

**RC Architects, Inc.**

Rick Canales, Registered Architect  
 14620 Echo Bluff  
 Austin, Texas 78737  
 (512) 913-0597  
 rickcanales.architects@gmail.com

**Structural Engineer**

HOLLINGSWORTH PACK  
 3801 South Congress Ave.  
 Suite 110  
 Austin, Texas 78704  
 (512)275-6060  
 Contact: Chris Hewett, P.E.

**M.E.P. Engineer**

HOLLINGSWORTH PACK  
 3801 South Congress Ave.  
 Suite 110  
 Austin, Texas 78704  
 (512)275-6060  
 Contact:  
 Brian Hockman, P.E. (Mechanical)  
 Buckley Parks, P.E. (Electrical)

**Civil Engineer**

GARZA EMC  
 7708 Rialto Blvd., Suite 125  
 Austin, Texas 78735  
 (512)298-3284, Ext. 118  
 Contact:  
 Anna Merryman, P.E.

**Owner**

Mobile Loaves and Fishes  
 901 Hog Eye Road  
 Austin, Texas 78724  
 Contact:  
 Mr. Jason Sprague, PMP  
 (210)501-6553

# Mobile Loaves & Fishes Operations Building 9301 Hog Eye Road Austin, Texas 78724

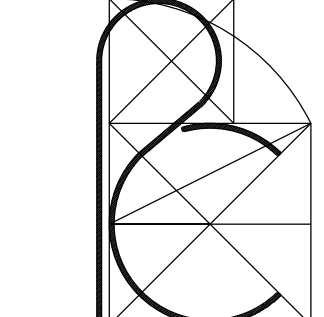


12/12/23

**FIRE  
 PERMIT  
 & BID  
 SET**

ARCHITECTURAL	STRUCTURAL	MECH., ELECT. & PLUMBING	CODE REVIEW	REVISIONS										
A1.0 COVER SHEET & PROJECT DATA A2.0 FLOOR PLAN A2.1 FLATWORK PLAN A2.2 REFLECTED CEILING PLAN A2.3 ENLARGED FLOOR PLANS, INTERIOR ELEVATIONS A2.4 FIRE EXIT & FIRE EXTINGUISHER FLOOR PLAN A2.5 ROOM FINISH, DOORS, FRAMES & DOOR HARDWARE A3.0 EXTERIOR ELEVATIONS AS.1 SPECIFICATIONS	S0.0 STRUCTURAL NOTES S1.0 FOUNDATION PLAN S2.0 FOUNDATION DETAILS S3.0 FOUNDATION DETAILS  NOTE: OPERATIONS BLDG. STRUCTURAL STEEL FRAMING INFO. & DETAILS WILL BE PROVIDED BY THE METAL BLDG. VENDOR.	M0.1 MECHANICAL COVER SHEET M0.2 MECHANICAL SPECIFICATIONS M0.3 MECHANICAL DETAILS M0.4 MECHANICAL SCHEDULES M1.1 MECHANICAL HVAC PLAN  E0.1 ELECTRICAL COVER SHEET E0.2 ELECTRICAL DETAILS E0.3 ELECTRICAL ONE LINE, SCHEDULES E2.1 ELECTRICAL LIGHTING PLAN E3.1 ELECTRICAL POWER PLAN  P0.1 PLUMBING COVER SHEET P0.2 PLUMBING SCHEDULES / DETAILS P0.3 PLUMBING RISER DIAGRAMS P1.1 PLUMBING FLOOR PLANS	<p><small>APPLICABLE CODES: ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS &amp; DRAWINGS AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, TEXAS ACCESSIBILITY STANDARDS AND REGULATIONS OF ALL GOVERNING BODIES INVOLVED. ANY MODIFICATIONS TO THE CONTRACT WORK REQUIRED BY SUCH AUTHORITIES AT THE EXPENSE OF THE LANDLORD / CONTRACTOR, AND SHALL BE SUBJECT TO THE RECEIPT OF AN AFFIDAVIT OR LETTER FROM THE GOVERNING BODY AND TENANT'S PRIOR APPROVAL. ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR INVOLVED. APPLICABLE CODES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:</small></p> <p><small>BUILDING: 2015 INTERNATIONAL BUILDING CODE            PLUMBING: 2018 INTERNATIONAL PLUMBING CODE            MECHANICAL: 2018 INTERNATIONAL MECHANICAL CODE            ELECTRICAL: 2014 NATIONAL ELECTRIC CODE            ENERGY: 2018 INTERNATIONAL ENERGY CONSERVATION CODE            FIRE: 2018 INTERNATIONAL FIRE CODE            2012 TEXAS ACCESSIBILITY STANDARDS</small></p> <p><small>OPERATIONS BUILDING DATA:</small></p> <table border="0"> <tr> <td><small>A) OCCUPANCY CLASSES:</small></td> <td><small>GROUP B - 2,410 S.F. / 100 + 25 OCCUPANTS GROUP S-2 - 6,640 S.F. / 300 + 23 OCCUPANTS</small></td> </tr> <tr> <td><small>B) TYPE OF CONSTRUCTION:</small></td> <td><small>TYPE 2B (PRE-ENGINEERED METAL BUILDING)</small></td> </tr> <tr> <td><small>C) FIRE SUPPRESSION:</small></td> <td><small>NOT PROVIDED WALL MOUNTED FIRE EXTINGUISHERS PROVIDED NOT TO EXCEED 75' TRAVEL DISTANCE APART. NO HIGH PILE STORAGE.</small></td> </tr> <tr> <td><small>D) BASIC ALLOWABLE AREA:</small></td> <td><small>26,000 S.F. PER FLOOR</small></td> </tr> <tr> <td><small>E) GROSS BUILDING AREA (FOOTPRINT):</small></td> <td><small>9,050 SQ. FT. SINGLE FLOOR</small></td> </tr> </table>	<small>A) OCCUPANCY CLASSES:</small>	<small>GROUP B - 2,410 S.F. / 100 + 25 OCCUPANTS GROUP S-2 - 6,640 S.F. / 300 + 23 OCCUPANTS</small>	<small>B) TYPE OF CONSTRUCTION:</small>	<small>TYPE 2B (PRE-ENGINEERED METAL BUILDING)</small>	<small>C) FIRE SUPPRESSION:</small>	<small>NOT PROVIDED WALL MOUNTED FIRE EXTINGUISHERS PROVIDED NOT TO EXCEED 75' TRAVEL DISTANCE APART. NO HIGH PILE STORAGE.</small>	<small>D) BASIC ALLOWABLE AREA:</small>	<small>26,000 S.F. PER FLOOR</small>	<small>E) GROSS BUILDING AREA (FOOTPRINT):</small>	<small>9,050 SQ. FT. SINGLE FLOOR</small>	<p style="text-align: center; font-size: 24pt;"><b>A1.0</b></p>
<small>A) OCCUPANCY CLASSES:</small>	<small>GROUP B - 2,410 S.F. / 100 + 25 OCCUPANTS GROUP S-2 - 6,640 S.F. / 300 + 23 OCCUPANTS</small>													
<small>B) TYPE OF CONSTRUCTION:</small>	<small>TYPE 2B (PRE-ENGINEERED METAL BUILDING)</small>													
<small>C) FIRE SUPPRESSION:</small>	<small>NOT PROVIDED WALL MOUNTED FIRE EXTINGUISHERS PROVIDED NOT TO EXCEED 75' TRAVEL DISTANCE APART. NO HIGH PILE STORAGE.</small>													
<small>D) BASIC ALLOWABLE AREA:</small>	<small>26,000 S.F. PER FLOOR</small>													
<small>E) GROSS BUILDING AREA (FOOTPRINT):</small>	<small>9,050 SQ. FT. SINGLE FLOOR</small>													

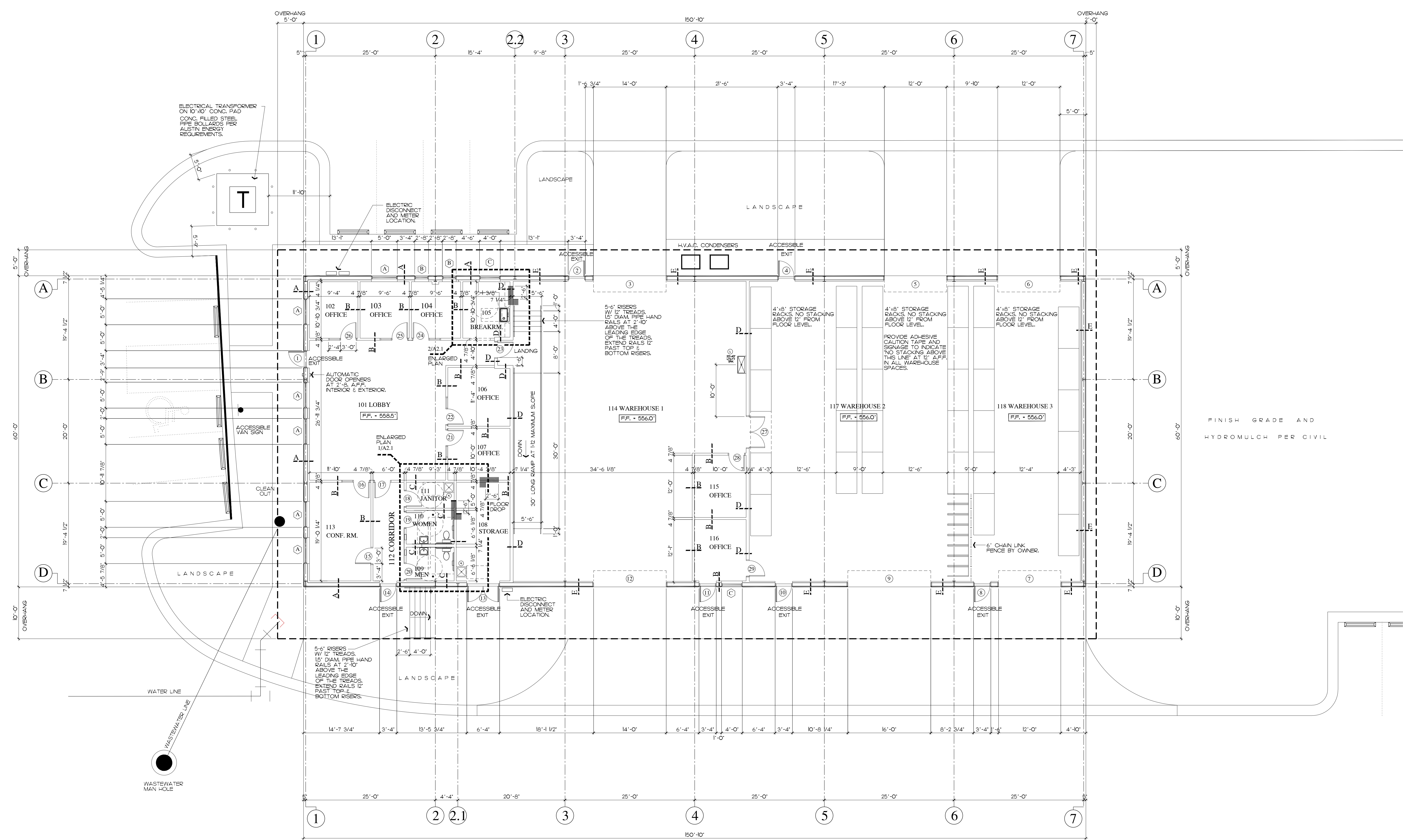




12/12/23

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.



PLAN NORTH 1 Floor Plan - Operations Building

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

**2 Interior Wall Types Legend**

<b>A---</b>	3-5/8" 20 GA. METAL STUDS AT 16" O.C. MECHANICALLY ATTACHED TO THE METAL BUILDING WALL GRTS. INSTALL ONE LAYER OF 5/8" TYPE 'X' GYPSUM BOARD ON THE FINISH SIDE. EXTEND WALL TO 1'-0" AFF. TAPE, FLOAT, TEXTURE (EGGSHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS TO PREVENT CRACKING DUE TO DIFFERENTIAL MOVEMENT. PROVIDE R-19 BATT INSULATION AS SPECIFIED.
<b>B---</b>	3-5/8" 20 GA. METAL STUDS AT 16" O.C. INSTALL ONE LAYER OF 5/8" TYPE 'X' GYPSUM BOARD ON EACH FINISH SIDE. EXTEND WALL TO 1'-0" AFF. TAPE, FLOAT, TEXTURE (EGGSHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS TO PREVENT CRACKING DUE TO DIFFERENTIAL MOVEMENT. PROVIDE SOUND ATTENUATION BATT INSULATION AS SPECIFIED.
<b>C---</b>	3-5/8" 20 GA. METAL STUDS AT 16" O.C. INSTALL ONE LAYER OF 5/8" TYPE WATER RESISTANT GYPSUM BOARD ON THE WET EXPOSURE SIDES. EXTEND WALL TO 1'-0" AFF. TAPE, FLOAT, TEXTURE (EGGSHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS TO PREVENT CRACKING DUE TO DIFFERENTIAL MOVEMENT. PROVIDE SOUND ATTENUATION BATT INSULATION AS SPECIFIED.
<b>D---</b>	6" 20 GA. METAL STUDS AT 12" O.C. INSTALL ONE LAYER OF 5/8" TYPE TYPE 'X' GYPSUM BOARD ON EACH SIDE. PROVIDE WATER RESISTANT GYP. BD. ON ANY WET EXPOSURE SIDES. DO NOT EXCEED THE UNBRACED LENGTH LIMITATIONS SPECIFICATIONS PROVIDED BY THE METAL STUD MANUFACTURER FOR A 6" 20 GA. METAL STUD WALL WITHOUT PROVIDING ADDITIONAL STUD BRACING OR HORIZONTAL WALL BRIDGING. REFER TO STRUCTURAL ENGINEERING PLANS FOR BRIDGING SPECIFICATIONS. EXTEND WALL TO THE BOTTOM OF THE METAL BUILDING JOIST DECK. TAPE, FLOAT, TEXTURE (EGGSHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS. DO NOT EXCEED 25' IN EITHER DIRECTION FOR CONT. JT. SPACING. PROVIDE 6" SOUND ATTENUATION BATT INSULATION AS SPECIFIED.
<b>E---</b>	3-5/8" 20 GA. METAL STUDS AT 16" O.C. MECHANICALLY ATTACHED TO THE METAL BUILDING WALL GRTS. INSTALL ONE LAYER OF 3/4" CDX PLYWOOD ON THE INTERIOR SIDE. EXTEND WALL TO 10'-0" AFF. PAINT PER ARCHITECT.

APPROVAL BLOCK:  
FOR MOBILE LOAVES AND FISHES  
DATE:

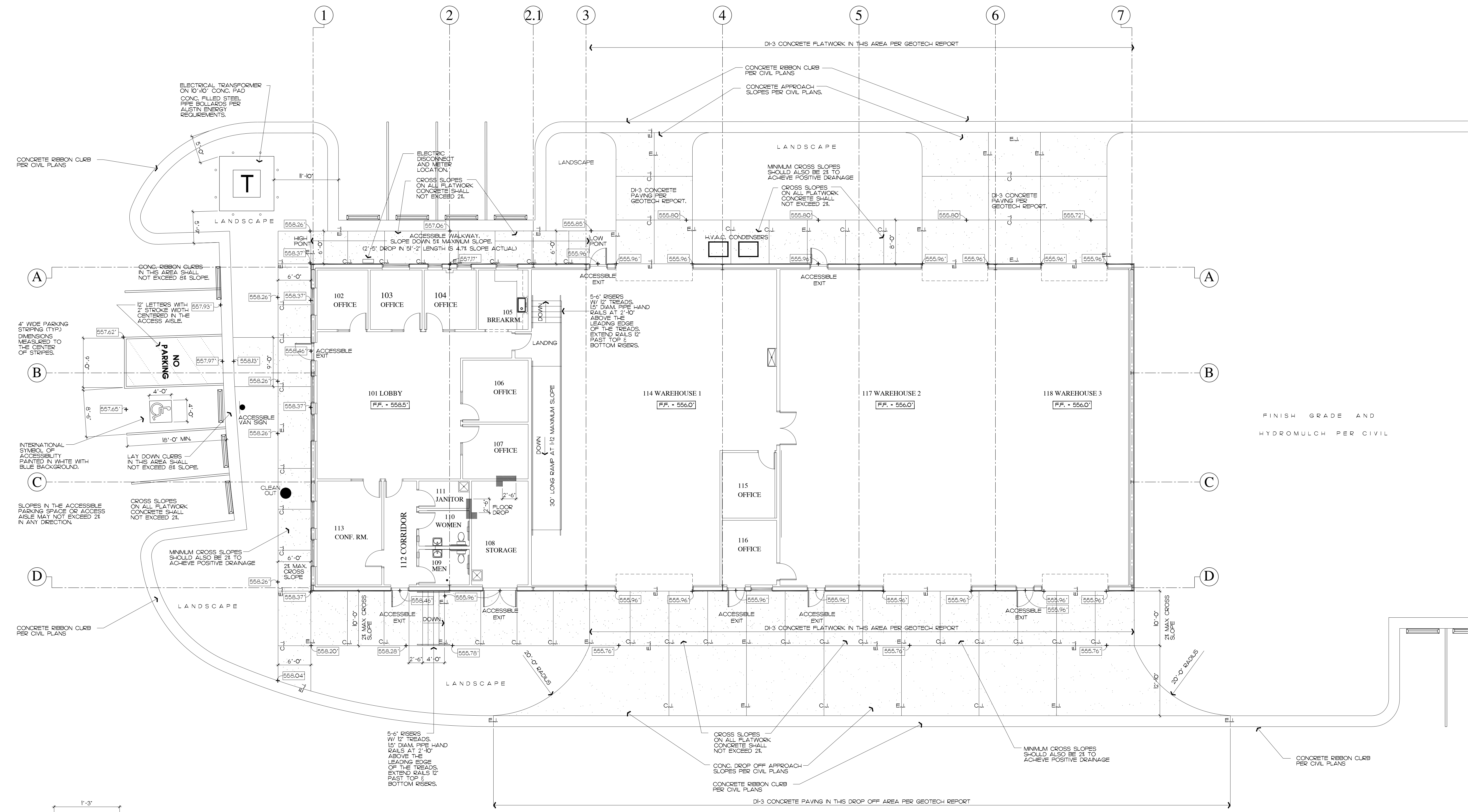
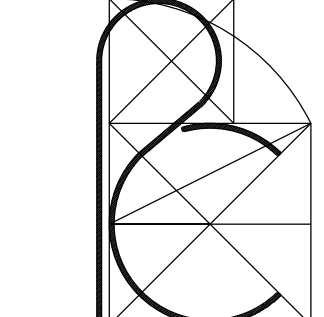
Revisions

Date

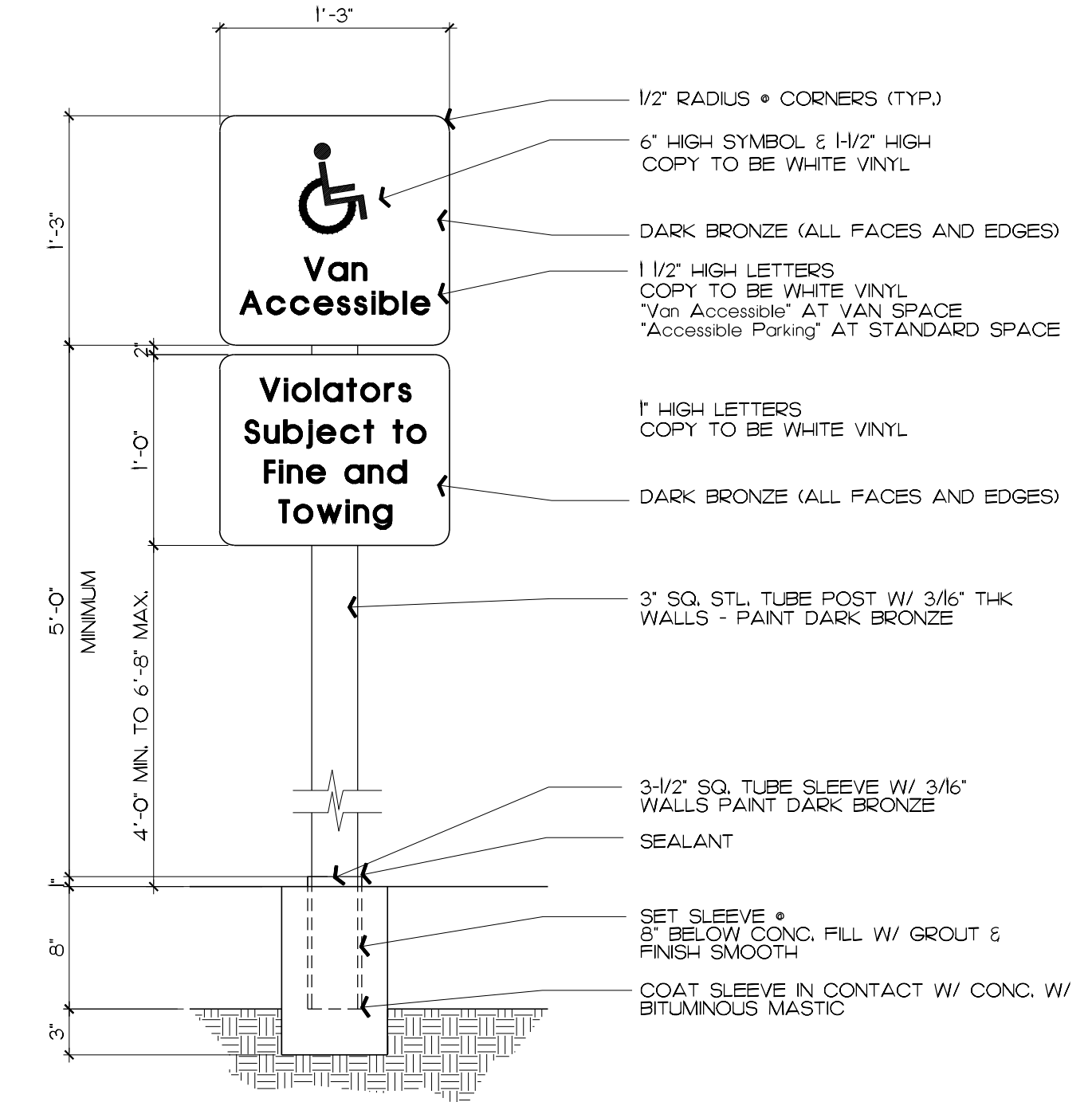
Sheet

**A2.0**

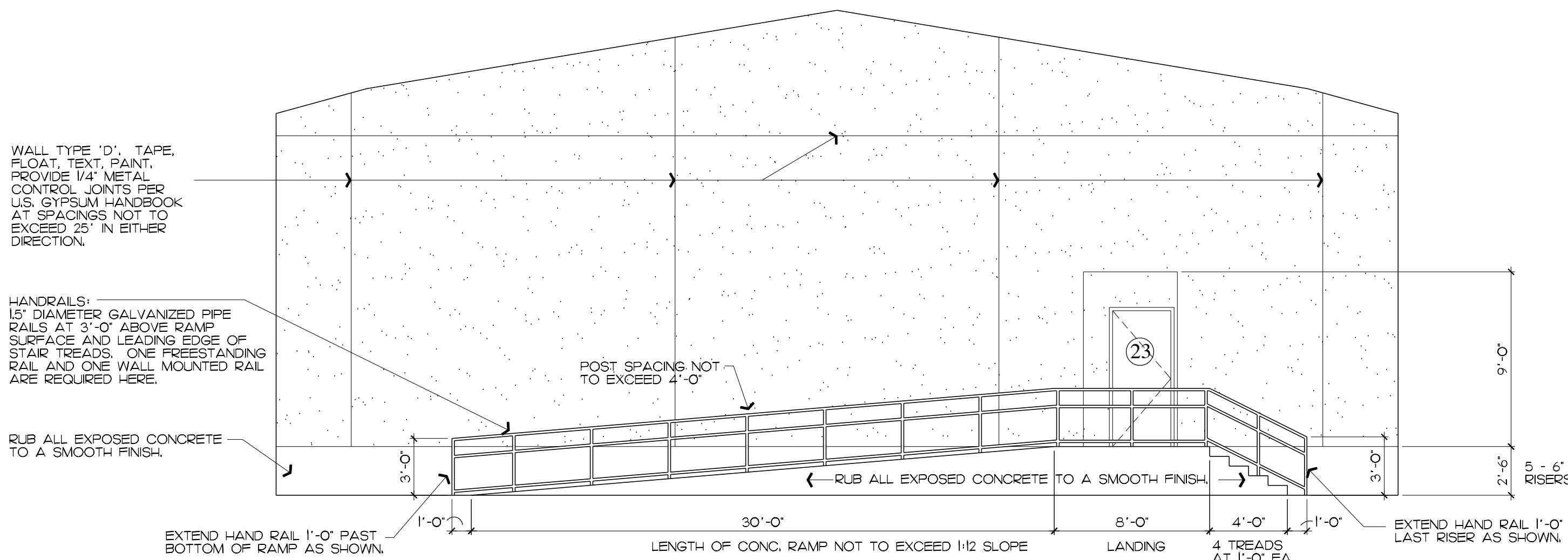




**1 Flatwork Concrete Plan - Operations Building**  
SCALE: 1/8" = 1'-0"



**2 Accessible Parking Sign Detail**  
SCALE: NONE



**3 Interior Wall, Accessible Ramp and Stair Elevation**  
SCALE: 3/16" = 1'-0"

**JOINT TYPE LEGEND**

C.J. INDICATES TOoled CONTROL JOINT 1/4" DEEP AS SHOWN ON THE PLAN REFER TO GEOTECH REPORT.

E.J. INDICATES EXPANSION JOINT 1/2" PRE-MOLDED JOIN FILLER WITH #3 BARS AT 12" O.C. IN ON COMPACTED BASE PER GEOTECH. LIGHT BROOM FINISH PERPENDICULAR TO LENGTH OF WALKWAY. REFER TO GEOTECH REPORT.

**IMPORTANT NOTE TO G.C.**  
EXTEND CLAY REMOVAL AND PAD PREP OUT TO BACK OF CURB OR EDGE OF FLATWORK AREAS. ENSURE THAT THIS REQUIREMENT IS CONVEYED TO THE SITEWORK SUBCONTRACTOR.

DH CONC. PAVING PER GEOTECH REPORT IN AREAS NOT INDICATED TO BE DI-3 PAVING.

ALL FLATWORK TO BE 5" THICK, 3500 PSI MIN. CONCRETE (28 DAY COMPRESSIVE STRENGTH), WITH #3 BARS AT 12" O.C. IN ON COMPACTED BASE PER GEOTECH. LIGHT BROOM FINISH PERPENDICULAR TO LENGTH OF DRIVEWAY.

PROVIDE 5" THICKENED EDGE AT BLDG. AND AT BACK OF CURB. CROSS SLOPES MAY NOT EXCEED 1/4" PER 1'-0" (2%).

DOWEL INTO END OF SLAB PER STRUCTURAL PLANS THRU COMPOSITE JOINT MATERIAL.

DI-3 CONC. PAVING PER GEOTECH REPORT AS INDICATED ON THIS PLAN.

ALL FLATWORK TO BE 7" THICK, 3500 PSI MIN. CONCRETE (28 DAY COMPRESSIVE STRENGTH), WITH #3 BARS AT 12" O.C. IN ON COMPACTED BASE PER GEOTECH. LIGHT BROOM FINISH PERPENDICULAR TO LENGTH OF DRIVEWAY.

PROVIDE 12" THICKENED EDGE AT BLDG. AND AT BACK OF CURB. DRIVEWAY SLOPES AND CROSS SLOPES PER CIVIL PLANS.

DOWEL INTO END OF SLAB PER STRUCTURAL PLANS THRU COMPOSITE JOINT MATERIAL.

**APPROVAL BLOCK:**  
FOR MOBILE LOAVES AND FISHES  
DATE:

Revisions

Date

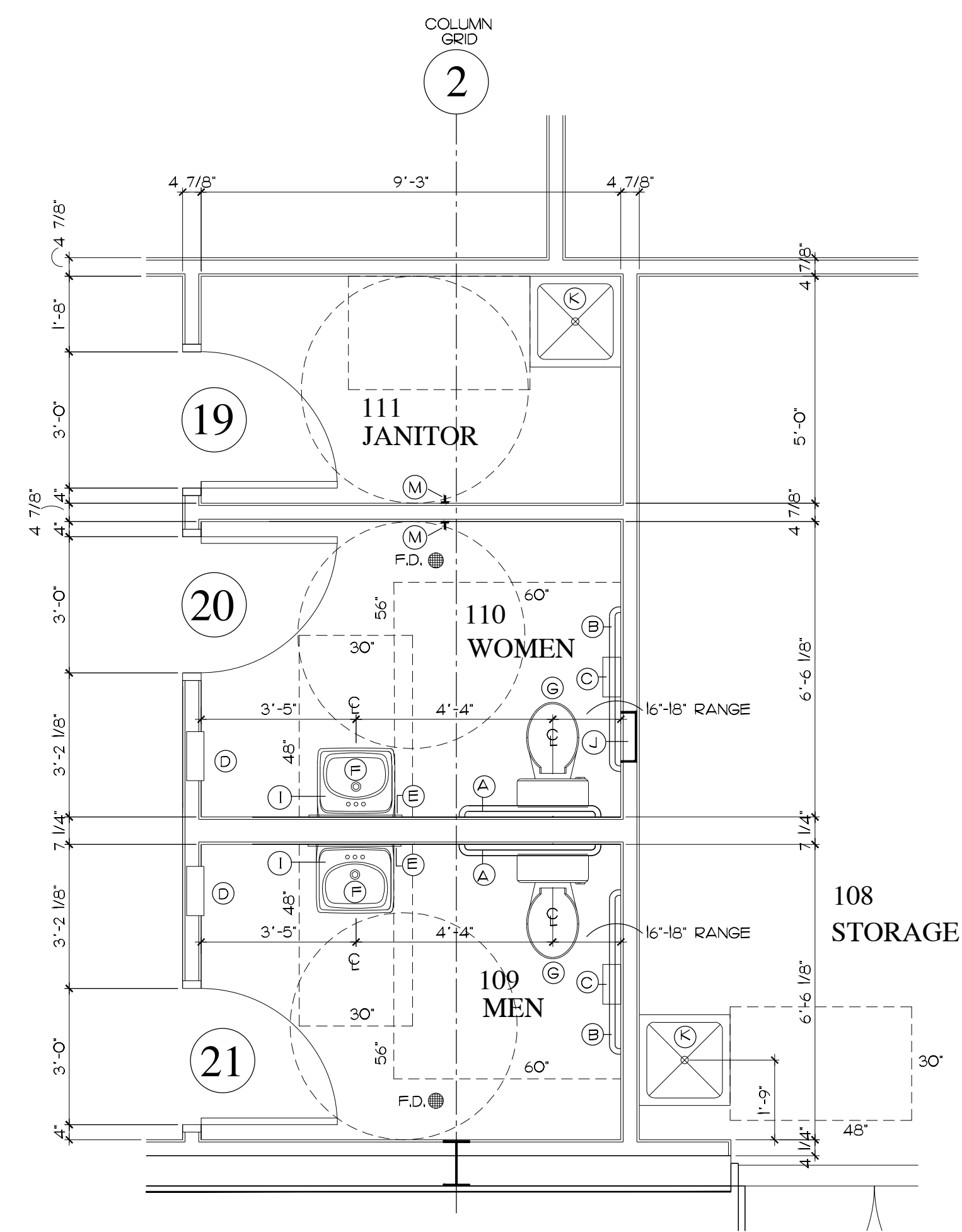
Sheet

**A2.1**



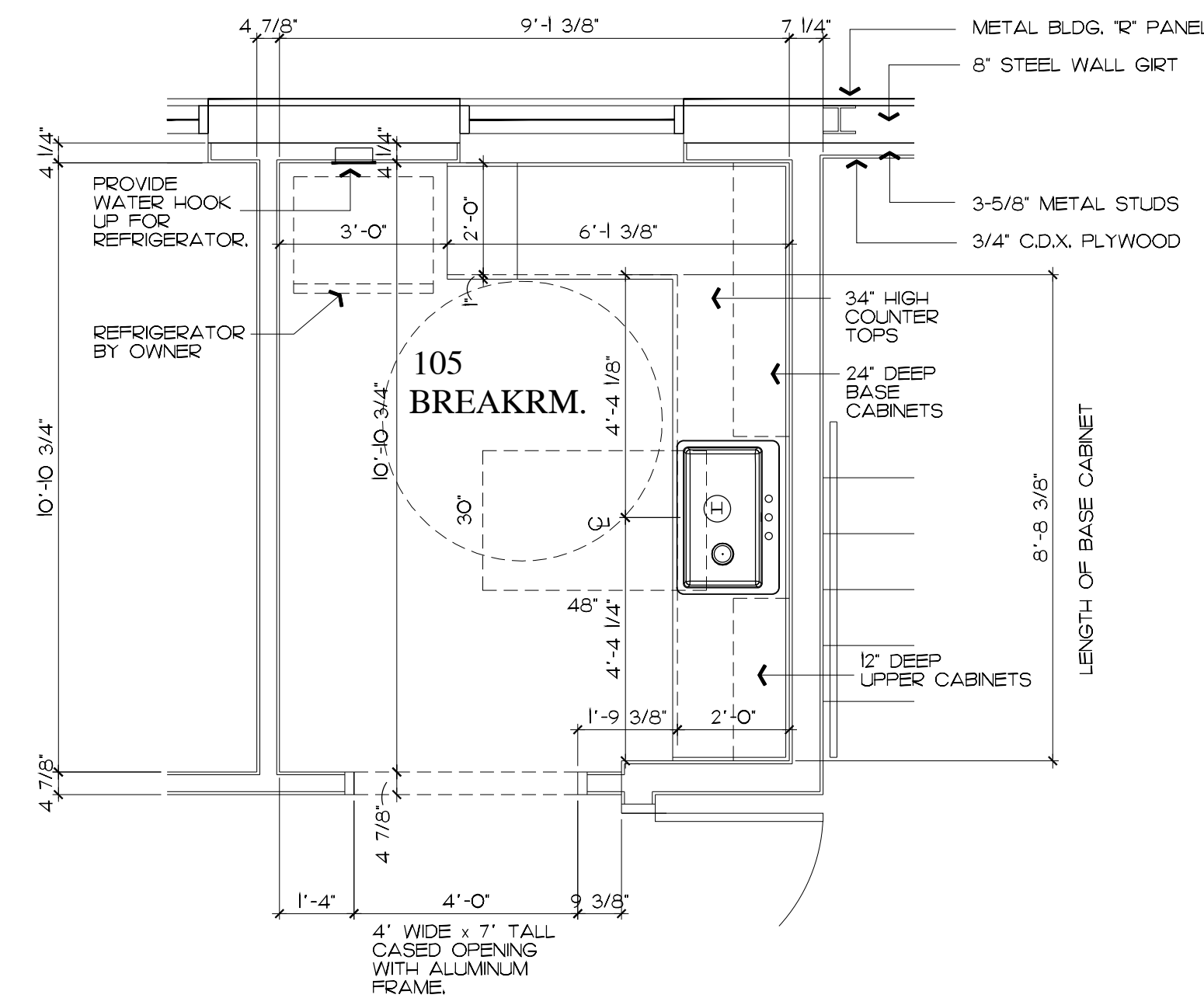






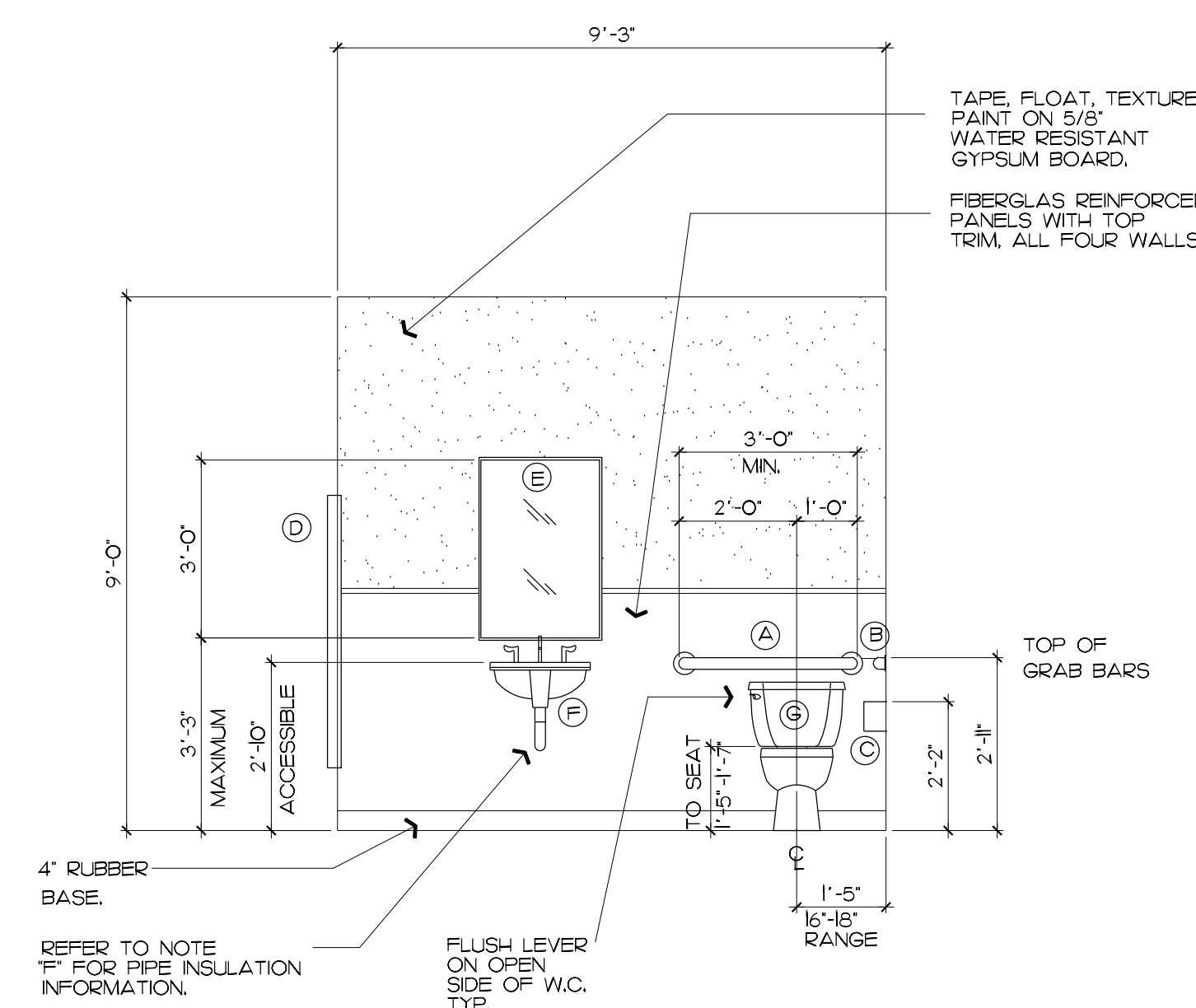
1 RESTROOM ENLARGED FLOOR PLAN

3/8" = 1'-0"



2 BREAK ROOM ENLARGED FLOOR PLAN

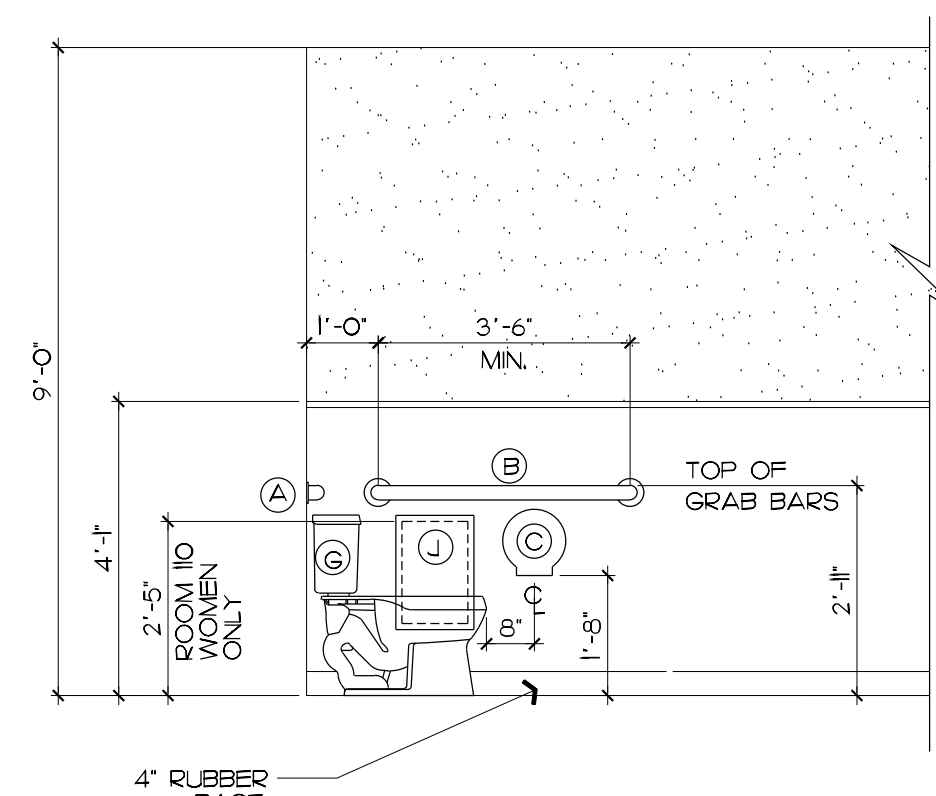
3/8" = 1'-0"



3 ELEVATION FACING LAV. & W.C.

MEN'S SHOWN  
WOMEN'S OPP. HAND

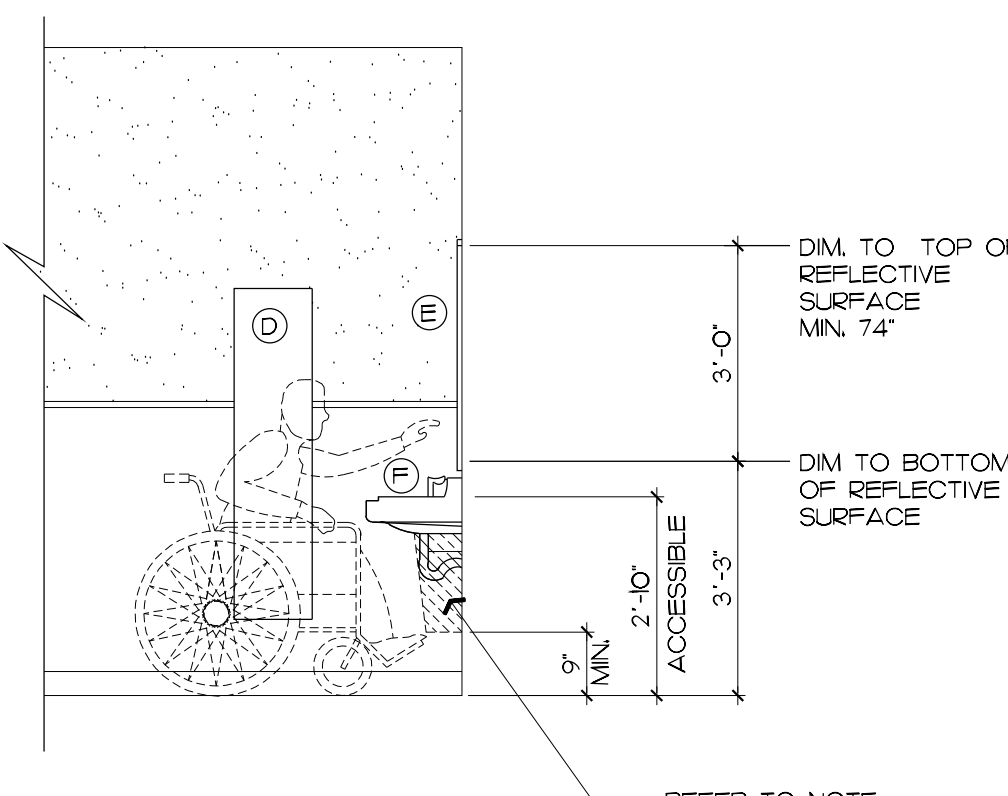
3/8" = 1'-0"



4 ELEVATION FACING SIDE OF W.C.

MEN'S SHOWN  
WOMEN'S OPP. HAND

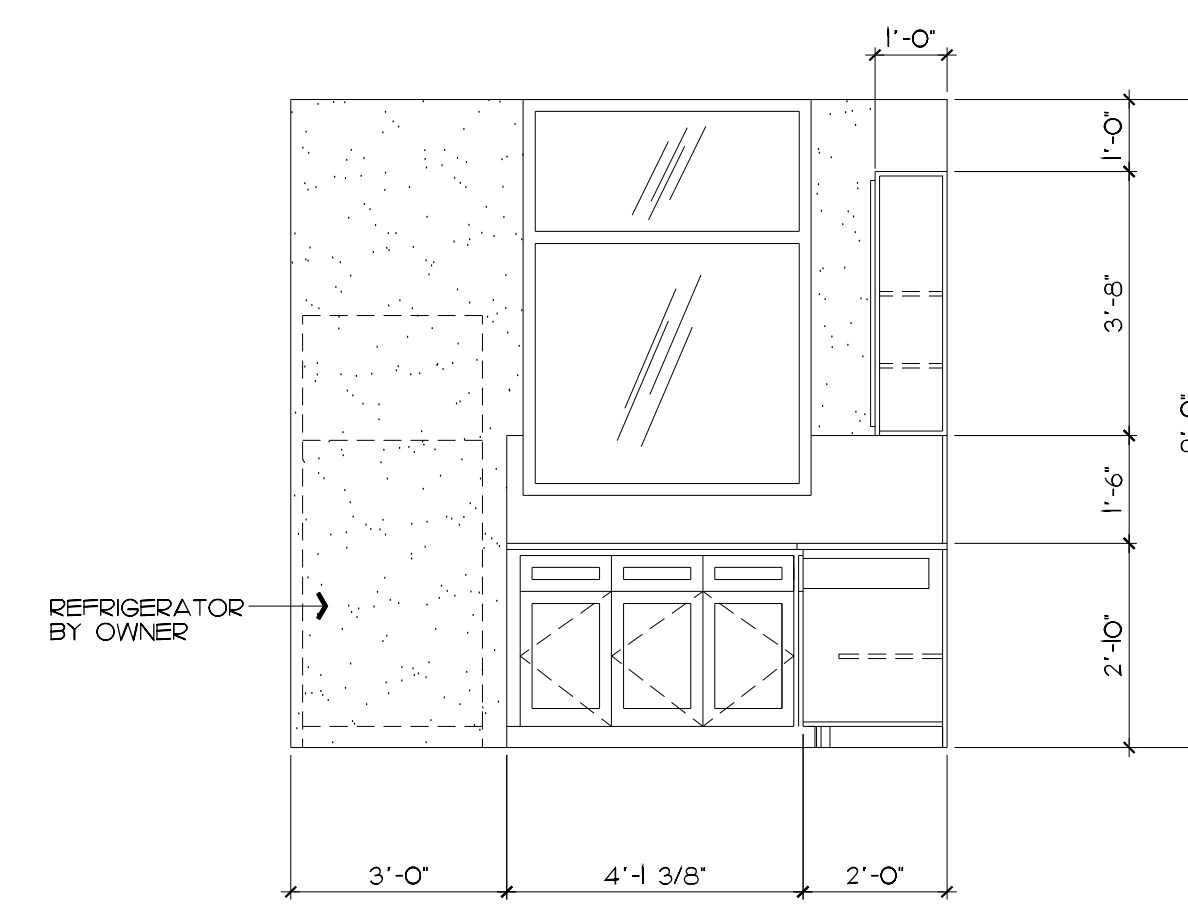
3/8" = 1'-0"



5 ELEVATION FACING SIDE OF LAV.

MEN'S SHOWN  
WOMEN'S OPP. HAND

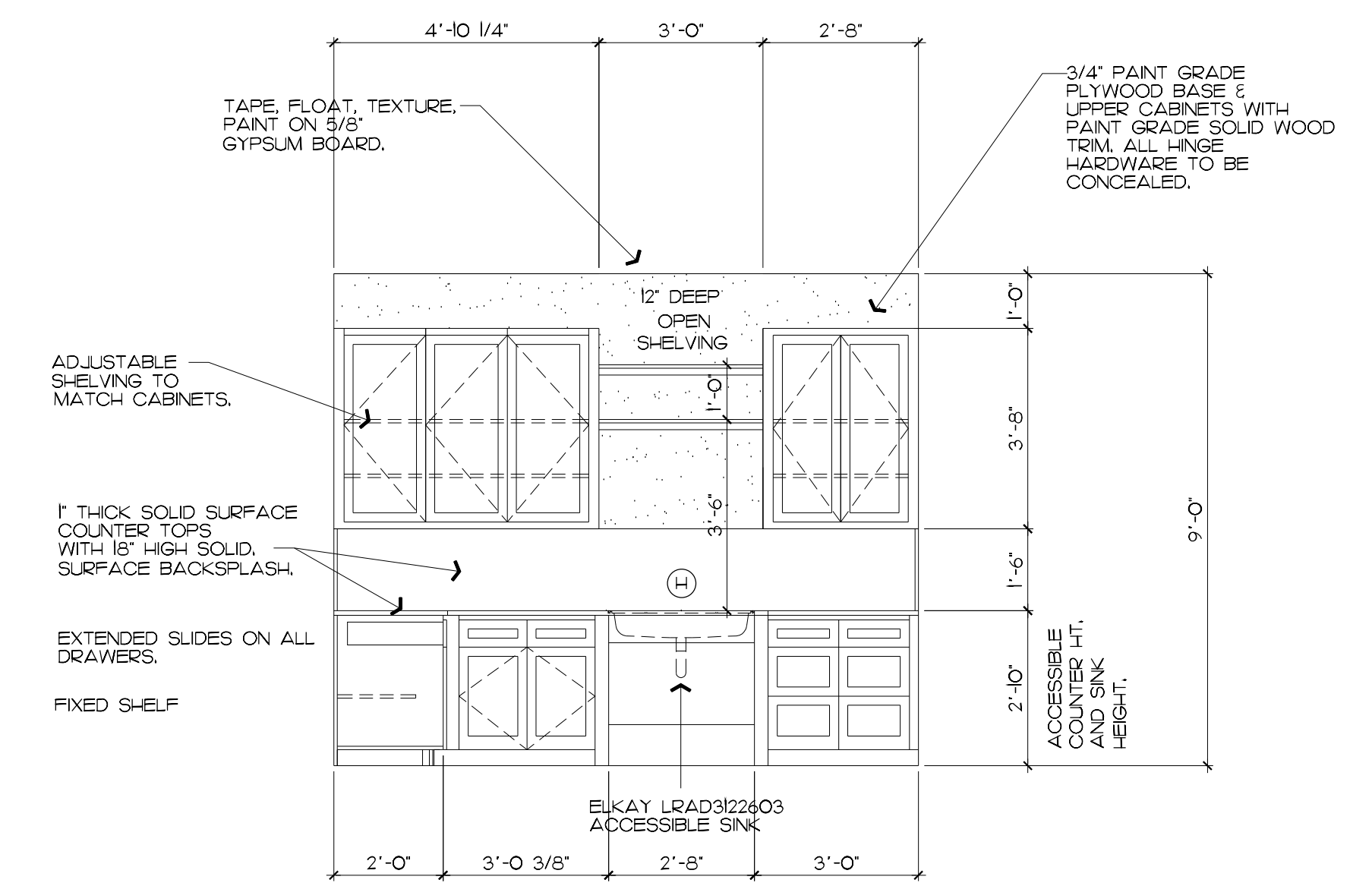
3/8" = 1'-0"



6 NORTH BREAK RM. ELEVATION.

FACING FRIDGE

3/8" = 1'-0"

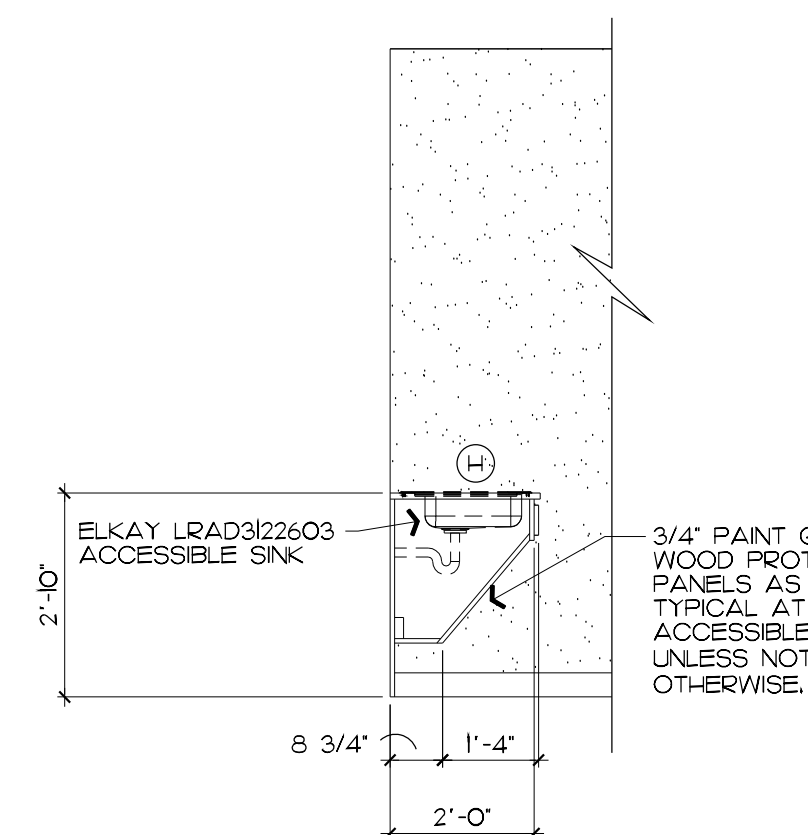


7 EAST BREAK RM. ELEVATION.

FACING SINK

3/8" = 1'-0"

PLUMBING FIXTURES / ACCESSORIES	RESTROOM NOTES
(A) GRAB BAR - 36" LONG BOBRICK B-5806.99.36 STAINLESS STEEL WITH SNAP FLANGE. INSTALL ONE @ EACH H.C. STALL MOUNT ON SIDE WALL #50' TO CENTERLINE OF BAG, 12" MAX FROM ADJACENT SURFACE. GRAB BARS SHALL COMPLY WITH ADA/ATAS GUIDELINES FOR STRUCTURAL STRENGTH.	1. CONTRACTOR TO PROVIDE & INSTALL BLOCKING FOR ALL RESTROOM FIXTURES, ACCESSORIES, FIRE EXTINGUISHERS, MILLWORK, ETC., AS REQUIRED.
(B) GRAB BAR - 42" LONG BOBRICK B-5806.99.42 STAINLESS STEEL WITH SNAP FLANGE. INSTALL ONE @ EACH H.C. STALL MOUNT ON SIDE WALL #50' TO CENTERLINE OF BAG, 12" MAX FROM ADJACENT SURFACE. GRAB BARS SHALL COMPLY WITH ADA/ATAS GUIDELINES FOR STRUCTURAL STRENGTH.	2. RESTROOM TO HAVE WR GYPSUM BOARD CEILING AT 9'-0" A.F.F. TAPE, FLOAT, TEXTURE AND PAINT PER ARCHITECT.
(C) BOBRICK B-2840 SURFACE MOUNTED TOILET TISSUE HOLDER & UTILITY SHELF. MOUNTING HEIGHT WITH FORWARD EDGE 36" MAX. FROM BACK WALL AND HORIZONTAL CENTERLINE MIN. 17" A.F.F.	3. ALL WALL DIMENSIONS ARE TO FACE OF GYPSUM WALL BOARD OR PLYWOOD (WAREHOUSES).
(D) BOBRICK B-4269 CONTURA SERIES RECESSED COMBINATION PAPER TOWEL DISPENSER & WASTE RECEPTACLE. MOUNTING HEIGHT 4'-6" TO PAPER NAPKIN OPENING.	4. FURNISH & INSTALL ADA SIGNAGE AT TOILET ROOMS TO MEET T.A.S. GUIDELINES. MOUNTING HEIGHT SHALL BE 60" A.F.F. TO THE L OF THE SIGN. MOUNT SIGN 6" FROM THE LOCKSET SIDE OF THE DOOR TO THE CENTERLINE OF THE SIGN. SIGN SHALL MEET ALL REQUIREMENTS FOR ADA SIGNAGE.
(E) BOBRICK B-465 18x24 1/4" THICK MIRROR GLASS. 24X26" PER INTERIOR ELEVATIONS. MIRROR SHALL BE SURFACE MOUNTED. MIRROR SHALL MEET ADA REQUIREMENTS AS CENTERED ABOVE SINK. W/ TOP & BOTTOM OF REFLECTIVE SURFACE PER ELEVATIONS.	5. ALL FIXTURES/ACCESSORIES TO BE INSTALLED PER T.A.S. GUIDELINES.
(F) LAVATORY PER M.E.P. LAV. SHALL MEET ADA REQUIREMENTS WITH LAV RIM AT 34" MAX. KNEE SPACE 27" LEVER TYPE HARDWARE. INSULATE EXPOSED PIPES AND COVER W/ PREMANUFACTURED VINYL WRAP W/ LEVER OPERATED FAUCET TO MEET ADA REQ.	6. ALL DOOR HANDLES, PULLS, LOCK SETS, & OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND & THAT DOESN'T REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED MECHANISMS ARE ACCEPTABLE. HARDWARE FOR ACCESSIBLE DOORS SHALL BE MOUNTED NO HIGHER THAN 44" A.F.F. OR LOWER THAN 30" A.F.F.
(G) WATER CLOSE (TOILET). PER M.E.P. TOILET SHALL MEET ADA REQUIREMENTS. FLUSH CONTROLS SHALL BE OPPOSITE THE WALL. TOP OF SEAT SHALL BE BETWEEN 17" AND 19" A.F.F. FLUSH LEVER ON OPEN SIDE OF W.C. (TYP)	7. DOORS W/ CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OR TO DEGREE THE DOOR TAKES AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH MEASURED TO THE LEADING EDGE OF THE DOOR.
(H) ELKAY LRAD322603 ACCESSIBLE SINGLE COMPARTMENT SINK. FAUCET PER M.E.P.	8. THE MAXIMUM FORCE FOR PUSHING OR PULLING AN ACCESSIBLE DOOR SHALL BE 5 LBS. TYP.
(I) SLOAN DECK MOUNTED FOAM SOAP DISPENSER. POLISHED CHROME FINISH (3346160-ESD-410-CP).	9. ALL RESTROOM WALLS ARE TO HAVE 5/8" W.R. GYPSUM BOARD ON 3-5/8" METAL STUDS AT 16" O.C. PROVIDE FIBERGLAS REINFORCED PANELS ON ALL FOUR WALLS TO 4'-0" A.F.F. PROVIDE ALL F.P.P. TRIM PIECES TOP, BOTTOM, SEAM AND INSIDE CORNERS.
(J) BOBRICK B-35303 TRIMLINE SERIES RECESSED SANITARY NAPKIN DISPOSAL. MOUNT TOP OF INTERIOR WALL BOX AT 27" A.F.F.	10. PERMANENT RESTROOM SIGNS MUST COMPLY WITH T.A.S. REQUIREMENTS 7031, 7032 AND 7035.
(K) JANITOR FLOOR SINK PER M.E.P.	
(L) SINGLE COMPARTMENT STAINLESS STEEL UTILITY SINK PER M.E.P. FAUCET PER M.E.P.	
(M) BOBRICK B-542 COAT HOOK. MOUNT AT 48" A.F.F.	



