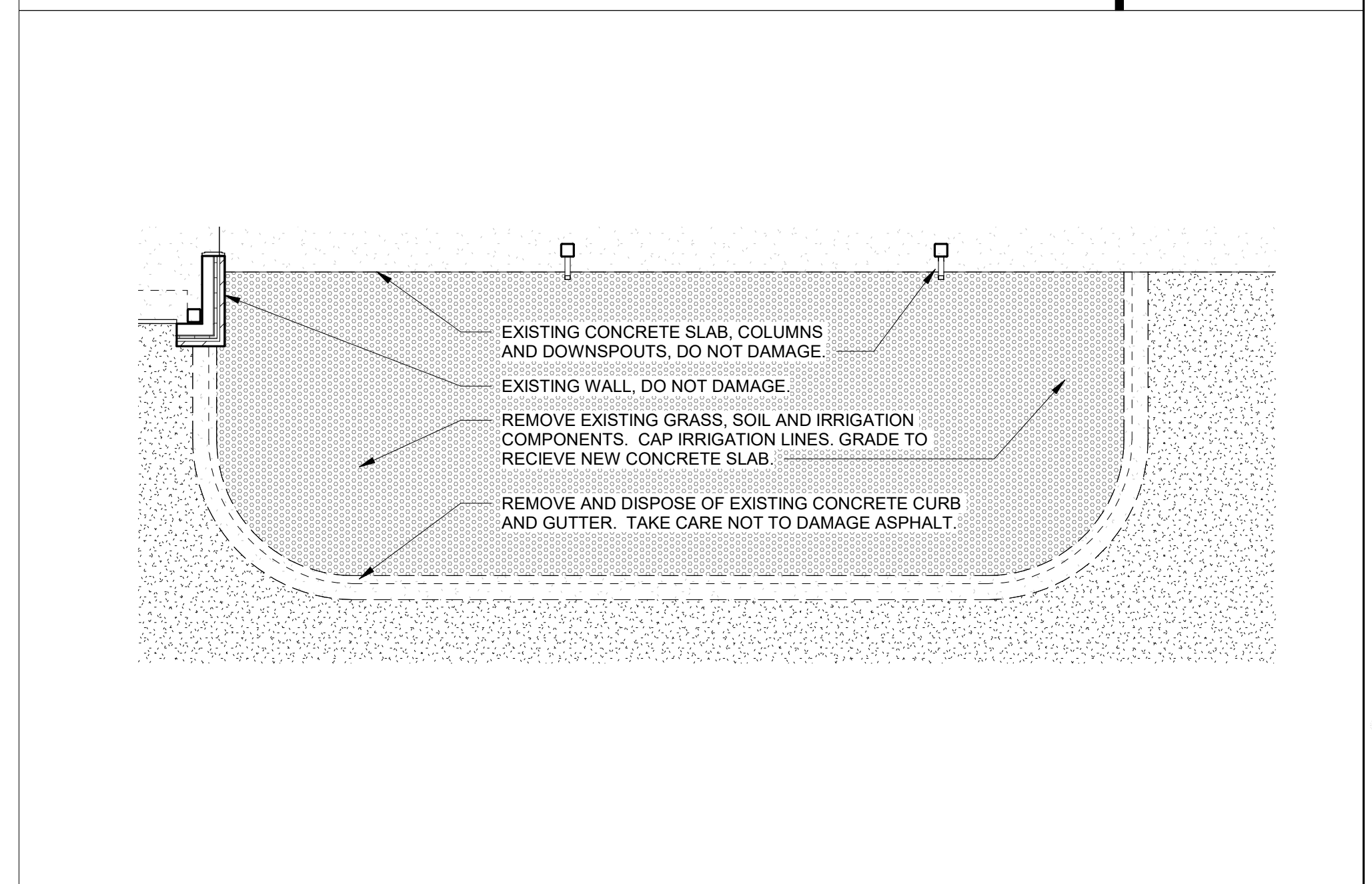
5/16/2023

SHEET NUMBER

A102



FLOOR PLAN - EXTERIOR SLAB | 1/8" = 1'-0" | 2



DEMOLITION PLAN - EXTERIOR SLAB | 1/8" = 1'-0" | 1

**SEISMIC AND WIND REQUIREMENTS
RISK CATEGORIES I, II & III
INFORMATION FOR IBC-2012 / ASCE 7-10**

SEISMIC DESIGN CATEGORY D

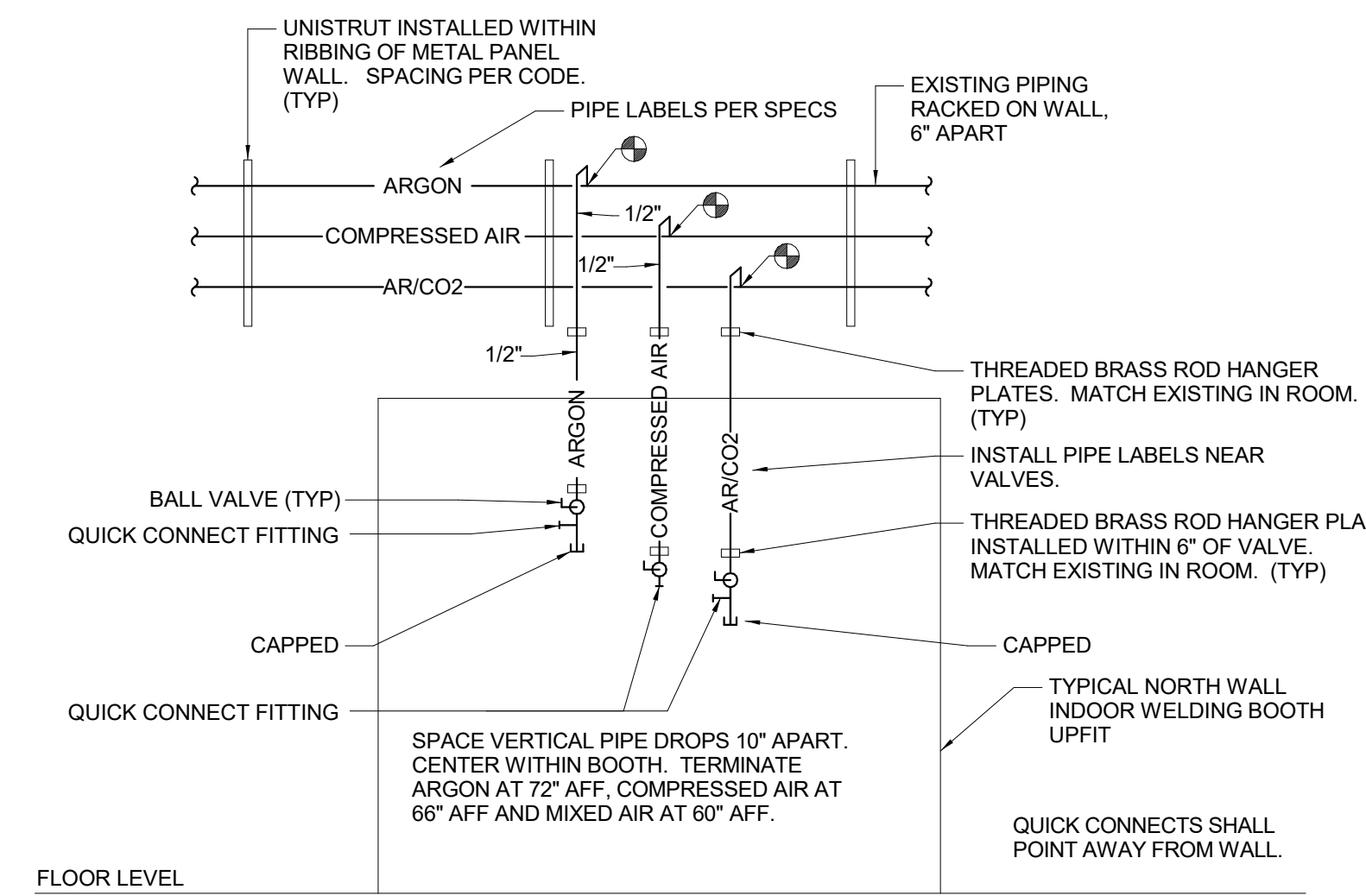
GENERAL NOTES

- A. PER THE 2015 SOUTH CAROLINA BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-10.
- B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTERS 26 TO 29 OF ASCE 7-10.
- C. WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.
- D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.
- E. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
- F. USE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.
- G. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL.
- H. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.
- I. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAY AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

