8601 WEST DODGE ROAD STE. 101

DMAHA, NE.

ABBREVIATIONS

HD: High Density

HDWD: Hardwood

HDWE: Hardware

HORIZ: Horizontal

HDR: Héader

HGT: Height

HR: Hour

HT: Heiaht

HVY: Heavy

BHD: Bulkhead AB: Anchor Bolt BLDG: Building ABV: Above AC: Acoustical BLK: Block ACOUST: Acoustical BLKG: Blocking ACT: Acoustical Tile BLT-IN: Built-In BM: Beam AD: Access Door, Area Drain BN: Bullnose ADA: Americans with Disabilities Act

CNTR: Counter

SYMBOL

lacktriangle

PUSH SIDE

has a closer and a latch

12" if door

ADD: Addendum: Addition BP: Base Plate ADDL: Additional BPL: Bearing Plate ADJ: Adjustable, Adjacent BR: Bedroom AFF: Above Finished Floor BRDG: Bridge, Bridging AIA: American Institute of Architects BRG: Bearing ALT: Alternate BRZ: Bronze

TAG DESCRIPTION

DOOR NUMBER

COLUMN GRID

ROOM NAME AND

NUMBER

WINDOW FRAME TYPE

TOWEL DISPENSER

SIZE MAY VARY

UNDERSINK PIPE

INSULATION (TYP.)

SCHEDULE FOR ADDITIONAL INFORMATION.

SCALE: 1/4" = 1'-0"

WOMEN

ONLY WHERE OCCURS

ALUM: Aluminun AMT: Amount ANCH: Anchor ANOD: Anodized APPROX: Approximate ARCH: Architect ASPH: Asphalt

ASSY: Assemblu AT: Acoustical Tile ATM: Automatic Teller Machine AUTO: Automatic AVG: Average

B & B: Balled and Burlapped BALL: Ballast BD: Board BDRM: Bedroor BEL: Below

CIVIL ENGINEER

ASSOC: Association

BETW: Between

NOT USED

SYMBOL

ROOM NAME

(#)

PULL SIDE

24" preferred

18" minimum

CNTR: Counter C.O.: Cased Opening COL: Column CON: Construction CONC: Concrete COND: Condenser, Conduit CONN: Connection CONST: Construction BOT: Bottom CONT: Continuous, Contro

CT: Ceramic Tile BSMT: Basement DBL: Double BUR: Built-up Roof DEG: Dearee DEMO: Demolition CAB: Cabinet DEPT: Department CARP: Carpet DET: Detail CAT: Catalog

CER: Ceramic DIAG: Diagonal CFL: Counterflashina DIA: Diameter DIM: Dimension CG: Corner Guard CHAM: Chamfer DISP: Disposal, Dispenser CHAN: Channel DN: Down DR: Door, Dining Room CIP: Cast-in-Place DS: Downspout CJ: Control Joint CL: Centerline, Clearance CLG: Ceiling

DTL: Detail DWG: Drawing DWGS: Drawings CLOS: Closet DWR: Drawer CLR: Clear CLR OPG: Clear Opening EA: Each, Expansion Anchor CMU: Concrete Masonry Unit

TAG DESCRIPTION

ELEVATION

SPOT ELEVATION AND

DESCRIPTION

SPOT ELEVATION

WALL TYPE

PULL SIDE

54" min.

39"-41"

AT WOMEN'S

RESTROOM ONLY

42" @ X

36" @ Y

_____ _____ EF: Exhaust Fan EIFS: Exterior Insulation and Finish System EJ: Expansion Joint EL: Elevation, Elevator ELEC: Electrical ELEV: Elevator, Elevation

EPDM: Ethylene Propylene Diene Monomer EQ: Equal EQUIP: Équipment CONTR: Contractor EW: Each Way CORR: Corridor EMC: Electric Mater Cooler EXIST: Existing CPT: Carpet EXP: Expansión, Exposed

EXT: Exterior FABR: Fabricate F: File FD: Floor drain FDN: Foundation DF: Drinking Fountain FE: Fire Extinguisher FEC: Fire Extinquisher Cabinet FF: Finished Floor

FFE: Finished Floor Elevation FGR: Fiberalass reinforced FIN: Finish, finished FIXT: Fixture FL: Floor FLASH: Flashina FLR: Floor

SYMBOL

VIEW

BABY CHANGING

SCALE: 1/4" = 1'-0"

CABINET

(IF USED)

FAMILY

RESTROOM

IN: Inch FLUOR: Fluorescent INFO: Information FR: Frame INSUL: Insulation FT: Foot, Feet INT: Interior FTG: Footing FURN: Furnish Furniture J-BOX: Junction Box

TAG DESCRIPTION

PLUS / MINUS

DEGREES

SECTION MARKER

PULL SIDE

24" minimum

FUT: Future JST: Joist F.V.: Field Verify JT: Joint GA: Gauge GALV: Galvanized KIT: Kitchen GC: General Contractor L: Angle, Length GEN: General, Generator LAB: Laboratory GL: Glass LAM: Laminate, Laminated GND: Ground LAV: Lavatory GRAN: Granular, Granite LB: Pound (weight, GYP: Gypsum LIBR: Library GYP BD: Gypsum Board LIN: Linear LT: Light LTG: Līghting HB: Hose Bib HC: Handicapped

MACH: Machine MAINT: Maintenance MAS: Masonru MAT: Materia MATL: Material MAX: Maximum MECH: Mechanica MED: Medium HVAC: Heating, Ventilating & Air Conditioning MET: Metal MEZZ: Mezzanine

JAN: Janitor

MFR: Manufacture, Manufacturer MIN: Minimum MISC: Miscellaneous MLDG: Molding MO: Masonry Openina MTD: Mountéd MULL: Mullion

NIC: Not In Contract NOM: Nominal NTS: Not To Scale OC: On Center OFF: Office OHD: Overhead Door OPNG: Openina OPP: Opposité ORD: Overflow Roof Drain P. LAM: Plastic Laminate PE: Porcelain Enamel, Professional Enginee PED: Pedestal, Pedestrian PERF: Perforated PERIM: Perimeter RM: Room PERP: Perpendicular

PKG: Parking PL: Plate, Plan, Plastic Laminate, Plastic PLAS: Plaster, Plastic PLAS LAM: Plastic Laminate PLYMD: Plymood PLUMB: Plumbing PNL: Panel PNT: Paint POL: Polish, Polished PR: Pair

PRE: Prefinished PREFAB: Prefabricated PT: Paint PVC: Polyvinyl Chloride PVMT: Pavement PWR: Power

QTY: Quantity R & S: Rod and Shelf RA: Return Air, Registered Architect RAD: Radius RCP: Reinforced Concrete Pipe RD: Roof Drain REBAR: Reinforcing Bar REC: Receiver RECEPT: Receptacle REFL: Reflected REFR: Refrigerate, Refrigerator REINF: Reinforcement, or Reinforce REQD: Required

REV: Reverse RO: Rough Opening ROW: Right of Way RT: Rubber Tile SAN: Sanitary SC: Solid Core SCHED: Schedule SECT: Section

SECY: Secretary SERV: Service SF: Square Foot SHT: Sheet SHEATH: Sheathing SHWR: Shower SIM: Similar SPEC: Specification, Specifications

VAR: Varies VB: Vapor Barrier, Vinul Base VCT: Vinyl Composition Tile VERT: Vértical VEST: Vestibule SPK: Speaker SQ: Savare

VMC: Vinyl Wall Covering M: Width W/: With W/O: Without **MB:** Mood Base MC: Watercloset MD: Wood MDM: Window WH: Water Heater MSCT: Wainscot MT: Weight MMF: Welded Wire Fabric 三日

S

SHEET INDEX

NGINEER	MECHANICAL ENGINEER	ELECTRICAL ENGINEER
HAINLLIL	WILOT IT TIMOT IL LINGTINELIT	LLLOTTIONL LINGINLLIT

ARCHITECT STRUCTURAL EN RYAN PELSTER STAN HOW III STANLEY J. HOW ARCHITECTS, INC. PERFORMANCE ENGINEERING 14685 CALIFORNIA STREET 11811 FORT STREET, SUITE 104 OMAHA, NEBRASKA 68154 OMAHA, NEBRASKA 68164 PHONE: 402-964-9000 PHONE: 402-343-3960 EMAIL: sjh@asdhow.com EMAIL: rpelster@performancese.com

EB: Expansion Bolt

PROJECT CONTACTS

SYMBOL LEGEND

MINIMUM MANEUVERING CLEARANCES AT DOORS

TAG DESCRIPTION

CENTER LINE

DIAMETER

PLATE

ANGLE

FIRE EXTINGUISHER

PUSH SIDE

24" minimum

NICK LIMPACH MORRISSEY ENGINEERING 4940 NORTH 118TH STREET OMAHA, NEBRASKA 68164 PHONE: 402-491-4144 EMAIL: nlimpach@morrisseyengineering.com

GEORGE MORRISSEY MORRISSEY ENGINEERING 4940 NORTH 118TH STREET OMAHA, NEBRASKA 68164 PHONE: 402-491-4144 EMAIL: gmorrissey@morrisseyengineering.co

SYMBOL

DETAIL

TAG DESCRIPTION

DETAIL MARKER

PUSH SIDE

22" minimum ...

+ -----

ACCESSIBLE

BREAKROOM

DISPERSAL

•••••••

AREA

SIGNAGE

A2.1 FLOOR PLAN, SCHEDULES, NOTES AND DETAILS

A2.2 EGRESS FLOOR PLAN AND NOTES

A4.2 SECTIONS AND DETAILS

A5.1 REFLECTED CEILING PLAN, NOTES AND ROOF PLAN

PROJECT MANUAL

GENERAL SPECIFICATIONS PM-2 GENERAL SPECIFICATIONS

A1.1 PROJECT COVER SHEET, SHEET INDEX, SYMBOLS,

ABBREVIATIONS .DETAILS. COMCHECK AND CODE INFORMATION A1.2 EXISTING BUILDING REFERENCE SITE PLAN

ARCHITECTURAL

A2.0 DEMOLITION FLOOR PLAN AND NOTES

A3.1 DOOR AND FRAME ELEVATIONS, ELEVATIONS, SECTIONS AND DETAILS A3.2 ELEVATIONS

A4.1 SECTIONS AND DETAILS

PM-3 GENERAL SPECIFICATIONS

PROPOSED MEXICAN RESTAURANT TENANT

8601 WEST DODGE ROAD SUITE 101

ASI #1 PLAN REVIEW FORM 2018 INTERNATIONAL EXISTING BUILDING CODE 2012 LIFE SAFETY CODE CLASSIFICATION TYPE: CHANGE OF OCCUPANCY PROJECT NAME:

OMAHA, NE. 68114 NATE DODGE N.P. DODGE COMPANY 8701 WEST DODGE ROAD OMAHA, NE. 68114 402-397-4900

402-964-9000

ARCHITECT: REGISTERED DESIGN PROFESSIONAL STANLEY J. HOW ARCHITECTS, INC 14685 CALIFORNIA STREET OMAHA, NE 68154 REGISTERED DESIGN PROFESSIONAL STANLEY J. HOW III EMAIL: sih@asdhow.com

I. CONSTRUCTION TYPE, USE, HEIGHT AND AREA TYPE OF BUILDING CONSTRUCTION: II-B (EXISTING)

NUMBER OF STORIES: 3 (EXISTING) TOTAL BUILDING AREA: 72,716 SQUARE FEET (EXISTING) AREA PER FLOOR: IST: 22,042 (EXISTING) 2ND: 25,337 (EXISTING) 3RD: 25,337 (EXISTING) SPRINKLER SYSTEM: NFPA 13 (EXISTING)

PROPOSED TENANT (LOWER LEVEL): MEXICAN RESTAURANT, BAR AND PATIO, OCCUPANCY TYPE: A-2

RESTAURANT AREA: 2,197 S.F. COOLER/FREEZER/PANTRY: 437.5 S.F. TOTAL: 2,634.5 S.F. PATIO: 599 S.F. CONSTRUCTION TYPE: II-B SPRINKLER SYSTEM: NFPA 13 OCCUPANCY SEPARATION: I HOUR RATED CONSTRUCTION BETWEEN 'A' AND 'B' OR 'M'

3. LIVE LOADS ROOF: (INCLUDING DRIFTS) IBC MIN: 25 LBS/SQ. FT. DESIGNED: 25 LBS/SQ. FT. (EXISTING) IBC MIN: 100 LBS/SQ. FT. DESIGNED: 100 LBS/SQ. FT. (EXISTING) FLOORS: CORRIDORS: IBC MIN: 100 LBS/SQ. FT. DESIGNED: 100 LBS/SQ. FT. (EXISTING) IBC MIN: 115 MPH / EXP. 'B' DESIGNED: 115 MPH / EXP. 'B' (EXISTING)

WIND LOAD: 4. FIRE PROTECTION REQUIRED BASED ON TYPE OF CONSTRUCTION (IBC TABLES 601 \$ 602)

EXTERIOR BEARING WALLS: REQUIRED: 0 HR. PROVIDED: 0 HR INTERIOR BEARING WALLS: REQUIRED: 0 HR. PROVIDED: 0 HR PROVIDED: 0 HR EXTERIOR NON-BEARING WALLS: REQUIRED: 0 HR. PROVIDED: 0 HR STRUCTURAL FRAME REQUIRED: REQUIRED: 0 HR. FIRE WALLS: (IBC SECTION 705) REQUIRED: 3 HR. PROVIDED: N/A SHAFT ENCLOSURES: REQUIRED: I HR. PROVIDED: I HR. FLOORS: REQUIRED: 0 HR. PROVIDED: 0 HR ROOFS: REQUIRED: 0 HR. PROVIDED: 0 HR ROOFING MATERIAL CLASS: REQUIRED: B PROVIDED: B OPENINGS IN EXTERIOR WALLS: REQUIRED: 0 HR. PROVIDED: N/A PARAPETS: (IBC SECTION 704.II) REQUIRED: NO PROVIDED: NO

5. EXIT REQUIREMENTS (IBC CHAPTER 10) NUMBER OF EXITS TOTAL TENANT SPACE EXIT WIDTH TO EXTERIOR MAXIMUM DISTANCE TO AN EXIT: CORRIDOR WIDTH: CORRIDOR PROTECTION REQUIRED:

REQUIRED: 2 REQUIRED: 33" (36" MIN.) ALLOWED: 250' MOST RESTRICTIVE PROVIDED: +/- 150' REQUIRED: 3 FT. 8 IN. REQUIRED: YES

REQUIRED: NO

PROVIDED: N/A/ PROVIDED: N/A

PROVIDED: 2

PROVIDED: 72"

MECHANICAL

M0.1 FLOOR PLAN - MECHANICAL DEMO

SS: Stainless Steel

STRUCT: Structural

T: Tread, Thermostat

T&B: Top and Bottom

T&G: Tonque & Groove

SUSP: Suspended, Suspend

STD: Standard

STOR: Storage

STL: Steel

SM: Switch

SYS: System

TB: Towel Bar

TEL: Telephone

TEMP: Tempered

TERR: Terrazzo

TLT: Toilet

TYP: Typical

UR: Urinal

UT: Utility

TV: Television

THRESH: Threshold

UNEXC: Unexcavated

UNO: Unless Noted Otherwise

USG: United States Gupsum Company

UNFIN: Unfinished

M1.1 FLOOR PLAN - HVAC M2.1 FLOOR PLAN - PIPING

M3.1 MECHANICAL DETAILS M4.1 MECHANICAL SCHEDULES M5.1 MECHANICAL SPECIFICATIONS

M6.1 MECHANICAL SUPPLEMENTAL DRAWINGS M6.2 MECHANICAL SUPPLEMENTAL DRAWINGS

ELECTRICAL

E1.1 ELECTRICAL PLANS

E2.1 ELECTRICAL SPECIFICATIONS



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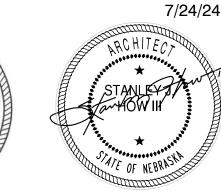
I, STANLEY J. HOW III, AM THE COORDINATING PROFESSIONAL ON THE 8601 DODGE STREET SUITE 101 PROPOSED MEXICAN

RESTAURANT PROJECT.

Report date: 07/03/24



Project Title: Proposed Mexican Restaurant (storage space only)



<u>ACCESSIBLE SIGNAGE TYPICAL NOTES:</u> (NOT ALL SIGNS SHOWN ARE USED)

UNISEX

ACCESSIBLE

MOUNT ON WALL ADJACENT TO LATCH SIDE OF DOOR, 60" MAX. TO 48" MIN. FROM FLOOR TO TACTILE CHARACTERS OF SIGN AND APPROXIMATELY 4" AWAY FROM THE DOOR FRAME. MOUNT WITH SILASTIC ADHESIVE, SUITABLE FOR ADHESION TO PAINT OR VINYL. MOUNTING HEIGHTS SHALL BE VERIFIED TO MEET ALL LOCAL, STATE OR FEDERAL CODES THAT APPLY (VERIFY). 2. PICTOGRAM SHALL BE 1/32" RAISED, SOLID COLOR EQUAL TO ASI, DARK GREY SC-904 IN A 6" HIGH PICTOGRAM AREA. BACKGROUND COLOR EQUAL TO ASI LIGHT BEIGE #SC-806.

3. VERBIAGE SHALL BE SANS SERIF LETTERING STYLE, 1/32" RAISED, 3/4" HIGH, UPPERCASE LETTERS, SOLID COLOR EQUAL TO ASI, DARK GREY SC-904 WITH GRADE 2 BRAILLE TACTILE CHARACTERS. 4. PROVIDE SIGNAGE AS REQUIRED BY CODE, CONTRACTOR SHALL VERIFY.

5. SIGNS SHALL BE EQUAL TO ASI, INTAC SERIES 0.125 ACRYLIC FACEPLATE 7" x 9" (OR 7" x 4" AS SHOWN) WITH RADIUS CORNERS.

MISCELLANEOUS ACCESSORY MOUNTING LOCATIONS

ACCESSORIES SHOWN ABOVE ARE FOR REFERENCE ONLY AND MAY NOT BE THE ACTUAL ACCESSORY TYPE. SEE RESTROOM ACCESSORY

ACCESSIBLE

SHOWER

• • • • • •

ALL RESTROOM ACCESSORIES AND FIXTURES SHALL BE MOUNTED AT HEIGHTS AND LOCATIONS AS SPECIFIED BY LOCAL, STATE OR

FEDERAL CODES THAT APPLY, CONTRACTOR SHALL VERIFY WITH GOVERNING JURISDICTION BEFORE INSTALLATION.

ICAL ACCESSIBLE SIGNAGE AI. / SCALE: 3" = 1'-0'

SCALE: 3" = 1'-0"

SHOWER

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ELECTRIC HAND

DRYER

(IF USED)

AREA OF

REFUGE

PATHWAY

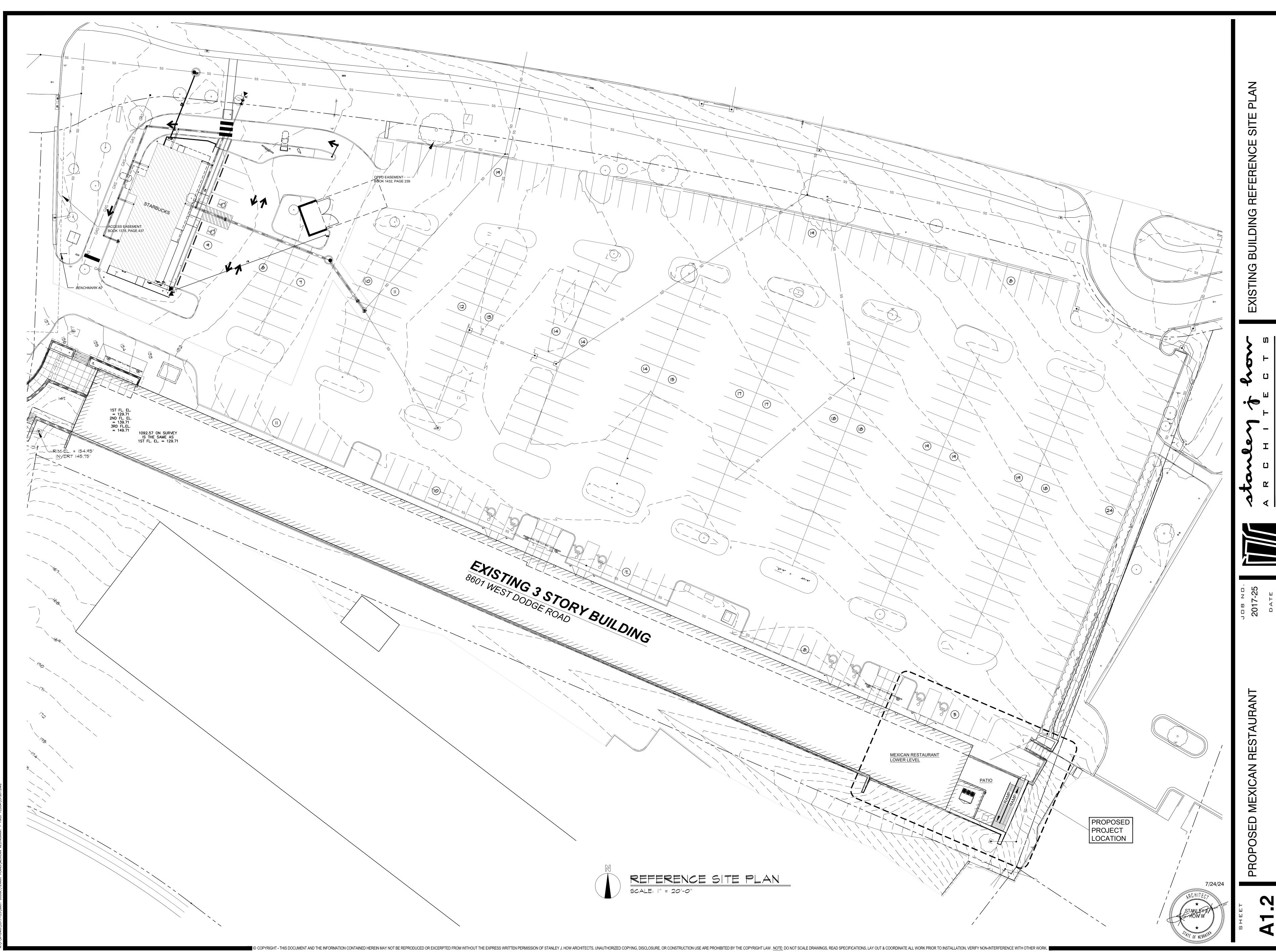
DRAFT STOPS: (IBC SECTION 717)

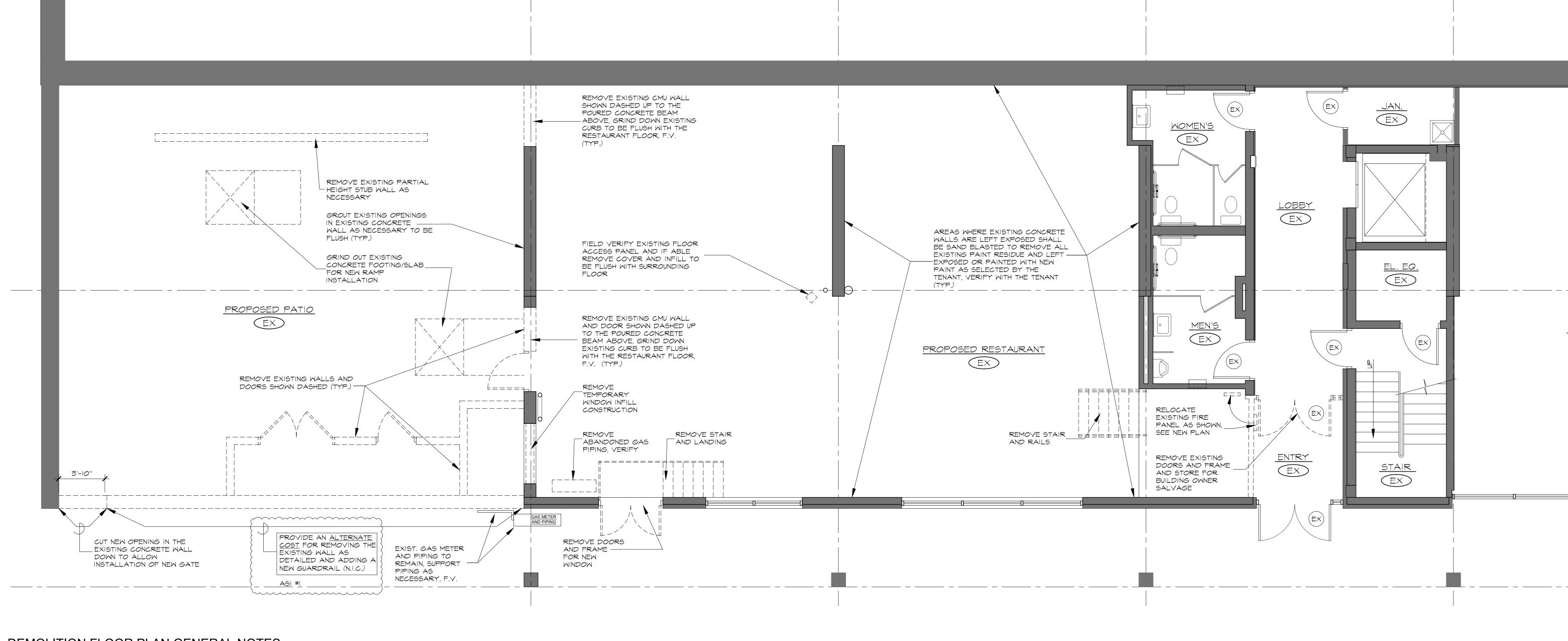
6. ENERGY COMPLIANCE: SEE MECHANICAL / ELECTRICAL DRAWINGS FOR APPLICABLE COM-CHECK FORMS

PROVIDED: NO

(402) 343-3960 Fax: (402) 343-3961 PE #: 240647

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- 1. GENERAL AND SUB CONTRACTORS SHALL FIELD VERIFY EXISTING CONDITION OF SITE, ALL STRUCTURES, EQUIPMENT AND DEVICES.
- 2. ALL EXISTING FINISHES SHALL BE REMOVED AND SURFACES PREPARED TO RECEIVE NEW FINISHES AS SCHEDULED, U.N.O.
- ALL DOORS, FRAMES, WINDOWS, MILLWORK, FIXTURES, ETC... SHOWN DASHED SHALL BE REMOVED, U.N.O.
- 4. WALLS SHOWN ARE EXISTING WALLS TO REMAIN.
- WALLS SHOWN ____ ARE EXISTING WALLS TO BE REMOVED. ALL DEMOLISHED MATERIALS SHALL BE REMOVED COMPLETELY FROM SITE.
- ALL SURFACES TO RECEIVE NEW FINISHES SHALL BE PREPARED AS NECESSARY TO ENSURE THE PROPER
- APPLICATION OF THE NEW FINISHES.
- 7. ANY DAMAGED OR MODIFIED WALLS, FLOORS OR CEILINGS SHALL BE PATCHED AND REPAIRED AS NECESSARY TO MATCH ADJACENT SURFACES.
- 8. ALL AREAS WHERE THE CONCRETE FLOOR IS MISSING SHALL BE INFILLED WITH GRANULAR FILL AND NEW 5" CONCRETE SLAB ON STEGO VAPOR BARRIER. FLOOR SHALL BE FLUSH WITH ADJACENT FLOORS.
- 9. ALL ITEMS SHOWN DASHED SHALL BE REMOVED AS NOTED.

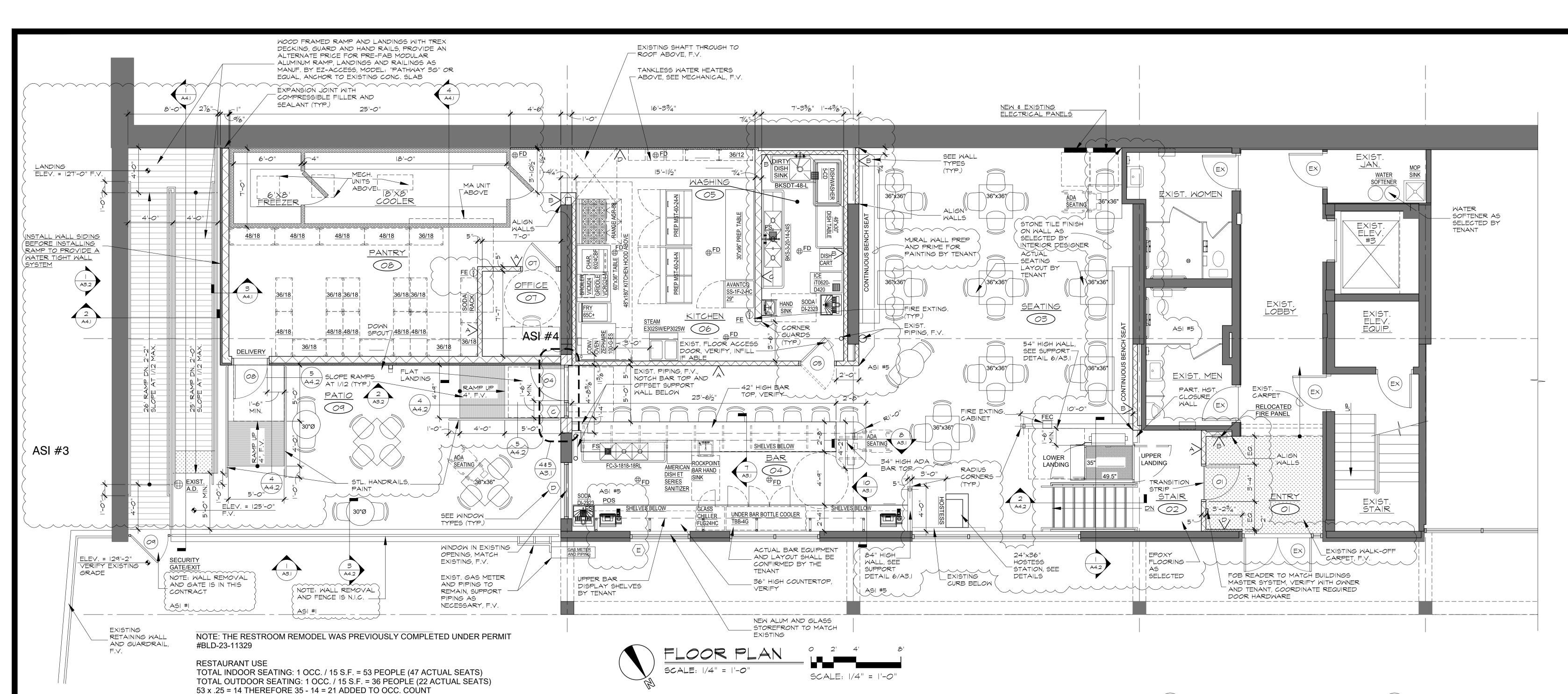


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L & 4 G

ASI ASI ASI ASI



FLOOR PLAN GENERAL NOTES

TOTAL RESTAURANT CAPACITY: 74 PEOPLE (69 ACTUAL SEATS)

34 MEN (REQ'D) = $1 \underline{WC}$, $0 \underline{UR}$, $1 \underline{LAV}$ (PROVIDED) = $1 \underline{WC}$, $1 \underline{UR}$, $1 \underline{LAV}$

NOTE: FIXTURE COUNT CONFIRMED AS ACCEPTABLE WITH FRANK REIDA AND MARTIN

*= DF NOT REQUIRED IS WATER IS PROVIDED FOR FREE PER NOTE 1

GOMEZ WITH THE CITY OF OMAHA PLUMBING DEPARTMENT PER PHONE

(PROVIDED) = 2 WC, 1 LAV

(PROVIDED) = 1 HIGH/LOW DF*

(PROVIDED) - 1

7/8" MET.

FURRING —

@ 16" O.C.

SCALE: 1/2" = 1'-0"

OCCUPANTS = 34 MEN, 34 WOMEN

34 WOMEN (REQ'D) = 2 WC, 1 LAV

DRINKING FOUNTAIN (REQ'D) = 1 DF,

5/8" GYF

6" MET. _

STUDS @ 16"

BD.

MOP SINK (REQ'D) = 1

CONVERSATION ON 9/7/2023.

CONC. CEILING TEE STRUCT.

BATT INSUL.,

MET. STUDS

SCALE: 1/2" = 1'-0"

@ 16" O.C.

WHERE

OCCURS

BATT INSUL.

MET. STUDS @ —

WHERE

OCCURS

16" O.C.

NOTE: WALL FINISHES SHALL BE SELECTED BY THE TENANT.

FIXTURE REQUIREMENT PER TABLE 49-722(3)

GENERAL AND SUB CONTRACTORS SHALL FIELD VERIFY EXISTING CONDITION OF SITE, ALL STRUCTURES AND DEVICES.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS GENERAL CONTRACTOR SHALL PROVIDE APPROPRIATE WOOD BLOCKING AT ALL WALL MOUNTED ITEMS.

DOORS WITH AN 'EX' TAG ARE EXISTING DOORS TO REMAIN, CONTRACTOR SHALL FIELD VERIFY EACH DOOR, FRAME AND TRIM TO DETERMINE THAT THEY ARE IN GOOD CONDITION AND IF NOT SHALL BE REPLACED WITH NEW. DOOR HARDWARE SHALL BE REPLACED AS NOTED.

WALLS SHOWN ARE EXISTING WALLS TO REMAIN.

WALLS SHOWN ARE NEW METAL STUD / FURRING FRAMING WITH 5/8" GYP BD, ALL WALLS BETWEEN KITCHEN/WASHING AND THE SEATING/BAR AREA SHALL HAVE SOUND BATT INSULATION.

ALL SURFACES TO RECEIVE NEW FINISHES SHALL BE PREPARED AS NECESSARY TO ENSURE THE PROPER APPLICATION OF THE NEW FINISH. ALL FINISHES SHALL BE SELECTED BY THE TENANT AND INSTALLED BY THE CONTRACTOR, VERIFY

ALL KITCHEN, BAR, COOLER/FREEZER AND OTHER EQUIPMENT SHALL BE SELECTED AND APPROVED BY THE TENANT

CONTRACTOR SHALL VERIFY WITH SPACE PROVIDED AND ENSURE THAT ALL UTILITY CONNECTIONS ARE PROVIDED FOR IT TO OPERATE AS INTENDED. 10. ANY DAMAGED OR MODIFIED WALLS, FLOORS OR CEILINGS SHALL BE PATCHED AND REPAIRED AS NECESSARY TO MATCH

ADJACENT SURFACES.

11. ALL GYP BD IN THE KITCHEN AND BAR AREAS SHALL BE GREEN BOARD OR EQUAL WATER RESISTANT BOARD AS DETAILED. 12. 'FD' INDICATES FLOOR DRAIN, 'FE' INDICATES FIRE EXTINGUISHER, 'FEC' INDICATES FIRE EXTINGUISHER CABINET AND 'FS'

INDICATES FLOOR SINK, 'AD' INDICATES AREA DRAIN. ALL OUTSIDE CORNERS SHALL IN THE GYP BD AND STUCCO WALLS SHALL BE RADIUSED CORNERS.

DO 014		K	00			· · · ·	H CEILING			DULE
ROOM NO	ROOM NAME	FLOOR	BASE	CONST	1	MATL	FIN	HGT	RMRK NO	REMARKS
01	ENTRY	EPOXY	VINYL	l STUCCO	EXPOSED / PAINT	GYP BD	PAINT	EXIST./ GYP BD	1, 2, 5	I. PREP ALL EXISTING SURFACES AS NECESSARY TO BE UNIFORM
<i>0</i> 2	STAIR	EPOXY	VINYL	STUCCO	EXPOSED / PAINT	EXIST	PAINT	EXPOSED	1, 2, 5	AND SMOOTH READY TO ACCEPT NEW FINISHES. 2. WALKOFF CARPET SHALL MATCH EXISTING LOBBY ENTRY
<i>0</i> 3	SEATING	EPOXY	VINYL	STUCCO/ GYP BD	EXPOSED / PAINT	EXIST	PAINT	EXPOSED	1, 5, 6	GARPET, VERIFY WITH BUILDING OWNER. 3. ALL PAINT SHALL BE EPOXY PAINT.
04	BAR	EPOXY	VINYL	EX.CONC/ STUCCO	EXPOSED / PAINT	EXIST	PAINT	EXPOSED	1, 3, 5	4. CEILING GRID SHALL BE ALUMINUM AND ACOUSTIC TILES SHALL
<i>0</i> 5	DISH WASHING	EPOXY	EPOXY	GYP BD	FRP	ACOUST	ACT-I	9'-0"	l, 4	BE CLEANABLE. 5. ALL INTERIOR EXPOSED CONCRETE WALL SHALL BE SAND
06	KITCHEN	EPOXY	EPOXY	GYP BD	FRP	ACOUST	ACT-I	9'-0"	I, 4	BLASTED TO REMOVE EXISTING PAINT AND LEFT AS BARE
07	OFFICE	EPOXY	VINYL	EX.CONC/ GYP BD	PAINT	ACOUST	ACT-2	8'-0"	1	CONCRETE OR NEW PAINT AS SELECTED BY TENANT, VERIFY. 6. SEE PLAN FOR GYP BD WALL (MURAL WALL) AND WALL TO
08	PANTRY	EPOXY	VINYL	EX./G.B./ COOLER	PAINT	GYP BD	PAINT	EXPOSED	I	RECEIVE STONE TILE AS SELECTED BY THE INTERIOR DESIGNER.
	RAL NOTES: EPOXY AND VINYL BASES SHA	LL BE COVED	EXCEPT	AT CARPE	TED ARE	\S.		1		

ACT-1: ARMSTRONG 24"x24" KITCHEN ZONE OR EQUAL ACT-2: ARMSTRONG 24"x24" OPTIMA OR EQUAL. VERIFY CEILINGS WITH TENANT. ALL GYP BD IN THE KITCHEN AND BAR AREAS SHALL BE GREEN BOARD OR EQ. WATER RESISTANT BOARD AS DETAILED. . ALL OUTSIDE CORNERS SHALL HAVE RADIUSED CORNERS.

<u> </u>		<u> </u>			<u> </u>	<u> </u>	\sim				$\nearrow \bigcirc$		<u> </u>	
		DO)R		۷D	F	RA	M	_	SC	СН	EDI		_E
DOOR	DOOR				FRAME	<u>-</u>	F	RAME	DETA	AIL .	HDW	RMRK.		DEMARKS
NO	SIZE	MAT.	TYPE	MAT.	TYPE	DEPTH	HEAD	JAMB	JAMB	SILL	SET	NO.		REMARKS
01	3'-0" x 7'-0" x 3/4"	WOOD/GL	6	HOL MET	А	5 3/4"	3/A3.I	3/A3.I			1	1, 2, 4	١.	DOOR TYPE SHALL MATCH EXISTING
04	3'-0" × 7'-0"	ALUM/GL	4	ALUM	C	4 1/2"					2	1, 2		BUILDING DOOR TYPES.
<i>0</i> 5	ELIASON BI-SWING 3'-0"x7'-0"	ALUM/GL	3	HOL MET	В	5 3/4"	3/A3.I	3/A3.I					2.	HARDWARE SHALL MATCH BUILDING
07	3'-0" × 7'-0" × 3/4"	SC WOOD	1	HOL MET	Α	5 3/4"	3/A3.I	3/A3.I			3			STANDARD MANUFACTURER AND FINISH AND CONFORM TO TENANTS
08	3'-0" × 7'-0" × 3/4"	HOL MET	2	HOL MET	Α	5 3/4"	3/A3.I	3/A3.I			4	1, 2		LOCKING REQUIREMENTS, VERIFY.
09	3'-8" x 7'-0" GATE	STEEL	5								5	3	3.	GATE SHALL BE LOCKABLE FROM
														THE EXTERIOR AND HAVE A PANIC BAR EXITING DEVICE. SYSTEM SHALL
														BE POWDER COATED GALVANIZED
														STEEL. PROVIDE ALTERNATE COST TO REMOVE ENTIRE NORTH WALL AND
														INSTALL GUARDRAIL SYSTEM.
													4.	DOOR AND FRAME SHALL BE ONE
														HOUR RATED WITH FIRELITE RATED GLAZING.

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HINGES:

I DRIP CAP

I. ALL NEW DOOR HARDWARE (HINGES, LOCKSETS, PASSAGE SETS, CLOSERS, PUSH / PULLS, ETC...) SHALL BE MEDIUM COMMERCIAL GRADE HARDWARE AS SELECTED BY THE TENANT. KEYING SHALL BE PER THE TENANTS INSTRUCTIONS.

HARDWARE SHALL BE EQUAL TO THE FOLLOWING: HAGER, MCKINNEY, STANLEY OR EQUAL LOCKSETS,

LATCHSETS, DEADBOLTS, CYLINDERS AND COVERS: SCHLAGE, BEST, YALE, WEISER OR EQUAL WALL STOPS: IVES, QUALITY OR EQUAL LCN, NORTON OR EQUAL CLOSERS: OVERHEAD STOPS: GLYNN-JOHNSON OR EQUAL

YON DUPRIN OR EQUAL EXIT DEVICES: SEALS AND THRESHOLDS: PEMKO, REESE OR EQUAL

DOOR AND FRAME SCHEDULE GENERAL NOTES:

2. FINISH SHALL BE SELECTED BY THE TENANT. CONTRACTOR SHALL VERIFY PASSAGE SET / LOCKSET LOCATIONS WITH THE TENANT. KEYING OF ALL LOCKS SHALL BE COORDINATED WITH THE TENANT.

**COORDINATE INSTALLATION AND HARDWARE WITH BUILDINGS STANDARD SECURITY SYSTEMS AND TENANTS SECURITY REQUIREMENTS. ADJUST HARDWARE

SCHEDULE OF HARDWARE:

SET NO. 1: DOOR OI | |/2 PAIR BUTTS AB800 4 |/2 X 4 |/2 X NRP I PUSH MATCH BUILDING STANDARD MATCH BUILDING STANDARD I ELECTRIC STRIKE 9600 630

SHOWN TO COMPLY WITH SECURITY REQUIREMENTS AND TO FUNCTION AS INTENDED

I POWER SUPPLY PS902 YON DUPRIN I CLOSER 4110-CUSH I OVERHEAD STOP 90 SERIES GLYNN-JOHNSON

<u>SET NO. 2:</u> DOOR 04 BY OTHERS 2 PAIR BUTTS AB800 5" x 4" NRP HAGER I CLOSER 4110 CUSH LCN

2 OFFSET PUSH / PULL CPN KAWNEER I THRESHOLD KAWNEER I SET WEATHER STRIPPING KAWNEER NOTE: VERIFY WITH BUILDING STANDARD DOOR AND FRAME HARDWARE.

