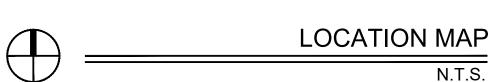


**VICINITY MAP** 

N.T.S.





**3330 NE 34 STREET** FT. LAUDERDALE, FL 33308 WWW.LASKYARCHITECTPA.COM 954.566.5051



930-M NW BLUE PKWY, LEES SUMMIT, MISSOURI 64086

# **SCOPE OF WORK**

PROJECT LOCATION

TENANT IMPROVEMENT CONSISTING OF THE CONSTRUCTION OF A NEW IV VITAMINS FACILITY WITHIN AN EXISTING BUILDING SHELL, TO INCLUDE ALL ELECTRICAL, PLUMBING, AND MECHANICAL MODIFICATIONS, INTERIOR PARTITIONS, AND EQUIPMENT. NO STRUCTURAL MODIFICATIONS ARE PART OF THE SCOPE.

# PROJECT DIRECTORY

SHYNEL LLC. 3758 SW SANDSTONE DR. LEE'S SUMMIT, MO 64082 CONTACT: SHYNEL KRAUSE PH: (816) 838-2330 EMAIL: SHYNEL.KRAUSE@THEDRIPBAR.COM DRIPBAR FRANCHISING LLC FRANCHISOR 236 FRANKLIN STREET, WRENTHAM, MA 02093 CONTACT: SHANNON PETTERUTI PH:(401)465-8943 EMAIL:SHANNON@THEDRIPBAR.COM RED PROPERTY MANAGEMENT, LLC LANDLORD PO BOX 98161 LAS VEGAS, NV 89193 RED SUMMIT FAIR, LLC AND SAHARA PAVILION SOUTH SC LLC CONTACT: DUSTIN CLEVELAND PH: (602) 684-0554 EMAIL: DCLEVELAND@REDDEVELOPMENT.COM **GOVERNING AGENCIES** CITY OF LEES SUMMIT **BUILDING DEPARTMENT** 

220 SE GREEN, LEES SUMMIT, MO

PH: (816) 969-1200

# **OCCUPANT LOAD CALCULATIONS**

TABLE 1004.5, IBC 2018

FUNCTION OF SPACE	AREA	OCCUPANT L	OAD FACTOR	NUMBER OF OCCUPANTS
BUSINESS	760 SF	150 GROSS	100 GROSS	6
ASSEMBLY WITHOUT FIXED SEATS, UNCONCENTRATED	215 SF	15 GROSS	15 GROSS	15
		TOTAL	OCCUPANTS	21

# **EGRESS REQUIREMENTS**

TABLE 1006.3.3(2) IBC 2018

STORIES	WITH ONE EXIT OF	R ACCESS TO ON	NE EXIT FOR OT	HER OCCUPANCII	ES
	OCCUPANCY	MAXIMUM OCCUPANTS PER STORY	MINIMUM # OF EXITS	MAX. COMMON PATH OF EGRESS TRAVEL DISTANCE	MAX. # OF STORIES
REQUIRED	A,B,E,F,M,U,S	49	1	75'-0"	1
PROVIDED	В	23	2	52'-9"	1

TABLE 1006.2			S TRAVE	
OCCUPANCY	WITH SPRIN SYS	IKLER	WITH SPRINKL SYSTE	.ER
	OCCU			
	<u>&lt;</u> 30	>30		
A, M	75	75	75	
B*	100*	75	100*	

# WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY

**TABLE 803.13, IBC 2018** 

	SPR	INKLERED	
GROUP	INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS <sup>a,b</sup>	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOMS & ENCLOSED SPACES
В	В	C <sup>m</sup>	С

For SI: 1 inch = 25.4mm, 1 square foot = 0.0929 m

- a. CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED FOR WAINSCOTTING OR PANELING OF NOT MORE THAN 1,000 SQUARE FEET OF APPLIED SURFACE AREA IN THE GRADE LOBBY WHERE APPLIED DIRECTLY TO A NONCOMBUSTIBLE BASE OR OVER FURRING STRIPS APPLIED TO A NONCOMBUSTIBLE BASE AND FIREBLOCKED AS REQUIRED BY SECTION 803.11.1.
- b. IN OTHER THAN GROUP I-2 OCCUPANCIES IN BUILDINGS LESS THAN THREE STORIES ABOVE GRADE PLANE OF OTHER THAN GROUP I-3, CLASS B INTERIOR FINISH FOR NONSPRINKLERED BUILDINGS AND CLASS C INTERIOR FINISH FOR SPRINKLERED BUILDINGS SHALL BE PERMITTED IN INTERIOR EXIT STAIRWAYS AND RAMPS.
- REQUIREMENTS FOR ROOMS AND ENCLOSED SPACES SHALL BE BASED UPON SPACES ENCLOSED BY PARTITIONS. WHERE A FIRE-RESISTANCE RATING IS REQUIRED FOR STRUCTURAL ELEMENTS, THE ENCLOSING PARTITIONS SHALL EXTEND FROM THE FLOOR TO THE CEILING. PARTITIONS THAT DO NOT COMPLY WITH THIS SHALL BE CONSIDERED ENCLOSING SPACES AND THE ROOMS OR SPACES ON BOTH SIDES SHALL BE CONSIDERED ONE. IN DETERMINING THE APPLICABLE REQUIREMENTS FOR ROOMS AND ENCLOSED SPACES, THE SPECIFIC OCCUPANCY THEREOF SHALL BE THE GOVERNING FACTOR REGARDLESS OF THE GROUP CLASSIFICATION OF THE BUILDING OR STRUCTURE.
- d. LOBBY AREAS IN GROUP A-1, A-2 AND A-3 OCCUPANCIES SHALL NOT BE LESS THAN CLASS B MATERIALS.
- CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED IN PLACES OF ASSEMBLY WITH AN OCCUPANT LOAD OF 300 PERSONS OR LESS. FOR PLACES OF RELIGIOUS WORSHIP, WOOD USED FOR ORNAMENTAL PURPOSES,
- TRUSSES, PANELING OR CHANCEL FURNISHING SHALL BE PERMITTED. CLASS B MATERIAL IS REQUIRED WHERE THE BUILDING EXCEEDS TWO STORIES.
- CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED IN ADMINISTRATIVE SPACES. CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED IN ROOMS WITH A CAPACITY OF FOUR PERSONS OR LESS.
- CLASS B MATERIALS SHALL BE PERMITTED AS WAINSCOTING EXTENDING NOT MORE THAN 48 INCHES ABOVE THE FINISHED FLOOR IN CORRIDORS AND EXIT ACCESS STAIRWAYS AND RAMPS.
- FINISH MATERIALS AS PROVIDED FOR IN OTHER SECTIONS OF THIS CODE. APPLIES WHEN PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN
- ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. m. CORRIDORS IN AMBULATORY CARE FACILITIES SHALL BE PROVIDED WITH CLASS A OR B MATERIALS.

# **EXISTING CONDITIONS NOTES**

THE CONTRACTOR AND SUB-CONTRACTORS SHALL NOT INITIATE ANY WORK UNTIL **EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED**. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

# PLUMBING FIXTURE REQUIREMENTS

TABLE 403.1, IPC 2018 MIN. NUMBER OF PLUMBING FIXTURES

OCCUPANCY B-BUSINESS

21 OCCUPANTS - 11 FEMALE	ES AND 11 MA	ALES
CODE	REQUIRED	PROVIDED
WATER CLOSETS 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50	2	1*
LAVATORIES 1 PER 40 for the first 80	2	1*
WATER FOUNTAIN 1 PER 100 OCCUPANTS	1	0**
SERVICE SINK	1	1

\*SECTION 403.2. EXCEPTION 4 SEPARATE FACILITIES SHALL NOT BE REQUIRED IN BUSINESS OCCUPANCIES IN WHICH THE MAXIMUM OCCUPANT LOAD IS 25 OR FEWER.

\*\*WATER BOTTLES WILL BE OFFERED TO THE PATRONS

PROFESSIONAL SEAL SCOVAL LASKY

\* SUMBER
A2019015157

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PKWY, 10 64086

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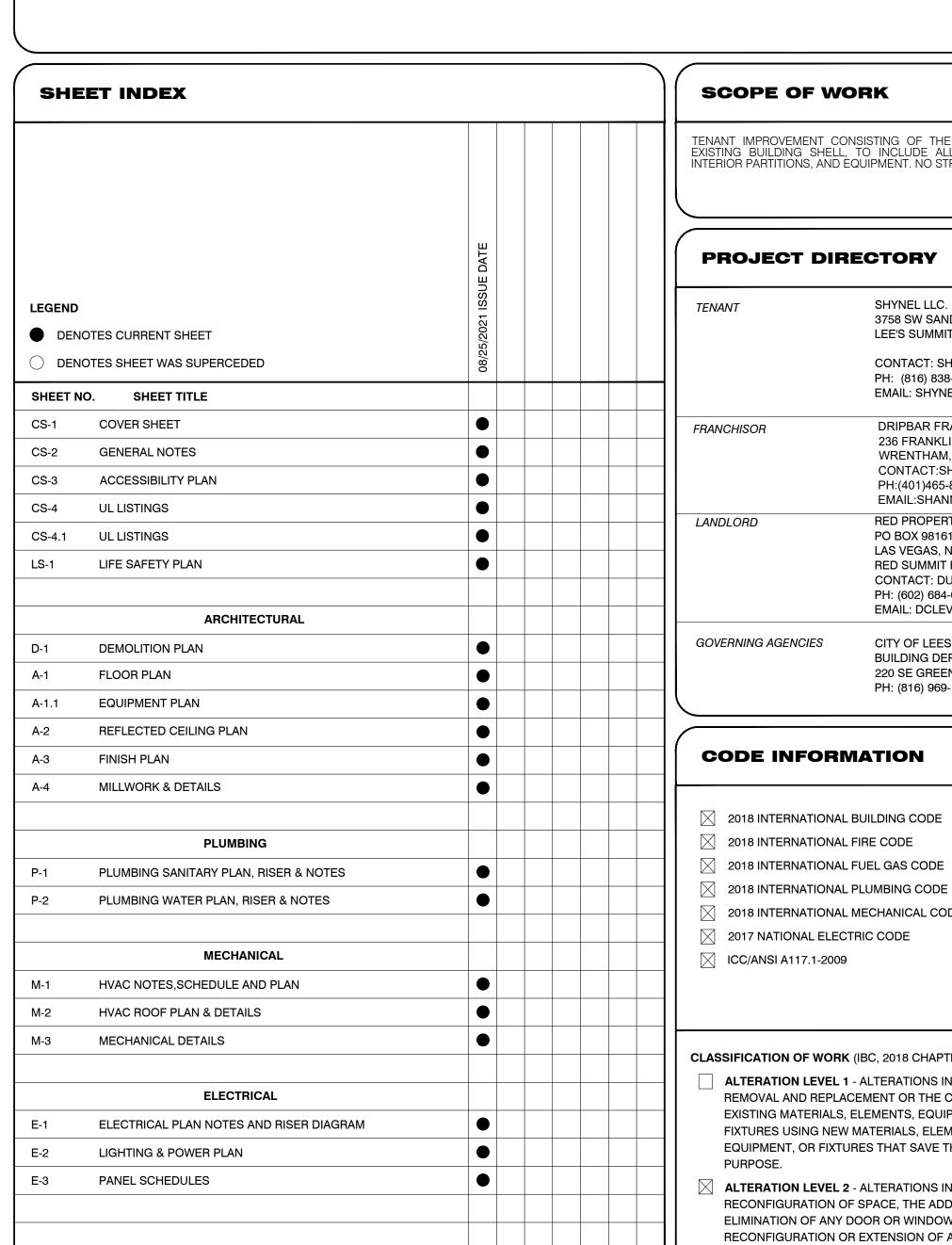
IPB

SCOTT L. LASKY A2019015157 REGISTERED ARCHITECT STATE OF MISSOURI

CHECKED BY: CC-SL

ISSUE DATE: 08-25-2021 PROJECT #: 328P.1313P DRAWN BY: AJ

**COVER SHEET** 



2018 INTERNATIONAL BUILDING CODE

2018 INTERNATIONAL FIRE CODE

2018 INTERNATIONAL FUEL GAS CODE

2018 INTERNATIONAL MECHANICAL CODE

CLASSIFICATION OF WORK (IBC, 2018 CHAPTER 5)

**ALTERATION LEVEL 1** - ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES THAT SAVE THE SAME

ALTERATION LEVEL 2 - ALTERATIONS INCLUDE THE RECONFIGURATION OF SPACE, THE ADDITION OR ELIMINATION OF ANY DOOR OR WINDOW, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM, OR THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT.

ALTERATION LEVEL 3 - ALTERATIONS APPLY WHERE THE WORK AREA EXCEEDS 50% OF THE AGGREGATE AREA OF THE BUILDING.

# **BUILDING DESCRIPTION**

NUMBER OF FLOORS IN BUILDING:.. CONSTRUCTION TYPE:.. .. II-B

FLOOR(S) OF PROPOSED **RENOVATION:.** CURRENT OCCUPANCY:. PROPOSED OCCUPANCY:. ADJACENT OCCUPANCY (EAST):.

ADJACENT OCCUPANCY (WEST):... REQUIRED SEPARATION OF OCCUPANCY:.. YES NO

EXTERIOR STOREFRONT RENOVATION? 8. PROPOSED STRUCTURAL ALTERATIONS? 9. ENERGY CALCULATION ATTACHED?

10. TOILET FACILITIES PROVIDED? 11. EXISTING FIRE SPRINKLERS? 12. \*FIRE ALARM SYSTEM MODIFICATIONS?

SPRINKLER AND FIRE ALARM SYSTEM.

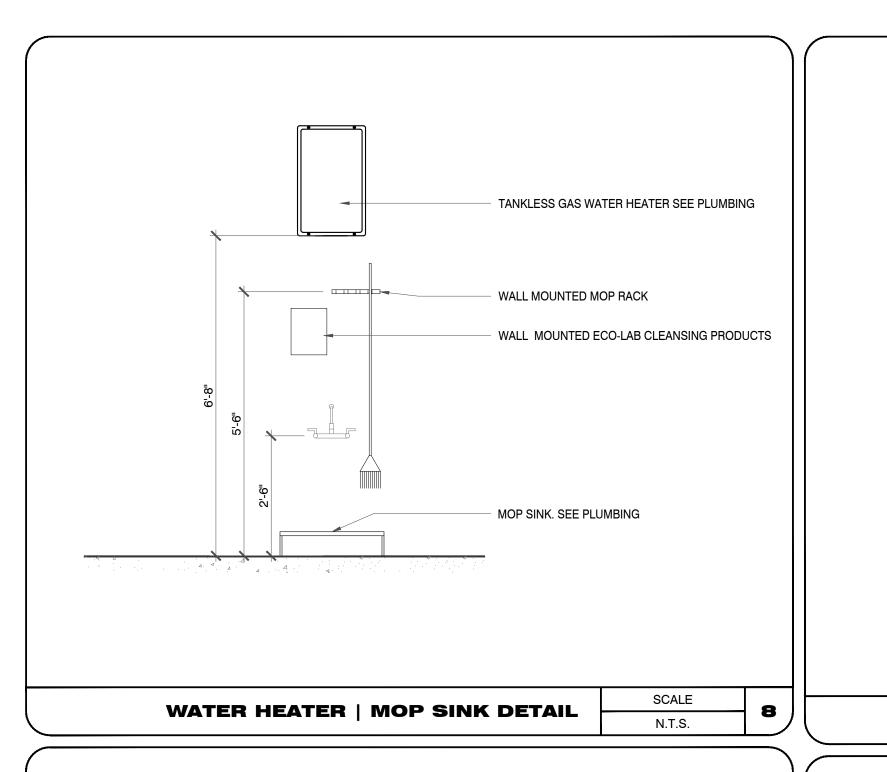
13. \*FIRE SPRINKLER SYSTEM MODIFICATIONS? \* G.C. TO PROVIDE FIRE SPRINKLER AND FIRE ALARM SHOP DRAWINGS FOR MODIFICATIONS TO FIRE

**TABLE 601, IBC 2018** 

TYPE II B CONSTRUCTION TYPE **BUILDING ELEMENT** STRUCTURAL FRAME: INCL: COLUMNS, GIRDERS, TRUSSES BEARING WALLS: **EXTERIOR** INTERIOR NONBEARING WALLS AND PARTITIONS: NONBEARING WALLS AND PARTITIONS: FLOOR CONSTRUCTION: INCL.: SUPPORTING BEAMS, JOISTS ROOF CONSTRUCTION: INCL.: SUPPORTING BEAMS, JOISTS

FIRE RESISTANCE RATING

c. IN ALL OCCUPANCIES, HEAVY TIMBER COMPLYING WITH SECTION 2304.11 SHALL BE ALLOWED WHERE A 1-HOUR OR LESS FIRE RATING IS REQUIRED.



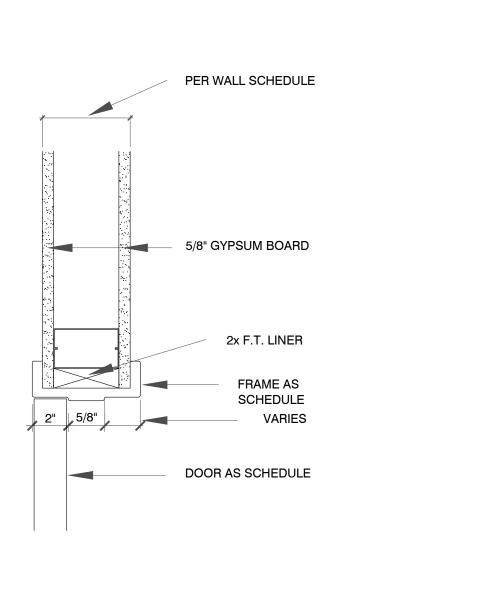
NOTE: SEE FINISH DRAWINGS FOR COVE HEIGHTS.

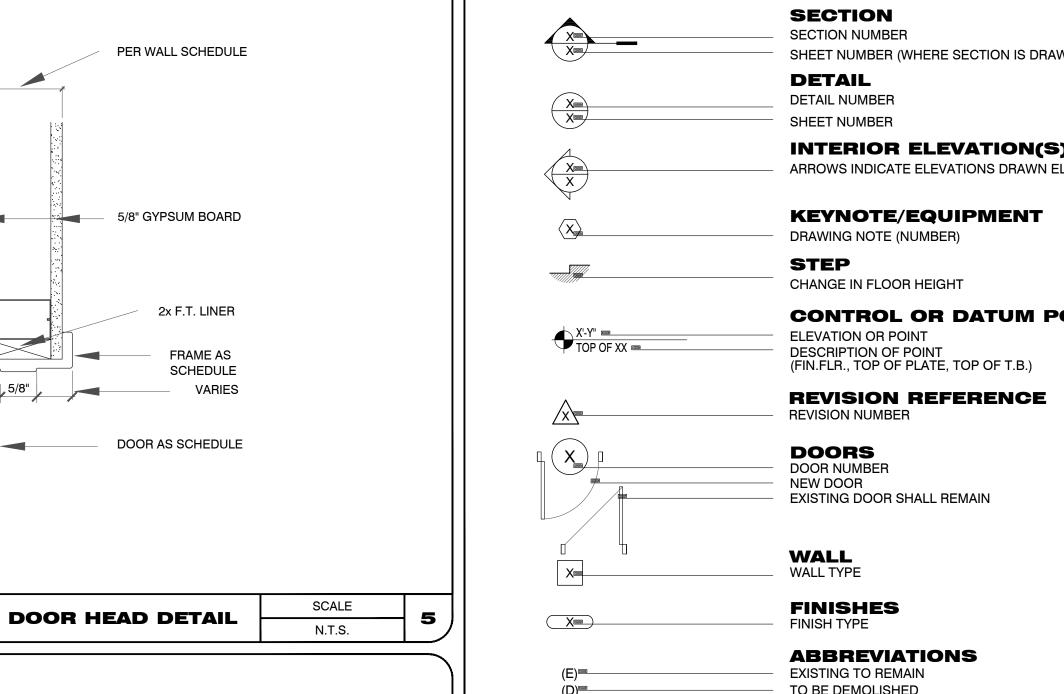
**DOOR JAMB DETAIL** 

**COVE BASE REQUIREMENTS DETAIL** 

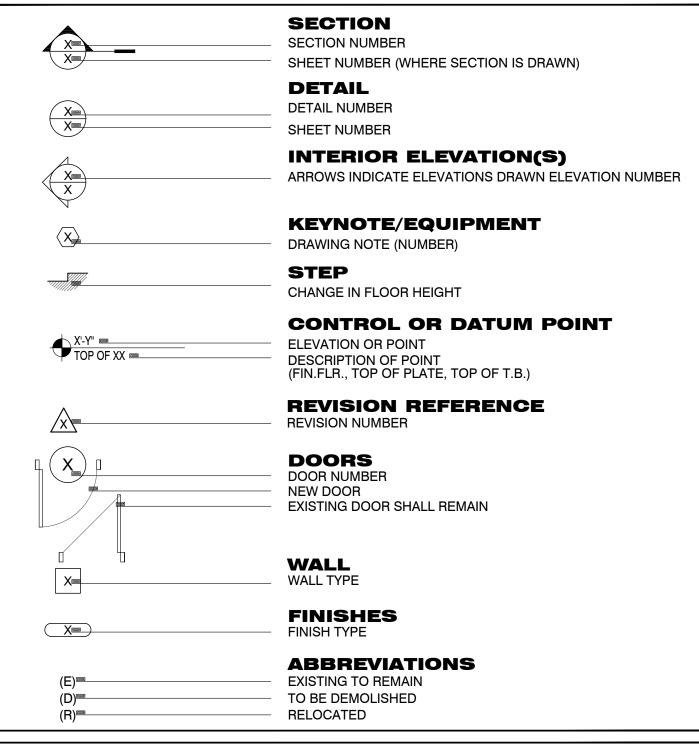
EPOXY FLOORING

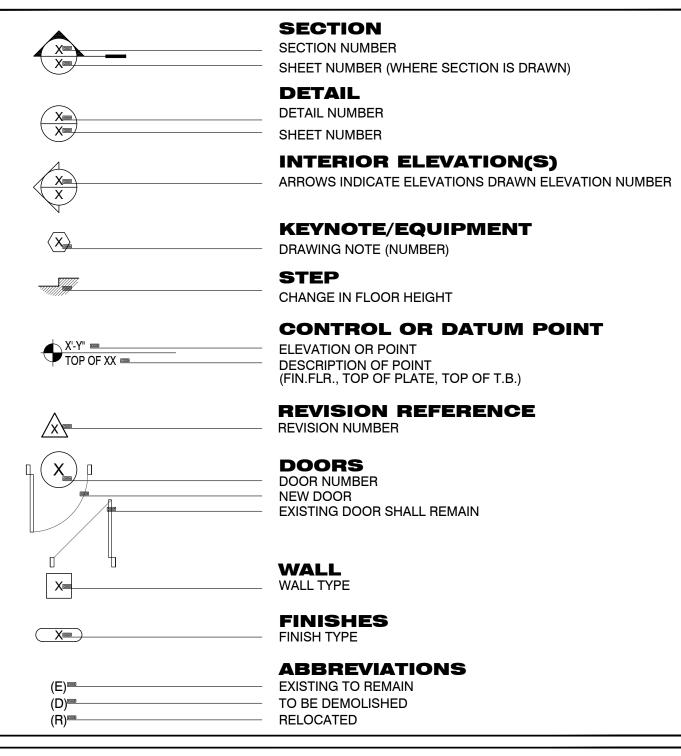
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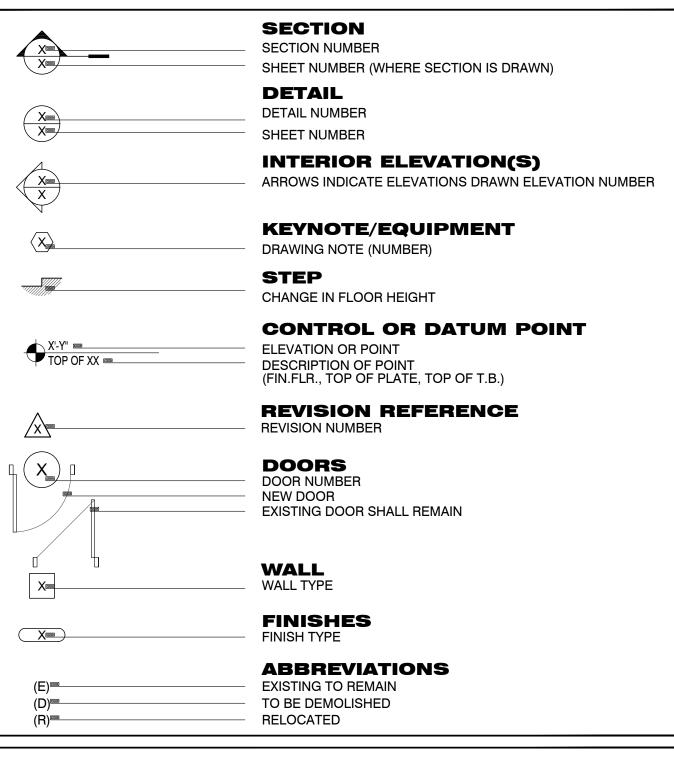


