

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

Phase 4 - Operations Building

7913 Burleson Road

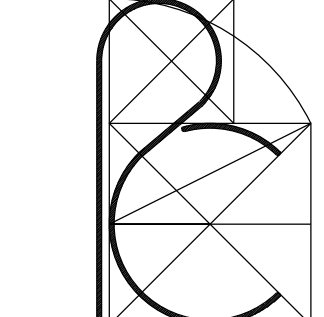
Austin, Texas 78724



6/6/24

**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 SECTIONS S3.0 TYPICAL 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 M2.01 MECHANICAL HVAC PLAN E0.01 ELECTRICAL COVER SHEET E0.02 ELECTRICAL DETAILS E0.03 ELECTRICAL ONE LINE E2.01 ELECTRICAL LIGHTING PLAN E3.01 ELECTRICAL POWER PLAN P0.01 PLUMBING COVER SHEET P0.02 PLUMBING SCHEDULES / DETAILS P0.03 PLUMBING RISER DIAGRAMS P2.01 PLUMBING PLANS	<small> APPLICABLE CODES: ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS & 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: BUILDING: 2015 INTERNATIONAL BUILDING CODE PLUMBING: 2018 INTERNATIONAL PLUMBING CODE MECHANICAL: 2018 INTERNATIONAL MECHANICAL CODE ELECTRICAL: 2014 NATIONAL ELECTRICAL CODE ENERGY: 2016 INTERNATIONAL ENERGY CONSERVATION CODE FIRE: 2018 INTERNATIONAL FIRE CODE 2012 TEXAS ACCESSIBILITY STANDARDS OPERATIONS BUILDING DATA: A) OCCUPANCY CLASSES: GROUP B - 2,410 S.F. / 100 • 25 OCCUPANTS GROUP S-2 - 6,640 S.F. / 300 • 23 OCCUPANTS B) TYPE OF CONSTRUCTION: TYPE 2B (PRE-ENGINEERED METAL BUILDING) C) FIRE SUPPRESSION: NOT PROVIDED WALL MOUNTED FIRE EXTINGUISHERS PROVIDED NOT TO EXCEED 75' TRAVEL DISTANCE APART. NO HIGH PILE STORAGE. D) BASIC ALLOWABLE AREA: 26,000 S.F. PER FLOOR E) GROSS BUILDING AREA (FOOTPRINT): 9,050 SQ. FT. SINGLE FLOOR </small>	Date 6/6/24 A1.0



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



6/6/24

MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

RC Architects, Inc.

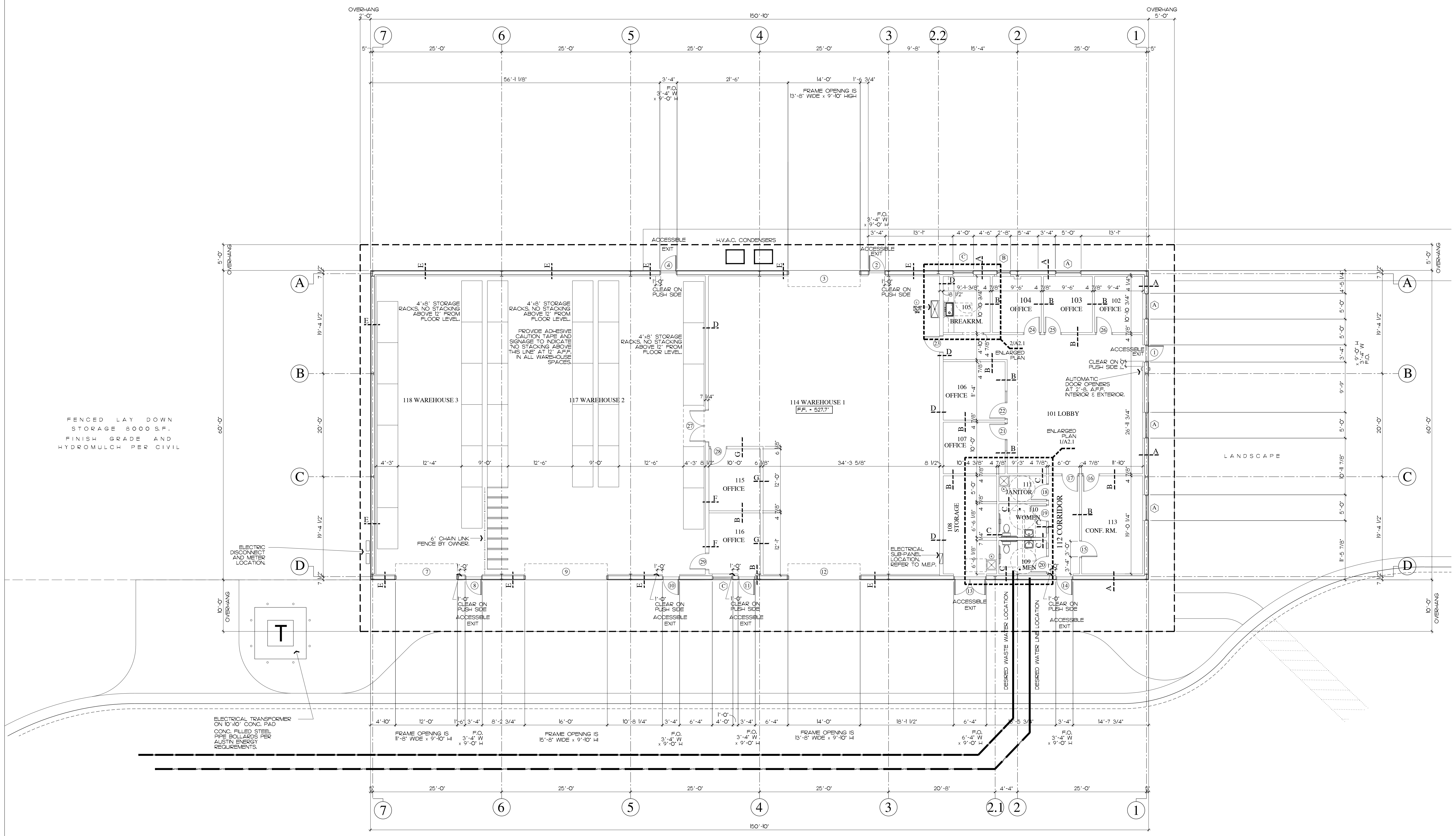
Revisions

Date

6/6/24

Sheet

A2.0



1 Floor Plan - Operations Building #4

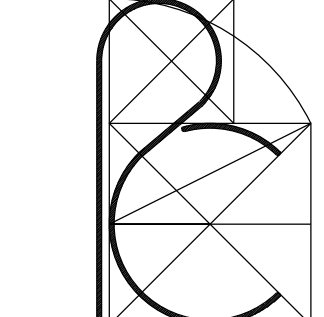
PLAN NORTH

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

2 Interior Wall Types Legend

A---	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 (EGG-SHELL) 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---	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 (EGG-SHELL) 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.
C---	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 (EGG-SHELL) 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.
D---	6" 20 GA. METAL STUDS AT 12" O.C. INSTALL TWO LAYERS OF 5/8" TYPE 'X' GYPSUM BOARD ON EACH SIDE. PROVIDE WATER RESISTANT GYR. 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 ROOF DECK. TAPE FLOAT, TEXTURE (EGG-SHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD METAL CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS. DO NOT EXCEED 25' IN EITHER DIRECTION FOR CONTROL JOINT SPACING. PROVIDE 6" SOUND ATTENUATION BATT INSULATION AS SPECIFIED. THIS IS TO BE A 2-HOUR FIRE WALL ASSEMBLY.
E---	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" COX PLYWOOD ON THE INTERIOR SIDE. EXTEND WALL TO 8'-0" AFF.
F---	6" 20 GA. METAL STUDS AT 12" O.C. INSTALL THREE LAYERS OF 5/8" TYPE 'X' ON THE OFFICE SIDE OF THE WALL AND ONE LAYER ON THE WAREHOUSE SIDE. PROVIDE WATER RESISTANT GYR. 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 ROOF DECK. TAPE FLOAT, TEXTURE (EGG-SHELL) ON THE FINISH SIDE. PAINT PER ARCHITECT. PROVIDE GYPSUM BOARD METAL CONTROL JOINTS PER U.S. GYPSUM RECOMMENDATIONS. DO NOT EXCEED 25' IN EITHER DIRECTION FOR CONTROL JOINT SPACING. PROVIDE 6" SOUND ATTENUATION BATT INSULATION AS SPECIFIED. THIS IS TO BE A 2-HOUR FIRE WALL ASSEMBLY.
G---	3-5/8" 20 GA. METAL STUDS AT 16" O.C. INSTALL TWO LAYERS OF 5/8" TYPE 'X' GYPSUM BOARD ON EACH FINISH SIDE. EXTEND WALL TO 1'-0" AFF. TAPE FLOAT, TEXTURE (EGG-SHELL) 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.

APPROVAL BLOCK:
FOR MOBILE LOAVES AND FISHES
DATE:



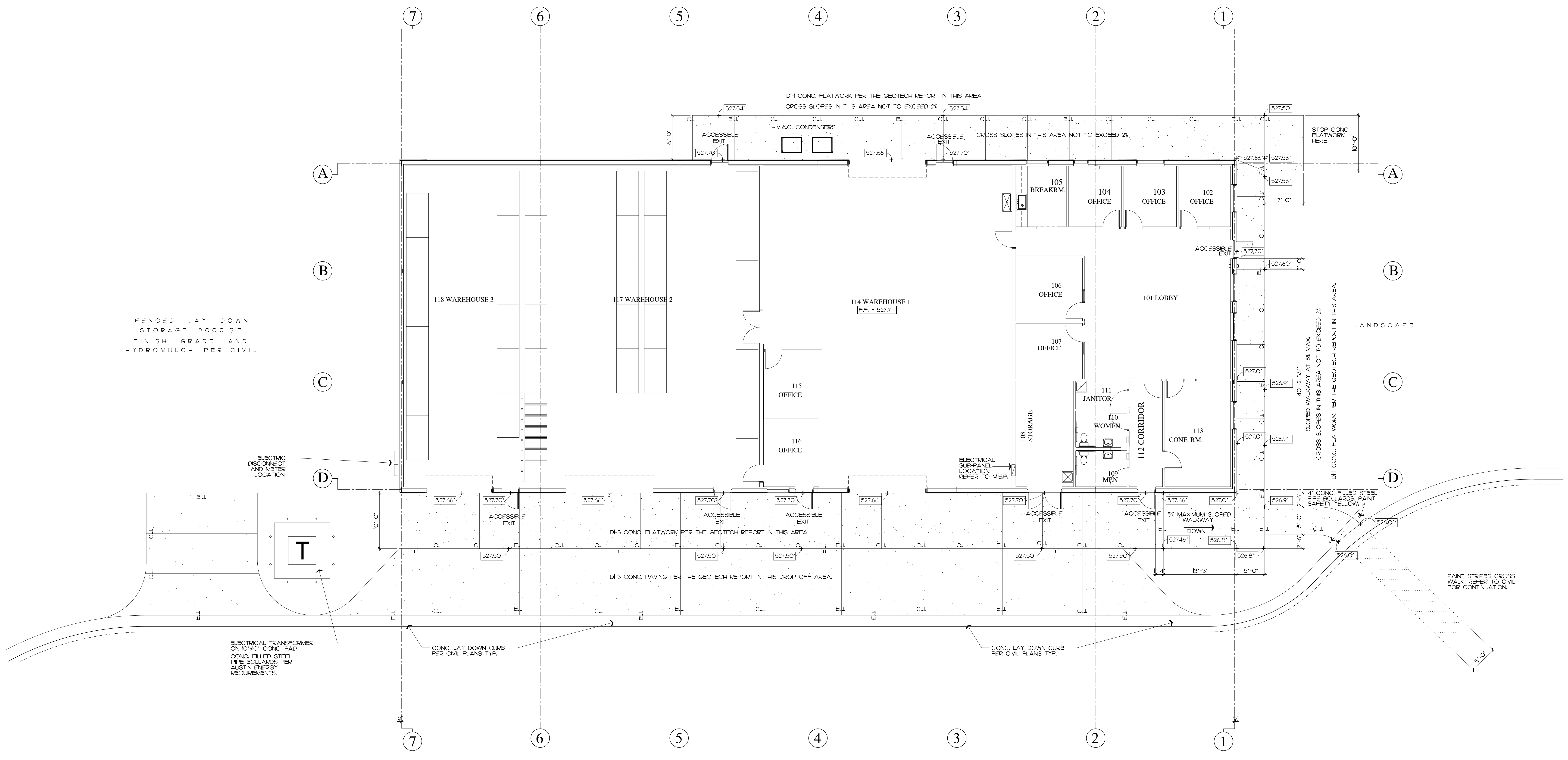
RC Architects, Inc.
14620 Echo Bluff
Austin, Texas 78737
(512) 913-0597
rickcanales.architects@gmail.com



6/6/24

MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

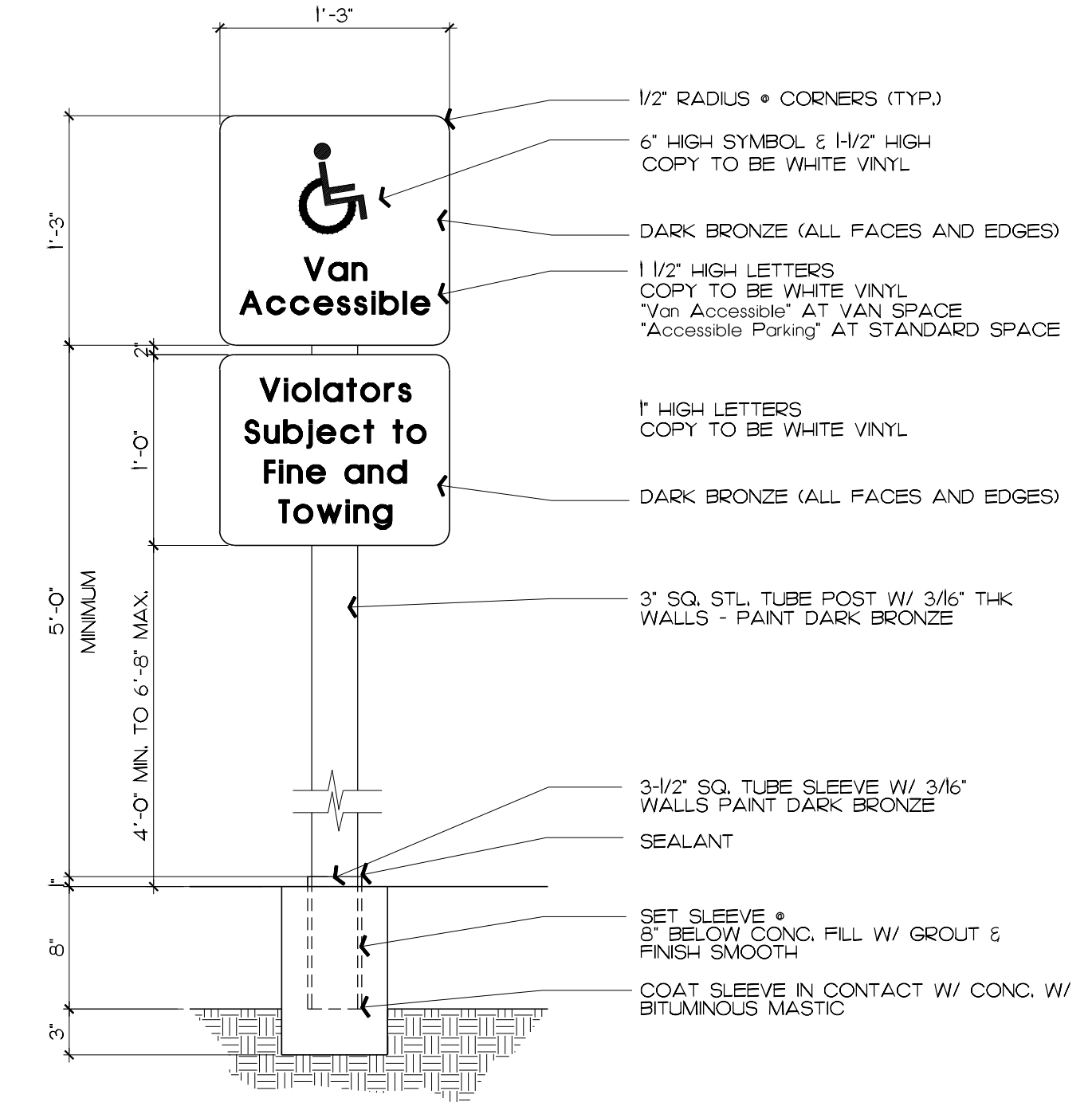
RC Architects, Inc.



1 Flatwork Concrete Plan - Operations Building #4

PLAN NORTH

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



2 Accessible Parking Sign Detail

SCALE: NONE

JOINT TYPE LEGEND

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

E.L. INDICATES EXPANSION JOINT 1/2" PRE-MOLDED JOIN FILLER WITH 3/4" x 1/8" SMOOTH STEEL DOWELS AND SLEEVE. 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.

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.

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:

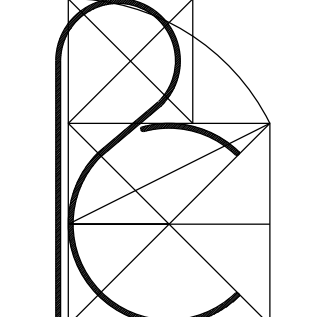
Revisions

Date

6/6/24

Sheet

A2.1



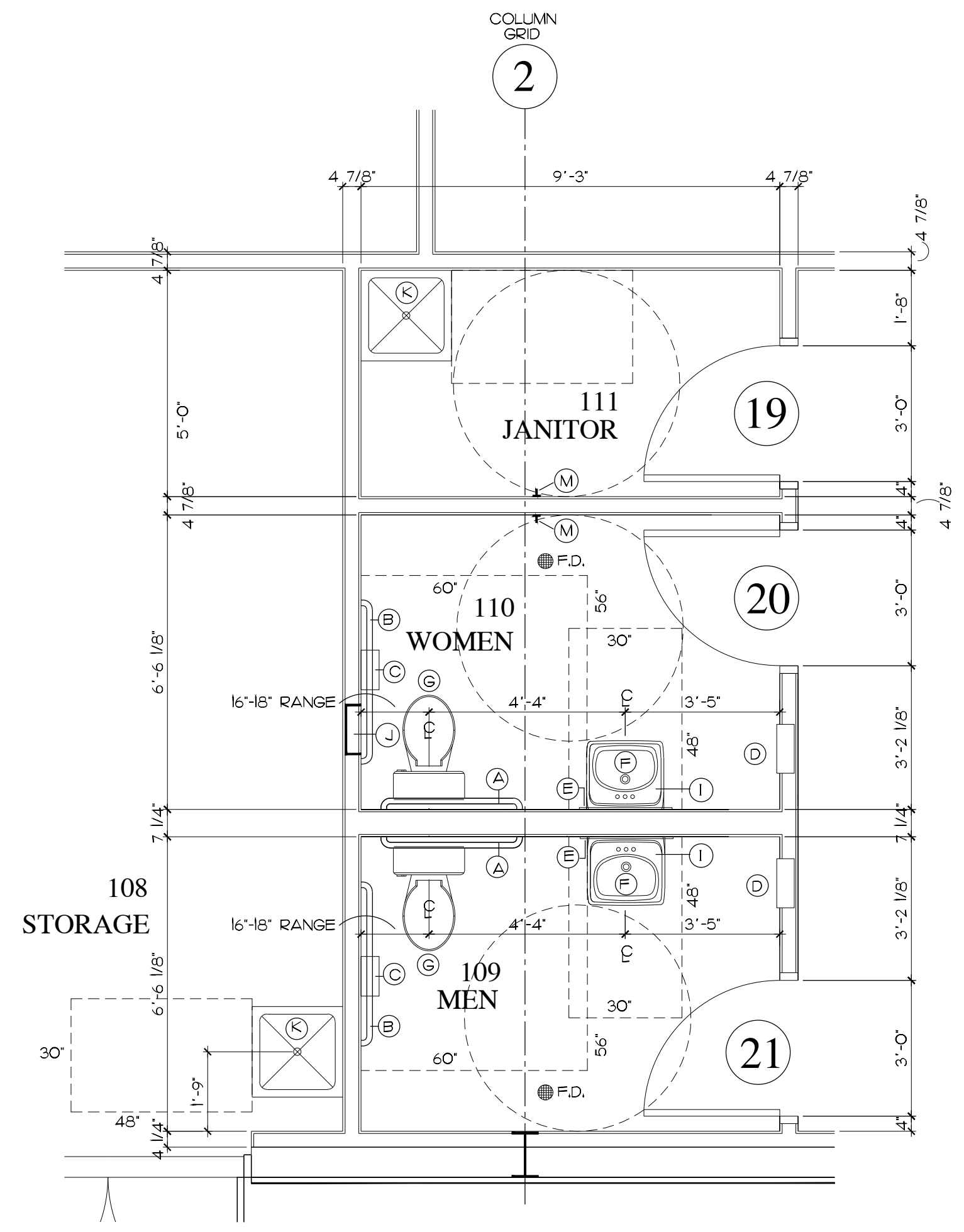
RC Architects, Inc.
14620 Echo Bluff
Austin, Texas 78737
(512) 913-0597
rickcanales.architects@gmail.com



6/6/24

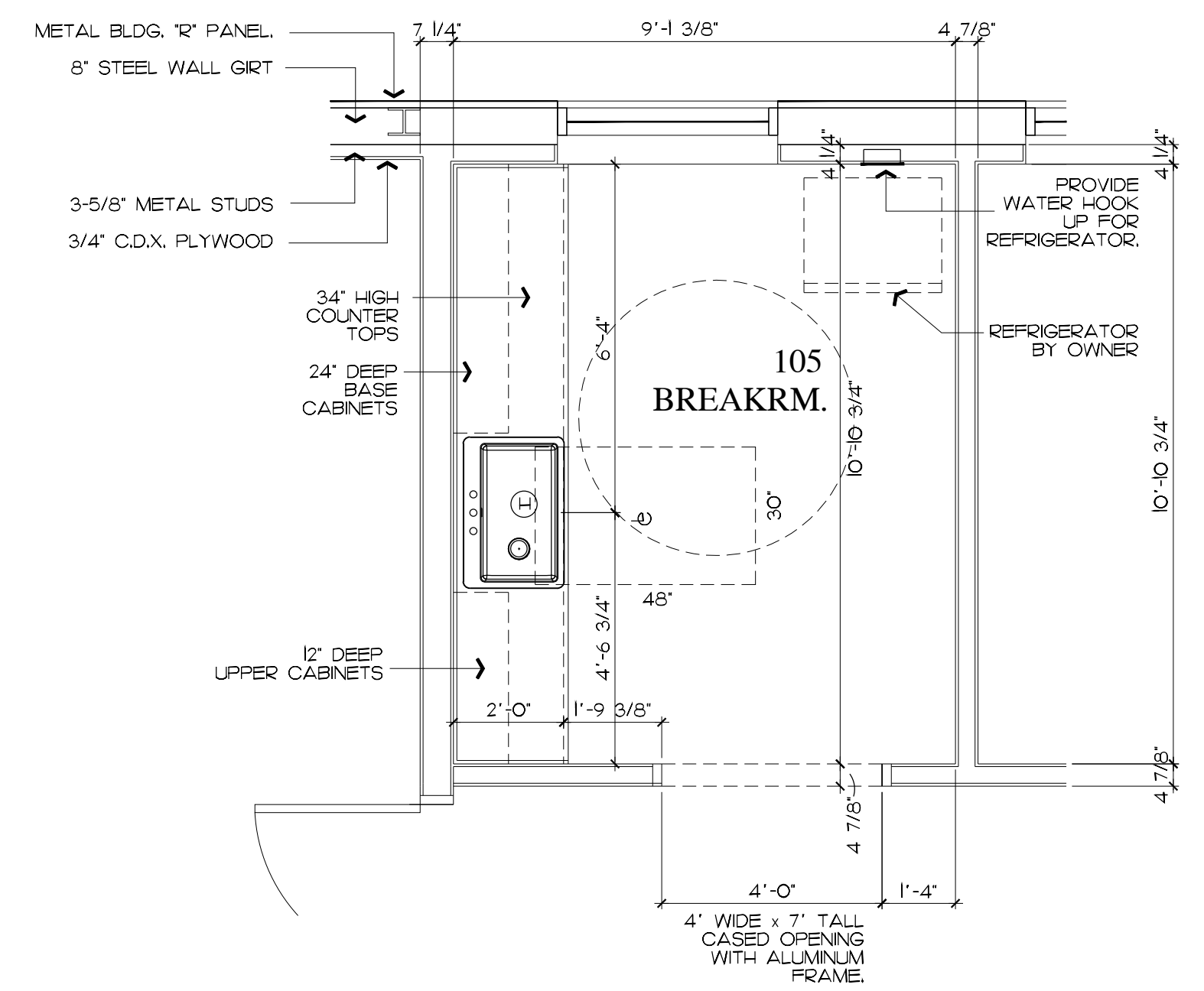
MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

RC Architects, Inc.



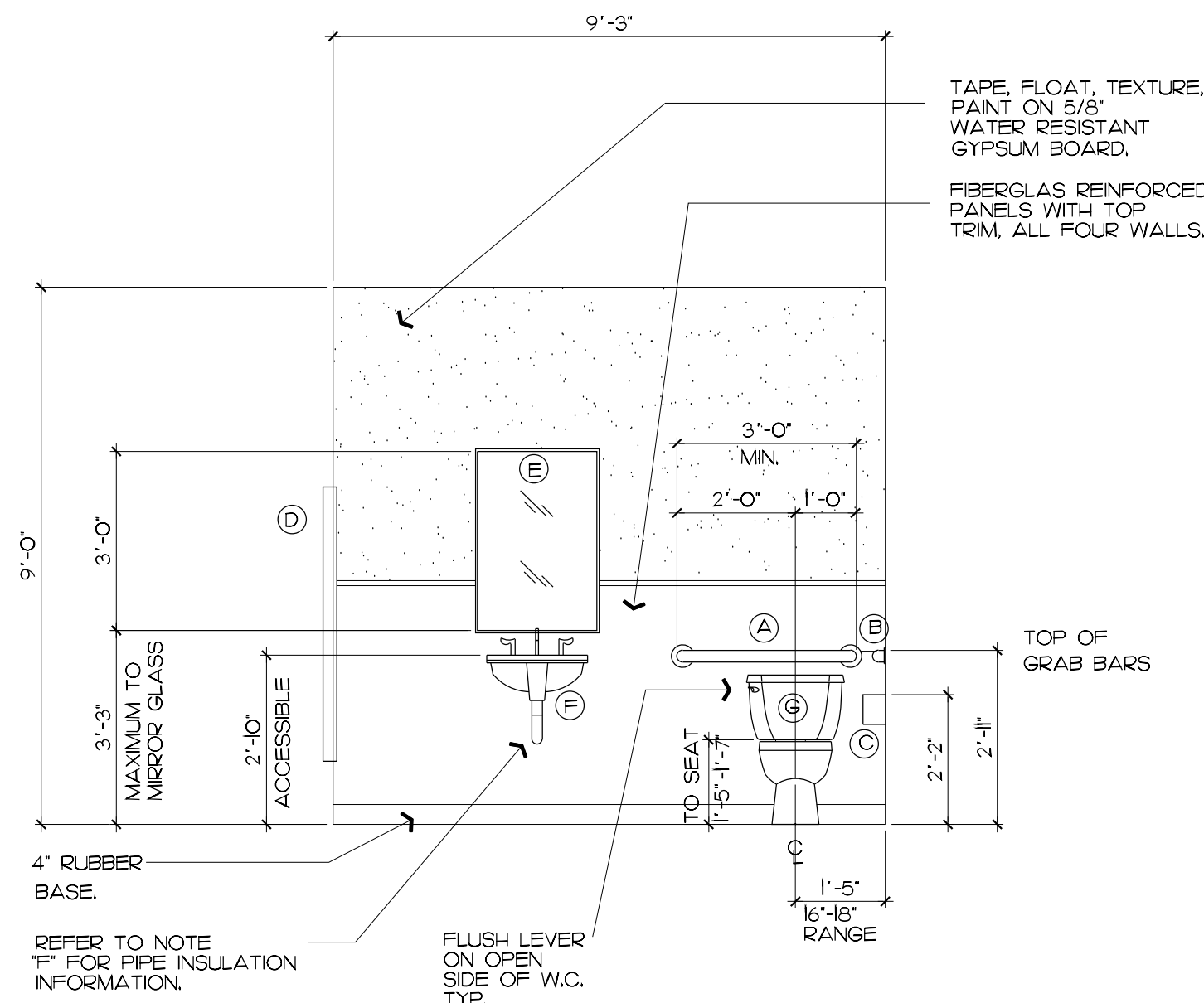
1 RESTROOM ENLARGED FLOOR PLAN

3/8" = 1'-0"



2 BREAK ROOM ENLARGED FLOOR PLAN

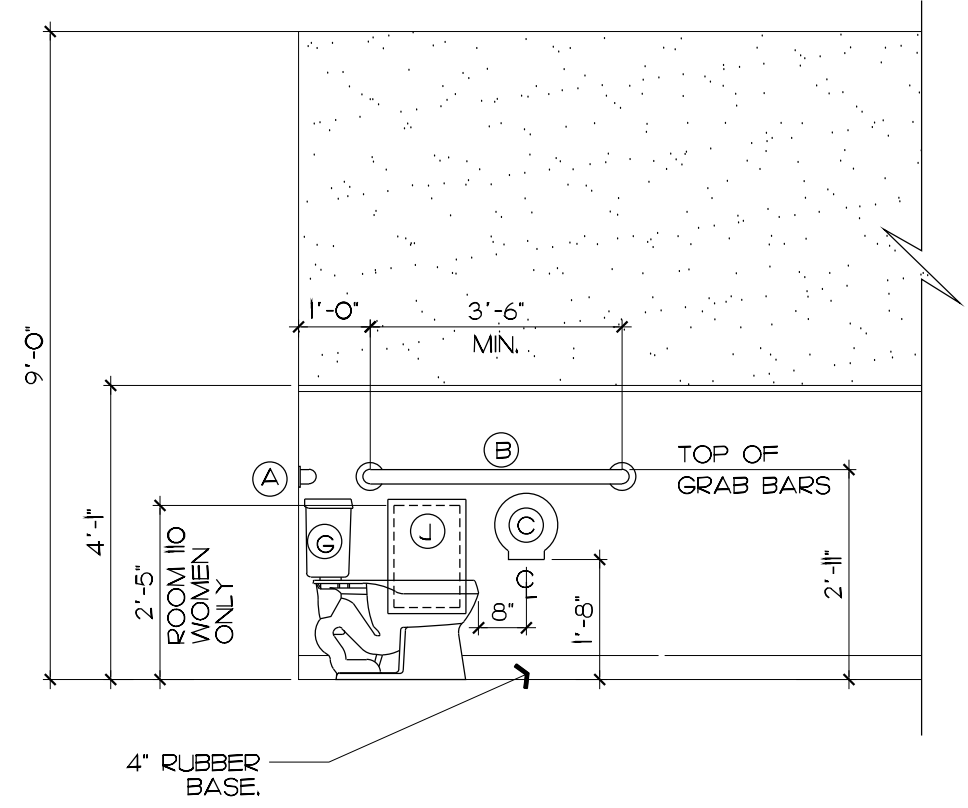
3/8" = 1'-0"



3 ELEVATION FACING LAV. & W.C.

WOMEN'S SHOWN
MEN'S OPP. HAND

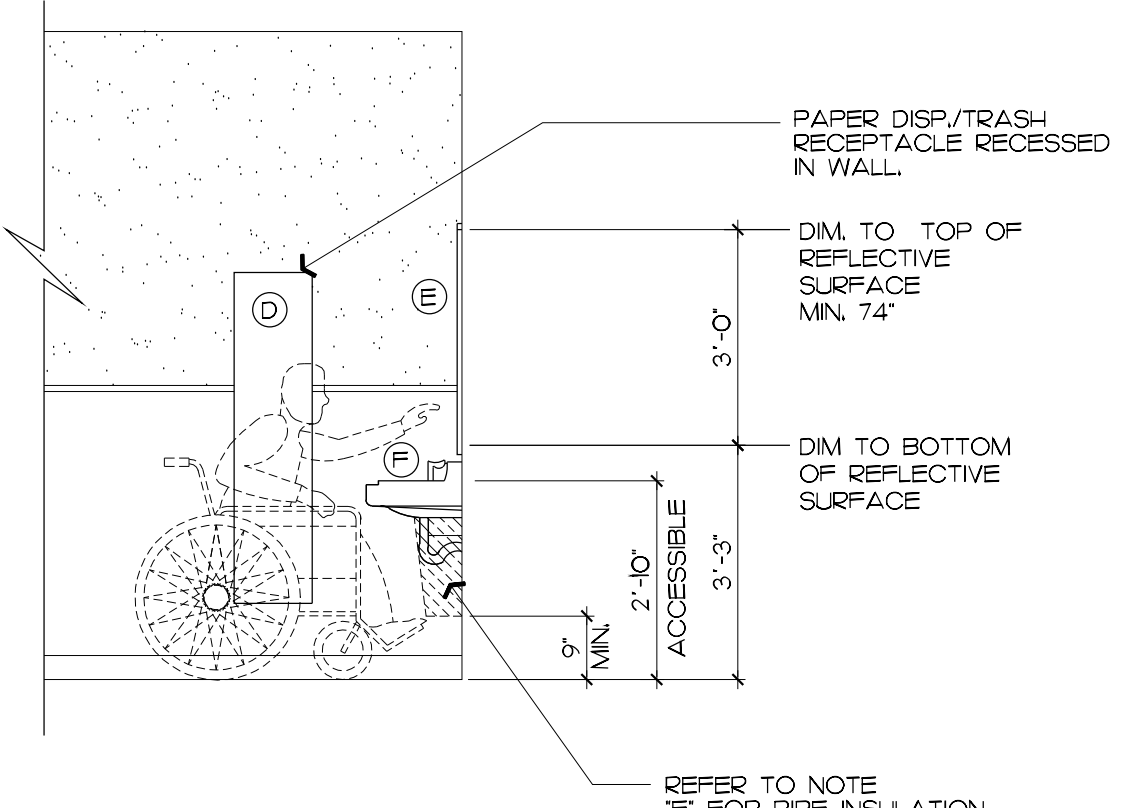
3/8" = 1'-0"



4 ELEVATION FACING SIDE OF W.C.

WOMEN'S SHOWN
MEN'S OPP. HAND

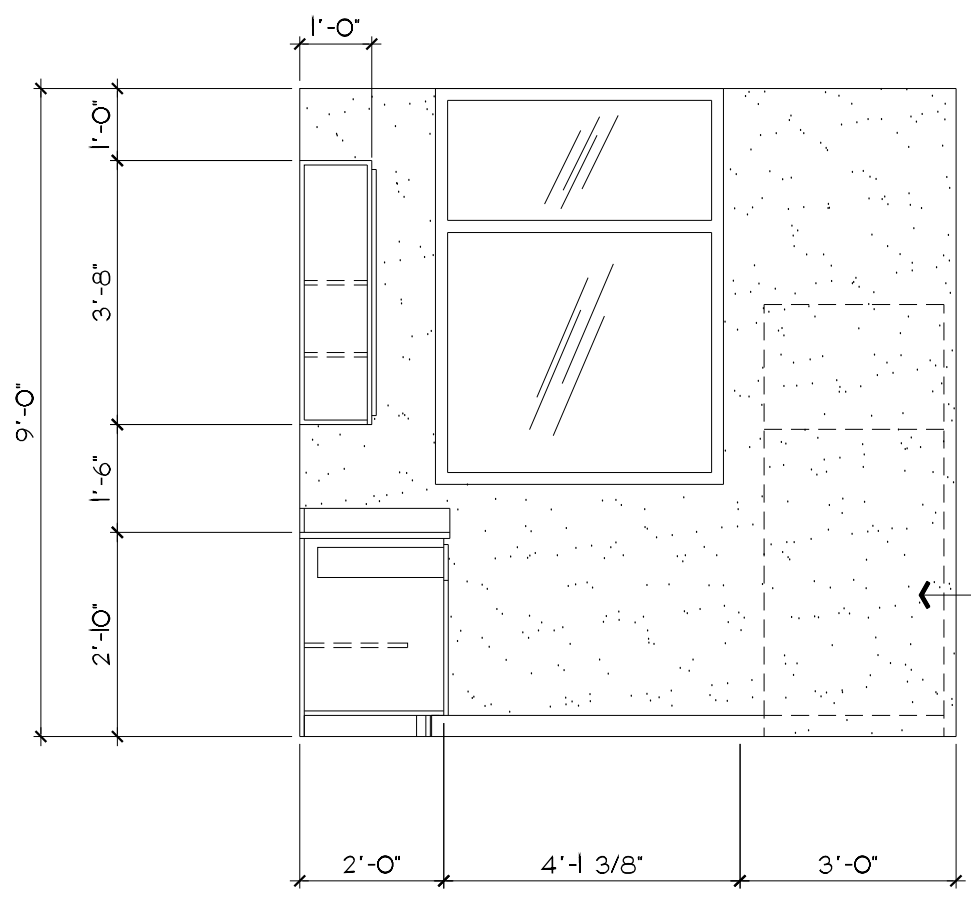
3/8" = 1'-0"



5 ELEVATION FACING SIDE OF LAV.

WOMEN'S SHOWN
MEN'S OPP. HAND

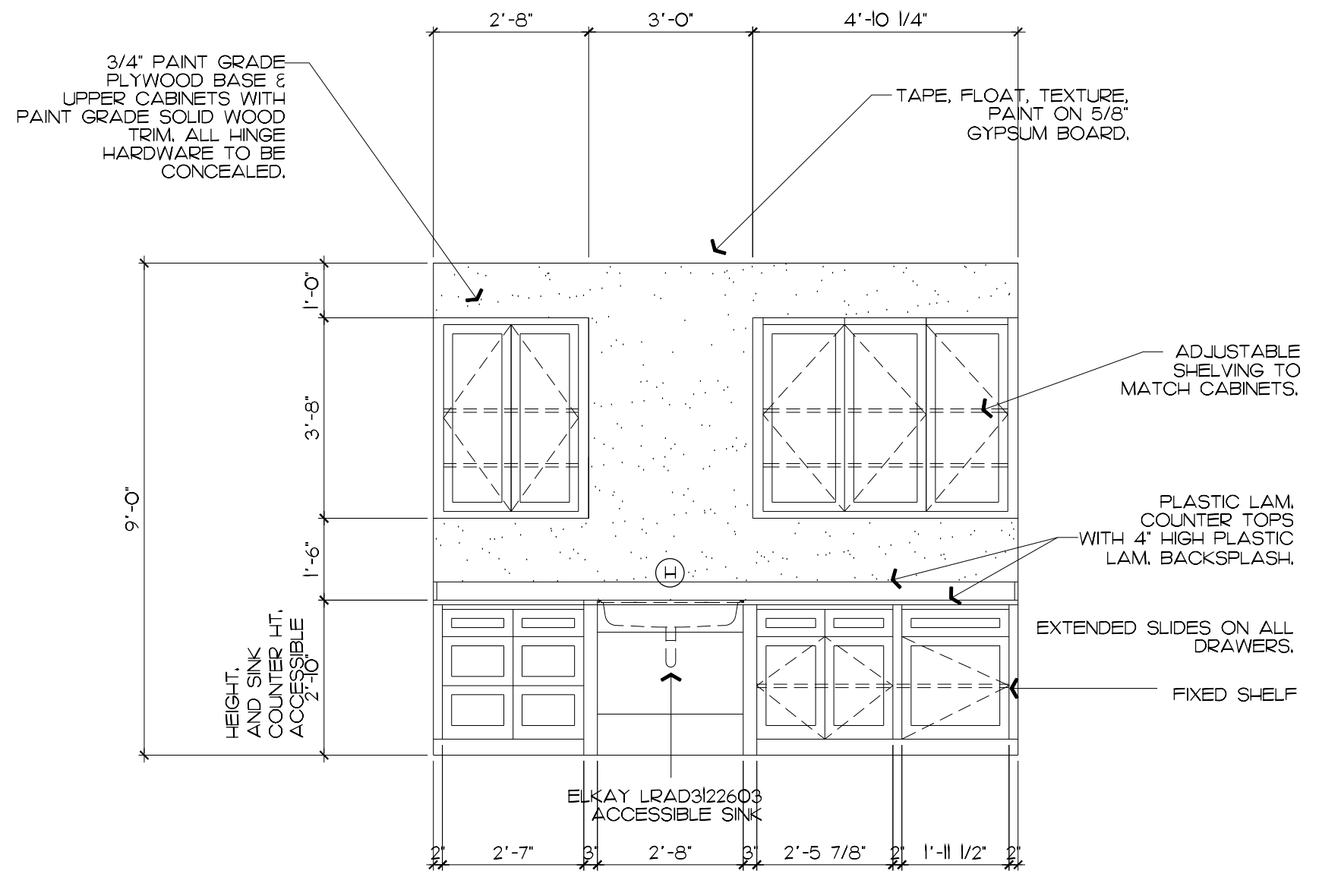
3/8" = 1'-0"



6 NORTH BREAK RM. ELEVATION.

FACING FRIDGE

3/8" = 1'-0"

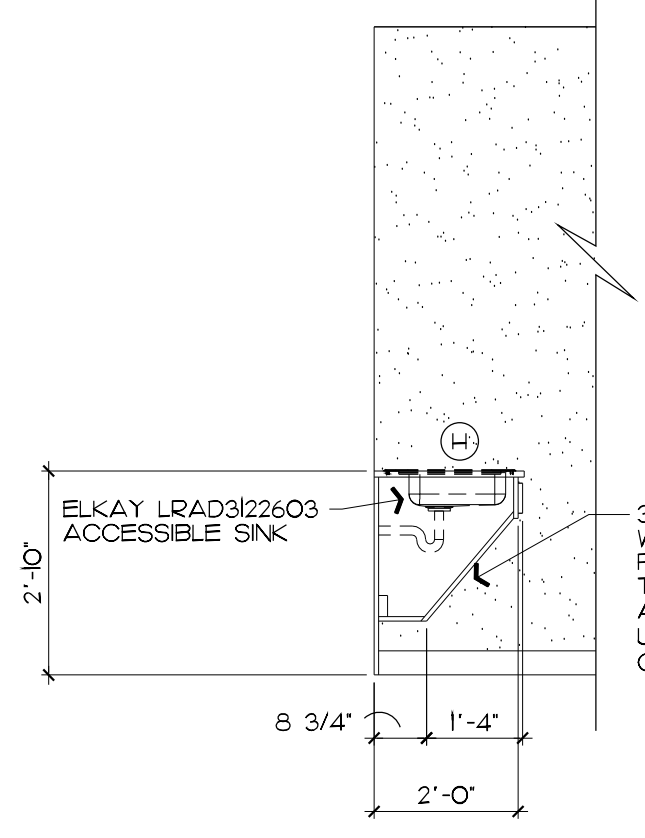


7 WEST BREAK RM. ELEVATION.

FACING SINK

3/8" = 1'-0"

PLUMBING FIXTURES / ACCESSORIES	RESTROOM NOTES
<p>(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 *36" TO CENTERLINE OF BAY, 12" MAX FROM ADJACENT SURFACE. GRAB BARS SHALL COMPLY WITH ADA/TAS GUIDELINES FOR STRUCTURAL STRENGTH.</p> <p>(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 *36" TO CENTERLINE OF BAY, 12" MAX FROM ADJACENT SURFACE. GRAB BARS SHALL COMPLY WITH ADA/TAS GUIDELINES FOR STRUCTURAL STRENGTH.</p> <p>(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.</p> <p>(D) BOBRICK B-4369 CONTURA SERIES RECESSED COMBINATION PAPER TOWEL DISPENSER & WASTE RECEPTACLE. MOUNTING HEIGHT 4'-6" TO PAPER NAPKIN OPENING.</p> <p>(E) BOBRICK B-445 18x4 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.</p> <p>(F) LAVATORY PER M.E.P. LAV. SHALL MEET ADA REQUIREMENTS WITH LAV RM 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.</p> <p>(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.)</p> <p>(H) ELKAY LRA0322603 ACCESSIBLE SINGLE COMPARTMENT SINK. FAUCET PER M.E.P.</p> <p>(I) SLOAN DECK MOUNTED FOAM SOAP DISPENSER. POLISHED CHROME FINISH (3346160-ESD-410-CP).</p> <p>(J) BOBRICK B-35303 TRIMLINE SERIES RECESSED SANITARY NAPKIN DISPOSAL. MOUNT TOP OF INTERIOR WALL BOX AT 27" A.F.F.</p> <p>(K) JANITOR FLOOR SINK PER M.E.P.</p> <p>(L) SINGLE COMPARTMENT STAINLESS STEEL UTILITY SINK PER M.E.P. FAUCET PER M.E.P.</p> <p>(M) BOBRICK B-542 COAT HOOK. MOUNT AT 48" A.F.F.</p>	<p>1. CONTRACTOR TO PROVIDE & INSTALL BLOCKING FOR ALL RESTROOM FIXTURES, ACCESSORIES, FIRE EXTINGUISHERS, MILLWORK, ETC., AS REQUIRED.</p> <p>2. RESTROOM TO HAVE WR GYPSUM BOARD CEILING AT 9'-0" A.F.F. TAPE, FLOAT, TEXTURE AND PAINT PER ARCHITECT.</p> <p>3. ALL WALL DIMENSIONS ARE TO FACE OF GYPSUM WALL BOARD OR PLYWOOD (WAREHOUSES).</p> <p>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.</p> <p>5. ALL FIXTURES/ACCESSORIES TO BE INSTALLED PER T.A.S. GUIDELINES.</p> <p>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.</p> <p>7. DOORS W/ CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OR TO DEGRESS THE DOOR TAKES AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH MEASURED TO THE LEADING EDGE OF THE DOOR.</p> <p>8. THE MAXIMUM FORCE FOR PUSHING OR PULLING AN ACCESSIBLE DOOR SHALL BE 5 LBS. TYP.</p> <p>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 PAIP TRIM PIECES TOP, BOTTOM, SEAM AND INSIDE CORNERS.</p> <p>10. PERMANENT RESTROOM SIGNS MUST COMPLY WITH T.A.S. REQUIREMENTS 7031, 7032 AND 7035.</p>



7 SECTION THRU ACCESSIBLE SINK

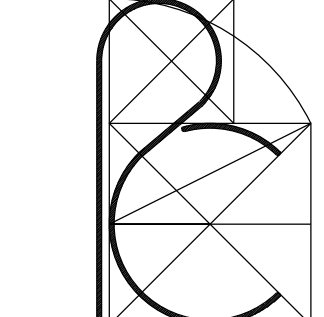
3/8" = 1'-0"

APPROVAL BLOCK:
FOR MOBILE LOAVES AND FISHES
DATE:

Revisions

Date
6/6/24

Sheet
A2.3



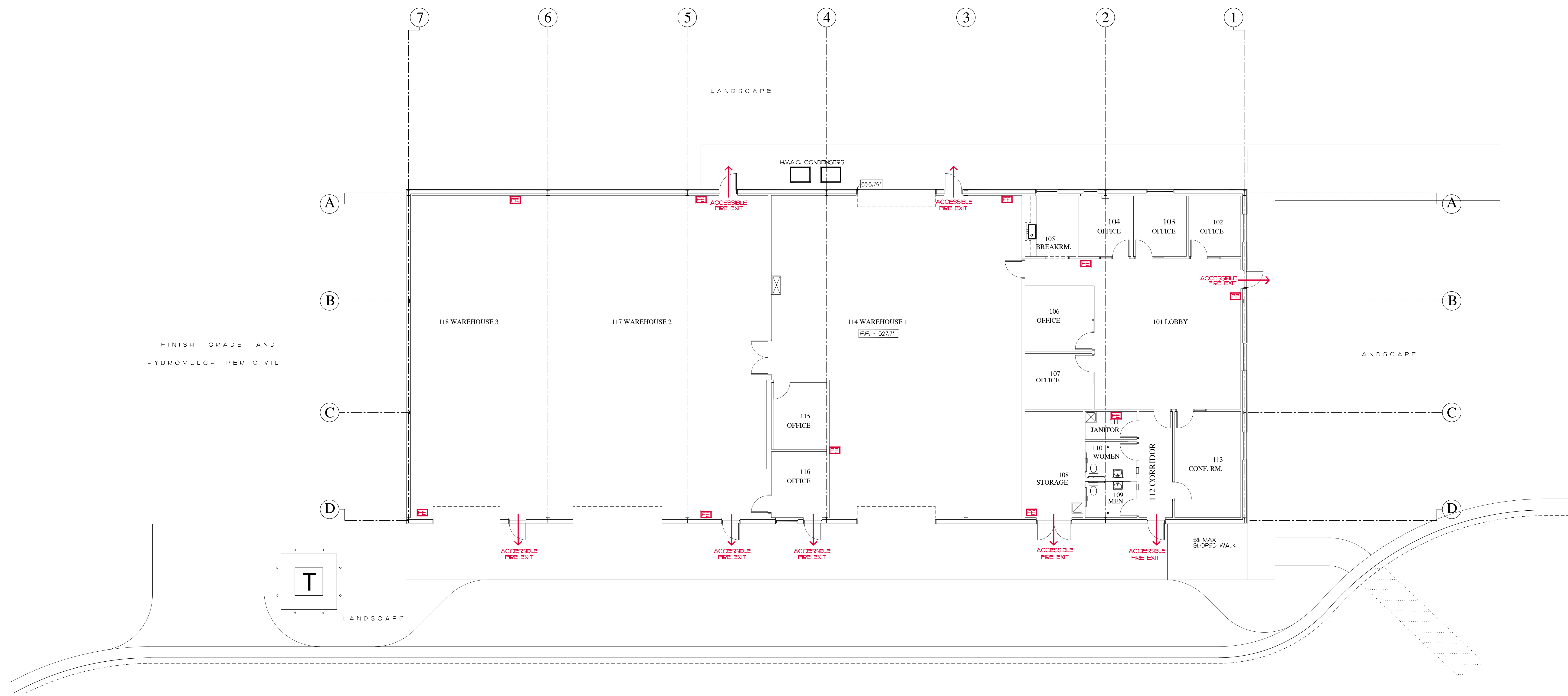
RC Architects, Inc.
 14620 Echo Bluff
 Austin, Texas 78737
 (512) 913-0597
 rickcanales.architects@gmail.com



6/6/24

MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

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.