<u>SET NO. 3:</u> DOOR 07 | 1/2 PAIR BUTTS AB700 4 1/2 x 4 1/2 HAGER I CLASSROOM SET SAT x STOPD SCHLAGE

I WALL STOP 401 IVES <u>SET NO. 4:</u> DOOR 08 I I/2 PAIR BUTTS AB700 4 $I/2 \times 4$ I/2 NRP HAGER I STOREROOM LOCK SET SAT x S80PD SCHLAGE I DEAD BOLT, SINGLE CYLINDER SCHLAGE CLOSER 4110 CUSH THERMALLY BROKEN WITH SEAL THRESHOLD S501A REESE I WEATHER STRIPPING REESE I SILL SWEEP 362A REESE

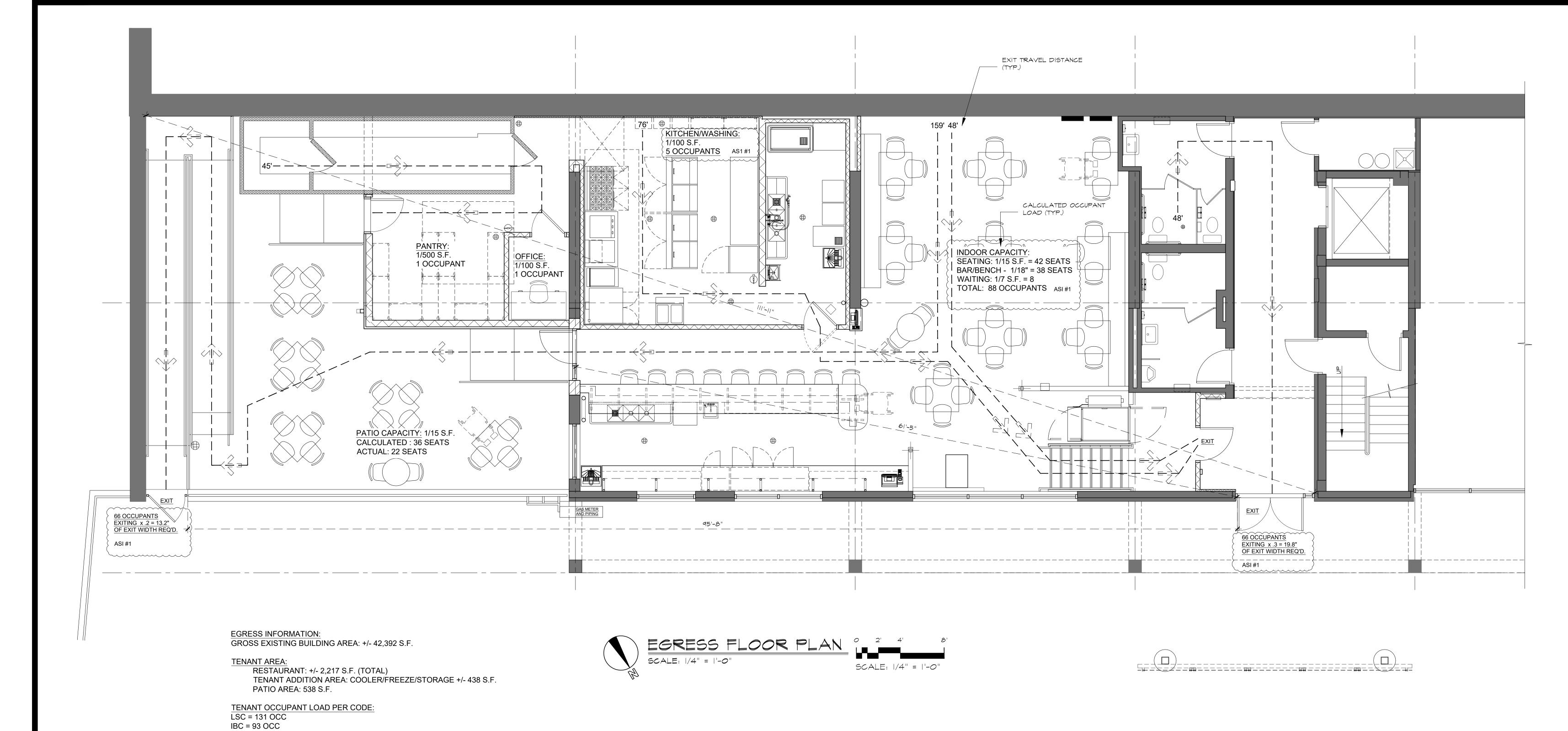
NOTE: VERIFY WITH BUILDING STANDARD DOOR AND FRAME HARDWARE.

<u>SET NO. 5:</u> GATE 09 I PAIR SELF CLOSING HINGES SYSTEM MANUF. AS SELECTED I CYLINDER LOCK SYSTEM MANUF. AS SELECTED I PANIC EXIT DEVICE SYSTEM MANUF. AS SELECTED

REESE

NOTE: VERIFY SYSTEM AS SELECTED AND APPROVED BY THE BUILDING OWNER.

7/24/24

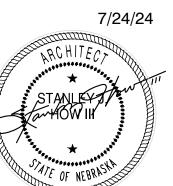


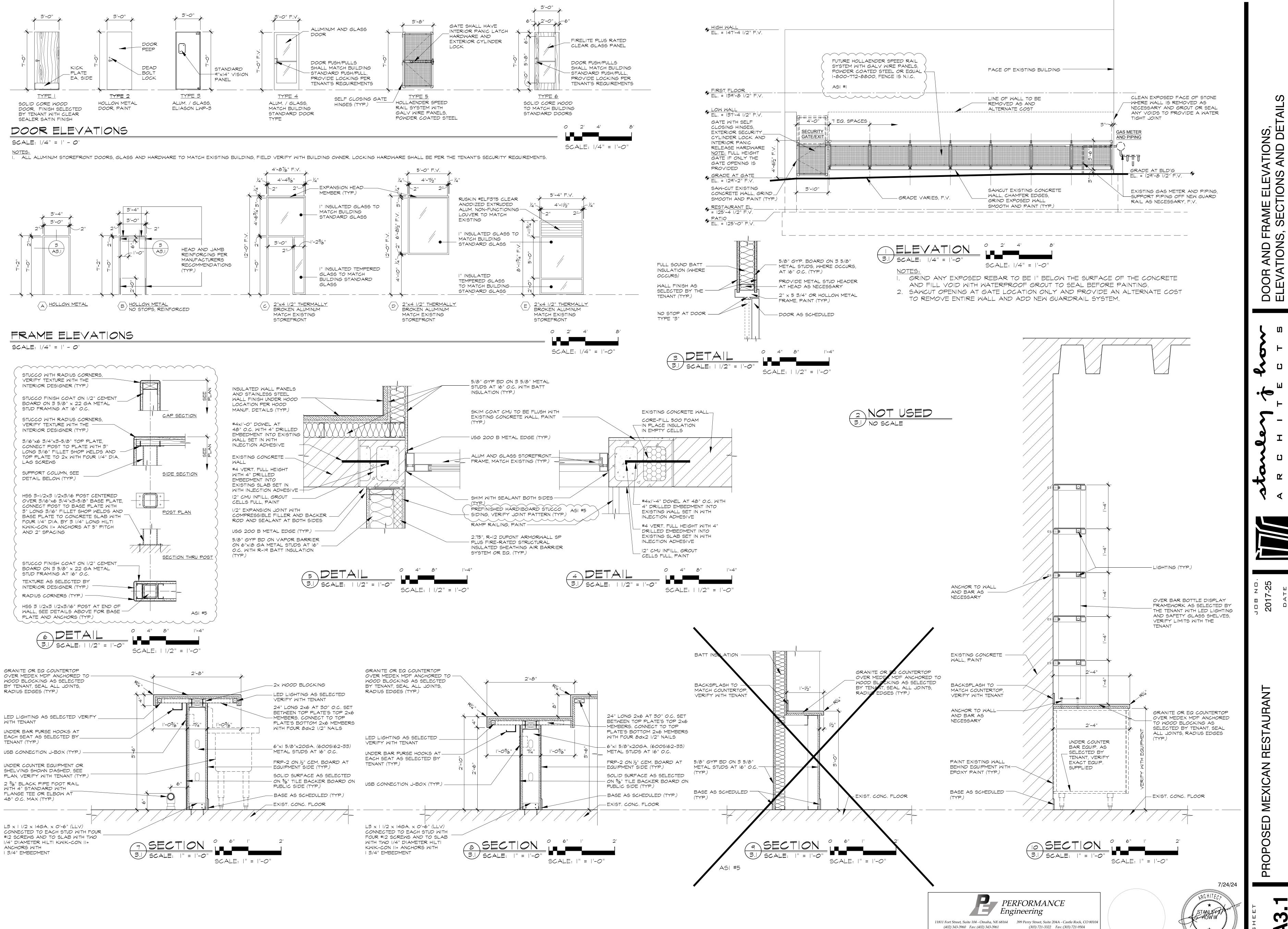
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1. LSC = LIFE SAFETY CODE, IBC = INTERNATIONAL BUILDING CODE.

ROOM OR SPACE TYPE AND NUMBER OF OCCUPANTS.

2. SEE EGRESS FLOOR PLAN FOR OCCUPANCY LOAD FACTOR PER EACH

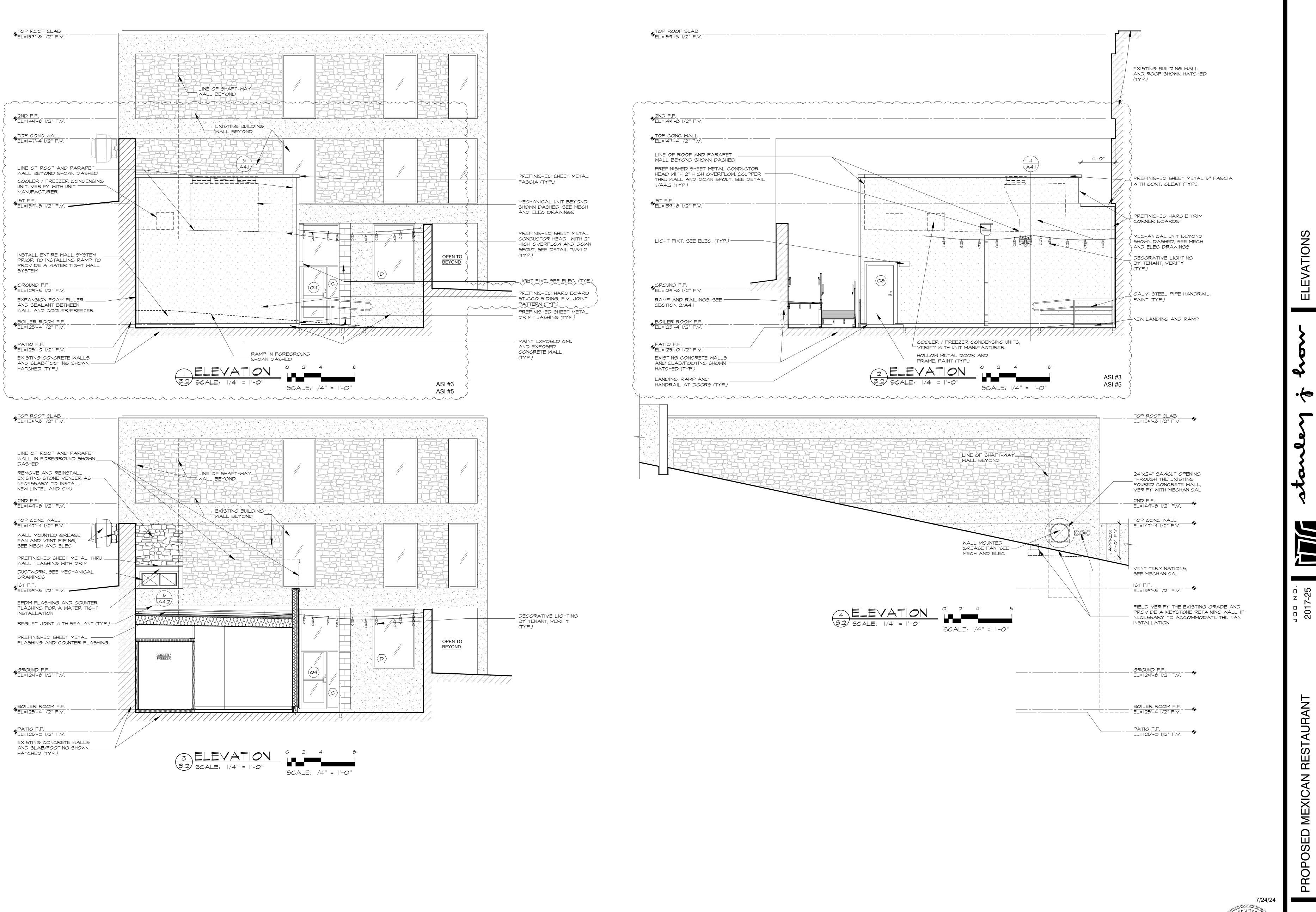




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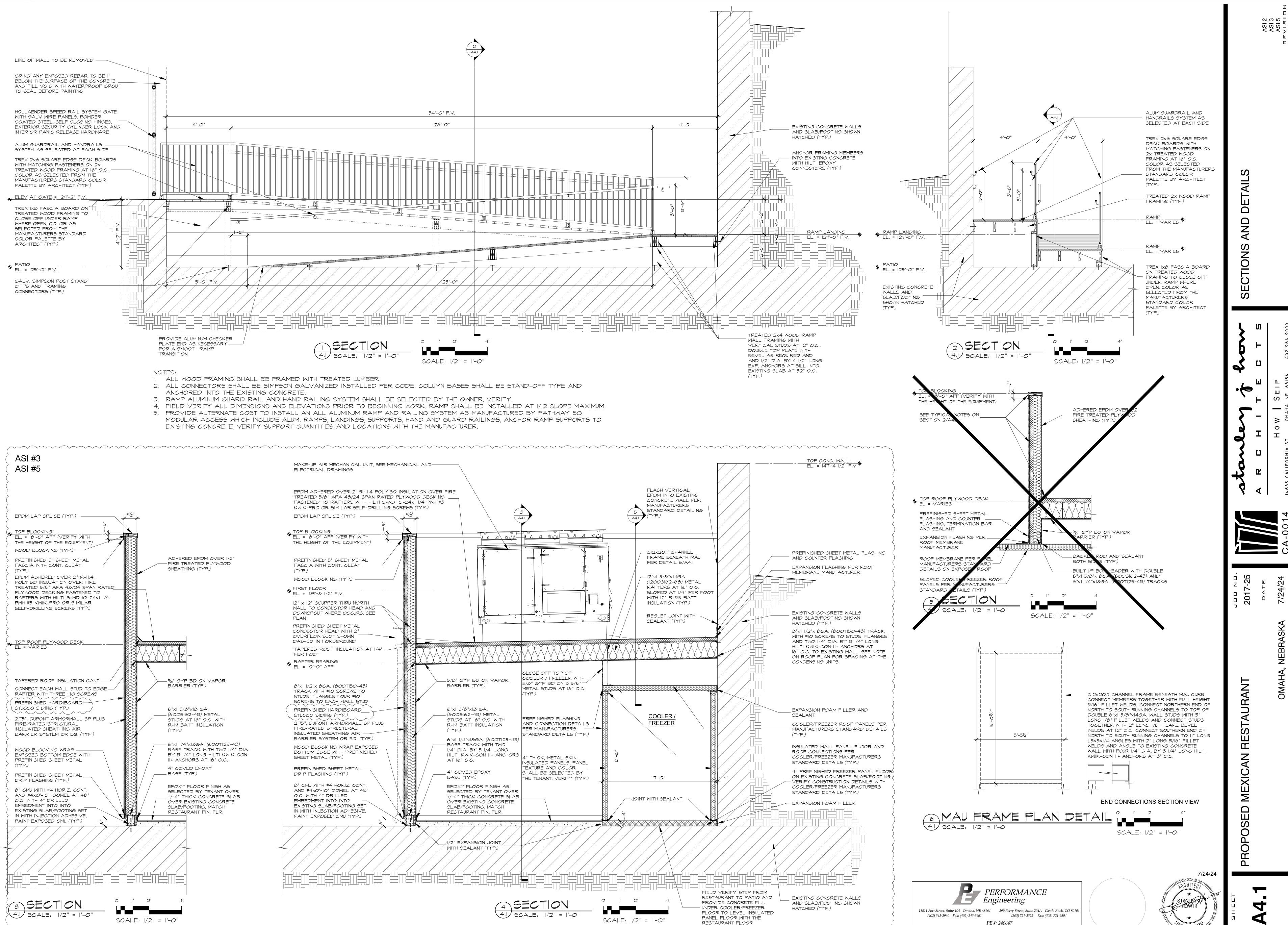
DOOR AND FF ELEVATIONS,

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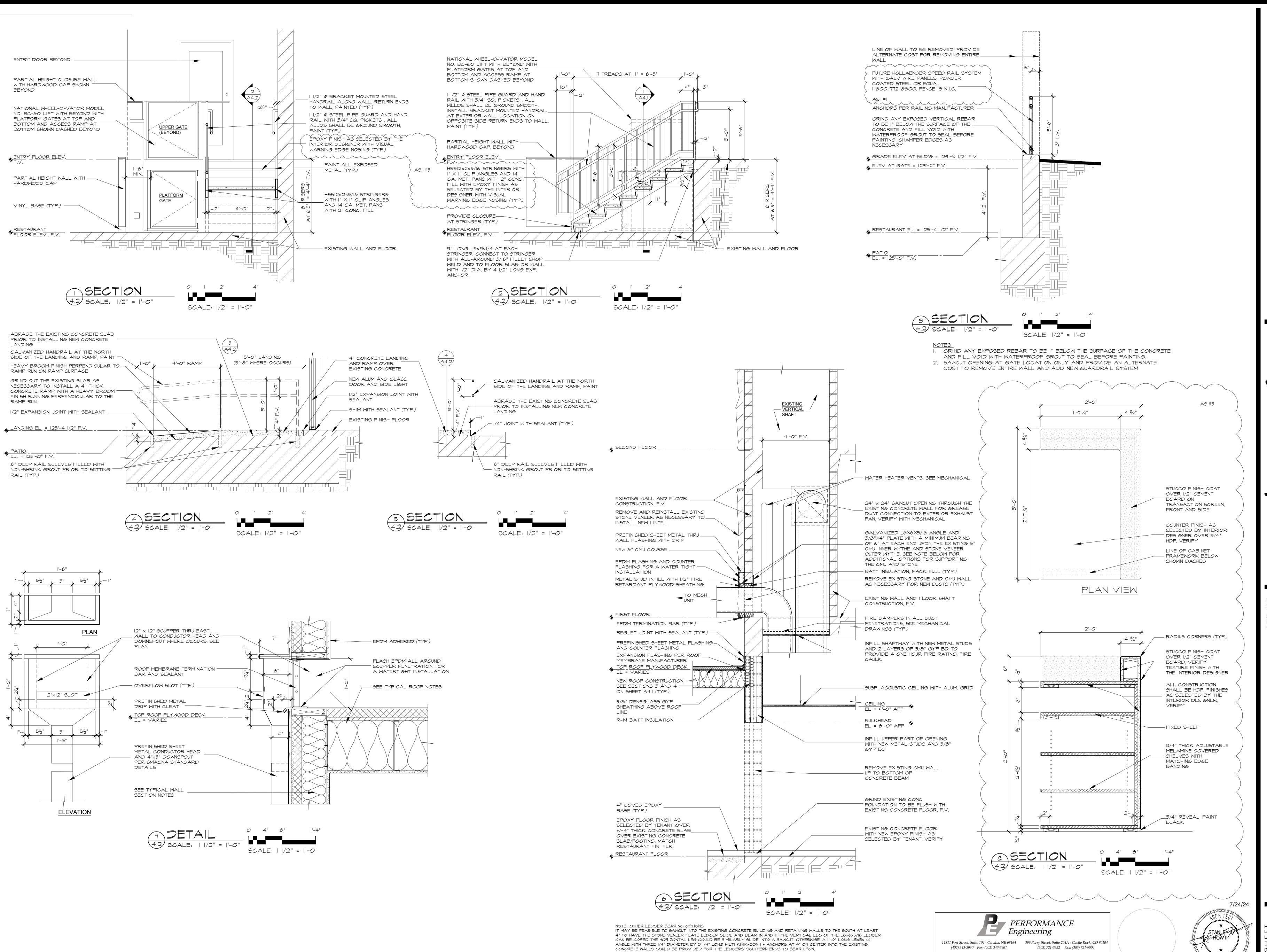


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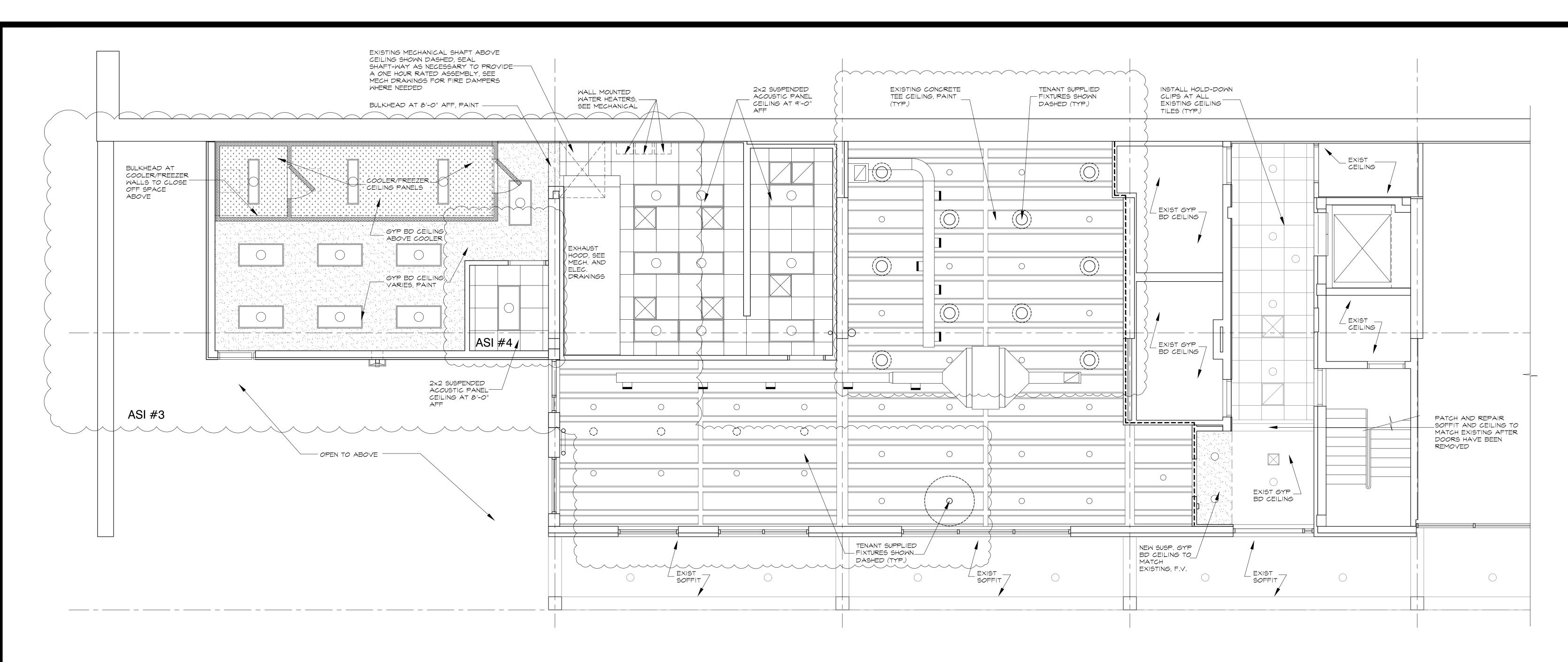
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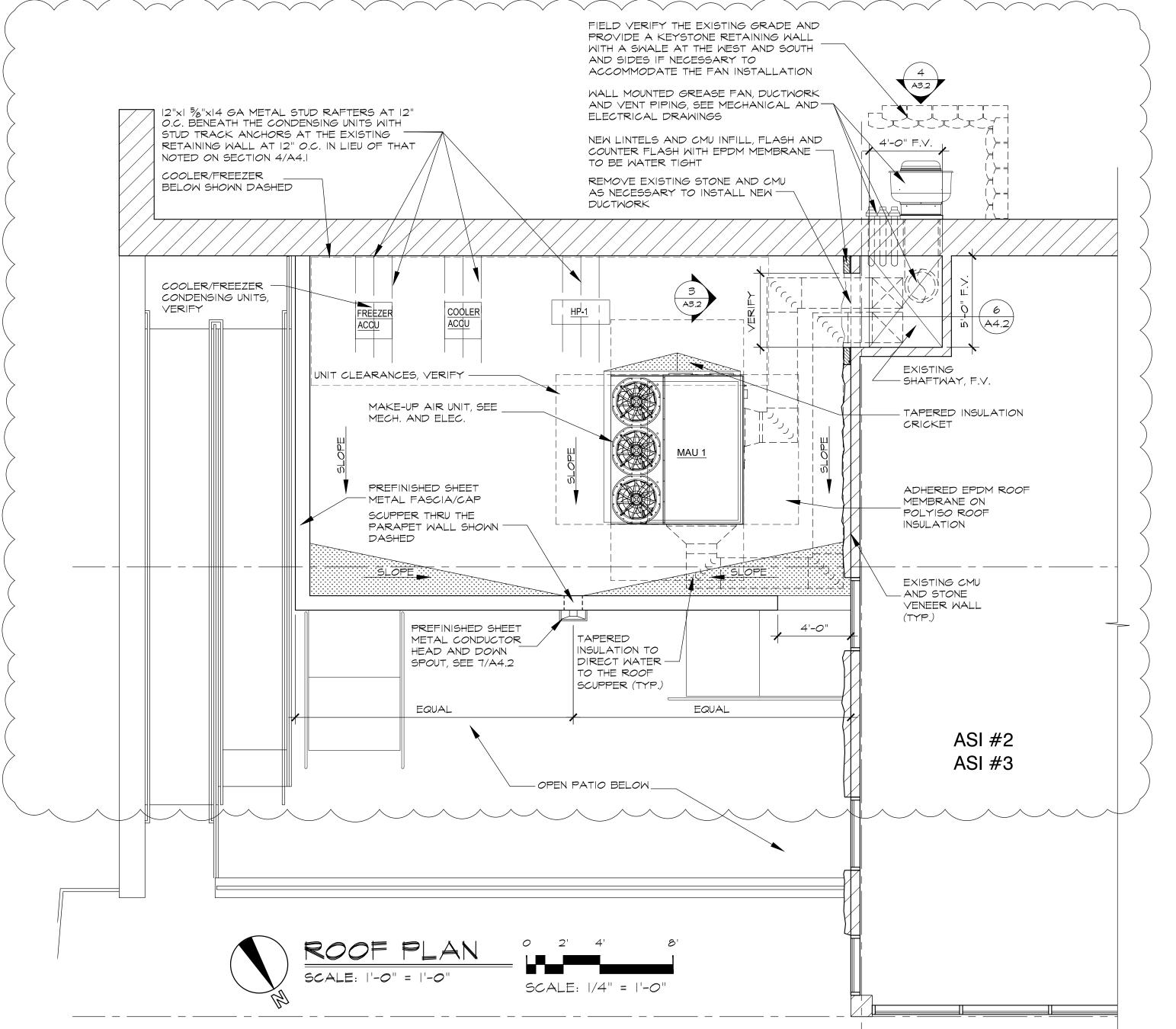


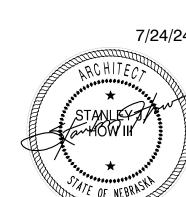
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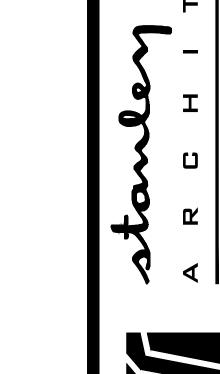


REFLECTED CEILING NOTES:

- 1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL WALL AND CEILING MOUNTED DEVICES. COORDINATE LOCATIONS OF ALL DUCTWORK, LIGHTING, DIFFUSERS, ETC... WITH STRUCTURAL, ARCHITECTURAL MECHANICAL AND ELECTRICAL DRAWINGS. FIXTURES, DUCTWORK, ETC... SHOWN ON THE REFLECTED CEILING PLAN ARE FOR REFERENCE ONLY.
- 2. WALLS SHOWN WITH A BOLD DASHED LINE -----SHALL EXTEND TO CONCRETE DECKING ABOVE SHALL BE ONE HOUR RATED WALLS AND BE FIRE CAULKED. DOORS AND FRAMES IN WALLS SHALL BE ONE HOUR RATED AND ANY DUCT PENETRATIONS SHALL HAVE FIRE DAMPERS.
- 3. TENANT DEMISING WALLS SHALL EXTEND TO CONCRETE DECKING ABOVE, GYP BD ON ALL OTHER WALLS SHALL EXTEND TO 6" ABOVE THE HIGHEST ADJACENT CEILING. BRACE WALLS AS REQUIRED. TENANT DEMISING WALLS AND WALLS BETWEEN THE KITCHEN/WASHING AND THE SEATING/BAR SHALL HAVE FULL SOUND BATT INSULATION.
- 4. MODIFY THE EXISTING FIRE SPRINKLER SYSTEM AND HEAD LOCATIONS AS NECESSARY FOR NEW LAYOUT.







SECTION OO 72 OO

GENERAL CONDITIONS

A. GENERAL CONDITIONS:

The "General Conditions of the Contract for Construction" A.I.A. Document A201-2007, Articles I to 15 inclusive, is hereby made a part of this Specification to the same extent as if it were herein written out in

END OF SECTION

00 73 00 SECTION 00 13 00

SUPPLEMENTARY CONDITIONS I.OI SUMMARY

It is the intent and purpose of these specifications and the accompanying drawings that the Contractor shall furnish all work, supervision, labor, equipment, tools and material to complete the erection of the building, except that items herein specifically excepted are not included. With these exceptions, the work shall be complete in every respect. All items necessary to erect a complete building or to complete the work under the Contract shall be furnished as required.

1.02 EXAMINATION OF SITE

The Contractor is requested to visit the site, compare the Drawings and Specifications with any work in place and inform himself as to all conditions including other work, if any, being performed. Failure to visit the site will in no way relieve the Contractor from the necessity of furnishing any materials or performing any work that may be required to complete his work in accordance with Drawings and Specifications without additional cost to the Owner.

1.03 LAYING OUT WORK

The Contractor shall immediately upon entering the project site for purpose of beginning his work locate all general reference points and take such actions as are necessary to prevent their destruction; lay out his own work and be responsible for all lines, elevations and measurements of building, paving, utilities and other work executed by him under the Contract. He must exercise proper precaution to verify figures shown on the Drawings before laying out the work and he will be held responsible for any error resulting from his failure to exercise such precaution.

1.04 TEMPORARY FIELD OFFICE

The General Contractor shall provide and maintain a temporary field office at the site, equipped with heat, telephone, toilet, plan desks and plan files. The office shall be of sufficient size for said use of the Contractor and the Architect's representative. He shall locate the temporary field office on the project site where directed by the Architect and remove when work is completed.

Should relocation of the field office be necessary during the construction period for the purpose of site development or co-ordination with other Contractors, the General Contractor shall comply as directed at no additional cost to the Owner.

1.05 TEMPORARY SANITARY FACILITIES

The General Contractor shall provide and maintain temporary sanitary facilities as necessary for use of workmen, locate where directed, and keep in sanitary condition.

1.06 ELECTRICAL A. Each Contractor shall furnish all equipment pertaining to his work including motors, relays, control

devices, etc. The Electrical Contractor shall furnish and install all disconnect switches and motor starters except those in "pre-wired" or "packaged" units. Multi-speed starters shall be furnished by the Contractor supplying the equipment to be controlled.

B. Each Contractor shall install motors pertaining to his work and all equipment except those requiring only low voltage connections. Line voltage items shall be installed and connected by the Electrical Contractor. All low voltage control wiring shall be furnished and installed by other Contractors unless otherwise specified.

C. Each Contractor shall submit complete wiring and control diagrams for Architect's approval and be responsible for proper operation. Wiring shall be in accordance with the Drawings and Specifications and per approved wiring diagrams. The Electrical Contractor shall be responsible for proper overload protection for all motors.

D. Prior to submitting his bid the Electrical Contractor shall examine the General and Mechanical Drawings and Specifications to clarify the extent of his work.

1.07 SUBCONTRACTS

Divisions and sections in these specifications conform roughly to customary trade practice. They are used for convenience only. The Architect is not bound to define the limits of any subcontract and the specifications sections shall not be interpreted in that fashion.

1.08 DATA AND MEASUREMENTS

The data given herein and on the Drawings is as exact as could be secured. Their absolute accuracy is not quaranteed. The Contractor shall obtain exact locations, measurements, levels, etc. at the site and shall satisfactorily adapt his work to the actual conditions at the building. DO NOT SCALE DRAWINGS. Verify all dimensions with the Architect prior to commencing work. Only Architectural Drawings may be utilized in calculation. Other (Mechanical, etc.) are diagrammatic or schematic.

1.09 DELIVERY AND STORAGE OF MATERIAL

Each Contractor shall make provisions for the delivery and safe storage of all his materials and shall make the required arrangements with other Contractors for the introduction into the building of equipment too large to pass through finished openings. Materials shall be delivered at such stages of the work as will expedite the work as a whole and shall be marked and stored in such a way as to be easily checked

I.IO MATERIALS FOR PROJECT

The successful bidder shall, upon the execution of the agreement, submit to the Architect and Owner a complete list of items of materials and equipment he proposes to use on this project. The list shall be complete with manufacturer's names, if requested by the Architect or Owner. The list shall include deviations from specified items as to operation, physical dimensions, etc. Equipment orders shall not be placed until the list has been returned approved. Four (4) copies of the list shall be furnished, one of which will be returned approved, or approved as noted. Where materials differ from those specified, a sample of same, together with complete data shall be furnished to the Architect which shall be subject to

Material and equipment specified to be one of two or more equally acceptable makes or types may be of any one of the makes or types mentioned but shall be of one make or type throughout the project. Materials and equipment specified to be of a certain make or type, or approved alternate, shall be of the make and type specifically mentioned, unless written approval of an alternate material has been

II SUBSTITUTION FOR MATERIALS AS SPECIFIED

A. All proposals shall be based on providing and installing all materials or items of equipment which are hereinafter specified by name and/or manufacturer. SUBSTITUTIONS for materials or items of equipment as specified, WILL NOT BE ALLOWED, unless approved by Architect prior to (7 days before) bid date. All other substitutions shall conform to the following requirements:

attached and furnished with his Proposal Form all items of material or equipment he wishes to substitute together with the price of these items which will be deducted from his Base Bid. 2. All items of material or equipment proposed by the Contractor as equal substitutions for items of

. Each Contractor shall be permitted to list on his Proposal Form, or on the supplemental sheet

material or equipment which are specified as "Similar To" or "Equal To" shall be equal in every respect to the quality, quantity, performance, appearance, color, finish, gauge and size of that item which has been used as a basis of equality.

B. The opinion of the Architect or Engineer shall be the sole and final judge as to the suitability of equality of substituted items. The Contractor shall furnish and install the specified items when proposed substitutions are not accepted. C. The entire cost of all changes of any type necessitated by the substitutions for the material or

equipment as specified shall be borne entirely by the Contractor making the substitution at no extra cost to the Owner or other Contractors.

D. After contracts are signed substitutions WILL NOT be allowed without an accompanying deduct amount which shall constitute a deduct change order.

1.12 CONTRACTOR FURNISHED INFORMATION

Prior to signing of the contracts the successful bidder shall submit to the Architect for approval the

A. Executed Performance Bond and Labor Material Payment Bond, A.I.A. Document A3II.

B. Completed Certificate of Insurance Form.

C. A list of all subcontractors which he proposes to employ on the project.

D. A breakdown of cost sufficiently detailed to show the various parts of work.

1.13 DRAWINGS AND SPECIFICATIONS

where applicable or as specified herein.

adequacy of his plant, appliance and methods.

These Specifications are intended to supplement the Drawings and it will not be the province of the Specifications to mention any part of the work which the Drawings are competent to fully explain in every particular and such omission is not to relieve the Contractor from carrying out portions indicated on the Drawings only. Should items be required by these Specifications and not indicated on the Drawings, they are to be supplied even if of such nature that they could have been indicated thereon.

In case of disagreement between Drawings and Specifications, or within either Drawings or Specifications, the better quality or greater quantity of work shall be estimated and the matter referred to the Architect or Engineer for a decision.

.14 STANDARDS All materials used shall meet the latest standards of the American Society for Testing Materials (ASTM)

1.15 ABBREVIATIONS The word "approved" as used herein means "approved by Architect and Owner". "For Approval" means "For the Architect's and Owner's approval". "Selected" means "selected by the Architect and Owner".

"ASTM Specifications" means "Standard Specifications of American Society for Testing Materials". "ASME

Code or approved" means "American Society of Mechanical Engineers applicable code, test or requirement". "NBFU" means "National Board of Fire Underwriters". "ÜL" means "Underwriters Laboratories, Inc.".

1.16 EQUIPMENT AND CONSTRUCTION METHODS The Contractor shall be responsible for the equipment and methods used in erection of this work covered by the contract, but the Owner reserves the right to approve such equipment and methods.

If, at any time, the Contractor's methods or equipment appear to the Architect and Owner to be unsafe, inefficient or inadequate for securing the safety of workmen, the quality of the work, or the rate of progress required, the Contractor shall, if directed by the Architect, correct such unsafe, inefficient or inadequate conditions to the satisfaction of the Architect and the Owner. By hereby establishing such authority the Architect will in no event assume the responsibility for the safety of workmen.

If, at any time, the Contractor's work force, in the opinion of the Architect and Owner, shall be inadequate for securing the necessary progress as herein stipulated, the Contractor shall, if so directed, increase the work force or equipment to such extent as to give the reasonable assurance of compliance with the schedule of progress but the failure of the Architect to make such demand shall not relieve the Contractor of his obligation to secure the quality, the safe conduct of the work and the rate of progress required by the Contract. The Contractor alone shall be responsible for the safety, efficiency and

Workmanship shall be of the best. The good appearance of finished work shall be of equal importance with its mechanical efficiency. All portions of the work shall be so laid out and installed that the work as a whole is of uniform quality and appearance.

1.17 CLEANING The Contractor shall maintain all areas during construction free from hazardous or obstructive rubbish and debris, due to performance of the work. When the electrical sustems have been installed the Contractor

shall remove all rubbish and debris from the building site, remove all paint, plaster and accumulated dirt from all equipment.

1.18 REQUIREMENTS OF SUBCONTRACTORS A. Each Contractor or Subcontractor shall be responsible for the various hangers, sleeves, openings,

B. Each Contractor or Subcontractor shall be responsible for such excavations and backfilling as he shall require. Backfill which settles shall be taken out and re-compacted at no cost to the Owner. Compaction densities shall be as specified elsewhere.

anchorage, fittings and other items necessary to the accomplishment of his work.

C. Signs advertising materials or Subcontractors will NOT be allowed.

I.I9 OCCUPATIONAL SAFETY AND HEALTH ACT

It shall be the responsibility of the Contractor and/or Contractors to comply with all the requirements of the Occupational Safety and Health Act of 1970 by the U.S. Department of Labor including all updates issued, and to require all it's subcontractors and employees to comply with this law and any related state

1.20 REGULATIONS

The Contractor shall give all notices and comply with all laws, ordinances, rules, building codes and regulations, including the Americans with Disabilities Act, bearing on the conduct of the work as drawn and specified. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted as provided in the Contract for "Changes In The Work". If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, building codes or regulations, and without such notice to the Architect, he shall bear all costs arising therefrom.

1.21 NUMBER OF SPECIFIED ITEMS REQUIRED

Wherever in these specifications an article, device or piece of equipment if referred to in the singular number, such reference shall apply to as many such articles as are shown on the drawings or required to complete the installation.

1.22 "AS BUILT" DRAWINGS

The Contractor shall maintain at the construction site one complete set of drawings suitably marked to show all deviations from the original set of drawings and other information as specified. Supplementary sketches may be included, if necessary, to clearly indicate the work in place.

1.23 NEBRASKA STATE SALES TAX

Contractor shall include all Sales Tax in his bid. 1.24 PERMITS, FEES, INSPECTIONS AND ASSESSMENTS

Each Contractor shall take out and pay for all permits, fees and inspections required by State and/or local Authorities which pertains to his portion of work.

1.25 SPECIAL INSPECTIONS The Contractor shall insure conformance with the 2012 IBC as amended by the City of Omaha Building Code. Special inspections, as defined and required by the above code, shall be performed by an independent inspection agency approved by the Building Official to perform such work.' The designated Special Inspector shall also be approved by the Architect and Engineer of Record and shall be paid by

The Special Inspector shall observe the work for conformance with approved design drawings and specifications and shall bring all discrepancies to the immediate attention of the Contractor for correction. Uncorrected discrepancies shall be reported to the Building Official and the Architect/Engineer of Record.

The Special Inspector shall furnish inspection reports to the Building Official and the Architect/Engineer of Record at monthly intervals and shall submit a final signed report at the project completion stating whether the work inspected was, to the best of his knowledge, in accordance with approved design drawings and specifications.

END OF SECTION

SECTION 00 73 16 INSURANCE REQUIREMENTS

I.OI GENERAL

A. Contractor shall purchase and maintain insurance to protect Contractor and Owner against all hazards herein enumerated throughout duration of contract. Said insurance shall be by an insurance company approved by insurance commissioner of Nebraska. All policies shall be in form and amounts with companies satisfactory to Owner.

B. "Insurance", "insurance policy", or "insurance contact" when used in these specifications shall have the same meaning as "insurance policy" provided, however, that when "insurance" as demonstrated by an "insurance policy" or "insurance contract" is required to be posted, presented or demonstrated to exist by any person or other entity by virtue of any contract, bid request, specification, rule or other action or request of Owner, said "insurance policy" or "contract insurance" shall provide coverage on an occurrence basis and not on a claims-made basis and person or other entity shall provide evidence of such coverage through an "insurance policy", "contract of insurance" or $^{\text{T}}$ certification of insurance" which clearly discloses on its face coverage on an occurrence basis, except as to insurance coverage required for hazardous materials abatement including removal of lead, asbestos, PCBs or the like, which may be provided on a claims-made basis when it is demonstrated to satisfaction of Owner that occurrence coverage is not reasonably available.

.02 INSURANCE REQUIREMENTS

Contractor shall purchase and maintain such insurance as will protect Contractor from claims set forth below which may arise out of or result from Contractor's operations under contract, whether such operations be by Contractor or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

A. Claims under worker's compensation, disability benefit and other similar employee benefits acts. B. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employee.

C. Claims for damages because of bodily injury, sickness or disease, or death of any person other than

D. Claims for damages insured by usual personal injury liability coverage which are sustained:

E. Claims for damages other than to work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom. F. Claims for damages because of bodily injury or death of any person or property damage arising out of ownership, mainténance, or use of any motor vehicle.

6. Wherever term ©150△ appears in these specifications, an equivalent form or better may be 1.03 LIMITS OF LIABILITY

Insurance required by Section II.I - Insurance, shall be written as follows:

A. Workers Compensation and Employers' Liability Insurance, as prescribed by Nebraska law with minimum limits shown below covering Employers' Liability limits.

Bodily injury by accident \$500,000 each accident Bodily injury by disease \$500,000 each accident Bodily injury by disease

\$500,000 policy limit USL&H and/or Jones Act coverage shall be provided where applicable

B. Commercial General Liability Insurance, which shall be no less comprehensive and no more restrictive than coverage provided by a standard form Commercial General Liability Policy (ISO CGOOOlO798) with standard exclusions "a" through "o", with minimum limits shown below covering bodily injury, property damage and personal injury. Any additional exclusions shall be identified on certificate

of insurance and shall be subject to review and approval of Owner: General Aggregate Limit \$2,000,000 Products Completed Operations Aggregate Limit \$2,000,000 Personal and Advertising Injury Limit \$1,000,000 Each Occurrence Limit \$1,000,000 \$50.000 Fire Damage Limit (any one fire)

Medical Damage Limit (any one person) This insurance must include the following features:

I. Coverage for all premises and operations. Policy shall be endorsed to provide the aggregate per project endorsement.

\$5,*000*

2. Operations by independent contractors.

Contractual Liability Endorsement (ISO CG 24 17 10 93; see Figure 1.2).