COMPONENT IDENTIFICATION	COMPONENT IMPORTANCE FACTOR (ip)				
	1.0		1.5		
	SEISMIC RESTRAINT REQUIREMENT	ASCE 7-10 REFERENCE	SEISMIC RESTRAINT REQUIREMENT	ASCE 7-10 REFERENCE	
ROOF MOUNTED	RESTRAIN ALL (SEE NOTE 1)	13.1.4.6	RESTRAIN ALL	13.1.4.6	
FLOOR MOUNTED	RESTRAIN ALL (SEE NOTES 1,2)	13.1.4.6	RESTRAIN ALL	13.1.4.6	
WALL MOUNTED	RESTRAIN ALL (SEE NOTE 1,2)	13.1.4.6	RESTRAIN ALL	13.1.4.6	
COMPONENT SUPPORTS	RESTRAIN ALL (SEE NOTE 1)	13.6.5	RESTRAIN ALL	13.6.5	
SUSPENDED EQUIPMENT	INLINE W/ DUCT/PIPE	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.7	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.7
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL (SEE NOTE 1)	13.1.4.6	RESTRAIN ALL	13.1.4.6
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)	RESTRAIN IF > 3" (SEE NOTE 4)	13.6.8.3.3.c	RESTRAIN IF > 1" (SEE NOTE 4)	13.6.8.3.3.b	
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)	RESTRAIN ALL (SEE NOTE 4)	13.6.8.3.3	RESTRAIN ALL (SEE NOTE 4)	13.6.8.3.3	
SUSPENDED PIPE ON TRAPEZE	RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4)	13.6.8.3.1	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4)	13.6.8.3.1	
DUCTWORK	RESTRAIN IF > 6 SQ.FT. AND > 17 LBS/FT (SEE NOTE 4.5)	13.6.7	RESTRAIN IF > 6 SQ.FT. AND > 17 LBS/FT (SEE NOTE 4.5)	13.6.7	
MULTIPLE DUCTS ON TRAPEZE	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTE 4.5)	13.6.7	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTE 4.5)	13.6.7	
SINGLE CONDUIT	RESTRAIN IF ≥ 2.5" (SEE NOTE 4)	13.6.5.6	RESTRAIN IF ≥ 2.5" (SEE NOTE 4)	13.6.5.6	
CABLE TRAY/BUS DUCT/ TRAPEZE CONDUIT	RESTRAIN IF TOTAL WEIGHT OF RACEWAY > 10 LBS/FT (SEE NOTE 4)	13.6.5.6	RESTRAIN IF TOTAL WEIGHT OF RACEWAY > 10 LBS/FT (SEE NOTE 4)	13.6.5.6	
PENDANT, LAY-IN, & CAN LIGHTS	REQUIRED (SEE NOTE 6)	13.5.6.2	REQUIRED (SEE NOTE 6)	13.5.6.2	
COMPONENT CERTIFICATION	NOT REQUIRED	13.2.2	REQUIRED (SEE NOTE 7)	13.2.2	

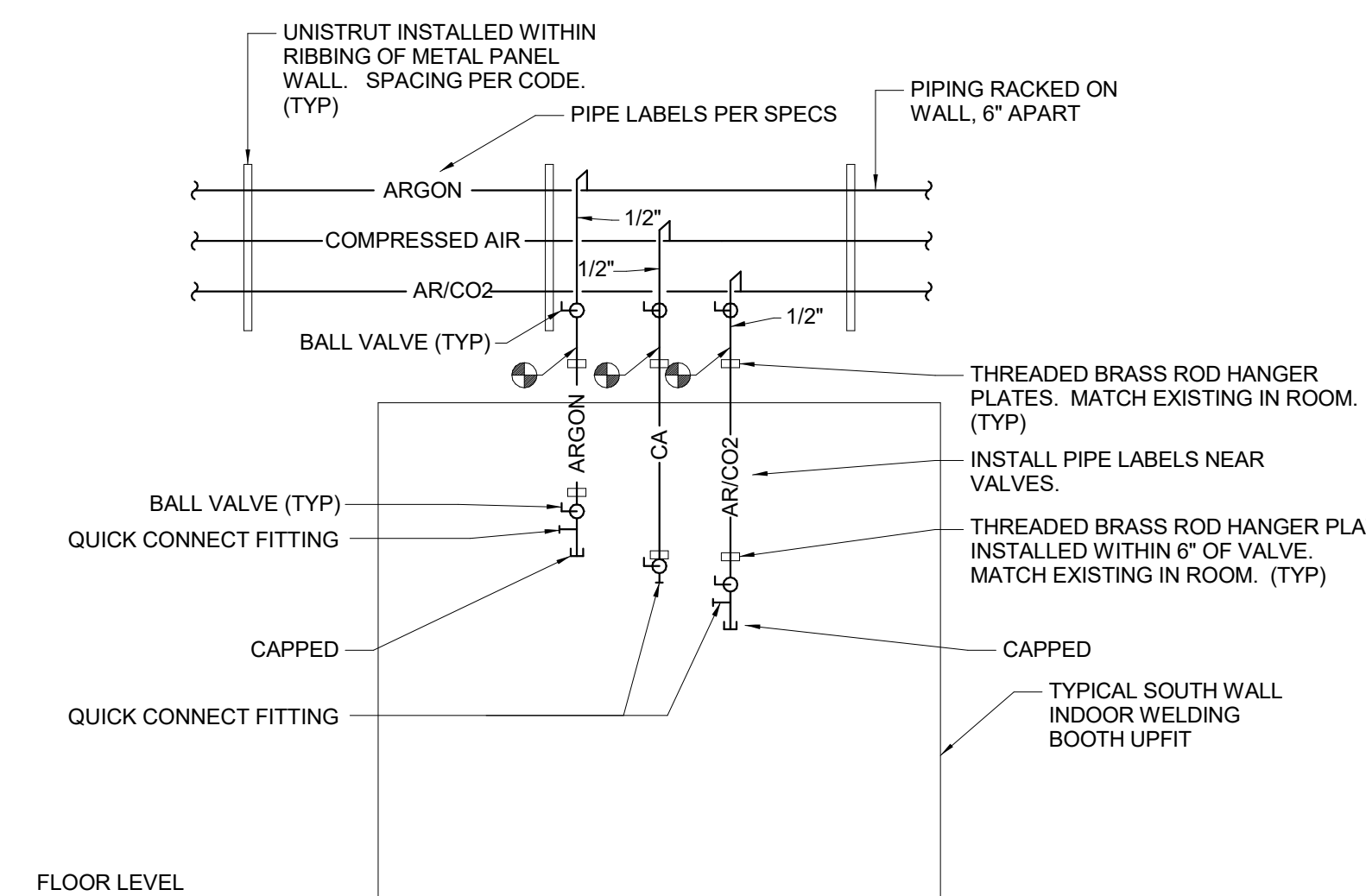
TABLE NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE, AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHTS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS AT 4 FT. OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK / CONDUIT IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. THE RESTRAINT OF PENDANT, LAY-IN, & CAN LIGHTS IS ADDRESSED IN ASTM C636 & E580.
7. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.



TYPICAL BOOTH GAS PIPE INSTALLATION FOR NORTH WALL WELDING AREA

SCALE: NONE



TYPICAL FUTURE BOOTH GAS PIPE INSTALLATION FOR SOUTH WALL WELDING AREA

SCALE: NONE

PLUMBING LEGEND		
SYMBOL	DESCRIPTION	
---	COLD WATER	
---	HOT WATER - 110°	
---	HOT WATER RECIRCULATION	
-----	VENT	
---	SAN - SANITARY SEWER	
---	G - NATURAL GAS (2 PSI)	
---	140 - HOT WATER - 140°	
---	→ FLOW ARROW	
---	WALL HYDRANT/HOSE BIBB	
---	SHUT-OFF VALVE	
---	HWV - HWV CIRCUIT SETTER OR GAS COCK	
---	---	CHECK VALVE
---	WCO - WALL CLEANOUT	
---	FCO - FLOOR CLEANOUT	
---	C.O.T.G. - CLEANOUT TO GRADE	
---	VTR - VENT THRU ROOF	
---	RD - ROOF DRAIN LEADER	
---	DRUP, RISE - DROP OR RISE	
---	---	CAPPED CONNECTION
---	FD - FLOOR DRAIN	
---	---	VALVE IN RISER
8 P0.04	DETAIL SYMBOL INDICATING THE DETAIL NUMBER AND THE DETAIL LOCATION SHEET REFERENCE	
---	HWR - HOT WATER RECIRCULATION - DOMESTIC	
---	AFF - ABOVE FINISHED FLOOR	
---	AFG - ABOVE FINISHED GRADE	
---	BAS - BUILDING AUTOMATION SYSTEM	
---	BFF - BELOW FINISHED FLOOR	
---	CW - COLD WATER	
---	FM - FORCED MAIN	
---	HW - HOT WATER	
---	HWR - HOT WATER RECIRCULATION	
---	SF - SQUARE FEET	
---	WHA - WATER HAMMER ARRESTOR	
---	---	BALL VALVE
---	---	SOLENOID VALVE
---	---	VENT
---	---	ACID VENT
---	---	EMERGENCY GAS SHUTOFF BUTTON
---	A - ACETYLENE	
---	MA - MIXED GAS	
---	AR - ARGON	
---	O2 - OXYGEN	
---	PRD - PRIMARY ROOF DRAIN	
---	ORD - OVERFLOW ROOF DRAIN	
---	CO2 - CARBON DIOXIDE	
---	CA - COMPRESSED AIR	
---	H - HOSE REEL	
---	TP - TEMPERATURE/PRESSURE	
---	FD - FLOOR DRAIN	
---	A - ACETYLENE PIPING	
---	AR - ARGON PIPING	
---	MA - MIXED AIR PIPING	
---	CA - COMPRESSED AIR PIPING	
---	O - OXYGEN PIPING	
---	COTG - CLEANOUT TO GRADE	
---	N GAS - NATURAL GAS	
---	---	CONNECT TO EXISTING OR CONNECT TO OWNER PROVIDED
---	MG - MIXED GAS	

(EXISTING) SHOP AIR COMPRESSOR SYSTEM

SYMBOL	QTY	DESCRIPTION	SCFM	PSIG	HP	VOLTAGE	FULL LOAD AMPS	RECEIVER	MANUFACTURER/MODEL BASIS OF DESIGN	REMARKS
AC-1	1	SHOP AIR COMPRESSOR	100	120	25	460/3/60	73.5	240 GAL.	INGERSOLL RAND UPRS-25-125	HORIZONTAL RECEIVER

INSTALL ON VIBRATION ISOLATION PADS ON A 6" HIGH CONCRETE HOUSEKEEPING PAD. PROVIDE 120 PSI AIR TO SYSTEM TO MAINTAIN 90 PSI AT EQUIPMENT.