Revisions

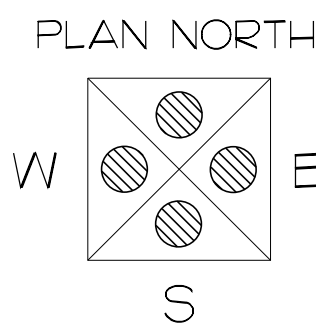
Date
 6/6/24

Sheet
 A2.4

APPROVAL BLOCK:
 FOR MOBILE LOAVES AND FISHES
 DATE:

ROOM FINISH SCHEDULE

NO	ROOM	FLOOR	BASE	WALLS			CEILING	NOTE
				FINISH	ALLOWANCE	TRANSOM		
101	LOBBY			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
102	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
103	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
104	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
105	BREAK ROOM			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
106	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
107	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
108	STORAGE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR	(1)	
109	MEN			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR	(1)	
110	WOMEN			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR	(1)	
111	JANITOR			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR	(1)	
112	CORRIDOR			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
113	CONFERENCE ROOM			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
114	WAREHOUSE NO. 1			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR	(3,4)	
115	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
116	OFFICE			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
117	WAREHOUSE NO. 2			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		
118	WAREHOUSE NO. 3			16 GA. HOLLOW METAL	3.15 SH.G.C.	2" SUSPENDED CEILING, REGULAR		



KEYED ROOM FINISH NOTES

Ⓛ DENOTES CORRESPONDING FINISH TO CORRESPONDING WALL IN ROOM INDICATED
 Ⓛ 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
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 260 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 260 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 260 FINISH.	KEY PAD ENTRY ON 112 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 STOSEROOM SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, HOLD OPEN, KICK PLATE, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 260 FINISH.	KEY PAD ENTRY ON 112 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 260 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 260 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	2 HR. FIRE RATED 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 260 FINISH.	KEY PAD ENTRY ON 114 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, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 260 FINISH.		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 260 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 260 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., CLEAR GLASS.	FULLY MORTISED ENTRY FUNCTION SET AS SPECIFIED. ALL OTHER HARDWARE AS SPECIFIED FOR HOLLOW METAL DOORS.	KEY PAD ENTRY ON 117 WAREHOUSE SIDE	27
28	G	2 HR. FIRE RATED 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., CLEAR GLASS.	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 260 FINISH.		28
29	G	2 HR. FIRE RATED 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., CLEAR GLASS.	CYLINDER OFFICE SET WITH LEVERS, DOOR STOP, CLOSER, SILENCERS, 1/2" PAIR PLAN BEARING BUTTS. ALL HARDWARE 260 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 260 FINISH. SUBMIT PRODUCT DATA FOR APPROVAL.

260 FINISH FOR PUSH, PULL, AND KICK ACCESSORIES

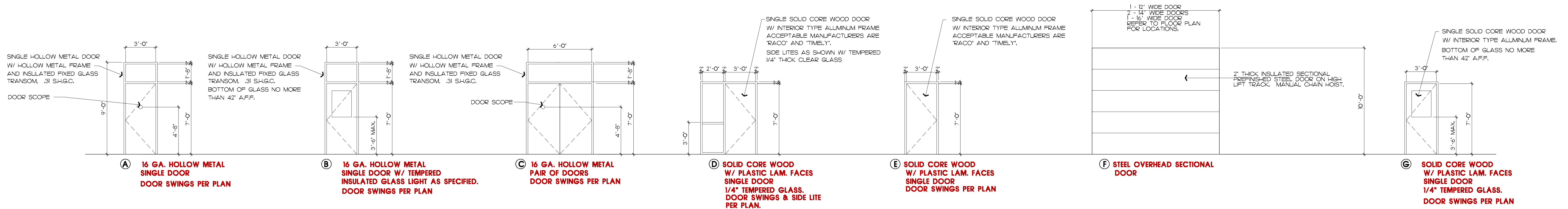
DOOR STOP TO BE FLOOR MOUNTED W/ 260 BRONZE FINISH

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

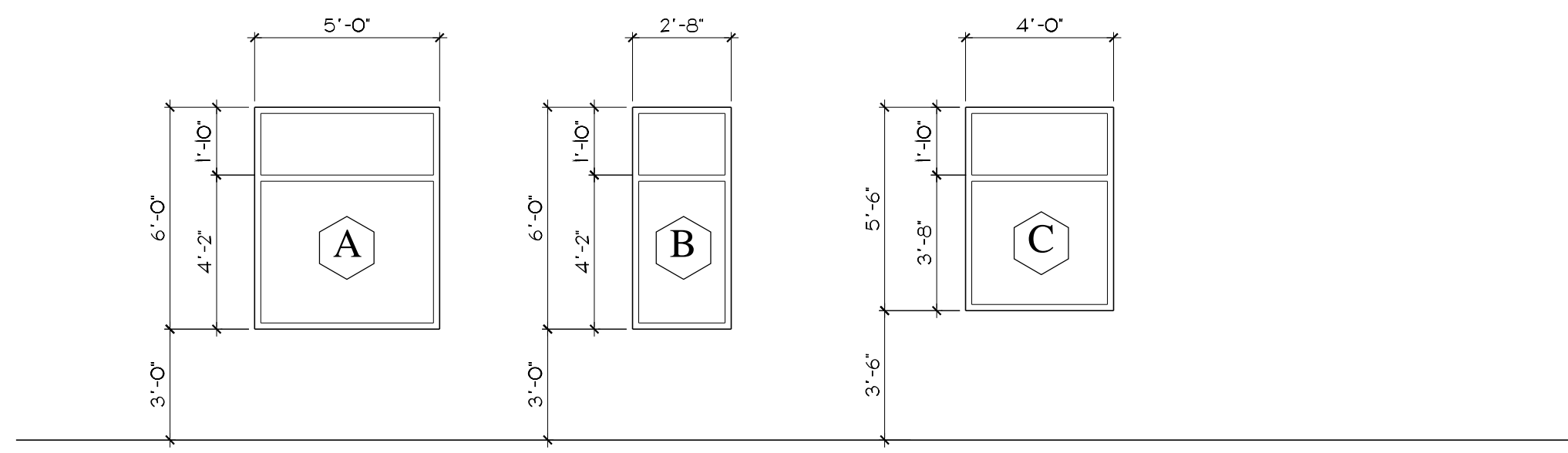
ADA APPROVED LEVER TYPE HARDWARE AT ALL DOORS 260 FINISH.

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 5 LBS IN THE DIRECTION OF EGRESS.

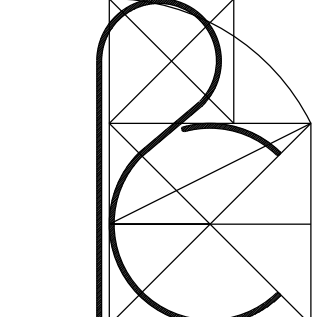


DOOR AND FRAME TYPES



WINDOW TYPES

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



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



6/6/24

MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

RC Architects, Inc.

Revisions

Date

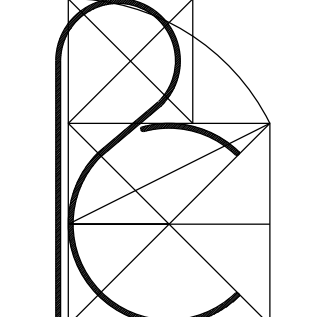
6/6/24

Sheet

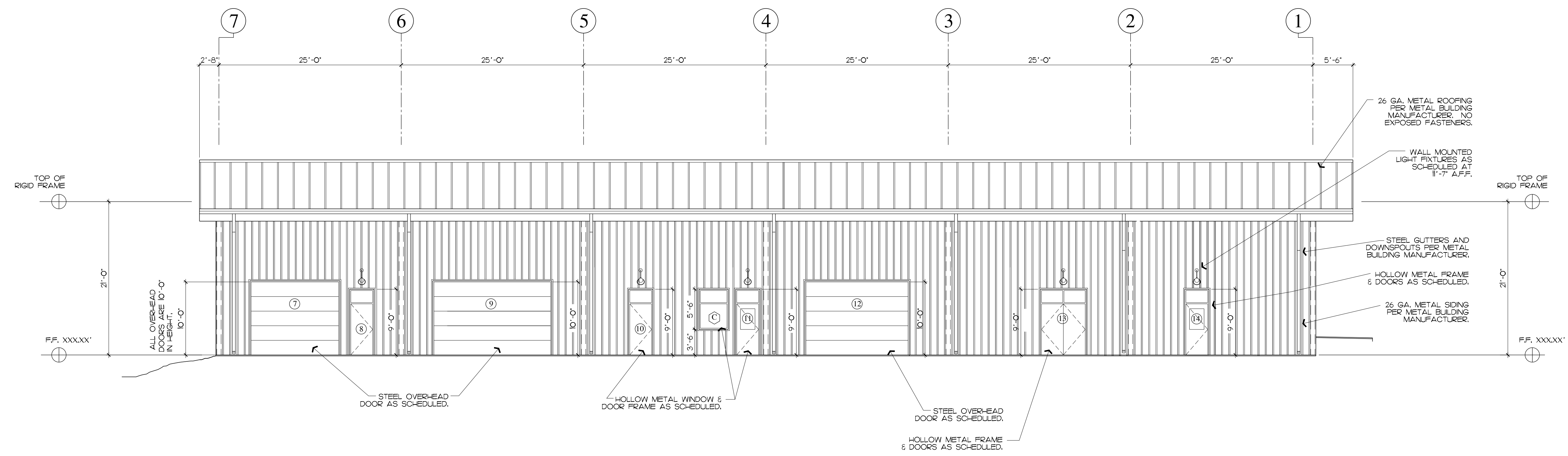
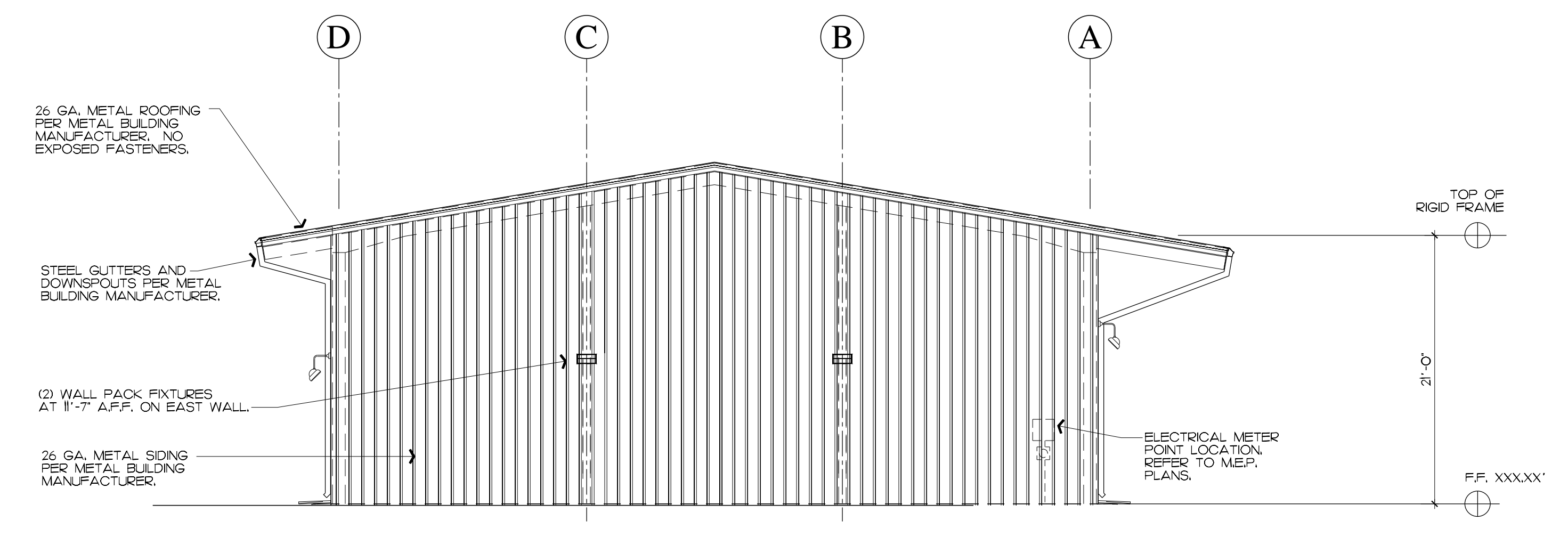
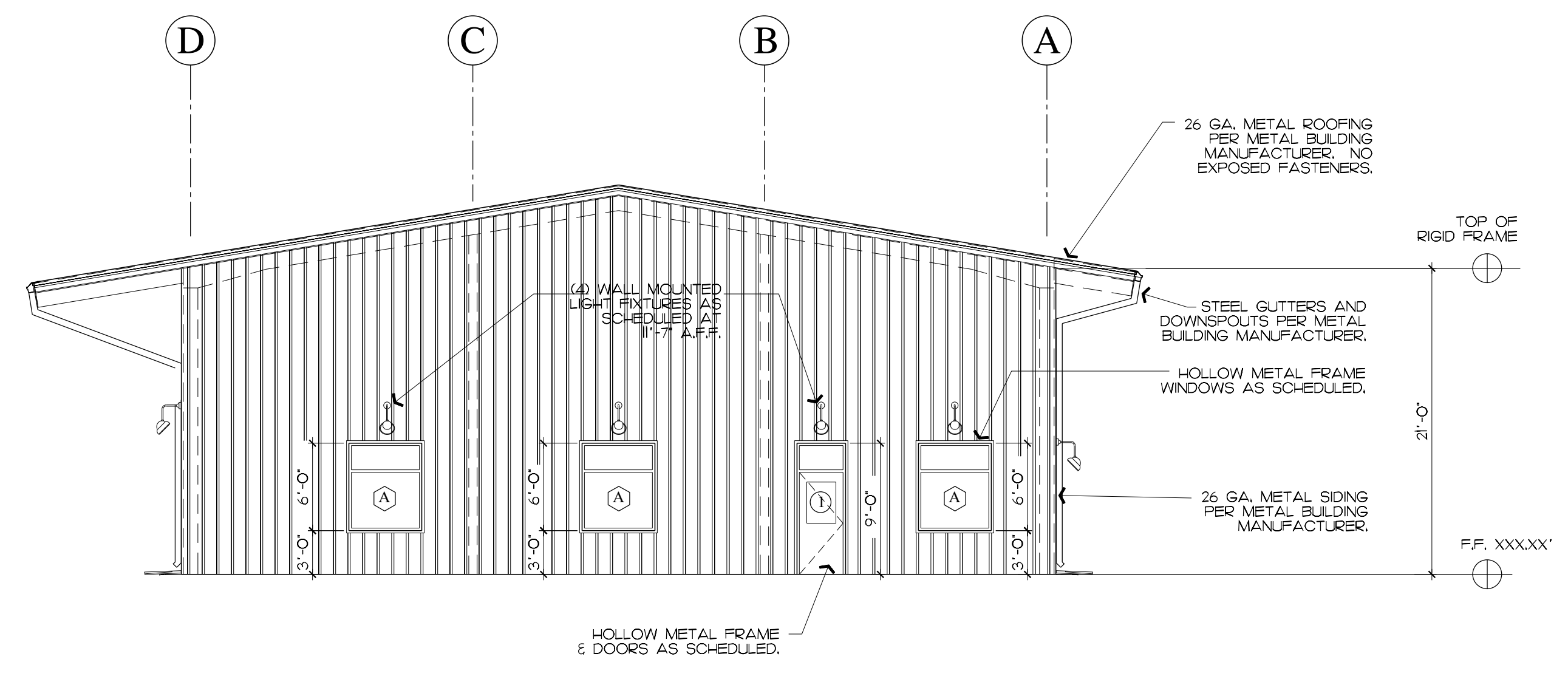
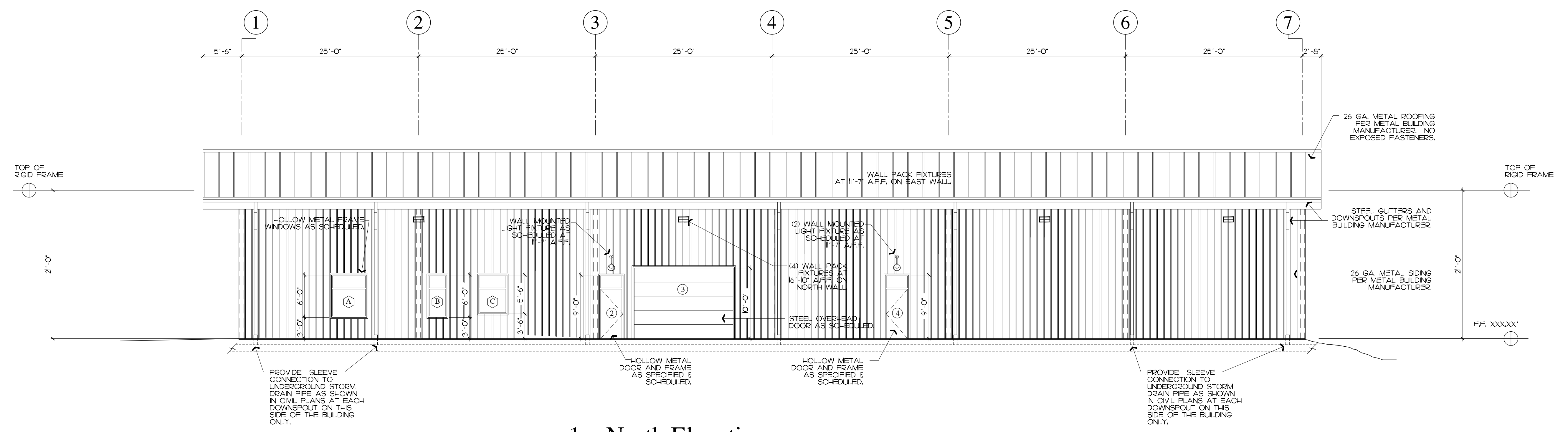
A2.5

APPROVAL BLOCK:

FOR MOBILE LOAVES AND FISHES
 DATE:



6/6/24



APPROVAL BLOCK:
FOR MOBILE LOAVES AND FISHES
DATE:

Revisions

Date
6/6/24

Sheet
A3.0

SPECIFICATIONS

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

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 ENCUMBER 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, INITIALS AND DATED. FAILURE TO 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 TRAVEL EXPENSES 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 MANUFACTURER, 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. ERECT 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 SECURE.
 2. GRIND EXPOSED JOINTS FLUSH AND SMOOTH WITH ADJACENT SURFACES. MAKE EXPOSED JOINTS BUTT TIGHT, FLUSH AND HAIRLINE. EASE EXPOSED EDGES TO SMALL UNIFORM RADII.
 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 D11. 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 UNCES 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 - 2.0 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 CEMENT.
 2. ADJUSTING - CLEAN AND TOUCH-UP PRIMER PAINT AT WELDED AND ABRASED SURFACES WITH SAME PRODUCT AS APPLIED IN SHOP. CLEAN AND TOUCH-UP GALVANIZED COATINGS AT WELDED AND ABRASED SURFACES WITH ZINC GALVALUTE GALVANIZING REPAIR COMPOUND, APPLIED PER MANUFACTURER'S RECOMMENDATIONS.
- G. MATERIALS:
 1. STEEL GRATING (IF INCLUDED IN PLANS) - G-8250 AS MANUFACTURED BY THE MINICHOLS COMPANY, 1-800-237-3520, PRIME AND PAINT PER ARCHITECT.
 2. PIPE BOLLARDS - 6" DIAMETER PAINT GRIP GALVANIZED STEEL, EMBEDDED IN 12" DIAMETER 3,000 PSI CONCRETE 48" BELOW FINAL GRADE TO 48" ABOVE FINAL GRADE, FILL WITH CONCRETE AND PROVIDE A ROUNDED TOP OF CONCRETE.
 3. DUMPSTER GATE HINGES (IF INCLUDED IN PLANS) - ROLLER BEARING HINGES, 3 PAIR PER GATE LEAF, ITEM #44-200 AS MANUFACTURED BY THE KING SUPPLY COMPANY, 1-800-542-2379.

SECTION 06100 - CARPENTRY

- A. PROVIDE ALL MATERIAL FOR COMPLETE INSTALLATION OF WOOD STUD WALLS, WOOD BLOCKING, WOOD FLOORING, TELEPHONE AND/OR ELECTRICAL BACKBOARDS, ROOF CURBS (IF REQUIRED), SOPRITS, AND OTHER ITEMS INCLUDED IN THE DRAWINGS.
- B. WOOD USED AT ALL COPING, BLOCKING, AND NAILER LOCATIONS SHALL BE MCQ OR ACO CEDAR-TONE PRESSURE-TREATED LUMBER, NO ARSENIC TYPE OR GREEN COLOR TREATED LUMBER IS ALLOWED.
- C. DISCOLORATION OF WOOD CAUSED BY EXPOSURE TO SUNLIGHT AND/OR WATER SHALL BE GROUNDS FOR REJECTION. EXPOSED MARKINGS INCLUDING STAMPS FROM THE MILL, WILL BE GROUNDS FOR REJECTION.

SECTION 07123 - FIBROUS AND REFLECTIVE INSULATION

BATT WALL INSULATION SHALL MEET FEDERAL SPEC. I-44-52/F, TYPE III, MINERAL FIBER OR FIBERGLASS COMPOSITION, UNFACED, MINIMUM R-VALUE OF 19. REFER TO THE DRAWINGS FOR SIZES, LOCATIONS, ETC.

ROOF INSULATION SHALL BE R-50 MINIMUM AND MAY BE VINYL FACED MATERIAL AS PROVIDED BY THE METAL BUILDING MANUFACTURER.

CONCEALED AND EXPOSED BATT INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 5 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN ZERO, IN ACCORDANCE WITH THE U.S. FEDERAL TRADE COMMISSION RULE.

R-VALUES OF ALL INSULATION TYPES SHALL BE DETERMINED IN ACCORDANCE WITH THE U.S. FEDERAL TRADE COMMISSION RULE.

SECTION 07410 - PRE-FORMED WALL PANELS

- A. METAL WALL PANELS - FINISH AND INSTALL 10" 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 2002 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 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. 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.
- E. 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" DIALS 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 SONOLASTIC SU SELF-LEVELING SEALANT, ASTM C 920, TYPE S, GRADE F, CLASS 25. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S PALLETTE.
- 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 PALLETTE. SONNEBORNE SONOLASTIC 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 5010, GRADE 1, HEAVY DUTY, MODEL 1, 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, ZINC 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 STOPS, 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 5 PHS-81 TO COORDINATE WITH SITE STANDARD BRAND OF HARDWARE AND TYPE OF KEY BLANK.
 2. 1" LEVERS ON 1E-2" ESCUTCHEON.
 3. FINISH SHALL BE US 260 UON.
 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 "9920 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 SPECIFIED 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-451D. 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 I, 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 S1X 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.
 7. IN ACCORDANCE WITH NFRC 400 OR AAMA/MDAMA/CSA 1014.52/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

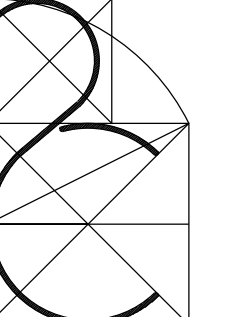
- A. MANUFACTURER: ARMSTRONG WORLD INDUSTRIES, INC. OR APPROVED EQUAL.
- B. ACOUSTICAL CEILING GRID - PRELUBE PLUS XL ALUMINUM 1541; EXPOSED TEE ACOUSTICAL CEILING TILE - 24" X 24" OR 24" X 48" AS INDICATED IN THE PLANS. OPTIMA 3281 LAT-IN SQUARE EDGE TESLAR TILES, 9/16" NCH THICKNESS, WHITE SURFACE COLOR.
- C. SUPPORT CHANNELS AND HANGERS: GALVANIZED STEEL, SIZE AND TYPE TO SUIT APPLICATION. SEISMIC REQUIREMENTS AND CEILING SYSTEM FLATNESS REQUIREMENTS SPECIFIED BELOW. PERMETER MOLINGS: SAME MATERIAL AND FINISH AS GRID. AT EXPOSED GRID, PROVIDE L-SHAPED MOLINGS 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 1/360.
- 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, COLUMNS, 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 FURNISH 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: 1989 PAINTING AND COATING SYSTEMS FOR SPECIFICS 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:
 - B. CONTRACTOR SHALL VERIFY ALL COATINGS DO NOT EXCEED THE VOC LIMIT OF GREEN SEAL GSH AS INDICATED IN THE AUSTIN ENERGY GREEN BUILDING COMMERCIAL PROGRAM.
 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 HPA ACRYLIC PAINT, AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY.
 2. STEEL HANDRAILING, 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 - REPERTE 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 ARCHITECT.

SECTION 16720 - SECURITY ACCESS IF REQUIRED BY FIRE MARSHAL

- #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 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 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.



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



6/6/24

MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

RC Architects, Inc.

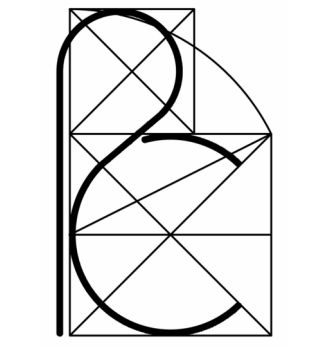
Revisions

Date

6/6/24

Sheet

AS.1



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



MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

RC Architects, Inc.

Revisions

Date
04/17/2024

STRUCTURAL
GENERAL
NOTES
S0.0

ABBREVIATIONS	
A	AND
ACI	AMERICAN CONCRETE INSTITUTE
ASCE	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B	BOTTOM OF STEEL
BOT	BOTTOM / BOTTOM OF
BRG	BEARING
BTWN	BETWEEN
C	CONSTRUCTION / CONTROL JOINT
CJ	CENTER LINE
CL	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONC	CONNECTION
CONST	CONSTRUCTION
CONTINUOUS	CONTINUOUS
D	DIAMETER
DIA Ø	DIAMETER
E	EXISTING
EJ	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
ELEV	ELEVATION
EQ	ENGINEER OF RECORD
EQ	EQUAL
EACH WAY	EACH WAY
F	FOUNDATION
FIN FLR	FINISHED FLOOR
FIN	FINISHED
G	GAGE
GC	GENERAL CONTRACTOR
GYPSUM BOARD	GYPSUM BOARD
H	HORIZONTAL
HSA	HEADED STUD ANCHOR
I	INFORMATION
INFO	INFORMATION
J	JOIST BEARING ELEVATION
J	JOINT
K	KIPS PER SQUARE INCH
LSI	KIPS PER SQUARE INCH
L	POUNDS
LEB	LONG EDGE HORIZONTAL
LEV	LONG EDGE VERTICAL
LH	LONG LEG HORIZONTAL
LV	LONG LEG VERTICAL
LONG	LONGITUDINAL
M	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
N	NOT TO SCALE
NITS	NITS
O	ON CENTER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
P	POWDER ACTUATED FASTENER
PCF	POUNDS PER CUBIC FOOT
PEF	PRESTRESS EFFECTIVE FORCE
P	PANEL JOINT
PL	PLATE
PL	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
Q	QUANTITY
QTY	QUANTITY
REF	REFERENCE / REFER TO
REIN	REINFORCING
REQD	REQUIRED
R	ROOF TOP UNIT
S	STEEL DECK INSTITUTE
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SPECS	SPECIFICATIONS
STEEL	STEEL
T	TOP OF BEAM
TC	TOP OF CONCRETE
TF	TOP OF FOOTING
THICKNESS	THICKNESS
TOP	TOP OF PIER
TOS	TOP OF STEEL
TOP OF PANEL	TOP OF PANEL
TRANS	TRANSVERSE
TYP	TYPICAL
U	UNLESS OTHERWISE NOTED
V	VERTICAL
VERT	VERTICAL

SPECIAL INSPECTIONS (CONT)		
STRUCTURAL STEEL CONSTRUCTION (IBC 1705.2, 1705.11-12)		
PRIOR TO WELDING (TABLE N5.4.1.AISC 360-10):		
VERIFY WELDING PROCEDURES	◆	
MATERIAL IDENTIFICATION	◆	VERIFY TYPE / GRADE OF MATERIAL
WELDER IDENTIFICATION SYSTEM	◆	VERIFY SYSTEM IN PLACE TO IDENTIFY THE WELDER FOR EACH JOINT
FT-UP OF GROOVE WELDS	◆	VERIFY JOINT PREPARATION, DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY, LOCATION, AND BACKING TYPE AND FIT IF APPLICABLE
ACCESS HOLES	◆	VERIFY CONFIGURATION AND FINISH
FT-UP OF FILLET WELDS	◆	VERIFY DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY / LOCATION
DURING WELDING (TABLE N5.4.2.AISC 360-10):		
USE OF QUALIFIED WELDERS	◆	
CONTROL AND HANDLING OF WELDING CONSUMABLES	◆	VERIFY PACKAGING AND EXPOSURE CONTROL
NO WELDING OVER CRACKED TACK WELDS	◆	
ENVIRONMENTAL CONDITIONS	◆	VERIFY WIND SPEED, PRECIPITATION, AND TEMPERATURE WITHIN LIMITS
WPS FOLLOWED	◆	VERIFY ITEMS INCLUDING WELDING EQUIPMENT SETTINGS, TRAVEL SPEED, WELDING MATERIALS, SHIELDING GAS TYPE / FLOW RATE, PRE-HEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN / MAX), AND PROPER POSITION (F / V / H)
WELDING TECHNIQUES	◆	VERIFY INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, AND QUALITY OF EACH PASS
AFTER WELDING (TABLE N5.4.3.AISC 360-10):		
WELDS CLEANED	◆	
SIZE, LENGTH AND LOCATION OF WELDS	◆	
WELDS MEET VISUAL ACCEPTANCE CRITERIA	◆	VERIFY CRACK PROHIBITION, WELD / BASE MATERIAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY
ARC STRIKES	◆	
K-AREA	◆	WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN WEB K-AREA, VISUALLY INSPECT FOR CRACKS WITHIN 3 INCHES OF K-AREA
BACKING & WELDING TABS REMOVED	◆	WHERE REQUIRED BY CONSTRUCTION DOCUMENTS OR APPROVED SUBMITTALS
REPAIR ACTIVITIES	◆	
DOCU ACCEPTANCE / REJECTION OF WELD	◆	
NONDESTRUCTIVE TESTING (TABLE N5.5.AISC 360-10):		
CJP WELDS (RISK CATEGORY II)	◆	ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF CJP GROOVE WELDS IN BUTT, T & CORNER JOINTS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN MATERIALS 5/16 INCH THICK OR GREATER. TESTING RATE MUST BE INCREASED TO 100% IF > 5% OF WELDS HAVE UNACCEPTABLE DEFECTS
ACCESS HOLES (FLANGE > 2")	◆	MAGNETIC PARTICLE TESTING OF PENETRANT TESTING OF EACH LOCATION, ANY CRACK FOUND UNACCEPTABLE
WELDED JOINTS SUBJECT TO FATIGUE	◆	RADIOGRAPHIC OR ULTRASONIC TESTING FOR ALL JOINTS, WHERE SPECIFIED
OTHER STEEL INSPECTIONS (TABLE N5.7.AISC 360-10, TABLES J6-1 & J10-1, AISC 341-10):		
STRUCTURAL STEEL DETAILS	◆	VERIFY COMPLIANCE WITH THE DETAILS SHOWN IN THE CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS
ANCHOR RODS AND / OR EMBEDS SUPPORTING STRUCTURAL STEEL	◆	INSPECTOR SHALL BE ON THE PREMISES DURING THE PLACEMENT OF ANCHOR RODS AND EMBEDS, VERIFY LOCATION, DIAMETER, GRADE, TYPE, AND LENGTH OF ELEMENT AND THE EXTENT OR DEPTH OF EMBEDMENT PRIOR TO PLACEMENT OF CONCRETE
REDUCED BEAM SECTIONS (RBS)	◆	VERIFY CONTOUR AND FINISH AS WELL AS DIMENSIONAL TOLERANCES
PROTECTED ZONES	◆	VERIFY THAT NO HOLES OR UNAPPROVED ATTACHMENTS ARE MADE WITHIN THE PROTECTED ZONE

SPECIAL INSPECTIONS	
S11	SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS, UNLESS WAIVED BY THE BUILDING OFFICIAL (SEE IBC CHAPTER 17)
S12	THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE OWNER, OWNER AND BUILDING OFFICIAL FOR APPROVAL
S13	DUTIES OF THE SPECIAL INSPECTOR: A. THE SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED BELOW FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AND THE 2015 IBC. B. THE SPECIAL INSPECTOR SHALL FURNISH SPECIAL INSPECTION REPORTS TO THE EOR, CONTRACTOR, OWNER AND BUILDING OFFICIAL ON A WEEKLY BASIS, OR MORE FREQUENTLY AS REQUIRED BY THE BUILDING OFFICIAL. ALL ITEMS NOT IN COMPLIANCE SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF CORRECTED, TO THE EOR AND THE BUILDING OFFICIAL. C. ONCE CORRECTIONS HAVE BEEN MADE BY THE CONTRACTOR, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTORS KNOWLEDGE AND IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AS WELL AS THE APPLICABLE WORKMANSHIP PROVISIONS OF THE 2015 IBC.
S14	DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR: A. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK. IN ACCORDANCE WITH IBC 1704.4, THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN KNOWLEDGE OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED WITHIN. B. THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (4 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED. C. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED BY THE SPECIAL INSPECTOR.
S15	PLEASE SEE THE SPECIAL INSPECTION SCHEDULE FOR THE TYPES, EXTENTS AND FREQUENCY OF SPECIFIC ITEMS REQUIRING SPECIAL INSPECTIONS AND STRUCTURAL TESTS AS PART OF THE PROJECT.

SPECIAL INSPECTION SCHEDULE			
AREAS REQUIRING SPECIAL INSPECTION	FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
FABRICATORS (IBC 1704.2.5)			
	◆		IF FABRICATOR IS APPROVED, ON-SITE INSPECTION NOT REQUIRED, BUT RATHER A CERTIFICATE OF COMPLETION
SOILS (IBC 1705.6)			
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS	◆		PRIOR TO PLACEMENT OF CONCRETE
EXCAVATION EXTENDED TO PROPER DEPTH AND MATERIALS	◆		PRIOR TO PLACEMENT OF COMPACTED FILL OR CONCRETE
CLASSIFICATION AND TESTING OF FILL MATERIALS	◆		CHECK CLASSIFICATION AND GRADATIONS AT EACH LIFT, BUT NOT LESS THAN ONCE FOR EACH 10,000 sq ft OF SURFACE AREA
VERIFY PROPER FILL MATERIALS, LIFT THICKNESSES AND IN-PLACE DENSITIES	◆		PRIOR TO PLACEMENT OF CONCRETE
CONCRETE CONSTRUCTION (IBC 1705.3)			
REINFORCING STEEL PLACEMENT	◆		VERIFY SIZE, CLEARANCES, SPLICES AND PROPER TIES
EMBEDDED BOLTS OR PLATES	◆		PRIOR TO PLACEMENT OF CONCRETE
VERIFY REINFORCED DESIGN MIX	◆		VERIFY MIX DESIGN MEETS STRENGTH AND EXPOSURE REQUIREMENTS LISTED ON APPROVED PLANS
CONCRETE PLACEMENT / SAMPLING	◆		INCLUDES SAMPLING OF AIR, SLUMP, STRENGTH AND TEMPERATURE TESTS
INSPECT FORMWORK	◆		VERIFY SHAPE, LOCATION AND MEMBER DIMENSIONS
POST-INSTALLED ANCHORS	◆		IN ACCORDANCE WITH APPROVED ICC-ES REPORT (PERIODIC INSPECTIONS ALLOWED IF STATED IN ES REPORT)

COLD FORMED STEEL FRAMING SYSTEM	
CF1	ALL STUDS, LINTELS, JOISTS, RUNNER TRACKS AND ACCESSORIES SHALL BE MANUFACTURED FROM ASTM A1003 STRUCTURAL GRADE-33 TYPE-H GALVANIZED SHEET STEEL (FOR TYPICAL MATERIAL) AND STRUCTURAL GRADE-50 TYPE-H GALVANIZED SHEET STEEL (FOR 50 KSI MINIMUM YIELD STRENGTH MATERIAL, WHERE SPECIFICALLY NOTED ON THE PLANS). HOT-DIPPED GALVANIZED COATING SHALL CONFORM TO ASTM A653 REQUIREMENTS.
CF2	FABRICATION AND ERECTION OF MEMBERS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
CF3	ALL LOAD-BEARING AND EXTERIOR WALL STUDS SHALL BE (600-S162-43) CHANNEL TYPE STEEL SECTIONS WITH A MINIMUM MOMENT OF INERTIA OF (2.316).
CF4	BRIDGING, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE HORIZONTAL STRAP BRACING ATTACHED TO BOTH SIDES OF THE LOAD-BEARING AND EXTERIOR WALL STUD AT ONE-THIRD AND TWO-THIRD THE HEIGHT OF THE STUDS.
CF5	TOP AND BOTTOM RUNNER TRACKS OF EXTERIOR AND LOAD-BEARING INTERIOR WALLS SHALL BE SECURELY ANCHORED TO THE ROOF OR JOIST STRUCTURE OVERHEAD AND THE FLOOR STRUCTURE BELOW BY WELDING, NAILING, OR BOLTING AS APPLICABLE.
CF6	WELDING OF LIGHT GAUGE STEEL SHALL BE IN ACCORDANCE WITH AWS D1.3, STRUCTURAL WELDING CODE-SHEET STEEL. ALL WELDS SHALL BE PERFORMED USING E70 ELECTRODES.
CF7	WELDED CONNECTIONS SHALL BE WIRE BRUSHED AND BRUSH-COATED WITH A GALVANIZED PAINT. PROVIDE 2" O' LONG SHORT WEB REINFORCEMENT CHANNEL ON EACH SIDE OF EACH CANTILEVERED JOIST.
CF8	POWDER-ACTUATED FASTENERS (PAFs) CONNECTING LIGHT GAGE STEEL INTO STRUCTURAL STEEL OR CONCRETE SHALL BE MILIT X1/4 PAFs WITH 0.157" SHANK DIAMETER, OR APPROVED EQUAL. SHANK LENGTH SHALL BE SELECTED PER MANUFACTURER'S REQUIREMENTS BASED ON THICKNESS OF MATERIALS TO BE JOINED, BUT NO LESS THAN 3/4" FOR CONNECTION INTO STRUCTURAL STEEL, AND 1-1/2" FOR CONNECTION INTO CONCRETE.
CF9	VERTICAL DEFLECTION CLIPS CONNECTING LIGHT GAGE STEEL WALL FRAMING INTO STRUCTURAL STEEL SHALL BE AS NOTED ON THE STRUCTURAL PLANS, OR AN APPROVED EQUAL, PROVIDED BY TSN, CLARK/DIETRICH, OR SIMPSON WITH AN EQUAL OR GREATER LOAD CAPACITY IN ALL DIRECTIONS.
CF10	CONTRACTOR SHALL FURNISH COMPLETE SHOP DRAWINGS OF THE COLD ROLLED STEEL FOR APPROVAL BY THE ENGINEER.