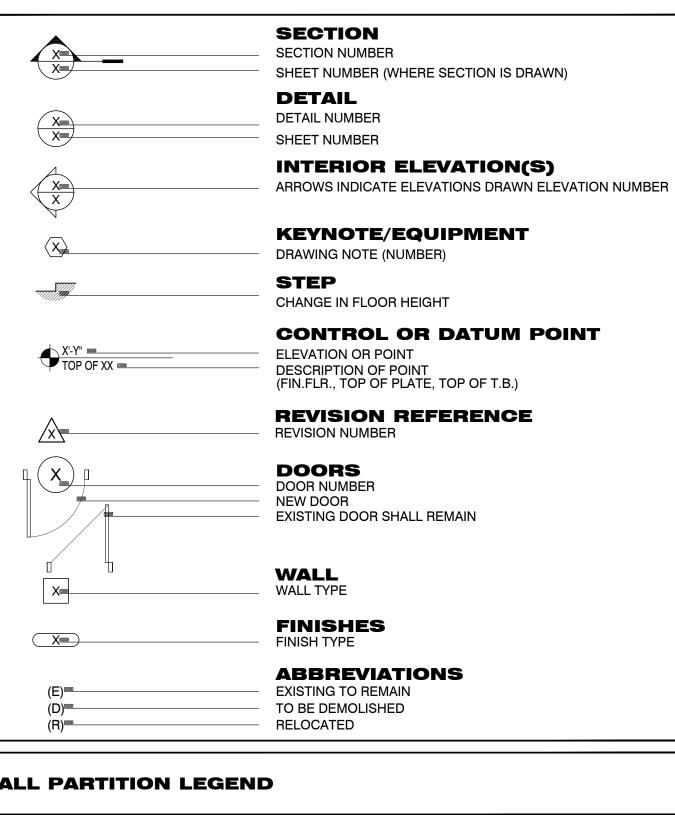


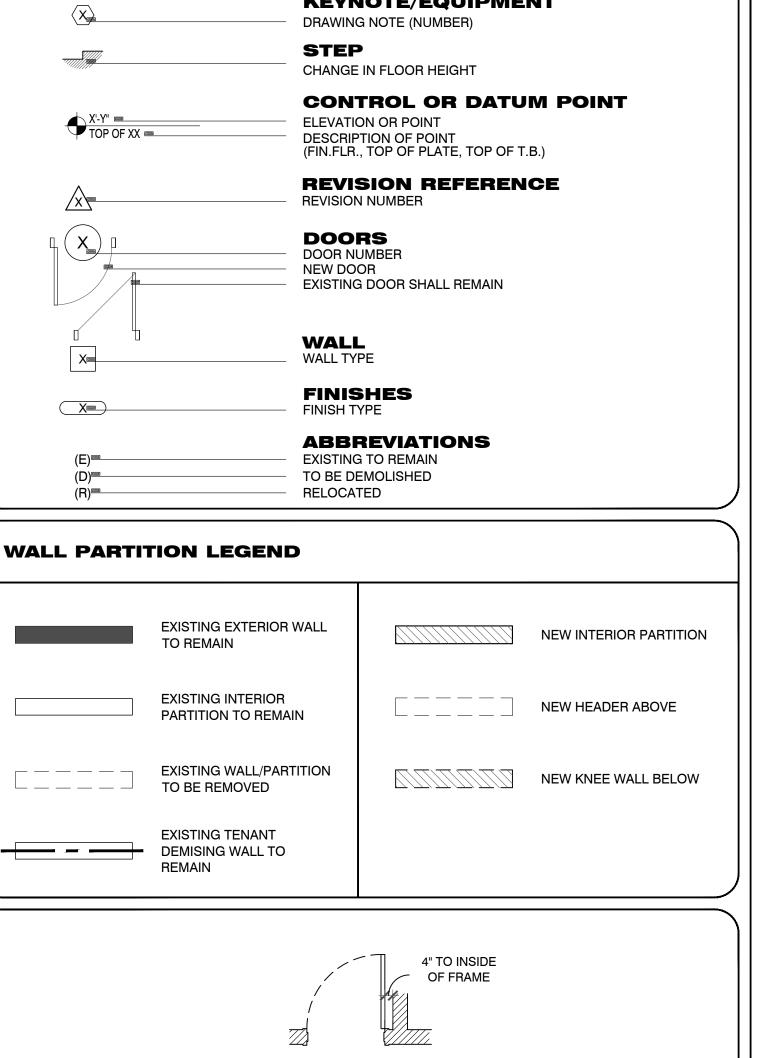
**ARCHITECTURAL SYMBOLS** 

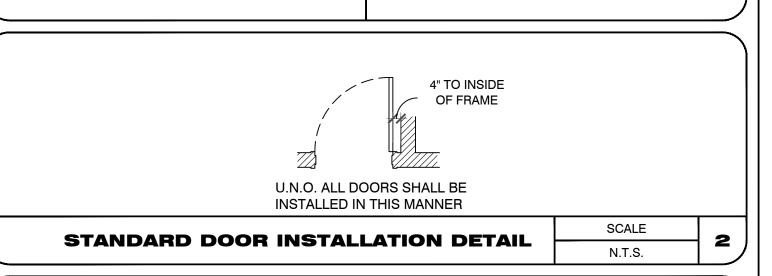


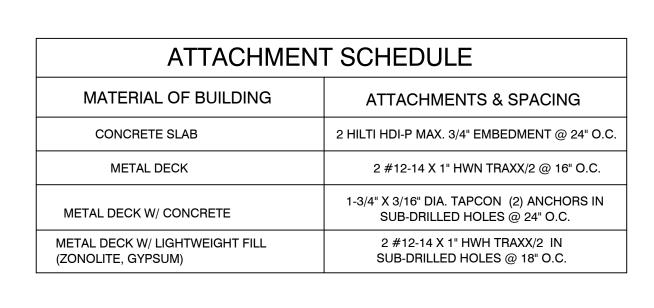


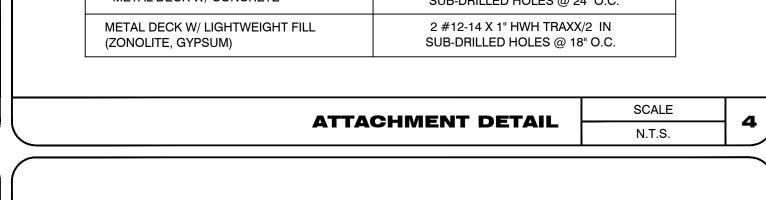










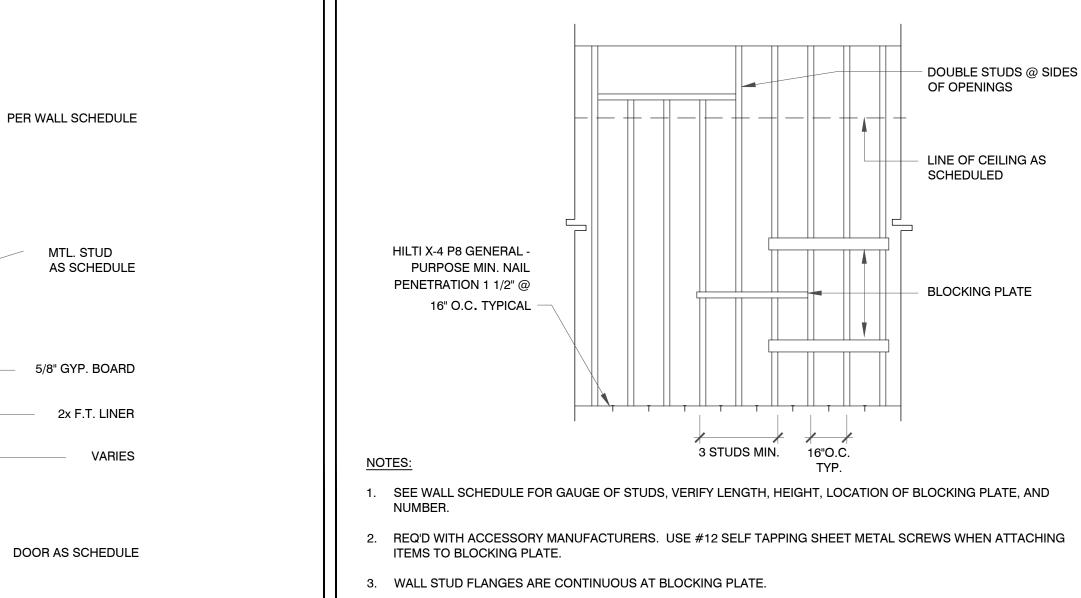


TYPICAL PARTITION

**DETAIL & ACCESSORY CONDITIONS** 

SCALE

N.T.S.



(E) STRUCTURE ABOVE

24" O.C.

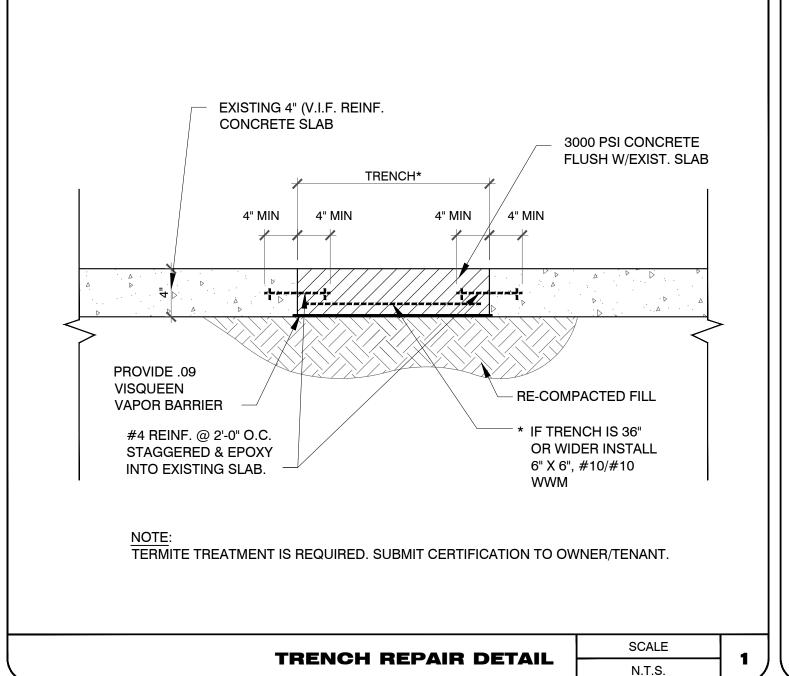
CERAMIC TILE

N.T.S.

N.T.S.

METAL STUD DIAGONALLY BRACED AT -

3" X 3" X 1'-0" L. 20 GA. METAL CLIP -





- THESE **PLANS** AND **SPECIFICATIONS**, AS INSTRUMENTS OF SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF **THE ARCHITECT**. THEY ARE NOT TO BE REPRODUCED IN PART OR WHOLE OR USED ON ANY OTHER PROJECTS EXCEPT BY AGREEMENT IN WRITING WITH AND AFTER APPROPRIATE COMPENSATION TO THE ARCHITECT.
- CONSTRUCTION SHALL FOLLOW THE LOCAL GOVERNING CODE, APPLICABLE EDITION, AS ADOPTED BY THE GOVERNING AUTHORITIES, AND ALL APPLICABLE AMENDMENTS. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR BUILDING THIS PROJECT IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND STATE AND LOCAL CODES, UNLESS WRITTEN NOTIFICATION IS RECEIVED.
- THE ARCHITECT DOES NOT GUARANTEE THE PERFORMANCE OF THE PROJECT IN ANY RESPECT OTHER THAN THE ARCHITECTURAL WORK PERFORMED WHICH MEETS THE STANDARDS OF PROFESSIONAL CARE.
- 4. THE CONTRACTOR SHALL VISIT THE SITE, BEFORE SUBMITTING PROPOSALS.
- 5. THE CONTRACTOR SHALL COORDINATE ALL THE WORK OF ALL THE TRADES.

SPECIFICALLY ADDRESSED IN THE PLANS AND NOTES.

- 6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO STARTING ANY WORK AND NOTIFY THE ARCHITECT IN WRITING IMMEDIATELY OF ANY ERRORS OR OMISSIONS OR THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR THE ERRORS AND OMISSIONS. DO NOT SCALE THE
- THESE PLANS, AS DRAWN AND NOTED, COMPLY WITH THE BUILDING ENVELOPE ENERGY REQUIREMENTS OF THE GOVERNING BUILDING CODE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE GOVERNING CODE IN THEIR ENTIRETIES AND BUILD IN ACCORDANCE WITH ALL PROVISIONS OF THESE CODES WHICH MAY NOT BE
- 3. THE CONTRACTOR WILL NOT SUBSTITUTE ITEMS WHICH THEY BELIEVE TO BE EQUAL OR BETTER THAN ITEMS SPECIFIED ON THESE DRAWINGS WITHOUT PRIOR NOTICE. ITEMS WHICH, WHEN SUBSTITUTED, REQUIRE APPROVED OF THE BUILDING OFFICIAL WILL BE SUBMITTED TO THE BUILDING OFFICIAL, THE TENANT, AND THE
- 9. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE BRACING, STRUCTURAL, AND NON-STRUCTURAL MEMBERS
- DURING CONSTRUCTION. 10. ALL FRAME WALLS SHALL BE CONSTRUCTED WITH ANCHORS, TOP AND BOTTOM OF EACH STUD, PER CODE.
- 11. ALL WORK SHALL BE ERECTED AND INSTALLED PLUMB, LEVEL, SQUARE AND TRUE, AND IN PROPER ALIGNMENT.
- 12. ANY ITEM SCHEDULED TO BE REUSED MUST BE REFURBISHED AND MAINTAINED TO A "LIKE NEW" CONDITION. NO EXCEPTIONS.
- 13. ALL FLOOR PENETRATIONS MUST BE SEALED WITH A 2 HOUR RATING.
- 14. ALL PENETRATIONS INTO OR THROUGH FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS, AND FIRE PENETRATIONS SHALL COMPLY WITH APPLICABLE BUILDING CODES.

## **PERMIT NOTES**

- 1. ALTERATION OF THE AUTOMATIC FIRE SPRINKLER SYSTEM IS REQUIRED, UNDER SEPARATE PERMIT.
- 2. ALTERATION OF THE FIRE ALARM SYSTEM IS REQUIRED, UNDER SEPARATE PERMIT.

## FLOOR PLAN NOTES

- . ALL DIMENSIONS MARKED 'CLEAR' OR 'CLR' SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL WALL FINISHES, UNLESS OTHERWISE NOTED.
- 2. ALL CONCEALED LUMBER AND BLOCKING TO BE FIRE TREATED. SILL COVER TO SUPPORT MINIMUM LIVE LOAD OF 300 LBS.
- 3. ALL WOOD NOT CALLED OUT SHALL BE PRESSURE-TREATED FIRE RATED OR FIRE RETARDANT TREATED WOOD.

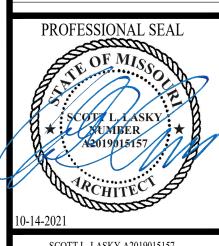
- ALL CONCRETE SHALL HAVE SAND AND GRAVEL AGGREGATE, TYPE I PORTLAND CEMENT, AND SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- 2. MINIMUM CEMENT RATIO TO BE: 6 SACKS PER CUBIC. MAXIMUM WATER CEMENT RATIO TO BE 0.50.
- 3. ALL CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
- 4. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185.
- 5. DETAILING, FABRICATION AND PLACING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN
- ACCORDANCE WITH ACI SP-66, LATEST EDITION. 6. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATION OF THE LATEST EDITIONS OF THE AMERICAN CONCRETE INSTITUTE ACI 318, ACI 301, ACI 309,

- ALL EXPOSED CABINET ENDS SHALL HAVE FINISH PANELS. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF ALL CABINET FILLERS, FALSE PANELS, MISC. COMPONENTS FOR CABINETRY AND MILLWORK & COUNTER TOP PENETRATIONS REQUIRED BY EQUIPMENT
- ALL COUNTERTOP / WALL INTERSECTIONS SHALL HAVE A 4" HIGH BACKSPLASH. UNLESS NOTED OTHERWISE.
- ALL MILLWORK TO BE FASTENED TO THE PARTITION THEY ADJOIN. PROVIDE BLOCKING FOR ALL MILLWORK NOT SUPPORTED BY SLABS.

# FINISH PLAN NOTES

- ALL INTERIOR WALLS SHALL BE FINISHED PER SCHEDULE. IF NO INDICATION PROVIDED, THE SURFACE SHALL BE PAINTED WITH A PAINT SPECIFICATION BEING USED PREDOMINANTLY ON THIS PROJECT.
- 2. ALL INTERIOR PARTITIONS SHALL RECEIVE ONE PRIMER & TWO FINISH COATS.
- . ALL HORIZONTAL GYPSUM BOARD SURFACES SHALL BE PRIMED WITH TINTED PRIMER TO COINCIDE WITH FINSH PAINT COLOR. ALL LEFT OVER PAINT SHALL BE CLEARLY LABELED AND APPROPRIATELY PACKAGED. CONTRACTOR SHALL DELIVER ALL LEFTOVER PAINT AND FINISH MATERIALS TO TENANT FOR STORAGE.
- 4. FLOOR FINISHES ON BOTH SIDES OF A DOOR SHALL BE LEVEL FOR A DISTANCE EQUAL TO 5' TO EITHER SIDE OF
- 5. CENTER FLOOR TILES IN ROOM UNLESS NOTED OTHERWISE.
- 6. CENTER ACOUSTIC CEILING TILES TO ROOM UNLESS NOTED OTHERWISE

- TRIM THE BOTTOM OF DOORS TO CLEAR THE TOP OF ALL FINISHED FLOORS. AS APPLICABLE BY 1/4" MAXIMUM, UNLESS OTHERWISE NOTED.
- 2. VERIFY SLAB CONDITIONS, TRIM EACH DOOR TO FIT CONDITIONS.
  3. WHERE RADICAL VARIATIONS IN FLOOR ELEVATION EXIST, DOORS SHALL BE ORDERED WITH BOTTOM STILE SIZED TO ACCOMMODATE THESE UNDERCUT CONDITIONS.



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PROJECT

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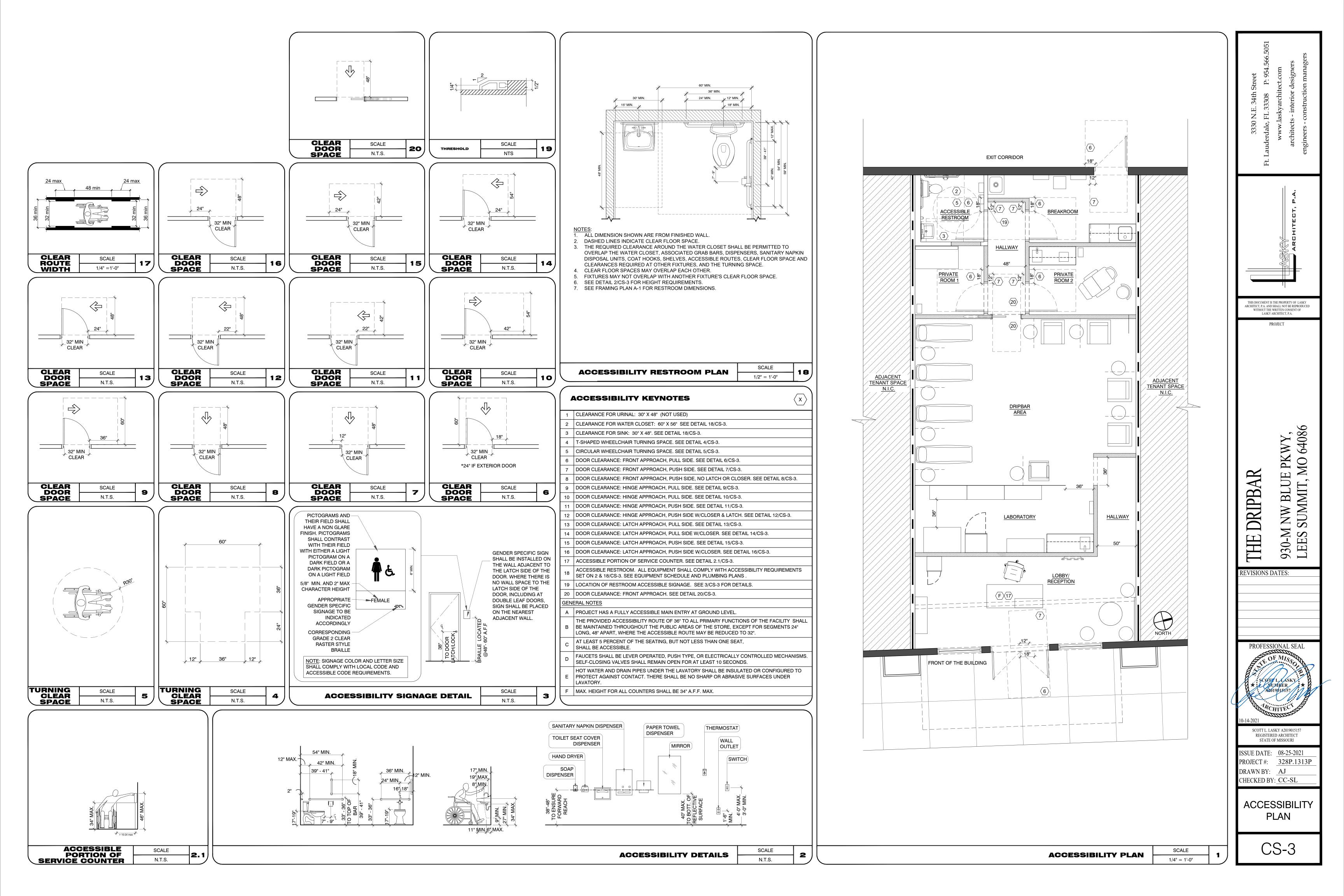
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SCOTT L. LASKY A2019015153 REGISTERED ARCHITECT STATE OF MISSOURI

ISSUE DATE: 08-25-2021 PROJECT #: 328P.1313P DRAWN BY: AJ CHECKED BY: CC-SL

> **GENERAL NOTES**

ACI 305 AND ACI 306. MAXIMUM FALL FOR CONCRETE SHALL BE 3'-0". ALL CONCRETE SHALL BE CONSOLIDATED BY VIBRATION, SPADING OR RODDING, SO THAT THE CONCRETE IS THOROUGHLY WORKED AROUND THE REINFORCEMENT, EMBEDDED ITEMS, AND INTO CORNERS OF FORMS, ELIMINATING ALL AIR OR STONE POCKETS WHICH MIGHT CAUSE HONEYCOMBING. CARE SHALL BE TAKEN NOT TO OVER VIBRATE AND CAUSE SEGREGATION. IPB METAL STUDS / DRYWALL 1. GYPSUM BOARD JOINTS SHALL BE STAGGERED AS REQUIRED BY GOVERNING BUILDING CODES. 2. PROVIDE WATER RESISTANT GYPSUM BOARDS AROUND RESTROOM FIXTURES. 3. ALL BACKING/BLOCKING SHALL CONSIST OF 16 GAUGE METAL FRAMING AND/OR 2" X F.T. LUMBER. 4. ALL DIMENSIONS ARE FROM FACE OF GYPSUM WALL BOARD, UNLESS NOTED OTHERWISE. 5. ALL EXPOSED GYPSUM BOARD EDGES TO HAVE METAL EDGE TRIM, UNLESS OTHERWISE NOTED.



