



WELDING LAB EXPANSION AND GRINDING LAB

CONSTRUCTION DOCUMENTS
9/12/23
STATE PROJECT # H59-6238
LS3P PROJECT # 2202-231075

INDEX OF SHEETS

GENERAL

G-000	COVER SHEET
G-001A	BUILDING CODE ANALYSIS - OSE FORMS
G-001B	BUILDING CODE ANALYSIS - OSE FORMS
G-002	FIRST FLOOR LIFE SAFETY PLAN - EXISTING BUILDING

CIVIL

C-101	SITE PLAN
C-102	SITEWORK DETAILS

ARCHITECTURAL

AD-101	DEMOLITION PLAN - FIRST FLOOR
A-101	FIRST FLOOR PLAN
A-102	ENLARGED CANOPY PLAN & SECTIONS
A-151	ROOF PLAN
A-501	GRINDING BOOTH DETAILS
A-502	WELDING BOOTH DETAILS (6X6)
A-521	PROJECT DETAILS
A-551	PERSPECTIVES (FOR INFORMATION ONLY)

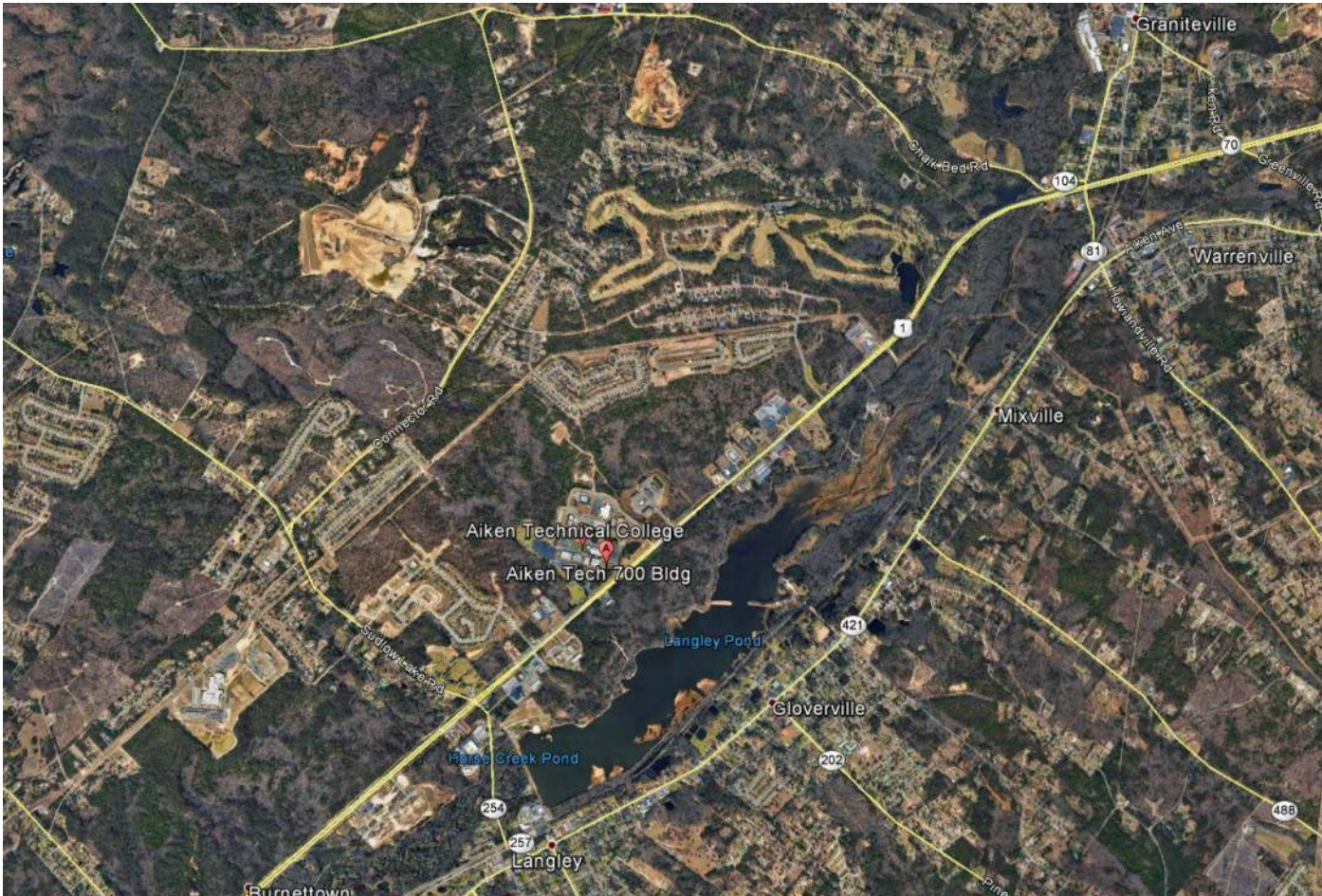
MECHANICAL

M-001	MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS
MD-101	FIRST FLOOR PLAN - MECHANICAL - DEMOLITION
MD-102	CANOPY PLAN - MECHANICAL - DEMOLITION
M-101	FIRST FLOOR PLAN - MECHANICAL
M-102	CANOPY FLOOR PLAN - MECHANICAL
M-201	MECHANICAL DETAILS
M-202	MECHANICAL DETAILS
M-301	MECHANICAL SCHEDULES AND SCHEMATICS

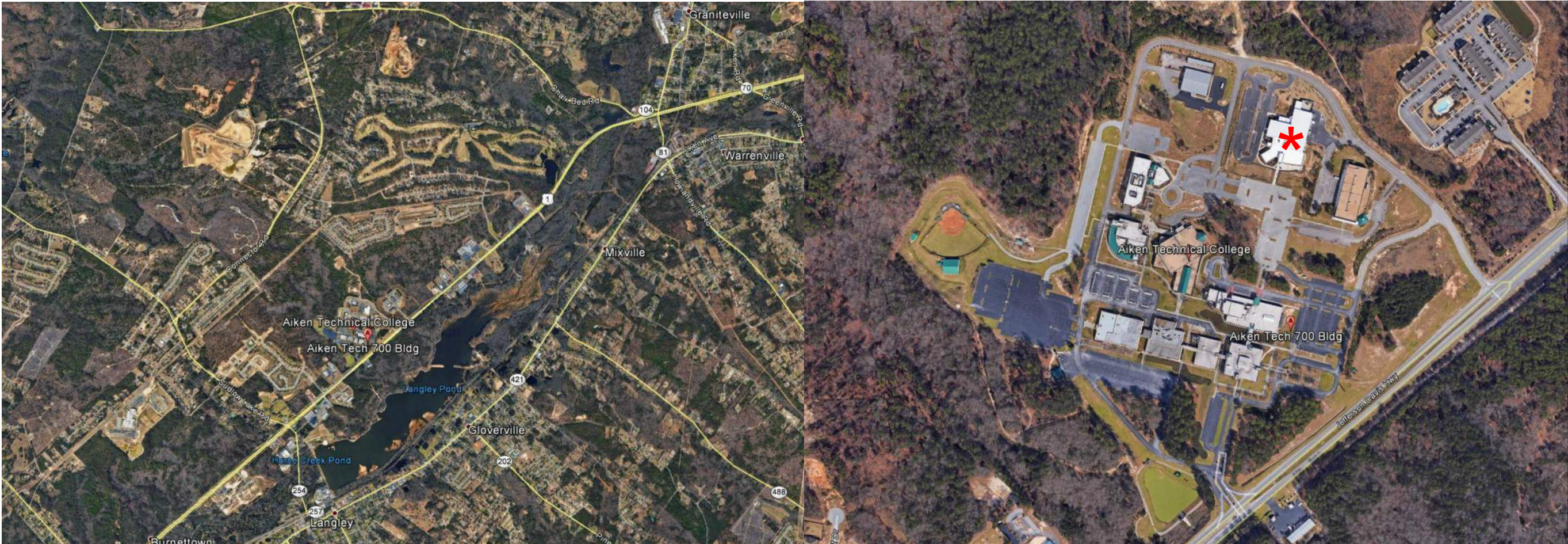
ELECTRICAL

E001	ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS
ED-101	ELECTRICAL DEMOLITION PLAN - WELDING ROOM
ED-102	ELECTRICAL DEMOLITION PLAN - GRINDING RM AND OUTDOOR CANOPY
E-101	ELECTRICAL NEW WORK PLAN - WELDING ROOM
E-102	ELECTRICAL NEW WORK PLAN - GRINDING RM AND OUTDOOR CANOPY
E-201	ELECTRICAL LIGHTING NEW WORK PLAN - WELDING RM
E-202	ELECTRICAL LIGHTING NEW WORK PLAN - GRINDING RM AND OUTDOOR CANOPY
E-301	ELECTRICAL LIGHT FIXTURE SCHEDULE
E-302	ELECTRICAL SCHEDULES

AREA MAP



VICINITY MAP



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E

1. International Existing Building Code (IEBC), 2021 Edition,
2. International Building Code (IBC), 2021 Edition,
3. International Fire Code (IFC), 2021 Edition,
4. International Energy Conservation Code (IECC), 2009 Edition,
ASHRAE 90.1 2007 as allowed by the IECC
5. International Mechanical Code (IMC), 2021 Edition,
6. International Fuel Gas Code (IFGC), 2021 Edition
7. International Plumbing Code (IPC), 2021 Edition, with the following insertions:
a. Section 305.4.1, insert "18" and insert "18"
b. Section 903.1, insert "8"
8. National Electrical Code (NEC) [NFPA-70], 2017 Edition
9. National Electrical Safety Code (NESC), IEEE-C2-2017 Edition
10. Latest edition of the American National Standards Institute, Inc. (ANSI) document A117.1, Accessible and Usable Buildings and Facilities
11. State Fire Marshal rules, regulations, and policies.
12. South Carolina Elevator, Code, & Regulations

D

TABLE 1 FLOOD HAZARD INFORMATION & FLOOD LOADS (EXISTING BUILDING)

FLOOD HAZARD AREA

Flood Map Information: Flood Zone: X (A Floodplain Permit is required for A and V Zones)
Community Number: 450002 Panel Number: 0337E

Is the Project Site in a 100-Year Floodplain? Yes ☐ No ☒

Base Flood Elevation (NGVD or FIRM) N/A MSL

Design Flood Elevation (IBC 1612.3 and ASCE 24) N/A MSL

NON HIGH-VELOCITY WAVE ACTION

Elevation of bottom of Lowest Horizontal Structural Member of lowest floor 316.50'(EXISTING) MSL

Dry floodproofing (ASCE 24) Yes ☐ No ☐

HIGH-VELOCITY WAVE ACTION

Elevation of bottom of Lowest Horizontal Structural Member of lowest floor _____ MSL

Flotation resistant (ASCE 24) Yes ☐ No ☐

Breakaway wall (ASCE 24) Yes ☐ No ☐

IBC 1612 and SE-510, as applicable

C

TABLE 2 SOILS & SITE (INFO. BASED ON EXISTING BUILDING GEOTECH REPORT)

SOILS INVESTIGATION (If required - IBC 1803.2) Yes ☐ No ☒

SOILS CLASSIFICATION

Site Class (IBC 1613.2.2) C

Classes Soil of Materials (UCS System) (IBC 1803.5.1) SM, SC, SP-SM, SW-SC, SP-SM, SW-SM

Allowable Footing Bearing Pressure _____ psf

MINIMUM DESIGN SOIL BEARING LOAD (IBC Table 1806.2) 3,000 psf

COMPACTION

Subgrade: 95 Percent

Base: 98 Percent

Other: _____ Percent

MINIMUM DESIGN SOIL LATERAL LOAD (IBC 1610.1) _____ psf

FOOTINGS

Undisturbed footings Yes ☒ No ☐

Compacted Fill Material (IBC 1804.6) Yes ☒ No ☐

ELEVATIONS

Elevation of Water Table: _____ MSL

Elevation of lowest footing: 313.50' MSL

Elevation of lowest floor or basement: 316.50' MSL

NOTE: Where a fire wall is necessary to separate buildings, each building is to be provided individual code criteria Tables 3 through 11. See IBC 503.1.2.

B

TABLE 3 BASIC BUILDING CODE INFORMATION

CONSTRUCTION CLASSIFICATION (IBC 602) Type: IIIB

OCCUPANCY CLASSIFICATION (indicate all) (IBC 302 & 504.2) ASSEMBLY A-3, BUSINESS (B), STORAGE S-1

MOST RESTRICTIVE OCCUPANCY CLASSIFICATION (IBC Tables 504.3, 504.4 & 506.2) ASSEMBLY A-3

Mixed Occupancy (IBC 508) Yes ☒ No ☐

Separated (IBC 506.2.2 & 508.4) Yes ☐ No ☒

Non separated (IBC 508.3) Yes ☒ No ☐

Does building require Incidental Use Area Separation? (IBC 509.1) Yes ☐ No ☒

2-way Communication Required (IBC 1009.6.5 & 1009.8) Yes ☐ No ☒

Fire Apparatus Access and Water Line (IFC 503 & 507) Yes ☐ No ☒

OTHER FIRE PROTECTION SYSTEMS, DEVICES or FEATURES _____ (EXISTING BUILDING)

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 - IBC 414.1.3.)

A

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)
☐ Alteration Level 1, minor including reroofing (IEBC Chap. 7)
☒ Alteration Level 2, reconfigurations of space (IEBC Chap. 8)
☐ Alteration Level 3, work area exceeds 50% (IEBC Chap. 9)
Aggregate area of building: 35,000 SF
Work area: 6,612 SF

☐ Option 3: Performance Compliance Method (IEBC Chap. 13)

CONSTRUCTION CLASSIFICATION (IBC 602) Type: IIIB

Change of Occupancy: ☐ Yes ☒ No

Existing Occupancy Classification(s): Overall Building: Business (B), Area of work: Educational (E) Shops/Vocational

New Occupancy Classification(s): N/A

Original Building Code and Edition Applicable at time of Construction: IBC 2012

Existing Sprinkler System? ☒ Yes ☐ No

Existing Fire Alarm System? ☐ Manual ☒ Auto

Seismic Evaluation Required? ☐ Yes ☒ No

Major Facility Project? (See §48-52-810(10)(a)) ☐ Yes ☒ No

Historic Building (IEBC Chapter 12): ☐ Preservation ☐ Rehabilitation ☐ Restoration ☐ Reconstruction

TABLE 4 BUILDING HEIGHT & AREA

BUILDING HEIGHT

	AS DESIGNED		AS ALLOWED BY IBC	
	In Feet	In Stories	In Feet	In Stories
IBC TABLE 504.3	_____	N/A	<u>55'</u>	N/A
IBC TABLE 504.4	N/A	_____	N/A	_____
TOTAL HEIGHT (including any Allowable Increase)	<u>30'</u>	<u>1</u>	<u>75'</u>	_____

BUILDING AREA

AREA LIMIT AS ALLOWED BY IBC TABLE 506.2 (area limitation for each story) _____ SF

AREA INCREASES AS ALLOWED BY IBC SECTIONS 506.2 & 506.3 _____ SF (maximum modified area for each story)

EXPLANATION OF INCREASES: _____

AREA AS ALLOWED BY IBC
Story: _____ SF (area this story)
Story: _____ SF (area this story)
Story: _____ SF (area this story)
Story: _____ SF (area this story)
Story: _____ SF (area this story)

TOTAL AREA OF BUILDING ALLOWED BY IBC (sum of all stories) _____ SF

AREA AS DESIGNED

Story: 35,000 SF (EXISTING) 35,000 SF (EXISTING) SF (area this story) _____ SF (area this story)
Story: _____ SF (area this story) _____ SF (area this story)
Story: _____ SF (area this story) _____ SF (area this story)
Story: _____ SF (area this story) _____ SF (area this story)
Story: _____ SF (area this story) _____ SF (area this story)

ACCESSORY OCCUPANCY (IBC 508.2 & Table 506.2)
_____ SF (area this story)
_____ SF (area this story)
_____ SF (area this story)
_____ SF (area this story)
_____ SF (area this story)

TOTAL DESIGNED AREA OF BUILDING (summary of all stories) 35,000 SF (EXISTING) SF

TABLE 5 BUILDING DESIGN OCCUPANT LOAD (NO CHANGE TO OCC. LOAD)

		A	B	C	D
STORY	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⁾
1ST	ASSEMBLY W/O FIXED SEATS, CONCENTRATED	<u>2,273 GSF</u>	<u>7' GSF</u>	<u>325 OCC</u>	
	ASSEMBLY W/O FIXED SEATS, UNCONCENTRATED	<u>981 GSF</u>	<u>15' GSF</u>	<u>66 OCC</u>	
	TABLES/CHAIRS				
	BUSINESS	<u>8,660 NSF</u>	<u>100' NSF</u>	<u>89 OCC</u>	
	VOCATIONAL	<u>20,858 NSF</u>	<u>50' NSF</u>	<u>419 OCC</u>	
	Subtotal Design Occupant Load for This Story				_____
1ST	CLASSROOM	<u>1,380 GSF</u>	<u>20' NSF</u>	<u>69 OCC</u>	
	STORAGE	<u>2,813 GSF</u>	<u>300' GSF</u>	<u>11 OCC</u>	
	Subtotal Design Occupant Load for This Story				_____

	Subtotal Design Occupant Load for This Story				_____

	Subtotal Design Occupant Load for This Story				_____

	Subtotal Design Occupant Load for This Story				_____
TOTAL BUILDING DESIGN OCCUPANT LOAD					<u>979 OCC ⁽⁶⁾</u>
FOOTNOTES: 1. Provide the complete name of the Function of Space using the left column of Table 1004.5 of the IBC ⁽¹⁾ 2. Design Area per each occupant of this Function on this Story in either Gross (GSF) or Net (NSF) Square Footage ⁽²⁾ 3. Allowed Floor Areas in SF per Occupant per right column in Table 1004.5 of the IBC ⁽³⁾ 4. Divide Column A (2) by Column B (3) for each function and enter result, rounded up to the nearest whole person ⁽⁴⁾ 5. Subtotal all Column C values for this floor to yield the Design Occupant Load ⁽⁵⁾ 6. Total Building Design Occupant Load –sum of all Column D value ⁽⁶⁾					

TABLE 6 GENERAL FIRE PROTECTION REQUIREMENTS

SEPARATIONS

Fireblocking Required (IBC Section 718)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Draftstopping Required (IBC Section 718)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Smoke Control System Required (IBC Section 909)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Smoke Barriers Required (IBC Section 407 & 408)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Smoke Partitions Required (IBC Section 407)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Fire Partition Required (IBC Section 708)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Fire Barrier Required (IBC Section 707)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

ALARM & DETECTION

Fire Alarm System Required (IFC Section 907)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Emergency/Voice Alarm Communications System Required (IFC Section 907.5.2.2)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Fire Command Center Required (IFC Section 508)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

SUPPRESSION

Standpipes Required (IFC Section 905)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Sprinklers Required (IFC Section 903)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sprinklers Provided (_____)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Portable extinguishers required (IFC 906)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Other suppression systems required (IFC 904)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Smoke & heat vents required (IFC 910)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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

Emergency Responder Radio Coverage (IFC Section 510) Yes ☐ No ☐

TABLE 7 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 (IBC Table 601)	<u>0</u>	<u>0</u>	_____	
Bearing Walls: (IBC Table 601) Exterior (IBC Table 705.5) Interior	<u>0</u> <u>0</u>	<u>0</u> <u>0</u>	_____ _____	_____ _____
Nonbearing Walls & Partitions (IBC Table 601, including footnote "d" & 602) Exterior (IBC Table 705.5) Interior	<u>0</u> <u>0</u>	<u>0</u> <u>0</u>	_____ _____	_____ _____
Floor Construction (IBC Table 601) (including supporting beams & joists)	<u>0</u>	<u>0</u>	_____	
Roof Construction (IBC Table 601) (including supporting beams & joists)	<u>0</u>	<u>0</u>	_____	
Fire Walls (IBC Section 706)	<u>0</u>	<u>0</u>	_____	_____
Fire Barriers (IBC Section 707)	<u>0</u>	<u>0</u>	_____	_____
Fire Partitions (IBC Section 708)	<u>0</u>	<u>0</u>	_____	_____
Shaft Enclosures (IBC Section 713)	<u>0</u>	<u>0</u>	_____	_____
Opening & Protective Listing by Category (fire shutters, doors, etc. - IBC Section 716)	<u>0</u>	<u>0</u>	_____	_____
Others (as required by Designer)	_____	_____	_____	_____

TABLE 8 STRUCTURAL DESIGN INFORMATION

RISK CATEGORY (IBC Table 1604.5): II

LIVE LOADS

Floor Live Load(s)
Occupancy/Use: _____ F_l = 100 PSF
Occupancy/Use: _____ F_l = _____ PSF
Occupancy/Use: _____ F_l = _____ PSF
Occupancy/Use: _____ F_l = _____ PSF
Roof Live Load
Ground Snow Load (IBC Figure 1608.2 or ASCE 7)
p_g = 10 PSF

WIND LOADS

Analysis Procedure (ASCE 7 or IBC 1609.1): DIRECTIONAL
Basic Design Wind Speed (IBC Fig's. 1609.3(1)-(3)): V = 120 MPH
Exposure Category (IBC 1609.4.3): B
Internal Pressure Coefficient (ASCE 7): GC_{pi} = 0.18
External Pressure Coefficient (ASCE 7): GC_{pe} = VARIES
Protection of Openings Required (IBC 1609.2): Yes ☐ No ☒
If "Yes", check one: Impact Resistant Glazing ☐
Impact Resistant Covering ☐

SEISMIC LOADS

Seismic Importance Factor (ASCE 7 Table 1.5-2): I_e = 1.25
Site Class (IBC 1613.2.2): C
Mapped Spectral Response Accelerations: S₁ = 0.318 S_i = 0.118
Design Spectral Response Acceleration Parameters: S_{ms} = 0.255 S_{mi} = 0.133
Seismic Design Category (IBC Tables 1613.2.5.1 and 1613.2.5.2): C
Basic Seismic Force Resisting System: LIGHT FRAMED WALLS W/ SHEAR PANELS
Design Base Shear (ASCE 7 Chapter 12): 40 KIPS
Seismic Response Coefficient(s) (ASCE 7): C_s = 0.16
Response Modification Factor(s) (ASCE 7): R = 2
Analysis Procedure: EQUIVALENT LATERAL FORCE METHOD

ARCHITECTURAL-MECHANICAL-ETC. LOADS

Provide as applicable: architectural items, mechanical, plumbing, etc. (ASCE 7) _____

SPECIAL LOADS

Provide as applicable: abnormal items, moving loads, impact, hoisting, etc. (ASCE 7) _____

*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.

GENERAL NOTES

A. INFORMATION BASED ON ORIGINAL BUILDING SUBMITTAL. THE SCOPE OF THIS PROJECT INCLUDES NO CHANGE OF AREA, CHANGE OF OCCUPANCY, OR CHANGE OF USE.

WELDING LAB
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GRINDING LAB

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REVISIONS:		
No.	Description	Date
1	OSE RESPONSES	10/25/23

STATE PROJECT: H59-6238
LS3P PROJECT: 2202-231075
DATE: 9/12/23

BUILDING
CODE
ANALYSIS -
OSE FORMS

G-001A

CONSTRUCTION DOCUMENTS

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TABLE 9 PLUMBING INFORMATION (AS PROVIDED IN EXISTING BUILDING)

WATER SYSTEM: Service Line Size: 3" Inches
Peak Flow: 125 GPM Total Demand: 245 No. Fixture Units

SANITARY SEWER SYSTEM: Loading: 10,620 GPD
Service Line Size: 6" Inches Slope: 0.125" = 1'-0" min inches/ft

MINIMUM PLUMBING FIXTURES REQUIRED BY OCCUPANCY (IPC Section 403 & Table 403.1)
All Occupancy Classification(s) (same as OSE Table 3): EXISTING - NO CHANGE
Total Building Design Occupant Load (same as OSE Table 5): EXISTING - NO CHANGE

1. Occupancy: EXISTING Total Load for this Occupancy: Male: Female:
Water Closets/ Urinals (IPC Section 424.2): MALE: (# Urinals allowed) FEMALE:
Lavatories: MALE: FEMALE:
Drinking Fountains
Unisex Toilet
Service Sink
Other (list):

2. Occupancy: Total Load for this Occupancy: Male: Female:
Water Closets/ Urinals (IPC Section 424.2): MALE: (# Urinals allowed) FEMALE:
Lavatories: MALE: FEMALE:
Drinking Fountains
Unisex Toilet
Service Sink
Other (list):

3. Occupancy: Total Load for this Occupancy: Male: Female:
Water Closets/ Urinals (IPC Section 424.2): MALE: (# Urinals allowed) FEMALE:
Lavatories: MALE: FEMALE:
Drinking Fountains
Unisex Toilet
Service Sink
Other (list):

TOTAL BUILDING COUNT REQUIRED/PROVIDED (add all occupancies)

Note: Round up all numbers Whole numbers only	REQUIRED		PROVIDED	
	Male	Female	Male	Female
Total Water Closets/ Urinals	(# Urinals allowed)		(# Urinals provided)	
Total Lavatories				
Total Drinking Fountains				
Total Unisex Toilets				
Total Service Sinks				
Total Other (list):				

TABLE 10 MECHANICAL INFORMATION (EXISTING BUILDING W/ HVAC MODIFICATIONS)

AIR COMFORT SYSTEMS
Overall Thermal Transfer Value (OTTV): ROOF=2.32 BTU/HR SF. WALL=8.90 BTU/HR SF
Building Cooling Load: 488 SF / Ton
Building Heating Load: 99.73 BTU/(HR x SF)

OTHER LOADING FEATURES
Glass: U Factor: 0.45 Window to wall ratio: 11.9%
Insulation Values: Roof: R-21 Exterior Walls: R-10
Outside Air minimum while occupied: 4684 CFM 570 Occupants

MECHANICAL SYSTEMS, SERVICE SYSTEMS & EQUIPMENT
Briefly describe mechanical system: WELDING TRAINING SPACE IS HEATING WITH A MAKE-UP AIR UNIT WITH GAS HEATING COIL. FUME EXHAUST IS COLLECTED AT SEVERAL DUST COLLECTORS WITH FILTERED AIR EXHAUSTED OUTSIDE OF THE BUILDING.