PRE-ENGINEERING METAL BUILDING	
MB1	METAL BUILDING MANUFACTURER SHALL BE ACCREDITED BY AND COMPLY WITH THE INSPECTION PROGRAM IAS AC472 METAL BUILDING SYSTEMS INSPECTION ACCREDITATION. ALL COMPONENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND THE AMERICAN IRON AND STEEL INSTITUTE.
MB2	ALL COMPONENTS SHALL BE SIZED FOR ALL DEAD + LIVE + WIND LOADS AS SPECIFIED WITHIN THE GENERAL NOTES HEREIN. USE A MINIMUM ROOF COLLATERAL DEAD LOAD OF (5) PSF.
MB3	METAL ROOF DOES NOT PROVIDE LATERAL BRACING FOR PURLINS, THEREFORE BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE PURLIN MANUFACTURER.
MB4	SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER OF RECORD. CALCULATIONS SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN STATE OF PROJECT LOCATION.
MB5	REFER TO MECHANICAL DRAWINGS FOR ROOF SUPPORTED HVAC UNITS AND PROVIDE SUPPORT FOR ADDITIONAL LOADS AS REQUIRED.
MB6	RIGID FRAME COLUMN BASE CONNECTIONS SHALL BE DESIGNED AS PINNED CONNECTIONS WITH NO BENDING MOMENTS TRANSFERRED TO THE FOUNDATION.
MB7	THESE PLANS ADDRESS ONLY THE DESIGN OF THE BUILDING FOUNDATIONS. THESE PLANS MUST BE USED IN CONJUNCTION WITH THE ARCHITECT'S DRAWINGS AND METAL BUILDING MANUFACTURER'S DRAWINGS. THE CONTRACTOR MUST PERFORM ALL COORDINATION OF THESE PLANS WITH ALL TRADES PRIOR TO CONSTRUCTION.
MB8	PURLINS SHALL BE DESIGNED WITH A MAXIMUM ALLOWABLE TOTAL LOAD DEFLECTION OF L/180 AND A AND A MAXIMUM ALLOWABLE LIVE LOAD DEFLECTION OF L/240.
MB9	MAIN FRAMES SHALL BE DESIGNED WITH A MAXIMUM ALLOWABLE TOTAL LOAD DEFLECTION OF L/180 AND A MAXIMUM ALLOWABLE LIVE LOAD DEFLECTION OF L/240.
MB10	WIND GIRTS SHALL BE DESIGNED WITH A MAXIMUM ALLOWABLE DEFLECTION OF L/120.
MB11	THE HORIZONTAL DEFLECTION AT THE EAVE HEIGHT SHALL BE LIMITED TO H/150.

SYMBOLS & HATCHING			
	INDICATES STEP IN ELEVATION		INDICATES GRID LINE
	INDICATES DIRECTION OF METAL DECK		INDICATES REFERENCED ELEVATIONS
	INDICATES OPENING IN SLAB		INDICATES SECTION CUT
	INDICATES REVISIONS / ADDENDUMS		INDICATES VENEER
	INDICATES EARTH		INDICATES SAND / NON-SHRINK GROUT
	INDICATES CMU / MASONRY		INDICATES RTU OR MECHANICAL ZONE

GENERAL NOTES	
G1	BUILDING CODE INTERNATIONAL BUILDING CODE (IBC), 2021
G2	GRAVITY LOAD DESIGN DATA: ROOF COLLATERAL DEAD LOAD (ROOF LIVE LOAD EXCEPTIBLE) 5 psf / 20 psf
G3	WIND DESIGN DATA: BASIC WIND SPEED, V 108 mph / BUILDING RISK CATEGORY II / WIND EXPOSURE CATEGORY C / INTERNAL PRESSURE COEFFICIENT ±0.18 / EXTERIOR COMPONENTS S & CLADDING (ASD) 18 psf
G4	SNOW LOAD DESIGN DATA: GROUND SNOW LOAD, PG 5 psf
G5	EARTHQUAKE DESIGN DATA: BUILDING RISK CATEGORY II / SEISMIC IMPORTANCE FACTOR 1.0 / SITE CLASS C / Ss: S1 0.09g, 0.03 g / Sds: SD1 0.07g, 0.05 g / SEISMIC DESIGN CATEGORY A
G6	ROOF RAIN LOAD DESIGN DATA: RAIN INTENSITY (1.00 year) 4.4 in/hr

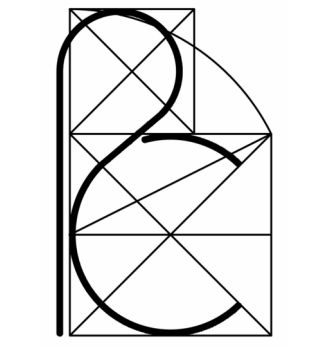
GENERAL CONDITIONS	
GC1	THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS, INCLUDING THOSE FURNISHED BY SUBCONTRACTORS.
GC2	DISCREPANCIES AND/OR VARIATIONS SHALL IMMEDIATELY BE REPORTED TO THE ARCHITECT.
GC3	DETAILS SHOWN ON DRAWINGS APPLY AT ALL LIKE CONDITIONS.
GC4	ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL STANDARDS AND TO THE APPLICABLE PROVISIONS OF THE GOVERNING BUILDING CODE.
GC5	THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR THE EARTH BANKS, FORMS, SCAFFOLDING, PLANNING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES, GIN POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES OBSERVED AT THE SITE BY THE ARCHITECT OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
GC6	THESE DRAWINGS SHOW ONLY REPRESENTATIVE AND TYPICAL DETAILS TO ASSIST THE CONTRACTOR. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. ALL ATTACHMENTS, CONNECTIONS, FASTENING, ETC., SHALL BE PROPERLY SECURED IN CONFORMANCE WITH THE BEST PRACTICE, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THEM.
GC7	THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER FOR PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

FOUNDATIONS	
F1	SHALLOW FOUNDATIONS HAVE BEEN DESIGNED USING AN ALLOWABLE SOIL BEARING VALUE OF 2,500 psf FOR STIFFENED BEAMS AND FOOTINGS IN ACCORDANCE WITH THE GEOTECHNICAL SOILS ANALYSIS REPORT NO. 96215049 DATED MAY 10, 2021 PREPARED BY TERRACON CONSULTANTS, INC.
F2	ALL FOUNDATION CONSTRUCTION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE STRUCTURAL PLANS. ALL SUBGRADE PREPARATION, FILL AND FILL PLACEMENT SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S DURING CONSTRUCTION. THE SUBGRADE PREPARATION AND FILL PLACEMENT NOTES HEREIN ARE SUMMARIZED FROM THE GEOTECHNICAL REPORT FOR BID PURPOSES ONLY.
F3	SPREAD FOOTING AND CONTINUOUS FOOTING DIMENSIONS AND/OR LOCATIONS MAY NOT BE ALTERED WITHOUT APPROVAL BY THE ENGINEER.
F4	ALL ORGANIC AND DELETERIOUS MATERIAL, AS WELL AS ANY OTHER UNSUITABLE MATERIAL, SHALL BE REMOVED WITHIN THE BUILDING PAD AREA, AND BEYOND OPENINGS AND OTHER SETTLEMENT SENSITIVE AREAS.
F5	SLABS SHALL REST ON A 10 MIL VAPOR BARRIER OVER A MINIMUM OF 5 FEET OF SELECT FILL. THE SELECT FILL SHALL HAVE A PLASTICITY INDEX (PI) BETWEEN 7 AND 20, AND SHALL BE COMPACTED IN LOOSE LIFTS NOT TO EXCEED 6 INCHES IN THICKNESS TO A DENSITY NOT LESS THAN 95% OF MAXIMUM DRY DENSITY OF STANDARD PROCTOR DENSITY WITHIN ±3% OF OPTIMUM MOISTURE CONTENT.
F6	THE BUILDING PAD SHALL BE PREPARED BY REMOVAL OF THE EXISTING ORGANIC SOILS AND STRATUM 1 SOILS (PER THE REFERENCED GEOTECHNICAL REPORT) TO A DEPTH OF AT LEAST 5 FEET BELOW EXISTING GRADES. THE REMOVED SOILS SHOULD BE REPLACED WITH SELECT FILL WITHIN ALL BUILDING AREAS UP TO THE FINAL BUILDING PAD ELEVATION.
F7	A 10 MIL VAPOR BARRIER, PROPERLY LAPPED AND TAPED, IS REQUIRED BENEATH THE SLABS-ON-GRADE. ANY STANDING WATER ON THE SURFACE OF THE VAPOR BARRIER SHALL BE REMOVED OR DRIED PRIOR TO CONCRETE PLACEMENT.
F8	SLABS-ON-GRADE HAVE BEEN DESIGNED IN ACCORDANCE WITH ACI 318-19, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

CONCRETE	
C1	CONCRETE WORK SHALL EXECUTED IN STRICT ACCORDANCE WITH ACI 318-19, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND ACCEPT AS MODIFIED BY THESE CONTRACT DOCUMENTS. SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-16, SPECIFICATIONS FOR STRUCTURAL CONCRETE.
C2	CONCRETE SPECIFICATIONS SHALL BE AS FOLLOWS: MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS (ALL CONCRETE) = 3,000 psi AIR CONTENT (FOUNDATION CONCRETE) = ± 4% ± 1.5% AIR CONTENT (FLOOR SLABS AND TILT-WALL PANELS, TROWEL-FINISHED) = 3% MAXIMUM PORTLAND CEMENT SHALL CONFORM TO ASTM C150 = TYPE I / II
C3	NORMAL WEIGHT CONCRETE SHALL HAVE A MAXIMUM UNIT WEIGHT OF 150 psf. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33, WITH A NORMAL MAXIMUM AGGREGATE SIZE OF 1-INCH.
C4	IF FLY ASH IS USED, IT SHALL CONFORM TO ASTM C618, TYPE "F" OR TYPE "C" AND SHALL BE A MINIMUM 15% AND MAXIMUM 25% BY MASS REPLACEMENT OF PORTLAND CEMENT.
C5	AIR ENTRAINING ADMIXTURES SHALL NOT BE USED IN CONCRETE FOR FLOOR SLABS, OR ANY OTHER CONCRETE TO RECEIVE A TROWEL FINISH.
C6	SEE ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL DEPRESSIONS, OPENINGS, CAST-IN-PLACE ACCESSORIES, ETC.
C7	JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE FABRICATION OF MATERIALS.
C8	1-1/2" DEEP SAWED OR FORMED CONTROL JOINTS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS OR SO THAT THE TOTAL AREA ENCLOSED BY SUCH JOINTS DOES NOT EXCEED 225 SQUARE FEET.
C9	ALL FLOOR SLABS SHALL BE CONSTRUCTED TO HAVE A MINIMUM FLATNESS OF FF-35 AND A MINIMUM LEVELNESS OF FL-25.
C10	ALL CONSTRUCTION JOINTS SHALL BE CLEANED WITH LAITANCE REMOVED BEFORE NEW CONCRETE IS PLACED. CONSTRUCTION JOINTS BELOW GRADE SHALL HAVE WATERSTOPS, UNLESS OTHERWISE NOTED.
C11	CONCRETE CLEAR COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SHALL CONFORM TO: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED EARTH = 3" CONCRETE EXPOSED TO EARTH OR WEATHER: No 3 - No 5 = 1-1/2" No 6 AND LARGER = 2" SLABS ON GRADE (DISTANCE FROM TOP OF SLAB) = 1-1/2"

CONCRETE ANCHOR	
CA1	SHEAR STUDS CAST INTO CONCRETE SHALL BE NELSON FLUXED HEADED STUDS OR APPROVED EQUAL. STUDS SHALL BE AUTOMATICALLY END WELDED IN THE SHOP OR IN THE FIELD. ALL STUD WELDS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NELSON STUD WELDING DIVISION, LORAIN, OHIO. HEADED STUDS SHALL BE MANUFACTURED OF C1015, C1017, OR C1020 COLD DRAWN STEEL CONFORMING TO ASTM SPECIFICATION A108-58T.
CA2	EXPANSION ANCHORS POST-INSTALLED INTO CONCRETE SHALL BE RED HEAD TRIBOLIT WEDGE ANCHOR, HILTI KWIK BOLT KB-T22, SIMPSON WEDGE-ALL ANCHORS OR APPROVED EQUAL.
CA3	ADHESIVE ANCHORS AND DOWELS POST-INSTALLED INTO CONCRETE SHALL USE HILTI HIT-RE 500 v3 EPOXY, SIMPSON SET-XP EPOXY OR APPROVED EQUAL. ANCHORS SHALL BE ASTM A36 THREADED RODS WITH ASTM A563 GRADE A NUTS AND ANS1 B18.22.1 TYPE 'A' WASHERS, UNLESS OTHERWISE NOTED. DOWELS SHALL BE GRADE 60 REINFORCING BAR.
CA4	SCREW ANCHORS POST-INSTALLED INTO CONCRETE SHALL BE HILTI KWIK HUS SCREW ANCHORS, SIMPSON TITEN HD SCREW ANCHORS, OR APPROVED EQUAL.
CA5	LOCATE EXISTING REINFORCEMENT AND PRESTRESSING TENDONS PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCEMENT OR PT TENDONS. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED TO AVOID REINFORCEMENT OR PT TENDONS, THE ENGINEER WILL DETERMINE A NEW LOCATION.
CA6	INSTALL ANCHORS PER MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE INSTALLATION FOR ALL ANCHORING PRODUCTS SPECIFIED.
CA7	PROVIDE STAINLESS STEEL FASTENERS FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER, AND GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.

CONCRETE REINFORCEMENT	
R1	ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60.
R2	REINFORCING STEEL SHALL BE DESIGNED, DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL (SP-16) AND CSI MANUAL OF STANDARD PRACTICE.
R3	PROVIDE 2-#5 BARS EACH SIDE OF ALL OPENINGS. EXTEND BARS 2'-0" PAST OPENINGS IN EACH DIRECTION.
R4	CORNER REINFORCING BARS SHALL BE USED AT ALL CORNERS AND INTERSECTIONS. SEE TYPICAL DETAIL.
R5	SPLICES IN REINFORCEMENT SHALL OCCUR AT POINTS OF MINIMUM STRESS AND, UNLESS OTHERWISE NOTED, WITH A MINIMUM LAP AS INDICATED IN THE DEVELOPMENT AND LAP SPLICE SCHEDULE.
R6	EXCEPT AS PROVIDED IN ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ALL WELDING OF REINFORCEMENT SHALL CONFORM TO RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, METAL INSERTS, AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION (AWS D12.1).
R7	PROVIDE (2) #4x4'-0" DIAGONAL BARS AT ALL RE-ENTRANT CORNERS. SEE FOUNDATION PLANS.



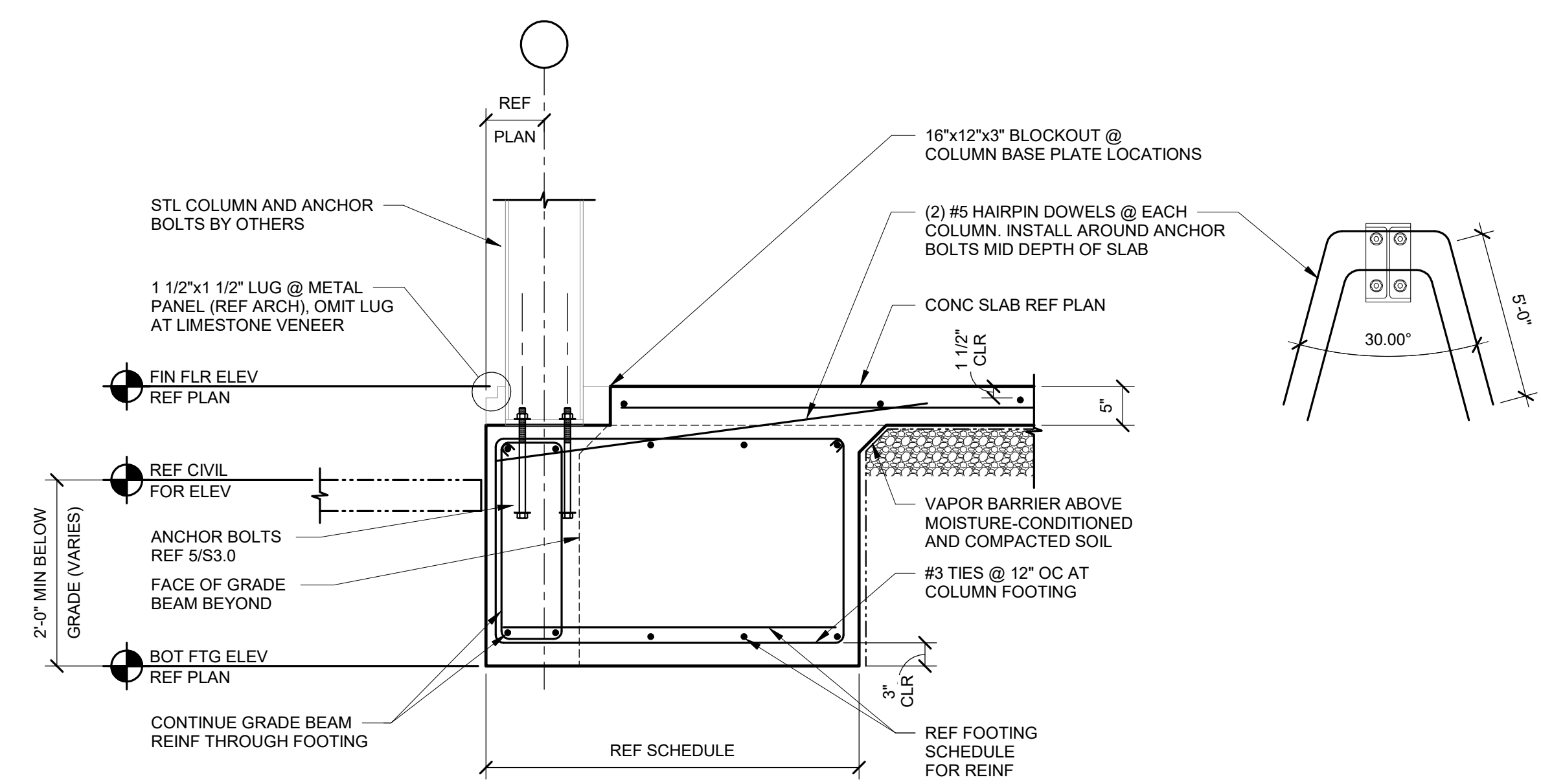
RC Architects, Inc.
14620 Echo Bluff
Austin, Texas 78737
(512) 913-0597
rickcanales.architects@gmail.com



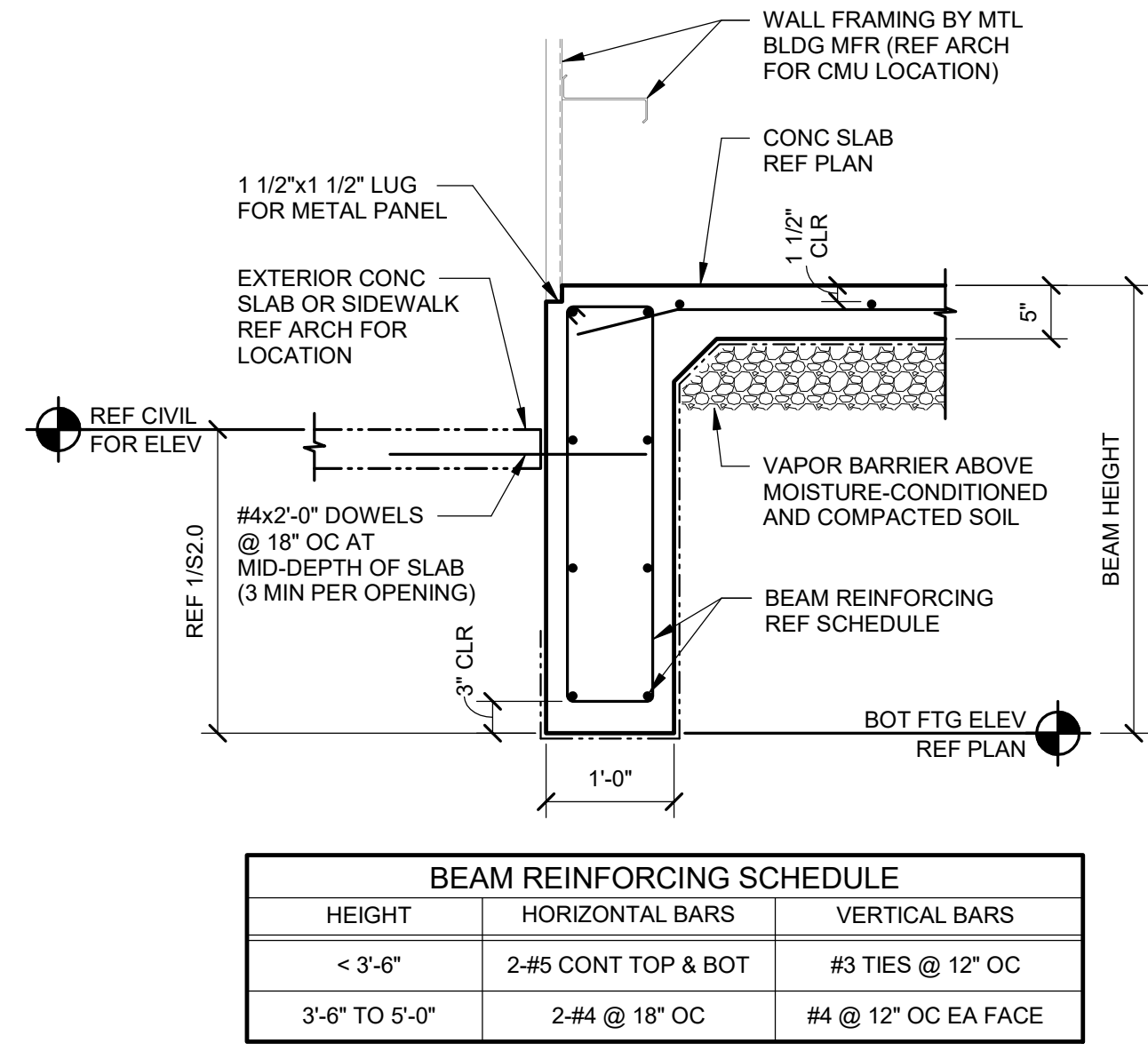
MOBILE LOAVES AND FISHES - OPERATIONS BLDG. - PHASE 4

ARCHITECT

RC Architects, Inc.

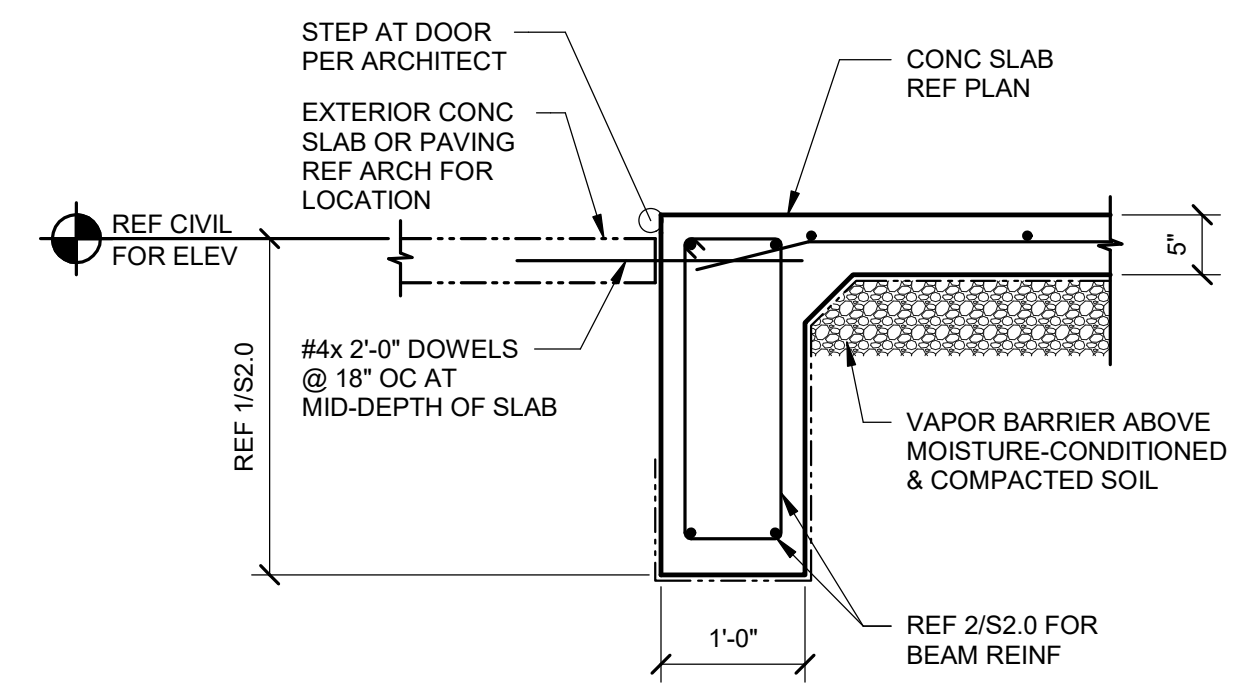


1 COLUMN FOOTING DETAIL
3/4" = 1'-0"

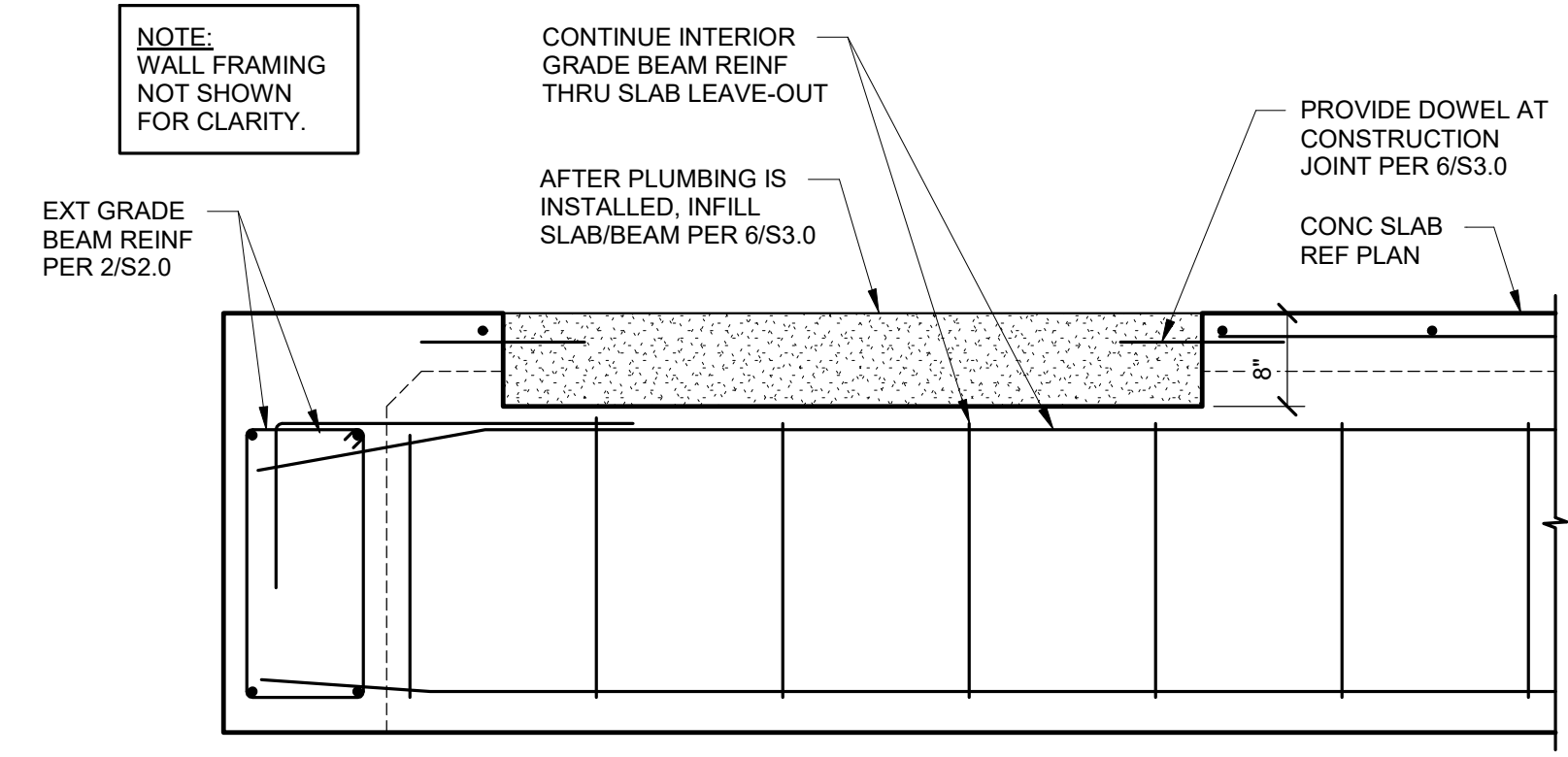


2 EXTERIOR BEAM DETAIL
3/4" = 1'-0"

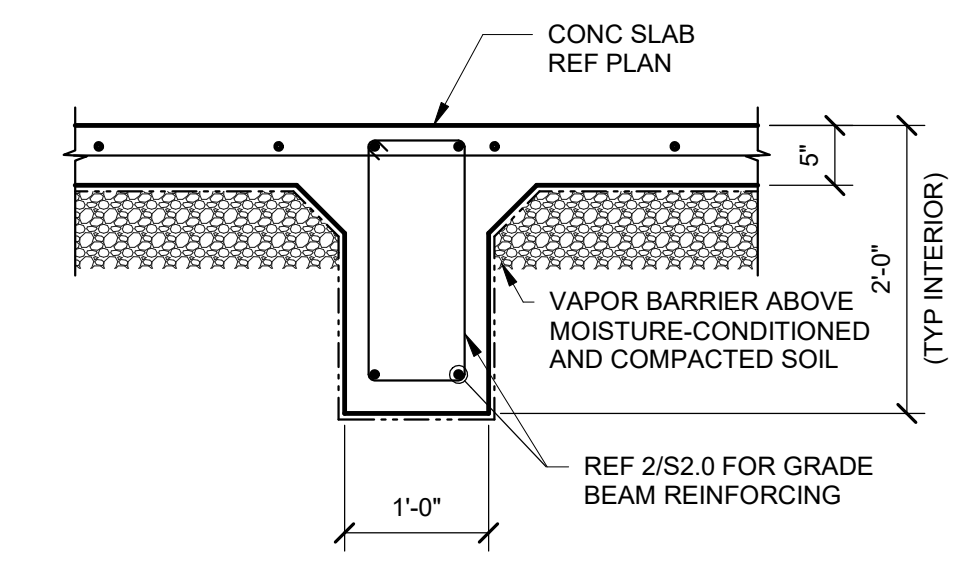
BEAM REINFORCING SCHEDULE		
HEIGHT	HORIZONTAL BARS	VERTICAL BARS
< 3'-0"	2-#5 CONT TOP & BOT	#3 TIES @ 12" OC
3'-6" TO 5'-0"	2-#4 @ 18" OC	#4 @ 12" OC EA FACE



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"

hp

Structural, MEP & Civil Engineering
3801 S. Congress Avenue, Suite 110
Austin, TX 78704
(512) 278-6966

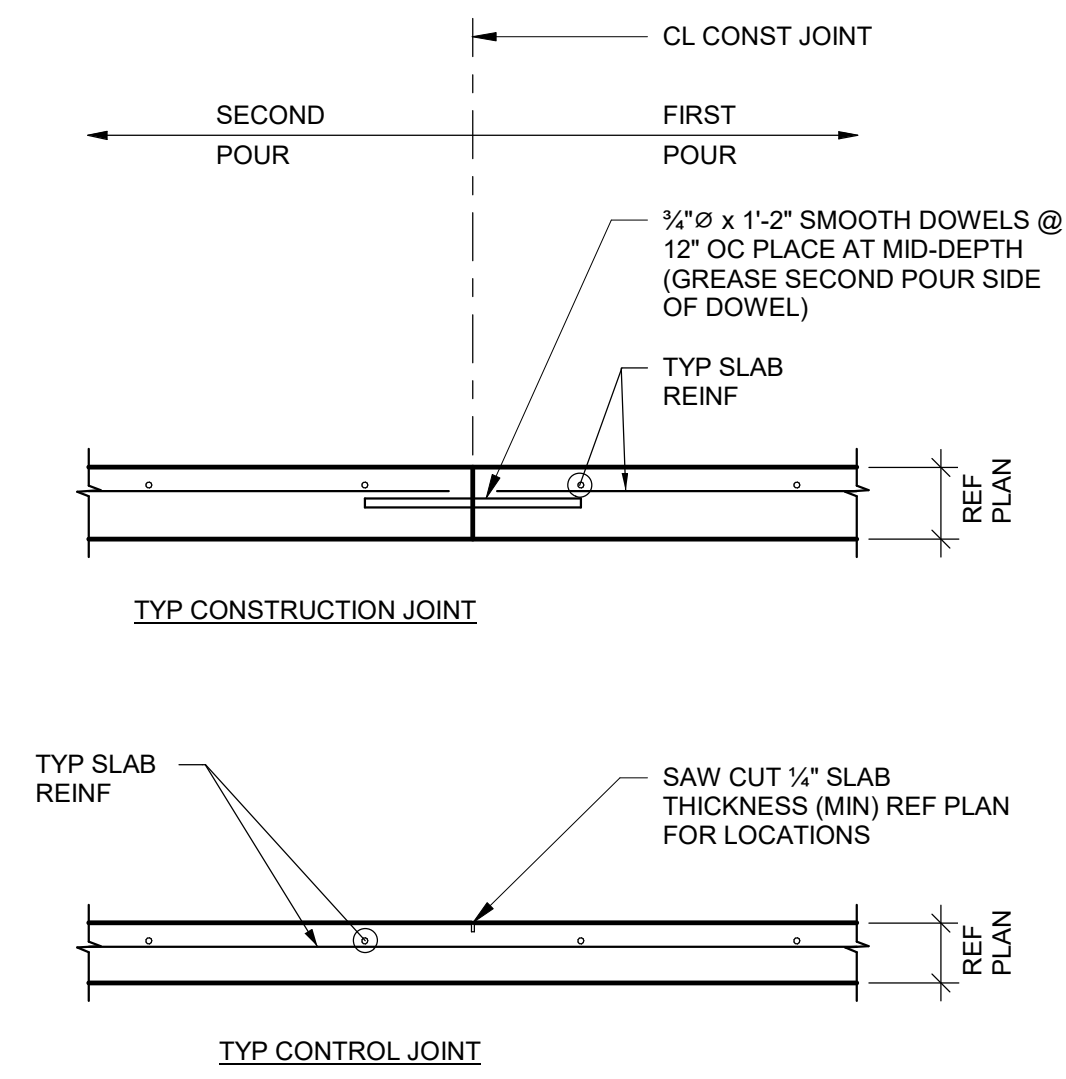


FOUNDATION SECTIONS

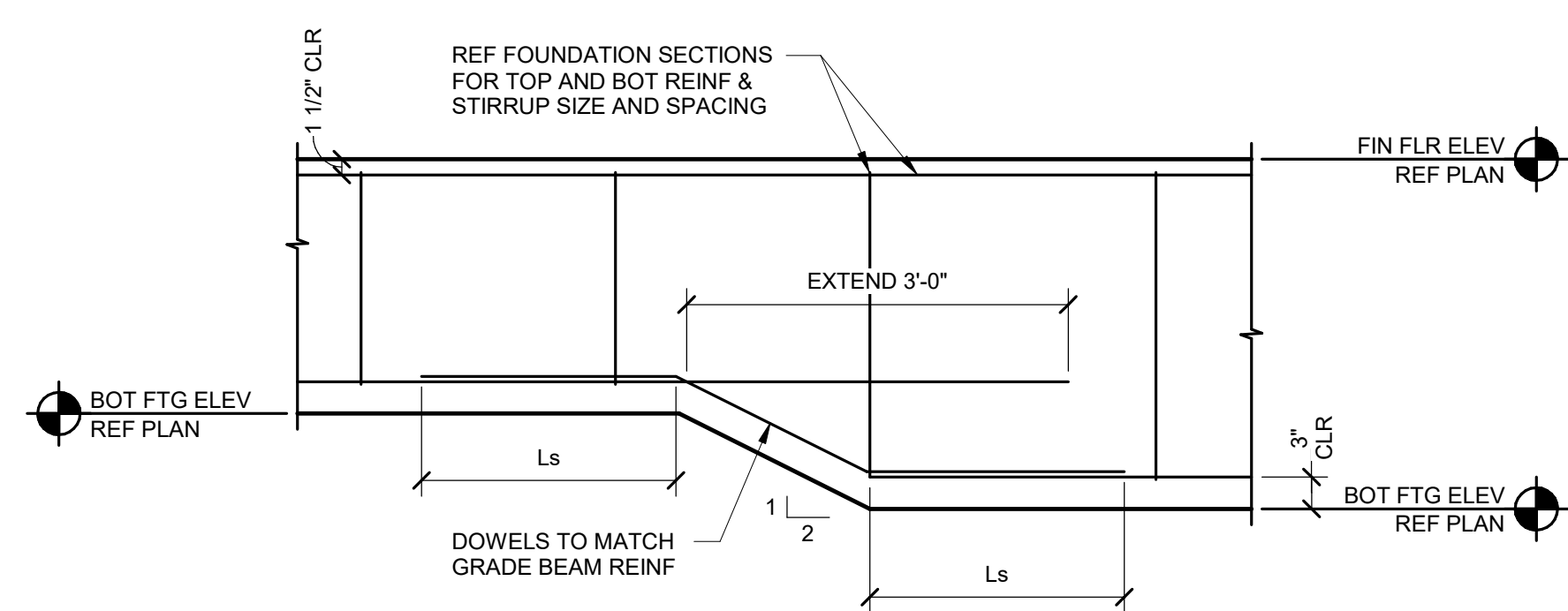
S2.0

Revisions

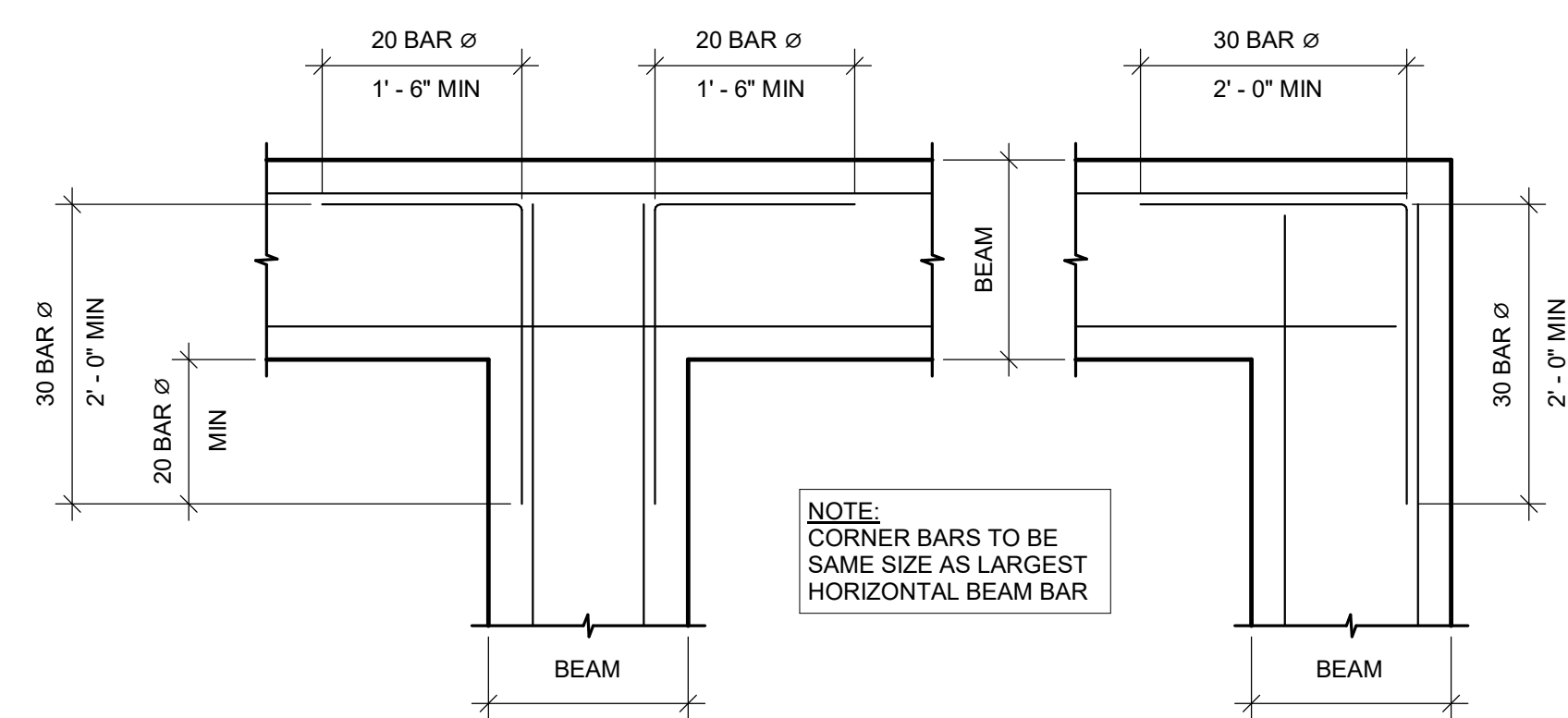
Date
04/17/2024



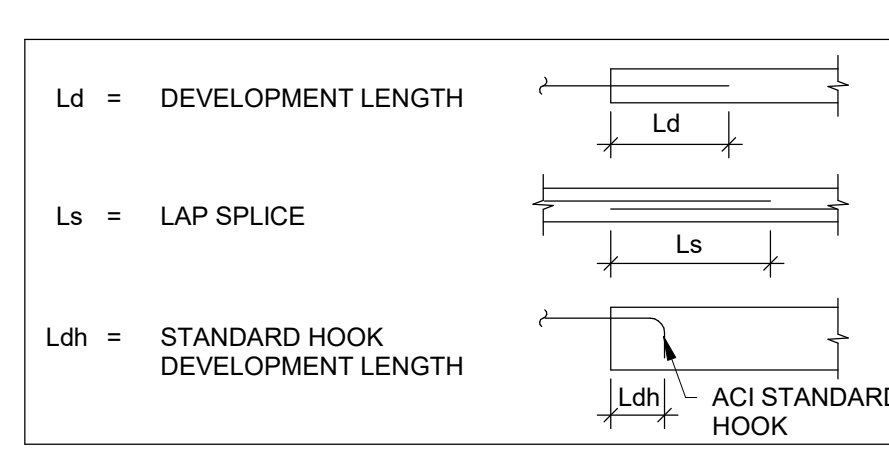
1 SLAB JOINT DETAIL
3/4" = 1'-0"



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



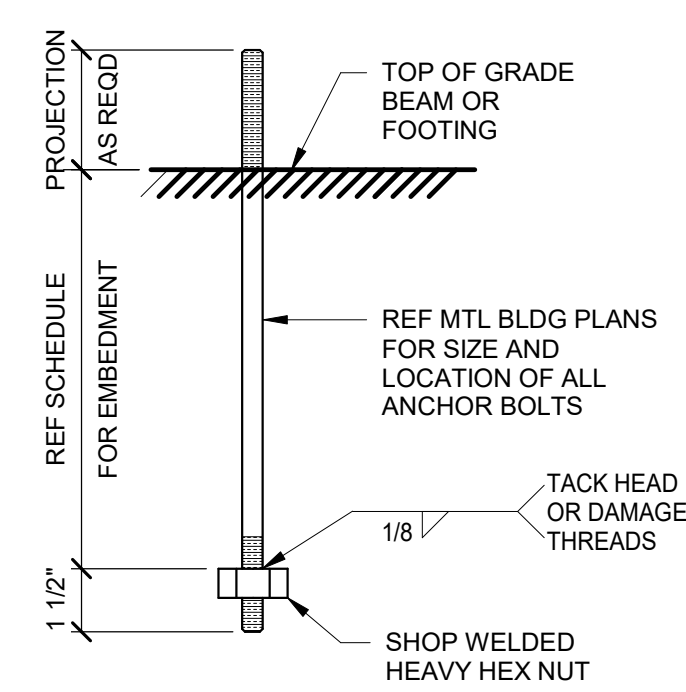
3 TYP CORNER BAR DETAIL
3/4" = 1'-0"



MINIMUM REINFORCING BAR DEVELOPMENT & SPLICE LENGTHS																
f'c (psi)	LOCATION	#3		#4		#5		#6		#7						
		L _D	L _S	L _{DH}	L _D	L _S	L _{DH}	L _D	L _S	L _{DH}	L _D	L _S	L _{DH}			
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.