(EXISTING) SHOP AIR DRYER SYSTEM

SYMBOL	QTY	DESCRIPTION	SCFM	FDP	KW	VOLTAGE	MANUFACTURER/MODEL BASIS OF DESIGN	REMARKS
AD-1	1	SHOP AIR DRYER	100	35 DEGREE	1.1	115/1/60	INGERSOLL RAND D212EC	INCLUDES PREFILTER

RATED AT 100 PSIG INLET PRESSURE, 100 DEG F INLET TEMPERATURE, 100 DEG F AMBIENT TEMPERATURE. UNIT MEASURES: 50X30X42.5. TANK MEASURES 34X30X76.5. INSTALL ON VIBRATION ISOLATION PADS ON A 4" HIGH CONCRETE HOUSEKEEPING PAD. RUN DRAIN LINE ALONG PERIMETER OF ROOM TO FLOOR DRAIN. PRE-FILTER SHALL FILTER TO 1.0 MICRON AND BE RATED FOR COMPRESSOR FLOW. OTHER EQUAL MANUFACTURERS INCLUDE: HANKISON, AND PNEUMATECH.

(EXISTING) HOSE REEL

SYMBOL	QTY	DESCRIPTION	MANUFACTURER/MODEL BASIS OF DESIGN	REMARKS
H	SEE DRAWINGS	HOSE REEL - 3/8" INNER DIAMETER HOSE, 35' FT LONG HOSE, RATED FOR RATED FOR 300 PSI. SAME HOSE REEL SHALL BE INSTALLED THROUGHOUT.	REELCRAFT RT635-OLP	SECURE TO STRUCTURE

ALTERNATE ACCEPTABLE MANUFACTURERS ARE COX REELS AND HUBBELL.

GENERAL NOTES:

1. ALL OPENINGS FOR PIPING PENETRATIONS ARE GENERALLY PROVIDED BY THE PLUMBING SUB-CONTRACTOR. EXCEPTIONS ARE COVERED BY NOTES AND DETAILS. THE LOCATION AND SIZE OF EACH OPENING SHALL BE FURNISHED TO THE GENERAL CONTRACTOR BY THE PLUMBING SUB-CONTRACTOR.
2. PIPE HANGERS AND CONCRETE INSERTS UTILIZED FOR THIS PROJECT SHALL BE PROVIDED BY THE PLUMBING SUB-CONTRACTOR. THIS INCLUDES ALL SUPPLEMENTAL STEEL, ETC.
3. COORDINATE VERTICAL PIPING WITH ARCHITECTURAL PLANS FOR EXACT LOCATION OF RISER.
4. COORDINATE SHUTDOVNS OF GAS SERVICES WITH OWNER.
5. NEW PIPE LABELS SHALL MATCH EXISTING LABELS.

DRAWING LIST - PLUMBING	
Sheet Number	Sheet Name
P001	PLUMBING NOTES, SYMBOLS, SCHEDULES AND DETAILS
P101	FIRST FLOOR PLANS - EAST - PLUMBING
P201	MIXED GASES AND STORM PIPING - ISOMETRIC - EAST

**GCAM -
WELDING
LAB
EXPANSION**

**BIDDING
DOCUMENTS**

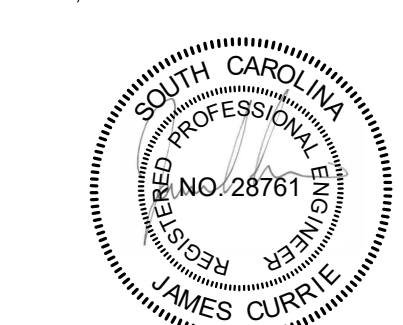
**OSE PROJECT#:
H59-N219-CB**

**FIRST FLOOR PLANS -
EAST - PLUMBING**

DATE: 05/16/2023
PROJECT NO: 23007

REVISIONS
NO: DATE: DESCRIPTION:

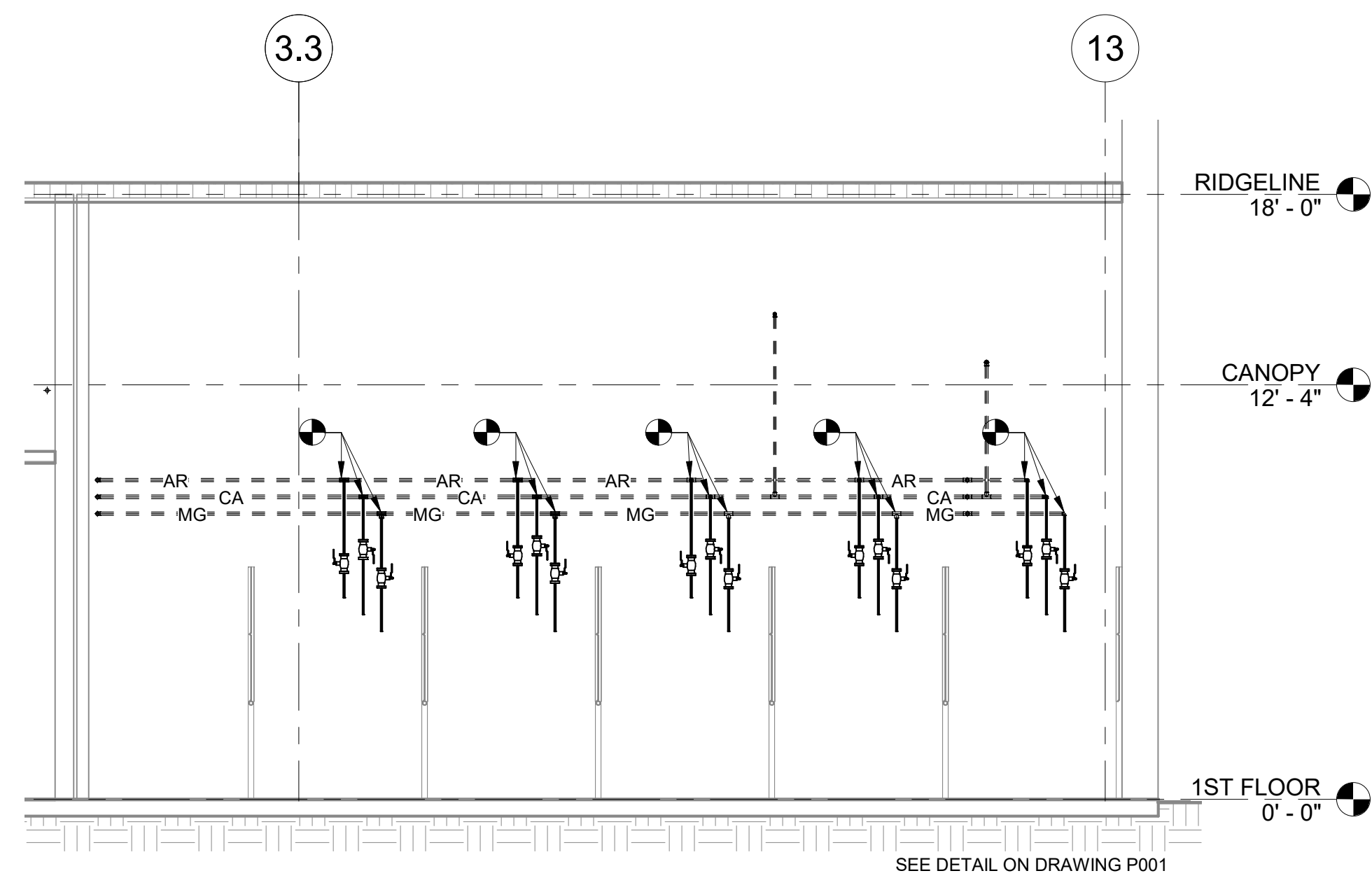
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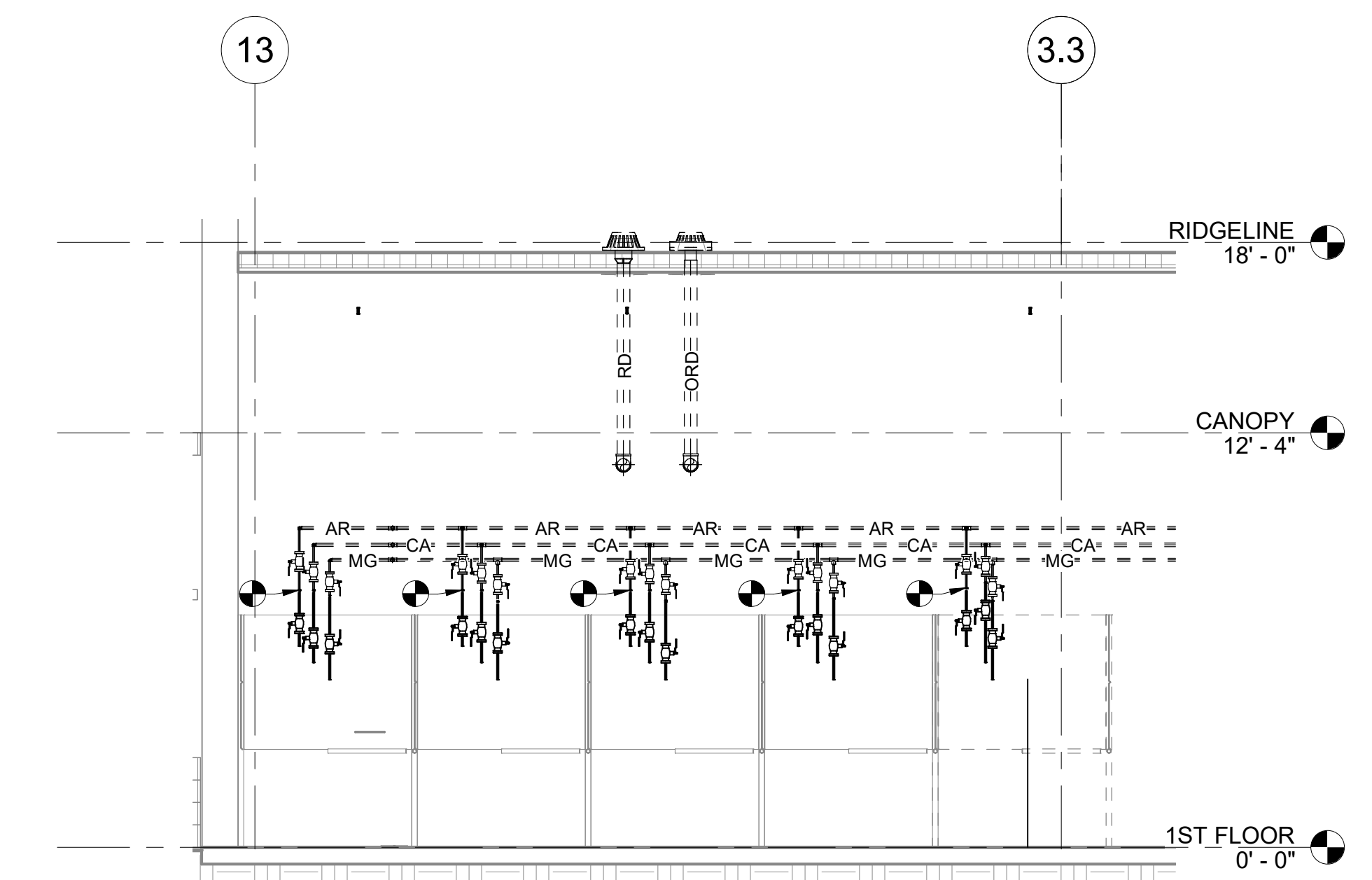
223.006 05/16/2023