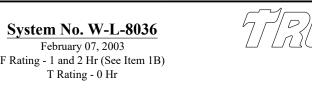
System No. W-L-1158 F Ratings - 1 and 2 Hr (See Item 1) T Rating - 0 Hr



Sealant/Weatherproofing Divisior 2628 Pearl Rd. Medina, OH 44256 Toll Free: 866-209-7055 www.tremcofirestop.com



Fire Protection Systems Group 2628 Pearl Rd. Medina, OH 44256 Toll Free: 866-209-7055 www.tremcofirestop.com Drawing Not to Sca



Section A-A

. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the

B. Gypsum Board\* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet

2. Through Penetrant - A max of two pipes or tubing to be installed within the opening. Of the two pipes, or tubing, only one of the pipes or tubing shall

3. Tube Insulation - Plastics+ - Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The

tube insulation may be installed on a max of one pipe or tubing. The annular space between penetrating item and periphery of opening shall be min 1/2 into

See Plastics+ (QMFZ2) category in the Recognized Component Directory for names for manufacturers. Any Recognized Component tube insulation material

4. Cables - One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials. Cable to be spaced a min 0

in. (point contact) to max 1/2 in. from the other penetrants. The space between the cable and the periphery of the opening shall be a min 0 in. (point contact) to

5. Fill, Void or Cavity Material\* - Sealant - Min 1/2 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Additional fill

material to be to be forced into intersties within groups of penetrating items to max extent possible and installed such that a min 1/4 in. thick crown is formed

have a nom diam greater than 1/2 in. The annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1/2 in.

orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3-1/2 in.

Pipes or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. O.C. with nom

individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

2 by 4 in. lumber end plates and cross braces. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. O.C.

meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

A. Steel Pipe - Nom 1 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

D. Copper Pipe - Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.

max 3/4 in. The space between pipes or tubing shall be 0 in. (point contact)

max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

TREMCO INC - TREMstop Intumescent Acrylic +Bearing the UL Recognized Component Mark

\*Bearing the UL Classification Mark

Reproduced courtesy of Underwriters Laboratories, Inc.

See UL Fire Resistance Directory for additional information

C. Copper Tubing - Nom 1 in. diam (or smaller) Type L (or heavier) copper tubing.

around the penetrating items and lapping 1/4 in. beyond the periphery of the opening.

B. Iron Pipe - Nom 1 in. diam (or smaller) cast or ductile iron pipe.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

www.tremcofirestop.com

Sealants & Waterproofing Division ntegrated Technical Solutions Dept 735 Green Rd., Beachwood, OH 44122 Toll Free: 866-209-7055

System No. BW-S-0006 March 12, 2004 Assembly Ratings - 1 and 2 Hr (See Item 2) Joint Width - 1 In. (25 mm) Max

. Floor Assembly - Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100 -150 pcf (1600-2400 kg/cu meter)) structural concrete. Floor

2. Wall Assembly - The 1 or 2 h fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the

A. Steel Floor Runner - Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B).

B. Studs - Steel studs to be min 2-1/2 in. (64 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in,

C. Gypsum Board\* - Gypsum board installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall for a 1 or 2 hr rated wall,

3. Joint System - Max separation between top of floor and bottom of gypsum board is 1 in. (25 mm). The joint system consists of a packing material and

A. Packing Material - (Optional, Not Shown) - Foam backer rod firmly packed into the gap between the bottom of the gypsum board and the top of the

B. Fill, Void or Cavity Material\*-Sealant - Min 1/2 in. (13 mm) thickness of fill material installed on each side of the wall between the bottom of the

System No. HW-D-0256

Assembly Ratings - 1 and 2 hr (See Items 2 and 3

Class II and III movement capabilities - 25 % compression or

extension (See Item 2)

C. Gypsum Board\* - Gypsum board sheets installed to a min total thickness of 5/8 in. and 1-1/4 in. on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that the gypsum board

is cut to follow the contour of the steel floor units or roof deck with a nom 1/2 in. gap maintained between the gypsum board and the steel floor units or roof

The hourly fire rating of the joint system is dependent on the hourly rating of the wall assembly in which it is installed. The movement capability of

3. Joint System - Max separation between bottom of steel floor units or roof deck and top of wall is 1/2 in. The joint system is designed to accommodate a

top of the ceiling runner and bottom of the steel floor units or roof deck. Mineral wool cut into strips having a width equal to ceiling runner and length

A. Forming Material\* - (Optional) - (Not shown) - Nom 3 in. thick, min 4 pcf density mineral wool batt insulation cut into strips to fill the gap between the

B. Forming Material - (Optional) - (Not shown) - In 2 Hr fire rated wall assemblies, foam backer rod friction fit into joint opening and recessed a min 5/8 in.

C. Fill, Void or Cavity Material\* - Sealant - Min 5/8 in. thickness of fill material applied within joint opening on both sides of wall, flush with each surface

of gypsum board. For 1 hr systems or in 2 hr systems where forming material (Item 3B) is not used, optional bond breaker tape may be applied to ceiling

the joint system is Class II and III except that when the vertical deflection clip (Item 2A3) is used, the movement capability is Class II only.

deck. In addition, the top row of screws shall be installed into the steel studs 1/2 to 1 in. below the bottom edge of the ceiling runner flange.

max 25 percent compression or extension from its installed width. The joint system consists of the following:

approximately 2-1/2 in. longer than flute bottom length, then compressed into flute cavity.

Nominal Joint Width - 1/2 in.

respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 1 in. (25

individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint

system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction

Floor runners to be provided with min 1-1/4 in. (32 mm) flanges. Runners secured with steel fasteners spaced 12 in. (305 mm) OC.

may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units\*.

resting on and fastened to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. (610 mm) OC.

concrete floor and recessed from each surface of the wall to accommodate the required thickness of fill material.

TREMCO INC - TREMstop Acrylic, TREMstop Intumescent Acrylic (IA) or TREMstop Silicone (Fyre-Sil)

mm) gap shall be maintained between the bottom of the gypsum board and the top of the concrete floor.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

gypsum board and the top of the concrete floor, flush with each surface of the wall.

a fill material, as follows:

Bearing the UL Classification Mark

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ee UL Fire Resistance Directory for additional information

Fire Protection Systems Group

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2628 Pearl Rd. Medina, OH 44256

from each surface of wall.

runner on each side of wall. TREMCO INC - TREMstop Acrylic

\*Bearing the UL Classification Mark

See Precast Concrete Units category in the Fire Resistance Directory for names of manufactures.



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PROJECT

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**UL LISTINGS** 

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Page 2 of 2

L Rating at Ambient - Less Than 1 CFM/sq ft

1. Wall Assembly - The 1 or 2 hour fire-rated gypsum board stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. B. Gypsum Board\* - One or two layers of nom 1/2 or 5/8 in. (13 or 16 mm) thick gypsum board as specified in the individual Wall and Partition Design.

t uncoil against the circular cutouts in the gypsum board layers. 2. Through Penetrants - One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. Pipe, tubing or conduit to be rigidly supported on both sides of wall assembly. The pipe, tubing or conduit may be installed at an angle not greater than 45 degrees from the

A. Steel Pipe - Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

D. Copper Tubing - Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

A. Packing Material - (Optional) - Foam backer rod firmly packed into the opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material\* - (Caulk) Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. When annular space exceeds 1/2 in. (13 mm), the min thickness of fill material is 5/8 in. (16 mm). Additional fill material to be installed such that a min 3/8 in. (10 mm) crown is applied at the pipe/wall interface at the point contact location.

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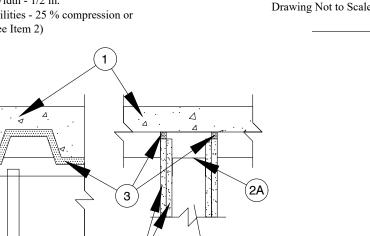
Wall Opening Protective Materials (CLIV) CLIV R.13432

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System No. HW-D-0256 July 22, 2005 Assembly Ratings - 1 and 2 hr (See Items 2 and 3) Nominal Joint Width - 1/2 in. Class II and III movement capabilities - 25 % compression or extension (See Item 2)



SECTION A-A

Floor Assembly - The fire rated fluted steel deck / concrete floor assembly shall be constructed of the materials and in the manner described in the ndividual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features A. Steel Floor And Form Units\* - Max 3 in. deep galv steel fluted floor units.

B. Concrete - Min 2-1/2 in. thick reinforced lightweight or normal weight concrete, as measured from the top plane of the floor units. 1A. Roof Assembly - (Not Shown) - As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following

B. Roof Insulation - Min 2-1/4 in. thick poured insulating concrete, as measured from the top plane of the roof deck. 2. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 and V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features: A. Steel Floor And Ceiling Runners - Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs.

with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner is secured to bottom of steel floor units or roof deck with steel fasteners

A2. Light Gauge Framing\* - Vertical Deflection Ceiling Runner - As an alternate to the ceiling runners in Items 2A and 2A1, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips provided with step bushings for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner secured to bottom of steel floor units

A3. Light Gauge Framing\* -Vertical Deflection Clip - (Optional) Steel clips can be used in conjunction with steel studs (Item 2B) or ceiling runner (Item 2A). Clips installed over the top of studs and inserted within the ceiling runner. Clip shall be secured to the ceiling runner with No. 8 self drilling, self tapping steel fasteners through holes provided within the clip. Clip may be secured to the stud with No. 6 pan head steel screw through holes provided within the clip. As an alternate, the legs of the clip may be installed over the top of the stud without attachment in accordance with manufacturer's installation instructions. FLEX-ABILITY CONCEPTS L L C - Three Legged Dog Deflection Clip

See UL Fire Resistance Directory for additional information.

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Max diam of opening is 15-1/8 in. (384 mm). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. A. Steel Sleeve - (Optional. Not shown.) Cylindrical sleeve fabricated from min 0.013 in. (0.330 mm) thick (No. 30 gauge) to max 0.056 in. (1.42 mm) (No. 6 gauge) galv steel sheet and having a min 1 in. (25 mm) lap along the longitudinal seam. Ends of sleeve to be trimmed flush with both surfaces of wall. Sleeve to be installed by coiling the sheet metal to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let

perpendicular. The annular space shall be min 0 (point contact) in. to max 1-7/8 in. (48 mm). The following types and sizes of metallic pipe tubing or conduit

B. Iron Pipe - Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe. C. Conduit - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) steel conduit.

E. Copper Pipe - Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe. 3. **Firestop System -** The firestop system shall consist of the following:

TREMCO INC - TREMstop Intumescent Acrylic

\*Bearing the UL Classification Mark

emco Incorporated ealant/Weatherproofing Division

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Front View

**TREMstop MP - Metallic Outlet Boxes** (Shown above, left detail)

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**Wall Opening Protective Materials (CLIV)** CLIV R.13432

Side View

Type TREMstop MP moldable putty pads for use with max 4-11/16 by 4-11/16 in. flush device UL Listed Metallic Outlet Boxes installed with steel cover

specified in the individual U400 and V400 Series Wall and Partition Designs in the Fire Resistance Directory. Min 0.2 in. thick moldable putty pads are to be

installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) and completely seal against the stud

and gypsum board within the stud cavity. An additional 3/4 in. ball of putty pad material used to plug the end of each electrical metallic tube or conduit at its

plates in 2 hr fire rated gypsum board wall assemblies framed with min 3-1/2 in. deep steel studs and constructed of the materials and in the manner

Front View

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See UL Fire Resistance Directory for additional information

in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

to be rigidly supported on both sides of wall assembly. The following types of tubing may be used:

caulk applied to the tubing/gypsum interface at the point contact location on both sides of wall.

the individual Wall and Partition Design. Max diam of opening is 5 in. (127 mm).

TREMCO INC - TREMstop Intumescent Acrylic

\*Bearing the UL Classification Mark

F Ratings - 1 and 2 Hrs. for TREMstop MP; 2 Hrs. for TREMstop Electrical Bo

System No. W-L-2463

F Ratings - 1 and 2 Hr (See Item 1)

T Ratings - 1 and 2 Hr (See Item 1)

. Wall Assembly - The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the

The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16

B. **Gypsum Board\*** - 5/8 in. (16 mm) thick, 4 ft (1.22 m) wide with square or tapered edges. Thickness, type, number of layers and fasteners as required in

opening, tightly bundled. The annular space between bundle of tubes and periphery of opening shall be min 0 in. (point contact) to max 1 in. (25 mm). Tubing

A. Crosslinked Polyethylene (PEX) Tubing - Nom 1 in. (25 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems

3. Fill, Void or Cavity Materials\* - Caulk - Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with each surface of wall. Min 5/8

in. (16 mm) thickness of fill material applied into interstices of tubes to maximum extent possible, on both sides of wall. Min 1/2 in. (13 mm) diam bead of

2. Through Penetrant - Multiple nonmetallic tubing for use in closed (process or supply) piping systems. Max 4 in. (102 mm) diam bundle of tubes in

Type TREMstop MP moldable putty pads for use with max 4 by 3-3/4 by 3 in. deep UL Listed Nonmetallic Outlet Boxes manufactured by Carlon Electrical Products, made of PVC and bearing a 2 hr rating under the "Outlet Boxes and Fittings Classified for Fire Resistance category in the Fire Resistance Directory. Boxes installed with steel cover plates, for use in 1 hr rated gypsum board wall assemblies framed with min 3-1/2 in. wide wood studs and constructed as specified in the individual U300 Series Wall and Partition Designs in the Fire Resistance Directory. Min 0.2 in. thick moldable putty pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) including nailing tabs and completely seal against and lap min 1/2 in. onto the stud, gypsum board and nonmetallic sheathed cable at its connection to the box. The putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer. When moldable putty pad outlet box protective material is used on boxes on both sides of wall as directed, the horizontal separation between boxes on

Type TREMstop MP moldable putty pads for use with max 4 by 3-3/4 by 3 in. deep UL Listed Nonmetallic Outlet Boxes manufactured by Carlon Directory. Boxes installed with **plastic cover plates**, for use in 2 hr rated gypsum board wall assemblies framed with min 3-1/2 in. wide wood studs and constructed as specified in the individual U300 Series Wall and Partition Designs in the Fire Resistance Directory. Min 0.2 in. thick moldable putty pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) including nailing tabs and completely seal against and lap min 1/2 in. onto the stud, gypsum board and nonmetallic sheathed cable at its connection to the box. The putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer. When moldable putty pad outlet box protective material is used on boxes on both sides of wall as directed, the horizontal separation between boxes on

TREMstop Electrical Box Inserts (Shown above, right detail) **TREMstop Electrical Box Inserts**, for use with max 4-11/16 by 4-11/16 by 2-1/8 in. flush device UL Listed Metallic Outlet Boxes without internal clamps installed with steel extension rings and steel cover plates in 2 h fire rated gypsum board wall assemblies framed with min 3-5/8 in. deep steel studs and constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Designs in the Fire Resistance Directory. One 4-1/2 by 4-1/2 in. insert adhered to the interior back wall of the outlet box in accordance with the instructions supplied with the product. Installation to comply with the National Electrical Code (NFPA 70). When protective material is used within outlet boxes on both sides of the wall as directed, the horizonta separation between outlet boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back-to-back.

Side View

Front View

2628 Pearl Rd. Medina, OH 44256

TREMstop MP - Non-metallic Outlet Boxes (Shown above, center detail) opposite sides of the wall may be less than 24 in, provided that the boxes are not installed back to back.

Electrical Products, made of PVC and bearing a 2 hr rating under the "Outlet Boxes and Fittings Classified for Fire Resistance category in the Fire Resistance opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back to back.

For additional information on the use and installation of TREMstop Putty Pads and TREMstop Electrical Box Inserts, please see the Introduction to the Wall

or by welds spaced max 24 in. OC. SLIPTRACK SYSTEMS INC - SLP-TRK

or roof deck with steel fasteners or by welds spaced max 24 in. OC. THE STEEL NETWORK INC - VertiTrack VTD250, VTD358, VTD400, VTD600 and VTD800

B. Studs - Steel studs to be min 3-5/8 in. wide. Studs cut 1/2 in. to 3/4 in. less in length than assembly height with the bottom nesting in and resting on floor runner and with the top nesting in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through the bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. OC.

Page 1 of 2

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specified in the individual U400 and V400 Series Wall and Partition Designs in the Fire Resistance Directory. Min 0.2 in. thick moldable putty pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) and completely seal against and lap min 1/2 in. onto the stud and gypsum board within the stud cavity. An additional 3/4 in. ball of putty pad material used to plug the end of each electrical metallic tube or conduit at its connection to the box. The putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer. When moldable putty pad outlet box protective material is used on boxes on both sides of wall as directed, the horizontal separation between boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back to back. Type TREMSTOP MP moldable putty pads for use with max 14-1/4 by 4-1/2 by 2-1/2 in. flush device UL Listed Metallic Outlet Boxes installed with steel cover plates in 2 hr fire rated gypsum board wall assemblies framed with min 3-1/2 in. deep steel studs and constructed of the materials and in the manner specified in the individual U400 and V400 Series Wall and Partition Designs in the Fire Resistance Directory. Min 0.2 in. thick moldable putty pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) and completely seal against and lap min 1/2 in. onto the stud and gypsum board within the stud cavity. An additional 3/4 in. ball of putty pad material used to plug the end of each electrical metallic tube or conduit at its connection to the box. The putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer. When moldable putty pad outlet box protective material is used on boxes on both sides of wall as directed, the horizontal separation between boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back to back.

Page 1 of 2

See UL Fire Resistance Directory for additional information

connection to the box. The putty pads may be installed with the release liner intact on the outside of the pad with the exception of any overlaps, in which case the liner is to be removed from the bottom layer. When moldable putty pad outlet box protective material is used on boxes on both sides of wall as directed, Opening and Protective Materials (CLIV) Category in the UL Fire Resistance Directory. the horizontal separation between boxes on opposite sides of the wall may be less than 24 in. provided that the boxes are not installed back to back. Type TREMSTOP MP moldable putty pads for use with max 4 by 4 by 2-1/8 in. flush device UL Listed Metallic Outlet Boxes installed with steel or plastic cover plates in 2 hr fire rated gypsum board wall assemblies framed with min 3-1/2 in. deep steel studs and constructed of the materials and in the manner

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A. Steel Roof Deck - Max 3 in. deep galv steel fluted roof deck.

Ceiling runner to be provided with min 1-1/4 in. flanges. Ceiling runner secured to steel floor units or roof deck with steel fasteners or welds spaced max 12 in. A1. Light Gauge Framing\* - Slotted Ceiling Runner - As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel

See UL Fire Resistance Directory for additional information

CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE MOST CURRENT VERSION OF ALL LISTED UL SPECIFICATIONS.

SCOTT L. LASKY A201901515 REGISTERED ARCHITECT STATE OF MISSOURI SSUE DATE: 08-25-2021 PROJECT #: 328P.1313P

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2I. Framing Members\* - Steel Studs — (As an alternate to Item 2, For use with Items 5C or 5L) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ½ in. gap between the end of the stud and track at the bottom of the vall. For direct attachment of gypsum board only. TELLING INDUSTRIES L L C — Viper25™

BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

2F. Framing Members\* - Steel Studs - Not shown - In lieu of Item 2 - proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.

2G. Framing Members\* - Steel Studs — Not shown - In lieu of Item 2 - proprietary channel shaped studs,

ninimum width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly heigh

DMFCWBS L L C - ProSTUD

MBA BUILDING SUPPLIES INC - ProSTUD

SOUTHEASTERN STUD & COMPONENTS INC - ProSTUD

STEEL STRUCTURAL SYSTEMS L L C - Tri-S ProSTUD

SUPER STUD BUILDING PRODUCTS — The Edge

STUDCO BUILDING SYSTEMS — CROCSTUD

TELLING INDUSTRIES L L C — TRUE-STUD™

assembly height.

RAM SALES L L C - Ram ProSTUD

23. Framing Members\* - Metal Studs — Not shown - In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights TELLING INDUSTRIES L L C — Viper20™

3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only.)- (Not Shown) - 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints.

Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, fastener lengths for gypsum panels ncreased by min. 1/2 in.

4. Batts and Blankets\* - (Required as indicated under Item 5) - Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies. A. Batts and Blankets\* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation earing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts** 

and Blankets (BKNV or BZJZ) Categories for names of Classified companies. Norizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not not be staggered. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows: be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need

Gypsum Board Protection on Each Side of Wall

 $\label{localization} $$ http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=BXUV.U419&ccnshorttitle=Fire+Resistance+Ratings+-+ANSI/UL+263... $$ 5/10 $$ 1/10 $$$ 1/10 $$ 1/10 $$ 1/10 $$ 1/10 $$$ 1/10 $$ 1/10 $$$$ 

BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263 one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints. 11A. Lead Batten Strips - (Not Shown, For Use With Item 5H) Lead batten strips, 2 in, wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification OO-L-201f, Grades "B, C or D". Lead batten strips equired behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. 12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) - Used in lieu of or in addition to the lead patten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead disce

tabs placed on avosum boards (Item 5B) underneath screw locations prior to the installation of the screws. ead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C 12A. Lead Discs — (Not Shown, for use with Item 5H) Max 5/16 in. diam by max 0.140 in. thick lead discs ompression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D". 13. Lead Batten Strips — (Not Shown, For Use With Item 5E) Lead batten strips, 2 in, wide, max 10 ft long

compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead

with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification OO-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations. 14. **Lead Tabs** — (Not Shown, For Use With Item 5E) 2 in. wide, 5 in. long with a max thickness of 0.142 in. abs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs

\*Bearing the UL Classification Mark Last Updated on 2014-05-14

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BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

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## Design/System/Construction/Assembly Usage Disclaimer

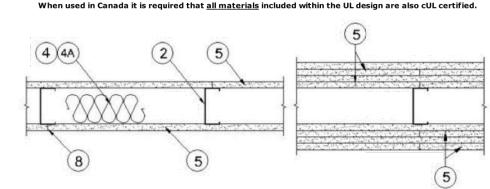
- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials. Authorities Having Jurisdiction should be consulted before construction.
- · Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide
- Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.

  Only products which bear UL's Mark are considered Certified.

# **BXUV - Fire Resistance Ratings - ANSI/UL 263**

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada See General Information for Fire-resistance Ratings - ANSI/UL 263

#### See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design No. U419



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Depth, in. Rating, Hr Items 2, 2C, 2D, 2F and 2G

1-5/8

1-5/8

1-5/8

BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO - 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX,

SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

**USG MEXICO S A DE C V** - 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members\*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth

is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board\*** – (As an alternate to Item 5) - 5/8 in. thick, 24 to 54 in. wide, applied horizontally as

5B. Gypsum Board\* - (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or ¾ in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 in. or ¾ in. may be used as alternate to all 5/8 in. or ¾ in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or ¾ in. thick lead backed

gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over stude

Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).

nd staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel stud

5C. Gypsum Board\* — (For Use With Item 2B) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum

edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom

both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered

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rack with screws spaced 8 in, OC starting 4 in, from the board edge, Fasteners shall not penetrate through

panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the

the outer layer to one side of the assembly. Secured as described in Item 6.

CGC INC - Type SHX.

UNITED STATES GYPSUM CO - Type FRX-G, SHX

RAY-BAR ENGINEERING CORP - Type RB-LBG

USG MEXICO S A DE C V — Type SHX.