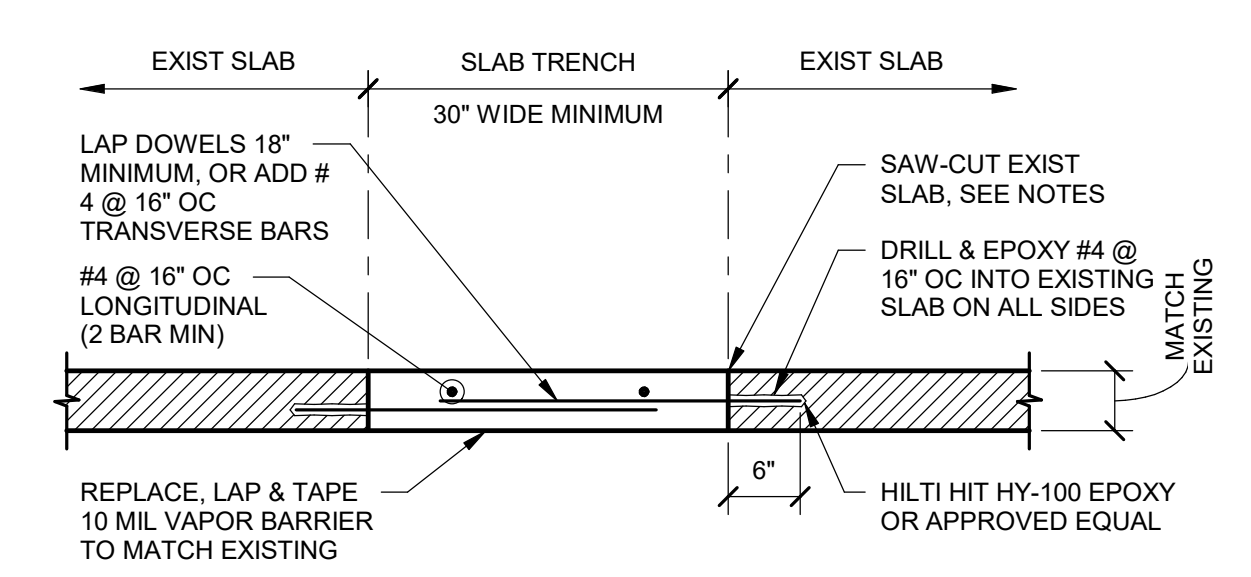
4 SLAB & BEAM DEVELOPMENT & SPLICE LENGTH SCHEDULE
3/4" = 1'-0"



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"

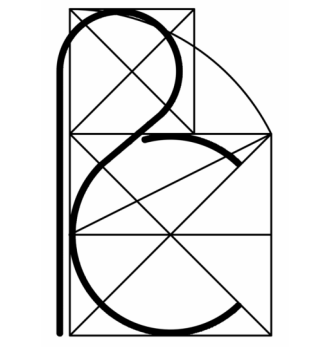
- NOTES:
- ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 (MIN).
 - ANCHOR ROD HOLES IN BASE PLATES AND MINIMUM WASHER DIAMETER SHALL BE SIZED IN ACCORDANCE WITH TABLE 14-2 OF THE AISC MANUAL OF STEEL CONSTRUCTION, 3RD ED.

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_c) 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. - PHASE 4
710 Dignity Circle - Austin, Texas 78724

RC Architects, Inc.

Revisions

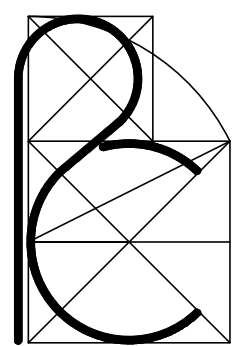
Date
04/17/2024

TYPICAL
DETAILS
S3.0

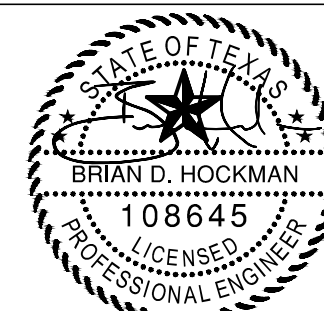


Structural, MEP & Civil Engineering
3801 S. Congress Avenue, Suite 110
Dallas, TX 75246
(972) 278-6969

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



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



06.06.2024

MOBILE LOAVES AND FISHES -OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

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 265 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

- 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.

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 5'-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 CPE FILM MECHANICALLY LOCKED TO HELIX WITHOUT ADHESIVES. INSULATION SHALL BE FACTORY WRAPPED FIBERGLASS BLANKET WITH A MAXIMUM THERMAL CONDUCTANCE OF 0.167 BTU/HR/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-8 INSULATION VALUE. ALL FLEXIBLE DUCT USED WITHIN UNINSULATED 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 60", 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.

Revisions

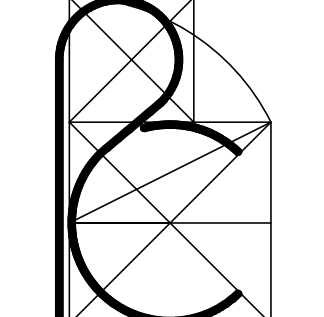
IFP: 2024.06.06

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

06/06/2024

MECHANICAL SPECIFICATIONS

M0.02



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

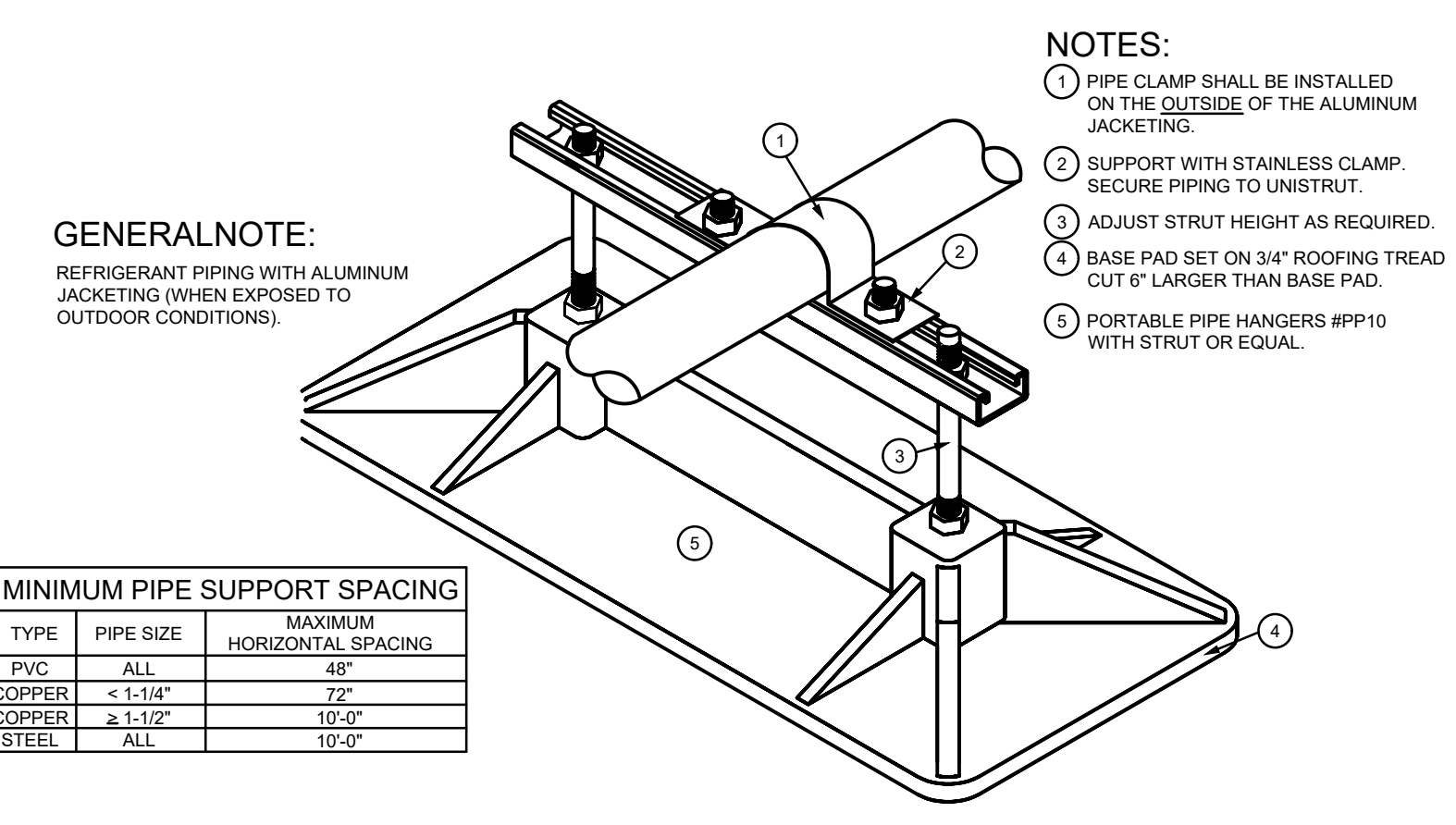
Revisions
IIP: 2024.06.06

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

06/06/2024

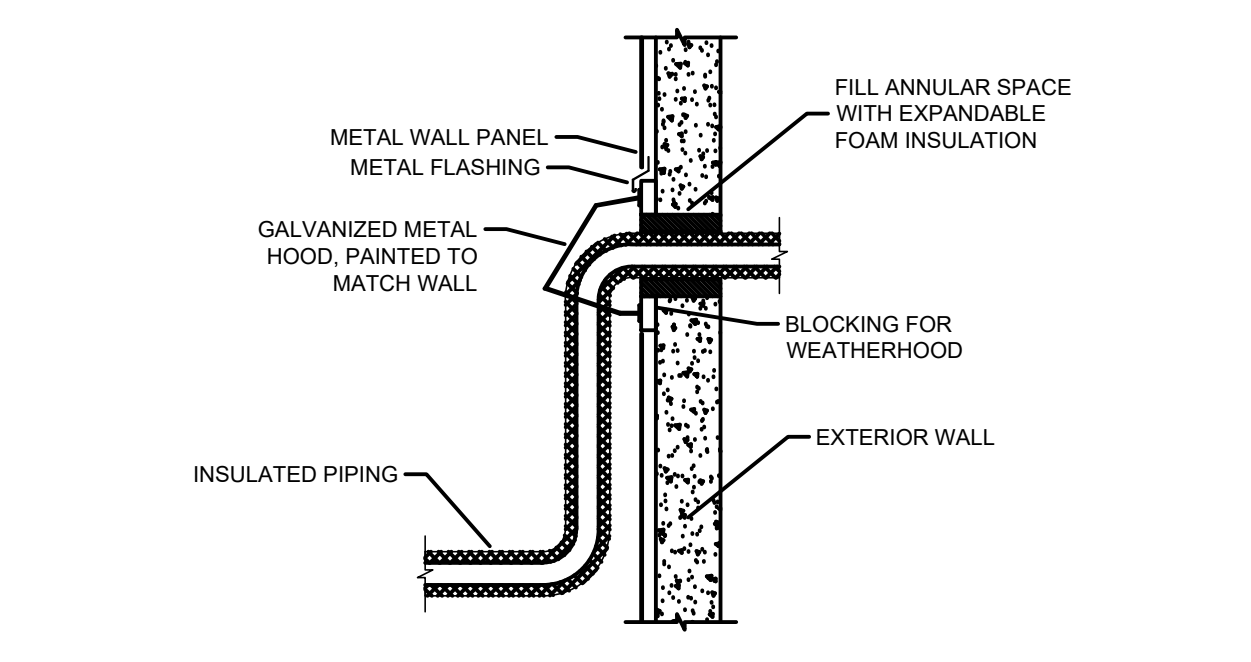
MECHANICAL
DETAILS

M0.03

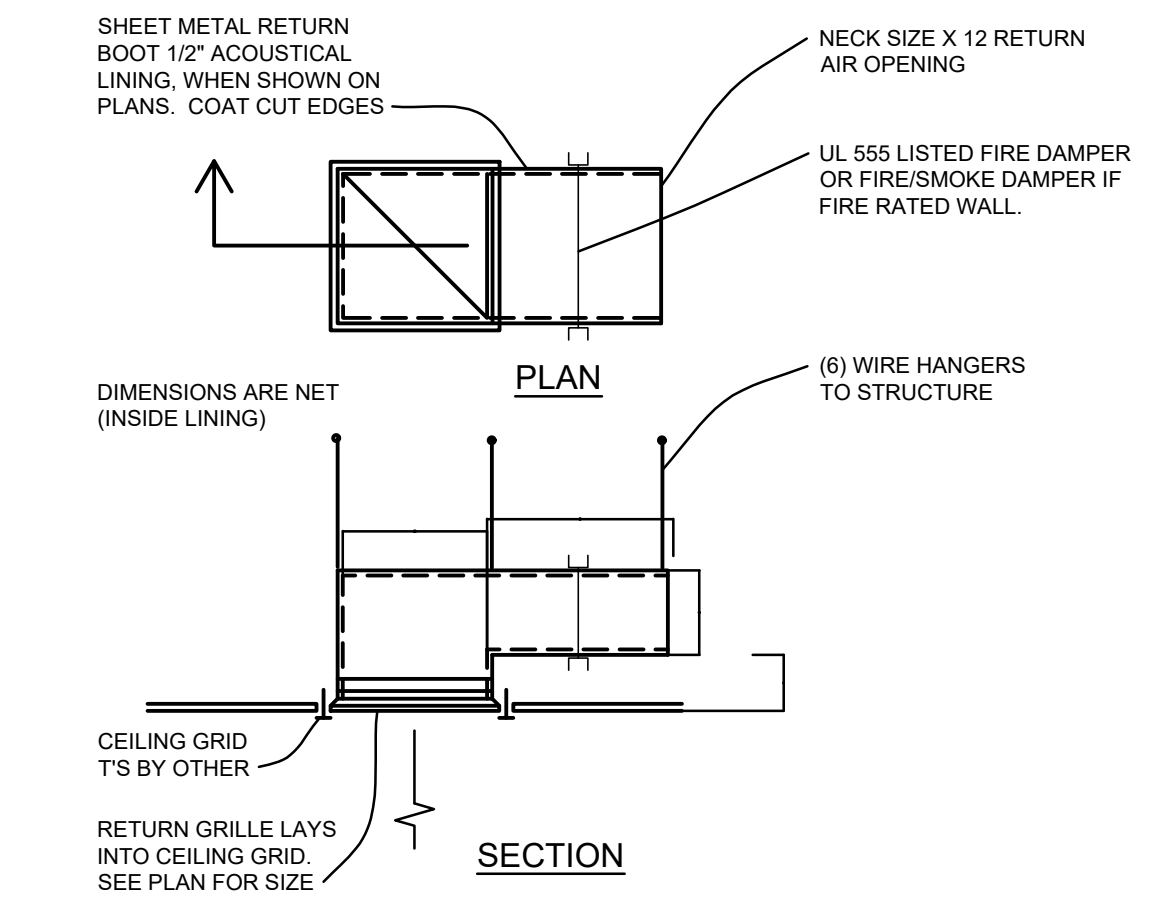


TYPE	PIPE SIZE	MAXIMUM HORIZONTAL SPACING
PVC	ALL	48"
COPPER	< 1.1/4"	72"
COPPER	> 1.1/2"	108"
STEEL	ALL	10'-0"

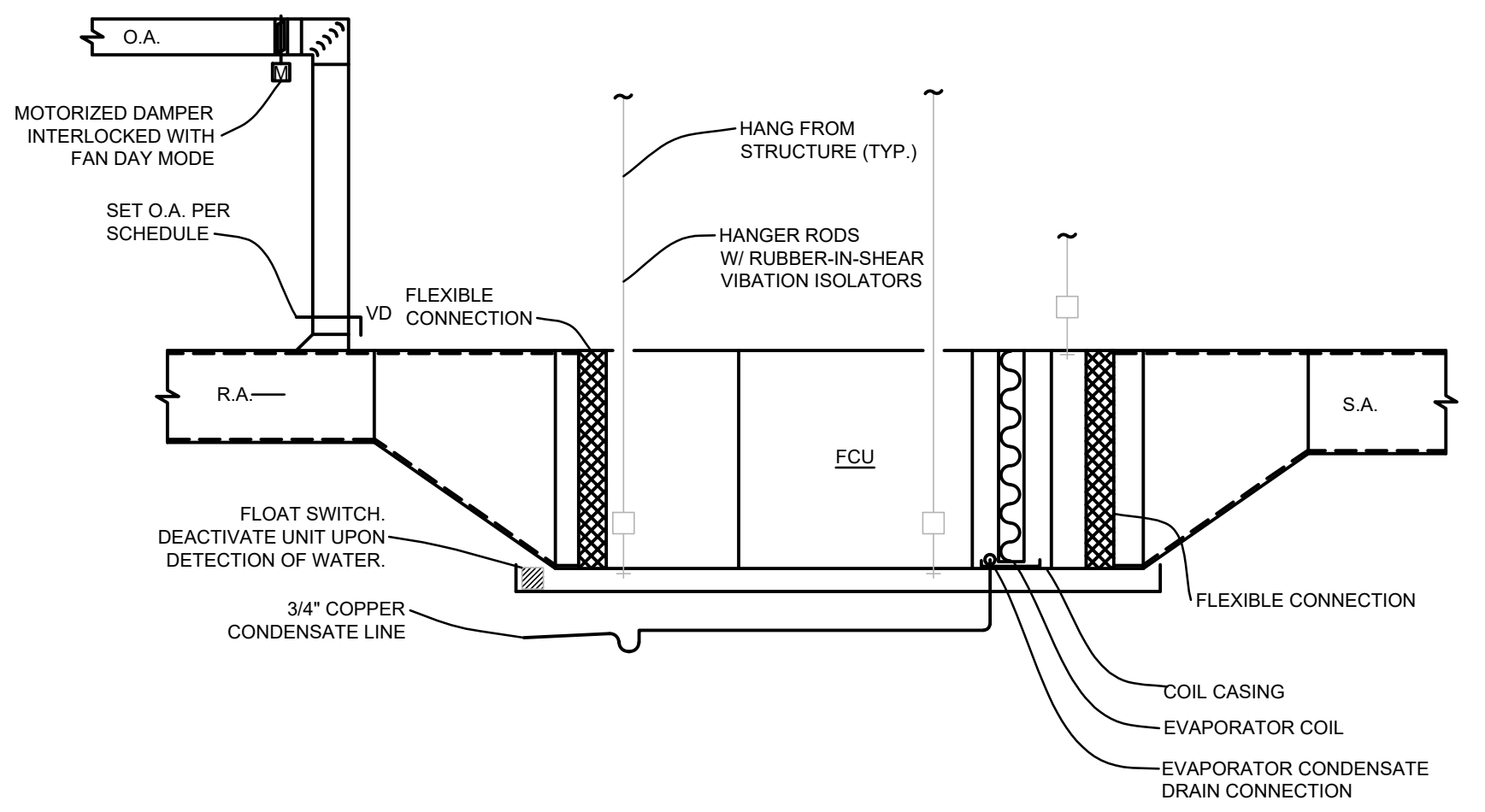
N PIPE SUPPORT DETAIL
SCALE: NTA



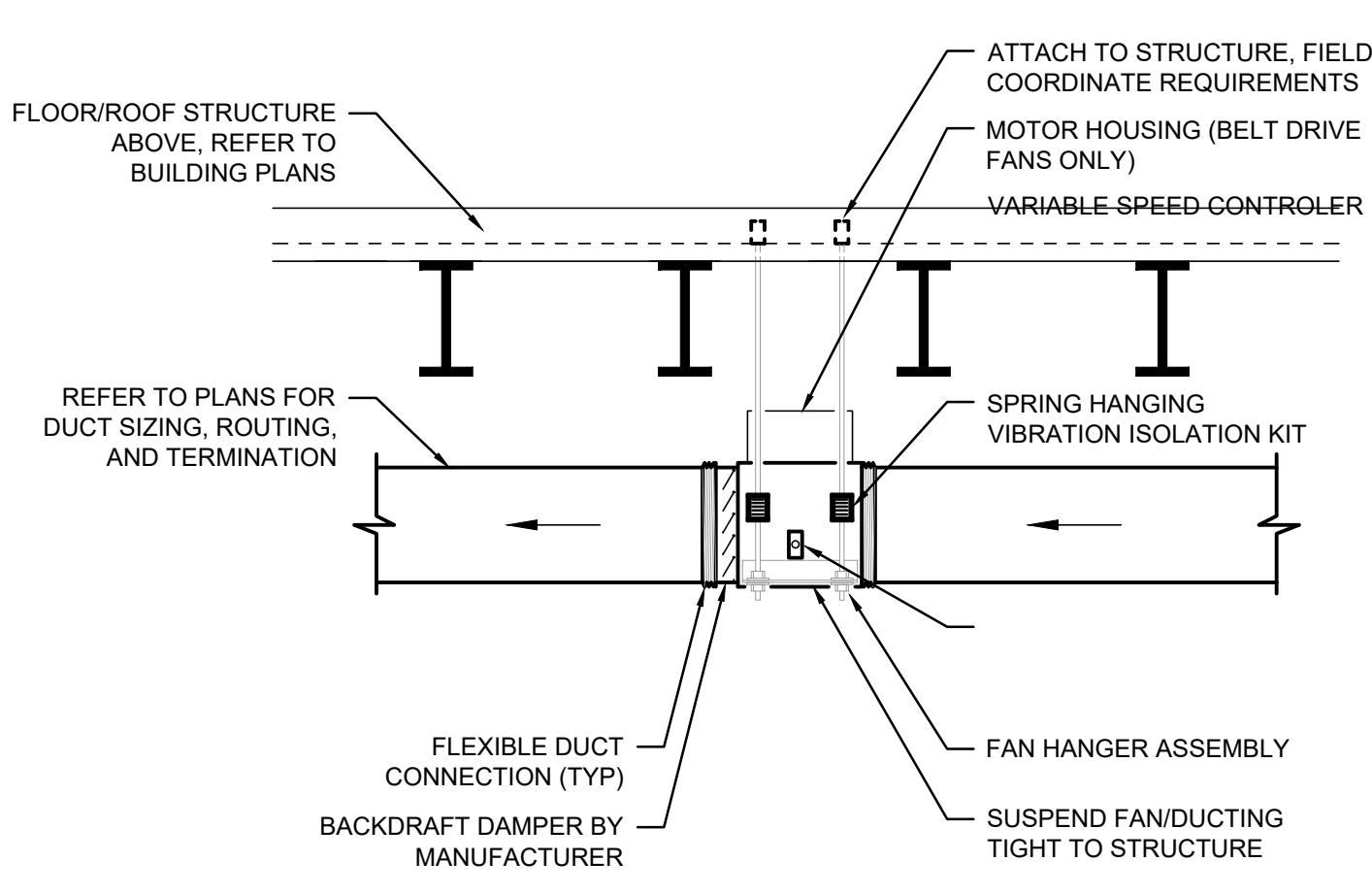
J EXTERIOR WALL PIPING PENETRATION
SCALE: NTA



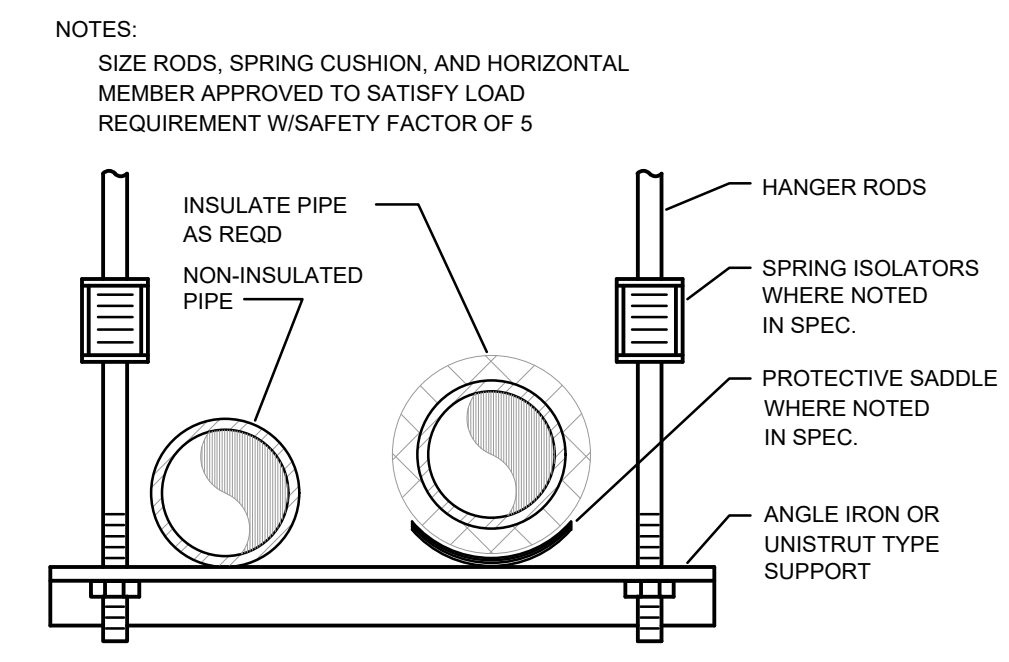
E LAY-IN RETURN AIR BOOT DETAIL
SCALE: NTA



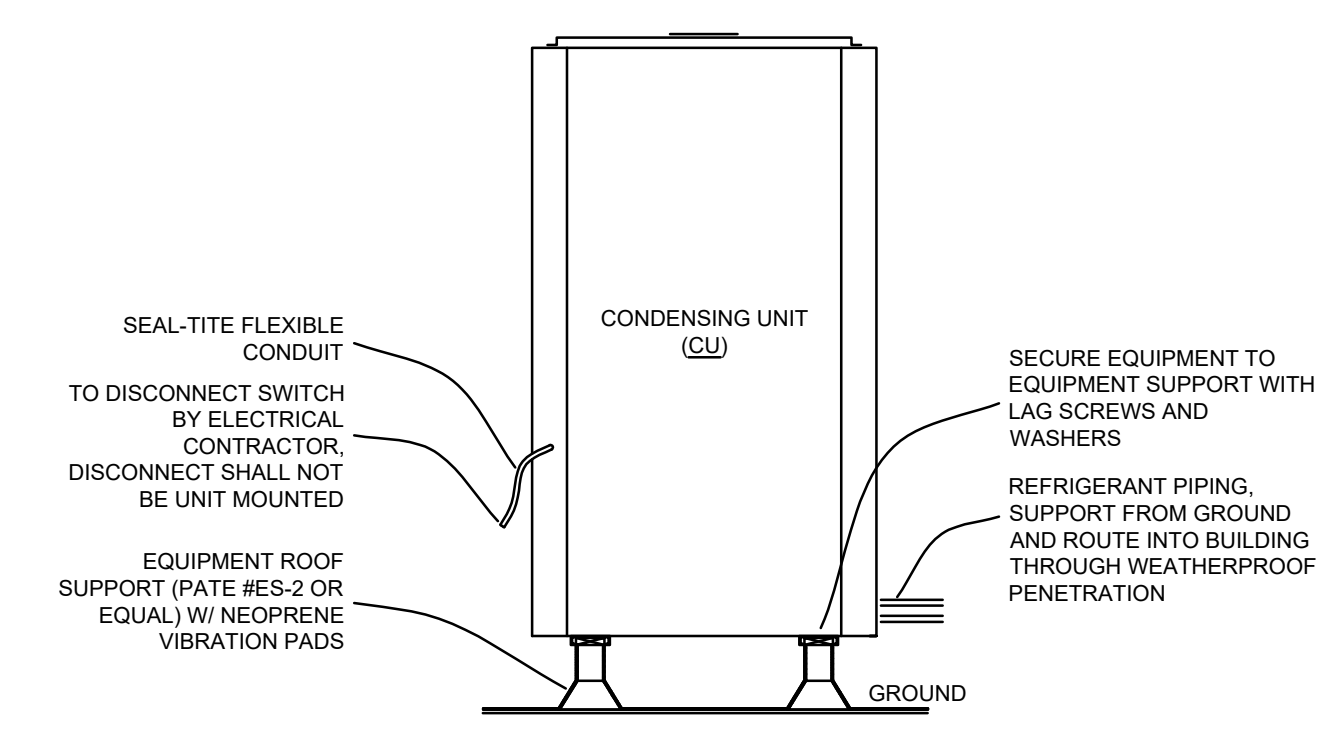
A AIR HANDLER UNIT DETAIL
SCALE: NTA



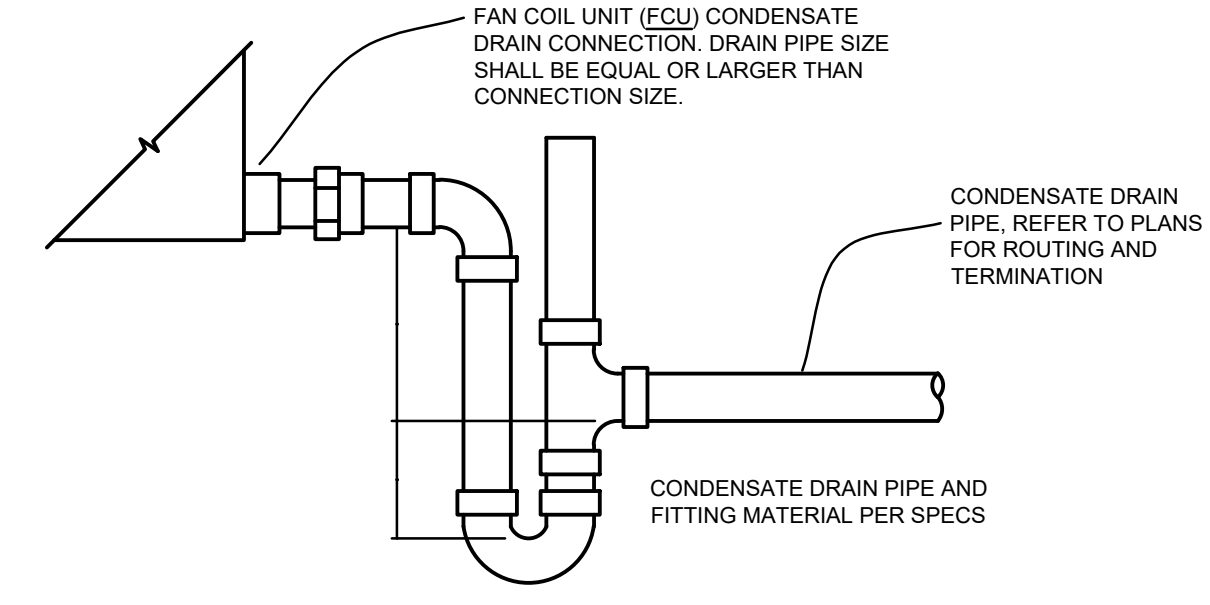
O INLINE EXHAUST FAN DETAIL
SCALE: NTA



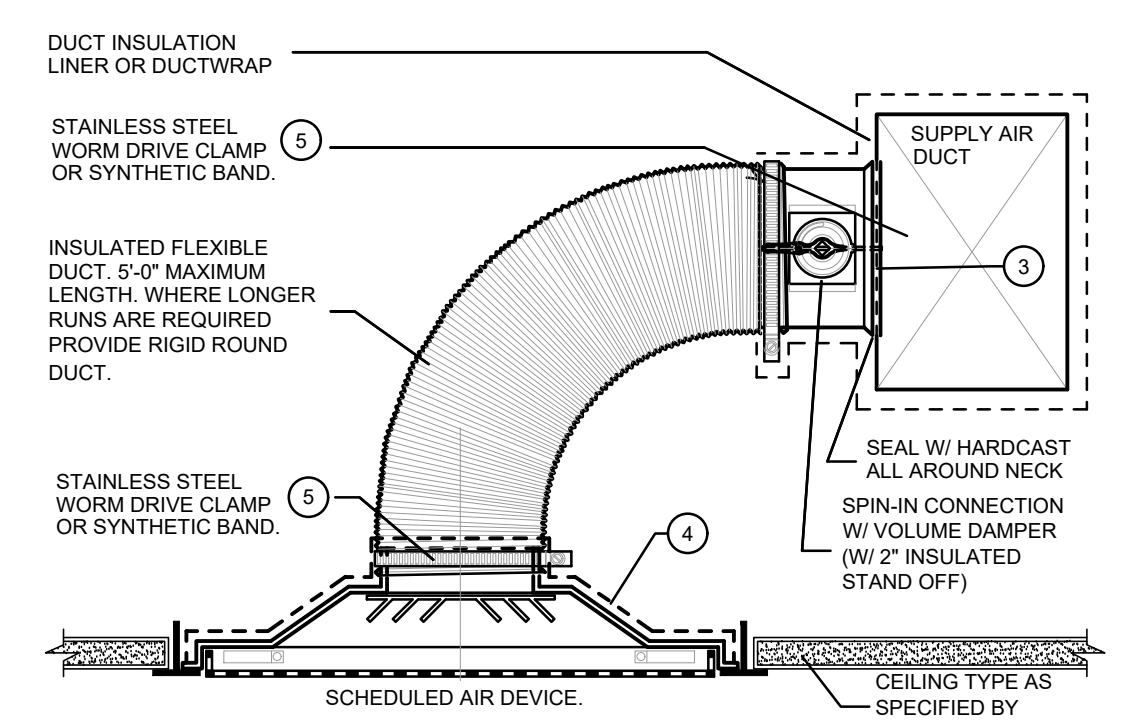
K TRAPEZE PIPE SUPPORT
SCALE: NTA



F CONDENSING UNIT DETAIL
SCALE: NTA

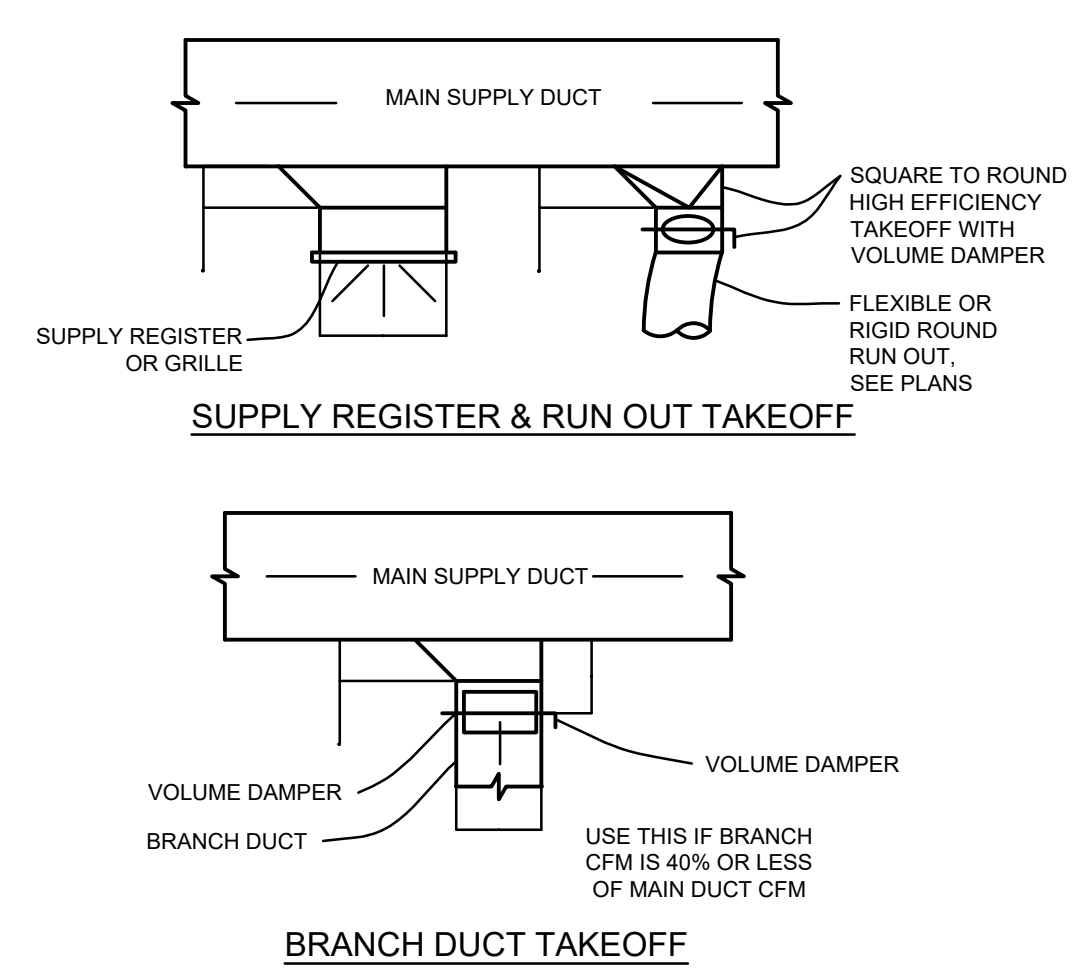


B CONDENSATE DRAIN DETAIL
SCALE: NTA

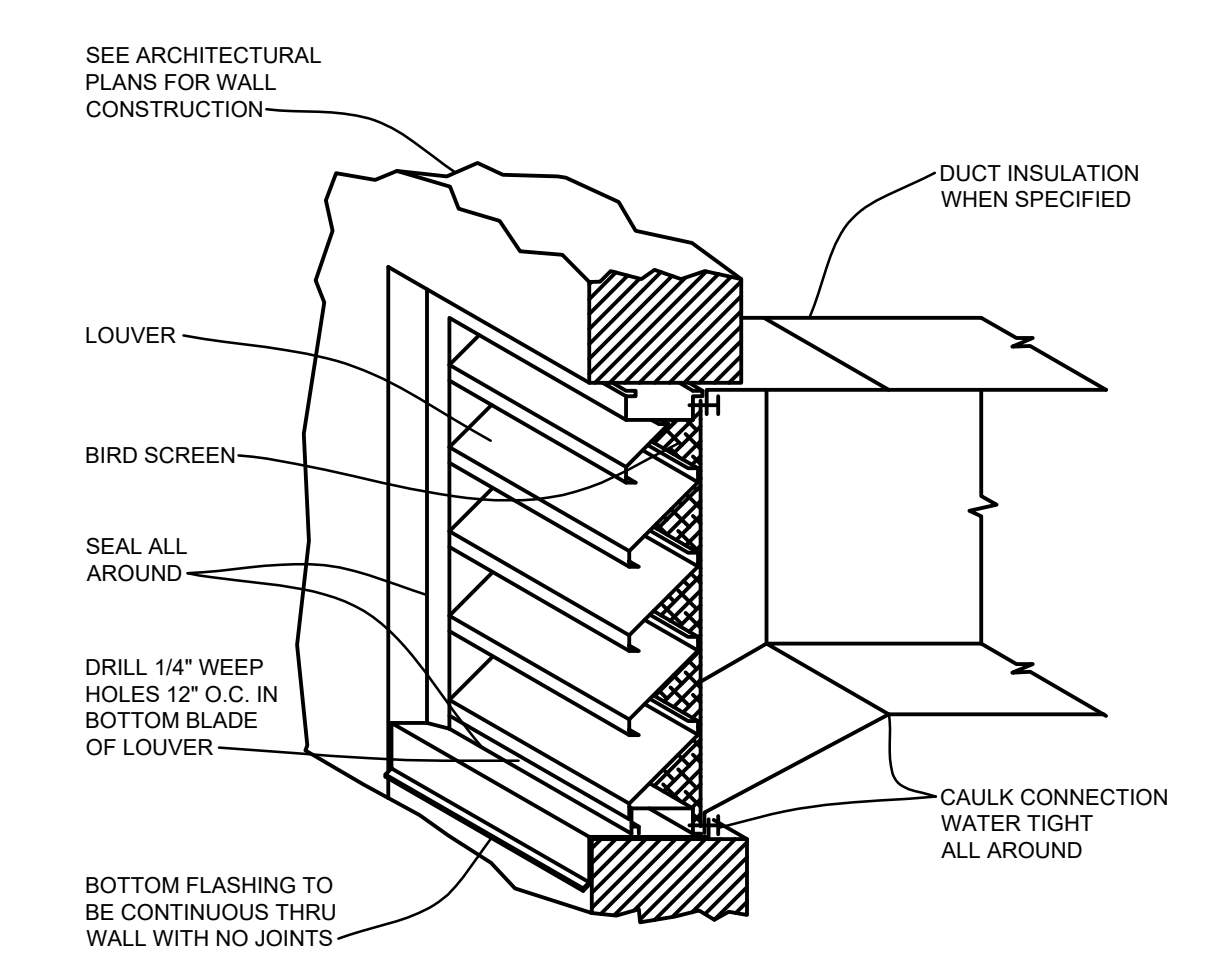


- NOTES:**
- CEILING DIFFUSER SHALL BE INSTALLED SUCH THAT THE FACE OF DIFFUSER IS FLUSH WITH CEILING.
 - SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT 'TEES' OR CEILING TILE.
 - PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS 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.)