7 SECTION THRU ACCESSIBLE SINK

3/8" = 1'-0"

APPROVAL BLOCK:

FOR MOBILE LOAVES AND FISHES  
DATE:

Revisions

Date

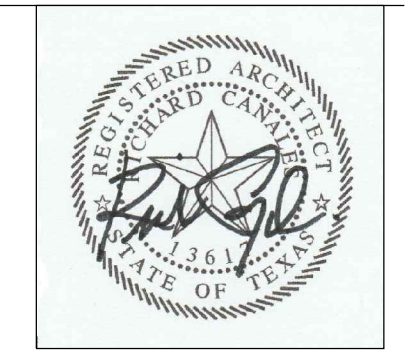
Sheet

A2.3

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724

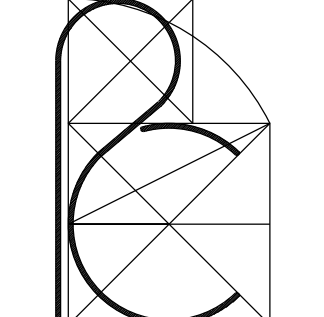
RC Architects, Inc.

RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12/12/23





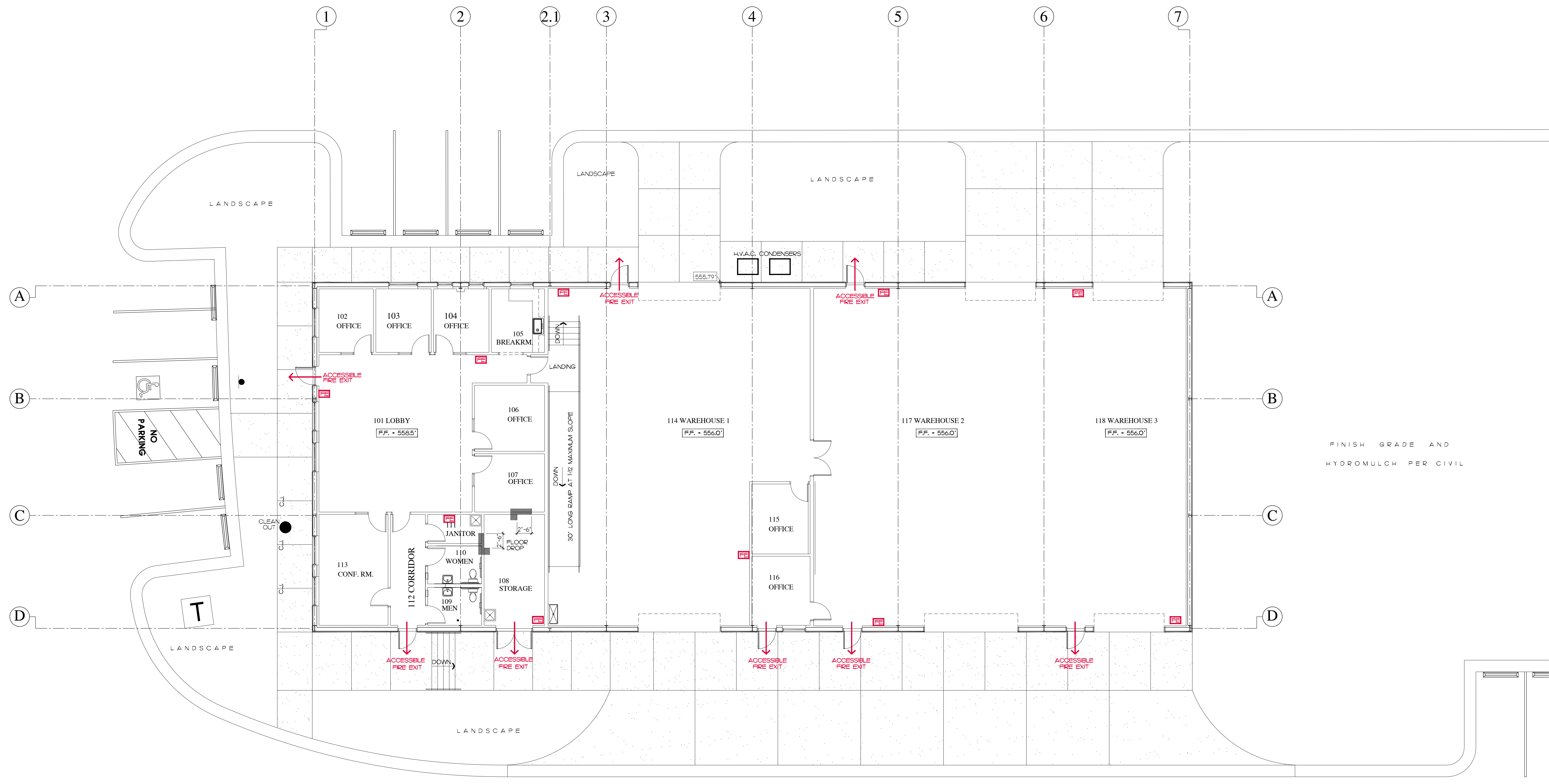
RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12/12/23

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.



PLAN NORTH

**1 Fire Exit and Extinguisher Floor Plan - Operations Building**

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

**NOTE TO FIRE MARSHAL: FIRE EXITS IN THIS BUILDING DO NOT EXCEED 75' IN TRAVEL DISTANCE. NO HIGH PILE STORAGE IS ALLOWED IN THIS BUILDING.**

**FE WALL MOUNTED FIRE EXTINGUISHERS WITHIN 75' TRAVEL DISTANCES. FIRE EXTINGUISHERS SHALL BE 2A10B:C RATED AND INSPECTED BY A STATE OF TEXAS LICENSED FIRE EXTINGUISHER COMPANY.**

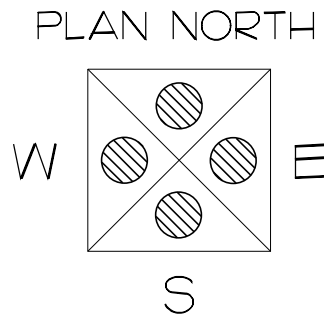
APPROVAL BLOCK:  
FOR MOBILE LOAVES AND FISHES  
DATE:

Revisions
Date
Sheet
<b>A2.4</b>



ROOM FINISH SCHEDULE

NO	ROOM	FLOOR	BASE	WALLS	CEILING	NOTE
101	LOBBY					
102	OFFICE					
103	OFFICE					
104	OFFICE					
105	BREAK ROOM					
106	OFFICE					
107	OFFICE					
108	STORAGE					1
109	MEN					1
110	WOMEN					1
111	JANITOR					1
112	CORRIDOR					
113	CONFERENCE ROOM					
114	WAREHOUSE NO. 1					
115	OFFICE					3,4
116	OFFICE					
117	WAREHOUSE NO. 2					
118	WAREHOUSE NO. 3					



KEYED ROOM FINISH NOTES

W DENOTES CORRESPONDING FINISH TO CORRESPONDING WALL IN ROOM INDICATED

(L) GYPSUM BOARD TO BE GREEN 'WR' BOARD TYPE.

DOOR, DOOR FRAME AND HARDWARE SCHEDULE

DOOR #	TYPE	DIMENSIONS	MATERIAL	FRAME	GLASS	HARDWARE / NOTES	KEY PAD SECURITY	DOOR #
1	B	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	INSULATED TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	1
2	A	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	N/A	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.		2
3	F	14'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		3
4	A	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	N/A	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	4
5	F	12'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		5
6	F	12'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		6
7	F	12'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		7
8	A	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	N/A	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	8
9	F	16'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		9
10	A	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	N/A	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	10
11	B	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	INSULATED TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	11
12	F	14'-W x 10'-H x 2"	INSULATED STEEL	HIGH LIFT STEEL TRACK	N/A	VERTICAL CHAIN HOIST, HORIZONTAL BOLT AT JAMB.		12
13	C	2) 3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	N/A	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	13
14	B	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	INSULATED TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON EXTERIOR SIDE	14
15	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER PASSAGE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		15
16	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER PASSAGE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		16
17	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER CLASSROOM SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, HOLD OPEN, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.	KEY PAD ENTRY ON I2 CORRIDOR SIDE	17
18	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER STOREROOM SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, HOLD OPEN, KICK PLATE, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.	KEY PAD ENTRY ON I2 CORRIDOR SIDE	18
19	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	PUSH/PULL WITH OCCUPANCY INDICATOR ON BOTH SIDES, KICK PLATE, DOOR STOP, HOLD OPEN, FOOT PULL, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		19
20	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	PUSH/PULL WITH OCCUPANCY INDICATOR ON BOTH SIDES, KICK PLATE, DOOR STOP, HOLD OPEN, FOOT PULL, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		20
21	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS.		21
22	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS.		22
23	E	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.	KEY PAD ENTRY ON I4 WAREHOUSE SIDE	23
24	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS.		24
25	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		25
26	D	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	N/A	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		26
27	C	2) 3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	INSULATED TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON I7 WAREHOUSE SIDE	27
28	C	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	1/4" TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		28
29	C	3'-0" x 7'-0" x 1-3/4"	SOLID CORE WOOD W/ PLASTIC LAM. FACES AND EDGES.	CLEAR FINISH ALUMINUM	1/4" TEMPERED GLASS HALF LITE WITH BOTTOM AT 42" MAX. A.F.F. .31 SH.G.C.	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 26D FINISH.		29

GENERAL DOOR SCHEDULE NOTES

DOOR SCOPE SHALL BE A WIDE ANGLE VIEW. VIEWER CAN VIEW IMAGES WHILE STANDING 6 FEET AWAY FROM VIEWER. 132 DEGREE VIEWING ANGLE WITH 26D FINISH. SUBMIT PRODUCT DATA FOR APPROVAL.

26D FINISH FOR PUSH, PULL, AND KICK ACCESSORIES.

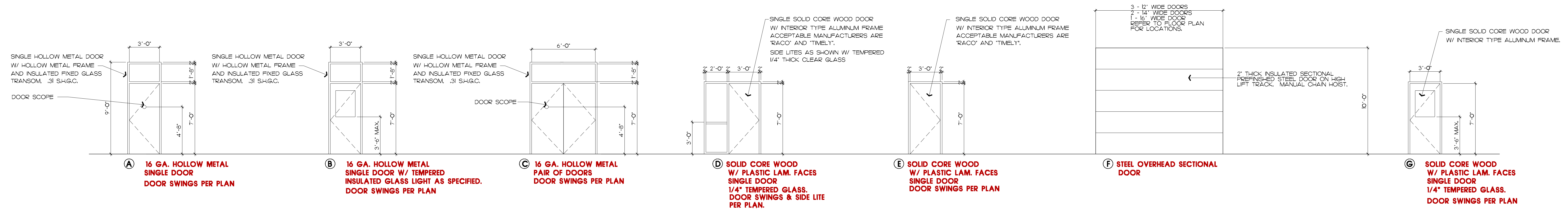
DOOR STOP TO BE FLOOR MOUNTED W/ 26D BRONZE FINISH.

INSTALL WEATHERSTRIPPING DOOR GASKETS AT SIDES AND TOP OF FRAME WITH SWEEP AT BOTTOM OF DOOR.

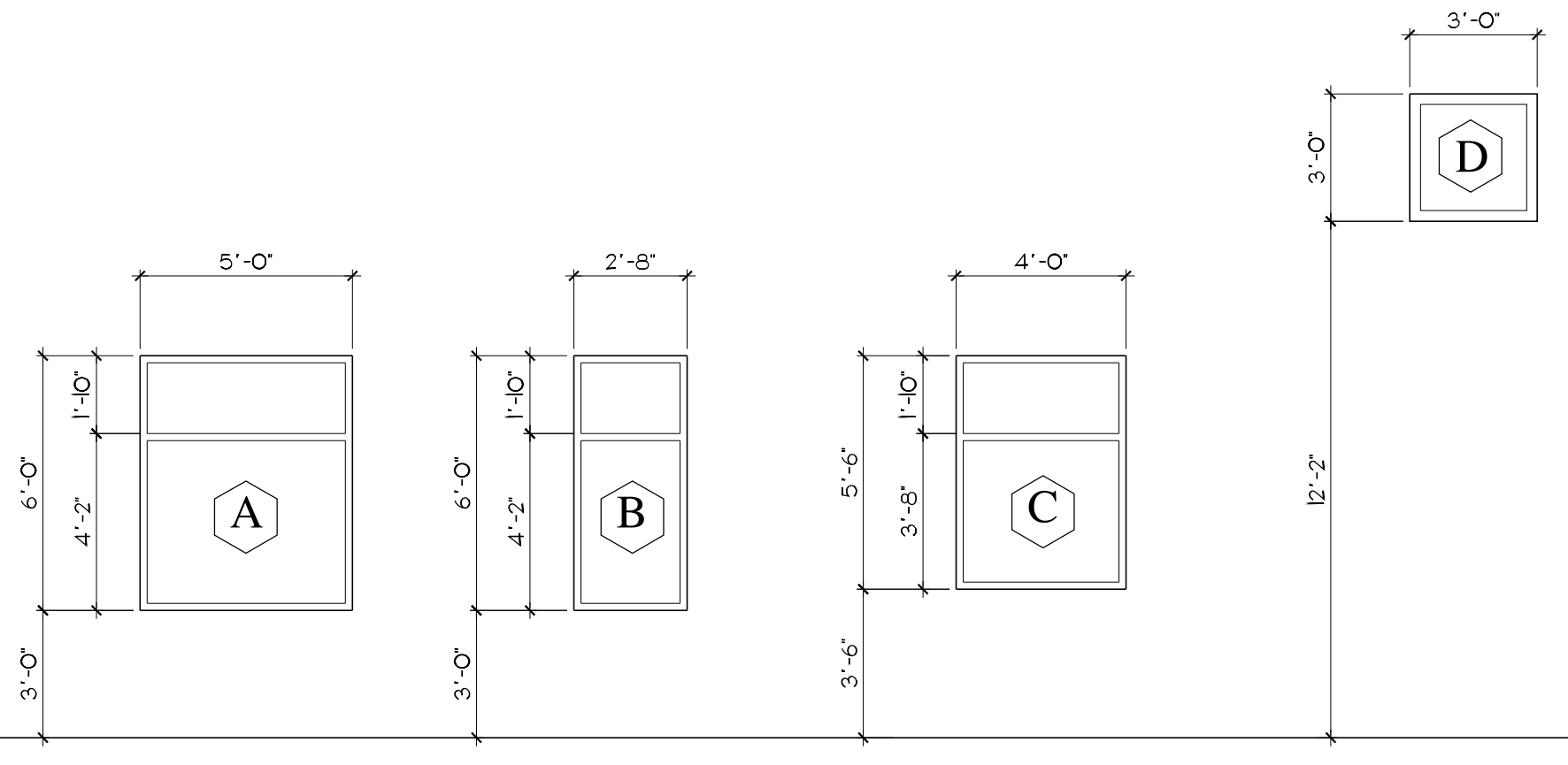
ADA APPROVED LEVER TYPE HARDWARE AT ALL DOORS 26D FINISH.

THRESHOLDS, AT ACCESSIBLE DOORS MUST HAVE A MAXIMUM ABRUPT VERTICAL LEVEL CHANGE OF 1/4" AND/OR A MAXIMUM RISE OF 1/2" WITH A SLOPE OF 1:2 MAXIMUM.

ALL EXIT DOORS SHALL BE PROVIDED WITH ADJUSTABLE CLOSERS THAT ARE SET TO RELEASE THE DOOR WITH A FORCE NO GREATER THAN 5LBS IN THE DIRECTION OF EGRESS.



DOOR AND FRAME TYPES



WINDOW TYPES  
ALL 16 GA. HOLLOW METAL FRAMES WITH INSULATED GLASS AND .31 SH.G.C.



12/12/23

Revisions

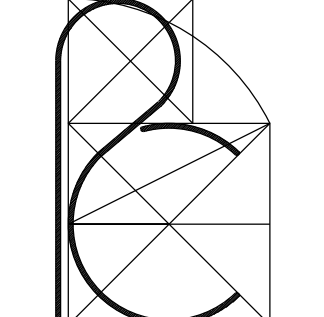
Date

Sheet

A2.5

APPROVAL BLOCK:  
FOR MOBILE LOAVES AND FISHES  
DATE:





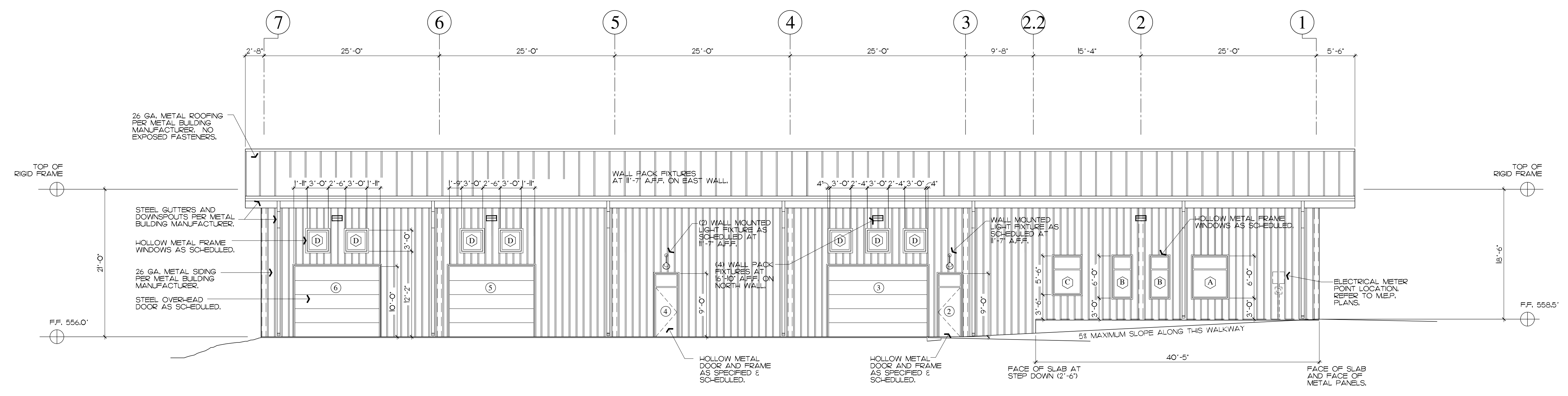
RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12/12/23

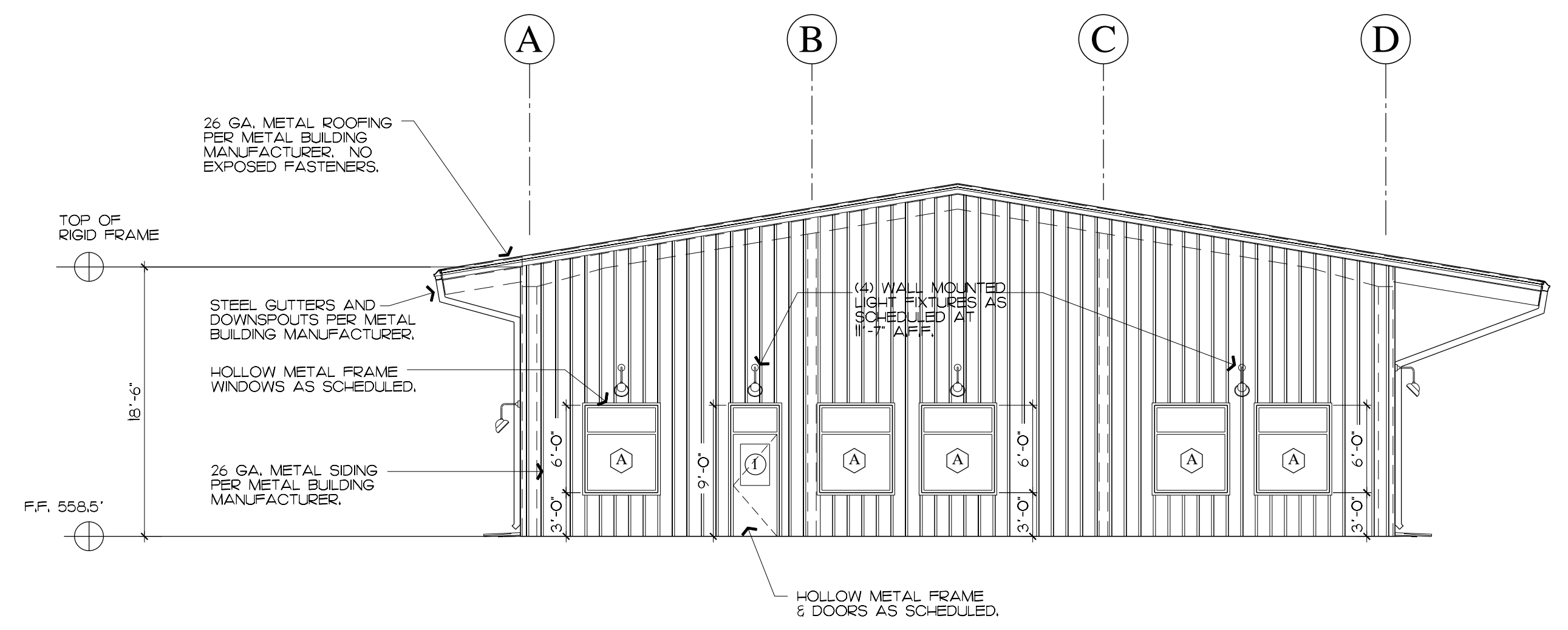
**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.



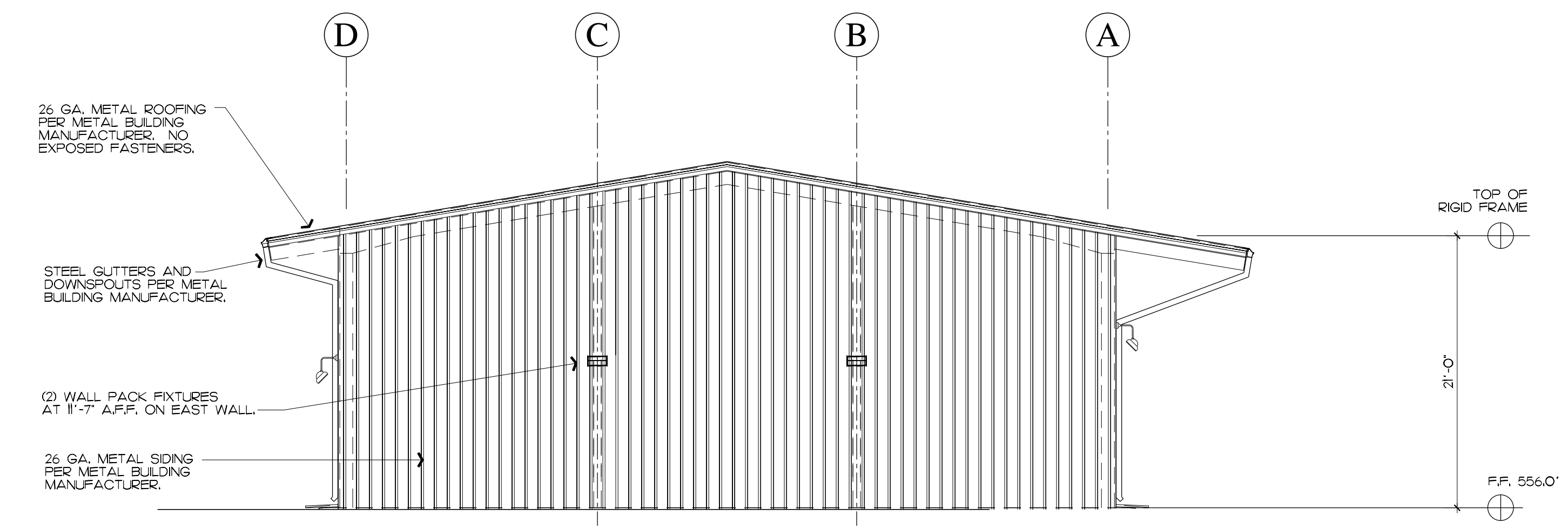
1 North Elevation

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



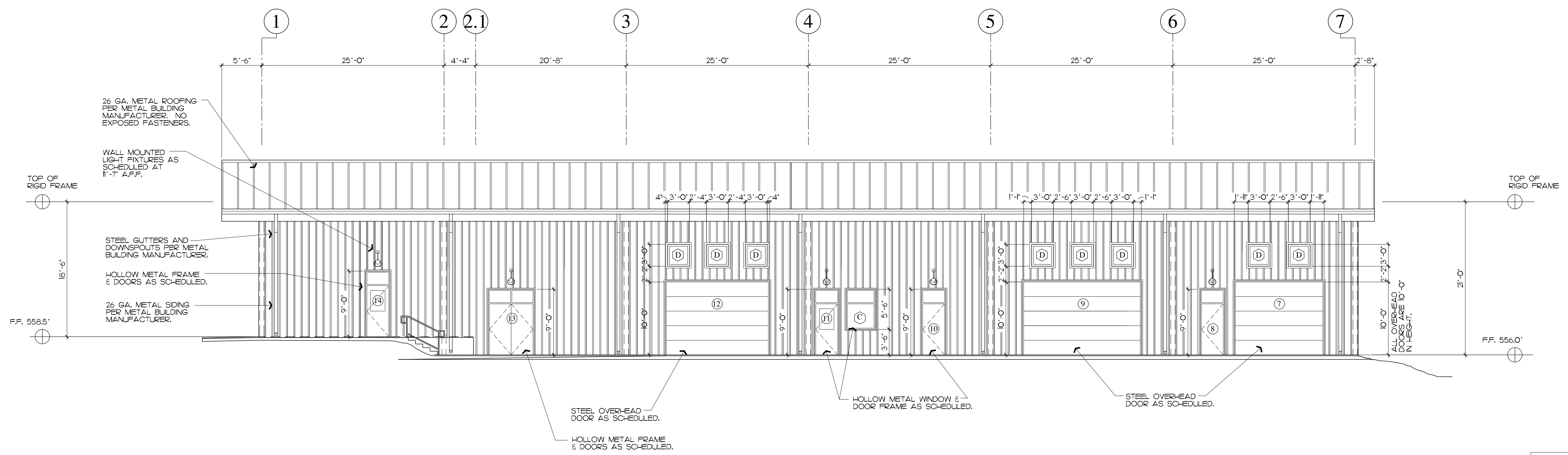
2 West Elevation

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



3 East Elevation

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



4 South Elevation

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

APPROVAL BLOCK:  
FOR MOBILE LOAVES AND FISHES  
DATE:

Revisions

Date

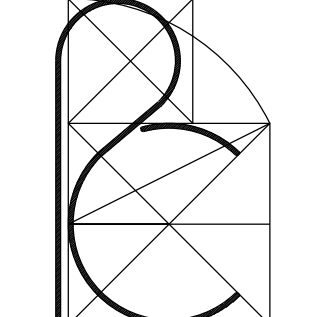
Sheet

A3.0



# SPECIFICATIONS

REFER TO STRUCTURAL DRAWINGS FOR SPECIFICATIONS AND NOTES.  
REFER TO DRAWINGS FOR MECHANICAL, ELECTRICAL & PLUMBING SPECIFICATIONS



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12/12/23

## SECTION 00700 - GENERAL CONDITIONS

- A. THE AMERICAN INSTITUTE OF ARCHITECTS STANDARD FORM, AIA DOCUMENT 201, LATEST EDITION, "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" IS HEREBY MADE A PART OF THESE CONSTRUCTION DOCUMENTS. THE GENERAL CONDITIONS APPLY TO EACH AND EVERY SECTION OF THESE SPECIFICATIONS AS WELL AS TO ALL THE WORK REQUIRED TO COMPLETE THIS PROJECT AS THOUGH INCLUDED HEREIN.

## SECTION 01010 - SUMMARY OF THE WORK

- A. GENERAL CONTRACTOR'S RESPONSIBILITIES:
  1. EXCEPT AS SPECIFICALLY NOTED, PROVIDE AND PAY FOR:
    - A. LABOR, MATERIALS AND EQUIPMENT;
    - B. TOOLS, CONSTRUCTION EQUIPMENT AND MACHINERY;
    - C. WATER AND UTILITIES REQUIRED FOR CONSTRUCTION;
    - D. OTHER FACILITIES AND SERVICES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK;
  2. PAY ALL LEGALLY REQUIRED SALES, CONSUMER AND USE TAXES;
  3. SECURE AND PAY FOR, AS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK, AND AS APPLICABLE:
    - A. PERMITS - THE OWNER WILL PAY FOR THE BASIC BUILDING PERMIT. ANY ADDITIONAL PERMITS REQUIRED FOR OTHER INCREMENTS OF THE WORK SHALL BE PAID BY THE GENERAL CONTRACTOR;
    - B. GOVERNMENT FEES;
    - C. LICENSES;
  4. GIVE REQUIRED NOTICES ALL PARTIES HAVING JURISDICTION;
  5. COMPLY WITH ALL CODES, ORDINANCES, RULES AND REGULATIONS, ORDERS AND OTHER LEGAL REQUIREMENTS OF PUBLIC AUTHORITIES WHICH BEAR ON THE PERFORMANCE AND COMPLETION OF THE WORK;
  6. PROMPTLY SUBMIT WRITTEN NOTICE TO ARCHITECT OF OBSERVED VARIANCE OF CONTRACT DOCUMENTS FROM LEGAL REQUIREMENTS. IT IS NOT THE CONTRACTOR'S RESPONSIBILITY TO MAKE CERTAIN THAT THE DRAWINGS AND SPECIFICATIONS COMPLY WITH APPLICABLE CODES AND REGULATIONS;
  7. ENFORCE STRICT DISCIPLINE AND GOOD ORDER AMONG EMPLOYEES. DO NOT EMPLOY UNFIT PERSONS OR PERSONS NOT SKILLED IN THEIR ASSIGNED TASKS.
- B. CONTRACTOR'S USE OF PREMISES:
  1. CONFORM TO ALL CITY, COUNTY AND STATE TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS, CONTRACT DOCUMENTS, THE OWNER OR ARCHITECT;
  2. DO NOT UNREASONABLY ENCLUMBER THE SITE WITH MATERIALS OR EQUIPMENT;
  3. DO NOT LOAD STRUCTURE WITH WEIGHT THAT WILL ENDANGER THE STRUCTURE;
  4. ASSUME FULL RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF PRODUCTS STORED ON PREMISES;
  5. MOVE ANY STORED PRODUCTS WHICH INTERFERE WITH OPERATION OF OWNER OR OTHER CONTRACTORS;
  6. OBTAIN AND PAY FOR USE OF ADDITIONAL STORAGE OR WORK AREAS NEEDED FOR THE OPERATION.

## SECTION 01340 - SHOP DRAWINGS

- A. SHOP DRAWINGS: CONTRACTOR SHALL REVIEW SHOP DRAWINGS AND PROJECT DATA PRIOR TO SUBMISSION TO ARCHITECT. SUBMITTALS MUST INCLUDE CONTRACTOR'S STAMP, DATED, INITIALED AND SIGNED. A STAMP AND INITIAL WILL RESULT IN REJECTION AND REQUIRE RESUBMISSION. CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY ARCHITECT AND/OR ENGINEER'S REVIEW/APPROVAL. ARCHITECT/ENGINEER REVIEW WILL BE FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND WITH THE INFORMATION GIVEN IN THE DRAWINGS AND SPECIFICATIONS ONLY.
- B. ELECTRONIC SUBMITTALS FOR SHOP DRAWINGS WILL BE ACCEPTED. ELECTRONIC SUBMITTALS FOR PRODUCT DATA WILL BE ACCEPTED UNLESS THE ARCHITECT DEEMS IT NECESSARY TO RECEIVE HARD COPIES.

## SECTION 01455 - TESTING AND INSPECTION SERVICES

- A. OWNER WILL EMPLOY AND PAY FOR SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM CERTAIN TESTING AND INSPECTION. CONTRACTOR SHALL COOPERATE WITH THE TESTING LABORATORY TO FACILITATE PERFORMANCE OF ITS WORK.
- B. CONTRACTOR'S RESPONSIBILITIES:
  1. NOTIFY LABORATORY SUFFICIENTLY IN ADVANCE OF OPERATIONS TO ALLOW FOR LABORATORY ASSIGNMENT OF PERSONNEL AND SCHEDULING OF TESTS. WHEN TESTS OR INSPECTIONS CANNOT BE PERFORMED AFTER SUCH NOTICE, REMEDIAL WORK, LABOR AND TEST/INSPECTION FEES WILL BE INCURRED DUE TO CONTRACTOR'S NEGLIGENCE. MAKE ARRANGEMENTS WITH LABORATORY AND PAY FOR ADDITIONAL SAMPLES, TESTS OR INSPECTIONS REQUIRED FOR CONTRACTOR'S CONVENIENCE.

## SECTION 05120 - STRUCTURAL STEEL

REFER TO STRUCTURAL DRAWINGS BY METAL BUILDING MAUFACTURER, AS IS APPLICABLE.

## SECTION 05400 - LIGHT GAUGE METAL FRAMING

THIS SECTION INCLUDES FORMED STEEL STUD EXTERIOR AND INTERIOR WALL FRAMING, ANCHORAGE AND ACCESSORIES.

- A. ACCOMPLISH THE WORK IN COMPLIANCE WITH THE LATEST APPLICABLE GUIDELINES OR RECOMMENDATIONS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, AMERICAN WELDING SOCIETY, METAL FRAMING MANUFACTURERS ASSOCIATION, METAL LATH/STEEL FRAMING ASSOCIATION AND STEEL STRUCTURES PAINTING COUNCIL.
- B. SYSTEM DESCRIPTION - CONTRACT DOCUMENTS ESTABLISH OVERALL DESIGN INTENT AND STANDARD OF QUALITY BUT DO NOT NECESSARILY DESCRIBE TOTAL EXTENT OF THE WORK. STRUCTURAL DESIGN OF COLD FORMED METAL FRAMING INCLUDING SOME SIZES, PROFILES, DETAILS AND METHODS OF CONNECTION AND ATTACHMENT ARE THE CONTRACTOR'S RESPONSIBILITY. MAINTAIN DESIGN CONCEPT SHOWN AND MEET SPECIFIED PERFORMANCE CRITERIA WITHOUT ALTERING PROFILES AND ALIGNMENTS.
- C. PRODUCTS - PROVIDE MINIMUM 20 GA. (UNLESS NOTED OTHERWISE) STUDS IN SIZES INDICATED TO BE ROLLED FROM NEW SHEET STEEL, FINISHED G60 GALVANIZED, WITH CHANNEL PROFILE PUNCHED FOR UTILITY ACCESS. PROVIDE SYSTEM COMPATIBLE TRACKS. PROVIDE ALL BRACING, FRAMING BRIDGES, PLATES, GUSSETS, CLIPS, AND FASTENERS AS DETERMINED BY PERFORMANCE REQUIREMENTS. STUD SPACING PER PLANS. DO NOT EXCEED THE UNBRACED LENGTH SPECIFICATION OF ANY STUD MEMBER.
- D. ERECTION - INSTALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FASTEN TRACKS AT MAXIMUM 12 INCHES ON CENTER. PLACE STUDS AT SPACING INDICATED AND NOT MORE THAN 2 INCHES FROM ADJUTING WALLS AND AT EACH SIDE OF OPENINGS. CONNECT STUDS TO BOTTOM TRACK USING FASTENER METHOD. ERCT STUDS ONE PIECE FULL LENGTH. SPACING NOT PERMITTED. INSTALL INTERMEDIATE STUDS ABOVE AND BELOW OPENINGS TO ALIGN WITH WALL STUD SPACING. ATTACH CROSS STUDS OR FLERING CHANNELS TO STUDS FOR ATTACHMENT OF FIXTURES ANCHORED TO WALLS.

## SECTION 05500 - METAL FABRICATIONS

- THIS SECTION INCLUDES SHOP FABRICATED FERROUS METAL COMPONENTS, GALVANIZED AND PRIME PAINTED, STEEL LADDERS, STEEL HANDRAILS AND RAILINGS, STEEL BOLLARDS, AND BAR GRATINGS.
- A. WORK SHALL BE ACCOMPLISHED IN COMPLIANCE WITH THE LATEST GUIDELINES AND RECOMMENDATIONS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, AMERICAN WELDING SOCIETY, NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS, AND THE STEEL STRUCTURES PAINTING COUNCIL.
  - B. SHOP DRAWINGS FOR THIS WORK SHOULD INCLUDE DIMENSIONS, METAL THICKNESSES, FINISHES, JOINTS, ATTACHMENTS, AND RELATIONSHIP TO ADJACENT CONSTRUCTION.
  - C. PROVIDE MATERIALS AND ACCESSORIES AS INDICATED IN THE DRAWINGS AND AS OTHERWISE REQUIRED TO COMPLETE THE WORK. AS REQUIRED ABOVE, PRIMER AND TOUCH-UP FOR FERROUS METALS TO BE SSPC 16, TYPE I, RED OXIDE. TOUCH-UP FOR GALVANIZING TO BE SSPC 20, TYPE I OR II.
  - D. FABRICATION:
    1. FIT AND SHOP ASSEMBLE ITEMS IN LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE. FABRICATE ITEMS WITH JOINTS TIGHTLY FITTED AND REQUIRED;
    2. GRIND EXPOSED JOINTS FLUSH AND SMOOTH WITH ADJACENT SURFACES. MAKE EXPOSED JOINTS BUTT TIGHT, FLUSH AND HAIRLINE. EASE EXPOSED EDGES TO SMALL UNIFORM RADIIUS.
    3. CONCEAL FASTENING WHERE POSSIBLE. EXPOSED MECHANICAL FASTENERS SHALL BE COUNTERSUNK SCREWS OR BOLTS UNOBTUSIVELY LOCATED, CONSISTENT WITH DESIGN OF COMPONENT EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE;
    4. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE OF FABRICATIONS, FABRICATE ANCHORS AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS FABRICATION, EXCEPT WHERE SPECIFICALLY NOTED.
    5. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE OF FABRICATIONS, FABRICATE ANCHORS AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS FABRICATION, EXCEPT WHERE SPECIFICALLY NOTED.
    6. WELDING TO CONFORM TO AWS D1. USE WELDS FOR PERMANENT CONNECTIONS WHERE POSSIBLE. GRIND EXPOSED WELDS SMOOTH. TACK WELDS PROHIBITED ON EXPOSED SURFACES.
  - E. FINISHES ON FERROUS METAL COMPONENTS AS NOTED IN THE DRAWINGS:
    1. GALVANIZED - ASTM A 123/A 123M, TO 125 OUNCES PER SQUARE FOOT. PRIME - SHOP PAINTED EXCEPT STEEL TO BE ENCASED IN CONCRETE AND SURFACES TO BE WELDED. PREPARE SURFACE AND APPLY PER MANUFACTURER'S RECOMMENDATIONS. MINIMUM DRY FILM THICKNESS - 20 MILS.
    2. FINISH EXECUTION:
      1. INSTALLATION - INSTALL ITEMS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. INSTALL COMPONENTS PLUMB, LEVEL, AND RIGID. WELDING: AWS D11. GRIND AND FILL EXPOSED WELDS. FINISH SMOOTH AND FLUSH. INSTALL SLEEVED COMPONENTS WITH ANCHORING GEMENT.
      2. ADJUSTING - CLEAN AND TOUCH-UP PRIMER PAINT AT WELDED AND ABRADED SURFACES WITH SAME PRODUCT AS APPLIED IN SHOP. CLEAN AND TOUCH-UP GALVANIZED COATINGS AT WELDED AND ABRADED SURFACES WITH ZRC GALVALUTE GALVANIZING REPAIR COMPOUND, APPLIED PER MANUFACTURER'S RECOMMENDATIONS.

## SECTION 07410 - PRE-FORMED WALL PANELS

- A. METAL WALL PANELS - FINISH AND INSTALL 1" PANELS AS MANUFACTURED BY THE METAL BUILDING MANUFACTURER. PREFINISHED METAL SHALL BE 26 GAUGE AS PROVIDED BY THE METAL BUILDING MANUFACTURER. COLOR SELECTION BY ARCHITECT. A TWO COLOR SCHEME IS LIKELY TO BE USED.
- B. PROVIDE ALL FLASHINGS, CLOSURE PIECES, ETC. OF SAME MATERIAL FOR A COMPLETE INSTALLATION, NO EXPOSED FASTENERS.
- C. COLOR TO BE SELECTED FROM MANUFACTURER'S STANDARD COLORS.
- D. PRIOR TO INSTALLATION, VERIFY FRAMING AND EXISTING CONDITIONS ARE ADEQUATE FOR THE FINAL INSTALLATION OF THE PANELS. PANELS TO BE VOID OF DENTS AND NOTICEABLE DEFLECTIONS. PROVIDE ALL FLASHINGS, CLOSURE PIECES, ETC. OF SAME MATERIAL FOR A COMPLETE INSTALLATION.
- E. SUBMIT ELECTRONIC COPIES OF PRODUCT DATA AND SHOP DETAILS FOR ALL EXPOSED METAL FLASHING AND COPINGS.
- F. ALL PERFORMANCE AND INSTALLATION REQUIREMENTS AS WELL AS ROOFING SYSTEM STANDARDS AND ACCESSORIES SHALL COMPLY WITH SECTIONS 0504.3.2 AND 0507.4 OF THE 2001 I.B.C. AND IN TURN, TESTED IN ACCORDANCE WITH UL 550 OR ASTM E 892.

## SECTION 07600 - FLASHING AND SHEET METAL FABRICATIONS

- A. CONFORM STRICTLY TO SPECIFICATIONS AND RECOMMENDATIONS OF THE SMACNA ARCHITECTURAL MANUAL, LATEST EDITION FOR FORMING, SOLDERING, ANCHORING, CLEANING AND PROVIDING FOR THERMAL EXPANSION AND CONTRACTION.
- B. METAL COPINGS AND EXPOSED METAL FLASHINGS - FINISH AND INSTALL METAL COPINGS AS DETAILED AND DESCRIBED IN THE DRAWINGS. PREFINISHED METAL TO BE 24 GAUGE WITH KYNAR 500 FINISH. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARDS.
- C. LOCATION OF COPING JOINTS SHALL BE APPROVED BY ARCHITECT. OVERLAP METAL JOINTS PER SMACNA. APPLY SEALANT, AND INSTALL 2" WIDE COVER PIECE OF SAME MATERIAL AND PROFILE.
- D. PROVIDE ALL FLASHINGS, CLOSURE PIECES, ETC. FOR A COMPLETE INSTALLATION.
- E. ALL EDGES OF COPING SHALL BE FASTENED WITH CONTINUOUS CLEATS AND RECEIVE A CONTINUOUS BEAD OF SEALANT AS SPECIFIED, NO PENETRATIONS THROUGH COPING WILL BE ALLOWED.
- F. CONTRACTOR SHALL NOT INSTALL COPING IN A VERTICAL DIRECTION UNLESS INDICATED IN THE DRAWINGS AT EACH SPECIFIC LOCATION OR APPROVED BY ARCHITECT FOR EACH SPECIFIC LOCATION.
- G. PREFINISHED METAL FLASHING AND TRIM AS PART OF THE FLAT ROOFING SYSTEM SHALL BE MINIMUM 24 GA. COLOR PER ARCHITECT.
- H. SUBMIT ELECTRONIC COPIES OF PRODUCT DATA FOR ALL EXPOSED METAL FLASHING AND COPINGS.

## SECTION 07700 - ROOF ACCESSORIES AND SPECIALTIES

- A. PIPE FLASHING SHALL BE SURE-WELD PRE-MOLDED PIPE FLASHING SW-8A AS MANUFACTURED BY CARLISLE INCORPORATED.
- B. ROOF ACCESS LADDER: IF INDICATED IN THE PLANS, PROVIDE A LOOKABLE ROOF ACCESS LADDER. LOCATIONS TO BE CONFIRMED BY ARCHITECT. THE LADDER SHALL BE COMPOSED OF 1 1/2" DIA. RAILS AND 4# REINFORCING STEEL FOR RAILS. ALL TUBE STEEL TO RECEIVE CLOSURE PLATES. ALL WELDS TO BE CONTINUOUS AND GROUND SMOOTH. PAINT AS SPECIFIED. COLOR PER ARCHITECT.

## SECTION 07900 - SEALANTS

- A. PROVIDE AND INSTALL ALL SEALERS, PRIMERS, BACKUP MATERIALS, BOND BREAKERS AND ACCESSORIES REQUIRED.
- B. INSTALL IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C. AT JOINTS IN CONCRETE FLOORS, INSTALL SONONASTIC SLI SELF-LEVELING SEALANT, ASTM C 920, TYPE S, GRADE P, CLASS 25. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S PALATE.
- D. AT JOINTS AROUND WINDOW AND DOOR FRAMES, AND OTHER THAN CONCRETE FLOORS AND AS INDICATED IN THE DRAWINGS, INSTALL DOW CORNING 790 SILICONE BUILDING EXTERIOR SEALANT, ASTM C 920 CLASS, TYPE II, GRADE NS, CLASS A, NON SAG, MOVEMENT CAPABILITY OF PLUS 100 PERCENT AND MINUS 50 PERCENT. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S PALATE. SONNEBORNE SONONASTIC 150, NP1 OR NP-2 WILL NOT BE ACCEPTED.
- E. PROVIDE MINIMUM 20 YEAR WARRANTY INCLUDING COVERAGE FOR EXTERIOR SEALERS AND ACCESSORIES THAT FAIL TO PROVIDE AIR AND WATER TIGHT SEAL, EXHIBIT LOSS OF ADHESION OR COHESION, OR DO NOT CURE.

## SECTION 08110 - HOLLOW METAL DOORS, DOOR FRAMES AND HOLLOW METAL WINDOW FRAMES

- A. DOORS SHALL BE 3010, GRADE 1 HEAVY DUTY, MODEL, FULL FLUSH, COLD ROLLED STEEL CONFORMING TO ASTM A-366. INTERIOR FACE SHEETS SHALL BE OF NOT LESS THAN 18 GAUGE. EXTERIOR FACE SHEETS SHALL BE MINIMUM 16 GAUGE, ZNC COATED. FRAMES SHALL BE COMMERCIAL QUALITY, COLD ROLLED STEEL, NOT LESS THAN 16 GAUGE. DOORS AND FRAMES SHALL BE FABRICATED WITH NO VISIBLE SEAMS. ALL JOINTS SHALL BE WELDED FULL, GROUND SMOOTH, SANDED AND PRIMED. CORE SHALL BE FOAMED-IN-PLACE POLYURETHANE.
- B. MINIMUM R VALUE OF 12.0 REQUIRED.
- C. DOOR OPERATION MUST CONFORM TEXAS ACCESSIBILITY STANDARDS. FOR DOORS WITH CLOSURES OPENING FORCE SHALL BE LESS THAN 5LBS.
- D. DOORS SHALL BE DESIGNED TO RECEIVE A FULLY MORTISED LOCKSET AS SPECIFIED, REINFORCE DOORS TO RECEIVE CLOSERS.

## SECTION 08710 - FINISH HARDWARE

- A. IN ADDITION TO HARDWARE SCHEDULED BELOW, PROVIDE ALL NECESSARY STOPPS, SLIDERS, WEATHER-STRIPPING, ETC. FOR A COMPLETE INSTALLATION.
- B. TYPICAL EXTERIOR HOLLOW METAL DOOR:
  1. ONE FULLY MORTISED LOCKSET, W/ ENTRANCE FUNCTION. OWNER MOBILE DOVES & FINISHES TO COORDINATE WITH SITE STANDARD BEAD OF HARDWARE AND TYPE OF KEY BLANK.
  2. 1" LEVERS ON 1/2" ESCUTCHEON
  3. FINISH SHALL BE US 260 UNON.
  4. FIVE KEYS FOR EACH DOOR PLUS TWO MASTER KEYS.
  5. THREE SLIDERS
  6. WEATHER-STRIPPING AND WATER PROOF SWEEP
  7. 1/2" HIGH THRESHOLD W/ MAX. 1:2 SLOPE PER T.A.S. REQUIREMENTS
  8. PROVIDE "R920 SERIES" CLOSERS AS MANUFACTURED BY RUSSWIN
  9. CLOSERS TO BE FULLY ADJUSTABLE TO MEET ACCESSIBILITY REQUIREMENTS
  10. CLOSER UNIT TO BE PARALLEL ARM STYLE IN SILVER ALUMINUM LACQUER FINISH
  11. ALUMINUM OR STAINLESS STEEL RAIN GUARD MOUNTED TO FRAME HEAD
  12. PROVIDE SEALANT AS SPECIED ON TOP SIDE OF RAIN GUARD.