TABLE 11 - ELECTRICAL INFORMATION

SERVICE TRANSFORMER: ☒ By Utility Company
☐ By Agency If by Agency: KVA Primary Voltage/Phase

ELECTRICAL SERVICE INFORMATION:
Service Voltage/Phase: 480 V/ Amperes: EXISTING
Service Entrance Conductors Size: 500 kcmil Quantity per Phase: EXISTING
Total Connected Load: 1939 KVA Estimated Demand Factor: EXISTING
Estimated Maximum Demand: EXISTING Amperes
Available Fault Current in Symmetrical Amperes: 52,300 Amperes
Interrupting Capacity of Service Overcurrent Device: EXISTING Amperes
Grounding Electrode System Components: EXISTING ☐ Metal Underground Water Pipe
☐ Metal In-ground Support Structure(s) ☐ Concrete-Enclosed Electrode
☐ Ground Ring ☐ Rod and Pipe Electrodes
☐ Plate Electrodes ☐ Other Local Metal Underground Systems or Structures
☐ Other Listed Electrodes, please specify

EMERGENCY SERVICE INFORMATION: EXISTING
Generator 1: ☐ Emergency ☐ Standby ☐ Op. Standby Voltage/Phase Fuel KVA
Generator 2: ☐ Emergency ☐ Standby ☐ Op. Standby ☐ Integral Battery Fuel KVA
Exit/Emergency Egress Lighting Backup Power EXISTING ☐ Battery ☐ Generator
Fire Alarm System: ☐ Manual ☐ Auto ☐ Manual/Auto ☐ Addressable Class: ☐ A ☐ B ☐ (Other)
EXISTING
Fire Alarm System Method of Communication to Monitoring Station (please specify):
Fire Alarm Pathway Survivability: EXISTING ☐ Level 0 ☐ Level 1 ☐ Level 2 ☐ Level 3
Carbon Monoxide Detection Required? ☐ Yes ☒ No
Carbon Dioxide Detection Required? ☐ Yes ☒ No
Emergency Responder Radio Coverage Enhancement Required? ☐ Yes ☒ No

LIGHTNING PROTECTION SYSTEM PROVIDED: EXISTING ☐ Yes ☐ No

WELDING LAB
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REVISIONS:

No.	Description	Date
1	OSE RESPONSES	10/25/23

STATE
PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/23

GENERAL NOTES

A. INFORMATION BASED ON ORIGINAL BUILDING SUBMITTAL. THE SCOPE OF THIS PROJECT INCLUDES NO CHANGE OF AREA, CHANGE OF OCCUPANCY, OR CHANGE OF USE.

BUILDING
CODE
ANALYSIS -
OSE FORMS

G-001B

CONSTRUCTION DOCUMENTS

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DATE: 9/12/23
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PROJECT: 2202-231075
DATE: 9/12/23

G-002



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CONSTRUCTION SCHEDULE

Construction Start: October 2023

Final Stabilization: December 2023

SCHEDULE OF WORK:

1. Receive NPDES coverage from DHEC
2. Install construction entrance
3. Clear & grub only as necessary to install perimeter controls
4. Install silt fence and any other perimeter controls
5. Rough grade the site
6. Install utilities
7. Install canopy & concrete
8. Fire grading
9. Final grading and permanent stabilization (mulch and fertilizer per vegetative plan)
10. Remove temporary sediment & erosion control measures after entire area draining the structure is finally stabilized (The Department recommends that the Project Owner/Operator have the SWPPP Preparer or registration equivalent approve the removal of temporary structures)

1 Day
1 Day
1 Day
1 Week
1 Week
1 Week
1 Week
1 Week
1 Week
1 Week

Notes:

- A. Installation of some permanent water quality devices should occur after the site is stabilized. Clean-out of other permanent water quality devices that were used during construction should occur after site stabilization.
- B. The control of sediment shall be the responsibility of the contractor and/or his grading contractor. Total time for site development is contingent upon weather and/or upon building construction. Therefore, the schedule shown is not cumulative but represents the total time involved for development of the site.

VEGETATIVE PLAN

All areas disturbed during construction shall be grassed according to the following specifications:

Planting Dates	PLAN 1	PLAN 2
Lime	2.0 Tons/Ac	2.0 Tons/Ac
Fertilizer	10-10-10	10-10-10
Temp. Cover	Browntop Millet	Rye Grass
	40 lbs/Ac	40 lbs/Ac
Perm. Cover	Common Bermuda	Unhulled Bermuda
	30 lbs/Ac	60 lbs/Ac
Mulch*	1.5 Tons/Ac	1.5 Tons/Ac

* Must be anchored with a disk harrow to prevent blowing.

Any variation from this plan must be approved by the local Soil Conservation Service Representative.

DISTURBED AREA = 4/-0.11 ACRES
PROVIDE A TEMPORARY STONE PAVED PAD AT ALL FIRE HYDRANTS OR OTHER POINTS OF DISCHARGE DURING TESTING OF THE WATER DISTRIBUTION SYSTEM.

PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE GRADED, GRADES AND STABILIZED WITH GRASSING, IMMEDIATELY AFTER THE UTILITY INSTALLATION.

ALL STONE PROVIDED FOR SEDIMENT AND EROSION CONTROL IS TO BE SIZED AND INSTALLED PER SDOT SPECIFICATIONS (SECTION 800) LATEST EDITION. FILTER FABRIC IS TO BE NONWOOL POLYESTER OR POLYPROPYLENE AND IS TO MEET ALL ASTM STANDARDS AND HAVE A MINIMUM THICKNESS OF 60 MILS.

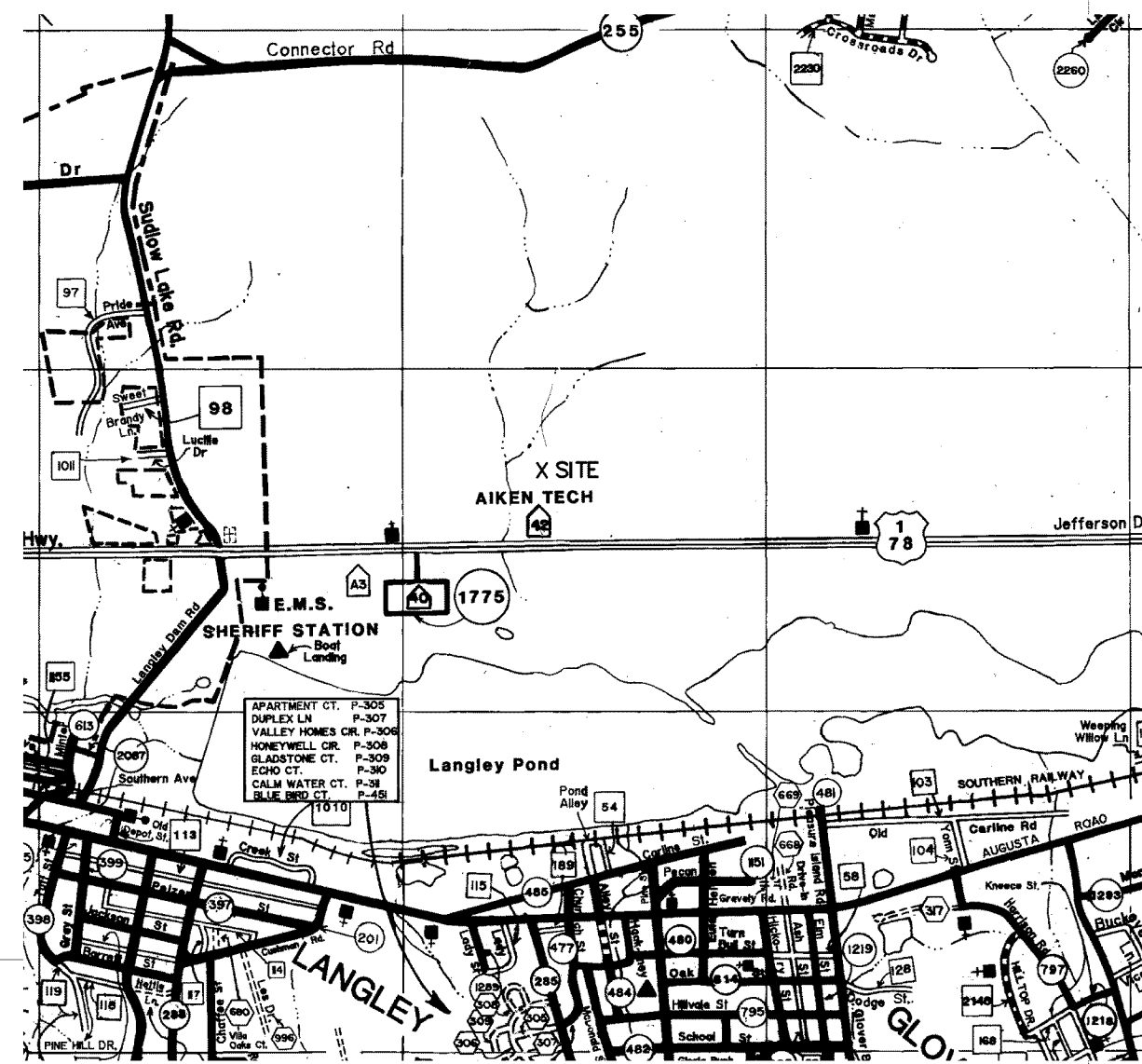
SITE IS COMPOSED OF VAUGHN SOIL.

I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of South Carolina, 1976 as amended, pursuant to Regulation 72-300 etc. sec. (if applicable), and in accordance with the terms and conditions of SDR100000.

GENERAL NOTES - SITEWORK

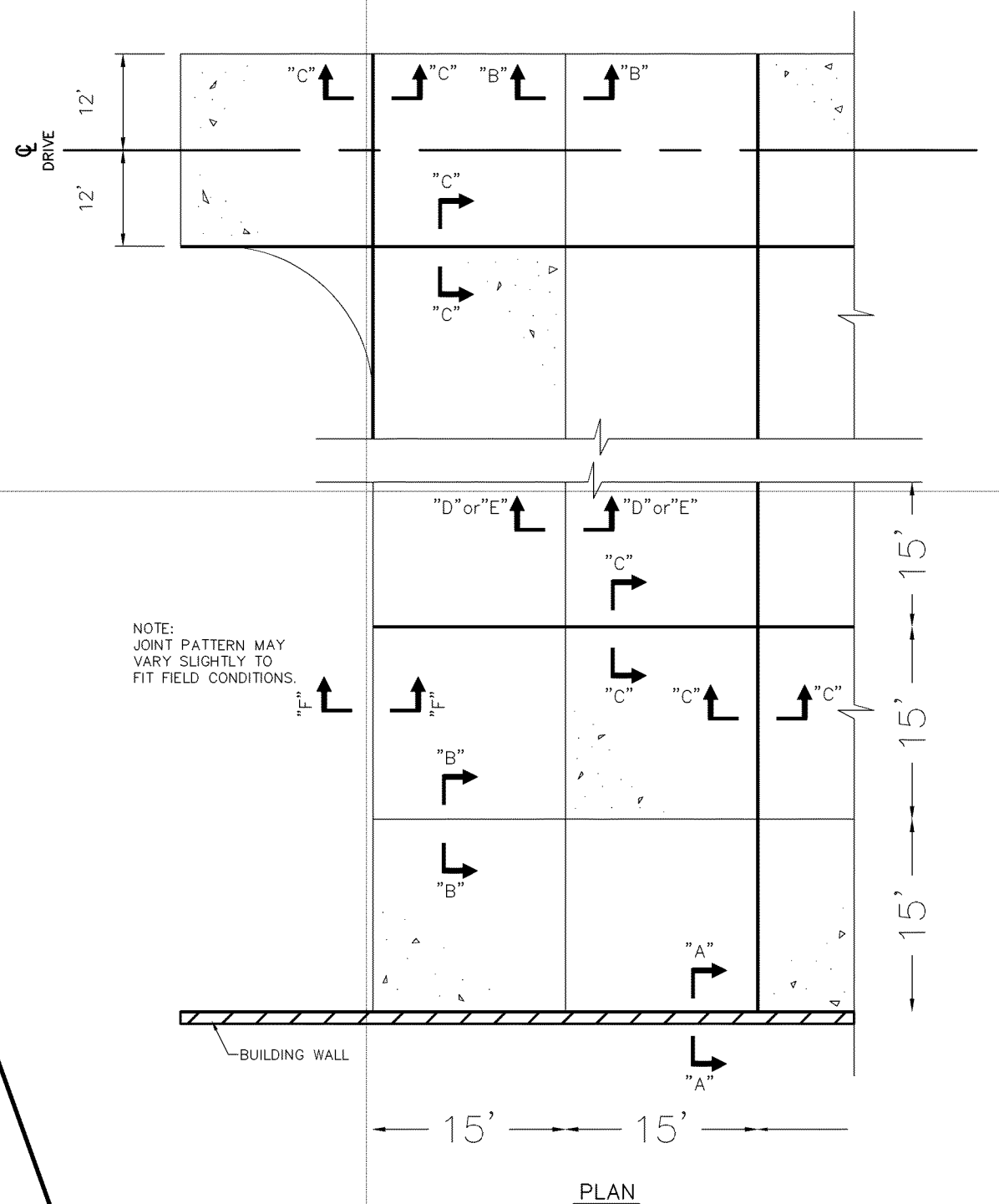
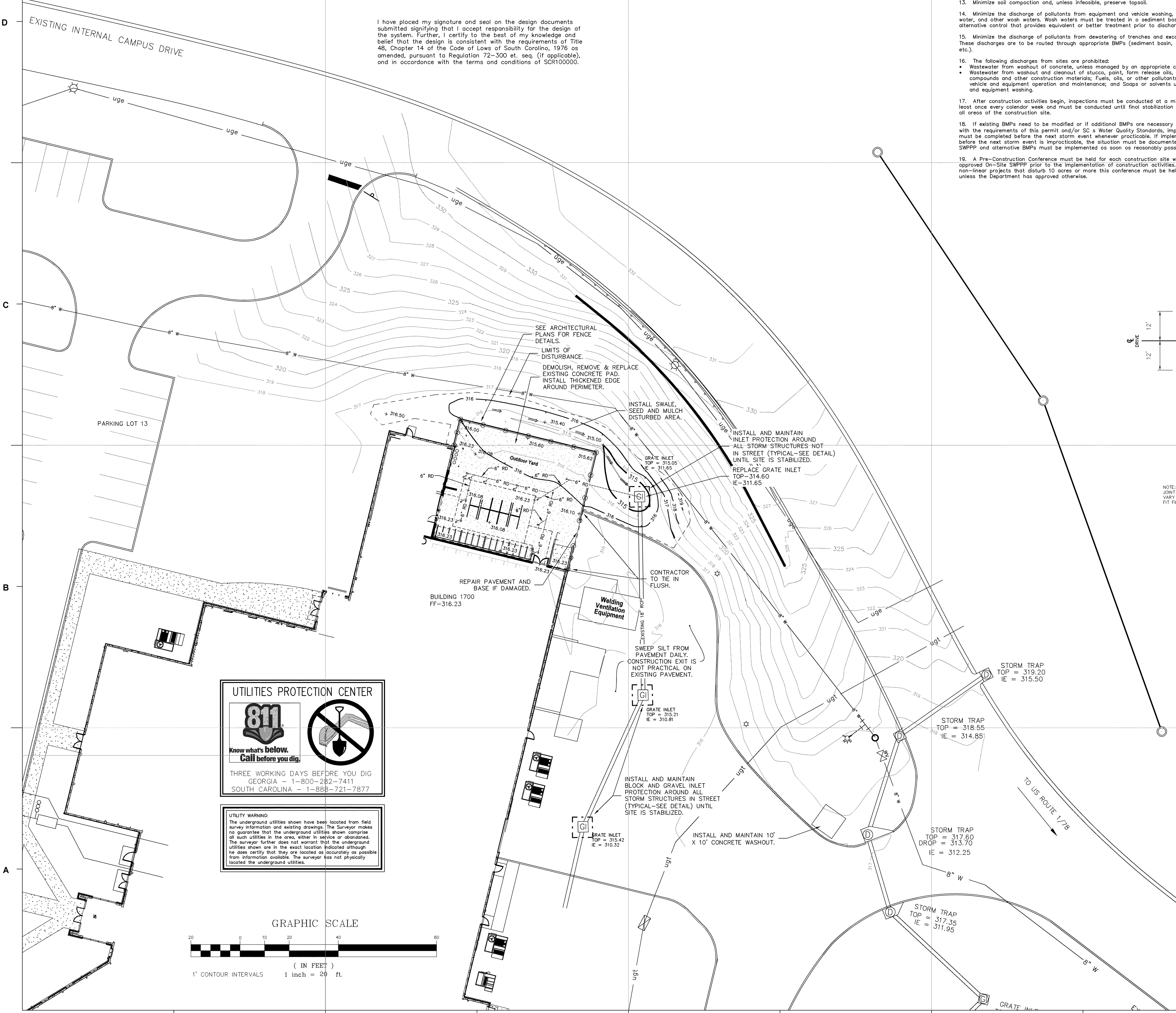
1. Topographic & partial utility survey by Hoss & Hildebrand, Inc. dated August 2023.
2. The contractor shall verify the location and invert elevation of all underground utilities, and verify property corners and topa before any construction is begun. Call utility companies before any excavation to locate all buried cables and underground utilities.
3. The contractor should notify the engineers for a review should discrepancies be discovered at the site or on the drawings.
4. Earthwork shall be to the lines and grades shown. Proof-rolling and compaction tests shall be accomplished in the field to test all areas. The contractor shall retain the services of a testing company to test all areas.
5. The grading contractor shall proof-roll the construction area with heavy-pneumatic equipment. All soft spots shall be undercut and recompacted with suitable structural fill material.
6. Topsoil to be stripped to a depth as required and stockpiled as directed by the owner's representative.
7. The grading contractor shall conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet. (Final graded surface under building slabs shall be within a tolerance of 3/8" when measured with a 10' straight edge).
8. All roads and parking lots shall have a minimum 3'-0" wide grassed shoulder.
9. All utility trenches shall be thoroughly compacted to prevent settlement and damage to future pavement and structures.
10. All areas not covered by buildings and pavement shall receive topsoil and be grassed in accordance with the specifications.
11. Dimensions shown are to the face of the curb and the face of walls unless noted otherwise.
12. Contractor shall be responsible for all utility relocation required.
13. All reference to specifications for highway construction of materials are made from South Carolina State Highway's Department standard specification, current edition.
14. The contractor shall remove all debris from site and protect all trees that are to remain.
15. All fill material shall be from a source approved by the testing company and shall be free of roots, organics and boulders larger than 1 cubic foot. Fill shall be placed in lifts and compacted per the specifications.
16. All existing slopes steeper than 4:1 that will receive fill shall be plowed and scarified so new fill will bond with existing surface.
17. All reinforced concrete pipe (RCP) shall be Class III unless noted on the drawings and shall conform to S.C.D.O.T. specifications.
18. All construction shall conform to the specifications of Aiken County and all applicable Federal and Local regulations, including NFPA and AWWA.
19. This construction will comply with all applicable Federal, State and Local regulations regarding Handicap access including ANSI standards.
20. According to the state historic preservation office there are no historically significant structures on this site.
21. There are no endangered species on this site per the scdar south Carolina rare, threatened & endangered species inventory map, species map of the usgs quadrangle data last updated January 17th, 2006.
22. There are no apparent wetlands on this site.
23. No new water or sewer required for this project.
27. Based on observation of the site there are no apparent archeological resources on the site.
28. The site is not in an airport district.
29. According to the national flood insurance program MAP 45030303376 +/- on effective date of JUNE 10, 2012 the property is located in a FLOOD ZONE "X".
30. Power provided by SCE&G.

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative means. In addition to hydroseeding, it may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporary or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as noted below.
3. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
4. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
5. All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been inappropriately or incorrectly installed, the Permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification.
6. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleared, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any water of the State.
7. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or off-site sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
8. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall only remove mud/soil from pavement, as may be required.
9. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C. Reg. 72-300 et seq. and SCDOT0000.
10. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upstate runoff and/or to divert sediment-laden water to appropriate traps or stable outlets.
11. All waters of the State (WOS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WOS. A 10-foot buffer should be maintained between the last row of silt fence and all WOS.
12. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
13. A copy of the SWPPP, inspections records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is reached.
14. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days.
15. Minimize soil compaction and, unless infeasible, preserve topsoil.
16. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
17. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.).
18. The following discharges from sites are prohibited:
 - Wastewater from washout of concrete, unless managed by an appropriate control;
 - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and Soaps or solvents used in vehicle and equipment washing.
19. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site.
20. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's Water Quality Standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as reasonably possible.
21. A Pre-Construction Conference must be held for each construction site with an approved On-Site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the Department has approved otherwise.



LOCATION DIAGRAM

SCALE: 1" = 200'



TYP. CONC. PAVEMENT JOINT LAYOUT

(N.T.S.)

INSTALL 6" 95% M.D.D. COMPACTED CRUSHED STONE UNDER SLAB. (STANDARD PROCTOR)

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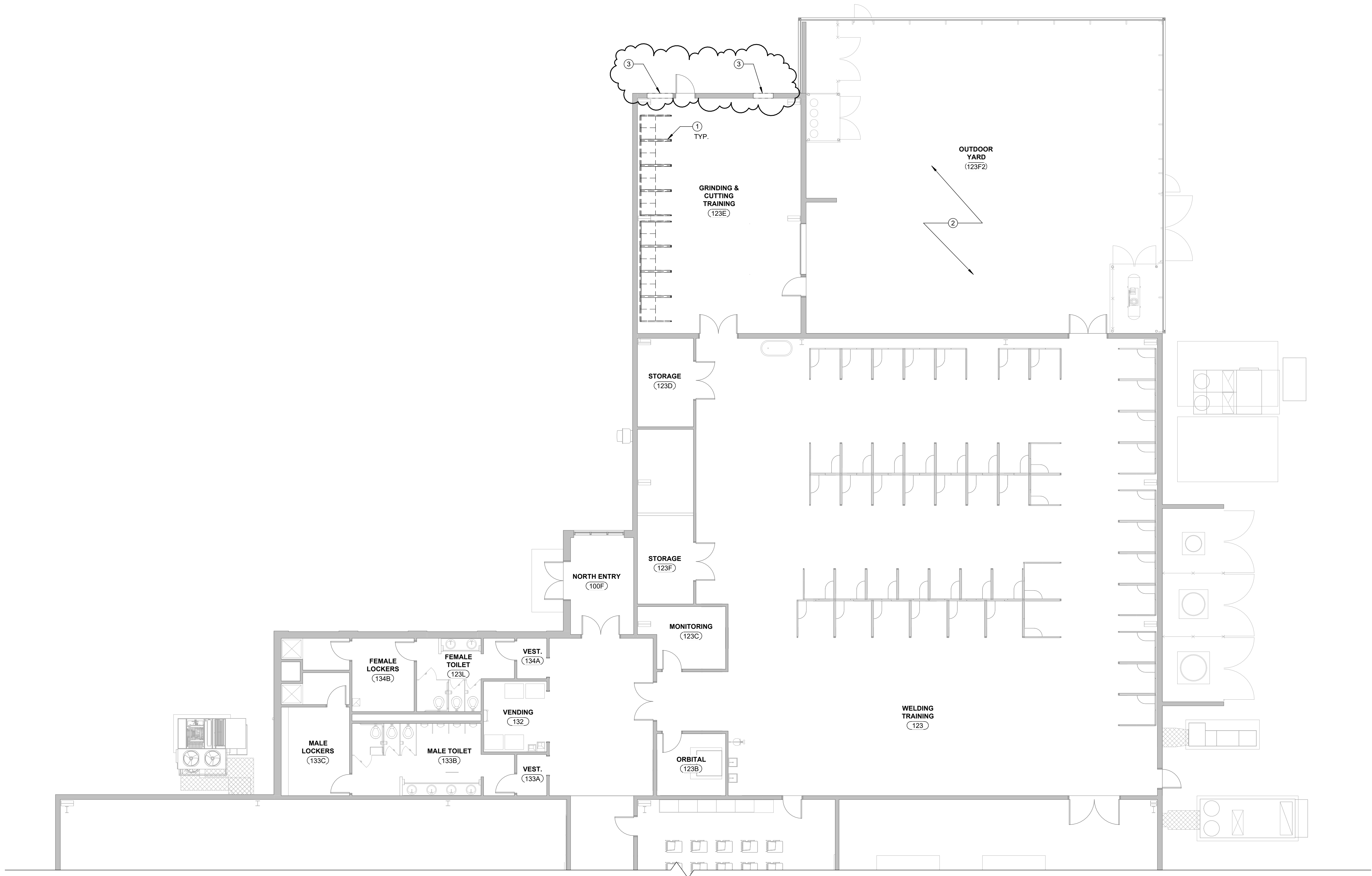
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C

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A

A1 FIRST FLOOR PLAN
1/8" = 1'-0"



DEMOLITION PLAN GENERAL NOTES

- NUMBERED KEY NOTES DO NOT IMPLY SEQUENCE. CONTRACTOR TO PERFORM DEMOLITION WORK AS REQUIRED PER WORK SEQUENCE.
- DEMOLITION DRAWINGS ARE INTENDED TO SHOW GENERAL AREAS OF DEMOLITION AS WELL AS GENERAL EXISTING CONDITIONS. THEY DO NOT SHOW ALL WORK WHICH MAY BE NECESSARY. COMPARE WITH DRAWINGS INDICATING NEW CONSTRUCTION.
- EXISTING WORK TO REMAIN SHALL BE TEMPORARILY SECURED, BRACED AND STABILIZED UNTIL PERMANENT CONSTRUCTION IS IN PLACE.
- VERIFY THAT CONSTRUCTION INDICATED FOR REMOVAL IS NOT LOAD BEARING OR IS ADEQUATELY SHORED AS INDICATED ON STRUCTURAL DRAWINGS PRIOR TO STARTING ANY WORK.
- ERECT BARRICADES, FENCES OR OTHER SECURABLE MEANS TO PREVENT UNAUTHORIZED ACCESS INTO CONSTRUCTION ZONES.
- DO NOT ALLOW MATERIAL AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON-SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
- THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORT, INSULATION, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.
- TERMINATE AND CAP ANY UTILITY WHICH OCCURS IN EXISTING WALLS, CEILINGS OR FLOORS TO BE REMOVED AND IS NOT INTENDED FOR REUSE. PREPARE AND PATCH SURFACES THAT ARE DESIGNATED TO RECEIVE NEW FINISHES AS DESCRIBED IN THE CONTRACT DOCUMENTS INCLUDING REMOVING OR RELOCATING DEVICES, WIRING OR OTHER APPURTENANCES NO LONGER APPROPRIATE FOR THE NEW USE OF THE ROOM.
- MAINTAIN EXISTING FINISHES, OPERATIONAL CHARACTERISTICS, AND APPEARANCE OF ITEMS SCHEDULED TO REMAIN OR TO BE REUSED. CUT AND PATCH FLOORS, WALLS AND CEILINGS WHERE REQUIRED TO CONCEAL ANY OF THE FOLLOWING: NEW MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS, UNLESS NOTED OTHERWISE. REPAIR CONSTRUCTION TO MATCH ADJACENT FINISHES.
- ALL DIMENSIONS AND AREAS SHOWN ON THIS SHEET ARE APPROXIMATE FOR REFERENCE ONLY, AND MUST BE FIELD-VERIFIED PRIOR TO EXECUTION OF DEMOLITION WORK.
- SEE MECHANICAL SECTION FOR ANY NECESSARY REMOVAL OF EXISTING EQUIPMENT, LOUVERS, GRILLES, CONTROLS, THERMOSTATS, AND DUCTWORK NOT NOTED ON THIS DRAWING.
- SEE ELECTRICAL SECTION FOR ANY NECESSARY REMOVAL OF EXISTING EQUIPMENT, FIXTURES, CONDUIT, PANEL BOARDS, AND SWITCHES NOT NOTED ON THIS DRAWING.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE DEMOLITION BEGINS.
- PROTECT ALL EXISTING CASEWORK, EQUIPMENT, ECT. TO REMAIN IN AREA OF WORK.
- ALL REMOVED STAINLESS STEEL DUCTWORK TO BE RETURNED TO OWNER. STORE IN LOCATION ON CAMPUS TO BE DESIGNATED BY OWNER. REFER ALSO TO MECHANICAL DRAWINGS.
- PROTECT ALL EQUIPMENT AND BUILDING COMPONENTS TO REMAIN IN OUTDOOR YARD, GRINDING AND CUTTING ROOM, AND WELDING & TRAINING ROOM THROUGHOUT DURATION OF PROJECT.