3. Contractual liability coverage: If work to be performed by Contractor includes construction or trestle, tracks, road beds, tunnel, underpass, or crossing, then such policy will include a Railroad's

4. Policy shall not exclude coverage for XCU (explosion, collapse, underground) 5. Any fellow employee exclusions shall be deleted as it applies to managerial and supervisory

6. Policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations. (As per standard CGOOOI Pollution Exclusion or equivalent)

7. Products and completed operations shall be maintained for duration of work and shall be

further maintained for a minimum period of three years after final acceptance and payment, unless modified in the Special Provisions. Completed Operations shall provide coverage for work performed by subcontractors.

8. Contractual liability coverage shall be included and shall not be amended by any limiting endorsements. Defense costs shall be in addition to policy limits.

9. In liev of including Owner as an additional insured on Contractor's commercial general liability insurance, Owner, at its option, may require Contractor to provide an Owner's protective liability policy by special provisión, or máy allów Contractor to provide an Owner's protective liability policy by change order. If an Owner's protective liability policy is provided, minimum coverage, limits and exclusions shall be as shown above and Contractor's premium cost of obtaining such insurance shall be considered incidental to work and shall not be subject to reimbursement by

10. Coverage for any EIFS-related work performed by contractor or any tiers of subcontractors

II. Coverage shall be on an occurrence form and not claims made.

C. Commercial automobile liability insurance, which shall be at least as broad as and no less restrictive than ISO form CA 0001, covering all owned, non-owned, hired and leased vehicles with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident. Insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted. Policy shall provide auto cargo pollution endorsement (ISO CA 99 48), if requested in special provisions.

D. Railroad protective liability, if required by Owner by special provision, or by an affected railroad, Contractor shall procure and maintain railroad protective liability insurance namina railroad as insured with minimum limit for bodily injury and property damage liability of \$2,000,000 per occurrence, \$6,000,000 aggregate, or with such limits as railroad shall require. Original of said policy shall be furnished to railroad and a certified copy of said policy shall be furnished to Owner prior to any construction or entry upon railroad easement premises by Contractor.

E. Umbrella/excess insurance: Policy shall provide liability coverage in excess of the specified Employers Liability, Commercial General Liability, and Commercial Auto Liability with limits of at least \$5,000,000 per occurrence and aggregate.

F. At Owner's option, minimum insurance limits specified above may be increased by special provision.

This increase may be satisfied with a combination of primary and umbrella/excess insurance.

G. Additional insured endorsements: The Contractor shall cause the commercial general liability and Umbrella policies required by the contract documents to include on a primary and non-contributory basis (1) the Owner as additional insured for claims caused in whole or in part by the Contractor's nealigent acts or omissions during the contractors operations; (2) the owner as additional insured for Completed Operations for 2 years following substantial completion for claims caused in whole or in part by the Contractor's negligent acts or omissions, (3) the Architect and Architect's Consultants as additional insured using ISO Form CG 2032 0704 or equivalent; (4) other parties as identified by

H. Contractor waives all rights of subrogation against Owner, Architect and Architect's Consultants and shall cause its insurers for Commercial General Liability, Workers Compensation, Auto Liability, and Umbrella Liability to endorse said policies to waive all rights of subrogation against Owner, Architect and Architect's Consultants with respect to losses arising out of or in connection with the Work.

1. Certificates of insurance acceptable to the Owner, and executed by a licensed representative of the participating insurer, shall be filed with the Owner and Architect prior to commencement of the work and thereafter upon renewal or replacement of each required policy of insurance. If required by Owner, copies of endorsement and/or policies shall be provided. Contractor shall promptly notify Owner of any cancellation, non-renewal, reduction of limits, or material modification of any policies o insurance reauired bu this gareement. Contractor shall cause all policies of insurance to be endorsed to provide Owner 30 days notice prior to cancellation (10 days for non-payment of premium). An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section II.I.2. Failure of Owner to demand such certificate(s) or other evidence of full compliance with these insurance requirements or failure of Owner to identify any deficiency from evidence provided by Contractor shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

END OF SECTION

DEMOLITION PART I GENERAL I.OI SUMMARY

1.03 SUBMITTALS

SECTION 02 41 00

The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any) apply to the work specified in this section. 1.02 DESCRIPTION OF WORK

Extent of demolition work is indicated on the drawings.

Owner through special supplemental conditions.

Demolition requires the selective removal and subsequent off site disposal of the following: Portions of building structure indicated on drawings and as required to accommodate new construction.

Removal of interior partitions as indicated on drawings. Removal of mechanical and electrical systems and equipment, as noted.

Removal and protection of existing fixtures and equipment items indicated "salvage" Removal of all demolished materials from the site.

Storage or sale of removed items on site will not be permitted.

Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Architect for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control protection. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations. Co-ordinate with Owner's continuing occupation of portions of existing building.

A. Occupancy: Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.

B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished. Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work C. Partial Demolition and Removal: Items indicated to be removed but of salvage value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

D. Protection: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to demolition work. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from occupied portions of building. Maintain required exits at all times.

Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished, and adjacent facilities or work to remain. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations. Protect floors with suitable coverings when necessary

Construct temporary insulated solid dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks if required. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to insure that no water leakage or damage occurs to structure or interior Remove protections at completion of work.

E. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

F. Traffic: Conduct demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from Owner. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

6. Explosives: Use of explosives will Not be permitted. H. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities. Standards: Perform all operations in compliance with NFPA 241, Standard for Safeguarding Construction, Alteration, and

Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical levél. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution. PART 2 PRODUCTS (NOT USED)

surfaces.

3.06 CLEAN-UP AND REPAIR

Provide interior and exterior shoring, bracing or support to prevent movement, settlement or collapse of structures to be

Cease operations and notify the Architect immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of

Provide weatherproof closures for exterior openings resulting from demolition work.

Locate, identify, stub off and disconnect utility services that are not indicated to remain. Provide by-pass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of seven (7) days advance notice to Owner if shut-down of service is necessary.

Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.

Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting Provide services for effective air and water pollution controls as required by local authorities having jurisdiction. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design

are encountered, investigate and measure both nature and extent of the conflict. Submit report to

Architect in written, accurate detail. Pending receipt of directive from Architect rearrange selective demolition schedule as necessary to continue overall job progress without delay. Patch all areas damaged or opened up by demolition including walls and ceilings exposed by removal of

walls, cabinets or other items. All patching shall be in the same materials and finishes as adjacent

3.04 SALVAGE MATERIALS Where indicated on Drawings as "Salvage-Deliver to Owner", or listed below carefully remove indicated items, clean, store and turn over to Owner and obtain receipt. Where indicated on the Drawings as "Salvage-Reinstall", carefully remove indicated items, clean, store and reinstall at appropriate time during

3.05 DISPOSAL OF DEMOLISHED MATERIALS Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site. If hazardous materials are encountered during demolition operations, comply with applicable regulations,

laws, and ordinances concerning removal, handling and protection against exposure or environmental

Burning of removed materials is <u>Not</u> permitted on project site.

surfaces soiled or damaged by selective demolition work.

Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or

END OF SECTION

PART I - GENERAL RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division°l Specification Sections, apply to this Sectio

This Section includes the following Interior non-load-bearing wall framing Exterior soffit framing.

Minimum Uncoated Steel Thickness: Minimum uncoated thickness of cold-formed framing delivered to the Project site shall be not less than 95 percent of the thicknesses indicated. Lesser thicknesses shall be permitted at bends due to cold forming. Producer: Entity that produces steel sheet coll fabricated Into cold-formed members.

All documents transmitted for submittal review are to be in electronic (pdf) format and transmitted via email.

B. Product Data: For each type of cold-formed metal framing product and accessory indicated.

Shop Drawinas: Show layout, spacinas, sizes, thicknesses, and types of cold-formed metal framina: fabrication: and fastenina and

anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining Work. D. Mill certificates signed by steel sheet producer or test reports from a qualified independent testing agency indicating steel sheet

E. Welding Certificates: Copies of certificates for welding procedures and personnel. F. Product Test Reports: From a qualified testing agency indicating that each of the following complies with requirements, based on comprehensive testing of current products: Expansion anchors

Power-actuated anchors Mechanical fasteners. Vertical deflection clips Miscellaneous structural clips and accessories

3. Approved equal.

STM C 955, and as follows:

Installer Qualifications: An experienced installer who has completed cold-formed metal framing similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service

Mill certificates signed by steel sheet producer or test reports from a qualified independent testing agency indicating steel sheet complies with requirements, including uncoated steel thickness, yield strength, tensile strength, total elongation, chemical requirements, ductility, and galvanized-coating thickness. g Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM É 329 to conduct the testing indicated, as documented according to ASTM E 548.

Welding: Qualify procedures and personnel according to AWS° DI.1, "Structural Welding Code-Steel," and AWS° DI.3, "Structural

Welding Code-Sheet Steel. AISI Specifications: Comply with AISI's "Specification for the Design of Cold-Formed Steel Structural Members" for calculating structural characteristics of cold-formed metal framing. 16 DELIVERY STORAGE AND HANDLING

A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.

PART 2 - PRODUCTS 2.I MANUFACTURERS A. Manufacturers: Subject to compliance with requirements, provide cold-formed metal framing by one of the following: I. Clark Steel Framing Industries. 2. Dietrich Industries, Inc.

B. Store cold-formed metal framing, protect with a waterproof covering, and ventilate to avoid condensation.

2.2 MATERIALS A. Steel Sheet: ASTM A 653/A 653M, structural steel, zinc coated, of grade and coating as follows: l. Grade: 33 for minimum uncoated steel thickness of 0.0428 inch (1.09 mm) and less; 50, Class I or 2 for minimum uncoated steel thickness of 0.0538 inch (1.37 mm) and greater. 2. Coating: 660 (ZI80). 2.3 INTERIOR NON-LOAD-BEARING WALL AND EXTERIOR SOFFIT FRAMING

Minimum Uncoated-Steel Thickness: As indicated on the structural drawings. Flange Width: As indicated on the structural drawings. B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, complying with ASTM C 955, and as follows: Minimum Uncoated-Steel Thickness: Matching steel studs. Flange Width: 1-1/4 inches (32 mm) unless noted otherwise.

Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, complying with

displacement of primary structure. 2.4 FRAMING ACCESSORIES Fabricate steel-framing accessories of the same material and finish used for framing members, with a minimum yield strength of 33.000 psi (230 Mpa).

Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows: Bracing, bridging, and solid blocking. Web stiffeners End clips. Foundation clips

Stud kickers, knee braces, and airts

Joist hangers and end closures

Gusset plates.

10. Backer plates. 2.5 ANCHORS, CLIPS, AND FASTENERS A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123.

washers; zinc coated by hot-dip process according to ASTM A I53/A I53M, Class C. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials,

with capability to sustain, without failure, a load equal to 10 times design load, as determined by testing per ASTM E 1190 conducted

B. Anchor Rods: ASTM F 1554, Grade 36, threaded carbon-steel hex-headed, bolts and carbon-steel nuts; and flat, hardened-steel

Mechanical Fasteners: Corrosion-resistant-coated, self-drilling, self-threading steel drill screws. . Head Type: Low-profile head beneath sheathing, manufacturer's standard elséwhere.

Welding Electrodes: Comply with AWS standards. 2.6 MISCELLANEOUS MATERIALS

correcting welding work

Stud Spacing: As indicated.

A. Galvanizing Repair Paint: ASTM A 780. B. Cement Grout: Portland cement, ASTM C 150, Type I; and clean, natural sand, ASTM C 404. Mix at ratio of I part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

C. Nonmetallic, Non-shrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement,

shrinkage-compensating agents, and plasticizing and water-reducing agents, complying with ASTM C 1107, with fluid consistency and 30-minute working time. A. Fabricate cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to manufacturer's written recommendations and requirements in this Section. Fabricate framing assemblies using jigs or templates. Cut framing members by sawing or shearing; do not torch cut Fasten cold-formed metal framing members by welding. Wire tying of framing members is not permitted. Comply with AWS DI.3

requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work. . Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing a. Comply with AWS DI.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work. b. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than three exposed screw threads. Fasten other materials to cold-formed metal framing by welding, bolting, or screw fastening, according to Shop Drawings.

Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distortion. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in Spacing: Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing material 2. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out-of-square tolerance of 1/8 inch (3 mm).

PART 3 - EXECUTION Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials. After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of old-formed framing without reducing thickness of fire-resistive materials below that are required to obtain fire-resistance rating indicated. Protect remaining fire-resistive materials from damage.

C. Grout bearing surfaces uniform and level to ensure full contact of bearing flanges or track webs on supporting concrete or masonry construction. 3.3 INSTALLATION, GENERAL A. Cold-formed metal framing may be shop or field fabricated for installation, or it may be field assembled.

B. Install cold-formed metal framing according to ASTM C 1007, unless more stringent requirements are indicated.

and true position between fabricated panels not exceeding 1/16 inch (1.6 mm). Install cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to manufacturer's written recommendations and requirements in this Section. 1. Cut framing members by sawing or shearing; do not torch cut. Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing brand stamped clearly thereon.

a. Comply with AMS DI.3 requirements and procedures for welding, appearance and quality of welds, and methods used in

Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than C. Store insulation material to prevent it from becoming wet, soiled or covered with ice or snow. Protect rigid insulation from three exposed screw threads. Install framing members in one-piece lengths, unless splice connections are indicated for track or tension members. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed 2.01 MATERIALS and permanent connections to framing are secured.

6. Do not bridge building expansion and control joints with cold-formed metal framing. Independently frame both sides of joints.

Install insulation in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's standard punched openings. Erection Tolerances: Install cold-formed metal framing level, plumb, and true to line to a maximum allowable tolerance variation shall be one (1) of the following types and manufacturer: of 1/8 inch in 10 feet (1:960) and as follows:

. Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials. 3.4 INTERIOR NON-LOAD-BEARING WALL AND EXTERIOR SOFEIT INSTALLATION Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.

Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral I. Connect vertical deflection clips to bypassing and infill studs and anchor to primary building structure.

Fasten both flanges of studs to top and bottom track, unless otherwise indicated. Space studs as follows:

width and thickness matching studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges. a. Install solid blocking at centers indicated . Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs. 3. Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors,

fasteners, and stud girts, to provide a complete and stable curtain-wall-framing system.

with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

H. Field and shop welds will be subject to inspection and testing.

I. Testing agency will report test results promptly and in writing to Contractor and Architect. Remove and replace Work that does not comply with specified requirements. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of corrected Work with

cold-formed metal framing. Paint framing surfaces with same type of shop paint used on adjacent surfaces.

Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing

Touch-up Painting: Wire brush, clean, and paint scarred areas, welds, and rust spots on fabricated and installed prime-painted,

Testing: Owner will engage a qualified independent testing agency to perform field quality-control testing.

PART I GENERAL

manufacturer at time sheathing is applied.

Work includes all work required for normal rough carpentry including but not limited to structural lumber, non-structural lumber. blocking, nailers, ground strips, plates, cants, curbs, plywood and fasteners required.

Protect paper-surfaced aupsum sheathing that will be exposed to weather for more than 30 days by covering exposed exterio

Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure cold-formed

surface of sheathing with a securely fastened air-infiltration barrier. Apply covering immediately after sheathing is installed.

D. Protect cutouts, corners, and joints in sheathing by filling with a flexible sealant or by applying tape recommended by sheathing

. Lumber Standards: Comply with PS 20 and with applicable rules of the respective grading and inspecting agencies for species and products indicated

metal framing is without damage or deterioration at time of Substantial Completion.

with applicable APA Performance Standard for type of panel indicated. Identify each plywood panel with the applicable APA Performance Standard for type of panel with the appropriate APA Trademark. Flame Spread: Material, which is pressure treated for fire retardance, shall have a flame spread of 25 or less when tested under ASTM E 84, NFPA 255, or UL 723. Furnish two (2) copies of a Certification stating that the above

. Plywood Product Standards: Comply with PS 1-74 (ANSI 199.1) or, for products not manufactured under PS 1-74 provisions,

D. AWPI Quality Mark: Each piece of lumber which is pressure treated shall bear the American Wood Preservers Institute Wality Mark to indicate conformance with the AMPI Standard hereinafter specified. The information required by the

American Wood Preservers Institute Standard must appear on the label. E. Acceptable manufacturers of pressure treatment materials are those listed by the American Wood Preservers Institute in their current directory as suppliers of the pressure-treated wood products

1.03 DELIVERY, STORAGE, AND HANDLING Immediately upon delivery to job site, place materials in area protected from weather. Store materials a minimum of 6" above ground on framework or blocking and cover with protective waterproof covering, providing for adequate air circulation. Do not store seasoned materials in wet or damp portions of building.

A. Lumber shall be 545, kiln dried with 19 percent maximum moisture content at time of dressing. Lumber shall be grade stamped in accordance with the latest edition of the standard grading rules of WWPA or the association under whose rules' it is graded. Exposed members shall be exposed for straightness. Misce laneous Framing and Blocking: Construction, Douglas Fir

All roof curbs, parapet caps, roof nailers, roof cants, and all other miscellaneous blocking used in the roofing installation shall be untreated Western Red Cedar, Grade No. 2 or better, pressure treated No. 2 or better Douglas Fir our Southern Pine. Pressure-treat with water-borne preservatives complying with AWPB LP-2. After treatment, kiln-dry to a maximum moisture content of 15%.

B. Interior plywood shall be A-A, G-I, Exposure I APA Plywood where both sides are exposed; A-D where only one side is exposed; óther grades as noted. Exterior plywood shall be A-C, EXT-APA, Exposuré l

C. Cedar siding shall be 1 x 6, "Aye" and Better, T & G, cedar siding. D. Fasteners and anchorages shall be of the size, type, material and finish as indicated or as recommended by applicable

standards complying with applicable Federal Specifications for nails, (staples), screws, bolts, nuts, washers and anchoring

devices. Metal hangers and framing anchors shall be of the size and type recommended by the manufacturer for each

use including recommending nails. Where rough carpentry work is exposed to the weather, in ground contact or in areas of high humidity, provide fasteners and anchorages with a hot-dip zinc coating (ASTM A 153). PART 3 EXECUTION

Boards: Select, White Pine

A. Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions as satisfactory.

B. Carefully lay out, cut, fit and install rough carpentry items. Use sufficient nails, spikes, screws and bolts to insure rigidity and permanence. Drive nails perpendicular to grain of wood in lieu of toenailing, where feasible. Install work to true lines, plumb and level, except as indicated otherwise. "Simpson" type connectors shall be used to fasten all suspended framing

Provide wood blocking/backing in walls for support of required hardware and accessory items. Verify exact location at time of construction. Anchorage and Framing: All wood framing members shall be bolted to steel, concrete or masonry. In concrete, the bolts shall be built in or expansion bolts shall be installed after concrete is placed. In masonru bolts may be built in as required, or toggle bolts shall be used. Wood bucks shall be anchored to masonry by meáns of benť anchors 12" x 12" x

Wood Blocking: The Contractor shall furnish and set all wood blocking, etc., required in the securing of all finished materials to the rough construction concrete, masonry and elsewhere as required by the various details. "Simpson" type connectors shall be used to fasten all suspended framing members. Vertical Deflection Clips: Manufacturer's standard bypass or head clips, capable of accommodating upward and downward vertical Wood Furring: Provide wood furring strips where and as called for on the drawings and as required. Furring shall be

> placed as shown and shall be shimmed cut to true and even surface. Strips shall be secured by toggle bolts, built-in metal plugs or other devices, as approved. Wood plugs shall not be used. END OF SECTION

PART I GENERAL

drawings are returned.

I.OI SUMMARY incidental to the furnishing and installing of all millwork, cabinet hardware, paneling, trim, window sills, plastic laminate and other items as shown on the drawings and as specified herein.

Shall be submitted for approval for all casework or mill fabricated items. Fabrication shall not begin until approved shop

1.03 STORAGE AND PROTECTION All millwork and finish shall be: A. Protected against damage.

B. Stored in dry and well ventilated areas.

to view unless otherwise specified.

C. Not subjected to extreme changes of temperature or humidity.

'4" screwed to buck with three No. 12 wood screws 1-1/4" long.

A. Moisture Content for hardwood shall not exceed 6%, Moisture content for softwoods shall not exceed 12%. B. Hardwood: Hardwood lumber or hardwood plywood shall be white oak, where noted. C. Softwoods shall be No. I clear White Pine or Fir unless otherwise noted. 2. Plywood: Interior plywood shall be Grade AA, where both sides are exposed and grade AC where one side is exposed

E. Finish: All exposed surfaces of wood finish shall be mill-sanded. F. Plastic Laminate: Shall be NEMA No. LD3, Class I (high pressure); 0.050" general-purpose type for counter tops, 0.042" post-forming type where post forming is required, 0.032" vertical-surface type for cabinet work, and 0.020" backup sheets for concealed back face where required. All plastic laminate shall be standard colors or patterns as selected by the Architect. New plastic laminate may be placed over existing if the existing plastic laminate does not have any loose

spots, chips, or other damage which would affect the appearance of the completed product. A. Interior millwork and trim shall conform to desian and details shown. Where practicable, millwork shall be assembled at the mill. All millwork and trim shall be sanded smooth and free from machine marks and tool marks that might show

3. Trim members shall be in single lengths without splicing. Running finish shall be in long lengths and jointed only where solid astening can be made. End joints shall be cut on the diagonal, but not butted. External and internal angles and corners Blocking shall be provided for securing or supporting work in place. No trim shall be installed before being back-primed. Contacts with adjoining work shall be scribed as required.

birch. Drawer bottoms and cabinet backs shall be one fourth inch (1/4") thick tempered hardboard (masonite) or approved E. All wood used in millwork, paneling or trim shall be clear and all heartwood. Sapwood will be accepted only if concealed, painted or specific approval is received from the Architect.

D. All millwork exposed to view shall be hardwood unless otherwise called for. Concealed framing members shall be softwood

of sound grade, except that wood glides for drawers shall be of oak or birch. Drawer sides and backs shall be of oak or

A. PREPARATION Precondition surfacing materials and surfaces to receive surfacing materials in accordance with manufacturer's printed

Install materials in accordance with manufacturer's printed instructions.

Owens-Corning Fiberglas Corp., Schuller, CerainTeed

accordance with the insulation manufacturer's recommendations

3.01 INSTALLATION

PART I GENERAL Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

I.OI SUMMARY

I. Bolt or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane

The work required under this heading shall include all labor, material, equipment and services necessary for and reasonably

incidental to the proper complete installation of all rigid board and blanket insulation as shown or scheduled on the drawings and

END OF SECTION

as specified herein. 1.02 DELIVERY, STORAGE, AND HANDLING A. All materials shall be delivered to the job in the original packages with seals unbroken and with manufacturer's name and the B. Scrap material and cuttings shall be removed from the project daily.

a. Rigid Board Insulation shall be extruded polystyrene board of the thickness shown. The rigid insulation board shall have a five 5) year aged average thermal conductivity, "K" factor, of .20, and an average compressive strength of 25 psi and shall be one (1)

B. Kraft-Faced Blanket Insulation shall consist of glass fiber and resinous binders formed into flexible blankets with asphalt and kraft paper vapor barriers laminated to one face with one inch (I") flanges on long edges. Blankets shall have an installed resistance of R-19 for six inch (6") blanket, R-13 for three and one half inch (3-1/2") blankets, and as shown on the drawings, and

Where the insulation is to be left exposed, substitute foil-faced blankets for kraft-faced.

Styrofoam SM, Dow Chemical Company, Foamular, U.C. Industries, Amofoam, Amoco Foam Products Company

cracks, such as Froth-Pak foam sealant manufactured by Dupont. Contractor shall review construction periodically to ensure that all voids are sealed prior to work being covered up. D. Adhesives, Mechanical Fastenings and Accessories shall be those recommended by the insulation manufacturer. E. Flame Spread Rating of all insulation not covered by fire resistive material, shall be 25 or less.

. Spray Foam Insulation shall be a two-component, quick-cure polyurethane foam, intended for filling cavities, penetrations and

Install horizontal bridging in curtain-wall studs, spaced in rows indicated on Shop Drawings but not more than 54 inches (1370 mm) . Fit insulation to form a complete insulation blanket around indicated areas. Position flanged blankets as recommended by manufacturer for application Top Bridging for Single Deflection Track: Install row of horizontal bridging within 12 inches (300 mm) of single deflection track. 3. Position vapor retarders on inside (heated side in winter) of insulation blanket Install a combination of flat, taut, steel sheet straps of width and thickness indicated and stud or stud-track solid blocking of 4. Coordinate insulation over or within three inches of lighting fixtures, fans, or other heat-generating electrical devices with manufacturer's recommendations and regulations of authorities having jurisdiction.

A. Install building insulation to comply with thermal and/or acoustical/sound control requirements. Fit insulation to conditions

B. Install rigid insulation directly to faces of concrete walls, progressively as metal furring channels are attached to the wall, in

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G. Allow 1/8-inch gap between trim and siding.

<u>DER-SLAB VAPOR BARRIER</u>

Products supplied under this section:

B. American Concrete Institute (ACI):

Manufacturer's samples, literature.

Vapor barrier must have all of the following qualities:

(877) 464-7834 <u>www.stegoindustries.com</u>.

Flooring Materials.

repair instructions.

2. Other performance criteria:

a.Strength: ASTM E 1745 Class A.

b.Thickness: Not less than 15mils

I. Level and compact base material.

A. Quality control/assurance:

A. American Society for Testing and Materials (ASTM):

1. Vapor barrier, seam tape, and mastic for installation under concrete slabs.

I. ASTM E 1745-09 Standard Specification for Plastic Water Vapor Retarders

2. ASTM E 154-99 (2005) Standard Test Methods for Water Vapor Retarders

4. ASTM F 1249-06 Standard Test Method for Water Vapor Transmission Rate

5. ASTME 1643-09 Selection, Design, Installation, and Inspection of Water Vapor

ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive

3. Manufacturer's installation instructions for placement, seaming and penetration

Permeance as tested before and after mandatory conditioning (ASTM E 1745

I. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC,

Stego Tape by Stego Industries LLC, (877) 464-7834, <u>www.stegoindustries.com</u>.

I. Stego Mastic by Stego Industries LLC, (877) 464-7834 <u>www.stegoindustries.com</u>.

A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E

I. Unroll vapor barrier with the longest dimension parallel with the direction of the

5. No penetration of the vapor barrier is allowed except for reinforcing steel and

A. Fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ 5 Engineered for Climate Siding.

. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of

2. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual

3. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and

. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.

. When used for its intended purpose, properly installed and maintained according to Hardie's published installation instructions, James

Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack;

A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400; Mission Viejo, CA

D. Fiber-cement Siding - have a flame-spread index of O and a smoke-developed index of 5 when tested in accordance with ASTM E

F. Shingle Siding: Hardie Shingle Siding Staggered Edge Panel as manufactured by James Hardie Building Products, Inc.

As recommended by manufacturer based on the total overall thickness of the wall materials being fastened to.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project

Install a water-resistive barrier is required in accordance with local building code requirements and as detailed. The water-resistive

barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

E. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's

B.Factory-finished fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ 5 Engineered for Climate

A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.

2. Lap vapor barrier over footings and/or seal to foundation walls.

4. Seal all penetrations (including pipes) per manufacturer's instructions.

6. Repair damaged areas by cutting patches of vapor barrier, overlapping

3. Overlap joints 6 inches and seal with manufacturer's tape.

damaged area 6 inches and taping all sides with tape.

A. ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test, Tool and Tape.

A. Product Data: Manufacturer's data sheets on each product to be used includina:

scope of the standard details and specifications provided by the manufacturer.

Installer Qualifications: Minimum of 2 years' experience with installation of similar products.

B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

2.Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.

2. Storage and handling requirements and recommendations

3. Refinish mock-up area as required to produce acceptable work.

A. Store products in manufacturer's unopened packaging until ready for installation.

A. Product Warranty: Limited, non-pro-rated product warranty for 30 years.

B.Finish Warranty: Limited product warranty against manufacturing finish defects.

3. Workmanship Warranty: Application limited warranty for 2 years.

A. HardiePlank HZ 5 lap siding, requirement for Materials:

. Type: Select Cedarmill 8.25 inches with a 7-inch exposure

and will not chip. Finish warranty includes the coverage for labor and material.

92691; Toll Free Tel: 866-274-464; Tel: 949-367-4980; Fax: 949-367-4981.

B. Fiber-cement Siding - complies with ASTM C 1186 Grade 11, Type A.

Do not install products under environmental conditions outside manufacturer's absolute limits.

C. Fiber-cement Siding - classified as noncombustible when tested in accordance with ASTM E 136.

E. Lap Siding: HardiePlank HZ 5 Lap as manufactured by James Hardie Building Products, Inc.

I. HardieTrim HZ 5 boards as manufactured by James Hardie Building Products, Inc.

2. Fasteners shall be pre-finished MAZE nails painted to match the siding or trim.

Install materials in strict accordance with manufacturer's installation instructions

2. Place fasteners no closer than 3/8 inch from panel edges and 2 inches from panel corners.

B. Block framing between studs where HardiePanel siding horizontal joints occur.

. Install metal Z flashing and provide a 1/4-inch gap at horizontal panel joints.

. Maintain clearance between siding and adjacent finished grade.

A. Do not begin installation until substrates have been properly prepared

A. Clean surfaces thoroughly prior to installation

INSTALLATION - HARDIEPANEL HZ 5 SIDING

A. Factory finished by James Hardie in colors as selected from manufacturers standard color pallet.

Preparation instructions and recommendations

B. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

Section 7.1 and sub-paragraphs 7.1.1 - 7.1.5): less than O.OI Perms [grains/(ft2 · hr

Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

3. ASTM E 96-05 Standard Test Methods for Water Vapor Transmission of

Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.

Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.

Used in Contact with Soil or Granular Fill Under Concrete Slabs.

Summary of test results as per paragraph 8.3 of ASTM E 1745.

'ART I GENERAL

SUMMARY

2 REFERENCES

3 SUBMITTALS

PART 2 - PRODUCTS

· inHq)].

B. Vapor barrier products:

2. No substitutions.

B. Vapor-proofing mastic:

02 ACCESSORIES

PART 3 - EXECUTION

DI PREPARATION

02 INSTALLATI*O*N

CTION 07 46 46

ART I - GENERAI

ECTION INCLUDE

SUBMITTALS

QUALITY ASSURANCE

DELIVERY, STORAGE, AND HANDLING

local authorities having jurisdiction.

PROJECT CONDITIONS

MANUFACTURERS

a.Sizes as noteo

c.Length: 12 fee

FASTENERS

A. Fasteners

FINISHES

PART 3 - EXECUTION

EXAMINATION

PREPARATION

d.Thickness: 3/4 inch

b.Texture: Wood Grained

concrete placement

OL MATERIALS

H. Seal gap with high quality, paint-able caulk.

1. Shim frieze board as required to align with corner trim.

J. Fasten through overlapping boards. Do not nail between lap joints.

K. Overlay siding with single board of outside corner board then align second corner board to outside edge of first corner board. Do not fasten HardieTrim boards to HardieTrim boards. L. Install HardieTrim Fascia boards to rafter tails or to sub fascia.

3.5 FINISHING A. Factory finished by James Hardie in colors as selected from manufacturers standard color pallet. 3.6 PROTECTION

A. Protect installed products until completion of project. B.Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION SECTION 07 53 23

ELASTOMERIC SHEET ROOFING - FULLY ADHERED - EPDM

I.OI SECTION INCLUDES A. EPDM membrane roofing system, including all components specified.

B. Comply with the published recommendations and instructions of the roofing membrane manufacturer.

C. Commencement of work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the

A. Section 06 10 00 - Rough Carpentry: Wood nailers associated with roofing and roof insulation.

C. Section 07 72 00 - Roof Accessories: Roof hatches, vents, and manufactured curbs

B. Section 07 61 00 - Sheet Metal Flashing and Trim: Formed metal flashing and trim items associated with roofing.

D. Section 08 62 00 - Unit Skylights.

A. Roofing Terminology: Refer to ASTM DIO79 for definition of terms related to roofing work not otherwise defined in the section. B. LTTR: Long Term Thermal Resistance, as defined by CAN-ULC-STTO.

1.04 REFERENCE STANDARDS A. ASTM CI289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2017.

B. ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing; 2016. C. ASTM DI621 - Standard Test Method for Compressive Properties Of Rigid Cellular Plastics; 2016.

E. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane; 2015.

D. ASTM DI622/DI622M - Standard Test Method for Apparent Density of Rigid Cellular Plastics; 2014.

F. ASTM D48II/D48IIM - Standard Specification for Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing; 2016. 6. CAN-ULC-ST70 - Standard Test Method Determination of L-Term Thermal Resistance Of Closed-Cell Thermal Insulating Foams; 2015.

H. FM (AG) - FM Approval Guide; current edition FM DS 1-28 - Wind Design; 2016

J. FM D5 I-29 - Roof Deck Securement and Above-Deck Roof Components; Factory Mutual System; 2016.

K. PS I - Structural Plywood; 2009. L. PS 20 - American Softwood Lumber Standard; 2015.

Sample of roof membrane.

1.05 ADMINISTRATIVE REQUIREMENTS A. Pre-Installation Conference: Before start of roofing work, Contractor shall hold a meeting to discuss the proper installation of materials and requirements to achieve the warranty

Require attendance with all parties directly influencing the quality of roofing work or affected by the performance of roofing 3.02EXAMINATION 2. Notify Architect well in advance of meeting 1.06 SUBMITTALS

A. Product Data: Provide membrane manufacturer's printed data sufficient to show that all components of roofing sustem, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane. 2. Where UL or FM requirements are specified, provide documentation that shows that the roofing system to be installed is UL-Classified or FM-approved, as applicable; include data itemizina the components of the classified or approved sustem.

3. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used. B. Samples: Submit samples of at least the following:

C. Shop Drawings: Provide: The roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings,

Sample of each insulation type and cover board

base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains. For tapered insulation, provide project-specific layout and dimensions for each board. D. Specimen Warranty: Submit prior to starting work.

E. Installer Qualifications: Letter from manufacturer attesting that the roofing installer meets the specified qualifications. F. Pre-Installation Notice: Copy to show that manufacturer's required Pre Installation Notice (PIN) has been accepted and approved

1.07 QUALITY ASSURANCE A. Installer Qualifications: Roofing installer shall have the following

. Current approval, license, or authorization as applicator by the manufacturer. 2. Fully staffed office within 100 miles of the job site. 3. At least five year's experience in installing specified system with a minimum of 1,000,000 sf of low-slope roofing membrane installed and covered under a manufacturer's system warranty. 4. Capability to provide payment and performance bond to building owner.

5. Contractor must self-perform the installation of the roofing system. Sub-contracting to a third party is not allowed. 3. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the 1.08 DELIVERY, STORAGE AND HANDLING A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible

B. Store materials clear of ground and moisture with weather protective covering.

C. Keep combustible materials away from ignition sources

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements. B. Comply with all warranty procedures required by manufacturer, including notifications, scheduling, and inspections.

Warranty: Elevate (formerly Firestone) Limited Warranty covering membrane, roof insulation, and other indicated components of the system, for the term indicatéd.

2. Scope of Coverage: Repair leaks in the roofing system caused by: a. Ordinary wear and tear of the elements b. Manufacturing defect in Elevate brand materials. Defective workmanship used to install these materials d. Damage due to winds up to 72 mph.

a. Specializing in manufacturing the roofing system to be provided.

Limit of Liability: No dollar limitation.

Metal Roof Edging with Exposed Decorative Fascia: Provide 20 year warranty for painted finish covering color fade, chalk, and

A. Acceptable Manufacturer - Roofing System: Elevate (formerly Firestone), Carmel, IN. Roofing systems manufactured by others are acceptable provided the roofing system is completely equivalent in materials and warranty conditions and the manufacturer meets the following qualifications:

b. Minimum ten years of experience manufacturing the roofing system to be provided. c. Able to provide a no dollar limit, single source roof system warranty that is backed by corporate assets in excess of one billion dollars d. 150 9000 certified. e. Able to provide polyisocyanurate insulation that is produced in own facilities.

Manufacturer of Insulation and Cover Boards: Same manufacturer as roof membrane to be included in the roof warrantu.

Manufacturer of Metal Roof Edging: Same manufacturer as roof membrane to be included in the roof warranty.

Substitutions: See Section OI 6000 - Product Requirements . Submit evidence that the proposed substitution complies with the specified requirements

Roofing System: Ethylene-propylene-diene-monomer (EPDM) single-ply membrane. Membrane Attachment: Fully adhered.

2. Warranty: Full system warranty; Elevate (formerly Firestone) 20 year Red Shield Limited Warranty covering membrane, roof insulation, membrane accessories, and metal edging and coping. 3. Comply with applicable local building code requirements. 4. Provide assembly having Underwriters Laboratories, Inc. (UL) Class A Fire Hazard Classification. 5. Provide assembly complying with Factory Mutual Corporation (FM) Roof Assembly Classification, FM D5 1-28 and FM D5 1-29, and

Roofing System Components: Listed in order from the top of the roof down: AS SHOWN ON THE DRAWINGS. I. Membrane: 60 MIL 2. Insulation Cover Board: High density polyisocyanurate; cold adhesive attached 3. Insulation:

a. Maximum Board Thickness: 2.5 inches; use as many layers as necessary; stagger joints in adjacent layers. b. Top Layer: 2.2" (R-12.6) Polyisocyanurate foam board, non-composite; cold adhesive attached. c. Bottom Layer: 2.2" (R 12-6) Polylsocyanurate foam board, non-composite; mechanically fastened d. Crickets: Tapered insulation of same type as specified for top layer; slope as indicated.

C. Provide neoprene membrane in grease catch pans as indicated on the drawings.

meeting minimum requirements of FM 1-90 wind uplift rating.

2. Acceptable Product: Neoprene Membrane by Elevate

D4811/D4811M Type 11, and with the following properties:

Thickness: 0.055 inch.

Roofing and Flashing Membrane: Black, cured synthetic single-ply membrane composed of ethylene propylene diene terpolymer (EPDM) with the following properties: Reinforcement: None; membrane complying with ASTM D4637/D4637M Type I. 2. Thickness: 0.060 inch. 3. Nominal Thickness Tolerance: Plus/minus 10 percent. 4. Sheet Width: Provide the widest available sheets to minimize field seaming.

5. Acceptable Product: RubberGard Non-Reinforced Low Slope Fire Retardant EPDM Membrane by Elevate. Neoprene Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized polychloroprene rubber, complying with Thickness: 0.055 inch.

C. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer. Flashing Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized EPDM rubber, complying with ASTM

2. Acceptable Product: RubberGard EPDM FormFlash by Elevate. E. Self-Adhesive Flashing Membrane: Semi-cured 45 mil EPDM membrane laminated to 35 mil EPDM tape adhesive; QuickSeam Flashing

F. Pre-Molded Pipe Flashings: EPDM, molded for quick adaptation to different sized pipes; Elevate EPDM Pipe Flashing. G. Self-Adhesive Lap Splice Tape: 35 mil EPDM-based, formulated for compatibility with EPDM membrane and high-solids primer;

H. Splice Adhesive: Synthetic polymer-based, formulated for compatibility with EPDM membrane and metal surfaces; SA-1065 Splice Bondina Adhesive: Neoprene-based, formulated for compatibility with EPDM membrane and wide variety of substrate materials, including masonry, wood, and insulation facings; Bonding Adhesive BA-2004 by Elevate.

Adhesive Primer: Synthetic rubber based primer formulated for compatibility with EPDM membrane and tape adhesive; QuickPrime Plus by Elevate.

K. Seam Edge Treatment: EPDM rubber-based sealant, formulated for sealing exposed edges of membrane at seams; Lap Sealant

L. Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer by Elevate. M. Water Block Seal: Butul rubber sealant for use between two surfaces, not exposed; Water Block Seal by Elevate

Metal Plates and Strips Used for Fastening Membrane and Insulation: Steel with Galvalume coating; corrosion-resistance meeting O. Termination Bars: Aluminum bars with integral caulk ledge; I.3 inches wide by O.IO inch thick; Elevate Termination Bar by Elevate. P. Roof Walkway Pads: EPDM, 0.30 inch thick by 30 by 30 inches with EPDM tape adhesive strips laminated to the bottom; QuickSeam Walkway Pads by Elevate.

PART I GENERAL Incidental to the furnishing and installing of all flashing and sheet metal work as shown on the drawings and as specified herein. Submit shop drawings to Architect showing the manner of forming, jointing and securing of flashing sheet metal, and roofing.

2.04ROOF INSULATION AND COVER BOARDS A. Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces, complying with ASTM C1289 Type II Class I, with the following additional characteristics: Thickness: As indicated elsewhere.

2. Size: 48 inches by 96 inches, nominal a. Exception: Insulation to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal.

3. R-value (LTTR): a. 2.2 inch Thickness: 12.6, minimum. 4. Compressive Strength: 20 psi when tested in accordance with ASTM Cl289. 5. UL-Classified and FM-approved for direct to steel deck applications.

7. Recycled Content: 19 percent post-consumer and 15 percent pre-consumer(post-industrial), average.

6. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.

8. Acceptable Product: ISO 95+ GL Polyisocyanurate Insulation by Elevate.

8 Mold Growth Resistance: Passina ASTM D3273.

9. Acceptable Product: ISOGARD HD Cover Board by Elevate.

D. Perform work using competent and properly equipped personnel.

H. Until ready for use, keep materials in their original containers as labeled by the manufacturer.

B. High Density Polyisocyanurate Cover Board: Non-combustible, water resistant, high density closed cell polyisocyanurate core with coated glass mat facers, with the following characteristics: . Size: 48 inches by 96 inches, nominal. a. Exception: Board to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal 2. Thickness: 1/2 inch.

3. Thermal Value: R-value of 2.5, when tested in accordance with ASTM C518 and ASTM C171. 4. Surface Water Absorption: 3 percent, maximum, when tested in accordance with ASTM C209. 5. Compressive Strength: 80 psi, when tested in accordance with ASTM DI621. 6. Densitu: 5 pcf, when tested in accordance with ASTM DI622/DI622M. 7. Factory Mutual approved for use with FM 1-60 and 1-90 rated roofing assemblies.

Insulation Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; 3.01 FABRICATION use only fasteners furnished by roof membrane manufacturer. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be provided; use only adhesives furnished by roof membrane manufacturer.

2.05 ACCESSORY MATERIALS A. Wood Nailers: PS 20 dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade pluwood: pressure preservative treated . Width: 3-1/2 inches, nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it. 2. Thickness: Same as thickness of roof insulation.

PART 3 - INSTALLATION 3.01 GENERAL A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good PART I GENERA roofing practices and industry standards. Comply with federal, state, and local regulations.

B. Obtain all relevant instructions and maintain copies at project site for duration of installation period. C. Do not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.

Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition F. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during

inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 6. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage 1.02 JOB CONDITIONS caused by roofing work.

1. Protect from spills and overspray from bitumen, adhesives, sealants and coatings 2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray. 3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

Consult membrane manufacturer's instructions, container labels, and Material Safety Data Sheets (MSDS) for specific safety instructions. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment and that deflection

B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with

Examine roof substrate to verify that it is properly sloped to drains. D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations ind instructions; start of work constitutes acceptable of project conditions and requirements.

E. Verify that wood nailers have been properly installed. A. Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes.

B. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease and other materials that may damage the membrane. Fill all surface voids in the immediate substrate that are greater than 1/4 inch wide with fill material acceptable insulation to

D. Seal, grout, or tape deck joints, where needed, to prevent bitumen seepage into building.

3.04INSULATION AND COVER BOARD INSTALLATION Install insulation in configuration and with attachment method(s) specified in PART 2, under Roofing System. B. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before

C. Lay roof insulation in courses parallel to roof edges. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4 inch. Fill gaps greater than 1/4 inch with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4 inch.