## SECTION 08800 - GLAZING

- A. FURNISH GLAZING MATERIALS IN ACCORDANCE WITH CPSSG ARCHITECTURAL GLAZING STANDARD, FLOAT GLASS TO MEET FED. SPEC. K00-G-45(D), SUBMIT 12" X 12" SAMPLE OF EACH GLASS TYPE TO BE USED. INSTALL TEMPERED GLASS AT DOORS AND ADJACENT TO DOORS/ENTRANCES AS REQUIRED BY LAW. GLAZING IN HAZARDOUS HUMAN IMPACT LOCATIONS SHALL BE TESTED IN ACCORDANCE WITH CPSC 16 CFR 101.01 OR ANSI Z97.1 PER SECTION 2406.2 OF 2002 I.B.C.
- B. GLASS TYPES:
  1. GLASS IN EXTERIOR WINDOWS - 1" THICK INSULATED GLASS PANELS, TYPE 1 TRANSPARENT FLAT, CLASS 1, LOW E, SHGC 0.31, U-VALUE .27
  2. TEMPERED GLASS IN EXTERIOR WINDOWS - 1" THICK INSULATED GLASS PANELS AT ALL HAZARDOUS LOCATIONS AS REQUIRED BY INTERNATIONAL BUILDING CODE, LOW E, SHGC 0.31, U-VALUE .27
  3. INTERIOR TEMPERED GLASS IN WALLS AND DOORS - 1/4" THICK TEMPERED GLASS PANELS, CLEAR.
  4. ACCEPTABLE MANUFACTURER FOR EXTERIOR GLASS: GUARDIAN SFX 5123 CLEAR OR APPROVED EQUAL.
  5. U-FACTORS OF PENETRATION PRODUCTS (WINDOWS, DOORS AND SKYLIGHTS) SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 100 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LABELED AND CERTIFIED BY THE MANUFACTURER.
  6. SOLAR HEAT GAIN COEFFICIENT OF PENETRATION PRODUCTS (WINDOWS, DOORS AND SKYLIGHTS) SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 200 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LABELED AND CERTIFIED BY THE MANUFACTURER.
  6. F. IN ACCORDANCE WITH NFRC 400 OR AAMA/MQ/M/CSA 101452/A440, WINDOWS, SKYLIGHTS, EXTERIOR SLIDING GLASS DOORS AND SWINGING DOORS MUST NOT EXCEED THEIR MAXIMUM AIR INFILTRATION RATE PER SECTION C402.4.3 AND TABLE C402.4.3 OF THE 2002 I.B.C.

## SECTION 09500 - ACOUSTICAL CEILINGS

- A. MANUFACTURERS: ARMSTRONG WORLD INDUSTRIES, INC. OR APPROVED EQUAL
- B. ACOUSTICAL CEILING GRID - FREULDE PLUS XL ALUMINUM 15x15' EXPOSED TEE. ACOUSTICAL CEILING TILE - 24" x 24" OR 24" x 48" AS INDICATED IN THE PLANS OPTIMA 320 LAY-IN SQUARE EDGE TESLAR TILES. 9/16" INCH THICKNESS, WHITE SURFACE COLOR.
- C. SUPPORT CHANNELS AND HANGERS: GALVANIZED STEEL, SIZE AND TYPE TO SUIT APPLICATION. SEISMIC REQUIREMENTS AND CEILING SYSTEM FLATNESS REQUIREMENTS SPECIFIED BELOW. PERIMETER MOLINGS: SAME MATERIAL AND FINISH AS GRID. AT EXPOSED GRID, PROVIDE L-SHAPED MOLING FOR MOUNTING AT SAME ELEVATION AS GRID.
- D. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. VERIFY THAT LAYOUT OF HANGERS WILL NOT INTERFERE WITH OTHER WORK.
- E. RIGIDLY SECURE SYSTEM INCLUDING INCLUDING INTEGRAL ELECTRICAL AND MECHANICAL COMPONENTS, FOR A MAXIMUM DEFLECTION OF 1/320."
- F. LOCATE SYSTEM ON ROOM AXIS ACCORDING TO THE REFLECTED CEILING PLAN. ANY DEVIATIONS MUST BE APPROVED BY THE ARCHITECT.
- G. INSTALL AFTER ALL MAJOR ABOVE CEILING WORK IS COMPLETE. COORDINATE THE LOCATION OF HANGERS WITH OTHER WORK. HANG SUSPENSION SYSTEM INDEPENDENT OF WALLS, COLLUMNS, DUCTS, PIPES, AND CONDUITS.
- H. SUPPORT FIXTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN 6 INCHES OF EACH CORNER OR SUPPORT FIXTURES INDEPENDENTLY.
- I. PERIMETER MOLINGS SHALL BE INSTALLED USING THE LONGEST PRACTICAL LENGTHS. OVERLAP AND RIVET CORNERS.
- J. TOLERANCES: MAXIMUM VARIATION FROM FLAT AND LEVEL SURFACE: 1/8 INCH IN 10 FEET. MAXIMUM VARIATION FROM PLUMB OF GRID MEMBERS CAUSED BY ECCENTRIC LOADS: 2 DEGREES.

## SECTION 09900 - PAINTING

- A. CONTRACTOR SHALL FINISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND RELATED ITEMS REQUIRED TO COMPLETE THE WORK, AS DESCRIBED IN THE DRAWINGS AND THESE SPECIFICATIONS. PAINT FAILURE IS LARGELY DUE TO POOR PREPARATION OF THE SURFACE TO BE PAINTED. FOR THIS PROJECT, THE GUIDE FOR SURFACE PREPARATION WILL BE THE FOLLOWING: A-999 PAINTING AND COATING SYSTEMS FOR SPECIFIERS AND APPLICATORS. VARIOUS SURFACE PREPARATION TECHNIQUES ARE DESCRIBED FOR DIFFERENT MATERIALS AND SITUATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE CORRECT METHOD FOR PREPARING FOR THE SPECIFIC PAINT TO BE USED. THE SURFACES TO BE PAINTED AND THE FINISHES REQUIRED ARE AS FOLLOWS:
  1. HOLLOW METAL DOORS AND FRAMES, EXPOSED STRUCTURAL STEEL INCLUDING CANOPY FRAMES:
    - A. APPLY A SINGLE COAT OF PROCRYL UNIVERSAL PRIMER AND TWO COATS OF SHER-CRYL HP-A ACRYLIC PAINT, AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY.
  2. STEEL HANDRILING, ELECTRICAL SCREEN WALL AND GATES, DUMPSTER GATES AND BOLLARDS:
    - A. APPLY A SINGLE COAT OF PROCRYL UNIVERSAL PRIMER AND TWO COATS OF INDUSTRIAL URETHANE AKLYD ENAMEL, AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY.
3. AREAS TO RECEIVE CONCRETE STAIN, APPLY ACID STAIN, AS MANUFACTURED BY THE SHERWIN WILLIAMS COMPANY. COLOR TO BE SELECTED BY ARCHITECT.
4. INTERIOR WALLS - (IF SHOWN ON THE DRAWINGS )
  - a. PRIMER - REPRITE 200 LATEX PRIMER, AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY
  - b. TWO COATS - PROMAR 200 INTERIOR AKLYD FINISH, AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY, COLOR PER ARCHTECT

- #3200 KNOX BOX - SERIES 3200 KNOX-BOX, RECESSED MOUNTED WITH HINGED DOOR, WITH UL LISTED TAMPER SWITCHES, 1/4" PLATE STEEL HOUSING, 1/2" THICK STEEL DOOR WITH INTERIOR GASKET SEAL AND ROLL STAINLESS STEEL DOOR HINGES, COLOR SHALL BE DARK BRONZE, AS MANUFACTURED BY THE KNOX COMPANY, 1600 W. DEER VALLEY ROAD, PHOENIX, AZ, 85027, (602) 552-2669. LOCATE ADJACENT TO FIRE ROOM DOOR, COORDINATE WITH FIRE MARSHAL FOR FINAL LOCATION.
- #4100 KNOX BOX - SERIES 4100 KNOX-BOX, RECESSED MOUNTED, SINGLE LOCK-MODEL, WITH UL LISTED TAMPER SWITCHES, 1/4" PLATE STEEL HOUSING, 1/2" THICK STEEL DOOR WITH INTERIOR GASKET SEAL AND STAINLESS STEEL DOOR HINGE, COLOR SHALL BE DARK BRONZE, AS MANUFACTURED BY THE KNOX COMPANY, 1600 W. DEER VALLEY ROAD, PHOENIX, AZ, 85027, (602) 552-2669. LOCATE ON BUILDING FACADE, COORDINATE WITH FIRE MARSHAL FOR FINAL LOCATION.

## SECTION 16720 - SECURITY ACCESS IF REQUIRED BY FIRE MARSHAL

Revisions

Date

Sheet

AS.1



GENERAL NOTES

Table with 2 columns: Item number and description. Includes items for Building Code, Wind Design Data, Earthquake Design Data, and Rain Intensity.

GENERAL CONDITIONS

Table with 2 columns: Item number and description. Details contractor responsibilities for materials, drawings, and site preparation.

FOUNDATIONS

Table with 2 columns: Item number and description. Covers foundation design, soil preparation, and organic material removal.

CONCRETE

Table with 2 columns: Item number and description. Specifies concrete work execution, strength requirements, and curing procedures.

CONCRETE ANCHOR

Table with 2 columns: Item number and description. Details installation of shear studs, expansion anchors, and adhesive anchors.

CONCRETE REINFORCEMENT

Table with 2 columns: Item number and description. Provides details for reinforcement steel, including bar placement and lap splices.

COLD FORMED STEEL FRAMING SYSTEM

Table with 2 columns: Item number and description. Lists requirements for studs, joists, bridging, and connections.

PRE-ENGINEERING METAL BUILDING

Table with 2 columns: Item number and description. Details manufacturer accreditation, component sizing, and shop drawings.

SYMBOLS & HATCHING

Table mapping hatching patterns to construction symbols like step in elevation, grid line, metal deck, and earth.

SPECIAL INSPECTIONS

Table with 2 columns: Item number and description. Outlines special inspection duties, responsibilities, and scheduling.

SPECIAL INSPECTION SCHEDULE

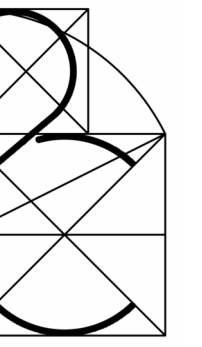
Table with 3 columns: Areas requiring special inspection, frequency, and comments. Covers fabricators, soils, and concrete construction.

SPECIAL INSPECTIONS (CONT)

Table with 3 columns: Inspection item, frequency, and description. Focuses on structural steel construction details and testing.

ABBREVIATIONS

Table listing various abbreviations used in the drawings, such as ACI, AWS, and structural symbols.



RC Architects, Inc. 14620 Echo Bluff Austin, Texas 78737 (512) 913-0597



MOBILE LOAVES AND FISHES - OPERATIONS BLDG. 9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.

Revisions

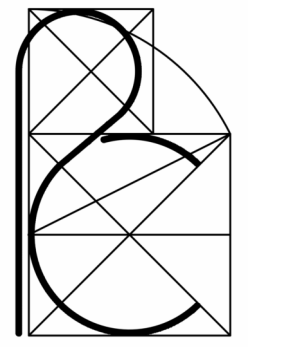
Date 12/12/2023

Sheet

S0.0





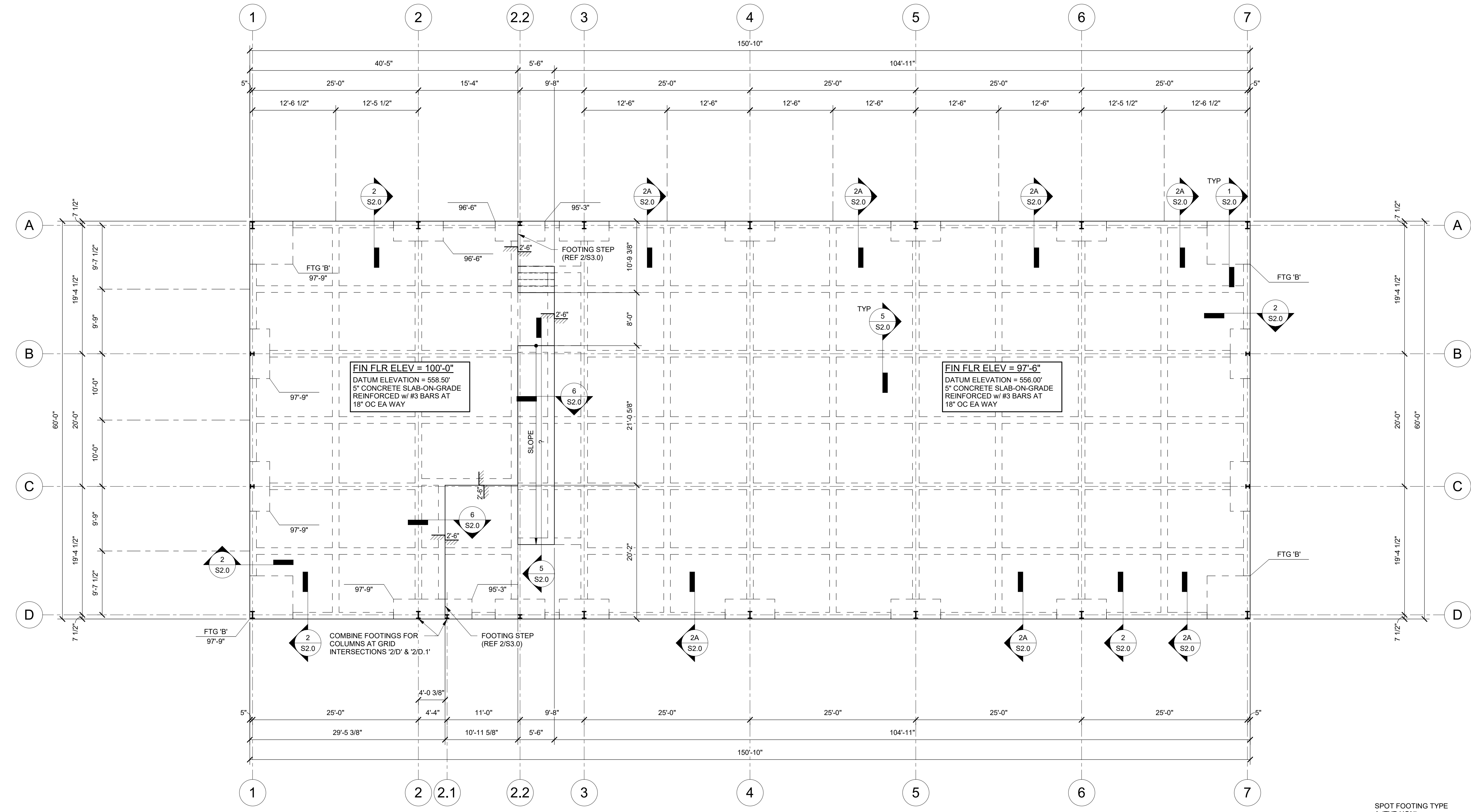


RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.



**1 FOUNDATION PLAN**  
1/8" = 1'-0"

- NOTES**
1. ALL ELEVATIONS ARE BASED ON FIN FLR = 100'-0"
  2. BOT OF FOOTING ELEVATIONS SHALL BE COORDINATED WITH THE LATEST CIVIL DRAWINGS PRIOR TO CONSTRUCTION.
  3. COORDINATE BUILDING DIMENSIONS & WALL OPENINGS WITH ARCHITECTURAL DRAWINGS.

SPOT FOOTING TYPE A (TYP UON)  
REF SCHEDULE  
BOT OF FOOTING ELEV = 95'-3" (TYP UON)

**FOOTING KEY**

FOOTING SCHEDULE		
TYPE	SIZE	REINFORCING
A	7'-6"x3'-0"x2'-0" MIN	#5 @ 6" OC EA WAY TOP & BOT
B	6'-6"x6'-6"x2'-0" MIN	#5 @ 6" OC EA WAY TOP & BOT



Structural, MEP & Civil Engineering  
3801 S. Congress Avenue, Suite 110  
Austin, TX 78746  
hollis@hollis.com

TX FIRM #12747  
Austin, TX 78756  
(512) 278-6966

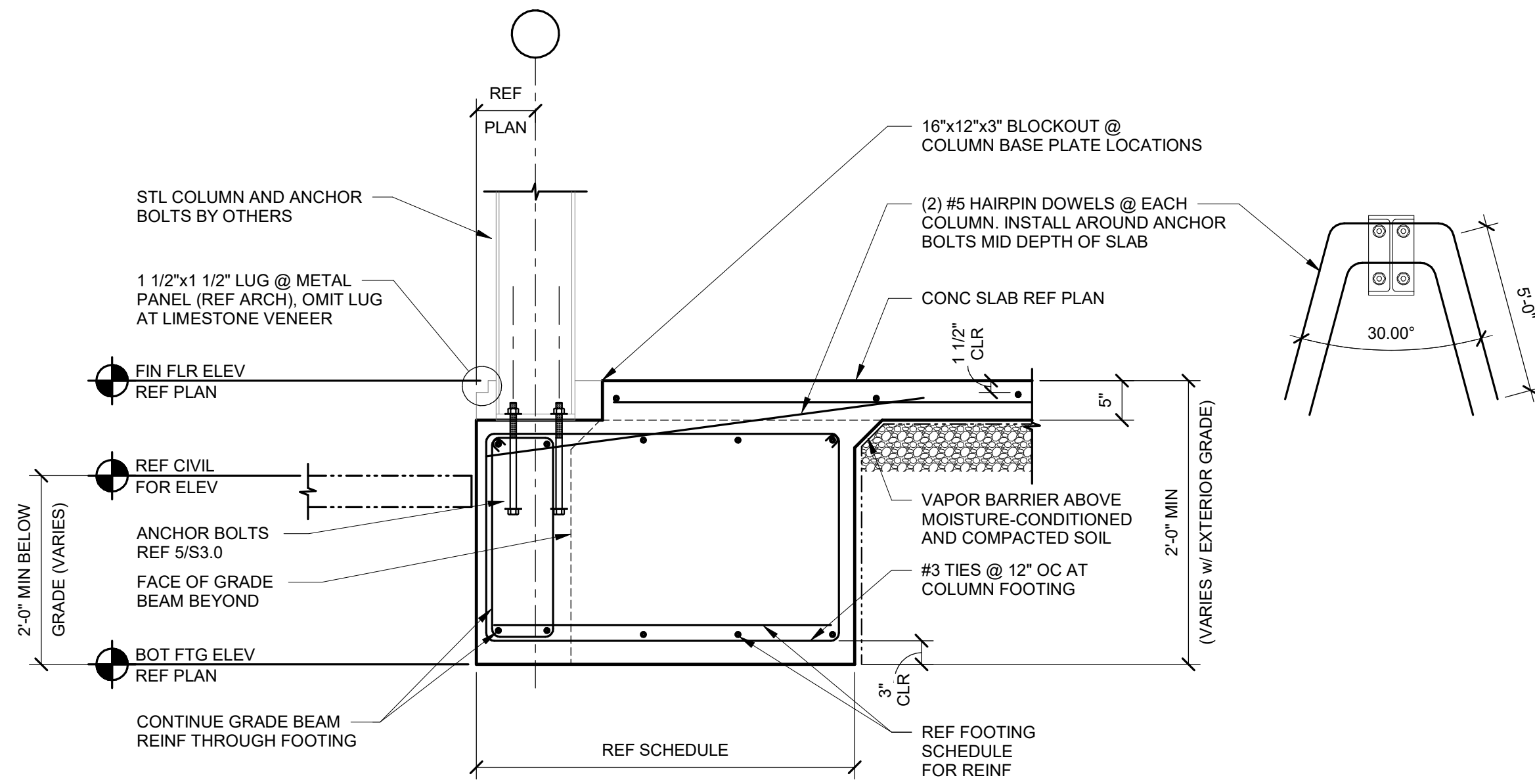
Revisions

Date  
12/12/2023

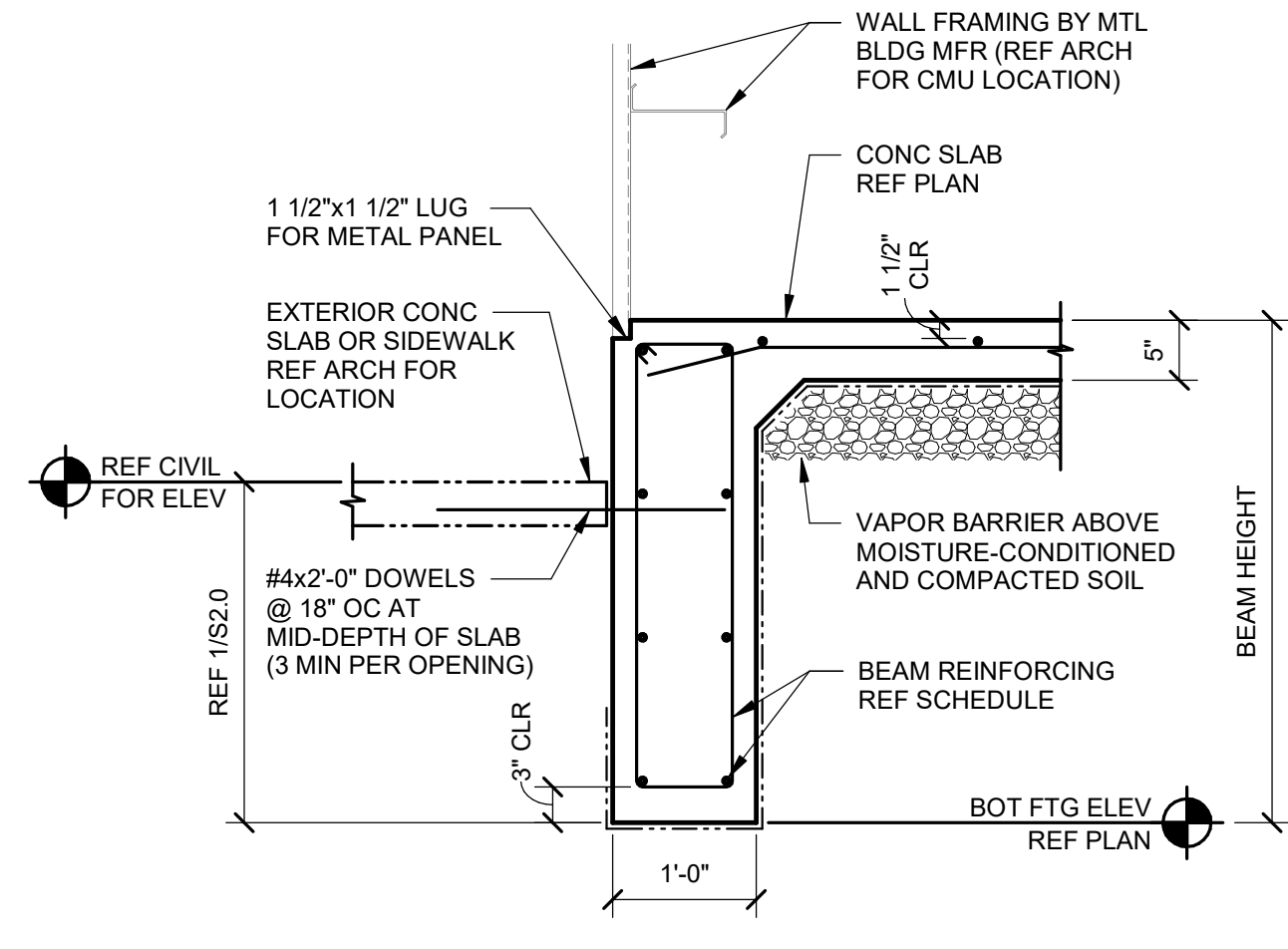
Sheet

**S1.0**





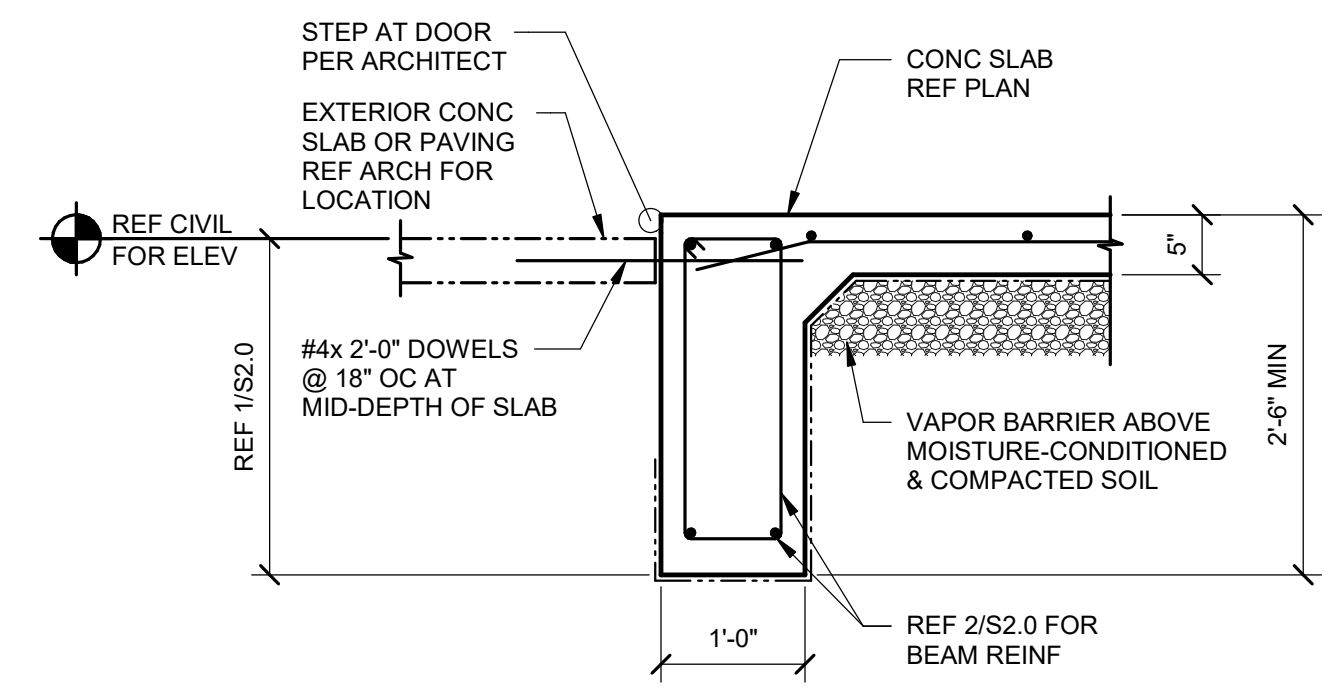
**1 COLUMN FOOTING DETAIL**  
3/4" = 1'-0"



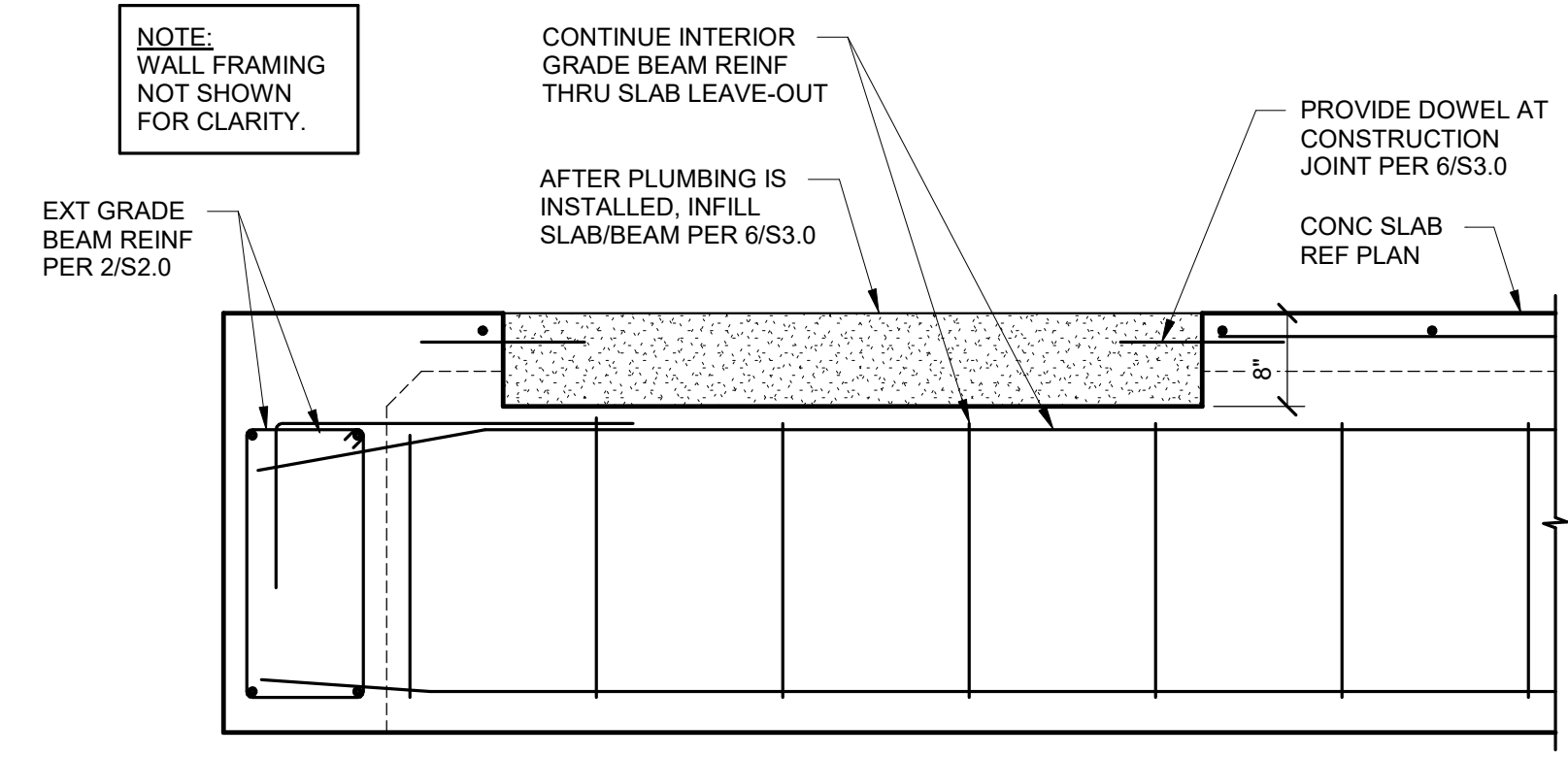
**BEAM REINFORCING SCHEDULE**

HEIGHT	HORIZONTAL BARS	VERTICAL BARS
< 3'-0"	2-#5 CONT TOP & BOT	#3 TIES @ 12" OC
3'-6" TO 5'-0"	2-#4 @ 18" OC	#4 @ 12" OC EA FACE

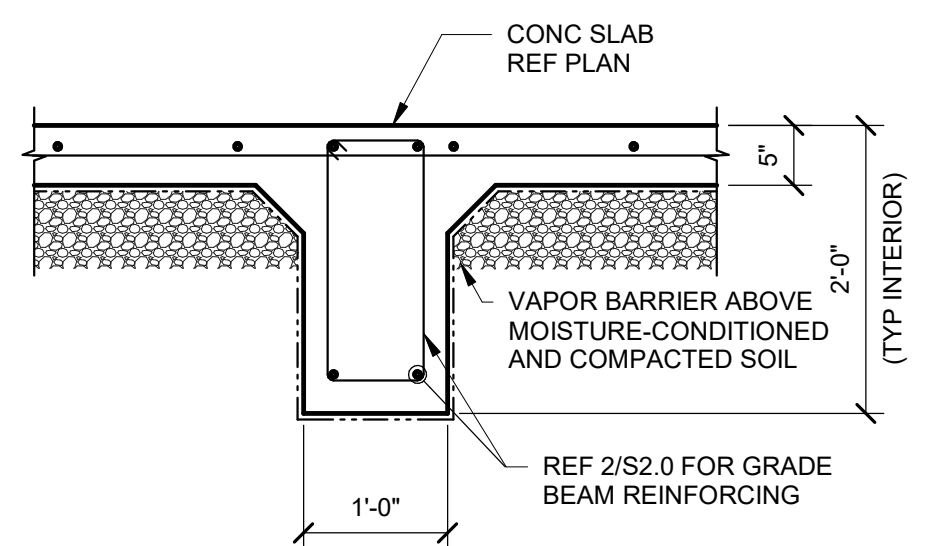
**2 EXTERIOR BEAM DETAIL**  
3/4" = 1'-0"



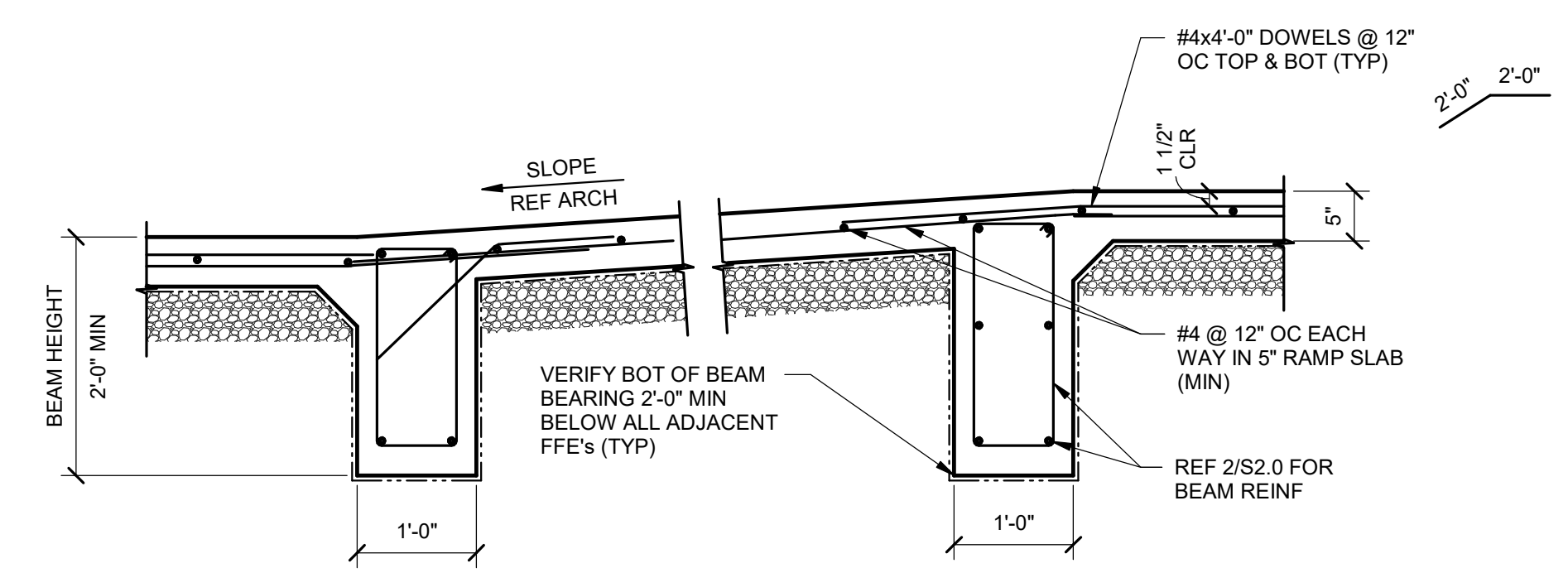
**2A BEAM AT DOOR OPENING**  
3/4" = 1'-0"



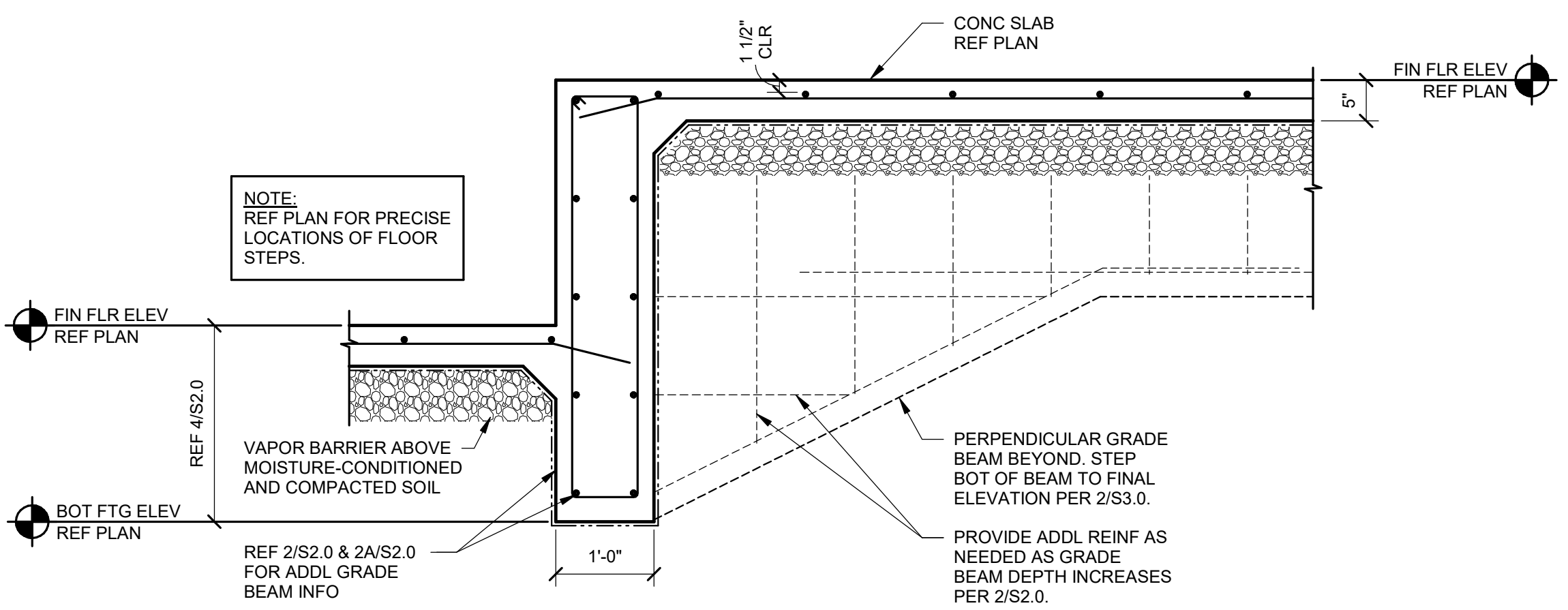
**3 INTERIOR BEAM AT SLAB LEAVE-OUT**  
3/4" = 1'-0"



**4 INTERIOR BEAM DETAIL**  
3/4" = 1'-0"

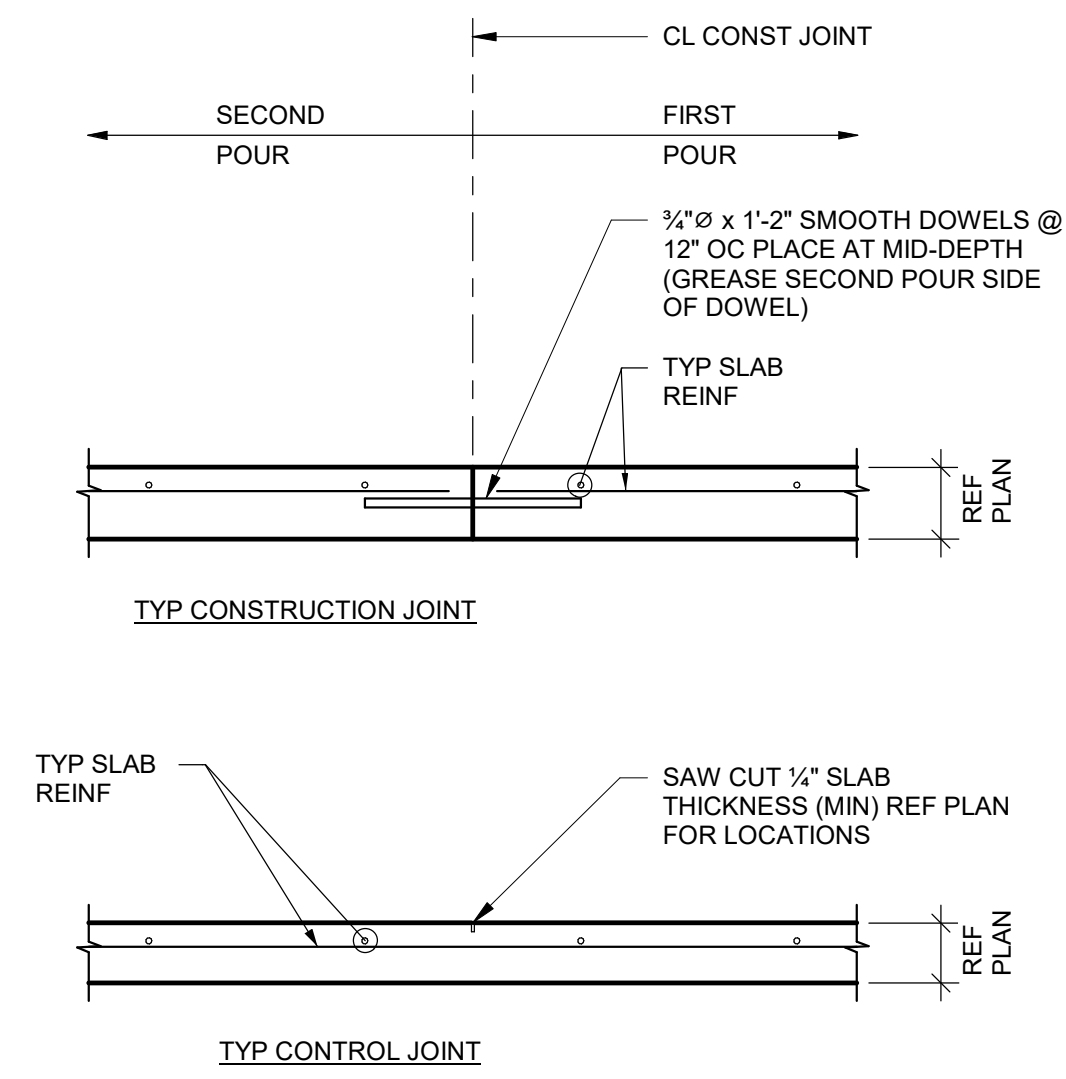


**5 CONCRETE RAMP DETAIL**  
3/4" = 1'-0"

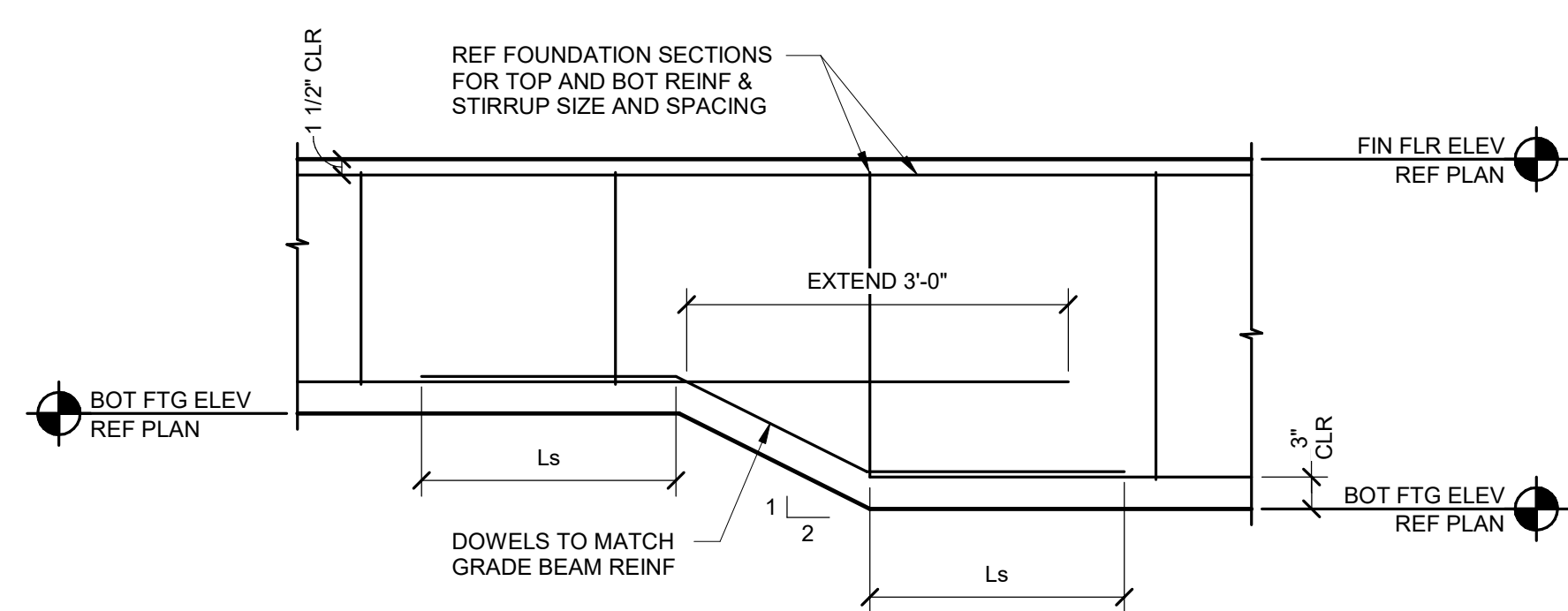


**6 FLOOR STEP SECTION**  
3/4" = 1'-0"

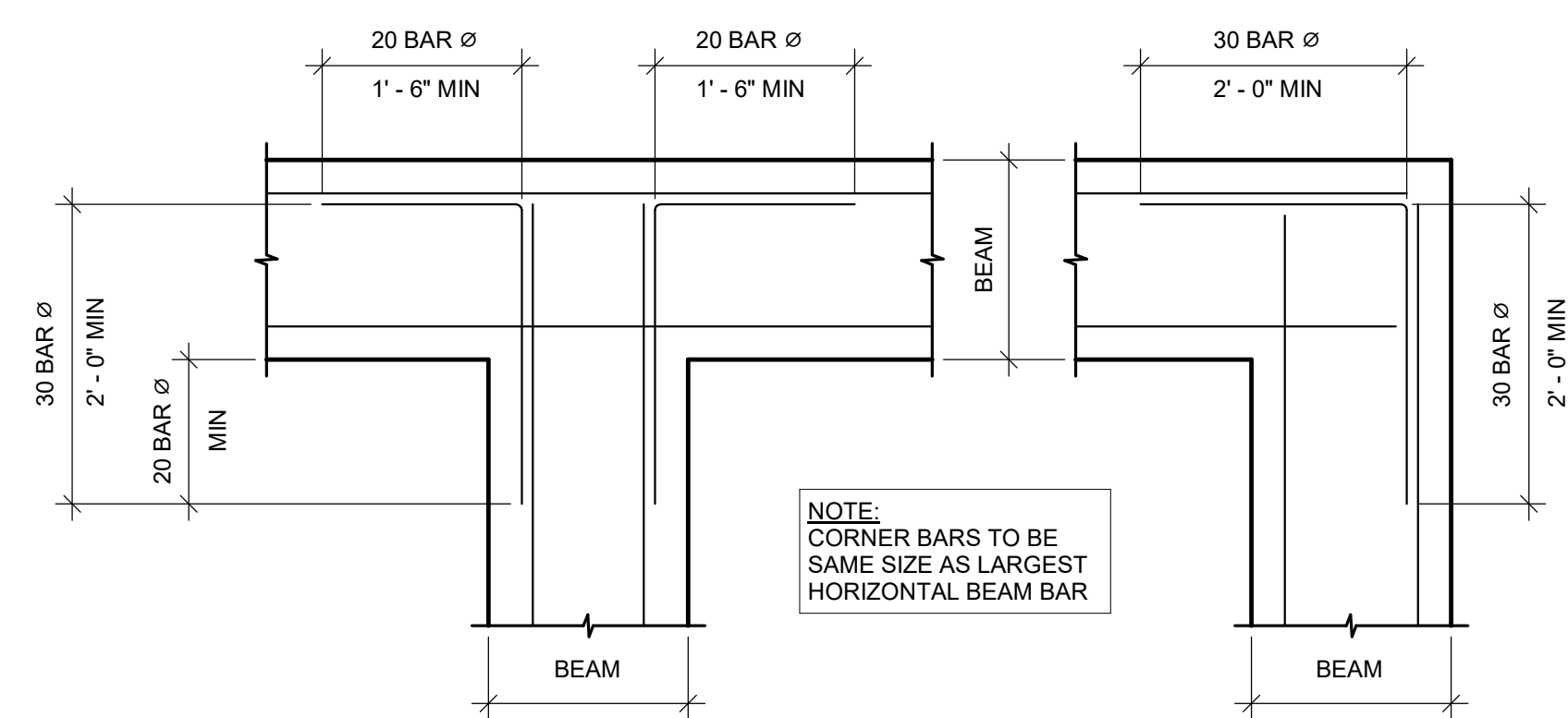




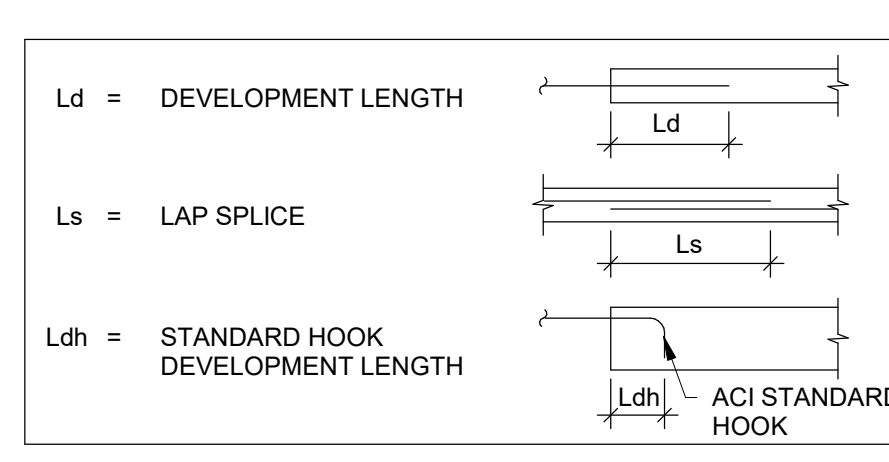
**1 SLAB JOINT DETAIL**  
3/4" = 1'-0"



**2 TYPICAL FOOTING STEP DETAIL**  
3/4" = 1'-0"



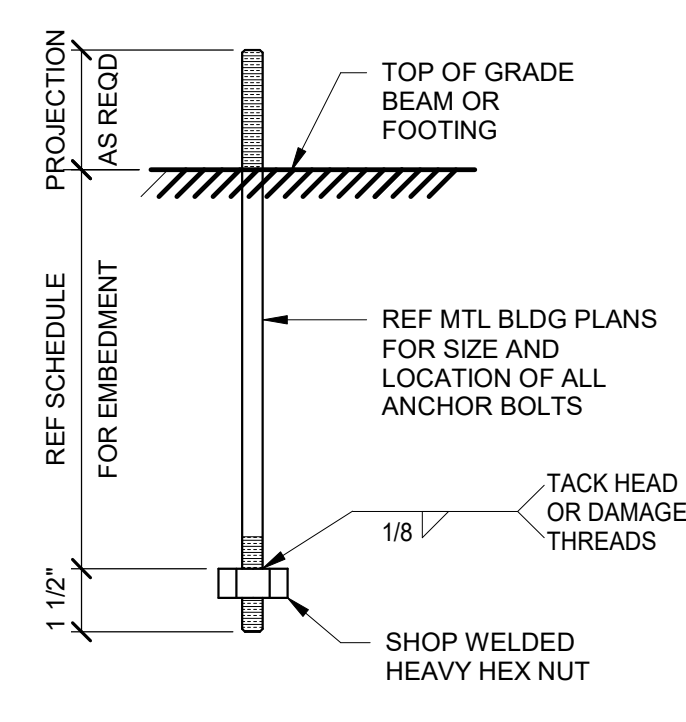
**3 TYP CORNER BAR DETAIL**  
3/4" = 1'-0"



MINIMUM REINFORCING BAR DEVELOPMENT & SPLICE LENGTHS																
f'c (psi)	LOCATION	#3		#4		#5		#6		#7						
		L <sub>D</sub>	L <sub>S</sub>	L <sub>DH</sub>	L <sub>D</sub>	L <sub>S</sub>	L <sub>DH</sub>	L <sub>D</sub>	L <sub>S</sub>	L <sub>DH</sub>	L <sub>D</sub>	L <sub>S</sub>	L <sub>DH</sub>			
3000	Horizontal Bars Above 12" of Fresh Concrete	23	30	9	29	38	11	37	49	14	43	56	17	63	82	20
	Other Reinforcing	17	23	9	22	29	11	28	37	14	33	43	17	48	63	20
4000	Horizontal Bars Above 12" of Fresh Concrete	20	26	5	25	33	7	32	42	9	38	50	10	55	72	12
	Other Reinforcing	15	20	5	19	25	7	24	32	9	29	38	10	42	55	12

- NOTES:
- If lightweight concrete is used, increase the specified lengths by 130%.
  - If epoxy-coated reinforcing is used, increase the specified lengths by 150%.
  - If the clear spacing of bars is less than (2-1/2 x bar diameter), increase the specified lengths by 150%.
  - Class B lap splices are specified per ACI 318.

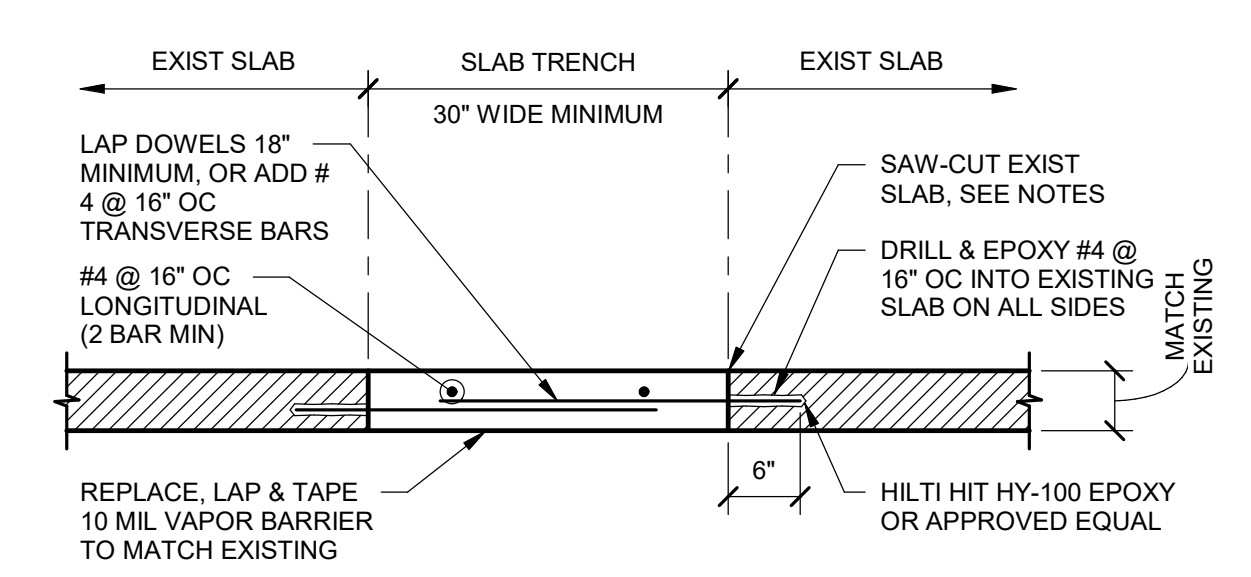
**4 SLAB & BEAM DEVELOPMENT & SPLICE LENGTH SCHEDULE**  
3/4" = 1'-0"



ANCHOR BOLT SCHEDULE		
ANCHOR BOLT DIAMETER	MINIMUM EMBED INTO FOOTING	MINIMUM EDGE DISTANCE
5/8"	9"	3 3/4"
3/4" OR 7/8"	1'-3"	5"
1" OR 1 1/8"	1'-6"	6"
1 1/4"	1'-9"	7"

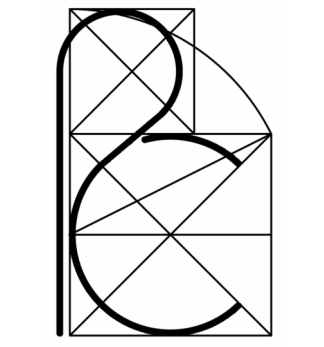
- NOTES:
- ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 (MIN).
  - ANCHOR ROD HOLES IN BASE PLATES AND MINIMUM WASHER DIAMETER SHALL BE SIZED IN ACCORDANCE WITH TABLE 14-2 OF THE AISC MANUAL OF STEEL CONSTRUCTION, 3RD ED.