SHEET NUMBER

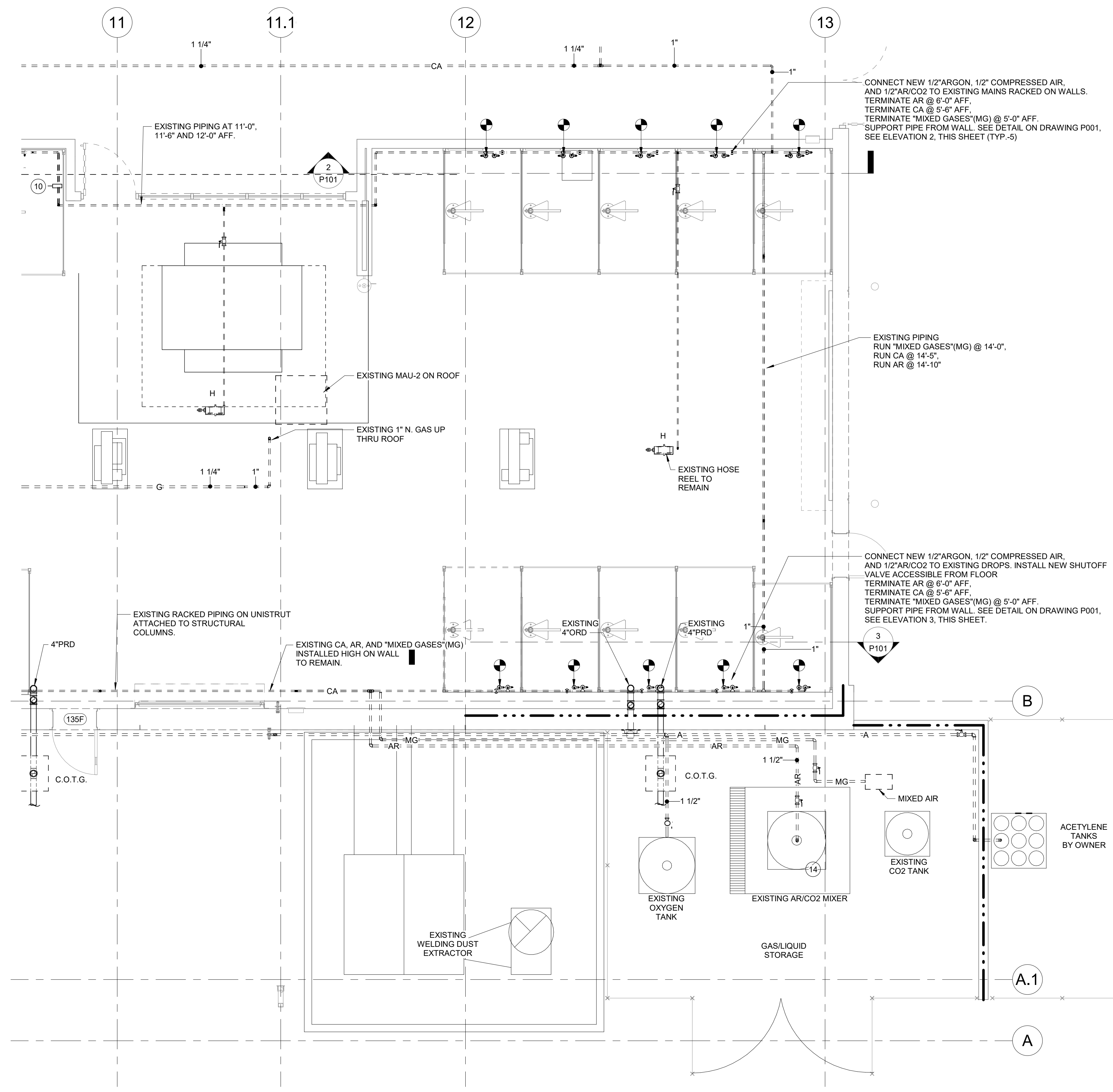
P101



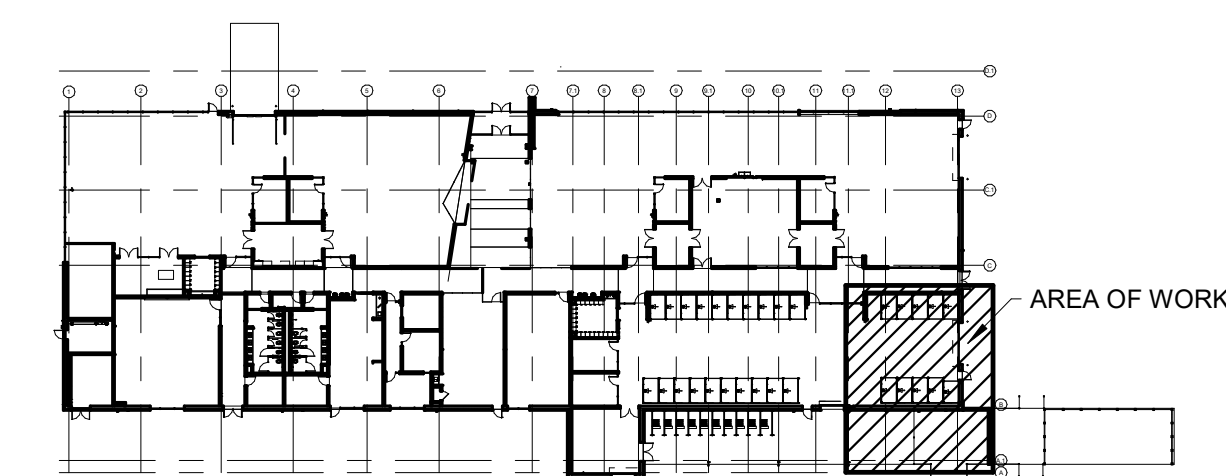
2 SECTION 2 - NORTH WALL
P101 1/4" = 1'-0"



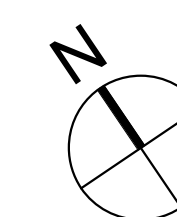
3 SECTION 3 - SOUTH WALL
P101 1/4" = 1'-0"



1 FIRST FLOOR PLAN - EAST - GAS AND STORM PIPING
P101 1/4" = 1'-0"

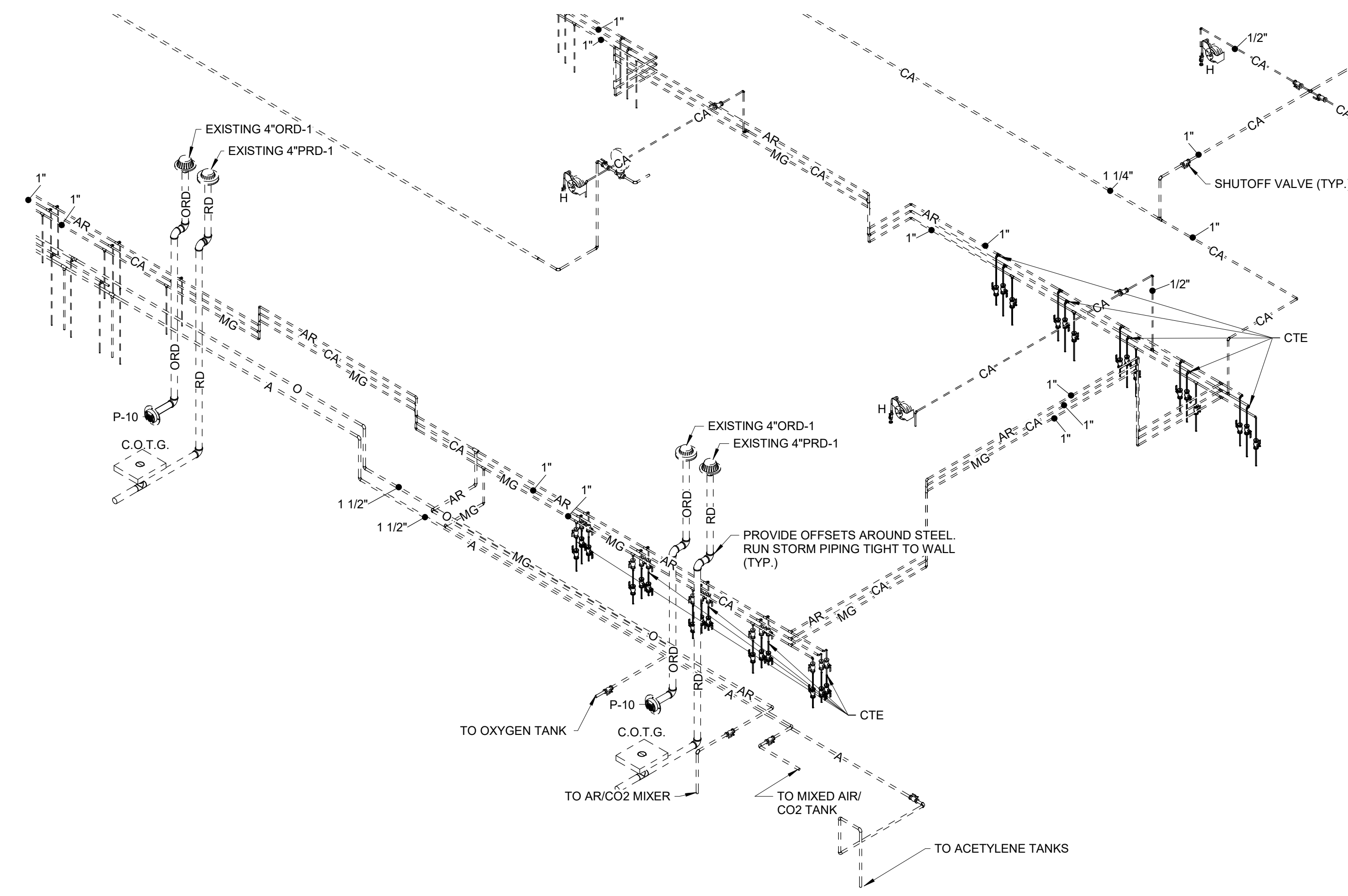


KEY PLAN



WALL PARTITION LEGEND:

--- · · · · ·	3 HR. FIRE RATING
--- · · · · ·	2 HR. FIRE RATING (6' FEET HIGH)
× × × × ×	ALUMINUM CHAIN LENGTH FENCING



1 MIXED GASES AND STORM PIPING ISOMETRIC - EAST
P201 / NTS

**GCAM -
WELDING
LAB
EXPANSION**

**BIDDING
DOCUMENTS**

**OSE PROJECT#:
H59-N219-CB**

**MIXED GASES AND
STORM PIPING
ISOMETRIC - EAST**

DATE: 05/16/2023
PROJECT NO: 23007

REVISIONS
NO: DATE: DESCRIPTION:

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223.006 05/16/2023

SHEET NUMBER

P201

GENERAL MECHANICAL NOTES

- OPENINGS FOR DUCTWORK SHALL BE PROVIDED BY THE MECHANICAL SUB-CONTRACTOR. THE LOCATION AND SIZE OF EACH OPENING SHALL BE FURNISHED TO THE GENERAL CONTRACTOR BY THE DIVISION 23 SUB-CONTRACTOR.
- THERMOSTATS, WALL SWITCHES, ETC. SHALL BE LOCATED AT THE SAME HEIGHT AS LIGHT SWITCHES (WITH 48" TO TOP MAXIMUM) IN ACCORDANCE WITH ANSI A117.1-2017. COORDINATE PLACEMENT WITH THE ELECTRICAL SUB-CONTRACTOR.
- ALL DOOR LOUVERS AND UNDERCUTS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. ARCHITECT TO SELECT.
- ALL WIRING, CONTROL WIRING, AND CONDUIT SHALL BE CONCEALED IN FINISHED SPACES.
- DUCT DIMENSIONS INDICATED ARE NET AIR STREAM INTERIOR DIMENSIONS OF DUCTWORK.
- THE MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0".
- ALL OPENINGS THROUGH NON-RATED WALLS SHALL BE PROVIDED WITH SHEETMETAL SLEEVES.
- REFER TO ARCHITECTURAL PLANS FOR FIRE RATING OF PARTICULAR WALLS, FLOORS AND FOR NON-RATED WALLS WHICH EXTEND TO STRUCTURE.
- ALL ROOF CURBS SHALL BE PROVIDED BY THE DIVISION 23 SUB-CONTRACTOR AND SHALL BE APPROVED BY THE GENERAL CONTRACTOR.
- COORDINATE VERTICAL DUCTWORK. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF RISERS.
- FOR EXACT LOCATION OF GRILLES, DIFFUSERS, ETC., REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
- THE DIVISION 23 SUB-CONTRACTOR SHALL PROVIDE TRANSITIONS AS REQUIRED TO MAKE DUCT CONNECTIONS FROM TERMINAL UNITS TO DUCTWORK WHERE DUCT SIZES ARE NOT SHOWN OR DO NOT MATCH INLET OPENINGS. TRANSITIONS SHALL HAVE A 7:1 RATIO.
- RUN-OUTS TO SUPPLY, RETURN AND EXHAUST DISTRIBUTION DEVICES SHALL BE AS INDICATED ON THE PLANS. WHERE SIZE OF RUN-OUT IS NOT GIVEN, THE RUN-OUT SHALL HAVE AN AREA EQUAL TO THE DISTRIBUTION DEVICE NECK SIZE. NECK SIZE SHALL BE BASED ON NC 20 OR LESS.
- WHERE DUCT PENETRATES FIRE WALL, AND WHERE FIRE DAMPERS ARE NOT REQUIRED, PROVIDE SHEET METAL SLEEVES AS DETAILED. PACK THE SPACE BETWEEN THE SLEEVES AND DUCT WITH FIRE PROOF SAFING.
- ROOF OPENINGS AND THEIR ASSOCIATED MISCELLANEOUS STEEL SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- PROVIDE REMOTE MOUNTED YOUNG REGULATORS FOR BALANCING OF ALL VOLUME DAMPERS ABOVE ROOMS WITH DRY WALL CEILINGS.
- THE GENERAL CONTRACTOR SHALL PROVIDE HORIZONTAL CHANNELS AS REQUIRED TO FRAME CEILING OPENINGS FOR STRIP DIFFUSERS. THE GENERAL CONTRACTOR SHALL POSITION HIS DIAGONAL BRACES TO AVOID DUCT AND PIPING. THE DIVISION 15B SUB-CONTRACTOR SHALL COORDINATE THESE ITEMS WITH THE GENERAL CONTRACTOR.
- ALL LOW PRESSURE DUCTWORK ABOVE NON-LAY-IN CEILINGS SHALL BE RIGID SHEET METAL. NO FLEXIBLE DUCTWORK SHALL BE USED.
- FILL CURBS OF ROOF TOP UNITS WITH (5) FIVE LAYERS OF 3/4" SHEETROCK, OVERLAPPING SEAMS.
- ALL EQUIPMENT ROOF CURBS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND SHALL BE AT LEAST 14" HIGH ABOVE TOP OF ROOFING. THOSE CURBS SHALL BE SEISMICALLY DESIGNED. CURB OPENINGS TO MATCH SIZE AND LOCATION OF ROOF OPENINGS. THESE CURBS SHALL ALSO BE VIBRATION ISOLATION TYPE IN ACCORDANCE WITH NOTE 2 UNDER ROOFTOP AIR CONDITIONING UNIT SCHEDULE ON SHEET M0.02.
- PROVIDE INTERNAL LINER ELASTOMERIC ACOUSTICAL TYPE ON FIRST NOMINAL 20' OF SUPPLY AND RETURN DUCTWORK LEAVING AND ENTERING EACH ROOFTOP UNIT. AREAS LISTED ARE NET FREE AREAS, INCREASE DIMENSIONS AS REQUIRED TO MAINTAIN FREE AREA. EXTERNALLY INSULATE LINED SAMPSSA AS WELL.
- ALL ROOF MOUNTED EQUIPMENT AND CURBS SHALL COMPLY WITH SEISMIC AND WIND SHEAR BRACING REQUIREMENTS. REFER TO IBC AND ASCE 7 FOR REQUIREMENTS.
- PIPE HANGERS UTILIZED FOR THIS PROJECT SHALL BE PROVIDED BY THE DIVISION 23 SUB-CONTRACTOR. THIS INCLUDES ALL SUPPLEMENTAL STEEL, ETC.
- MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX PER IBC 602.3.1.
- ALL DUCTWORK SHALL BE SEALED CLASS 'A' PER SMACNA STANDARDS.
- ALL DUCTWORK PROVIDED WITH LAGGING SHALL BE SUPPORTED FROM SPRING HANGERS.
- AT CONTRACTOR'S OPTION, AC DRAIN PIPING ON ROOF MAY BE SCHEDULE 40 PVC OR COPPER AS SPECIFIED.
- SUPPLY AND RETURN REGISTERS IN THE WALLS SHALL BE FIELD PAINTED. COLOR SHALL BE SELECTED BY THE ARCHITECT.
- YOUNG REGULATORS USED FOR REMOTE BALANCING SHALL BE PROVIDED WITH A PREFINISHED FLAT WHITE COVER PLATE.
- ALL EXPOSED NON-FABRIC DUCT TO BE SINGLE WALL WITH PAINT GRIP. PAINT TWO COATS ENAMEL. COLOR BY ARCHITECT.
- MECHANICAL SUB CONTRACTOR SHALL REFER TO DIVISION 1 COMMISSIONING SPECIFICATIONS FOR ALL REQUIREMENTS AND INVOLVEMENT.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE
 Prescriptive [X] Energy Cost Budget

Thermal Zone _____ ZONE 3A

Exterior design conditions
 winter dry bulb 25.4 °F
 summer dry bulb 91.3 °Fdb/78°Fwb

Interior design conditions
 winter dry bulb 72 °F
 summer dry bulb 75 °F
 relative humidity 50% R.H.

Building heating load _____ 602.7 MBH (ADD 600 MBH FOR WELDING MAKE UP AIR)
Building cooling load _____ 91.5 TONS (EXCLUDING WELDING 100%OA MODE LOAD)

Mechanical Spacing Conditioning System
 Unitary _____ PACKAGED ROOF TOP UNITS
 description of unit _____ DX COOLING ONLY
 heating efficiency _____ SEE DRAWING M-002.3
 cooling efficiency _____ SEE DRAWING M-002.3
 heat output of unit _____ SEE DRAWINGS M-002.003
 cooling output of unit _____ SEE DRAWINGS M-002.003
 boiler _____ NOT APPLICABLE
 total boiler output, if oversized, state reason. _____

chiller _____ NOT APPLICABLE
 total chiller capacity, if oversized, state reason. _____

List equipment efficiencies

Equipment schedule with motors (mechanical systems)
 motor horsepower _____ MOTOR CONTROL SCHEDULE THIS SHEET
 number of phases _____ MOTOR CONTROL SCHEDULE THIS SHEET
 minimum efficiency _____ MOTOR CONTROL SCHEDULE THIS SHEET
 motor type _____ MOTOR CONTROL SCHEDULE THIS SHEET
 # of poles _____ MOTOR CONTROL SCHEDULE THIS SHEET

DESIGNER STATEMENT:
 To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the International Building Code, 2012.