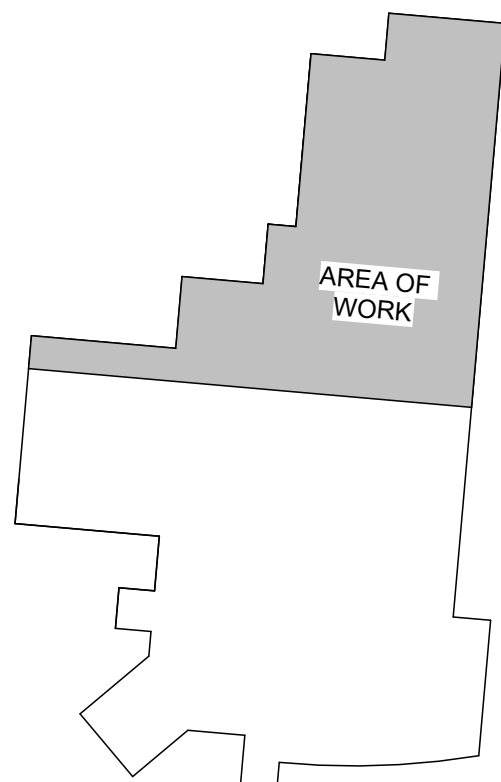
SHEET NOTES

- REMOVE AND PROTECT EXISTING GRINDING BOOTHS FOR RELOCATION AND REFINISHING AS PART OF NEW WORK SCOPE. REFER TO NEW WORK DRAWINGS.
- REFER TO CIVIL DRAWINGS AND CANOPY PLANS FOR EXTENT OF ANY CONCRETE SLAB DEMOLITION AND PATCHING.
- PREPARE WALL OPENING FOR NEW VENTILATION FAN. REFER TO MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF OPENING.

DEMOLITION LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED

KEYPLAN



**WELDING LAB
EXPANSION AND
GRINDING LAB**



701-A LADY STREET
COLUMBIA, SOUTH CAROLINA 29201
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WWW.LS3P.COM



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No.	Description	Date
1	OSE RESPONSES	10/25/23

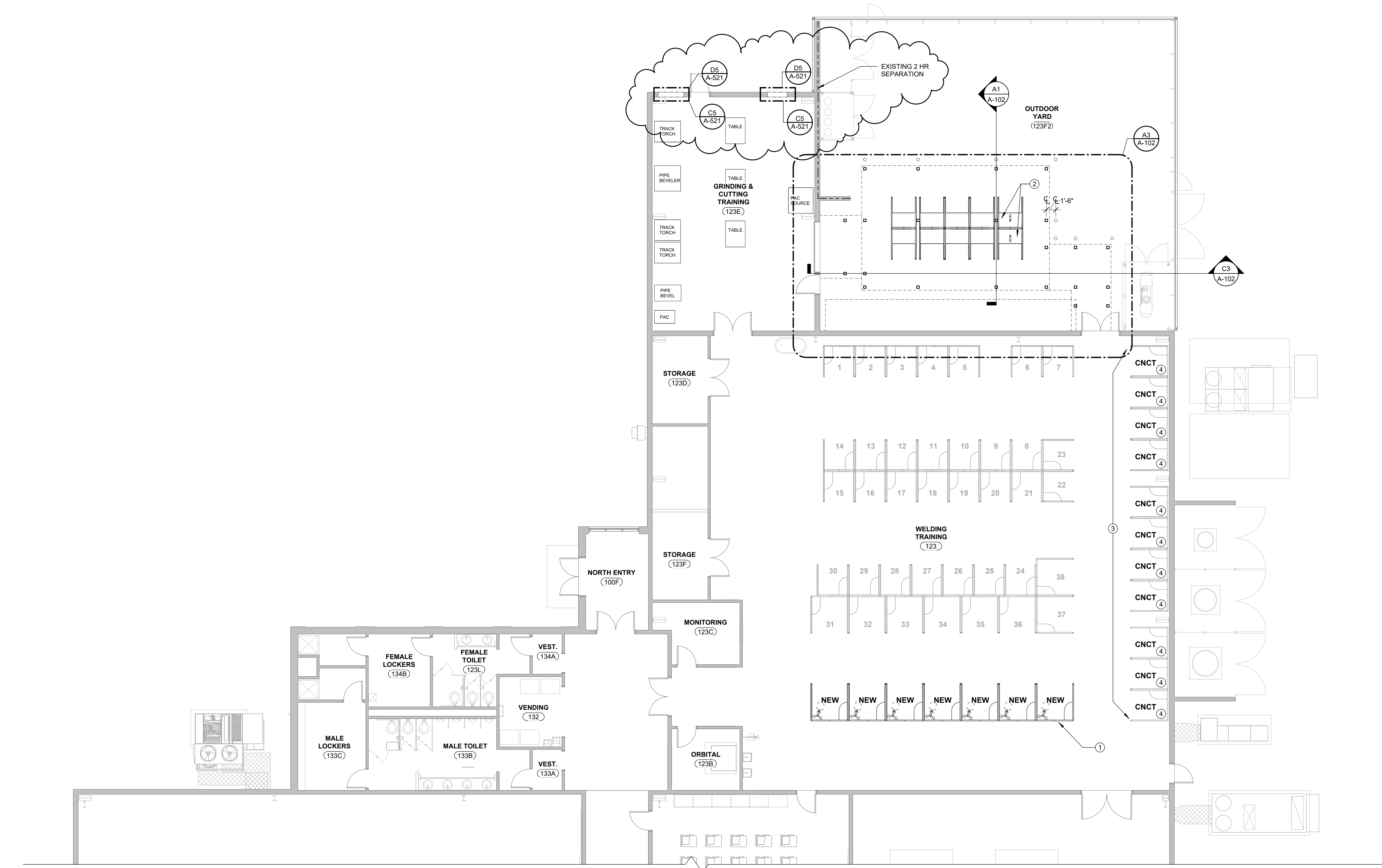
STATE PROJECT: H59-6238
LS3P PROJECT: 2202-231075
DATE: 9/12/23

**DEMOLITION
PLAN - FIRST
FLOOR**

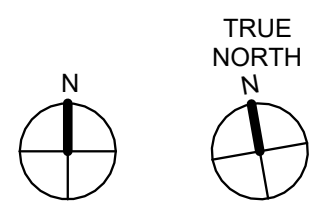
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Autodesk Docs\\2202-231075 ATC CEAM Outdoor Welding Lab\\Arch_ATC CEAM Outdoor Welding Lab\\Arch_ATC CEAM Outdoor Welding Lab_2022.rvt
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(A1) FIRST FLOOR PLAN
1/8" = 1'-0"



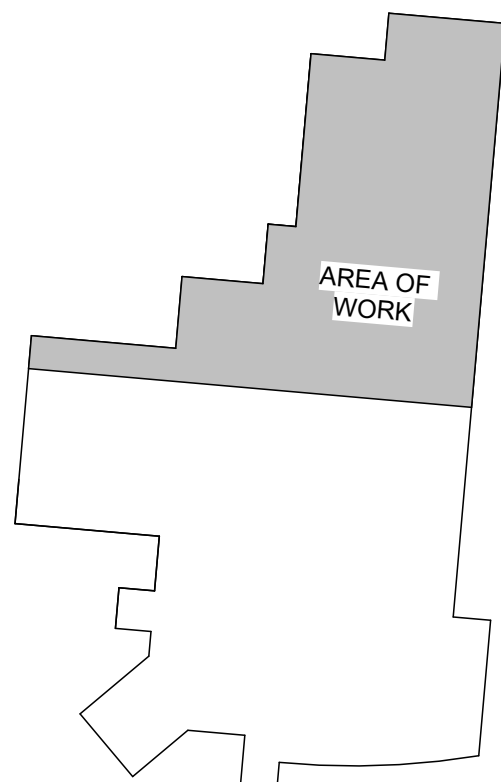
GENERAL NOTES

- INTERIOR DIMENSIONS INDICATED ARE TO (FACE OF FINISH, FACE OF STUD, PARTITION CENTERLINE) AND CENTERLINES OF COLUMNS, UNO.
- DIMENSIONAL CONFLICTS BETWEEN PARTITION TYPES AND THE ARCHITECTURAL FLOOR PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- SEE LIFE SAFETY PLANS FOR THE LOCATIONS OF SMOKE BARRIERS, SMOKE PARTITIONS AND FIRE-RATED PARTITIONS.
- REFER TO UNDERWRITERS LABORATORIES, INC. FIRE RESISTANCE VOLUMES - CURRENT EDITION FOR SPECIFIC CONSTRUCTION REQUIREMENTS OF U.L. LISTED ASSEMBLIES.
- REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR TYPICAL U.L. LISTED PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE PROJECT-SPECIFIC U.L. LISTED ASSEMBLIES FOR PENETRATIONS.
- ALL PIPE AND CONDUIT PENETRATIONS THRU 2 HR RATED OR MORE PARTITIONS, FLOORS, ROOF, ETC. SHALL BE SEALED WITH A RESPECTIVELY RATED FIRE BARRIER PENETRATION SEALING SYSTEM BY 3M OR U.L. APPROVED EQUAL.
- AT ALL EXISTING AND CONSTRUCTED PARTITIONS THE CONTRACTOR IS TO MAINTAIN THE FIRE-RESISTIVE INTEGRITY.
- REFER TO MECHANICAL DRAWINGS FOR ROOF PENETRATION LOCATIONS.
- NEW MANUFACTURED WALKWAY COVERINGS TO BE CLEAR ANODIZED ALUMINUM.

SHEET NOTES

- NEW 6'x6' WELDING BOOTH. REFER TO SHEET A-502. NEW WELDING TABLES AT EACH NEW WELDING BOOTH. REFER TO SHEET A-521.
- TWO NEW 5'x5' GRINDING BOOTHS. REFER TO SHEET A-501. NEW GRINDING TABLES AT EACH NEW GRINDING BOOTH. REFER TO SHEET A-521.
- REFER TO MECHANICAL DRAWINGS FOR CONNECTION OF EXISTING 6'x5' BOOTHS.
- NEW WELDING TABLE. REFER TO SHEET A-521.

KEY PLAN



WELDING LAB EXPANSION AND GRINDING LAB



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1	OSE RESPONSES	10/25/23

STATE PROJECT: H59-6238
LS3P PROJECT: 2202-231075
DATE: 9/12/23

FIRST FLOOR PLAN

A-101

A. INTERIOR DIMENSIONS INDICATED ARE TO FACE OF FINISH, FACE OF STUD PARTITION CENTERLINE) AND CENTERLINES OF COLUMNS, UNITS, ETC.

B. DISCREPANCIES BETWEEN ARCHITECTURAL DRAWINGS AND MECHANICAL/FIRE PROTECTION PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT

C. SEE LIFE SAFETY PLANS FOR THE LOCATIONS OF SMOKE BARRIERS, SMOKE EXHAUST SYSTEMS, ETC.

D. REFER TO UNIT FIRE-RATED PENETRATIONS, INC. FIRE RESISTANCE VOLUMES CURRENT EDITION FOR SPECIFIC CONSTRUCTION REQUIREMENTS OF U.L. LISTED ASSEMBLIES

E. MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR TYPICAL U.L. LISTED PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE PROJECT-SPECIFIC U.L. LISTED PENETRATIONS

F. ALL PIPE AND CONDUIT PENETRATIONS THRU 2 HR RATED OR MORE PARTITIONS, FLOORS, ROOF, ETC. SHALL BE SEALED WITH A RESPECTIVELY RATED FIRE-RESISTANT PENETRATION PRODUCT

G. AT ALL EXISTING AND CONSTRUCTED PARTITIONS THE CONTRACTOR IS TO MAINTAIN THE FIRE-RESISTIVE INTEGRITY

H. REFER TO MECHANICAL/FIRE PROTECTION PLANS FOR PENETRATION LOCATIONS

I. NEW MANUFACTURED WALKWAY COVERINGS TO BE CLEAR ANODIZED ALUMINUM

1. RELOCATED GRINDING BOOTH. CLEAN, PREP, AND RE-PAINT RELOCATED EXISTING GRINDING BOOTHS.
2. NEW GRINDING BOOTH. REFER TO DETAILS ON A-501. NEW GRINDING TABLES AT EACH NEW GRINDING BOOTH. REFER TO SHEET A-521.
3. COORDINATE DRAIN LOCATIONS W/ CIVIL DRAWING AND CANOPY MANUFACTURER'S REQUIREMENTS.

AREA OF WORK

A-102

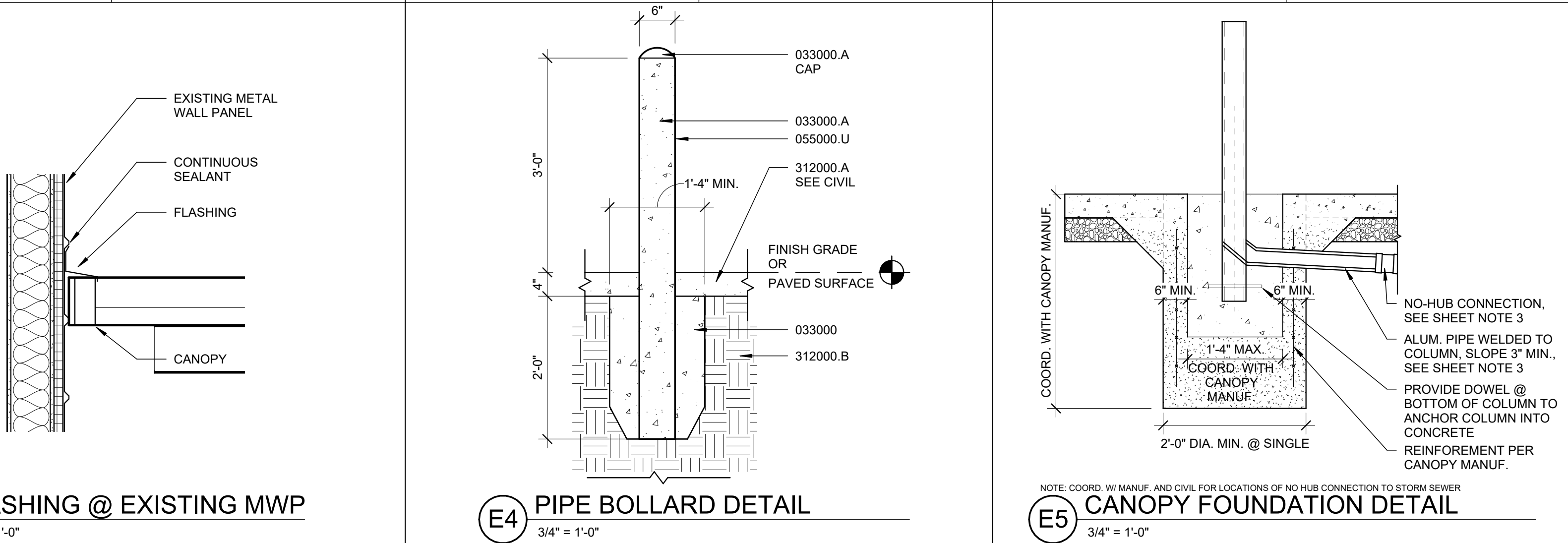
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PROJECT: H59-6238

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PROJECT: 2202-231075

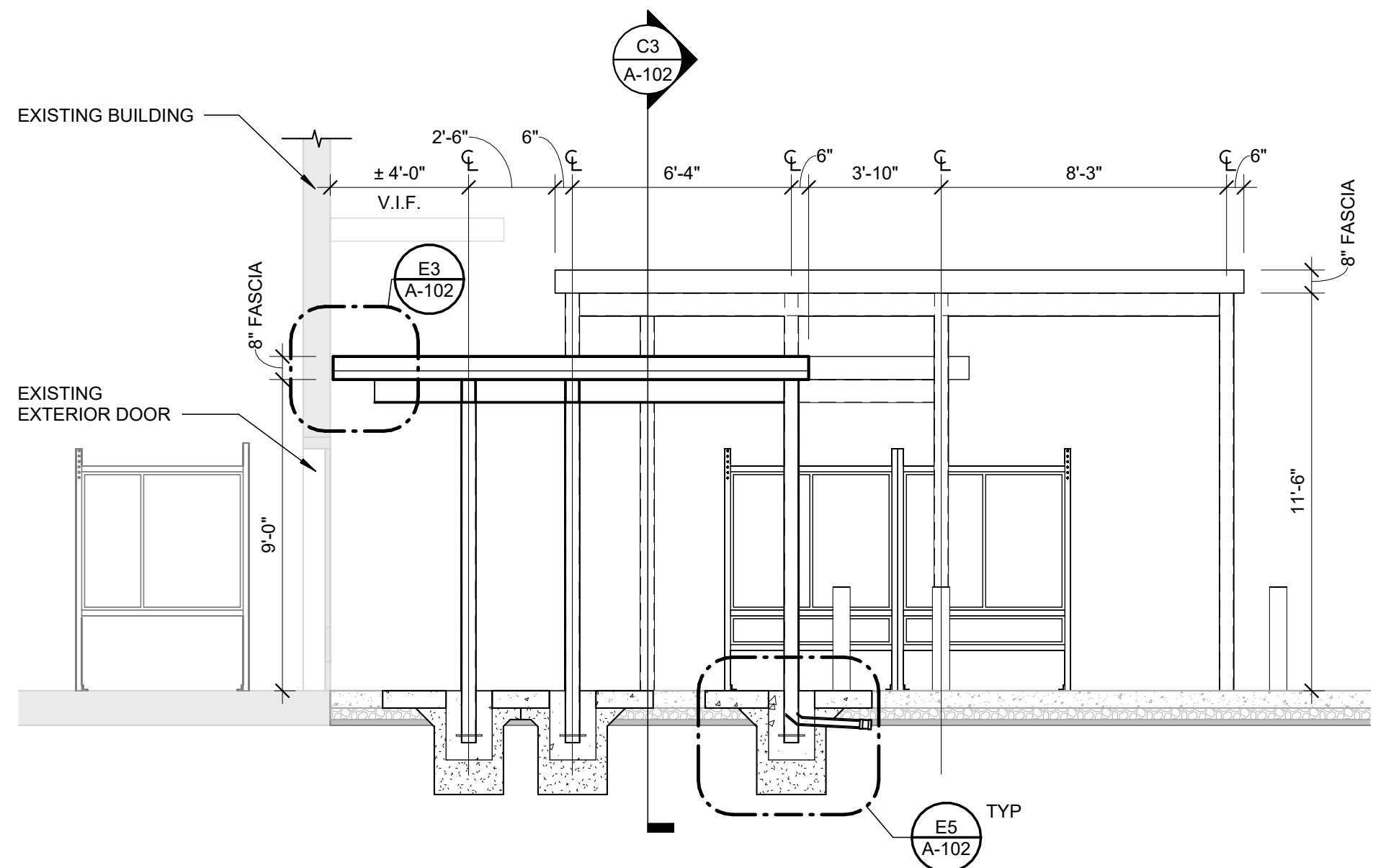
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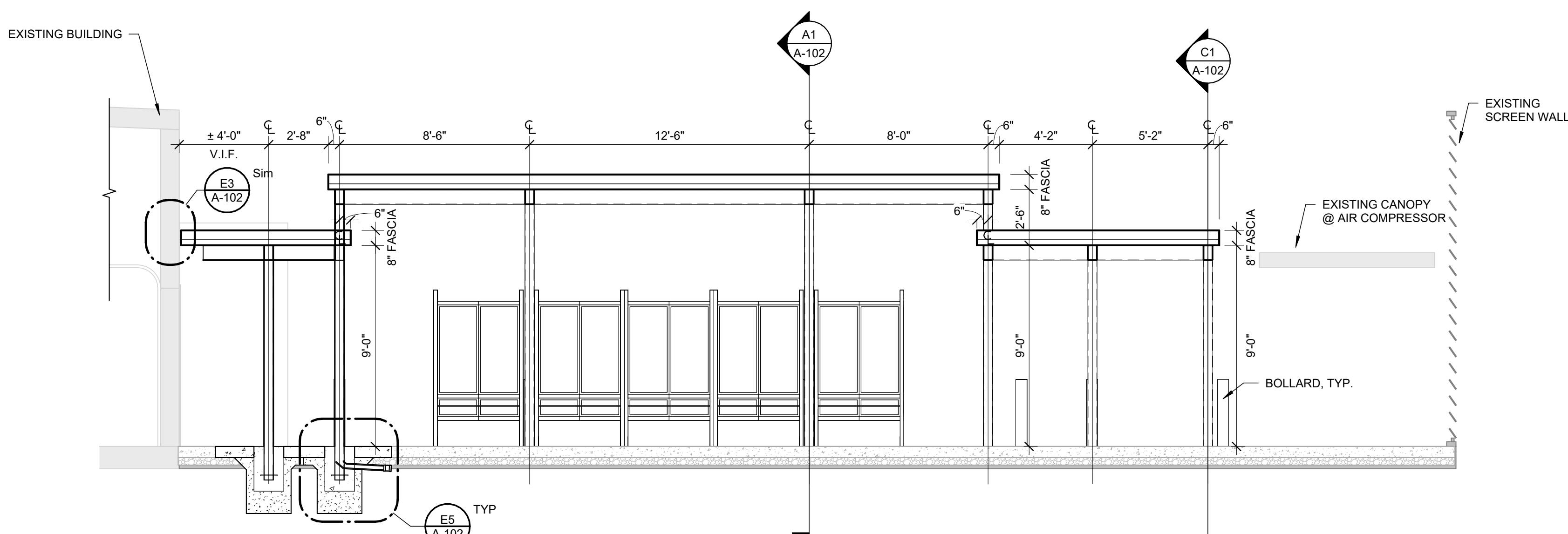
(E3) FLASHING @ EXISTING MWP
3/4" = 1'-0"

E4 PIPE BOLLARD DETAIL
3/4" = 1'-0"

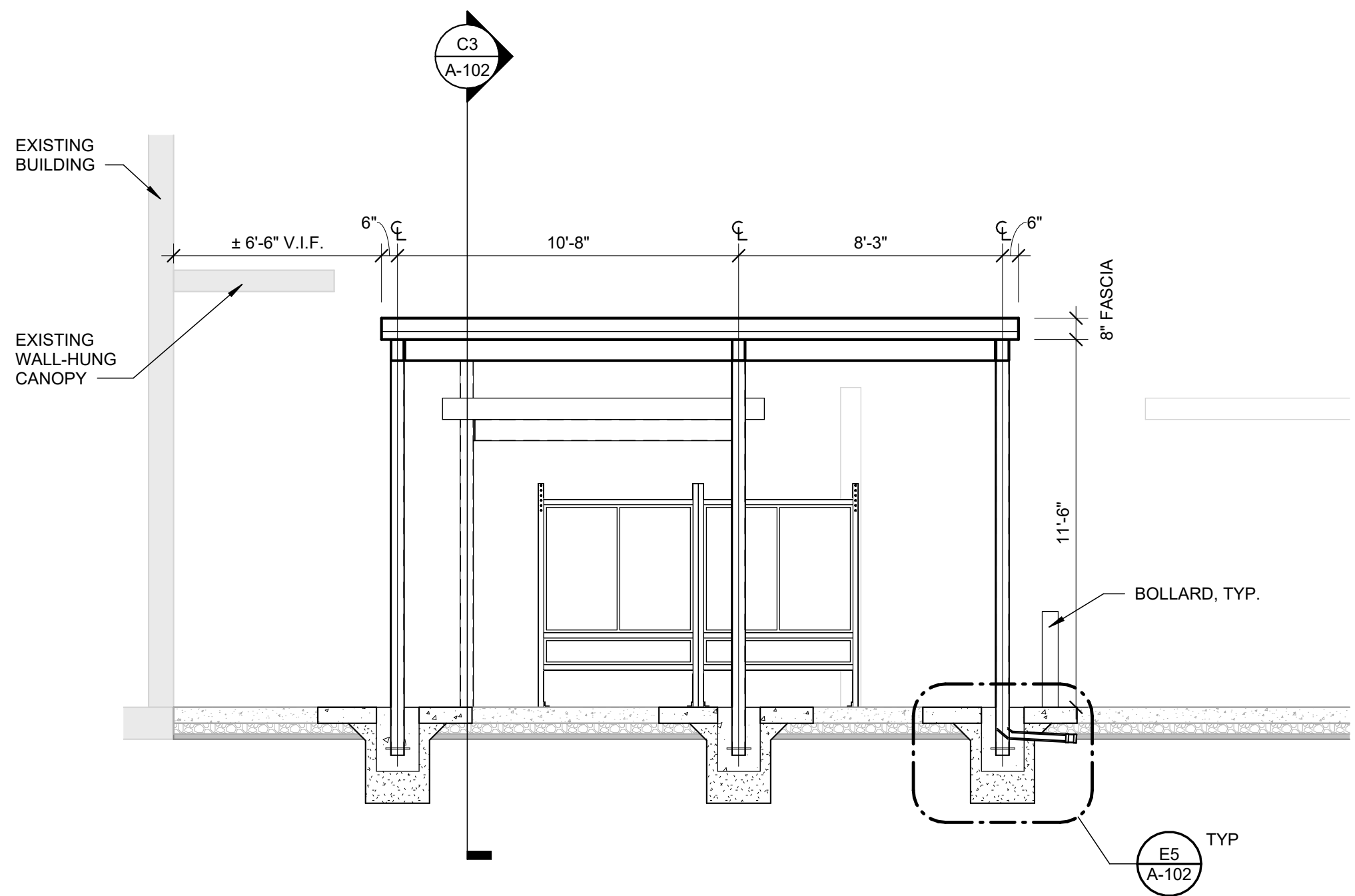
E5 CANOPY FOUNDATION DETAIL
3/4" = 1'-0"