E. Mechanical Fastening: Using specified fasteners and insulation plates engage fasteners through insulation into deck to depth and in pattern required by Factory Mutual for FM Class specified in PART 2 and membrane manufacturer, whichever is more stringent. F. Cold Adhesive Attachment: Apply in accordance with membrane manufacturer's instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact.

3.05 SINGLE-PLY MEMBRANE INSTALLATION A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time. B. Lay out the membrane pieces so that field and flashing splices are installed to shed water.

Install membrane without wrinkles and without gaps or fishmouths in seams; bond and test seams and laps in accordance with membrane manufacturer's instructions and details.

D. Install membrane adhered to the substrate, with edge securement as specified. Adhered Membrane: Bond membrane sheet to substrate using membrane manufacturer's recommended bonding material,

METAL DOORS AND FRAMES Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than in 12 inches using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer. Exceptions: Round pipe penetrations less than 18 inches in diameter and square penetrations less than 4 inches square. 2. Metal edging is not merely decorative; ensure anchorage of membrane as intended by roofing manufacturer.

A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's

edge member over membrane and flashling over metal onto membrane.

recommendations of manufacturers of components and surfaces.

roofing to original condition

Remove leftover materials, trash, debris, equipment from project site and surrounding areas.

B. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of

Follow roofing manufacturer's instructions. 2. Remove protective plastic surface film immediately before installation 3. Install water block sealant under the membrane anchorage leg. 4. Flash with manufacturer's recommended flashing sheet unless otherwise indicated. 5. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge

piece of self-adhesive flashling membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashina sections.

6. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional 7. When the roof slope is greater than I:12, apply seam edge treatment along the back edge of the flashing. C. Scuppers: Set In sealant and secure to structure; flash as recommended by manufacturer.

D. Roofing Expansion Joints: Install as shown on drawings and as recommended by roofing manufacturer. Flashing at Walls, Curbs, and Other Vertical and Sloped Surfaces: Install weathertight flashing at all walls, curbs, parapets, curbs skylights, and other vertical and sloped surfaces that the roofing membrane abuts to; extend flashing at least 8 inches high above mémbrane surface. . Use the longest practical flashing pieces.

2. Evaluate the substrate and overlay and adjust installation procedure in accordance with membrane manufacturer's 3. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface. 4. Provide termination directly to the vertical substrate as shown on roof drawings

Roof Drains: I. Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations 2. Position membrane, then cut a hole for roof drain to allow 1/2 to 3/4 inch of membrane to extend inside clamping ring past drain 2.02 HOLLOW METAL DOORS 3. Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes.

4. Apply sealant on top of drain bowl where clamping ring seats below the membrane 5. Install roof drain clamping ring and clamping bolts, tighten clamping bolts to achieve constant compression. 5. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration. Pipes, Round Supports, and Similar Items: Flash with specified pre-molded pipe flashings wherever practical; otherwise use 2. Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches deep, with at least 1 inch clearance from penetration, sloped to shed water.

3. Structural Steel Tubing: If corner radii are greater than 1/4 inch and longest side of tube does not exceed 12 inches, flash as for pipes; otherwise, provide a standard curb with flashing. 4. Flexible and Moving Penetrations: Provide weathertight gooseneck set in sealant and secured to deck, flashed as recommended 5. High Temperature Surfaces: Where the in-service temperature is, or is expected to be, in excess of 180 degrees F, protect the elastomeric components from direct contact with the not surfaces using an intermediate insulated sleeve as flashing substrate as recommended by membrane manufacturer

A. Install walkways at access points to the roof, around rooftop equipment that may require maintenance, and where indicated on the 1. Use specified walkway pads unless otherwise indicated. B. Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1.0 inch and maximum of 3.0 inches from each

other to allow for drainage. . If installation of walkway pads over field fabricated splices or within 6 inches of a splice edge cannot be avoided, adhere another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches on either side. 2. Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion. 3.08 FIELD QUALITY CONTROL A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing

system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person). B. Perform all corrections necessary for issuance of warranty. A. Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with

B. UNIT STEEL FRAMES FOR LABELED DOORS: Where doors are to be labeled, the frames for these doors shall also receive a corresponding label. When frame openings are larger than the maximum allowable for the required rating, or when the Certificate of Inspection supplied. This information shall be included with the shop drawings. A. Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged metal glass stops shall be provided for all glazed openings.

2.05 WORKMANSHIP

All work shall be executed according to the best practice and quality for steel cabinet workmanship. The finished work shall be strong and rigid, neat in appearance and free from defects. Surfaces shall be smooth and free from warps and buckles. Molded members shall be clean-cut, straight and true, miters shall be well formed and in true alignment

All joints in exposed surfaces of the framing members shall be finished such to make joining invisible. All fastenings, anchors, etc., shall be concealed. No screws or other fastenings shall be exposed in any hollow metal work, unless from mechanical necessity and then only on approval.

All joining, cutting, etc. shall be done to a hairline. All construction marks shall be removed from finished or exposed surfaces. All moldings shall be sharp and accurate without rounded edges. All work shall be thoroughly protected from rust during fabrication. All shearing, cutting, notching, punching, and mitering shall be done to accurate measurements; all work shall be accurately mortised, reinforced, drilled and tapped for hardware.

PART 3 EXECUTION 3.01 INSTALLATION

A. Install frames plumb, square, straight and true: rigidly secured in place and properly braced. Anchor frames securely to loor and at jambs. Weld all field joints and grind smooth, to form an unbroken finished surface. Where frames are anchored with bolts, bolts shall be countersunk, and surface shall be made smooth. Hang hollow metal doors, preserving all clearances. Install miscellaneous items as shown on the drawings.

B. Clearances for labeled doors shall conform to NFPA Publications 80 and 101 with applicable local codes.

END OF SECTION

PREFINISHED WOOD DOORS PART I - GENERAL

Furnish and install all types of wood doors as shown and scheduled on the drawings and specified in this section.

A. Comply with the applicable requirements of the following standards unless otherwise indicated:

A. Interior solid core flush doors for transparent finish shall be the following:

ANSI/NWMA I.S.I, "Industry Standard for Wood Flush Doors" published by the National Woodwork Manufacturers Association (NWMA). AWI Quality Standard: Section 1300 of "Architectural Woodwork Quality Standards", Fourth Edition, published by the Architectur Woodwork Institute (AWI). Designations for grade and core construction under types of doors refer to this standard. B. Obtain doors from a single manufacturer to ensure uniformity in quality of appearances and construction, unless otherwise indicated.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

All doors furnished under this section of the specification shall be UNCONDITIONALLY GUARANTEED for the life of the installation. In case of failure, doors shall be replaced in operation (including finish) at no cost to the owner. This guarantee shall be afforded the Owner in

All joints around door frames (interior and exterior) and adjoining materials, except for door frames in gypsum obligation either totally or partially. PART 2 - PRODUCTS All joints around louvers (interiors and exterior) and adjoining materials. All building control joints, construction joints, expansion joints, and all other locations where metal contacts metal 2 OL APPROVED MANUFACTURERS This specification is based on Marshfield Architectural Doors with Marshfield Enviroclad UV factory-applied finish.

Hardwood Core Construction: PC-7 or SLC-7 Deliver, store and handle material in a manner to prevent the entrance of foreign materials and damage of materials oy water or breakage. Damaged material shall be' rejected. The name of the manufacturer and the trade name of the 1-3/4 inches Thickness

operation and durabilitu.

Wall Stops

PART 2 PRODUCTS A. Exterior: Compound used for exterior sealing shall be a two component polyurethane sealant to meet or exceed the Manufacturer: Tremco Inc. of Beechwood, Ohio. 1-800-321-7906.

application (gun or knife), non-staining, non-bleeding, paintable. Manufacturer: Tremco Inc. of Beechwood, Ohio. 1-800-321-7906. Joint backing shall be non-absorbant, closed cell, foam polyethylene material, square or round in shape, and shall be sized to cause a 30% compression in the joint.

Installer must examine substrates and caulkina (joint surfaces) and conditions under which joint sealer work is to be

The work required under this heading shall include all labor, material, equipment and services necessary for and reasonably

A. SMACNA STANDARDS: Except as otherwise shown, detailed or specified, flashing and sheet metal work shall comply with

All sheet metal shall be stored flat in areas protected from weather, wind and other conditions which might cause damage to

A. Metal Flashing, Metal Fascia: shall be formed 24 gauge Una-Clad sheet metal to the profile shown on the drawings.

B. Provide all other incidental and accessory materials, methods, tools and equipment. Include all materials of sheet metal,

C. Coating and tapes, for isolation of dissimilar materials, shall meet the recommendations of the sheet metal manufacturer

Copper and aluminum surfaces or dissimilar surfaces to be placed in contact with each other shall each be coated with paints as

Shop fabricate work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA

deterioration of the work. Form work to fit substrates. Take all steps necessary to form exposed copper sheet metal work without

Installer shall advise contractor of required procedures for protection of flashings, roofing and sheet metal work during

END OF SECTION

Include all materials, labor, equipment and incidentals for the completion of work shown, specified, or otherwise required

For the purpose of this specification all EXTERIOR work shall receive SEALANT; all INTERIOR work shall receive a

Weather Conditions: Do not proceed with installation of liquid sealants under unfavorable weather conditions, Install

elastomeric sealants when temperature is in lower tier of temperature range recommended by manufacturer for

rchitectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant

oil-canning, buckling, tool marks and stains, true to line and levels a's indicated, with exposed edges fòlded back to form hems.

performance and with expansion provisions for running work, sufficient to permanently prevent leakage, damage or

Provide uniform neat seams without exposure of solder and sealant. Follow with metal manufacturer's recommendations of

All joints around window frames (interior and exterior) and adjoining materials

At all structural steel and masonry such as joints between steel columns and masonry.

or where metal contacts masonry, concrete, drywall, plaster, etc.

applicable recommendations and details of the Architectural Sheet Metal Manual of the Sheet Metal and Air Conditioning

responsibility for the specified performance of component parts even though some components may be

specified in Aluminum Construction Manual published by The Aluminum Association, latest edition.

the form or finish of the metal. All damaged materials are to be removed and replaced with new material.

B. All sheet metal, roofing, roof insulation, and associated work shall be subcontracted to a single firm, with undivided

1.03 QUALITY ASSURANCE

sub-contracted to others.

Color shall be as selected

flashing, and trim required.

PART 3 EXECUTION

LO4 PRODUCT DELIVERY STORAGE AND HANDLING

tinning, soldering, welding, and cleaning flux from metal.

CAULKING COMPOUND.

construction, to ensure work will be without staining, damage or deterioration.

for both interior and exterior of the building.

First-class workmanship only will be acceptable.

Completely seal, but do not limit to the following:

All joints in conjunction with masonry work

Joint between curb and wall.

Door thresholds (set unit in sealant)

installation (45 degrees to 55 degrees F).

caulking compound shall be on each container.

performed and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with joint sealer work until nsatisfactory conditions have been corrected in a manner accéptable to installer. JOINT PREPARATION Clean joint surfaces immediately before installation of sealants or caulking compounds. Remove dirt. insecure coatings moisture and other substrates that could interfere with seal of gasket or bond of sealant or caulking compound. Etch masonry joint surfaces as recommended by sealant manufacturer. Roughen vitreous surfaces as recommended by sealant

B. Prime or seal joint surfaces where recommended by sealant manufacturer. Confine primer/sealer to areas of sealant bond. Do not allow spillage or migration onto adjoining surfaces.

3 OLINSTALL ATION A. Install as per manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise

B. Set joint filler units at depths or position in joint as indicated to coordinate with other work, including installation of bond preakers, backer rods and sealants. Do not leave voids or gaps between ends of joint filler units. C. Apply sealant with a hand or power caulking gun of the proper size to fit the joint. Avoid applying materials to surfaces 2. Joints that are open to a depth greater than I/2" shall receive joint backing material.

E. After sealant is applied tool material to insure that joints are filled completely and solidly. Finish joints shall be smooth even and concave and shall be watertight. Unsatisfactory joints shall be completely removed and replaced. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations to obtain high, early bond strenath, internal cohesive strenath and surface dynability. Advise Contractor of procedures required for cure and protection of joint sealant during construction period so they will be without deterioration or damage (other than normal wear and weathering) at time of substantial completion. Cure and protect sealants in a manner that will minimize increases in modulus of elasticity and other accelerated aging effects. Replace or restore sealants that are damaged or deteriorated during construction period.

CLEANING A. Any adjacent materials that have become soiled due to installation of this work shall be thoroughly cleaned with a suitable solvent of the type as recommended by the sealant compound manufacturer. B. Site shall be cleaned up at the end of each day's work. All unused materials shall be placed in tightly sealed containers and stored. Upon completion of all the work, this Contractor shall remove cartons and other debris related to this work from the project site at the direction of the project superintendent.

END OF SECTION SECTION OB II 13

I.OI SUMMARY Furnish all labor, materials, tools equipment and services for all steel doors, steel door frames, and steel frame components such as sidelites, borrowed lites, transom frames and architectural stick assemblies as shown on plans and schedules. Furnisi and install all supplementary or miscellaneous items, appurtenances and devices incidental to, or n'ecessary for a sound, secure, and complete installation.

Submit complete shop drawings for all items specified herein. Shop drawings shall show all quantities, types, and locations. Door construction shall be fully detailed showing weights of materials, finish, framing reinforcing, method of making joints and indicate conformance with all other technical requirements specified hereinafter.

A. Furnish hollow metal doors and frames complying with the Steel Door Institute "Recommended Specifications for Standard

I. Furnish hollow metal doors and frames manufactured by a member of Steel Door Institute.

2. Steel for door face sheets shall be prime quality, cold rolled, stretcher leveled steel, free from defects

3. Steel for frames shall be prime quality steel sheet free from defects. 1.04 PRODUCT DELIVERY, STORAGE AND HANDLING oors shall be shipped individually packed. Frames shall be shipped with spreaders at door opening bottom or may be pai

bundled. Doors and frames shall be stored on the building site, in an upright position, on wood sills or floors, in a manner that will prevent rust or damage.

All metal door frame and trim work shall be the product of one (1) of the following manufacturers at Contractor's option:

Pioneer, Steelcraft, Curries, Ceco, Kewanee

A HOLLOW METAL DOORS shall be of the sizes and thickness shown on the drawings and schedules. Doors shall be seamless

extending the full height of the door, spaced not more than six inches (6") apart. The face sheets shall be spot welded to the reinforcement leaving both faces absolutely flat and level without depressions or distortion. All spaces betweer reinforcing members shall be filled with a sound deadening, insulating urethane filler. Hinge reinforcement shall be 3/16" thick Internal reinforcing or core construction differing from that specified above may be used. However, it shall be the esponsibility of the Contractor to submit full copies of tests by an independent testing laboratory showing that the door

flush-type, constructed to two (2) 18 gauge steel sheets. Reinforced with steel channels, hat sections or zee-bars

All joints shall be reinforced and welded. At top and bottom edges install 16 gauge steel channels full width of the door spot welded to both steel sheets. At all exterior doors the top edge shall have a channel insert or shall be otherwise inished flush to prevent the accumulation of moisture. A similar flush closure shall be provided at all exterior doors which close over a vinul weather sealed threshold. Louvers where called for shall be standard with the manufacturer and shall be sight-proof. Where glazed panels are indicated, panels shall have metal channel edging and removable inside glazing

submitted is equal to doors manufactured as specified.

B. Labeled doors shall be furnished where noted on the schedule or drawings. These doors shall carry the Underwriter's Label for the scheduled rating, the doors shall conform to that rating in all other respects and shall be accompanied by the certificate of inspection. This information must be included with the shop drawings.

C. Doors shall be mortised, reinforced, drilled and tapped for scheduled mortise hardware and reinforced for surface applied 2.03 HOLLOW METAL FRAMES

A. UNIT STEEL FRAMES shall be of design as detailed by the drawings. Provide three (3) Glynn-Johnson No. 64 door mytes for each frame. Frames shall be formed of No. 16 gauge steel of design shown. All breaks, angles and arises shall be uniform, straight, sharply defined and true. The corners shall be mitered, accurately fitted, welded, properly fluxed and finished with smooth rigid, invisible joints. Frames shall have adjustable anchors not more than twenty-four inches (24") apart for setting into partitions. These anchors shall be of corrugated 16 aguae steel and shall be permanently fastened to the frame in such manner that they will have vertical adjustment to fit the masonry joints. For the proper anchorage at the bottom of the jambs, a bent plate adjustable clip bolted to frames and of material as specified for the jambs shall extend on the iloor construction to which it shall be secured with 3/8" x 2" expansion bolts, or shot-in studs. All frames shall be provided with temporary spreader channel at bottom. All frames reinforcing shall be the responsibility of the door manufacturer and all hinge, closér and hold-arm reinforcing shall be 3/16" thick. Provide special head reinforcing for frames over 3'-6" wide. Frames in metal stud partitions shall be anchored to stud members by welded channel anchors extending over three (3)

necessary method of anchoring will not qualify for labeling, all other requirements of that rating shall be met, and a TRANSOMS, SIDELIGHTS, BORROWED LIGHTS AND VIEW WINDOWS shall be as detailed on the drawings. Construction and installation shall conform to the applicable portions of the above paragraph, "Unit Steel Frames". Removable 18 gauge

naphtha, then gone over with emery cloth until free from oil, dirt, rust, or other imperfections. After the surfaces are clean and ry, they shall receive a dip of prime coat of rust resisting paint, color selected, then baked at proper temperature to obtain the most satisfactory results. Prime coat shall be best quality enamel base paint to receive the enamel paint finish to be applied in the field as specified under Division 9, Section 09900 Painting. Submit samples of paint finish.

Doors, frames, and other work of ferrous metals, unless specified hereinbefore, shall have surfaces washed with benzene or

Submit shop drawings to Architect for approval of all doors. These submittals shall include door manufacturer's construction details specifications and statement of avarantee. Door manufacturer shall be approved by the Architect.

C. Where noted on the drawinas, furnish doors bearing the label of Underwriters Laboratories, Inc., of Factoru Mutual Engineering Corporation, indicating the applicable rating and wall opening classification specified. Doors shall bear labels from the same agency

Wood doors shall not be delivered until the building or storage area is enclosed and sufficiently dry so that doors will not be damaged by excessive changes in moisture content. Identify each door as to type and location.

writing BY THE GENERAL CONTRACTOR who, in turn, may receive subrogative guarantees from his subcontractors or suppliers to cover his

Provide wood doors complying with applicable requirements of referenced standards for kinds and types of doors indicated and d

As scheduled Finish: Factory finish, custom color selected by Architect B. Fire rated doors shall be solid core and shall include the following: Faces and Grade: Match non-rated doors.

Core Construction: Manufacturer's standard core construction as required to provide the fire-resistant rating indicated. Interior: Compound used for interior caulking to be acrylic latex complying with either ASTM C834 type as required for Edge Construction: Provide manufacturer's standard laminated edge construction for improved screw holding capacity and spl resistance. Edges composed of a single layer of treated lumber will not be acceptable. 1-3/4 inches. Thickness: As scheduled

Factory finish, custom color selected by Architect.

PART 3 - EXECUTION 3 OLINSTALL ATION Condition doors to average prevailing humidity prior to hanging. Install wood doors in accordance with the manufacturer's instructions of as shown on the drawings. Fit doors to frame for proper fit and machine for hardware using templates supplied by the hardware supplier After fitting, all wood doors shall be hung. Prepare doors for the installation of all hardware items to produce the best possible

END OF SECTION SECTION 08 70 00

Install fire rated doors in corresponding fire-rated frames in accordance with the requirements of NFPA 80.

PART I GENERAL Hardware shall be as hereinafter specified and scheduled. Provide additional items of hardware which are necessary to make a complete workable and workmanlike installation even though such items are not herein specifically scheduled. Such miscellaneous item's shall be equal in quality and finish to items which are specified.

A. Hardware for the following items is specified under other sections of the specifications, except as noted.

. Access Doors 6. Overhead Doors 7. Automatic Operators for doors 3. Toilet Enclosures 4. Folding Doors B. All lock cylinders and keys for the above items requiring master-keyed locking shall be furnished under this section of the

.03 DESIGN REQUIREMENTS All hardware coming in contact with metal frames or doors shall be made to template and shall be furnished with machine screws. The hardware supplier shall furnish all necessary templates and schedules required by the wood door supplier or metal door and rame fabricator for mortised hardware. Doors and frames shall be reinforced, drilled and tapped by the fabricator for mortise hardware. Reinforcement for surface applied hardware shall be by the metal fabricator, drilling and tapping shall be done in the

field by the General Contractor. Prior to delivery of hardware, submit hardware shop drawings and a hardware schedule of all hardware required. The schedule shall follow the requirements of this specification and shall list type, manufacturer's name and number, finish and location. Provide catalog cuts for all substituted items. In addition, furnish a schedule fully identifying all abbreviations and symbols used. Approval of schedule will not relieve the Contractor of responsibility for furnishing all necessary hardware.

The firm supplying hardware for this project shall employ a member of the American Society of Architectural Hardware Consultants or a person of equivalent capability who is approved by the Architect. The Consultant shall be available during all phases of construction for consultation and technical assistance. The General Contractor shall receive hardware when delivered at the building. A room shall be set aside for storing hardware

A. Package each item of hardware separately in individual containers, complete with necessary screws, keys, instructions and installation templates for spotting mortising tools. B. Mark each container with item number corresponding to number shown on the Contractor's hardware schedule.

and all hardware shall be kept locked therein. The General Contractor shall unpack, tag, index and file all hardware as follows:

Supply three (3) copies of installation and maintenance instructions for each operating item, and parts manuals for all locksets, closers, exit devices and other operating devices to the Owner. Supply three (3) complete sets of all installation and adjustment tools to the Owner for each different style, type and series of lockset, latch exit device, closer or other adjustable hardware item provided and installed at this project.

PART 2 PRODUCTS Brands and models designated in this section are intended to define the exact standards of quality, function and design required.

SPECIFIED <u>ACCEPTABLE</u> McKinney, Stanley Locksets, Latchsets, Deadbolts, Cylinders & Covers No substitutions

Substitutions, other than as below noted, will not be permitted unless given prior approval via Addendum

frames. Consult Architect before applying any hardware with hex bolts or through bolting of any type.

All locks shall be provided with keyed alike construction cores. Supply six (6) construction pass keys to Contractor. Final keying system to be established by Architect and Owner will be a master keyed system and shall be installed just prior to final acceptance of the project. The quantity of keys and distribution thereof will be determined at that time. Installation of final keying shall be done by the General Contractor unless instructed otherwise.

Install each hardware item in compliance with the manufacturer's recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished another way, coordinate removal, storage and reinstallation. Do not install surface-mounted items until finishes have been completed on the substrate.

Provide hardware which meets the requirements of Underwriter's Laboratories and local building codes for all fire doors and

Drill, tap and countersink units for surface applied hardware and other items which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards and manufacturer's recommendation Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace

Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper

any unit which cannot be adjusted or operate freely and smoothly as intended for the application made. 3.03 SCHEDULE OF HARDWARE: AS NOTED ON THE PLANS

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<u>LUMINUM-FRAMED STOREFRONTS</u>

PART I GENERAL

I SUMMARY

Mork required under this section shall include all materials and installation and all related items necessary to complete the storefront installation as shown on the drawings and specified herein.

2 SUBMITTALS Prior to fabrication, submit shop drawings. Include system and component dimensions; components within assembly; framed opening requirements and tolerances; anchorage and fasteners; glass and infills; and door hardware requirements. Submit color samples of specified finish.

03 SYSTEM DESCRIPTION System to provide for expansion and contraction within system components caused by a cycling temperature range of 170 F degrees without causing detrimental effect to system

Design and size members to withstand dead loads and live loads caused by pressure and 1.03 TEMPERATURE AND VENTILATION

suction of wind as calculated in accordance with U.B.C. code. Limit maximum deflection to 1/175, or flexure limit of glass with full recovery of glazing

materials, whichever is less. Drain water entering joints, condensation occurring in glazing channels, or migrating

moisture occurring within system, to exterior. Limit air infiltration through assembly to 0.06 cubic feet minimum square feet of assembly

surface area, measured at a reference differential pressure across assembly of 0.3

System to accommodate, without damage to system or components, or deterioration of perimeter seal: movement within system; movement between system and perimeter framing components; dynamic loading and release of loads; and deflection of structural support

4 DELIVERY, STORAGE AND HANDLING Transport products by methods to avoid product damage; deliver in undamaged condition

are correct, and products are undamaged.

inches water gauge as measured in accordance with ASTM E283.

in manufacturer's unopened containers or packaging. Provide equipment and personnel to handle products by methods to prevent damage. Promptly inspect shipments to assure that products comply with requirements, quantities

Store products in accordance with manufacturer's instructions, with seals and labels intact

Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.

PART 2 PRODUCTS

DI MATERIALS Extrusions shall be 6063-T5 alloy and temper (ASTM B 221 alloy G.S. 10A-T5). The thermal barrier shall consist of a two-part, chemically curing, high density polyurethane. Fasteners, where exposed, shall be aluminum, stainless steel or plated steel in accordance with ASTM A 164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be elastomeric

DO APPROVED MANUFACTURERS Specifications are based on standard systems manufactured by Kawneer Company, Inc. Systems by the following manufacturers are approved, subject to being equal or better to the specified systems in performance, appearance, and function:

A. EFCO Corporation B. MANKO Window Systems C. U.S. Aluminum

D. Vistawall

A. Type I: Kawneer VG 45I-T, $2" \times 4$ -I/2", Center glazed, thermal break frame system. B. Type 2: Kawneer 350 doors with 10" bottom rail.

04 FINISH SPECIFICATIONS All exposed surfaces shall be free of scratches and other serious blemishes and shall receive an architectural Class I Color Anodic Coating conforming with Aluminum Association Standard AAMI2C22A42/44. Permanodic color - clear anodized.

The framing system shall provide for center glazing on all sides with no projecting stops. Entrance framing members shall be compatible with glass framing in appearance. All single acting entrance frames shall include the Sealair positive barrier weathering, including the EPDM sweep strip.

PART 3 EXECUTION

.OI INSTALLATION All glass framing shall be set in correct locations as shown in the details and shall be level, square, plumb and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between framing and the building structure shall be sealed in order to secure a watertight installation.

Install doors and hardware in compliance with manufacturer's recommendations. Coordinate hardware installation to assure proper function.

D2 PROTECTION AND CLEANING After installation, adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants.

Prior to acceptance, remove protective materials and clean exposed members.

03 SCHEDULE *O*F HARDWARE As scheduled on drawings

END OF SECTION

<u>ECTION 08 80 00</u>

ART I GENERAL

Furnish and install all types of glass and glazing for sash, windows, storefront, curtain walls, borrowed lights, glazing doors, and insulated spandrel glazing as indicated on the drawings.

Submit one 12" \times 12" sample of each product specified. A. REQUIREMENTS OF REGULATORY AGENCIES: All areas of glazing shall comply with all applicable codes. In case of conflict

between that regulation and these drawings and specifications, the requirements of the regulatory agency shall B. GLASS STANDARDS: Glass installations shall meet the requirements of the Prime Glass Standard FS DD-G-451.

Heat-treated glass shall meet the requirements of Standard FS DD-6-1403. Safety glass shall meet the requirements of

i. Glass material containing bubbles, scratches, or other glass shall be removed immediately upon notice. D. MANUFACTURER'S LABEL: Each piece of glass shall bear the manufacturer's label.

E. Watertight and airtight installation of each piece of glass is required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors) without failure of any kind including loss or breakage of glass, fallure of sealant or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the work.

F. Comply with combined recommendations of glass manufacturer and manufacturer of sealant and other materials used in glazing, except where more stringent requirements are shown or specified, and except where manufacturer's technical

Comply with "Glazing Manual" and other applicable publications by Flat Glass Marketing Association except as shown and

specified otherwise and except as specifically recommended otherwise by the manufacturers of the glass and glazing

H. Cut and install colored (tinted) and heat absorbing glass as recommended in "Technical Services Report No. 104" by PPG Industries, or similar reports by other manufacturers.

A. WARRANTY ON HERMETIC SEALS: Provide insulating glass manufacturer's written warranty, agreeing to, furnish replacement units for insulating glass units which have defective hermetic seals; defined to include intrusion of moisture or dirt, internal condensation at temperatures above 20F, and other visual evidence of seal failure or performance failure; provided manufacturer's instructions for handling, installation, protection, and maintenance have been adhered to during warranty

B. All glass shall be guaranteed for ten years against breakage due to defects in materials, workmanship or installation with

all such glass immediately removed and replaced with matching new material at no additional cost to the Owner.

A. TEMPERED CLEAR LOW-E INSULATING: shall be two (2) sheets of 1/4" clear tempered safety glass such as PPG Herculite "K"

CLEAR LOW-E INSULATING: shall be I" thick units, (1) sheet of 1/4" thick clear float glass on exterior and one (1) sheet clear float glass on interior with a 1/2" sealed air space between

TEMPERED CLEAR GLASS: shall be 1/4" clear tempered safety glass.

D. FIRE RATED GLASS: shall be 3/16" fire rated glass such as "Firelite" glass. DELIVERY STORAGE AND HANDLING

Stack glazing sheets at 5 to 7 degrees from vertical. Separate sheets with interleaving of protection paper and cushion top and bottom edges with felt. Cover to protect material from wind-blown water or run-off but provide for ventilation and circulation of cool, dry air. Maintain temperature above dew point. Protect glazing material from welding, sandblasting, and other potentially damaging operations before and after installation. ART 3 EXECUTION

I PREPARATION Protect glass from edge damage at all times during handling, installation and operation of the building.

when they differ from the Glazing Manual. Continuous glazing tape shall be installed at all glass.

within the tolerances and necessary dimensions established. Sizes shown on the Drawings are approxímate only. Coordinate with painter to assure that all metal frames have received their first coat of paint before glazing is started. Clean alazina channel and other framina members to receive alass immediately before alazina. Remove coatinas which are not firmly bonded to substrate. Remove lacquer from metal surfaces where elastomeric sealant is used. Apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

Glazina channel dimensions as shown are intended to provide for necessaru minimum bite on the alass, minimum edge clearance and adequate sealant thickness, with reasonable tolerances. The Glazier is responsible for correct glass size for each opening,

2 INSTALLATION Inspect each piece of glass immediately before installation and discard, any which have observable edge damage or face

Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other pieces.

Install glass and all glazing sheets together with miscellaneous glazing accessories, to meet the recommendations of the GlazingManual for Flat Glass Products of the Flat Glass Marketina Association except the manufacturer's recommendations shall prevai

Cure glazing sealant and compounds in compliance with manufacturer's instruction and recommendations to obtain high early bond strength, internal cohesive strength and surface durability. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during the construction period, including natural causes, accidents and vandalism After all other construction activities, and before acceptance by the Owner, all glass shall have labels removed and shall be thoroughly washed on both sides, leaving it clean, clear and free of scratches or defects. Use special care not to scratch glass with razor blades.

END OF SECTION

3.03 CURE, PROTECTION AND CLEANING

I.OI WORK INCLUDED

The work required under this heading shall include all labor, materials, tools, equipment, and services necessary for and reasonably incidental the furnishing and installing of all metal framing as shown on the drawings and as specified herein.

I.O2 PACKAGING, DELIVERY AND STORAGE All manufactured materials shall be delivered in unopened containers or bundles bearing the name of manufacturer, brand, type Store off the ground in dry, well ventilated space. Protect from rusting damage.

B. Runner, furring channels shall be 16 gauge: cold rolled steel, black painted, 1-1/2" deep (475 pounds per M) 3/4" (300 pounds per

C. Z furring channels, 25 gauge, in depth as required by wall insulation; manufactured with slotted web from hot-dip galvanized steel. Interior partition studs shall be 25 gauge, in widths and dimensions as required, made from 40 ksi hot-dipped galvanized steel

PART 3 EXECUTION

Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory conditions are

3.02 PREPARATION Protect installed finish work of other trades and surfaces to preclude damage from work of this section.

A. Erect the work in accordance with specifications, manufacturer's directions, and ASTM C754. Where these may be in conflict, the

shall be 90 degrees unless shown otherwise with an allowable tolerance of one degree

Install runner tracks at floor and ceiling; align to insure plumb partitions; secure with approved fastening method two inches (2")

D. Erect studs at sixteen inch (16") o.c.; install additional studs as detailed or required at all partition intersections, corners or openings. Place studs against walls of dissimilar materials and securely anchor in place. In areas of possible water penetration place asphalt felt strip between runners, studs and adjacent surface.

F. Shim all metal furring as required to provide true and level surface for application of wall board. Cross brace all chase partitions as recommended by manufacturer. Where metal studs are surfaced on side only, or surfacing does not run full height of studs, the stud flanges must be laterally braced and braced to adjacent surfaces, as recommended by manufacturer, to meet

6. Where stud systems abut horizontal or vertical structural elements, isolate as shown, or required, to prevent transfer of structural Install supplementary framing, blocking, and backing wherever walls of partitions support fixtures, equipment, services, casework,

manufacturer's recommendations and industry standards for resulting weight and loading requirements. I. Provide for mechanical/electrical penetrations.

END OF SECTION

The work required under this heading shall include all labor, materials, tools, equipment and services necessary for and reasonably incidental to the furnishing and installing of all gypsum work as shown on the drawings and as specified herein.

U.S. Gypsum's Manual: "Architectural Reference Library" current as of date of Project Manual.

Submit copies of fire resistance data: Include required fire test results for all gypsum wallboard systems on partitions, ceilings, columns, and the like. Correlate with supporting framing detail. 1.04 DELIVERY, STORAGE AND HANDLING

Materials shall be delivered in the original packages or containers bearing the name of manufacturer and brand. Cementitious material shall be kept dry until ready to be used. They shall be kept off the ground, under cover, and away from sweating walls and other damp surfaces. Premixed compounds and other materials shall not be allowed to freeze. 1.05 TEMPERATURE AND VENTILATION In cold weather, a uniform temperature of not less than 55 degrees F., and not more than 80 degrees F., shall be continuously

maintained in the building for a week before the application. The heat shall be well distributed in all areas and deflective or protective screens shall be used to prevent concentrated or uneven heat or greas near the hear source. Where required, heat shall be furnished by General Contractor. In enclosed areas or buildings lacking openings for natural ventilation, air circulation shall be provided by the use of temporary circulators. Conform to all requirements of product manufacturer.

Comply with "References", Specifications and Manufacturer's data. Where these may be in conflict, the more stringent requirements

B. WALLBOARD shall be Fire Rated 1/2" or 5/8" as detailed, U.L. labeled and ICBO approved for fire resistive system detailed.

C. WATER RESISTANT BOARD shall be 5/8" DensGuard, ICBO approved for installation in moisture areas. U.L. labeled and ICBO approved for fire resistive system detailed. Use Water Resistant board for following: walls and ceilings of janitor rooms, toilet rooms, and any other "wet" areas.

D. TILE BACKER BOARD shall be 1/2" thick Dens-Shield Tile Backer. Install and finish joints in accordance with manufacturer's

TRIM ACCESSORIES: Hot-dipped galvanized coated trims in shapes and sizes as detailed. Casing beads for drywall shall be mechanical anchorage is impractical to achieve. All trim pieces thus anchored shall be verified with Architect

G. JOINT CEMENT, REINFORCING TAPE AND ADHESIVES: As recommended by Gypsum Board Manufacturer for intended purpose Joint Treatment System shall be U.S. Gypsum's Durabond, for all high moisture areas, W/R Sheetrock Compound for taping W/R Joints and sealing of all cut edges and penetrations. a) USG or Tremco.

b) Non-setting, non-staining, acoustically tested. Sound Sealant Tape: Polyvinyl chloride, minimum 14 pounds density, non-porous, acoustically tested.

PART 3 EXECUTION

Verify installation conditions as satisfactory to receive work of this section. Do not install until any unsatisfactory conditions are corrected. Beginning work constitutes your acceptance of conditions as satisfactory.

Protect installed finish work of other trades and surfaces to preclude damage from work of this Section. Protect surrounding areas and surfaces to preclude damage. Exercise care to avoid soiling, spatter, and damage to work of other trades. Use cover cloths, or other means of protection. Remove, clean and repair any soiled or damaged work, as required. Protect from

A. Erect the work in accordance with Specifications, Manufacturer's directions, and ASTM C840. Where these may be in conflict, the more stringent requirements govern. Install fire rated systems in accordance with the requirement of the system as approved by

B. Allowable Tolerances for wall board shall be 1/16" offset between planes and board faces and 1/8" in 8'-0" for plane, level, warp, and bow. Shim panels as necessary to comply with tolerances. C. Install trims and expansion joints where required.

wall as possible. Place edges in contact and fit neatly, without forcing into place. All joints are to be staggered on opposite sides of the partitions and butt joints are to be staggered on the same surface.

F. Fire rating of partitions shall be maintained at all equipment recesses. A. Prepare joint compound according to Manufacturer's directions. Center reinforcing tape over joint and coat into compound

leaving approximately 1/64" to 1/32" under tape to provide proper bond. Follow with skim coat to embed tape, but not to

Leave all depressions level with surface plane same as above. All beads and trims to receive three (3) coat applications same as joints. Make them true and level with adjacent surfaces. D. Allow second coat to thoroughly dry, apply finish coat evenly over and extending beyond second coat on all joints, feathering to

END OF SECTION

Clean all beads, screeds, metal base, metal trim, mechanical, and electrical items, and the like. Wipe clean, leaving work ready for decoration under other sections. As work is completed in each space, clean all rubbish, utensils, and surplus materials from the space. Leave floors broom-clean.

PART I GENERAL

The work required under this heading shall include all labor, materials, equipment and services necessary for and reasonably incidental to the proper installation complete of all acoustical tile and panel ceilings, including suspension systems, luminous ceilings and other acoustical treatments all as shown or scheduled on the drawings and as specified herein.

A. Performance Requirements Ceiling suspension systems must be capable of accepting and supporting specified mechanical and electrical items and other specified ceiling accessories.

Acoustical tile shall have been tested under ASTM E84, shall have a Class A rating with a flame spread of 25 or less, and carry an Underwriters Laboratories, Inc. label. Manufacturer's Data: For information only, submit copies of the manufacturer's product specifications and installation instructions for each acoustic ceiling material required, and for each suspension system, including certified laboratory tests and other data

as required to show compliance with these specifications. Include manufacturer's recommendations for cleaning and refinishing acoustical units, including precautions against materials and methods which may be detrimental to finishes and acoustical

Samples: Submit three sets of 4-inch square samples for each acoustic unit required. In each set of samples, show the full range of exposed color and texture to be expected in the completed work. Sample submittal and Architect's review will be for color

and texture only. Compliance with finished aesthetic appeal and all performance characteristics is the exclusive responsibility of Submit one 12-inch long sample of each exposed runner and molding. Architect's review will be for color only. Compliance with all

LO4 QUALITY ASSURANCE Subcontract the installation of acoustical ceilings to an experienced firm which is acceptable to the manufacturer of the acoustical units and suspension system.

until all glazing has been completed and all exterior openings closed in. All wet work, including concrete, masonry, etc., shall be completed and dried out.

At the completion of the project the acoustical ceiling subcontractor shall furnish the Owner with one (1) full carton, seals

Temperature shall be maintained uniformly at a minimum of 60 degrees Fahrenheit before, during and after installation. Humidity shall not exceed 40 percent before, during or after installation

Material shall be delivered to the project in the original packages, with seals unbroken and with the manufacturer's name and

brand stamped clearly thereon. No seconds or remnants shall be used. No materials shall be delivered or stored in the building

unbroken, of all ceiling and tile panel types scheduled for use on this project. Provide manufacturer's 15 year warranty for ceiling systems.

other requirements is exclusive responsibility of the Contractor.

A. Acoustical Tile: As selected by the owner. ACT-I Shall be: Armstrong "Optima" or equa 2. ACT-2 Shall be: Armstrong "Kitchen Zone" or equal.

Suspension Systems: Double-web, hot-dip galvanized with 6-30 coating.

2. Aluminum grid in kitchen and dishwashing areas. PART 3 EXECUTION

PART 2 PRODUCTS

A. Install a suspension system to comply with ASTM C636, with hanger support coming from building structure only. Install hangers with concrete nails or drive pins into solid structural members, toggles into hollow areas, or eye screws as appropriate to comply with ASTM C 636. Attachment to ducts, conduit, or other similar support will not be permitted. Space hangers not more than 4 feet on center as recommended by arid manufacturer along each member, plus provide a hanger wire not more than 6 inches from ends of each member. Extra hanger wires shall be required as recommended by the grid manufacturer where grilles or troffers are installed parallel to main runners.

B. Install edge moldings, corners, special corners, or reveal moldings to coordinate with the grid system at edges of each acoustical ceiling area as noted on the reflected ceiling plan, and at locations where edge of units would otherwise be exposed after completion of work. Secure wall angle molding to building construction by fastening through holes made not more 3 inches from end of mold and 6 inches on center. All moldings shall be standard wall angle moldings specified except where shown otherwise on the drawings.

. Main tees and cross tees shall be framed out as shown on the drawings and as required for coordination with light fixtures,

diffusers, access doors and other equipment. All joints in main tees shall be mechanically spliced, cross tees shall be locked into D. Ceiling tile and panels shall be neatly scribed and fit where field cutting is required and in accordance with the manufacturer's instructions. Finish and scribe to fit where field cutting is required. Ceiling tiles and panels shall be placed into grid system or

other suspension systems listed completely free of voids and openings. Hold down clips shall be installed where noted on the drawings and at vestibules and other areas adjacent to exterior entrance. 3.02 ADJUSTING, CLEANING AND PROTECTION The ceiling system installer shall advise the Prime Contractor of required protection for the acoustical tile and suspension, including temperature and humidity limitations and dust control, so that all work will be without damage at the time of acceptance by

Upon completion of the installation, all soiled, deformed, discolored or otherwise damaged tile surfaces shall be cleaned or replaced. Completed acoustical ceiling system installation shall neither be altered nor disturbed by any other trade without specific prior approval from the prime Contractor and ceiling subcontractor. Contractor is responsible for adjusting all units and accessories for complete and proper placement and alignment. All soiled or otherwise damaged acoustic tile units and accessories shall be replaced with new Items If minor finish damage cannot be successfully cleaned or repaired to original condition status completely free of damage or soil evidence to the satisfaction of the

END OF SECTION

The work required under this heading shall include all labor, materials, equipment and services necessary for and reasonably incidental the furnishing and installing of all fiberglass reinforced plastic panels as shown on the drawings and as specified herein.

Submit two 8-inch by 10-inch samples of each type of panel. Shop Drawings: Indicate and dimension the location of joints and fastener attachments.

Provide panels, molding and adhesive only from the manufacturer specified to ensure warranty and color harmonization of 1.04 DELIVERY, STORAGE AND HANDLING A. Delivery of Materials

I. Package sheets on skids or pallets for shipment to project site. 2. Deliver adhesive in sealed containers with labels legible and intact

7. USDA accepted.

8.1CBO Report Number 4583.

B. Storage of Materials I.Store sheets in a dry place at the project site.

1. When moving more than a single sheet, place sheets face-to-face and back-to-back.

2. Protect surface during cutting and working by application of temporary, strippable coating or by other means recommended

3. Remove foreign matter from face of panel by use of a soft bristle brush, avoiding abrasive action. A.Installation shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual

moisture has dissipated. B. During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used.

C.Do not allow containers of Kemlite 101 adhesive to be opened until all potential sources of flame or spark have been shut down or extinguished and until warnings against their ignition during adhesive application have been posted. D. Provide ventilation to disperse fumes during application of solvent-based adhesive.