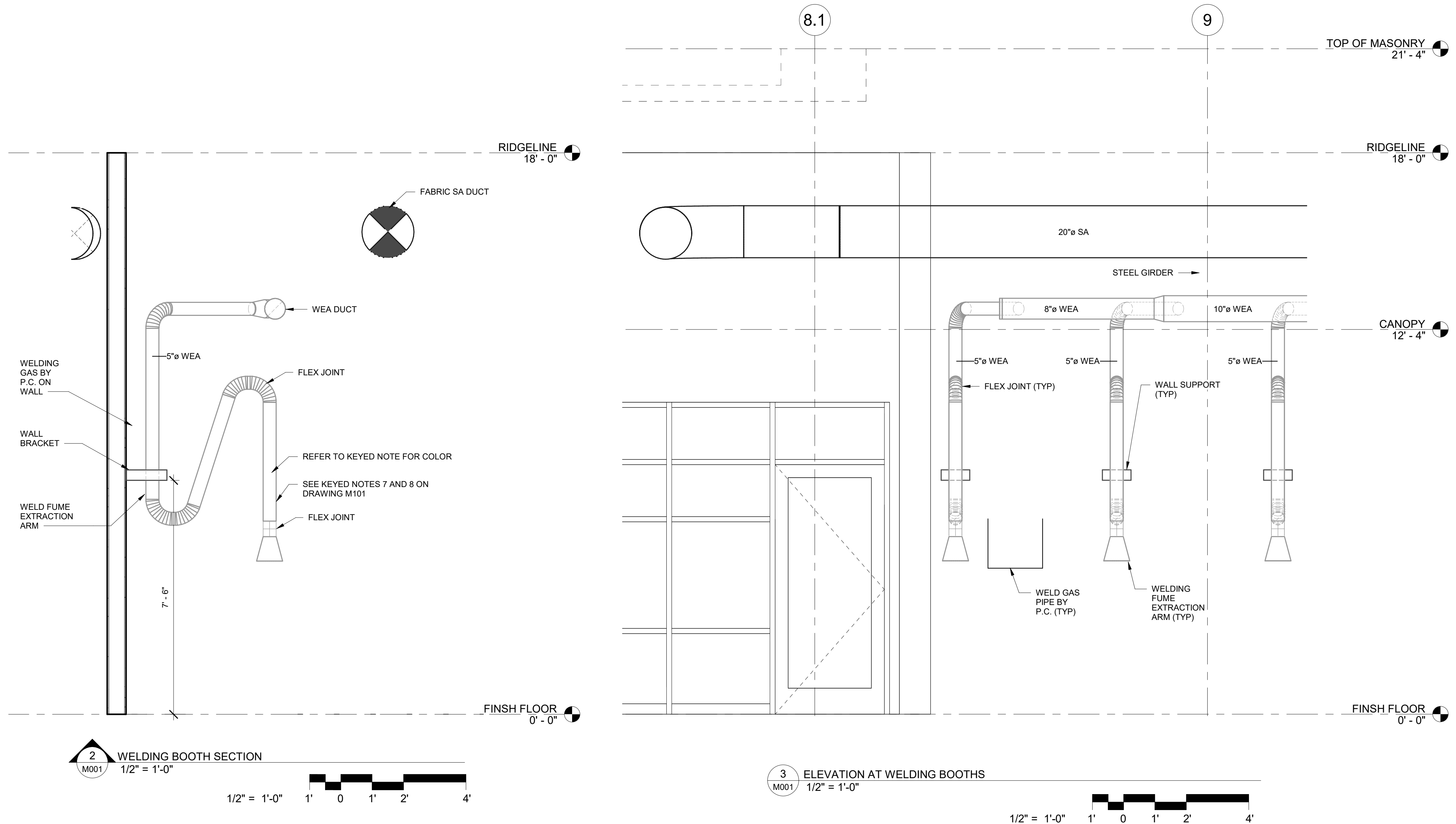
Name: JAMES CURRIE, P.E.
 Title: PRINCIPAL

MECHANICAL SYMBOLS LEGEND

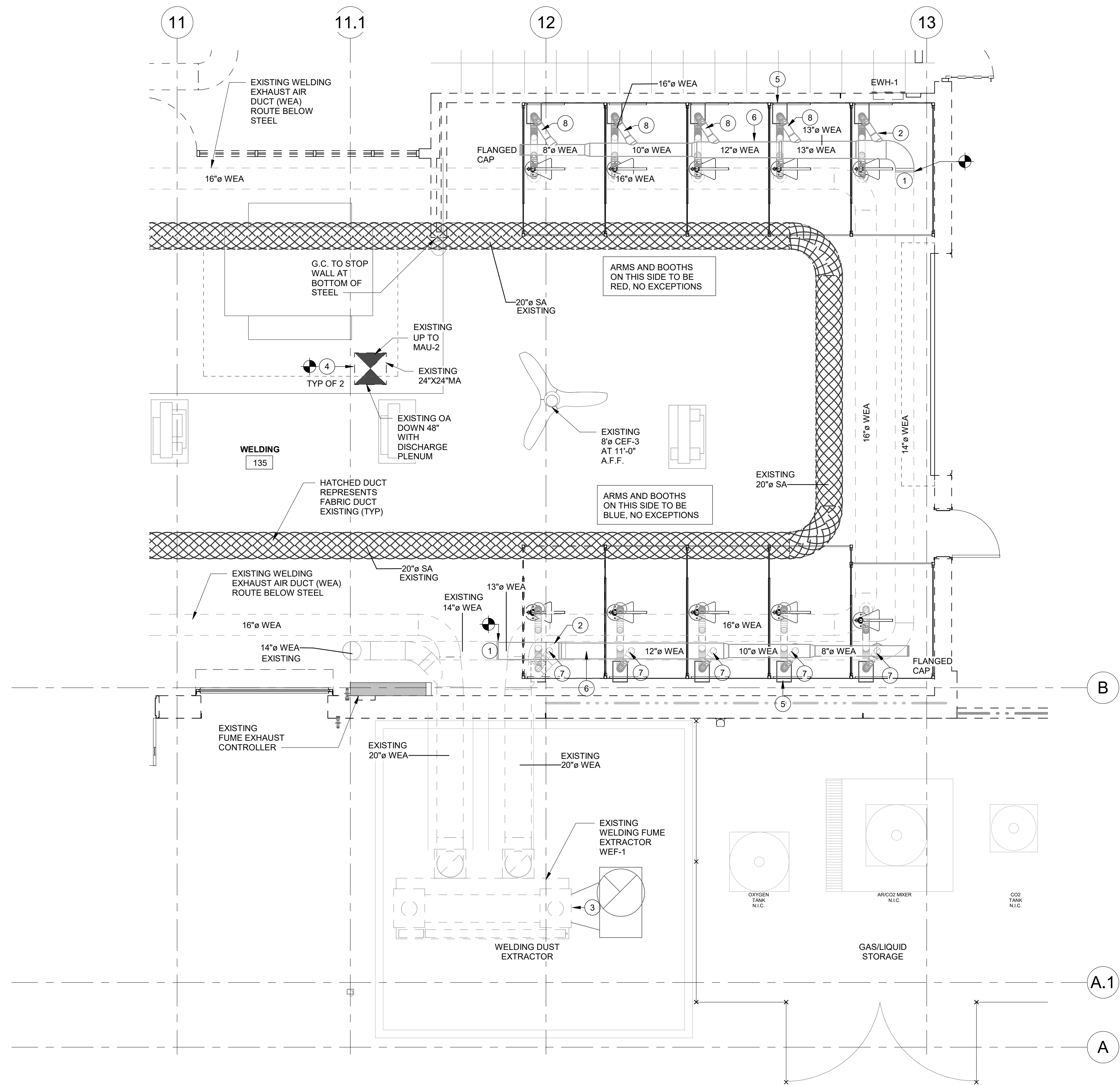
	SUPPLY AIR DUCT OR DIFFUSER		THERMOSTAT
	RETURN OR EXHAUST AIR DUCT OR GRILLE		WALL SWITCH
	DEVICE DESIGNATION		CARBON MONOXIDE SENSOR
	CFM		CARBON DIOXIDE SENSOR
	RECTANGULAR DUCTWORK WIDTH x HEIGHT		WALL MOUNT - PUSHBUTTON OVERRIDE SWITCH TO BAS
	RECTANGULAR DUCTWORK WIDTH x HEIGHT LINED DUCT; (L) DUCT LINER		DOOR LOUVER
	ROUND DUCT SIZE		DUCT DETECTOR
	VANE ELBOW (DOUBLE WALL VANES)		FIRE DAMPER W/ACCESS DOOR (WALL)
	RECTANGULAR DUCTWORK TRANSITION		FIRE DAMPER W/ACCESS DOOR (FLOOR)
	DUCT/AIR BLOWING UP TOWARD READER		COMBINATION FIRE/SMOKE DAMPER W/ACCESS DOOR (WALL)
	DUCT/AIR BLOWING AWAY FROM READER		COMBINATION FIRE/SMOKE DAMPER W/ACCESS DOOR (FLOOR)
	DUCT/AIR FLOW DOWN		ACCESS DOOR
	FLEXIBLE DUCT, MAX. 6'-0" LONG.		OUTDOOR AIR
	EXHAUST OR RETURN REGISTER OR GRILLE		SUPPLY AIR
	CONICAL TAP WITHOUT VOLUME DAMPER (MPSA DUCT)		EXHAUST AIR
	SPIN-IN FITTING WITH VOLUME DAMPER (LOW PRESSURE DUCT ONLY)		RETURN AIR
	BRANCH TAKE-OFF WITH VOLUME DAMPER		MEDIUM PRESSURE SUPPLY AIR
	MANUAL ISOLATION DAMPER (NORMALLY CLOSED)		PACKAGED ROOFTOP UNIT
	MOTORIZED AUTOMATIC DAMPER		ABOVE FINISHED FLOOR
			HVAC SUB-CONTRACTOR
			PLUMBING SUB-CONTRACTOR
			ELECTRICAL SUB-CONTRACTOR
			FIRE DAMPER OR FLOOR DRAIN
			BAKED ON WHITE
			NOT TO SCALE
			OCCUPIED/UNOCCUPIED SWITCH
			ZONE OVERRIDE SWITCH