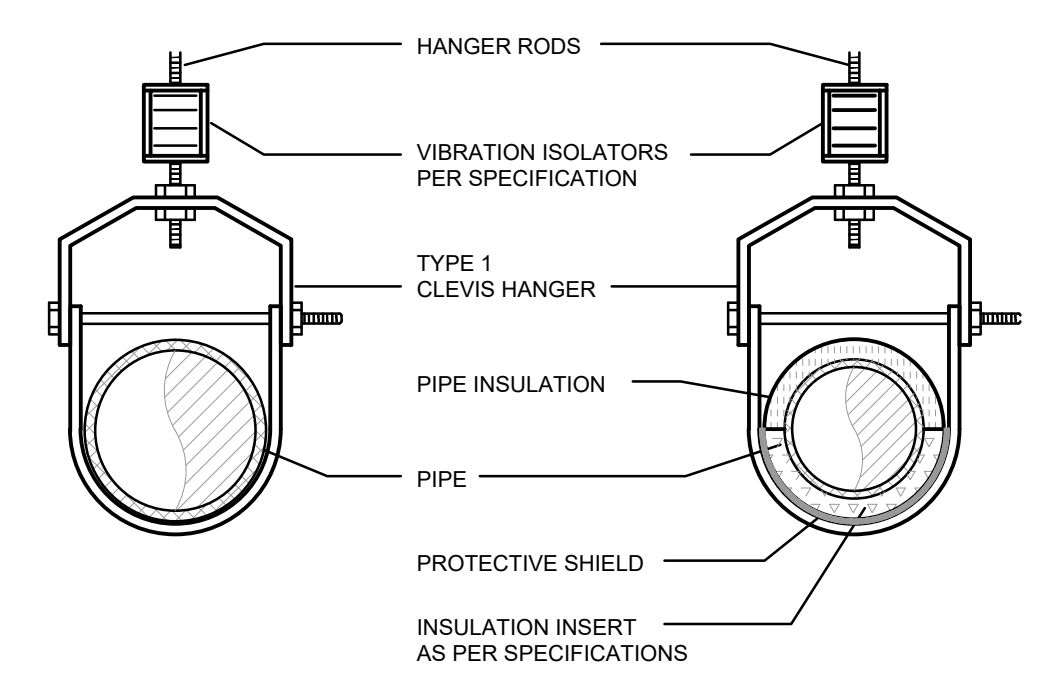
L CEILING DIFFUSER DETAIL
SCALE: NTA



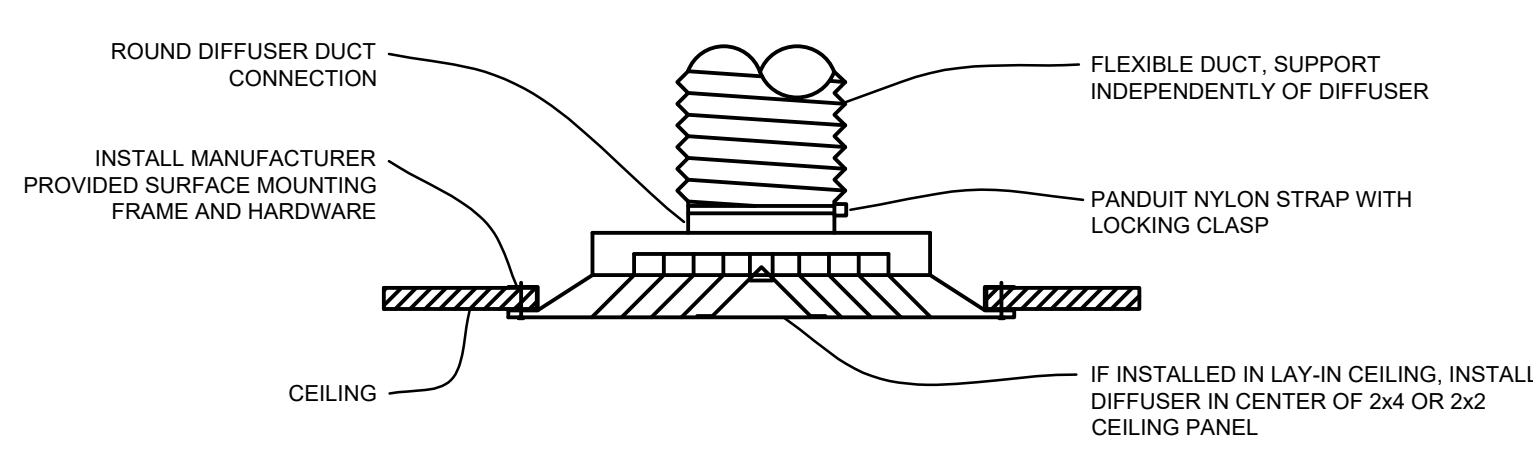
G LOW VELOCITY DUCT DETAILS
SCALE: NTA



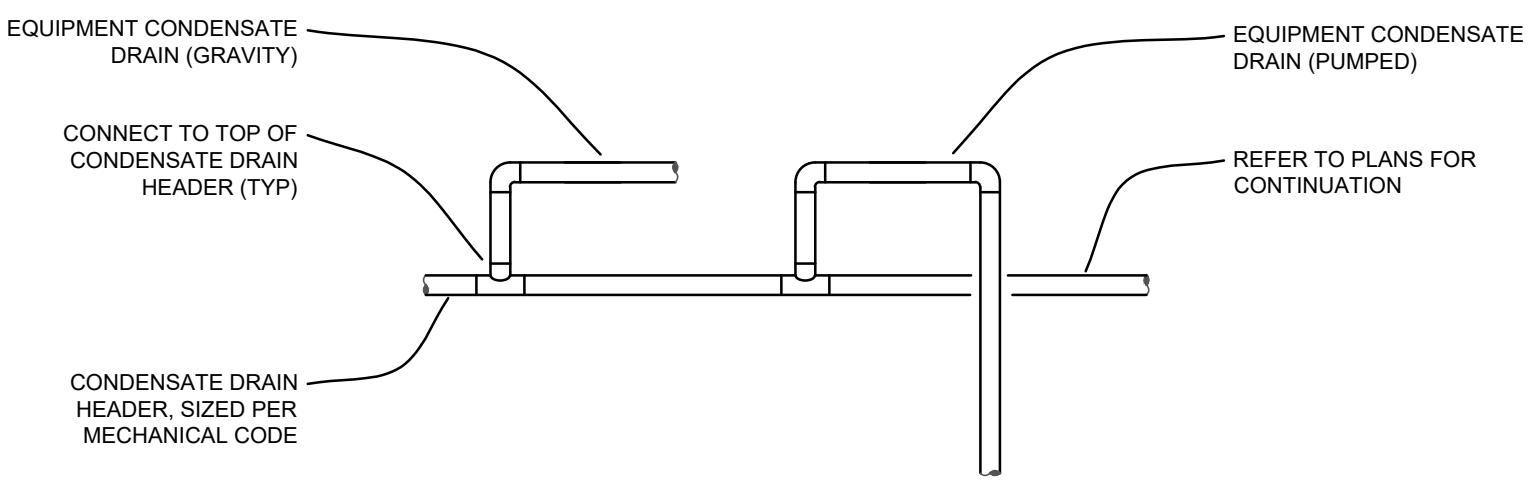
C LOUVER INSTALLATION DETAIL
SCALE: NTA



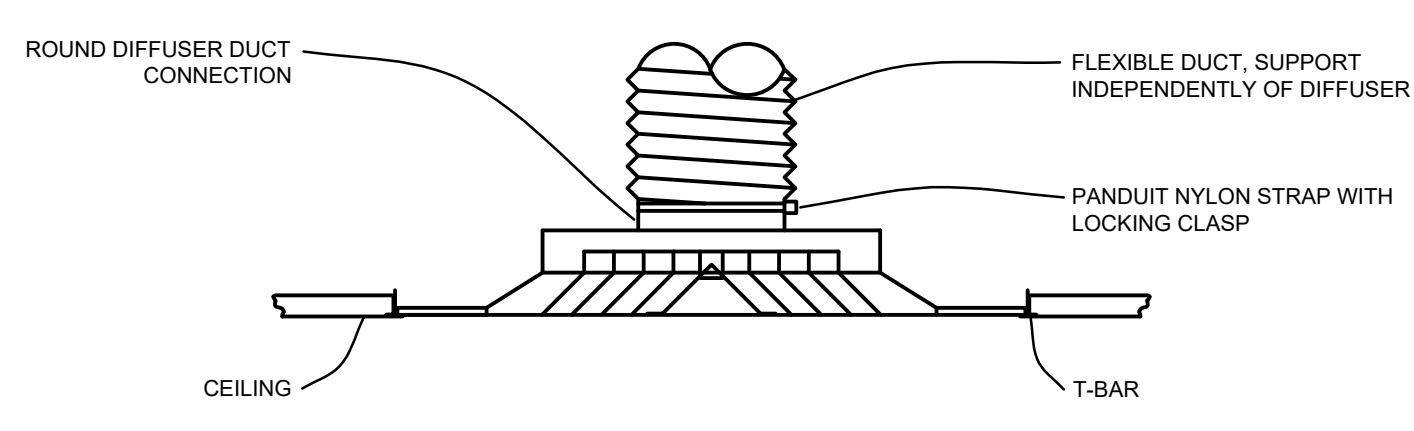
M CLEVIS PIPE HANGER
SCALE: NTA



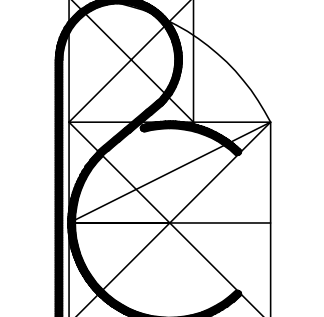
H SURFACE MOUNTED DIFFUSER DETAIL
SCALE: NTA



D CONDENSATE DRAIN MANIFOLD PIPING DETAIL
SCALE: NTA



I LAY-IN DIFFUSER DETAIL
SCALE: NTA



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4
RC Architects, Inc.

OA SCHEDULE							
Outside air shall be provided in accordance with ASHRAE Standard 62.1-2022 as follows:							
	Rp	Pz	Ra	Az			
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)	Voz (CFM)
FCU-01							
LOBBY	1	5	14	0.06	789	116.1	145.2
OFFICES	1	5	3	0.06	308	33.5	41.9
BREAK ROOM*	1	5	1	0.12	99	16.9	10.6
Total			18.0		1176		197.6
					PROVIDED	200.0	
FCU-02							
OFFICES	1	5	2	0.06	256	25.4	31.7
STORAGE	1	0	0	0.06	197	11.8	14.8
CORRIDOR	1	5	0	0.06	114	6.8	8.6
CONFERENCE ROOM*	1	5	8	0.06	225	53.5	33.4
Total			10.0		792		88.5
					PROVIDED	100.0	
FCU-03							
OFFICES	1	5	2	0.06	238	24.3	30.4
Total			2.0		238		30.4
					PROVIDED	35.0	
*Intermittent occupancy reduced 50%					TOTAL OA REQUIRED	316.4	
					TOTAL OA PROVIDED	335.0	

AIR DEVICE SCHEDULE											
TAG	MANUFACTURER	MODEL	DUCT SIZE (IN)	NOM. FACE SIZE (IN)	MAX AIRFLOW (CFM)	THROW (@90 FPM)	NC AT MAX AIRFLOW	MATERIAL	FINISH	MOUNTING	NOTES
SUPPLY GRILLE											
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
RETURN GRILLE											
R-1	PRICE	80	22x10	24x12	670	-	28	ALUMINUM	WHITE	LAY-IN	1, 2, 3, 4
R-2	PRICE	80	22x22	24x24	1555	-	32	ALUMINUM	WHITE	LAY-IN	1, 2, 3, 4
EXHAUST GRILLE											
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 (LBS)	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	1-3

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	SIZE	WEIGHT (LBS)
FCU-01	DAIKIN	DMVT60DP1400*	5-1/2 TON	172
FCU-02	DAIKIN	DMVT42CP1400*	3-1/2 TON	158
FCU-03	FDMQ12RVJU	DX SPLIT HEAT PUMP	1 TON	64
INDOOR UNIT				
DESIGN AIRFLOW (CFM)	2000	1350		392
DESIGN OUTSIDE AIRFLOW (CFM)	200	100		35
DESIGN ESP (IN WTR)	0.5	0.5		0.5
MOTOR (HP)	1	3/4		130 W
FLA (AMPS)	6.9	5.2		0.7
COOLING SECTION				
AMBIENT (°F)	105			105
MIXED AIR (EAT) DESIGN CONDITIONS DB/WB (°F)	81.2 / 64.7	81.4 / 30.4		80.0 / 67.0
COOL CAPACITY (TOT./SENS. MBH)	52.5 / 47.2	32.8 / 31.9		10.30 / 8.44
HEAT PUMP HEATING				
AMBIENT (°F)	17	17		17
CAPACITY (MBH)	38.0	31.4		8.5
HSFP2	8.2	8.2		9.0
ELECTRICAL				
VOLTAGE/PH	208-240/0/1	208-240/0/1		208-240/0/1
AMPS (208/230)	17.3 / 20.0	17.3 / 20.0		0.7 / 0.7
AUX. HEAT CAPACITY (KW @ 240V)	5.0	5.0		N/A
MCA (AMPS) (208/230)	30.3 / 34	28.2 / 32		(NOTE 9)
MCCP (AMPS) (208/230)	35.0 / 35.0	30.0 / 35.0		(NOTE 9)
NOTES / ACCESSORIES				
HP-01	DAIKIN	DZ7TCA6010A*	5 TON	315
HP-02	DAIKIN	DZ7TCA4810A*	4 TON	307
HP-03	DAIKIN	RX12RMVJUSA	1 TON	60
OUTDOOR UNIT				
NO./TYPE	1 / SCROLL	1 / SCROLL		1 / SCROLL
REFRIGERANT	R-410A	R-410A		R-410A
STAGES	2	2		1
EFFICIENCY (AHRI 210/243)				
AMBIENT DB	95.0	95.0		105.0
EBR/SEER2	11.7 / 16.2	12.0 / 17.2		11.17 / 18.4
ELECTRICAL				
VOLTAGE/PH	208-230/1	208-230/1		208-230/1
MCA	32.4	27.7		9.1
MCCP	50	35		15
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				

EXHAUST LOUVER SCHEDULE									
MARK	MANUFACTURER	MODEL	SIZE (INCHES)	TYPE	TOTAL CFM	TOTAL S.P. (IN WG)	FREE AREA (S.F.)	VELOCITY (FT/MIN)	NOTES
L-01	GREENHECK	ESD-435	16x14	EXHAUST	250	0.05	0.5	493	1

NOTES:
(1) PROVIDE WITH MANUFACTURER'S BIRD SCREEN, MOUNTING ANGLES, AND PLENUM ON BACK OF LOUVER (MINIMUM 10" LENGTH).

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-12	335	0.03	409	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.

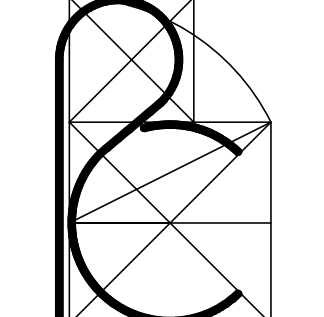
Revisions
△ IFP: 2024.06.06

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

06/06/2024

MECHANICAL SCHEDULES

M0.04



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

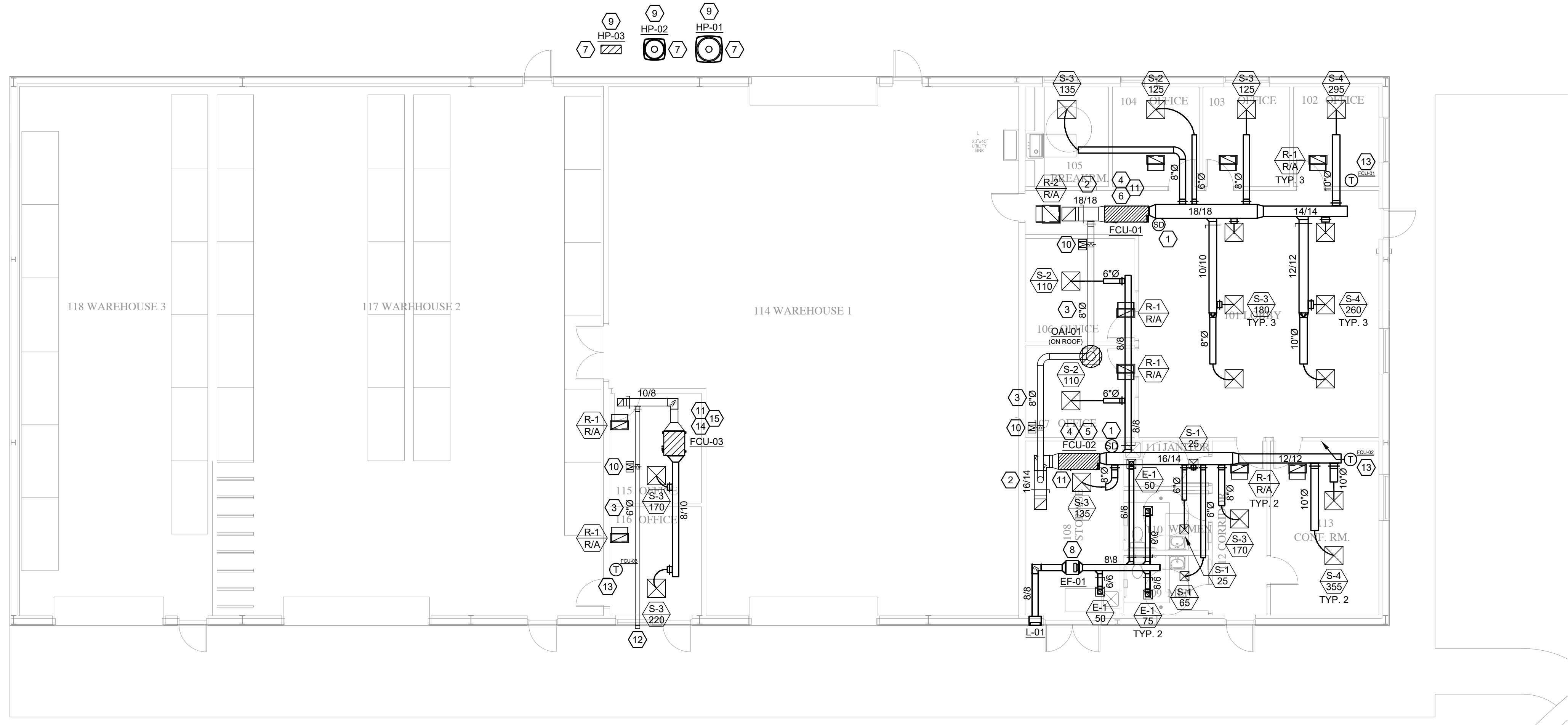
RC Architects, Inc.

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 2021 IFC 907.3.1 AND THE IMC. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR AND FIRE ALARM CONTRACTOR.
- 2. PROVIDE 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 FCU 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 TAILPIPE. 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 SSB-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. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCES. COORDINATE WITH ELECTRICAL CONTRACTOR FOR MOUNTING OF ELECTRICAL DISCONNECTS.
- 10. INSTALL MOTORIZED DAMPER FOR OUTSIDE AIR INTAKE DUCT. INTERLOCK WITH ASSOCIATED FAN COIL UNIT (FCU). MOTORIZED DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.
- 11. INSTALL FAN COIL UNIT (FCU) ABOVE CEILING IN SECONDARY CONTAINMENT PAN AND PROVIDE INTEGRAL FLOAT SWITCH IN CONDENSATE DRAIN PAN. INTEGRAL FLOAT SWITCH TO AUTOMATICALLY SHUT OFF FCU UPON DETECTION OF WATER. FCU TO BE SUSPENDED FROM STRUCTURE. FIELD COORDINATE FINAL INSTALLATION LOCATION WITH ALL OTHER TRADES.
- 12. ROUTE ROUND OUTSIDE AIR DUCT TO WALL INTAKE VENT CAP EQUAL TO LUXURY METALS #SWVG6 WITH INSECT SCREEN.
- 13. PROVIDE AND INSTALL THERMOSTAT 54 A.F.F. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE EMPTY J-BOX AND CONDUIT FOR THERMOSTAT LOCATION.
- 14. ROUTE PUMPED CONDENSATE DRAIN PIPE FROM FAN COIL UNIT (FCU) DRAIN CONNECTION TIGHT TO STRUCTURE AND TRANSITION TO GRAVITY DRAIN WHEN APPLICABLE. TERMINATE AT 108 STORAGE MOP/UTILITY SINK RIM. PROVIDE MINIMUM 1" AIR GAP BETWEEN RIM OF MOP SINK AND DRAIN PIPING. ROUTE NEW INSULATED 3/4" CONDENSATE LINE AS HIGH AS NEEDED TO ACCOMMODATE FALL TO DISCHARGE LOCATION.
- 15. ROUTE REFRIGERANT PIPING PER MANUFACTURER INSTRUCTIONS TO CONDENSING UNIT LOCATED ON EXTERIOR OF BUILDING. COORDINATE ROUTING IN FIELD WITH BUILDING OWNER AND ARCHITECT. ROUTING TO BE NEAT AND TIDY.



1 MECHANICAL HVAC PLAN

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

Revisions

IFP: 2024.06.06

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

06/06/2024

MECHANICAL
HVAC PLAN

M2.01

System Checksums

By Hollingsworth Pack

HP-01

Incremental Heat Pump

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK			TEMPERATURES				
Peaked at Time:		Mo/Hr: 8 / 14			Mo/Hr: Sum of			Mo/Hr: Heating Design							
Outside Air:		OADB/WB/HR: 101 / 78 / 108			OADB: Peaks			OADB: 28							
Space Sens.	Plenum Sens.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak Tot	Percent Of Total							
+ Lat.	+ Lat	Btu/h	(%)	Btu/h	(%)	Space Sens	Btu/h	(%)							
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)							
Envelope Loads					Envelope Loads			Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0.00	Skylite Solar	0	0	0.00	SADB	56.7	90.0
Skylite Cond	0	0	0	0	0	0	0	0.00	Skylite Cond	0	0	0.00	Ra Plenum	79.8	67.7
Roof Cond	0	3,768	3,768	6	0	0	0	3.40	Roof Cond	0	-1,854	3.40	Return	79.8	67.7
Glass Solar	10,070	0	10,070	16	12,671	34	0	0.00	Glass Solar	0	0	0.00	Ret/OA	82.0	63.6
Glass/Door Cond	1,552	0	1,552	2	302	1	-3,243	5.95	Glass/Door Cond	-3,243	-3,243	5.95	Fn MtrTD	0.0	0.0
Wall Cond	5,126	10,971	16,098	26	5,209	14	-1,770	10.02	Wall Cond	-1,770	-5,456	10.02	Fn BldTD	0.1	0.0
Partition/Door	461	0	461	1	380	1	-823	1.51	Partition/Door	-823	-823	1.51	Fn Frict	0.2	0.0
Floor	0	0	0	0	0.00	0	0	0.00	Floor	0	0	0.00			
Adjacent Floor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Adjacent Floor	0.00	0.00	0.00			
Infiltration	0	0	0	0	0	0	0	0.00	Infiltration	0	0	0.00			
Sub Total ==>	17,210	14,739	31,949	51	18,561	49	-5,836	20.89	Sub Total ==>	-5,836	-11,377	20.89			
Internal Loads					Internal Loads			Internal Loads							
Lights	4,014	0	4,014	6	4,014	11	0	0.00	Lights	0	0	0.00			
People	8,100	0	8,100	13	4,500	12	0	0.00	People	0	0	0.00			
Misc	9,044	0	9,044	14	9,044	24	0	0.00	Misc	0	0	0.00			
Sub Total ==>	21,158	0	21,158	34	17,558	46	0	0.00	Sub Total ==>	0	0	0.00			
Ceiling Load	1,803	-1,803	0	0	1,658	4	-848	0.00	Ceiling Load	-848	0	0.00			
Ventilation Load	0	0	10,170	16	0	0	-9,046	16.61	Ventilation Load	0	-9,046	16.61			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0			
Dehumid. Ov Sizing			0	0			-34,540	63.41	Ov/Undr Sizing	-34,540	-34,540	63.41			
Ov/Undr Sizing	0		0	0	0	0	490	-0.90	Exhaust Heat		490	-0.90			
Exhaust Heat		-1,045	-1,045	-2			0	0.00	OA Preheat Diff.		0	0.00			
Sup. Fan Heat			560	1			0	0.00	RA Preheat Diff.		0	0.00			
Ret. Fan Heat			0	0			0	0.00	Additional Reheat		0	0.00			
Duct Heat Pkup			0	0					Underflr Sup Ht Pkup		0	0.00			
Underflr Sup Ht Pkup			0	0					Supply Air Leakage		0	0.00			
Supply Air Leakage			0	0					Grand Total ==>	-41,224	-54,472	100.00			
Grand Total ==>	40,171	11,891	62,793	100.00	37,778	100.00									

AIRFLOWS		
	Cooling	Heating
Diffuser	1,891	1,891
Terminal	1,891	1,891
Main Fan	1,891	1,891
Sec Fan	0	0
Nom Vent	198	198
AHU Vent	198	198
Infil	0	0
MinStop/Rh	0	0
Return	1,891	1,891
Exhaust	198	198
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	10.4	10.4
cfm/ft²	1.61	1.61
cfm/ton	361.35	
ft²/ton	224.74	
Btu/hr-ft²	53.40	0.00
No. People	18	

COOLING COIL SELECTION										
	Total Capacity	Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR			
	ton	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb	
Main Clg	5.2	62.8	53.7	1,891	82.1	64.7	65.6	56.5	53.6	57.9
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5.2	62.8								

AREAS			
	Gross Total	Glass	
		ft²	(%)
Floor	1,176		
Part	390		
Int Door	1		
ExFlr	0		
Roof	1,175	0	0
Wall	1,880	172	9
Ext Door	6	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
	MBh	cfm	°F	°F
Main Htg	0.0	1,891	90.0	90.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	0.0			

System Checksums

By Hollingsworth Pack

HP-02

Incremental Heat Pump

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK			TEMPERATURES					
Peaked at Time:		Mo/Hr: 7 / 18			Mo/Hr: Sum of			Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 98 / 74 / 89			OADB: Peaks			OADB: 28			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak Tot Sens	Percent Of Total (%)	Return <th>Ret/OA <th>Fn MtrTD <th>Fn BldTD <th>Fn Frict </th></th></th></th>	Ret/OA <th>Fn MtrTD <th>Fn BldTD <th>Fn Frict </th></th></th>	Fn MtrTD <th>Fn BldTD <th>Fn Frict </th></th>	Fn BldTD <th>Fn Frict </th>	Fn Frict			
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		81.1	82.4	0.0	0.1	0.2			
Envelope Loads					Envelope Loads			Envelope Loads			AIRFLOWS					
Skylite Solar	0	0	0	0	0	0	0	0.00	Skylite Solar	0	0	0.00	Diffuser		1,111	1,111
Skylite Cond	0	0	0	0	0	0	0	0.00	Skylite Cond	0	0	0.00	Terminal		1,111	1,111
Roof Cond	0	2,948	2,948	8	0	0	0	4.76	Roof Cond	0	-1,492	4.76	Main Fan		1,111	1,111
Glass Solar	5,066	0	5,066	14	5,066	22	0	0.00	Glass Solar	0	0	0.00	Sec Fan		0	0
Glass/Door Cond	866	0	866	2	866	4	-1,605	5.11	Glass/Door Cond	-1,605	-1,605	5.11	Nom Vent		88	88
Wall Cond	4,323	8,168	12,490	33	4,323	19	-1,478	13.44	Wall Cond	-1,478	-4,216	13.44	AHU Vent		88	88
Partition/Door	1,539	0	1,539	4	1,623	7	-2,115	6.74	Partition/Door	-2,115	-2,115	6.74	Infil		0	0
Floor	0	0	0	0	0.00	0	0	0.00	Floor	0	0	0.00	MinStop/Rh		0	0
Adjacent Floor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Adjacent Floor	0.00	0.00	0.00	Return		1,111	1,111
Infiltration	0	0	0	0	0	0	0	0.00	Infiltration	0	0	0.00	Exhaust		88	88
Sub Total ==>	11,793	11,116	22,909	61	11,877	52	-5,198	30.05	Sub Total ==>	-9,428	-9,428	30.05	Rm Exh		0	0
Internal Loads					Internal Loads			Internal Loads			ENGINEERING CKS					
Lights	3,270	0	3,270	9	3,270	14	0	0.00	Lights	0	0	0.00	% OA		8.0	8.0
People	4,100	0	4,100	11	2,460	11	0	0.00	People	0	0	0.00	cfm/ft²		1.16	1.16
Misc	3,072	0	3,072	8	3,072	14	0	0.00	Misc	0	0	0.00	cfm/ton		356.87	
Sub Total ==>	10,441	0	10,441	28	8,801	39	0	0.00	Sub Total ==>	0	0	0.00	ft²/ton		307.85	
Ceiling Load	1,808	-1,808	0	0	2,039	9	-848	0.00	Ceiling Load	-848	0	0.00	Btu/hr-ft²		38.98	-32.75
Ventilation Load	0	0	4,226	11	0	0	0	12.91	Ventilation Load	0	-4,050	12.91	No. People		10	
Adj Air Trans Heat	0	0	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0				
Dehumid. Ov Sizing	0	0	0	0	0	0	-18,166	57.90	Ov/Undr Sizing	-18,166	-18,166	57.90				
Ov/Undr Sizing	0	0	0	0	0	0	269	-0.86	Exhaust Heat	269	-0.86					
Exhaust Heat	0	-562	-562	-2	0	0	0	0.00	OA Preheat Diff.	0	0.00					
Sup. Fan Heat	0	0	329	1	0	0	0	0.00	RA Preheat Diff.	0	0.00					
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	Additional Reheat	0	0.00					
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	Underflr Sup Ht Pkup	0	0.00					
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	Supply Air Leakage	0	0.00					
Supply Air Leakage	0	0	0	0	0	0	0	0.00	Grand Total ==>	-24,212	-31,375	100.00				
Grand Total ==>	24,042	8,746	37,343	100.00	22,717	100.00	-24,212	100.00	Grand Total ==>	-24,212	-31,375	100.00				

COOLING COIL SELECTION										AREAS			HEATING COIL SELECTION				
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR			Gross Total	Glass	Capacity	Coil Airflow	Ent	Lvg	
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb							ft²
Main Clg	3.1	37.3	33.6	1,111	82.5	64.1	62.3	56.1	52.7	55.2	Floor	958	-31.4	1,111	64.1	90.0	
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part	1,003	0.0	0	0.0	0.0	
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Int Door	1	0.0	0	0.0	0.0	
											ExFlr	0	0.0	0	0.0	0.0	
Total	3.1	37.3									Roof	958	0.0	0	0.0	0.0	
											Wall	1,413	84	6	0.0	0.0	
											Ext Door	6	0	0	0.0	0.0	
											Total		-31.4				

System Checksums

By Hollingsworth Pack

HP-03

Incremental Heat Pump

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 7 / 18			Mo/Hr: Sum of			Mo/Hr: Heating Design						
Outside Air:		OADB/WB/HR: 98 / 74 / 89			OADB: Peaks			OADB: 28						
	Space	Plenum	Net	Percent	Space	Percent	Space	Coil Peak	Percent	Space	Coil Peak	Cooling	Heating	
	Sens. + Lat.	Sens. + Lat	Total	Of Total		Sensible		Of Total	Space Sens		Tot Sens			Of Total
	Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	Btu/h	(%)	Btu/h	Btu/h		
Envelope Loads														
Skylite Solar	0	0	0	0	0	0	0	0	0.00		0	0.00		
Skylite Cond	0	0	0	0	0	0	0	0	0.00		0	0.00		
Roof Cond	0	800	800	9	0	0	0	-376	4.74		0	0.00		
Glass Solar	644	0	644	7	644	11	0	0	0.00		0	0.00		
Glass/Door Cond	275	0	275	3	275	5	0	-465	5.86		-465	5.86		
Wall Cond	516	1,446	1,962	22	516	9	0	-176	8.41		-667	8.41		
Partition/Door	2,296	0	2,296	26	2,330	40	0	-3,048	38.45		-3,048	38.45		
Floor	0	0	0	0	0.00	0	0	0	0.00		0	0.00		
Adjacent Floor	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00		0.00	0.00		
Infiltration	0	0	0	0	0	0	0	0	0.00		0	0.00		
Sub Total ==>	3,731	2,246	5,977	67	3,765	65		-3,689	57.47		-4,555			
Internal Loads														
Lights	812	0	812	9	812	14	0	0	0.00		0	0.00		
People	450	0	450	5	250	4	0	0	0.00		0	0.00		
Misc	512	0	512	6	512	9	0	0	0.00		0	0.00		
Sub Total ==>	1,774	0	1,774	20	1,574	27		0	0.00		0			
Ceiling Load														
Ventilation Load	388	-388	0	0	425	7	0	-170	0.00		0	0.00		
Adj Air Trans Heat	0	0	1,187	13	0	0	0	0	13.92		-1,103	13.92		
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0.00		0	0.00		
Ov/Undr Sizing	0	0	0	0	0	0	0	-2,326	29.35		-2,326	29.35		
Exhaust Heat	0	-139	-139	-2	0	0	0	59	-0.75		0	0.00		
Sup. Fan Heat	0	0	84	1	0	0	0	0	0.00		0	0.00		
Ret. Fan Heat	0	0	0	0	0	0	0	0	0.00		0	0.00		
Duct Heat Pkup	0	0	0	0	0	0	0	0	0.00		0	0.00		
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0.00		0	0.00		
Supply Air Leakage	0	0	0	0	0	0	0	0	0.00		0	0.00		
Grand Total ==>	5,893	1,719	8,883	100.00	5,764	100.00		-6,184	79.25		-7,925			

TEMPERATURES		
	Cooling	Heating
SADB	56.4	90.0
Ra Plenum	80.2	67.8
Return	80.3	67.8
Ret/OA	81.8	64.4
Fn MtrTD	0.0	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.2	0.0

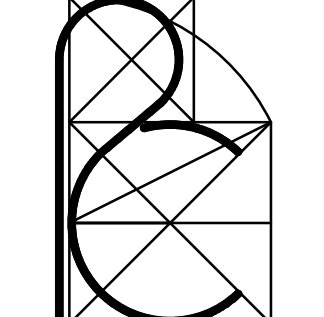
AIRFLOWS		
	Cooling	Heating
Diffuser	284	284
Terminal	284	284
Main Fan	284	284
Sec Fan	0	0
Nom Vent	24	24
AHU Vent	24	24
Infil	0	0
MinStop/Rh	0	0
Return	284	284
Exhaust	24	24
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	8.5	8.5
cfm/ft ²	1.19	1.19
cfm/ton	383.18	
ft ² /ton	321.51	
Btu/hr-ft ²	37.32	-33.30
No. People	1	

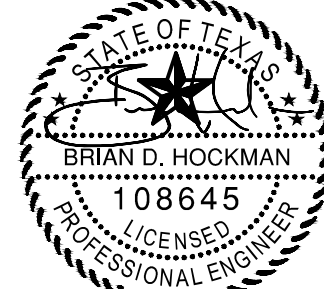
COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			MBh	cfm	°F	°F	gr/lb	°F
Main Clg	0.7	8.9	8.1	284	81.9	63.9	62.0	56.2	53.2	57.1
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	8.9								

AREAS			
	Gross Total	Glass	
		ft ²	(%)
Floor	238		
Part	1,445		
Int Door	1		
ExFlr	0		
Roof	238	0	0
Wall	221	12	5
Ext Door	30	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
Main Htg	-7.9	284	64.4	90.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-7.9			