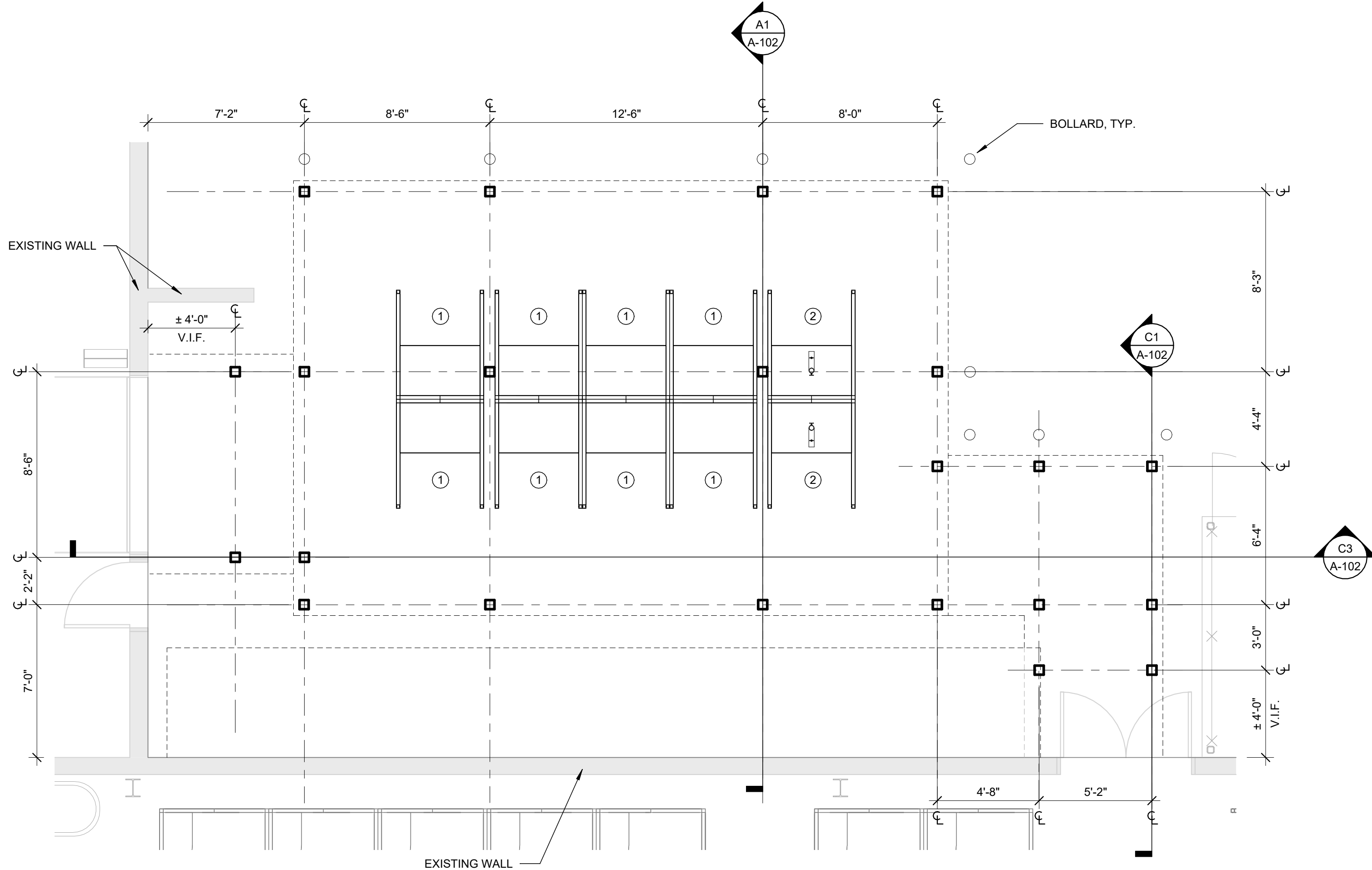
C1 SECTION - CANOPY FROM WELDING TRAINING
1/4" = 1'-0"



(C3) SECTION - LONGITUDINAL SECTION
1/4" = 1'-0"



(A1) SECTION - GRINDING BOOTH CANOPY
1/4" = 1'-0"

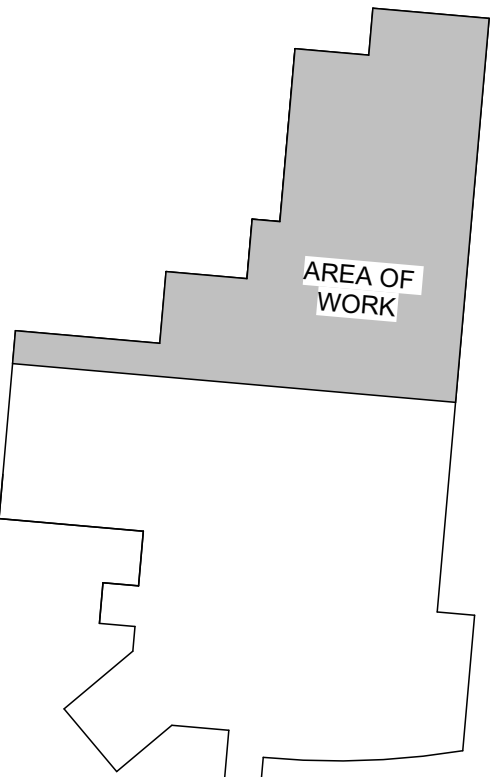


A3 ENLARGED CANOPY PLAN
1/4" = 1'-0"

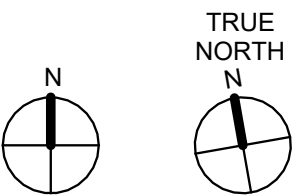
SHEET NOTES

- INTERIOR DIMENSIONS INDICATED ARE TO (FACE OF FINISH, FACE OF STUD, PARTITION CENTERLINE) AND CENTERLINES OF COLUMNS, UNO.
- F. ALL PERSONAL BELONGINGS AND VALUABLES ARE TO BE REMOVED FROM THE PROJECT. LIFE SAFETY PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR LIFE SAFETY PLANS FOR THE LOCATIONS OF SMOKE BARRIERS, SMOKE
- D. REFER TO UNDERWRITERS LABORATORIES, INC. FIRE RESISTANCE VOLUMES - CURRENT EDITION FOR SPECIFIC CONSTRUCTION REQUIREMENTS OF U.L. LISTED
- E. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR TYPICAL U.L. LISTED PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES. CONTRACTOR SHALL VERIFY THAT THE CORRECTLY APPROPRIATE PROJECT-SPECIFIC U.L. LISTED ASSEMBLIES FOR PENETRATIONS.
- F. ALL PIPE AND CONDUIT PENETRATIONS THROUGH 2 HR RATED OR MORE PARTITIONS, FLOORS, ROOF, ETC. SHALL BE SEALED WITH A RESPECTIVE U.L. LISTED FIRE RESISTANT PENETRATION. FOR PENETRATIONS THROUGH IMPROVED ELEVATED
- G. AT ALL EXISTING AND CONSTRUCTION PARTITIONS THE CONTRACTOR IS TO MAINTAIN THE FIRE-RESISTIVE INTEGRITY.
- H. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR PENETRATION LOCATIONS.
- I. NEW MANUFACTURED WALKWAY COVERINGS TO BE CLEAR ANODIZED ALUMINUM.

KEY PLAN



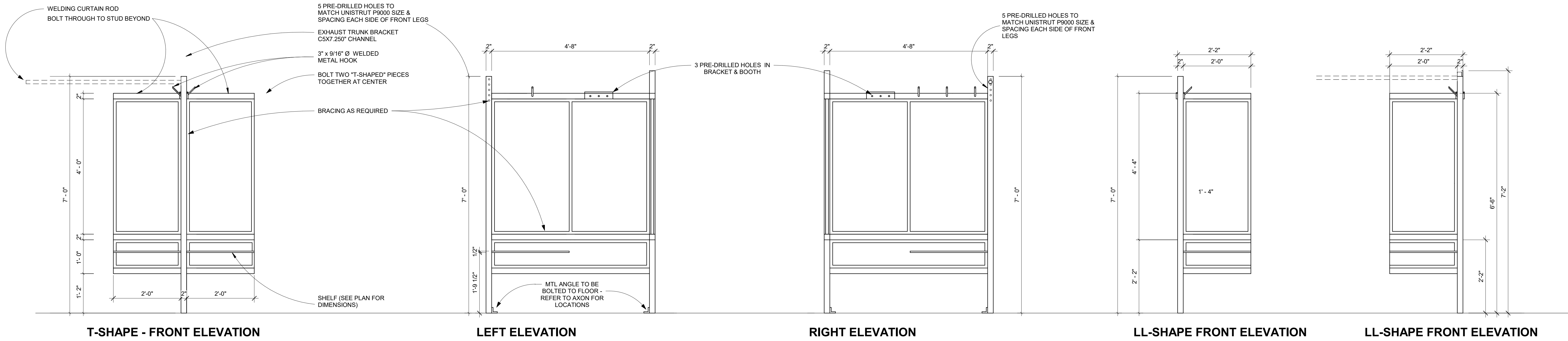
A1 ROOF PLAN
1/8" = 1'-0"



INDIVIDUAL PIECE ELEVATIONS

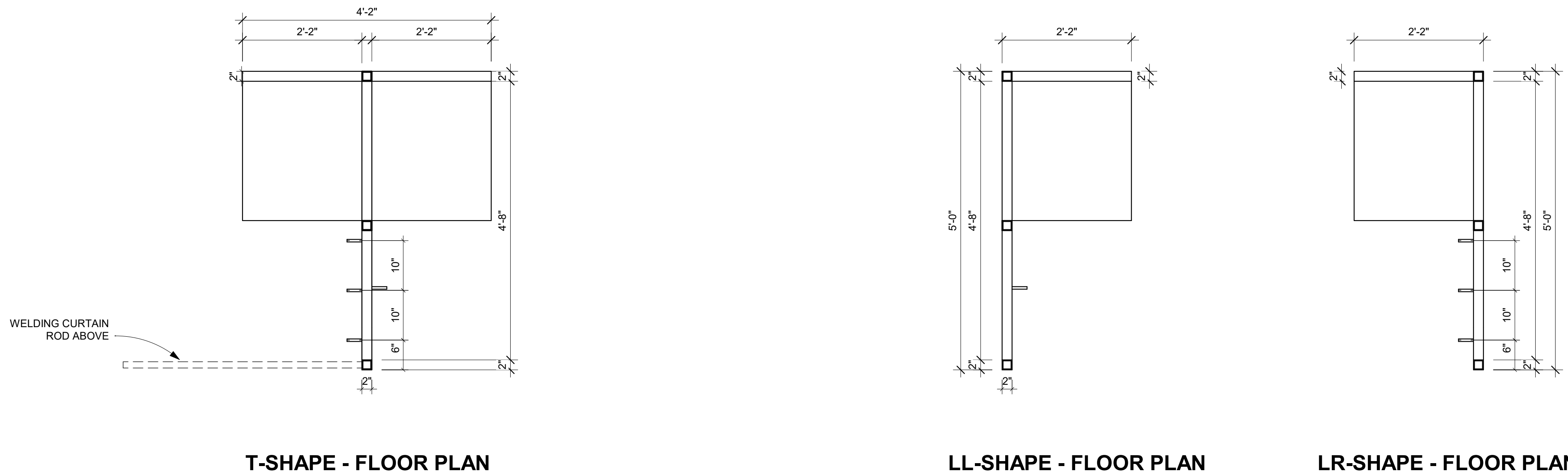
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D



INDIVIDUAL PIECE FLOOR PLANS

C



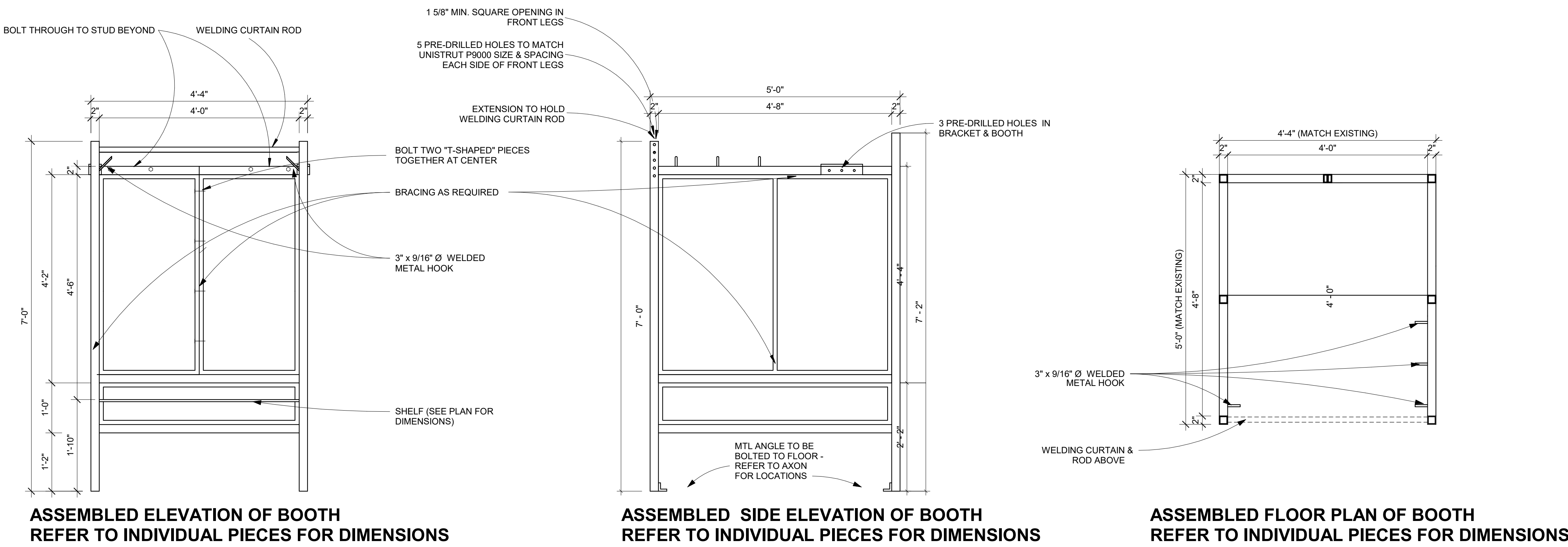
GRINDING BOOTH GENERAL NOTES

1. DESIGN INTENT IS TO MATCH AS CLOSELY AS POSSIBLE THE DESIGN, CONSTRUCTION, MATERIALS, AND FINISHES OF EXISTING WELDING BOOTHS IN THE AREA OF WORK.
2. REFER TO PLANS FOR QUANTITY AND LAYOUT OF EXISTING AND NEW BOOTHS. THERE MUST BE NO MORE THAN ONE NON-WELDED JOINT PER BOOTH OR NO MORE THAN SIX NON-WELDED JOINS PER SECTION OF SIX BOOTHS. THE ONLY EXCEPTION TO THIS IS THAT THE CURTAIN ROD MAY HAVE A BOLTED ATTACHMENT AT THE POINTS WHERE IT MEETS THE TOP OF EACH DIVIDER PANEL. ALL TABLETOPS AND SHELVES MUST BE WELDED TO THE PANELS. THERE MUST BE NO BOLTS OR FASTENERS EXTENDING OUT OF THE REAR OF THE BOOTH THAT WOULD OBSTRUCT WHEN BOOTHS ARE BOLTED TO THE WALL.
4. ALL WELDS MUST MEET THE VISUAL INSPECTION REQUIREMENTS OF THE AMERICAN WELDING SOCIETY D1.1 STRUCTURAL STEEL WELDING CODE AND MUST BE INSPECTED PRIOR TO APPLYING THE POWDER COAT FINISH. BUYER WILL SUPPLY THE CERTIFIED WELDING INSPECTOR AND MUST BE NOTIFIED 48 HOURS PRIOR TO INSPECTION. IT IS THE VENDOR'S RESPONSIBILITY TO CONTRACT THE BUYER AT THIS TIME.
5. THERE MUST BE INCLUDED A WAY TO LEVEL BOOTHS BY EITHER A SLOTTED ATTACHMENT AT THE POINT WHERE THE TWO PANELS JOIN, OR BY LEVELING ADJUSTMENTS ON THE BOTTOM OF EACH FOOT, OR BOTH. ALL POINTS WHERE THE TUBING EXTENDS TO THE FLOOR MUST MAKE FULL CONTACT WITH FLOOR PRIOR TO ANCHORING.
6. WITH THE EXCEPTION OF THE 3/8\"/>
7. THERE SHALL BE NO HOLES IN ANY PARTS THAT ARE LEFT OPEN AFTER THE INSTALLATION IS COMPLETE. ANY OPENINGS AT THE END OF THE PIPE OR TUBING SHOULD BE PERMANENTLY CAPPED PRIOR TO POWDER COAT APPLICATION.

ASSEMBLED BOOTH DRAWINGS - SEE TO INDIVIDUAL PIECES ABOVE FOR ADDITIONAL DIMENSIONS AND DETAILS

B

A



GRINDING BOOTH SIZES & THICKNESS

- A. LEGS & BRACING IN PANELS = 2.0\"/>

REVISIONS:

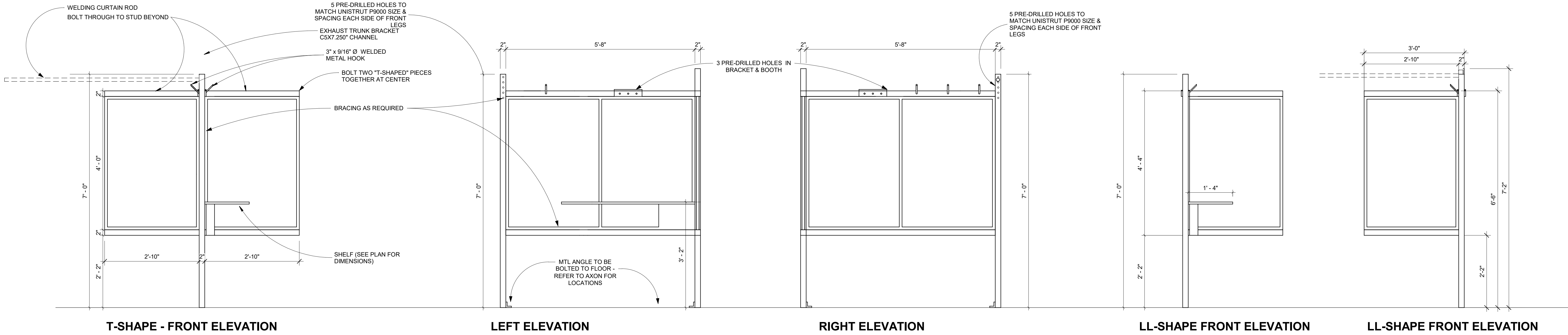
No.	Description	Date
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STATE
PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/23

INDIVIDUAL PIECE ELEVATIONS

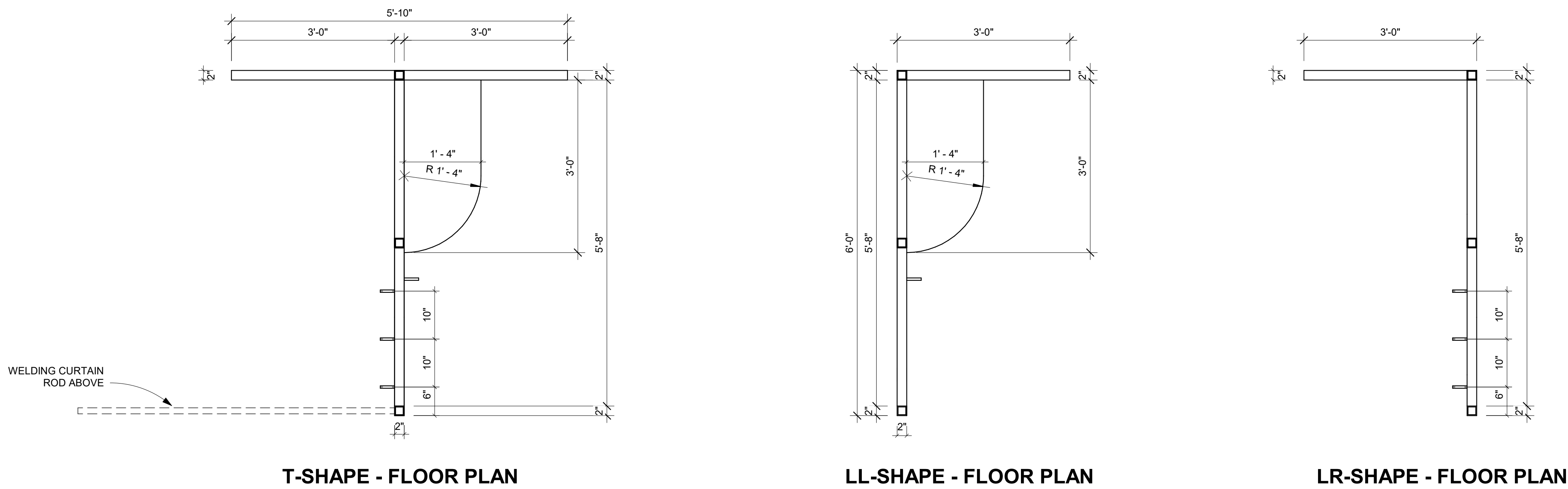
E

D



INDIVIDUAL PIECE FLOOR PLANS

C



WELDING BOOTH GENERAL NOTES

1. DESIGN INTENT IS TO MATCH AS CLOSELY AS POSSIBLE THE DESIGN, CONSTRUCTION, MATERIALS, AND FINISHES OF EXISTING WELDING BOOTHS IN THE AREA OF WORK.
2. REFER TO PLANS FOR QUANTITY AND LAYOUT OF EXISTING AND NEW BOOTHS.
3. THERE MUST BE NO MORE THAN ONE NON-WELDED JOINT PER BOOTH OR NO MORE THAN SIX NON-WELDED JOINTS PER SECTION OF SIX BOOTHS. THE ONLY EXCEPTION TO THIS IS THAT THE CURTAIN ROD MAY HAVE A BOLTED ATTACHMENT AT THE POINTS WHERE IT MEETS THE TOP OF EACH DIVIDER PANEL. ALL TABLETOPS AND SHELVES MUST BE WELDED TO THE PANELS. THERE MUST BE NO BOLTS OR FASTENERS EXTENDING OUT OF THE REAR OF THE BOOTH THAT WOULD OBSTRUCT WHEN BOOTHS ARE BOLTED TO THE WALL.
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6. WITH THE EXCEPTION OF THE 3/8\"/>
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WELDING LAB
EXPANSION AND
GRINDING LAB



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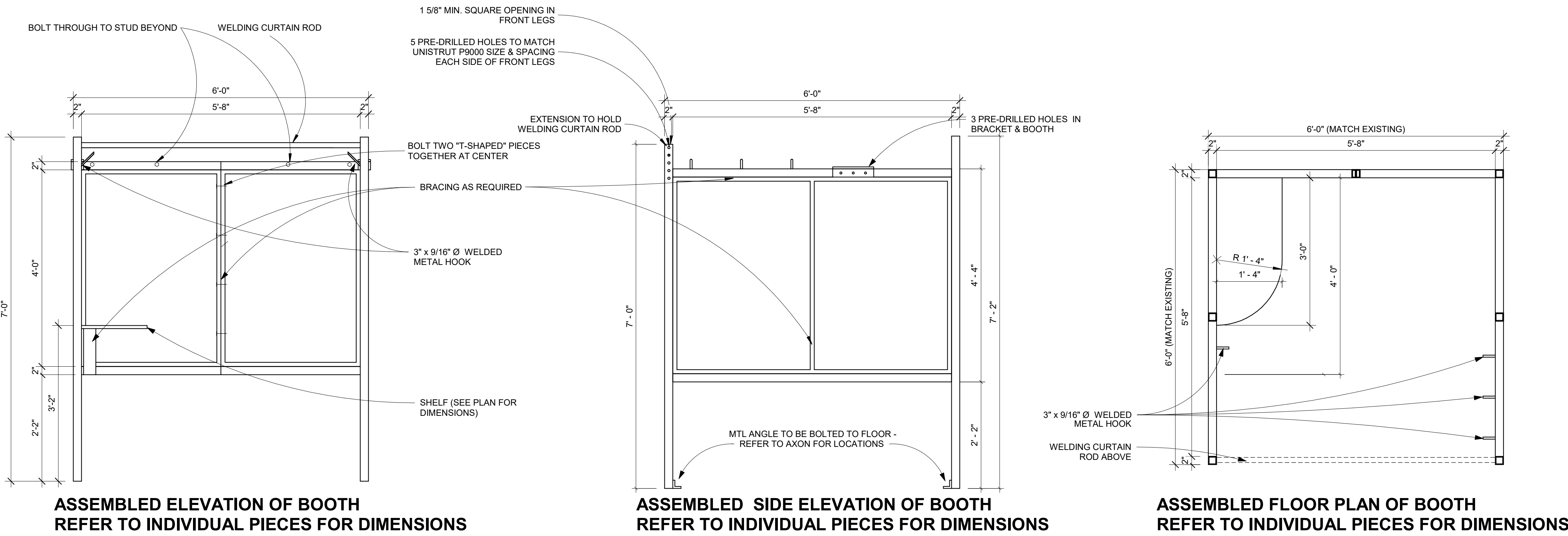
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ASSEMBLED BOOTH DRAWINGS - SEE TO INDIVIDUAL PIECES ABOVE FOR ADDITIONAL DIMENSIONS AND DETAILS

B

A



WELDING BOOTH SIZES & THICKNESS

- A. LEGS & BRACING IN PANELS = 2.0\"/>

REVISIONS:

No.	Description	Date
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STATE
PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/23

WELDING
BOOTH
DETAILS (6X6)

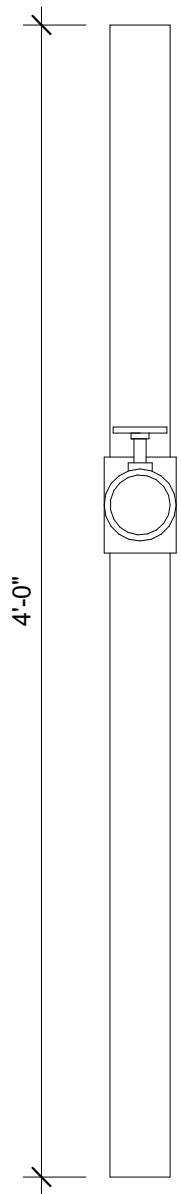
A-502



D1 WELDING TABLE
1/2" = 1'-0"

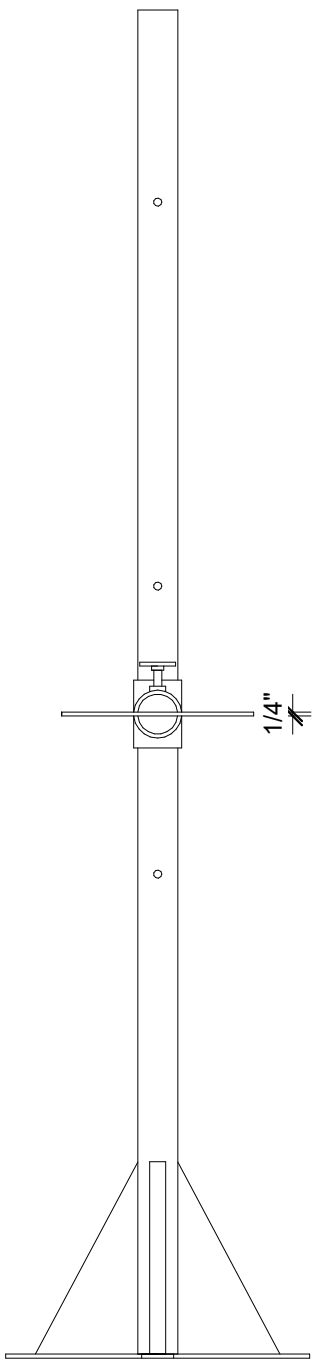


A1 GRINDING TABLE
1/2" = 1'-0"



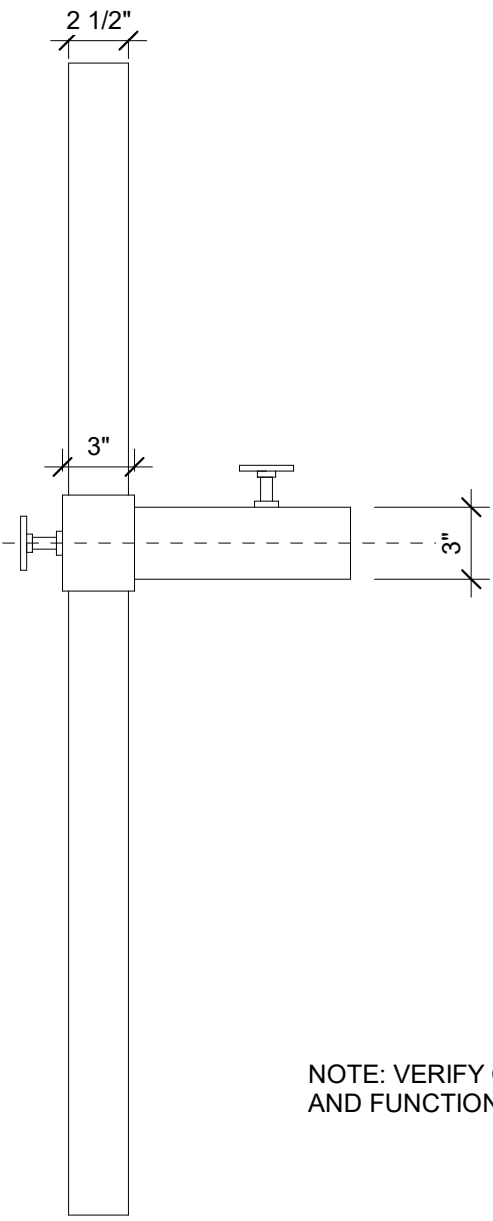
NOTE: VERIFY GRINDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