MECHANICAL DRAWING LIST

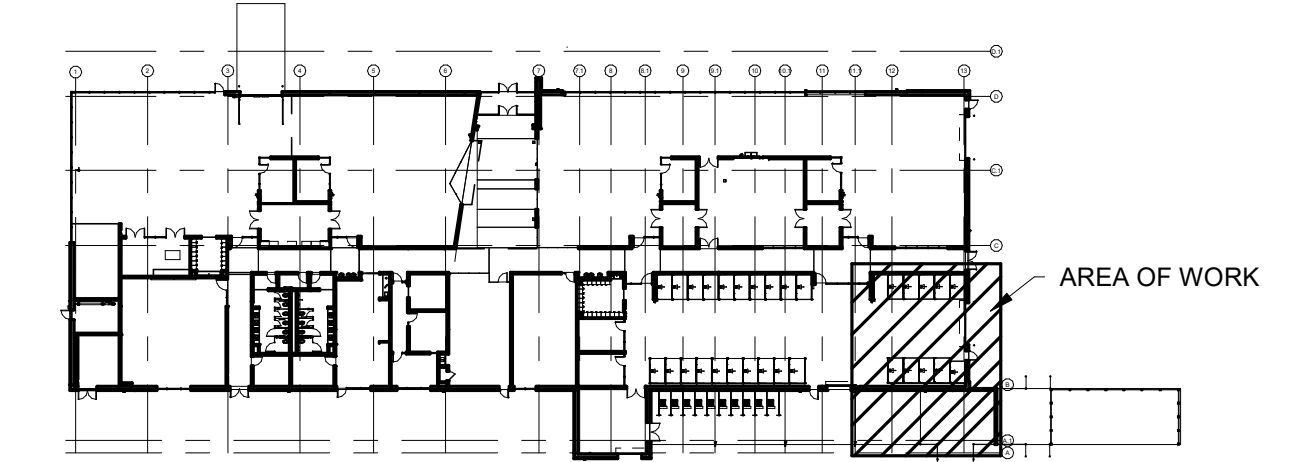
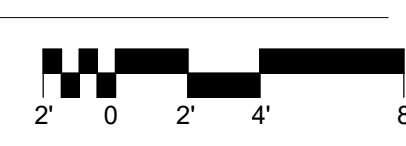
Sheet Number	Sheet Name
M001	LEGEND, SYMBOLS, NOTES AND DRAWING LIST - MECHANICAL
M101	FIRST FLOOR PLAN - EAST - HVAC DUCTWORK



MECHANICAL KEYED NOTES	
KEY VALUE	KEYNOTE TEXT
1	REMOVE VOLUME DAMPER AND INLET GRATING/BELLMOUTH. CONNECT DUCT TO MATCH EXISTING.
2	PROVIDE VOLUME DAMPER AT TAP TO NEW DUCT.
3	REBALANCE/RESET FUME EXHAUST FAN VFD TO PROVIDE A MINIMUM OF 600 CFM PER EXTRACTION ARM.
4	REMOVE CURRENT MESH AT OPENING. PROVIDE NEW DISCHARGE GRILLE AT 24"X24" TWO WAY DEFLECTION STAINLESS STEEL DISCHARGE GRILLE SIMILAR TO NAILOR 71DH.
5	PROVIDE WALL MOUNT AND ELEVATIONS OF ALL EXTRACTION ARMS TO MATCH EXISTING. FIELD VERIFY ELEVATIONS.
6	ROUTE DUCT HIGH IN STRUCTURAL BAY TO MATCH EXISTING.
7	PROVIDE FUME EXTRACTION ARM WITH WALL MOUNT BRACKET. ARM TO BE IAP MODEL FA-0160-H - 9' MINIMUM EXTENSION LENGTH. TUBE COLOR TO BE BLUE WITH BLACK FLEX AND HOOD FOR THIS SIDE, NO EXCEPTIONS.
8	PROVIDE FUME EXTRACTION ARM WITH WALL MOUNT BRACKET. ARM TO BE IAP MODEL IAP MODEL FA-106-H - 9' MINIMUM EXTENSION LENGTH. TUBE COLOR TO BE RED WITH BLACK FLEX AND HOOD FOR THIS SIDE, NO EXCEPTIONS.

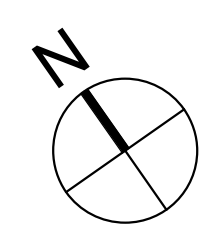


1 FIRST FLOOR PLAN - HVAC PLAN - EAST
M101 1/4" = 1'-0"



WALL PARTITION LEGEND:

	3 HR. FIRE RATING
	2 HR. FIRE RATING (6' FEET HIGH)
	ALUMINUM CHAIN LINK FENCING



**GCAM -
WELDING
LAB
EXPANSION**
**BIDDING
DOCUMENTS**

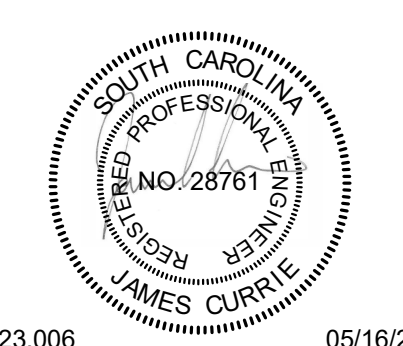
**OSE PROJECT#:
H59-N219-CB**

**FIRST FLOOR PLAN - EAST
- HVAC DUCTWORK**

DATE: 05/16/2023
PROJECT NO: 23007

REVISIONS
NO: DATE: DESCRIPTION:

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223.006 05/16/2023

SHEET NUMBER

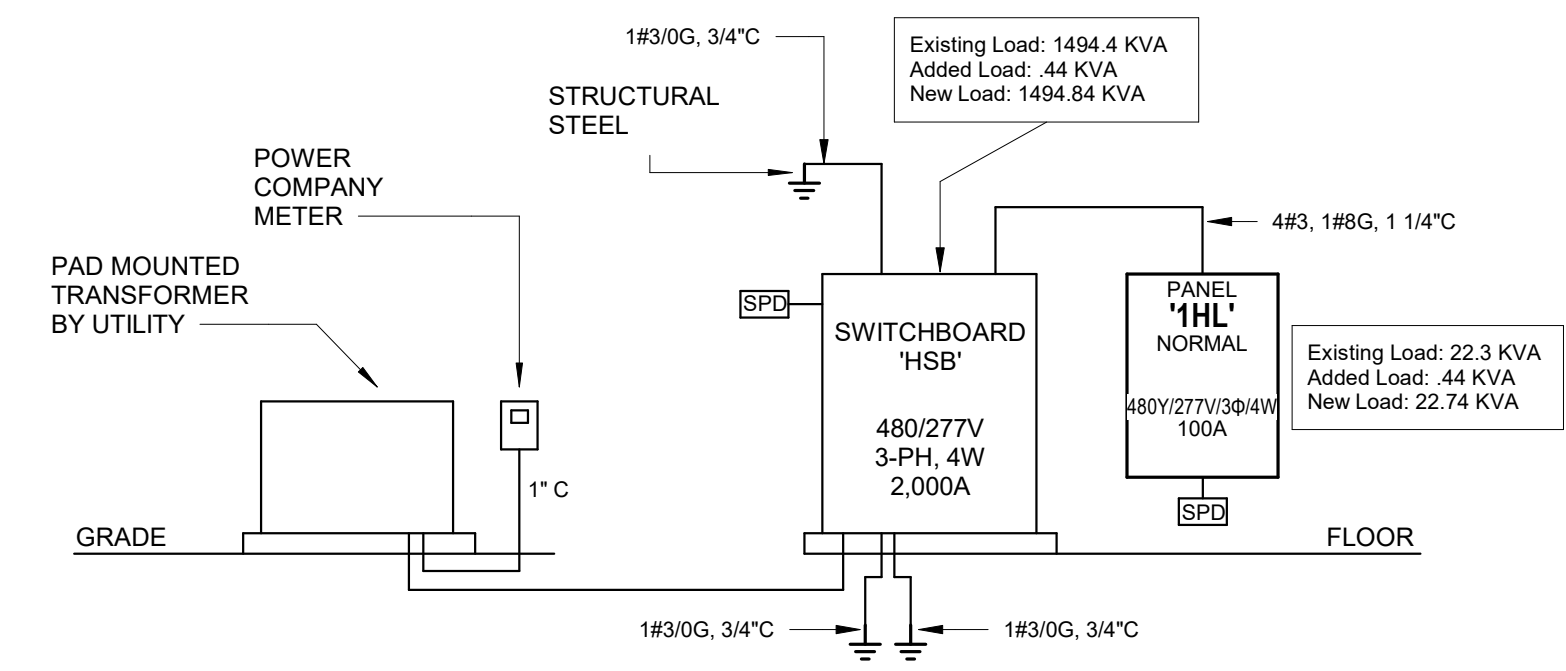
M101

ELECTRICAL SYMBOL SCHEDULE

- LIGHTING**
□ LIGHTING FIXTURE: CEILING, WALL, SUSPENDED, OR RECESS MOUNTED AS SCHEDULED. DRAWN APPROXIMATELY TO SCALE. PROVIDE OUTLET BOX TO FIT CONDITIONS.
- TYPICAL LUMINAIRE NOTATIONS**
(BHA-5) NOTATION ON PARENTHESES NEXT TO AN ELECTRICAL DEVICE OR LUMINAIRE INDICATES THE PANEL AND BRANCH CIRCUIT SERVING THE ITEM. PROVIDE BRANCH CIRCUIT WIRING IN CONDUIT PER SPECIFICATIONS.