A. Class I(A) Finish. Wall panels shall be Kemlite Fire-X Glasbord with Surfaseal fiberglas reinforced plastic panels as manufactured by Kemlite Company. Color to be Soft Beige. Panel thickness shall be nominal .09" or 3/32". Alternate products shall meet or exceed the following properties:

P. Flame spread of 20 or lower, smoke developed 200 or lower per ASTM E-84. 3. Barcol hardness (scratch resistance) of 55 per ASTM D-2583. 4. Panels will exhibit no more than a 0.038% weight loss after a 25-cycle Taber test 5. Impact strength (IZOD) of 12 ft.lbs./in. per ASTM D-256. 6. FMRC approved. Subject to the conditions of approval as described in FMRC Report J.I. OF 9A3.AM.

B. Adhesive: As recommended by panel manufacturer for application to substrate. C.Corner Trim: Panel manufacturer's standard single length extruded vinyl pieces; longest length possible--to eliminate end PART 3 EXECUTION

A. Examine backup surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface. B. Do not begin installation until backup surfaces are put into satisfactory condition.

A. Do all cutting with carbide tipped saw blades or drill bits, or cut with snips. of this section. B. Install panels with manufacturer's recommended gap for panel field and corner joints. C. Using a 1/4" notched trowel, apply adhesive to panel back for 100 percent coverage.

D. Using products acceptable to manufacturer, install the frp system in accordance with manufacturer's printed instructions. E. Joints shall be sealed with Kemlite Silicone sealant A. Remove any adhesive or excessive sealant from face using solvent or cleaner recommended by panel manufacturer

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<u>SECTION 09 91 00</u> PAINTING

PART I GENERAL

The work required under this heading shall include all labor, material, equipment, and services necessary for and reasonably incidental to preparation, painting, and finishing of all finish surfaces

A. Examine the specifications for various other trades and become thoroughly familiar with all their provisions regarding painting. All surfaces left unfinished by requirements of other specifications shall be painted or finished as a part of this work.

B. Interior face brick, ceramic tile, structural glazed tile, copper, bronze, chromium plate, nickel, stainless steel, aluminum, monel metal, lead and lead coated copper shall not be painted or finished unless otherwise specified

C. If woodwork, metal or any other surface to be finished cannot be put in proper condition for finishina by customary cleaning

sanding and puttying operations, the Painting Contractor shall immediately notify the General Contractor or Architect in writing or assume responsibility for and rectify any unsatisfactory finish. Application of first coat of paint shall be construed as an acceptance of the base

D. Spray application of paints will not be permitted, except as specified, unless approval has been secured in writing from the Árchitect and unless surfaces and materials are entirely suitable to this type of application as proven by on-the-job

A. Product Manufacturer: Company specializing in production and distribution of quality Architectural finishes and provides technical and specification assistance for the Specifier B. Applicator: Company specializing in commercial painting and finishing with five (5) years documented experience, and approved by

Following award of Contract, General Contractor shall submit the following information to the Architect for his approval and shall not proceed with any painting and finishing work until such approval has been given: A. Name of painting contractor.

B. Name of manufacturer whose products are being proposed for use. Only one line of materials shall be used throughout the job,

except for specified special products

C. Manufacturer's complete and detailed specifications for materials to be used for each application. Specification shall include the following:

Chemistry of Product Dry Mil Thickness Spreading Rate Non-volatile bu Weight Non-volatile bý Volúme

or other method during progress of the work.

Dust Free Timé Re-Coat Time

Provide item by item comparison to specified products. D. An $8" \times 10"$ brush out and roll out of each product in each color for sheen evaluation and color match.

1.05 DELIVERY, STORAGE, AND HANDLING Deliver paints and enamels ready-mixed to job site. All material must be delivered in their original containers with labels intact. All materials used on the job shall be stored in a single place designated by the Owner or Architect. Such storage place shall be kept neat and clean and all damage thereto or to its surroundings shall be made good by the painting subcontractor. All soiled or used rags, waste and trash must be removed from the building every night and every precaution taken to avoid the danger of fire. Paints must be stored at temperatures above 50 degrees.

Areas to be painted shall be clean and free of dust and shall remain in that condition through the painting process. All materials shall be applied at temperatures above 50 degrees surface temperature. Do not paint exteriors during frosty or

rainy weather. Avoid painting surfaces while they are exposed to hot sun. Do not apply paint to areas where dust is being generated. Provide lighting level of 80 foot candles for all application procedures if natural lighting is not adequate. The painter shall not only protect his work at all times but shall also protect all adjacent work and materials by suitable covering

A. Provide owner with a new, unopened container of each product in each color used on this project. B. Affix a typewritten $3" \times 5"$ card to each container showing location where used.

The Contractor shall have the option of using materials and finishes manufactured by any one of the following manufacturers

hereinafter listed. Materials use'd throughout shall be the product of one manufacturer only and shall be the first line and top

grade materials produced by the manufacturer selected. Pratt and Lambert, Sherwin Williams Special finishes other than the products listed above shall be used as specified.

2.02 PAINTING SCHEDULE METAL WORK - Three (3) coats, in addition to shop prime coat. This to include all exposed structural steel, metal doors and frames, louvers, metal handrails, quard posts and aluminum or steel heating/air conditioning grilles. All mounted mechanical equipment shall be painted per Árchitect's instructions

2 Coats "SW" B66W01151 Pro Industrial DTM Acrylic Semi-Gloss 2 Coats "SW" B53-1150 Pro Industrial Waterbased Alkyd Urethane Enamel Semi- Gloss FIBER CEMENT SIDING, SOFFIT AND TRIM - Three (3) coats

B. INTERIOR WORK GYPSUM BOARD - Three (3) Coats Coat "SW" B28W02600 Pro Mar 200 Zero VOC Interior Latex Primer

2 Coats "SW" K33-200 Duration Exterior Acrylic Satin Coating

l Coat "SW" B66W00310 Pro-Cryl Primer

2 Coats "SW" B20-2600 Pro Mar 200 Zero VOC Interior Latex Eggshell GYPSUM BOARD-EPOXY - Three (3) Coats l Coat "SW" B28W02600 Pro Mar 200 Zero VOC Interior Latex Primer

2 Coats "SW" K45-I50 Pro Industrial Pre-Catalyzed Water-based Epoxy Eggshell 2 Coats "SW" B73-360 Pro Industrial Catalyzed Epoxy Eggshell NEW CONCRETE & CONCRETE MASONRY - Three (3) Coats

Coat "SW" A24WOO2O Loxon Block Surfacer 2 Coats "SW" B20-2600 Pro Mar 200 Zero VOC Interior Latex Eggshell 2 Coats "SW" K45-150 Pro Industrial Pre-Catalyzed Waterbased Epoxy Eggshell

NEW METAL, including other exposed structural steel, hollow metal doors and frames, metal frames for door lights, louvers,

mechanical grilles and sprinkler piping exposed in finished areas -Three (3) Coats. Coat "SW" B66W00310 Pro Industrial Pro-Cryl Primer 2 Coats "SW" B66W01151Pro Industrial DTM Acrylic Semi-Gloss

2 Coats "SW" B53-1150 Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss

I Coat "SW" 564 Series Sher-Wood BAC Wiping Stain 2 Coats "SW" A68 Series Wood Classics Waterborne Polyurethane Varnish Satin NEW WOOD PAINTED - Three (3) Coats

NEW WOOD STAINED - Three (3) Coats

Beginning of installation means acceptance of substrates.

G. Clear finishes shall be brush or pad applied.

A. Remove spills, splatters, and paint from surfaces not to be painted.

B. Remove equipment and leftover materials upon initial completion of work.

I Coat "SW" B51-450 Multi Purpose Latex Primer/Sealer 2 Coats "SW" A76 Series Solo 100% Acrylic Semi-Gloss 2 Coats "SW" B31-1100 Pro Classic Waterborne Acrylic Semi-Gloss 2.03 VINYL WALL COVERING

The Painting Contractor shall provide and install all vinyl wall coverings where noted on the drawings. All wall surfaces that receive vinyl wall covering shall receive one (1) coat of primer per the recommendation of the covering manufacturer. After hanging, all surfaces must be cleaned of paste and dirt by washing with clean water. Do not use carbon tetrachloride or lacaver solvents for cleaning. Vinyl wall covering shall be installed per manufacturer's recommendations with all seams plumb and stratight. PART 3 EXECUTION

Verify that substrate conditions are ready to receive work as detailed by manufacturer of the product. Examine surfaces scheduled to be finished prior to commencement of work. Report conditions that may potentially affect proper

Do not apply interior finishes if substrate moisture is greater than 12%. Sponge all wood to receive clear finish system with clean water. Allow to dry, sand with 150A sandpaper. Sand all glossy areas to break the old film.

All surfaces to receive finishes must be solid, dry, smooth, clean, and free from any abnormal conditions or contaminants. If Contractor is unfamiliar with any surface condition, immediately consult with supplier for assistance. A. The workmanship shall be of the very best and all materials evenly spread and smoothly flowed on without runs or sags. ONLY

SKILLED MECHÀNICS SHALL BE EMPLOYED B. Enamel or varnish finish applied to wood or metal shall be sanded between coats with fine sandpaper to produce an even, smooth finish. All coats shall be thoroughly dry before applying succeeding coats. C. All interior wood trim shall be back-primed before installation with an approved interior trim primer.

D. All exterior wood trim shall be back-primed before installation with the house paint exterior primer recommended by the manufacturer of the paint to be used for finishing. After fitting by the carpenter, tops and bottoms of wood doors or sash shall be E. Stipple finish shall be uniform in nature, and free from lap marks, brush marks, or hat bands. F. Final roll-off of all materials shall be free from shadows, roller shedding, roller tailing, and sags.

H. Sprau application is permitted for hollow metal doors and frames. Other sprau application is permitted only on written approva Contractor will be responsible for any damage due to overspray conditions that may arise. 1. Apply materials to provide total color and sheen uniformity on all surfaces, regardless of number of coats necessary.

J. All materials shall be applied in conformance with manufacturer's standard specifications for materials and surface involved

Shall be as recommended by manufacturer

PART 2 PRODUCTS

Furring channels shall be 25 gauge, hat-shaped channel 1-3/8" wide, 7/8" deep, unless other depths required; manufactured from

(0.179 base metal), listed by ICBO for structural design properties. Openings in webs for services maximum 24" o.c., runners, E. Fasteners shall be in accordance with ASTM C646, and in required lengths and types.

corrected. Beginning work constitutes your acceptance of conditions as satisfactory.

more stringent requirements govern. Install fire rated systems in accordance with the requirement of the system as approved by the governing Code. B. Allowable tolerances for placement of metal studs shall be 1/8" in 8'0" for plane, level, plumb. All inside and outside wall corners

from each end and not over 2'-0" o.c. maximum. Install continuous tracks sized to match studs. Align tracks accurately to

E. Coordinate stud erection with detailed or required blocking/backing for fixtures and surface mounted casework.

heavy trim, furnishings, and the like. Where type of supplementary support is not otherwise indicated, comply with stud

PART I GENERAL

103 SUBMITTALS

A. FASTENERS shall be in accordance with ASTM C646, and in required lengths and types.

E. SHEATHING shall be 5/8" thick Dens-Glass Gold Firestop manufactured by Georgia Pacific. U.S.G NO. 200A OR 200B. Corner metal trim shall be used on all exterior corners. Beads shall be the proper size for drywall thickness. The finished product shall be straight and completely concealed. Metal beads and trim shall be mastic applied where

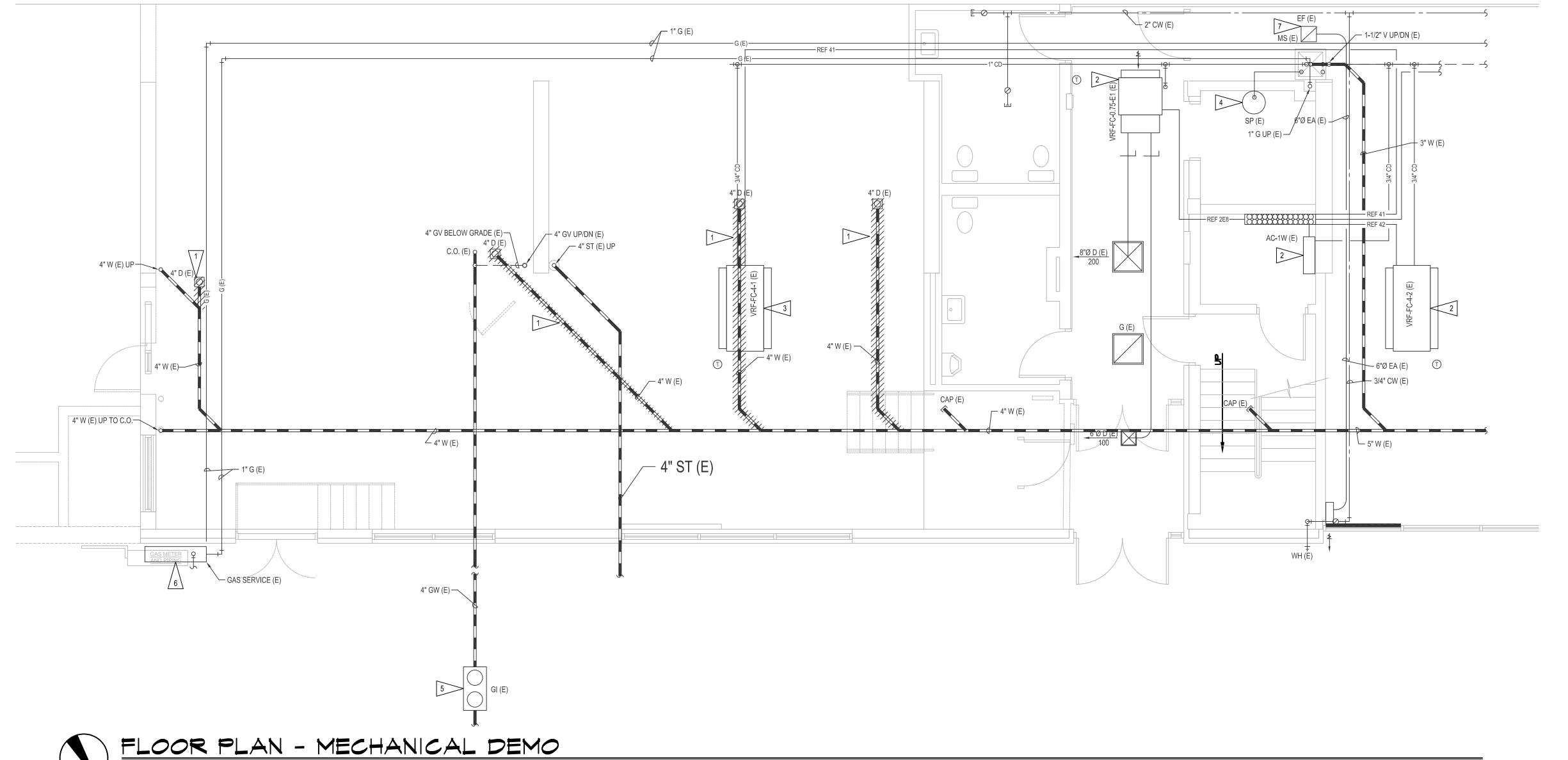
b) Norton in required thickness and widths.

3.03 INSTALLATION

D. Provide for mechanical/electrical penetrations. E. Panel Joints: Analyze all walls to determine panel application to reduce joints to minimum. Apply in maximum lengths to minimize both horizontal and vertical joints. Start installation of panels at exterior wall to position but joints as far away from exterior

B. Allow embedding coat to thoroughly dry prior to application of second coat. C. Apply joint compound and taping to fastener depressions as first coat. Follow with a minimum of two (2) additional applications.





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DEMOLITION NOTES

- 1. ALL MECHANICAL ITEMS SHOWN ARE EXISTING. NOT ALL EXISTING MECHANICAL ITEMS ARE SHOWN. ITEMS SHOWN DASHED/HATCHED ARE TO BE REMOVED.
- 2. EXISTING DRAWINGS ARE BASED ON APPROXIMATIONS FROM FIELD OBSERVATIONS. DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT LOCATION OF ALL EXISTING EQUIPMENT, DUCTWORK AND PIPING. EQUIPMENT, DUCTWORK AND PIPING DISCOVERED ON SITE TO BE REMOVED BUT NOT INDICATED ON PLANS TO BE IDENTIFIED BY CONTRACTOR AND REMOVED AS REQUIRED. 3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO
- PROVIDING NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING REMOVAL AS REQUIRED TO ACCOMMODATE ACTUAL CONDITIONS.
- 4. COORDINATE ALL REQUIRED SHUT-DOWNS WITH GENERAL CONTRACTOR.
- 5. HOLES CUT IN WALLS, FLOORS AND CEILINGS TO PERMIT THE REMOVAL OF EXISTING EQUIPMENT, PIPING, ETC. SHALL BE CAREFULLY MADE AND RESTRICTED TO THE SMALLEST PRACTICAL SIZE. PATCH ALL HOLES NOT REQUIRED FOR NEW WORK TO MATCH EXISTING. SEAL ALL HOLES OF EXTERIOR ENVELOPE WATER TIGHT.
- 6. THE OWNER RESERVES THE FIRST RIGHT OF SALVAGE OF ANY ITEMS REMOVED. CONTRACTOR SHALL REMOVE ALL UNWANTED MATERIALS FROM THE SITE. OWNER'S DUMPSTER OR OTHER TRASH RECEPTACLES ARE NOT TO BE UTILIZED.
- 7. WHERE APPLICABLE, COORDINATE EXTENT OF DEMOLITION WITH NEW WORK. 8. COORDINATE ALL ROOF WORK WITH GENERAL CONTRACTOR AND ROOFING
- CONTRACTORS. 9. LOCATION OF BELOW GRADE PIPING IS BASED ON EXISTING DRAWINGS AND HAS NOT BEEN VERIFIED. CONTRACTOR SHALL PROVIDE COMPLETE CAMERA SCOPE AND DOCUMENTATION OF ALL EXISTING BELOW GRADE PIPING. INCLUDE THE FOLLOWING INFORMATION: LOCATION, SIZE, ELEVATION, AND

CONDITION OF ALL BELOW GRADE PIPING.

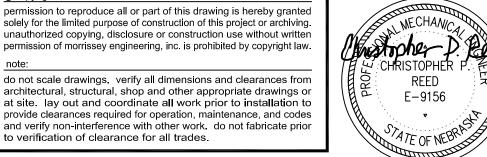
- 10. UNLESS OTHERWISE NOTED ALL BELOW GRADE PIPING SHALL REMAIN. SEE NEW WORK PLAN FOR RECONNECTION TO EXISTING BELOW GRADE PIPING. ALL PIPING NOT USED IN NEW DESIGN SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE. DO NOT ALLOW DEAD LEGS OF SANITARY PIPING. HAZARDOUS MATERIAL COORDINATION NOTES
- 1. WHENEVER THE CONTRACTOR ENCOUNTERS A MATERIAL WHICH COULD POSSIBLY BE HAZARDOUS, THE CONTRACTOR SHALL STOP WORK AND CONTACT THE OWNER IMMEDIATELY FOR DIRECTION. DO NOT DISTURB THE MATERIAL IN ITS LOCATION.
- 2. CONTRACTORS SHALL AND MUST COORDINATE REMOVAL OF ANY ITEMS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS WITH THE OWNER. REMOVAL OF ANY HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH ANY EPA REQUIREMENTS AS WELL AS ANY REQUIREMENTS OF ANY OTHER AGENCIES WITH JURISDICTION OVER SUCH WORK.

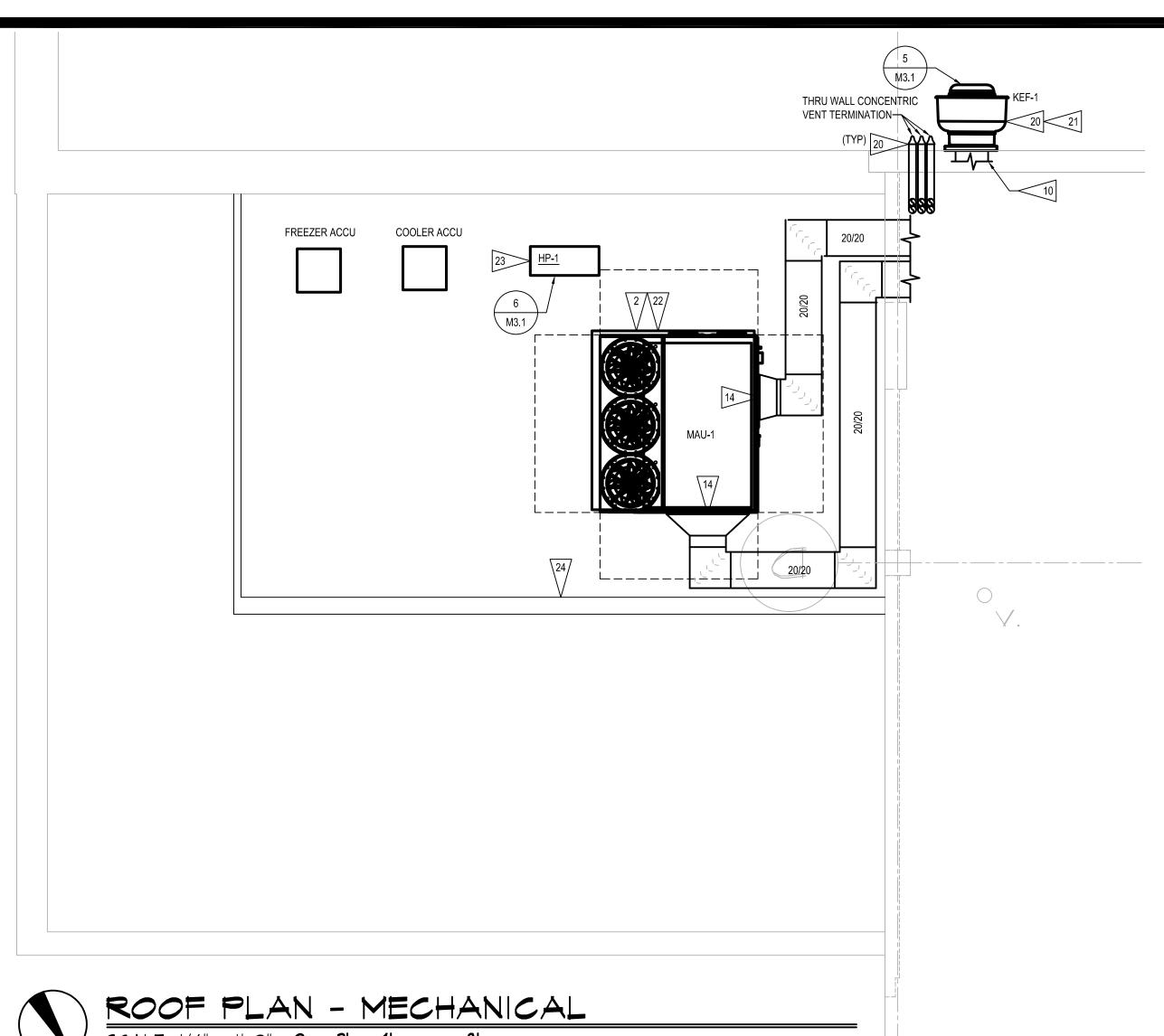
DEMOLITION FLAG NOTES

- 1 REMOVE SANITARY PIPING SHOWN HATCHED COMPLETE. REMOVE SANITARY BACK TO MAIN AND CAP. DO NOT ALLOW DEAD LEGS OF
- 2 EXISTING VRF UNIT, DUCT, REFIRGERANT PIPING, CONTROLS AND ETC.
- RELOCATE VRF UNIT. SEE SHEET M1.1 FOR ADDITIONAL INFORMATION.
- 4 EXISTING SUMP PUMP, PIPING AND CONTROLS TO REMAIN.
- 5 EXISTING GREASE INTERCEPTOR AND PIPING TO REMAIN.
- 6 EXISTING GAS SERVICE TO REMAIN. SEE SHEET M2.1 FOR ADDITIONAL
- INFORMATION. 7 EXISTING EXHAUST FAN, DUCT AND CONTROLS TO REMAIN.

Omaha, NE 68164

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SCALE: 1/4" = 1'-0"

GENERAL NOTES

- 1. DO NOT ROUTE DUCTWORK OR LOCATE EQUIPMENT ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 2. MECHANICAL ITEMS SHOWN LIGHT AND / OR INDICATED WITH (E) ARE EXISTING. ITEMS INDICATED WITH A (R) ARE RELOCATED. ALL ITEMS SHOWN DARK ARE
- 3. EXISTING DRAWINGS ARE BASED ON EXISTING CONSTRUCTION DOCUMENTS AND APPROXIMATION FROM FIELD OBSERVATIONS. DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT LOCATION OF ALL MECHANICAL ITEMS. MECHANICAL ITEMS DISCOVERED ON SITE TO BE REMOVED BUT NOT INDICATED ON PLANS TO BE IDENTIFIED BY CONTRACTOR AND REMOVED / RELOCATED AS DIRECTED BY THE ENGINEER.
- 4. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE OFFSETS AS
- 5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING DUCTWORK AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS AND WITH ALL TRADES OF NEW WORK AT NO ADDITIONAL COST TO THE OWNER.
- 6. COORDINATE ALL ROOF, WALL, AND FLOOR PENETRATIONS WITH GENERAL CONTRACTOR. SEAL PENETRATIONS OF EXTERIOR ENVELOPE WATERTIGHT.
- 7. MAINTAIN CODE AND MANUFACTURER'S REQUIRED CLEARANCES AROUND ALL MECHANICAL EQUIPMENT TO ALLOW PROPER OPERATION AND FOR EASY MAINTENANCE AND FILTER ACCESS. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENTLY ADOPTED LOCAL AND STATE CODES AS WELL AS OWNER STANDARDS.
- 9. MECHANICAL CONTRACTOR TO PROVIDE ALL LOW VOLTAGE CONTROL WIRING AND ELECTRICAL CONTRACTOR TO PROVIDE ALL POWER AND LINE VOLTAGE CONTROL WIRING REQUIRED FOR COMPLETE OPERATION OF ALL MECHANICAL
- 10. SEE DUCT FITTING DETAIL 1 ON SHEET M3.1.
- 11. SPACE IS LIMITED. COORDINATE DUCT ROUTING WITH STRUCTURE AND ALL OTHER TRADES. OFFSET AND EXTEND DUCTWORK AS REQUIRED TO AVOID CONFLICTS.
- 12. INSTALL ALL VOLUME DAMPERS ABOVE ACCESSIBLE CEILINGS OR IN ACCESSIBLE LOCATIONS.
- 13. ROUND RUN-OUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK UNLESS NOTED OTHERWISE. SEE DIFFUSER CONNECTION DETAIL 2 ON 14. COORDINATE ALL CEILING-MOUNTED DIFFUSER, REGISTER AND GRILLE
- BOARD SHALL BE INSTALLED SYMMETRICALLY TO EACH OTHER AND SYMMETRICALLY WITH LIGHT FIXTURES.

LOCATIONS WITH ARCHITECTURAL DRAWINGS. ALL DEVICES INSTALLED IN GYP

- LOCATIONS WITH ELECTRICAL AND DESIGN ARCHITECT.
- 16. MECHANICAL CONTRACTOR TO COORDINATE MAKEUP AIR UNIT, KITCHEN EXHAUST HOOD, KITCHEN EXHAUST FAN AND KITCHEN EXHAUST CONTROL REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND ELECTRICAL CONTRACTOR. PROVIDE ALL NECESSARY CONTROLS FOR A COMPLETE AND OPERATIONAL SYSTEM MEETING ALL THE REQUIREMENTS PER NFPA 96, 2021 IMC AND ALL LOCAL CODES.
- 17. COORDINATE ALL WORK WITH ACTUAL KITCHEN EQUIPMENT PROVIDED. SEE MECHANICAL SUPPLEMENTAL DRAWINGS SHEETS M6.1-M6.2 FOR MORE INFORMATION REGARDING KITCHEN VENTILATION EQUIPMENT.
- 18. PROVIDE PAINT GRIP FINISH ON ALL SHEET METAL DUCTWORK IN AREAS WHERE EXPOSED. DUCTWORK AND ASSOCIATED REGISTERS TO BE PAINTED BY GENERAL CONTRACTOR. COORDINATE PAINTING REQUIREMENTS WITH ARCHITECTURAL.
- 19. VERIFY ALL HVAC CONNECTIONS AND HOOD SIZE WITH THE KITCHEN EQUIPMENT AND KITCHEN EQUIPMENT SUPPLIER.

KITCHEN HOOD CONTROL & INTERLOCK REQUIREMENTS

- 1. TYPE 1 HOOD SHALL INCLUDE HEAT DETECTOR AND MANUAL PUSH BUTTON STATION. UPON DETECTION OF HEAT OR ACTIVATION OF THE "ON" BUTTON, THE MAKEUP AIR UNIT SHALL PROVE TO BE ON. UPON PROOF THAT THE MAKEUP AIR UNIT IS RUNNING, THE KITCHEN EXHAUST FAN WILL BE ACTIVATED. IF THE MAKEUP AIR UNIT DOES NOT GIVE PROOF, THE EXHAUST FAN DOES NOT ACTIVATE. IN A FIRE SITUATION WHERE THE ANSUL SYSTEM OPERATES, THE EXHAUST FAN WILL CONTINUE TO OPERATE AND THE MAKEUP AIR UNIT WILL CEASE OPERATION.
- 2. TYPE 1 HOOD SHALL BE INTERLOCKED WITH KITCHEN ROOFTOP UNIT. KITCHEN ROOFTOP UNIT MUST OPERATE IN "FAN ON" MODE WHILE TYPE 1 HOOD EXHAUST FAN IS OPERATING.

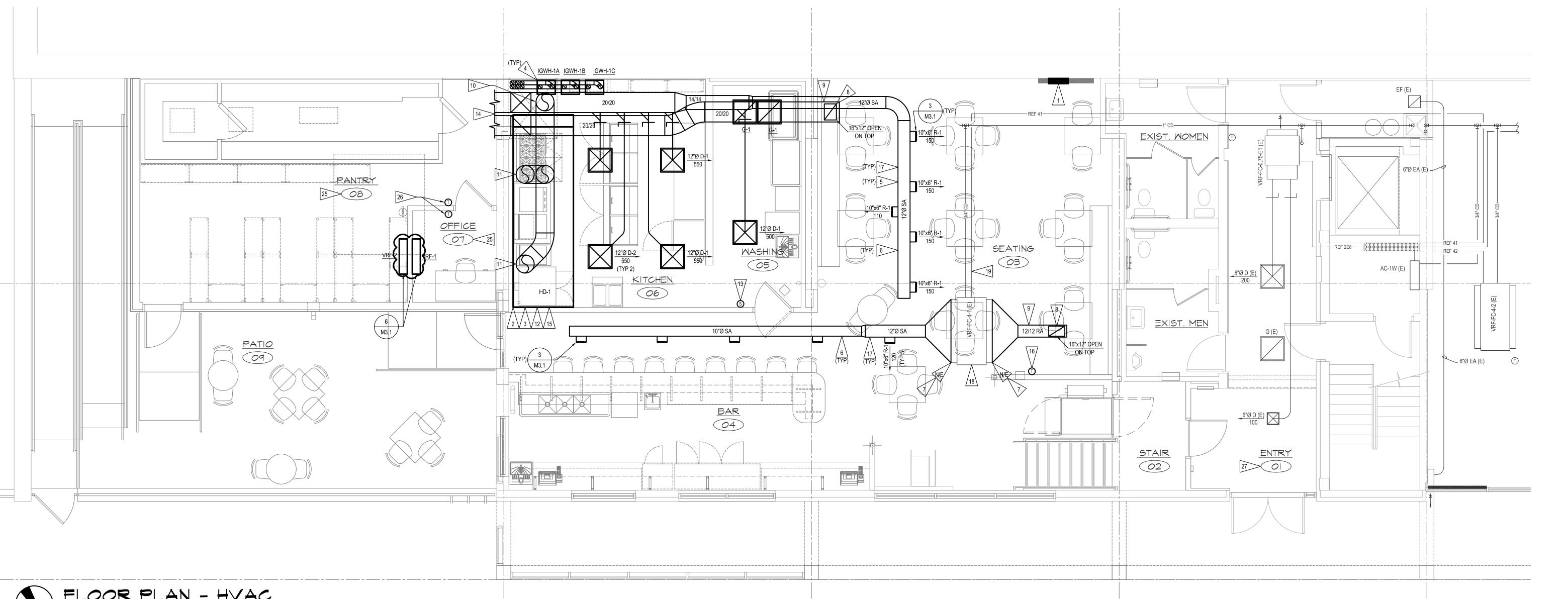
- N/E CONNECT NEW TO EXISTING. FIELD VERIFY EXISTING SIZE AND LOCATION PRIOR TO PROVIDING NEW WORK. 1 DO NOT ROUTE DUCTWORK OR PIPING ABOVE ELECTRICAL
- PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES. 2 INTERLOCK HOOD FIRE SUPPRESSION SYSTEM WITH MAKE-UP AIR UNIT SUCH THAT MAKE-UP AIR UNIT SHUTS DOWN IF FIRE SUPPRESSION SYSTEM IS ACTIVATED.
- 3 INTERLOCK HOOD FIRE SUPPRESSION SYSTEM WITH ALL FUEL SHUTOFFS. > PROVIDE GAS WATER HEATER VENT UP TO CONCENTRIC TERMINATION PER MANUFACTURER'S RECOMMENDATIONS AND NFPA 54. SEE DETAIL 4 ON SHEET M3.1. SEAL WALL
- PENETRATION WATER TIGHT. 5 INSTALL DUCT TIGHT TO BOTTOM OF STRUCTURE. TRANSITION DUCT TO FOLLOW SLOPE OF ROOF.
- 6 PAINT EXPOSED DUCTWORK AND REGISTERS VISIBLE TO PUBLIC. COORDINATE EXACT COLOR WITH ARCHITECT AND OWNER. CONSTRUCT DUCT TO BE PAINTED WITH GRIP FINISH.
- 7 CONNECT NEW SA/RA DUCT TO EXISTING SA/RA DUCT. FILED VERIFY EXISTING DUCT LOCATION AND SIZE. TRANSITION SA/RA DUCT TO EXISTING DUCT AS REQUIRED.
- 8 MOUNT DUCT AS HIGH AS POSSIBLE AND MAINTAIN 12" AIR GAP ABOVE OPENING. ELBOW RETURN AIR OPENING UP TOWARD EXISTING STRUCTURE. PROVIDE 1/2"x1/2" WIRE MESH SCREEN WITH FRAME OVER OPENING.
- 9 EXPOSED RECTANGULAR DUCT SHALL BE LINED. ROUTE DUCT TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ROUTING WITH LIGHT FIXTURES AND ARCHITECTURAL.
- 10 > 18"Ø EA DUCT UP IN EXISTING CHASE TO WALL MOUTNED KEF-1. COORDINATE WITH STRUCTURE. TRANSITION TO KEF-1 OPENING SIZE AS REQUIRED. COORDINATE DUCT SIZE AND ROUTING WITH HOOD, EXHAUST FAN AND OVEN MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
- 15. THERMOSTAT ROUGH-INS BY ELECTRICAL CONTRACTOR. COORDINATE EXACT

 LOCATIONS WITH ELECTRICAL AND DESIGN ADDITION. COLLAR TO KEF-1. DUCTWORK SHALL BE ALL WELDED CARBON STEEL PER NFPA 96 AND ALL LOCAL CODE REQUIREMENTS. PROVIDE FIRE RATED DUCT INSULATION PER MANUFACTURER'S REQUIREMENTS TO MAINTAIN ZERO CLEARANCE TO COMBUSTIBLES.
 - 12 KITCHEN HOOD, KEH-1. INSTALL TYPE I RANGE HOOD PER NFPA 96, IMC 2021, MANUFACTURER'S RECOMMENDATIONS AND ALL LOCAL CODES.
 - 13 >> PROVIDE MANUAL PULL STATION FOR HOOD FIRE SUPPRESSION SYSTEM PER NFPA 96 REQUIREMENTS. VERIFY LOCATION WITH LOCAL AUTHORITY HAVING JURISDICTION AND COORDINATE THE COMPLETE INSTALLATION WITH ALL OTHER TRADES. REMOTE PULL STATION FOR HOODS SHALL BE NO LESS THAN 10'-0" AND NO MORE THAN 20'-0" FROM HOOD ALONG PATH OF
 - 20/20 O.A./RA DUCT TO MUA-1 LOCATED ON LOWER ROOF. COORDINATE WITH ARCHITECTURE AND STRUCTURE. TRANSITION DUCT TO MAU-1 OPENING SIZE AS REQUIRED.

- 15 TYPE 1 HOOD LISTED AND LABELED MATERIALS, INSTALLATION, FIRE SUPPRESSION, GREASE DUCT WITH CLEANOUTS CLEARANCES, TERMINATIONS AND MAKE-UP AIR ALL IN ACCORDANCE WITH REQUIREMENTS SET FORTH
- IN IMC 2021 WITH LOCAL AMENDMENTS. 16 RELOCATE EXISTING THERMOSTAT TO LOCATION INDICATED. PROVIDE ADDITIONAL CONTROL WIRING AS REQUIRED. COORDINATE T-STAT LOCATION WITH ARCHITECT AND TENANT.
- 17 EXPOSED ROUND DUCT SHALL BE DOUBLE WALL WITH 1" INTERSTITIAL LINER. ROUTE DUCT TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ROUTING WITH LIGHT FIXTURES AND ARCHITECTURAL. MOUNT DUCT AS HIGH AS
- 18 > EXISTING VRF UNIT TO REMAIN. PROVIDE COMPLETE SERVICE INCLUDING, CLEANING OF COILS COMPLETE CHARGE OF REFRIGERANT, CHANGE OF BELTS AND NEW FILTERS. REPORT ADDITIONAL NEEDED REPAIRS TO BUILDING OWNER. BALANCE SUPPLY AIR TO 600 CFM. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND UNIT.
- 19 EXISTING REFRIGERANT PIPING UP TO OUTDOOR UNIT TO REMAIN. VERIFY EXACT LOCATION IN FIELD PROVIDE COMPLETE SERVICE INCLUDING, CLEANING, COMPLETE CHARGE OF REFRIGERANT AND CHANGE OF BELTS. REPORT ADDITIONAL NEEDED REPAIRS TO BUILDING OWNER. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND UNIT.
- 20 MAINTAIN 10'-0" MINIMUM FROM ALL OUTSIDE AIR INTAKES. 21 NTERLOCK HOOD EXHAUST FAN WITH MAKE-UP AIR UNIT SUCH THAT EXHAUST FAN CANNOT RUN IF MAKE-UP AIR
- UNIT IS NOT RUNNING. 22 LOCATE NEW MAKE-UP AIR UNIT AT APPROXIMATE LOCATION INDICTED. COORDINATE EXACT LOCATION WITH STRUCTURE. MAINTAIN MANUFACTURER'S RECOMMENDED
- CLEARANCES. 23 LOCATE NEW VRF-HP UNIT AT APPROXIMATE LOCATION INDICTED. COORDINATE EXACT LOCATION WITH GENERAL CONTRACTOR. MAINTAIN MANUFACTURER'S
- 24 PROVIDE GUARD RAIL FOR MECHANICAL EQUIPMENT LOCATED WITHIN 10'-0" OF ROOF EDGE. COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECTURAL.

RECOMMENDED CLEARANCES.

- 25 ELECTRIC HEAT BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL DRAWINGS.
- 26 INSTALL NEW VRF ROOM SENSORS AND ALL REQUIRED CONTROL WIRING PER MANUFACTURERS RECOMMENDATIONS. COORDINATE SENSOR LOCATION WITH ELECTRICAL CONTRACTOR.
- 27 EXISTING ELECTRIC UNIT HEATERS TO REMAIN. SEE





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07/24/24

MARK	ITEM	CW	HW	FILTERED CW	WASTE	VENT	GAS	NATURAL GAS LOAD (CFH)	REMARKS
1	THREE COMPARTMENT SINK	3/4"	3/4"	-	(3) 2"	-	-	-	(7) (10)
2	SODA WITH ICE BIN	1/2"	-	-	1"	-	-	-	(5) (11) (13)
3	CONVECTION OVEN	-	-	-	-	-	3/4"	90	(6)
4	CHAR BROILER	-	<u>-</u>	<u>-</u>	-	-	3/4"	80	(6)
5	UNDER COUNTER DISHWASHER	1/2"	1/2"	-	1-1/2"	-	-	-	(5) (8)
6	DISHMACHINE	3/4"	3/4"	-	2"	-	-	-	(5) (8)
7	FRYER	-	-	-	-	-	3/4"	150	(6)
8	GRIDDLE	-	-	-	-	-	3/4"	50	(6)
9	HAND SINK	1/2"	1/2"	-	1-1/2"	1-1/2"	-	-	(14)
10	ICE CUBE MACHINE	-	-	1/2"	3/4"	-	-	-	(5) (9) (12)
11	CONVECTION OVEN	-	-	-	-	-	3/4"	390	(6)
12	WALK-IN FREEZER (EVAP. COIL)	_	-	-	3/4"	-	-	<u>-</u>	(5)
13	WALK-IN COOLER (EVAP. COIL)	-	-	<u>-</u>	3/4"	-	-	-	(5)
14	WATER SOFTENER	1-1/2"	~~		3/4"	~~	•		(3) (5) (8) (15)
15	DIRTY DISH SINK	3/4"	3/4"	-	2"	-	-	-	(5)

- AND FOOD SERVICE DRAWINGS. FIELD VERIFY CONNECTION SIZES AND MODIFY SIZE AND LOCATION OF UTILITIES AS REQUIRED. INSTALL ALL EQUIPMENT PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND LOCAL PLUMBING CODE. VERIFY ALL BACKFLOW PREVENTION REQUIREMENTS WITH AHJ. PROVIDE BACKFLOW PREVENTION DEVICES AS REQUIRED BY LOCAL PLUMBING CODE.
- PROVIDE ISOLATION VALVES, FLOW CONTROL VALVE, SIPHON BREAKER AND LL OTHER SPECIALTIES PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND LOCAL PLUMBING CODE.
- PROVIDE WATER STOPS AT EACH PIECE OF EQUIPMENT. WATER STOPS SHALL BE IN AN ACCESSIBLE LOCATION. HARD PIPE INDIRECT WASTE CONNECTION FROM EQUIPMENT DRAIN TO NEAREST FLOOR SINK. MAINTAIN CODE REQUIRED AIR GAP AND
- DISCHARGE TO FLOOR SINK. PROVIDE GAS COCK, LBS. TO OZ. GAS PRESSURE REGULATOR, DIRT LEG AND UNION AT APPLIANCE. VERIFY CONNECTION REQUIREMENTS WITH FOOD SERVICE EQUIPMENT SUPPLIER. PROVIDE QUICK CONNECT FLEXIBLE GAS CONNECTIONS AT KITCHEN
- APPLIANCES. VENT REGULATOR TO OUTSIDE AS REQUIRED. PROVIDE 1-1/2" WASTE FROM EACH SINK COMPARTMENT DRAIN TO 2" CONTINUOUS WASTE HEADER. DISCHARGE 2" WASTE HEADER INDIRECT TO FLOOR SINK. MAINTAIN CODE REQUIRED AIR GAP AND DISCHARGE TO FLOOR SINK.
- PROVIDE BACKFLOW PREVENTER AT APPLIANCE WATER CONNECTION PER LOCAL PLUMBING CODE REQUIREMENTS. ICE MAKER IS AIR-COOLED. PROVIDE BACKFLOW PREVENTER AND ANY REQUIRED SPECIALITIES PER MANUFACTURER'S
- RECOMMENDATIONS AND LOCAL PLUMBING CODE. ROUTE 3/4" CW AND 3/4" HW TO MULTI-COMPARTMENT SINK. PROVIDE DRAIN AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. PIPE INDIRECT WASTE CONNECTION FROM EQUIPMENT TO
- NEAREST FLOOR SINK. PIPE FLOOR SINK WITH CORROSIVE RESISTANT MATERIALS PER LOCAL PLUMBING CODE. ROUTE 1/2" CW TO FILTER. ROUTE 1/2" FILTERED CW FROM FILTER TO ICE MAKER. PROVIDE 6" PVC PIPING BELOW FLOOR AND ABOVE CEILING FROM BAG & BOX TO BEVERAGE DISPENSERS. COORDINATE EXACT
- ROUTING AND REQUIREMENTS WITH BEVERAGE SUPPLIER. PROVIDE BELOW DECK THERMOSTATIC MIXING VALVE SERVING HOT WATER SUPPLY. SET MAX TEMPERATURE TO 110° F.
- INFORMATION INCLUDED IN SCHEDULE HAS BEEN BASED ON LIMITED DESIGN INFORMATION AVAILABLE AT TIME OF CONSTRUCTION DOCUMENTS. COORDINATE EQUIPMENT LOCATIONS. CONDUIT ROUTING. DEVICE MOUNTING HEIGHTS AND POWER CONNECTIONS INCLUDING VOLTAGE, PHASE, BREAKER, CONDUCTOR, CONDUIT AND RECEPTACLE CONFIGURATION WITH WITH OWNER, KITCHEN EQUIPMENT SUPPLIER AND REVIEWED KITCHEN EQUIPMENT SUBMITTALS PRIOR TO ROUGH IN AND PURCHASE OF LONG LEAD TIME EQUIPMENT. COORDINATE ANY CHANGES REQUIRED TO THE INFORMATION ABOVE WITH THE ENGINEER OF RECORD. MAKE ANY CHANGES REQUIRED AT NO ADDITIONAL COST TO OWNER.