D3 GRINDING TABLE DETAIL ELEVATION - FRONT
1 1/2" = 1'-0"



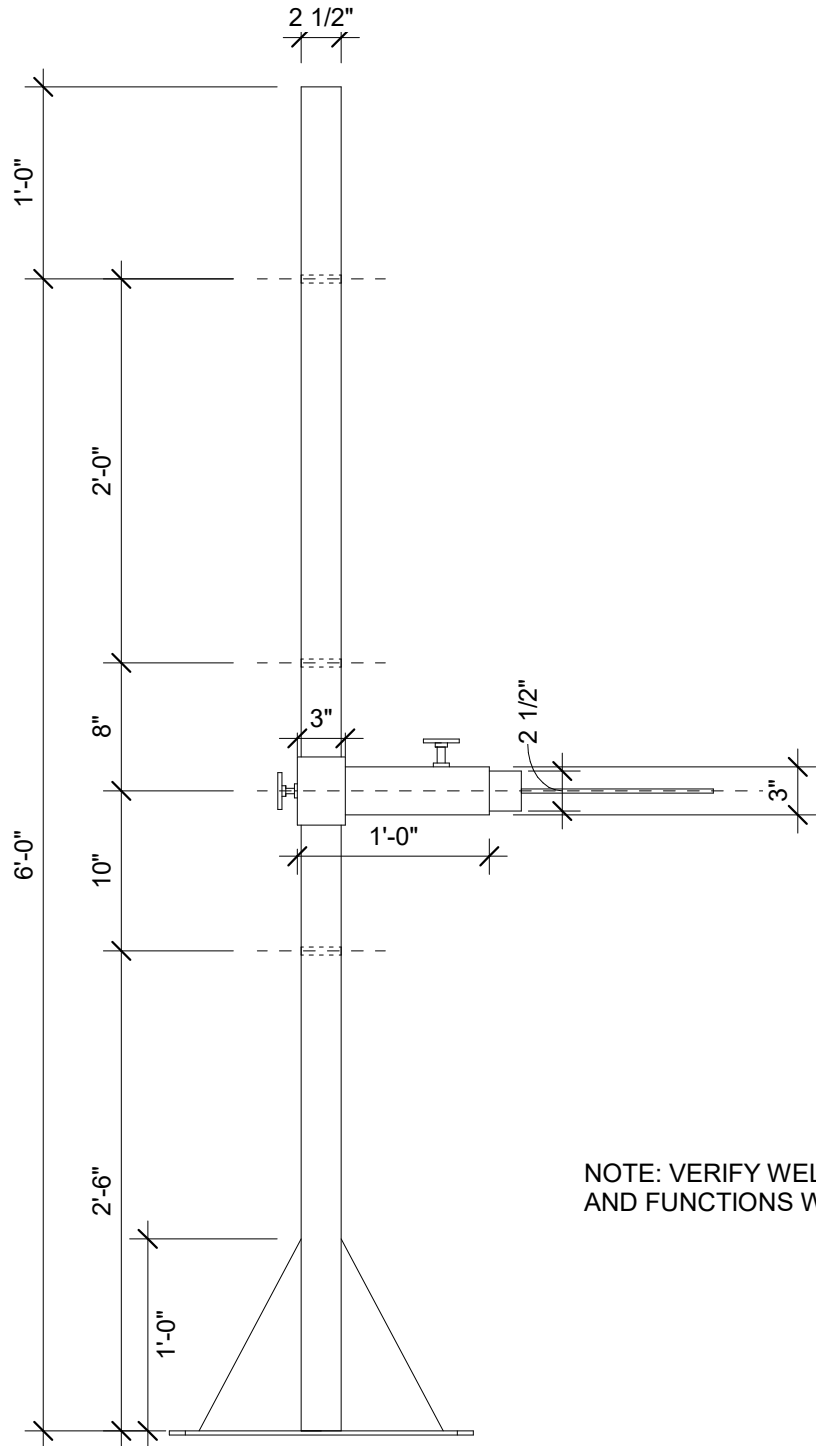
NOTE: VERIFY WELDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

D4 WELDING TABLE DETAIL ELEVATION - FRONT
1" = 1'-0"



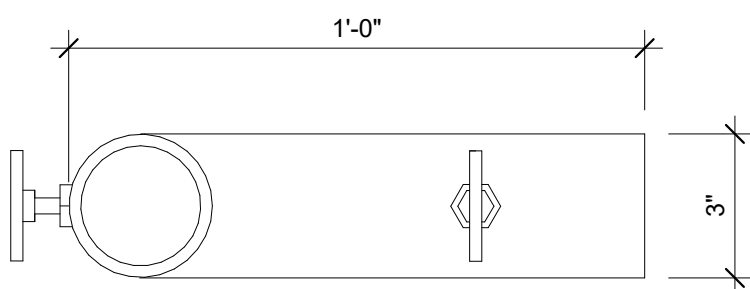
NOTE: VERIFY GRINDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

C3 GRINDING TABLE DETAIL ELEVATION - SIDE
1 1/2" = 1'-0"



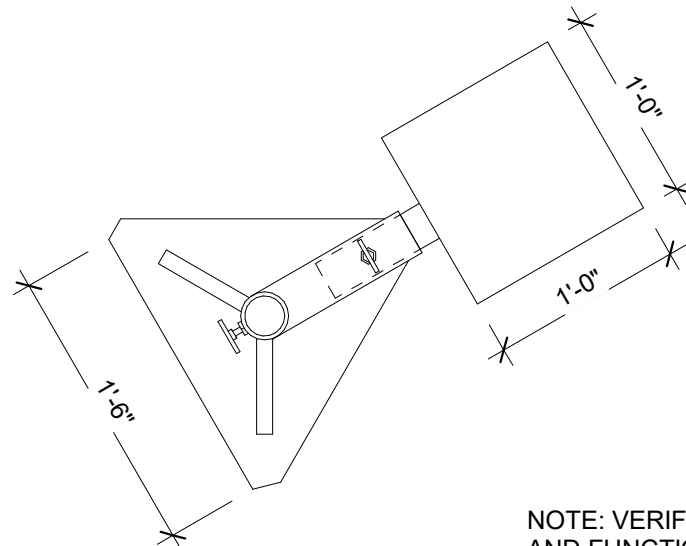
NOTE: VERIFY WELDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

C4 WELDING TABLE DETAIL ELEVATION - SIDE
1" = 1'-0"



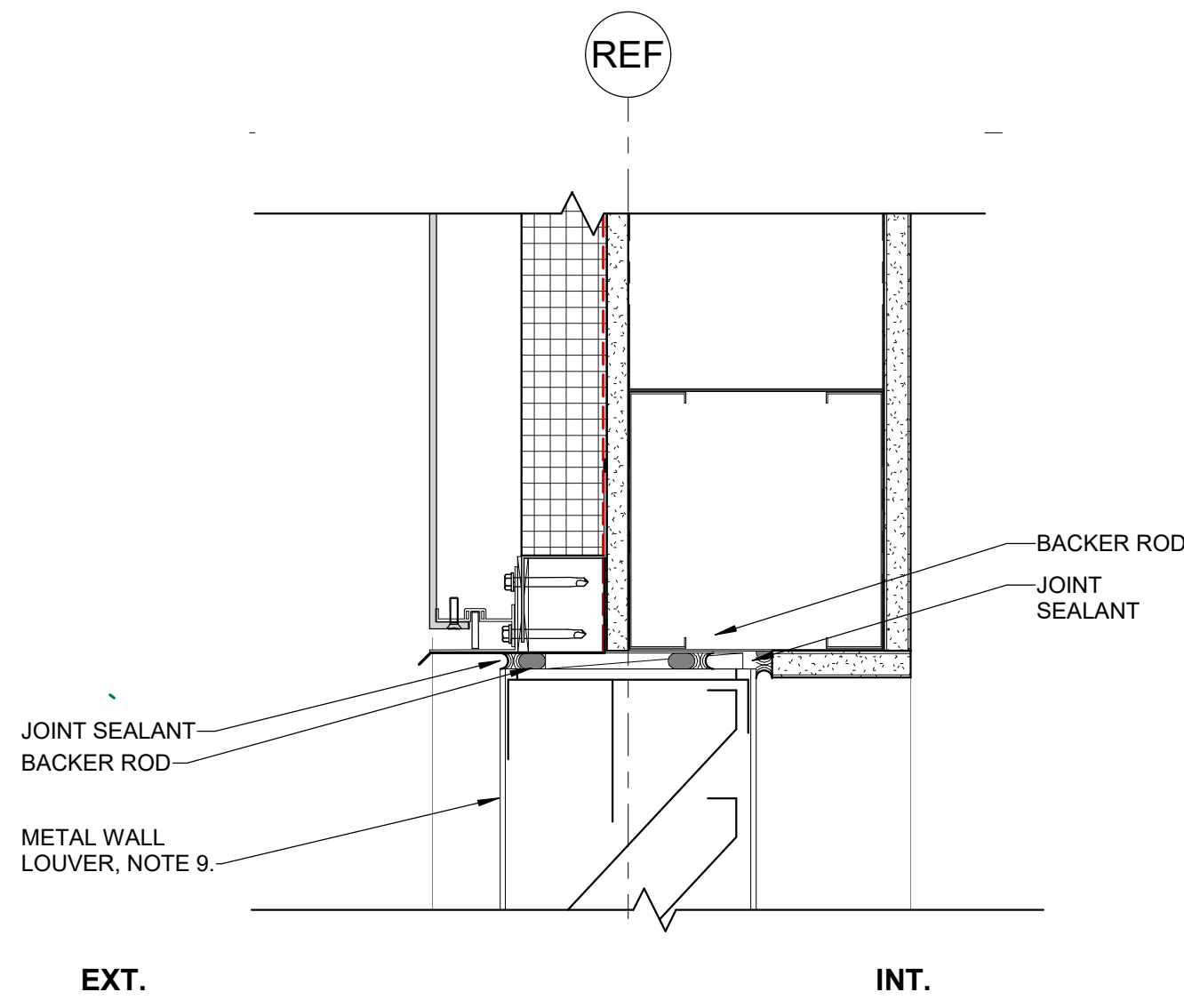
NOTE: VERIFY GRINDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

A3 GRINDING TABLE DETAIL PLAN
3" = 1'-0"

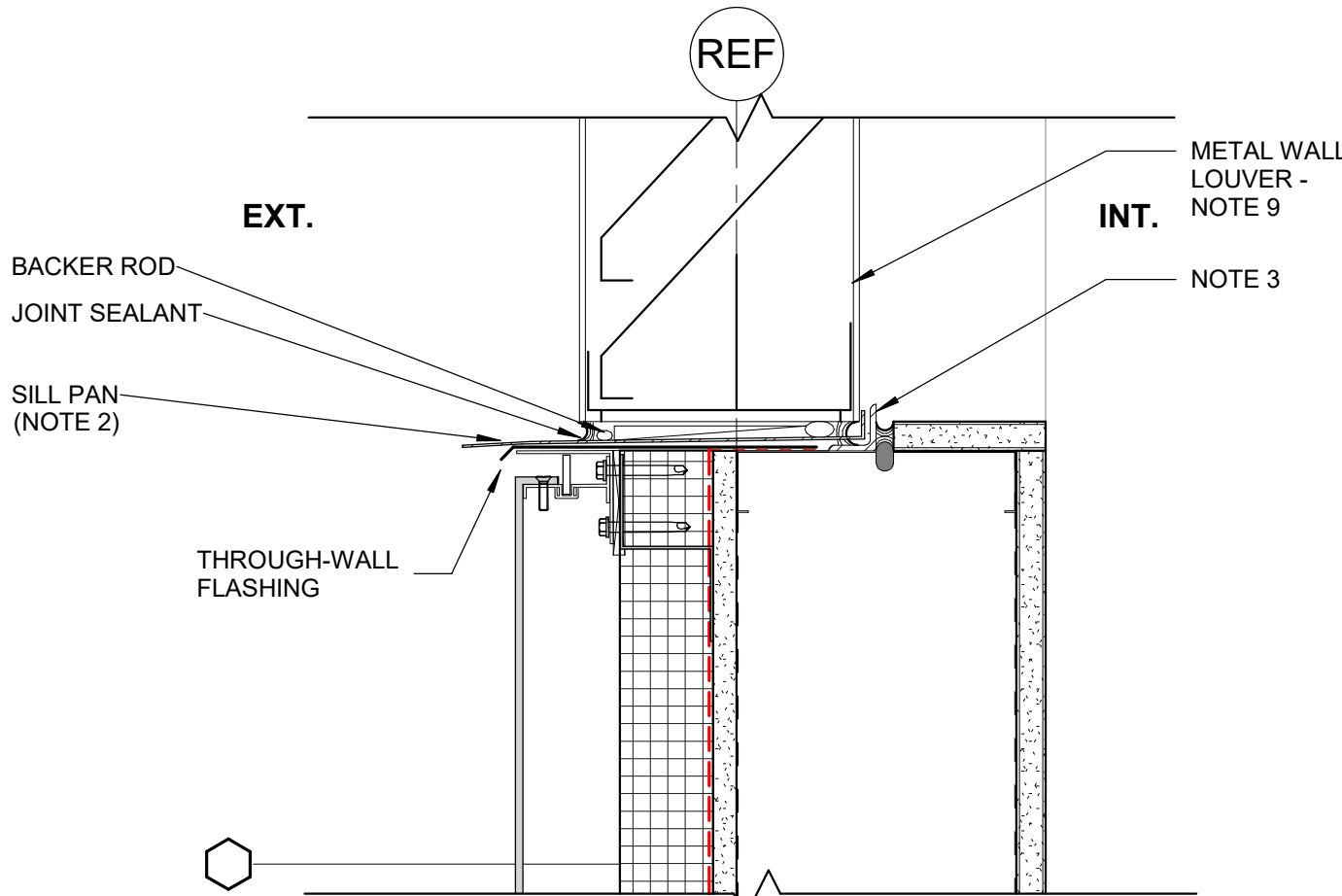


NOTE: VERIFY WELDING TABLE DIMENSIONS
AND FUNCTIONS W/ OWNER PRIOR TO FABRICATION.

A4 WELDING TABLE DETAIL PLAN
1" = 1'-0"



D5 LOUVER HEAD DTL MTLSTD/MTD
3" = 1'-0"



C5 LOUVER SILL DTL MTLSTD/MTD
3" = 1'-0"



D1 Perspective 1
1/2" = 1'-0"



D4 Perspective 2
1/2" = 1'-0"



B4 Perspective 3
1/2" = 1'-0"


MECHANICAL SYMBOLS

- | <u>EQUIPMENT DESIGNATIONS</u> | |
|--------------------------------------|------------------------------|
| <u>SYMBOL</u> | <u>DESCRIPTION</u> |
| <u>AC-X</u> | AIR COMPRESSOR DESIGNATION |
| <u>DC-X</u> | DUST COLLECTOR DESIGNATION |
| <u>EF-X</u> | EXHAUST FAN DESIGNATION |
| <u>EXA-X</u> | EXTRACTOR ARM DESIGNATION |
| <u>MAU-X</u> | MAKE-UP AIR UNIT DESIGNATION |

EQUIPMENT DESIGNATIONS

<u>SYMBOL</u>	<u>DESCRIPTION</u>
<u>AC-X</u>	AIR COMPRESSOR DESIGNATION
<u>DC-X</u>	DUST COLLECTOR DESIGNATION
<u>EF-X</u>	EXHAUST FAN DESIGNATION
<u>EXA-X</u>	EXTRACTOR ARM DESIGNATION
<u>MAU-X</u>	MAKE-UP AIR UNIT DESIGNATION

LINETYPE SYMBOLS

DESIGNATION	DESCRIPTION
----	DEMOLITION WORK (SH)
_____	EXISTING WORK
=====	NEW WORK
-----	MATCHLINE
	PART PLAN DESIGNATION

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE COMMENCING WORK. THIS CONTRACT REQUIRES COMPLETE, FINISHED WORKABLE PROJECT OF THE AREAS INDICATED BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS COMPLETE SAME, REGARDLESS OF WHETHER OR NOT EACH AND EVERY NECESSARY WORK OR ITEM IS SPECIFICALLY INDICATED ON ANY OTHER PORTION OF THE DRAWING AND/OR NOTES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE USED AS SUCH UNLESS OTHERWISE SPECIFIED. IN ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

CONTRACTOR SHALL FURNISH ALL ADDITIONAL DATA AND DOCUMENTATION TO SECURE ALL REQUIRED PERMITS AND APPROVALS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED. AS A MINIMUM, ALL WORK SHALL CONFORM TO THE APPLICABLE BUILDING CODE ADOPTED BY THE JURISDICTION OF THE WORK, WHERE MORE STRINGENT CODES ARE ADOPTED, THEY SHALL GOVERN THE WORK.

ALL WORK SHALL CONFORM TO APPLICABLE FEDERAL, STATE, COUNTY AND LOCAL CODES AND ORDINANCES.

TO PROVIDE ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED, ALL WORK SHALL CONFORM TO PUBLIC ACCOMMODATION ACT (42 USC 11913) AND AMERICANS WITH DISABILITIES ACT OF 1990.

ALL WORK SHALL CONFORM TO THE APPLICABLE 2021 INTERNATIONAL BUILDING CODE BY THE JURISDICTION OF THE WORK.

AROUND ALL EXPOSED PIPES, CONDUIT OR DUCTS, INSTALL ENCLOSURES OF THE SAME MATERIAL AND FINISH AS THE EXPOSED PIPES, CONDUIT OR DUCTS, UNLESS NOTED OTHERWISE.

VENTILATORS AND FANS SHALL BE BUILT SUITABLE TO OPENINGS. ALL SUCH ASSEMBLIES TO BE FLASHED, WATERSTOPPED AND SEALED.

FIELD CHECK ALL ROUGH AND/OR FINISH DIMENSIONS FOR ACCURATE FITTING OF EQUIPMENT, CABINETS AND CASES. IF ANY DISCREPANCIES ARE NOTED BEFORE FABRICATION, PROVIDE AND INSTALL ALL NECESSARY FITTERS, SCRIBE STRIPS, PANELS, BASES OR TRIM TO COMPLETE AND FINISH INSTALLATIONS.

ALL SWITCHES, OUTLETS, THERMOSTATS, OR OTHER WALL MOUNTED DEVICES OR CONTROLS SHALL BE INSTALLED TO THE LOCATION SPECIFIED ON THE DRAWINGS. IF THE LOCATION SPECIFIED ON THE DRAWINGS FOR FURNISHINGS OR EQUIPMENT, ITEMS INTENDED FOR WALL MOUNTING SHALL NOT BE INSTALLED ON, THROUGH OR INTO ANY OTHER EQUIPMENT UNLESS SPECIFICALLY CALLED FOR. VERIFY MOUNTING AND LOCATION OF ALL ITEMS.

PROVIDE AND INSTALL ALL NECESSARY HARDWARE, BRACKETS, BRACING, ANCHORING, INSERTS, BLOCKING, FURRING OR OTHER SUPPLEMENTARY ITEMS NEEDED FOR COMPLETE INSTALLATION OF ALL WORK. FUTURE WORK BY OTHERS OR ACCESSORIES ARE NOT TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONTRACTORS ARE TO COORDINATE THE WORK OF EACH OTHER, SO THAT THE WORK AND SCHEDULE ARE NOT IMPEDED. SCHEDULE WORK PROGRESS THROUGHOUT THE ENTIRE PROJECT TO PREVENT CONFLICTS AND INTERFERENCE. OBTAIN ALL NECESSARY INFORMATION SUCH AS SIZES, LOCATIONS, DIMENSIONS, ETC. OF ALL EXISTING WORK. COORDINATE ALL WORK WITH THE OWNER, PROJECT MANAGER AND ALL OTHERS INVOLVED IN THE PROJECT. COORDINATE ALL WORK TO BE PROPER AND WELL COORDINATED INSTALLATION. PRIOR TO INSTALLATION OF ITEMS, CONFER WITH EACH CONTRACTOR FOR EXAMINATION OF ALL ITEMS.



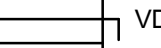













WHERE THE DETAILS REQUIRE OR ON DIMENSIONS, OR NECESSARY TO COMPLETE THE WORK OF THIS CONTRACT ARE NOT SPECIFIED HEREIN, PROVIDE BEST QUALITY MATERIALS. WHERE MATERIALS ARE INTENDED TO MATCH EXISTING, PROVIDE CLOSEST POSSIBLE MATCH, SUBJECT TO OWNER'S APPROVAL. WHERE THE WORK IS TO BE MATCHED TO EXISTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAMAGE SUFFERED SHALL BE REPAIRED OR REPLACED, WHERE ITEM CANNOT BE REPAIRED TO A "NEW CONDITION", OR WHERE THE STRUCTURAL INTEGRITY HAS BEEN AFFECTED, IT SHALL BE REPLACED.


CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIREMENTS FOR INSTALLATION OF OWNER PROVIDED EQUIPMENT INCLUDING: FURNISHING DIAGRAMS, INSTALLATION INSTRUCTIONS, ELECTRICAL SCHEMATICS, TEMPLATES, LAYOUTS AND DIMENSIONS AND ALL OTHER INFORMATION NECESSARY FOR A CORRECT AND COMPLETE INSTALLATION. PRIOR TO ROUGH-IN SERVICES, CONFER WITH OWNER EXACT LOCATION OF ALL ITEMS.


PIPING SYMBOLS	
<u>SYMBOL</u>	<u>DESCRIPTION</u>

A	ACETYLENE
AR	ARGON
CA	COMPRESSED AIR
CO2	CARBON DIOXIDE
MG	MIXED GAS
NG	NATURAL GAS
O	OXYGEN

DUCTWORK SYMBOLS

<u>SYMBOL</u>	<u>DESCRIPTION</u>
	TEMPERATURE SENSOR
	AIR FLOW
	VOLUME DAMPER
	HORIZONTAL ACCESS DOOR
	VERTICAL ACCESS DOOR
	ELBOW W/ DOUBLE THICKNESS TURNING VANES
	RECTANGULAR BRANCH TAKE-OFF
	BELL MOUTH BRANCH TAKE-OFF
	ROUND BRANCH TAKE-OFF
	ROUND DUCT DROP OFF BOTTOM
	DUCT TRANSITION
	SQUARE TO ROUND TRANSITION
	DUCTWORK CHANGE IN ELEVATION (UP OR DOWN)
	SUPPLY / OUTSIDE AIR DUCT RISER
	RETURN AIR DUCT RISER
	EXHAUST / RELIEF AIR DUCT RISER