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

GENERAL CONDITIONS	INSTALLATION	PRODUCT SPECIFICATIONS	
<p>CODE REQUIREMENTS</p> <p>1. THE PUBLICATIONS AND STANDARDS OF THE FOLLOWING AUTHORITIES, IN ADDITION TO THOSE SPECIFIED IN RELATED SUPPLEMENTARY CONDITIONS, SHALL BE OBSERVED DURING CONSTRUCTION AND ARE REFERENCED IN THE DOCUMENTATION BY THE ABBREVIATIONS NOTED:</p> <p>1.1. UNITED STATES OF AMERICA STANDARDS INSTITUTE - USASI 1.2. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS - IEEE 1.3. NATIONAL ELECTRICAL CODE - NEC 1.4. NATIONAL FIRE PROTECTION ASSOCIATION - NFPA 1.5. UNDERWRITERS LABORATORY - UL 1.6. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION - NEMA 1.7. CERTIFIED BALLAST MANUFACTURERS - CBM 1.8. AMERICAN SOCIETY FOR TESTING AND MATERIALS - ASTM 1.9. OCCUPATIONAL SAFETY AND HEALTH ACT - OSHA 2. U.N.O., EQUIPMENT AND DEVICES SHALL BE MOUNTED PER ADA AND T&E REQUIREMENTS. 2.1. OPERABLE DEVICES (SWITCHES, CARD READERS, ETC) AT OR BELOW 48" AFF 2.2. RECEPTACLES, TELEPHONE AND DATA OUTLETS AT 18" AFF (15" MIN TO BOTTOM OF DEVICE), UNO 3. THE CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS OF ALL APPLICABLE REQUIREMENTS OF LAWS, RULES, REGULATIONS, CODES AND ORDINANCES OF FEDERAL, STATE, AND LOCAL AUTHORITIES HAVING JURISDICTION AND ALL EQUIPMENT AND MATERIALS SHALL COMPLY WITH SAID AUTHORITIES WHETHER INDICATED ON THE CONTRACT DOCUMENTS OR NOT. ALL WORK SHALL BE PERFORMED PER AUSTIN ORDINANCE 20022831-105, 2023 NEC, AND CITY OF AUSTIN UTILITY DESIGN CRITERIA MANUAL OF 2021. MODIFICATIONS REQUIRED BY THE ABOVE SAID AUTHORITIES HAVING JURISDICTION SHALL BE MADE WITHOUT ADDITIONAL CHARGE TO THE OWNER.</p> <p>SCOPE OF WORK</p> <p>1. THE SCOPE OF WORK SHALL INCLUDE COMPLETE PROVISIONS FOR ELECTRICAL POWER DISTRIBUTION TO ALL LIGHTING, DEVICES, APPLIANCES, AND EQUIPMENT SHOWN ON THE CONSTRUCTION DOCUMENTS</p> <p>1.1. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO, ALL SUPPLIES, MATERIALS, EQUIPMENT, TOOLS AND LABOR. 1.2. PROVISIONS ALSO INCLUDE ALL MISCELLANEOUS MATERIALS REQUIRED TO COMPLETE THE WORK SHOWN INCLUDING, BUT NOT LIMITED TO, SUPPORTS, HANGERS, RACEWAYS, BOXES, SLEEVES, SEALS, EQUIPMENT PADS, WIRING CONNECTORS, TERMINALS, LABELS, SIGNS, AND MARKERS. 1.3. THE CONSTRUCTION DOCUMENTS INCLUDE ALL PLANS, ELEVATIONS, DETAILS, DIAGRAMS, SCHEDULES, AND NOTES ON THE DRAWINGS AND THE WRITTEN SPECIFICATIONS INCLUDING ANY ITEMS MENTIONED IN EITHER THE SPECIFICATIONS OR ON THE DRAWINGS BUT NOT IN THE OTHER. 1.4. WHERE USED ON THE PLANS AND IN THE SPECIFICATIONS AND WHERE NOT SPECIFICALLY NOTED OTHERWISE, THE TERM "PROVIDE" AND THE TERM "INSTALL" SHALL MEAN FURNISH, INSTALL, CONNECT AND TEST. 1.5. UNLESS EXPLICITLY NOTED "BY OTHERS" OR "EXISTING," ALL ITEMS SHOWN GRAPHICALLY OR SPECIFIED BY NOTES AND DETAILS ON THE PLANS SHALL BE PROVIDED, INSTALLED, CONNECTED, AND TESTED AS NOTED. 2. ADDITIONALLY, THE SCOPE OF WORK SHALL INCLUDE 2.1. APPLICATION FOR TEMPORARY AND PERMANENT ELECTRICAL SERVICE, PERMITTING, AND INSPECTION. 2.2. TESTING AND COMMISSIONING. 2.3. EQUIPMENT RENTAL. 2.4. TEMPORARY CONSTRUCTION POWER AND LIGHTING. 2.5. PROVISIONS FOR MAINTAINING THE FUNCTIONALITY OF EXISTING TO REMAIN BUILDING COMMUNICATIONS, FIRE ALARM, SECURITY/ACCESS CONTROL, PUBLIC ADDRESS, AND BELL SYSTEMS THAT WILL BE AFFECTED BY THE WORK.</p> <p>SUBMITTALS</p> <p>1. PRODUCT DATA: SUBMIT CATALOG DATA SHOWING MANUFACTURER'S NAME AND CONTACT INFORMATION, ALL STANDARD FEATURES, AMPERAGE, VOLTAGE, AIC RATINGS, DIMENSIONS, WEIGHTS, LISTINGS & PRODUCT LABELS, MATERIAL TYPES, FINISHES AND CLEARLY INDICATING WHICH OPTIONAL FEATURES WILL BE PROVIDED. 1.1. WHERE MULTIPLE SIZES ARE LISTED, INDICATE SIZES TO BE USED. 1.2. WHERE MULTIPLE PRODUCTS ARE SHOWN ON THE SAME PAGE, INDICATE WHICH PRODUCTS TO BE USED. 2. SHOP DRAWINGS (WHERE APPLICABLE), MANUFACTURER OR CONTRACTOR PREPARED DRAWINGS SHOWING ALL RELEVANT DIMENSIONS, WEIGHTS, ELECTRICAL & MECHANICAL CONNECTION REQUIREMENTS, CONDUIT ENTRY POINTS, ASSEMBLY REQUIREMENTS, LIFTING CLEARANCES, LIFTING POINTS, INCLUDING PLAN VIEWS & ELEVATIONS. 2.1. INCLUDE ALL RELEVANT ELECTRICAL DIAGRAMS INCLUDING SCHEMATIC AND INTERCONNECTION DIAGRAMS FOR POWER, SIGNAL, AND CONTROL WIRING.</p> <p>COORDINATION</p> <p>1. ALL POWER OUTAGES SHALL BE COORDINATED IN WRITING WITH OWNER ONE (1) WEEK (MIN) PRIOR TO THE OUTAGE. 2. COOPERATE FULLY WITH THE OWNER OR HIS REPRESENTATIVE DURING CONSTRUCTION OPERATIONS TO MINIMIZE CONFLICTS AND TO FACILITATE OWNER USAGE SO AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS. 3. THE DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW SWITCHES, POWER AND DATA OUTLETS, SPECIAL SYSTEMS COMPONENTS (E.G. ACCESS CONTROL, AV, ETC), ELECTRICAL EQUIPMENT, EQUIPMENT CONNECTIONS, REQUIRED RACEWAY, ETC. IN THEIR EXACT DIMENSIONED LOCATIONS. THE CONTRACTOR MUST CAREFULLY REVIEW THE ARCHITECTURAL, STRUCTURAL MECHANICAL, PLUMBING, FIRE PROTECTION, AND SPECIAL SYSTEMS PLANS TO IDENTIFY CONFLICTS AND AREAS THAT REQUIRE COORDINATION. 4. COORDINATE ELECTRICAL AND SPECIAL SYSTEMS EQUIPMENT ROUGH-IN WITH FURNITURE, MILLWORK, SIGNS, MECHANICAL AND PLUMBING SYSTEMS, SPRINKLER SYSTEMS, ARCHITECTURAL AND STRUCTURAL ELEMENTS, AND THE OWNER'S REPRESENTATIVE. MINOR CHANGES IN ELECTRICAL EQUIPMENT LOCATIONS AND LAYOUT THAT ARE REQUIRED BY SITE CONDITIONS OR BY THE DESIGN TEAM PRIOR TO PERFORMANCE OF WORK SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGES TO THE OWNER. 5. MAINTAIN REQUIRED NEC WORKING SPACE AND DEDICATED EQUIPMENT SPACE AROUND ALL ELECTRICAL EQUIPMENT, CONTROLS PANELS, ETC THAT ARE SUBJECT TO MAINTENANCE, TESTING, OR USER INTERFACE. COORDINATE WITH OTHER TRADES. IF CLEARANCE CANNOT BE PROVIDED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO ROUGH-IN. 6. COORDINATE COLOR SELECTIONS FOR LUMINAIRES AND ALL DEVICE PLATES WITH ARCHITECT.</p> <p>QUALIFICATIONS</p> <p>1. MANUFACTURER: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SHOWN ON THE CONSTRUCTION DOCUMENTS WITH A MINIMUM THREE YEARS DOCUMENTED EXPERIENCE 2. INSTALLER: A STATE LICENSED ELECTRICIAN WITH DOCUMENTED EXPERIENCE INSTALLING ALL EQUIPMENT SPECIFIED HEREIN SHALL DIRECTLY SUPERVISE ALL WORK. WHERE NOTED IN THE SPECIFICATIONS, REQUIRED BY CODE, OR REQUIRED BY THE MANUFACTURER, INSTALLER SHALL BE A MANUFACTURER TRAINED AND/OR CERTIFIED INSTALLER OF THE SPECIFIC PRODUCT TO BE INSTALLED. 3. WHERE TESTING IS REQUIRED BY THE CONSTRUCTION DOCUMENTS, EQUIPMENT MANUFACTURER, OR CODE, TESTING SHALL BE PERFORMED BY AN AGENCY WITH DOCUMENTED EXPERIENCE AND PROPERLY CALIBRATED, FULLY FUNCTIONING EQUIPMENT. THAT IS A MEMBER OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION OR IS A NATIONALLY RECOGNIZED TESTING LABORATORY (NTEP), AND IS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.</p> <p>QUALITY ASSURANCE</p> <p>1. UNLESS OTHERWISE APPROVED, ALL EQUIPMENT SHALL BE NEW, PROPERLY DESIGNED, FROM A REPUTABLE MANUFACTURER MEETING THE SPECIFICATION QUALIFICATIONS, IN COMPLIANCE WITH THE SPECIFICATION REQUIREMENTS, AND IN FULL WORKING ORDER. 2. WHERE TWO OR MORE ITEMS OF THE SAME CLASS OF EQUIPMENT ARE REQUIRED, THESE ITEMS SHALL BE PRODUCTS OF A SINGLE MANUFACTURER; HOWEVER, THE COMPONENT PARTS OF THE ITEM NEED NOT BE THE PRODUCTS OF THE SAME MANUFACTURER UNLESS STATED IN THE TECHNICAL SECTION. 3. LISTING AND LABELING: WHERE REQUIRED, ALL ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND MARKED FOR THE INTENDED USE. TESTING AGENCY SHALL BE UL UNLESS NOTED OTHERWISE OR PRE-APPROVED BY OWNER AND AHJ. 4. ALL EQUIPMENT USED FOR TESTING SHALL BE IN FULL WORKING ORDER AND CALIBRATED PER THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>DELIVERY AND STORAGE</p> <p>1. STORE ALL ELECTRICAL/SPECIAL SYSTEMS EQUIPMENT MATERIALS IN A CLEAN, DRY SPACE LOCATED ABOVE GRADE. PROTECT FROM DIRT, WATER, CONSTRUCTION DEBRIS, TRAFFIC, FREEZE, AND DETERIORATION FROM SUN LIGHT. 2. MAINTAIN FACTORY WRAPPING OR PROVIDE APPROPRIATE COVER FOR ALL LARGE ELECTRICAL EQUIPMENT. FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR HUMIDITY AND MAXIMUM TEMPERATURES FOR STORING ELECTRICAL EQUIPMENT.</p> <p>IDENTIFICATION</p> <p>1. PROVIDE APPROPRIATE LABELS AND WARNING SIGNS FOR ALL EQUIPMENT, WIRING DEVICES, CONDUCTORS, CABLES, BOX, AND ENCLOSURES. PROVIDE BURIED DETECTABLE WARNING TABLE FOR UNDERGROUND CONDUITS. 2. CONDUIT OR TAGGING TAG ALL CONDUCTORS AT MOTOR CONTROLS, PANELS, TERMINAL CABINETS AND JUNCTION BOXES. TAG CIRCUITS WHOSE PATH THROUGH OTHER TRADES SUCH AS LIGHTING CONTACTORS. 3. PROVIDE A TYPED PANEL DIRECTORY FOR EACH PANEL PROVIDED OR MODIFIED FOR THIS PROJECT. DIRECTORY SHALL IDENTIFY THE CIRCUIT NUMBER, LOADS SERVED, AND LOCATION OF LOADS BY ROOM NUMBER. MOUNT ON INSIDE OF EACH PANEL AND FILE THEM WITH THE OWNER WHEN THE WORK IS COMPLETED. 4. PROVIDE EACH PANEL WITH A MANUFACTURER PREPARED ARC FLASH HAZARD WARNING LABEL. 5. ALL ELECTRICAL EQUIPMENT SHALL BE IDENTIFIED BY MEANS OF 2"X1" (MINIMUM) LABELS PERMANENTLY ATTACHED TO THE EQUIPMENT. PLATES SHALL BE METAL, PLASTIC, OR SIMILAR, BLACK WITH 1/4" (MIN) ENGRAVED WHITE LETTERS. 6. JUNCTION AND PULL BOXES SHALL BE LABELED WITH PANEL NAME, CIRCUIT #, AND VOLTAGE. 7. RECEPTACLES SHALL BE LABELED WITH THE PANEL NAME AND CIRCUIT #. USE WHITE LABELS WITH BLACK TEXT. 8. FIRE ALARM, EMERGENCY/CRITICAL PWR, LIFE SAFETY LABELS, INCLUDING RECEPTACLES, SHALL BE COLOR CODED & ENGRAVED.</p>	<p>GENERAL REQUIREMENTS</p> <p>1. THE CONTRACTOR SHALL PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. THE CONCRETE PAD PROTRUDE 3" PAST THE EDGE OF THE ELECTRICAL EQUIPMENT ON ALL SIDES. THE CONCRETE PAD SHALL BE 6" TALL AND CONTAIN A 1/2" CHAMFER ON ALL SIDES. PROVIDE A MINIMUM OF 3000 PSI CONCRETE AND #4 REBAR. 2. ALL TERMINALS, LUGS AND BUS JUNCTIONS SHALL BE TIGHTENED PER THE MANUFACTURER'S TORQUE RECOMMENDATIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A LETTER TO THE ELECTRICAL INSPECTOR STATING WHEN IT WAS COMPLETED. 3. NO FOREIGN SYSTEMS SUCH AS PIPING, DUCT WORK, ETC SHALL BE INSTALLED ABOVE ELECTRICAL EQUIPMENT. 4. PROVIDE SLEEVES FOR PENETRATIONS THROUGH WALLS/FLOORS. SEAL ALL OPENINGS. USE FIRE-RATED SEALANT FOR OPENINGS IN RATED WALLS. 5. PERFORM GROUND PENETRATING RADAR SCAN BEFORE CUTTING EXISTING STRUCTURES. COORDINATE LOCATIONS WITH STRUCTURAL ENGINEER/ARCHITECT.</p> <p>CONDUCTORS AND CABLES</p> <p>1. ALL BUILDING WIRING SHALL BE INSULATED COPPER CONDUCTORS RUN FROM LOAD TO SOURCE INSIDE RACEWAY, CONTINUOUS (WITHOUT SPLICES) BETWEEN JUNCTION AND PULL BOXES, AND EXPOSED INSIDE PANELS ONLY. 2. ALL SINGLE POLE CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR ROUTED TO THE SOURCE PANEL. 3. FIELD VERIFY WHETHER A NEUTRAL IS REQUIRED FOR ALL TWO AND THREE POLE CIRCUITS. FOR ALL LOADS EXCEPT MOTORS, A NEUTRAL IS ASSUMED TO BE REQUIRED UNLESS FIELD DETERMINED TO BE UNNECESSARY. 4. ALL POWER & CONTROL WIRING ROUTED THROUGH RETURN AIR FLENUMS SHALL BE PLENUM RATED. 5. UP TO 3-20A CIRCUITS MAY SHARE A RACEWAY FOR HOMERUNS WHERE SUITABLE & PER NEC CONDUIT FILL RULES. 6. 120V, 20A HOME RUNS LONGER THAN 100' AND 277V, 20A HOME RUNS LONGER THAN 150' SHALL BE #10 MIN.</p> <p>GROUNDING AND BONDING</p> <p>1. ALL RACEWAYS AND CIRCUITS SHALL BE PROVIDED WITH A NEC 250 COMPLIANT GREEN GROUND CONDUCTOR. 2. ALL EQUIPMENT SHALL BE PROPERLY BONDED. 3. UPON COMPLETION OF THE WORK, ALL PARTS OF THE ELECTRICAL INSTALLATION SHALL BE MEGGER TESTED AND PROVED TO BE FREE OF UNWANTED GROUNDS AND OTHER DEFECTS. 4. AT A MINIMUM, A GROUNDING ELECTRODE CONDUCTOR, SIZED PER NEC ARTICLE 250, SHALL BE CONNECTED FROM THE GROUND BUS OF THE SERVICE ENTRANCE DISCONNECT TO A 3/4"x10" COPPER CLAD STEEL GROUND ROD, TO THE BUILDING METAL COLD WATER AND GAS PIPING AT THE POINT OF ENTRANCE INTO THE BUILDING, STRUCTURAL STEEL, AND 20' OF BARE COPPER EMBEDDED IN THE SLAB. ADDITIONAL REQUIREMENTS MAY BE SPECIFIED ON THE PLANS OR IN THE SPECIFICATIONS. 5. ROUTING OF GROUNDING ELECTRODE CONDUCTORS SHALL BE IN METAL CONDUIT IN ALL LOCATIONS THAT ARE SUBJECT TO PHYSICAL ABUSE OR ENVIRONMENTAL DETERIORATION SUCH AS EXTERIOR MOUNTED, EXPOSED BELOW LAY IN CEILING, ETC. 6. PROVIDE A #4 GROUND FROM THE SERVICE ENTRANCE GROUND BUS TO ALL TELEPHONE SERVICE BOARDS AND COMMUNICATIONS EQUIPMENT ROOMS AND TERMINATE AT A GROUND BUS.</p> <p>HANGERS AND SUPPORTS</p> <p>1. SUPPORT RACEWAYS USING GALVANIZED STEEL OR MALLEABLE IRON STRAPS; CHANNEL OR PIPE CLAMPS AS APPROPRIATE. 2. PROVIDE SUPPORTS AT ALL BOXES, ELEC. EQUIP., LOADS, & AT CODE REQUIRED INTERVALS ALONG RACEWAYS. 3. GROUP RELATED RACEWAYS AND SUPPORT USING STEEL CHANNEL CONDUIT RACKS WITH 25% SPARE CAPACITY. 4. SUPPORT LIG. ELEC. EQUIP., RACEWAYS/BOXES, ETC. INDEPENDENTLY. DO NOT USE CEILING SUPPORT WIRES, PIPING SYSTEMS, ETC.</p> <p>RACEWAY AND BOXES</p> <p>1. PROVIDE COMPLETE RACEWAY SYSTEMS FROM SOURCE TO ALL LOADS WITH DEDICATED SUPPORTS FOR EACH RACEWAY ELEMENT. 2. PROVIDE ALL REQUIRED BOXES & SUPPORTS FOR WIRING DEVICES, TELECOMMUNICATIONS, FIRE ALARM, ACCESS CONTROL, CONTROLS EQUIPMENT, ALARMS, SENSORS, ETC. 3. PROVIDE PULL BOXES AT APPROPRIATE LOCATIONS FOR ALL POWER AND SPECIAL SYSTEMS RACEWAYS WHETHER SHOWN ON PLANS OR NOT. INSTALL ALL PULL BOXES IN CONCRETE. 4. DO NOT INSTALL RACEWAY WITH MORE THAN THE EQUIVALENT OF THREE NINETY DEGREE BENDS BETWEEN PULL POINTS. 5. THE CONDUIT ROUTING SHOWN ON THESE PLANS IS DIAGRAMMATIC. 6. COORDINATE INTERIOR ROUTING WITH OTHER TRADES; STRUCTURE; NEW AND EXISTING UTILITIES, DUCTWORK, PIPING, AND OTHER EXISTING CONDITIONS AS REQUIRED FOR A COMPLETE, CONFLICT FREE INSTALLATION. 7. COORDINATE SITE ROUTING WITH OTHER TRADES; STRUCTURE; NEW AND EXISTING BURIED UTILITIES, PAVED AREAS, CONDUIT SLEEVES, AND LANDSCAPING BEFORE DIGGING TO AVOID CONFLICTS, DAMAGE, AND TO ALLOW FOR FUTURE INSTALLATIONS. 8. ROUTE RACEWAYS PARALLEL AND PERPENDICULAR TO WALLS, FLOORS, AND CEILINGS. 9. ROUTE EXPOSED CONDUIT PARALLEL AND TIGHT TO STRUCTURAL ELEMENTS. FOLLOW ALL SURFACE CONTOURS; DO NOT ROUTE IN FREE AIR FROM POINT TO POINT. 10. INSTALL RACEWAYS SO THAT IT DRAINS TO JUNCTION AND PULL BOXES TO AVOID MOISTURE TRAPS AT LOW POINTS; INSTALL JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM. 11. INSTALL FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE RACEWAY CROSSES SEISMIC CONTROL, AND EXPANSION JOINTS. 12. INSTALL SUITABLE PULL STRING OR CORD IN EACH EMPTY RACEWAY, LABEL, AND CAP. 13. CLOSE ENDS AND UNUSED OPENINGS IN SURFACE RACEWAYS, WIREWAY, BOXES, AND ENCLOSURES. 14. WHERE POSSIBLE ALL CONDUIT ROUTED THROUGH ROOF STRUCTURE SHALL SHARE COMMON PENETRATIONS AS MECHANICAL DUCTWORK OR PIPING. COORDINATE WITH MECHANICAL CONTRACTOR. 15. ALL ROOF AND WALL PENETRATIONS SHALL BE FLASHED AND SEALED TO MAINTAIN THE FIRE RATING AND WATERPROOFING OF THE STRUCTURE PER THE MANUFACTURER OF THE MATERIAL'S RECOMMENDED PRACTICES. 16. USE MULTI-GANG BOXES IN ALL POSSIBLE LOCATIONS. 17. PAINT EXPOSED RACEWAYS AND BOXES TO MATCH THE SURFACE TO WHICH THEY ARE ATTACHED. 18. ALL CONDUIT SHALL HAVE AN NEC COMPLIANT GROUND AND AN INSULATED THROAT BUSHING IN PLACE FOR PULLING CONDUCTORS. 19. ALL CONNECTIONS TO MOTORS, INSTRUMENTS, MACHINES, AND EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION SHALL BE MADE USING LIQUID-TIGHT, FLEXIBLE METAL CONDUIT (LFMT), (3FT MAX).</p> <p>WIRING DEVICES</p> <p>1. PROVIDE A SECOND "ISOLATED" CODE SIZE GROUND IN CIRCUIT THAT IS DEDICATED TO DEVICES IDENTIFIED AS "IG". 2. DUPLEX RECEPTACLES MOUNTED ON OPPOSITE SIDES OF A COMMON WALLS SHALL BE A MINIMUM OF 12" APART. (NO BACK TO BACK OUTLETS) TO REDUCE NOISE TRANSFER. JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED IN THE SAME WALL CAVITY. SEPARATE ALL JUNCTION BOXES BY AT LEAST ONE FRAMING MEMBER. 3. PROVIDE GFI RECEPTACLES & DIMMERS WITH DEDICATED NEUTRALS INDEPENDENT OF OTHER LOADS ON THE CIRCUIT.</p> <p>ENCLOSED SWITCHES AND CONTACTORS</p> <p>1. TO FACILITATE SAFE REPAIR AND REPLACEMENT OF EQUIPMENT, PROVIDE ALL STARTERS AND DISCONNECTS WITH LOTO PROVISIONS. 2. MOUNT STARTERS AND DISCONNECTS SERVING HVAC EQUIPMENT TO STRUCTURE ADJACENT TO EQUIPMENT SERVED RATHER THAN MOUNTING DIRECTLY TO THE EQUIPMENT. THIS INCLUDES U-CHANNEL SUPPORT AND 120V MAINTENANCE RECEPTACLE FOR ROOF MOUNTED EQUIPMENT. PROVIDE WORKING SPACE PER NEC REQUIREMENTS.</p> <p>LIGHTING</p> <p>1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LIGHT FIXTURE LOCATIONS AND QUANTITIES. 2. EXAMINE THE AREA OF INSTALLATION TO VERIFY ADEQUATE SPACE AND MOUNTING PROVISIONS ARE PROVIDED FOR THE SPECIFIED LUMINAIRE PRIOR TO ORDERING LUMINAIRE. 3. VERIFY THAT LUMINAIRE WILL NOT INTERFERE WITH REQUIRED CLEARANCES FOR EQUIPMENT INCLUDING FILTER PULL SPACE, NEC WORKING SPACE IN FRONT OF DISCONNECTS, CONTROL PANELS, ETC. 4. COORDINATE EXIST LIGHT LOCATIONS WITH STRUCTURE AND BUILDING SYSTEMS TO INSURE EXIST SIGNS ARE VISIBLE. 5. PROVIDE GROUND WIRE AND ONE NEUTRAL CONDUCTOR PER CIRCUIT IN ALL LIGHTING CONDUIT. 6. LABEL ALL CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING. 7. UNO, ALL EXIT SIGNS, EMERGENCY EGRESS PATHWAY LIGHT FIXTURES, LIGHTS NOTED "X", AND LIGHTS SHOWN CROSS HATCHED SHALL BE CONNECTED TO THE SWITCHED AREA LIGHTING CIRCUIT FOR NORMAL OPERATION AND AN UNSWITCHED CIRCUIT FROM THE SAME OCPD TO AUTOMATICALLY CONTROL POWER TRANSFER TO AN INTEGRAL BATTERY PACK FOR 90 MINUTES OF EMERGENCY OPERATION WHEN LOSS OF NORMAL POWER IS SENSED ON THE UNSWITCHED CIRCUIT. PROVIDE A BATTERY STATUS INDICATOR MOUNTED IN A VISIBLE LOCATION. 8. INSTALL FIXTURES PLUMB, SQUARE AND LEVEL WITH CEILINGS AND WALLS AND SECURE FIXTURES PER MANUFACTURER'S PRINTED INSTRUCTIONS. 9. ADJUST AIMABLE FIXTURES, CLEAN, AND PROVIDED ALL FIXTURES WITH LAMPS PRIOR TO OWNER OCCUPANCY. 10. UNO, LIGHTING SWITCHES IN ROOMS SHALL CONTROL ONLY FIXTURES IN THAT ROOM. 11. WHEN MORE THAN ONE(1) LIGHTING SWITCH IS SHOWN AT A LOCATION THEY SHALL BE GANGED TOGETHER. 12. LUMINAIRE WHIPS SHALL BE FLEXIBLE METAL CONDUIT, 6FT MAX. SECURE TO STRUCTURE WITH LISTED SUPPORTS.</p> <p>LIGHTING CONTROL REQUIREMENTS</p> <p>1. OCCUPANCY SENSOR OFF DELAY SHALL BE SET BY EC AT END OF PROJECT TO 15 MINUTES. AMBIENT LIGHT OVERRIDE SHALL BE SET SUCH THAT THE LUMINAIRE'S ARE SWITCHED OFF WHEN APPROPRIATE FC LEVEL IS MEASURED ON THE FLOOR (REGARDLESS OF THE FOOTCANDLES MEASURED AT THE OCCUPANCY SENSOR). 2. INSTALL DIMMER SWITCHES ON THE LOAD SIDE OF OCCUPANCY SENSORS AND OTHER CONTROLS. 3. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED AUTOMATICALLY. PROVIDE LIGHTING CONTACTOR TO CONTROL ALL EXTERIOR LIGHTING CIRCUITS BY A SINGLE PHOTOCELL AND/OR ASTRONOMICAL TIME CLOCK WITH HOLIDAY PROGRAMMING. PHOTOCELL SHOULD BE ROOF MOUNTED. COORDINATE MOUNTING LOCATION WITH ARCHITECT. 4. ALL LUMINAIRE'S IN ROOMS WITH BI OR DUAL LEVEL SWITCHING SHALL BE PROVIDED WITH MULTIPLE OR MULTILEVEL BALLASTS AND WIRED TO ALLOW FOR EVENLY REDUCED ILLUMINATION THROUGHOUT THE SPACE. UNO, SWITCH "a" SHALL CONTROL THE OUTER LAMPS IN THE FIXTURES; SWITCH "b" SHALL CONTROL THE INNER LAMPS IN THE FIXTURES.</p>	<p>GENERAL REQUIREMENTS</p> <p>1. COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PROVIDING EQUIPMENT THAT IS NEW, PROPERLY DESIGNED, FROM A REPUTABLE MANUFACTURER, AND IN FULL WORKING ORDER. 2. IF CONFLICTS BETWEEN THE SPECIFICATIONS AND DRAWINGS OCCUR, THE HIGHER QUALITY OR QUANTITY SHALL BE PROVIDED AND INSTALLED. WHEN CONFLICTS EXIST, CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR CLARIFICATION FROM THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL EXPENSES INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBTAIN CLARIFICATION. 3. ALL ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE 16 GAUGE SHEET METAL (MIN). PROVIDED WITH MANUFACTURER'S CORROSION RESISTANT PAINT SYSTEM. PROVIDED WITH CONTINUOUSLY HINGED, LATCHING DOORS (UNO). 4. EQUIPMENT TO BE INSTALLED OUTDOORS SHALL HAVE NEMA 3R ENCLOSURES MIN. EQUIPMENT IN CORROSIVE OR HAZARDOUS ENVIRONMENTS SHALL BE RATED FOR THE INTENDED USE.</p> <p>CONDUCTORS AND CABLES</p> <p>1. THHN/THWN SOFT DRAWN, STRANDED COPPER, XHHW FOR UG, USE SOLID COPPER FOR #10 & SMALLER, MIN SIZE #12</p> <p>RACEWAY AND BOXES</p> <p>1. RACEWAY AND BOX SPECIFICATIONS ARE BY LOCATION.</p> <p>TRANSFORMERS</p> <p>1. ALL DRY-TYPE DISTRIBUTION TRANSFORMERS 15KVA AND LARGER SHALL CONFORM TO NEMA TP-1-2002 STANDARDS AND BE ENERGY STAR RATED.</p> <p>PANELBOARDS</p> <p>1. PROVIDE ALL PANELS WITH COPPER PHASE, NEUTRAL, GROUND BUSES. 42 PROVISIONS BREAKER MOUNTING SPACES (MIN). 2. ALL BRANCH CIRCUIT BREAKERS SHALL BE BOLT ON TYPE THERMAL MAGNETIC WITH COMMON TRIP HANDLE FOR MULTIPLE POLES, HAGR RATED FOR MECHANICAL LOADS. 3. PROVIDE ADJUSTABLE TRIP SETTINGS FOR DISTRIBUTION BREAKERS. UNO, LI 800 TO 900A, LISI 1000A & ABOVE. 4. PROVIDE CONTINUOUSLY HINGED DOORS AND FRONT COVER, LATCH AND KEY LOCK, METAL IDENTIFY FRAME.</p> <p>WIRING DEVICES</p> <p>1. WIRING DEVICES SHALL BE COMMERCIAL GRADE (MIN), GROUNDING, AND RATED FOR LOAD (20A MIN). 2. SURFACE MOUNTED RACEWAY FOR RECEPTACLES AND DATA OUTLETS SHALL BE DUAL CHANNEL, METAL RACEWAYS, TWO PIECE DESIGN WITH METAL BASE AND SNAP-ON METAL COVER. ASSEMBLED BASE AND COVER SHALL BE A MINIMUM OF 4" WIDE BY 1.5" DEEP. PULSE BRACKETS AND COVER PLATES THAT WILL ACCEPT DUPLEX RECEPTACLES AND STANDARD DATA JACK MOUNTING PLATES WITHOUT FIELD CUTTING MUST BE AVAILABLE FROM THE RACEWAY MANUFACTURER.</p> <p>ENCLOSED SWITCHES AND CONTACTORS</p> <p>1. DISCONNECTS SHALL BE QUICK MAKE/BREAK LOAD INTERRUPTING KNIFE SWITCHES WITH EXTERNAL HANDLE LOCKABLE IN ON AND OFF POSITIONS, FULLY HINGED DOOR THAT IS LOCKED WHEN ENERGIZED AND PROVIDED WITH A DEFATER MECHANISM TO OPEN ENCLOSURE WHEN ENERGIZED. 2. ENCLOSED MOTOR STARTERS SHALL HAVE REMOTE START SIGNAL INPUT, FULL SIZE OVERLOADS, CONTROL XFMR WITH PRIMARY & SECONDARY FUSING, HAND-OFF-AUTO SELECTOR SWITCH. (2) NORMALLY OPEN AND (2) NORMALLY CLOSED AUX. DRY CONTACTS. COORDINATE VOLTAGE WITH CONTRACTOR PROVIDING EQUIPMENT TO BE CONTROLLED.</p> <p>LIGHTING</p> <p>1. ALL LIGHT FIXTURES/LAMPS SHALL BE UL LISTED AND CONFORM TO ALL APPLICABLE UL, ANSI AND NFPA STANDARDS. 2. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE, BALLAST, AND LAMP SPECIFICATIONS. SUBSTITUTIONS SHOULD BE APPROVED PRIOR TO BID.</p>	<p>LIGHTING</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. POLE SINGLE THROW ROCKER SWITCH: ALL LIGHTING CONTROLS SHALL BE 20A, 120/277V, UNO 2. POLE SINGLE THROW ROCKER SWITCH: FINISHED AREAS: COMMERCIAL GRADE W/WHITE NYLON COVER, UNO 3. POLE DOUBLE THROW 3-WAY ROCKER UNFINISHED AREAS: HEAVY DUTY, INDUSTRIAL GRADE TOGGLE SWITCH 4. POLE DOUBLE THROW 4-WAY ROCKER 5. SLIDE DIMMER, COMMERCIAL GRADE 6. DOOR FRAME SWITCH 7. SWITCH MOUNTED OCCUPANCY SENSOR 8. WALL/CEILING MOUNTED OCCUPANCY SENSOR 9. CEILING MOUNTED OCCUPANCY SENSOR 10. PHOTOCELL 11. TIMECLOCK 12. EMERGENCY LIGHTING FIXTURE CONTROLLED BY UNSWITCHED LEG OF AREA LIGHTING CIRCUIT 13. LED EXIT SIGN W/ARROWS AS REQUIRED 14. EXTERIOR SPOTLIGHT 15. POLE MOUNTED LIGHT FIXTURE 16. TRACK LIGHTING FIXTURE</p> <p>POWER</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. CIRCUIT WIRING 2. UNDERGROUND CIRCUIT WIRING 3. UNDERGROUND ELECTRICAL SERVICE 4. OVERHEAD ELECTRICAL SERVICE 5. ELECTRICAL MANHOLE 6. UTILITY POLE 7. NEUTRAL, HOT, GROUND CONDUCTORS HOMERUN TO PANELBOARD "A" CIRCUIT #1 8. EQUIPMENT CONNECTION POINT 9. 2 POLE, 3 WIRE, 125V SINGLE RECEPT. 10. 2 POLE, 3 WIRE, 125V DUPLEX RECEPT 11. USE DEVICE RECEPTACLE 12. ISOLATED, INSULATED GROUND 13. RECEPTACLE - DUPLEX, MOUNTING IN CEILING 14. GROUND FAULT INTERRUPTER 15. WEATHERPROOF/WATER RESISTANT 16. QUADRUPEX RECEPTACLE 17. FLOOR MOUNTED RECEPTACLE 18. SPECIAL PURPOSE RECEPTACLE 19. JUNCTION BOX 20. PANELBOARD 21. TRANSFORMER 22. MOLDED CASE CKT BREAKER 23. DRAWOUT CIRCUIT BREAKER, AIR TYPE 24. THERMAL OVERLOAD 25. FUSED DISCONNECT SWITCH 26. FUSE, HOLDER & PULLER 27. POTENTIAL TRANSFORMER 28. CURRENT TRANSFORMER 29. METER 30. MOTOR, "X" INDICATING HORSE POWER 31. MOTOR RATED TOGGLE SWITCH 32. MANUAL MOTOR STARTER 33. ENCLOSED CIRCUIT BREAKER 34. DISCONNECT SWITCH 35. COMBINATION STARTER & DISCONNECT 36. MAGNETIC STARTER - FVNR N.O. 37. MAGNETIC CONTACTOR 38. VARIABLE FREQUENCY DRIVE 39. GENERATION REMOTE ANNUNCIATOR 40. SURGE PROTECTION DEVICE (TVSS)</p> <p>COMMUNICATIONS</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. DATA OUTLET WALL & FLOOR MTD. 2. DATA/VOICE OUTLET WALL & FLOOR MTD. 3. VOICE OUTLET WALL & FLOOR MTD. 4. WIRELESS ACCESS POINT (ROUTER) 5. SPEAKER OUTLET CEILING & WALL MTD.</p> <p>FIRE ALARM</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. AUDIO/VISUAL FIRE ALARM 2. VISUAL STROBE FIRE ALARM 3. MANUAL PULL STATION 4. FIRE ALARM SPEAKER 5. AREA SMOKE DETECTOR 6. AREA HEAT DETECTOR 7. DUCT MOUNTED SMOKE DETECTOR 8. FIRE ALARM PANEL 9. FIRE ALARM EXTENSION PANEL 10. FIRE ALARM PANEL REMOTE ANNUNCIATOR 11. MONITOR MODULE 12. CONTROL MODULE 13. HOOD FIRE SUPPRESSION SYSTEM RELAY 14. SUPERVISORY SWITCH 15. TAMPER SWITCH 16. WATER FLOW SWITCH 17. MOTORIZED SMOKE FIRE DAMPER 18. FIREMAN'S PHONE JACK, WALL MOUNTED 19. AREA OF REFUGE BUZZ</p> <p>CONTROLS</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. FLOAT SWITCH 2. PUSH BUTTON 3. RELAY 4. THERMOSTAT 5. TIMER SWITCH</p> <p>ACCESS CONTROL/SECURITY</p> <p>SYMBOL DESCRIPTION SPECIFICATIONS</p> <p>1. CARD READER 2. CCTV CAMERA (FIXED UNO.) 3. DOOR CONTACT 4. ELECTRIC DOOR STRIKE 5. ELECTROMAGNETIC DOOR HOLDER 6. DOOR LOCK 7. ELECTROMAGNETIC DOOR LOCK 8. EXIT ALARM 9. GLASS BREAK DETECTOR 10. HOLD OPEN ALARM 11. MOTION DETECTOR 12. OVERHEAD DOOR CONTACT 13. TOUCH SENSE BAR (CRASH BAR)</p>

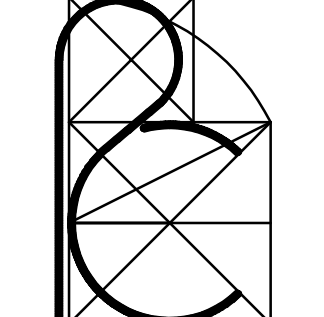
ABBREVIATIONS			
A	AMPERE	FACP	FIRE ALARM CONTROL PANEL
AC	ABOVE COUNTER	FL	FULL LOAD AMPS
ACF	ABOVE FINISHED FLOOR	FS	FLOW SWITCH
ACS	AMP INTERRUPTING CAPACITY	FSD	FIRE SMOKE DAMPER
AV	AUDIO VISUAL	GFI	GROUND FAULT INTERRUPTER
ATS	AUTOMATIC TRANSFER SWITCH	GND.	GROUND
BLDG.	BUILDING	HOA.	HAND-OFF-AUTO
C	CONDUIT	HP	HORSEPOWER
CKT.	CIRCUIT	HPS.	HIGH PRESSURE SODIUM
CM	CONTROL MODULE	HTR.	HEATER
COA.	CITY OF AUSTIN	J-BOX	JUNCTION BOX
CONN.	CONNECT OR CONNECTION	KCM	THOUSAND CIRCULAR MILLS
CT.	CURRENT TRANSFORMER	LOTO	LOCK OUT TAG OUT
DM.	DIMENSION	LIG.	LIGHT OR LIGHTING
EA.	EACH	MIN.	MINIMUM
EC	ELECTRICAL CONTRACTOR	MCC.	MOTOR CONTROL CENTER
EF.	EXHAUST FAN	MCP.	MOTOR CIRCUIT PROTECTOR
ELEC.	ELECTRICAL	MR.	MAIN CIRCUIT BREAKER
EMER.	EMERGENCY	MH.	METAL HALIDE
EPO.	EMERGENCY POWER OFF	MLO.	MAIN LUGS ONLY
EW.	ELECTRIC WATER COOLER	MRS.	MOTOR RATED SWITCH
MSB.	MAIN SWITCH BOARD	MNTD.	MOUNTED
MV.	MEDIUM VOLTAGE	MNTF.	MANUAL TRANSFER SWITCH
N.I.C.	NOT IN CONTRACT	N.S.	NOT TO SCALE
N.T.S.	NOT TO SCALE	OL.	OVERLOAD
OE.	OVERHEAD	OL.	OVERHEAD ELECTRIC
P.S.	PULL STRING	P.S.	PULL STRING
RECEPT.	RECEPTACLE	RGS.	RIGID GALVANIZED STEEL
SPD.	SURGE PROTECTION DEVICE	SPD.	SURGE PROTECTION DEVICE
TS.	TAMPER SWITCH	TS.	TAMPER SWITCH
TVSS.	TRANSIENT V. SURGE SUPPRESSER	TVSS.	TRANSIENT V. SURGE SUPPRESSER
UG.	UNDERGROUND	UNO.	UNLESS NOTED OTHERWISE
V.	VOLTAGE	V.	VOLTAGE
WH.	WATER HEATER	WH.	WATER HEATER
WP.	WEATHER PROOF	WP.	WEATHER PROOF
WR.	WEATHER RATED	WR.	WEATHER RATED
XFMR.	TRANSFORMER	XFMR.	TRANSFORMER

hollingsworth pack J
Design & Construction Consultants
3801 S. Congress Suite 110 - Austin, TX 78704
PH(512) 275-6000 TX FRM # 12747

06/06/2024

ELECTRICAL COVER SHEET

E0.01

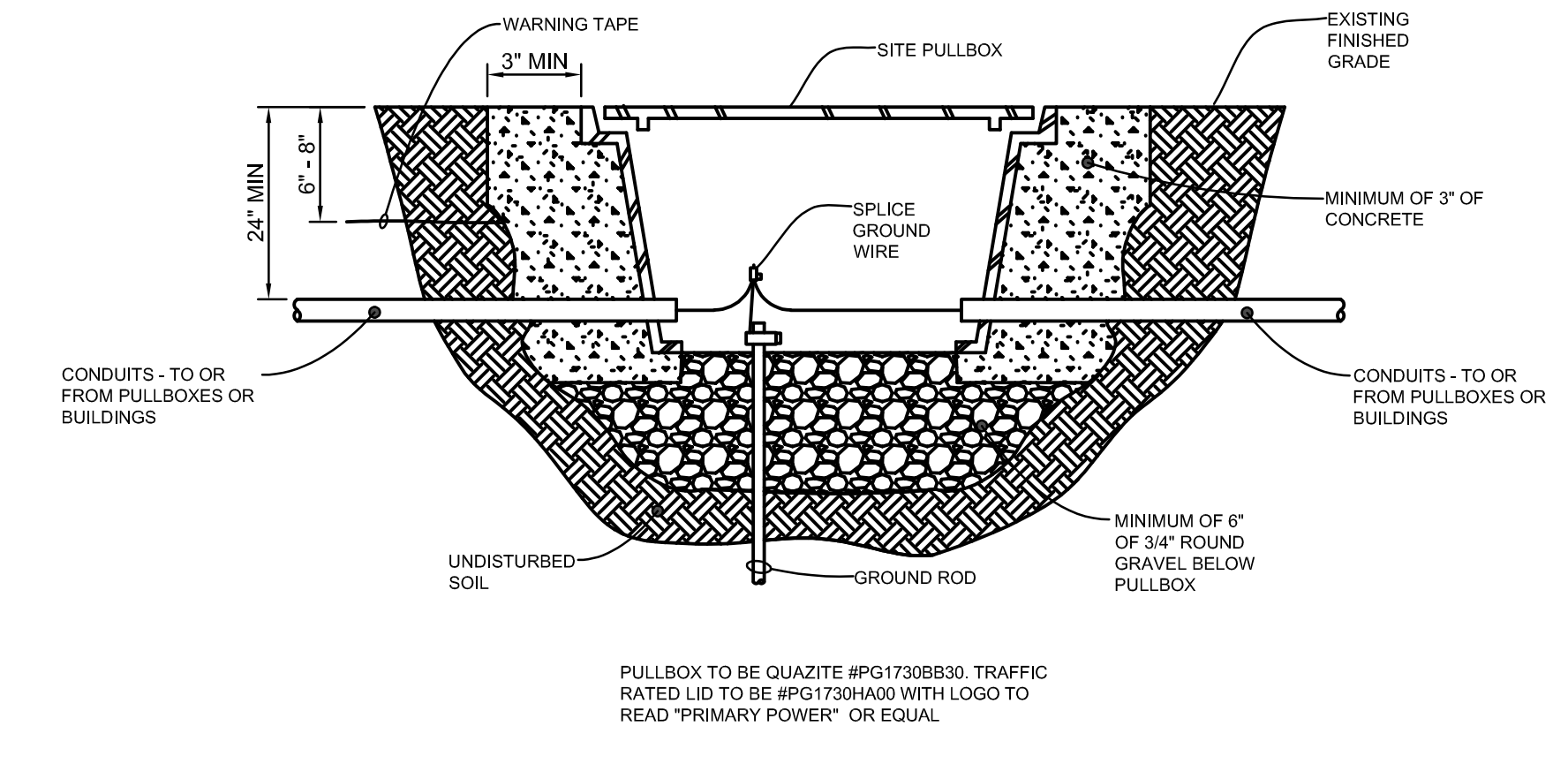


RC Architects, Inc.
14620 Echo Bluff
Austin, Texas 78737
(512) 913-0597
rickcamales.architects@gmail.com

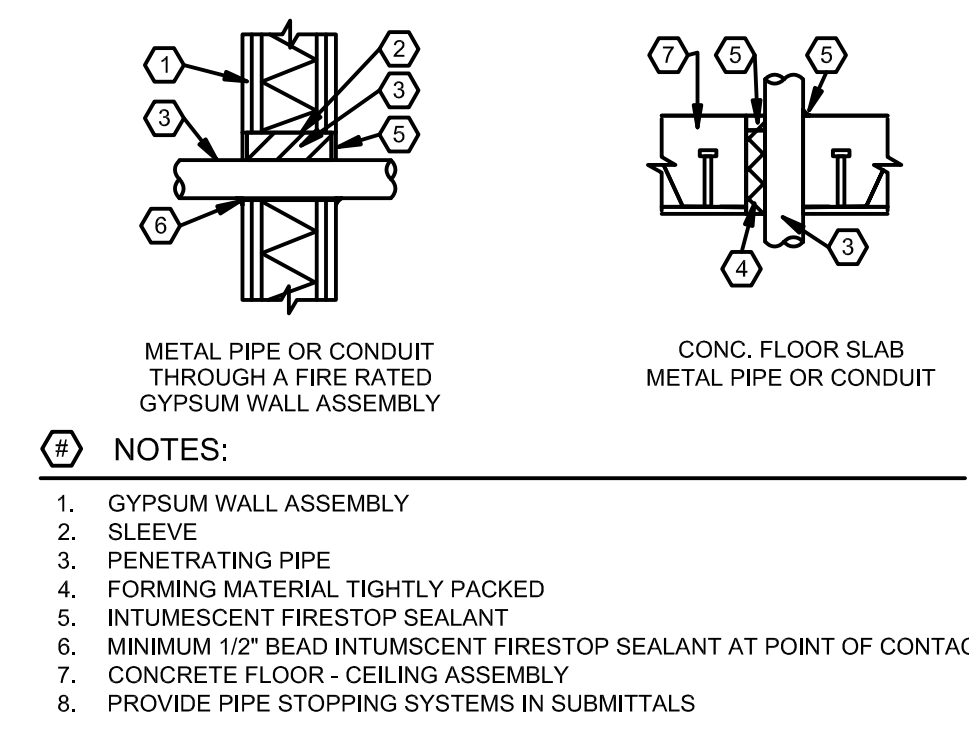


06.06.2024

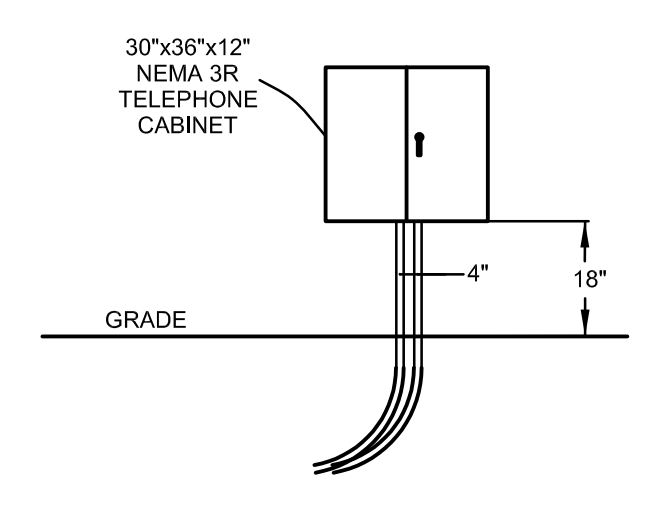
MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4
RC Architects, Inc.



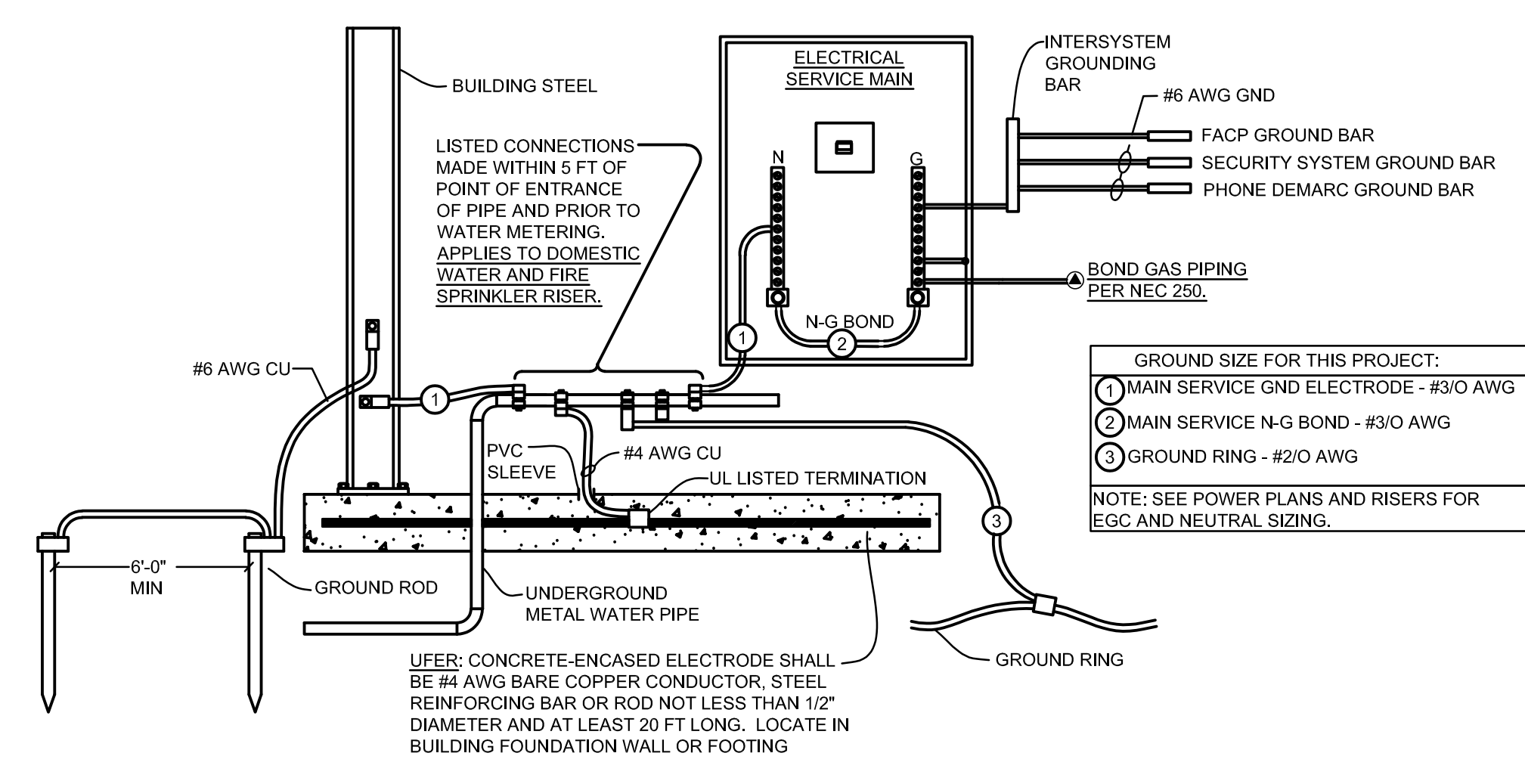
1 IN-GRADE PULL BOX DETAIL
SCALE: N.T.S.



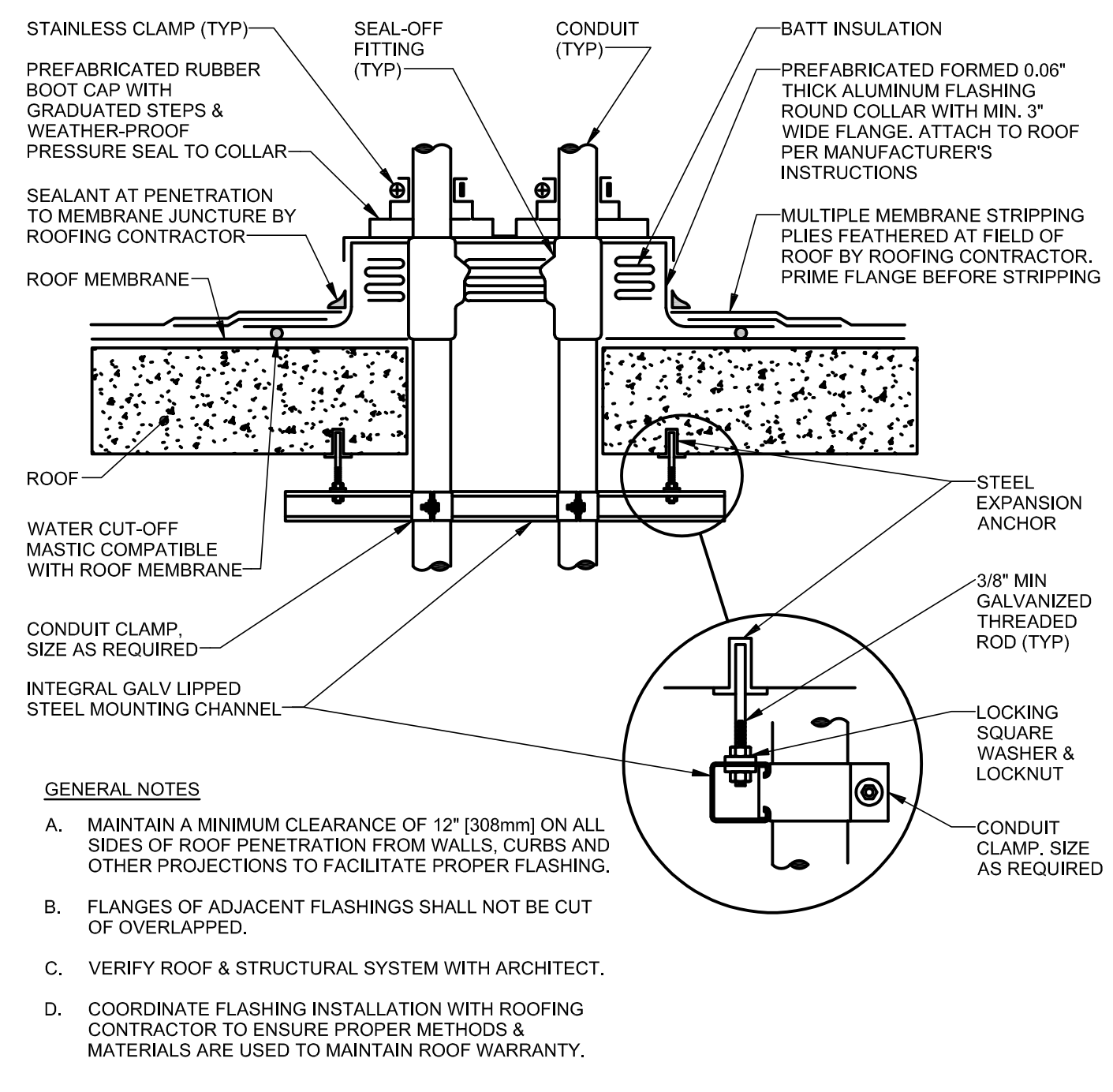
2 FIRE STOPPING PENETRATION DETAILS
SCALE: N.T.S.