Layers & Thkns of Panel

layer, 5/8 in. thick

1 layer, 1/2 in, thick

1 layer, 3/4 in. thick

2 layers, 1/2 in, thick

1 layer, 3/4 in, thick

2 lavers, 3/4 in, thick

3 layers, 5/8 in. thick

4 lavers, 5/8 in, thick

2 layers, 3/4 in. thick

Insulation (Item 4)

Nonbearing Wall Ratings -1, 2, 3 or 4 Hr (See Items 4 & 5)

1B. Framing Members\* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

1. Floor and Ceiling Runners — (Not shown) — For use with Item 2 - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. Framing Members\* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2B,

roprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper20™ Track

CALIFORNIA EXPANDED METAL PRODUCTS CO - Viper25™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

\*\*\*\*\*\*\*\*\*\*\*

PHILLIPS MFG CO L L C - Viper20™ Track

PHILLIPS MFG CO L L C - Viper25™ Track

Framing Members\*-Floor and Ceiling Runners- (Not shown) - In lieu of Item 1 - Channel shaped,attached to floor and ceiling with fasteners 24 in. OC. max. ALLSTEEL & GYPSUM PRODUCTS INC - Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

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BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263 one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire

Resistive Directory. CGC INC - Type SCX.

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UNITED STATES GYPSUM CO - Type SCX, SGX.

 ${\bf USG\ MEXICO\ S\ A\ DE\ C\ V}-{\bf Type\ SCX}.$ 

5D. **Gypsum Board\*** — (As an alternate to Item 5) - 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only. **UNITED STATES GYPSUM CO** — Type USGX.

5E. **Gypsum Board\*** — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity or opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. NEW ENGLAND LEAD BURNING CO INC, DBA NELCO - Nelco

5F. Gypsum Board\* - (As an alternate to Item 5) - For use with Items 1E and 2E and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.

UNITED STATES GYPSUM CO - 5/8 in. thick Type SCX, SGX.

5G. **Gypsum Board\*** — (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum	<b>Board Protection on Each Side of Wal</b>
Gypsum	Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC - 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

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UNITED STATES GYPSUM CO - 1/2 in. thick Type C. IP-X2. IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-

7/1/2014 BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263 **USG MEXICO S A DE C V** -1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

> 5H. Gypsum Board\* - (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both s of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Ite 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel tuds and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. ong Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secures to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and

BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

1D. Floor and Ceiling Runners — (Not shown)—For use with Item 2A- Channel shaped, fabricated from min 20

1E. Framing Members\*— Floor and Ceiling Runners— (Not shown, As an alternate to Item 1)— For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness)

1F. Framing Members\* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2F,

proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs

bricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with

1G. Framing Members\* - Floor and Ceiling Runner — For use with Item 2G, proprietary channel shaped

runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC

1H. Floor and Ceiling Runners — (Not shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.02 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1I. Framing Members\*— Floor and Ceiling Runners — (Not shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.

11. Framing Members\* - Floor and Ceiling Runner - Not shown - In lieu of Item 1 - For use with Item 21.

proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC

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I or galv steel, min depth to accommodate stud size, with min 1 in. long legs,

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.

 $\textbf{STEEL CONSTRUCTION SYSTEMS INC} - \mathsf{Type} \ \mathsf{SUPREME} \ \mathsf{Framing} \ \mathsf{System}$ 

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

SOUTHEASTERN STUD & COMPONENTS INC - ProTRAK

STEEL STRUCTURAL SYSTEMS L L C - Tri-S ProTRAK

SUPER STUD BUILDING PRODUCTS - The Edge

STUDCO BUILDING SYSTEMS — CROCSTUD Track

TELLING INDUSTRIES L L C — Viper25™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100.

MBA BUILDING SUPPLIES INC — ProTRAK

DMFCWBS L L C - ProTRAK

RAM SALES L L C — Ram ProTRAK

asteners spaced 24 in. OC max

12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A). MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

51. **Gypsum Board\*** — (As an alternate to Item 5) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item CGC INC - Type ULX

UNITED STATES GYPSUM CO - Type ULX

USG MEXICO S A DE C V — Type ULX

5J. Gypsum Board\* — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs
Item 2A, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or
tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on
opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in, OC at perimeter and 12 in, OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

6. Fasteners — (Not shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach 6. Fasteners — (Not shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer-1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer-1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three-layer systems: First layer-1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer-1 in. long for 1/2 in., 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer-1 in. long for 1/2 in., 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer-1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer-1.5/8 in. long for 1/2 in. 5/8 in. long for 1/2 in. 5/8 in. long for 1/2 in. 5/8 in. thick panels, spaced 24 in. OC. Second layer-1.5/8 in. long for 1/2 in. 5/8 in. long for 1/2 in. 1/8 in. First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. Furring Channels - (Optional, not shown, for single or double layer systems) - Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E. 7A. **Framing Members\*** - (Optional on one or both sides, not shown, for single or double layer systems) -As an alternate to Item 7, furring channels and Steel Framing Members as described below a. Furring Channels - Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide

by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E. b. Steel Framing Members\* - Used to attach furring channels (Item 7Aa) to studs

(Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No.  $8\times1$ -1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No.  $8\times9$ /16 in. minimum self-drilling. S-12 steel screw through the center hole. Furring channels are http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=BXUV.U419&ccnshorttitle=Fire+Resistance+Ratings+-+ANSI/UL+263... 8/10

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BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263 friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring PACINTERNATIONALINC - Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

2E. Framing Members\*— Steel Studs — (Not shown, As an alternate to Item 2) —For use with Items 5F or 5G

0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in.

or 51 only, channel shaped study, min depth as indicated under Item 55, 56 or 51, fabricated from min

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BXUV.U419 - Fire Resistance Ratings - ANSI/UL 263

proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1K. Framing Members\* - Floor and Ceiling Runner - Not shown - In lieu of Item 1 - For use with Item 21.

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as

2A. **Steel Studs** — (As an alternate to Item 2, For use with Items 5B, 5E, 5H and 5J) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height

2B. Framing Members\* - Steel Studs - (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary

channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ½ in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

2C. Framing Members\* - Steel Studs — Not shown - In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick

2D. Framing Members\* - Steel Studs - In lieu of Item 2 - Channel shaped studs, min depth as indicated

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV - Type SUPREME Framing System

ndicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly

TELLING INDUSTRIES L L C — Viper20™ Track

CRACO MFG INC - SmartStud25™

PHILLIPS MFG CO L L C — Viper25™

PHILLIPS MFG CO L L C - Viper20™

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper25™

CALIFORNIA EXPANDED METAL PRODUCTS CO - Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper20™

 $\textbf{ALLSTEEL \& GYPSUM PRODUCTS INC} - \mathsf{Type} \ \mathsf{SUPREME} \ \mathsf{Framing} \ \mathsf{System}$ 

QUAIL RUN BUILDING MATERIALS INC - Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO - Type SUPREME Framing System

 $\textbf{STEEL CONSTRUCTION SYSTEMS INC} - \mathsf{Type} \ \mathsf{SUPREME} \ \mathsf{Framing} \ \mathsf{System}$ 

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

7B. Framing Members\* — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC endicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum boar attached to furring channels as described in Item 5. Not for use with Item 5A and 5E. b. Steel Framing Members\* — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8  $\times$ 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips

7C. Framing Members\* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described

 ${f KINETICS}$  NOISE CONTROL INC - Type Isomax

PLITEQ INC - Type GENIECLIP

a. Furring Channels - Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E. b. Steel Framing Members\* — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 n. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

7D. Steel Framing Members — (Optional, Not Shown)\* - Furring channels and resilient sound isolation clip as

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furing channels as described in Item 4. Side joint furing channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge. Not for use with Item 5A and 5E.

o. Steel Framing Members\* — Resilient sound isolation clip used to attach furring channels (Item 7Da) to studs. Clips spaced 24 in. OC., and secured to studs with No 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or

8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints nd screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all ints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are upplied with a square edge. 9. Siding, Brick or Stucco - (Optional, not shown) - Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course

10. Caulking and Sealants\* — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO - Type AS

1. Lead Batten Strips - (Not Shown, For Use With Item 5B) - Lead batten strips, min 1-1/2 in, wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=BXUV.U419&ccnshorttitle=Fire+Resistance+Ratings+-+ANSI/UL+263... 9/10

**UL LISTING NOTES:** 

SPECIFICATIONS AND INFORMATION IN THIS SHEET ARE FOR CONTRACTOR INFORMATION ONLY. INFORMATION ARE TAKEN FROM MATERIALS PUBLISHED BY TREMCO AND UL LABS WHO ARE RESPONSIBLE FOR THEIR CONTENT. 2. RECOMMENDED ELEMENTS HAVE BEEN INDICATED, HOWEVER CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE MOST CURRENT VERSION OF ALL LISTED UL SPECIFICATIONS.

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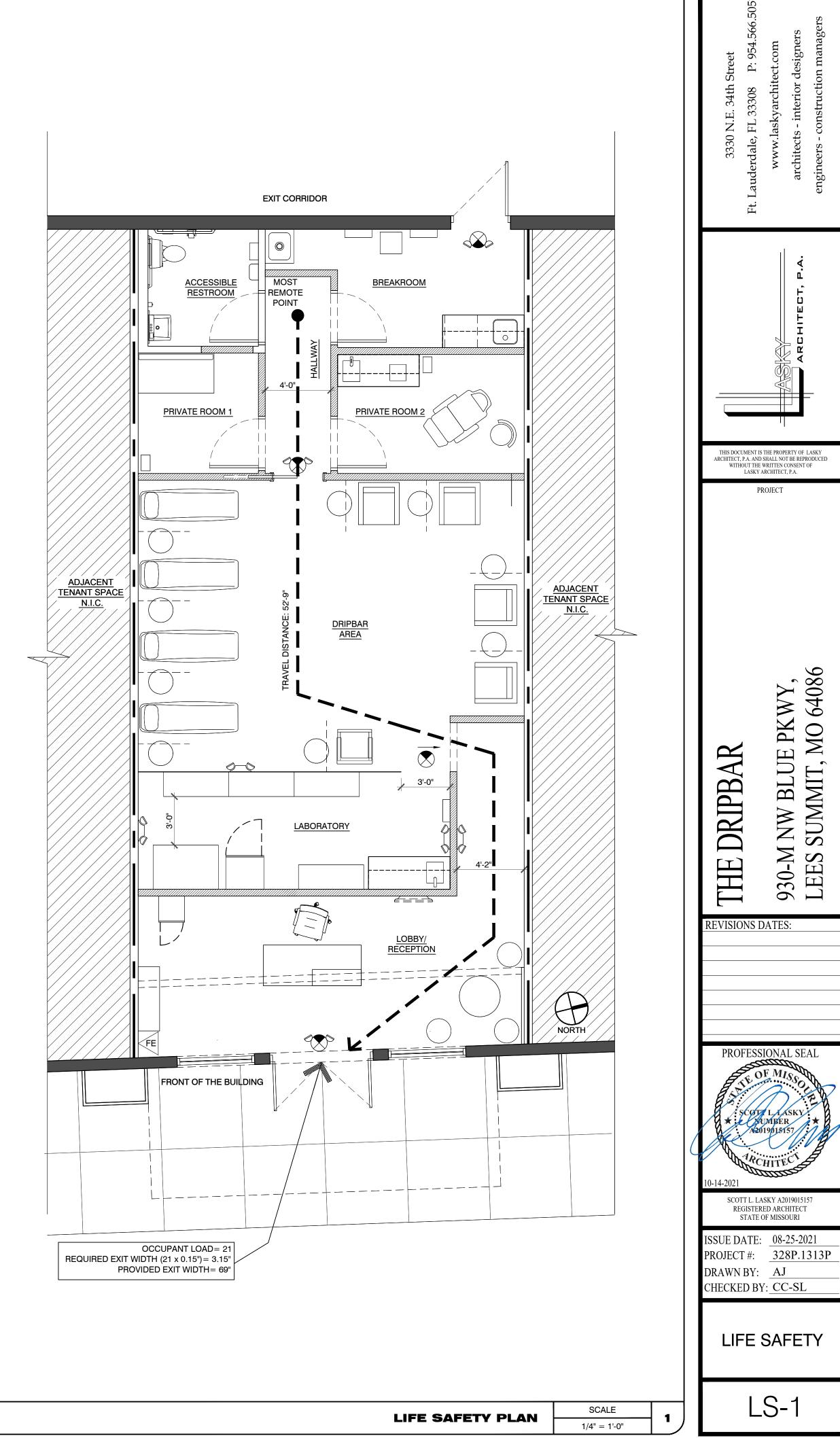
PROFESSIONAL SEAL WUMBER/ A2019015157

SCOTT L. LASKY A2019015153 REGISTERED ARCHITECT STATE OF MISSOURI

ISSUE DATE: 08-25-2021 PROJECT #: 328P.1313P DRAWN BY: AJ CHECKED BY: CC-SL

IL LISTINGS

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	LIFE SAFETY NOTES
1.	. CONTRACTOR TO FIELD VERIFY THE PRESENCE OF A DUCT SMOKE DETECTOR & THAT IT IS IN COMPLIANCE WITH CURRENT LOCAL MECHANICAL CODE.
	PREQUIRED "PRELIMINARY SMOKE / LIFE SAFETY SYSTEM TEST": G.C. TO COORDINATE EXECUTION WITH HVAC SUB, LIFE SAFETY MONITOR SUB - PRIOR TO CONTACTING AND SCHEDULING FINAL SMOKE TEST WITH THE CITY.
	B. EXIT ACCESS SHALL BE PERMITTED TO PASS THROUGH STOREROOMS PROVIDED THAT THE FOLLOWING CONDITIONS ARE MET: 3.1. NOT MORE THAN 50 PERCENT OF EXIT ACCESS SHALL BE PROVIDED THROUGH THE STOREROOM
	<ul> <li>3.2. THE STOREROOM SHALL NOT BE SUBJECT TO LOCKING</li> <li>3.3. THE MAIN AISLE THROUGH THE STOREROOM SHALL NOT BE LESS THAN 44 in. (112 cm) WIDE</li> </ul>
	3.4. THE PATH OF TRAVEL THROUGH THE STOREROOM, DEFINED WITH FIXED BARRIERS, SHALL BE DIRECT AND CONTINUOUSLY MAINTAINED IN AN UNOBSTRUCTED CONDITION.
5.	<ul> <li>PROVIDE (1) TYPE-ABC FIRE EXTINGUISHER FOR EACH 2,500 S.F. AND NOT MORE THAN 75 FEET APART.</li> <li>FIRE EXTINGUISHERS SHALL BE PLACED BY ALL EXIT DOORS AND SHALL BE VISIBLE AND ACCESSIBLE AT ALL TIMES DURING REMODELING.</li> </ul>
6.	6. ALL EXIT WAYS SHALL BE KEPT FREE AND CLEAR FOR EXITING AND ENTERING PURPOSES.
	NOTE:
	DENOTES 5LB ABC FIRE EXTINGUISHER
	DENOTES 5LB ABC FIRE EXTINGUISHER WITH SEMI-RECESSED CABINET
	SYMBOL DESCRIPTION - SEE ELECTRICAL PLANS FOR DETAILS
	WALL-MOUNTED EXIT SIGN/EMERGENCY LIGHT COMBO
	CEILING MOUNTED DIRECTIONAL EXIT SIGN
	EGRESS DOOR REQUIREMENTS
7.	ALL EGRESS DOORS, NEW OR EXISTING, SHALL COMPLY WITH NFPA 101 SECTION 7.2.1, AND THE FOLLOWING REQUIREMENTS:
	MINIMUM CLEAR WITH WIDTH WHEN OPEN 90 DEGREES SHALL BE 32".  THE ELEVATION OF THE FLOOR SURFACES ON BOTH SIDES OF THE DOOR SHALL NOT VARY BY MORE THAN 1/2". THE ELEVATION SHALL BE MAINTAINED FOR A (MIN.) DISTANCE FOLIAL TO THE WIDTH OF THE LEAF
	FOR A (MIN.) DISTANCE EQUAL TO THE WIDTH OF THE LEAF. IN EXISTING BUILDINGS DOORS DISCHARGING TO THE OUTSIDE, THE FLOORS OUTSIDE MAY BE ONE STEP LOWER THAN THAT OF THE INSIDE (8" MAX). THE OPENING FORCE (APPLIED TO THE LATCH STILE) TO FULLY OPEN THE
	DOOR SHALL NOT EXCEED 15 LBF TO RELEASE THE LATCH, 30 LBF TO SET THE DOOR IN MOTION AND 15 LBF TO OPEN THE DOOR TO THE REQUIRED WIDTH.
	THE OPENING FORCE TO FULLY OPEN AN EXISTING DOOR IN AN EXISTING BUILDING SHALL NOT EXCEED 50 LBF. DOOR SHALL BE ARRANGED TO BE OPENED READILY FORM THE EGRESS SIDE WHENEVER THE BUILDING IS OCCUPIED. LOCKS SHALL NOT REQUIRE THE USE OF A KEY, TOOL, EFFORT OR SPECIAL KNOWLEDGE FOR OPERATION ON THE EGRESS SIDE.
	ALL LOCKS ON EGRESS DOORS, NEW OR EXISTING, SHALL COMPLY WITH NFPA 1 SECTION 7.2.1.5.3, AND THE FOLLOWING REQUIREMENTS:
	DOOR LEAVES SHALL BE ARRANGED TO BE OPENED READILY FROM THE EGRESS SIDE WHENEVER THE BUILDING IS OCCUPIED.
	LOCKS, IF PROVIDED, SHALL NOT REQUIRE THE USE OF A KEY, A TOOL, OR
•	



WALL PARTI	TION LEGEND
	EXISTING EXTERIOR WALL TO REMAIN
	EXISTING INTERIOR PARTITION TO REMAIN
	EXISTING WALL/PARTITION TO BE REMOVED
	EXISTING TENANT DEMISING WALL TO REMAIN

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D	PEMOLITION KEYNOTES
1	(E) INTERIOR PARTITION WALLS TO BE REMOVED. G.C. TO PATCH AND REPAIR ADJACENT WALL AFFECTED BY DEMOLITION.
2	(E) ACOUSTICAL CEILING SYSTEM TO BE REMOVED, FIRE SPRINKLER SYSTEM SHALL REMAIN.
3	(E) DOOR, FRAME & HARDWARE TO BE REMOVED.
4	(E) DOOR & HARDWARE SHALL REMAIN.
5	(E) DRINKING FOUNTAIN TO BE REMOVED. GC TO CAP & SEAL ANY PLUMBING LINES NOT BEING USED.
6	(E) STOREFRONT SYSTEM SHALL REMAIN.
7	(E) RESTROOM ACCESSORIES & FINISHES TO BE REMOVED.
8	(E) FURNITURE, MERCHANDISE DISPLAYS & MILLWORK TO BE REMOVED
9	(E)TENANT DEMISING WALL SHALL REMAIN AND BE PROTECTED DURING DEMOLITION.
10	(E) MOP SINK TO BE RELOCATED. GC TO CAP & SEAL ANY PLUMBING LINES NOT BEING USED.
11	(E) WATER HEATER, LOCATED ABOVE RESTROOM CEILING, TO BE REMOVED.GC TO CAP & SEAL ANY PLUMBING LINES NOT BEING USED.
12	(E) LIGHTING CONTROL PANEL TO BE REMOVED.
13	(E) DRYWALL CEILING SHALL REAMIN. GC TO PREPARE SURFACE TO RECEIVE NEW FINISH.
14	(E) ELECTRICAL PANELS & TRANSFORMER SHALL REMAIN.
_	GENERAL NOTES
Α	ALL (E) FLOORING MATERIALTO BE REMOVED, GC TO PREPARE FLOOR SLAB TO RECEIVE NEW FLOOR FINISHES.
В	ALL (E) INTERIOR WALL FINISHES TO BE REMOVED. GC TO PATCH & PREPARE WALLS TO RECEIVE NEW FINISHES.
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	<b>\</b>

# DEMOLITION NOTES

- 1. THIS PORTION OF THE WORK TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR ALL DISMANTLING, DEMOLITION AND SALVAGE AS SHOWN ON THE DRAWING AND SPECIFIED HEREIN.
- 2. DEMOLITION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPLICABLE SAFETY REQUIREMENTS OF THE LANDLORD, CITY AND STATE OF THE PROJECT, THE ASSOCIATED GENERAL CONTRACTOR'S MANUAL OF ACCIDENT PREVENTION ON CONSTRUCTION, LATEST EDITION, AND THE APPLICABLE REQUIREMENTS OF THE LOCAL BUILDING CODE.
- 3. ALL REQUIRED BUILDING AND OTHER PERMITS IN CONNECTION WITH THE CONSTRUCTION AND COMPLETION OF THE TENANT'S WORK IS THE SOLE RESPONSIBILITY OF THE TENANT / TENANT'S CONTRACTOR(S).
- 4. CONTRACTOR TO VISIT THE SITE TO DETERMINE DEMOLITION REQUIREMENTS.
  FAILURE OF CONTRACTOR TO ACQUAINT HIMSELF WITH ALL AVAILABLE INFORMATION CONCERNING CONDITIONS WILL NOT RELIEVE HIM FROM THE RESPONSIBILITY FOR ACCURATELY ESTIMATING THE DIFFICULTY OR THE COST OF THE WORK.
- 5. GC MUST VERIFY CONDITIONS FOR ALL DEMISING WALLS. PATCH AND REPAIR AS NECESSARY. FIRE SEPARATION BETWEEN TENANTS MUST COMPLY WITH ALL LOCAL CODES. ALL DEMISING WALL WORK TO BE DONE PRIOR TO INTERIOR CONSTRUCTION DEMISING WALLS SHALL BE 1-HOUR RATED, PATCHED AND FIRE STOPPED AS REQUIRED. NONMETALLIC PIPES PENETRATING DEMISING WALLS SHALL USE ATTACHED FIRE COLLAR.
- 6. THE EXISTING CONCRETE SLAB SHALL BE WELL PREPARED TO RECEIVE NEW
- 7. ALL MATERIALS USED IN THE CONSTRUCTION OF THE SPACE MUST BE ASBESTOS
- 8. NOTIFY ARCHITECT IMMEDIATELY OF ANY INCONSISTENCIES OR DISCREPANCIES WITH PLANS IN RELATION TO EXISTING FIELD CONDITIONS.
  9. IT IS THE TENANT / TENANTS CONTRACTOR RESPONSIBILITY TO FIELD VERIFY ALL
- EXISTING CONDITIONS AND DIMENSIONS.

  10. IF ANY EXISTING FIRE PROOFING OR FIRE ASSEMBLIES TO REMAIN ARE DAMAGED DURING DEMOLITION, THEY SHALL BE REPAIRED TO CONFORM TO THE ORIGINAL

FIRE PROTECTION REQUIREMENTS. CONTACT ARCHITECT TO VERIFY UL

- ASSEMBLIES TO BE USED FOR REPAIRS.