 ROUND DUCT RISER


 AIR DEVICE TYPE AIR DEVICE IDENTIFIER
 CFM

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

NUMBER, POUND DOLLAR	HWR HZ	HOT WATER RECIRCULATION HERTZ
PERCENT	IA	INSTRUMENT AIR
AND	ICW	INDUSTRIAL COLD WATER
PLUS	IHR	INDUSTRIAL HOT WATER RECIRCULATION
MINUS	IHW	INDUSTRIAL HOT WATER
DIVIDE BY, PER	IN	INCH, INCHES
LESS THAN	INV EL	INVERT ELEVATION
EQUALS, EQUAL TO		
GREATER THAN		
MULTIPLY BY, BY	KW	KILOWATTS
INCHES, INCH		
FEET, FOOT	L	LONG, LENGTH
PLUS OR MINUS	LA	LABORATORY AIR
LESS THAN OR EQUAL TO	LAT	LEAVING AIR TEMPERATURE
GREATER THAN OR EQUAL TO	LBS	POUNDS
	LBSHR	POUNDS PER HOUR
AT	LN	LIQUID NITROGEN
COMPRESSED AIR	LP	LIQUID PROPANE
AUTOMATIC AIR VENT	LPG	LIQUID PETROLEUM GAS
AUTOMATIC CONTROL VALVE	LPR	LOW PRESSURE STEAM RETURN
ACCESS DOOR, AREA DRAIN	LPS	LOW PRESSURE STEAM SUPPLY
ANTIFREEZE	LW	LABORATORY VENT, LABORATORY VACUUM
ABOVE FINISHED FLOOR	LW	LABORATORY WASTE
ARGON GAS	LWT	LEAVING WATER TEMPERATURE
AUTOMATIC TEMPERATURE CONTROL		
	MA	MEDICAL AIR
BUILDING AUTOMATION SYSTEM	MAV	MANUAL AIR VENT
BOKER BLOWDOWN	MAX	MAXIMUM
BEARING COOLING WATER RETURN	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BEARING COOLING WATER SUPPLY	MCC	MOTOR CONTROL CENTER
BACKDRAFT DAMPER	MEQ	MECHANICAL EQUIPMENT
BACKFLOW PREVENTER	MH-F	MANHOLE
BRAKE HORSEPOWER	MIN	MINIMUM
BUILDING MANAGEMENT SYSTEM	MISC	MISCELLANEOUS
BLOW OFF	MO	MOTOR OIL PIPING
BRITISH THERMAL UNIT	MOD	MOTOR OPERATED DAMPER
BRITISH THERMAL UNIT PER HOUR	MPR	MEDIUM PRESSURE STEAM RETURN
BALANCING VALVE	MPS	MEDIUM PRESSURE STEAM SUPPLY
	MV	MEDICAL VACUUM
CONTROL AIR		
CONTINUOUS BLOWDOWN	N	NITROGEN
CAMPUS CONDENSATE	NA, N/A	NOT APPLICABLE
CENTRAL CONTROL AND MONITORING SYSTEM	NC	NOISE CRITERIA, NORMALLY CLOSED
CONDENSATE DRAIN	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CHEMICAL FEED	NG	NATURAL GAS
CUBIC FEET PER MINUTE	NO	NORMALLY OPEN, NITROUS OXIDE
CHELAT	No	NUMBER
CHILLED WATER RETURN	NOM	NOMINAL
CHILLED WATER SUPPLY	NPSH	NET POSITIVE SUCTION HEAD
CHILLED WATER HEAT EXCHANGER	NPW	NOT-POTABLE WATER
CLEANOUT		
CARBON DIOXIDE	O	OXYGEN
CLEAN STEAM	OA	OUTSIDE AIR
COMBUSTION TURBINE	OD	OVERFLOW DRAIN
COLD WATER, DOMESTIC CITY WATER	OE	OPEN ENDED DUCT
CONDENSER WATER RETURN	OF	OVERFLOW
CONDENSER WATER SUPPLY	OSD	OUTSIDE STEM AND YOKE
CEGREE(S) CELSIUS		
	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
DEEP, DRAIN WATER	PA	PLANT AIR
DEBRIS, DRY BULB	PC	PUMPED CONDENSATE
DIRECT DIGITAL CONTROL	PCH	PRIMARY CHILLED WATER RETURN
DESIGNATION	PCHS	PRIMARY CHILLED WATER SUPPLY
DISTRIBUTION HEATING WATER RETURN	PCP	PUMP CONTROL PANEL
DISTRIBUTION HEATING WATER SUPPLY	PCR	PUMPED CONDENSATE RECIRCULATION
DOMESTIC HOT WATER RETURN	PCWR	PROCESS COOLING WATER RETURN
DOMESTIC HOT WATER SUPPLY	PCWS	PROCESS COOLING WATER SUPPLY
DIAMETER	PD	PRESSURE DROP, PUMP DISCHARGE
DIIONIZED WATER RETURN	PG	PILOT GAS
DIIONIZED WATER SUPPLY	PGR	PROCESS GLYCOL WATER RETURN
DOOR LOUVER	PGS	PROCESS GLYCOL WATER SUPPLY
DOWN	PH	PHASE
DRY SPRINKLER PIPE	PHR	PRIMARY HEATING RETURN
DUAL TEMPERATURE RETURN	PHS	PRIMARY HEATING SUPPLY
DUAL TEMPERATURE SUPPLY	PIV	POST INDICATING VALVE
DISTILLED WATER	PPH	POUNDS PER HOUR
	PRV	PRESSURE REDUCING VALVE, PRESSURE REGULATING VALVE
EXHAUST AIR	PSI	POUNDS PER SQUARE INCH
ENTERING AIR TEMPERATURE	PSIG	POUNDS PER SQUARE INCH GAUGE
EQUIPMENT DRAIN	PW	POTABLE WATER
EXPANSION JOINT		
ELEVATION		
ENERGY MANAGEMENT SYSTEM	RA	RETURN AIR, RELIEF AIR
EQUIPMENT, EQUALIZING	RAF	RETURN AIR FAN
EXTERNAL STATIC PRESSURE	RD	REFRIGERANT DISCHARGE
ETCETERA	RDR	ROOF DRAIN
GAS EVACUATION	RH	RELATIVE HUMIDITY
ENTERING WATER TEMPERATURE	RHR	REHEAT WATER RETURN
EXISTING	RHS	REHEAT WATER SUPPLY
		REMOVE AND REINSTALL
NUMBER 2 FUEL OIL RETURN	RL	REFRIGERANT LIQUID
NUMBER 2 FUEL OIL SUPPLY	ROR	REVERSE OSMOSIS WATER RETURN
NUMBER 6 FUEL OIL RETURN	ROS	REVERSE OSMOSIS WATER SUPPLY
NUMBER 6 FUEL OIL SUPPLY	RPM	REVOLUTIONS PER MINUTE
FIRE LINE	RS	REFRIGERANT SUCTIION
FLOAT AND THERMOSTATIC TRAP	RV	RELIEF VENT, REFRIGERANT VENT
FLEXIBLE CONNECTION	RX	REMOVE EXISTING
FIRE DAMPER, FOUNDATION DRAIN		
FLOOR DRAIN	SA	SUPPLY AIR, SHOCK ARRESTOR
FIRE DEPARTMENT VALVE	SAN	SANITARY, SOIL, WASTE
FINISHED FLOOR	SCH	SECONDARY CHILLED WATER RETURN
FINISHED FLOOR ELEVATION	SCHS	SECONDARY CHILLED WATER SUPPLY
FINS PER FOOT	SD	STORM DRAIN, SMOKE DETECTOR
FINS PER INCH	SF	SQUARE FOOT
FLOWMETER	SHR	SECONDARY HEATING WATER RETURN
FLOWMETER FITTING	SHS	SECONDARY HEATING WATER SUPPLY
FUEL OIL FILL	SL	SOUND LINING
FUEL OIL OVERFLOW	SP	STATIC PRESSURE
FUEL OIL RETURN	SPR	SPRINKLER LINE
FUEL OIL SUPPLY	SQ FT	SQUARE FOOT
FUEL OIL SUCTION	SS	STAINLESS STEEL
FUEL OIL TRANSFER	SSUL	SODIUM SULFITE
FUEL OIL TRANSFER PUMP	STD	STORM DRAIN
FUEL OIL VENT	SW	SOFT WATER
FEET PER MINUTE	TS	TAMPER SWITCH
FEET PER SECOND	TSP	TOTAL STATIC PRESSURE
FEET SWITCH	TW	TREATED WATER
FEET, FEET	TWR	TEMPERED WATER RETURN
FEED WATER	TWS	TEMPERED WATER SUPPLY
FEED WATER RECIRCULATION	TY	TYPICAL
FEED WATER SUCTION	ΔT	TEMPERATURE DIFFERENCE
DEGREE(S) FAHRENHEIT		
	UCD	UNDERCUT DOOR
NATURAL GAS	UL	UNDERWRITERS LABORATORIES
GALLON, GALLONS		
GENERATOR	V	VACUUM, VOLTS
GLYCOL HEATING RETURN	VD	VOLUME DAMPER
GLYCOL HEATING SUPPLY	VENT	VENTILATION
GALLONS PER HOUR	VFD	VARIABLE FREQUENCY DRIVE
GALLONS PER MINUTE	VPD	VACUUM PUMP DISCHARGE
AUTOMOTIVE LUBRICATION PIPING	VSD	VARIABLE SPEED DRIVE
	VTR	VENT THROUGH ROOF
HIGH		
HOSE BIB	W	WATTS, WIDE
HORSE END DRAIN VALVE	WB	WET BULB
HORSEPOWER	WC	WATER COLUMN
HIGH PRESSURE STEAM RETURN	WG	WATER GAUGE
HIGH PRESSURE STEAM SUPPLY	WH	WALL HYDRANT
HEATING WATER RETURN	WWE	WELDED WIRE FABRIC</



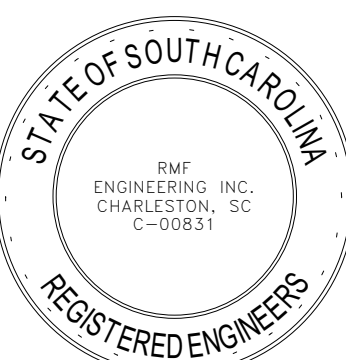
WELDING LAB EXPANSION AND GRINDING LAB



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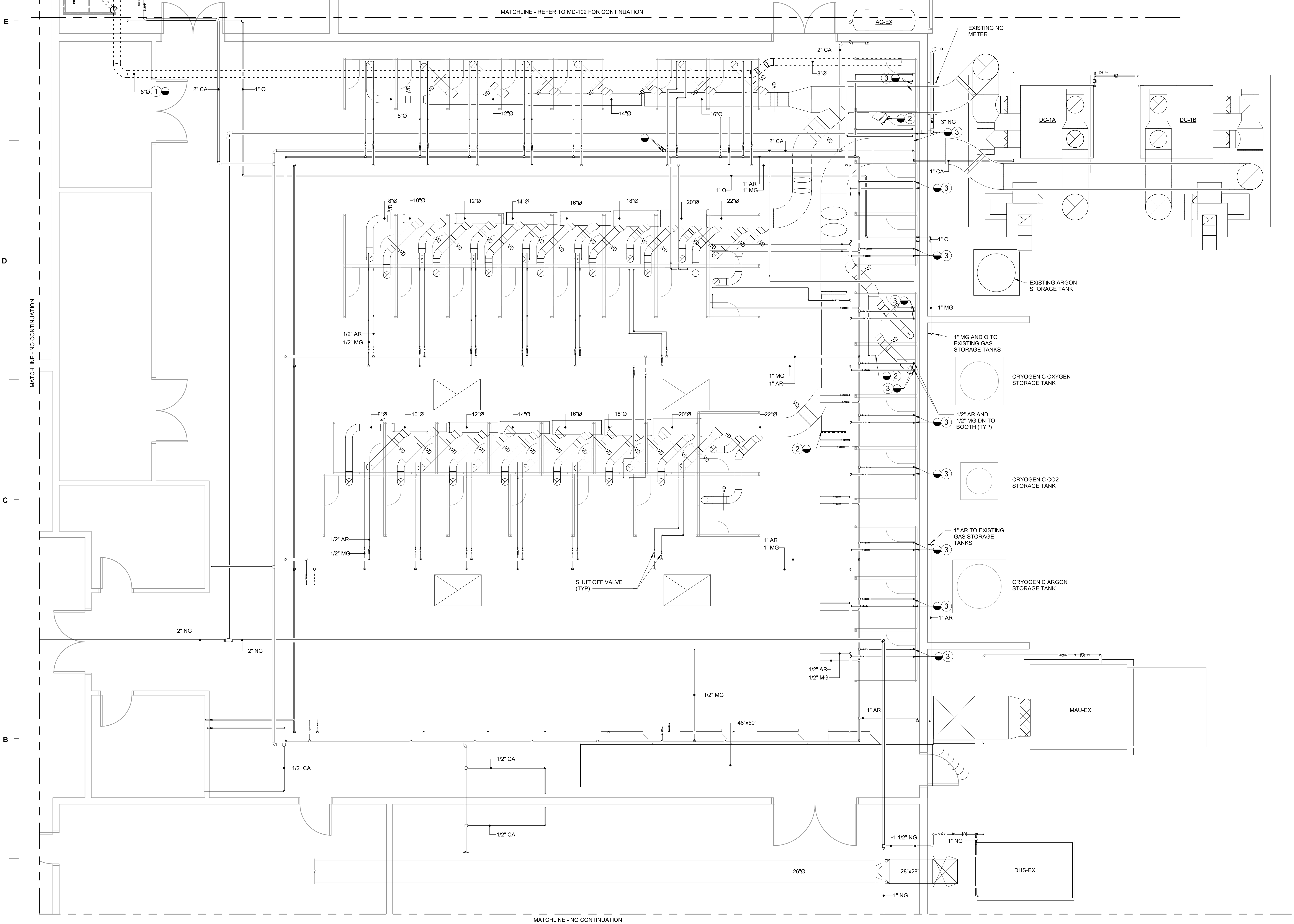
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DATE: 9/12/2023

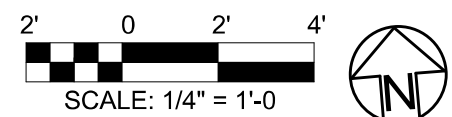
MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS

M-001

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FIRST FLOOR PLAN - MECHANICAL - DEMOLITION
SCALE: 1/4" = 1'-0"

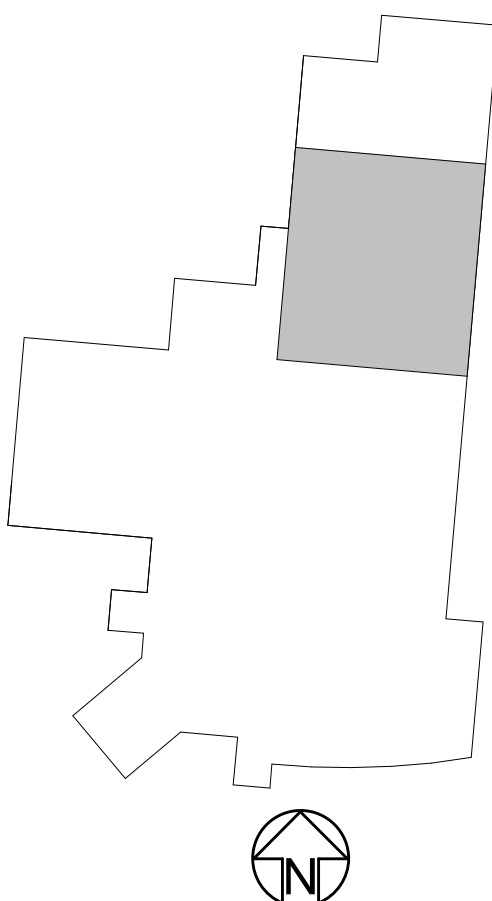


NOTES

DEMOLITION NOTES

- 1 DEMOLISH AND REMOVE EXISTING GRINDER EXHAUST DUCTWORK AND ASSOCIATED SUPPORTS.
- 2 REMOVE DUCT ENDCAP
- 3 REMOVE PIPE ENDCAP

KEY PLAN



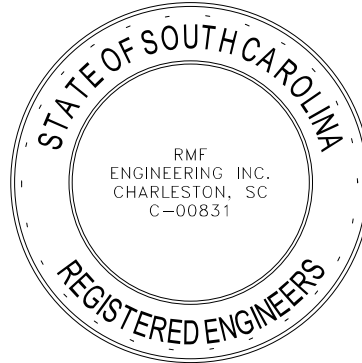
**WELDING LAB
EXPANSION AND
GRINDING LAB**



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SUITE G
CHARLESTON, SC 29492
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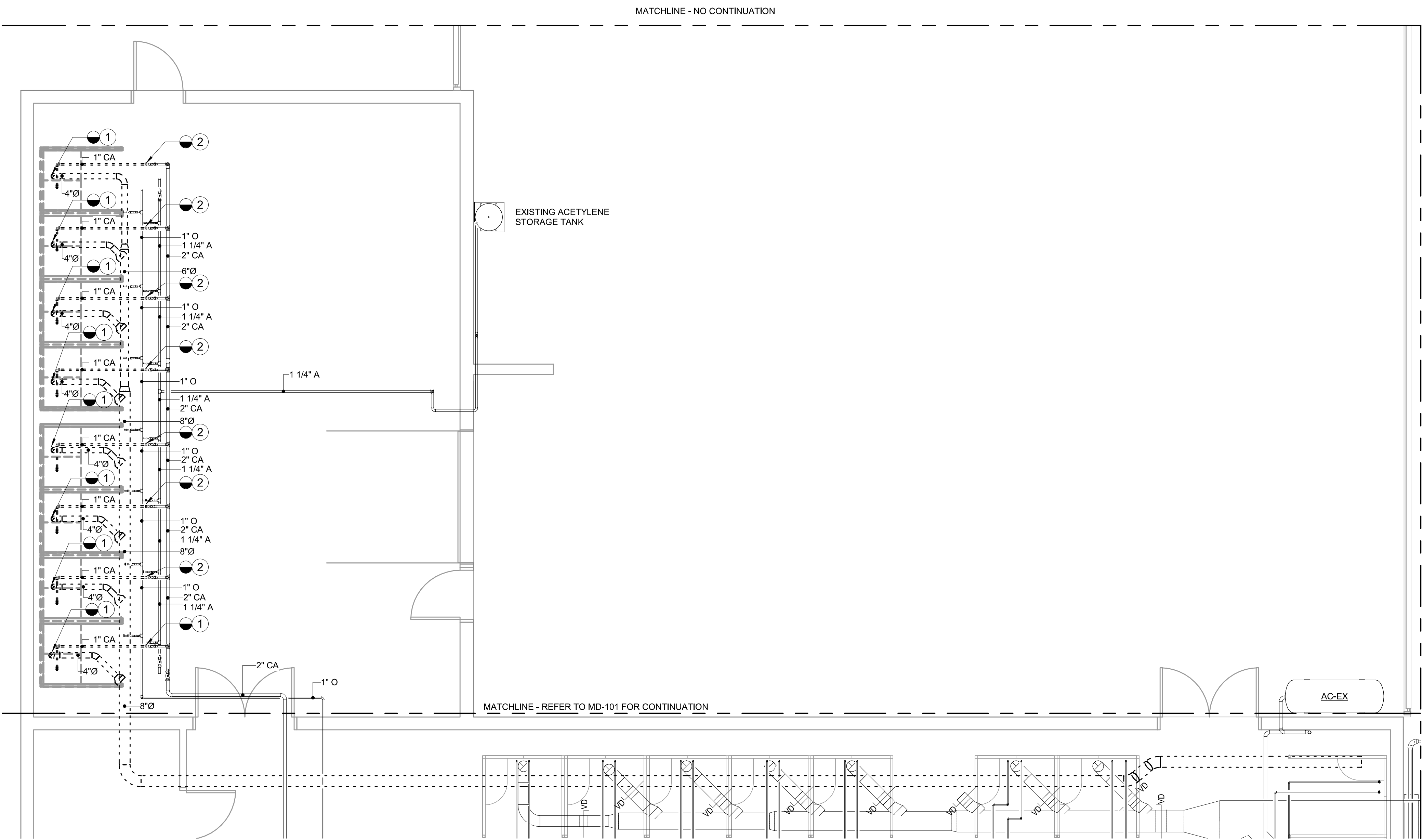
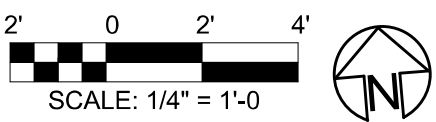
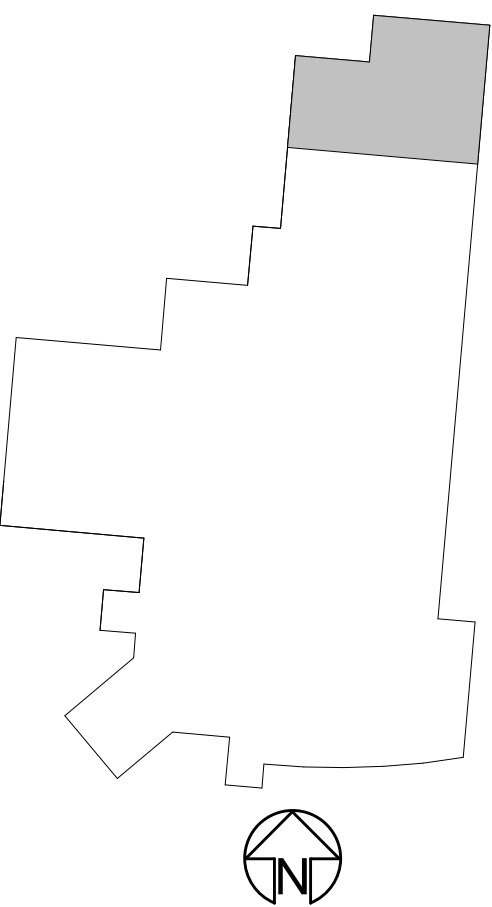
**FIRST FLOOR
PLAN -
MECHANICAL -
DEMOLITION**

MD-101

DEMOLITION NOTES

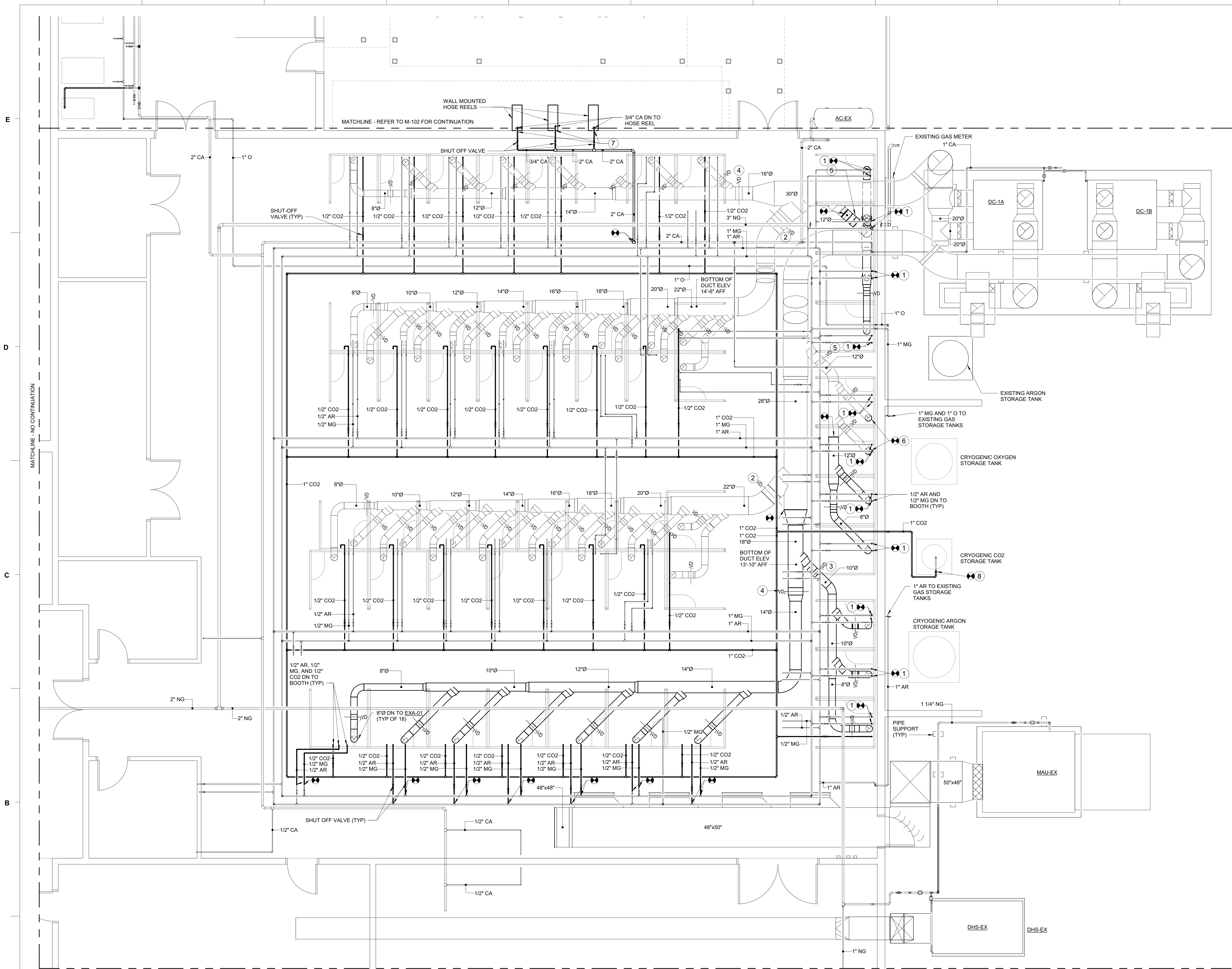
- 1 REMOVE GRINDER EXHAUST DUCT AND ASSOCIATED SUPPORTS.
- 2 REMOVE GRINDER STATION COMPRESSED AIR PIPING AND ASSOCIATED SUPPORTS.

KEY PLAN

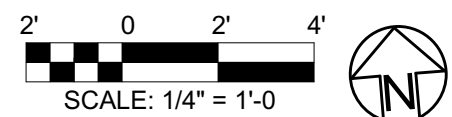


CANOPY PLAN - MECHANICAL - DEMOLITION
SCALE: 1/4" = 1'-0"

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FIRST FLOOR PLAN - MECHANICAL
SCALE: 1/4" = 1'-0"



NOTES

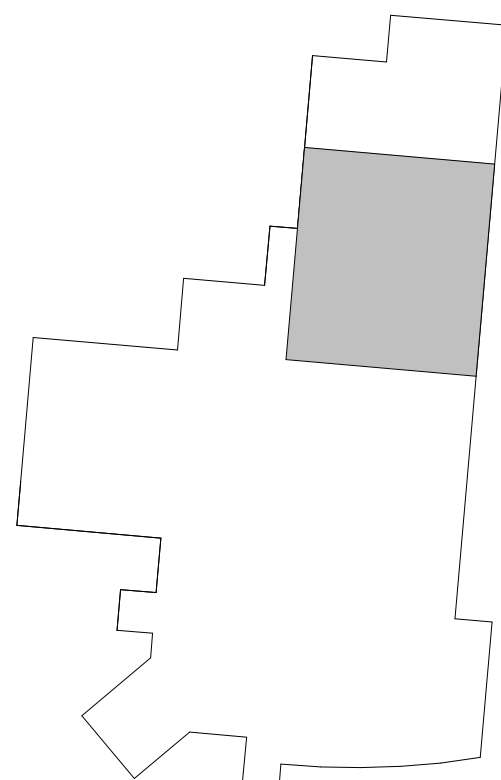
GENERAL NOTES

1. ALL WELDING EXHAUST ARMS (EXA-01) ASSOCIATED WITH DC-1A AND DC-1B SHALL BE BALANCED TO 600 CFM.

DRAWING NOTES

- 1 1/2" AR AND 1/2" O PIPING DN TO WELDING BOOTH. CONNECT NEW PIPING TO EXISTING PIPING IN RISE. NEW PIPE MATERIAL SHALL MATCH EXISTING FOR EACH RESPECTIVE AR AND O PIPING SYSTEM.
- 2 BALANCE BRANCH FOR 9600 CFM.
- 3 BALANCE BRANCH FOR 1800 CFM.
- 4 BALANCE BRANCH FOR 4200 CFM.
- 5 BALANCE BRANCH FOR 2400 CFM.
- 6 CONNECT EXTRACTION ARM EXA-01 TO EXISTING DUCT BRANCH IN DUCT RISE.
- 7 PROVIDE WATERTIGHT PENETRATION
- 8 CONNECT NEW CO2 SUPPLY PIPING TO THE EXISTING CO2 BULK TANK DISCHARGE PIPING. ALL NEW CO2 PIPING SHALL MATCH EXISTING CO2 PIPING.

KEY PLAN



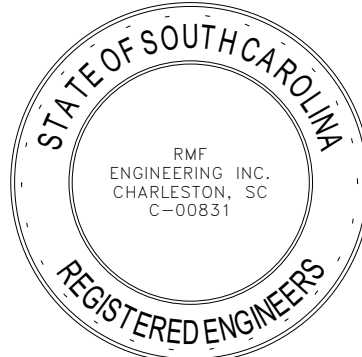
WELDING LAB
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FIRST FLOOR
PLAN -
MECHANICAL

M-101

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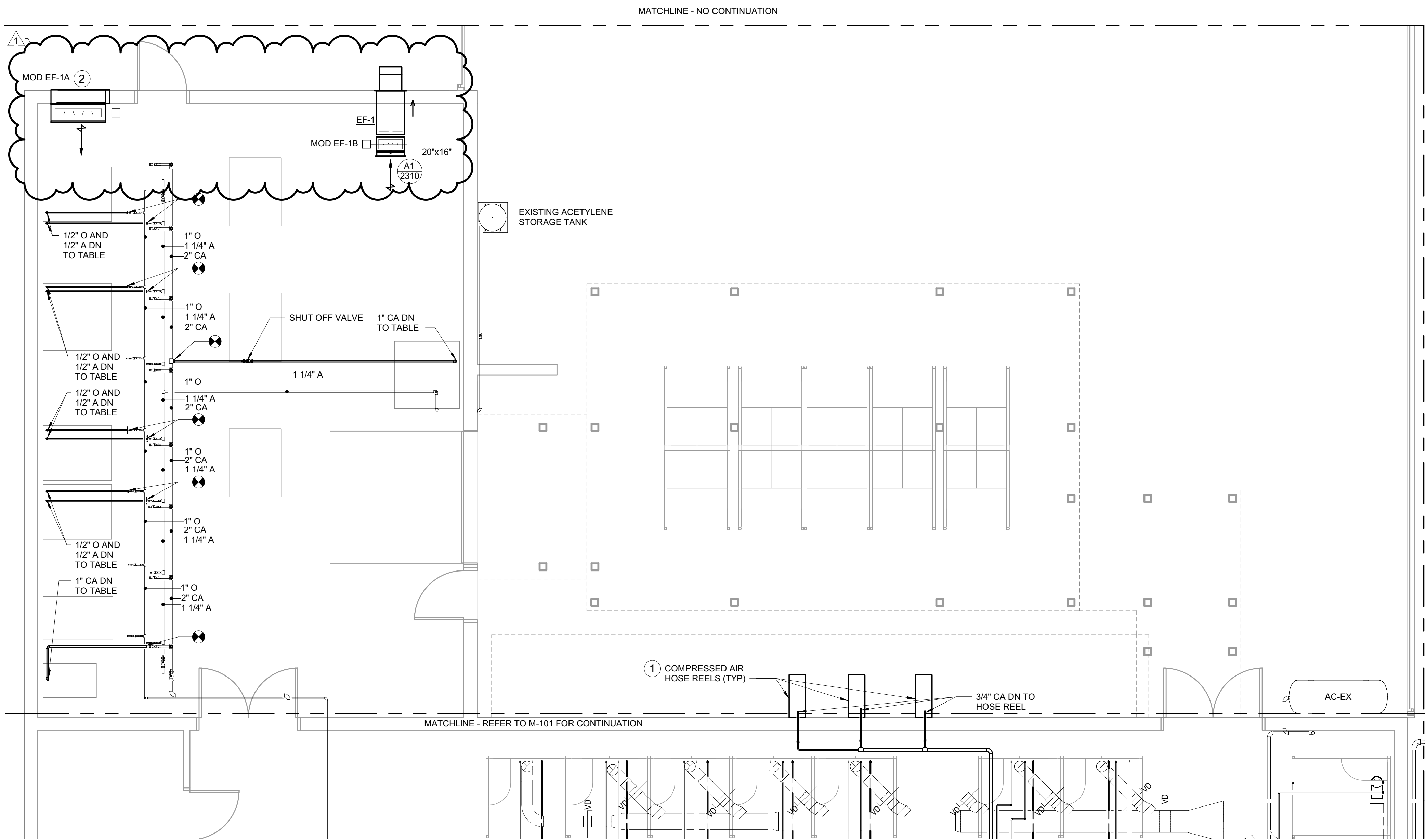
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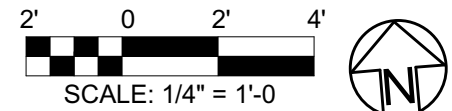
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CANOPY FLOOR PLAN - MECHANICAL
SCALE: 1/4" = 1'-0"



NOTES

DRAWING NOTES

- 1 PROVIDE WALL-MOUNTED 25 FOOT COMPRESSED AIR HOSE REEL MOUNTED AT 4" ABOVE FINISHED FLOOR. HOSE REEL BASIS OF DESIGN IS REELCRAFT 5625 OLP.
- 2 PROVIDE 40"x40" ARCHITECTURAL LOUVER WITH NO LESS THAN 5.6 SQ FT OF FREE AREA. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATION.