GENERAL NOTES

- 1. NOT ALL EXISTING MECHANICAL ITEMS ARE SHOWN ON PLAN. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING PIPING AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS AND WITH ALL TRADES OF NEW WORK.
- 2. MECHANICAL ITEMS SHOWN LIGHT AND / OR INDICATED WITH (E) ARE EXISTING. ALL ITEMS SHOWN DARK ARE NEW. ALL ITEMS INDICATED WITH (R) ARE RELOCATED.
- 3. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 4. MECHANICAL CONTRACTOR TO COORDINATE ALL KITCHEN EQUIPMENT ROUGH-IN REQUIREMENTS WITH FOOD SERVICE EQUIPMENT SUPPLIER
- AND EQUIPMENT MANUFACTURER. 5. MECHANICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO KITCHEN EQUIPMENT. COORDINATE CONNECTION SIZE, LOCATION AND REQUIRED PLUMBING SPECIALTIES WITH FOOD SERVICE EQUIPMENT
- 6. PROVIDE BACKFLOW PREVENTERS AT WATER CONNECTIONS TO KITCHEN EQUIPMENT AS REQUIRED BY LOCAL PLUMBING CODE.

SUPPLIER AND EQUIPMENT MANUFACTURER.

- 7. PROVIDE WATER STOPS AT EACH PIECE OF KITCHEN EQUIPMENT. WATER STOPS SHALL BE IN AN ACCESSIBLE LOCATION.
- 5. PIPING MATERIAL AND SPRINKLER HEADS SHALL MEET THE REQUIREMENTS OF NFPA 13. CPVC PIPING WILL NOT BE ALLOWED. 8. SPACE ABOVE CEILINGS IS LIMITED. COORDINATE PIPE ROUTING WITH ENTIRE TENANT FINISH SHALL HAVE NEW FIRE SPRINKLER HEADS. SEE ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND FIRE SPRINKLER SPEC SECTION 211000 ON SHEET M5.1 FOR FIRE TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION. SPRINKLER HEAD REQUIREMENTS.

FIRE SPRINKLER NOTES

JURISDICTION.

9. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.

10. ALL PIPING SHOWN FOR CLARITY, ROUTE WASTE, VENT, WATER AND

- GAS PIPING CONCEALED IN CHASES, IN WALLS OR ABOVE CEILINGS AS REQUIRED.
- 11. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON WARM -IN-WINTER SIDE OF INSULATION.

12. NOT ALL CLEANOUTS ARE SHOWN, PROVIDE CLEANOUTS PER LOCAL

PLUMBING CODE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL

- CONTRACTOR. 13. COORDINATE ALL BELOW GRADE PIPING WITH EXISTING STRUCTURAL FOOTINGS. OFFSET BELOW GRADE PIPING AS REQUIRED TO AVOID
- 14. SEE PLUMBING FIXTURE SCHEDULE ON SHEET M4.1 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.

CONFLICTS.

- 15. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET FOR KITCHEN EQUIPMENT CONNECTION REQUIREMENTS.
- 16. ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE LOCAL PLUMBING
- 17. VERIFY ALL PLUMBING CONNECTIONS WITH THE KITCHEN EQUIPMENT AND KITCHEN EQUIPMENT SUPPLIER.
- 18. SEE WASTE AND VENT DIAGRAM ON SHEET M3.1 FOR WASTE AND VENT PIPE SIZES. 19. SEE FLOOR PLANS FOR HOT WATER CIRCULATION (HWC) MAIN SIZES.

AUTOMATIC BALANCING VALVES SET AT 0.5 GPM.

ALL HWC BRANCHES SHALL BE 1/2", ALL BALANCE VALVES SHALL BE

1. THE EXISTING BUILDING IS PROTECTED BY A WET PIPE NFPA 13 FIRE N/E >> CONNECT NEW TO EXISTING. FIELD VERIFY EXISTING SIZE AND SPRINKLER SYSTEM. CONTRACTOR SHALL VERIFY EXISTING LOCATION PRIOR TO PROVIDING NEW WORK. CONDITIONS INCLUDING PIPE SIZES AND LOCATIONS, SPRINKLER HEAD 1 DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN LOCATIONS, FLOW SWITCHES, ZONE VALVES, AVAILABLE PRESSURE, ETC. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIALS ALL CODE REQUIRED CLEARANCES.

NECESSARY TO MODIFY SYSTEM TO MEET REQUIREMENTS OF NFPA 13

3. MODIFY EXISTING FIRE SPRINKLER SYSTEM TO ACCOMMODATE

MEETS THE REQUIREMENTS OF NFPA 13 AND AUTHORITY HAVING

4. CONNECT NEW FIRE SPRINKLER PIPING TO THE EXISTING SPRINKLER

6. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH

DUCTWORK OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO

ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS,

SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED

COORDINATE WITH ALL OTHER TRADES.

AT NO ADDITIONAL EXPENSE TO THE PROJECT.

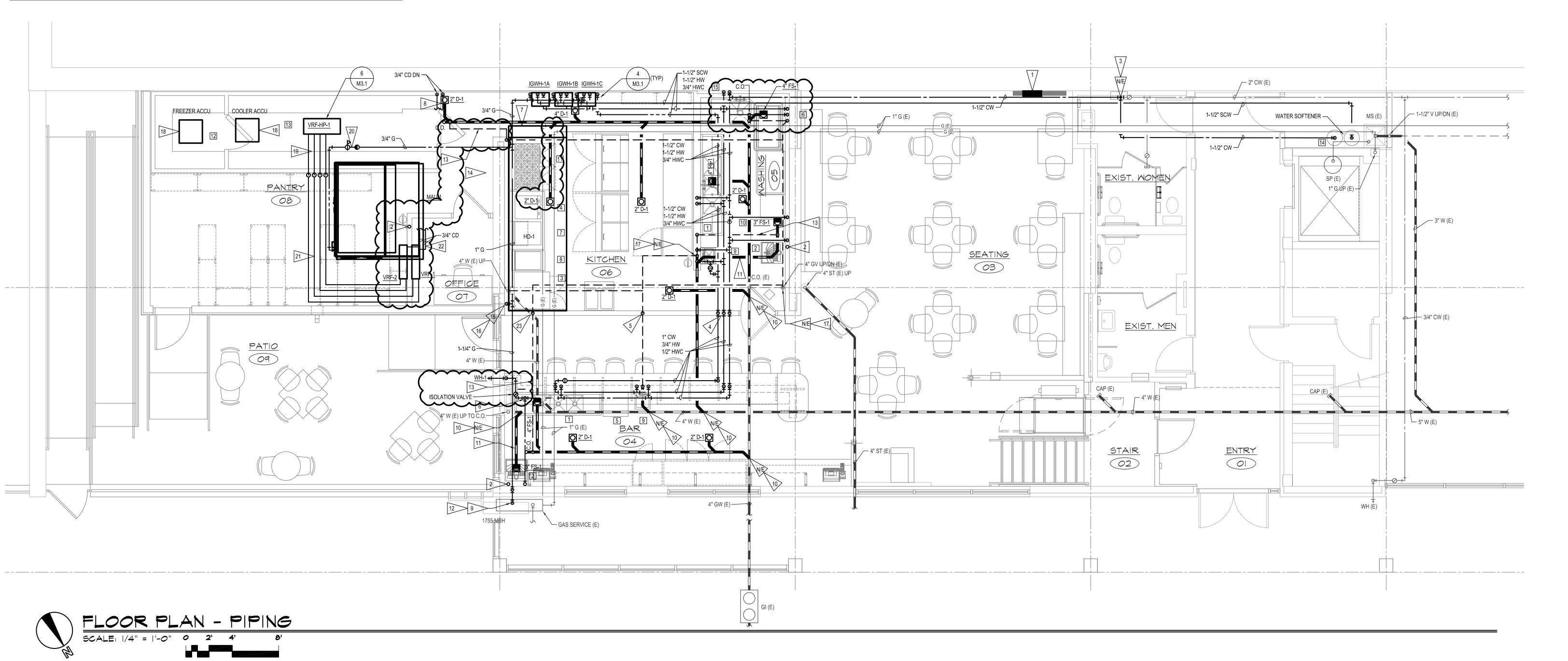
7. SEE SPECIFICATION SECTION 211000 ON SHEET M5.1.

2 CONTRACTOR TO PROVIDE 6" PVC PATHWAYS WITH LONG AND THE AUTHORITY HAVING JURISDICTION. SWEEPS FOR BEER/SODA LINES SHOWN ON FOOD SERVICE EQUIPMENT DRAWINGS FROM COOLER/BAG IN BOX TO 2. EXISTING FIRE SPRINKLER PIPING SHALL BE REMOVED AS REQUIRED BEER/SODA DISPENSER. COORDINATE ABOVE CEILING ROUTING FOR NEW WORK ASSOCIATED WITH TENANT FINISH. COORDINATE WITH EXISTING CONDITIONS AND ALL OTHER TRADES. EXTENT OF DEMOLITION REQUIRED WITH MECHANICAL DRAWINGS AND COORDINATE ANY BELOW GRADE PIPING WITH EXISTING ARCHITECTURAL DRAWINGS. NEW DUCTWORK AND NEW CEILINGS STRUCTURAL AND BELOW GRADE UTILITIES. COORDINATE ALL HAVE PRIORITY OVER EXISTING FIRE SPRINKLER PIPING. IF CONFLICTS REQUIREMENTS WITH BEER/SODA SUPPLIER. OCCUR WITH EXISTING FIRE SPRINKLER PIPING, EXISTING FIRE SPRINKLER SHALL BE REMOVED.

FLAG NOTES

- 3 CONNECT NEW 2" CW TO EXISTING 2" CW WITH ISOLATION VALVE. FIELD VERIFY EXACT SIZE AND CONNECTION LOCATION OF EXISTING CW. EXTEND AND OFFSET NEW PIPING AS REQUIRED TENANT FINISH SUCH TO PROVIDE A FIRE SPRINKLER SYSTEM THAT TO MAKE CONNECTION TO EXISTING CW PIPING.
- ROUTE 1" CW, 3/4" HW AND 1/2" HWC DOWN IN WALL TO BELOW FLOOR. ROUTE 1" CW, 3/4" HW AND 1/2" HWC TO BACK OF COUNTER TO BAR EQUIPMENT. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET AND KITCHEN EQUIPMENT SUPPLIER PIPING. RELOCATE EXISTING SPRINKLER PIPING AS REQUIRED BY NEW DRAWINGS FOR FINAL CONNECTION REQUIREMENTS. WALLS, CEILINGS, LIGHTS, MECHANICAL EQUIPMENT, DUCTWORK, ETC.
 - 5 > 1-1/2" ISLAND VENT IN WALL FROM HAND SINK.
 - 6 ROUTE 1/2" CW DOWN TIGHT TO BACK OF COUNTER TO BELOW FLOOR. ROUTE 1" CW TO BACK OF COUNTER TO BAR EQUIPMENT. SEE KITCHEN EQUIPMENT SCHEDULE ON THIS SHEET AND KITCHEN EQUIPMENT SUPPLIER DRAWINGS FOR FINAL CONNECTION REQUIREMENTS.
 - ANSUL R102 WET CHEMICAL KITCHEN HOOD FIRE PROTECTION SYSTEM (OR EQUAL). PROVIDE WET CHEMICAL AGENT, PIPING, NOZZLES, AND CONTROLS AS REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM. SYSTEM SHALL MEET NFPA 17A, NFPA 96 AND ALL OTHER APPLICABLE CODES. MOUNT SYSTEM ON HOOD PER MANUFACTURER'S RECOMMENDATIONS. LOCATE PULL STATION AS REQUIRED BY CODE. COORDINATE EXACT LOCATION OF ALL SYSTEM COMPONENTS WITH ALL OTHER TRADES, KITCHEN EQUIPMENT PLACEMENT AND KITCHEN EQUIPMENT SUPPLIER. SEE SUPPLEMENTAL MECHANICAL DRAWINGS SHEETS M6.1-M6.2 FOR MORE INFORMATON.
 - > ROUTE CONDENSATE DRAIN FROM WALK-IN COOLER/FREEZER EVAPORATOR TO INDIRECT DISCHARGE AT FLOOR SINK. 9 CONNECT NEW 1-1/4" GAS AND METER TO EXISTING GAS HEADER.
 - FIELD VERIFY EXACT SIZE AND CONNECTION LOCATION OF EXISTING GAS. EXTEND AND OFFSET NEW PIPING AS REQUIRED TO MAKE CONNECTION TO EXISTING GAS PIPING. 10 CONNECT NEW WASTE/GREASE WASTE TO EXISTING WASTE/GREASE WASTE AT LOCATION INDICATED. FIELD VERIFY
 - EXACT SIZE. LOCATION. ELEVATION AND DIRECTION OF FLOW OF EXISTING WASTE. EXTEND AND OFFSET PIPING AS REQUIRED TO MAKE CONNECTION IF EXISTING LOCATION VARIES FROM WHAT IS INDICATED ON PLAN. SAW CUT FLOOR AS REQUIRED. PATCH FLOOR TO MATCH EXISTING.
 - > WASTE PIPING FOR FLOOR SINKS SERVING SODA AND BEER WASTE SHALL BE OF CORROSIVE RESISTANT MATERIAL PER LOCAL PLUMBING CODE.

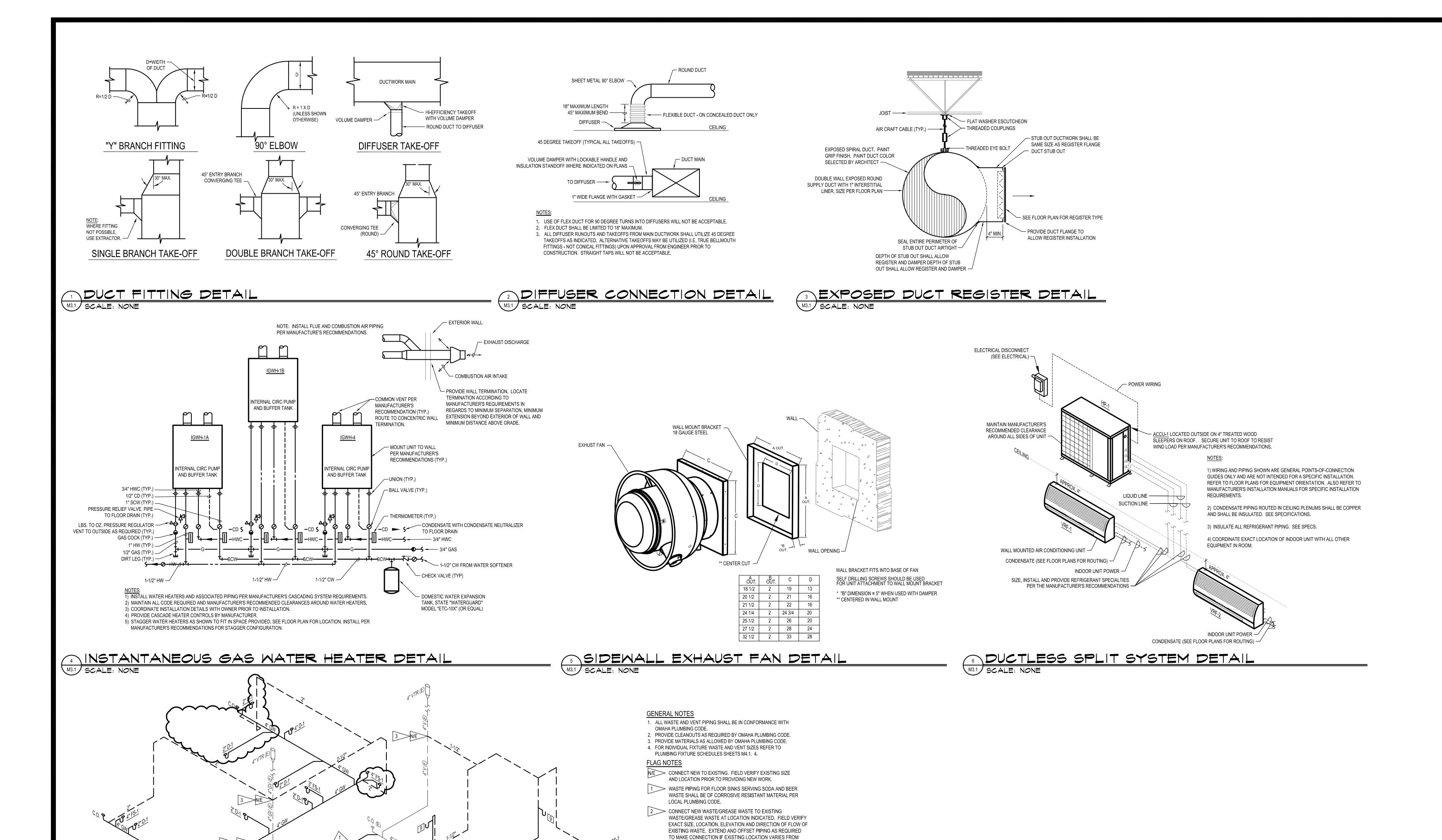
- 12 NEW 1-1/4" GAS PIPE BACK TO EXISTING GAS METER CENTER. FIELD VERIFY EXACT LOCATION OF EXISTING METER CENTER. COORDINATE NEW METER AND SERVICE LOAD WITH LOCAL GAS COMPANY. APPROXIMATE NEW CONNECTED LOAD = 1755 CFH AT 75'-0" OF EQUIVALENT LENGTH.
- 13 BELOW GRADE VENT. SEE WASTE AND VENT RISER DIAGRAM ON
- SHEET M3.1. 14 3/4" GAS THROUGH WALL TO MAU-1. SEAL WALL PENETRATION
- WATERTIGHT. 15 AUTOMATIC GAS SHUT-OFF VALVE. VALVE SHALL BE INTERLOCKED TO THE KITCHEN HOOD FIRE PROTECTION SYSTEM. VALVE TO CLOSE UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM. PROVIDE ALL REQUIRED WIRING.
- 16 1" GAS DOWN TO GAS HEADER SERVING COOKLINE. PROVIDE VENTLESS LBS. TO OZ. PRV AT START OF HEADER. ROUTE 2" GAS (AT 7" W.C.) FROM PRV TO KITCHEN EQUIPMENT ALONG COOKLINE. SEE KITCHEN EQUIPMENT SCHEDULE FOR INDIVIDUAL EQUIPMENT GAS CONNECTION REQUIREMENTS.
- 17 CONNECT NEW VENT/GREASE VENT TO EXISTING 4" VENT/GREASE VENT AT LOCATION INDICATED. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VENT. EXTEND AND OFFSET PIPING AS REQUIRED TO MAKE CONNECTION IF EXISTING LOCATION VARIES
- FROM WHAT IS INDICATED ON PLAN. 18 REMOTE ACCU UNIT FOR COOLER/FREEZER EVAPORATOR. COORDINATE EXACT LOCATION, REFRIGERANT PIPE ROUTING AND ROOF PENETRATION WITH GENERAL CONTRACTOR. SEAL ALL ROOF PENETRATIONS WATER TIGHT. ROUTE AND SIZE
- REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. 19 ROUTE REFRIGERANT PIPING FROM HEAT PUMP DOWN THROUGH ROOF TO WALL MOUNTED VRF UNITS. COORDINATE PIPING WITH ALL TRADES. SIZE OF REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. SEAL ROOF PENETRATION
- WATER TIGHT. 20 > PROVIDE GAS COCK, PRV, AND DIRT LEG PRIOR TO CONNECTION TO MECHANICAL EQUIPMENT. CONNECT GAS PIPING TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 21 >> PROVIDE COMPLETE REFRIGERANT PIPING FOR VRF SYSTEM. ROUTING IS INDICATED SCHEMATICALLY. ALL PIPING SHALL BE SIZED, INSTALLED, AND INSULATED PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. PIPE ROUTING SHALL BE COORDINATED WITH EXISTING CONDITIONS. ALL PIPING SHALL BE CONCEALED ABOVE CEILINGS OR IN WALL.
- 22 ROUTE PUMPED CONDENSATE FROM VRF UNIT TO INDIRECT CD DISCHARGE AT FLOOR DRAIN. 23 2" VENT IN WALL FROM FLOOR SINK.



MEI NO: 22488

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07/24/24



WHAT IS INDICATED ON PLAN. SAW CUT FLOOR AS REQUIRED.

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CONNECT NEW VENT/GREASE VENT TO EXISTING 4" VENT/GREASE VENT AT LOCATION INDICATED. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VENT. EXTEND AND OFFSET PIPING AS REQUIRED TO MAKE CONNECTION IF EXISTING LOCATION VARIES

PATCH FLOOR TO MATCH EXISTING.

FROM WHAT IS INDICATED ON PLAN.

MASTE AND VENT RISER DIAGRAM

M3.1 SCALE: NONE



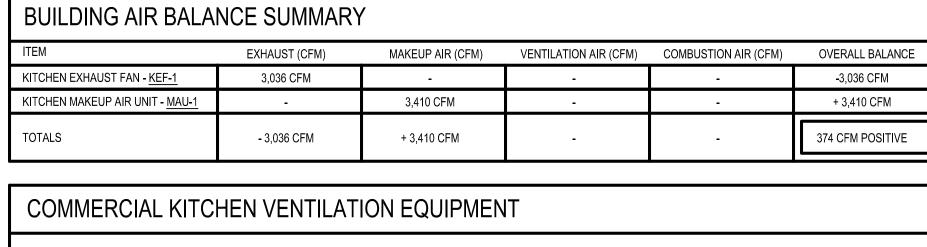
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07/24/24



1. COMMERCIAL KITCHEN VENTILATION EQUIPMENT IS SHOWN ON THE MECHANICAL SUPPLEMENTAL DRAWINGS BY CAPTIVE AIRE (SEE DRAWINGS M6.1 - M6.2). EQUIPMENT LIST AS FOLLOWS:

CAPTIVE AIRE EQUIPMENT

- . <u>HD-1</u> (KH-1 AND KH-2) TYPE I KITCHEN EXHAUST HOOD
- KEF-1 (KEF-1) ROOF MOUNTED GREASE RATED UTILITY SET EXHAUST FAN (SERVES KITCHEN HOOD HD-1)
- MAU-1 (MAU-1) GAS-FIRED MAKEUP AIR UNIT (SERVES KITCHEN HOODS HD-1)
- FIRE PROTECTION SYSTEM #1 ANSUL FIRE PROTECTION SYSTEM WITH AUTOMATIC GAS VALVE (SERVES KITCHEN HOODS <u>HD-1</u>)
- EMS-PLUS ENERGY MANAGEMENT SYSTEM (SERVES KITCHEN HOODS <u>HD-1</u>)

	MECHANIC	AL SY	MBOLS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TYPI	CAL PIPING	
Ļ	PIPE TEE / PIPE ELBOW	- -	UNION
⊕ —	ELBOW DN / ELBOW UP	- 4	STRAINER WITH BLOWDOWN
- ⊘-	ISOLATION VALVE (BALL OR BUTTERFLY)	7	CHECK VALVE (ARROW INDICATES FLOW)
—Ф—	BALANCING VALVE	<u>-</u> \$\$-	
→	GATE VALVE	<u> </u>	PRESSURE REGULATING VALVE (PRV)
- 	GLOBE VALVE	<u>Ψ</u>	PRESSURE GAUGE
<u> </u>			THERMOMETER
	PL	UMBING	
	DOMESTIC COLD WATER (CW)	—	GAS COCK
	DOMESTIC HOT WATER (HW) (NUMBER INDICATES TEMPERATURE)	<u> </u>	FLOOR DRAIN - SIZE TYPE
	DOMESTIC HOT WATER CIRCULATION (HWC) (NUMBER INDICATES TEMPERATURE)	©2" RD-1	ROOF DRAIN - SIZE TYPE
-	SANITARY WASTE (BELOW GRADE)	②2" OFD-1	OVERFLOW ROOF DRAIN - SIZE TYPE
	SANITARY WASTE (ABOVE GRADE)	<u>+ HB</u>	HOSE BIBB
	VENT PIPING	++ WH	WALL HYDRANT (NON-FREEZE) VENT THROUGH ROOF
—_ST—	STORM PIPING (BELOW GRADE) STORM PIPING (ABOVE GRADE)	VTR I.E.	I.E. INVERT ELEVATION
— SI —	OVERFLOW STORM PIPING (BELOW GRADE)	F.L.	FLOW LINE
— OF —	OVERFLOW STORM PIPING (ABOVE GRADE)	WC	WATER CLOSET (SEE SPECIFICATIONS FOR TYPE)
——AW ——	ACID WASTE PIPING (BELOW GRADE)	UR	URINAL (SEE SPECIFICATIONS FOR TYPE)
—AW—	ACID WASTE PIPING (ABOVE GRADE)	LAV	LAVATORY (SEE SPECIFICATIONS FOR TYPE)
AV	ACID VENT PIPING	S	SINK (SEE SPECIFICATIONS FOR TYPE)
——А——	COMPRESSED AIR PIPING	EWC	ELECTRIC WATER COOLER (SEE SPECIFICATIONS FOR TYPE)
<u></u> —G—	NATURAL GAS PIPING	MS	MOP SINK (SEE SPECIFICATIONS FOR TYPE)
——SAN—	SITE SANITARY PIPING	DI	DUCTILE IRON
—_st—_	SITE STORM PIPING	CI	CAST IRON
w	SITE WATER PIPING	PVC	POLY VINYL CHLORIDE
	REFRIGE	RATION PIPIN	G
— RL —	REFRIGERANT LIQUID LINE		SOLENOID VALVE
— RS —	REFRIGERANT SUCTION LINE		THERMOSTATIC EXPANSION VALVE (TXV)
— RD —	REFRIGERANT HOT GAS DISCHARGE LINE		SIGHT GLASS
— CD —	COIL CONDENSATE DRAIN (SLOPE TO DRAIN)		
		HVAC	
6x6 R-1 100	SIDEWALL SUPPLY REGISTER OR GRILLE NECK SIZE (IN), TAG	S	SENSOR
100	AIRFLOW (CFM)	(T)	THERMOSTAT
6x6 R-1	SIDEWALL RETURN OR EXHAUST REGISTER OR GRILLE NECKSIZE (IN), TAG	<u>B</u>	HUMIDISTAT
	AIRFLOW (CFM)	M— -—	MOTORIZED CONTROL DAMPER WITH ACTUATOR
6"Ø D-1 100	SUPPLY AIR REGISTER NECK SIZE (IN), TAG AIRFLOW (CFM)	B.D.D.	BACKDRAFT DAMPER VOLUME DAMPER
		FR.D.	FIRE DAMPER WITH SLEEVE AND ACCESS DOOR
\times	SUPPLY AIR, OUTSIDE AIR OR MIXED AIR DUCT END OR RISER UP / RISER DN	M S.D.	SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR
		M ← F.S.D.	FIRE/SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR
	RETURN AIR, EXHAUST AIR OR RELIEF AIR DUCT END OR RISER UP / RISER DN	S.A.	SUPPLY AIR
12/0	DECTANGULAD DUCTMODIZ (MIDTH/DEDTH/MA) / CIDOT ALLARDED IO ODE OLICARA)	R.A.	RETURN AIR
12/8	RECTANGULAR DUCTWORK (WIDTH/DEPTH)(IN) (FIRST NUMBER IS SIDE SHOWN)	E.A.	EXHAUST AIR
<u> </u>	ROUND DUCTWORK (DIAMETER)(IN) (SPIRAL DUCT IN EXPOSED AREAS)	RLF.A.	RELIEF AIR
0 12 0	MODIAD DOOT WORK (DIAMIETEN/LIM) (OFTINAL DUCT HIS EXPOSED AREAS)	O.A.	OUTSIDE AIR
CCC	TURNING VANES	M.A.	MIXED AIR
	FIRE F	PROTECTION	
— F —	FIRE SPRINKLER PIPING		FIRE HYDRANT
		DIV	POST INDICATOR VALVE
— F — — SP —	STANDPIPE PIPING	— → PIV	
	STANDPIPE PIPING SPRINKLER BRANCH AND HEADS FIRE HOSE CABINET		ALARM CHECK VALVE 0.S&Y VALVE

TAG	FIXTURE (2)	DESCRIPTION		CONN	ECTIONS	
		DESCRIPTION: FLOOR DRAIN WITH CAST IRON BODY, FLASHING COLLAR, 6" SQUARE ADJUSTABLE NICKEL	CW	HW	WASTE	VEN
		BRONZE GRATE.		-	2" 3"	1-1/2' 1-1/2
			<u> </u>		3 4"	2"
<u>D-1</u>	MODEL: J.R. SMITH #2010			OR PLAN	S FOR WAS REMENTS.	STE AN
		DESCRIPTION: FLOOR SINK WITH SEDIMENT BUCKET, ACID	CW	HW	WASTE	VENT
		RESISTANT COATED CAST IRON BODY, FLASHING COLLAR, AND REMOVABLE 8-1/2" SQUARE NICKEL BRONZE TOP.	-	-	2"	1-1/2'
	PROVIDE THE FOLLOWING FEATURES:	-	-	3"	1-1/2	
FS-1		1. HINGED GRATE 2. 3/4 GRATE	-	-	4"	2"
	WODEL AND MITH #3104		REMARKS: SEE FLOOR PLANS FOR WASTE AN VENT SIZE REQUIREMENTS.			
V V I	VIOSELE. VIOSIVII I NE #5 100	DESCRIPTION: WALL HYDRANT WITH THE FOLLOWING	CW	HW	WASTE	VENT
		FEATURES: NONFREEZE, AUTOMATIC DRAINING, ANTIBACKFLOW TYPE, KEY OPERATION, 3/4" NPS THREADED	3/4"	-	-	-
<u>WH-1</u>		OR SOLDER JOINT INLET, AND GARDEN HOSE THREADED ON OUTLET. INCLUDE OPERATING KEY FOR EACH HYDRANT. 1. TYPE: SURFACE MOUNT [WALL BOX] 2. FINISH: CHROME PLATED [BRONZE] 3. OPERATION: KEY, 3/8" OPERATING ROD	REMARK	(S:		
N	MODEL: WOODFORD MODEL #67					

	PLAN TAG	VRF-HP-1
	MANUFACTURER	MITSUBISHI/TRANE (10)
	MODEL NUMBER	NTXMPH20A122CA
OENEDAL	SERVES	SEE PLANS
GENERAL	CONFIGURATION	(9)
	MAXIMUM SIZE (HxWxD)(IN)	38" x 17" x 42"
	MAXIMUM WEIGHT (LBS.)	300
	REMARKS	(3) (4) (6) (8) (9)
	VOLTS	208
	PHASE	1
LECTRICAL	MAXIMUM UNIT KW	-
ELECTRICAL	MAXIMUM OCP (AMPS)	40
	MINIMUM CIRCUIT AMPACITY (MCA)	26.9
	REMARKS	(7)
	AMBIENT AIR TEMPERATURE (F)	95
	MINIMUM NET EER (ARI)	13.5
COOLING (1)	NOMINAL CAPACITY (TONS)	1.5
	TOTAL COOLING (MBH)	18.0
	SENSIBLE COOLING (MBH)	-
	AMBIENT AIR TEMPERATURE (F)	47 / 17 / 5
HEATING (2)	MINIMUM NET COP (ARI)	4.0 / 2.1 / 1.89
	MINIMUM HEATING CAPACITY (MBH)	22.0
	TYPE	R410A
REFRIGERANT	MIN. NUMBER OF CIRCUITS	-
	REMARKS	-
	TYPE	(5)
	QUANTITY	1
COMPRESSORS	HP	-
	REMARKS	-
	TYPE	PROP.
CONDENSER	QUANTITY	1
FANS	НР	-
	REMARKS	-
REMARKS	 COOLING CAPACITY AT 100% COMBITEMPERATURE AND 67°F INDOOR W HEATING CAPACITY: 100% HEATING CAPACITY AT 5° F OU 75% HEATING CAPACITY AT -13°F OU PROVIDE WITH 10 YEAR COMPRESSON AIR-TO-AIR HEAT PUMP SERVING MUREFRIGERANT VOLUME UNITS WITH MANUFACTURER'S STANDARD INVERCOMPRESSOR AND CONTROLS. PROVIDE WITH LOW AMBIENT KIT FOWAMBIENT, SNOW / HAIL GUARDS AND SINGLE POINT ELECTRICAL CONNECTS ELECTRICAL DISCONNECTS BY ELECTRICAL DRAWINGS. SUBJECT TO COMPLIANCE WITH RECORD BY ONE OF THE FOLLOWING MANUFLOAKIN, SAMSUNG. 	B TEMPERATURE. TDOOR AMBIENT. ITDOOR AMBIENT. DR WARRANTY. JILTIPLE INDOOR VARIABLE MANUFACTURER'S CONTROLS. RTER-DRIVEN SCROLL OR OPERATION DOWN TO -20°F D BASE PAN HEATER. ETION. SEE ELECTRICAL DRAWINGS. CTRICAL CONTRACTOR. SEE QUIREMENTS, PROVIDE PRODUCT

DIFFUSER REGIST	ER AND G	RILLE SCH	HEDULE	
PLAN TAG	D-1	D-2	R-1	G-1
MANUFACTURER	TITUS	CAPTIVE AIRE	TITUS	TITUS
MODEL NUMBER	OMNI	DI-PSP	300RL	PAR
FUNCTION	SUPPLY	SUPPLY	SUPPLY	RETURN
DESCRIPTION	FLAT PLATE	PERF.	REGISTER	PERF. GRILLE
DEFLECTION	360°	4-WAY	DOUBLE	-
MAX. STATIC PRESSURE (IN W.G.)	0.1"	-	0.1"	0.08"
CONSTRUCTION MATERIAL	STEEL	STEEL	STEEL	STEEL
FINISH	WHITE	WHITE	WHITE	WHITE
NECK SIZE (IN)	SEE PLANS	SEE PLANS	SEE PLANS	22x22
FACE SIZE (IN)	24x24	24x24	NECK + 1-3/4"	24x24
ACCESSORIES	(3)	SRD	(3)	(4)
REMARKS	(1) (2)	(5)	(1) (2)	(1) (2)

PROVIDE OPPOSED BLADE DAMPER.

) SEE SUPPLEMENTAL DRAWING M6.1 FOR ADDITIONAL INFORMATION.

1) PROVIDE INSULATED BACK PAN.

	MODEL TAG (1)	/RF-1A/B, 2A/B,3A/B	VRF-2	
	MANUFACTURER	TRANE (5)	TRANE (5)	
	MODEL NUMBER	MSZ-EF09NAW-U2	MSZ-EF12NAW-U2	
GENERAL (1)	MAX WEIGHT (LBS.)	35	35	
	CONFIGURATION	(6)	(8)	
	MAXIMUM SIZE (WxDxH)(IN)	35 x 8 x 12	35 x 8 x 12	
	REMARKS	(2) (4) (7)	(2) (4) (7)	
	AIRFLOW RANGE (CFM)	141-371	141-371	
FAN	EXTERNAL STATIC PRESSURE (IN. W.C.)	-	-	
	FAN MOTOR OUTPUT (W)	-	-	
	MIN. CIRCUIT AMPS (MCA) (A)	1.0	1.0	
	MAXIMUM FUSE SIZE	15	15	
ELECTRICAL	VOLTS	208	208	
	PHASE	1	1	
	REMARKS	(3)	(3)	
REMARKS	 REFER TO SPECIFIC INDOOR VRF UN SERVED, SYSTEMS, HEATING AND C TAG INDICATES TONNAGE. PROVIDE WITH CONCEALABLE CONT DISCONNECT BY ELECTRICAL CONT PROVIDE WITH MANUFACTURER'S B DIGITAL CONTROL INTERFACE PANE SUBJECT TO COMPLIANCE WITH REFOLLOWING MANUFACTURERS: TRA WALL MOUNTED 0.75 TON NOMINAL. PROVIDE MANUFACTURER'S STAND. WALL MOUNTED 1.0 TON NOMINAL. 	OOLING PERFORMA DENSATE PUMP. RACTOR. ACNET COMPATIBLE EL. QUIREMENTS, PROV NE, MITSUBISHI, DAI 9.0 MBH COOLING, ARD FILTER.	NCES, ACCESSORIE CONTROL SYSTEM IDE PRODUCT BY O KIN, SAMSUNG. 10.0 MBH HEATING.	I. WITH REMOTE

REMARKS	ComCHECK COMPLIANCE REPO COMMISSIONING IS REQUIRED. REQUIRED DOCUMENTS (REFEROR OWNER REPRESENTATIVE VERTIFICATE OF OCCUPANCY). SEE RESPECTIVE SPECIFICATION	R TO CODE) SHALL BE PF VITHIN 90 DAYS OF THE [ROVIDED TO THE BUIL DATE OF RECEIPT OF	LDING OWNER THE
WAT	ER HEATER SCHEDU	JLE		
	PLAN TAG	IGWH-1A, B, C		
	MANUFACTURER	NAVIEN		
GENERAL	MODEL NUMBER	NPE-240A NG		
	SERVES	HOT WATER		
	RECOVERY (GPH@ 90°F RISE)	(1)		,
	TYPE	INSTANT		E
TANK	STORAGE CAPACITY (GAL.)	-		P
IANIX	DIMENSIONS (WxDxH) (IN.)	18" x 14" x 29"		L
	REMARKS	(2)		P
	FUEL	NATURAL GAS		
	INPUT (MBH)	199		(
	EEEIOIENOV			

ENERGY CODE COMPLIANCE

ComCHECK

TAB REPORT

COMMISSIONING

2018 IECC

	TYPE	INSTANT
TANK	STORAGE CAPACITY (GAL.)	-
IANK	DIMENSIONS (WxDxH) (IN.)	18" x 14" x 29"
	REMARKS	(2)
	FUEL	NATURAL GAS
	INPUT (MBH)	199
0.4.0	EFFICIENCY	(3)
GAS FIRED	VENT CONNECTION	(4)
	BURNER MOTOR HP	-
	BURNER MOTOR VOLTS/PHASE	120 / 1
		(5) (6)
	REMARKS	(5) (6)
	(1) INSTANTANEOUS GAS WATER HEAT	
REMARKS	(1) INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE.	ER WITH 5.1 GPM FLOW @ 77°F
REMARKS	 (1) INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. (2) INTERNAL CIRCULATION PUMP, 0.5 0 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK,
REMARKS	 (1) INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. (2) INTERNAL CIRCULATION PUMP, 0.5 0 TEMPERATURE/PRESSURE RELIEF 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK,
REMARKS	 (1) INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. (2) INTERNAL CIRCULATION PUMP, 0.5 OF TEMPERATURE/PRESSURE RELIEF (3) 0.95 ENERGY FACTOR. 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK,
REMARKS	 (1) INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. (2) INTERNAL CIRCULATION PUMP, 0.5 OF TEMPERATURE/PRESSURE RELIEF (3) 0.95 ENERGY FACTOR. 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK, VALVE. NUFACTURER'S RECOMMENDATIONS ON. COMMON VENT PER
REMARKS	 INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. INTERNAL CIRCULATION PUMP, 0.5 (TEMPERATURE/PRESSURE RELIEF) 0.95 ENERGY FACTOR. PVC OR CPVC VENT PIPING PER MAITO CONCENTRIC ROOF TERMINATION 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK, VALVE. NUFACTURER'S RECOMMENDATIONS DN. COMMON VENT PER ONS.
REMARKS	 INSTANTANEOUS GAS WATER HEAT TEMPERATURE RISE. INTERNAL CIRCULATION PUMP, 0.5 OF TEMPERATURE/PRESSURE RELIEF 0.95 ENERGY FACTOR. PVC OR CPVC VENT PIPING PER MAIT TO CONCENTRIC ROOF TERMINATION MANUFACTURER'S RECOMMENDATION 	ER WITH 5.1 GPM FLOW @ 77°F GALLON BUFFER TANK, VALVE. NUFACTURER'S RECOMMENDATIONS DN. COMMON VENT PER ONS. NIMUM 19.9 MBH FIRING RATE.

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	COMcheck Software Version 4.1.5.5 Mechanical Compliance Certificate
Project Inform	ation

Energy Code: Project Title:

(2)(3)(4)

2018 IECC Proposed Mexican Restaurant Location: Omaha, Nebraska Climate Zone:

Project Type: Construction Site:

Owner/Agent: 8601 West Dodge Road Suite 101 Omaha, NE 68114

Designer/Contractor: Morrissey Engineering, Inc. 4940 Noth 118th St. Omaha, NE 68164 402.491.4144

Mechanical Systems List

Quantity System Type & Description

1 HVAC System 1 (Single Zone): VRF Condensing Unit, Air Cooled Heat Pump Heating Mode: Capacity = 22 kBtu/h, No minimum efficiency requirement applies

Cooling Mode: Capacity = 18 kBtu/h, No minimum efficiency requirement applies Fan System: None

1 HVAC System 2 (Single Zone): Cooling: 1 each - VRF Zone Fan Unit, Capacity = 9 kBtu/h, No Economizer, Economizer exception: None No minimum efficiency requirement applies

Fan System: None 1 HVAC System 3 (Single Zone): Cooling: 1 each - VRF Zone Fan Unit, Capacity = 11 kBtu/h, No Economizer, Economizer exception: None

No minimum efficiency requirement applies Fan System: None

3 Water Heater 1: Gas Instantaneous Water Heater, Capacity: 10 gallons, Input Rating: 199 kBtu/h w/ Circulation Pump No minimum efficiency requirement applies

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 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Chris Reed - Mechanical

Project Title: Proposed Mexican Restaurant (storage space only) Data filename: K:\2022\22488 8601 Restaurant\Calculations\NP Dodge_8601_Mexican Restaurant (storage Page 1 of 12

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2. Division 21, 22 and 23 Conditions apply to this Section.