  11. REFER TO MECHANICAL, PLUMBING, FIRE PROTECTION, COMMUNICATIONS INFORMATION SYSTEMS AND ELECTRICAL DRAWINGS FOR EXTENT AND LOCATION OF CHANNELING OF EXISTING FLOOR SLAB. IF EXISTING PIPING OR CONDUIT WORK (OTHER THAN THE DESIRED CONNECTION) IS ENCOUNTERED WHILE CHANNELING, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE
- CHANNELING, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE CONTINUING

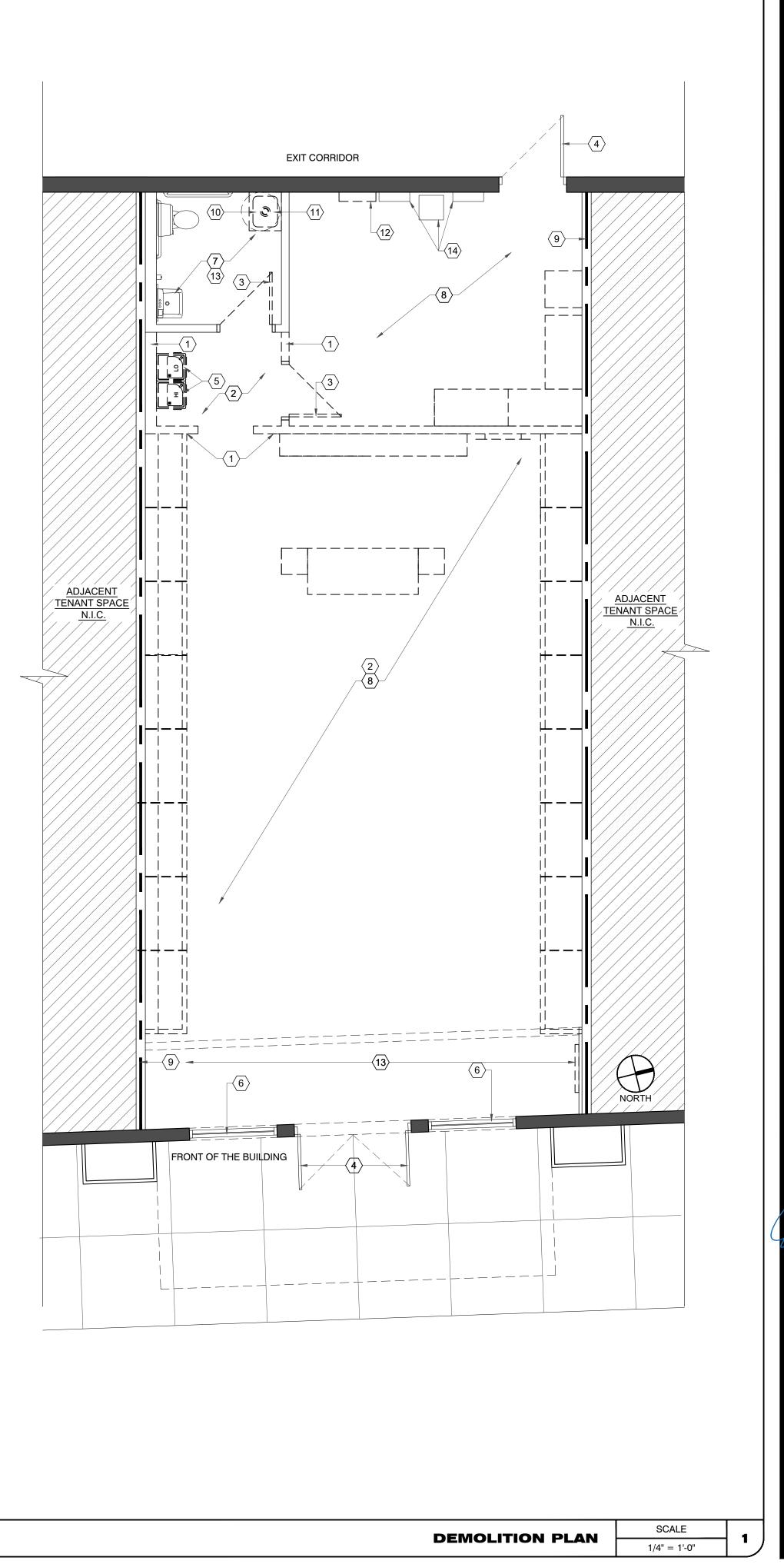
  12. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION OF EXISTING WALLS MEETS THE FIRE PROTECTION RATING DESIGNATED ON THESE DRAWINGS. HE SHALL ALSO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO BRING EXISTING WALLS, FLOORS, DUCTS, ETC. UP TO THE PROPER INDICATED FIRE
- OR BEARING PROPER LABELS SHALL BE REPLACED.

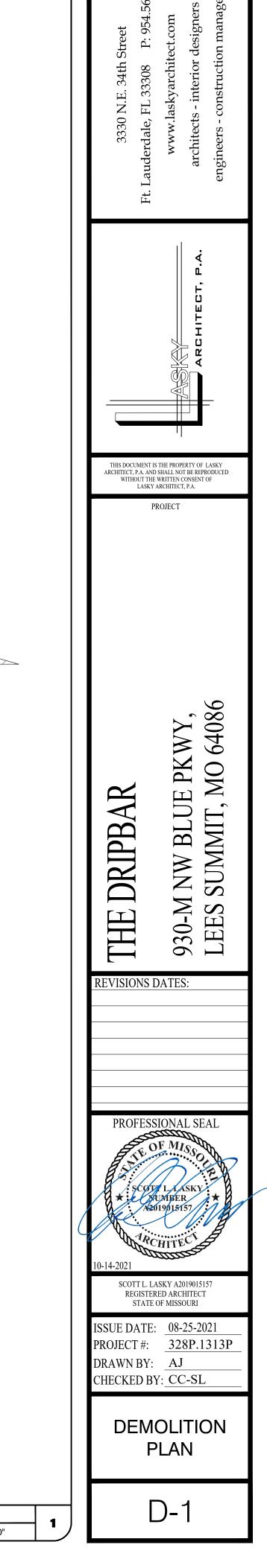
  13. DEMO CONTRACTOR IS GENERALLY RESPONSIBLE, BUT NOT LIMITED TO THE

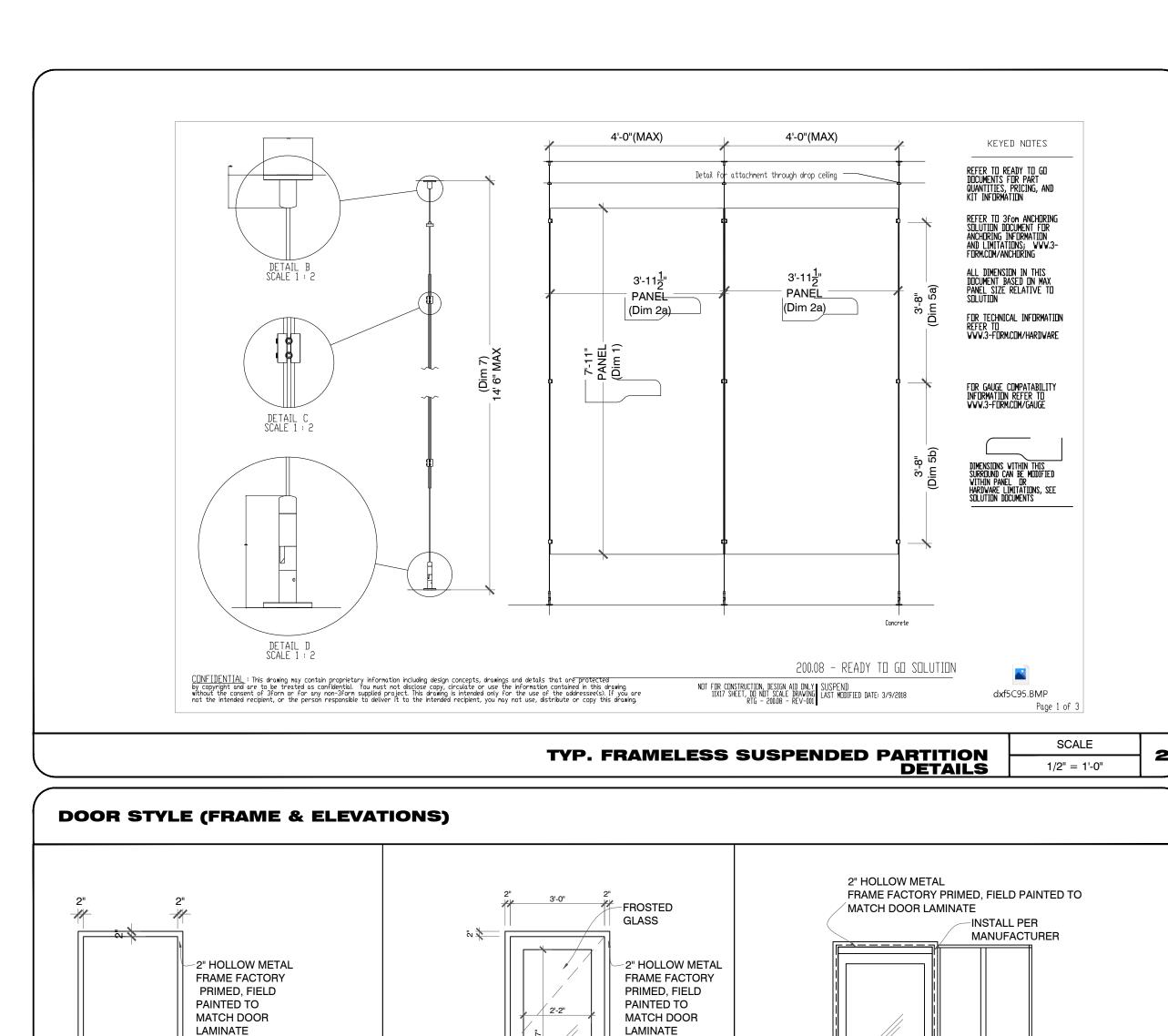
PROTECTION RATING. DOORS AND FRAMES NOT MEETING RATING REQUIREMENTS

- FOLLOWING:

  A. WALL, FRAMING & FINISH REMOVAL
- B. REMOVAL OF EXISTING FLOORING MATERIAL DOWN TO BARE CONCRETE DECKC. COMPLETE REMOVAL OF STOREFRONT & WALL SYSTEMS
- D. REMOVAL OF WALLS, LOCKERS & OTHER EQUIPMENT FROM LEASE LINE E. REMOVAL OF EXISTING PLUMBING FIXTURES & PIPES CAPPED BELOW OR
- INSIDE OF WALLS TO REMAIN
- F. REMOVAL OF ANY EXISTING MISC. WALLS & DOORS NOT NOT SHOWN IN PLANS, TO PROVIDE A CLEAN & UNOBSTRUCTED SPACE.
- G. REMOVAL OF ALL MEP OR ELECTRICAL EQUIPMENT NOT BEING RE-USED, AS INDICATED IN PLANS. INCLUDING CONDUIT, J-BOXES, WIRING, ETC. BACK TO LANDLORDS POINT OF CONNECTION.
- H. REMOVAL OF ALL EXISTING CABINETRY, FURNITURE, & EQUIPMENT NOT BEING USED (AS INDICATED IN PLANS) ALONG W/ ANY MISC. ITEMS ATTACHED
- I. REMOVAL OF EXISTING LIGHT FIXTURES & SALVAGE THOSE INDICATED IN PLANS
- J. REMOVAL OF ALL HARD CEILING, GRIDS, & ALL OTHER CEILING SYSTEMS K. REMOVAL OF ALL A/C DUCT WORK & DIFFUSERS, EXCEPT FOR MAIN TRUNK
- LINE
  L. ALL FIRE DETECTION, SPEAKERS, WIRING, ETC.







NOTE: "DRIPBAR" LOGO ON THE FROSTED GLASS

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TO BE COORDINATED WITH OWNER AND

VENDOR.

(E) ELECTRICAL PANEL, REFER TO ELECTRICAL FOR DETAILS.

https://www.3-form.com/products/frameless-suspended-partition

(N) ACCESSIBLE RESTROOM. ALL EQUIPMENT SHALL COMPLY WITH

(N) EXISTING WALL TO BE BROUGHT UP 6" ABOVE NEW CEILING.

ACCESSIBILITY REQUIREMENTS SET ON CS-3. SEE RESTROOM EQUIPMENT

(N) FRAMELESS SUSPENDED PARTITIONS

MATERIAL: 200.08 VARIA ICECAP- GAUGE 3/8"

SCHEDULE AND PLUMBING PLANS FOR DETAILS.

FRONT AND BACK FINISH: SANDSTONE

COLOR: UMBRA DESIGN COLLECTION

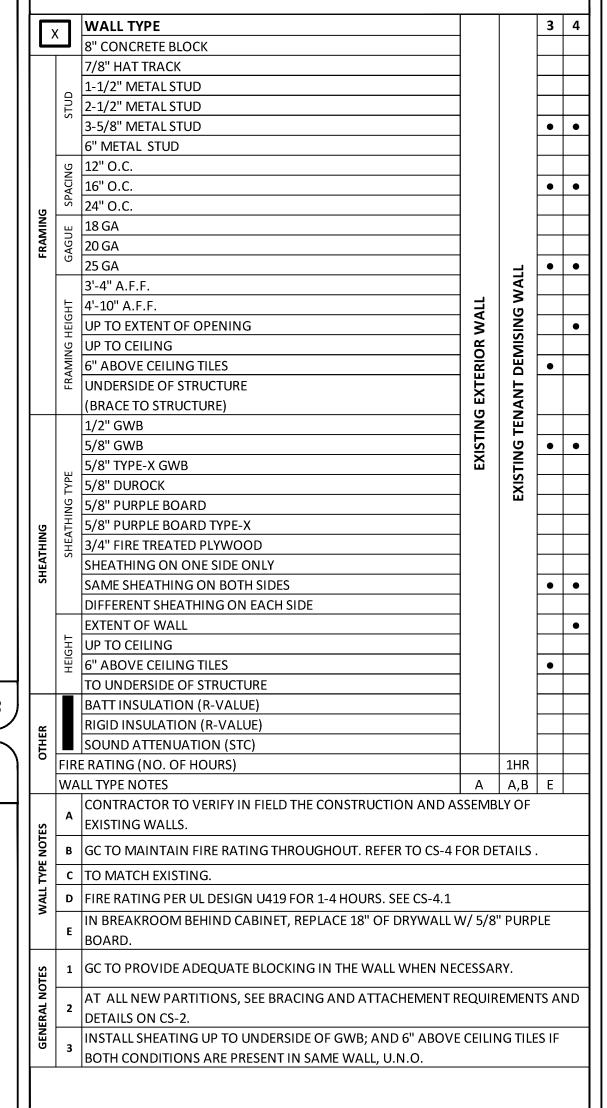
(E) & (N) HEADER WALL ABOVE, SEE REFLECTED CEILING PLAN FOR DETAILS.

**SHEET KEYNOTES** 

MANUFACTURER: 3FORM

HARDWARE: STAINLESS

REFER TO DETAIL 2/A-1



**WALL TYPE SCHEDULE** 

PART	MODEL NO	MANUFACTURER
HINGES	1279 4 1/2x4 1/2xUS26D	HAGER
<b>ノ</b>	NRP BB1191 4 1/2x4 1/2xNRPxUS32D	HAGER
LATCH SET	PASSAGE: ND10S RHO 626	SCHLAGE
LOCK SET	PRIVACY: ND40S RHO 626	SCHLAGE
	OFFICE: ND50PD RHO 626	SCHLAGE
<del> </del>	CLASSROOM: ND70PD RHO 626	SCHLAGE
	STOREROOM: ND80PD RHO 626	SCHLAGE
	ENTRANCE: ND53PD RHO 626	SCHLAGE
CLOSER	1070 xSEX BOLTS	LCN
PANIC EXIT	99L-F (FIRE PROOF)	VONDUPRIN
DEVICE	99E0	VONDUPRIN
- L	99L	VONDUPRIN
THRESHOLD	THRESHOLD # 119NXAL	NGP
	WEATHER STRIP # 160A	NGP
	DRIP # 16 AP	NGP
STOPPER	STOP W 302Px626	QUALITY
	FLOOR STOP	QUALITY
_	SILENCERS 1337A	QUALITY
KICK PLATES	12"x2" LDWx.050x630	QUALITY
PULL PLATE	31E US26D	HAGER
PUSH PLATE	30S US26D	HAGER

**HARDWARE MANUFACTURERS** 

		HRDWR SET 1	HRDWR SET 2	HRDWR SET 3
	HINGES (QTY. 3)	•	•	•
	LATCH SET (PASSAGE FUNCT.)(ANSI F75)	•		
_	` ' '			
مِ إِنَّ	PRIVACY LOCK FUNCT. (ANSI F76)			•
815	OFFICE FUNCT. (ANSI F82)			
DOOR	CLASSROOM FUNCT. (ANSI F84)		•	
Щ	STOREROOM FUNCT. (ANSI F86)			
	ENTRANCE FUNCT. (ANSI F109)			
PANIC CLOSERS BAR	FIRE RATED CLOSERS			
SE	NON-FIRE RATED CLOSERS			•
$\mathbb{R}^{\square}$	HOLD OPEN FEATURE			
	FIRE RATED PANIC BAR			
ANIC	NON-FIRE RATED PANIC BAR			
Z B	exterior lock only			
	exterior lock with handle			
	FLUSH BOLT (bottom)			
ပ္သ	FLUSH BOLT (top)			
ESSORIES	PUSH / PULL PLATE			
SO	KICK PLATE ON PUSH SIDE			
ES	WEATHER SEAL (jamb and head)			
ACC	RAIN CAP			
4	WALL STOP	•	•	•
	DOOR SILENCERS (hollow metal frames only)	•	•	•
	NOTES	1	1	1

SCHLAGE JUPITER

HANDLE SATIN CHROME FINISH

NO	TES:
1.	ALL HARDWARE TO BE US26D
2.	DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM 90°, THE TIME
	REQUIRED TO MOVE THE DOOR TO 12° FROM THE LATCH IS 5
	SECONDS MIN. MAXIMUM PUSH OR PULL FORCE FOR ALL DOORS: 5LB

x										DULE	R & FRAME SCHE	DOO
	REMARKS	SADDLE	HARDWARE	RAME FINISH	FF MAT'L	FINISH	DOOR MAT'L	THICKNESS	DIMENSION	STYLE	DESCRIPTION	DOOR #
	GC TO V.I.F. THAT EXISTING PANIC HARDWARE MEETS LOCAL REQUIREMENT. IF NOT, GC TO PROVIDE NEW PANIC HARDWARE.			R TO REM					(1) 6'-0" X 7'-0"	-	LOBBY-STOREFRONT DOOR	E1
	GC TO V.I.F. THAT EXISTING PANIC HARDWARE MEETS LOCAL REQUIREMENT. IF NOT, GC TO PROVIDE NEW PANIC HARDWARE.		MAIN	R TO REM	NG DOO	EXISTI			(1) 3'-0" X 7'-0"	-	REAR DOOR	E2
MINATE	WHITE LAMINATE-FROSTED GLASS- FRAME PAINT TO MATCH LAMINATE	-	1	PNT	H.M.	LAM	S.C/GL	1-3/4"	(1) 3'-0" X 7'-0"	В	PRIVATE ROOM	01
	WHITE LAMINATE- FRAME PAINT TO MATCH LAMINATE	-	2	PNT	H.M.	LAM	S.C.	1 3/4"	(1) 3'-0" X 7'-0"	А	BREAKROOM	02
	WHITE LAMINATE- FRAME PAINT TO MATCH LAMINATE		3	PNT	H.M.	LAM	S.C.	1 3/4"	(1) 3'-0" X 7'-0"	А	UNISEX RESTROOM	03
- //INATE	WHITE LAMINATE-FROSTED GLASS- FRAME PAINT TO MATCH LAMINATE	-	PER MANUFACTER	PNT	H.M.	LAM	S.C/GL	1 3/4"	(1) 3'-0" X 7'-0"	С	HALLWAY	04
	WHITE LAMINATE- FRAME PAINT TO MATCH LAMINATE WHITE LAMINATE- FRAME PAINT TO MATCH LAMINATE	- - -	1 2 3 PER MANUFACTER	PNT PNT	H.M.	LAM	S.C.	1 3/4"	(1) 3'-0" X 7'-0" (1) 3'-0" X 7'-0"	A	BREAKROOM  UNISEX RESTROOM  HALLWAY	02

FROSTED

NOTE: "DRIPBAR" LOGO ON THE FROSTED

GLASS TO BE COORDINATED WITH OWNER

**METAL STUD LIMITING HEIGHTS** 

18 MIL

18 MIL

27 MIL

30 MIL

43 MIL

54 MIL

30 MIL

43 MIL

16"

16"

16"

16"

STUD SIZE GAUGE THICKNESS SPACING

22

20

18

25

22

20

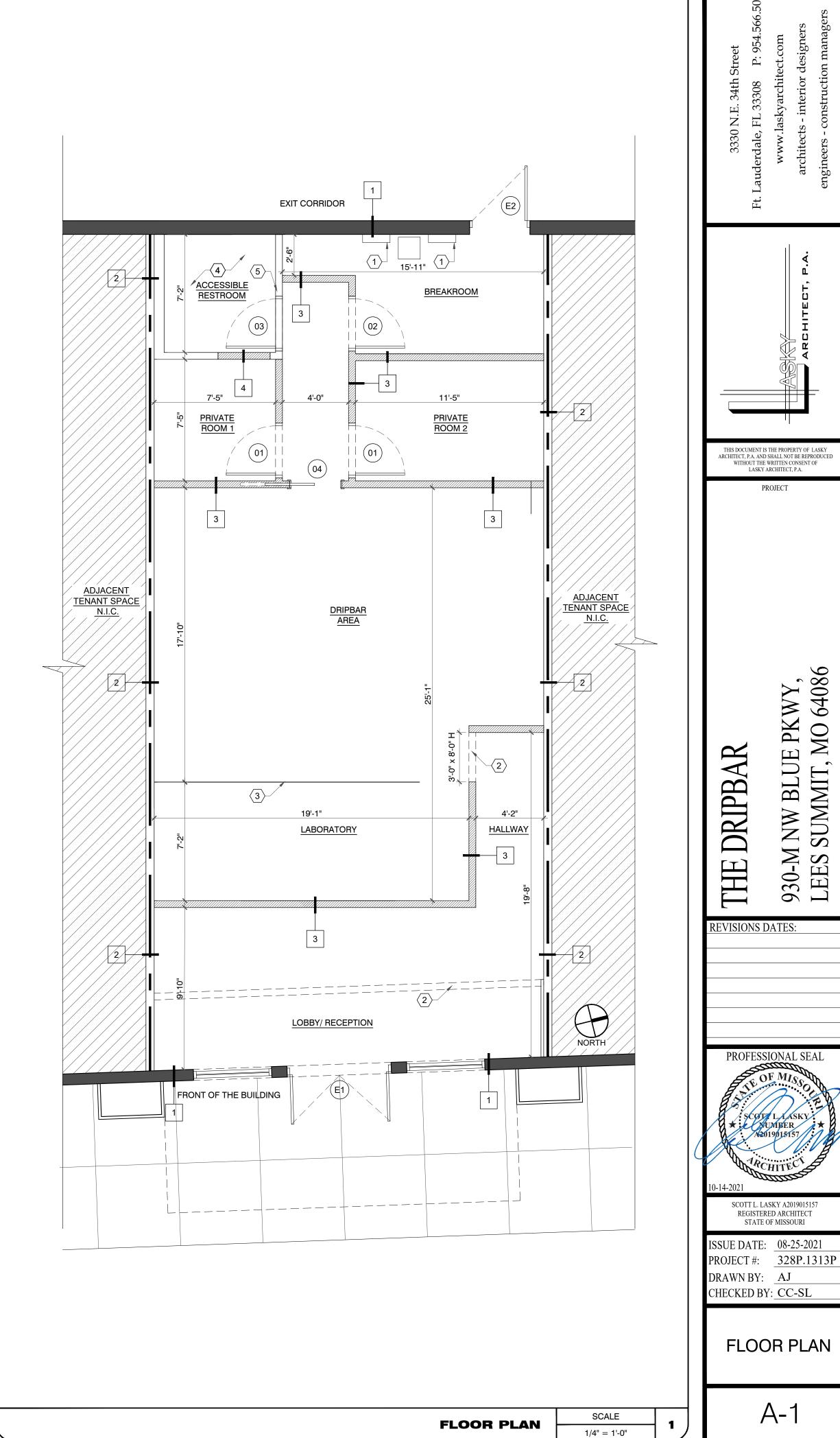
6"

 NON-LOAD BEARING 5# LATERAL LOAD

L/360 DEFLECTION

LÉGEND: H.C. = HOLLOW CORE WOOD S.C. = SOLID CORE WOOD H.M. = HOLLOW METAL S.P. = SOLID PLASTIC LAM. = LAMINATE LOUV. = LOUVER COAT. DOORS THAT OPEN ONTO &/OR EXPOSED TO AREAS OPEN TO THE PUBLIC FLOOR SHALL BE PAINTED TO MATCH ADJACENT WALL. 1. ALL EXTERIOR DOORS (INCLUDING EXISTING) SHALL BE SELF-CLOSING AND RODENT PROOF.

2. ALL HARDWARE PACKAGES TO BE REVIEWED W/ TENANT PRIOR TO ORDERING INCLUDING DESIGNATED LOCKS/DEADBOLTS. SEE EXIT DOOR REQUIREMENTS ON LS-1.