**5 TYPICAL ANCHOR BOLT DETAIL**  
3/4" = 1'-0"



- NOTES:
- NEW SLAB SAW-CUTS SHALL BE A MINIMUM OF 3'-0" FROM THE INSIDE FACE OF EXTERIOR WALLS & ALL COLUMNS TO AVOID BUILDING FOUNDATIONS. THIS DISTANCE SHOULD BE CONFIRMED ADEQUATE BASED ON FIELD CONDITIONS. SAW BLADE DEPTH SHALL EQUAL THE FIELD VERIFIED SLAB DEPTH.
  - CUTTING OPERATIONS SHALL BE PERFORMED TO ALLOW FOR SMOOTH CORNERS - OVERCUTS SHALL NOT BE ALLOWED, AND WILL BE REQUIRED TO BE REPAIRED BY ADDITIONAL SLAB REMOVAL. ALL EXISTING AND FUTURE REBAR SHALL BE SAW-CUT IN LIEU OF TORCH CUTTING.
  - THE EXPOSED SUBGRADE SHALL BE FILLED WITH EXISTING MATERIAL, MOISTURE CONDITIONED & COMPACTED PER THE GEOTECHNICAL RECOMMENDATIONS. AT MINIMUM, LOOSE LIFTS SHALL NOT EXCEED 8" IN THICKNESS, AND SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE STANDARD PROCTOR (TEX - 114 - E) MAXIMUM DRY DENSITY.
  - THE INFILL SLAB DEPTH SHALL MATCH THE EXISTING. CONTINUE EXISTING SLAB CONTROL JOINTS THROUGH THE INFILL SLAB AFTER PROPER CURING.
  - CONCRETE SHALL DEVELOP A 28 - DAY COMPRESSIVE STRESS (f<sub>c</sub>) OF 3,000 PSI, AND REINFORCING STEEL SHALL COMPLY w/ ASTM A - 615, GRADE 60. LAP ALL REINFORCING STEEL 48 BAR DIAMETERS, AND CENTER BARS WITHIN SLAB DEPTH.

**6 TENANT SLAB REMOVAL & REPLACEMENT DETAIL**  
3/4" = 1'-0"



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.

Revisions

Date  
12/12/2023

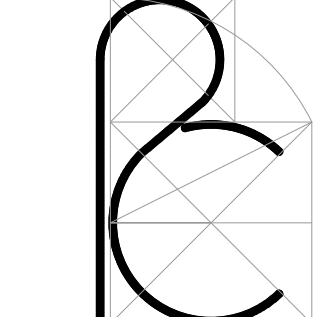
Sheet  
S3.0



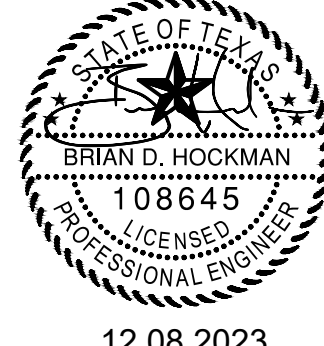
Structural, MEP & Civil Engineering  
3801 S. Congress Avenue, Suite 110  
Houston, Texas 77056  
hollis@hollisrc.com

TX FIRM #12747  
Austin, TX 78704  
(512) 278-6969





RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12.08.2023

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

MECHANICAL LEGEND AND SYMBOLS	MECHANICAL DESIGN CRITERIA	GENERAL NOTES	MECHANICAL GENERAL NOTES												
<p>CD CONDENSATE DRAIN HWS HEATING WATER SUPPLY HWR HEATING WATER RETURN CWS CHILLED WATER SUPPLY CWR CHILLED WATER RETURN RS REFRIGERANT SUCTION LINE RL REFRIGERANT LIQUID LINE HG REFRIGERANT HOT GAS LINE GV GATE VALVE BV BALL VALVE BU BUTTERFLY VALVE GLOBE VALVE TDV TRIPLE DUTY VALVE SCV SWING CHECK VALVE STR STRAINER FC FLEX CONNECTOR HEDV HOSE END DRAIN VALVE PRV PRESSURE REDUCING VALVE SRV SAFETY RELIEF VALVE UNION M2V MOTORIZED T.C. VA2-WAY VALVE M3V MOTORIZED T.C. VA3-WAY VALVE EPLV ECCENTRIC PLUG BALANCING VALVE VRV VALVE IN RISER TU TEE UP TD TEE DOWN ELU UP ELBOW UP ELU DN ELBOW DOWN PSC PIPE SIZE CHANGE MFLV MANUAL FLOW BALANCING VALVE (OROUT SETTER) AFLV AUTOMATIC FLOW BALANCING VALVE PG PIPE GUIDE PA PIPE ANCHOR PTV PRESSURE/TEMP. TEST PLUG DIAL THERMOMETER PWSV PRESSURE GAUGE W/ SNUBBER CNX CONNECT NEW TO EXISTING</p> <p>ET ELECTRIC THERMOSTAT ETW ELECTRIC THERMOSTAT W/GUARD PNT PNEUMATIC THERMOSTAT OR ODC TEMPERATURE SENSOR (JOB SPECIFIC) PNTA PNEUMATIC THERMOSTAT ASPERATING THERMOSTAT PNTW PNEUMATIC STAT W/GUARD ALS ACoustically LINED SHEET METAL DUCT MBD MANUAL BALANCING DAMPER FC FLEX CONNECTOR AD ACCESS DOORS FD FIRE DAMPER FBD FIRE/SMOKE DAMPER MD MOTORIZED DAMPER TVE TURNING VANE ELL LWV 45° LOW-LOSS TAKE-OFF FITTING W/ DAMPER &amp; FLEX DUCT LWV2 45° LOW-LOSS TAKE-OFF FITTING W/ DAMPER &amp; RIGID ROUND DUCT RTV 90° TEE TAKE-OFF FITTING CTV CONICAL 90° TEE TAKE-OFF FITTING TTF 45° TEE TAKE-OFF FITTING TTF2 45° 90° TEE TAKE-OFF FITTING TTF3 45° 90° TEE TAKE-OFF FITTING SA SUPPLY AIR DUCT (SINGLE LINE) RA RETURN AIR DUCT (SINGLE LINE) EA EXHAUST AIR DUCT (SINGLE LINE) DRA DIFFUSER, REGISTER, OR GRILLE THROW PATTERN SHOWN ON DWGS. ACV AIR DEVICE CALL OUT X-X AIR DEVICE DESIGNATION PER SCHEDULE, AIR FLOW (E.G., 100 CFM) EX EXISTING ITEMS DN DEMO ITEMS NW NEW ITEMS</p>	<p><b>MECHANICAL DESIGN CONDITIONS:</b> PROJECT LOCATION: AUSTIN, TEXAS CLIMATE ZONE: 2A</p> <p><b>SUMMER:</b> OUTDOOR DESIGN: 98°F DB / 74°F WB INDOOR DESIGN: 75°F DB / 50% RH</p> <p><b>WINTER:</b> OUTDOOR DESIGN: 25°F DB INDOOR DESIGN: 72°F DB</p> <p><b>BUILDING WALL &amp; ROOF CONSTRUCTION INFORMATION:</b> ROOF: U-VALUE = 0.039 ROOF: U-VALUE = 0.079 FRONT GLASS: U-VALUE: 0.45 SHADE COEFF: 0.35</p> <p>INTERIOR LOADS BASED ON ACTUAL LIGHTING, OCCUPANT AND EQUIPMENT LOADS.</p>	<p><b>APPLICABLE CODES AND STANDARDS</b></p> <ol style="list-style-type: none"> <li>BUILDING CODE - 2021 IBC WITH CITY OF AUSTIN AMENDMENTS</li> <li>FIRE CODE - 2021 IFG WITH CITY OF AUSTIN AMENDMENTS</li> <li>ELECTRICAL CODE - 2020 NEC WITH CITY OF AUSTIN AMENDMENTS</li> <li>MECHANICAL CODE - 2021 UMC WITH CITY OF AUSTIN AMENDMENTS</li> <li>PLUMBING CODE - 2021 UPC WITH CITY OF AUSTIN AMENDMENTS</li> <li>OTHER - 2021 INTERNATIONAL ENERGY CONSERVATION CODE WITH CITY OF AUSTIN AMENDMENTS</li> <li>OTHER - LIFE SAFETY CODE (NFPA 101) 2015 EDITION</li> <li>OTHER - FEDERAL DEPARTMENT OF JUSTICE AMERICANS WITH DISABILITIES ACT AND TEXAS ACCESSIBILITY STANDARDS</li> <li>CITY OF AUSTIN ORDINANCE NO. 20111020-089</li> <li>CITY OF AUSTIN ORDINANCE NO. 20130606-091</li> <li>2021 CITY OF AUSTIN ELECTRIC UTILITY DESIGN CRITERIA MANUAL</li> <li>SUBCHAPTER E OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.</li> </ol> <p><b>2021 IECC ENERGY CODE COMPLIANCE</b></p> <p>COMPLIANCE WITH 2021 IECC CITY OF AUSTIN AMENDMENTS TO 2021 IECC.</p> <p><b>EQUIPMENT SIZING AND PERFORMANCE:</b></p> <ol style="list-style-type: none"> <li>LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH ASHRAE STANDARD 183 OR BY AN APPROVED COMPUTATIONAL PROCEDURE USING THE DESIGN PARAMETERS SPECIFIED IN CHAPTER 3 OF THE 2021 IECC.</li> <li>EQUIPMENT HAS BEEN SELECTED PER 2021 IECC C403.3.</li> <li>VENTILATION AND THE ABILITY TO REDUCE OUTSIDE AIR TO IMC MINIMUMS SHALL BE PROVIDED PER 2021 IECC C403.2.6</li> </ol> <p><b>HVAC SYSTEM CONTROLS &amp; CRITERIA</b></p> <ol style="list-style-type: none"> <li>TEMPERATURE CONTROL SYSTEM SHALL HAVE A MINIMUM DEAD BAND OF 5°F AS REQUIRED BY 2021 IECC SECTION C403.2.4.1.2.</li> <li>HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF PROVIDING NIGHT SETBACK, SEVEN DIFFERENT DAILY SCHEDULES AND OPTIMUM START PER THE REQUIREMENTS OF 2021 IECC SECTION C403.2.2.4.2.</li> <li>OUTSIDE AIR DAMPERS, EXHAUST OUTLETS AND RELIEF OUTLETS SHALL BE PROVIDED WITH DAMPERS THAT COMPLY WITH 2021 IECC SECTION C403.2.4.3. DAMPER SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP, COOL-DOWN AND SETBACK. DAMPER MAXIMUM LEAKAGE RATE SHALL NOT EXCEED 4.0 CFM/SF AT 1" WATER GAUGE.</li> <li>ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH 2021 IECC SECTION C403.12.2. DUCTWORK INSTALLED ON THIS PROJECT IS CLASSIFIED AS LOW PRESSURE (BELOW 2" WATER GAUGE).</li> <li>DUCTWORK SHALL BE INSULATED TO THE APPROPRIATE R-VALUE AS LISTED IN THE SPECIFICATIONS ON THIS PROJECT. INSULATION SHALL COMPLY WITH 2021 IECC C403.12.1.</li> </ol> <p><b>TEST, ADJUST AND BALANCING REQUIREMENTS:</b></p> <ol style="list-style-type: none"> <li>EACH SUPPLY AIR DEVICE AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 OF THE IMC. AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO FIRST MINIMIZE THROTLING LOSSES THEN, FOR FANS WITH SYSTEM POWER GREATER THAN 1 HP, FAN SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS.</li> </ol>	<p>1. FURNISH AND INSTALL ALL ITEMS NECESSARY TO PROVIDE FULLY FUNCTIONING SYSTEMS AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTS/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.</p> <p>2. DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL WORK AND MATERIALS REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION AND DETAILS WHERE SCOPE IS UNCLEAR.</p> <p>3. ALL WORK SHALL COMPLY WITH THE MOST RECENT ADOPTED VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY EXISTS, THE LOCAL ENFORCING AUTHORITY SHALL APPLY. ANY MODIFICATIONS TO THE DESIGN SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING WITH ANY MODIFICATIONS.</p> <p>4. WHERE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THAT THEY ARE NOT IN CONFLICT WITH THE CODES.</p> <p>5. BEFORE SUBMITTING BIDS, EACH CONTRACTOR SHALL PERFORM A SITE VISIT AND UNDERSTAND THE CONDITIONS TO BE MET IN INSTALLING THE WORK, AND SHALL MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL BID. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.</p> <p>6. MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.</p> <p>7. ALL WORK SHALL BE CARRIED OUT IN A NEAT, WELL ORGANIZED MANNER. ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL EQUIPMENT TO PROVIDE ACCESS AND ARRANGE ALL WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND TO MAINTAIN PROPER CODE AND MANUFACTURER'S CLEARANCES.</p> <p>8. ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.</p> <p>9. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED AND INSTALLED.</p> <p>10. THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO: A. EQUIPMENT AND MATERIALS SHOP DRAWINGS B. COORDINATION DRAWINGS C. RECORD DRAWINGS D. OPERATING AND MAINTENANCE MANUALS E. FIRE STOP MATERIALS AND DETAIL</p> <p>11. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC., WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, PIPING, CONDUIT, CABLE, ETC., IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE OR OTHER TRADE WORK, WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, PIPING, CONDUIT, CABLE, ETC., SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER/TENANT. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.</p> <p>12. MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIAL STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE WORK. MATERIALS AND EQUIPMENT, WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER/TENANT AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER/TENANT.</p> <p>13. THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE AND SHALL INCLUDE AT LEAST ONE (1) FULL HEATING SEASON AND ONE (1) FULL COOLING SEASON, DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER/TENANT: A. ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS. B. ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED. C. THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.</p> <p>15. THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.</p> <p>16. THIS BUILDING MAY HAVE A STRUCTURAL SYSTEM UTILIZING POST-TENSIONED CABLES. THE CONTRACTOR SHALL DETERMINE THE EXISTING STRUCTURAL SYSTEM PRIOR TO CUTTING, DRILLING, OR CORING. THE CONTRACTOR SHALL X-RAY ALL PENETRATIONS PRIOR TO CUTTING THE FLOOR SLAB.</p> <p>17. THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.</p> <p>18. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE PRICING REFLECTING THE GREATEST COST. THE CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.</p> <p>19. PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRE RATED TO COMPLY WITH ASTM E-814 (UL 1478), AND THE LOCAL AUTHORITY HAVING JURISDICTION.</p> <p>20. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A COMPLETE SET OF "AS BUILT" DRAWINGS PORTRAYING ACTUAL SITE CONDITIONS OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION WORK. SUBMISSION SHALL CONSIST OF ONE SET OF PAPER COPIES AND ONE SET OF CAD FILES IN AUTOCAD (CONTRACTOR SHALL UTILIZE OWNER'S LAYER STANDARDS IF EXISTING).</p> <p>21. IN THE EVENT THAT MATERIALS, PRODUCTS, AND/OR PROCESSES BEING PROPOSED FOR THIS PROJECT CONTAIN, OR MAY EMIT, ANY VOLATILE ORGANIC COMPOUNDS (VOC), FORMALDEHYDE FORMULATIONS, OR HAZARDOUS OUT-GASSING, AS DETERMINED BY THE MANUFACTURER, A MATERIALS SAFETY DATA SHEET SHALL BE SUBMITTED AS PART OF THE SHOP DRAWING PROCESS FOR REVIEW BY THE ARCHITECT/ENGINEER'S OWNER.</p> <p>22. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE LOCATIONS OF THE HVAC AND PLUMBING SYSTEMS. LOCATE ALL ITEMS IN THE FIELD. COORDINATE WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.</p> <p>23. THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE. CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL.</p>	<p>1. THE CONTRACTOR SHALL VERIFY THAT ALL NEW TERMINAL UNITS ARE MOUNTED SO THAT ALL REQUIRED SERVICING AND MAINTENANCE CLEARANCES ARE MAINTAINED AT THE BOTTOM AND SIDES OF EACH UNIT. COORDINATE WITH ALL NEW ARCHITECTURAL WALLS TO STRUCTURE, AND RELOCATE TERMINAL UNITS AS REQUIRED TO MAINTAIN PROPER CLEARANCES.</p> <p>2. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER MEP TRADES TO MAINTAIN A MINIMUM OF 9" CLEAR SPACE FOR TENANT EQUIPMENT, CABLE TRAY, WIRING, ETC.</p> <p>3. PROVIDE REMOTE DAMPER OPERATORS FOR ALL SPIN-IN DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. OPERATORS SHALL BE ROTO-TWIST (OR APPROVED EQUAL) CABLE-TYPE OPERATORS. CONCEALED WITHIN DUCT RUN-OUT TO DEVICE, AND ACCESSIBLE FOR BALANCING FROM FACE OF AIR DEVICE. PROVIDE REQUIRED CABLE LENGTHS, MOUNTING CLIPS, AND ALL OTHER REQUIRED COMPONENTS FOR PROPER INSTALLATION AND OPERATION.</p> <p>4. PRIMARY AND SECONDARY DUCTWORK SHALL HAVE EXTERNAL INSULATION INSTALLED ON TOP SIDE OF DUCTWORK PRIOR TO HANGING DUCTWORK TO ALLOW DUCT TO BE SUSPENDED WITH INSULATION TIGHT TO STRUCTURE. DO NOT COMPRESS INSULATION.</p> <p>5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING TO THE ENGINEER'S ATTENTION ANY WALLS THAT EXTEND FROM THE FINISHED FLOOR TO STRUCTURE AND REQUIRE RETURN AIR PATHWAYS. RETURN AIR BOOTS SHALL BE INSTALLED TO PROVIDE CROSS SECTIONAL AREA EQUIVALENT TO 500 FPM OF AIRFLOW BASED ON THE SUPPLY CFM TO THE ROOM ENCLOSED BY THE FULL HEIGHT WALLS.</p> <p>6. FINAL LOCATION OF ALL NEW EQUIPMENT SHALL BE APPROVED BY BUILDING OWNER OR PROJECT MECHANICAL ENGINEER PRIOR TO INSTALLATION.</p> <p>7. ROOF PENETRATIONS SHALL BE PERFORMED TO MAINTAIN THE WARRANTY ON THE ROOF. COORDINATE PENETRATIONS WITH THE ROOF MEMBRANE MANUFACTURER.</p> <p>8. MOUNT ALL TEMPERATURE CONTROL DEVICES 48 INCHES ABOVE FINISHED FLOOR TO THE CENTER OF THE DEVICE TO COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITY ACT ANS1 A117.1.</p> <p>9. DURING CONSTRUCTION, SEAL ALL OPEN DUCTS WITH PLASTIC TO PREVENT DUST/DIRT. CLEAN ALL INTERIOR DUCT SURFACES PRIOR TO DUCT INSTALLATION. ALL VAV TERMINAL UNIT FILTERS SHALL BE MAINTAINED DURING CONSTRUCTION AND REPLACED AT THE END OF CONSTRUCTION. PROVIDE CONSTRUCTION FILTERS OVER AIR HANDLING UNIT INTAKES AND MAINTAIN FILTER MEDIA DURING CONSTRUCTION. REPLACE ALL FILTERS AT END OF CONSTRUCTION. ALL RETURN AIR INTAKES TO MECHANICAL ROOM SHALL BE COVERED WITH FILTER MEDIA DURING CONSTRUCTION. REMOVE UPON COMPLETION.</p> <p>10. SEAL ALL NEW AND EXISTING PIPE, CONDUIT, AND DUCT PENETRATIONS THRU FIRE RATED WALLS WITH FIRE RATED GASKETS. FIRE CAULKING SHALL BE EQUAL TO 3M BRAND CP25WP FIRE CAULK. INSTALL CAULKING IN STRICT ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS AND WRITTEN INSTRUCTIONS AND IN ACCORDANCE WITH ALL APPLICABLE UL DETAILS.</p> <p>11. CONTRACTOR SHALL MAINTAIN A SET OF CONSTRUCTION DOCUMENTS FOR THE SOLE PURPOSE OF INDICATING AS-BUILT CONDITIONS. SET SHALL NOT BE USED FOR ANY OTHER PURPOSE. AS-BUILT REVISIONS SHALL BE INDICATED USING RED PENCIL AND BE CLEARLY DRAWN AND LABELED TO BE LEGIBLE. ILLEGIBLE ENTRIES SHALL BE REVISED BY THE CONTRACTOR. PROVIDE AS-BUILT SET TO THE OWNER AT SUBSTANTIAL COMPLETION.</p> <p>12. CONTRACTOR SHALL COMPLETE START-UP FORMS AND CHECK-OUT UTILIZING MANUFACTURER CERTIFIED START-UP TECHNICIANS. EQUIPMENT START-UP AND CHECK-OUT FORMS SHALL BE INCLUDED IN THE O&amp;M MANUALS.</p> <p>13. RADIUS ELBOWS 2 TIMES THE DUCT DIMENSION AND LARGER DO NOT REQUIRE SPLITTER VANES; PROVIDE SPLITTER VANES FOR ALL RADIUS ELBOWS 1.5 TIMES AND SMALLER. SPLITTER VANES SHALL BE LOCATED AND SECURED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."</p> <p>14. RECTANGULAR ELBOWS SHALL INCORPORATE TURNING VANES. VANES SHALL BE SINGLE THICKNESS GALVANIZED STEEL VANES SET IN GALVANIZED STEEL RUNNERS. VANES AND RUNNERS SHALL BE CONSTRUCTED AND SECURED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."</p>											
<p><b>MECHANICAL ABBREVIATIONS</b></p> <p>AFF ABOVE FINISHED FLOOR ACFM ACTUAL CFM AHU AIR HANDLING UNIT ANSI AMERICAN NATIONAL STANDARDS INSTITUTE AMP AMPERE (AMP AMPS) APD AIR PRESSURE DROP APPROX APPROXIMATE BHP BRAKE HP, BOLLER HP BTU BRITISH THERMAL UNIT MBH BTU PER HOUR (THOUSAND) CU FT CUBIC FEET CU IN CUBIC INCH CFM CUBIC FEET PER MINUTE SCFM CFM, STANDARD CONDITIONS DB DEGREE DIA Ø DIAMETER ID DIAMETER, INSIDE OD DIAMETER, OUTSIDE DBT DRY-BULB TEMPERATURE (E) EXISTING EAT ENTERING AIR TEMPERATURE E.C. ELECTRICAL CONTRACTOR EDR EQUIVALENT DIRECT RADIATION EXP EXPANSION EWT ENTERING WATER TEMPERATURE F FAHRENHEIT FFM FEET PER MINUTE FPS FEET PER SECOND FT FOOT OR FEET HZ FREQUENCY GA GAGE OR GAUGE GAL GALLONS G.C. GENERAL CONTRACTOR GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GPD GALLONS PER DAY HD HEAD HGT HEIGHT HP HORSEPOWER RH RELATIVE HUMIDITY KW KILOWATT KWH KILOWATT HOUR</p> <p>LAT LEAVING AIR TEMPERATURE LWT LEAVING WATER TEMPERATURE LF LINEAR FEET MAX MAXIMUM M.C. MECHANICAL CONTRACTOR MIN MINIMUM (N) NEW N O NORMALLY OPEN N C NORMALLY CLOSED N/A NOT APPLICABLE NIC NOT IN CONTRACT NTS NOT TO SCALE NO NUMBER OBD OPPOSED BLADE DAMPER OA OUTSIDE AIR DP PRESSURE DIFFERENCE PH PHASE (ELECTRICAL) LBS POUNDS PSI POUNDS PER SQUARE INCH PSIA PSI ABSOLUTE PD PRESSURE DROP PSIG PSI GAUGE (R) RELOCATED RH RELATIVE HUMIDITY RA RETURN AIR RPM REVOLUTIONS PER MINUTE SH SENSIBLE HEAT SPEC SPECIFICATION SP VOL SPECIFIC VOLUME STD STANDARD SUCT SUCTION SA SUPPLY AIR TEMP TEMPERATURE ΔT TEMPERATURE DIFFERENCE T STAT THERMOSTAT TONS TONS OF REFRIGERATION T.C. TEMPERATURE CONTROL VAC VACUUM VAV VARIABLE AIR VOLUME VEL VELOCITY V VOLT VOL VOLUME VFD VARIABLE FREQUENCY DRIVE WC WATER COLUMN W WITH</p>															
			<p><b>SHEET LIST</b></p> <table border="1"> <thead> <tr> <th>DRAWING</th> <th>SHEET TITLE</th> </tr> </thead> <tbody> <tr> <td>M0.1</td> <td>MECHANICAL COVER SHEET</td> </tr> <tr> <td>M0.2</td> <td>MECHANICAL SPECIFICATIONS</td> </tr> <tr> <td>M0.3</td> <td>MECHANICAL DETAILS</td> </tr> <tr> <td>M0.4</td> <td>MECHANICAL SCHEDULES</td> </tr> <tr> <td>M1.1</td> <td>MECHANICAL HVAC PLAN</td> </tr> </tbody> </table>	DRAWING	SHEET TITLE	M0.1	MECHANICAL COVER SHEET	M0.2	MECHANICAL SPECIFICATIONS	M0.3	MECHANICAL DETAILS	M0.4	MECHANICAL SCHEDULES	M1.1	MECHANICAL HVAC PLAN
DRAWING	SHEET TITLE														
M0.1	MECHANICAL COVER SHEET														
M0.2	MECHANICAL SPECIFICATIONS														
M0.3	MECHANICAL DETAILS														
M0.4	MECHANICAL SCHEDULES														
M1.1	MECHANICAL HVAC PLAN														
			<p>Revisions</p> <p>Δ IFP: 2023.12.08</p>												

hollingsworth pack  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

MECHANICAL COVER SHEET

M0.1



## MECHANICAL SPECIFICATIONS

### DUCTWORK INSULATION

- ALL DUCTWORK INSULATION SHALL HAVE A COMPOSITE (INSULATION, JACKET, OR FACING, AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURE ASTM E84, NFPA 225 AND UL 723, NOT EXCEEDING:

FLAME SPREAD	25
SMOKE DEVELOPED	50
- ALL DUCTWORK AND SHEET METAL DESIGNED TO SERVE THE FOLLOWING AREAS SHALL BE EXTERNALLY INSULATED:
  - CONCEALED SUPPLY AND RETURN AIR DUCTWORK.
  - ALL RIGID ROUND AND FLEXIBLE SUPPLY & RETURN DUCTWORK NOT FACTORY INSULATED.
  - ALL OTHER SYSTEMS SPECIFICALLY INDICATED ON THE DRAWINGS.
- ALL DUCTWORK AND SHEET METAL DESIGNED TO SERVE THE FOLLOWING AREAS SHALL BE SINGLE WALL INTERNALLY INSULATED DUCT SYSTEM:
  - ALL SUPPLY OR RETURN DUCTWORK EXPOSED TO VIEW. REFER TO PLANS FOR ADDITIONAL INFORMATION.
- DUCT INSULATION THICKNESS AND APPLICATION SCHEDULE: INSULATE DUCTS AND BACKSIDES OF SUPPLY & DUCTED RETURN AIR DEVICES WITH THE FOLLOWING MATERIALS AND THICKNESS:
  - CONCEALED APPLICATIONS (INSULATED PLENUM): FIBERGLASS BLANKET, WITH A MINIMUM OF 1" THICKNESS R-6.
  - CONCEALED APPLICATIONS (UNINSULATED PLENUM): FIBERGLASS BLANKET, WITH A MINIMUM OF 1-1/2" THICKNESS R-8.
  - EXPOSED APPLICATIONS: FIBERGLASS BOARD, WITH A MINIMUM OF 1" THICKNESS R-6.
  - OUTDOOR APPLICATIONS: DOUBLE WALL DUCT CONSTRUCTION WITH FIBERGLASS BOARD INSULATION BETWEEN INNER AND OUTER JACKET, MINIMUM OF R-8.

### EXTERNAL DUCT WRAP INSULATION

- INSULATION SHALL BE SCHULLER R-SERIES MICROLITE FSK, OWENS-CORNING TYPE ED100, OR CERTAINTEE TYPE 100 DUCT WRAP 1 POUND FSK FLEXIBLE GLASS FIBER BLANKET.
- INSULATION SHALL HAVE AN AVERAGE THERMAL CONDUCTIVITY (K-VALUE) OF NO MORE THAN 0.27 BTU/INHR/SF/F AT 75°F MEAN TEMPERATURE AND A 250°F TEMPERATURE LIMIT.
- INSULATION SHALL BE FURNISHED WITH A FACTORY APPLIED FOIL-SCRIM-KRAFT FACING CONSISTING OF 0.35 MIL ALUMINUM FOIL REINFORCED WITH GLASS YARN MESH AND LAMINATED TO 40 POUND CHEMICALLY TREATED AND FIRE RESISTANT WHITE KRAFT PAPER.

### INTERNAL DUCT LINER

- INTERNAL DUCT LINER INSULATION SHALL BE 2 POUND DENSITY MANVILLE LINA-COUSTIC OR OWENS-CORNING AEROFLEX FIBERGLASS OR CERTAINTEE ULTRALITE. THE LINER SHALL MEET THE LIFE SAFETY STANDARDS AS ESTABLISHED BY NFPA 90A.
- THE DUCT LINER SHALL HAVE A CONDUCTANCE FACTOR NOT EXCEEDING 0.26 BTU/INHR/SF/F AT 75°F MEAN TEMPERATURE.

### INSTALLATION OF DUCTWORK INSULATION

- ALL INSULATION SHALL BE APPLIED WITH EDGES TIGHTLY STITCHED WITH STAPLES ON 3" CENTERS.
- THE INSULATION SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF ALL SQUARE DUCTS 24" OR WIDER BY MEANS OF WELDED PINS AND SPEED CLIPS ON 12" CENTERS.
- DUCTWORK INTERNAL LINER SHALL BE APPLIED WITH 100% COVERAGE OF CHILDERS CP-88, FOSTER 81-10, OR MEI 22-22 (SHOP APPLICATION), CHILDERS CP-80, FOSTER 85-20, OR MEI 22-25 (FIELD APPLICATION).
- THE LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS ON MAXIMUM 15" CENTERS ON DUCTS 20" OR MORE WIDE OR DEEP. FASTENERS SHALL START WITHIN 2" OF THE LEADING EDGE OF EACH SECTION AND WITHIN 3" OF THE LEADING EDGE OF ALL TRANSVERSE JOINTS WITHIN THE DUCT SECTION.
- THE VAPOR BARRIER FACING SHALL BE THOROUGHLY SEALED AT JOINTS, CUTS, TEARS AND WHERE THE PINS HAVE PIERCED THROUGH THE VAPOR BARRIER WITH 3" PRESSURE SENSITIVE ALUMINUM FOIL VAPOR BARRIER TAPE.
- ALL LINER INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA "DUCT LINER APPLICATION STANDARD 2ND EDITION" AND NAIMA "FIBROUS GLASS DUCT LINER STANDARD (FGDLS)".

### DUCTWORK AND SHEETMETAL

- DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONSTRUCTION REQUIREMENTS SPECIFIED IN THE 2005 SMACNA EDITION OF "HVAC DUCT CONSTRUCTION STANDARDS", EXCEPT WHERE SMACNA REQUIREMENTS ARE EXCEEDED IN THESE SPECIFICATIONS.
- MAXIMUM ALLOWABLE DUCTWORK LEAKAGE, AS A PERCENTAGE OF AIR SYSTEM VOLUME, SHALL BE 2%.
- THE INTERIOR SURFACE OF ALL DUCTWORK SHALL BE SMOOTH WITH NO SHEET METAL OR OTHER PARTS PROJECTING INTO THE AIR STREAM. ALL SEAMS AND JOINTS SHALL BE EXTERNAL. THE INSIDE OF ALL DUCTWORK SHALL BE THOROUGHLY CLEANED AND ALL FANS OPERATED TO REMOVE ANY DEBRIS PRIOR TO CONNECTION OF AIR DISTRIBUTION DEVICES.
- ALL DUCTWORK DIMENSIONS ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- INSTALL ALL DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO THE CONSTRUCTION OR INSTALLATION OF DUCTWORK.
- ALL TRANSVERSE DUCT JOINTS, LONGITUDINAL SEAMS AND DUCT WALL PENETRATIONS SHALL BE SEALED REGARDLESS OF DUCT PRESSURE CLASSIFICATION. SEALER SHALL BE RATED BY MANUFACTURER AND SHALL BE SUITABLE FOR USE AT THE SYSTEM STATIC PRESSURE CLASSIFICATION OF THE DUCTWORK APPLIED. DUCTWORK SEALANT SHALL BE HARDCAST "VERSA-GRIP 181" OR APPROVED EQUAL. SEALANT SHALL BE SUITABLE FOR USE INDOORS AND OUTDOORS. SEALANT SHALL BE WATER BASED. SEALANT SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. SEALANT SHALL BE LISTED IN ACCORDANCE WITH UL 181A OR UL 181B, AS REQUIRED IN THE INTERNATIONAL ENERGY CONSERVATION CODE. DUCT SEALANT SHALL BE APPLIED PER MANUFACTURER'S INSTRUCTIONS. MINIMUM DRYING TIME SHALL BE ALLOWED PER MANUFACTURER'S INSTRUCTIONS. ADDITIONAL TIME FOR DRYING SHALL BE ALLOWED IN CLIMATES WHERE TEMPERATURE AND HUMIDITY MAY AFFECT THE CURING OF THE SEALANT. SEALANT SHALL BE ALLOWED TO COMPLETELY DRY AND HARDEN BEFORE AIR IS CIRCULATED THROUGH THE DUCTWORK. THE USE OF DUCT TAPE FOR SEALING OF METAL DUCTS IS PROHIBITED UNLESS THE TAPE IS PART OF AND USED, IN CONJUNCTION WITH A MULTI-PART SEALING SYSTEM (I.E., ADHESIVE, TAPE, COATING, ETC.).
- ALL ROUND TAKE-OFFS IN LOW PRESSURE DUCTWORK SHALL BE MADE WITH A DAMPER EXTRACTOR SPIN-IN COLLAR WITH A 2" STAND-OFF LOCKING QUADRANT. SPIN-INS SHALL BE INSTALLED WITH THEIR DAMPER AXIS PARALLEL TO AIR FLOW.
- ALL LONGITUDINAL SEAMS SHALL BE "PITTSBURGH LOCK" OR BUTTON PUNCH SNAP LOCK AT CORNER SEAMS AND GROOVED (ACME) SEAM OR SEAM WELDED IN SIDES BETWEEN CORNERS.
- FLEXIBLE DUCT FABRIC CONNECTIONS SHALL BE INSTALLED ON THE INLET AND OUTLET CONNECTIONS TO ALL POWERED AIR MOVING EQUIPMENT NOT CONNECTED WITH FLEXIBLE DUCT ATTACHED DIRECTLY TO INLET OR DISCHARGE PLENUM. A MINIMUM OF 1" OF SLACK SHALL BE ALLOWED IN ALL FLEXIBLE CONNECTIONS TO INSURE VIBRATION ISOLATION. FLEXIBLE FABRIC SHALL BE A MINIMUM OF 3" WIDE WITH "GRIP-LOC" SEAM TO 24 GAUGE GALVANIZED METAL SIDE CONNECTORS A MINIMUM OF 3" WIDE EACH. FLEXIBLE CONNECTIONS ARE TO BE FABRICATED WITH DURO DYNE EXCELON "METAL-FAB" VINYL COATED 22 OZ. NYLON WITH 24 GAUGE GALVANIZED IRON SIDE CONNECTORS OR "APPROVED EQUAL".
- ALL DUCTWORK SUPPORTS SHALL BE PER TABLE 4-1 OF THE SMACNA MANUAL WITH ALL SUPPORTS DIRECTLY ANCHORED TO THE BUILDING STRUCTURE. SUPPORTS SHALL BE ON MAXIMUM 8'-0" CENTERS WITH ADDITIONAL SUPPORTS AS REQUIRED TO PREVENT SAGGING.

### PIPING MATERIALS

- CONDENSATE AND AUXILIARY DRAIN PIPING (WHERE EXTERIOR TO THE BUILDING OR IN AN OPEN RETURN AIR CEILING PLENUM) SHALL BE ASTM B88-72 TYPE "L" HARD DRAWN COPPER WITH ASTM B32-76 GRADE 957A TIN-ANTIMONY SOLDERED JOINTS.
- CONDENSATE AND AUXILIARY DRAIN PIPING:
  - WHERE IN A NON RETURN AIR PLENUM: ASTM D2665 SCHEDULE 40 PVC PLASTIC PIPE AND FITTINGS AND SOLVENT WELDED JOINTS.
  - WHERE IN A RETURN AIR PLENUM: ASTM B88-72 TYPE "L" HARD DRAWN COPPER WITH ASTM B32-76 GRADE 957A TIN-ANTIMONY SOLDERED JOINTS.
- REFRIGERANT PIPING SHALL BE TYPE L HARD DRAWN "ACR" TUBING THAT HAS BEEN CLEANED AND CAPPED FOR REFRIGERATION SERVICE. FITTINGS TO BE WROUGHT COPPER INSTALLED WITH HARRIS 15% SILPHOS SILVER SOLDER JOINTS. PIPE ENDS AND FITTINGS SHALL BE CAREFULLY CLEANED PRIOR TO JOINING. ACID SHALL NOT BE USED IN CLEANING OR AS A FLUX. BLEED NITROGEN THROUGH ALL PIPING WHILE SOLDERING. PIPE SIZES TO BE AS RECOMMENDED BY THE CONDENSING UNIT MANUFACTURER. SHOP DRAWINGS SHOWING ALL TRAPS, PIPE SIZES, LINE SIZING CALCULATIONS, AND ACCESSORIES SHALL BE SIGNED BY A REPRESENTATIVE OF THE CONDENSING UNIT MANUFACTURER, INDICATING THEIR APPROVAL. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING EQUIPMENT. PROVIDE REPLACEABLE CORE TYPE LIQUID LINE FILTER DRYER SIZED FOR SYSTEM CAPACITY (2 PSI DROP PER ARI 710), SIGHT GLASS MOISTURE INDICATOR, THERMAL EXPANSION VALVE WITH ADJUSTABLE SUPERHEAT, REFRIGERANT SHUT-OFF, RELIEF AND SOLENOID VALVES AS REQUIRED. SLOPE ALL SUCTION LINES AND PROVIDE SUCTION LINE TRAPS TO FACILITATE OIL RETURN TO COMPRESSOR. ALL PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- REFRIGERANT PIPING SHALL BE TESTED WITH DRY NITROGEN AT 250 PSI FOR 24 HOURS. ISOLATE EXPANSION VALVES AND OTHER DEVICES THAT WOULD BE DAMAGED BY THIS HIGH PRESSURE. TEST ALL JOINTS WITH A SOAP SOLUTION. AFTER THE INITIAL PRESSURE TEST HAS BEEN COMPLETED, INTRODUCE A MIXTURE OF REFRIGERANT AND NITROGEN AT 150 PSI AND TEST ALL JOINTS USING A HFC DETECTOR. FOLLOWING THE SATISFACTORY COMPLETION OF ALL TESTS, EVACUATE THE SYSTEM WITH A VACUUM PUMP CONNECTED TO THE LIQUID LINE. AFTER 20-INCHES OF VACUUM IS OBTAINED, CLOSE SUCTION AND DISCHARGE VALVES AT THE COMPRESSOR AND CONTINUE EVACUATION FOR 24 HOURS. AFTER DEHYDRATION IS COMPLETE, INTRODUCE PROPER REFRIGERANT INTO SYSTEM THROUGH A FILTER/DRYER.

### PIPING INSULATION

- ALL CONDENSATE PIPING INSULATION SHALL HAVE A COMPOSITE (INSULATION JACKET OR FACING, AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURE ASTM E84, NFPA 225 AND UL 723 NOT EXCEEDING:

FLAME SPREAD	25
SMOKE DEVELOPED	50
- INSULATE ALL INTERIOR CONDENSATE DRAIN PIPING WITH 1/2" THICKNESS "AP ARMAFLEX" OR RUBATEX R-180-FS FLEXIBLE ELASTOMER PIPE INSULATION. PROVIDE PROTECTION AND BLOCKING AND SHIELDS AT EACH HANGER. FOR EXTERIOR EXPOSED INSULATED PIPING, PROVIDE OUTER JACKET AND WRAP COMPLETELY AROUND. OUTER JACKET SHALL BE 1577CW-E (NATURAL ALUMINUM EMBOSSED) VENTURE CLAD JACKETING SYSTEM.

### HVAC TESTING AND BALANCING

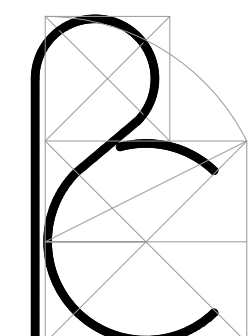
- UPON COMPLETION OF HVAC WORK, AND PRIOR TO TENANT OCCUPANCY, ALL AIR AND WATER SYSTEMS SHALL BE ADJUSTED AND BALANCED TO WITHIN 10% OF INDICATED DESIGN AIR QUANTITIES AND IN ACCORDANCE WITH ALL NEBB OR AABC RECOMMENDATIONS AND PROCEDURES. THE HVAC TEST-ADJUST-BALANCE CONTRACTOR SHALL HAVE CURRENT NEBB OR AABC CERTIFICATION. ALL INSTRUMENTS USED SHALL BE PROPERLY CALIBRATED. TABULATE ALL TEST DATA ON NEBB OR AABC FORMS. IF PROBLEMS ARE ENCOUNTERED DURING BALANCING, THE HVAC TEST-ADJUST-BALANCE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND IF NECESSARY, THE ARCHITECT/ENGINEER FOR INSTRUCTIONS BEFORE COMPLETION OF TESTING AND BALANCING. COORDINATE WITH TEMPERATURE CONTROLS CONTRACTOR OR OWNER'S BUILDING ENGINEER AS NECESSARY TO UPDATE PROGRAM ALL REQUIRED SYSTEM STATIC PRESSURE SETPOINTS AND OTHER BASE BUILDING TEMPERATURE CONTROLS SYSTEM CONTROL POINTS AS DETERMINED THROUGH THE TEST-ADJUST-BALANCE. THE CONTRACTOR SHALL ADJUST ALL VAV TERMINAL UNIT MINIMUM AND MAXIMUM SETPOINTS.
- ALL TEST & BALANCE WORK SHALL BE PERFORMED BY INDEPENDENT TEST AND BALANCING CONTRACTOR. (NOT THE MECHANICAL CONTRACTOR)

### FLEXIBLE DUCTWORK

- FLEXIBLE DUCT SHALL BE USED FOR CONNECTIONS TO AIR DISTRIBUTION DEVICES WHERE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN. MAXIMUM LENGTH SHALL BE 9'-0" FOR AIR DISTRIBUTION DEVICE CONNECTIONS. WHERE LONGER RUNS ARE REQUIRED, PROVIDE RIGID DUCTWORK.
- INSULATED FLEXIBLE DUCT SHALL BE A FACTORY FABRICATED ASSEMBLY CONSISTING OF A SPRING STEEL OR SPIRAL ALUMINUM HELIX. INNER LINER SHALL BE A SMOOTH, AIRTIGHT OPE FILM MECHANICALLY LOCKED TO HELIX WITHOUT ADHESIVES. INSULATION SHALL BE FACTORY WRAPPED FIBERGLASS BLANKET WITH A MAXIMUM THERMAL CONDUCTANCE OF 0.167 BTU/INHR/SF/F AT 75°F MEAN TEMPERATURE (R VALUE = 6). THE ASSEMBLY SHALL BE SHEATHED IN A REINFORCED METALIZED MYLAR VAPOR BARRIER OUTER JACKET WITH PERMEANCE NOT EXCEEDING 0.17 PERMS/SF AT 1" PRESSURE.
- VAPOR BARRIER SHALL BE FIRE RETARDANT REINFORCED ALUMINUM MATERIAL.
- ALL FLEXIBLE DUCT USED WITHIN INSULATED CEILING PLENUMS SHALL BE MINIMUM OF R-5 INSULATION VALUE. ALL FLEXIBLE DUCT USED WITHIN UN-INSULATED PLENUMS OR IN ATTIC SPACES SHALL BE MINIMUM OF R-8 INSULATION VALUE.
- THE FLEXIBLE DUCT ASSEMBLY SHALL BE RATED FOR 4,000 FPM VELOCITY, A MINIMUM OF 4" W.G. AND 4" W.G. WORKING PRESSURE AND SHALL BE LISTED CLASS I BY THE UNDERWRITERS LABORATORY (UL-181) AT A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED RATE OF NOT OVER 50. DUCTS SHALL ALSO COMPLY WITH NFPA STANDARD 90A.
- WHERE FLEXIBLE DUCT LENGTH OF 80", HORIZONTAL SUPPORT IS REQUIRED. DUCT SHALL BE SUSPENDED ON CENTERS WITH A MINIMUM 3/4" WIDE BAND STRAP AND A MINIMUM 6" WIDE SHEET METAL PROTECTIVE SADDLE.
- ALL JOINTS AND CONNECTIONS OF FLEXIBLE DUCT SHALL BE MADE BY INSTALLING "PANDUIT" STRAPS ON INNER JACKET, SEALING OUTER JACKET WITH TWO WRAPS OF SMACNA APPROVED DUCT TAPE, AND INSTALLING AN ADDITIONAL "PANDUIT" STRAP OVER DUCT TAPE.
- FLEXIBLE DUCTS SHALL BE SUPPORTED IN SUCH A MANNER TO PREVENT SAGS AND KINKS. BENDS IN ANY LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 90°.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, FLEXIBLE DUCTWORK OF THE FOLLOWING TYPES WILL BE ACCEPTABLE:
  - FLEXMASTER TYPE 8M, THERMAFLEX M-KE OR APPROVED EQUAL.

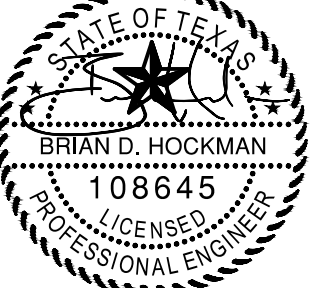
### CONTROLS

- TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE COMPONENTS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. MATCH EXISTING BUILDING MANAGEMENT SYSTEM.
- LOW VOLTAGE WIRING SHALL BE PROVIDED AND INSTALLED BY THE CONTROLS CONTRACTOR. LINE VOLTAGE WIRING SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR AND CONTROLS CONTRACTOR SHALL COORDINATE EXACT REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR PRIOR TO SUBMITTING A BID.
- PROVIDE OPERATOR TRAINING FOR ALL NEW CONTROLS AND SYSTEMS PROVIDED. PROVIDE CONTROLS O&M MANUALS TO THE OPERATIONS ENGINEER UPON COMPLETION OF THE CONTROLS SYSTEM.



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597

rickcanales.architects@gmail.com



12.08.2023

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.

9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.

### Revisions

△ IIP: 2023.12.08

**hollingsworth pack** J  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

MECHANICAL  
SPECIFICATIONS

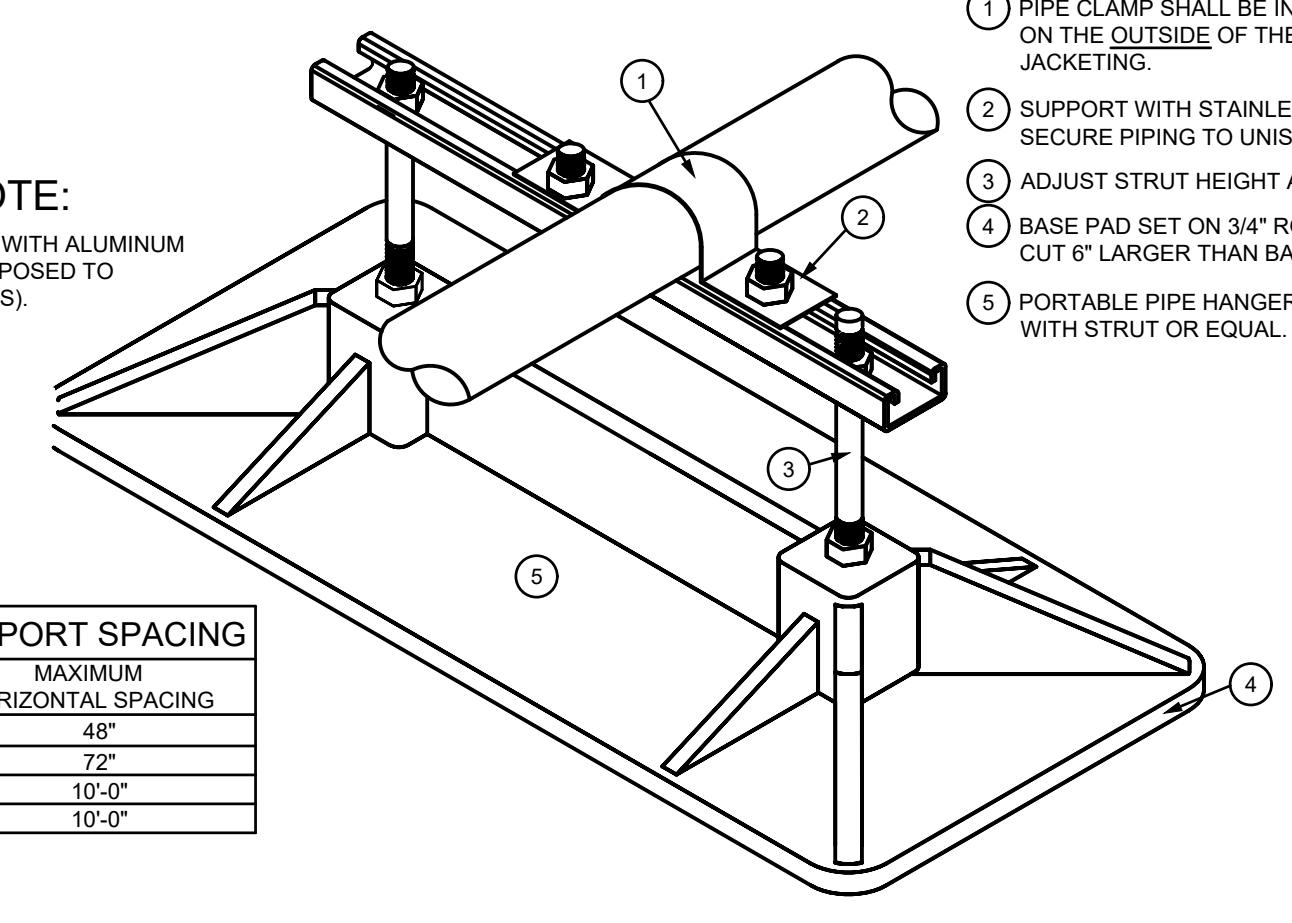
M0.2



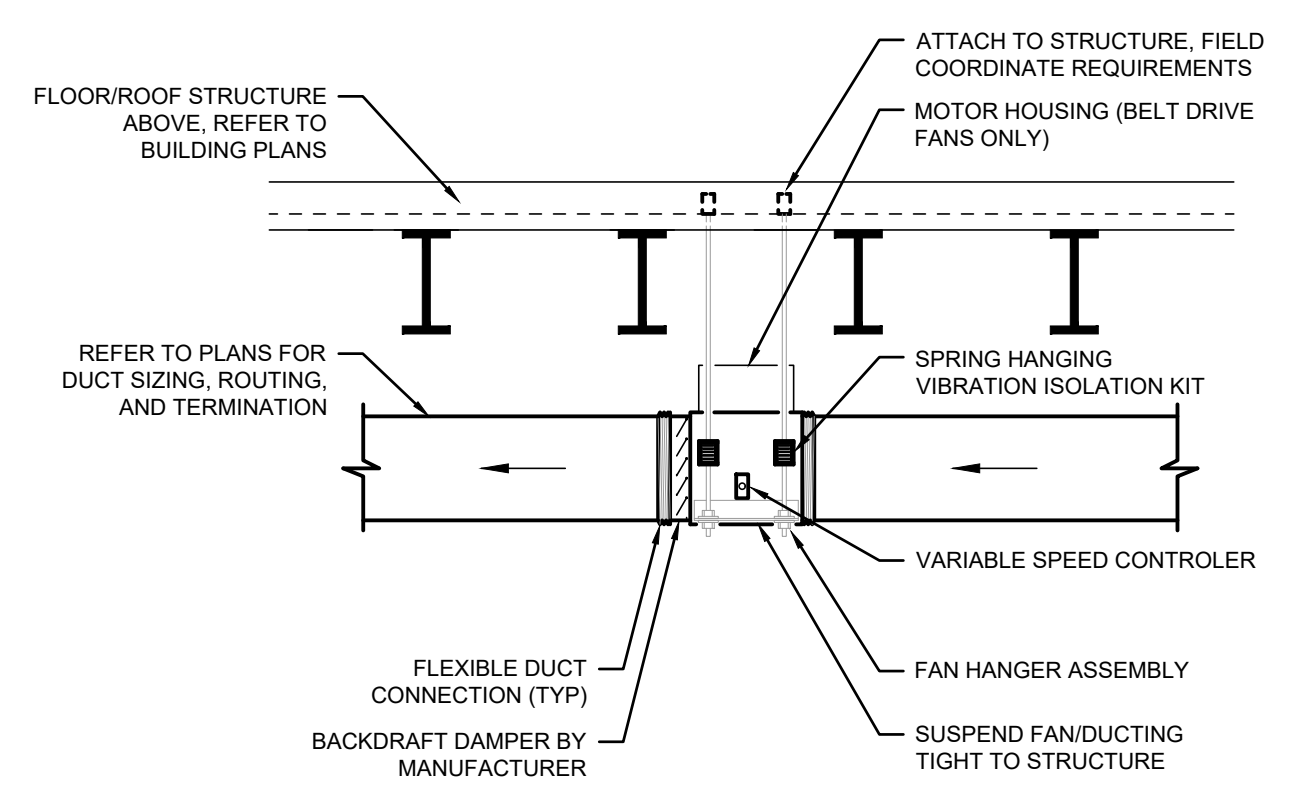
**GENERALNOTE:**  
REFRIGERANT PIPING WITH ALUMINUM JACKETING (WHEN EXPOSED TO OUTDOOR CONDITIONS).