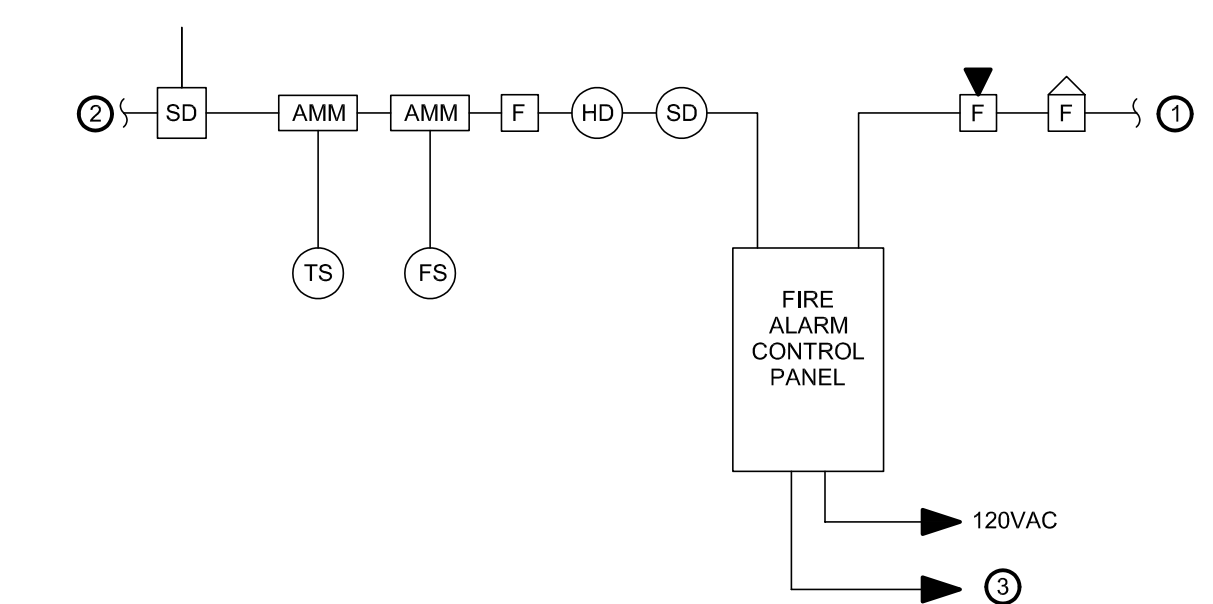
3 TELE/DATA RISER
SCALE: N.T.S.



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



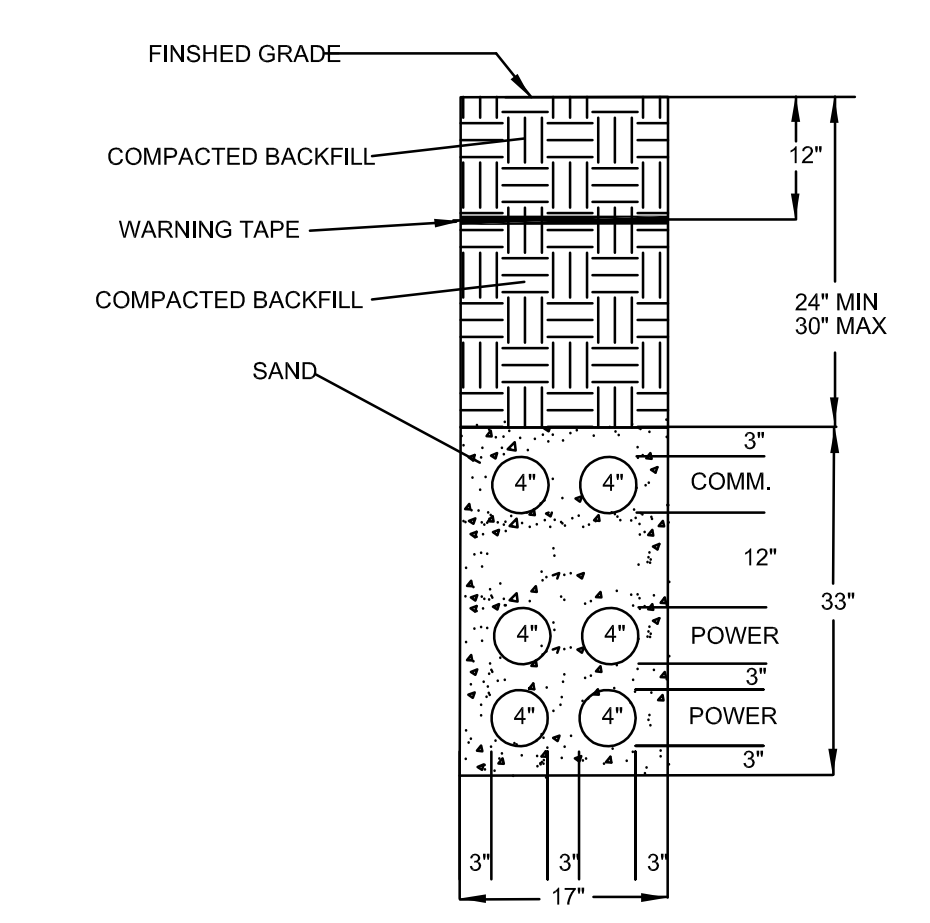
5 ROOF PENETRATION DETAIL
SCALE: N.T.S.



NOTES: (1)
1. TYPICAL NOTIFICATION APPLIANCE CIRCUIT. (HORN/STROBE).
2. TYPICAL SIGNALING LINE CIRCUIT. (ADDRESSABLE LOOP).
3. PROVIDE 3/4" AND (2) CAT 5E CABLES TO OUTSIDE TELEPHONE LINE.

NOTE:
NOT ALL DEVICES ARE SHOWN. SEE PLANS FOR QUANTITY. COORDINATE CONDUCTOR TYPE AND QUANTITY WITH FIRE ALARM MANUFACTURER.

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



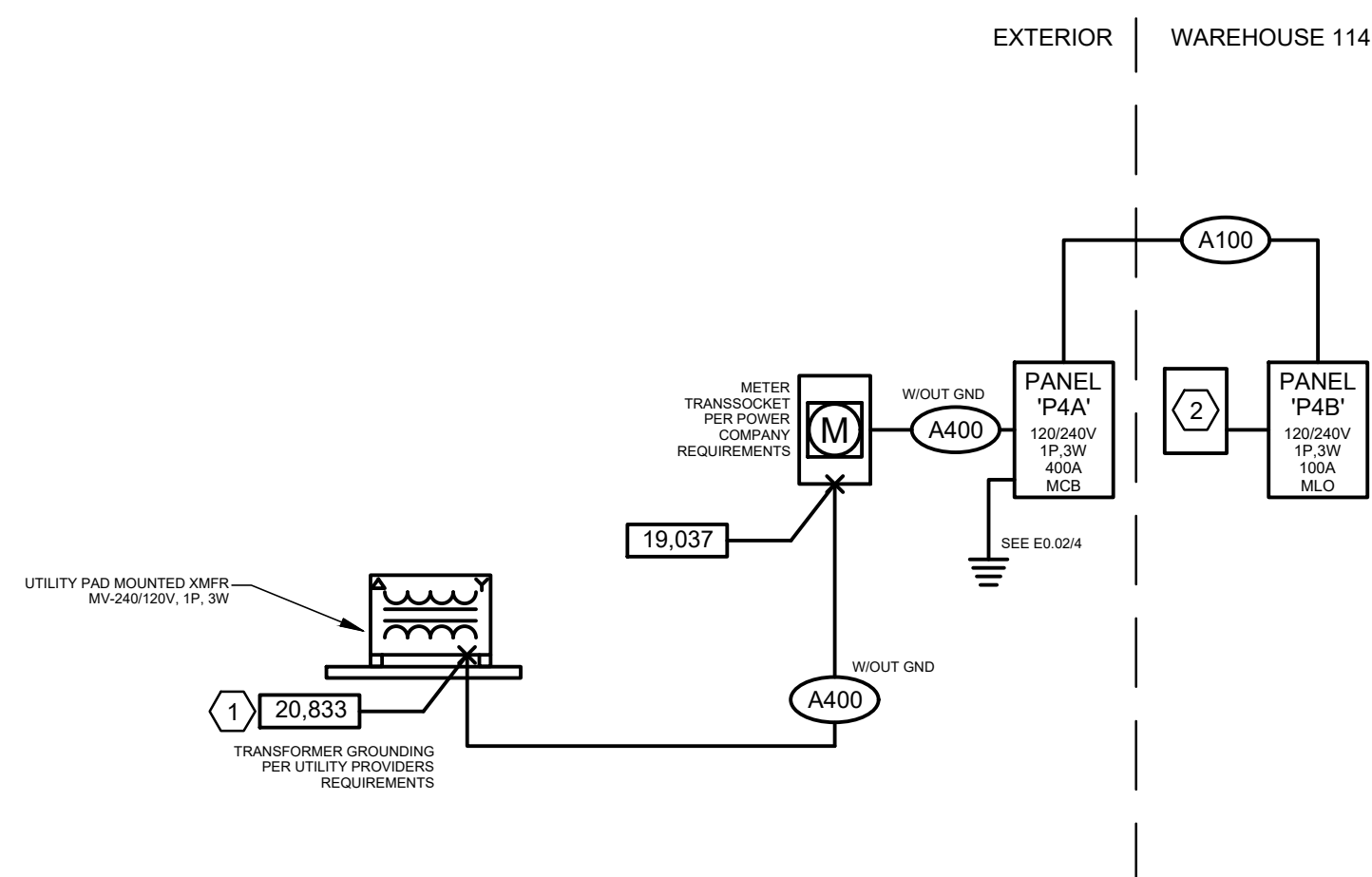
7 SECONDARY TRENCH WITH TELECOM
SCALE: N.T.S.

Revisions
IFP: 2024.06.06

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

06/06/2024

ELECTRICAL
DETAILS
E0.02



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	1/0 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		FIXTURE WATTS	VOLTS	MOUNTING	REMARKS			
			NO.	TYPE				NO.	TYPE		
A	LITHONIA	CPX 2X2 3200LM 80CRI 35K SWL MN10 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 QZ10 35K 80CRI NLTAR2 RMS045 DWH	1	LED	88	88	UNV	SUSPENDED	HIGH BAY LED WITH INTEGRAL OCCUPANCY MOTION SENSOR ADD 'E20WCPHE' FOR EMERGENCY BATTERY PACK 3500K LED PROVIDED		
C	LITHONIA	CPX 2X4 5000LM 80CRI 35K SWL MN10 ZT MVOLT	1	LED	40	40	UNV	RECESSED	2X4 LED PANEL ADD 'E10WCP' FOR EMERGENCY BATTERY PACK 3500K LED PROVIDED		
WE	SPECLIGHT	EB12143V 15L 40K EX FJ1 FG1 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	EXTERIOR WALL PACK 4000K LED PROVIDED		
X	LITHONIA	EDG 1 R EL	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	OCPO RATING (AMP)	VOLTAGE	PH	DISCONNECT TYPE	ENCLOSURE RATING	REMARKS
EF-1	20/1	120	1	MOTOR SW	15	
EW1-1	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

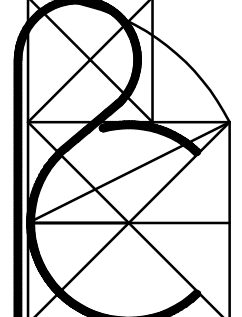
NOTES:
1. PROVIDE ALL DISCONNECTS WITH LOCK OUT TAG OUT PROVISIONS
2. MOUNT DISCONNECTS TO STRUCTURE ADJACENT TO EQUIPMENT. DO NOT MOUNT TO EQUIPMENT.
3. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION
4. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS AS NOTED ON PLANS

P4A																		
PANEL RATING (A): 400							MINIMUM AIC RATING: 22 KAIC											
MAIN CIRCUIT BREAKER (A): 400							BUSING: COPPER											
VOLTAGE (V): 240							MOUNTING: SURFACE											
PHASE: 1							NEMA ENCLOSURE: NEMA 3R											
WIRE: 3							LOCATION: REFER TO PLANS											
FEEDER SIZE: REFER TO ONE LINE							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					
RECEPITS EXTERIOR	1	180	#12	#12	3/4"	20/1	A	50/2	1"	#10	#6	4160	2					
WELDER	3	4160	#6	#10	1"	50/2	B	-	-	#6	4160	4	WELDER					
-	5	4160	#6	-	-	-	A	20/1	3/4"	#12	#12	100	6	EF-01				
FCU-01	7	3152	#8	#10	3/4"	35/2	B	20/1	3/4"	#12	#12	250	8	CP-1				
-	9	3152	#8	-	-	-	A	30/1	3/4"	#10	#10	2000	10	EW1-1				
HP-01	11	3370	#6	#10	1"	50/2	B	30/2	3/4"	#10	#10	2933	12	FCU-02				
-	13	3370	#6	-	-	-	A	-	-	-	#10	2933	14	-				
HP-03	15	947	#12	#12	3/4"	15/2	B	35/2	3/4"	#10	#8	2881	16	HP-02				
-	17	947	#12	-	-	-	A	-	-	-	#8	2881	18	-				
FORKLIFT CHARGER	19	1500	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	720	20	RECEPS 117/118				
SPARE	21	0	-	-	-	20/1	A	20/1	-	-	0	22	SPARE					
SPARE	23	0	-	-	-	20/1	B	20/1	-	-	0	24	SPARE					
SPARE	25	0	-	-	-	20/1	A	20/1	-	-	0	26	SPARE					
SPARE	27	0	-	-	-	20/1	B	20/1	-	-	0	28	SPARE					
SPARE	29	0	-	-	-	20/1	A	20/1	-	-	0	30	SPARE					
SPARE	31	0	-	-	-	20/1	B	20/1	-	-	0	32	SPARE					
SPARE	33	0	-	-	-	20/1	A	20/1	-	-	0	34	SPARE					
SPARE	35	0	-	-	-	20/1	B	20/1	-	-	0	36	SPARE					
SPARE	37	0	-	-	-	20/1	A	20/1	-	-	0	38	SPARE					
SPARE	39	0	-	-	-	20/1	B	100/2	1 1/2"	#8	#1	12382	40	PANEL 'P4B'				
SPARE	41	0	-	-	-	20/1	A	-	-	-	13364	42	-					
CONNECTED LOAD							DEMAND LOAD											
A							B											
LIGHTING (VA)	864			2962			3826			1080			3703			4783		
RECEPTACLE (VA)	10880			8940			19820			10880			8940			14910		
CONTINUOUS (VA)	16820			14820			31640			21025			18525			39550		
NON-CONTINUOUS (VA)	0			0			0			0			0			0		
HVAC/MOTOR (VA)	8683			8633			17216			8528			9378			18901		
KITCHEN (VA)	0			1200			1200			0			780			780		
TOTAL (KVA)	37	36	74	43	41	79							328.85					

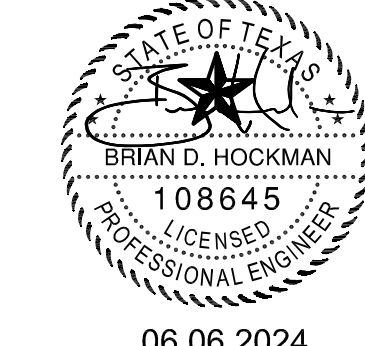
P4B															
PANEL RATING (A): 100							MINIMUM AIC RATING: 22 KAIC								
MAIN CIRCUIT BREAKER (A): MLO							BUSING: COPPER								
VOLTAGE (V): 240							MOUNTING: SURFACE								
PHASE: 1							NEMA ENCLOSURE: NEMA 1								
WIRE: 3							LOCATION: REFER TO PLANS								
FEEDER SIZE: REFER TO ONE LINE							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	3/4"	#12	#12	1080	2	RECEPS 102/103	
RECEPITS EXTERIOR	3	1080	#12	#12	3/4"	20/1	B	20/1	3/4"	#12	#12	1260	4	RECEPS 104/105	
LIGHTING WH1	5	792	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	900	6	RECEPS 101	
LIGHTING WH1-115-116	7	336	#12	#12	3/4"	20/1	B	20/1	3/4"	#12	#12	1000	8	WORKSTATIONS 101	
LIGHTING WH2	9	792	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	1000	10	WORKSTATIONS 101	
LIGHTING WH3	11	528	#12	#12	3/4"	20/1	B	20/1	3/4"	#12	#12	1000	12	WORKSTATIONS 101	
RECEPS 106/107	13	1260	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	1000	14	WORKSTATIONS 101	
RECEPS 113	15	1260	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	500	16	WORKSTATIONS 101	
RECEPS 108-111	17	360	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	500	18	WORKSTATIONS 101	
SERVER	19	1500	#12	#12	3/4"	20/1	B	20/1	3/4"	#12	#12	500	20	WORKSTATIONS 101	
SPARE	21	0	-	-	-	20/1	A	20/1	3/4"	#12	#12	500	22	WORKSTATIONS 101	
DAMPER ACTUATORS	23	300	#12	#12	3/4"	20/1	B	20/1	3/4"	#12	#12	1080	24	RECEPS 114	
SPARE	25	0	-	-	-	20/1	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	3/4"	#12	#12	500	28	FACP	
RECEPS 114	29	540	#12	#12	3/4"	20/1	A	20/1	3/4"	#12	#12	1200	30	MICROWAVE 105	
RECEPS 114	31	1440	#12	#12	3/4"	20/1	B	20/1	-	-	-	0	32	SPARE	
SPARE	33	0	-	-	-	20/1	A	20/1	-	-	-	0	34	SPARE	
SPARE	35	0	-	-	-	20/1	B	20/1	-	-	-	0	36	SPARE	
SPARE	37	0	-	-	-	20/1	A	20/1	-	-	-	0	38	SPARE	
SPARE	39	0	-	-	-	20/1	B	20/1	-	-	-	0	40	SPARE	
LIGHTING EXTERIOR	41	394	#12	#12	3/4"	20/1	A	20/1	-	-	-	0	42	SPARE	
CONNECTED LOAD							DEMAND LOAD								
A							B								
LIGHTING (VA)	2962			864			3826			3703			4783		
RECEPTACLE (VA)	8220			10700			18920			8220			10700		
CONTINUOUS (VA)	0			1500			1500			0			1875		
NON-CONTINUOUS (VA)	0			0			0			0			0		
HVAC/MOTOR (VA)	0			300			300			0			300		
KITCHEN (VA)	1200			0			1200			780			0		
TOTAL (KVA)	12	13	26	13	14	22							92.49		

ONE-LINE GENERAL NOTES:

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



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

Revisions
 IFP: 2024.06.06

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

06/06/2024

ELECTRICAL
 LIGHTING PLAN

E2.01

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. UNON ALL CIRCUITS SHOWN ON THIS DRAWING WILL BE FED FROM PANEL 'P4B'.

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
	CORNER MOUNTED OCCUPANCY SENSOR (DUAL TECH)
	CORNER MOUNTED VACANCY SENSOR



1 ELECTRICAL LIGHTING PLAN

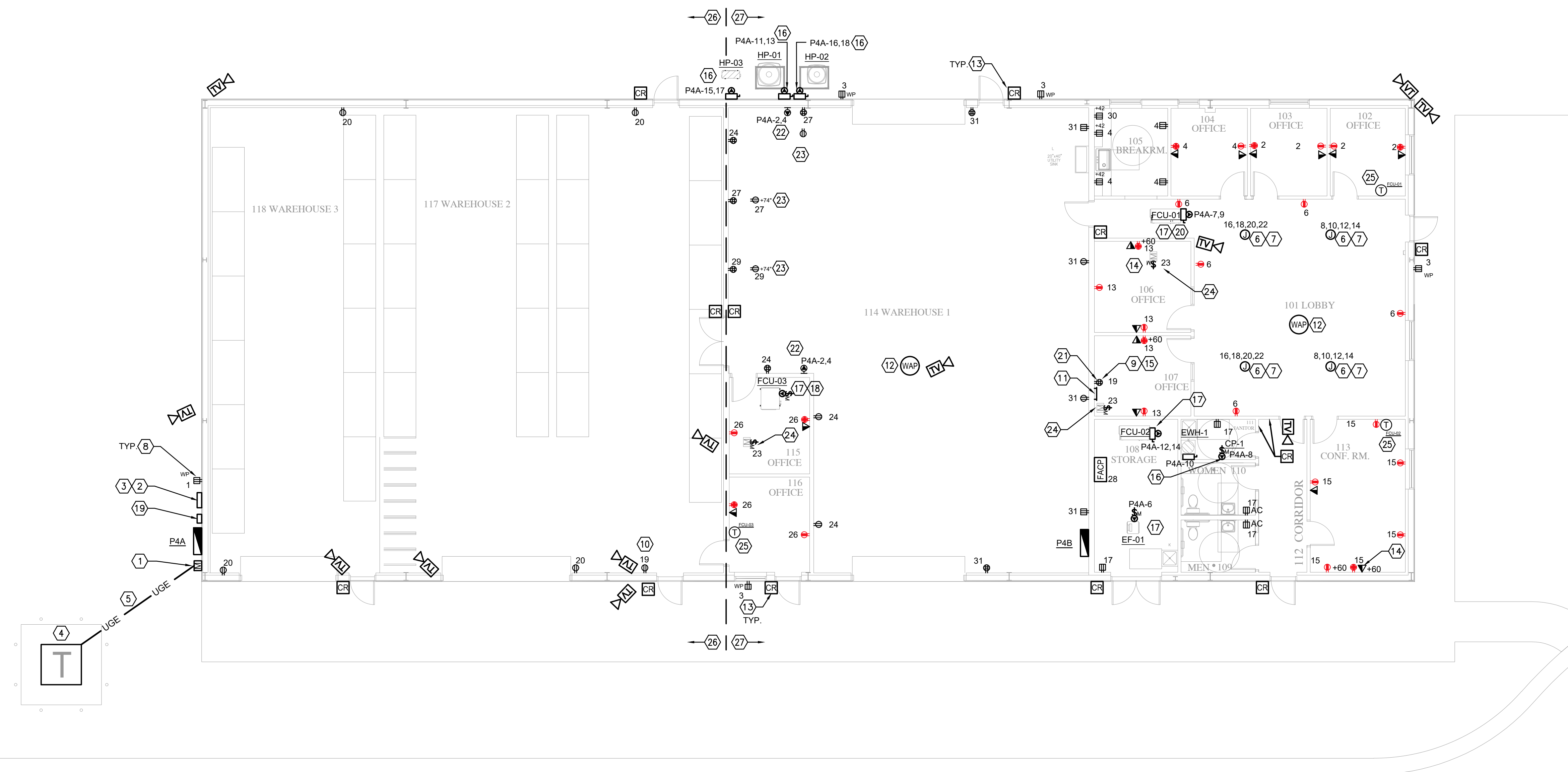
SCALE: 1/8" = 1'-0"

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, HOSTING/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.

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 SUBJECT TO 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 PROVIDER 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 408.3(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 DEDICATED RECEPTACLE 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 #12S 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. CONTACTOR 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.
- 24. DAMPER ACTUATORS. PROVIDE 120V POWER FROM PANEL. REFER TO MECHANICAL PLANS FOR CONTROLS ASSOCIATED WITH THIS DEVICE. TYP.
- 25. COORDINATE WITH MECHANICAL DRAWINGS FOR NEW THERMOSTAT LOCATIONS.
- 26. UON. ALL CIRCUITS SHOWN IN THIS AREA SHALL BE FED FROM PANEL 'P4A'.
- 27. UON. ALL CIRCUITS SHOWN IN THIS AREA SHALL BE FED FROM PANEL 'P4B'.

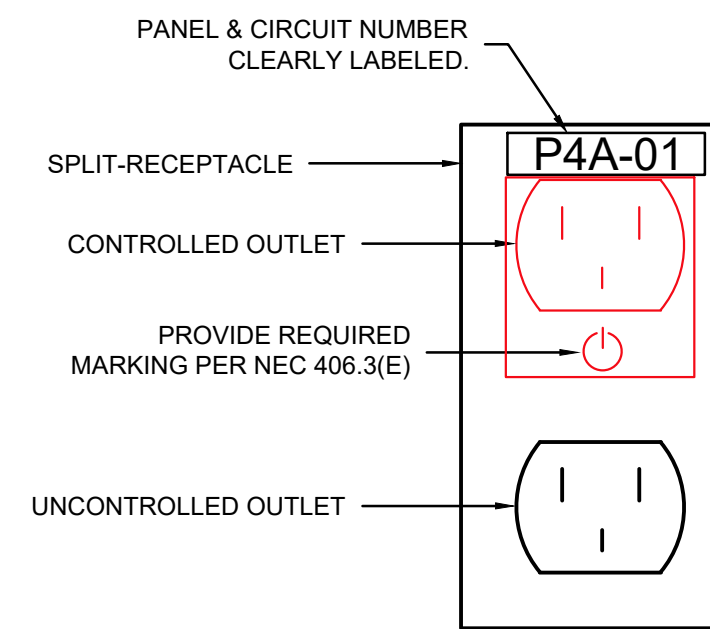


1 ELECTRICAL POWER PLAN

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

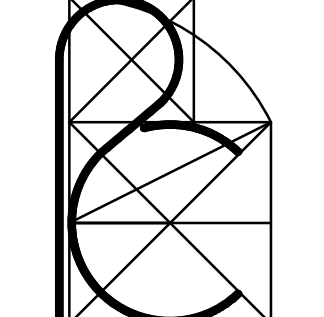
FIRE ALARM DESIGN/BUILD NOTES

- 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 AUSTIN 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.

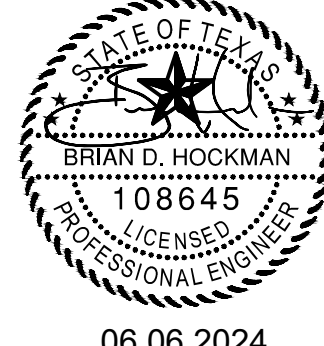


2 CONTROLLED RECEPTACLE DETAIL

SCALE: N.T.S.



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

Revisions

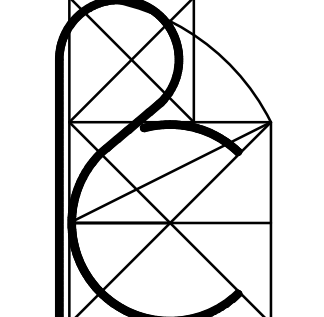
△ IFP: 2024.06.06

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

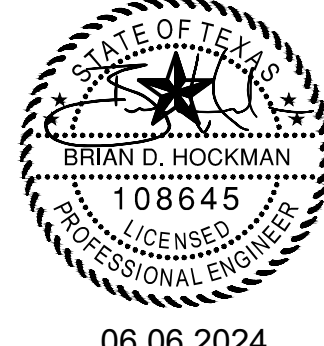
06/06/2024

ELECTRICAL
POWER PLAN

E3.01



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

RC Architects, Inc.

PLUMBING LEGEND AND SYMBOLS

--- CW ---	COLD WATER SUPPLY		FHV	FIRE HOSE VALVE
--- NPW ---	NON-POTABLE WATER			ALARM VALVE
--- HW ---	HOT WATER SUPPLY			DRY-PIPE VALVE
140 HW	140°F HOT WATER SUPPLY			POST-INDICATOR VALVE
--- HWC ---	HOT WATER RECIRC			DETECTOR CHECK VALVE
--- CA ---	COMPRESSED AIR			STANDPIPE BASE VALVE
--- NG ---	NATURAL GAS			FIRE DEPT. CONNECTION
--- F ---	FIRE MAIN, STANDPIPE			RELIEF VALVE
--- S ---	SPRINKLER, DRY OR WET			GATE VALVE
--- V ---	PLUMBING VENT			OS&Y VALVE
--- PD ---	PUMP DISCHARGE			GLOBE VALVE
--- W ---	SANITARY WASTE			BALL VALVE
--- GW ---	GREASE WASTE			CHECK VALVE
--- RL ---	RAIN LEADER			BUTTERFLY VALVE
--- ORL ---	OVERFLOW RAIN LEADER			PLUG VALVE
FD	FLOOR DRAIN			PRESSURE REGULATING VALVE
FS	FLOOR SINK			THREE-WAY VALVE
RO	ROOF DRAIN, OVERFLOW			MOTORIZED VALVE
WCO	WALL CLEAN OUT			PNEUMATIC VALVE
FCO	FLOOR CLEAN OUT			SOLENOID VALVE
---	EXISTING PIPING AND EQUIPMENT			VALVE (N-RISE)
---	DEMO PIPING AND EQUIPMENT			STRAINER
---	NEW PIPING AND EQUIPMENT			SLEEVE
	CONNECT TO EXISTING			GUIDE
				ANCHOR
				UNION
				SHOCK ARRESTER AND SIZE (X)

GENERAL NOTES

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED AND INSTALLED.
- THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO:
 - EQUIPMENT AND MATERIALS SHOP DRAWINGS
 - COORDINATION DRAWINGS
 - RECORD DRAWINGS
 - OPERATING AND MAINTENANCE MANUALS
 - FIRE STOP MATERIALS AND DETAILS
- 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.
- 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.
- 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.
- 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:
 - ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS.
 - ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED.
 - THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.
- AS THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.
- 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.
- 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.
- 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.
- 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.
- 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).
- 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.
- VERIFY LOCATIONS OF EXISTING VALVES LOCATED WITHIN SCOPE OF WORK. MODIFY EXISTING OR PROVIDE NEW MEANS OF ACCESS WHERE REQUIRED BECAUSE OF NEW CONSTRUCTION.
- 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.
- 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.
- 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).
- 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.

PLUMBING GENERAL NOTES

- REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.
- REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS OF ALL FLOOR DRAINS.
- ALL SANITARY AND VENT PIPING SHALL BE ROUTED AT A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.
- 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.
- 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.
- THE PLUMBING CONTRACTOR SHALL CLEAN, FLUSH, AND DISINFECT ALL COLD WATER AND HOT WATER PIPING AND ALL FIXTURES PRIOR TO COMPLETION OF WORK.
- VENTS THROUGH ROOF TO BE LOCATED A MINIMUM OF 15'-0" HORIZONTALLY AWAY FROM OUTSIDE AIR INTAKES.
- FLOOR DRAINS NOT RECEIVING REGULAR-USE DRAINAGE ARE TO BE TRAP PRIMED.
- PROVIDE BACKFLOW PREVENTION AS REQUIRED BY THE LOCAL CROSS CONNECTION CONTROL DEPT. STANDARDS WHERE NOT PROVIDED OR INADEQUATELY PROVIDED BY EQUIPMENT MANUFACTURER.
- INSTALL PIPING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED.
- VERIFY DIMENSIONS FROM ARCHITECTURAL DRAWINGS AND FROM ACTUAL MEASUREMENTS AT JOBSITE.
- PROVIDE SADDLES AND SHIELDS FOR SUPPORT OF INSULATED PIPING TO PREVENT CRUSHING.
- PIPING PENETRATIONS THROUGH PERIMETER BEAMS, FOUNDATION ON GRADE, AND STRUCTURAL FLOORS SHALL BE SLEEVED. COORDINATE SLEEVE LOCATIONS AND SIZES WITH STRUCTURAL PRIOR TO POUR.
- PROVIDE DIELECTRIC UNIONS AT DISSIMILAR MATERIALS.
- PROVIDE ESCUTCHEONS AT ALL FINISHED WALL AND CEILING PIPING PENETRATIONS.
- 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 SETON "SETMARK" OR EQUAL.
- COORDINATE WORK COMPLETELY WITH ALL OTHER TRADES.
- INSTALL PIPING FREE OF SAGS AND BENDS. PROVIDE NON-METALLIC COATED HANGERS WHERE IN DIRECT CONTACT WITH COPPER PIPING.
- PROVIDE ENGINEERED WATER HAMMER ARRESTERS SIZED AND PLACED IN ACCORDANCE WITH STANDARD PDI-WH 201. AIR CHAMBERS SHALL NOT BE ALLOWED.
- PROVIDE FLEXIBLE EXPANSION FITTINGS SUITABLE FOR SANITARY (DWV) AND RAINWATER PIPING WHERE PIPING ENTERS EXPANSIVE SOILS TO ALLOW FOR 4" OF DIFFERENTIAL MOVEMENT.
- ALL FLOOR PENETRATIONS MUST BE SEALED WITH FIRE CAULK.
- 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.
- PROVIDE MINIMUM 1" AIR GAP AT DRAIN DISCHARGE FOR ALL INDIRECT WASTE PIPING.
- 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.
- COMPRESSION TANKS SUPPLIED AT EACH WATER HEATER SHALL BE SECURED TO A WALL WITH (2) 1" x 14 GA. GALVANIZED STRAPS. PROVIDE LAG BOLTS AND BLOCKING AS REQUIRED.
- 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.

2021 IECC ENERGY CODE COMPLIANCE

- REQUIREMENTS SPECIFIC TO WATER HEATING:
- 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.
 - PIPE INSULATION FOR THE SPECIFIED NONCIRCULATING SERVICE HOT WATER SYSTEM IS REQUIRED FOR ALL PIPING IN THE FOLLOWING CATEGORIES:
 - THE FIRST 8' OF OUTLET PIPING FROM ANY CONSTANT-TEMPERATURE, NONCIRCULATING STORAGE SYSTEM.
 - THE INLET PIPING BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONCIRCULATING STORAGE SYSTEM.
 - INSULATION SHALL COMPLY WITH PIPE INSULATION SPECIFICATIONS AS INDICATED ON THIS DRAWING PER TABLE C403.2.10.
- GENERIC PLUMBING REQUIREMENTS:
- 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.
 - WATER-HEATING EQUIPMENT SHALL BE PROVIDED WITH CONTROLS THAT ALLOW THE USER TO SET THE WATER TEMPERATURE TO 140°F.

PLUMBING PIPING & MATERIALS

DOMESTIC WATER PIPING	
ABOVE GRADE:	ASTM B88, TYPE L HARD DRAWN COPPER TUBING, WITH SOLDERED JOINTS, ASME B16.22, WROUGHT COPPER AND BRONZE FITTINGS, OR PRESSURE SEALED FITTINGS AND JOINTS COMPLYING WITH ASTM B584
BELOW GRADE:	ASTM D1785, SCHEDULE 80 PVC, WITH SOLVENT WELDS.
VENT PIPING ABOVE CEILINGS	
ALL VENT PIPING ABOVE CEILINGS SHALL BE SERVICE WEIGHT, NO-HUB CAST IRON PIPE AND DRAINAGE FITTINGS WITH HEAVY DUTY COUPLINGS.	
WHEN CEILING CAVITY IS A RETURN AIR PLENUM, PROVIDE TRANSITION TO PVC WASTE AND VENT PIPING AS REQUIRED. PRIOR TO ENTERING PLENUM (IF APPLICABLE), PVC SHALL NOT BE EXPOSED IN A RETURN AIR PLENUM.	
WASTE AND VENT PIPING	
ABOVE GRADE:	ASTM A74, HUBLESS CAST IRON, WITH CISPI 301 SPIGOT BEAD ENDS FOR COUPLING ASSEMBLY, ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.
BELOW GRADE:	ASTM A74, CAST IRON, HUB AND SPIGOT TYPE, JOINED WITH ASTM C564 NEOPRENE COMPRESSION GASKETS, ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.
DOMESTIC WATER VALVES	
DOMESTIC WATER: BALL VALVES, 2" AND SMALLER, ASTM B 584, BRONZE BODY AND BONNET, 2-PIECE CONSTRUCTION, CHROME-PLATED BRASS BALL, FULL PORT, BLOWOUT PROOF, BRASS OR BRONZE STEM, TEFLON SEAT AND SEALS, STEM EXTENSION FOR VALVES INSTALLED IN INSULATED PIPING, AND THREADED ENDS.	

PLUMBING ABBREVIATIONS

AB.C	ABOVE CEILING	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AV	ACID VENT	NG	NATURAL GAS
AW	ACID WASTE	(N)	NEW
BFF	BELOW FINISHED FLOOR	NO	NORMALLY OPEN (VALVE)
BG	BELOW GRADE	NC	NORMALLY CLOSED (VALVE)
CA	COMPRESSED AIR	OH	OVERHEAD
CD	CONDENSATE DRAIN	ORL	OVERFLOW RAIN LEADER
C.I.N.H.	CAST IRON NO HUB CLEANOUT	(R)	RELOCATED
CO	CHECK VALVE	RL	RAIN WATER LEADER
CW	COLD WATER	SHT	SHEET
CX	CONNECT TO EXISTING	SCW	SOFT COLD WATER
DN	PIPE DROP TO NEXT LEVEL	SOC	SHUT OFF COCK (GAS)
DTL	DETAIL	SOV	SHUT OFF VALVE
(E)	EXISTING	TP	TRAP PRIMER
F	FIRE SERVICE	UG	UNDERGROUND
FCO	FLOOR CLEANOUT	UP	PIPE RISE TO NEXT LEVEL
FND	FOUNDATION DRAIN	US	UNDER SLAB
GCO	GRADE CLEANOUT	UTR	UP THRU ROOF
HW	HOT WATER	V	VENT
HWC	HOT WATER CIRCULATION	VA	VALVE
IDW	INDIRECT WASTE	VTR	VENT THRU ROOF
I.E.	INVERT ELEVATION	W	WASTE
IRR	IRRIGATION	WCO	WALL CLEANOUT
LPG	LIQUEFIED PETROLEUM GAS		
LWCO	LOW WATER CUTOFF		

PLUMBING DESIGN CRITERIA

GENERAL GUIDELINES:
ALL PLUMBING WORK AND MATERIALS SHALL COMPLY WITH THE 2021 IPC.

SANITARY DRAINAGE AND VENT PIPING
SIZED PER TABLE 710.1 OF THE 2021 IPC.
DRAIN PIPE SHALL SLOPE PER 2021 IPC SECTION 704.0.

DRAINAGE FIXTURE UNITS
SIZED PER TABLE 709.1 OF THE 2021 IPC.

WATER SUPPLY FIXTURE UNITS
SIZED PER TABLE E103.3(2) OF THE 2021 IPC.

WATER SUPPLY PIPE SIZING
SIZED PER FIGURE E103.3(3) OF THE 2021 IPC.

SHEET LIST

DRAWING	SHEET TITLE
P0.01	PLUMBING COVER SHEET
P0.02	PLUMBING SCHEDULES & DETAILS
P0.03	PLUMBING RISER DIAGRAMS
P2.01	PLUMBING FLOOR PLANS

Revisions
 IFP: 2024.06.06

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

06/06/2024

PLUMBING COVER SHEET

P0.01

PLUMBING SPECIFICATIONS

DOMESTIC WATER PIPING

- ALL BRANCH WATER PIPING INSIDE THE BUILDING SHALL BE TYPE 1" 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% TIN/ANTIMONY SOLDER. NO ACIDS SHALL BE USED TO CLEAN EITHER PIPE OR FITTINGS OR AS A FLUX IN SWEATING JOINTS. THE USE OF BRILLETT CONNECTIONS IS NOT PERMITTED.
- ACCEPTABLE ALTERNATE: ASTM F876, F877, CSA B 137.5, NSF 61 (NSF/UPP), 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 "PEX2000" CHLORINE RESISTANCE RATING. PEX TUBING SHALL HAVE A 60 DAY MINIMUM UV RATING. PEX FITTINGS: ASTM F 1807, OR ASTM 2159 AND ASTM F877 LEAD-FREE METAL-INSERT TYPE WITH COPPER CRAMP 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 5/8" 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 COPPER 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 2500 FIBERGLASS 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 DURAFIL OR VIRCON PTFE SEALS 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 D2688, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS. PIPING INSTALLED WITHIN RETURN AIR PLenums SHALL BE "NO-HUB" CAST IRON SOIL PIPE AND FITTINGS (GSP/ST) ASSEMBLED WITH 304 STAINLESS STEEL NO-HUB COUPLINGS ASSEMBLIES, WITH NEOPRENE GASKET MEETING ASTM C-564.
- BELOW GROUND SHALL BE ASTM D2685, 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 1" 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% TIN/ANTIMONY SOLDER. NO ACIDS SHALL BE USED TO CLEAN EITHER PIPE OR FITTINGS OR AS A FLUX IN SWEATING JOINTS.

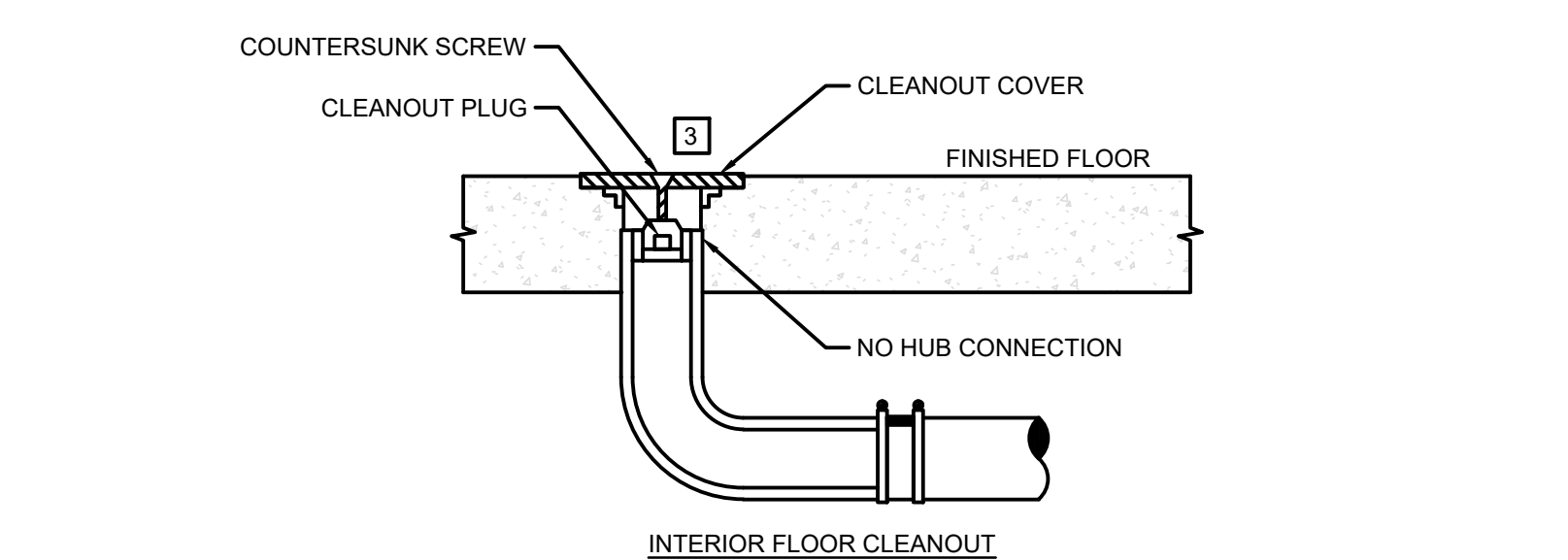
PLUMBING PIPING HANGER SPACING

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.