PROJECT

PKWY, 10 64086

1 NW BLUE P. SUMMIT, MO

930-M LEES S

E MUMBER

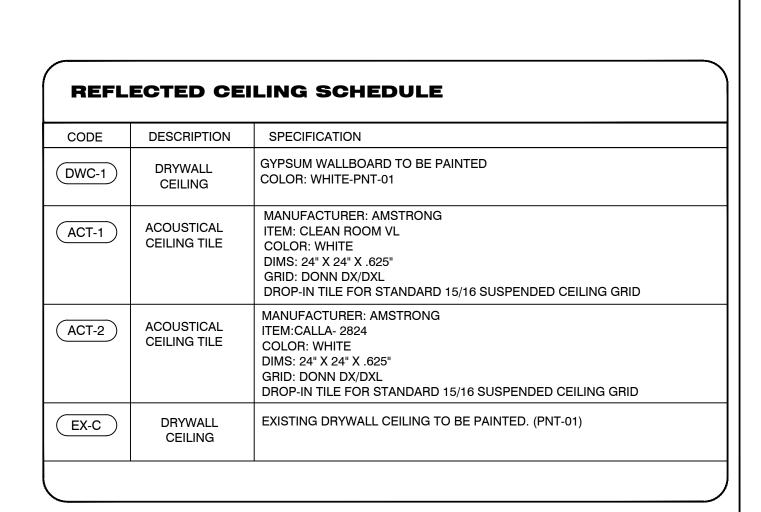
STATE OF MISSOURI

DESCRIPTION	QTY (PER ROOM)	COLOR	SPECIFICATION
VANITY DRAWERS BASE	1	WHITE	<ul> <li>34 1/2" HIGH,</li> <li>SOFT CLOSE DOORS AND DRAWERS,</li> <li>21 " HIGH DOORS,</li> <li>FULL -DEPTH SHELVES,</li> <li>CONCEALED GLIDES ON DRAWERS</li> </ul>
VANITY SINK BASE	1	WHITE	<ul> <li>34 1/2" HIGH,</li> <li>SOFT CLOSE DOORS,</li> <li>21 " HIGH DOORS,</li> <li>FULL -DEPTH SHELVES,</li> </ul>
HIGH WALL CABINET	2	WHITE	AS HIGH AS POSSIBLE TO GIVE A BUILT-IN LOOK,     SOFT CLOSE DOORS,     FULL -DEPTH SHELVES,
COUNTERTOP	1	VARIES	MANUFACTURER: WILSONART -     MODEL: CLOUD MIST 9243SS,     GC TO COORDINATE CUT INTO THE COUNTERTOP     WITH SINK DIMENSIONS.
HANDLE	10	SATIN NICKEL	T-BAR PULL
DOORS DRAWERS	8 2	WHITE	SHAKER STYLE DOOR,     FULL OVERLAY,     DOOR PANEL: RECESSED,     DOOR FRAME: 3 -IN STILE & RAIL,     DRAWER FRONT: 5- PIECE RECESSED PANEL

	IPMENT SCHEDULE						
ROON	IS EQUIPMENT						
m	Qty Description	Manufacturer	Model No.	Finish / Color	Furnished	Installed By	Remarks
.1	1 WALL MOUNTED SINK		EXISTING TO REMAIN				
2	1 TOILET		EXISTING TO REMAIN				
13	1 36" GRAB BAR	BOBRICK	B-6806 x 36	STAINLESS STEEL	G.C.	G.C.	
A 4	1 42" GRAB BAR	BOBRICK	B-6806 x 42	STAINLESS STEEL	G.C.	G.C.	
A 5	1 TOILET TISSUE DISPENSER	BOBRICK	B-4288	STAINLESS STEEL	G.C.	G.C.	
A 6	1 SOAP DISPENSER	SIMPLY HUMAN	SINGLE	STAINLESS STEEL	G.C.	G.C.	
A 7	1 PAPER TOWEL DISPENSER	GEORGIA PACIFIC	59462	TRANSLUCENT SMOKE	G.C.	G.C.	
A 8	1 LIGHTED MIRROR	EUROFASE LIGHTING	37140		G.C.	G.C.	
A 9	1 MOP SINK		EXISTING TO BE RELOCATED		G.C.	G.C.	
A 10	- WATER HEATER		EXISTING TO REMAIN				
A 11	3 SINK		FER TO PLUMBING PLANS FOR DETAILS		G.C.	G.C.	
A 12	1 SANITARY NAPKIN DISPOSAL	BOBRICK	B-270		G.C.	G.C.	
A 13	- DRINKING FOUNTAIN				1		NOT USED IN THIS PROJECT
A 14	1 TOILET SEAT COVER DISPENSER	BOBRICK	B-221		G.C.	G.C.	
A 15	3 SS 14.4 GAL RECTANGULAR TRASH CAN	SIMPLE HUMAN	10080211	SS	G.C.	G.C.	RESTROOM AND PRIVATE ROOMS
A 16	1 18" VERTICAL GRAB BAR	BOBRICK	B-6806 x 18	STAINLESS STEEL	G.C.	G.C.	
A 17	1 KITCHEN SINK	RE	FER TO PLUMBING PLANS FOR DETAILS		G.C.	G.C.	
ERAL E	QUIPMENT						
em	Qty Description	Manufacturer	Model No.	Finish / Color	Furnished	Installed By	Remarks
B1	- MOBILE MAYO TRAY STAND	MAYO	81-11100	STAINLESS STEEL	TENANT	G.C.	AMOUNT TBD BY OWNER
B2	- IV STAND 2 HOOKS	BLICKMAN	1415SS-4	STAINLESS STEEL	TENANT	G.C.	AMOUNT TBD BY OWNER
В3	4 INTER METRO 3-SHELF SOLUTION	THE CONTAINER STORE	10064011		TENANT	G.C.	18" X 48"
B 4	4 METRO COMMERCIAL CLEAR SHELF LINER	THE CONTAINER STORE	10070637		TENANT	G.C.	
B5	1 MOUNTED CABINET DEFRILATOR	PHILLIPS BASIC SURFACE	989803136531		TENANT	G.C.	
B6	1 COMPOUNDING ASEPTIC CONTAINMENT ISOLATOR	PHARMAGARD	NU-PR797-400		TENANT	G.C.	HOOD
B7	1 CENTRIFUGE SPINNER	SELPHYL	TBD		TENANT	G.C.	1 · · · =
B8	1 28" WIDE PHARMACY REFRIGERATOR	NUAIRE	ACR1718RH	STAINLESS STEEL	TENANT	G.C.	
B9	- INTER METRO SHELVING SOLUTION	THE CONTAINER STORE	TBD	J./ HITELOG OFFILE	TENANT	G.C.	NOT USED IN THIS PROJECT
B10	1 COUNTERTOP DISPLAY REFRIGERATOR	EXCELLENCE	EMM-4HC		TENANT	G.C.	NO. COLD IN THIS I NOTECT
B11	9 DOCK CLEAT	EVERBILT	41644	GRADE SS	G.C.	G.C.	@ 37" A.F.F
B11.A		EVERBILT					
	9 PLATED SWIVEL PULLEY		43334	NICKEL	G.C.	G.C.	BACK WALL TO THE PULLEY 24"
B11.B	9 WHITE TWISTED NYLON ROPE	EVERBILT	73052	71810	G.C.	G.C.	LENGTH +- 162"
B11.C	5 PLATED UTILITY SCREW HOOK	EVERBILT	43054	ZINC	G.C.	G.C.	
B11.D	9   13/16" X 3-3/16" ROUND FIXED EYE SNAP HOOK	EVERBILT	42464	SS	G.C.	G.C.	@ 84" A.F.F
B12	1 TV SCREEN				TENANT	G.C.	RECEPTACLE @ 7'-0" A.F.F
B13	1 UNDERCOUNTER REFRIGERATOR	WHIRLPOOL	WRT111SFDB		TENANT	G.C.	
B14	1 MICROWAVE	KENMORE	72129		TENANT	G.C.	
B15	- RED LIGHTS SYSTEM	TBD	TBD		TENANT	G.C.	NOT USED IN THIS PROJECT
B16	- SS 12 GA. SEMI ROUND TRASH CAN	SIMPLE HUMAN	10083613	SS	TENANT	G.C.	DRIPBAR -AMOUNT TBD BY OWNER
B17	- SAFE -WALL MOUNTED	ADIROFFICE	631-05-BLK		TENANT	G.C.	NOT USED IN THIS PROJECT
B18	- INFRARED SAUNA	CLEARLIGHT INFRARED SAUNAS	CANCTLADV DETDEAT AD		TENIANIT		NOT LICED IN THE PROJECT
		CELANEIGHT IN IVANED SACINAS	SANCTUARY RETREAT- 4P		TENANT	G.C.	NOT USED IN THIS PROJECT
NITURI							
em	Qty Description	Manufacturer	Model No.	Finish / Color	Furnished	Installed By	Remarks
em	Qty Description	Manufacturer	Model No.	Finish / Color	Furnished	Installed By	Remarks
C1	4 LOUNGE CHAIR	CITI SQUARE/ SHEEHANS	S7875-S3	A04F IVORY / CHROME	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
2	1 PHLEBOTOMY CHAIR	INTENSA	25925	ALABASTER	TENANT	G.C.	
C3	4 CHAISE LOUNGE	SENCE RELAX/ SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
C 4	- OTTOMAN- TRIANGLE (OPTION 2)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
4.1	- OTTOMAN- DIAMOND (OPTION 2)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
4.2	- OTTOMAN- TRAPEZOID (OPTION3)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
<u></u>	1 AESTHETICS CHAIR	SALON AND EQUIPMENT	SKU16135	WHITE	TENANT	G.C.	
C6	5 SIDE TABLE (LOUNGE CHAIR)	SHEEHANS		WHITE	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
6.1	4 SIDE TABLE (CHAISE LOUNGE)	SHEEHANS		WHITE	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
C 7	- LOBBY LOFT SEATING (OPTION 1)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
<del>7</del> .1	- LOBBY LOFT SEATING (OPTION 2)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
7.2	3 LOBBY LOFT SEATING (OPTION 3)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS  TO REFER TO FURNITURE PACKAGE FOR DETAILS
C8	- COFFEE TABLE (OPTION 1)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS  TO REFER TO FURNITURE PACKAGE FOR DETAILS
8.1	1 COFFEE TABLE (OPTION 2)	SHEEHANS			TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS  TO REFER TO FURNITURE PACKAGE FOR DETAILS
<u> </u>	1 RECEPTION CHAIR (OPTION 1)	SHEEHANS	WIT	GREY/BLUE	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS  TO REFER TO FURNITURE PACKAGE FOR DETAILS
9.1	- RECEPTION CHAIR (OPTION 1)	SHEEHANS	MAVIC	GREY/ORANGE	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS  TO REFER TO FURNITURE PACKAGE FOR DETAILS
	` '				+		
9.2	- RECEPTION CHAIR (OPTION 3)	SHEEHANS	VECTRA	GREY/GREEN	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
10	1 RECEPTION DESK	SHEEHANS			TENANT	G.C.	72" - TO REFER TO FURNITURE PACKAGE FOR DETAILS
11	1 RETAIL DISPLAY	SHEEHANS		\	TENANT	G.C.	TO REFER TO FURNITURE PACKAGE FOR DETAILS
12	2 PRIVATE ROOM/LABORATORY CABINETRY	LOWE'S		WHITE	TENANT	G.C.	60" L -REFER TO PRIVATE ROOM CABINET SCHEDULE
13	1 PHLEBOTOMY CART	KINGRACK	KK KINGRACK	GREY	TENANT	G.C.	
14	11 LUMBAR PILLOW FOR ARM		IM120	WHITE	TENANT	G.C.	
15	1 SWIVEL CHAIR	TBD	TBD		TENANT	G.C.	
16	- SOFA	SHEEHANS			TENANT	G.C.	
	- DESK	TBD BY TENANT	TBD BY TENANT		TENANT	G.C.	
C 17	DESK					_	
17 18	1 BREAKROOM CABINET	TBD BY TENANT	TBD BY TENANT		TENANT	G.C.	



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A2019015157 MITTER SCOTT L. LASKY A2019015157 REGISTERED ARCHITECT STATE OF MISSOURI ISSUE DATE: 08-25-2021 PROJECT #: 328P.1313P DRAWN BY: AJ CHECKED BY: CC-SL **EQUIPMENT** PLAN



LIGHT	ING	SCHEDULE		
SYMBOL	TYPE	DESCRIPTION	VENDOR	REMARKS
0	А	4" RECESSED LED DOWNLIGHT W/ DIMMING	COMMERCIAL LIGHTING	LOBBY, OFFICE, BREAKROOM AND RESTROOM
<b>←</b>	В	4" RECESSED LED WALL WASH W/ DIMMING	COMMERCIAL LIGHTING	LOBBY AND DRIPBAR
0	С	ACCENT PENDANT LIGHT	COMMERCIAL LIGHTING	BOTTOM @ 6'-6" A.F.F GC TO V.I.F THAT PENDANT CENTERED ON RECEPTION DESK
$\bigcirc$	D	CHANDELIER	COMMERCIAL LIGHTING	BOTTOM @ 7'-6" A.F.F
-\$-	F	LED WALL SCONCE	COMMERCIAL LIGHTING	MOUNTED @ BETWEEN 5'-0" TO 6'-0" A.F.F AND 6" FROM DOOR FRAME
0	G	4" RECESSED LED DOWNLIGHT W/ DIMMING	COMMERCIAL LIGHTING	LABORATORY
0	Ι	4" RECESSED LED DOWNLIGHT W/ DIMMING	COMMERCIAL LIGHTING	DRIPBAR
	I	LED ROPE LIGHT	COMMERCIAL LIGHTING	DRIPBAR
	EX	EXIT SIGN-EMERGENCY LIGHT COMBO	COMMERCIAL LIGHTING	
$\bigcirc$	X1	EXIT SIGN	COMMERCIAL LIGHTING	
888	(E)	EXISTING TRACK LIGHTING SURFACE MOUNTED		

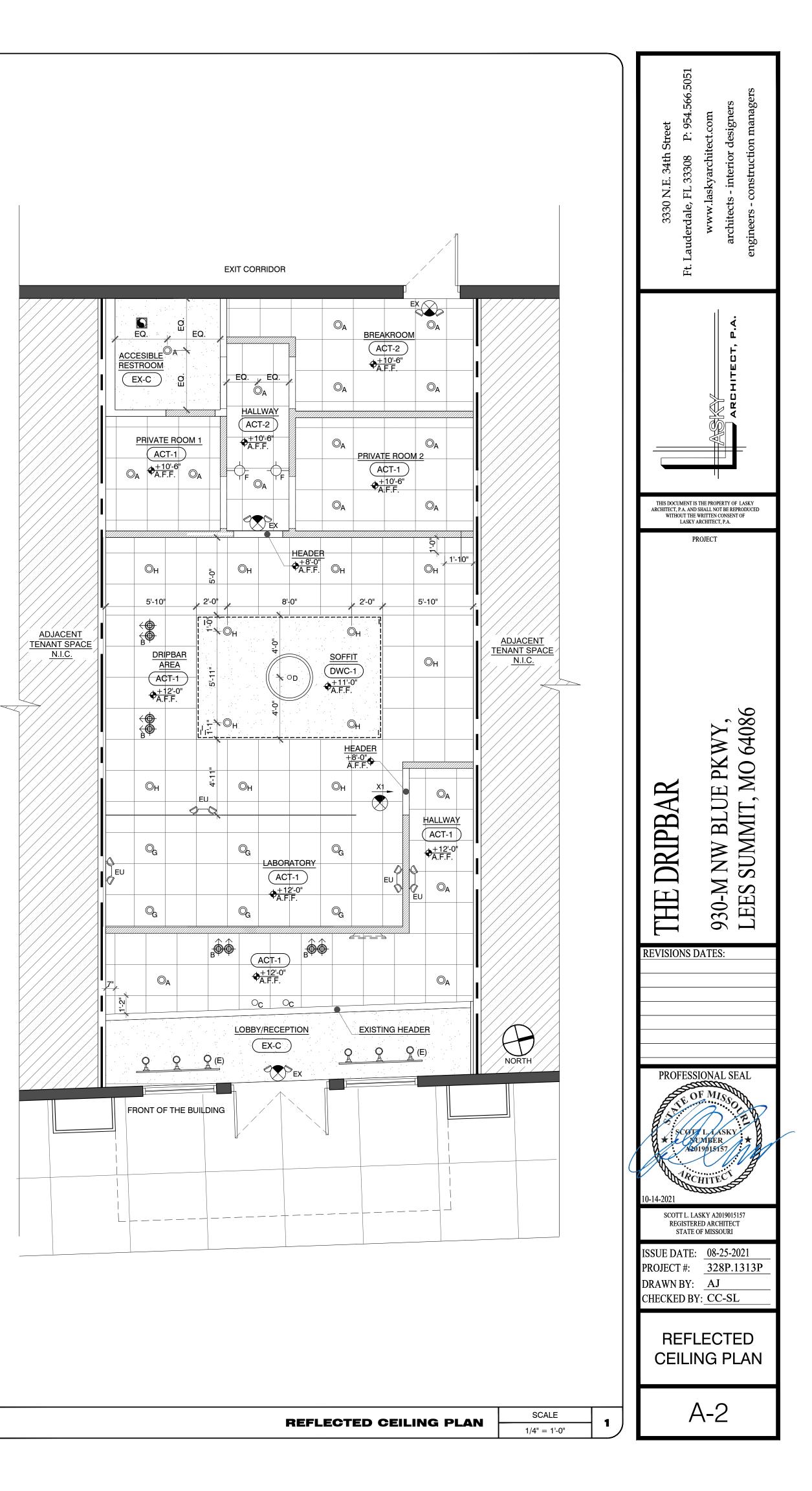
LIGHTING SPECIFICATION NOTES

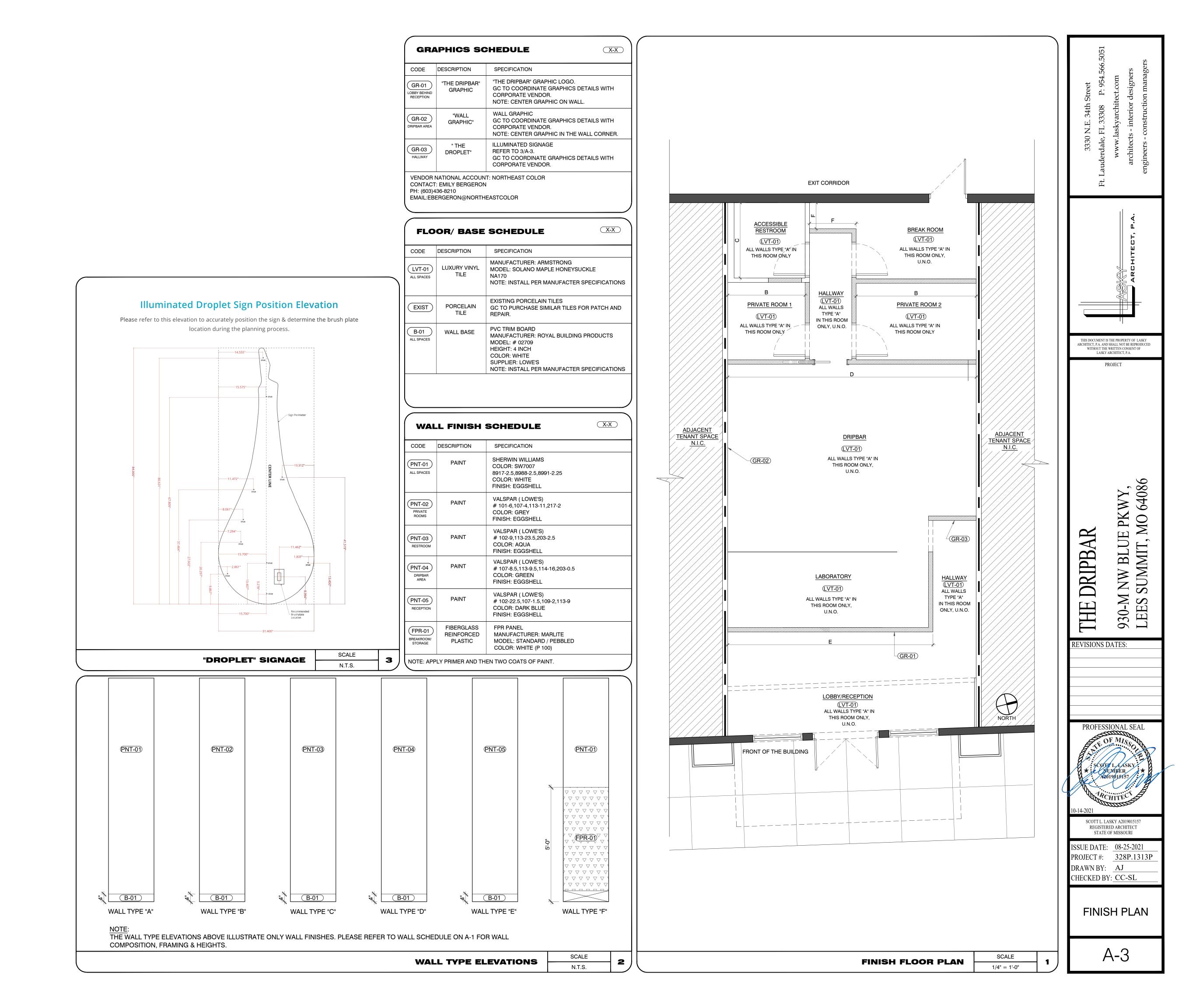
ALL LIGHT FIXTURES SHALL BE FURNISHED ON NEW JUNCTION BOXES.

ALL LIGHTING TO BE PURCHASED FROM:
COMMERCIAL LIGHTING
NATIONAL ACCOUNT

CONTACT: JEFF BERNSTEIN jbernstein@commercial-lighting.net PHONE: (800)755.0155

PI D D	TRIP LED. SEE ELECTRIC LANS & SCHEDULE FOR ETAILS P.T. PLYWOOD -10'-0" A.F.F. PROP CEILING	
DROP CEILING DETAIL	SCALE 1/2" = 1'-0"	2





#### PLUMBING NOTES

- 1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
- 2. PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, OR DESCRIPTION OF THE WORK.
- 3. ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
- PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
- 5. ALL MATERIALS SHALL BE NEW.

OF HIS WORK BY REGULATORY AUTHORITIES.

- 6. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS
- 7. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- 8. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK ON ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF THE WORK OF THE APPROXIMATION AND THE PROPERTY OF THE PROPERTY
- 9. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
- 10. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
- 11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
- 12. EXPOSED WATER PIPING SHALL BE TYPE "L" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANSI/NSF STANDARD 61.
- 13. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
- 14. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- 15. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
- 16. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
- 17. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
- 8. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
- 19. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE WITHIN 72 HOURS OF NOTIFICATION AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER
- 20. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.

PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED. PROVIDE COPY TO LL.

- 21. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL
- 22. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
- 23. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
- 24. WATER PIPING INSULATION SHALL BE 1" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
- 25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVC PIPING WITH 1/2" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. SEE PLUMBING DRAWINGS FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40 FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40.
- 26. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
- ${\bf 27.\,NO\,JOINTS\,UNDERGROUND\,FOR\,COPPER.}$
- 28. PLUMBING FIXTURES SHALL COMPLY WITH IPC.
- 29. WATER HAMMER ARRESTORS AS PER IPC.
- 30. PLUMBING CONTRACTOR TO PROVIDE ANTI-SCALDING VALVE FOR TUBS AND SHOWERS.
- 31. PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
- 32. PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
- 33. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
- 34. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

# SCOPE OF WORK

PROVIDE ALL PLUMBING FOR IV VITAMIN FACILITY INCLUDING ALL WATER & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW TANKLESS WATER HEATER.

COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES.

#### **EXISTING CONTIDITONS NOTES**

STOP AND READ

THE CONTRACTOR AND SUB-CONTRACTORS **SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED**. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

#### **ENERGY CONSERVATION NOTES**

1. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, SECTION C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.11.3 OF MINIMUM PIPE INSULATION THICKNESS.

2. HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, C404.5.1. THE HOT WATER VOLUME FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER MAXIMUM PIPING LENGTH TABLE.

3. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, C404.6.1, CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NOT DEMAND FOR HOT WATER.