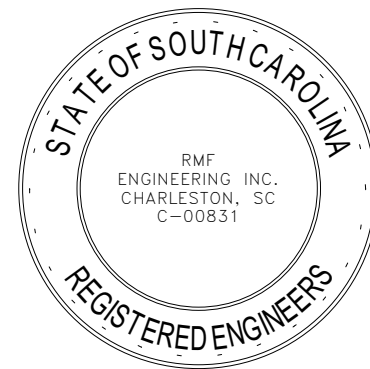
WELDING LAB EXPANSION AND GRINDING LAB



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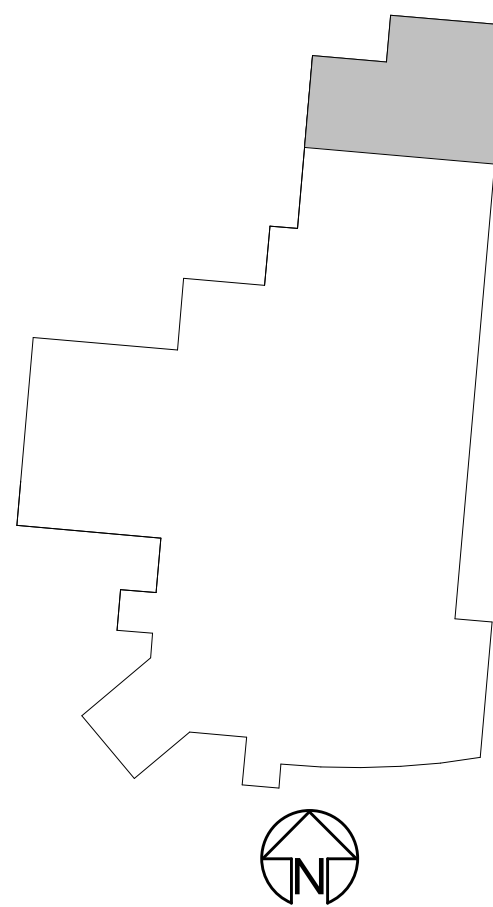
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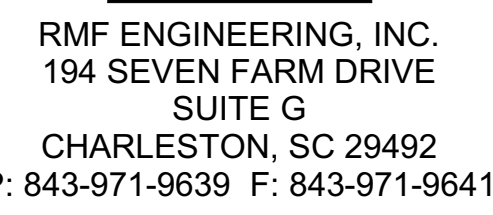
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PROJECT: H59-6238
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PROJECT: 2202-231075
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KEY PLAN



CANOPY FLOOR PLAN - MECHANICAL

M-102



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SIP: 2202-231075
PROJECT: 2202-231075
DATE: 9/12/2023

MECHANICAL DETAILS

M-202



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FAN SCHEDULE

DESIGNATION	SERVICE	TYPE	CFM	SP INCH H2O	APPROX RPM	MOTOR		WHEEL DIAMETER (IN)	DRIVE	ELECTRICAL			VFD	EMERGENCY POWER	APPROX WEIGHT (LBS)	BASIS OF DESIGN	REMARKS
						BHP	HP			VOLTS	PHASE	HERTZ					
EF-1	CUTTING ROOM	WALL MOUNTED	2310	0.2	1750	0.39	0.33	10	DIRECT	115	1	60	NO	NO	16	GREENHECK - SE1	

DUST COLLECTOR SCHEDULE

DUST COLLECTOR SCHEDULE																	
DESIGNATION	CFM	NUMBER OF FILTER CARTRIDGES	COMPRESSED AIR (PSI)	ESP (IN H2O)	APPROX RPM	DRIVE	ELECTRICAL			VARIABLE FREQUENCY DRIVE			WEIGHT (LBS)	BASIS OF DESIGN	REMARKS		
							VOLTS	PHASE	HERTZ	MOTOR BHP	MOTOR HP	VFD				BYPASS	ENCLOSURE
DC-1A	16200	16	75	12	1800	DIRECT	460	3	60	--	60	YES	NO	NEMA 1	4245	LINCOLN ELECTRIC - L 17587-6	1
DC-1B	17400	16	75	12	1800	DIRECT	460	3	60	--	60	YES	NO	NEMA 1	4245	LINCOLN ELECTRIC - L 17587-6	1

NOTE:
1. REBALANCE DUST COLLECTOR TO SCHEDULED AIRFLOW.

EXTRACTOR ARM SCHEDULE

DESIGNATION	TYPE	CFM	PD INCH H2O	DIAMETER (IN)	APPROX WEIGHT (LBS)	BASIS OF DESIGN	REMARKS
EXA-01	TELESCOPIC	600	3.2	8	59.5	LINCOLN ELECTRIC - K1655-14	

SEQUENCE OF OPERATION

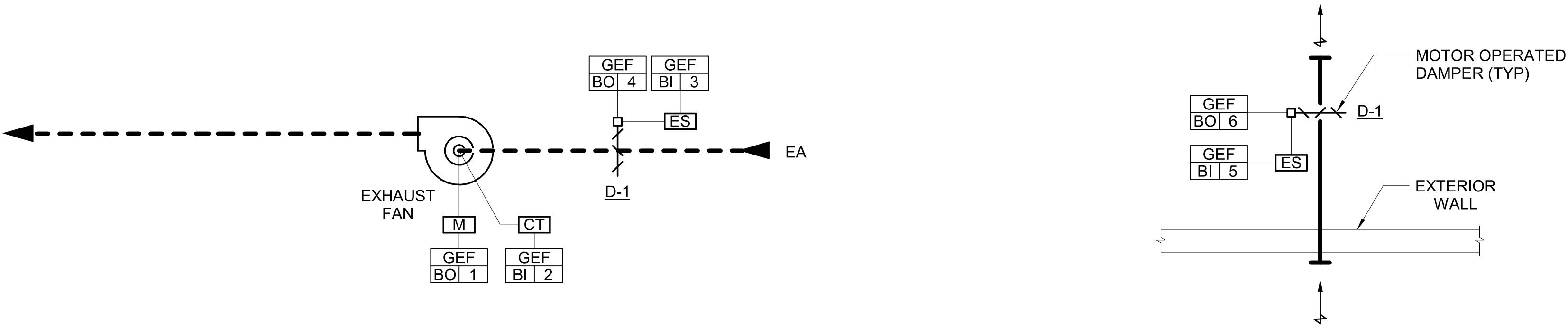
PART 1 - GENERAL

A. SYSTEM CONTROL

- THE EXHAUST FAN SHALL BE ENERGIZED VIA MANUAL WALL SWITCH AND RUN CONTINUOUSLY.
- WHEN WALL SWITCH IS TURNED OFF, EXHAUST FAN SHALL DE-ENERGIZE.
- WHEN ENERGIZED, EXHAUST FAN SHALL START AND RUN CONTINUOUSLY AFTER ISOLATION DAMPER AND OUTDOOR AIR INTAKE LOUVER HAS BEEN PROVEN OPEN.
- WHEN THE EXHAUST FAN IS DEENERGIZED, ALL CONTROLS SHALL RETURN TO THEIR NORMAL POSITION READY FOR RESTARTING. THE EXHAUST FAN SHALL DEENERGIZE AND, AFTER AN ADJUSTABLE INTERVAL, ISOLATION DAMPER SHALL CLOSE.

B. ALARMS & FAILURE MODES

- A FAILURE OF THE EXHAUST FAN, AS SENSED BY ITS RESPECTIVE CURRENT TRANSDUCER, SHALL BE ALARMED TO THE BAS. UPON SENSING FAILURE, THE BAS SHALL INDICATE ALARM AND DISABLE THE FAILED FAN.
- A FAILURE OF THE ISOLATION DAMPER THAT IS REQUIRED TO BE PROVEN OPEN FOR NORMAL OPERATION SHALL BE ALARMED TO THE BAS. UPON SENDING FAILURE, THE BAS SHALL INDICATE ALARM, DISABLE THE EXHAUST FAN, AND RETURN ALL CONTROLS TO THEIR NORMAL POSITION.



1 SCHEMATIC - GENERAL EXHAUST FAN

SCALE: N.T.S.



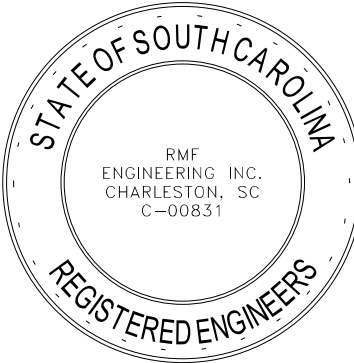
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MECHANICAL
SCHEDULES
AND
SCHEMATICS

M-301

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<u>SYMBOL</u>	<u>DESCRIPTION</u>
SWGR	SWITCHGEAR
SWBD	SWITCHBOARD
PNL	PANELBOARD
MCC	MOTOR CONTROL CENTER
XFMR	TRANSFORMER

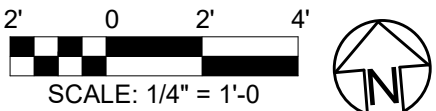
GENERAL NOTES

- ITEMS INDICATED WITH DASHED LINES ARE REMOVED IN THEIR ENTIRETY. ITEMS THAT ARE EXISTING TO REMAIN ARE INDICATED WITH LIGHT CONTINUOUS LINES.
- EXISTING CONDITIONS SUCH AS LIGHTING, RECEPTACLES, ETC. WERE OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETELY CORRECT OR COMPLETELY ACCURATE. THE EXACT LOCATION OF ALL ELECTRICAL ITEMS IN THE FIELD PRIOR TO THE START OF ANY WORK.
- SHOULD THE CONTRACTOR ENCOUNTER ANY MAJOR ELECTRICAL ITEMS, I.E. PANELS, FEEDERS, JUNCTION BOXES ETC. WHICH ARE NOT ADDRESSED ON THE DRAWINGS, HE SHALL BRING THEM TO THE ATTENTION OF THE ENGINEER. ENGINEER WILL REVIEW THE ITEM IN QUESTION AND PROVIDE DIRECTION.
- THE OWNER SHALL BE GIVEN A FIRST RIGHT OF REFUSAL, FOR ALL ELECTRICAL EQUIPMENT WHICH IS TO BE REMOVED. ALL ELECTRICAL EQUIPMENT WHICH IS DESIRED BY THE OWNER SHALL BE STORED ON THE SITE WHERE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROTECT ALL OF ALL ELECTRICAL ITEMS WHICH ARE REMOVED AND THE OWNER DOES NOT WANT TO KEEP.
- WHERE EXISTING DEVICES REMAIN IN WALLS WHICH RECEIVE A NEW FINISH, CONTRACTOR SHALL SUPPLY ALL NECESSARY OUTLET BOX EXTENSIONS, PLASTER RINGS, ETC. SO THAT THE NEW FINISH WILL BE IN THE SAME MANNER AS EXISTING. REMOVE ALL EMPTY RECESSES AND BOXES THAT ARE ABANDONED.
- CONTRACTOR TO REPLACE ALL DEVICES AND FACE PLATES FOR AREAS WHERE SCOPE OF WORK IS PERFORMED SO THAT EXISTING TO REMAIN DEVICES AND NEW DEVICES MATCH. TRACE RECEPTACLE CIRCUITS, FACEPLATES SHALL BE LABELED WITH CIRCUIT NUMBER AND PANEL.
- FOR DEMOLISHED LIGHT FIXTURES, LEAVE CIRCUIT LOOP, FOR NEW FIXTURE, SEE SHEET E202 FOR NEW FIXTURE TYPE, NEW FIXTURES SHALL BE SUPPORTED PER IBC.

DRAWING NOTES

- BUS DUCT TO BE EXISTING TO REMAIN

ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



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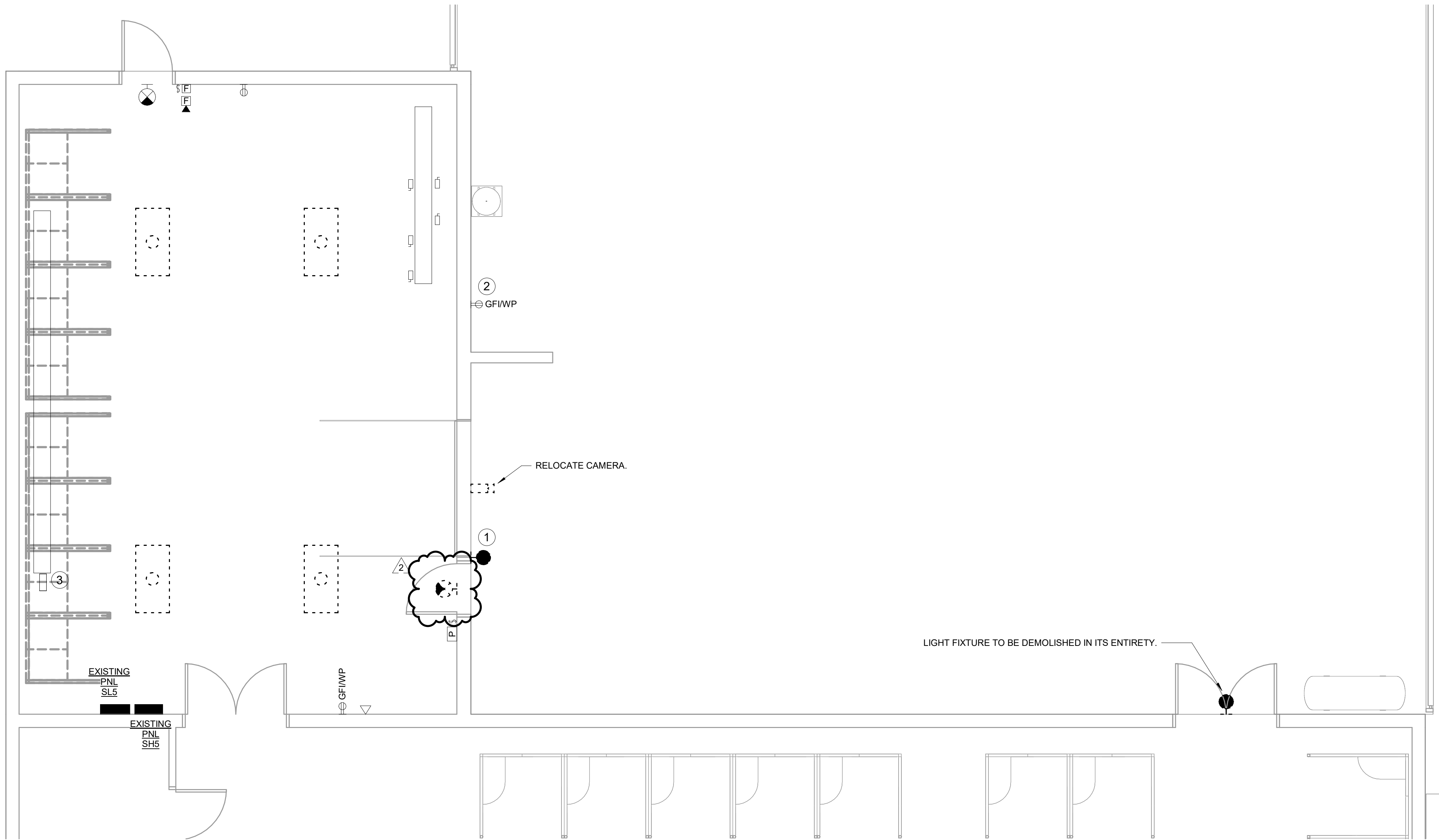
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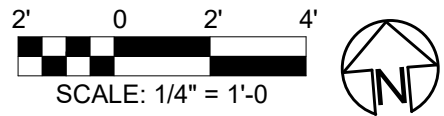
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ELECTRICAL DEMOLITION PLAN - GRINDING RM AND OUTDOOR CANOPY
SCALE: 1/4" = 1'-0"



GENERAL NOTES

- ITEMS INDICATED WITH DASHED LINES ARE REMOVED IN THEIR ENTIRETY. ITEMS THAT ARE EXISTING TO REMAIN ARE INDICATED WITH LIGHT CONTINUOUS LINES.
- EXISTING CONDITIONS SUCH AS LIGHTING, RECEPTACLES, ETC. WERE OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL ELECTRICAL ITEMS IN THE FIELD PRIOR TO THE START OF ANY WORK.
- SHOULD THE CONTRACTOR ENCOUNTER ANY MAJOR ELECTRICAL ITEMS, I.E. PANELS, FEEDERS, JUNCTION BOXES ETC. WHICH ARE NOT ADDRESSED ON THE DRAWINGS, HE SHALL BRING THEM TO THE ATTENTION OF THE ENGINEER. ENGINEER WILL REVIEW THE ITEM IN QUESTION AND PROVIDE DIRECTION.
- THE OWNER SHALL BE GIVEN A FIRST RIGHT OF REFUSAL FOR ALL ELECTRICAL EQUIPMENT WHICH IS TO BE REMOVED. ALL ELECTRICAL EQUIPMENT WHICH IS DESIRED BY THE OWNER SHALL BE STORED ON THE SITE WHERE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROMPTLY DISPOSE OF ALL ELECTRICAL ITEMS WHICH ARE REMOVED AND THE OWNER DOES NOT WANT TO KEEP.
- WHERE EXISTING DEVICES REMAIN IN WALLS WHICH RECEIVE A NEW FINISH, CONTRACTOR SHALL SUPPLY ALL NECESSARY OUTLET BOX EXTENSIONS, PLASTER RINGS, ETC. SO THAT DEVICES INSTALLED IN THE SAME MANNER AS EXISTING. REMOVE ALL EMPTY RACEWAYS AND BOXES THAT ARE ABANDONED.
- CONTRACTOR TO REPLACE ALL DEVICES AND FACE PLATES FOR AREAS WHERE SCOPE OF WORK IS PERFORMED SO THAT EXISTING TO REMAIN DEVICES AND NEW DEVICES MATCH. TRACE RECEPTACLE CIRCUITS, FACEPLATES SHALL BE LABELED WITH CIRCUIT NUMBER AND PANEL.
- FOR DEMOLISHED LIGHT FIXTURES, LEAVE CIRCUIT LOCAL FOR NEW FIXTURE. SEE SHEET E201 FOR NEW FIXTURE TYPE. NEW FIXTURES SHALL BE SUPPORTED PER IBC.

DRAWING NOTES

- LIGHT FIXTURE TO BE REMOVED IN ITS ENTIRETY DURING DEMOLITION PHASE. PROTECT CIRCUIT AND CONDUCTORS FOR RELOCATION OF LIGHT FIXTURE DURING CONSTRUCTION PHASE.
- CONTRACTOR TO PROVIDE WEATHERPROOF COVER TO EXISTING OUTDOOR GFI RECEPTACLE.
- REMOVE DROP CORD FROM GRINDING BOOTHS BACK TO BUS DUCT. BUS TO BE EXISTING TO REMAIN.



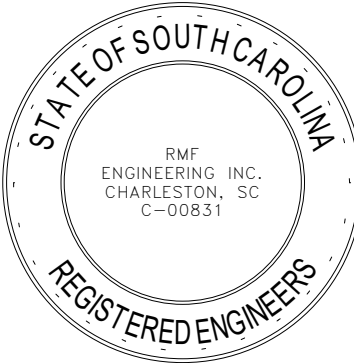
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**ELECTRICAL
DEMOLITION
PLAN -
GRINDING RM
AND OUTDOOR
CANOPY
ED-102**

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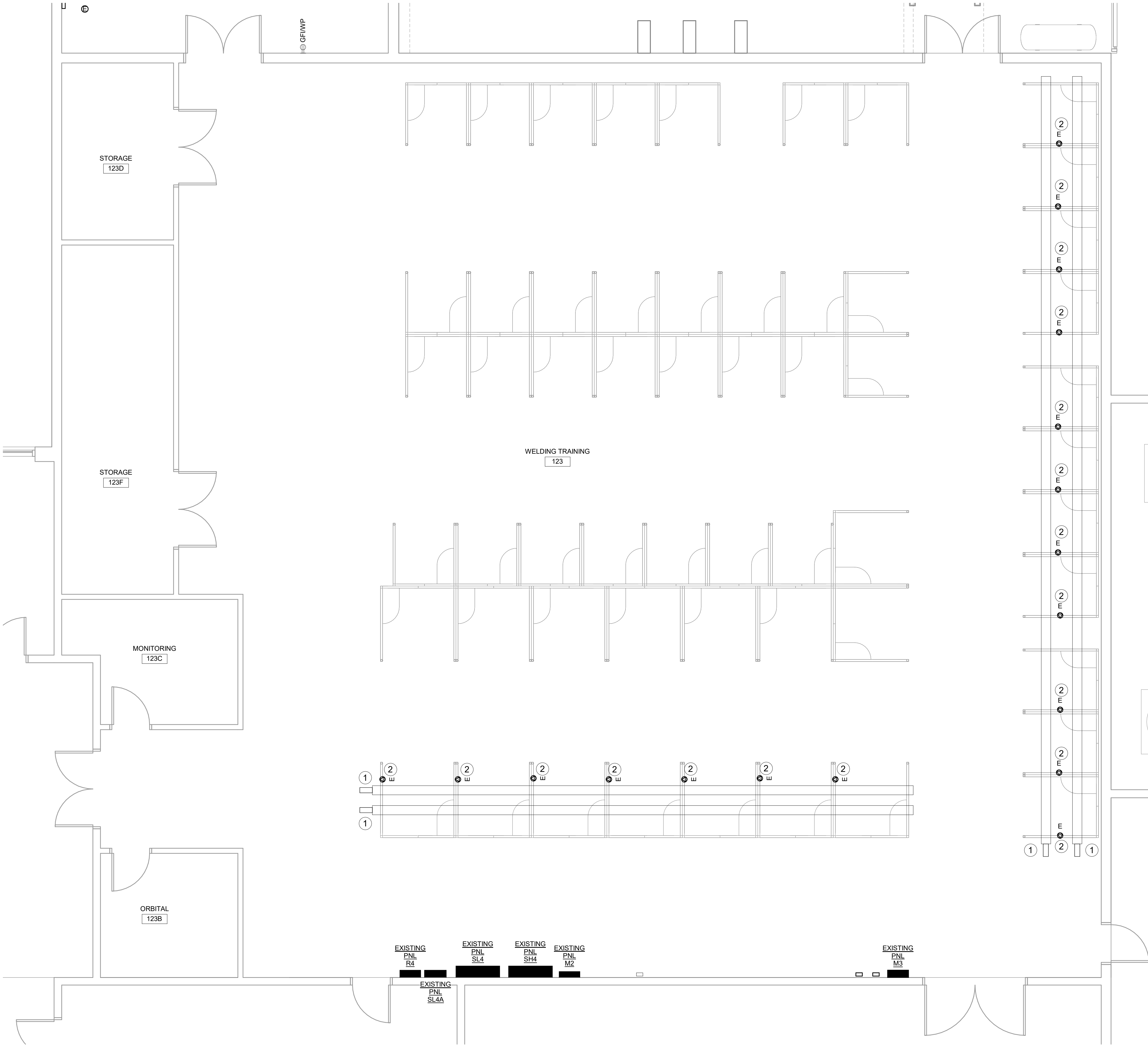
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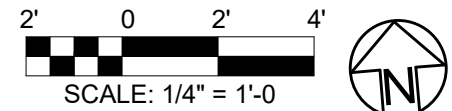
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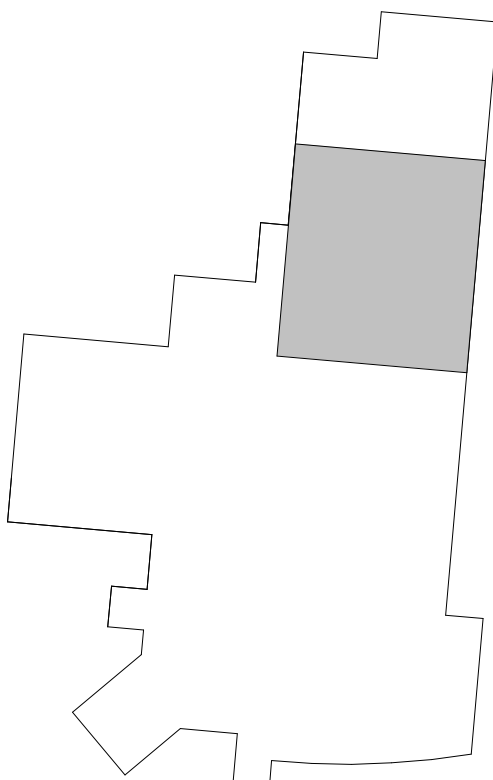


ELECTRICAL NEW WORK OVERALL PLAN - WELDING ROOM
SCALE: 1/4" = 1'-0"



DRAWING NOTES

1. CONTRACTOR TO CONNECT WELDING LABS TO EXISTING BUS DUCT. EXTEND BRANCH CIRCUIT WIRING AS NECESSARY.
2. CONTRACTOR TO PROVIDE 480V, 3PH, 30A TWIST-LOCK PLUGS FED FROM EXISTING 480V BUS DUCT. PROVIDE EXTRA HARD USAGE TYPE SOJ CORD WITH STRAIN RELIEF CORD GRIP CONNECTOR. PROVIDE BOD: HUBBELL HBL2731 OR APPROVED EQUAL. COORDINATE WITH OWNER ON EXACT LOCATION FOR EACH PLUG DROP PRIOR TO INSTALLATION.