B. SUMMARY

. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of fire suppression systems.

2. Refer to Section 230100 for General Requirements for Mechanical

3. Refer to Section 230500 for Basic Mechanical Materials and Methods

4. Refer to Section 230505 for Basic Piping Materials and Methods

SECTION 211000 - WATER-BASED FIRE-SUPPRESSION SYSTEMS (RENOVATION)

A. The building is protected by an existing wet pipe NFPA 13 fire sprinkler system. Contractor shall verify existing conditions including pipe sizes and locations, sprinkler head locations, flow switches, zone valves, available pressure and flow, etc. Contractor shall provide all equipment and materials necessary to modify system to meet requirements of NFPA 13 and the Authority Having Jurisdiction.

B. Drawings indicate general layout. Final pipe sizing, pipe routing, and sprinkler head layout shall be by the fire sprinkler contractor.

C. Piping material, fire sprinkler heads, and accessories shall be constructed of materials that meet the requirements of NFPA 13 and the Authority Having Jurisdiction. Steel piping shall be minimum Schedule 10 wall

D. Sprinkler heads shall be as follows:

Sprinkler heads in areas without ceilings shall be upright or pendant type. Sprinkler heads in areas with ceiling shall be concealed sprinkler heads with cover plate. Cover plate color shall be selected by the architect from manufacturer's standard colors. Fire sprinkler heads shall be centered in tile where installed in lay-in tile ceilings.

E. Space above ceilings is limited. Coordinate location of all sprinkler heads and all existing and new piping with all other trades. If conflicts do occur such that lights, mechanical piping, plumbing or ceiling systems cannot be installed due to sprinkler piping interference, the sprinkler piping shall be relocated at no additional cost to the

SECTION 220100 - GENERAL REQUIREMENTS FOR PLUMBING

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this

2. Division 22 and 23 Conditions apply to this Section.

B. SUMMARY

1. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of plumbing systems.

2. Refer to Section 230100 for General Requirements for Mechanical

3. Refer to Section 230500 for Basic Mechanical Materials and Methods

SECTION 220720 - PIPE INSULATION FOR PLUMBING

A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation: Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each laver of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.

B. FLEXIBLE ELASTOMERIC THERMAL INSULATION: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials. Adhesive as recommended by insulation material manufacturer. Ultraviolet-Protective coating as recommended by insulation manufacturer. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Follow manufacturer's written instructions for applying insulation. Seal longitudinal seams and end joints with manufacturer's recommended

C. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic Mastics.

D. INSULATION APPLICATION SCHEDULE

Service: Domestic cold water (CW) Thickness/Material: 1/2" Mineral Fibe Vapor Retarder Required: Yes

Service: Domestic hot water and circulating water (HW, HWC)

Thickness/Material: Mineral Fiber. Apply the following insulation thicknesses: a. Systems without recirculation: 1/2"

b. 1/2" to 2" pipe: 1" c. 2 ½" and larger: 1-1/2" Vapor Retarder Required: No

Service: Domestic hot and cold water, direct buried Thickness/Material: 3/4" Flexible Elastomeric

Plumbing vents (V or AV), 2 foot section below roof

Vapor Retarder Required: Yes

Thickness/Material: 1/2" Mineral Fiber Vapor Retarder Required: Yes

Service: Sanitary waste and Grease waste piping

Insulation Material: None

SECTION 221116 - WATER DISTRIBUTION PIPING

A. DOMESTIC WATER PIPING: Above ground; hard copper tube, ASTM B 88, Type L; copper, 95-5 solder-joint fittings; and soldered joints. Underground; Soft copper tube, ASTM B 88, Type K; wrought-copper, solder-joint pressure fittings; and soldered joints.

B. VALVES: Provide gate, ball or butterfly isolation valves close to main on each branch and riser serving plumbing fixtures or equipment, and where indicated . Provide globe, ball or butterfly valve for throttling where indicated. Provide supply stops at each plumbing fixture. Provide calibrated or automatic balancing valves as

C. TESTING: Test water distribution piping according to authority having jurisdiction. Clean and disinfect water distribution piping. Fill water piping. Check components to determine that they are not air bound and that piping is

SECTION 221316 - DRAINAGE AND VENT PIPING

A. ABOVEGROUND, SANITARY WASTE AND VENT AND STORM PIPING: CISPI 301, ASTM A888, Hubless, cast-iron soil pipe; hubless, cast-iron, soil-pipe fittings and hubless, cast-iron, Neoprene sleeve coupling with stainless steel clamps.

B. UNDERGROUND, SANITARY WASTE, AND VENT AND STORM PIPING: ASTM A74. Hub-and-spigot, cast-iron soil pipe, Service class; hub-and-spigot, cast-iron, soil-pipe fittings, lead & oakum or compression joints.

C. PIPING INSTALLATION: Make changes in direction for drainage and vent piping using appropriate branches, bends, and long-sweep bends. Do not make change in direction of flow greater than 90 degrees. Lay buried building drain piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions.

D. SLOPE: Install drainage and vent piping at the following minimum slopes, unless otherwise indicated:

1. Sanitary Piping: 2 percent downward in direction of flow for piping 3-inch NPS and smaller; 1 percent downward in direction of flow for piping 4-inch NPS and larger.

2. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

E. TESTING: Test drainage and vent piping according to procedures of authorities having jurisdiction.

SECTION 221319 - PLUMBING SPECIALTIES

A. WATER HAMMER ARRESTERS: ASME A112.26.1M, ASSE 1010, or PDI-WH 201, bellows or piston type with pressurized cushioning chamber. Provide at each battery of fixtures.

B. WATER PRESSURE REGULATORS: water regulators, rated for initial working pressure of 150 psig minimum, of size, flow rate, and inlet for 80 psig outlet pressure. Install on building service piping.

C. WALL HYDRANTS (WH-1): nonfreeze, automatic draining, antibackflow type, key operation, with 3/4-inch NPS threaded or solder-joint inlet, and garden-hose threads on outlet. Include operating key for each hydrant, Nickel bronze finish. Woodford Model B65 or equal.

steel cover, vandal proof screws. Install as shown and as required by code. E. CLEANOUT PLUGS (CO): Cast iron or brass, threads complying with ANSI B2.1, countersunk head. Engrave

D. WALL CLEANOUTS (WCO): Cast iron body adaptable to pipe with cast bronze, brass cleanout plug; stainless

heads to identify system. F. FLOOR CLEANOUTS (FCO): Cast iron body and frame with cleanout plug and adjustable round nickel bronze

top. Provide to match floor system: Exposed finish type, standard mill finish.

2. Exposed flush type, standard non-slip scored or abrasive finish. 3. Exposed flush type, standard mill finish and carpet marker.

4. Heavy duty for traffic applications.

G. VENT FLASHING (VTR): 24" square minimum. Non-plasticized, chlorinated, polyethylene, concealed, waterproof membrane, 0.40" thick, solvent weldable or Lead sheet, 2-1/2" lb/sf, concealed. 224000 PLUMBING FIXTURES

A. Installation: Install handles for accessible water closets and urinals with handle mounted on wide side of compartment. Install individual stop valve in each water supply to fixture. Install water-supply stop valves in accessible locations. Install traps on fixture outlets. Omit traps on fixtures having integral traps and on indirect wastes. Vent all fixtures as required by local code. Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Install hot and cold water supply, waste and vent piping of sizes indicated, but not smaller than required by authorities having

B. See Plumbing Fixture Schedule on sheet M4.2 for plumbing fixture specifications.

SECTION 230100 - GENERAL REQUIREMENTS FOR MECHANICAL

A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner. Warranty shall include repair of faulty workmanship.

B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents:

Supply and deliver to site ready for installation Noted, scheduled or specified Provide Furnish, install and connect complete and ready for final use

Americans with Disabilities Act American National Standards Institute American Society of Mechanical Engineers

American Society of Heating, Refrigeration and Air Conditioning Engineers National Electric Code (NFPA 70) National Electrical Manufacturers Association National Fire Protection Association

Sheet Metal and Air Conditioning Contractors National Association Underwriters Laboratories Inc.

C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, Local Plumbing Code, Local Mechanical Code, Local Fire Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, ilcenses, etc. Ali permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.

E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for all items of mechanical equipment including the following:

Diffusers, Registers, Grilles Sheet Metal Accessories HVAC equipment Plumbing Fixtures Plumbing Specialties

1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a minimum of six (6) copies of shop drawings for review. Electronic copies (in pdf format) by e-mail are acceptable in lieu of hard copies.

2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within

F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.

G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain mechanical systems. Schedule training with Owner with at least seven days' advance notice.

H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance.

<u>SECTION 230500 - BASIC MECHANICAL MATERIALS AND METHODS</u>

A. PIPING INSTALLATION: Install piping at required slope. Install components with pressure rating equal to or greater than system operating pressure. Install piping in concealed locations, except in equipment rooms and service areas. Install piping free of sags and bends. Install piping at right angles or parallel to building walls. Install piping tight to slabs, beams, joists, columns, walls, and other building elements. Locate groups of pipes parallel to each other, spaced to permit valve servicing. Install fittings for changes in direction and branch connections. Install pipe escutcheons for exposed pipe penetrations walls and ceilings. Install sleeves for pipes passing through concrete and masonry walls, and concrete floor and roof slabs. Provide dielectric fitting where two different types of pipe materials are joined. Comply with MSS-69 for pipe hanger selection and application.

B. EQUIPMENT INSTALLATION: Install equipment per manufacturer's recommendations Install equipment as high as possible. Install equipment level and plumb, parallel and perpendicular to building. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Install equipment giving right of way to piping installed at required slope.

C. LABELING AND IDENTIFYING

Piping: Provide pipe markers on each system where pipe is exposed to view and above removable ceilings. Include pipe description of system and arrows showing normal direction of flow.

Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of mechanical

D. CUTTING AND PATCHING: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for mechanical installations. Perform cutting by skilled mechanics of trades involved. Repair cut surfaces to match adjacent surfaces.

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING

A. Examine air-handling equipment to ensure clean filters have been installed, bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation. Check dampers for proper

B. Perform testing and balancing procedures on each system according to the procedures contained in NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems" and this Section.

C. Adjust fans to deliver total design airflow within the maximum allowable rpm listed by the fan manufacturer. Provide new fan sheaves as required. Measure fan airflow, static pressure, rpm and amp draw.

D. Adjust volume dampers to achieve design airflow within 10% of specified values. Adjust diffusers, registers and grilles. Adjust minimum and maximum outside airflow.

E. Prepare report listing date, project information, equipment data and measured airflow results. Report shall

include drawing indicating locations of air outlets and final measured airflow of each outlet. Submit four copies of

report to engineer for review.

SECTION 230700 - DUCT INSULATION

A. MINERAL-FIBER BLANKET THERMAL INSULATION: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, with all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor-retarder mastic on cold air ducts. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.

B. ACOUSTICAL DUCT LINER: ASTM C 518 with resin and black mat coated surface exposed to air stream to prevent erosion of glass fibers. Thermal Conductivity (k-Value): 0.26 at 75 deg F mean temperature. Nominal Density 1.5 lbs per cubic foot, minimum noise reduction characteristic shall be 0.55 for 1" thickness; rated for 6000 fpm air velocity; air friction multiplier less than 1.6 at 2000 fpm. Adhere a duct liner with 100 percent coverage of adhesive. Butt transverse joints without gaps and coat joint with adhesive. Secure liner with mechanical fasteners. Apply metal nosing on leading edge of liner.

C. FIRE RATED DUCT INSULATION: UL Classified glass fiber blanket completely encapsulated in UL Classified aluminum foil facing. Flame spread rating of 25 or less, and smoke-developed rating of 50 or less. Insulation shall meet the requirements of NFPA 96 for zero clearance from the duct to the interior surfaces of enclosures of noncombustible and limited combustible construction. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor retarder mastic on cold air ducts. Seal penetrations in insulation at hangers supports, anchors, and other projections with vapor retarder mastic bonded with a thermosetting resin.

D. EXISTING INSULATION: All existing insulation damaged by this contractor shall be replaced with new insulation as specified within.

E. APPLICATION SCHEDULE

Service: SUPPLY AIR - Rectangular, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6 Vapor Retarder Required: Yes

Service: SUPPLY AIR - Round, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6 Vapor Retarder Required: Yes

Service: SUPPLY AIR - Round, exposed Thickness/Material: Double wall 1" interstitial liner Minimum Installed R-Value: R6 Vapor Retarder Required: NA

Thickness/Material: 1-1/2" Duct Liner

Minimum Installed R-Value: R6 Vapor Retarder Required: Yes Service: RETURN AIR - Rectangular, concealed Thickness/Material: 2-3/16" Mineral-Fiber Blanket

Service: RETURN AIR - Rectangular, exposed in finished spaces

Vapor Retarder Required: Yes Service: OUTSIDE AIR Thickness/Material: 2-3/16" Mineral-Fiber Blanket Minimum Installed R-Value: R6

Vapor Retarder Required: Yes

Service: OUTSIDE AIR and RETURN AIR exposed to outdoors Thickness/Material: 2" Rigid Styrofoam Board Minimum Installed R-Value: R8 Vapor Retarder Required: Yes

Service: TYPE I KITCHEN HOOD EXHAUST AIR Material: Fire Rated Duct Insulation Thickness as required to maintain zero clearance to combustibles. Vapor Retarder Required: Yes

SECTION 230720 - PIPE INSULATION FOR HVAC

A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation: Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each layer of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.

Provide Alumaguard jacket or equivalent, slope top of duct to allow water to drain and seal all duct

B. FLEXIBLE ELASTOMERIC THERMAL INSULATION: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials. Adhesive as recommended by insulation material manufacturer. Ultraviolet-Protective coating as recommended by insulation manufacturer. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Follow manufacturer's written instructions for applying insulation. Seal longitudinal seams and end joints with manufacturer's recommended

C. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.

D. INSULATION APPLICATION SCHEDULE

1. Service: Condensate drain piping (CD) Thickness/Material: Mineral Fiber. Apply the following insulation thicknesses: a. PVC piping: None b Copper 1/2" Vapor Retarder Required: Yes

Service: Refrigerant suction (RS), refrigerant liquid (RL) and refrigerant hot gas discharge (RD) Thickness/Material: 1-1/2" Flexible Elastomeric Vapor Retarder Required: Yes Finish: Two coats of manufacturer's coating when exposed to outside

B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends according to ASME B1.20.1. Joint Compound and Tape: Suitable for natural gas.

B. Install and test gas piping according to NFPA 54 "National Fuel Gas Code" and Authority having jurisdiction

SECTION 232300 - REFRIGERANT PIPING

1. Aboveground, ASTM B 280, Type ACR copper tubing with brazed joints (using AWS A5.8 filler material).

Service Valves:

a) Body: Forged brass with brass cap including key end to remove core.

e) Working Pressure Rating: 500 psig.

b) Solenoid Tube, Plunger, Closing Spring, and Seat Orifice: Stainless steel.

e) Electrical: Molded, watertight coil in NEMA 250 enclosure of type required by location with 1/2-inch conduit adapter, and 24-V ac coil.

f) Working Pressure Rating: 400 psig.

C. INSTALLATION:

2. Sizing, pipe arrangement, and refrigerant specialties shall be determined by the equipment manufacturer based on the final layout / routing worked out in the field. Installation shall follow the recommended

3. Piping shall be free of sags and bends and routed in as direct as possible path between components.

(attaching support/clamps directly to the piping will be unacceptable).

ASHRAE 15. Charge system refrigerant. SECTION 233113 - METAL DUCTS AND ACCESSORIES

A. GENERAL: Drawings indicate general arrangement of ducts, fittings, and accessories. Minor modifications to route, size and shape of duct may be made to meet structural and other interference. Changes which could affect system performance shall be reviewed by Architect/Engineer prior to fabrication or installation of duct. Coordinate

B. DUCT FABRICATION: Sizes shown on plans are inside clear dimensions. Ductwork utilizing duct liner shall

C. MATERIAL: Construct all rectangular and round ducts from galvanized sheet steel: Lock-forming quality;

D. QUALITY ASSURANCE: Fabricate and install duct per SMACNA's "HVAC Duct Construction Standards-Metal and Flexible" and applicable codes. Comply with requirements for metal thickness, reinforcing types and intervals, tie-rod applications, and joint types and intervals. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," unless otherwise indicated.

E. PRESSURE CLASS: Unless otherwise noted construct all ducts to 2.0" WG positive or 2.0" WG negative

F. DUCT SEALING: UL classified, non-combustible, flame spread 25 or less, smoke developed rating of 540 or less, resistant to water, pressure rupture rating of 16" WG minimum, suitable for use alone or with tape, application an operational temperature ranges appropriate for usage. Seal all duct per SMACNA class 'C' duct seal requirements.

G. TURNING VANES: Fabricate of 1-1/2" wide, curved blades 3/4" on center. Provide turning vanes in all mitered elbows and duct turns.

H. DUCT ACCESS DOORS: Install insulated duct access doors with hinges and latches for access to inlet side of coils, equipment, control dampers, fire dampers, and smoke dampers.

I. VOLUME DAMPERS: Fabricate single blade dampers for duct sizes 9 ½: high x 30" width maximum. Fabricate multi-blade dampers of opposed blade pattern using minimum 16 gauge steel with maximum blade sizes 6" x 48" for larger ducts. Provide end bearings with end seals for pressure class required except in round duct 12" in diameter and smaller. Provide locking indicating quadrant regulators on all volume dampers. Mark ends of damper shanks for open/closed indication. Insulated ducts to have elevated dial indicators. Motorized dampers to have 115 volt operators. Provide manual volume dampers at branch take-offs and as shown. Provide motorized

J. FIRE DAMPERS: Labeled to UL 555, One and one-half hours fire rating with 165°F fusible link unless otherwise indicated. SMACNA Type B Frame with blades out of airstream. Factory- or field-installed galvanized. sheet steel Mounting Sleeve. Include a blade lock and stainless-steel negator closure spring for horizontal

K. SMOKE DAMPERS: Labeled to UL 555S. Combination fire and smoke dampers shall be labeled for one-and-one-half-hour rating to UL 555. 165 deg F fusible link unless otherwise as indicated. Factory-installed mounting sleeve, 0.052-inch-thick, galvanized, sheet steel; length to suit wall or floor application. 115 V, single

smoke dampers according to manufacturer's UL-approved written instructions.

path shall not exceed 45°.

L. FLEXIBLE CONNECTORS: Flame-retarded or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1. Neoprene double-coated woven glass fibber fabric in accordance with NFPA 90A, suitable for temperatures and pressures of application, approximately 6" wide, crimped into metal edge strip. Provide flexible connections to motor driven equipment.

M. FLEXIBLE DUCTS: Factory-fabricated, insulated, round duct, with an outer jacket enclosing 1-1/2-inch-thick,

Comply with UL 181, Class 1. Final connections to air outlets and terminal units may be made with flexible duct.

glass-fiber insulation around a continuous inner liner, steel-wire helix encapsulated in polyethylene inner liner.

Install flexible ducts with metal collars or sleeves with draw bands. Length of flexible duct shall not exceed 36"

SECTION 231123 - NATURAL GAS PIPING

A. STEEL PIPE: Pipe: ASTM A 53; Type E or S; Grade B; Schedule 40; black. Malleable-Iron. Threaded Fittings ASME B16.3, Class 150, standard pattern, with threaded ends according to ASME B1.20.1. Unions: ASME

A. REFRIGERANT PIPING

B. REFRIGERANT VALVES

b) Core: Removable ball-type check valve with stainless-steel spring.

c) Seat: Polytetrafluoroethylene. d) End Connections: Copper spring.

2. Solenoid Valves: Comply with ARI 760 and UL 429; listed and labeled by an NRTL.

a) Body and Bonnet: Plated steel.

c) Seat: Polytetrafluoroethylene. d) End Connections: Threaded

g) Maximum Operating Temperature: 240 deg F. h) Manual operator.

1. Refrigerant piping to be installed per ASHRAE 15.

requirements of the equipment manufacturer.

4. Pipe shall be insulated per insulation schedule. Use of thermal shields must be used at support points

B. TESTING: Purge refrigerant piping systems with dry nitrogen. Prepare and pressure test piping according to

layout with suspended ceiling, fire- and smoke-control dampers, lighting layouts, and similar finished work.

be increased in size to accommodate the duct liner thickness.

ASTM A 653/A 653M, G90 coating designation, mill-phosphatized finish for surfaces of ducts exposed to view.

dampers. Provide fire dampers at locations indicated and where required by applicable codes. Install fire and

phase, 60 Hz., damper Motors: provide for modulating or two-position action per application. Provide fire and smoke dampers at locations indicated and where required by applicable codes. Install fire and smoke dampers according to manufacturer's UL-approved written instructions.

07/24/24

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o not scale drawings. verify all dimensions and clearances fror architectural, structural, shop and other appropriate drawings or at site. lav out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify non-interference with other work. do not fabricate prior

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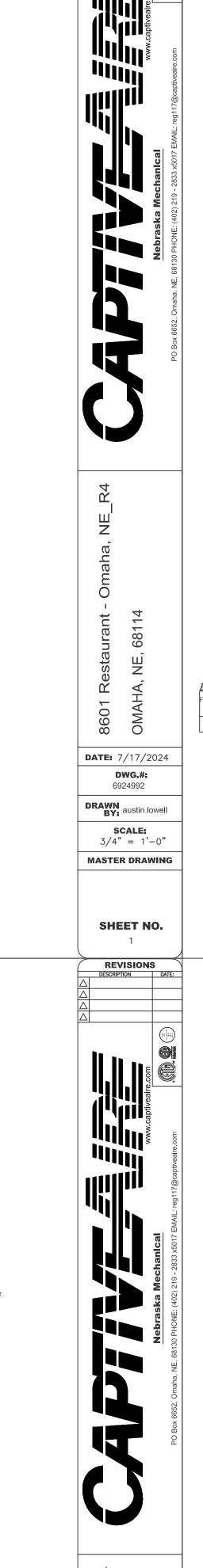
o verification of clearance for all trades.

LEFT WALL AS END PANEL. -

EQUIPMENT BY OTHERS.

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD. - HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

IT IS THE RESPONSIBILITY
OF THE ARCHITECT/OWNER TO
ENSURE THAT THE HOOD CLEARANCE
FROM LIMITED-COMBUSTIBLE
AND COMBUSTIBLE MATERIALS
IS IN COMPULANCE WITH
LOCAL CODE REQUIREMENTS.



DATE: 7/17/2024

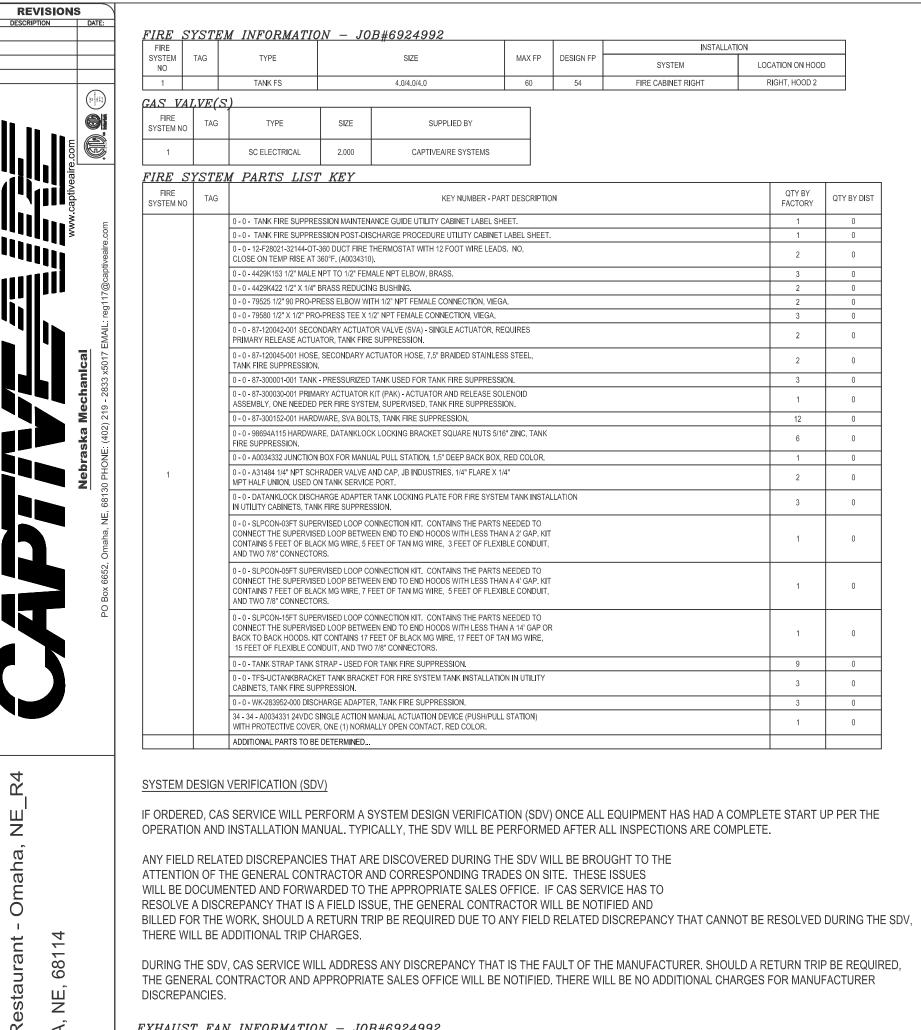
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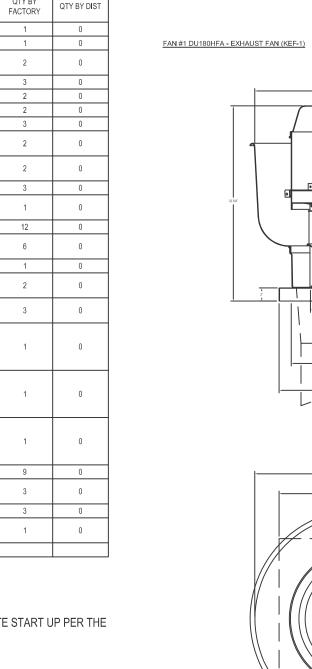
DRAWN BY: austin.lowell

3/4" = 1'-0'

MASTER DRAWING

SHEET NO.





TOP VIEW

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS). - RESTAURANT MODEL. - UL705 AND UL762 AND ULC-S645 · VARIABLE SPEED CONTROL. - INTERNAL WIRING. - THERMAL OVERLOAD PROTECTION (SINGLE PHASE) - HIGH HEAT OPERATION 300°F (149°C). - GREASE CLASSIFICATION TESTING. - NEMA 3R SAFETY DISCONNECT SWITCH. NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED HERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION. ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY

WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE \vdash - - -AN UNSAFE CONDITION. OPTIONS - GREASE BOX. - FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE SOLATORS), 70LB MOTOR MAX FOR WALL ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING.

- THROUGH WALL CURB MOUNT INSTALLATION. CURB HEIGHT MUST BE MINIMUM 10" TALLER THAN WALL THICKNESS FOR USE WITH A HINGE KIT.
- SHIP LOOSE DISCONNECT FOR REMOTE MOUNT.

- HINGE KIT LOCKING (XHD). SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
- 2 YEAR PARTS WARRANTY.

FEATURES:

REVISIONS

DESCRIPTION DATE

DATE: 7/17/2024 6924992 3/4" = 1'-0MASTER DRAWING

SHEET NO.

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07/24/24

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED,

		REPAN	CIES.	NTRACTOR AND APPROPRIATE SAI INFORMATION — JOB#69.		_ BE NOTII	FIED. THE	RE WILL	BE NO ADDIT	TONAL	CHARG	SES FOR	R MANU	FACTU	RER
ı	FAN UNIT	TAG	QTY	FAN UNIT MODEL#	MANUFACTURER	CFM	ESP	RPM	MOTOR	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOC

EXI	AUST	FAN	INFORMATION - JOB#69	24992									-		
FAN UI NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)
1	KEF-1	1	DU180HFA	CAPTIVEAIRE	3036	1.400	1300	ODP,PREMIUM	3.000	1.5120	3	208	9.5	701 FPM	199

NOTE: THESE DRAWINGS PROVIDED BY CAPTIVEAIRE ARE SUPPLEMENTAL INFORMATION TO

THE MECHANICAL DRAWINGS. SEE FLOOR PLANS FOR MORE DETAILS AND SYSTEM LAYOUT.

Omaha, NE 68164

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07/24/24

SCALE: 1/2" = 1'-0" **MASTER DRAWING** SHEET NO.

SIZE 3 - 3 CONDENSERS

NOTES REQUIRED INPUT GAS PRESSURE 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

14. HAIL GUARD FOR CONDENSING COIL
15. FACTORY INSTALLED COMPRESSOR SOUND BLANKET 16. SIDE DISCHARGE/SIDE RETURN

DOAS/RTU FAN SCHEDULE - JOB#6924992

FAN	OPTIO	NS'	
FAN UNIT NO	TAG	QTY	DESCRIPTION
		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	WALL MOUNT CONSTRUCTION 18/20 (D60 ISOLATORS), 70LB MOTOR MAX FOR WALL MOUNTING
1	KEF-1	1	THROUGH WALL CURB MOUNT INSTALLATION. CURB HEIGHT MUST BE MINIMUM 10* TALLER THAN WALL THICKNESS FOR USE WITH A HINGE KIT
		1	SHIP LOOSE DISCONNECT FOR REMOTE MOUNT
		1	HINGE KIT LOCKING (XHD)- SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS
		1	2 YEAR PARTS WARRANTY
		1	RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER
		1	INLET PRESSURE GAUGE, 0-35"
		1	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 1"
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	CONTROL PANEL ENCLOSURE HEATER 100W - RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R410A
2	MAU-1	1	RTU3 SIDE DISCHARGE
		1	24VAC FIRE INPUT
		1	DUCT MOUNTED SMOKE DETECTOR - SHIPS LOOSE
		1	HIGH TURNDOWN OPTION FOR DOAS UNITS
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 2 FURNACES
		1	OCCUPIED SCHEDULING
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU3 HAIL GUARD
		1	RTU3 SIDE RETURN
		1	RTU INTAKE/RETURN DAMPER - OA PERCENTAGE CONTROL
		1	RTU3 CURB DUCT HANGER
		1	UNIT MOUNTED VFD CONFIGURED FOR DCV
		1	RTUVZH117 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN	T40		EXHAUST			SUPF	PLY	
UN I T NO	TAG	GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						

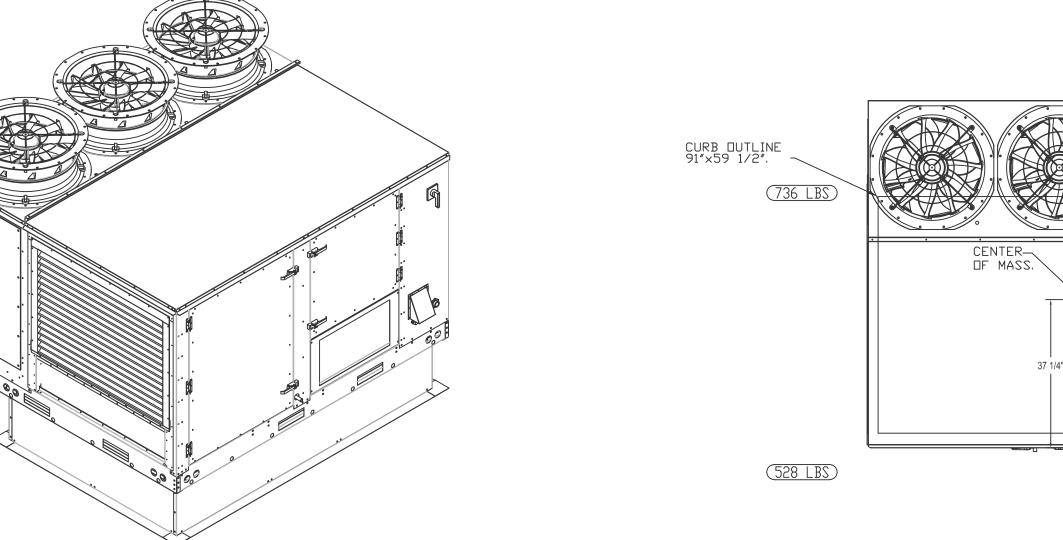
<u>CUF</u>	RB AS	<u>SSEMBLIES</u>			
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	80 LBS	CURB	26.500"W X 26.500"L X 24.000"H INSULATED VENTED 16 GAUGE.
2	# 2	MAU-1	159 LBS	CURB	59.500"W X 91.000"L X 12.000"H INSULATED 16 GAUGE.
3			48 LBS	CURB	26.500"W X 26.500"L X 24.000"H.

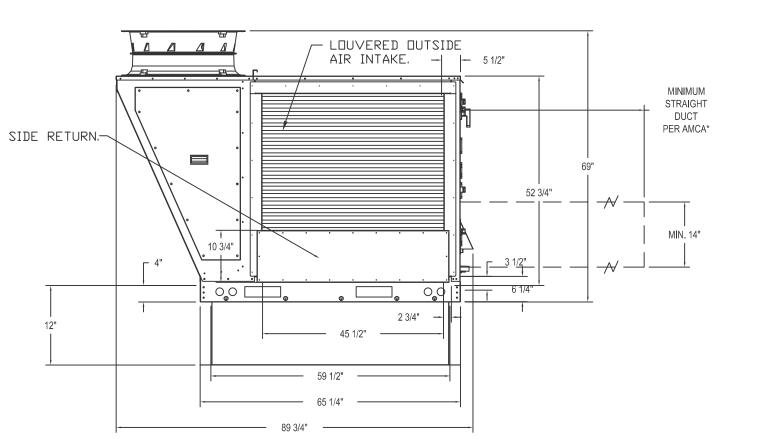
		HMI SCHEDULE		
UNIT NUMBER	HMI#	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #2	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #2	HMI #2 - SPACE		AVERAGED	56

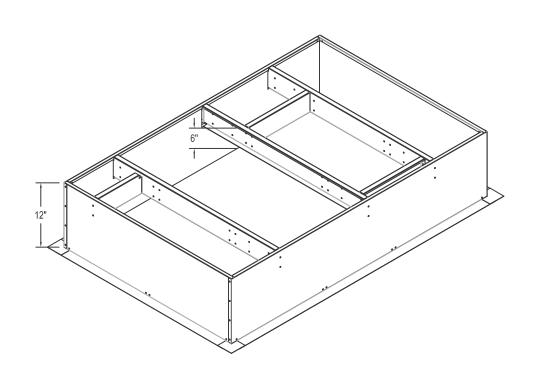
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.

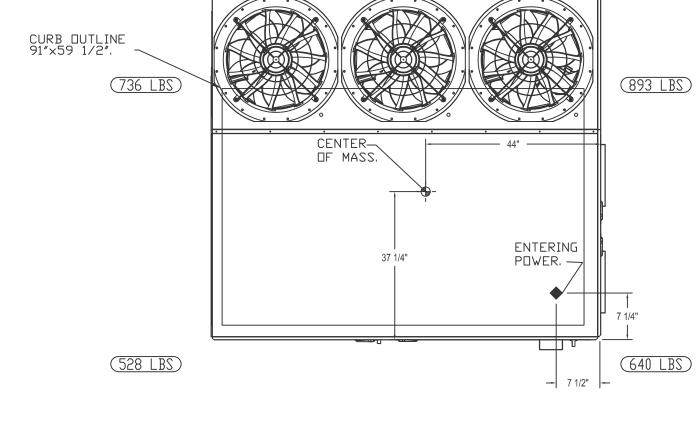
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS. 4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER
- 5. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND

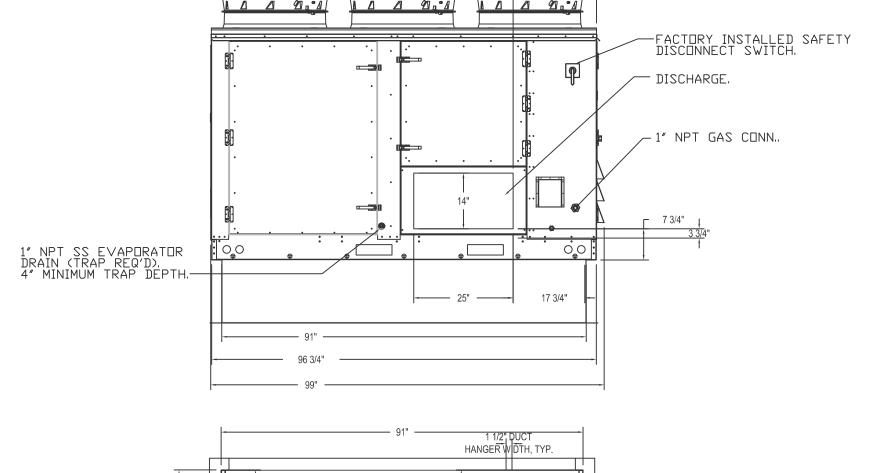
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.

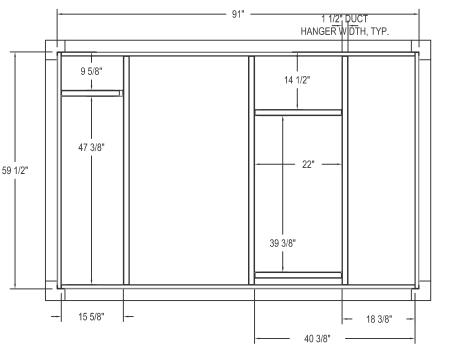












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NOTE: THESE DRAWINGS PROVIDED BY CAPTIVEAIRE ARE SUPPLEMENTAL INFORMATION TO THE MECHANICAL DRAWINGS. SEE FLOOR PLANS FOR MORE DETAILS AND SYSTEM LAYOUT.

REVISIONS DESCRIPTION DATE:

68114

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DATE: 7/17/2024

DWG.#:

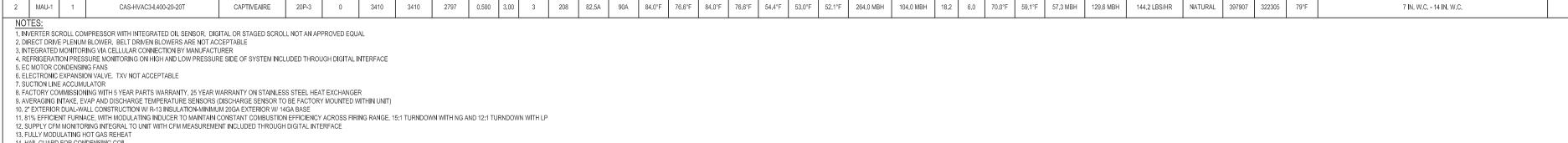
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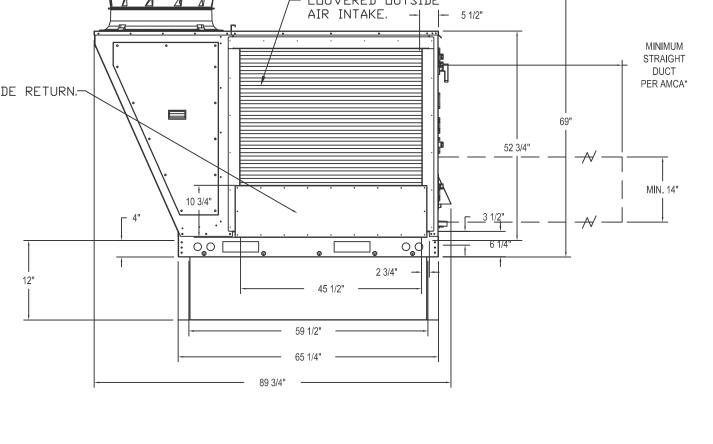


DENOTES CORNER WEIGHT.

ANTI-ROTATION BRACKET.

FAN #2 CAS-HVAC3-I.400-20-20T - HEATER (MAU-1)

SUGGESTED STRAIGHT DUCT SIZE IS 25" x 14".