GENERAL NOTES

- ELECTRICAL DEVICES AND EQUIPMENT SHALL BE U.L. APPROVED FOR USE WITH CONDUCTORS THAT HAVE INSULATION RATED FOR 75°C OR HIGHER. DERATING OF CONDUCTORS IS NOT ALLOWED.
- ELECTRICAL CONDUCTORS SHALL BE COPPER, THW/THHN, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG. REFER TO SPECIFICATIONS FOR MINIMUM ACCEPTABLE CONDUIT SIZE.
- AN INDIVIDUAL GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED WITH EACH 120-VOLT OR HIGHER VOLTAGE CIRCUIT. SIZE CONDUCTOR AS SHOWN, OR, IF SIZE IS NOT GIVEN, PER NEC TABLES 250.122 AND 250.168, AS APPLICABLE. GROUNDING CONDUCTOR SHALL BE BONDED TO EACH METALLIC CONDUIT, EACH OUTLET BOX, AND TO TERMINATION EQUIPMENT.
- PROVIDE CONDUITS AS SPECIFIED FOR ALL POWER CIRCUITS, SIZED PER NEC, NOT TO EXCEED 40% FILL.
- RUN CONDUITS AS HIGH AS POSSIBLE, CONCEALED IN WALLS, ABOVE CEILING, BELOW GRADE OR UNDER SLAB BELOW VAPOR BARRIER, OR HIDDEN IN OVERHEAD STRUCTURE TO MAXIMUM EXTENT FEASIBLE. COORDINATE ROUTING OF CONDUITS WITH OTHER TRADES TO AVOID CONFLICTS. CONDUIT IN SLAB OR DECK IS NOT ALLOWED AS A WIRING METHOD, UNLESS OTHERWISE NOTED.
- ALL WORK SHALL COMPLY WITH 2020 NEC.
- ALL EQUIPMENT, FIXTURES AND MATERIALS USED IN THIS PROJECT SHALL BE LISTED BY AN INDEPENDENT TESTING LABORATORY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
- ALL NON-ENERGIZED CONDUCTIVE SURFACES OF MATERIALS THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE BONDED TO INSULATED GROUNDING CONDUCTOR RUN WITH PHASE CONDUCTORS.
- EACH 120 VOLT AND 277 VOLT BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE, DEDICATED NEUTRAL CONDUCTOR WHETHER CIRCUIT IS RUN SINGLY OR GROUPED IN CONDUIT WITH OTHER CIRCUITS. NO MORE THAN THREE 120 VOLT OR 277 VOLT CIRCUITS MAY BE RUN TOGETHER IN A SINGLE CONDUIT.
- PROVIDE CONDUIT PENETRATION OF RATED WALLS AND FLOOR IN ACCORDANCE WITH DETAILS AND SECTION 260539.
- ELECTRICAL CIRCUITING SHOWN ON THESE DRAWINGS IS DIAGRAMMATIC AND IS NOT INTENDED TO DEPICT ACTUAL CONDUIT ROUTES. RUN CONDUITS PER SPECIFICATIONS, AND IN ACCORDANCE WITH NEC REQUIREMENTS. CIRCUIT RUNS OTHER THAN THOSE NECESSARY FOR THE OPERATION OF EGRESS STAIRS AND PASSAGES ARE NOT PERMITTED TO PENETRATE THE RATED STAIR ENCLOSURE OR THE ASSOCIATED EXIT PASSAGEWAY.
- DO NOT RUN ANY UN-RELATED POWER CONDUCTORS THROUGH TELECOM ROOM.
- THE LOCATION OF ALL ABOVE CEILING LIGHTING CONTROLS INCLUDING OCCUPANCY SENSOR POWER PACKS/RELAYS AND EMERGENCY TRANSFER RELAYS SHALL HAVE THEIR LOCATION IDENTIFIED ON THE CEILING WITH PHENOLIC LABELS PER SPECIFICATION SECTION 260553.
- CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.
- NO CONDUIT SHALL BE RUN EXPOSED WITHOUT PRIOR APPROVAL BY THE ARCHITECT.



1
E001 PARTIAL POWER RISER DIAGRAM
NOT TO SCALE

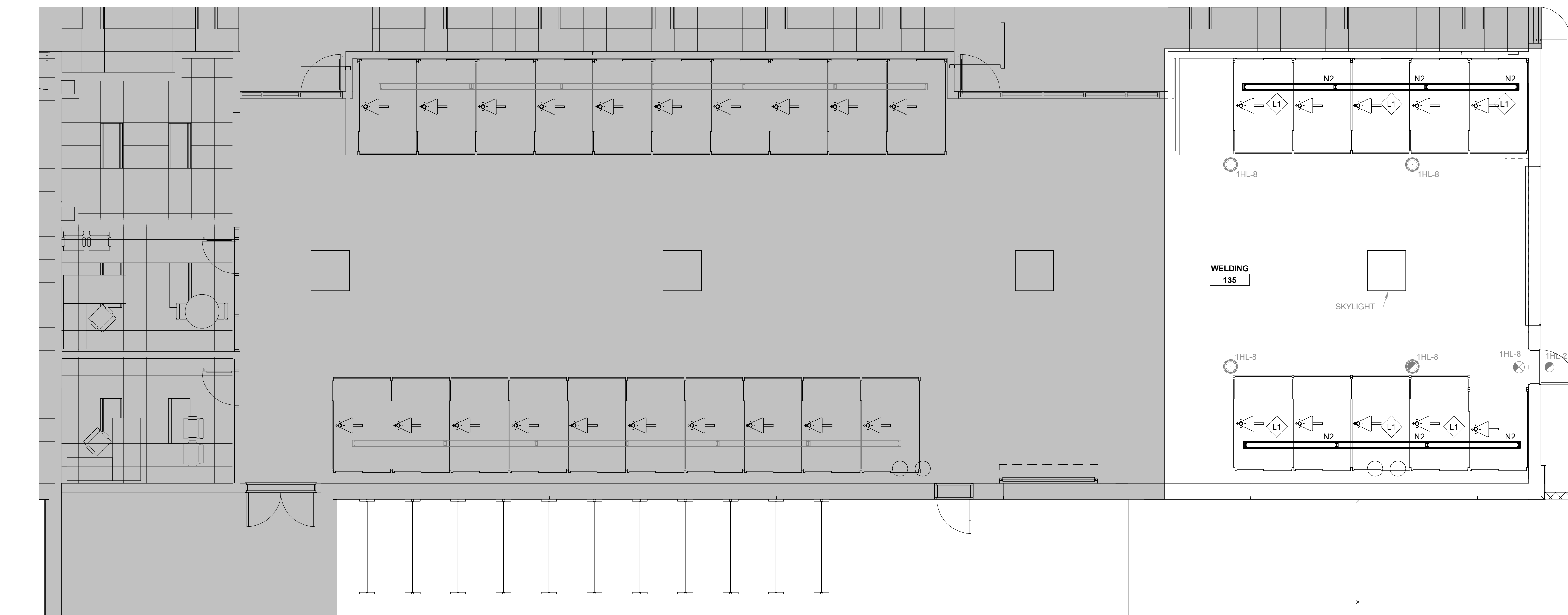
NOTE: ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN.

GENERAL NOTES (LIGHTING):

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
- CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100.1(2) 4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- ALL LIGHTING FIXTURE LENSES, PARABOLIC LOUVERS, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRTY DEPOSITS. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.

KEYNOTES

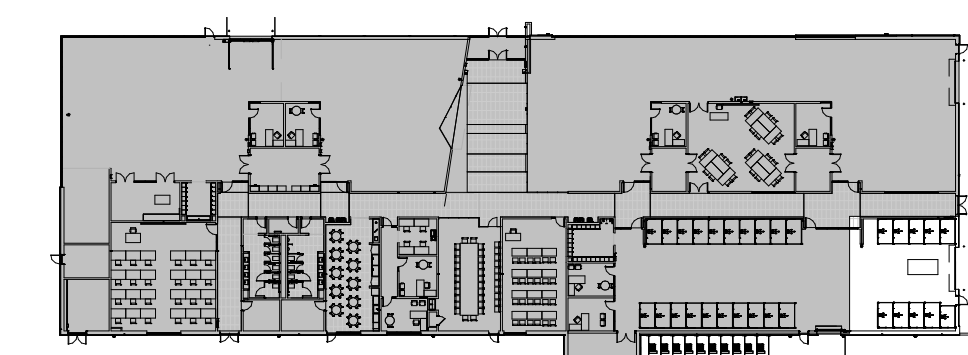
NO.	DESCRIPTION
L1	NEW LIGHTING FIXTURE SHALL BE WIRED TO EXISTING BRANCH CIRCUIT 1HL-8 SERVING LIGHTING IN THE AREA WITH 2#10, #10G, 3/4\"/>



2
E001 WELDING EXPANSION - LIGHTING
3/16" = 1'-0"

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	MOUNTING	LAMPS	MINIMUM LUMENS	MAXIMUM WATTAGE	VOLTAGE
N2	8' LED STRIP, SUSPENDED FROM OVERHEAD STRUCTURE WITH CHAINS TO 12'-0" AFF TO BOTTOM OF FIXTURE	WILLIAMS 76-6-L154/840-VBY-2-DRV-UNV	SUSPENDED	LED	15400	108	277



KEY PLAN