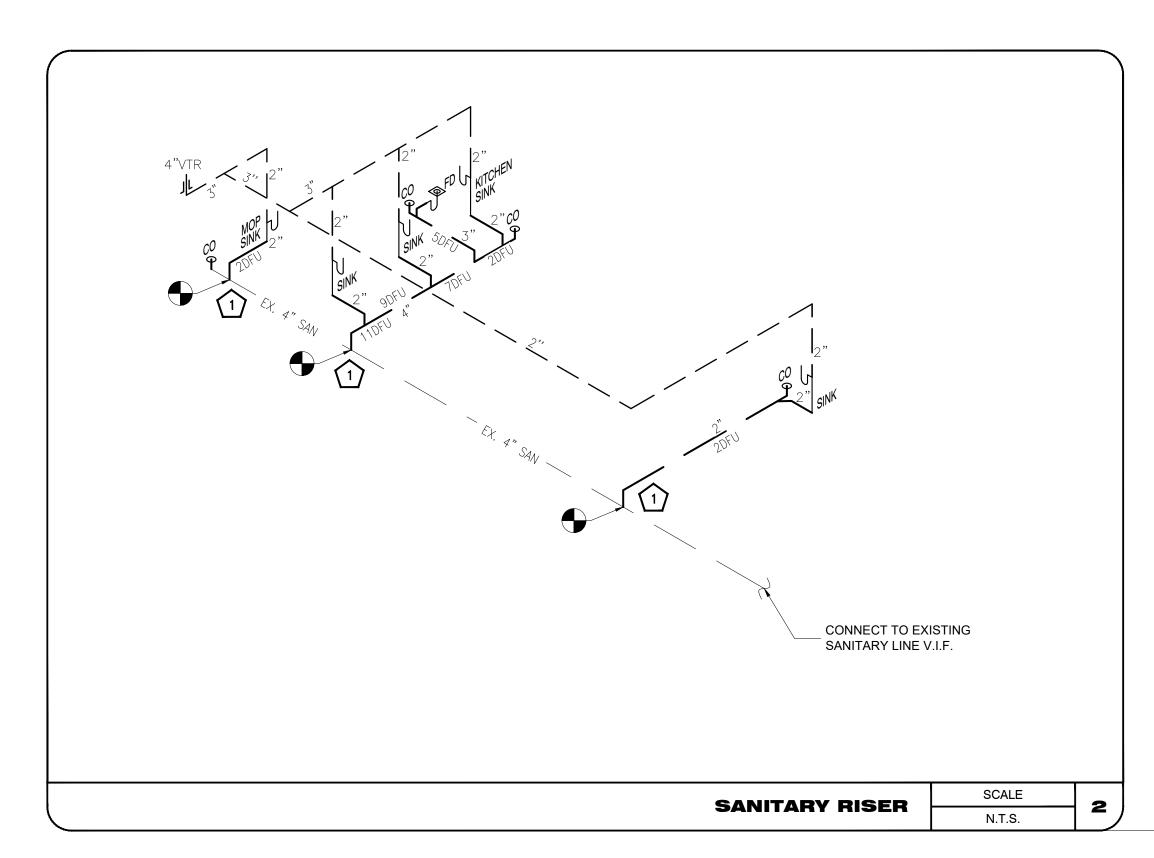
4. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, C404.7, THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO NOT GREATER THAN 104°F (40°C).

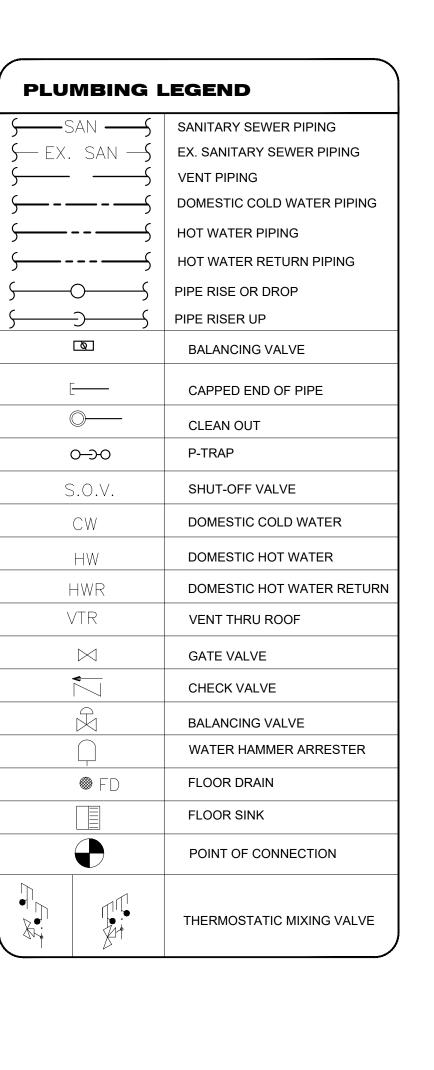
# FIXTURE BRANCH SCHEDULES

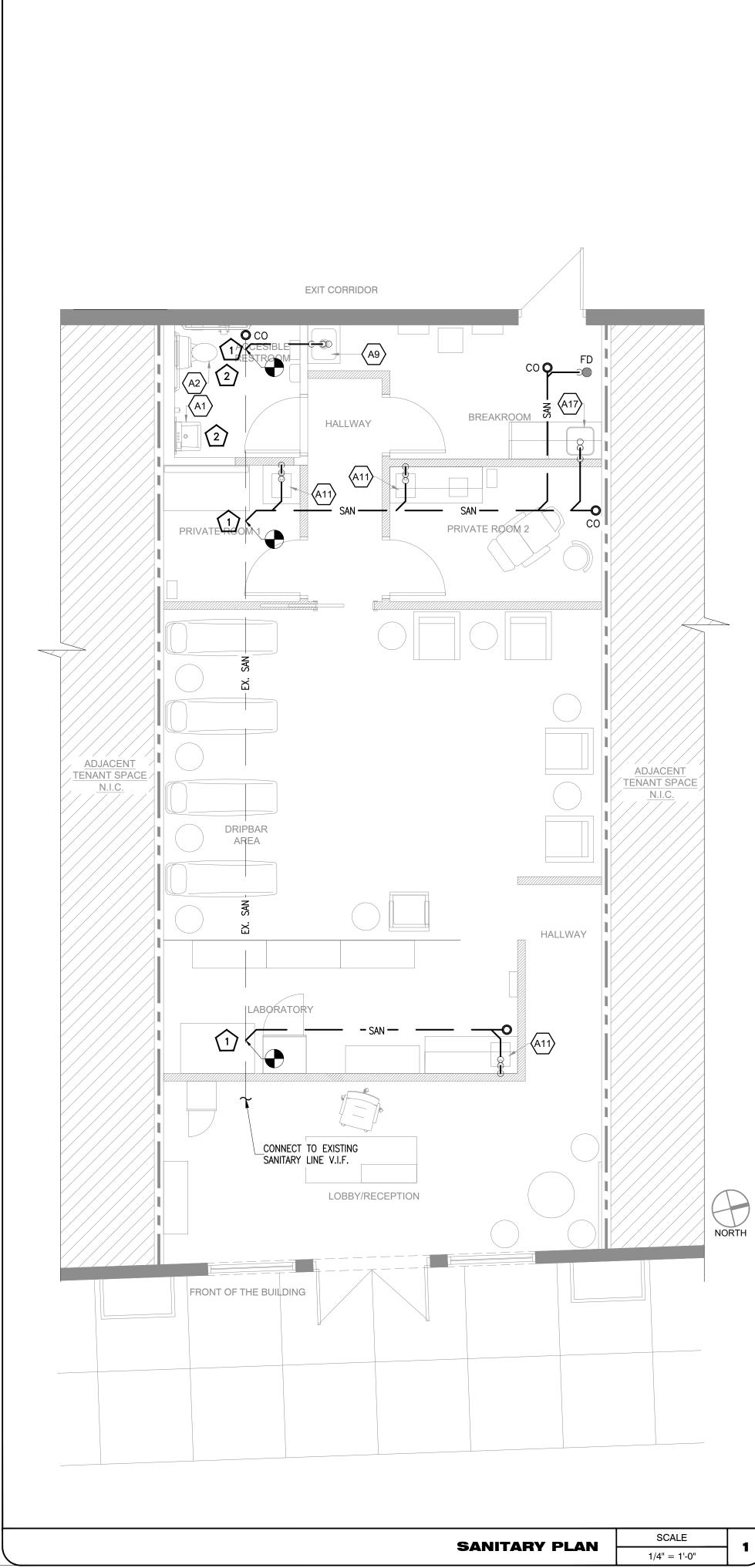
FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (TANK)	3/4"		4"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"-2"
SERVICE SINK	1/2"	1/2"	2"	1 1/2"-2"
FLOOR DRAIN			3"-4"	

## SANITRAY PLAN NOTES

- CONNECT NEW 4" SANITARY LINE INTO LANDLORDS EXISTING SANITARY SERVICE. FIELD VERIFY EXACT LOCATION, SIZE AND FLOW DIRECTION OF LANDLORDS MAIN PRIOR TO BIDDING.
- 2 EXISTING PLUMBING FIXTURE WITH PLUMBING CONNECTION TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS REPLACE IF REQUIRED.









382 NE 191ST ST. SUITE, 49674, MIAMI FL 33179

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PROJECT

)-M NW BLUE PKWY, ES SUMMIT, MO 64086

REVISIONS DATES:

PROFESSIONAL SEAL

ERIC
ENGEL

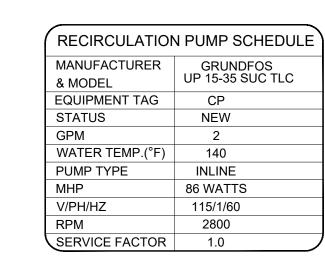
NUMBER
PE-2002014528

ERIC ENGELL #2002014528 PROFESSIONAL ENGINEER STATE OF MISSOURI

ISSUE DATE: 08.23.2021
PROJECT #: 328P.1313P
DRAWN BY: NYE
CHECKED BY: NYE

PLUMBING SANITARY PLAN, RISER & NOTES

P-1



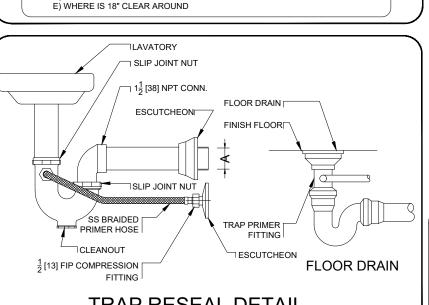
WAT	ER HEATER SCI	HEDULE
ANUFACTURER	HUBBELL	CHRONOMITE
DDEL	TX27-3T4	CM-20L/208
UIPMENT TAG	WH-1	WH-2
ATUS	NEW	NEW
APACITY	TANKLESS	TANKLESS
JANTITY	1	1
V	24	4.16
OW RATE	2.73 GPM*	0.5 GPM*
IERGY FACTOR	0.92	0.97
DLTAGE	480/3/60	208/1/60
/IPERAGE	29	15
EIGHT (EMPTY)	21 LBS.	5 LBS.

N.T.S.

WATER PLAN	NOTES	
CONNECT NEW 1" CW I	INE WITH RP7 TO	EXISTING

CONNECT NEW 1" CW LINE WITH RPZ TO EXISTING CW WATER LINE WITH NEW WATER METER. CONTRACTOR TO FIELD VERIFY THE SIZE AND LOCATION IN FIELD. 2 EXISTING PLUMBING FIXTURE WITH PLUMBING CONNECTION TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS REPLACE IF REQUIRED

PLUM	BIN	G FIXTURE SCHEDUL	.E			WAT	ER	WASTE		
Item No.	Qty.	Description	Manufacturer		Model	Hot	Cold	Waste	Usage	Spe
A1	1	LAVATORY		EXISTING TO REMAIN				1 1/2"		
	1	LAVATORY FAUCET				1/2"	1/2"		0.5	GP
	5	THERMAL MIXING VALVES				1/2"	1/2"			
	1	INSULATED PLUMBING COVERS								
A2	1	WATER CLOSET		EXISTING TO REMAIN			1/2"	4"	1.6	GF
	1	ELONGATED SEAT								
A9	1	MOP SINK	ADVANCE TABCO	9-OP-44				2"		
	1	MOP SINK FAUCET	REGENCY	600FM086		1/2"	1/2"			
A10	2	WATER HEATER	SEE SCHEDULE	SEE SCHEDULE		3/4"	3/4"			
A11	3	SINK	MATRIX DECOR	MD-LU14189R1				1 1/2"		
	3	SINK FAUCET	MOEN	87702		1/2"	1/2"			
A17	1	KITCHEN SINK						1 1/2"		
		FLOOR DRAINS*	ZURN	Z-1446 C/W						



─\ (FCO)

AS REQUIRED FOR DEPTH OF SEWER

HUB AND SPIGOT CAST

FLOOR CLEANOUT DETAIL NOTES

B) AT TURNS OF PIPES GREATER THAN 45 DEGREES
C) AT 90' INTERVALS ON STRAIGHT RUNS

1) LOCATE CLEANOUT AT THIS LOCATIONS: A) BUILDING EXIT

IRON PIPE BELOW FLOOR

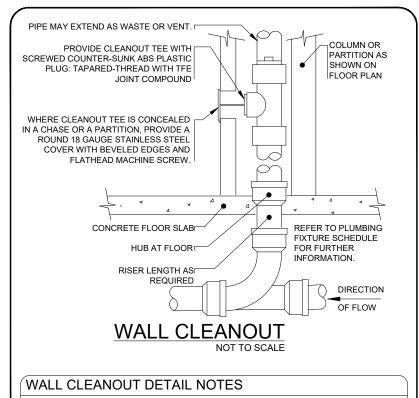
SAME SIZE AS SEWER UP

¬LONG SWEEP ELBOW AT

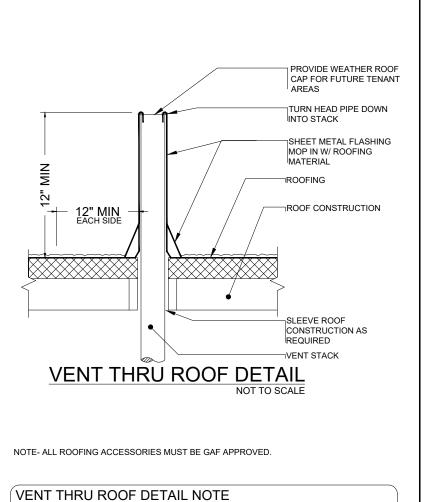
COMBINATION WYE AND

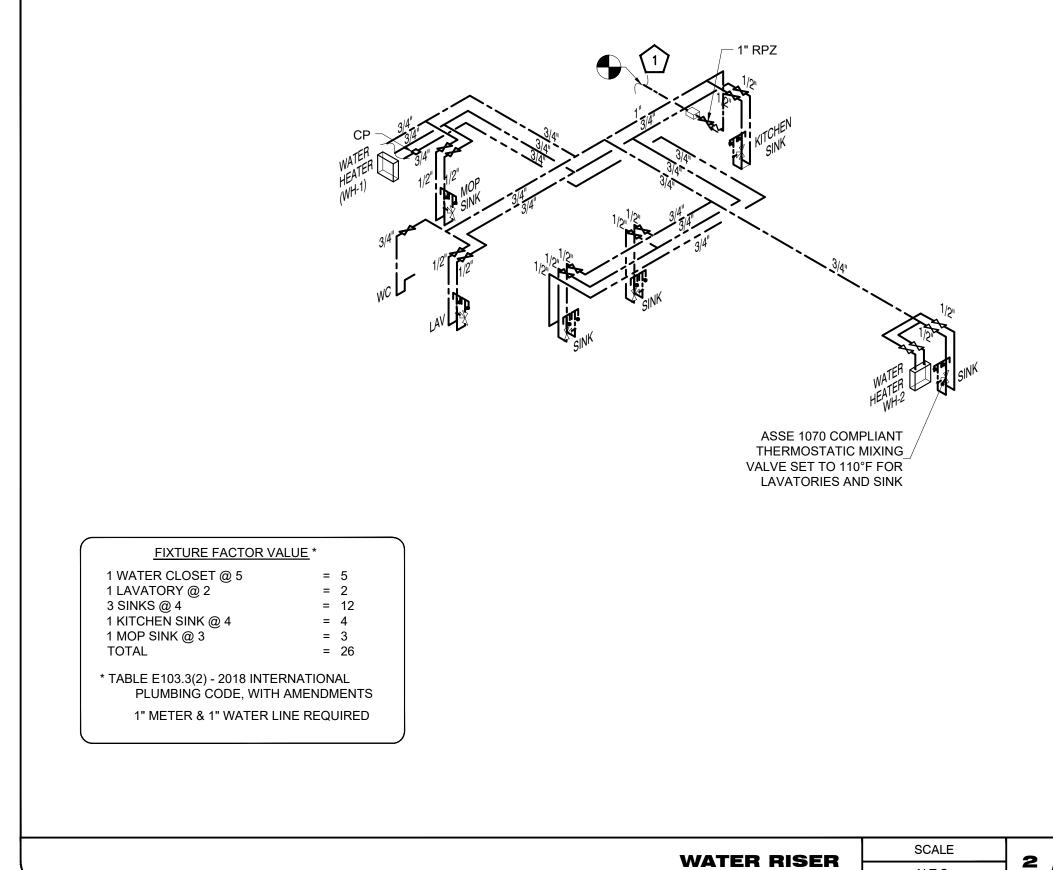
EIGHT BEND IN RUN ENTER

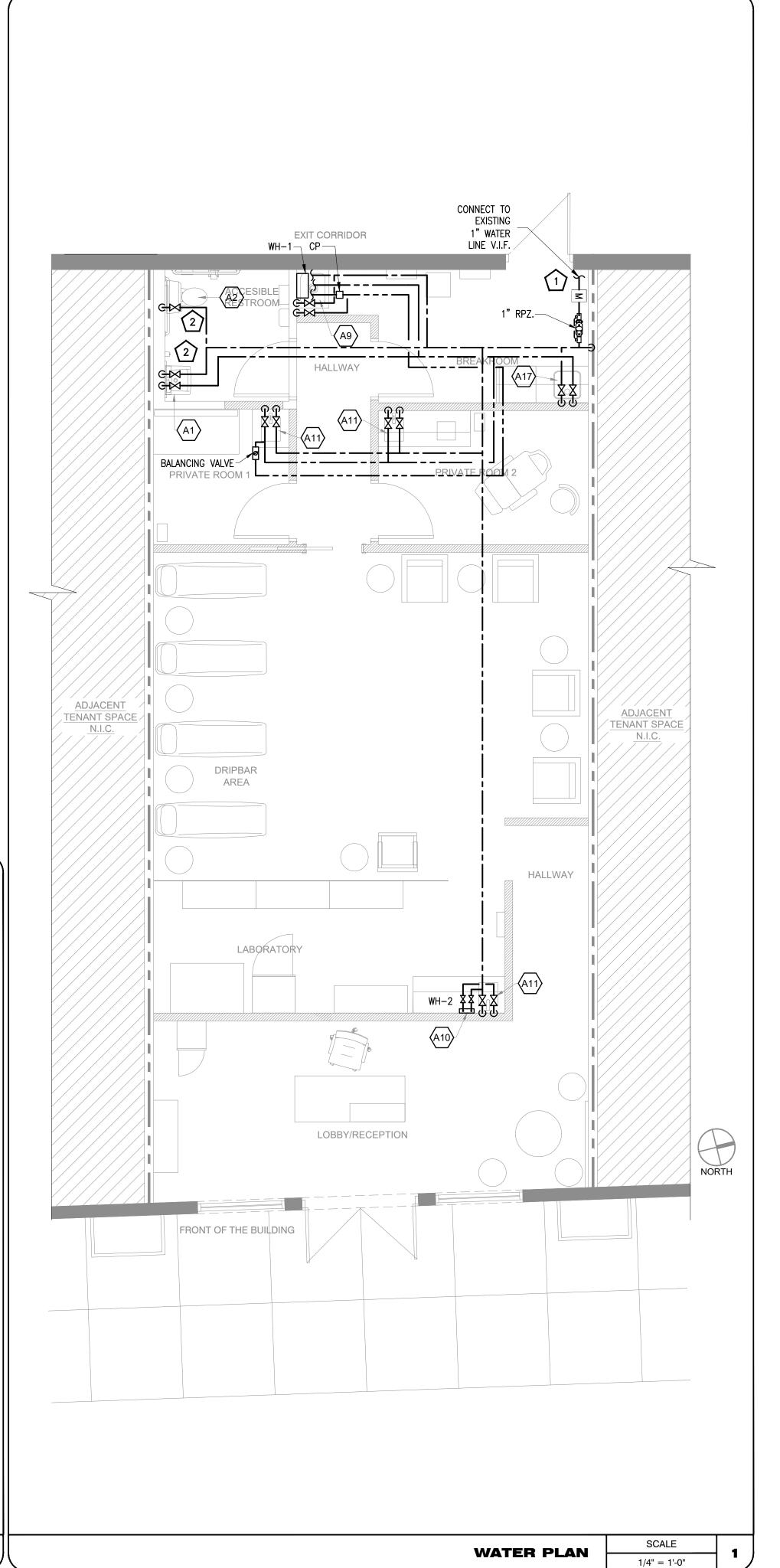
# TRAP RESEAL DETAIL NOT TO SCALE



1) PROVIDE WCO WHERE SHOWN ON PLANE, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT
2) LOCATE ABOVE FIXTURE FLOOR RIM WITHIN 4' OF FLOOR.
3) CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.
4) LONG SWEEP AT END OF LINE OR COMBINATION WYE AND EIGHT BEND IN RUN OF LINE
5) CLEAN OUT FACE SHALL BE WITHIN 4" OF WALL SURFACE. PROVIDE A PIPE EXTENSION IF REQUIRED
6) REFER TO PLUMBING FIXTURE SCHEDULE FOR FUTHER INFORMATION FOR ANY VENT FIRE WITHIN 10'-0" OF ANY DOOR, WINDOW, OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3'-0" ABOVE SUCH







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PROJECT

A NW BLUE PKWY, S SUMMIT, MO 6408

**REVISIONS DATES:** 

PROFESSIONAL SEAL NUMBER

> ERIC ENGELL #2002014528 PROFESSIONAL ENGINEER STATE OF MISSOURI

ISSUE DATE: 08.23.2021 PROJECT #: 328P.1313P DRAWN BY: NYE CHECKED BY: NYE

> PLUMBING WATER PLAN, RISER & NOTES

#### **EXISTING CONDITION NOTES**

THE CONTRACTOR AND SUB CONTRACTOR SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND SECOND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED. THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTAL AND VERTICAL, ELECTRICAL SERVICE/PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY. OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAINED ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME. THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

## **SCOPE OF WORK**

USE EXISTING 5 TON ELECTRIC HEAT ROOFTOP UNIT AND PROVIDE ALL DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM.

PROVIDE NEW BATHROOM EXHAUST FAN.

COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND WITH GC AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT.