EXIST. MEN

14 PANEL PANEL 1 <u>'L101A'</u> <u>'L101'</u>

03

NEW EXISTING PANEL PANEL 'L101A' 'L101'

L101-16

U,24" 🔾

SEATING

07/24/24 7 GEORGE M. MORRISSEY E-8874

	LIGH	ITING CONTF	ROL DEVICE SCHEDULE (NOTE 1)						
SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION						
E	SENSORSWITCH	nECY MVOLT ENC GFXK	LIGHTING CONTROL NETWORK SYSTEM BACKBONE						
	SENSORSWITCH	nPODM TOUCH	GRAPHICAL INTERFACE						
₩	SENSORSWITCH	WSX PDT XX	LINE VOLTAGE SINGLE POLE WALL BOX OCCUPANCY SENSOR						
PP _{n,D}	SENSORSWITCH	nPP16 DS	LIGHTING CONTROL NETWORK POWER PACK - WITH DIMMING (NOTE 2)						
PP _{n,EM}	SENSORSWITCH	nPP16 ER	LIGHTING CONTROL NETWORK POWER PACK - NO DIMMING, WITH UL924 EMERGENCY OPERATION						

1. PRODUCTS LISTED INDICATE BASIS OF DESIGN PRODUCTS. REFER TO SPECIFICATIONS FOR ACCEPTABLE EQUIVALENT MANUFCATURERS. 2 COORDINATE DIMMING TYPE REQUIRED WITH ASSOCIATED LIGHT FIXTURE TYPE CONTROLLED

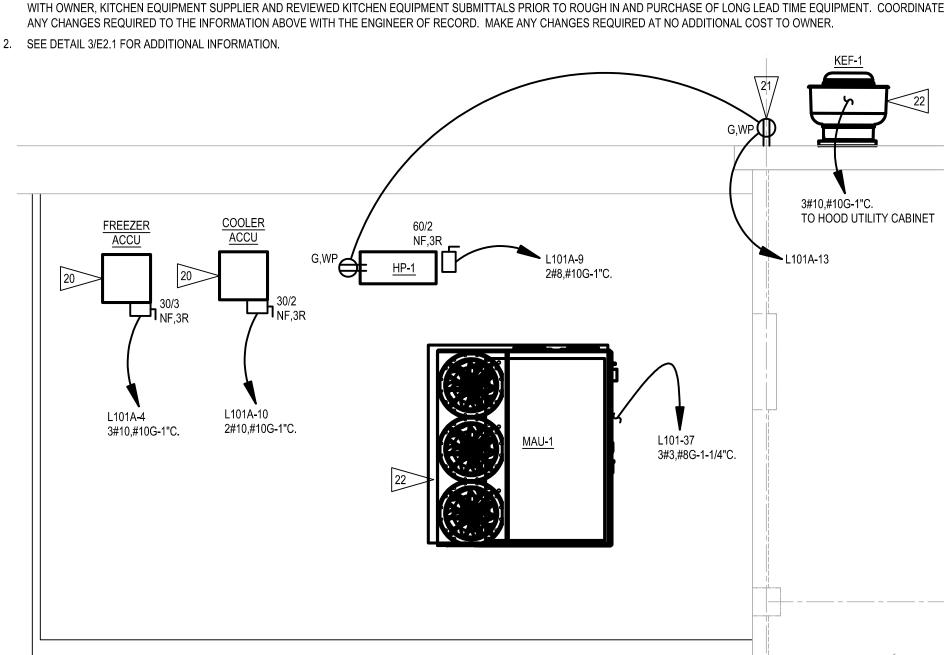
		EQUIRED WITH ASSOCIATED LIGHT		· · · · · ·									
		LIGHTI	NG	FIXTUR	RE S	CHE	EC) [JL	Ε	i		
		CATALOG NO.		LAMP DATA					10U	NTII	١G		
FIXT#	MANUFACTURER	(NOTE 2)	QTY.	SIZE	TYPE (NOTE 3)	VOLTAGE	SURF	FLUSH	CLG	WALL	HEIGHT	DESCRIPTION	REMARKS
1	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT	N/A	6,000 LM / 4000K	LED	120/277		Χ	Χ		_	2X4 FLAT PANEL	
1E	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT EL14L	N/A	6,000 LM / 4000K	LED	120/277		Χ	Χ		-	2X4 FLAT PANEL	WITH EM BATTERY
2	LITHONIA, NOTE 1	LDN4CYL 30/15 L04AR LSS MVOLT GZ10 PM DBL	N/A	1,500LM / 3000K	LED	120/277	Х		Χ			BLACK 4IN CYLINDER	
3	LITHONIA	LHQM LED B R HO	N/A	N/A	LED	120/277	Х			Χ	-	EXIT LIGHT	WITH EM HEADS
4	LITHONIA	ELM2L B	N/A	N/A	LED	120/277	Х		Χ		-	EM BATTERY LIGHT	WITH EM BATTERY
5	LITHONIA, NOTE 1	LDN4 35/15 L04AR LSS MVOLT EZ1	N/A	1,500LM / 3500K	LED	120/277		Χ	Х			4IN DOWN LIGHT	
6	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT 2X4SMKSH	N/A	6,000 LM / 4000K	LED	120/277	Х		Х		-	2X4 FLAT PANEL	
6E	LITHONIA, NOTE 1	EPANL 2X4 6000LM 80CRI 40K MIN10 ZT MVOLT EL14L 2X4SMKSH	N/A	6,000 LM / 4000K	LED	120/277	Х		Х		-	2X4 FLAT PANEL	WITH EM BATTERY
7	BL LIGHTING, NOTE 7	BL FLEXFORM D2 30 65 BL DRIVELINE MG 9610	•	200 LM/FT / 3000K	-	120	Х				-	TAPE LIGHT	NOTE 4
8	LITHONIA	WPX1 LED P1 30K MVOLT DBLXD	N/A	2,900 LM / 3000K	LED	120/277	Х			Χ	NOTE 5	WALL PACK	
9	ALPHABET	750X 30K VA PC XX XX	N/A	170 LM / 3000K	LED	120/277		Х		Х	NOTE 6	RAIL LIGHT	
10	LITHONIA	WLTE B 1 R EL	N/A	N / A	LED	120/277	Х			Х	-	EXIT LIGHT	WITH EM HEADS
11	NOTE 8		24	NOTE 9	LED	120/277	Х		Х		-	HOST PENDANT	
12	NOTE 8		1	NOTE 10	LED	120/277	Х		Х		_	DINING PENDANT	

BAR PENDANT

- 1. FIXTURE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY COLUMBIA, DAY-BRITE, COOPER, AND H.E. WILLIAMS.
- 2. CONTRACTOR SHALL VERIFY LIGHT FIXTURE CATALOG NUMBER & INSTALLATION REQUIREMENTS PRIOR TO ORDERING
- 3. LAMP TYPE DESCRIPTION: LED=LIGHT EMITTING DIODE
- 4. REFER TO ARCHITECTURAL PLANS FOR RUN LENGTHS REQUIRED. LUMINAIRE SHALL BE CONTINUOUS FOR ENTIRE LENGTHS. PROVIDE ACCESSORY MOUNTING CABLE AND ALL REQUIRED HARDWARE FOR INSTALLATION PER
- MANUFACTURER'S INSTRUCTIONS.
- 5. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT.
- 6. COORDINATE BEZEL COLOR, FACE TYPE AND INSTALLATION OF LIGHT WITH ARCHITECT, RAILING VENDOR AND GENERAL CONTRACTOR PRIOR TO ROUGH IN. 7. FIXTURE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY LLI LIGHTING.
- 8. LIGHT FIXTURE FURNISHED BY OWNER AND INSTALLED BY ELECTRICAL CONTRACTOR
- 9. PROVIDE LED RETROFIT LAMP ARCHIPELAGO LIGHTING #LTCA10V20030CB OR EQUAL
- 10. PROVIDE LED RETROFIT LAMP ARCHIPELAGO LIGHTING #LTST21C35030MB OR EQUAL 11. PROVIDE LED RETROFIT LAMP - ARCHIPELAGO LIGHTING #LTG25V35030MBOR EQUAL.

		KI	TCHE	ΞN	EQI	JIPM	ENT	С	ONI	NECTIO	N SCHE	DUL	E			
	MARK	ITEM	VOLTAGE	PH	HP (KW)	AMPS	BREAKER		CORD AND PLUG	RECEPTACLE CONFIGURATION	MOUNTING HEIGHT	WIRE	GROUND WIRE	CONDUIT	CIRCUIT	
	$\langle 1 \rangle$	SODA DISPENSER	120	1		3.2	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-9	
	2	CONVECTION OVEN	120	1		8.0	20/1		Х	5-20R	48"	#12	#12	3/4"	L101-11	
	3	GLASS CHILLER	120	1		2.5	20/1		Х	5-20R	16"	#12	#12	3/4"	L101-15	
	4	ICE MACHINE	120	1		5.9	20/1	\lceil	×	5-20R	48"	#12	#12	3/4"	L101-17	
\	5	PREP TABLE	120	1		4.4	20/1		Х	5-20R	NOTE 2	#12	#12	3/4"	L101-19	}
}	6	PREP TABLE	120	1		4.4	20/1		Х	5-20R	NOTE 2	#12	#12	3/4"	L101-21	13
\ \ \		RANGE	120	~ ~	~~~~	6.0	20/1	₩	~~~	5-20R	16"	#12	#12	3/4"	L101-23	
}	8	REACH IN FREEZER	120	1		12.6	20/1		Χ	5-20R	48"	#12	#12	3/4"	L101-27	}
7	9	BACK BAR COOLER	120	7	~~~~	10.7	20/1	~	~~	5-20R	16"	#12	#12	3/4"	L101-29	
	(10)	GLASS WASHER	208	1		32.2	45/2	Х			16"	#6	#10	1"	L101-31	
	(11)	DISH WASHER	120	1		26.0	35/2	Х			16"	#8	#10	1"	L101-35	
	$\langle 12 \rangle$	SODA DISPENSER	120	1		3.2	20/1		Х	5-20R	48"	#12	#12	3/4"	L101A-15	

INFORMATION INCLUDED IN SCHEDULE HAS BEEN BASED ON LIMITED DESIGN INFORMATION AVAILABLE AT TIME OF CONSTRUCTION DOCUMENTS. COORDINATE EQUIPMENT LOCATIONS, CONDUIT ROUTING, DEVICE MOUNTING HEIGHTS AND POWER CONNECTIONS INCLUDING VOLTAGE, PHASE, BREAKER, CONDUCTOR, CONDUIT AND RECEPTACLE CONFIGURATION WITH





- SCALE: 1/4" = 1'-0" EXISTING PANEL BOARD SERVING AREA OF REMODEL. REUSE EXISTING CIRCUITS

 | A PROVIDE LIGHTING CONTROL | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | 16 | 17 C. CEILING SPACE OF PANTRY RAN BELOW SLAB AND STUBBED UP INTO | WHERE POSSIBLE. PROVIDE NEW BREAKERS AS REQUIRED TO ACCOMMODATE
- COMPLETE. 2 PROVIDE FINAL CONNECTION TO WALK IN EQUIPMENT INTERIOR LIGHTING, PRESSURE RELIEF PORTS, DOOR HEATERS, PILOT LIGHT SWITCH, ETC. FIELD COORDINATE EXACT ELECTRICAL REQUIREMENTS (BRANCH CIRCUIT SIZE, OVER CURRENT PROTECTION DEVICE SIZE, LOCAL DISCONNECTING MEANS SIZE, ETC.) WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN.

REMODEL. PROVIDE AN UPDATED TYPED CIRCUIT DIRECTORY AFTER REMODEL IS

L101A-2

SCALE: 1/4" = 1'-0"

2#12,#12G-1"C.

- PROVIDE TWO DEAD FRONT REMOTE 'GFCI' DEVICES TO PROVIDE 'GFCI' PROTECTION OF THE TWO BRANCH CIRCUITS SERVING EQUIPMENT UNDER THE HOOD. 4 PROVIDE NEW TWO CHANNEL, SEVEN DAY DIGITAL TIME CLOCK - TORK #DG SERIES OR EQUAL. COORDINATE TIME CLOCK LOCATION WITH OWNER PRIOR TO ROUGH IN.
- PROVIDE 120V CONNECTION TO TIME CLOCK. 5 CONNECT NEW DOWN LIGHTING IN EXISTING VESTIBULE TO EXISTING VESTIBULE 6 INSTALL AND CONNECT LIGHT FIXTURES AND SWITCHES FURNISHED WITH WALK IN
- REFRIGERATION EQUIPMENT. SEE POWER PLAN FOR ADDITIONAL INFORMATION. 7 PROVIDE LIGHTING CONTROL NETWORK SYSTEM BACKBONE WITH REQUIRED QUANTITY OF BRIDGES AND POWER PACK(S) - nLIGHT #nECY MVOLT ENC GFXK. PROVIDE 120V CONNECTION WITH LOCKABLE CIRCUIT BREAKER. NEATLY ARRANGE ASSOCIATED DEVICES ADJACENT TO SYSTEM BACKBONE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- DEVICE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. 9 LIGHTING CONTROL NETWORK POWER PACK - SEE LIGHTING CONTROL DEVICE

SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. LOCATE ABOVE

- NEAREST ACCESSIBLE CEILING. PROVIDE ALL REQUIRED LOW VOLTAGE AND LINE VOLTAGE CONNECTIONS. 10 PROVIDE LINE VOLTAGE WALL BOX OCCUPANCY SENSOR - SEE LIGHTING CONTROL DEVICE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 11 CONNECT TO BRANCH CIRCUIT SERVING GENERAL LIGHTING IN SAME ROOM AS EMERGENCY LIGHT. CONNECT BATTERY SENSING LEADS AHEAD OF LOCAL
- 12 CONNECT EXIT LIGHTS TO EXISTING CIRCUIT SERVING EXIT LIGHTS PRIOR TO REMODEL.

13 EXTEND EXISTING FIRE ALARM NOTIFICATION LOOP TO NEW DEVICES AND CONNECT.

14 FEED NEW PANEL FROM NEW (100/3) CIRCUIT BREAKER IN EXISTING PANEL 'L101' WITH 4#2,#8G-1-1/2"C. 15 PROVIDE FINAL CONNECTION TO WHEEL CHAIR LIFT. COORDINATE LOCATION OF ALL

COMPONENTS AND REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH IN.

- BASE OF HAND RAIL POST TO ALLOW FOR ROUTING OF LOW VOLTAGE CABLES SERVING RAIL LIGHTING. COORDINATE WITH ARCHITECTURAL AND GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. 17 PROVIDE NEW CENTRAL INVERTER - EVENLITE #PWII 12 LC TB OR EQUAL.
- 18 PROVIDE ROUGH IN FOR THERMOSTAT / SENSOR. PROVIDE 1/2"C. WITH PULL STRING FROM ROUGH IN TO MECHANICAL EQUIPMENT SERVED. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN. 19 EXISTING MECHANICAL EQUIPMENT TO REMAIN. MAINTAIN BRANCH CIRCUIT AND
- PROTECT EQUIPMENT DURING REMODEL. 20 EXACT ELECTRICAL REQUIREMENTS NOT KNOWN AT TIME OF DESIGN. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. MAKE REQUIRED
- CHANGES AT NO ADDITIONAL COST TO THE OWNER. 21 LOCATE SERVICE RECEPTACLE ADJACENT TO EXHAUST FAN. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR AND GENERAL CONTRACTOR PRIOR TO ROUGH IN.
- PULL STRING FROM EQUIPMENT TO HOOD UTILITY CABINET FOR CABLING BY OTHERS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. 23 PROVIDE NEW RECEPTACLE FOR WATER SOFTENER. CONNECT TO EXISTING PANEL SERVING SAME ROOM AS WATER SOFTENER. COORDINATE EXACT LOCATION OF RECEPTACLE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH IN.

22 EQUIPMENT PROVIDED WITH INTEGRAL DISCONNECT. PROVIDE SPARE 1"C. WITH

- 3-PHASE VFDS AND OVERLOADS FOR EXHAUST AND SUPPLY FANS, CONNECTIONS FOR HOOD LIGHTS, AND HOOD ON/OFF CONTROLS. VERIFY LOCATION WITH KITCHEN EQUIPMENT SUPPLIER. PROVIDE BUILDING POWER CONNECTION TO PANEL FOR EACH HOOD FAN AND HOOD LIGHTS, THEN FINAL CONNECTIONS FROM PANEL TO FAN AND LIGHTS. PROVIDE ALL ADDITIONAL LINE VOLTAGE AND LOW VOLTAGE CONNECTIONS NOT INDICATED ON THIS PLAN REQUIRED TO ENSURE HOOD IS OPERATIONAL. COORDINATE ALL REQUIREMENTS WITH REVIEWED HOOD EQUIPMENT
- SHOP DRAWINGS AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN. 25 PROVIDE 120V ELECTRICAL CONNECTION TO HOOD ANSUL FIRE SUPPRESSION SYSTEM CONTROL PANEL. UPON ALARM FROM HOOD FIRE DETECTION SYSTEM THE ANSUL SYSTEM CONTROL PANEL SHALL DISCONNECT ELECTRICAL POWER TO ALL EQUIPMENT UNDER HOOD THROUGH SHUNT TRIP CONTROLLED BREAKERS IN PANEL SERVING EQUIPMENT UNDER HOOD.
- MINIMUM SIZE FOR BRANCH CIRCUIT CONDUITS SHALL BE 1/2." MINIMUM DATA/COMMUNICATIONS CONDUIT SIZE SHALL BE 1." SEE DRAWINGS FOR AREAS

GENERAL NOTES

EXIST. WOMEN

- AT CONTRACTOR'S OPTION, THE USE OF MULTI-WIRE BRANCH CIRCUITS IS ALLOWED. PROVIDE MEANS TO SIMULTANEOUSLY DISCONNECT ALL CIRCUIT BREAKERS SHARING A COMMON NEUTRAL.
- PROVIDE A GREEN INSULATED GROUND WIRE IN ALL LIGHTING AND POWER BRANCH
- ALL EXISTING WIRING DEVICES (LIGHTING, POWER AND DATA AS APPLICABLE) LOCATED WITHIN THE SCOPE OF REMODEL SHALL BE REMOVED AND REPLACE WITH NEW AS REQUIRED TO MATCH DEVICE AND FACEPLATE COLORS AND TYPES INDICATED IN ELECTRICAL SPECIFICATIONS.

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Furnish Supply and deliver to site ready for installation

Indicated Noted, scheduled or specified

Provide Furnish, install and connect complete and ready for final use

National Electric Code (NFPA 70)

NEMA National Electrical Manufacturers Association

NFPA National Fire Protection Association

Underwriters Laboratories Inc.

C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.

E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for the following items of electrical

Enclosed switches

equipment

Panelboards

Lighting fixtures Lighting control

1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a PDF copy of shop drawings for review.

2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within

undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of

manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.

F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and

G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain electrical systems. Schedule training with Owner with at least seven days' advance notice.

H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper

operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance. TEMPORARY POWER AND LIGHTING - Use electric power from Owner's existing system without metering

1. Provide receptacle outlets adequate for connection of power tools and construction equipment.

2. Provide temporary lighting with local switching that provides adequate illumination for construction operations

SECTION 260500 - BASIC ELECTRICAL MATERIALS AND METHODS

A. QUALITY ASSURANCE - 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 intended

B. COORDINATION - Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the work.

C. CONDUCTORS - All conductors shall be installed in raceways. Conductors for pilot and control circuits shall be #14. All other conductors shall be #12 or larger.

1. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.

2. Conductors, Larger Than No. 10 AWG: Stranded copper.

3. Insulation: Thermoplastic, rated at 75 deg C minimum.

4. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service

D. RACEWAYS - Minimum raceway size shall be ½". Raceway types and applications shall be as follows: 1. Electrical metallic tubing (EMT): ANSI C80.3, zinc-coated steel, with set-screw or compression fittings. EMT shall be used for all other applications not listed below.

2. Liquid tight flexible metal conduit (LFMC): Zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket. LFMC shall be used for connections to vibrating equipment or in wet or damp locations

3. Rigid non-metallic conduit (RNC): NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings. RNC shall be used for all underground applications.

4. Raceway Fittings: Specifically designed for the raceway type with which used.

E. JUNCTION AND DEVICE BOXES - Minimum box size shall be 4" square with extension or plaster ring as required. Box types and applications shall be as follows

1. Sheet metal boxes: NEMA OS 1 galvanized steel. Sheet metal boxes shall be used for all surface mounted applications and flush mounting in gypsum or plaster walls.

2. Masonry boxes: square cornered suitable for flush mounting in masonry construction.

3. Cast metal boxes: NEMA FB 1, Type FD, cast box with gasketed cover. Cast metal boxes shall be used for exterior surface mounted applications.

F. ELECTRICAL IDENTIFICATION - All conductors shall be color coded throughout the installation. Color coding shall be as prescribed by ANSI A13.1 and NFPA 70.

1. Provide underground warning tape for all buried conductors tape shall be permanent, bright-colored, continuous-printed, vinyl tape not less than 6 inches wide by 4 mils thick with embedded continuous metallic strip and shall be compounded for permanent direct-burial service.

G. FIRESTOPPING - Apply firestopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly.

H. WORK IN EXISTING BUILDINGS - Protect existing electrical equipment and installations indicated to remain. If

damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.

1. Existing utilities shall not be interrupted without prior written approval from the Landlord. All interruptions shall

I. CUTTING AND PATCHING - Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.

1. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

SECTION 262416 - PANELBOARDS

A. GENERAL - Panelboard cabinets shall be NEMA PB 1, type 1 zinc coated steel with manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat. Each new panelboard and existing panelboard modified in remodel shall be furnished with a new and typed directory card indicating the load served by each branch

1. Panelboard bus material shall match existing.

2. Provide each panelboard with an equipment ground bus adequate for feeder and branch-circuit equipment ground conductors. Bus shall be bonded to box.

3. Where future devices (spaces) are scheduled provide mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

4. Each panelboard shall be fully rated to interrupt symmetrical short-circuit current available at terminals. See schedules for required interrupting current (A.I.C.).

5. Panelboards shall be mounted with top of trim at 74" above finished floor, unless otherwise indicated. 6. Panelboards shall be mounted plumb and rigid without distortion of box. Mount recessed panelboards with fronts

uniformly flush with wall finish. 7. Panelboards shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.

B. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS 1. Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

2. Doors: Front mounted with concealed hinges; secured with flush latch with tumbler lock; keyed alike. C. OVERCURRENT PROTECTIVE DEVICES - Thermal-magnetic circuit breakers with inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for

circuit-breaker frame sizes 250 A and larger. Circuit breaker lugs shall be mechanical style, suitable for number, size,

trip ratings, and material of conductors. 1. Each overcurrent protective device shall have an application listing appropriate for the application.

SECTION 262726 - WIRING DEVICES A. GENERAL - Devices shall be installed plumb and secure. Unless otherwise indicated, flush mount wiring devices

1. Unless otherwise indicated wiring devices shall be mounted at the following heights, measured from finished floor to centerline of device.

Wall switches and wall box dimmers = 48"

Receptacles = 16"

2. Group adjacent devices under single multi-gang wall plates.

with long dimension vertical, and grounding terminal of receptacles on bottom.

3. Wiring devices shall be manufactured by Pass and Seymour, Leviton, Hubbell, or General Electric.

B. RECEPTACLES - Duplex receptacles shall be specification grade 20 ampere, 120 volt.

1. Ground fault interrupting (GFI) receptacles shall be feed-through type arranged to protect connected downstream receptacles on same circuit.

2. Receptacles serving owner furnished equipment shall have configuration to match that of equipment plug.

C. SWITCHES - Snap switches shall be specification grade, quiet type, single pole, two pole, or three-way to suit

D. DEVICE COLOR - Coordinate color with Owner prior to purchase for devices in areas accessible to public. In back of house areas, color shall be gray.

E. WALL PLATES - Plates in areas accessible to public shall be smooth finish plastic in single and combination types to match corresponding wiring devices. Match color of associated device(s). Plates in back of house areas shall be type 302 satin finish stainless steel in single and combination types to match corresponding wiring devices.

1. Weatherproof plates in wet locations: Self closing transparent cover, lockable weatherproof enclosure, the integrity of which is not affected when the attachment plug cap is inserted. Equal to Hubbell #ML series.

SECTION 262816 - ENCLOSED SWITCHES

manufactured by Gould Shawmut, littlefuse, or GE are acceptable.

A. ENCLOSED SWITCHES - Enclosed switches shall be heavy-duty grade with lockable handle. Switches shall be non-fusible unless otherwise indicated and shall have clips to accommodate fuse sizes indicated on the drawings.

1. Exterior mounted switches shall be NEMA 3R rated and shall be bolted closed. 2. Cartridge fuses shall be class dual-element time delay, Class "RK-1" Bussman low peak. Equivalent fuses as

3. Enclosed switches shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.

SECTION 265100 - LIGHTING

A. LUMINAIRE AND FIXTURE COMPONENTS - All metal parts and components shall be free from burrs, sharp corners, and edges. All fixtures shall be shipped pre-wired and ready for mounting.

1. Doors, frames, and other internal access mechanisms shall be smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools.

B. EMERGENCY LIGHTING UNITS - Unit shall be a self-contained units with sealed, maintenance-free, lead-acid type with minimum 5-year nominal life and fully automatic, solid-state type charger with sealed transfer relay.

1. Relay shall automatically turn lamp(s) on when supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. When normal voltage is restored, relay disconnects lamps, and battery is automatically recharged and floated on charger.

C. EMERGENCY POWER SUPPLY UNIT - Unit shall be a self-contained, modular, battery-inverter unit factory mounted within fixture body, 1100 lumen output minimum.

1. Fixture shall be provided with a test switch and light-emitting diode indicator light which is visible and accessible without opening fixture or entering ceiling space.

2. Battery shall be a sealed, maintenance-free, nickel-cadmium type with minimum 5-year nominal life with fully automatic, solid-state, constant-current type charger.

3. Relay shall automatically energize lamp or LEDs from unit when normal supply circuit voltage drops to 80 percent of nominal voltage or below. When normal voltage is restored, relay disconnects lamp, and battery is automatically recharged and floated on charger.

D. LED LIGHT SOURCE REQUIREMENTS:

1. Rated life (L70): Minimum 50,000 hours as defined by IES LM80 and TM21.

2. Color Rendering Index (CRI): 80 CRI minimum.

3. Each luminaire type type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among

E. LED DRIVER REQUIREMENTS:

1 0-10V Dimming

2. Total Harmonic Distortion Rating: Less than 20 percent.

3. Ambient Temperature Rating: -40° to + 55° C.

4. Power Factor (100% output): >0.95

F. WARRANTY - Include labor allowance required for replacement on-site at no extra cost to Owner within 1-year construction warranty. Transfer remainder of the manufacturer's warranty, including ballast manufacturer's labor

manufacturer's written instructions and approved submittal materials.

1. Ballast and Drivers: 5-year replacement warranty.

2. LED system Warranty: 5-year replacement warranty.

stipend to owner after 1-year construction warranty.

G. FINISHES - Luminaire finishes shall be manufacturer's standard, unless otherwise indicated. Painted finishes shall be applied over corrosion-resistant treatment or primer, free of defects. Metallic finishes shall be corrosion resistant. H. INSTALLATION - Luminaires shall be set level, plumb, and square with ceiling and walls, and secured according to

1. Luminaires in or on grid-type suspended ceilings shall be supported with support clips and a minimum of four ceiling support system rods or wires for each fixture, located not more than 6 inches from fixture corners.

SECTION 265200 - LIGHTING CONTROL

A. OCCUPANCY SENSORS - Sensor adapts or "learns" patterns of use specific to controlled space to reduce false

1. Wall Box Sensors: Passive dual technology with 180 degree adjustable field of view capable of sensing small motion to 20' when mounted at 4'. Pushbutton on sensor face provides manual on/manual off load control, load may be manually turned on or off at any time. Mount in wall box with decorator style faceplate, sensor shall have gray finish with 302 stainless steel plate. Integral switch in sensor housing shall be rated for 800W ballast or incandescent load at 120V, 1200W ballast load at 277V, and 1/4 hp motor load at 120V. Sensorswitch WSD PDT or equivalent by Hubbell or Wattstopper.

3. Adjust occupancy sensors tailored to actual use conditions of controlled space. Make adjustments before and after Owner has occupied space

B. LIGHTING CONTROL - See plans, schedules, and details for requirements of network type lighting control. C. WARRANTY - Manufacturer and Installer agree to repair or replace devices that fail in materials or workmanship

within two years from date of substantial completion. D. MANUFACTURERS

1. Lighting control system shall be manufactured by SensorSwitch nLight, Wattstopper, Encelium.

SECTION 268100 - FIRE ALARM A. GENERAL - All new devices shall be connected to the existing addressable fire alarm control panel. All new devices shall be compatible with the existing control equipment. The existing fire alarm system shall remain functional throughout construction. Any required outages shall be coordinated with the fire marshal and owner. Provide panel modifications and programming at the existing fire alarm control panel as required by new work.

B. SUBMISSIONS TO AUTHORITIES HAVING JURISDICTION - Submit to authorities having jurisdiction. Include copies of annotated Contract Drawings as needed to depict component locations to facilitate review. Resubmit if required to make clarifications or revisions to obtain approval. On receipt of comments from authorities having jurisdiction, submit them to Engineer for review.

C. SMOKE DETECTORS - Smoke detectors shall be photoelectric type with integral LED indicating light and adjustable sensitivity settings.

1. Duct smoke detector shall be ionization type with sampling tube sized as recommended by the manufacturer for the specific duct size, air velocity, and installation conditions where applied.

D. NOTIFICATION APPLIANCES - Devices shall be combination type with factory-integrated audible and visible devices in a single-mounting assembly.

mechanism behind a grille. Horns produce a sound-pressure level of 90 dB, measured 10 feet from the horn. 2. Visible alarm devices shall be xenon strobe lights listed under UL 1971 with clear or nominal white polycarbonate

1. Audible alarm device shall be electric-vibrating-polarized type horn with provision for housing the operating

lens. The word "FIRE" shall be engraved in minimum 1-inch high letters on the lens. Unit candela output shall meet the 3. Notification devices shall be mounted at 82" A.F.F. or 6" below finished ceiling whichever is lower.

E. WIRE - wiring shall be as follows unless otherwise recommended by the manufacturer or required by the authority

Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.

2. Provide fan shutdown relay(s) rated to interrupt fan motor-control circuit where required.

Low-Voltage Circuits: No. 16 AWG, minimum. Line-Voltage Circuits: No. 12 AWG, minimum.

Power-Limited Circuits: NFPA 70, Types FPL, FPLR, or FPLP, as recommended by manufacturer.

1. Fire alarm wiring shall be installed in raceway. Conceal raceway except in unfinished spaces and as indicated. F. MANUFACTURERS - Match existing.

L. FIELD SERVICE AND TESTING - Upon completion of work a re-acceptance test shall be performed by a licensed party in accordance with NFPA 72.

1. Occupancy Adjustments: When requested within one year of date of Substantial Completion, provide on-site assistance in adjusting sound levels, controls, and sensitivities to suit actual occupied conditions. Provide up to two requested visits to Project site for this purpose.

LIGHTING P.	ANEL	S	CH	IEDUL	LE (EXISTING)
ITING PANEL: L101				VOLTAGE	: 208/120V
ING: 400A				PHASE:	3
JNTING: SURFACE				WIRE:	4
E: MLO W/ GND.				A.I.C. RA	TING: SERIES
BAR					
DESCRIPTION	O/C	Cł	T.	O/C	DESCRIPTION
RE	20/1 (X)	1	2	15/2 (X)	EXISTING VRF UNITS
RE	20/1 (X)	3	4		
TING VRF-HP-4-1	45/2 (X)	5	6	20/1 (X)	LTG - RESTROOMS (EXISTING)
-		7	8	20/1 (X)	REC - RESTROOMS (EXISTING)
- SODA DISPENSER	20/1 (G)	9	10	20/2 (X)	EXISTING WATER HEATER
- CONVECTION OVEN	20/1 (S)	11	12		
NT TRIP SPACE ONLY		13	14	20/1	REC - SEATING
- GLASS CHILLER	20/1 (G)	15	10	20/1	REC - SEATING
- ICE MACHINE	20/1 (G)		1θ	20/1	REC - POS
- PREP TABLE	20/1 (G)	19	20	20/1	REC - BOH BAR
- PREP TABLE	20/1 (G)	21	22	20/1	REC - BAR SEATING
- RANGE	20/1 (S)	23	24	20/1	REC - EXTERIOR
NT TRIP SPACE ONLY		25	20	20/1	REC - MANAGER'S OFFICE
- REACH IN FREEZER	20/1 (G)		2θ	20/1	REC - EXTERIOR
- BACK BAR COOLER	20/1 (G)	29	30	20/1	TIME CLOCK 'TC-1'
SS WASHER	45/2 (L)	31	32	20/1	LTG - SEATING / BAR
		33	34	20/1	LTG - BACK OF HOUSE
l Washer	35/1 (L)		30	20/1	LTG - BAR LIGHTING
J-1	90/3	37	30	100/3	PANEL 'L101A'
		39	40		
		41	42		

1. (X) INDICATES EXISTING CIRCUIT BREAKER TO REMAIN.

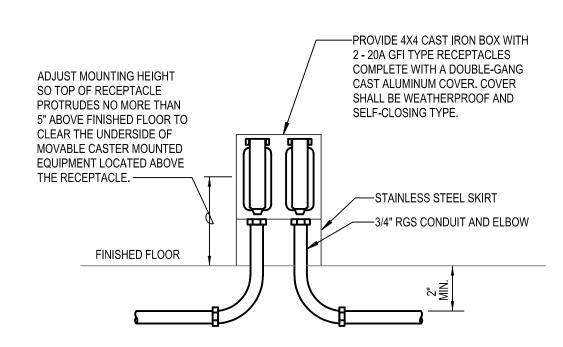
2. (S) INDICATES TO PROVIDE A SHUNT TRIP TYPE CIRCUIT BREAKER.

3. (L) INDICATES TO PROVIDE A LOCKABLE CIRCUIT BREAKER. 2. (G) INDICATES TO PROVIDE A 'GFCI' TYPE CIRCUIT BREAKER.

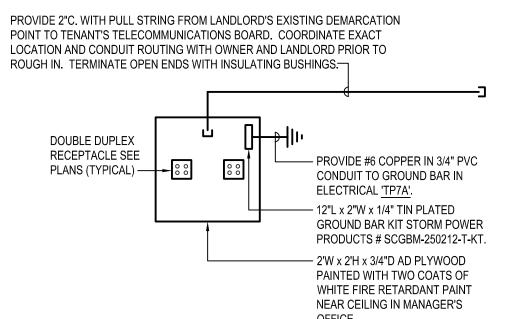
LIGHTING PANEL SCHEDULE (NE LIGHTING PANEL: L101A VOLTAGE: 208/ RATING: 100A PHASE: 3	(120V
	/120V
RATING 100A PHASE 3	
1001	
MOUNTING: SURFACE WIRE: 4	
TYPE: MLO W/ GND. A.I.C. RATING: SER	RIES
BAR	
9.0	DESCRIPTION
WHEEL CHAIR LIFT 20/1 1 2 20/1 LTG - EXTERIO	• • •
WATER HEATERS 20/1 3 4 30/3 FREEZER ACC	CU
VRF-1 / 2 15/2 5 6	
7 8	
HP-1 40/2 9 10 30/2 COOLER ACCI	U
11 12	
REC - ROOF TOP 20/1 13 14 30/3 KEF-1	
REC - SODA DISPENSER 20/1 (G) 15 10	
MISC WALK IN EQUIPMENT 20/1 (L) 17 18	
REC - KITCHEN 20/1 19 20 20/1 COOLER EVAI	PORATOR
21 22 20/2 FREEZER EV <i>A</i>	APORATOR
23 24	
25 2 0 20/1 HOOD UTILITY	CABINET
27 28 20/1 ANSUL SYSTE	EM
29 30	
31 32	
33 34	
35 30	
37 38	
39 40	
41 42	

NOTES:

1. (G) INDICATES TO PROVIDE A 'GFCI' TYPE CIRCUIT BREAKER. 2. (L) INDICATES TO PROVIDE A LOCKABLE CIRCUIT BREAKER.



KITCHEN FLOOR RECEPTACLE DETAIL



COMMUNICATIONS BOARD DETAIL

DATA/COMM ROUGH-IN DETAIL

LABEL END OF

CONDUIT ---

PULLSTRING -

ARLINGTON PRESS-ON

INSULATING BUSHING —

TURN CONDUIT OUT

ABOVE ACCESSIBLE

WALL STUD ----

1" CONDUIT STUBBED

MOUNT DATA OUTLET

4-11/16" SQUARE BOX

BLANK COVER PLATE —

WITH SINGLE GANG

PLASTER RING —

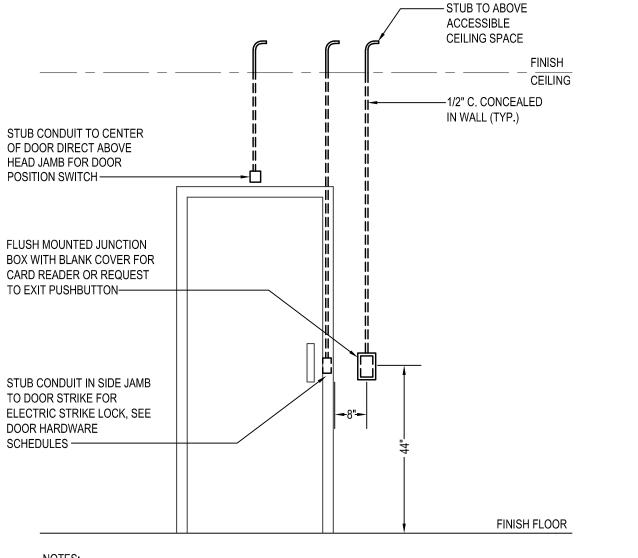
ADJACENT TO

RECEPTACLE -

CONCEALED IN WALL —

CEILING -

PROVIDE



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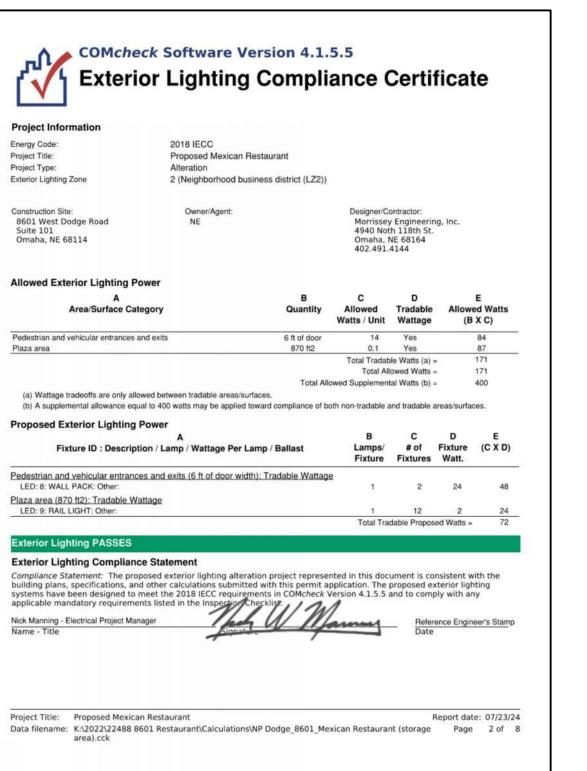
1. ROUGH-IN REQUIREMENTS AND LOCATIONS SIMILAR FOR DOUBLE DOORS. 2. SEE POWER PLANS FOR SPECIFIC DOOR ROUGH-IN REQUIREMENTS.

3. COODINATE ACCESS CONTROL ROUGH-IN REQUIREMENTS WITH ARCHITECTURAL DOOR SCHEDULES. 4. COODINATE ACCESS CONTROL ROUGH-IN REQUIREMENTS WITH SECURITY EQUIPMENT SUPPLIER.

ACCESS CONTROL ROUGH-IN

	ELE	ECTRICA	L SY	MBOLS				
SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION				
		LIGH	TING					
	LUMINAIRE		S	SINGLE POLE SWITCH				
0	LUMINAIRE		S₃	3 - WAY SWITCH				
	LUMINAIRE CONNECTED TO EMERGENCY CIRCUIT OR BATTERY		S₄	4 - WAY SWITCH				
$\overline{\square}$	STRIP LUMINAIRE		<u></u>	WALL BOX DIMMER SWITCH				
	WALL MOUNTED LUMINAIRE		<u> </u>	CEILING MOUNTED MOTION SENSOR/SWITCH				
		NUMBER OR LETTER	H	WALL MOUNTED MOTION SENSOR/SWITCH				
Ю	WALL MOUNTED LUMINAIRE	DENOTES TYPE, SEE CORRESPONDING MARK		LOW VOLTAGE LIGHTING CONTROL SWITCH				
<u> </u>	TRACK LUMINAIRE	IN LUMINAIRE SCHEDULE	⊢®	PHOTOCELL OFFILING MOUNTED EXIT LIGHT WITH DIPECTIONAL APPOW				
	EMERGENCY BATTERY PACK		<u></u> ■	CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW				
<u>⊸</u>	POLE MOUNTED LUMINAIRE		<u>+⊗</u> l	WALL OR END MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW				
¤	BOLLARD LUMINAIRE							
		FIRE A	ALARM					
•	FIRE ALARM SMOKE DETECTOR		FK	FIRE ALARM HORN & STROBE COMBINATION				
	DUCT MOUNTED SMOKE DETECTOR		F◀	FIRE ALARM MINI-HORN & STROBE COMBINATION				
F	FIRE ALARM MANUAL PULL STATION		F	CEILING FIRE ALARM STROBE				
	FIRE SPRINKLER VALVE TAMPER SWITCH		HF F	WALL FIRE ALARM STROBE				
F→ FIRE SPRINKLER FLOW SWITCH				CEILING FIRE ALARM HORN & STROBE COMBINATION				
		POV	VER					
\Rightarrow	DUPLEX RECEPTACLE		••	FLOOR BOX - COMBINATION POWER & DATA				
→ G	"G" DENOTES GFCI TYPE		•	POKE-THRU FLOOR BOX				
⇒⊳	"▶" DENOTES ISOLATED GROUND TYPE			MULTI-OUTLET ASSEMBLY - LENGTH AS INDICATED				
₩ н	"H" DENOTES HOSPITAL GRADE TYPE		M _#	MOTOR ("#" DENOTES HORSEPOWER RATING)				
→ TR	"TR" DENOTES TAMPER RESISTANT TYPE		ì	DISCONNECT SWITCH				
₩ "	"U" DENOTES UNIVERSAL SERIAL BUS (USB) TYPE		Ste	THERMAL ELEMENT SWITCH				
-	DOUBLE SHADING DENOTES RED DEVICE		■ ∽	SWITCH & FUSE				
-	SINGLE SHADING DENOTES SPLIT WIRED DEVICE		□co	SWITCH & FUSTAT				
Ю	HORIZONTAL MOUNTED DUPLEX RECEPTACLE		⊠	MAGNETIC MOTOR STARTER				
Ø	CEILING MOUNTED DUPLEX RECEPTACLE		₩	COMBINATION MAGNETIC STARTER/DISCONNECT				
#	DOUBLE DUPLEX RECEPTACLE		<u> </u>	MOTOR CONTROL PUSHBUTTON STATION				
Ю	SINGLE RECEPTACLE		R	RELAY				
H)	DRYER RECEPTACLE NEMA 14-30 (125/250V 30A)							
	RANGE RECEPTACLE NEMA 14-50 (125/250V 50A)							
<u>₩</u>	"W" DENOTES WELDER RECEPTACLE NEMA 6-50 (250V 50A)							
$\vdash \!$	SPECIAL PURPOSE RECEPTACLE (NEMA CONFIG. AS NOTED)							
		COMMUN	VICATION					
•	WALL PHONE OUTLET		(5)	CEILING SPEAKER				
⊢	WALL COMMUNICATIONS DATA OUTLET		К₃	WALL SPEAKER				
<u> </u>	CEILING COMMUNICATIONS DATA OUTLET		₩	WALL MICROPHONE OUTLET				
■WAP	CEILING WIRELESS ACCESS POINT OUTLET		♦	CEILING MICROPHONE OUTLET				
HTV	TELEVISION/VIDEO OUTLET		V	VOLUME CONTROL				
	CONDUIT SLEEVE (1" UNLESS NOTED OTHERWISE ON PLANS)		С	CALL-IN DEVICE				
		GEN	ERAL					
	LIGHTING PANEL		Ю	WALL MOUNTED JUNCTION BOX				
	DISTRIBUTION PANEL SWITCHBOARD OR MOTOR CONTROL CENTE	R	0	JUNCTION BOX				
	CABINET, ENCLOSURE, OR CONTROL PANEL, TYPE INDICATED ON	PLANS	_	CONDUIT SEAL				
	BRANCH CIRCUIT - EXPOSED			CIRCUIT DOWN				
	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL			CIRCUIT UP				
/	BRANCH CIRCUIT CONCEALED IN FLOOR		7	CONDUIT STUB-OUT				
	HOMERUN TO PANEL (QUANTITY OF ARROWS INDICATES QUANTIT	Y OF CIRCUITS)	~~ <u>\$</u>	CIRCUIT BREAK				
	SPECIAL PURPOSE HOMERUN AS INDICATED			BELL				
T	THERMOSTAT		•	PUSH BUTTON				
WP	SUBSCRIPT "WP" APPLIED TO ANY SYMBOL INDICATES WEATHERP	ROOF	В	BUZZER				
	NEMA TYPE 2D OD FOUNTALENT							





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MEI NO: 22488

NEMA TYPE 3R OR EQUIVALEN

NEMA 3 OR EQUIVALEN

SUBSCRIPT "RT" APPLIED TO ANY SYMBOL INDICATES RAINTIGH

SUBSCRIPT "EP" APPLIED TO ANY SYMBOL INDICATES EXPLOSION PROC

SUBSCRIPT "PD" ADDED TO ANY FLOOR OUTLET INDICATES

ENERGY CODE COMPLIANCE		
CODE	2018 IECC	
ComCHECK	YES	
COMMISSIONING	YES	NOTE 1

THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

R SUBSCRIPT "R" ADDED TO ANY SYMBOL INDICATES RELOCATED

YP) WHERE (TYP) IS USED ON PLANS INDICATES A TYPICAL NOTE OR CONDITION

BUILDING OWNER OR OWNER REPRESENTATIVE WITHIN 90 DAYS OF

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to not scale drawings. verify all dimensions and clearances from

architectural, structural, shop and other appropriate drawings or

at site. lay out and coordinate all work prior to installation to

provide clearances required for operation, maintenance, and codes and verify non-interference with other work. do not fabricate prior

to verification of clearance for all trades.

REQUIRED DOCUMENTS (REFER TO CODE) SHALL BE PROVIDED TO THE

E SUBSCRIPT "E" ADDED TO ANY SYMBOL INDICATES EXISTING

DL SUBSCRIPT "DL" ADDED TO ANY SYMBOL INDICATES DAMP LOCATION

K SUBSCRIPT "K" ADDED TO ANY SYMBOL INDICATES KEY OPERATED
P SUBSCRIPT "P" ADDED TO ANY SYMBOL INDICATES PILOT LIGHT

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