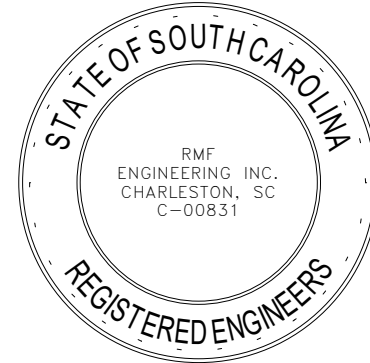
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**ELECTRICAL
NEW WORK
PLAN -
WELDING
ROOM**

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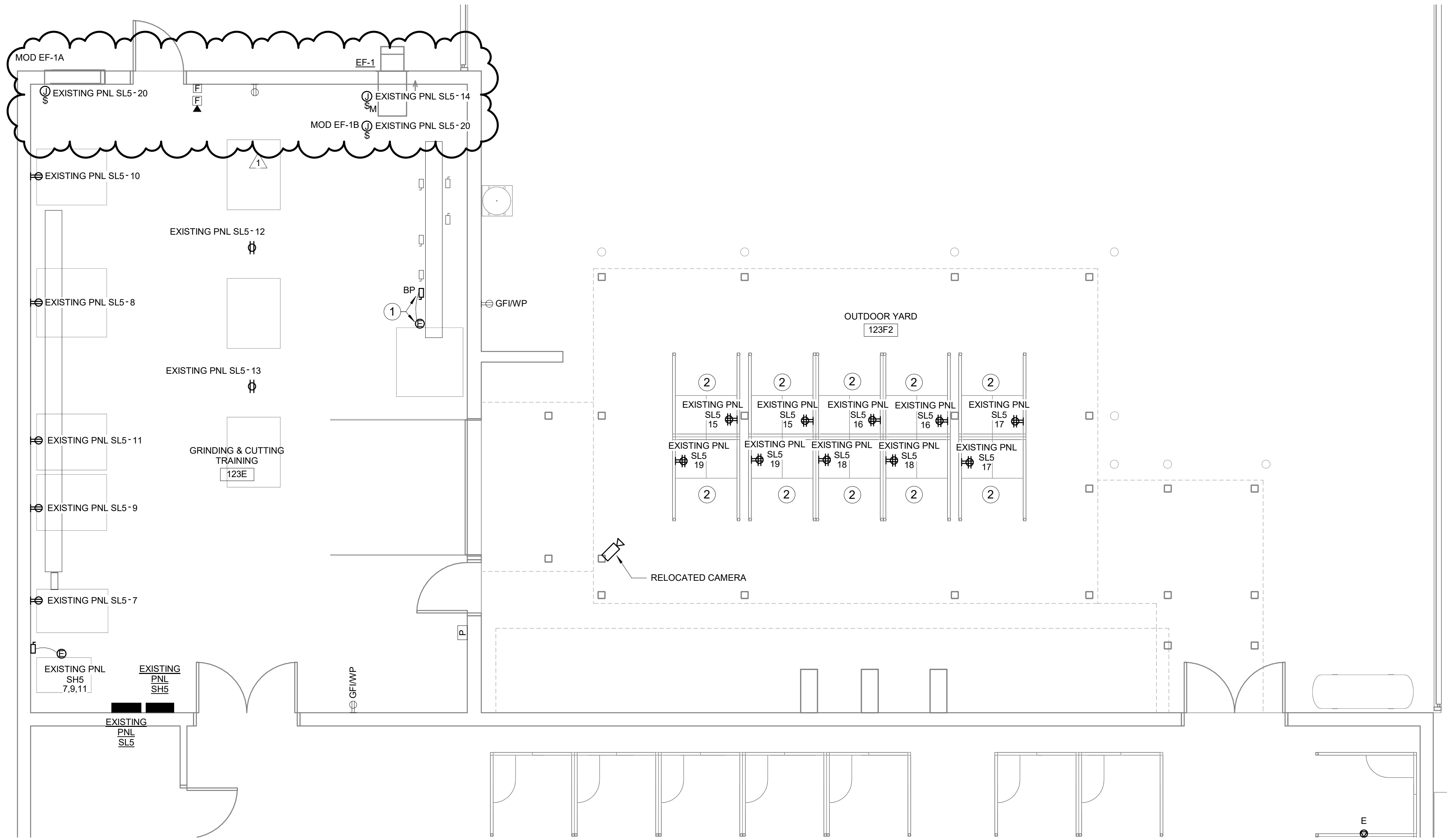
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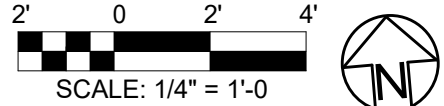
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ELECTRICAL NEW WORK PLAN - GRINDING RM & OUTDOOR CANOPY
SCALE: 1/4" = 1'-0"



NOTES

DRAWING NOTES

1. CONTRACTOR TO CONNECT OWNER PROVIDED AIR COMPRESSOR TO EXISTING BUS DUCT ABOVE. CONTRACTOR TO PROVIDE 30A FUSED BUS PLUG-IN DISCONNECT. EXTEND BRANCH CIRCUIT WIRING AS NECESSARY.
2. RECEPTACLES IN GRINDING BOOTHS TO BE MOUNTED AT 4' AFF. COORDINATE EXACT LOCATION OF RECEPTACLES WITH ARCHITECT / OWNER PRIOR TO INSTALLATION.



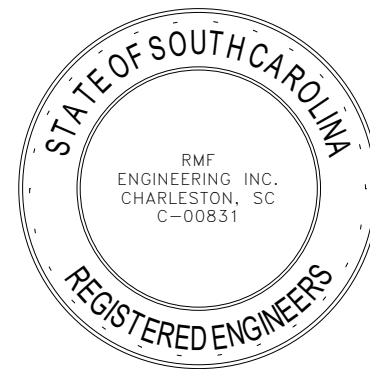
WELDING LAB EXPANSION AND GRINDING LAB



RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641



701-A LADY STREET
COLUMBIA, SOUTH CAROLINA 29201
TEL: 803.765.2418 FAX: 803.765.2419
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No.	Description	Date
1	OSE RESPONSE	10/25/2023

STATE
PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/2023

ELECTRICAL NEW WORK PLAN - GRINDING RM AND OUTDOOR CANOPY

E-102

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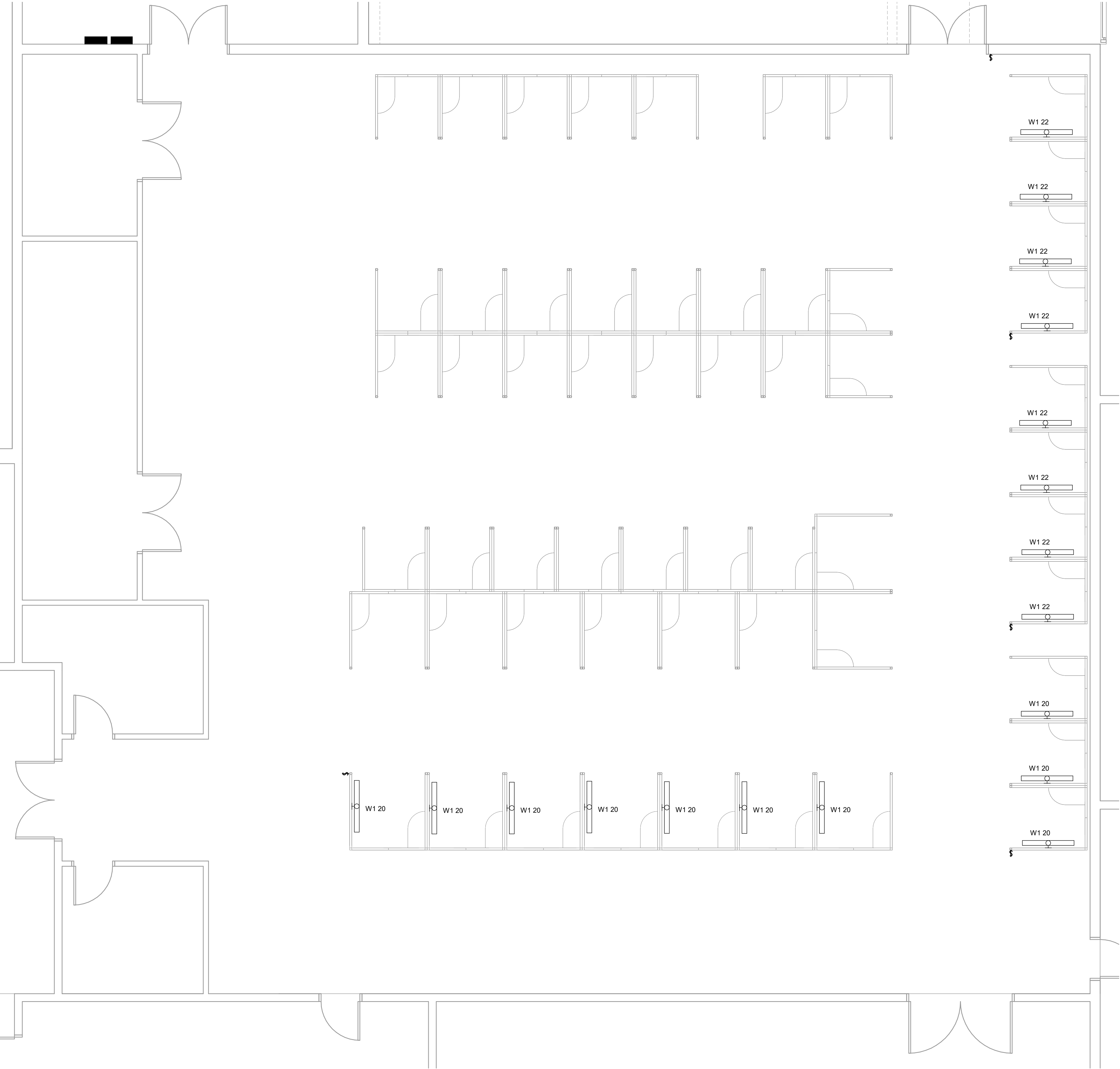
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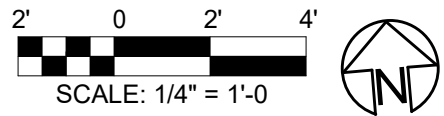
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ELECTRICAL LIGHTING NEW WORK PLAN - WELDING ROOM
SCALE: 1/4" = 1'-0"



GENERAL NOTES

1. LIGHTING FIXTURES TO BE FED FROM EXISTING PANEL M2.
2. W1 TYPE FIXTURES TO BE MOUNTED TO WELDING LAB. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.



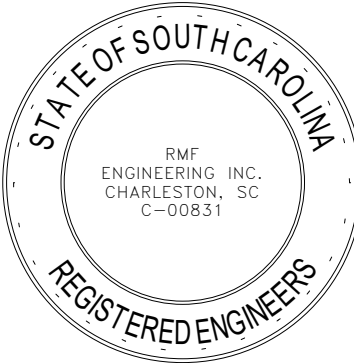
**WELDING LAB
EXPANSION AND
GRINDING LAB**



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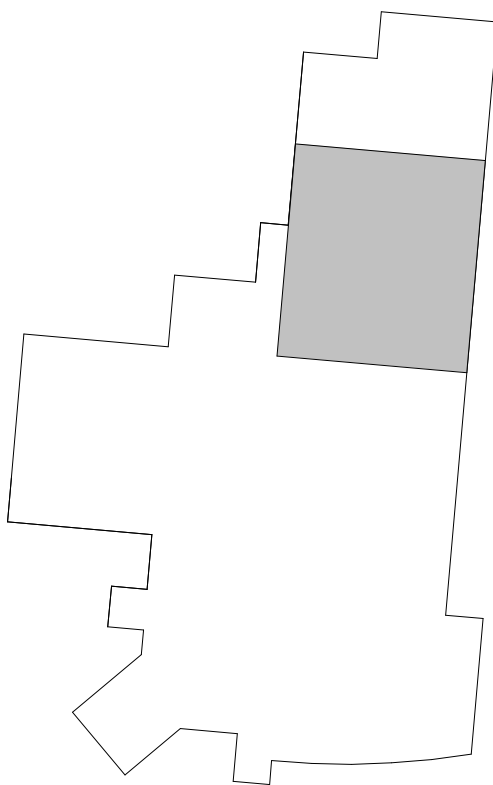
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PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/2023



**ELECTRICAL
LIGHTING NEW
WORK PLAN -
WELDING RM**

E-201

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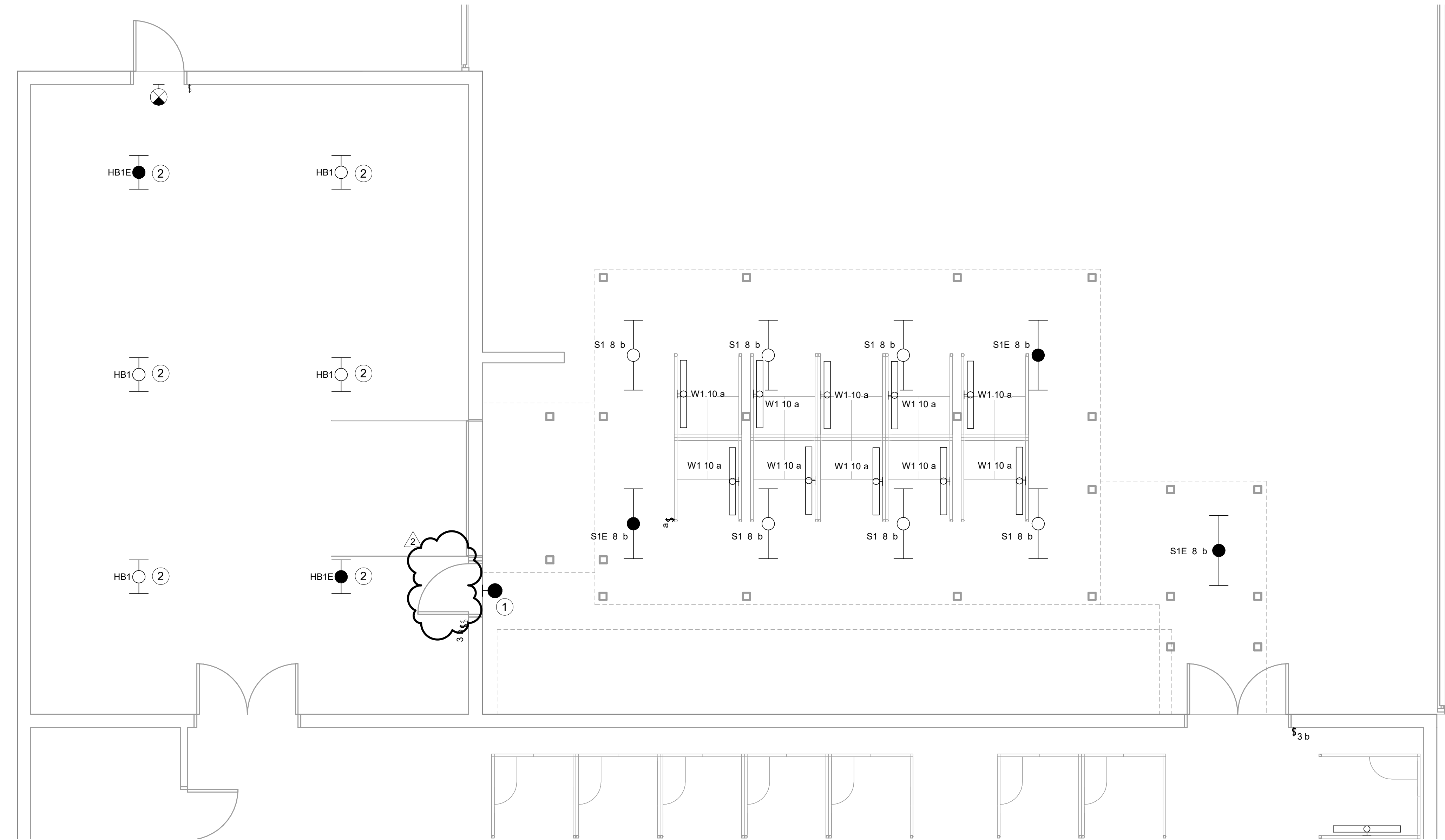
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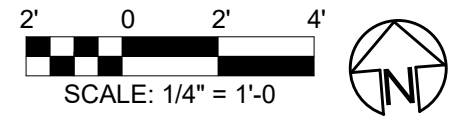
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ELECTRICAL LIGHTING NEW WORK PLAN - GRINDING ROOM AND OUTDOOR CANOPY
SCALE: 1/4" = 1'-0"



DRAWING NOTES

- 1 RELOCATED LIGHT FIXTURE. EXTEND BRANCH CIRCUIT WIRING AS NECESSARY.
- 2 LIGHTING FIXTURES TO BE CIRCUITED FROM EXISTING LOCAL CIRCUIT MADE DURING DEMOLITION. EXTEND BRANCH CIRCUIT WIRING AS NECESSARY.



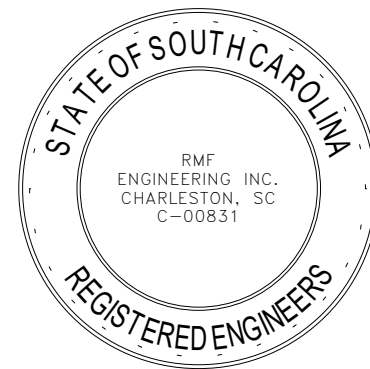
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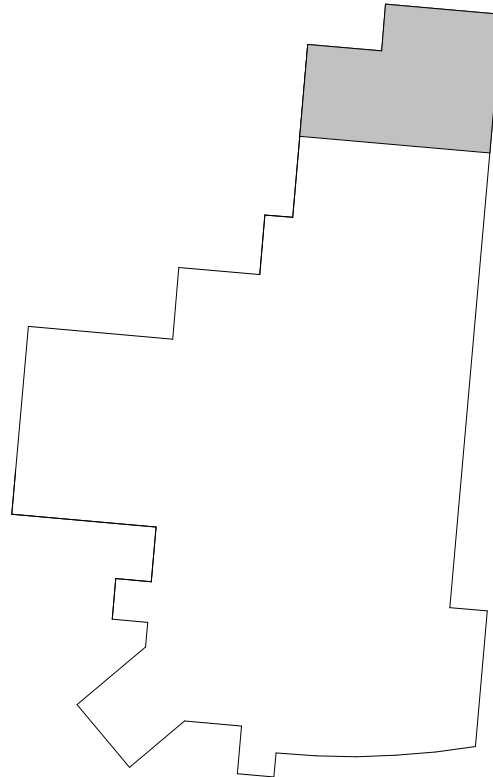
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No.	Description	Date
2	OSE REVIEW	11/03/2023

STATE PROJECT: H59-6238
LS3P PROJECT: 2202-231075
DATE: 9/12/2023



**ELECTRICAL
LIGHTING NEW
WORK PLAN -
GRINDING RM
AND OUTDOOR
CANOPY
E-202**

Autodesk Docs://2202-231075-ATC CEAM Outdoor Welding_Lab/0230488_AQ_MEP_22.rvt
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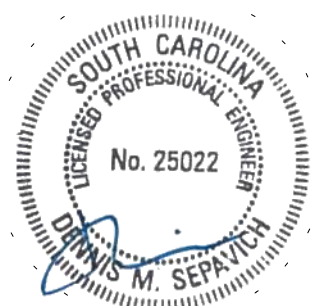
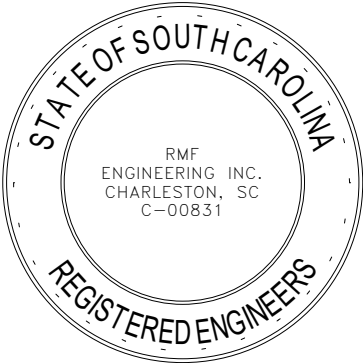
WELDING LAB
EXPANSION AND
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No.	Description	Date
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STATE
PROJECT: H59-6238
LS3P
PROJECT: 2202-231075
DATE: 9/12/2023

ELECTRICAL
LIGHT FIXTURE
SCHEDULE

E-301

DRAWING NOTES

1 ALTERNATE MANUFACTURERS SHALL BE ACCEPTED. ALL MANUFACTURERS SHALL MEET DESIGN INTENT AND SPECIFICATIONS.

LIGHTING FIXTURE SCHEDULE ①

	DESCRIPTION	LAMPS				VOLTS	MOUNTING	MOUNTING SURFACE	REMARKS	BASIS OF DESIGN MANUFACTURER
		TYPE	WATTS	QTY.	COLOR TEMP.					
HB1	LED HIGH BAY FIXTURE, 16,000 LUMENS	LED	32	1	3500 K	277	PENDANT	STUCTURE	PROVIDE UNISTRUT FRAME AND THREADED ROD TO SUSPEND FIXTURE FROM STRUCTURE	DAY-BRITE # FBX16LL35-UNV-LFA
HB1E	LED HIGH BAY FIXTURE, 16,000 LUMENS WITH EMERGENCY BATTERY	LED	32	1	3500 K	277	PENDANT	STUCTURE	PROVIDE UNISTRUT FRAME AND THREADED ROD TO SUSPEND FIXTURE FROM STRUCTURE	DAY-BRITE # FBX16LL35-UNV-LFA-EMLED
S1	4FT LED INDUSTRIAL STRIP	LED	32	1	3500 K	277	PENDANT	STUCTURE	PROVIDE UNISTRUT FRAME AND THREADED ROD TO SUSPEND FIXTURE FROM STRUCTURE	HE WILLIAMS # 75R-4-L50/835-ACF/D48-DIM-UNV
S1E	4FT LED INDUSTRIAL STRIP WITH EMERGENCY BATTERY	LED	32	1	3500 K	277	PENDANT	STUCTURE	PROVIDE UNISTRUT FRAME AND THREADED ROD TO SUSPEND FIXTURE FROM STRUCTURE	HE WILLIAMS # 75R-4-L50/835-EM/110WLP-ACF/D48-DIM-UNV
W1	4FT LED WALL MOUNTED LIGHT FIXTURE	LED	32	1	3500 K	277	WALL	WELDING BOOTH		HE WILLIAMS # SLF-4-L26/835-HIA-DIM-UNV

DRAWING NOTES

- CONTRACTOR TO PROVIDE BREAKERS SHOWN ON PANEL. BREAKER SHALL MATCH EXISTING EATON SERIES PRL3A PANELBOARD.
- CONTRACTOR TO PROVIDE BREAKERS SHOWN ON PANEL. BREAKER SHALL MATCH EXISTING EATON SERIES PRL1A PANELBOARD.

PANELBOARD: EXISTING PNL M2															
LOCATION: Surface					MAINS: MLO					AMPS: 400					
MOUNTING: Surface					VOLTS: 480/277 Wye										
ENCL NEMA: Type 1					PHASE: 3										
MIN AIC: SEE ONE-LINE DIAGRAM					WIRES: 4										
PANEL NOTES:															
PROVIDE GROUND BUS															
PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE															
WIRE SIZE	LOAD DESCRIPTION	P	TRIP AMPS	TYPE	CKT	A	B	C	CKT	TYPE	TRIP AMPS	P	LOAD DESCRIPTION	WIRE SIZE	
--	EXISTING LOAD	3	20 A	--	1	0.00	7.48		2						
					3		0.00	7.48	4		60 A	3	MAU-01	3#8AWG + 1#10GRD IN 1"CND	
					5			0.00	7.48	6					
					7	0.00	0.00		8	--	20 A	1	EXISTING LOAD	--	
--	SPARE	3	20 A	--	9		0.00	0.00	10	--	20 A	1	EXISTING LOAD	--	
					11			0.00	0.00	12	--	20 A	1	EXISTING LOAD	--
					13	0.00	0.00		14						
--	SPARE	3	20 A	--	15		0.00	0.00	16	--	60 A	3	EXISTING LOAD	--	
					17			0.00	0.00	18					
					19	0.00	0.00		20		20 A	1	LTG WELDING LABS		
--	EXISTING LOAD	3	20 A	--	21		0.00	0.00	22		20 A	1	LTG WELDING LABS		
					23			0.00	--	24	--	--	1	SPACE	--
					25	0.00	--		26	--	--	1	SPACE	--	
--	EXISTING LOAD	3	60 A	--	27		0.00	--	28	--	--	1	SPACE	--	
					29			0.00	--	30	--	--	1	SPACE	--
					31	0.00	--		32	--	--	1	SPACE	--	
--	EXISTING LOAD	3	30 A	--	33		0.00	--	34	--	--	1	SPACE	--	
					35			0.00	--	36	--	--	1	SPACE	--
--	EXISTING LOAD	3	20 A	--	37	0.00	--		38	--	--	1	SPACE	--	
					39		0.00	--	40	--	--	1	SPACE	--	
					41			0.00	--	42	--	--	1	SPACE	--
--	SPACE	1	--	--	43	--	--		44	--	--	1	SPACE	--	
--	SPACE	1	--	--	45	--	--		46	--	--	1	SPACE	--	
--	SPACE	1	--	--	47	--	--	--	48	--	--	1	SPACE	--	
--	SPACE	1	--	--	49	--	--		50	--	--	1	SPACE	--	
--	SPACE	1	--	--	51	--	--	--	52	--	--	1	SPACE	--	
--	SPACE	1	--	--	53	--	--	--	54	--	--	1	SPACE	--	
--	SPACE	1	--	--	55	--	--		56	--	--	1	SPACE	--	
--	SPACE	1	--	--	57	--	--	--	58	--	--	1	SPACE	--	
--	SPACE	1	--	--	59	--	--	--	60	--	--	1	SPACE	--	
--	SPACE	1	--	--	61	--	--		62	--	--	1	SPACE	--	
--	SPACE	1	--	--	63	--	--	--	64	--	--	1	SPACE	--	
--	SPACE	1	--	--	65	--	--	--	66	--	--	1	SPACE	--	
--	SPACE	1	--	--	67	--	--		68	--	--	1	SPACE	--	
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--	SPACE	1	--	--	71	--	--	--	72	--	--	1	SPACE	--	
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--	SPACE	1	--	--	75	--	--	--	76	--	--	1	SPACE	--	
--	SPACE	1	--	--	77	--	--	--	78	--	--	1	SPACE	--	
--	SPACE	1	--	--	79	--	--		80	--	--	1	SPACE	--	
--	SPACE	1	--	--	81	--	--	--	82	--	--	1	SPACE	--	
--	SPACE	1	--	--	83	--	--	--	84	--	--	1	SPACE	--	
TOTAL LOAD:						7.48 kVA	7.48 kVA	7.48 kVA							
BREAKER TYPE KEYS:															
LO - INDICATES C.B. EQUIPPED WITH "LOCK-ON" DEVICE															
GF - INDICATES C.B. IS GROUND FAULT TYPE (5mA FOR PERSONNEL)															
ST - INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE															
HT - INDICATES C.B. EQUIPPED WITH 30mA GROUND FAULT FOR EQUIPMENT															
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals											
LTG	0.00	0.00%	0.00												
Equipment	22.45	100.00%	22.45	Total Conn. Load: 22.45 kVA											
				Total Est. Demand: 22.45 kVA											
				Total Conn. Current: 27.00 A											
				Total Est. Demand Current: 27.00 A											