TYPE	PIPE SIZE	MAXIMUM HORIZONTAL SPACING
PVC	ALL	48"
COPPER	< 1-1/4"	72"
COPPER	≥ 1-1/2"	10'-0"
STEEL	ALL	10'-0"

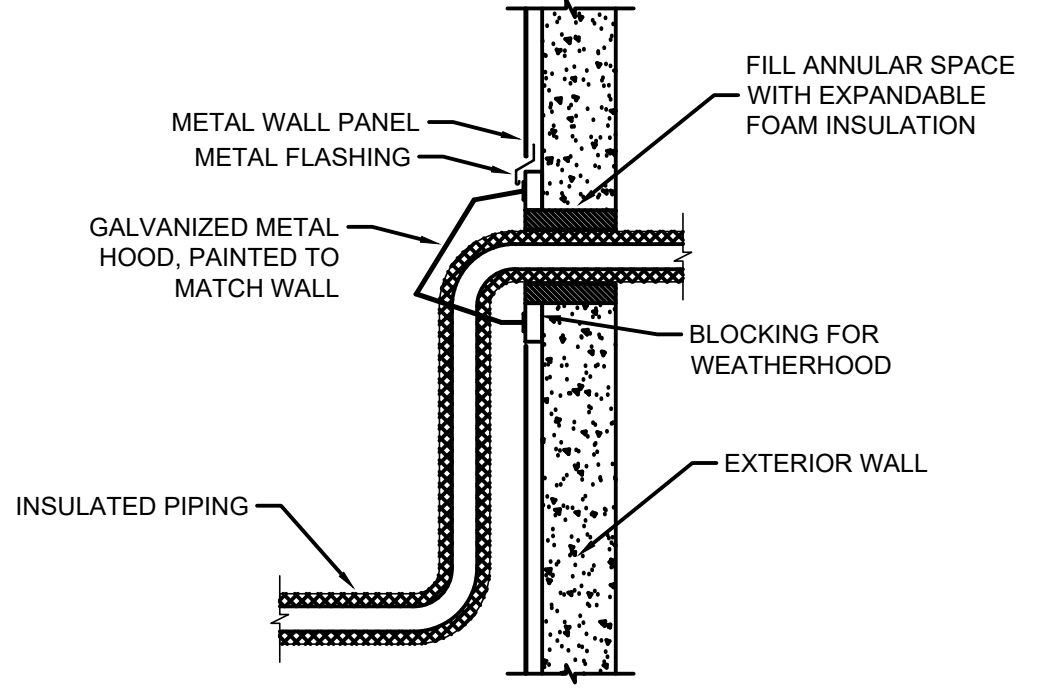
- NOTES:**
- PIPE CLAMP SHALL BE INSTALLED ON THE OUTSIDE OF THE ALUMINUM JACKETING.
  - SUPPORT WITH STAINLESS CLAMP. SECURE PIPING TO UNISTRUT.
  - ADJUST STRUT HEIGHT AS REQUIRED.
  - BASE PAD SET ON 3/4" ROOFING TREAD CUT 6" LARGER THAN BASE PAD.
  - PORTABLE PIPE HANGERS #PP10 WITH STRUT OR EQUAL.



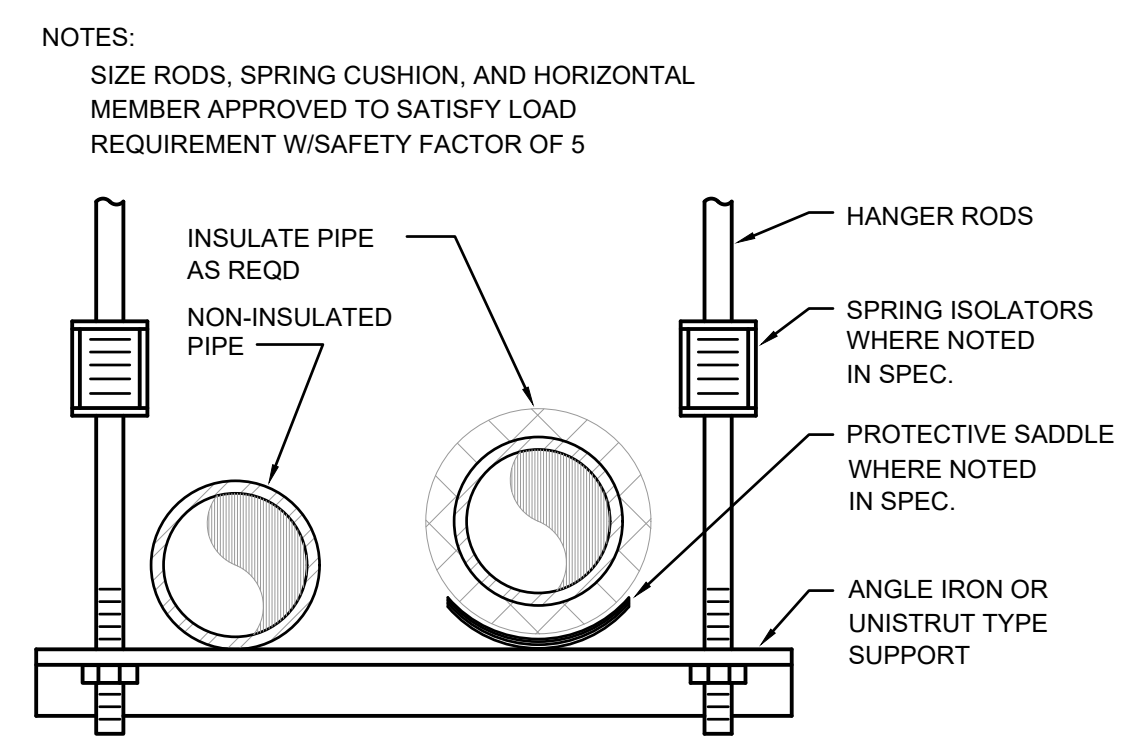
**N PIPE SUPPORT DETAIL**  
SCALE: NTA



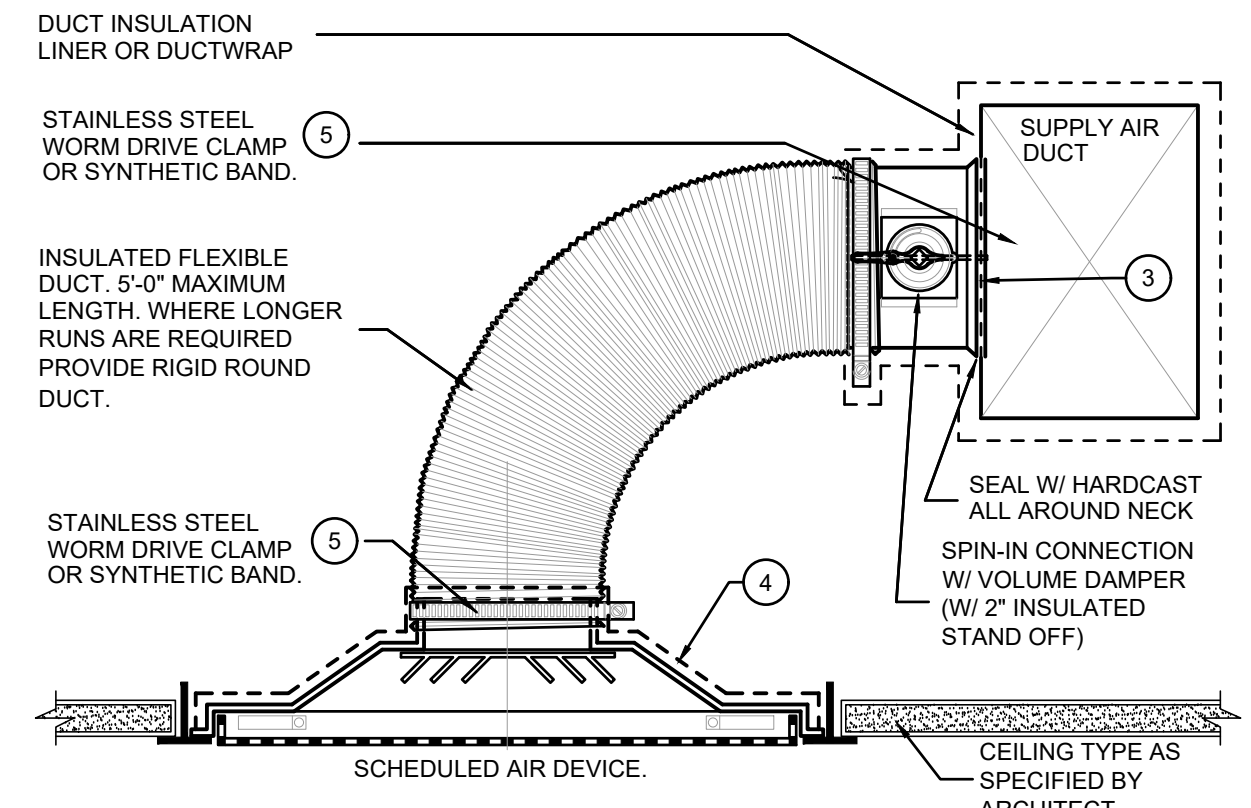
**O INLINE EXHAUST FAN DETAIL**  
SCALE: NTA



**J EXTERIOR WALL PIPING PENETRATION**  
SCALE: NTA

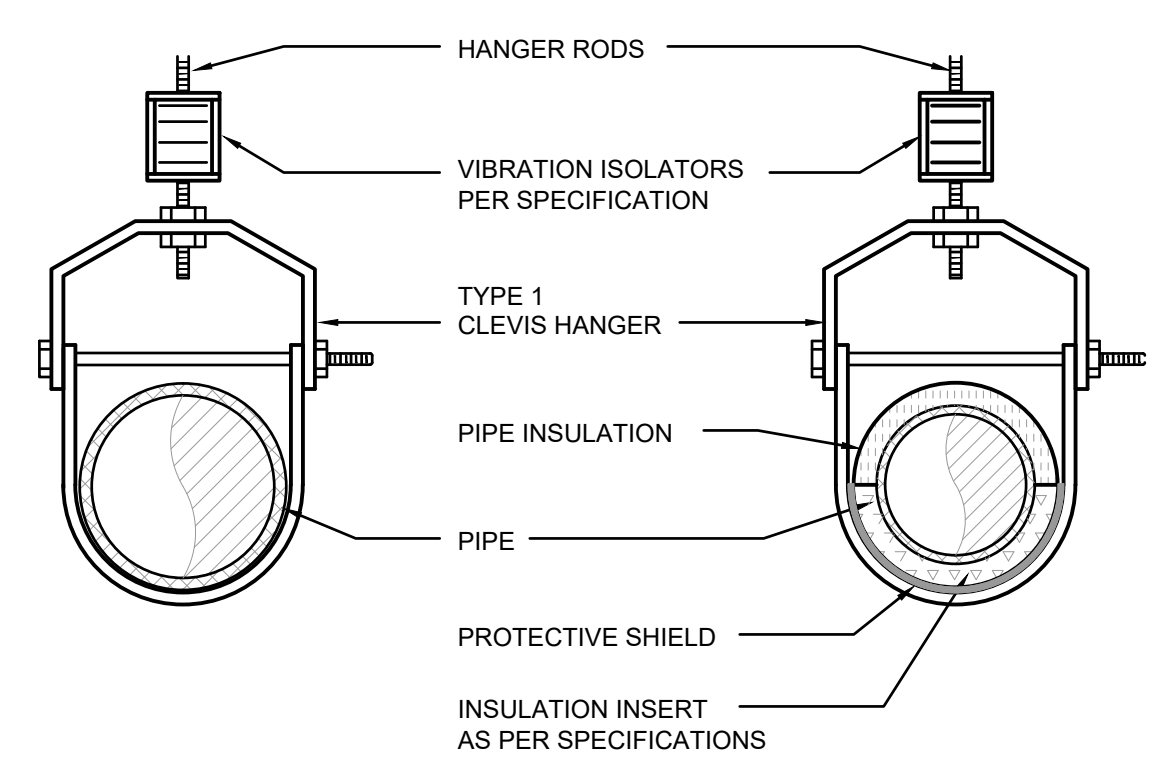


**K TRAPEZE PIPE SUPPORT**  
SCALE: NTA

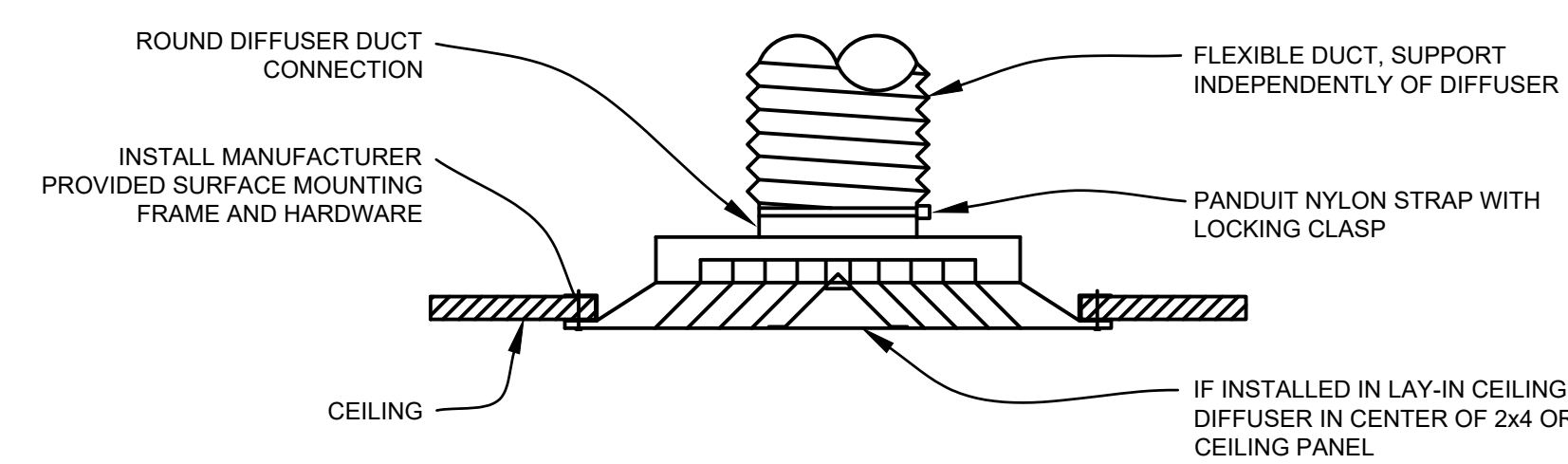


- NOTES:**
- CEILING DIFFUSER SHALL BE INSTALLED SUCH THAT THE FACE OF DIFFUSER IS FLUSH WITH CEILING.
  - SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT 'TEES' OR CEILING TILE.
  - PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS DIMENSION OF RECTANGULAR DUCT. (SEE DET. FOR ADDITIONAL INFORMATION).
  - FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF CEILING DIFFUSER WITH 2" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE.
  - EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)

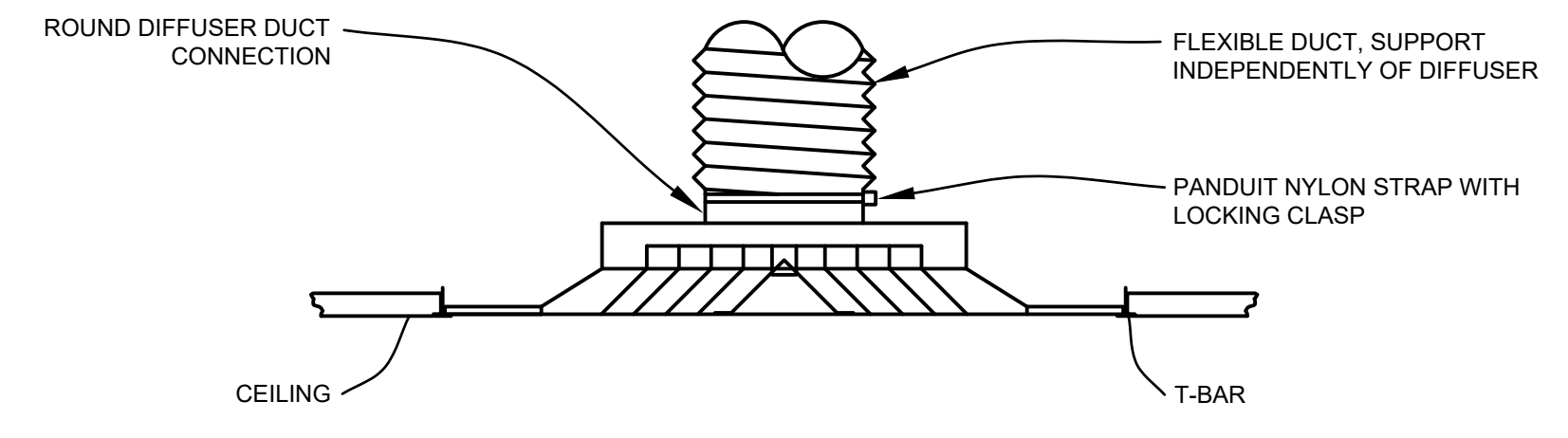
**L CEILING DIFFUSER DETAIL**  
SCALE: NTA



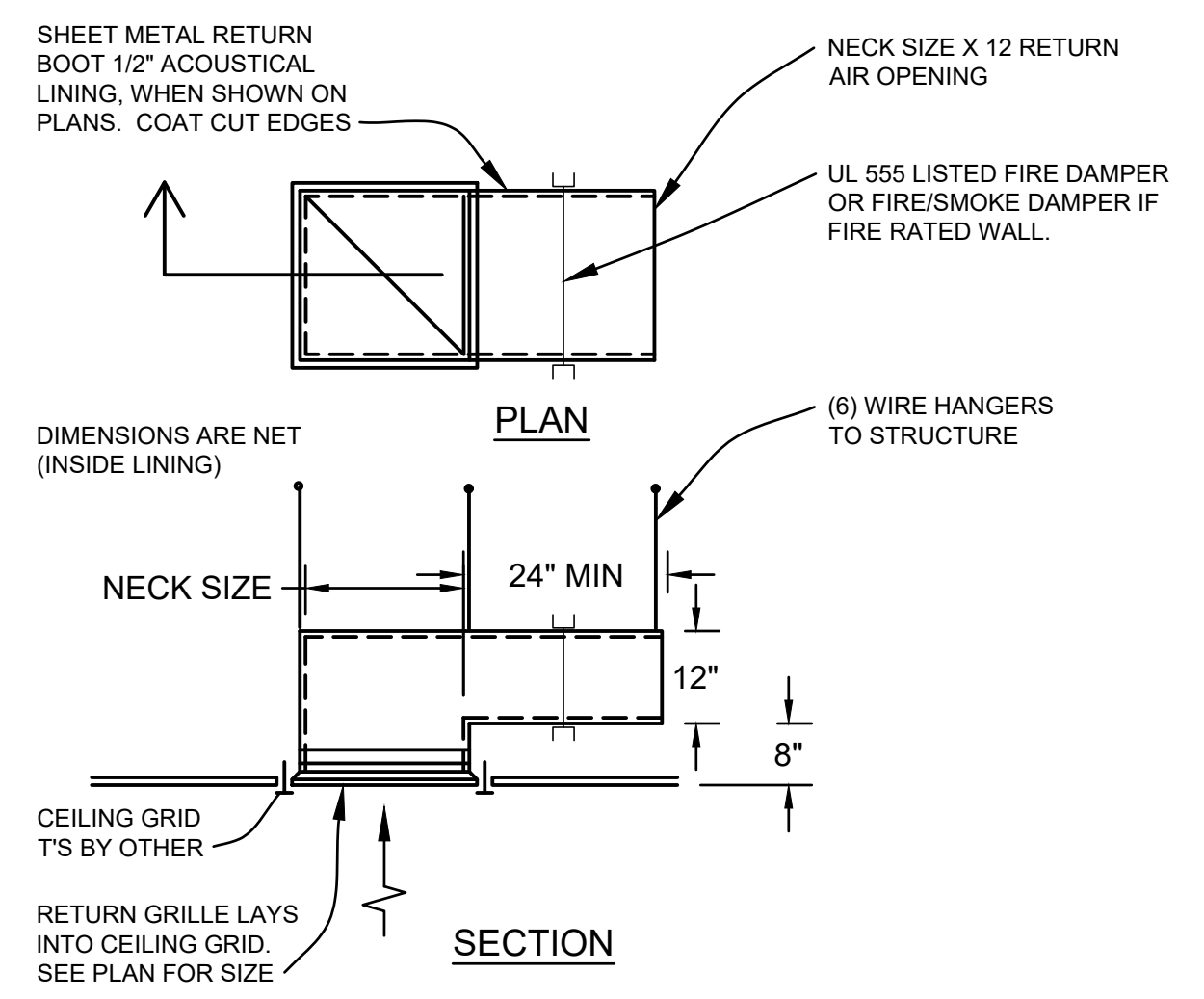
**M CLEVIS PIPE HANGER**  
SCALE: NTA



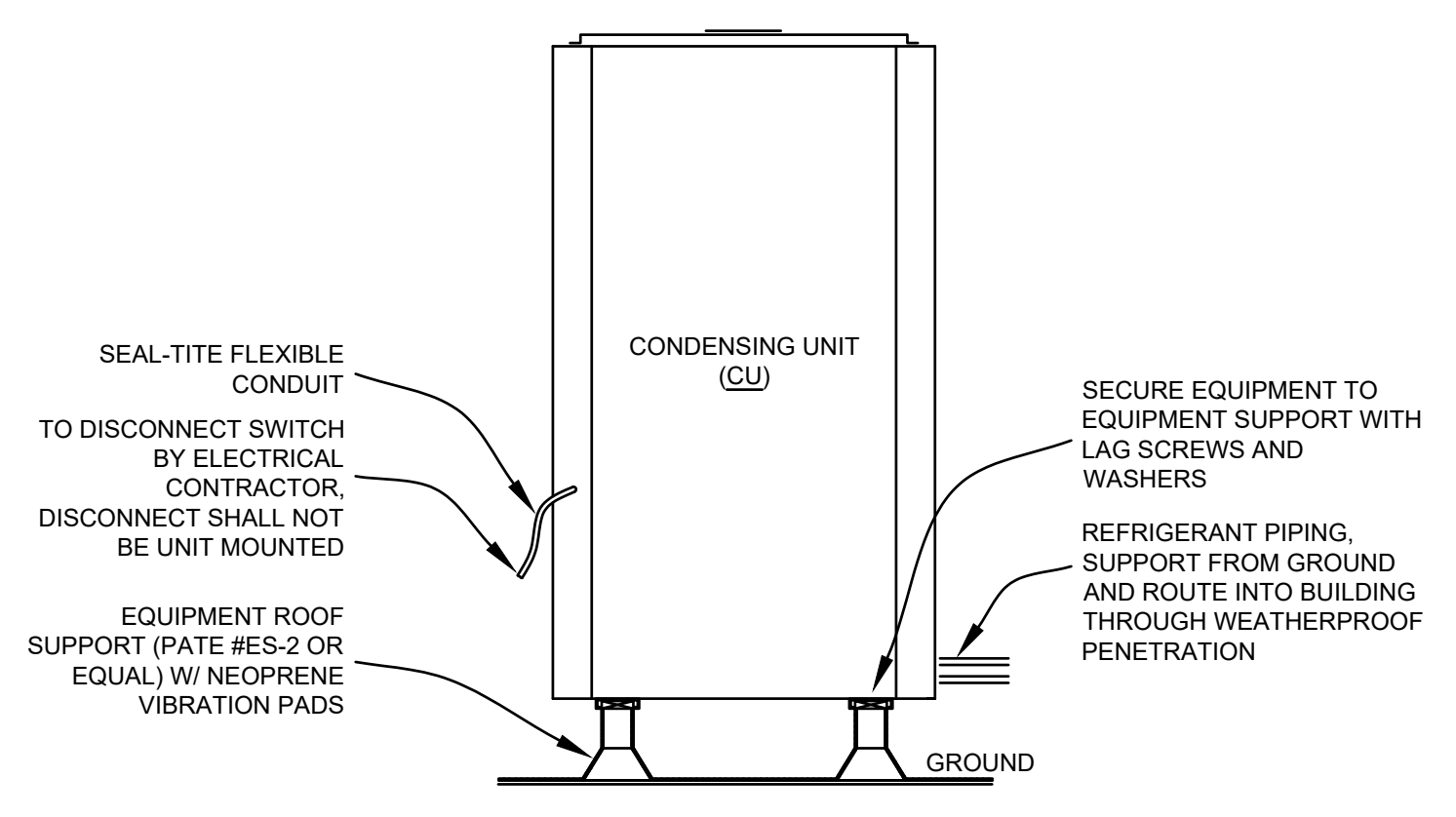
**H SURFACE MOUNTED DIFFUSER DETAIL**  
SCALE: NTA



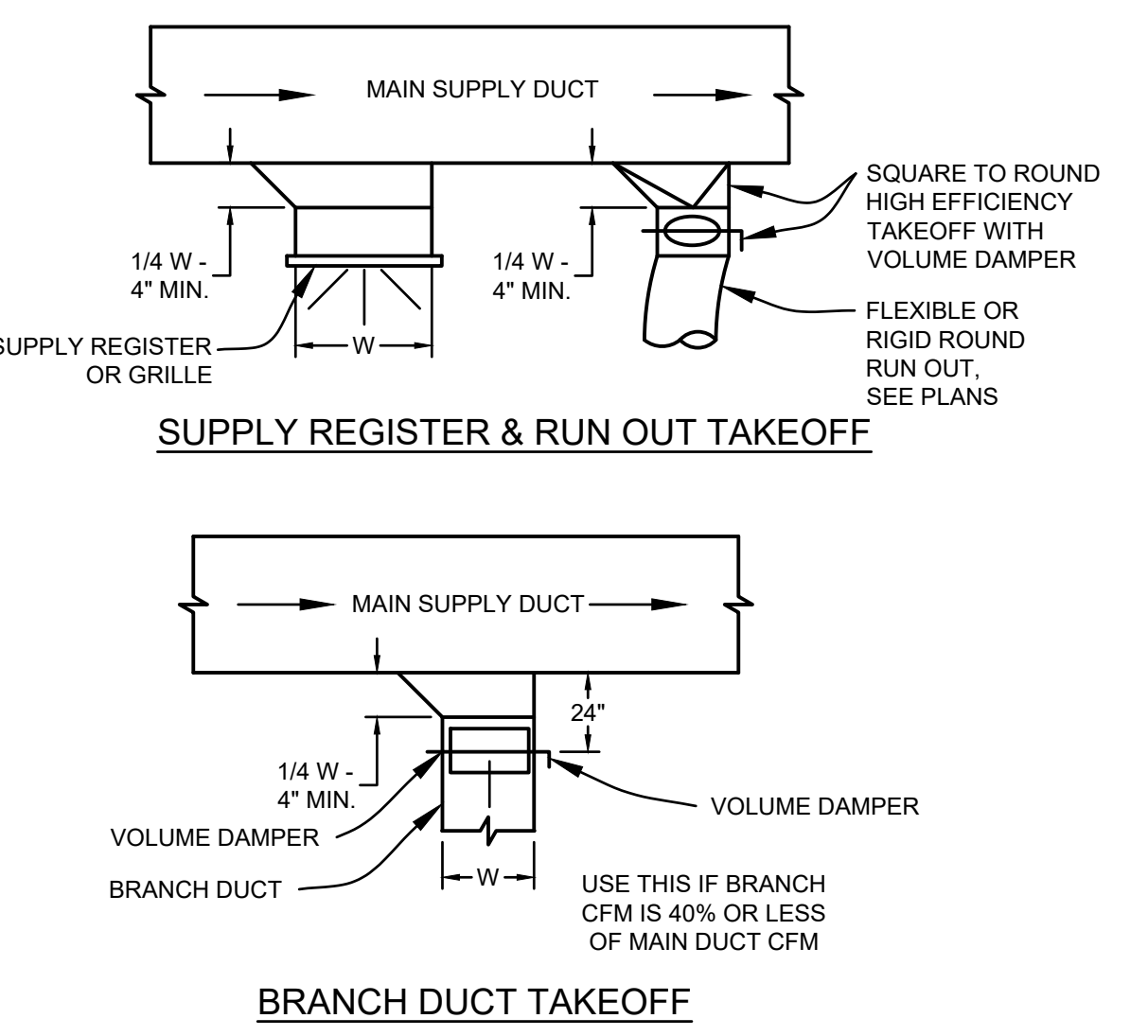
**I LAY-IN DIFFUSER DETAIL**  
SCALE: NTA



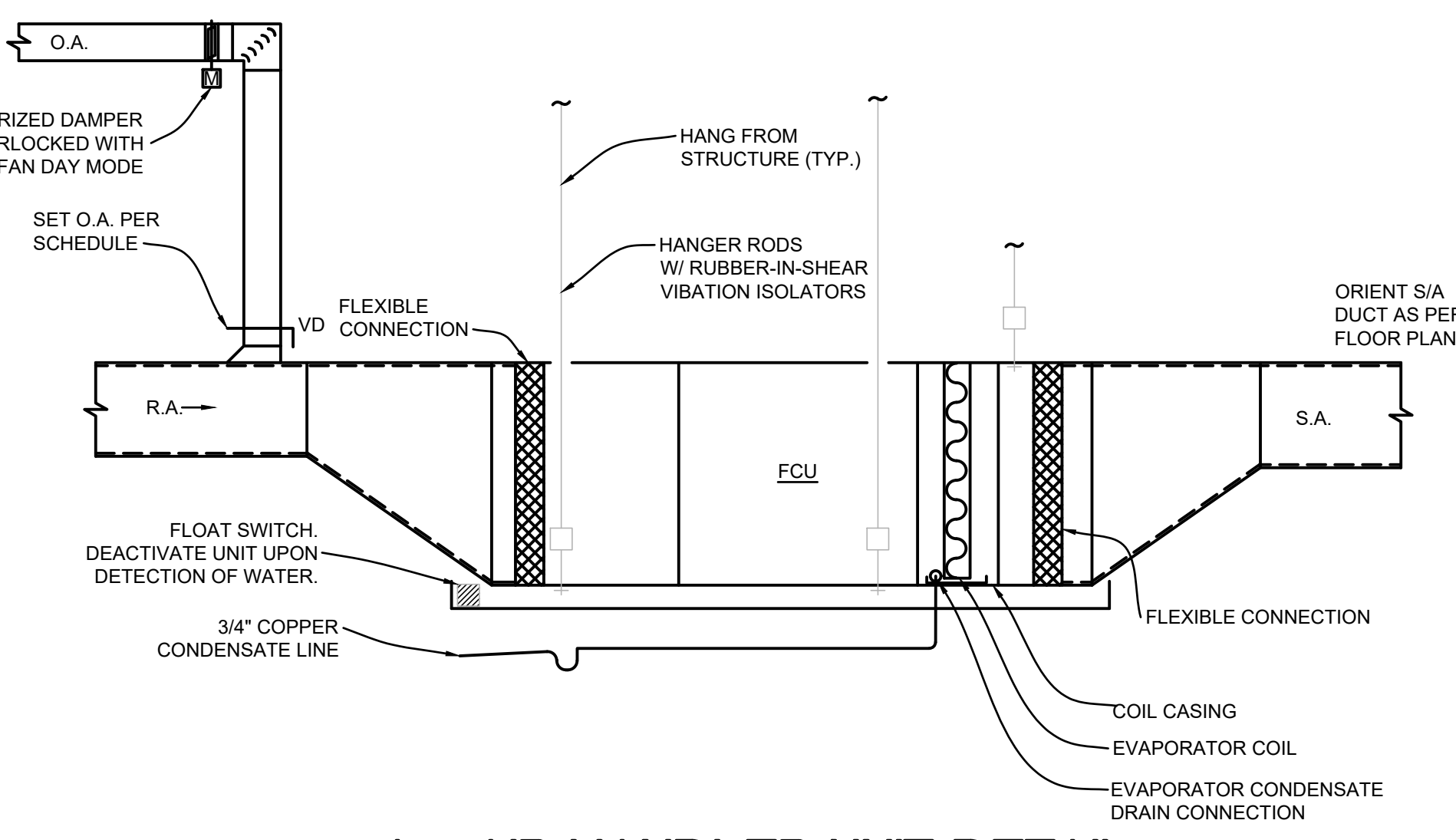
**E LAY-IN RETURN AIR BOOT DETAIL**  
SCALE: NTA



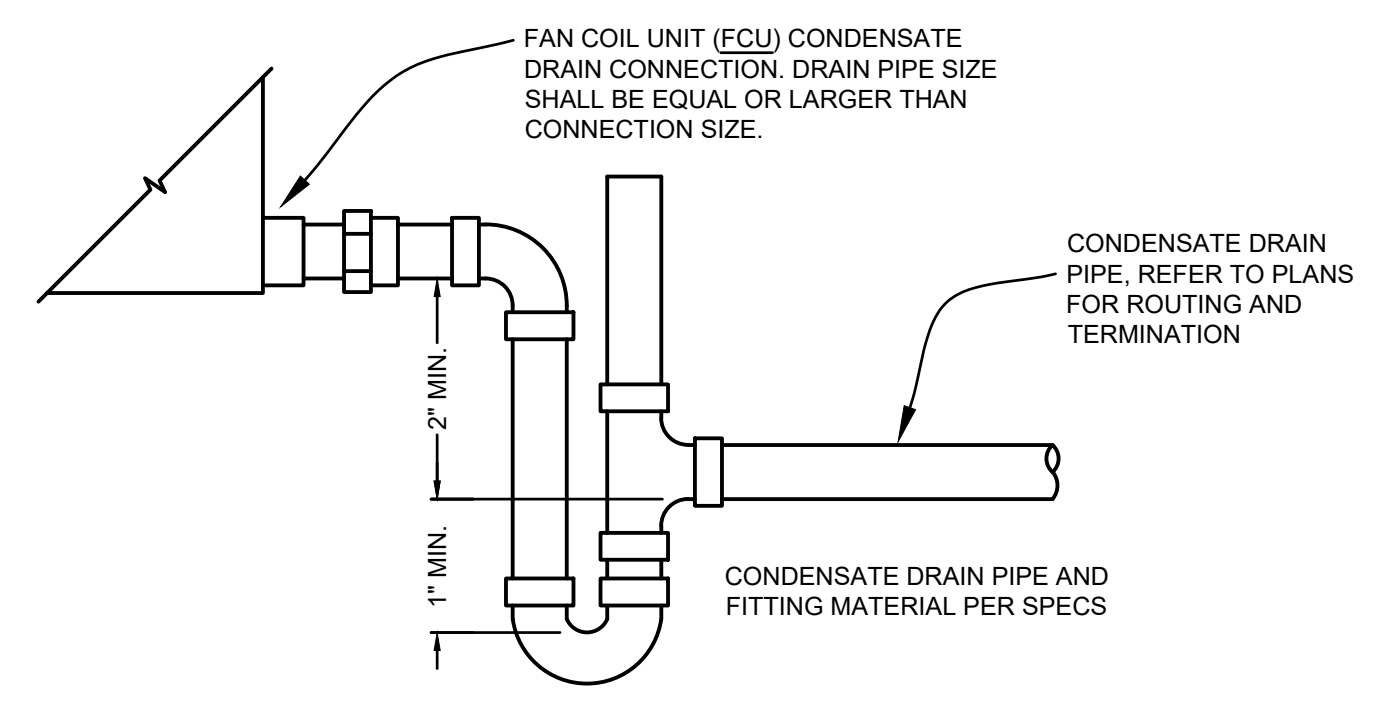
**F CONDENSING UNIT DETAIL**  
SCALE: NTA



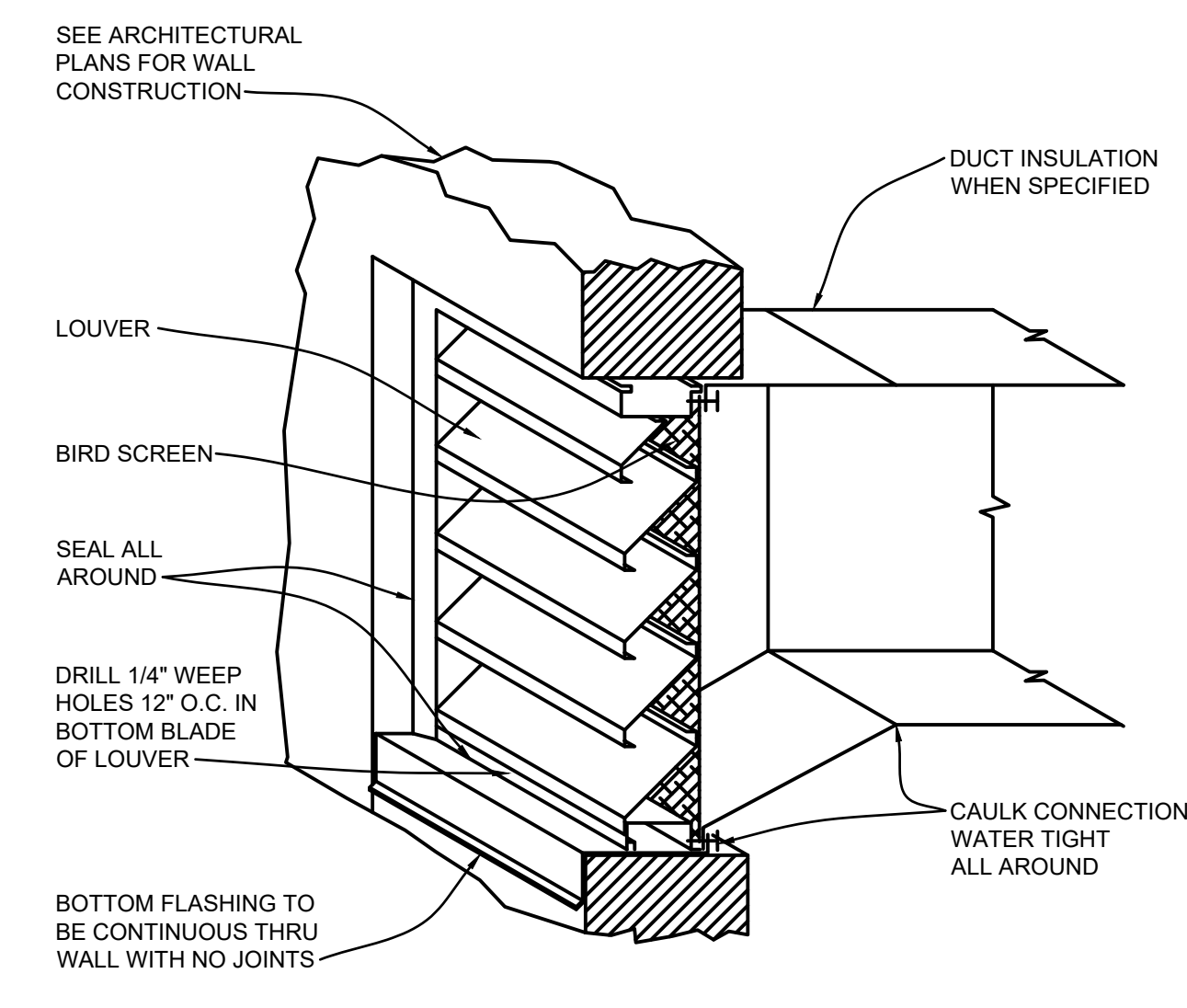
**G LOW VELOCITY DUCT DETAILS**  
SCALE: NTA



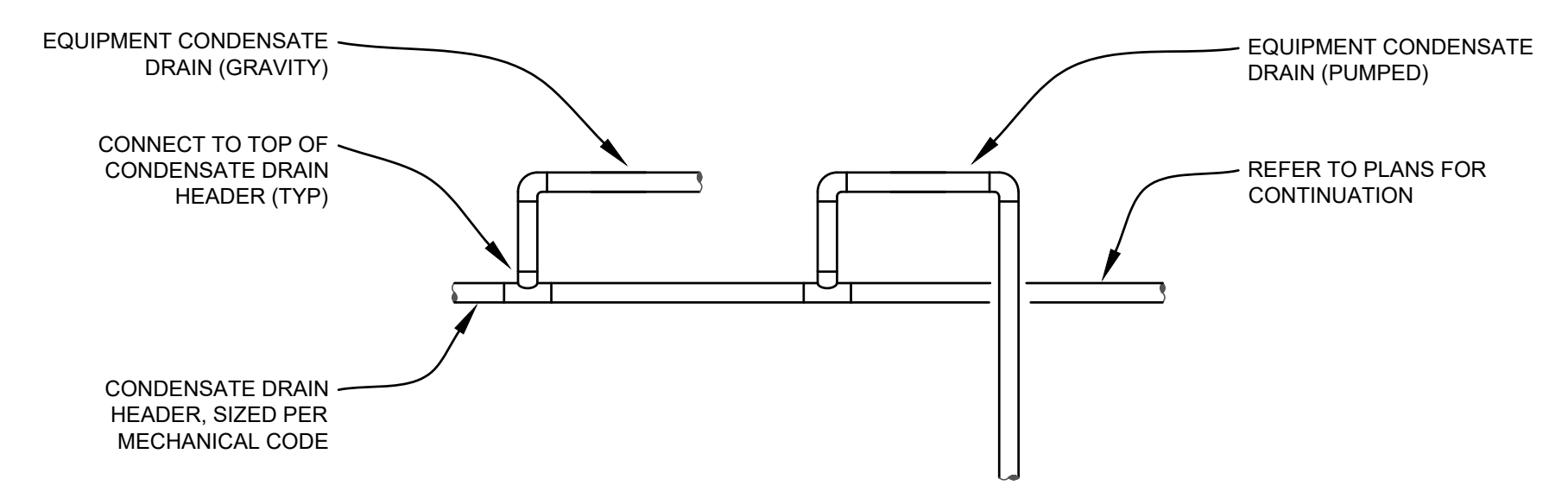
**A AIR HANDLER UNIT DETAIL**  
SCALE: NTA



**B CONDENSATE DRAIN DETAIL**  
SCALE: NTA

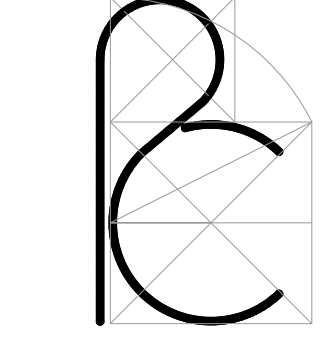


**C LOUVER INSTALLATION DETAIL**  
SCALE: NTA

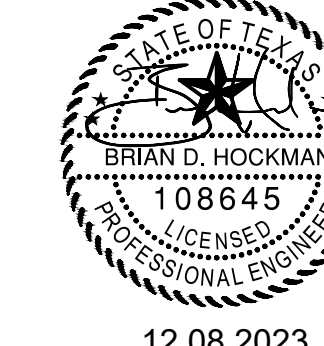


**D CONDENSATE DRAIN MANIFOLD PIPING DETAIL**  
SCALE: NTA





RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcarnales.architects@gmail.com



12.08.2023

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

AIR DEVICE SCHEDULE											
TAG	MANUFACTURER	MODEL	DUCT SIZE (IN)	NOM. FACE SIZE (IN)	MAX AIRFLOW (CFM)	THROW (@80 FPM)	NC AT MAX AIRFLOW	MATERIAL	FINISH	MOUNTING	NOTES
<b>SUPPLY GRILLE</b>											
S-1	PRICE	ASPD	6"Ø	12x12	120	8	NC<10	ALUMINUM	WHITE	SURFACE	1, 2, 3, 5, 6
S-2	PRICE	SPD	6"Ø	24x24	120	5	NC<10	STEEL	WHITE	LAY-IN	1, 2, 3, 5, 6
S-3	PRICE	SPD	8"Ø	24x24	245	8	NC<10	STEEL	WHITE	LAY-IN	1, 2, 3, 5, 6
S-4	PRICE	SPD	10"Ø	24x24	380	10	18	STEEL	WHITE	LAY-IN	1, 2, 3, 5, 6
<b>RETURN GRILLE</b>											
R-1	PRICE	80	22x10	24x12	670	-	29	ALUMINUM	WHITE	LAY-IN	1, 2, 3, 4
R-2	PRICE	80	22x22	24x24	1245	-	26	ALUMINUM	WHITE	LAY-IN	1, 2, 3, 4
<b>EXHAUST GRILLE</b>											
E-1	TITUS	3FL	6x6	8x8	90	-	19	ALUMINUM	WHITE	SURFACE	1, 2, 3, 4

**NOTES:**  
(1) COORDINATE WITH ARCHITECTURAL DRAWINGS FOR REQUIRED MOUNTING TYPES. PROVIDE LAY-IN IN ACOUSTIC CEILING, CONCEALED IN METAL CEILING, SURFACE IN GYP.  
(2) COORDINATE WITH ARCHITECT AND GC FOR FINAL COLOR OF AIR DEVICE.  
(3) AIR DEVICES FROM ALTERNATE MANUFACTURER EQUAL TO SCHEDULED MODELS ARE ACCEPTABLE (PRICE, METAL/AIRE, ETC.).  
(4) AIR DEVICES LOCATED IN INACCESSIBLE CEILINGS TO BE PROVIDED WITH FACE OPERABLE OPPOSED BLADE AIR DAMPERS.  
(5) AIR DEVICES LOCATED IN INACCESSIBLE CEILINGS TO BE PROVIDED WITH REMOTE OPERABLE OPPOSED BLADE AIR DAMPERS.  
(6) PLAQUE AIR DEVICES TO BE PROVIDED WITH BACKPAN INSULATION.

EXHAUST FAN SCHEDULE												
TAG	MANUFACTURER	MODEL	SERVICE	LOCATION	FAN TYPE	DRIVE TYPE	AIR VOLUME (CFM)	EXT. STATIC PRESSURE (IN WG)	ELEC POWER	HP	WEIGHT (LBS)	NOTES
EF-01	GREENHECK	SQ-90-VG	REFER TO PLANS	INLINE	CENTRIFUGAL	DIRECT	250	0.3	120/60/1	1/10	49	(1, 2, & 3)

**NOTES:**  
(1) FANS PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.  
(2) COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION AND WIRING OF DISCONNECTING MEANS. ELECTRICAL TO PROVIDE 24/7 TIMECLOCK TO OPERATE DURING OCCUPIED HOURS.  
(3) PROVIDE WITH MANUFACTURER'S SPRING HANGING ISOLATORS, GRAVITY BACKDRAFT DAMPER, INTEGRAL FAN SPEED CONTROLLER, AND THERMAL OVERLOAD PROTECTION.  
(4) ALTERNATE MANUFACTURERS: COOK, METAL/AIRE

**ACCESSORIES:**  
(1) NEMA-3R DISCONNECT SWITCH PROVIDED WITH EQUIPMENT, WIRED BY EC

SPLIT SYSTEM SCHEDULE			
TAG	MANUFACTURER	MODEL	NOTES
<b>INDOOR UNIT</b>			
FCU-01	DAIKIN	DMVT60DP1400*	FCU-01
FCU-02	DAIKIN	DMVT42CP1400*	FCU-02
FCU-03	DAIKIN	FDMQ12RVJU	FCU-03
<b>OUTDOOR UNIT</b>			
HP-01	DAIKIN	HP-01	HP-01
HP-02	DAIKIN	HP-02	HP-02
HP-03	DAIKIN	HP-03	HP-03

**NOTES / ACCESSORIES:**  
(1) NEMA 1 DISCONNECT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR  
(2) MANUFACTURER CONTROLS  
(3) AUXILIARY DRAIN PAN WITH FLOAT SWITCH W/ AUTOMATIC SHUT DOWN UPON DETECTION OF WATER  
(4) FILTER RACK AND FILTER  
(5) MANUFACTURER'S 7-DAY PROGRAMMABLE THERMOSTAT  
(6) COORDINATE DISCONNECT SIZE AND REQUIREMENTS WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL.  
(7) PROVIDE LOCKING REFRIGERANT PORT CAPS  
(8) HAIL GUARDS, ANTI-SHORT CYCLE TIMER, HIGH PRESSURE SWITCH  
(9) FCU POWERED THROUGH OUTDOOR UNIT  
(10) MECHANICAL CONTRACTOR TO PROVIDE APPROPRIATELY SIZED CONDENSING UNIT WALL MOUNTING KIT

OA SCHEDULE						
Outside air shall be provided in accordance with ASHRAE Standard 62.1-2022 as follows:						
	Rp	Pz	Ra	Az	Vbz	Voz
BREAK AREA	5	25	0.12	1,000		
CORRIDOR	0	0	0.06	1,000		
OFFICE SPACE	5	5	0.06	1,000		
STORAGE	0	0	0.06	1,000		
Vbz = RpPz + RaAz Ez = 0.8 Voz = Vbz / Ez						
Room	Qty.	Rp (CFM/P)	Pz (People)	Ra (CFM/SF)	Az (SF)	Vbz (CFM)
<b>FCU-01</b>						
LOBBY	1	5	8	0.06	754	85.2
OFFICE	1	5	3	0.06	308	33.5
BREAK ROOM*	1	5	0	0.06	100	6.0
Total			11.0		1162	155.9
						<b>PROVIDED 160.0</b>
<b>FCU-02</b>						
OFFICE	1	5	2	0.06	256	25.4
STORAGE	1	0	0	0.06	197	11.8
CORRIDOR	1	5	0	0.06	114	6.8
CONFERENCE ROOM*	1	5	8	0.06	225	53.5
Total			10.0		792	88.5
						<b>PROVIDED 100.0</b>
<b>FCU-03</b>						
OFFICE	1	5	2	0.06	238	24.3
Total			2.0		238	30.4
						<b>PROVIDED 35.0</b>
*Intermittent occupancy reduced 50%					<b>TOTAL OA REQUIRED</b>	<b>274.7</b>
					<b>TOTAL OA PROVIDED</b>	<b>295.0</b>

OUTSIDE AIR INTAKE HOOD							
TAG	MANUFACTURER	MODEL	CFM	E.S.P. (IN.)	THROAT VELOCITY (FT/MIN)	THROAT AREA (SQ. FT.)	NOTES
OAI-01	GREENHECK	GRSI-10	345, 310	0.030, 0.024	421, 378	0.8	(1-3)

**ACCESSORIES:**  
(1) 12" ROOF CURB, TO BE FLASHED IN TO ROOF. COORDINATE WITH ROOFING CONTRACTOR FOR ROOF CURB INSTALLATION.  
(2) INSECT SCREEN  
(3) PROVIDE INLINE BACKDRAFT DAMPER AT THROAT OF INTAKE DUCTWORK.