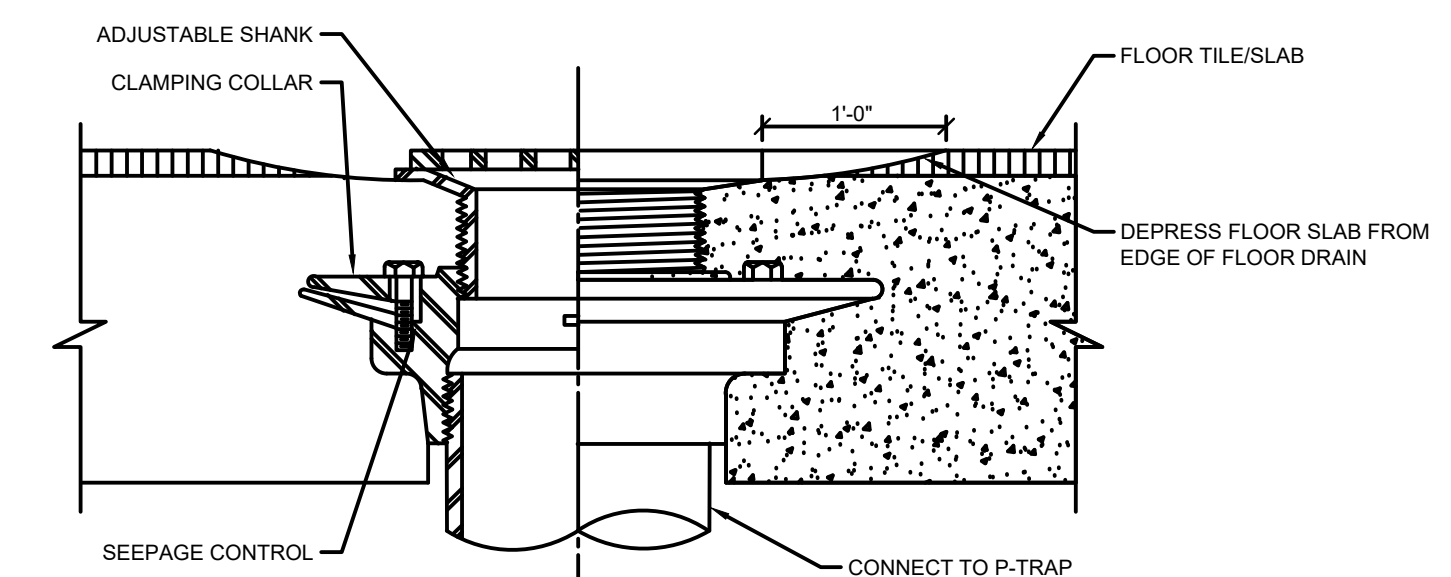
IN NO CASE SHALL ANY PIPING DEPEND ON BLOCKS, BRICKS, STONE, WOOD SLEEPERS, OR TIE WIRES FOR ITS FINAL SUPPORT.

PLUMBING FIXTURE SCHEDULE								
TAG	DESCRIPTION	MANUFACTURER - MODEL	TRIM & ACCESSORIES	CONNECTIONS (INCHES)				DESCRIPTION AND NOTES
				HW	CW	W	V	
EW-H-1	ELECTRIC WATER HEATER	RHEEM #XE30P06L20U1	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 #B65	-	-	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 T-THREAD
SK-1	BREAK SINK (ADA)	ELKAY "PERGOLA" #HDDB332294	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.

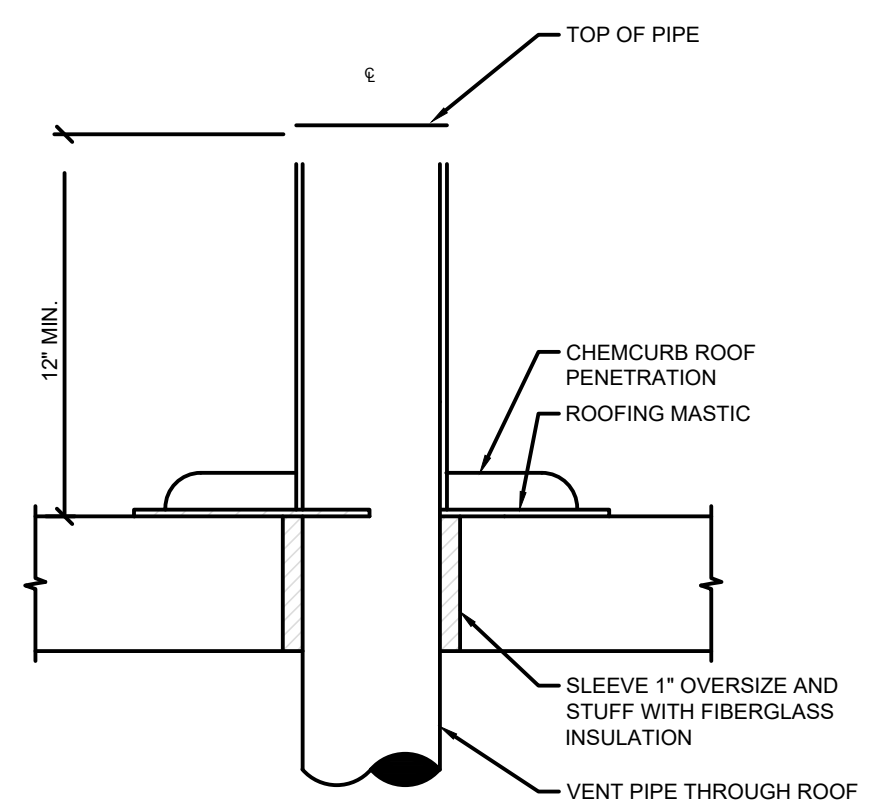
WATER CALCULATIONS (2021 IPC) - SERVICE SIZE		
AVAILABLE WATER PRESSURE		PSI
PRESSURE LOSS AT METER		60.0
MIN. PRESSURE REQUIRED (FLUSH TANK)		15.0
ELEVATION OF HIGHEST FIXTURE (FEET)	4	25.0
STATIC PRESSURE LOSS (ELEV)		1.7
TOTAL AVAILABLE PRESSURE		18.3
DISTANCE TO LAST FIXTURE (IN FT.)		125
TOTAL DEVELOPED LENGTH (IN FT.)		150
PEAK FLOW (IN GPM)		22
ALLOWABLE FRICTION LOSS/100 FT		12.2
FIXTURE	QTY	WSFU EA
WATER CLOSET (FLUSH TANK)	2.0	5.00
LAVATORY	2.0	3.0
KITCHEN SINK	1.0	2.3
DRINKING FOUNTAIN	1.0	0.25
DISHWASHER	1.0	1.4
REFRIGERATOR ICE MAKER	1.0	0.3
MOP/UTILITY SINK	2.0	4.50
HOSE BIB	3.0	2.5 / 1
TOTAL WSFU		25.2
EQUIVALENT GPM		21.6
METER SIZE:	1"	
BUILDING SUPPLY SIZE:	1"	



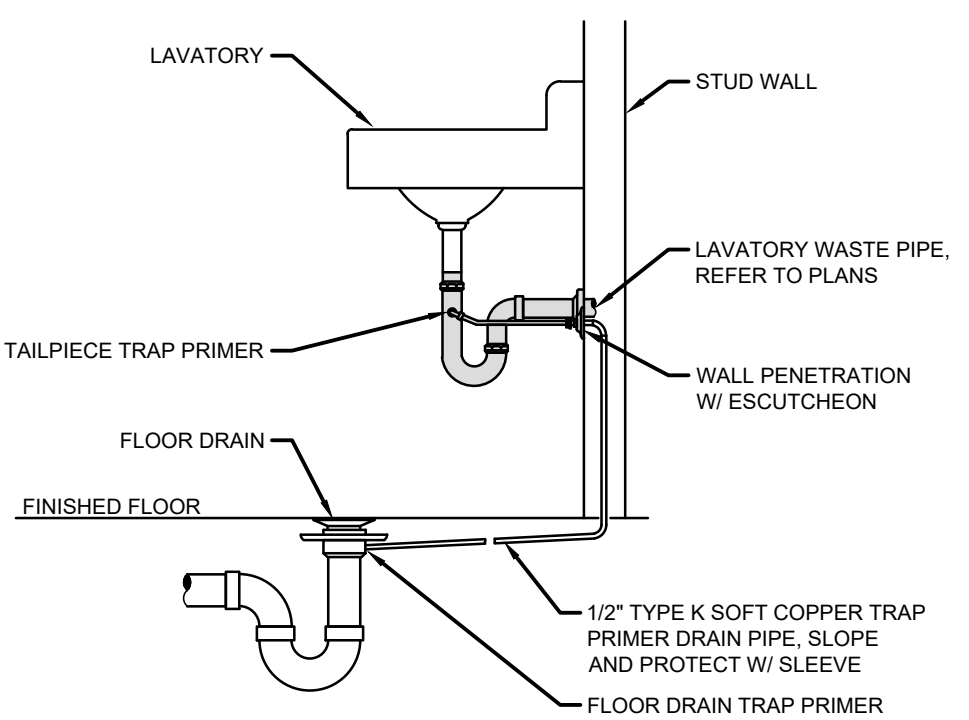
G CLEANOUT DETAILS
SCALE: N.T.S.



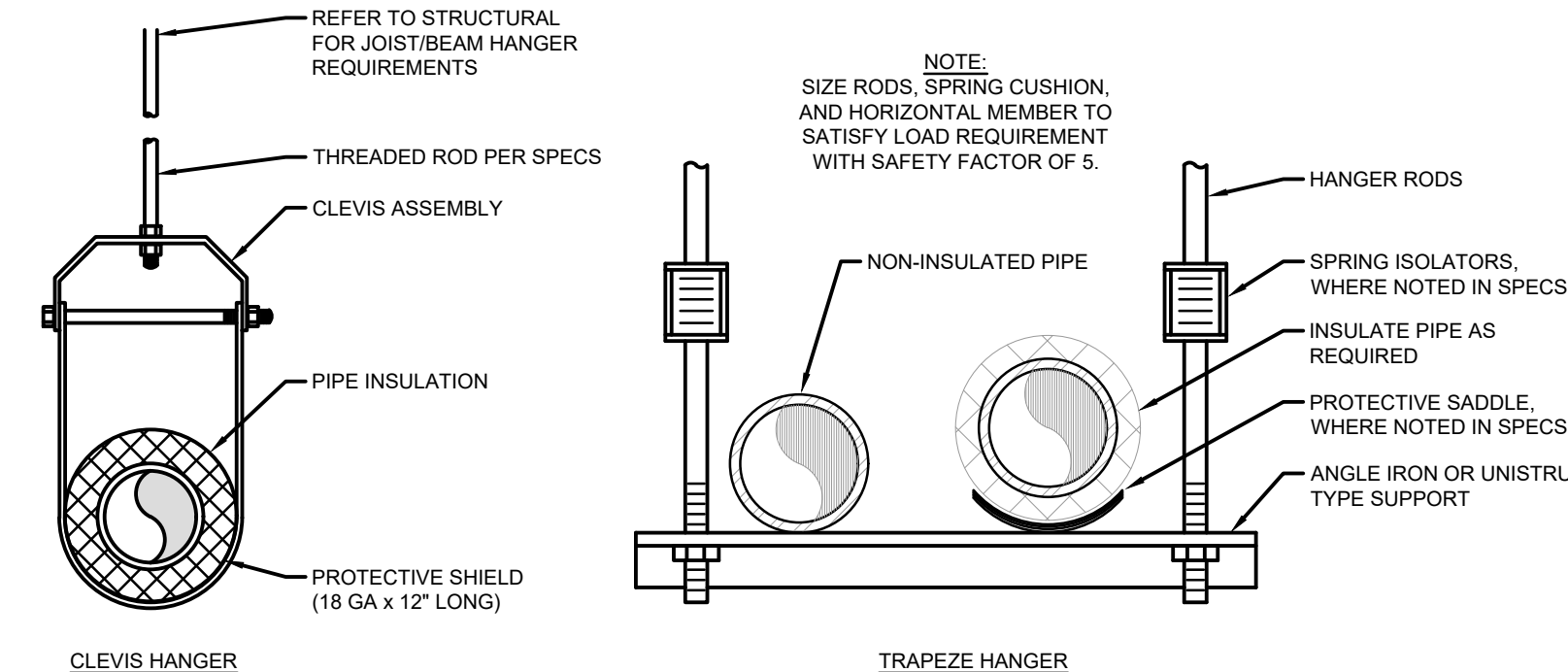
D FLOOR DRAIN DETAIL
SCALE: N.T.S.



E VENT TERMINATION DETAIL
SCALE: N.T.S.



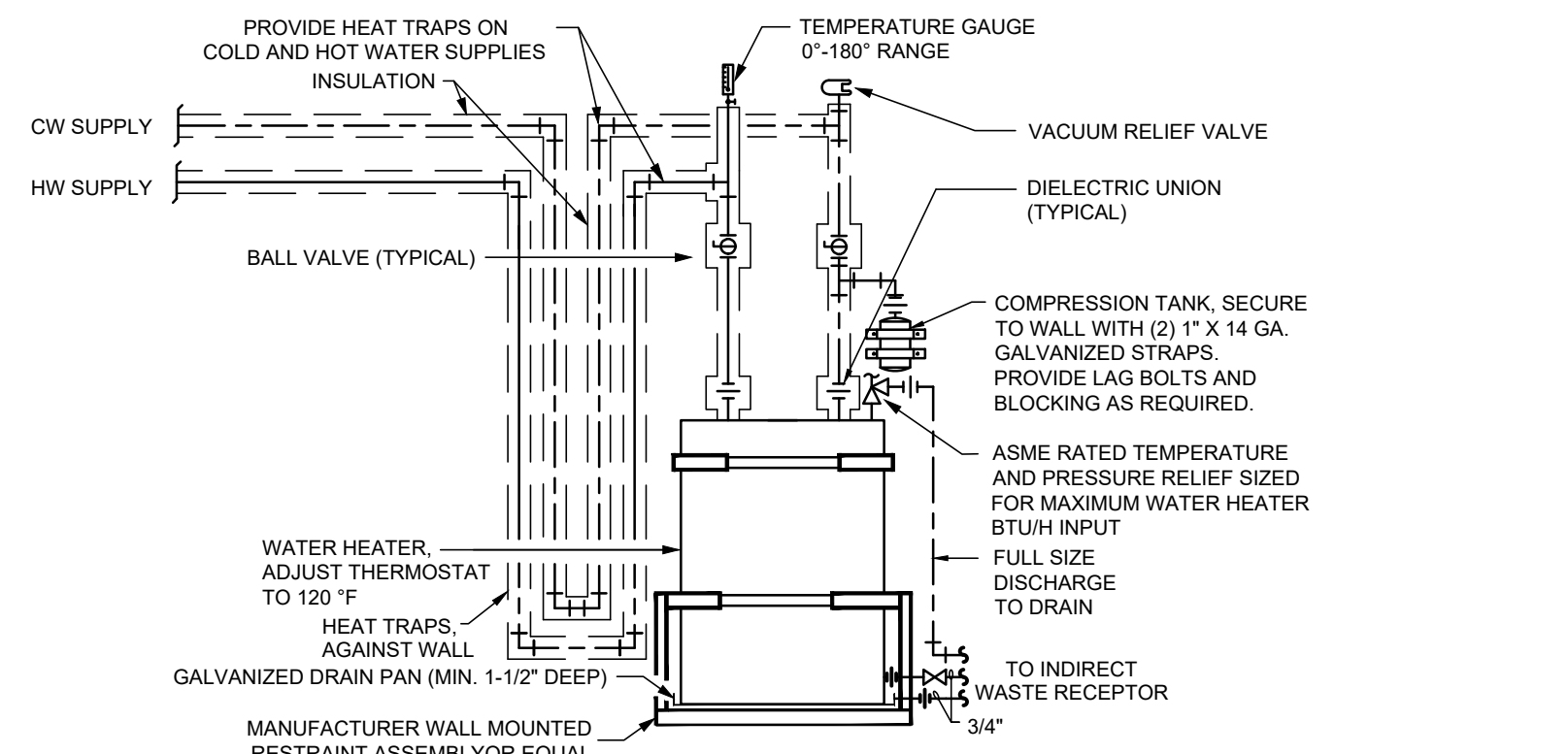
F TRAP PRIMER DETAIL
SCALE: N.T.S.



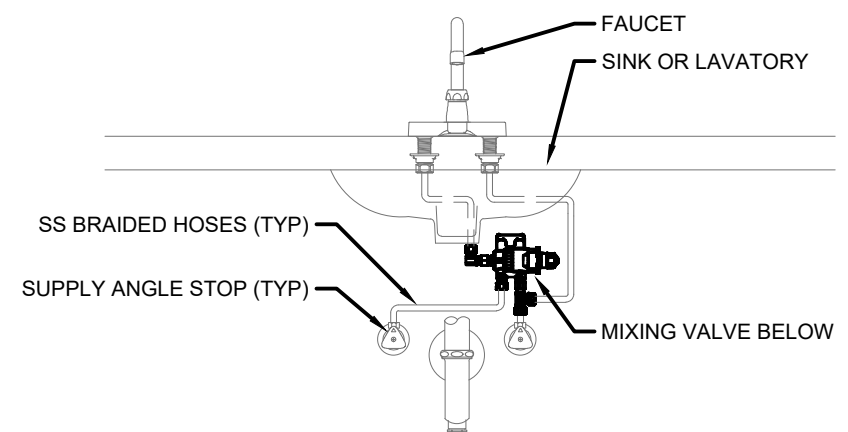
MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET				
NOM. SIZE	THRU 3/4"	1"	1-1/4"	1-1/2"
COPPER	1'	1'-1/4"	1'-1/2"	2'

PER 2021 UNIFORM PLUMBING CODE

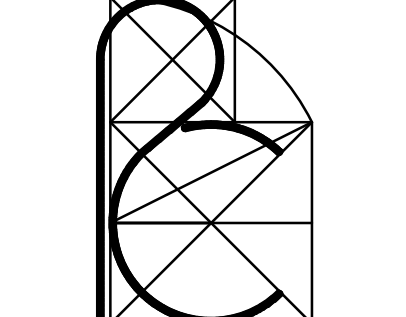
A PIPE HANGER DETAILS
SCALE: N.T.S.



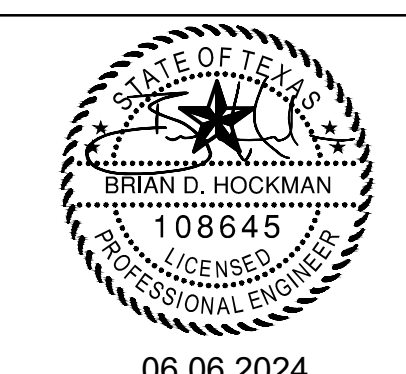
B WATER HEATER DETAIL
SCALE: N.T.S.



C TEMP MIXING VALVE DETAIL
SCALE: N.T.S.



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



06.06.2024

MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

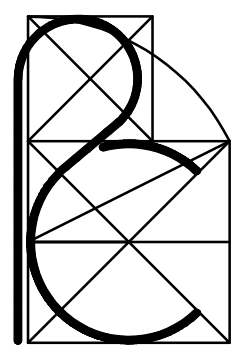
RC Architects, Inc.

Revisions
IIP: 2024.06.06

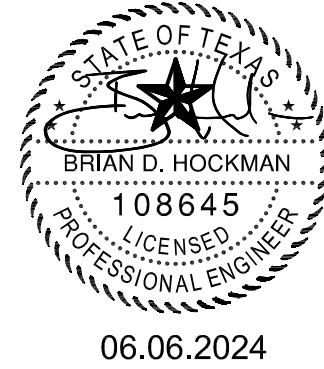
hollingsworth pack J
Design & Construction Consultants
3801 S. Congress Suite 110 - Austin, TX 78704
PH(512) 275-0060 TX FIRM # 12747

06/06/2024

PLUMBING SCHEDULES & DETAILS
P0.02



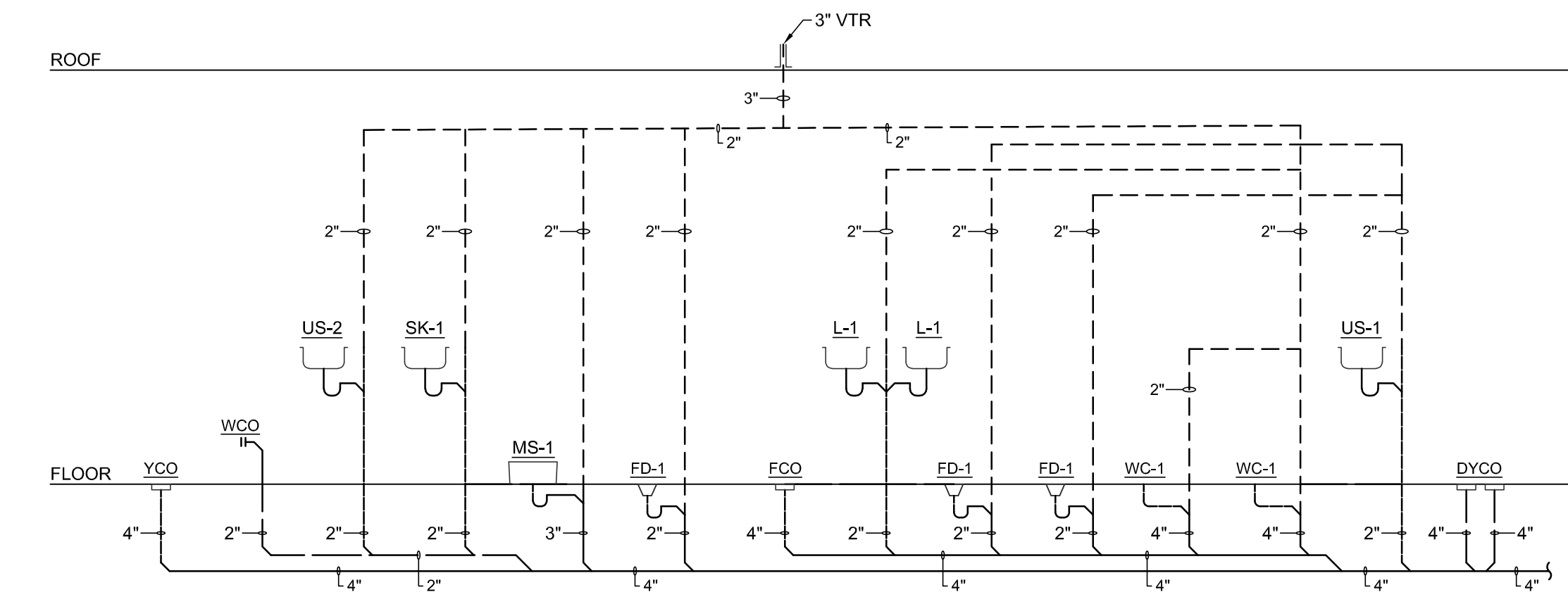
RC Architects, Inc.
14620 Echo Bluff
Austin, Texas 78737
(512) 913-0597
rickcanales.architects@gmail.com



06.06.2024

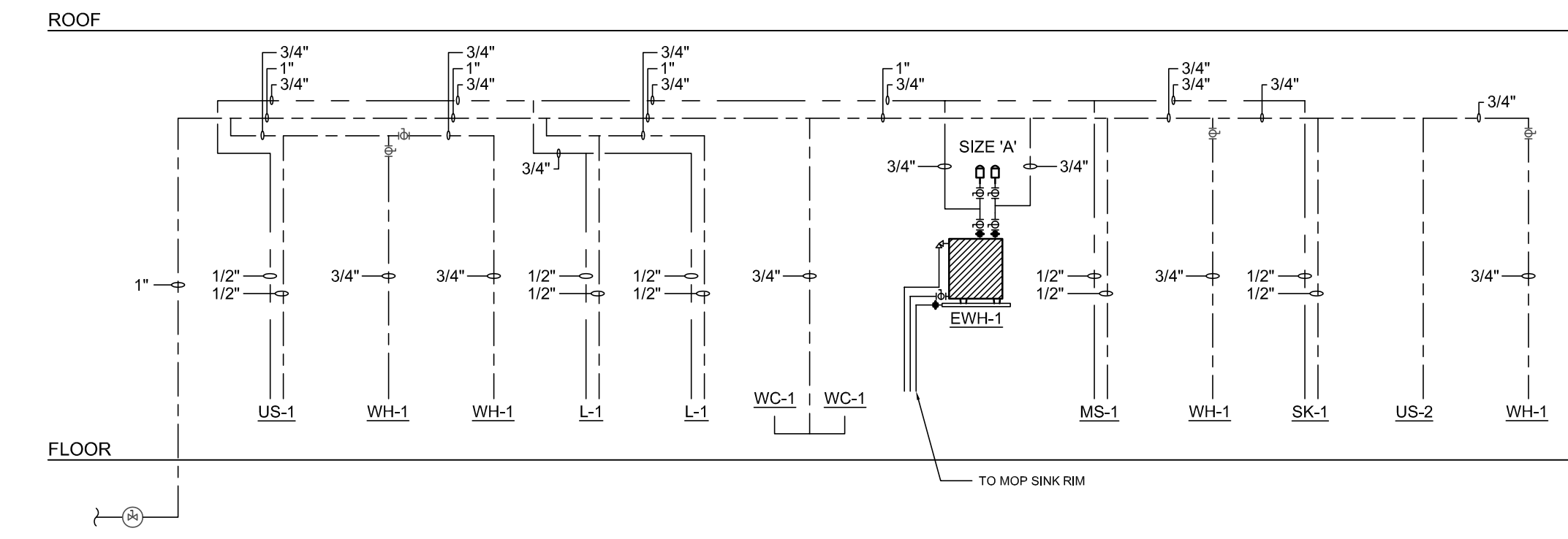
MOBILE LOAVES AND FISHES -OPERATIONS BLDG-PHASE 4

RC Architects, Inc.



1 PLUMBING DWV RISER DIAGRAM

SCALE : N.T.S.



2 PLUMBING DOM. WATER RISER DIAGRAM

SCALE : N.T.S.

Revisions

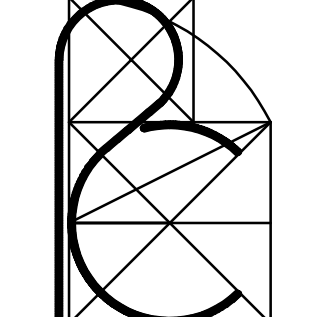
△ IFP: 2024.06.06

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

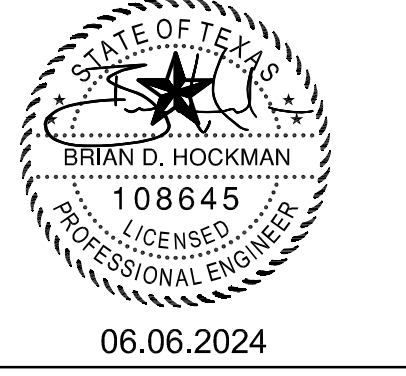
06/06/2024

PLUMBING RISER
DIAGRAMS

P0.03



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



MOBILE LOAVES AND FISHES - OPERATIONS BLDG-PHASE 4

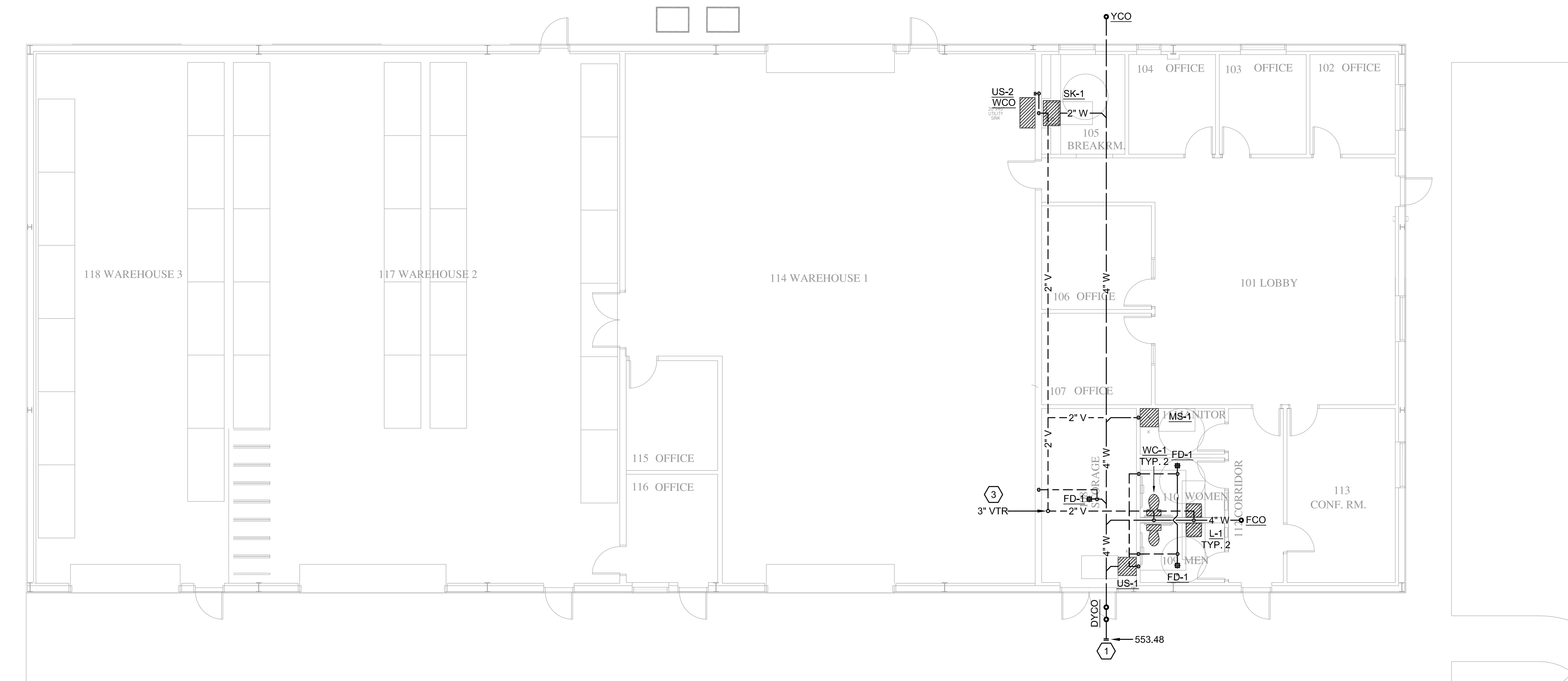
RC Architects, Inc.

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.

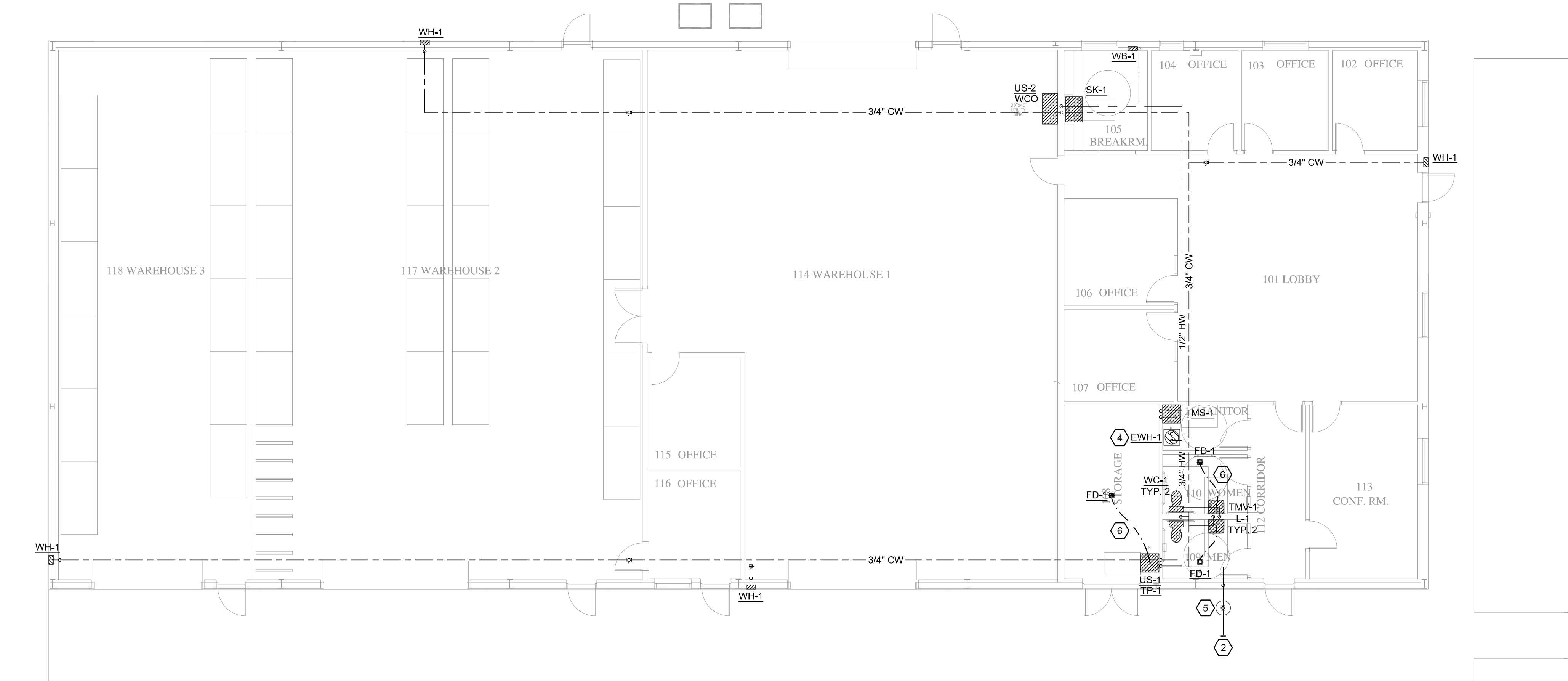
KEYED NOTES (X):

- 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. COORDINATE WITH ROOFING MANUFACTURER FOR FLASHING AND WATERPROOFING OF VENT TO ROOF.
- 4. MOUNT ELECTRIC WATER HEATER ON WALL. ROUTE AUXILIARY DRAIN AND T&P 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.



1 PLUMBING DWV PLAN

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



1 PLUMBING DOM. WATER PLAN

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

Revisions
IFP: 2024.06.06

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

06/06/2024

PLUMBING FLOOR PLANS
P2.01



Electric Service Planning Application (ESPA)

Refer to the Austin Energy Design Criteria Manual

Fill out one ESPA per main disconnect or distribution enclosure. Review of this application may result in a request for additional information.

The form must be filled out completely. See instructions online at [Electric Service Design & Planning](#).

I. Service Area

A map of the service areas and contacts can be found online at [Electric Distribution Contacts Map](#).

a) All services equal to or under 350A single-phase or 225A three-phase.	b) All service over 350A single-phase or 225A three-phase	c) All services in downtown Network area
---	--	---

Complete ESPA and email to DAS.

For these sections (I.b & I.c) complete ESPA and submit online at [Distribution Design Intake](#).

<input type="checkbox"/> Development Assistance Support aebpsaespa@austinenergy.com	<input type="checkbox"/> North: Kramer Service Center Ph: 512-505-7181	<input type="checkbox"/> South: St. Elmo Service Center Ph: 512-505-7682	<input type="checkbox"/> Downtown Network Ph: 512-505-7682
---	---	---	---

Small Cell: Submit ESPA online at [Small Cell Web Form](#) Distributed Generation (solar, etc.): [Use Distributed Generation Planning Application \(DGPA\)](#)

II. Customer & Project Information

(a) Customer Information

Property Owner Name: _____ Phone: _____ Email: _____
(Austin Energy may request the property owner contact information of adjacent properties where AE work is required.)
 Prop Owner Representative Name (if different): _____ Title: Elect Engineer Elect Contractor Other _____
 Rep Phone: _____ Rep Fax: _____ Rep Email: _____
 Date ESPA Submitted: _____

(b) Project Information:

Project Name: _____
 911 Service Address: _____
 Nearest Intersection: _____
 Service Provider: Austin Energy Other _____

(c) Project Type:

New Construction Remodel/Rebuild Traffic Signal
 Dual Feed Small Cell
 Estimated Service Need Date: _____

(d) Service Duration:

Permanent Service Construction Power/Temporary Service (less than 24 months)

III. Electrical Information

Refer to the appropriate table in the Austin Energy Criteria Manual for available electric services.

(a) Type of Service Requested:

Overhead Service
 Secondary Riser
 Underground Service
Downtown Network Options:
 Network Transformer Vault
 Network Underground Secondary

(b) Service Voltage Requested:

120/240 V, 1 ϕ , 3-Wire
 120/240 V, 3 ϕ , 4-Wire (Overhead or secondary riser only)
 120/208V, 3 ϕ , 4-Wire
 120/208V, 1 ϕ , 3-Wire (Network Only)
 277/480 V, 3 ϕ , 4-Wire
 7200/12470 V (Primary Meter)

(c) Additional Service & Electrical Load Information:

Building Use (Residential, Warehouse, Restaurant, Retail, Office, Mixed Use, etc.): _____
 FT²/Average Unit: _____ # Units: _____
 Total Building FT²: _____
 Fuel Type: All Electric Gas & Electric
 Total NEC-Calculated Load: _____ (amps)
 Service Wire Type, Size, & Quantity: _____
 Service Length: _____

(d) Main Disconnect (1st interrupting device) or Distribution Enclosure size (total of all meters):

200 Amps 600 Amps 1600 Amps
 350 Amps 800 Amps 2000 Amps
 400 Amps 1200 Amps Other _____

Note: Austin Energy may size equipment based on empirical data and not necessarily per the main disconnect size.

(e) New Meter Size(s):

List revenue meters only. For DG meters (solar, etc.) use DGPA.

1. Meter Can Size _____ (amps) x # Meters _____
 2. Meter Can Size _____ (amps) x # Meters _____
 3. Meter Can Size _____ (amps) x # Meters _____
 4. Meter Can Size _____ (amps) x # Meters _____

(For multiple meters attach a list of unit #'s.)

Number of existing meters: _____

Total number of meters after job is complete: _____

(f) Meter Enclosure(s):

Click here for list of approved [meter socket](#) and [meter hub](#) specifications and mfg #'s.

AE Metering Questions;
AEDistributionMetering@austinenergy.com

-----For internal use only-----

Design Required AE Work Request Number (WR#) _____
 Service Only
 AE Rep: _____ Phone: _____ Date: _____
 Comments: _____

Approval Stamp Verification

To conduct business online visit the AB+C Portal at <https://abc.austintexas.gov/web/permit>



Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
 Project Title: 33-1419 MLF Operations BLDG 4
 Project Type: New Construction

Construction Site:
 9301 Hog Eye Rd
 Austin, Texas 78724

Owner/Agent:

Designer/Contractor:
 Hollingsworth Pack

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts
1-Warehouse area (Warehouse)	6340	0.45	2853
2-Office area (Office)	2710	0.64	1734
Total Allowed Watts =			4587

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Warehouse area (Warehouse)				
B/BE: B: HIGH BAY PANEL: Other:	1	26	88	2288
2-Office area (Office)				
A/AE: A: 2X2 LED PANEL: Other:	1	23	16	359
C/CE: C: 2X4 LED PANEL: Other:	1	21	40	840
Total Proposed Watts =				3487

Interior Lighting PASSES: Design 24% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Buckley H. Parks, PE
 Name - Title

Signature



2024.04.29
 Date



Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
 Project Title: 33-1419 MLF Operations BLDG 4
 Project Type: New Construction
 Exterior Lighting Zone: 2 (Light industrial area with limited nighttime use (LZ2))

Construction Site:
 9301 Hog Eye Rd
 Austin, Texas 78724

Owner/Agent:

Designer/Contractor:
 Hollingsworth Pack

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Facade Light and entrance (Illuminated area of facade wall or surface)	6480 ft2	0.07	No	486
Loading Dock (Loading dock)	2700 ft2	0.35	Yes	945
Parking Lot (Parking area)	700 ft2	0.04	Yes	28
Total Tradable Watts (a) =				973
Total Allowed Watts =				1459
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
<u>Facade Light and entrance (Illuminated area of facade wall or surface, 6480 ft2): Non-tradable Wattage</u>				
WE: WE: Exterior Wall Sconce: Other:	1	11	10	110
<u>Loading Dock (Loading dock, 2700 ft2): Tradable Wattage</u>				
WP: WP: Exterior Wall Pack: Other:	1	4	71	284
<u>Parking Lot (Parking area, 700 ft2): Tradable Wattage</u>				
WP: WP: Exterior Wall Pack: Other:	1	2	71	142
Total Tradable Proposed Watts =				426

Exterior Lighting PASSES: Design 69% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Buckley H. Parks, PE

Name - Title

Signature



2024.04.29

Date



Inspection Checklist

Energy Code: 2021 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22] ¹	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern ≥ 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1, C405.2.1.1 [EL18] ¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces ≤ 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1.2 [EL19] ¹	Occupancy sensors control function in warehouses: In warehouses, the lighting in aiseways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1.3 [EL20] ¹	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces ≥ 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas ≤ 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by $\geq 80\%$ of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2, C405.2.2.1 [EL21] ²	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1)
 2 Medium Impact (Tier 2)
 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23] ²	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL27] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.7 [EL28] ¹	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL26] ²	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8 [EL27] ²	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9.1, C405.9.2 [EL28] ²	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.10 [EL29] ²	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.1.1 [EL30] ²	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.11, C405.11.1 [EL31] ²	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17] ³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.5.1 [FI19] ¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Exterior Lighting fixture schedule for values.</i>
C408.1.1 [FI57] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [FI16] ³	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [FI33] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------



COMcheck Software Version COMcheckWeb Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: 33-1419 MLF Operations BLDG 4
Location: Austin, Texas
Climate Zone: 2a
Project Type: New Construction

Construction Site: 9301 Hog Eye Rd
Austin, Texas 78724
Owner/Agent:
Designer/Contractor: Hollingsworth Pack

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Mechanical Systems List

Quantity System Type & Description

- 1 CU/FCU-01 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 38 kBtu/h,
Proposed Efficiency = 8.20 HSPF2, Required Efficiency = 7.50 HSPF2
Cooling Mode: Capacity = 52 kBtu/h,
Proposed Efficiency = 16.20 SEER2, Required Efficiency = 14.30 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 2000 CFM, 1.0 motor nameplate hp, 1.00 fan energy index
- 1 CU/FCU-02 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 31 kBtu/h,
Proposed Efficiency = 8.20 HSPF2, Required Efficiency = 7.50 HSPF2
Cooling Mode: Capacity = 33 kBtu/h,
Proposed Efficiency = 17.20 SEER2, Required Efficiency = 14.30 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

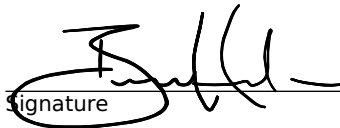
Fans:
FAN 2 Supply, Constant Volume, 1350 CFM, 0.8 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
- 1 CU/FCU-03 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 8 kBtu/h,
Proposed Efficiency = 9.00 HSPF2, Required Efficiency = 7.50 HSPF2
Cooling Mode: Capacity = 10 kBtu/h,
Proposed Efficiency = 18.40 SEER2, Required Efficiency = 14.30 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Brian Hockman, P.E.

Name - Title


Signature

04/30/2024

Date





Inspection Checklist

Energy Code: 2021 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
------------------------	--------------------------	-----------------------

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.13.2 , C403.13.3 [FO9] ³	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature above 50F and outdoor temperature above 40F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
------------------------	--------------------------	-----------------------

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
------------------------	--------------------------	-----------------------

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq R-3.5$.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.1 [ME65] ³	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.8.3 [ME117] ²	Fans have a fan energy index (FEI) ≥ 1.00 . Variable volume fans will have an FEI ≥ 0.95 .	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.4 [ME142] ²	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.6 [ME143] ²	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans $> 1/4$ hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.9 [ME144] ²	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3 [ME55] ²	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.2.2 [ME59] ¹	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.1 [ME59] ¹	Demand control ventilation provided for spaces >500 ft ² and >15 people/1000 ft ² occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow $>3,000$ cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.2 [ME115] ³	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.6 [ME141] ³	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.4 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.5 [ME116] ³	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.4 [ME63] ²	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.3, C403.11.3.1, C403.11.3.2 [ME123] ³	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2..	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26] ²	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8 [EL27] ²	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9.1, C405.9.2 [EL28] ²	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.10 [EL29] ²	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.1.1 [EL30] ²	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.11, C405.11.1 [EL31] ²	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [F18] ³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3.1 [FI27] ³	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1 [FI47] ³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.1 [FI42] ³	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.2 [FI38] ³	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.3 [FI20] ³	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.2 [FI39] ³	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.2.1, C403.4.2.2 [FI40] ³	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.2.3 [FI41] ³	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.1.1 [FI57] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.1 [FI28] ¹	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.1 [FI31] ¹	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [FI10] ¹	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [FI29] ¹	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [FI7] ³	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI43] ¹	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.2 [FI30] ¹	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
---	----------------------	---	------------------------	---	---------------------