Revisions  
 1 IFP: 2023.12.08

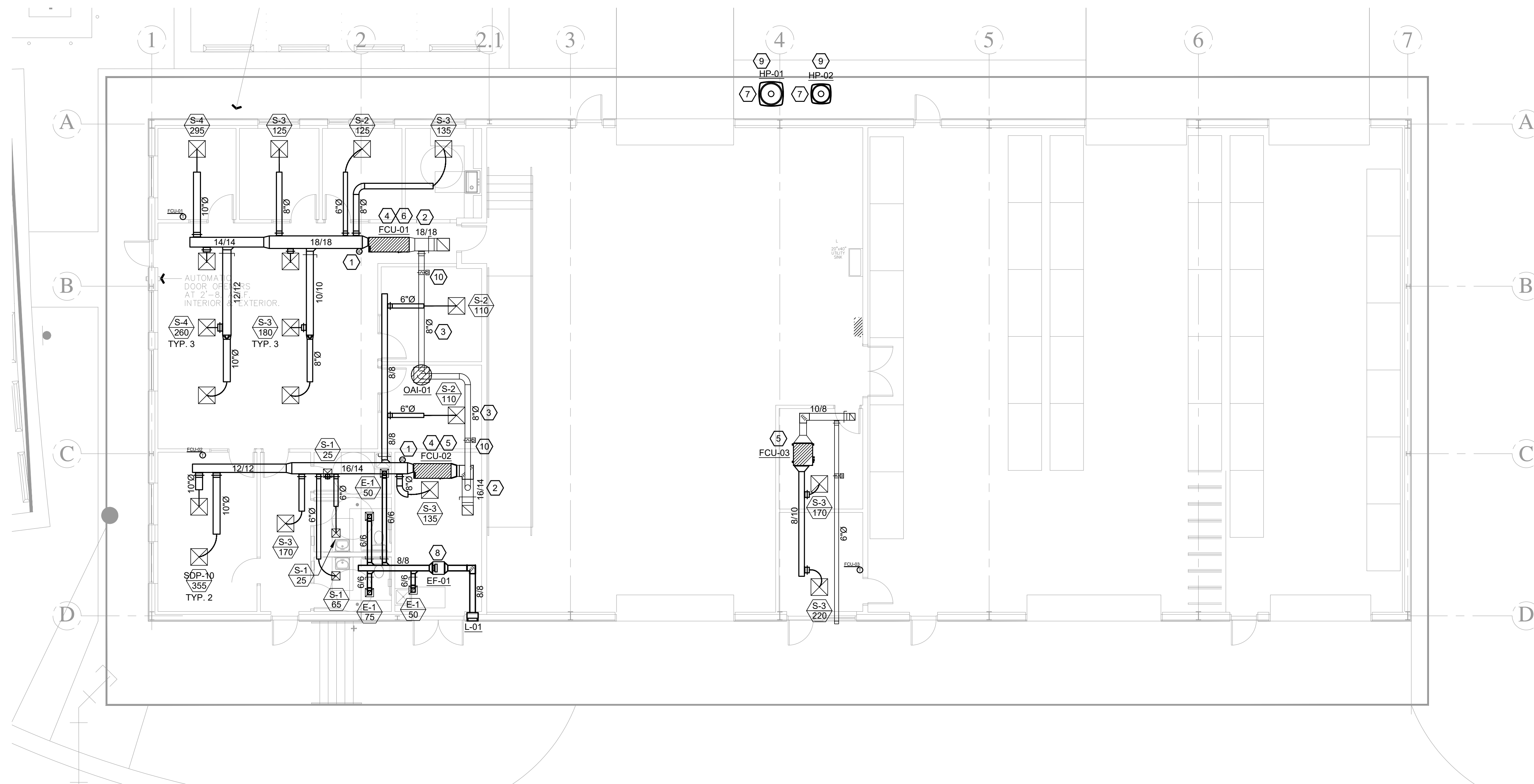
**hollingsworth pack**  
 Design & Construction Consultants  
 3801 S. Congress Suite 110 - Austin, TX 78704  
 PH(512) 275-0060 TX FIRM # 12747

12/08/2023

MECHANICAL SCHEDULES

M0.4





1 MECHANICAL HVAC PLAN

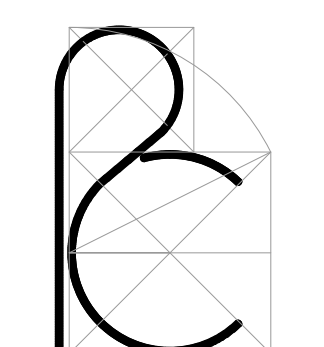
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

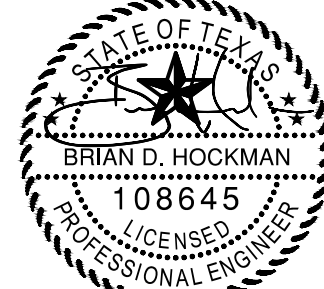
- A. REFER TO MECHANICAL COVER SHEET DRAWING FOR SYMBOLS, ABBREVIATIONS, SPECIFICATIONS, AND ADDITIONAL INFORMATION.
- B. DUE TO DRAWING SCALE IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.
- C. FINAL LOCATION OF ALL NEW EQUIPMENT PRIOR TO EQUIPMENT INSTALLATION SHALL BE APPROVED BY BUILDING OWNER OR PROJECT MECHANICAL ENGINEER.
- D. MAINTAIN CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ALL NEW EQUIPMENT.
- E. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FINAL AIR DEVICE/LOUVER COLORS TO MATCH ARCHITECTURAL CEILING FINISHES.
- F. COORDINATE INSTALLATION OF ALL EQUIPMENT, DUCTWORK, AIR DEVICES, AND ACCESSORIES WITH ALL OTHER TRADES SO AS TO AVOID INSTALLATION CONFLICTS.

KEYED NOTES:

- 1. PROVIDE AND INSTALL DUCT SMOKE DETECTOR ON SUPPLY AIR DUCT BEFORE FIRST BRANCH DUCT CONNECTION. UPON DETECTION OF SMOKE, UNIT SERVED SHALL AUTOMATICALLY SHUT DOWN. ACTIVATION OF DUCT SMOKE DETECTOR SHALL INITIATE A VISUAL AND AUDIBLE AT A CONSTANTLY ATTENDED LOCATION AND SHALL PERFORM THE INTENDED FIRE SAFETY FUNCTION IN ACCORDANCE WITH THE 2015 IFC 907.3.1 AND THE IMC. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR AND FIRE ALARM CONTRACTOR.
- 2. PROVIDE "Y" RETURN AIR DUCT AT UNIT INLET CONNECTION WITH OPENING ON TOP OF DUCT. COVER OPENING WITH METAL MESH SCREEN. REFER TO PLANS FOR SIZING.
- 3. NEW ROUND OUTSIDE AIR DUCT TIED INTO RETURN AIR DUCT TO AIR HANDLER. SIZE AS INDICATED ON PLANS. PROVIDE MANUAL VOLUME BALANCING DAMPERS AND MOTORIZED BACKDRAFT DAMPER INTERLOCKED WITH FAN COIL UNIT SERVED. BALANCE PER AHU SCHEDULE.
- 4. ROUTE REFRIGERANT PIPING TO CONDENSING UNITS LOCATED ON EXTERIOR OF BUILDING.
- 5. PROVIDE TRAP AT UNIT DRAIN CONNECTION AND ROUTE 3/4" INSULATED CONDENSATE DRAIN OVERHEAD, DOWN IN WALL, AND TERMINATE AT MOP UTILITY SINK RIM. PROVIDE MINIMUM 1" AIR GAP BETWEEN RIM OF MOP SINK AND DRAIN PIPING.
- 6. PROVIDE TRAP AT UNIT DRAIN CONNECTION AND ROUTE 3/4" INSULATED CONDENSATE DRAIN OVERHEAD, DOWN IN WALL, AND TERMINATE AT BREAK ROOM SINK TAILPEICE. COORDINATE WITH PLUMBING CONTRACTOR FOR FINAL TERMINATION.
- 7. REFRIGERANT PIPING EXPOSED TO THE ELEMENTS SHALL BE PROVIDED WITH ALUMINUM METAL JACKET FOR PROTECTION. PROVIDE UNISTRUT PIPE SUPPORTS EQUAL TO PHP MODEL SSS-C.
- 8. INLINE EXHAUST FAN WITH TERMINATION AT WALL MOUNTED LOUVER. COORDINATE WITH ARCHITECT FOR FLASHING OF LOUVER. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
- 9. CONDENSING UNITS TO BE MOUNTED ON RAISED CONCRETE HVAC PAD THAT EXTENDS A MINIMUM OF 4" BEYOND FOOTPRINT OF MECHANICAL EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR FOR MOUNTING OF ELECTRICAL DISCONNECTS.
- 10. INSTALL MOTORIZED DAMPER FOR OUTSIDE AIR INTAKE DUCT. INTERLOCK WITH FCU-01, 02. MOTORIZED DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12.08.2023

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.

9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.

Revisions	
△	IIP: 2023.12.08

**hollingsworth pack**  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

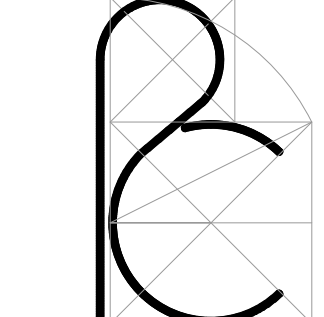
MECHANICAL  
HVAC PLAN

M1.1









RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

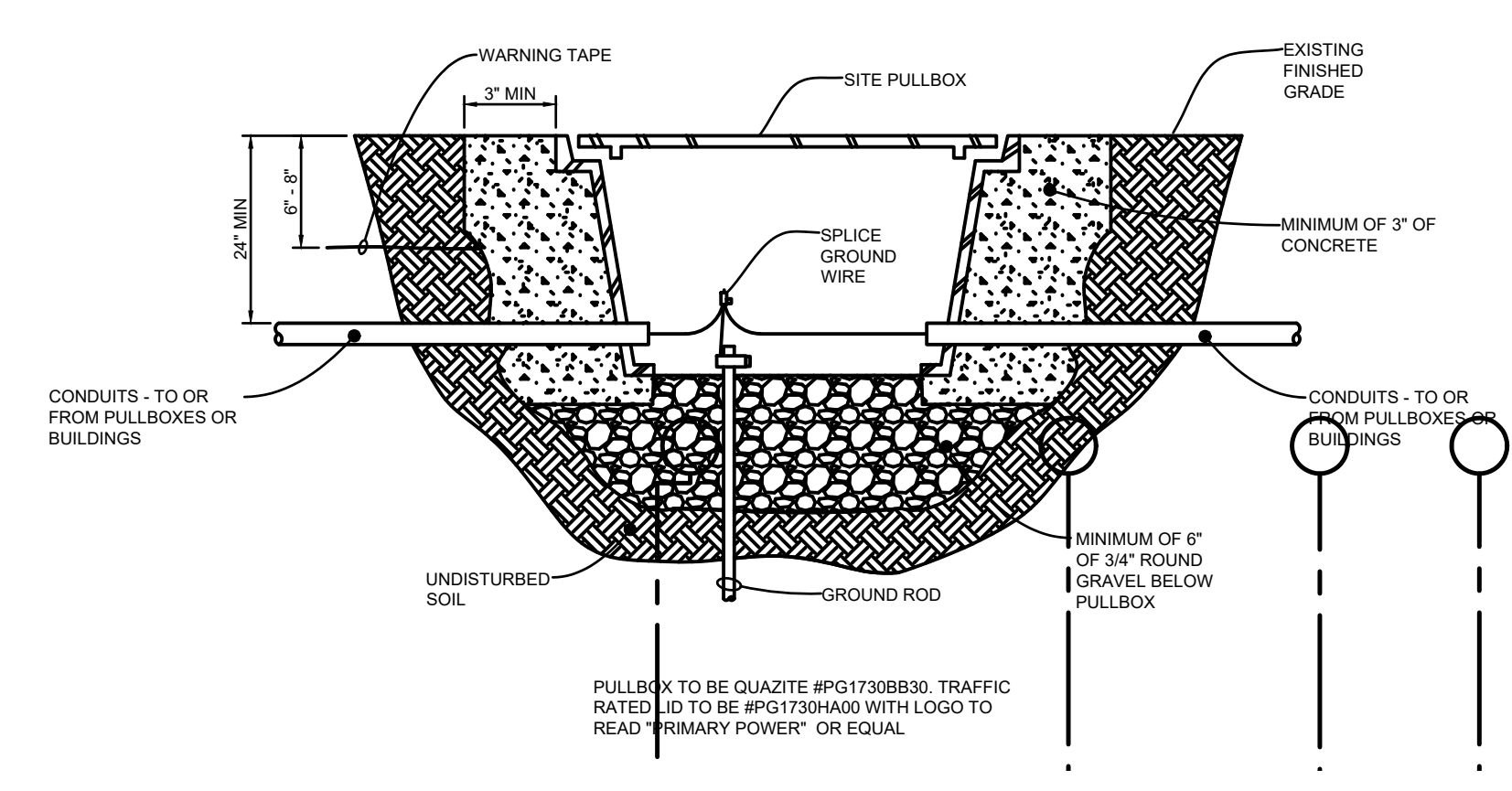
Revisions  
IIP: 2023.12.08

hollingsworth pack  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

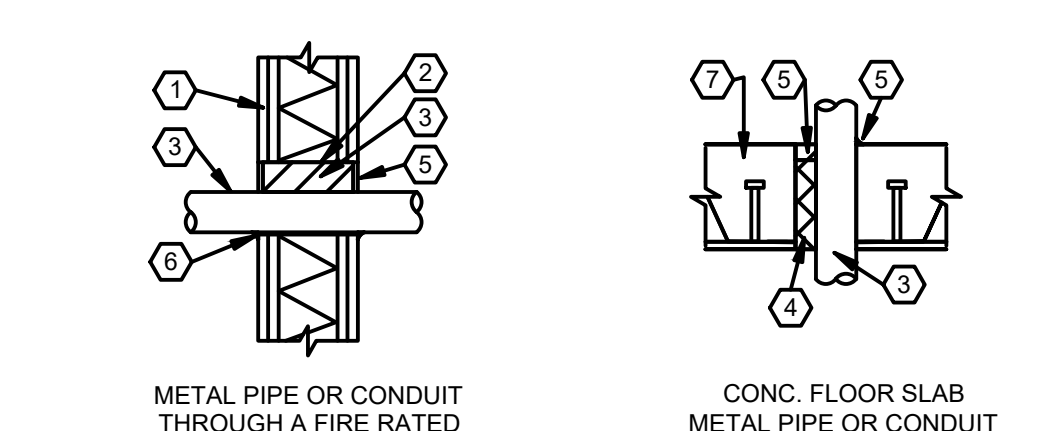
12/08/2023

ELECTRICAL  
DETAILS

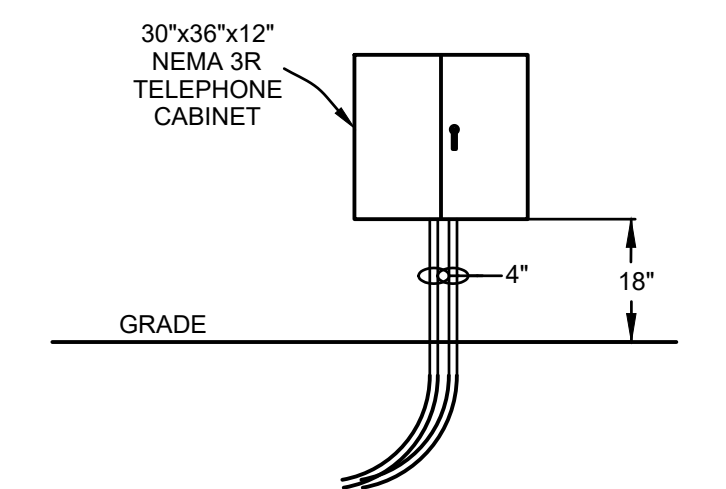
E0.2



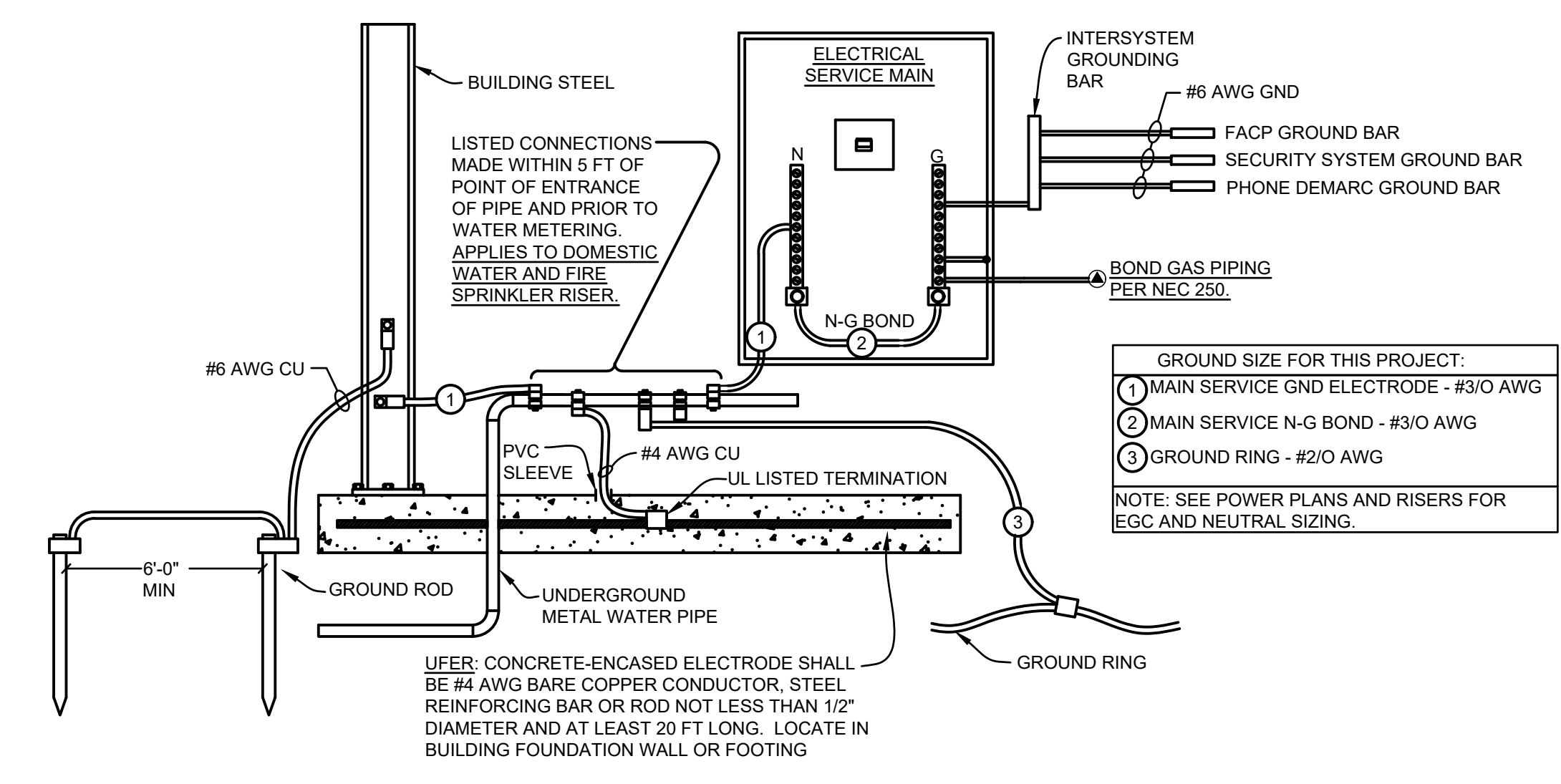
**1 IN-GRADE PULL BOX DETAIL**  
SCALE: N.T.S.



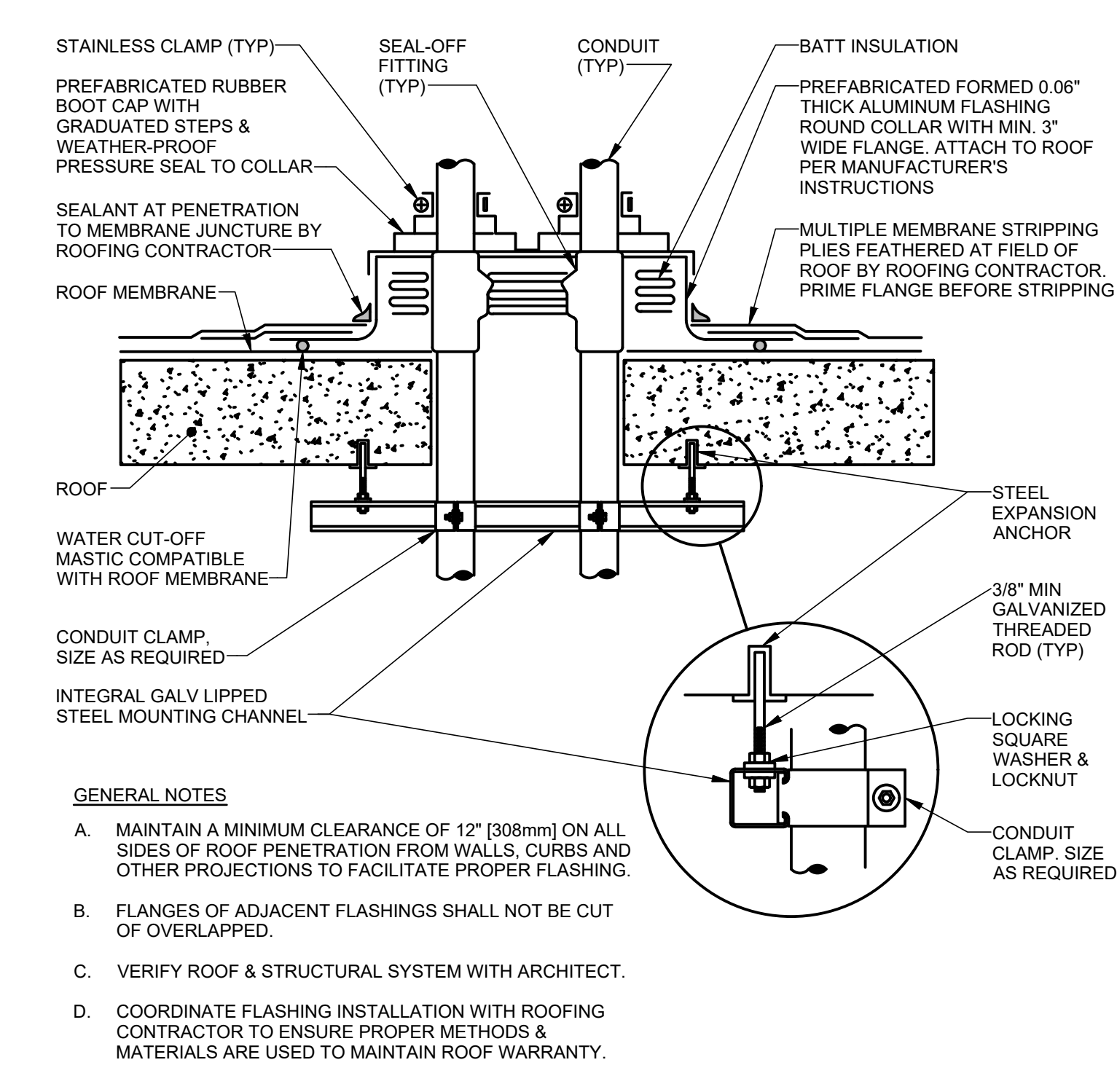
**2 FIRE STOPPING PENETRATION DETAILS**  
SCALE: N.T.S.



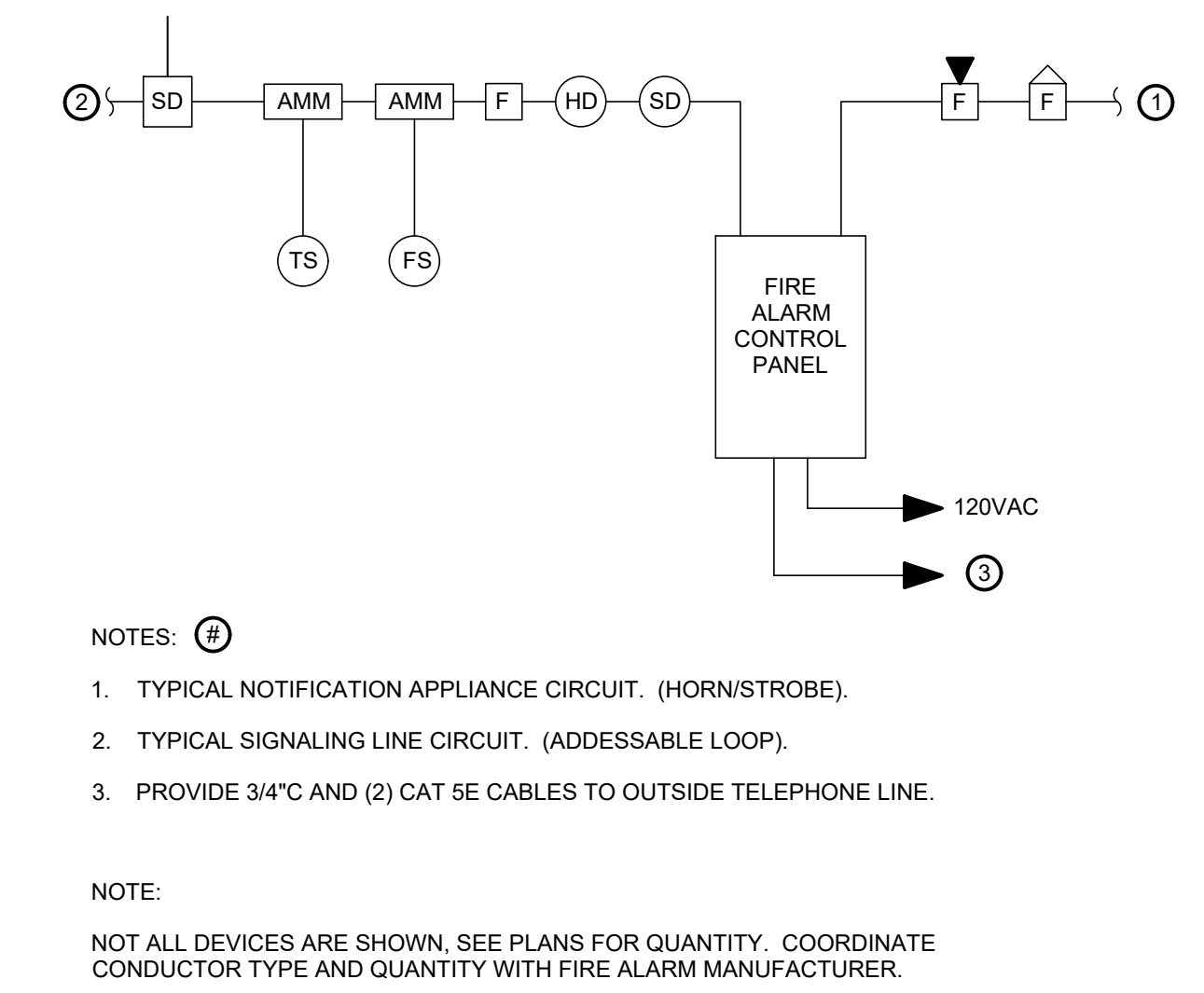
**3 TELE/DATA RISER**  
SCALE: N.T.S.



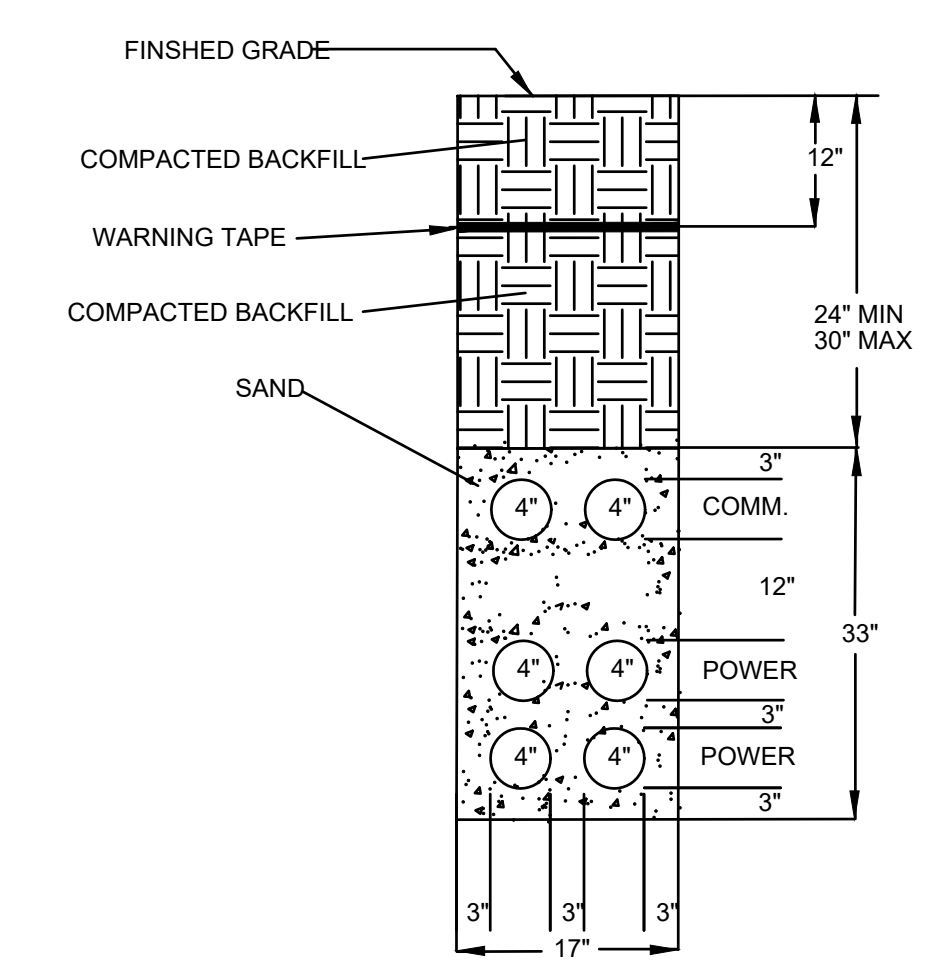
**4 BLDG GROUNDING SYSTEM DETAIL**  
SCALE: N.T.S.



**5 ROOF PENETRATION DETAIL**  
SCALE: N.T.S.

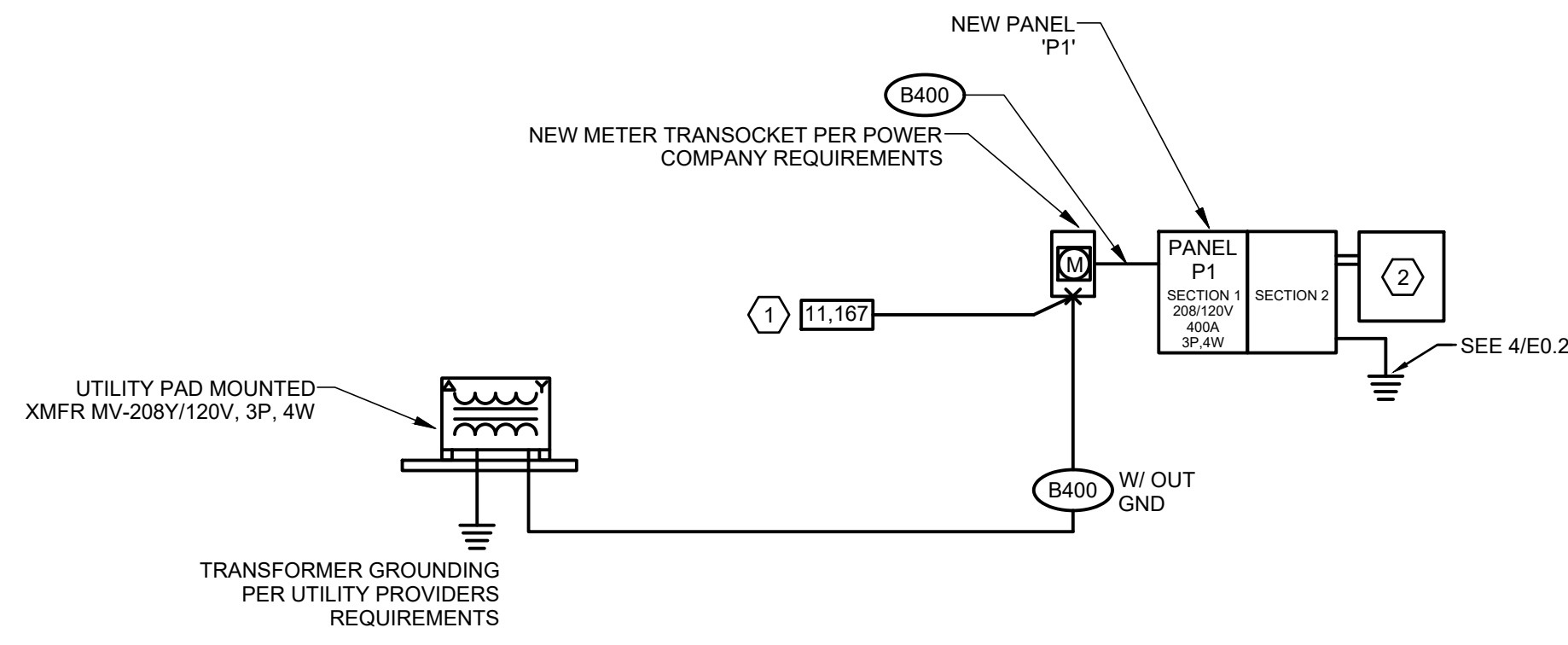


**6 FIRE ALARM RISER DIAGRAM**  
SCALE: N.T.S.



**7 SECONDARY TRENCH WITH TELECOM**  
SCALE: N.T.S.





1 ONE-LINE DIAGRAM

SCALE: N.T.S.

FEEDER SCHEDULE (COPPER)							FEEDER SCHEDULE (ALU)						
AMPS	3 COND	4 COND	RUNS	CONDUCTOR SIZE	GROUND SIZE	CONDUIT SIZE	AMPS	3 COND	4 COND	RUNS	CONDUCTOR SIZE	GROUND SIZE	CONDUIT SIZE
20A	A20	B20	1	12 AWG	12 AWG	3/4"	205A	A200	B200	1	250 kcmil	4 AWG	2 1/2"
30A	A30	B30	1	10 AWG	10 AWG	3/4"	230A	A225	B225	1	300 kcmil	2 AWG	3"
40A	A40	B40	1	8 AWG	10 AWG	1"	250A	A250	B250	1	350 kcmil	2 AWG	3"
55A	A55	B55	1	6 AWG	10 AWG	1"	310A	A300	B300	2	3/0 AWG	2 AWG	2"
70A	A70	B70	1	4 AWG	8 AWG	1 1/4"	360A	A350	B350	2	4/0 AWG	1 AWG	2 1/2"
85A	A85	B85	1	3 AWG	8 AWG	1 1/4"	410A	A400	B400	2	250 kcmil	1 AWG	2 1/2"
95A	A100	B100	1	2 AWG	8 AWG	1 1/4"	500A	A500	B500	2	350 kcmil	1/0 AWG	3"
110A	A125	B125	1	1 AWG	6 AWG	1 1/2"	615A	A600	B600	2	500 kcmil	2/0 AWG	3 1/2"
150A	A150	B150	1	1 1/0 AWG	6 AWG	1 1/2"	810A	A800	B800	3	400 kcmil	3/0 AWG	3"
175A	A175	B175	1	2 / 0 AWG	6 AWG	2"	1000A	A1000	B1000	4	350 kcmil	4/0 AWG	3"
200A	A200	B200	1	3 / 0 AWG	6 AWG	2"	1610A	A1600	B1600	6	400 kcmil	350 kcmil	3"
230A	A225	B225	1	4 / 0 AWG	4 AWG	2 1/2"	2000A	A2000	B2000	8	350 kcmil	400 kcmil	3 1/2"
255A	A250	B250	1	250 kcmil	4 AWG	3"	2500A	A2500	B2500	10	350 kcmil	600 kcmil	3 1/2"
285A	A300	B300	1	300 kcmil	4 AWG	3"	PROVIDE A BID LINE ITEM TO PROVIDE ALUMINUM FEEDERS INSTEAD OF COPPER FOR 200A AND HIGHER.						
350A	A350	B350	2	2 / 0 AWG	3 AWG	2"							
400A	A400	B400	2	3 / 0 AWG	3 AWG	2"							

LUMINAIRE SCHEDULE										
TYPE	MANUFACTURER	CATALOG NO.	LAMPS			VOLTS	MOUNTING	REMARKS		
			NO.	TYPE	WATTS					
A	LITHONIA	CPX 2X2 3200LM 80CRI 35K SWL MIN10 ZT MVOLT	1	LED	15.6	15.6	UNV	RECESSED	2X2 LED PANEL ADD "E10WCP" FOR EMERGENCY BATTERY PACK 3500K LED PROVIDED	
B	LITHONIA	CPHB 12000LM SEF GCL MD MVOLT GZ10 35K 80CRI NLTAR2 RMSOD45 DWH	1	LED	88	88	UNV	SUSPENDED	HIGH BAY LED WITH INTEGRAL OCCUPANCY MOTION SENSOR ADD "E20WCP" FOR EMERGENCY BATTERY PACK 3500K LED PROVIDED	
C	LITHONIA	CPX 2X4 5000LM 80CRI 35K SWL MIN10 ZT MVOLT	1	LED	40	40	UNV	RECESSED	2X4 LED PANEL ADD "E10WCP" FOR EMERGENCY BATTERY PACK 3500K LED PROVIDED	
WE	SPECLIGHT	EB12140V 15L 40K EX F1J F01 CP104 PA901212 BZ WLKA	1	LED	10	10	UNV	WALL	EXTERIOR EMBLEM - SIGN LIGHTS INCLUDE EMERGENCY BATTERY PACK 4000K LED PROVIDED	
WP	LITHONIA	WDGE3 LED P3 40K 80CRI R3 MVOLT SRM	1	LED	71	71	UNV	WALL	4000K LED PROVIDED	
X	LITHONIA	EDG 1 REL	1	LED	3	3	UNV	SURFACE	LED EXIT SIGN CONTRACTOR TO CONFIRM MOUNTING CONFIGURATION	

NOTES:  
1. WHETHER INDICATED IN CATALOG NUMBER OR NOT, CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES AND MOUNTING HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.  
2. EXIT LIGHTS AND EMERGENCY LUMINAIRES SHALL HAVE BATTERY PACK FOR 90 MINUTES (MIN) OF EMERGENCY OPERATION AND VISIBLE BATTERY STATUS INDICATOR  
3. EXIT LIGHTS AND EMERGENCY LUMINAIRES SHALL SWITCH TO BATTERY AUTOMATICALLY UPON SENSING PRIMARY POWER LOSS.  
4. COORDINATE FIXTURE COLOR SELECTION WITH ARCHITECT PRIOR TO PURCHASE.  
5. ALL OUTDOOR FIXTURE TO BE FULL CUT-OFF

ELECTRICAL EQUIPMENT SCHEDULE						
EQUIPMENT DESCRIPTION	OCDP RATING (AMPS)	VOLTAGE	PH	DISCONNECT TYPE	ENCLOSURE RATING	REMARKS
EF-1	20/1	120	1	MOTOR SW	15	
EWHL-1	20/1	120	1	DISC SW	30	
CP-1	20/1	120	1	MOTOR SW	15	
HP-1	50/1	208	1	DISC SW	60	
HP-2	35/1	208	1	DISC SW	60	
HP-3	15/1	208	1	DISC SW	30	
FCU-1	35/1	208	1	DISC SW	60	
FCU-2	35/1	208	1	DISC SW	60	
FCU-3	-	208	1	MOTOR SW	15	POWERED THROUGH HP-3

NOTES:  
1. PROVIDE ALL DISCONNECTS WITH LOCK OUT TAG OUT PROVISIONS  
2. MOUNT DISCONNECTS TO STRUCTURE ADJACENT TO EQUIPMENT. DO NOT MOUNT TO EQUIPMENT.  
3. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION  
4. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS AS NOTED ON PLANS

P1														
PANEL RATING (A): 400A MAIN CIRCUIT BREAKER (A): 400A VOLTAGE (V): 208 PHASE: 3 WIRE: 4 FEEDER SIZE: REFER TO ONE LINE							MINIMUM AIC RATING: 14 KAIC BUSING: COPPER MOUNTING: SURFACE NEMA ENCLOSURE: NEMA 3R LOCATION: REFER TO PLANS FED FROM: REFER TO ONE LINE							
SERVING	CKT NO.	CONN LOAD	WIRE SIZE	GROUND SIZE	CONDUIT SIZE	BRKR AMP/ POLE	BRKR AMP/ POLE	CONDUIT SIZE	GROUND SIZE	WIRE SIZE	CONN LOAD	CKT NO.	SERVING	
LIGHTING OFFICE	1	984	#12	#12	3/4"	20/1 A	20/1 A	3/4"	#12	#12	1080	2	RECEPS 102/103	
RECEPS EXTERIOR	3	1080	#12	#12	3/4"	20/1 B	20/1 B	3/4"	#12	#12	1260	4	RECEPS 104/105	
LIGHTING WH1	5	792	#12	#12	3/4"	20/1 C	20/1 C	3/4"	#12	#12	900	6	RECEPS 101	
LIGHTING WH1-114-115	7	336	#12	#12	3/4"	20/1 A	20/1 A	3/4"	#12	#12	1000	8	WORKSTATIONS 101	
LIGHTING WH2	9	792	#12	#12	3/4"	20/1 B	20/1 B	3/4"	#12	#12	1000	10	WORKSTATIONS 101	
LIGHTING WH3	11	528	#12	#12	3/4"	20/1 C	20/1 C	3/4"	#12	#12	1000	12	WORKSTATIONS 101	
RECEPS 106/107	13	1260	#12	#12	3/4"	20/1 A	20/1 A	3/4"	#12	#12	1000	14	WORKSTATIONS 101	
RECEPS 113	15	1260	#12	#12	3/4"	20/1 B	20/1 B	3/4"	#12	#12	500	16	WORKSTATIONS 101	
RECEPS 108/109/110/111	17	720	#12	#12	3/4"	20/1 C	20/1 C	3/4"	#12	#12	500	18	WORKSTATIONS 101	
SERVER	19	1500	#12	#12	3/4"	20/1 A	20/1 A	3/4"	#12	#12	500	20	WORKSTATIONS 101	
FORKLIFT CHARGER	21	2880	#10	#10	3/4"	30/3 B	20/1 B	3/4"	#12	#12	500	22	WORKSTATIONS 101	
-	23	2880	#10	-	-	-	C	20/1	3/4"	#12	#12	1080	24	RECEPS 114
-	25	2880	#10	-	-	-	A	20/1	3/4"	#12	#12	1080	26	RECEPS 115/116
RECEPS 114	27	1080	#12	#12	3/4"	20/1 B	20/1 B	3/4"	#12	#12	720	28	RECEPS 117/118	
RECEPS 114	29	540	#12	#12	3/4"	20/1 C	20/1 C	3/4"	#12	#12	500	30	FCP	
RECEPS 114	31	1440	#12	#12	3/4"	20/1 A	20/1 A	3/4"	#12	#12	1200	32	MICROWAVE 105	
SPARE	33	0	-	-	-	20/1 B	20/1 B	-	-	-	0	34	SPARE	
SPARE	35	0	-	-	-	20/1 C	20/1 C	-	-	-	0	36	SPARE	
SPARE	37	0	-	-	-	20/1 A	20/1 A	-	-	-	0	38	SPARE	
SPARE	39	0	-	-	-	20/1 B	20/1 B	-	-	-	0	40	SPARE	
SPARE	41	0	-	-	-	20/1 C	20/1 C	-	-	-	0	42	SPARE	
SPARE	43	394	#12	#12	3/4"	20/1 A	20/1 A	-	-	-	0	44	SPARE	
LIGHTING EXTERIOR	45	0	-	-	-	20/1 B	20/1 B	-	-	-	0	46	SPARE	
SPARE	47	0	-	-	-	20/1 C	20/1 C	-	-	-	0	48	SPARE	
SPARE	49	0	-	-	-	20/1 A	20/1 A	-	-	-	0	50	SPARE	
SPARE	51	0	-	-	-	20/1 B	20/1 B	-	-	-	0	52	SPARE	
SPARE	53	0	-	-	-	20/1 C	20/1 C	-	-	-	0	54	SPARE	
SPARE	55	0	-	-	-	20/1 A	20/1 A	-	-	-	0	56	SPARE	
SPARE	57	0	-	-	-	20/1 B	20/1 B	-	-	-	0	58	SPARE	
SPARE	59	0	-	-	-	20/1 C	20/1 C	-	-	-	0	60	SPARE	
SPARE	61	0	-	-	-	20/1 A	20/1 A	-	-	-	0	62	SPARE	
SPARE	63	0	-	-	-	20/1 B	20/1 B	-	-	-	0	64	SPARE	
SPARE	65	0	-	-	-	20/1 C	20/1 C	-	-	-	0	66	SPARE	
SPARE	67	0	-	-	-	20/1 A	50/2	1"	#10	#6	4160	68	WELDER	
WELDER	69	4160	#6	#10	1"	50/2 B	-	-	-	#6	4160	70	-	
-	71	4160	#6	-	-	-	C	20/1	3/4"	#12	#12	100	72	EF-01
FCU-01	73	3152	#8	#10	3/4"	35/2 A	20/1 A	3/4"	#12	#12	250	74	CP-1	
-	75	3152	#8	-	-	-	B	30/1	3/4"	#10	#10	2000	76	EWHL-1
HP-01	77	3370	#6	#10	1"	50/2 C	30/2	3/4"	#10	#10	2933	78	FCU-02	
-	79	3370	#6	-	-	-	A	-	-	#10	2933	80	-	
HP-03	81	847	#12	#12	3/4"	15/2 B	35/2	3/4"	#10	#8	2881	82	HP-02	
-	83	847	#12	-	-	-	C	-	-	#8	2881	84	-	
CONNECTED LOAD							DEMAND LOAD							
A	B	C	3 PH			A	B	C	3 PH					
LIGHTING (VA)	1714	792	1320	3826		2143	990	1650	4783					
RECEPTACLE (VA)	7360	7400	5240	20000		7360	7400	5240	15000					
CONTINUOUS (VA)	13540	15700	9540	38780		16925	19625	11925	48475					
NON-CONTINUOUS (VA)	0	0	0	0		0	0	0	0					
HVAC/MOTOR (VA)	4705	4480	7731	16916		5548	5200	8574	19321					
KITCHEN (VA)	1200	0	0	0		780	0	0	0					
<b>TOTAL (KVA)</b>	<b>28.5</b>	<b>28.4</b>	<b>23.8</b>	<b>80.7</b>		<b>32.8</b>	<b>33.2</b>	<b>27.4</b>	<b>88.4</b>				<b>245.27</b>	

ONE-LINE GENERAL NOTES:

- A. ALL EQUIPMENT SHOWN GRAYSCALE SHALL BE PROVIDED BY TENANT.
- B. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL EQUIPMENT SHOWN AS NEW, UNO.
- C. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE NEW ELECTRICAL SERVICE WITH UTILITY AND INCLUDE IN BID.
- D. PROVIDE ARC FLASH LABELING FOR ALL NEW EQUIPMENT AS REQUIRED PER NEC ARTICLE 110.16 AND NFPA-70E.
- E. ALL CONDUCTORS SHALL BE COPPER TYPE THWN-2 (EXTERIOR).
- F. ALL GROUNDING SHALL BE IN ACCORDANCE WITH NEC REQUIREMENTS.
- G. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL SITE REQUIREMENTS.

ONE-LINE KEYED NOTES (x):

- 1. UNLESS SUPPLIED BY THE UTILITY COMPANY, THE FAULT CURRENT LEVEL SHALL BE DETERMINED FROM TABLE 1 "SHORT-CIRCUIT CURRENTS AVAILABLE FROM VARIOUS SIZE TRANSFORMERS" (BASED ON WORST CASE IMPEDANCE) IN BUSMANS ELECTRICAL PROTECTION HANDBOOK.
- 2. EXTERIOR LUMINAIRES SHALL BE SWITCHED BY A CONTACTOR CONTROLLED BY A 24 HOUR, 7 DAY ASTRONOMICAL TIME CLOCK WITH HOLIDAY SCHEDULING IN CONJUNCTION WITH A ROOF MOUNTED PHOTOCELL. CONTACTOR AND TIME CLOCK TO BE MOUNTED ADJACENT TO PANEL.

RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

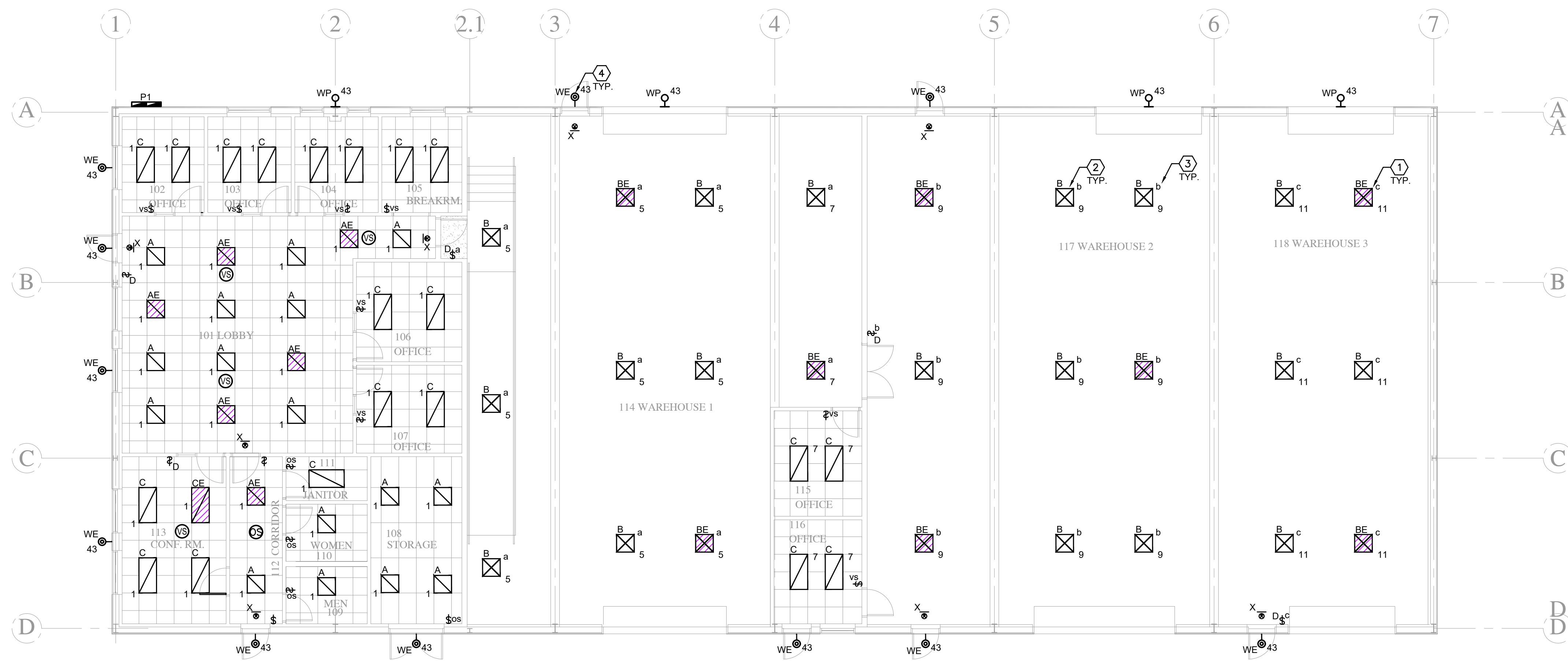
Revisions  
Δ IFP: 2023.12.08

hollingsworth pack  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

ELECTRICAL  
ONE LINE &  
SCHEDULES  
**E0.3**





1 ELECTRICAL LIGHTING PLAN

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

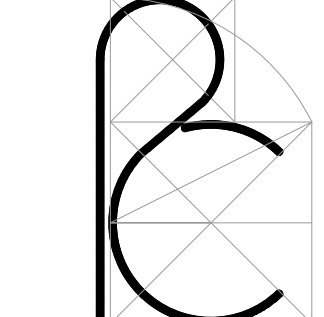
GENERAL NOTES:

- A. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL LIGHTING INSTALLATION REQUIREMENTS.
- B. CONTRACTOR SHALL COORDINATE LUMINAIRE LOCATIONS WITH THE ARCHITECTURAL ELEVATIONS AND RCP PRIOR TO INSTALLATION. VERIFY LOCATIONS AND MOUNTING METHODS AND MATERIALS THAT ARE UNCLEAR PRIOR TO ORDERING OR INSTALLING LUMINAIRES.
- C. CIRCUIT NUMBER AND FIXTURE TAG SHOWN ADJACENT TO EACH LUMINAIRE.
- D. CIRCUIT EXIT SIGNS (UNSWITCHED) WITH THE ADJACENT LIGHTING IN THE ROOM.
- E. LIGHTING CONTROL SYSTEM TO INCLUDE ADDITIONAL RELAYS PER CONTROL ZONE FOR RECEPTACLE CONTROL, ACCORDING TO IECC 2021 C405.11. REFER TO SHEET E3.1 FOR CONTROLLED RECEPTACLE LAYOUT.
- F. UN. ALL CIRCUITS SHOWN ON THIS DRAWING WILL BE FED FROM PANEL 'P1'.

KEYED NOTES (X):

- 1. LUMINAIRES SHOWN HATCHED OR TAGGED "X" AND ALL EXIT SIGNS SHALL BE PROVIDED WITH INTEGRAL BATTERY PACKS FOR 90 MIN OF EMERGENCY OPERATION. PROVIDE WITH VISIBLE BATTERY STATUS INDICATOR. TYPICAL
- 2. HIGH-BAY LIGHTS SHALL BE PROVIDED WITH INTEGRAL SENSOR FOR CONTROLS. REFER TO LIGHTING FIXTURE SCHEDULE ON SHEET E0.3.
- 3. LOWER CASE LETTER ADJACENT TO LUMINAIRE INDICATES SWITCHLEG TO SERVE LUMINAIRE.
- 4. EXTERIOR LUMINAIRES SHALL BE SWITCHED BY A CONTACTOR CONTROLLED BY A 24 HOUR, 7 DAY ASTRONOMICAL TIME CLOCK WITH HOLIDAY SCHEDULING IN CONJUNCTION WITH A ROOF MOUNTED PHOTOCELL. CONTACTOR AND TIME CLOCK TO BE MOUNTED ADJACENT TO PANEL. WE FIXTURES MOUNTED AT 11'7" AND WP FIXTURES MOUNTED AT 16'10".

LIGHTING CONTROLS SYMBOLS LEGEND	
	WALL MOUNTED OCCUPANCY SENSOR (DUAL TECH)
	WALL MOUNTED VACANCY SENSOR WITH DIMMING
	CEILING MOUNTED OCCUPANCY SENSOR (DUAL TECH)
	CEILING MOUNTED VACANCY SENSOR WITH DIMMING
	CORNER MOUNTED OCCUPANCY SENSOR (DUAL TECH)
	CORNER MOUNTED VACANCY SENSOR WITH DIMMING



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12.08.2023

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
 9301 Hog Eye Road - Austin, Texas 78724  
 RC Architects, Inc.

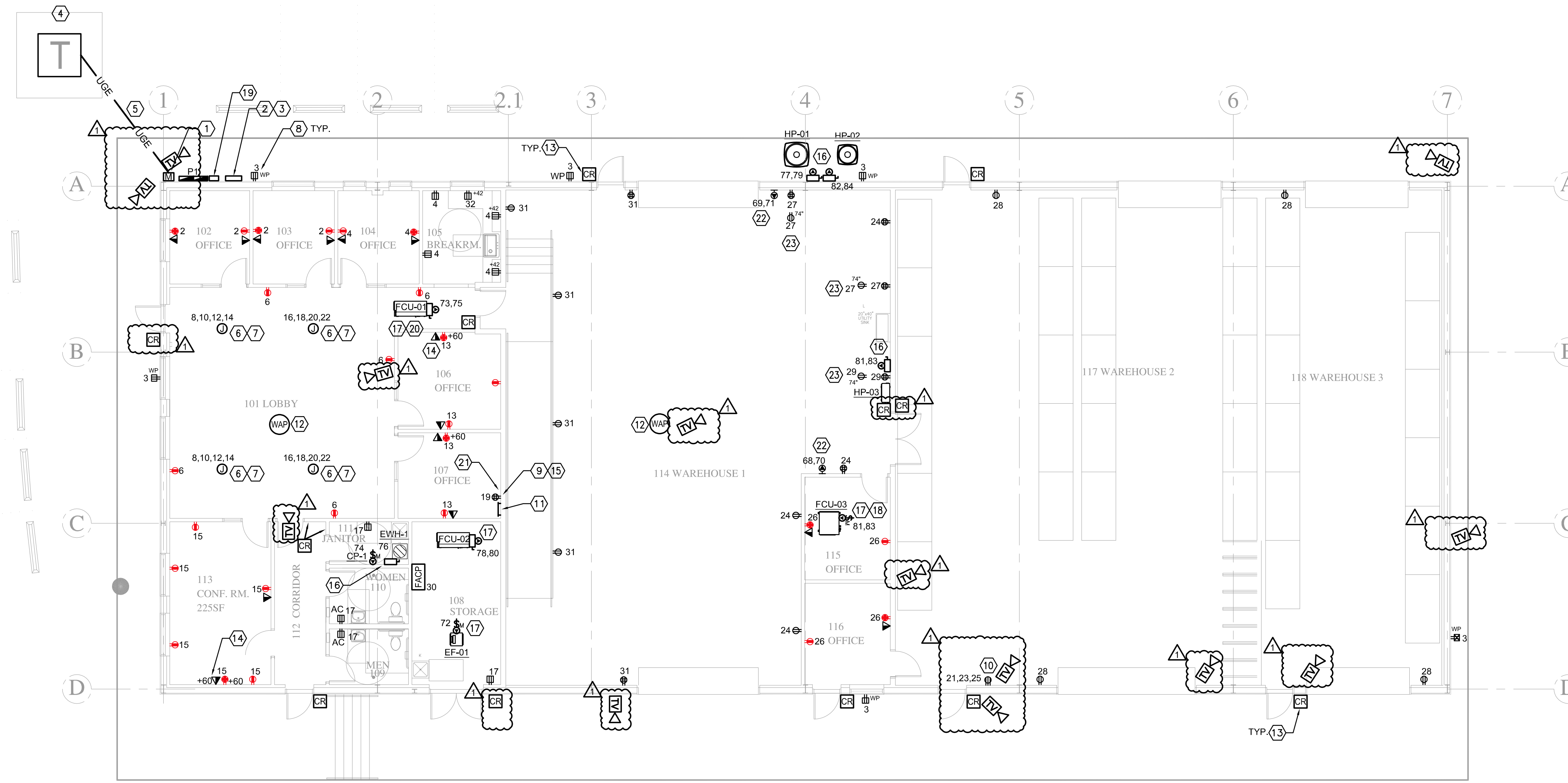
Revisions	
△	IIFP: 2023.12.08

**hollingsworth pack**  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

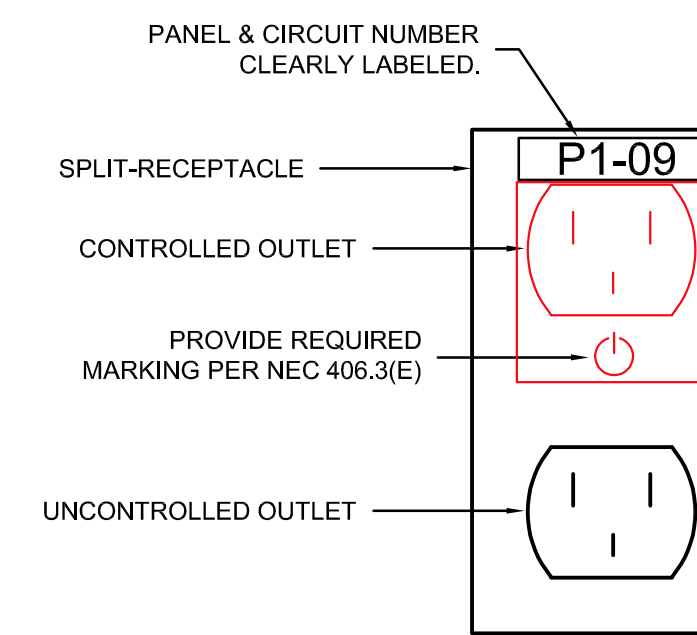
ELECTRICAL  
LIGHTING PLAN  
**E2.1**





# 1 ELECTRICAL POWER PLAN

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



# 2 CONTROLLED RECEPTACLE DETAIL

SCALE: N.T.S.

## GENERAL NOTES:

- A. FURNISH AND INSTALL ALL ITEMS, INCLUDING EVERY ARTICLE, DEVICE, OR ACCESSORY REASONABLY NECESSARY TO FACILITATE EACH SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.
- B. DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT NECESSARILY REFLECT ALL WORK REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN INTENT AT NO ADDITIONAL COST TO OWNER OR TENANT. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION IN CASES OF DOUBT.
- C. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL ELECTRICAL EQUIPMENT AND SYSTEM INSTALLATION REQUIREMENTS.
- D. FOR FIRE ALARM WORK, A CONTRACTOR LICENSED PER STATE FIRE MARSHAL'S REQUIREMENTS MUST DO THE WORK AND SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL. CODE COMPLIANT FIRE ALARM DEVICES SHALL BE PROVIDED FOR FULL COVERAGE OF THIS SPACE IN STRICT ACCORDANCE WITH NFPA-72, AND ALL CITY, STATE, NATIONAL CODES AND STANDARDS, IFC. ALL FIRE ALARM DEVICES SHALL EXACTLY MATCH BUILDING STANDARD.
- E. REFER TO ELECTRICAL EQUIPMENT SCHEDULE FOR DISCONNECT AND CONTROLS REQUIREMENTS.
- F. SPECIAL REQUIREMENTS SUCH AS WATERPROOF (WP) AND USB RECEPTACLES (D) ARE NOTED ADJACENT TO RECEPTACLES.
- G. CONTRACTOR SHALL PROVIDE POWER TO ALL ITEMS SHOWN FROM THE PANEL AND CIRCUIT NUMBERS THAT ARE SHOWN ADJACENT TO THE LOAD (RECEPTACLE, DISCONNECT, J-BOX, EQUIPMENT CONNECTION POINT, ETC.). SIZE CIRCUIT PER PANEL SCHEDULE. PROVIDE NEUTRAL AND GROUND, U.N.O.
- H. CONTRACTOR SHALL COORDINATE ALL WIRING DEVICE LOCATIONS WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- I. UN, ALL CIRCUITS SHOWN ON THIS DRAWING WILL BE FED FROM PANEL 'P1'.

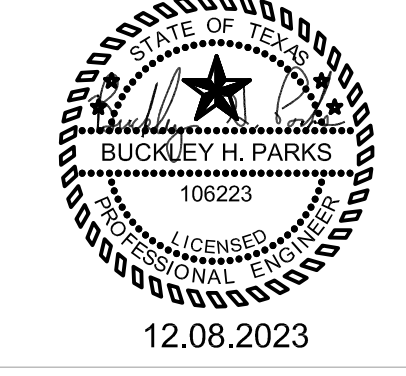
## KEYED NOTES (X):

1. UTILITY METER AND PANEL. REFERENCE ONE LINE DIAGRAM.
2. TELEPHONE/CABLE SERVICE BOXES, RE: 7/E0.2. FIELD COORDINATE TELEPHONE BOX FINAL LOCATION WITH SERVICE PROVIDER AND OWNER.
3. PROVIDE TWO (2) 4" CONDUITS FOR TELEPHONE AND CABLE SERVICE COORDINATE WITH TELECOM AND CABLE PROVIDER FOR CONNECTION TO EXISTING TELEPHONE/CABLE CONDUITS. PROVIDE MAXCELL 2"-3-CELL INNERDUCT FABRIC LINER.
4. PAD MOUNTED UTILITY TRANSFORMER. THIS DRAWING IS FOR REFERENCE PURPOSES ONLY AND IS SUPERCEDED BY LOCAL ELECTRIC UTILITY'S DRAWING. CONFIRM EXACT LOCATION OF TRANSFORMER WITH LOCAL ELECTRIC UTILITY AND CIVIL ENGINEER PRIOR BEGINNING WORK.
5. SECONDARY SERVICE CONDUITS IN TRENCH FROM TRANSFORMER TO ELECTRICAL SERVICE ENCLOSURE. COORDINATE ROUTING WITH OTHER TRADES. DO NOT ROUTE UNDER ANY STRUCTURE BEFORE ENTERING SERVICE ENCLOSURE. PROVIDE (2) SPARE CONDUITS.
6. PROVIDE TWO(2) COMPARTMENT POWER/DATA POLE TO MATCH SYSTEM FURNITURE. STUB POLE 3" MIN ABOVE CEILING. PROVIDE CIRCUITS NOTED THROUGH POLE TO RECEPTACLES IN SYSTEM FURNITURE.
7. PROVIDE TWO(2) COMPARTMENT POWER/DATA POLE TO MATCH SYSTEM FURNITURE. STUB POLE 3" MIN ABOVE CEILING. ROUTE CONDUCTORS IN FMC TO POLE. PROVIDE CIRCUITS NOTED THROUGH POLE TO RECEPTACLES IN SYSTEM FURNITURE. COORDINATE LOCATION, POWER POLE PURCHASE, AND INSTALLATION OF CONDUCTORS WITH FURNITURE PROVIDER. PROVIDE DEDICATED NEUTRAL AND GROUND WITH EACH CIRCUIT AND MAKE ALL ELECTRICAL TERMINATIONS. COORDINATE CIRCUIT COUNT WITH FURNITURE PRIOR TO ROUGH-IN. PROVIDE CREDIT TO TENANT IF CIRCUIT COUNT IS LESS THAN 4. PROVIDE ONE (1) CONTROLLED CIRCUIT. COORDINATE WITH FURNITURE PROVIDER TO ENSURE CONTROLLED CIRCUIT IS PROPERLY LABELED PER NEC 406.3(E).
8. ALL EXTERIOR RECEPTACLES SHALL BE GFCI TYPE, IN A WEATHER RESISTANT, WHILE IN USE, ENCLOSURE (TYPICAL).
9. LOCATION OF DATA RACK. FIELD COORDINATE FINAL LOCATION AND INSTALLATION WITH OWNER.
10. PROVIDE 2-POLE 3-WIRE 30 AMP RECEPTACLE SIMILAR TO NEMA 6-30R FOR FORKLIFT CHARGER. COORDINATE AND CONFIRM REQUIREMENTS WITH CHARGER MANUFACTURER AND OWNER PRIOR TO ROUGH-IN.
11. PROVIDE A GROUND LUG AND TERMINAL STRIP WITH A #4 ISOLATED GROUND CONDUCTOR BONDED TO THE GROUNDING ELECTRODE AT THE SERVICE ENTRANCE DISCONNECT.
12. WIRELESS ACCESS POINT BY OTHERS. COORDINATE LOCATION WITH IT REPRESENTATIVE. PROVIDE SINGLE GANG J-BOX AND 1" CONDUIT TO DATA RACK LOCATION.
13. PROVIDE JUNCTION BOX AT 48" AFF FOR CARD READER. ROUTE 1/2" CONDUIT FROM J-BOX TO ACCESSIBLE CEILING. PROVIDE CONDUIT FROM ACCESSIBLE CEILING TO TOP OF DOOR FRAME FOR DOOR CONTACT SWITCH AND TO JAM FOR ELECTRIC STRIKE. TYPICAL.
14. TV MOUNTED ON WALL AT THIS LOCATION. PROVIDE HDMI OUTLET AT 18" AND ANOTHER AT TV MOUNTING HEIGHT 60". PROVIDE 3" CONDUIT BETWEEN THE TWO HDMI OUTLETS. COORDINATE ELEVATION WITH ARCHITECT AND INSTALLATION WITH TELEVISION BLOCKING AND MOUNTING EQUIPMENT. COORDINATE DETAILS WITH AV CONTRACTOR DRAWINGS PRIOR TO ROUGH-IN.
15. PROVIDE TWO(2) 2" CONDUITS FROM BUILDING TELECOM DEMARC TO INDICATED LOCATION. WITH PULL STRING. COORDINATE TERMINATION POINT WITH COMMUNICATIONS CONTRACTORS. REFER TO ARCHITECTURAL PLANS TO DETERMINE CONDUIT RUN LENGTHS AND ROUTING.
16. MOUNT EQUIPMENT ON WALL ADJACENT TO LOAD TO BE SERVED. IN A VISIBLE AND ACCESSIBLE SPACE, AND PROVIDED WITH NEC REQUIRED CLEARANCES. COORDINATE LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
17. MOUNT EQUIPMENT TO STRUCTURE ABOVE CEILING ADJACENT TO LOAD TO BE SERVED. IN A VISIBLE AND ACCESSIBLE LOCATION, AND PROVIDED WITH WORKING SPACE. COORDINATE LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE GFCI RECEPTACLE MOUNTED BELOW DISCONNECT. RECEPTACLE SHALL BE CIRCUITED TO NEAREST GENERAL PURPOSE CIRCUIT.
18. INDOOR UNIT IS POWERED BY OUTDOOR UNIT. PROVIDE 3 #12'S IN 3/4" CONDUIT FROM INDOOR UNIT TO OUTDOOR UNIT. COORDINATE CONDUIT ROUTING WITH REFRIGERANT PIPING.
19. EXTERIOR LUMINAIRES SHALL BE SWITCHED BY A CONTACTOR CONTROLLED BY A 24 HOUR, 7 DAY ASTRONOMICAL TIME CLOCK WITH HOLIDAY SCHEDULING IN CONJUNCTION WITH A ROOF MOUNTED PHOTOCELL. CONTRACTOR AND TIME CLOCK TO BE MOUNTED ADJACENT TO PANEL IN NEMA-3R ENCLOSURE.
20. PROVIDE DUCT MOUNTED SMOKE DETECTOR IN AIR DUCT OF HVAC UNIT. DUCT DETECTOR TO BE WIRED TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. PROVIDE DUCT DETECTOR WITH LED ALARM INDICATOR REMOTE MOUNTED TO BOTTOM OF CEILING BELOW UNIT SERVED. PROVIDE CONTROL POWER FOR DUCT DETECTOR FROM UNIT SERVED. COORDINATE REQUIREMENTS AND INSTALLATION WITH MECHANICAL CONTRACTOR AND INTERFACE WITH FIRE ALARM SYSTEM WITH FIRE ALARM CONTRACTOR.
21. PROVIDE 3/4" FIRE RATED PLYWOOD BACKBOARD FOR MOUNTING COMMUNICATIONS EQUIPMENT. WIDTH OF PANEL SHALL BE COORDINATED WITH INFORMATION TECHNOLOGIES CONTRACTOR. PAINT TO MATCH WALL TO WHICH BOARD IS ATTACHED.
22. PROVIDE 250V 50AMP RECEPTACLE FOR WELDER, COORDINATE RECEPTACLE NEMA CONFIGURATION AND INSTALLATION DETAILS WITH OWNER PRIOR TO PROCUREMENT AND ROUGH IN.
23. PROVIDE QUAD BELOW AND DUPLEX WITH CORD REAL UP HIGH ON WALL. COORDINATE INSTALLATION HEIGHTS WITH OWNER PRIOR TO ROUGH IN.

## FIRE ALARM DESIGN/BUILD NOTES

- a. PROVIDE A COMPLETE FIRE ALARM SYSTEM IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES.
- b. MOUNT NEW FIRE ALARM CONTROL PANEL "FACP" AS INDICATED. PROVIDE REQUIRED BRANCH CIRCUITS FROM APPROPRIATE PANEL.
- c. EC SHALL ADD ANNUNCIATION DEVICES TO THE SYSTEM PANEL.
- d. REFER TO THE SPECIFICATIONS AND ANY PERTINENT SHEET WORK NOTES ON THESE DRAWINGS FOR MORE INFORMATION.
- e. PROVIDE A COMPLETE SET OF FIRE MARSHAL APPROVED SHOP DRAWINGS TO THE ENGINEER PRIOR TO ROUGH-IN.
- f. CELLULAR DATA IS ACCEPTABLE.
- g. DOOR ACCESS CONTROL SYSTEM INSTALLATION PLANS, DETAILS AND HARDWARE SPECIFICATIONS MUST BE SUBMITTED TO THE ALBANY FIRE DEPARTMENT FOR REVIEW AND APPROVAL AS SHOP DRAWINGS FROM THE INSTALLATION CONTRACTOR PRIOR TO INSTALLATION. IF INSTALLED IN LOCATIONS OTHER THAN AT FIRE-RATED DOORS OR STAIRS DOORS, ELECTRIC STRIKE DOOR LOCKS THAT ALLOW FREE EGRESS BY OCCUPANTS AT ALL TIMES WILL NOT REQUIRE AFD SUBMITTAL AS SHOP DRAWINGS.

RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

Revisions
△ IFP: 2023.12.08
△ REV #1: 2023.12.19

hollingsworth pack  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

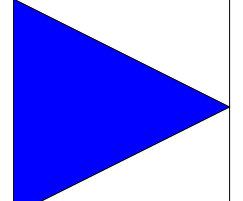
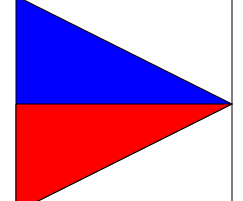
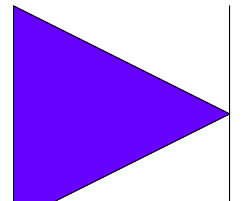
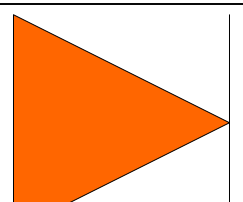
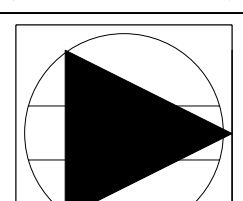
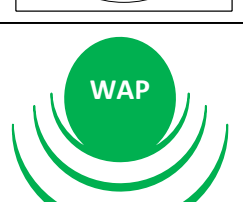
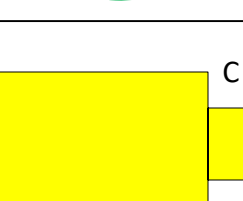
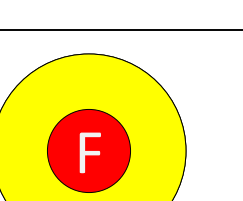
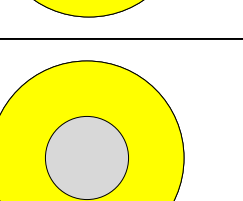
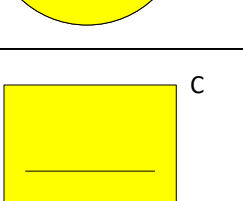
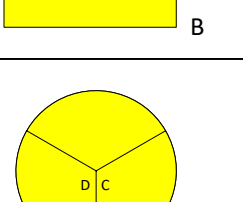
12/08/2023

ELECTRICAL  
POWER PLAN

E3.1



## LEGEND

	Category 6 Network Outlet	Quantity	19
	Dual Category 6 Network Outlet	Quantity	00
	Category 6 AV Network Outlet	Quantity	02
	4k HDMI Outlet	Quantity	02
	Surface Mounted Outlet	Quantity	00
	Wireless Access Point	Quantity	02
	Bullet Camera (Model)	Quantity	06
	Fisheye Camera (Model)	Quantity	06
	Dome Camera (Model)	Quantity	01
	Access Control Reader	Quantity	12
	18/2 Door Contact	Quantity	14

CLIENT :  
**Mobile Loaves & Fishes**

PROJECT NAME :  
 Mobile Loaves & Fishes  
 Operations Building

SITE ADDRESS :  
 9301 HOG EYE ROAD  
 AUSTIN, TX 78724

REVISIONS		
DATE	No.	Description

DRAWN BY : **CB**

DRAWING TITLE :  
**LEGEND**

ISSUE DATE : **6/29/23**

REVISED  
**12/19/23**



CLIENT : **Mobile Loaves & Fishes**

PROJECT NAME : **Mobile Loaves & Fishes Operations Building**

SITE ADDRESS : **9301 HOG EYE ROAD  
 AUSTIN, TX 78724**

REVISIONS

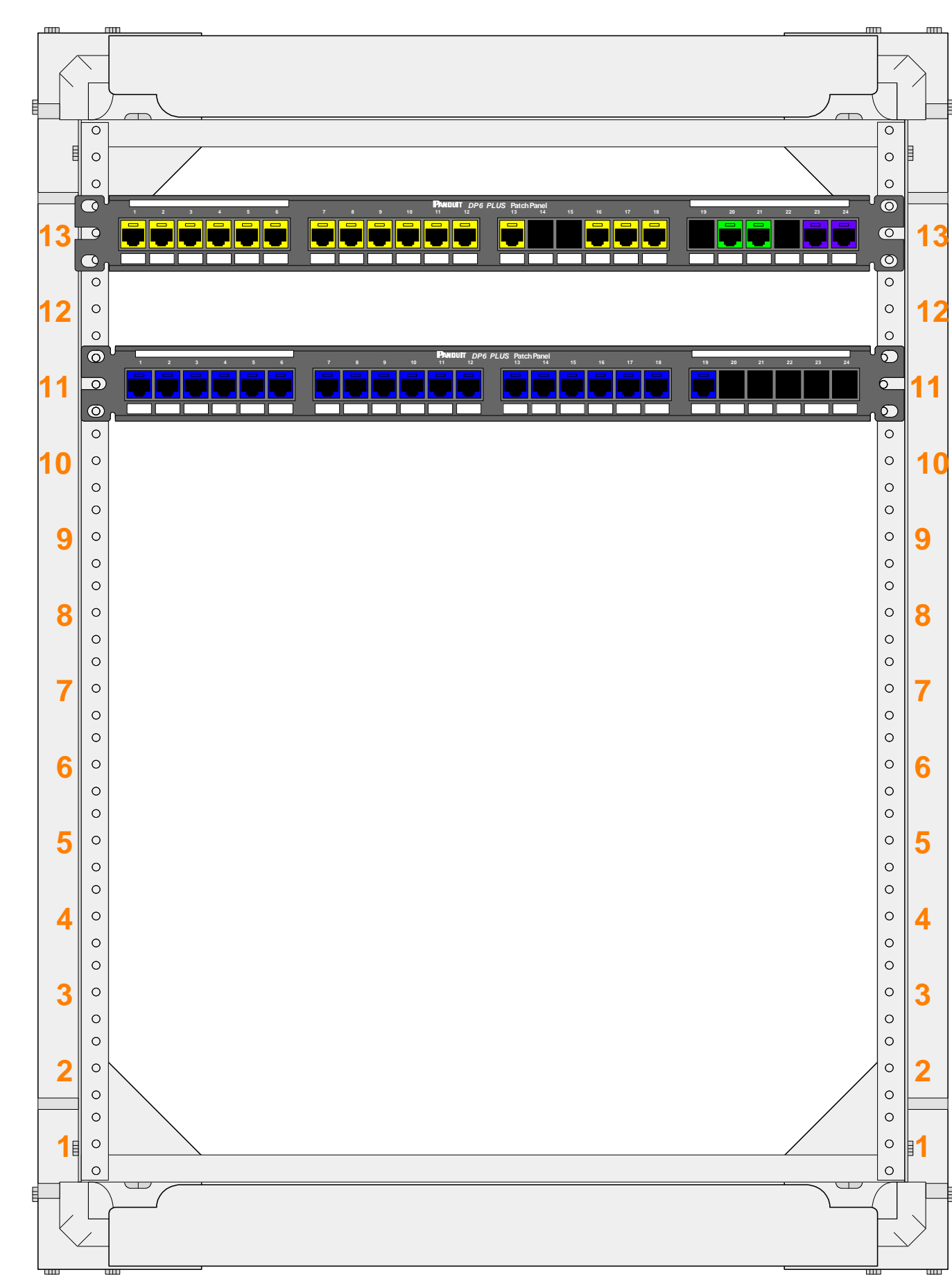
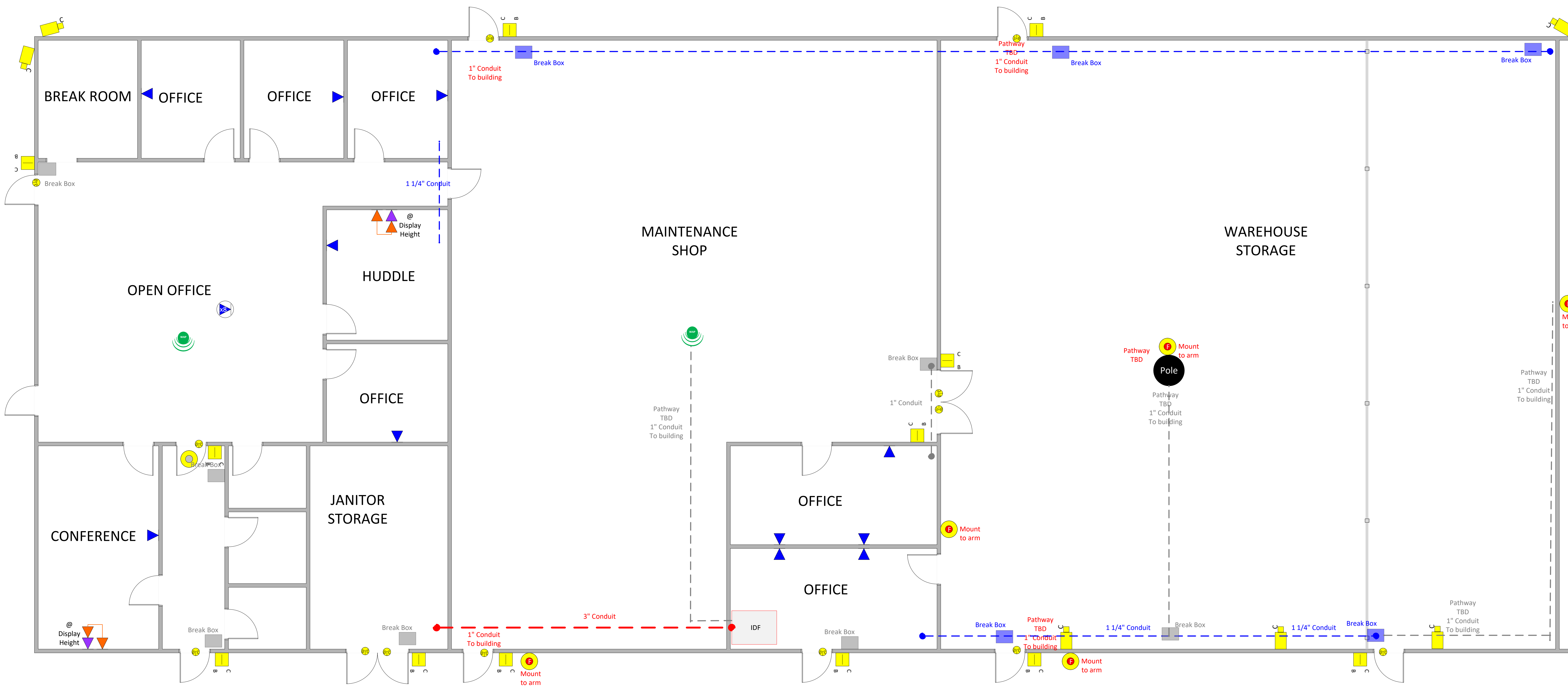
DATE	No.	Description

DRAWN BY : **CB**

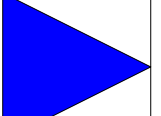
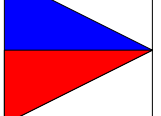
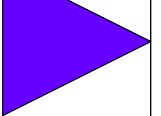
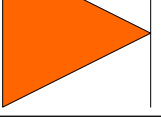


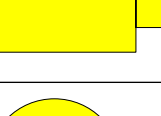
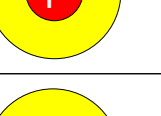
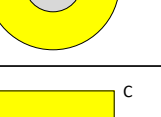
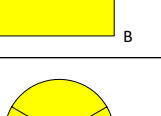
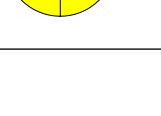
DRAWING TITLE : **A2.0**

ISSUE DATE : **6/29/23**

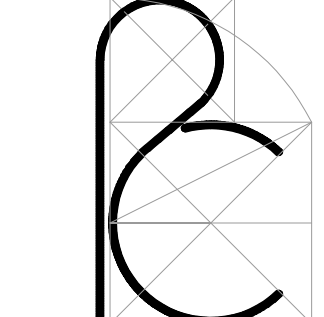
REVISED **12/19/23**



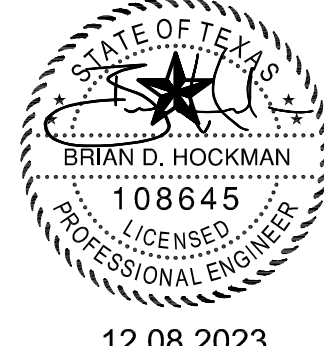
LEGEND

	Category 6 Network Outlet	Quantity	19
	Dual Category 6 Network Outlet	Quantity	00
	Category 6 AV Network Outlet	Quantity	02
	4k HDMI Outlet	Quantity	02
	Surface Mounted Outlet	Quantity	00
	Wireless Access Point	Quantity	02
	Bullet Camera (Model)	Quantity	06
	Fisheye Camera (Model)	Quantity	06
	Dome Camera (Model)	Quantity	01
	Access Control Reader	Quantity	12
	18/2 Door Contact	Quantity	14





RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12.08.2023

MOBILE LOAVES AND FISHES - OPERATIONS BLDG.  
9301 Hog Eye Road - Austin, Texas 78724  
RC Architects, Inc.

PLUMBING LEGEND AND SYMBOLS		GENERAL NOTES	PLUMBING GENERAL NOTES	2021 IECC ENERGY CODE COMPLIANCE										
<p>--- CW --- COLD WATER SUPPLY</p> <p>--- NPW --- NON-POTABLE WATER</p> <p>--- HW --- HOT WATER SUPPLY</p> <p>--- 140 HW --- 140°F HOT WATER SUPPLY</p> <p>--- HWC --- HOT WATER RECIRC</p> <p>--- CA --- COMPRESSED AIR</p> <p>--- NG --- NATURAL GAS</p> <p>--- F --- FIRE MAIN, STANDPIPE</p> <p>--- S --- SPRINKLER, DRY OR WET</p> <p>--- V --- PLUMBING VENT</p> <p>--- PD --- PUMP DISCHARGE</p> <p>--- W --- SANITARY WASTE</p> <p>--- GW --- GREASE WASTE</p> <p>--- RL --- RAIN LEADER</p> <p>--- ORL --- OVERFLOW RAIN LEADER</p> <p>FD  FLOOR DRAIN</p> <p>FS  FLOOR SINK</p> <p> ROOF DRAIN, OVERFLOW</p> <p>WCO  WALL CLEAN OUT</p> <p>FCC  FLOOR CLEAN OUT</p> <p>--- EXISTING PIPING AND EQUIPMENT</p> <p>--- DEMO PIPING AND EQUIPMENT</p> <p>--- NEW PIPING AND EQUIPMENT</p> <p> CONNECT TO EXISTING</p>	<p>FHV  FIRE HOSE VALVE</p> <p> ALARM VALVE</p> <p> DRY-PIPE VALVE</p> <p> POST-INDICATOR VALVE</p> <p> DETECTOR CHECK VALVE</p> <p> STANDPIPE BASE VALVE</p> <p> FIRE DEPT. CONNECTION</p> <p> RELIEF VALVE</p> <p> GATE VALVE</p> <p> OS&amp;Y VALVE</p> <p> GLOBE VALVE</p> <p> BALL VALVE</p> <p> CHECK VALVE</p> <p> BUTTERFLY VALVE</p> <p> PLUG VALVE</p> <p> PRESSURE REGULATING VALVE</p> <p> THREE-WAY VALVE</p> <p> MOTORIZED VALVE</p> <p> PNEUMATIC VALVE</p> <p> SOLENOID VALVE</p> <p> VALVE (N-RISE)</p> <p> STRAINER</p> <p> SLEEVE</p> <p> GUIDE</p> <p> ANCHOR</p> <p> UNION</p> <p> SHOCK ARRESTER AND SIZE (X)</p>	<p>1. FURNISH AND INSTALL ALL ITEMS NECESSARY TO PROVIDE FULLY FUNCTIONING SYSTEMS AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.</p> <p>2. DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL WORK AND MATERIALS REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION AND DETAILS WHERE SCOPE IS UNCLEAR.</p> <p>3. ALL WORK SHALL COMPLY WITH THE MOST RECENT ADOPTED VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY EXISTS, THE LOCAL ENFORCING AUTHORITY SHALL APPLY. ANY MODIFICATIONS TO THE DESIGN SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING WITH ANY MODIFICATIONS.</p> <p>4. WHERE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THAT THEY ARE NOT IN CONFLICT WITH THE CODES.</p> <p>5. BEFORE SUBMITTING BIDS, EACH CONTRACTOR SHALL PERFORM A SITE VISIT AND UNDERSTAND THE CONDITIONS TO BE MET IN INSTALLING THE WORK, AND SHALL MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL BID. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.</p> <p>6. MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.</p> <p>7. ALL WORK SHALL BE CARRIED OUT IN A NEAT, WELL ORGANIZED MANNER. ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL EQUIPMENT TO PROVIDE ACCESS AND ARRANGE ALL WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND TO MAINTAIN PROPER CODE AND MANUFACTURER'S CLEARANCES.</p> <p>8. ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.</p> <p>9. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED AND INSTALLED.</p> <p>10. THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO: A. EQUIPMENT AND MATERIALS SHOP DRAWINGS B. COORDINATION DRAWINGS C. RECORD DRAWINGS D. OPERATING AND MAINTENANCE MANUALS E. FIRE STOP MATERIALS AND DETAILS</p> <p>11. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC., WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, PIPING, CONDUIT, CABLE, ETC., IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE OR OTHER TRADE WORK WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, PIPING, CONDUIT, CABLE, ETC., SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER/TENANT. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.</p> <p>12. MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIAL STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE WORK. MATERIALS AND EQUIPMENT WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER/TENANT AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER/TENANT.</p> <p>13. DAMAGE CAUSED DURING CONSTRUCTION TO EXISTING MATERIALS/EQUIPMENT WILL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO OWNER. RE-SUPPORT ANY REMAINING PIPING OR DEVICES THAT WERE SUPPORTED BY WALLS BEING REMOVED.</p> <p>14. THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE AND SHALL INCLUDE AT LEAST ONE (1) FULL HEATING SEASON AND ONE (1) FULL COOLING SEASON. DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER/TENANT: A. ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS. B. ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED. C. THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.</p> <p>15. THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.</p> <p>16. THIS BUILDING MAY HAVE A STRUCTURAL SYSTEM UTILIZING POST-TENSIONED CABLES. THE CONTRACTOR SHALL DETERMINE THE EXISTING STRUCTURAL SYSTEM PRIOR TO CUTTING, DRILLING, OR CORING. THE CONTRACTOR SHALL X-RAY ALL PENETRATIONS PRIOR TO CUTTING THE FLOOR SLAB.</p> <p>17. THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.</p> <p>18. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE PRICING REFLECTING THE GREATEST COST. THE CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.</p> <p>19. PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRE RATED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE LOCAL AUTHORITY HAVING JURISDICTION.</p> <p>20. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A COMPLETE SET OF "AS BUILT" DRAWINGS PORTRAYING ACTUAL SITE CONDITIONS OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION WORK. SUBMISSION SHALL CONSIST OF ONE SET OF PAPER COPIES AND ONE SET OF CAD FILES IN AUTOCAD (CONTRACTOR SHALL UTILIZE OWNER'S LAYER STANDARDS IF EXISTING).</p> <p>21. IN THE EVENT THAT MATERIALS, PRODUCTS, AND/OR PROCESSES BEING PROPOSED FOR THIS PROJECT CONTAIN, OR MAY EMIT, ANY VOLATILE ORGANIC COMPOUNDS (VOC), FORMALDEHYDE FORMULATIONS, OR HAZARDOUS OUT-GASSING, AS DETERMINED BY THE MANUFACTURER, A MATERIALS SAFETY DATA SHEET SHALL BE SUBMITTED AS PART OF THE SHOP DRAWING PROCESS FOR REVIEW BY THE ARCHITECT/ENGINEER/OWNER.</p> <p>22. VERIFY LOCATIONS OF EXISTING VALVES LOCATED WITHIN SCOPE OF WORK. MODIFY EXISTING OR PROVIDE NEW MEANS OF ACCESS WHERE REQUIRED BECAUSE OF NEW CONSTRUCTION.</p> <p>23. PLUMBING EQUIPMENT SHALL BE IDENTIFIED BY MEANS OF NAMEPLATES PERMANENTLY ATTACHED TO THE EQUIPMENT. NAMEPLATES SHALL BE BLACK SURFACE, WHITE CORE LAMINATED WITH ENGRAVED LETTERS. PLATES SHALL BE A MINIMUM OF 3" LONG BY 1" WIDE WITH WHITE LETTERS 1/4" HIGH.</p> <p>24. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE LOCATIONS OF THE HVAC AND PLUMBING SYSTEMS. LOCATE ALL ITEMS IN THE FIELD. COORDINATE WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.</p> <p>25. AFTER COMPLETION OF INSTALLATION, BUT PRIOR TO SUBSTANTIAL COMPLETION, CONTRACTOR SHALL CERTIFY IN WRITING THAT PRODUCTS AND MATERIALS INSTALLED AND PROCESSES USED DO NOT CONTAIN ASBESTOS OR POLYCHLORINATED BIPHENYL (PCB).</p> <p>26. THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE THUS CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE DUE TO WATER, SPRAY-ON FIREPROOFING, CONSTRUCTION DEBRIS, ETC. IN A MANNER ACCEPTABLE TO THE ENGINEER AND/OR OWNER.</p>	<p>1. REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.</p> <p>2. REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS OF ALL FLOOR DRAINS.</p> <p>3. ALL SANITARY AND VENT PIPING SHALL BE ROUTED AT A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.</p> <p>4. THE PLUMBING CONTRACTOR SHALL COORDINATE EXACT ROUTING OF ALL PIPING WITH THE WORK OF ALL OTHER TRADES. PROVIDE OFFSETS IN PIPING WHERE REQUIRED BY COORDINATION OF TRADES.</p> <p>5. INSTALL ALL FLOOR DRAINS AND FLOOR SINKS SUCH THAT GRATING IS FLUSH WITH ADJACENT FLOORING SURFACE. FLOOR SHALL SLOPE TO DRAIN. COORDINATE ALL REQUIREMENTS WITH ARCHITECT AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.</p> <p>6. THE PLUMBING CONTRACTOR SHALL CLEAN, FLUSH, AND DISINFECT ALL COLD WATER AND HOT WATER PIPING AND ALL FIXTURES PRIOR TO COMPLETION OF WORK.</p> <p>7. VENTS THROUGH ROOF TO BE LOCATED A MINIMUM OF 15'-0" HORIZONTALLY AWAY FROM OUTSIDE AIR INTAKES.</p> <p>8. FLOOR DRAINS NOT RECEIVING REGULAR-USE DRAINAGE ARE TO BE TRAP PRIMED.</p> <p>9. PROVIDE BACKFLOW PREVENTION AS REQUIRED BY THE LOCAL CROSS CONNECTION CONTROL DEPT. STANDARDS WHERE NOT PROVIDED OR INADEQUATELY PROVIDED BY EQUIPMENT MANUFACTURER.</p> <p>10. INSTALL PIPING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED.</p> <p>11. VERIFY DIMENSIONS FROM ARCHITECTURAL DRAWINGS AND FROM ACTUAL MEASUREMENTS AT JOBSITE.</p> <p>12. PROVIDE SADDLES AND SHIELDS FOR SUPPORT OF INSULATED PIPING TO PREVENT CRUSHING.</p> <p>13. PIPING PENETRATIONS THROUGH PERIMETER BEAMS, FOUNDATION ON GRADE, AND STRUCTURAL FLOORS SHALL BE SLEEVED. COORDINATE SLEEVE LOCATIONS AND SIZES WITH STRUCTURAL PRIOR TO POUR.</p> <p>14. PROVIDE DIELECTRIC UNIONS AT DISSIMILAR MATERIALS.</p> <p>15. PROVIDE ESCUTCHEONS AT ALL FINISHED WALL AND CEILING PIPING PENETRATIONS.</p> <p>16. ALL PIPING SHALL BE IDENTIFIED AS TO TYPE OF USE, SERVICE, AND DIRECTION OF FLOW. LOCATE MARKERS AT EACH VALVE, AT ENTRIES TO WALLS, AND ON 20' CENTERS ON STRAIGHT RUNS OF PIPE. PROVIDE A FLOW ARROW AT EACH IDENTIFICATION MARKER. PIPE MARKERS SHALL BE SET ON "SETMARK" OR EQUAL.</p> <p>17. COORDINATE WORK COMPLETELY WITH ALL OTHER TRADES.</p> <p>18. INSTALL PIPING FREE OF SAGS AND BENDS. PROVIDE NON-METALLIC COATED HANGERS WHERE IN DIRECT CONTACT WITH COPPER PIPING.</p> <p>19. PROVIDE ENGINEERED WATER HAMMER ARRESTERS SIZED AND PLACED IN ACCORDANCE WITH STANDARD PDI-WH 201. AIR CHAMBERS SHALL NOT BE ALLOWED.</p> <p>20. PROVIDE FLEXIBLE EXPANSION FITTINGS SUITABLE FOR SANITARY (DWV) AND RAINWATER PIPING WHERE PIPING ENTERS EXPANSIVE SOILS TO ALLOW FOR 4" OF DIFFERENTIAL MOVEMENT.</p> <p>21. ALL FLOOR PENETRATIONS MUST BE SEALED WITH FIRE CAULK.</p> <p>22. MAKE ALL NECESSARY EXCAVATIONS, CUTTING OF PAVING, CONCRETE, ETC., REMOVAL OF UNUSABLE SPOIL MATERIAL. ALL BACKFILLING WITH STABILIZED FILL, AND PERFORM TEMPORARY PATCH PAVING REPAIRS NECESSARY FOR PROPER EXECUTION OF THE WORK. BACKFILL SHALL BE MECHANICALLY COMPACTED TO A DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST.</p> <p>23. PROVIDE MINIMUM 1" AIR GAP AT DRAIN DISCHARGE FOR ALL INDIRECT WASTE PIPING.</p> <p>24. DISCHARGE PIPING FROM A DISHWASHER SHALL BE LOOPED UP AND SECURELY FASTENED TO THE UNDERSIDE OF THE COUNTER OR AN APPROVED DISHWASHER AIR-GAP FITTING IS REQUIRED.</p> <p>25. COMPRESSION TANKS SUPPLIED AT EACH WATER HEATER SHALL BE SECURED TO A WALL WITH (2) 1" x 1/4 GA. GALVANIZED STRAPS. PROVIDE LAG BOLTS AND BLOCKING AS REQUIRED.</p> <p>26. AN ATMOSPHERIC VACUUM BREAKER OR OTHER APPROVED BACKFLOW PREVENTION DEVICE MUST BE INSTALLED ON ALL THREADED HOSE BIBB, WALL HYDRANT, OR FAUCET CONNECTIONS LOCATED INSIDE OR OUTSIDE THE BUILDING.</p>	<p>REQUIREMENTS SPECIFIC TO WATER HEATING:</p> <p>1. HEAT TRAPS SHALL BE PROVIDED ON NONCIRCULATING WATER HEATING SYSTEMS ON BOTH INLET AND OUTLET CONNECTIONS. HEAT TRAPS MAY BE PRE-FABRICATED OR FIELD-FABRICATED BY CREATING A LOOP OR INVERTED U-SHAPED ARRANGEMENT ON THE INLET AND OUTLET PIPES. REFER TO WATER HEATER DETAIL.</p> <p>2. PIPE INSULATION FOR THE SPECIFIED NONCIRCULATING SERVICE HOT WATER SYSTEM IS REQUIRED FOR ALL PIPING IN THE FOLLOWING CATEGORIES: a) THE FIRST 8' OF OUTLET PIPING FROM ANY CONSTANT-TEMPERATURE, NONCIRCULATING STORAGE SYSTEM. b) THE INLET PIPING BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONCIRCULATING STORAGE SYSTEM.</p> <p>3. INSULATION SHALL COMPLY WITH PIPE INSULATION SPECIFICATIONS AS INDICATED ON THIS DRAWING PER TABLE 503.2.8.</p> <p><b>GENERIC PLUMBING REQUIREMENTS:</b></p> <p>1. SERVICE WATER HEATING EQUIPMENT SHALL MEET MINIMUM FEDERAL EFFICIENCY REQUIREMENTS INCLUDED IN THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT AND THE ENERGY POLICY ACT OF 1992, WHICH MEET OR EXCEED 2021 IECC AND ASHRAE 90.1 FOR ENERGY EFFICIENCY AND STANDBY LOSS.</p> <p>2. WATER-HEATING EQUIPMENT SHALL BE PROVIDED WITH CONTROLS THAT ALLOW THE USER TO SET THE WATER TEMPERATURE TO 140°F.</p>										
PLUMBING ABBREVIATIONS														
<p>AB.C ABOVE CEILING</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>AV ACID VENT</p> <p>AW ACID WASTE</p> <p>BFF BELOW FINISHED FLOOR</p> <p>BG BELOW GRADE</p> <p>CA COMPRESSED AIR</p> <p>CD CONDENSATE DRAIN</p> <p>C.I.N.H. CAST IRON NO HUB</p> <p>CO CLEANOUT</p> <p>CKV CHECK VALVE</p> <p>CW COLD WATER</p> <p>CX CONNECT TO EXISTING</p> <p>(A) PIPE DROP</p> <p>DN PIPE DROP TO NEXT LEVEL</p> <p>DTL DETAIL</p> <p>(E) EXISTING</p> <p>F FIRE SERVICE</p> <p>FCC FLOOR CLEANOUT</p> <p>FND FOUNDATION DRAIN</p> <p>GCC GRADE CLEANOUT</p> <p>HW HOT WATER</p> <p>HWC HOT WATER CIRCULATION</p> <p>IDW INDIRECT WASTE</p> <p>I.E. INVERT ELEVATION</p> <p>IRR IRRIGATION</p> <p>LPG LIQUEFIED PETROLEUM GAS</p> <p>LWCO LOW WATER CUTOFF</p>	<p>MAX MAXIMUM</p> <p>MIN MINIMUM</p> <p>NG NATURAL GAS</p> <p>(N) NEW</p> <p>NO NORMALLY OPEN (VALVE)</p> <p>NC NORMALLY CLOSED (VALVE)</p> <p>OH OVER HEAD</p> <p>OFL OVERFLOW RAIN LEADER</p> <p>(R) PIPE RISE</p> <p>ROU ROUGH-IN ONLY</p> <p>RWL RAIN WATER LEADER</p> <p>SHT SHEET</p> <p>SCW SOFT COLD WATER</p> <p>SOC SHUT OFF COCK (GAS)</p> <p>SOV SHUT OFF VALVE</p> <p>TP TRAP PRIMER</p> <p>UG UNDERGROUND</p> <p>UP PIPE RISE TO NEXT LEVEL</p> <p>US UNDER SLAB</p> <p>UTR UP THRU ROOF</p> <p>V VENT</p> <p>VA VALVE</p> <p>VTR VENT THRU ROOF</p> <p>W WASTE</p> <p>WCO WALL CLEANOUT</p>													
PLUMBING DESIGN CRITERIA														
<p><b>GENERAL GUIDELINES:</b></p> <p>ALL PLUMBING WORK AND MATERIALS SHALL COMPLY WITH THE 2021 IPC.</p> <p><b>SANITARY DRAINAGE AND VENT PIPING</b></p> <p>SIZED PER TABLE 710.1 OF THE 2021 IPC. DRAIN PIPE SHALL SLOPE PER 2021 IPC SECTION 704.0.</p> <p><b>DRAINAGE FIXTURE UNITS</b></p> <p>SIZED PER TABLE 709.1 OF THE 2021 IPC.</p> <p><b>WATER SUPPLY FIXTURE UNITS</b></p> <p>SIZED PER TABLE E103.3(2) OF THE 2021 IPC.</p> <p><b>WATER SUPPLY PIPE SIZING</b></p> <p>SIZED PER FIGURE E103.3(3) OF THE 2021 IPC.</p>														
SHEET LIST														
	<table border="1"> <thead> <tr> <th>DRAWING</th> <th>SHEET TITLE</th> </tr> </thead> <tbody> <tr> <td>P0.1</td> <td>PLUMBING COVER SHEET</td> </tr> <tr> <td>P0.2</td> <td>PLUMBING SCHEDULES &amp; DETAILS</td> </tr> <tr> <td>P0.3</td> <td>PLUMBING RISER DIAGRAMS</td> </tr> <tr> <td>P1.1</td> <td>PLUMBING FLOOR PLANS</td> </tr> </tbody> </table>	DRAWING	SHEET TITLE	P0.1	PLUMBING COVER SHEET	P0.2	PLUMBING SCHEDULES & DETAILS	P0.3	PLUMBING RISER DIAGRAMS	P1.1	PLUMBING FLOOR PLANS			
DRAWING	SHEET TITLE													
P0.1	PLUMBING COVER SHEET													
P0.2	PLUMBING SCHEDULES & DETAILS													
P0.3	PLUMBING RISER DIAGRAMS													
P1.1	PLUMBING FLOOR PLANS													
<p>Revisions</p> <p>△ IFP: 2023.12.08</p>														

**hollingsworth pack** **J**  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

PLUMBING COVER SHEET

P0.1



**PLUMBING SPECIFICATIONS**

**DOMESTIC WATER PIPING**

- ALL BRANCH WATER PIPING INSIDE THE BUILDING SHALL BE TYPE "L" COPPER TUBING (ASTM B-88) WITH WROUGHT COPPER FITTINGS (ANSI B16.22). CLEAN AND DEBURR THE INSIDE OF ALL FITTINGS CAREFULLY BEFORE JOINING WITH 95/5 TIN/ANTIMONY SOLDER. NO ACIDS SHALL BE USED TO CLEAN EITHER PIPE OR FITTINGS OR AS A FLUX IN SWEATING JOINTS. THE USE OF DRILLED-T CONNECTIONS IS NOT PERMITTED.
- ACCEPTABLE ALTERNATE: ASTM F876, F877, CSA B 137.5, NSF 61 (NSF69S-PW), AND ASTM E84. PEX TUBING SHALL HAVE A STANDARD DIMENSIONAL RATIO DESIGNATION (SDR 9), WITH A 100 PSI AT 180 DEG F / 160 PSI AT 73 DEG F PRESSURE. TEMPERATURE RATING, AND "PEX5000" CHLORINE RESISTANCE RATING. PEX TUBING SHALL HAVE A 60 DAY MINIMUM UV RATING. PEX FITTINGS: ASTM F 1907, OR ASTM F 2159 AND ASTM F877 LEAD-FREE METAL-INSERT TYPE WITH COPPER CRIMP RINGS OR METAL-INSERT TYPE WITH ATTACHED 304 STAINLESS STEEL PRESS SLEEVE, OR PLASTIC-INSERT TYPE WITH ATTACHED 304 STAINLESS STEEL PRESS SLEEVE FOR USE WITH SDR 9 PEX TUBE.
- EACH FIXTURE, DEVICE OR CONNECTION TO EQUIPMENT SHALL HAVE A STOP VALVE TO ISOLATE THAT FIXTURE WITHOUT SHUTTING DOWN ANY OTHER PORTION OF THE SYSTEM.
- ALL OTHER WATER PIPING SHALL BE COMPLETELY ISOLATED FROM METAL HANGERS, METAL STUDS, OR ANY OTHER ELECTRICALLY CONDUCTIVE BUILDING COMPONENTS. PROVIDE DIELECTRIC UNION AT ALL CONNECTIONS BETWEEN COPPER AND GALVANIZED PIPE.

**THERMAL INSULATION FOR DOMESTIC WATER PIPING**

- ALL DOMESTIC WATER PIPING SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH AN ALL-SERVICE JACKET OR "AP" ARMAFLEX FLEXIBLE ELASTOMERIC PIPE INSULATION WITH AN ALL-SERVICE JACKET. ELBOWS AND FITTINGS SHALL BE INSULATED AND COVERED WITH ZESTON 2000 2550 FIRE/SMOKE RATED PVC JACKETS.
- DOMESTIC COLD WATER PIPING:  
ALL SIZES - 1" THICKNESS  
\*IF EXPOSED TO OUTDOOR CONDITIONS, INCREASE BY 1/2"
- DOMESTIC HOT WATER PIPING:  
1-1/4" AND SMALLER - 1" THICKNESS  
1-1/2" AND LARGER - 2" THICKNESS  
\*IF EXPOSED TO OUTDOOR CONDITIONS, INCREASE BY 1/2"
- DOMESTIC HOT WATER RECIRCULATION PIPING:  
1-1/4" AND SMALLER - 1" THICKNESS  
1-1/2" AND LARGER - 2" THICKNESS  
\*IF EXPOSED TO OUTDOOR CONDITIONS, INCREASE BY 1/2"
- CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH 1/2" THICKNESS FIBERGLASS INSULATION WITH ALL SERVICE JACKET (ASJ) VAPOR BARRIER.
- ALL DRAIN HORIZONTAL STORM DRAINAGE PIPING AND PIPING RECEIVING CHILLED DRAINAGE OR SHALL BE INSULATED WITH 1" THICKNESS FIBERGLASS INSULATION IF ABOVE GRADE.
- AT ALL CLEVIS HANGERS, INSTALL INSULATION OVER HANGER AND PROVIDE A VAPOR BARRIER COVER.

**BALL VALVES**

- ALL VALVES SHALL BE BALL VALVES, NO GATE VALVES SHALL BE USED.
- BALL VALVES SHALL BE WATTS MODEL B-6000 BRONZE, SHALL HAVE BOTTOM LOADED PRESSURE RETAINING BLOW-OUT PROOF STEMS, ADJUSTABLE PACKING NUT, GLASS REINFORCED DURAFILL OR VIRGIN PTFE SEATS AND BALL. VALVES SHALL BE PRESSURE RATED AT 600 PSI WOG 1/4" UP TO 2" AND 400 PSI WOG 2-1/2" AND 3". VALVES SHALL BE MANUFACTURED AND ASSEMBLED IN THE U.S.A.

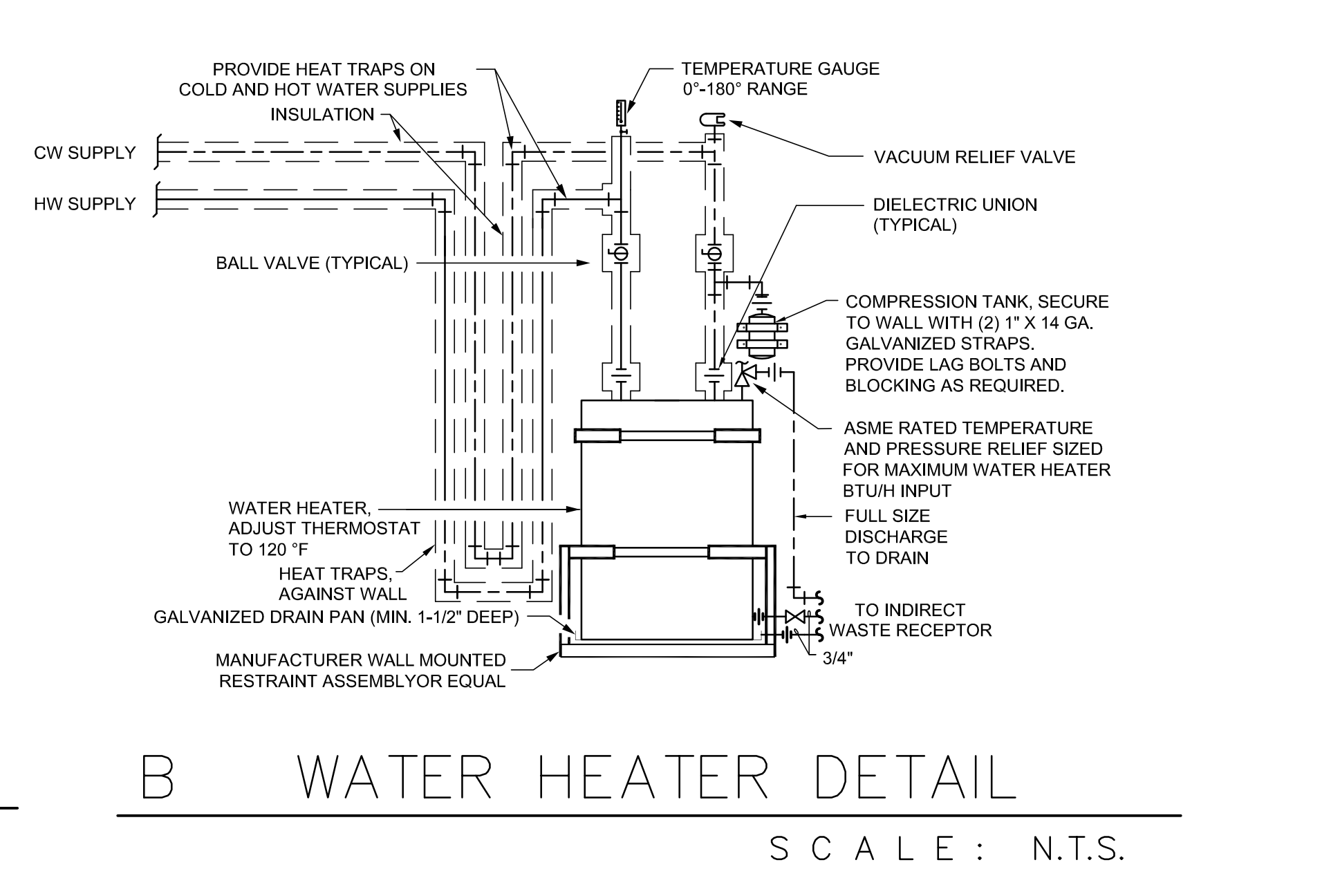
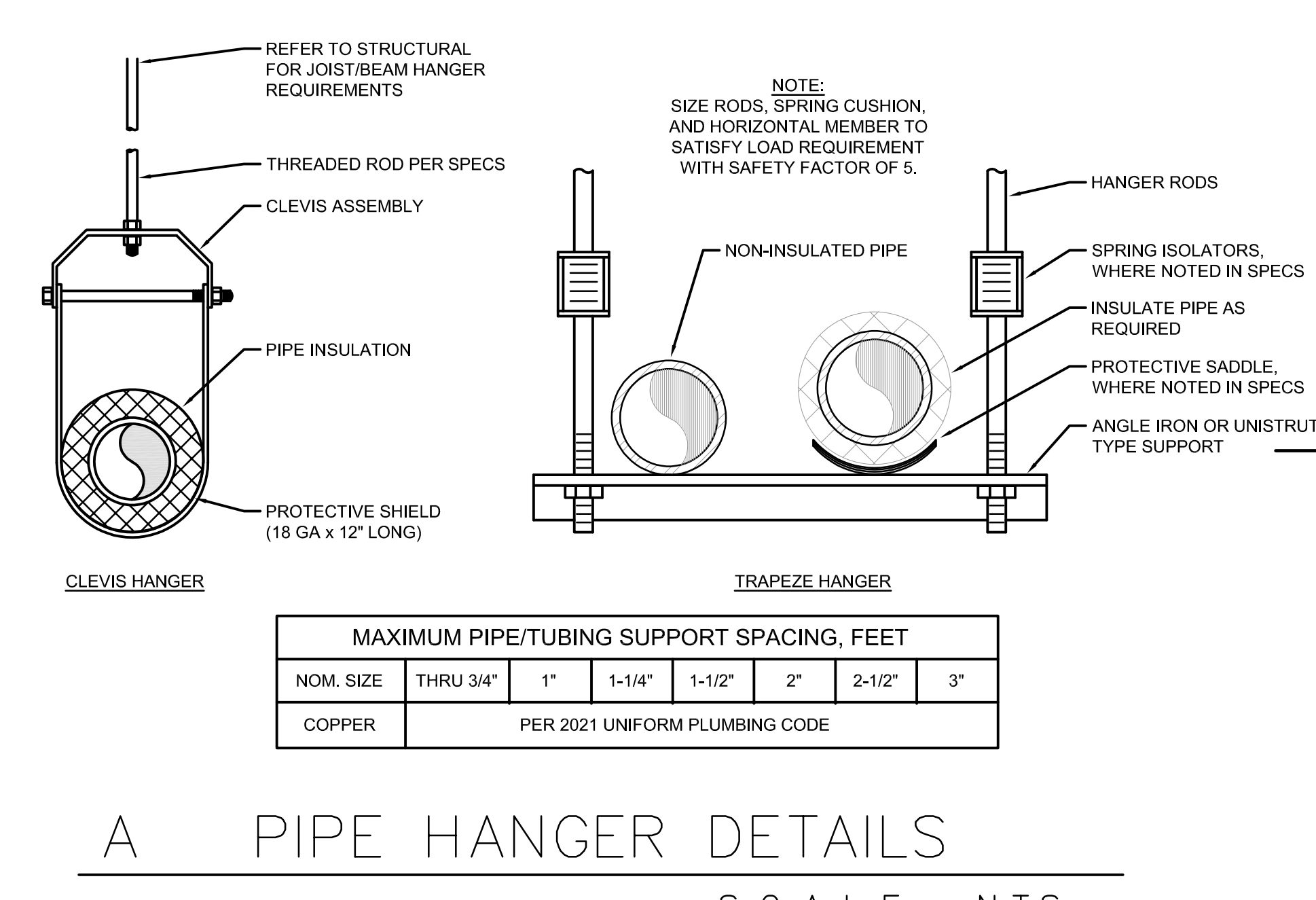
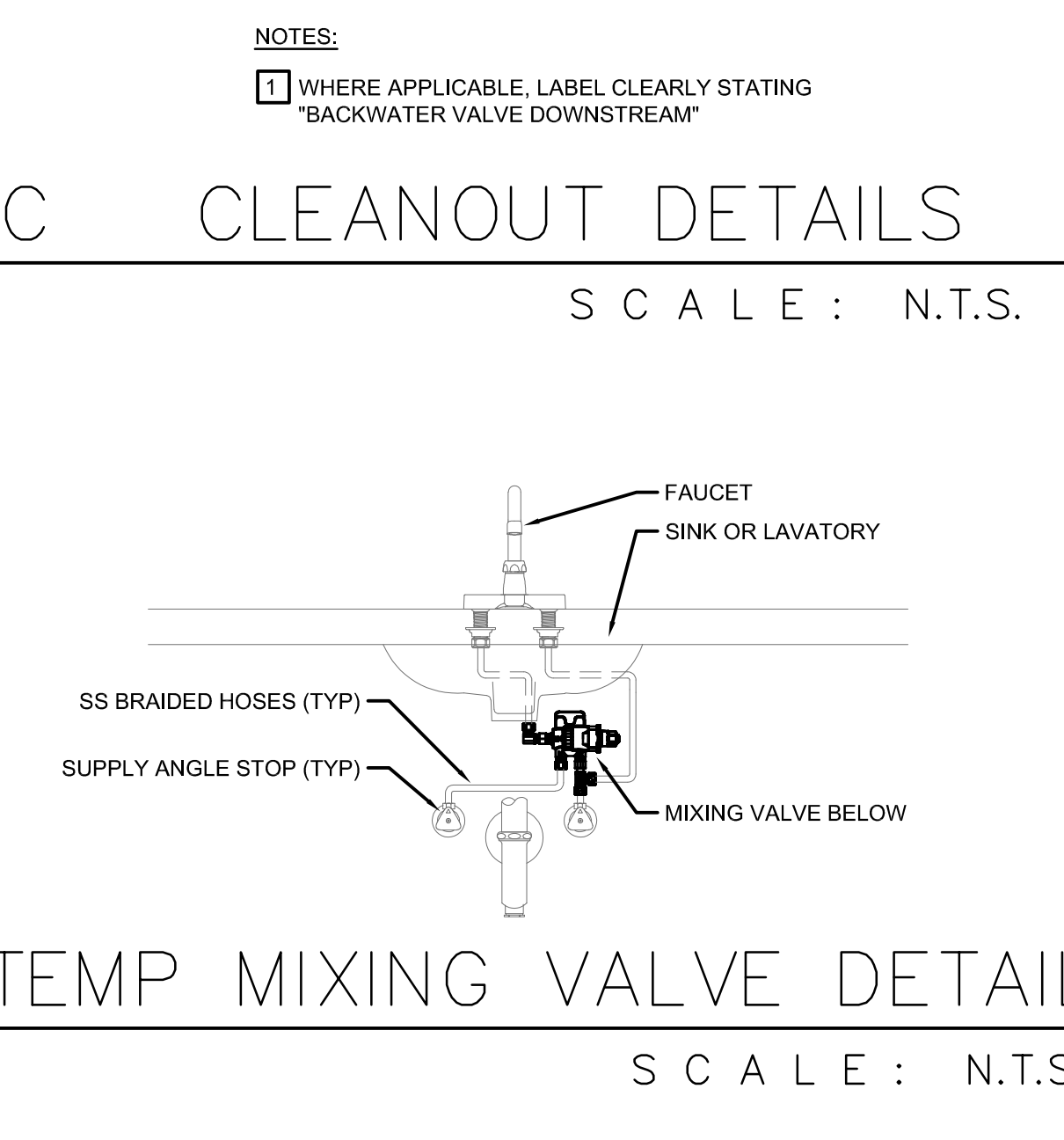
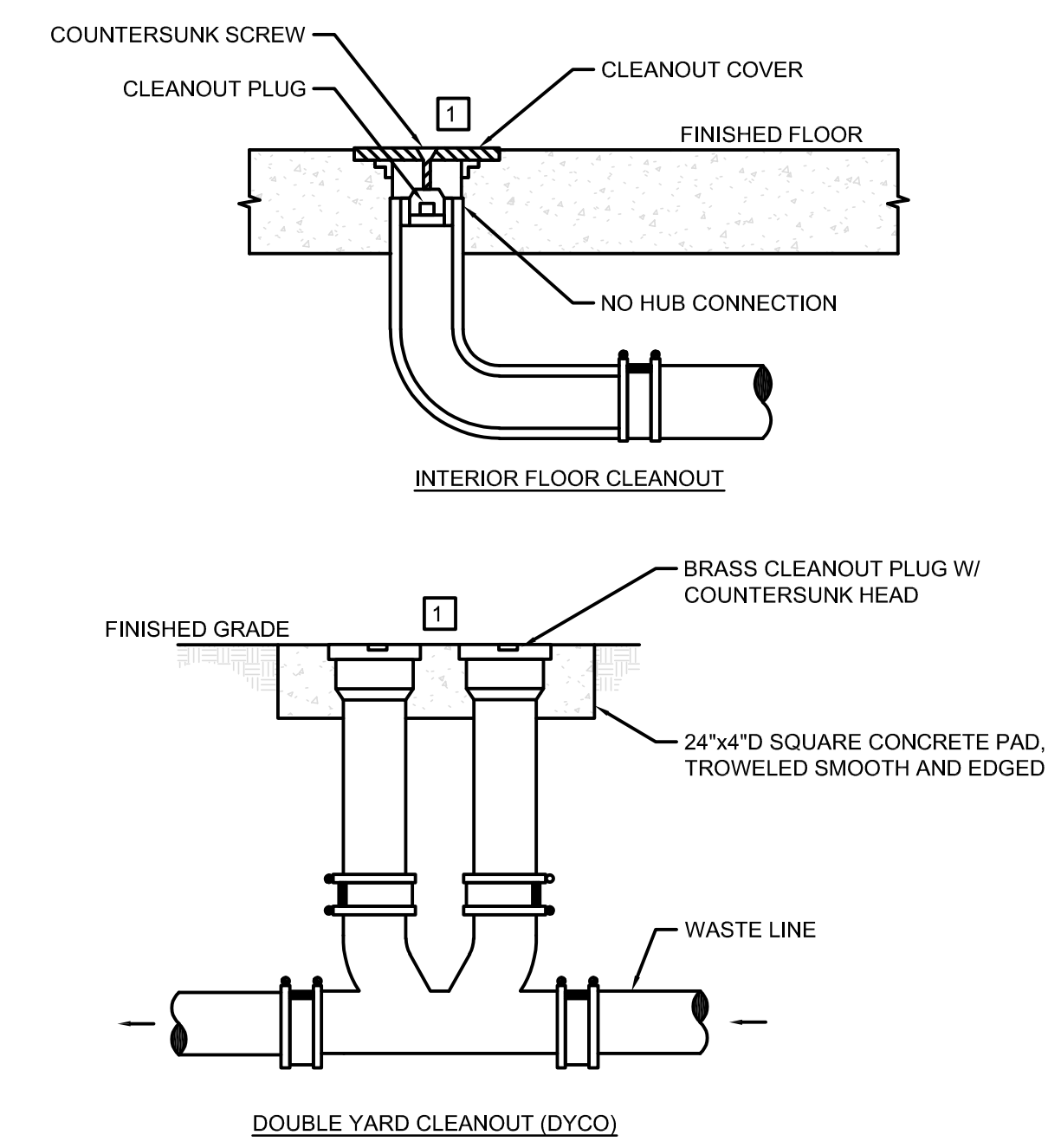
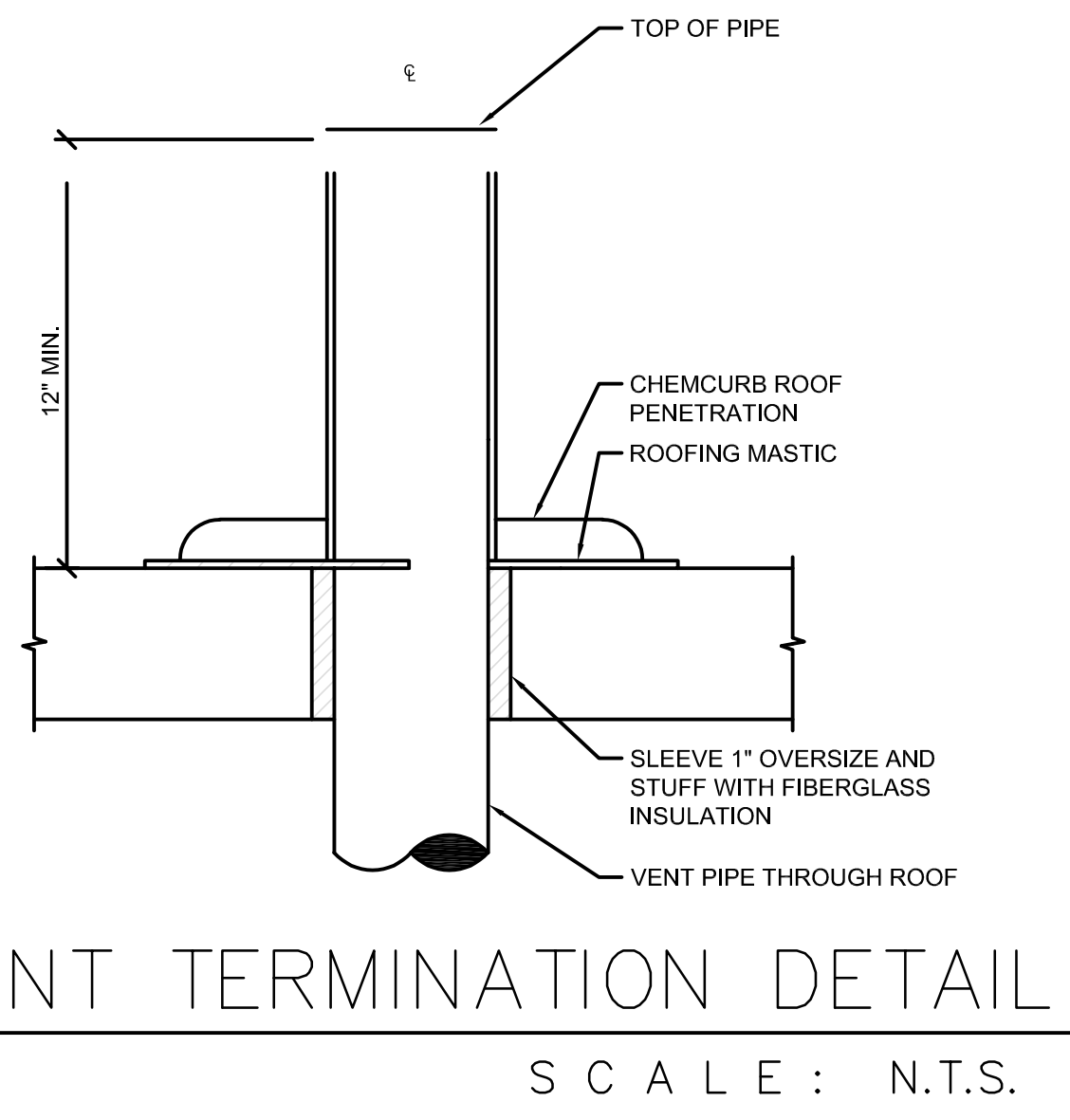
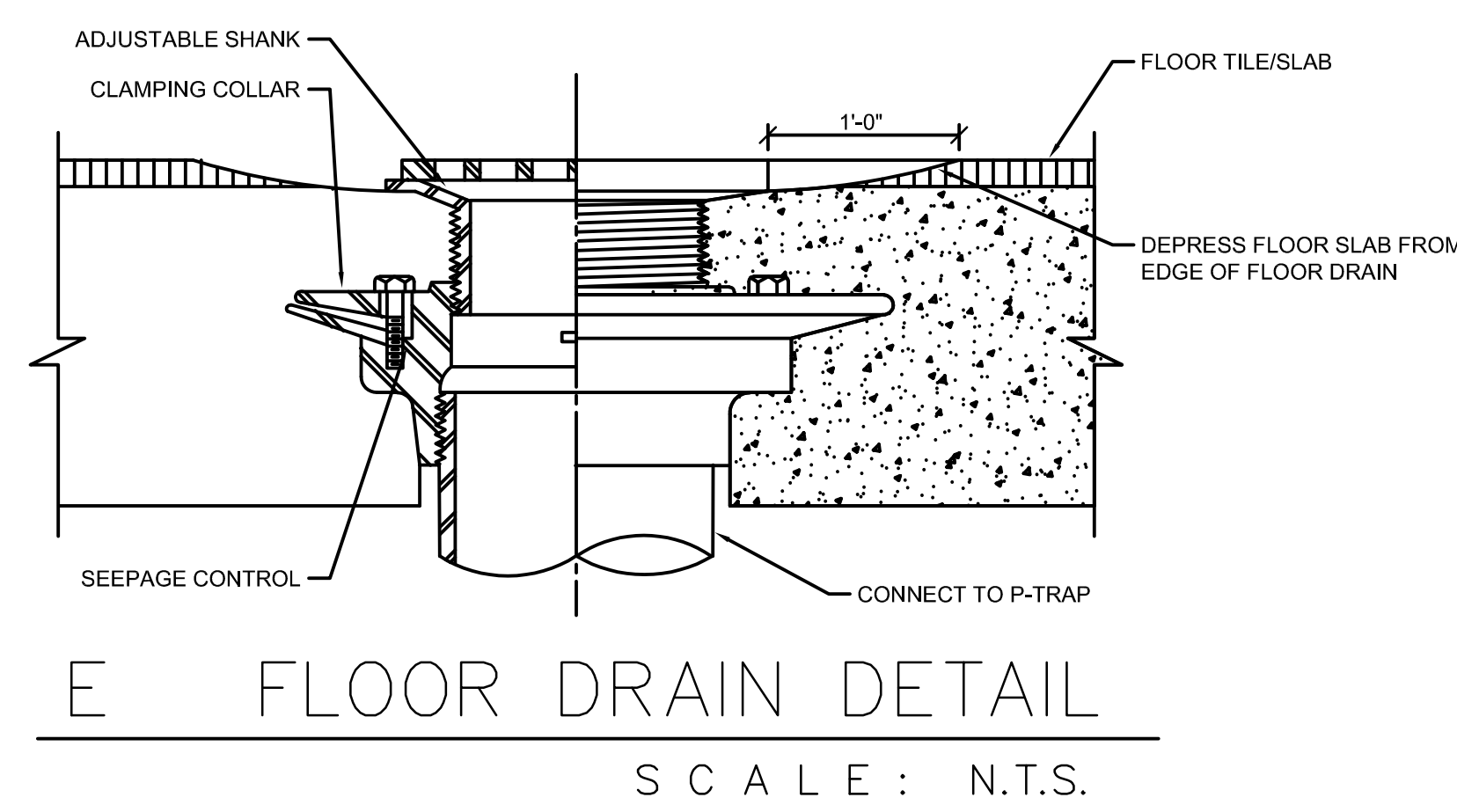
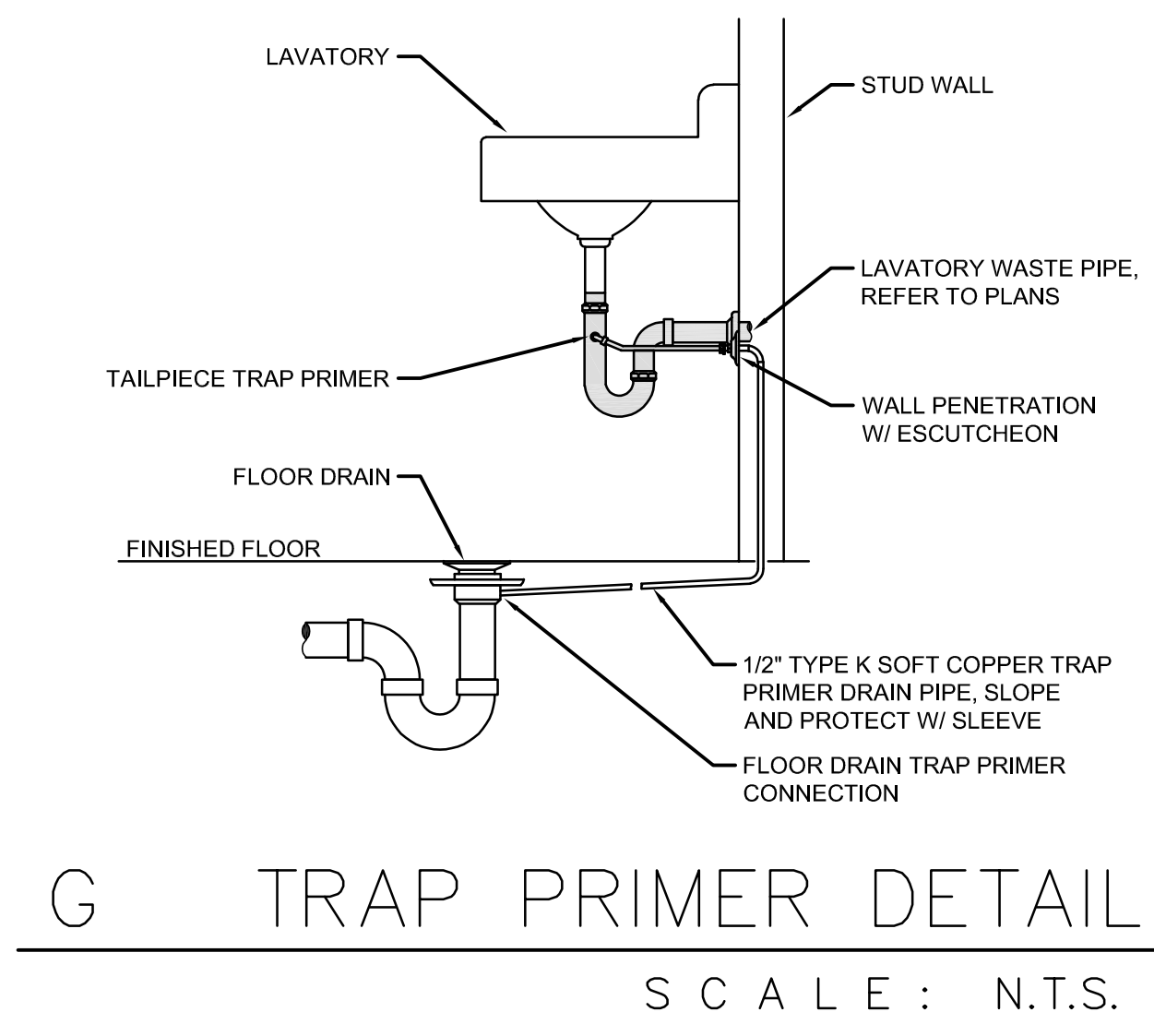
**SANITARY SOIL WASTE, AND VENT PIPING**

- ABOVE GROUND INSIDE BUILDING VERTICAL AND HORIZONTAL WASTE AND VENT STACKS, FIXTURE AND VENT MANIFOLDS SHALL BE ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS. PIPING INSTALLED WITHIN RETURN AIR PLenums SHALL BE "NO-HUB" CAST IRON SOIL PIPE AND FITTINGS (CISPB01) ASSEMBLED WITH 304 STAINLESS STEEL NO-HUB COUPLINGS ASSEMBLIES, WITH NEOPRENE GASKET MEETING ASTM C-664.
- BELOW GROUND SHALL BE ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.
- PROVIDE AND INSTALL ALL CLEANOUTS INDICATED AND AS REQUIRED BY LOCAL CODES.
- THE WASTE AND VENT SYSTEM SHALL BE TESTED AS REQUIRED BY THE PLUMBING CODES HAVING JURISDICTION.
- INDIRECT DRAINS SHALL BE TYPE "L" COPPER TUBING (ASTM B-88) WITH WROUGHT COPPER FITTINGS (ANSI B16.22). CLEAN AND DEBURR THE INSIDE OF ALL FITTINGS CAREFULLY BEFORE JOINING WITH 95/5 TIN/ANTIMONY SOLDER. NO ACIDS SHALL BE USED TO CLEAN EITHER PIPE OR FITTINGS OR AS A FLUX IN SWEATING JOINTS.

**PLUMBING PIPING HANGER SPACING**

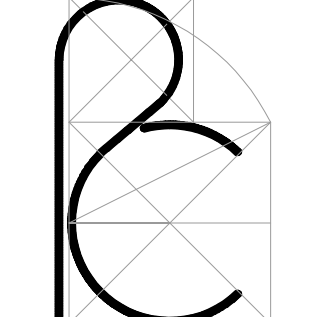
MAXIMUM SPACING BETWEEN PIPING HANGERS SHALL BE IN ACCORDANCE WITH THE 2021 UNIFORM PLUMBING CODE. SUPPORTS SHALL BE ARRANGED SO AS TO BE NEAR THE WEAKEST POINT OF THE SPAN SUCH AS JOINTS, TURNS AND AT THE BASE OF ALL VERTICAL TO HORIZONTAL OFFSETS, AND AT ALL WASTE TRAPS.

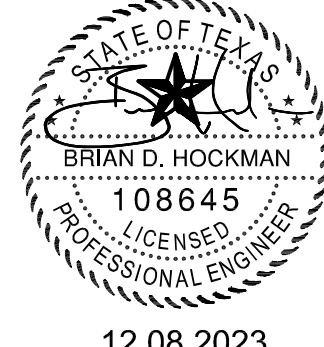
IN NO CASE SHALL ANY PIPING DEPEND ON BLOCKS, BRICKS, STONE, WOOD SLEEPERS, OR TIE WIRES FOR ITS FINAL SUPPORT.



PLUMBING FIXTURE SCHEDULE								
TAG	DESCRIPTION	MANUFACTURER - MODEL	TRIM & ACCESSORIES	CONNECTIONS (INCHES)				DESCRIPTION AND NOTES
				HW	CW	W	V	
EWH-1	ELECTRIC WATER HEATER	RHEEM #XE30P08P20U1	WALL MOUNTED SUSPENDED PLATFORM W/ STEEL DRAIN PAN (HOLDRITE OR EQUAL), CP-1 & XT-1 AS SCHEDULED	3/4	3/4	-	-	30 GALLON POINT OF USE ELECTRIC WATER HEATER, 2 KW, 9 GPH AT 90°F TEMPERATURE RISE, SET AT 120°F DISCHARGE TEMPERATURE, 120/60/1
FCO	FLOOR CLEANOUT	JAY R. SMITH #4020	FLANGE W/ FLASHING CLAMP	-	-	4	-	CAST IRON BODY, ABS CLEANOUT PLUG WITH GASKET, NICKEL BRONZE COVER, ADJUSTABLE HOUSING FOR FLUSH INSTALLATION
FD-1	FLOOR DRAIN	JAY R. SMITH #2010-A	-	-	-	2	2	CAST IRON BODY, CLAMPING COLLAR, NICKEL BRONZE 6" STRAINER, TRAP PRIMER CONNECTION
HB-1	HOSE BIBB	WOODFORD #665	-	-	3/4	-	-	ANTI-SIPHON FREEZELESS WALL HYDRANT, CHROME WITH ANTI-SIPHON VACUUM BREAKER HOSE THREAD, BRASS STEM WITH KEY OPERATOR, CONCEALED RECTANGULAR BOX.
LAV-1	LAVATORY (ADA)	STERLING "SACRAMENTO" #446121	FAUCET: SLOAN SOLIS #EAF-275-ISM, TRAP, S.S. BRAIDED HOSES, 1/4 TURN ANGLE STOPS, WALL ESCUTCHEONS, PIPE INSULATION COVERS	1/2	1/2	2	2	ADA WALL MOUNT VITREOUS CHINA LAVATORY, DECK MOUNT SENSOR SOLAR POWERED FAUCET W/ BATTERY BACK-UP, 0.35 GPM AERATOR, INTEGRATED SIDE MIXED (SET TO 105°F OUTLET TEMPERATURE)
MS-1	MOP SINK	FLORESTONE #MSR-2424	FAUCET: FIAT #830-AA, STAINLESS STEEL WALL PANELS, MOP HANGER	1/2	1/2	3	2	24"x24"x10" MOLDED STONE MOP SINK, CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, WALL BRACE, PAIL HOOK, AND HOSE THREAD
SK-1	BREAK SINK (ADA)	ELKAY "PERGOLA" #HDB332284	FAUCET: PFISTER "RENATO" #F-529-TRNC, GRID STRAINER, TRAP, SS BRAIDED HOSES, WALL ESCUTCHEONS	1/2	1/2	2	2	20 GA DOUBLE BOWL STAINLESS STEEL DROP-IN SINK, SOUND DEADENING PADS, 1.8 GPM CHROME SINGE HOLE FAUCET W/ PULL OUT SPRAYER, SOAP DISPENSER
TP-1	TRAP PRIMER	PRECISION PLUMBING PRODUCTS #LTP-1500	-	-	1/2	-	-	UNDER LAVATORY TRAP AND PRIMER ASSEMBLY, 3/8" BRAIDED HOSE WITH 5/8" COMPRESSION FITTINGS, CHROME PLATED ESCUTCHEONS.
US-1	UTILITY SINK	STEELTON #522CS124FW	FAUCET: MANUFACTURER INCLUDED, STEEL WALL PANEL(S)	1/2	1/2	3	2	18 GA 24"x24"x12" STAINLESS STEEL BOWL, CHROME PLATED GOOSENECK FAUCET
US-2	UTILITY SINK	-	FAUCET: MANUFACTURER INCLUDED, STEEL WALL PANEL(S)	1/2	1/2	3	2	18 GA 24"x24"x12" STAINLESS STEEL BOWL, CHROME PLATED GOOSENECK FAUCET
WC-1	WATER CLOSET	KOHLER "HIGHLINE" #K-3999-0	SEAT: AMERICAN STANDARD #6901110T.020, S.S. BRAIDED HOSE, 1/4 TURN ANGLE STOP, WALL ESCUTCHEON	-	1/2	4	2	ADA VITREOUS CHINA GRAVITY FLUSH TANK, FLOOR MOUNTED, ELONGATED BOWL, 1.28 GPF WATER CLOSET
WCO	WALL CLEANOUT	JAY R. SMITH #4402C	-	-	-	-	-	STAINLESS STEEL COVER, REFER TO PLANS FOR SIZE
XT-1	EXPANSION TANK	RHEEM THERM-X-GUARD #RRT-12	-	-	3/4	-	-	4.4 GALLON EXPANSION TANK, 150 PSIG OPERATING PRESSURE, CERTIFIED FOR POTABLE WATER USAGE
YCO/DYCO	YARD CLEANOUT / DOUBLE YARD CLEANOUT	JAY R. SMITH #4250	-	-	-	4	-	EXTRA HEAVY DUTY, DOUBLE FLANGED, CAST IRON ROUND SCORRIATED COVER, SET EXTERIOR YARD CLEANOUT IN 24"x24"x6" THICK CONCRETE PAD WHERE LOCATED IN UNPAVED AREA

WATER CALCULATIONS (2021 IPC) - SERVICE SIZE			
ELEVATION OF HIGHEST FIXTURE (FEET)	AVAILABLE WATER PRESSURE	PSI	60.0
	PRESSURE LOSS AT METER		15.0
	MIN. PRESSURE REQUIRED (FLUSH TANK)		25.0
	STATIC PRESSURE LOSS (ELEV)		1.7
	TOTAL AVAILABLE PRESSURE		18.3
DISTANCE TO LAST FIXTURE (IN FT.)	TOTAL DEVELOPED LENGTH (IN FT.)		125
	PEAK FLOW (IN GPM)		150
	ALLOWABLE FRICTION LOSS/100 FT		22
			12.2
FIXTURE	QTY	WSFU EA.	TOTAL WSFU
	WATER CLOSET (FLUSH TANK)	2.0	5.00
LAVATORY	2.0	1.50	3.0
KITCHEN SINK	1.0	2.25	2.3
DRINKING FOUNTAIN	1.0	0.25	0.25
DISHWASHER	1.0	1.40	1.4
REFRIGERATOR ICE MAKER	1.0	0.25	0.3
MOP/UTILITY SINK	2.0	2.25	4.50
HOSE BIBB	3.0	2.5 / 1	3.5
METER SIZE:			1"
BUILDING SUPPLY SIZE:			1"
TOTAL WSFU EQUIVALENT GPM			25.2
			21.6

  
**RC Architects, Inc.**  
 14620 Echo Bluff  
 Austin, Texas 78737  
 (512) 913-0597  
 rickcanales.architects@gmail.com

  
 BRIAN D. HOCKMAN  
 108645  
 LICENSED PROFESSIONAL ENGINEER  
 12.08.2023

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
 9301 Hog Eye Road - Austin, Texas 78724  
**RC Architects, Inc.**

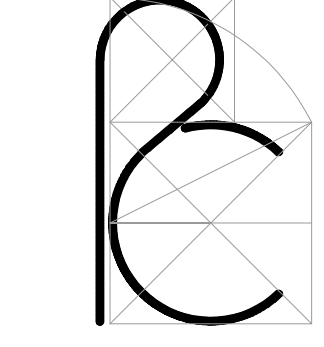
Revisions  
 Δ IFP: 2023.12.08

**hollingsworth pack** Design & Construction Consultants  
 3801 S. Congress Suite 110 - Austin, TX 78704  
 PH(512) 275-0060 TX FIRM # 12747

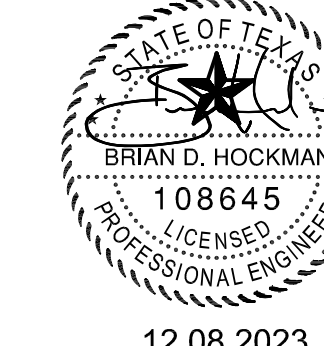
12/08/2023

**PLUMBING SCHEDULES/DETAILS**  
**P0.2**

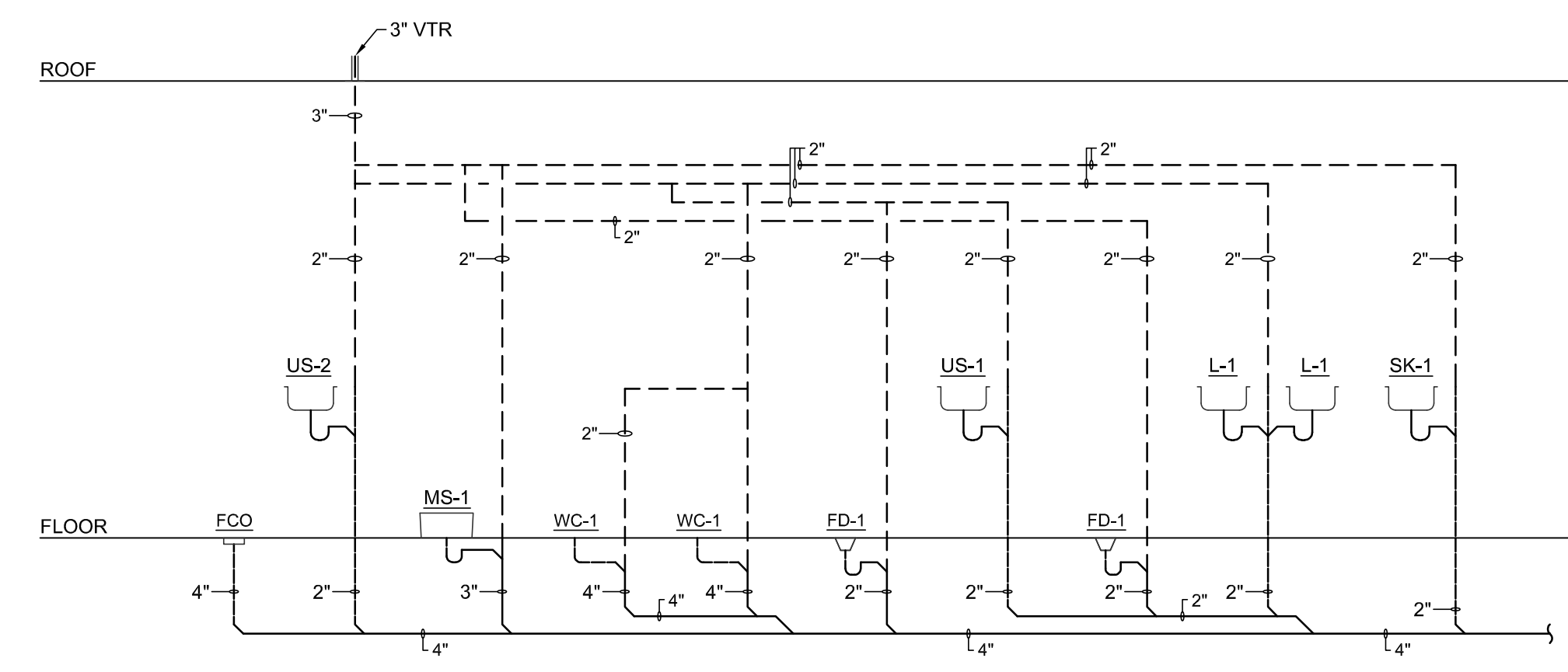




RC Architects, Inc.  
 14620 Echo Bluff  
 Austin, Texas 78737  
 (512) 913-0597  
 rickcanales.architects@gmail.com

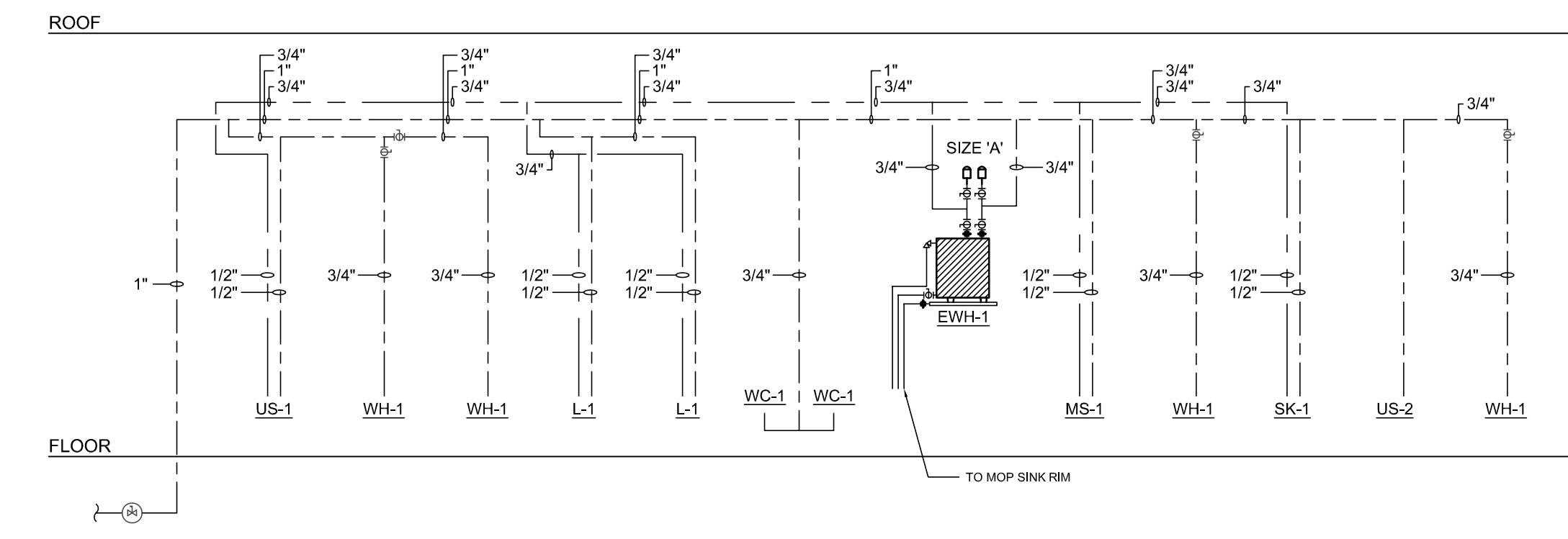


12.08.2023



1 PLUMBING DWV RISER DIAGRAM

SCALE : N.T.S.



2 PLUMBING DOM. WATER RISER DIAGRAM

SCALE : N.T.S.

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**

9301 Hog Eye Road - Austin, Texas 78724

RC Architects, Inc.

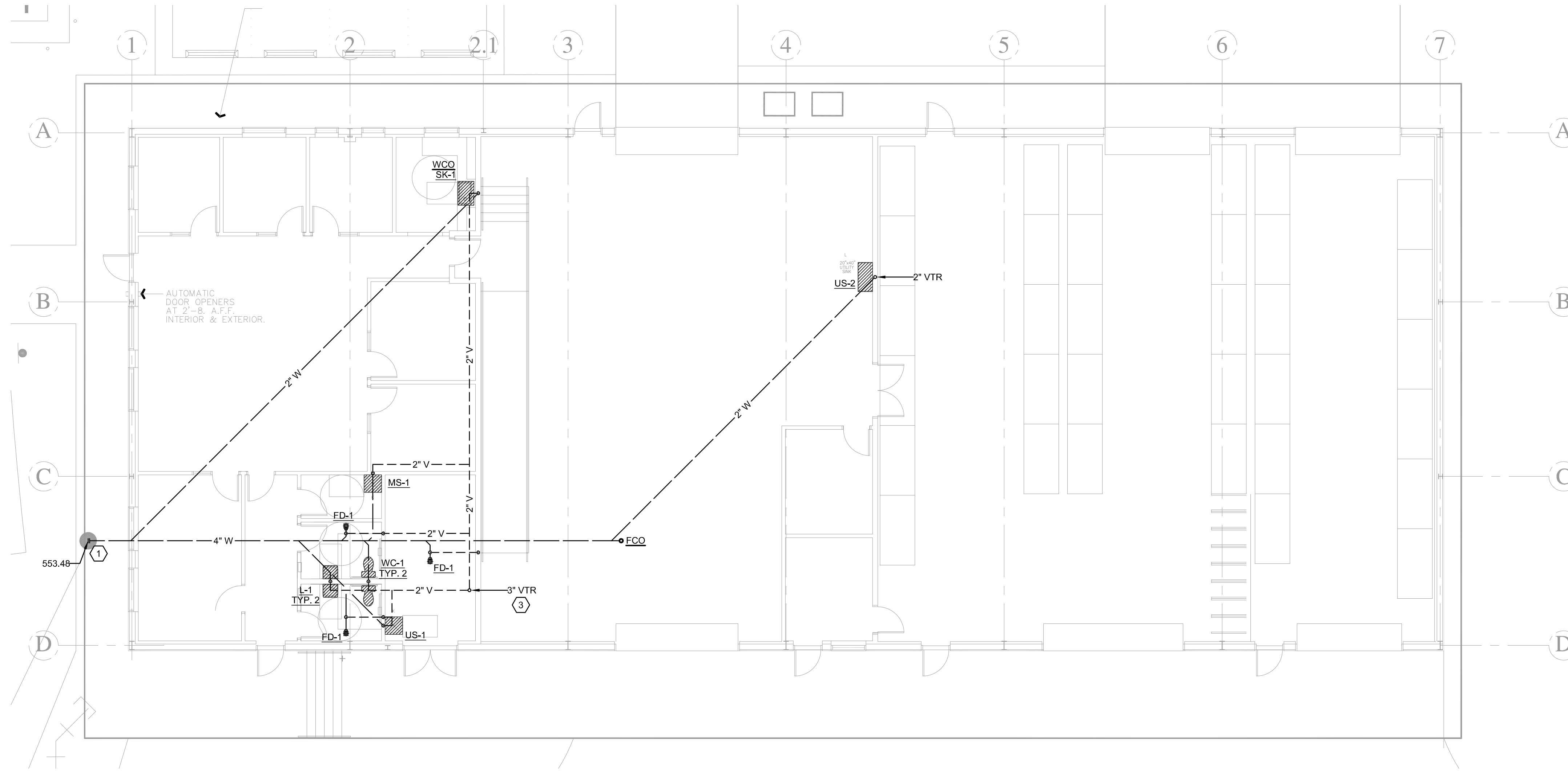
Revisions	
△	IFP: 2023.12.08

**hollingsworth pack**  
 Design & Construction Consultants  
 3801 S. Congress Suite 110 - Austin, TX 78704  
 PH(512) 275-0060 TX FIRM # 12747

12/08/2023

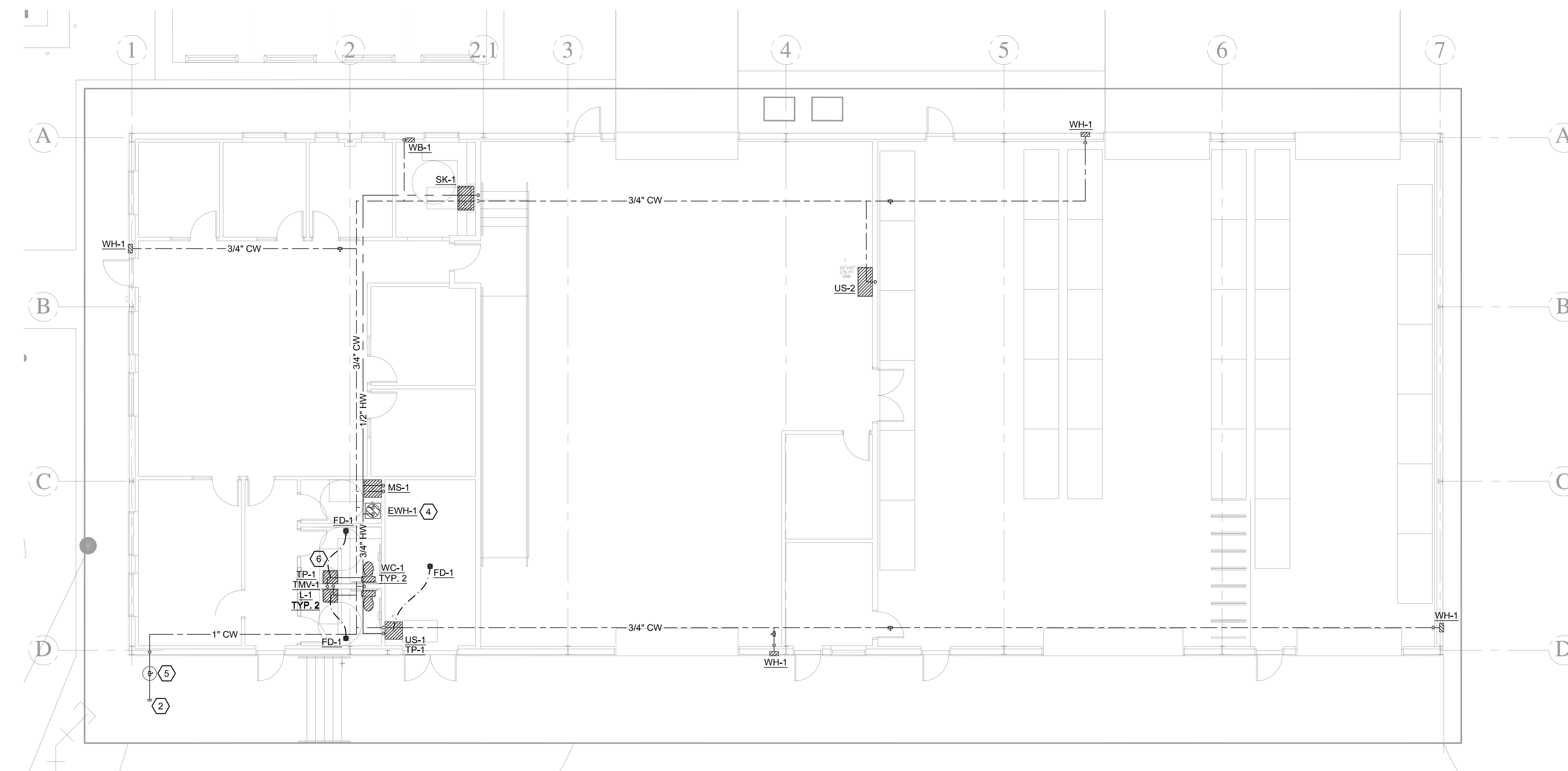
PLUMBING  
 RISER  
 DIAGRAMS  
**P0.3**





1 PLUMBING DWV PLAN

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



1 PLUMBING DOM. WATER PLAN

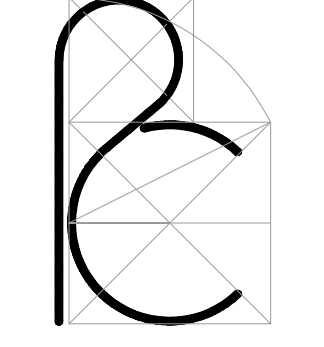
SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

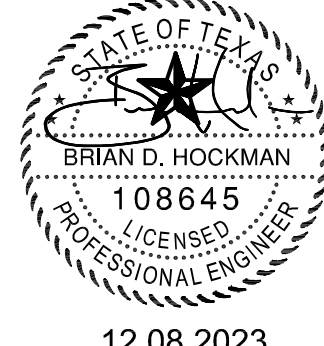
- A. REFER TO PLUMBING COVER SHEET DRAWING FOR SYMBOLS, ABBREVIATIONS, SPECIFICATIONS, AND ADDITIONAL INFORMATION.
- B. DUE TO DRAWING SCALE IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.
- C. COORDINATE ALL STRUCTURAL BEAM PENETRATIONS WITH STRUCTURAL ENGINEER. SLEEVE ALL PIPING PENETRATIONS. SUBMIT ALL PROPOSED PENETRATION LOCATIONS AND SIZES TO STRUCTURAL ENGINEER FOR APPROVAL.
- D. ALL VENTS THROUGH ROOF SHALL BE A MINIMUM 10 FT AWAY FROM OUTSIDE AIR INTAKES.

**KEYED NOTES (X):**

- 1. 4" SANITARY WASTE TO 5'-0" OUTSIDE OF BUILDING. REFER TO CIVIL FOR CONTINUATION.
- 2. 1" DOMESTIC COLD WATER TO 5'-0" OUTSIDE OF BUILDING. REFER TO CIVIL FOR CONTINUATION.
- 3. 3" VENT TO ROOF. MAINTAIN CODE REQUIRED 10'-0" CLEARANCE TO ALL BUILDING INTAKES.
- 4. ROUTE ELECTRIC WATER HEATER ON WALL. ROUTE AUXILIARY DRAIN AND TRAP DRAIN TO MOP SINK RIM AND TERMINATE WITH CODE MINIMUM AIR GAP.
- 5. PROVIDE SHUT OFF VALVE IN VALVE BOX FOR BUILDING SHUT OFF. VALVE BOX SHALL BE PROVIDED FLUSH WITH GRADE.
- 6. ROUTE TRAP PRIMER TP-1 TO FLOOR DRAIN TRAP PRIMER CONNECTION. TYP. OF 2.



RC Architects, Inc.  
14620 Echo Bluff  
Austin, Texas 78737  
(512) 913-0597  
rickcanales.architects@gmail.com



12.08.2023

**MOBILE LOAVES AND FISHES - OPERATIONS BLDG.**  
 9301 Hog Eye Road - Austin, Texas 78724  
 RC Architects, Inc.

Revisions

△	IFP: 2023.12.08
---	-----------------

**hollingsworth pack**  
Design & Construction Consultants  
3801 S. Congress Suite 110 - Austin, TX 78704  
PH(512) 275-0060 TX FIRM # 12747

12/08/2023

PLUMBING  
FLOOR PLANS

P1.1