#### **MECHANICAL PLAN NOTES**

- USE EXISTING UNIT WITH ELECTRIC HEAT. PROVIDE MODIFICATIONS TO DUCT SYSTEM AS SHOWN. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO A/C UNIT SCHEDULE FOR ADDITIONAL
- FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF U.L. 268A, INTERLOCKED TO SHUTDOWN A/C UNIT UPON DETECTION OF SMOKE. IF NECESSARY PROVIDE SMOKE DETECTOR WITH AN ANNUNCIATOR, ALARM AND POWER L.E.D.'S FOR VISIBLE AND AUDIBLE ALARM SIGNAL, AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUNCIATOR ON ROOM SIDE OF
- ALL DUCTS WILL MINIMUM 26 GAUGE SHEET METAL WITH EXTERNAL DUCT WRAP INSULATION. ALL DUCTS TO BE MANUFACTURED AND INSTALLED ACCORDING TO ASHRAE AND SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A. NO DUCT BOARD ALLOWED.
- THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT.
- ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION. EXTERIOR AIR DUCTS TO HAVE R-8 INSULATION ACCORDING TO INTERNATIONAL ENERGY CONSERVATION CODE - 2018.
- ALL SEAMS, JOINTS, ETC WILL BE SEALED TO MAKE AIR DUCT AIRTIGHT. PRESSURE SENSITIVE MATERIALS AND OTHERS APPROVED BY LATEST SMACNA. SEALING MATERIALS WILL BE USED.
- . ALL EVAPORATOR UNITS SHALL HAVE A FLOAT SWITCH TO CONTROL OVERFLOW THAT WILL AUTOMATICALLY SHUT DOWN THE RTU SYSTEM. THE DEVICE SHALL BE ATTACHED TO THE SECONDARY DRAIN OUTLET ON THE UNIT.
- ALL RTU CONDENSATE DRAINS WILL BE COPPER FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST ROOF DRAIN OR INDIRECT WASTE.
- ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.
- TESTING AND BALANCING SHALL BE DONE ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C) NATIONAL STANDARDS OR EQUIVALENT PROCEDURES
- HANGER ATTACHMENTS TO THE STEEL STRUCTURE WILL BE RATED POWDER ACTUATED FASTENERS, "C" CLAMPS, WELDED STUDS, CLAMP HANGERS, JOIST CLAMPS OR OTHER METHODS RECOMMENDED BY SMACNA'S "METAL AND FLEXIBLE STANDARDS", CHAPTER 4, AND WILL HAVE A MINIMUM SAFETY MARGIN OF
- 4:1. SUSPENDED FROM TOP CHORD OF JOISTS, NOTHING FROM DECK OR CROSS BRACING. ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

#### **GENERAL NOTES**

- CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH
- DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL
- COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.
- VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECT'S OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.
- ALL A/C AND FRESH AIR ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL RECTANGULAR DUCTS OVER CEILINGS MAY BE SHEET METAL WITH EXTERNAL INSULATION. ALL SG SUPPLY GRILLS WILL BE DOUBLE DEFLECTION WITH VOLUME CONTROLS.
- G.C. SHALL CONTRACT LANDLORD-APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- IF APPLICABLE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR KITCHEN VENTILATION SYSTEM INCLUDING TYPE 1 HOOD AND FOR
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

TAG	RTU -1 (E)					
UNIT	GAS					
MANUFACTURER	CARRIER					
MODEL	50HCA06A2M6A					
STATUS	EXISTING					
MOUNTING	ROOF					
NOMINAL CAPACITY	5.0 TONS					
TOTAL BTUH'S	57,500					
SENSIBLE BTUH'S	SAE					
HEATING kW	14					
SEER	SAE					
SUPPLY AIR (CFM)	1,960					
OUTDOOR AIR (CFM)	300					
VOLTAGE	480/3/60					
MCA (A)	27					
MCB(A)	30					
WEIGHT (lbs)	SAE					

1:EXISTING RTU-1(E) SHOULD HAVE AT LEAST 35.5 MBH OF SENSIBLE COOLING & 45 MBH OF TOTAL COOING CAPACITY AND 50 MBH OF HEATING CAPACITY. CONTRACTOR TO FIELD VERIFY AND INFORM ENGINEER FOR DISCREPANCIES. 2:CONTRACTOR TO ADJUST MOTORIZED DAMPER ON FRSH AIR TAP TO PROVIDE OUTSIDE AIR AS MENTIONED IN VENTILATION REQUIRMENT TABLE.

	DIFFUSER SCHEDULE								
	MANUFACTU RER	TITUS	TITUS	TITUS	TITUS	TITUS			
J -1 (E)	DESIGNATION	А	A1	С	D	R			
	USE	SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETUF			
GAS RRIER	MODEL	TDC-AA	TDC-AA	250-AA(2/3 WAY)	FL-15	56FS			
.06A2M6A	MOUNTING	SAT CEILING	HARD CEILING	CEILING	HARD CEILING	SAT CEILIN			
STING	LOCATION	ANY	ANY	BATROOM/ST	ANY	ANY			
OOF				0	41 4 511				
TONS 7,500	FACE SIZE	24" X 24"	24"X24"	12"X12"	4' ,1.5" SLOT, 2 SLOT	AS SHO			
SAE	NECK SIZE	TO MATCH DUCT	TO MATCH DUCT	TO MATCH DUCT	-	TO MAT			
14	FRAME TYPE	LAY IN	FLANGED	FLANGED	-	LAY II			
SAE	FINISH	WHITE	WHITE	FIELD	WHITE	WHIT			
,960		***************************************	***************************************	PAINTED	********	***************************************			
300	NOISE CRITERIA	<30	<30	<30	<30	<30			
0/3/60	ACCESSORIE S	VOLUME DAMPER	OPPOSED BLADE DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUN DAMPE			
30		1							

6"Ø EXHAUST

DUCT UP TO

20"x14" STEEL

SUPPLY DUCT

FROM RTU-1(E)

**TEMPERATURE** 

FOR RTU-1(E)

SENSOF

ADJACEN

TENANT SPACE

FRONT OF THE BUILDING

EXIT CORRIDOR

FAN SCHEDULE						
DESIGNATION	BEF-1(N)					
STATUS	NEW					
QUANTITY	1					
MANUFACTURER	соок					
MODEL	GC-142					
CFM	70@0.25ESP					
WATTS	75					
SONES	1.2					
ACCESSORIES	MANUF. RECOMMENDED					
WEIGHT (LBS)	15					
VOLTAGE	120/1/60					

ADJACENT

TENANT SPACE

20"x12" STEEL

RETURN DUC

TO RTU-1(E)

**THERMOSTAT** 

FOR RTU-1(E)

SCALE

1/4" = 1'-0"

24"X24"

**HVAC PLAN** 

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PROJECT

SUM

**REVISIONS DATES:** 

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> ERIC ENGELL #2002014528 PROFESSIONAL ENGINEER STATE OF MISSOUR

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HVAC NOTES, SCHEDULE AND PLAN

M-1

#### THERMOSTATIC CONTROLS

PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

- THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE INDIVIDUALLY CONTROLLED BY THERMOSTATIC CONTROLS RESPONDING TO TEMPERATURE.
- B. DEAD BAND:

WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CAPABLE OF PROVIDING A TEMPERATURE RANGE OR DEAD BAND OF AT LEAST 5°F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

THERMOSTATS THAT REQUIRE MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.

C. SETBACK CONTROLS:

HEATING SYSTEMS LOCATED IN CLIMATE ZONES 2-8 SHALL BE EQUIPPED WITH CONTROLS THAT HAVE THE CAPABILITY TO AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN ZONE TEMPERATURES ABOVE A HEATING SETPOINT ADJUSTABLE DOWN TO 55°F OR LOWER. COOLING SYSTEMS LOCATED IN CLIMATE ZONES 1B, 2B, AND 3B SHALL BE EQUIPPED WITH CONTROLS THAT HAVE THE CAPABILITY TO AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN ZONE TEMPERATURES BELOW A COOLING SETPOINT ADJUSTABLE UP TO 90°F OR HIGHER OR TO PREVENT HIGH SPACE HUMIDITY LEVELS

D. AUTOMATIC SHUTDOWN:

HVAC SYSTEMS SHALL BE EQUIPPED WITH AT LEAST ONE OF THE FOLLOWING: CONTROLS THAT CAN START AND STOP THE SYSTEM UNDER DIFFERENT TIME SCHEDULES FOR SEVEN DIFFERENT DAY-TYPES PER WEEK, ARE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST TEN HOURS, AND INCLUDE AN ACCESSIBLE MANUAL OVERRIDE, OR EQUIVALENT FUNCTION, THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO TWO HOURS.

E. HEAT PUMP SUPPLEMENTARY HEAT:

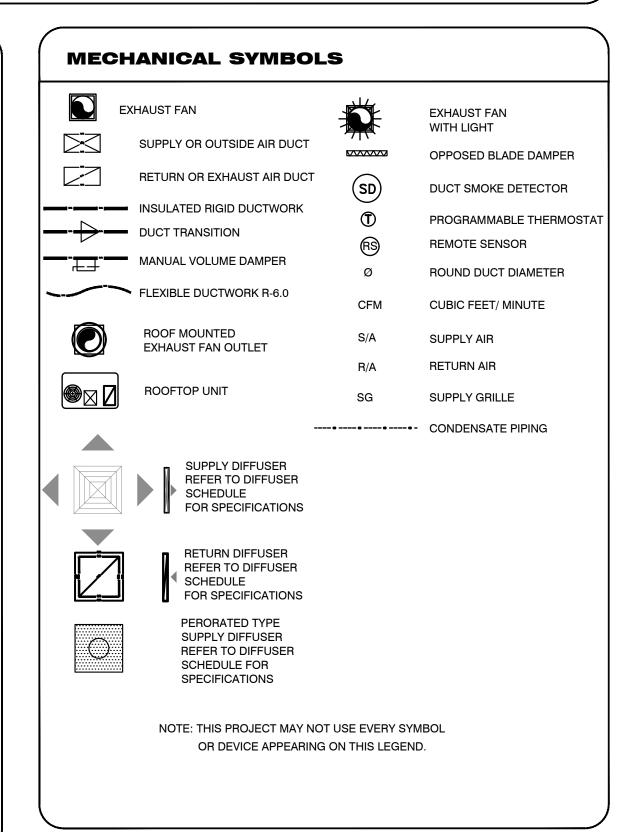
HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT, EXCEPT DURING DEFROST, PREVENT SUPPLEMENTARY HEAT OPERATION WHERE THE HEAT PUMP CAN PROVIDE THE HEATING LOAD.

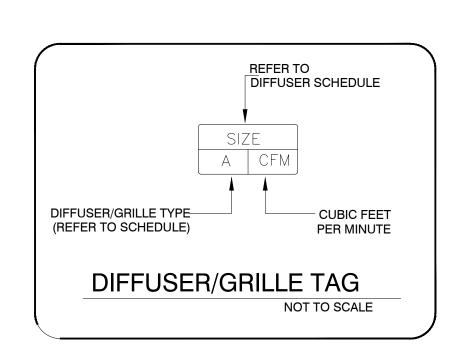
# LEE'S SUMMIT BUILDING DEPARTMENT NOTES

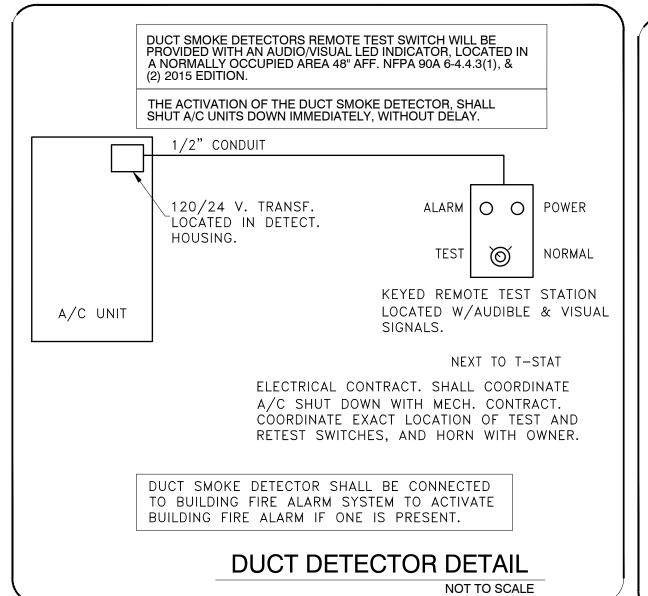
ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2018 IBC AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE. THE CONTRACTOR SHALL ENGAGE THE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE

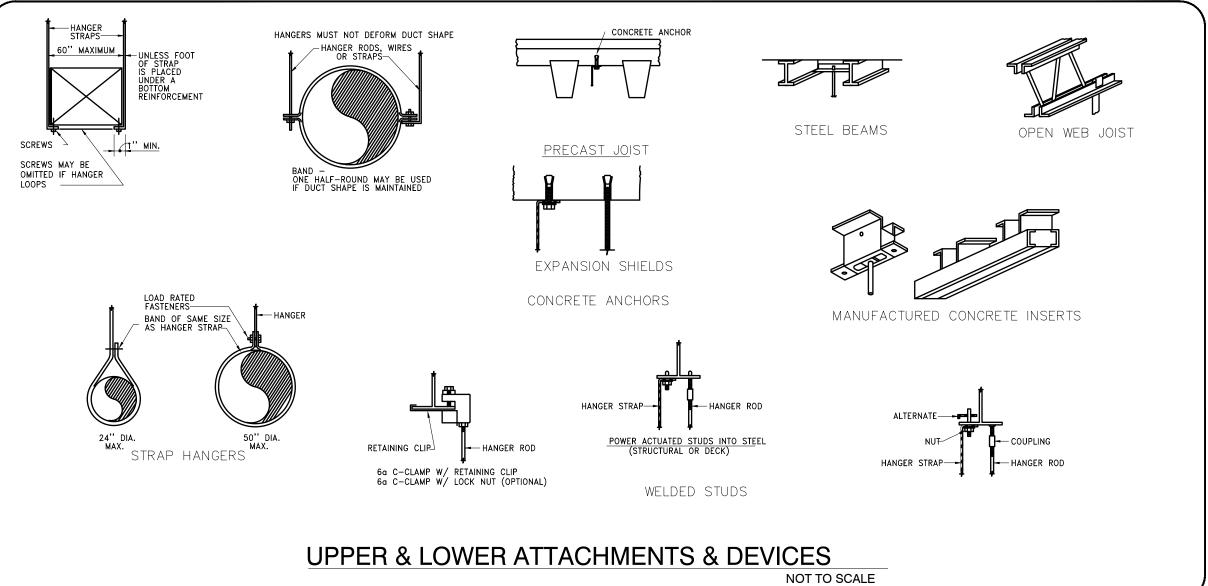
- REQUIRED SPECIAL INSPECTIONS AND TESTS. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE
- CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
- A. DUCT CONSTRUCTION AND INSTALLATION- 2018 IMC SECTION 603 B. AIR INTAKES, EXHAUSTS AND RELIEF - 2018 IMC SECTION 401.5
- MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG.
- FAHRENHEIT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY IMC-2018.
- VENTILATION FOR ALL AREA SHALL COMPLY WITH IMC-2018.
- A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY IMC-2018.
- REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
- 9. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER
- BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES. MECHANICAL SYSTEMS SHALL BE COMMISSIONED PER IECC 2018 C403.3.2, C408.2.1, C408.2.5 FINAL
- COMMISSIONING REPORT SHALL BE DUE WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY. 9. A COMMISSIONING PLAN SHALL BE DEVELOPED BY A LICENSED DESIGN PROFESSIONAL, MECHANICAL
- ENGINEER OR APPROVED AGENCY. 10. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE LICENSED DESIGN PROFESSIONAL, ELECTRICAL ENGINEER, MECHANICAL
- ENGINEER OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED
- ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183. 12. SMOKE DETECTOR SHALL MEET UL268A.

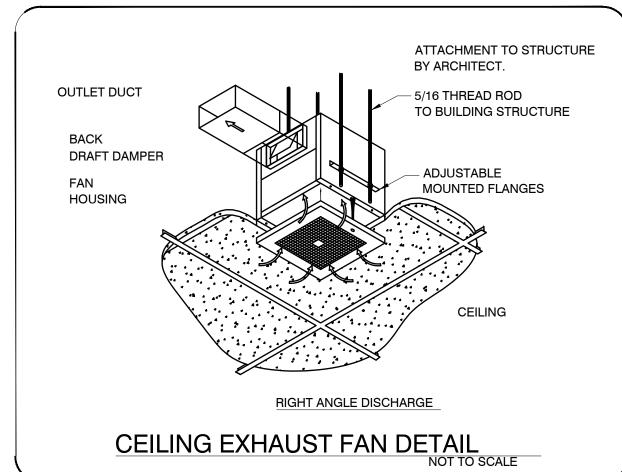
#### OCCUPANCY CALCULATION AS PER, IMC-2018 130 SQ. FT. @30 PEOPLE/1000SQ.FT. 4 PEOPLE RECEPTION 407 SQ. FT. @15 PEOPLE/1000SQ.FT. 7 PEOPLE DRIPBAR LABORATORY 137 SQ. FT. @15 PEOPLE/1000SQ.FT. 3 PEOPLE PRIVATE ROOM 1 84 SQ. FT. @15 PEOPLE/1000SQ.FT. 2 PEOPLE PRIVATE ROOM 2 55 SQ. FT. @15 PEOPLE/1000SQ.FT. 1 PEOPLE 95 SQ. FT. @25 PEOPLE/1000SQ.FT. 3 PEOPLE (OCCUPANCY FOR VENTILATION CALCULATIONS IS CONSIDERED AS PER ARCHITECTURAL LAYOUT) VENTILATION REQUIREMENTS PER IMC-2018 DRIPBAR 407 SQ. FT. X 0.06 CFM/SQ. FT. = 25 CFM 7 PEOPLE X 5 CFM/PEOPLE. = 35 CFM 130 SQ. FT. X 0.06 CFM/SQ. FT. = 8 CFM 4 PEOPLE. X 5 CFM/PEOPLE. = 20 CFM **HALLWAY** 191 SQ. FT. X 0.06 CFM/SQ. FT. = 12 CFM BREAK ROOM 95 SQ. FT. X 0.18 CFM/SQ. FT. = 18 CFM 3 PEOPLE. X 7.5 CFM/PEOPLE. = 23 CFM PRIVATE ROOM 1 84 SQ. FT. X 0.06 CFM/SQ. FT. = 6 CFM 2 PEOPLE. X 5.0 CFM/PEOPLE. = 10 CFM 55 SQ. FT. X 0.06 CFM/SQ. FT. = PRIVATE ROOM 2 4 CFM 1 PEOPLE. X 5.0 CFM/PEOPLE. = 5 CFM 137 SQ. FT. X 0.06 CFM/SQ. FT. = 9 CFM **LABORATORY** 3 PEOPLE. X 5.0 CFM/PEOPLE. = 15 CFM OUTSIDE AIR REQUIRED 190 CFM **OUTSIDE AIR THROUGH RTU-3(E)** 300 CFM O/A PROVIDED 300 CFM BEF-1(N) -70 CFM RTU BAROMETRIC RELIEF 230 CFM

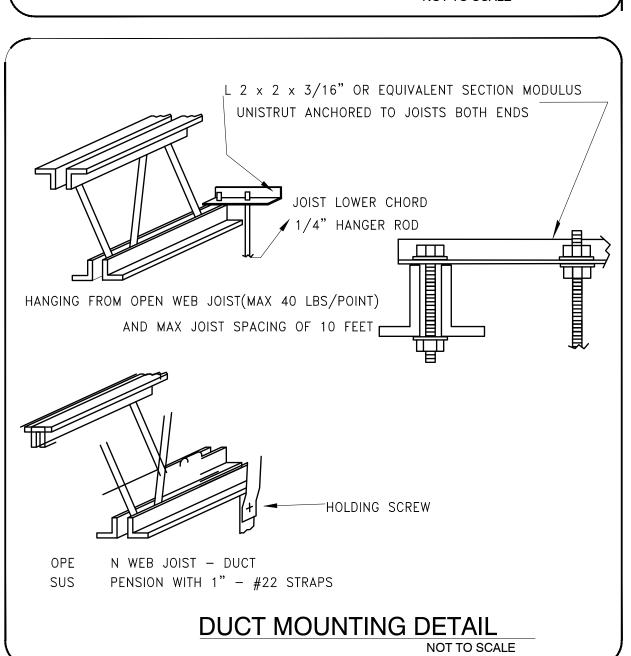


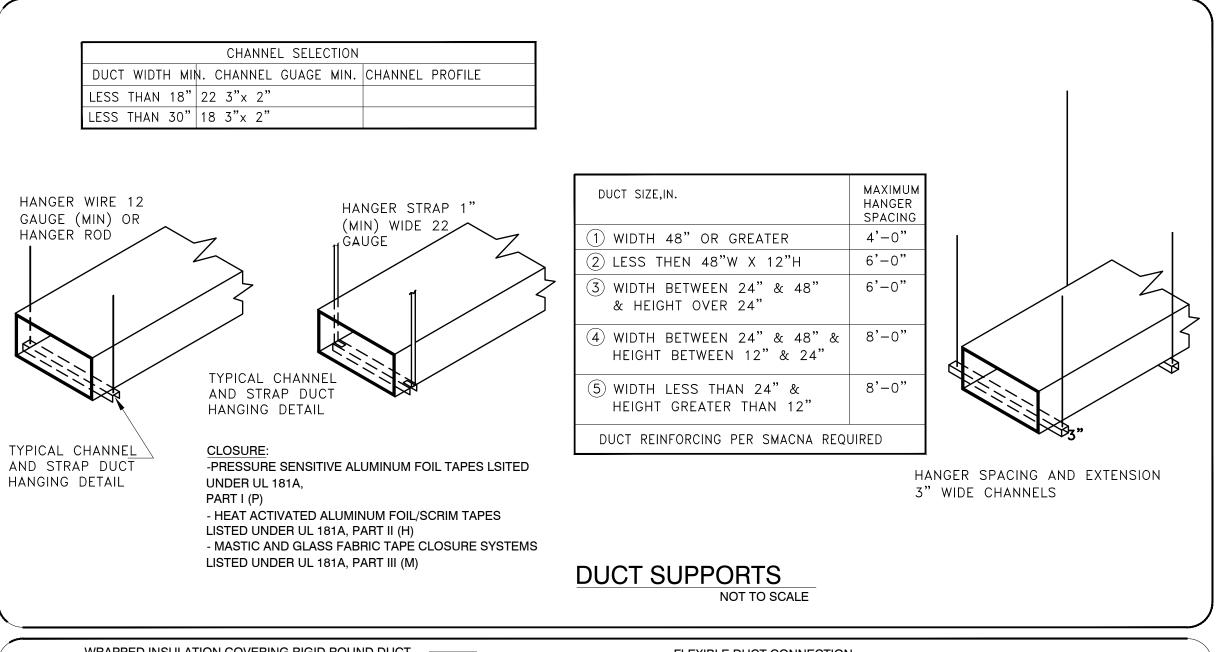


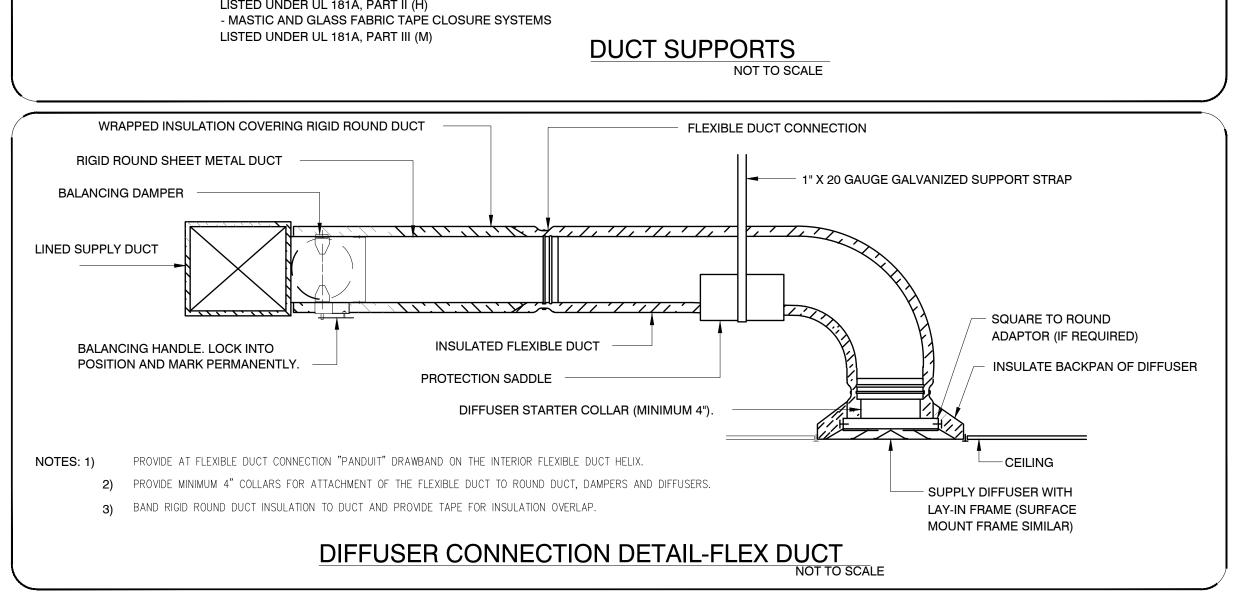


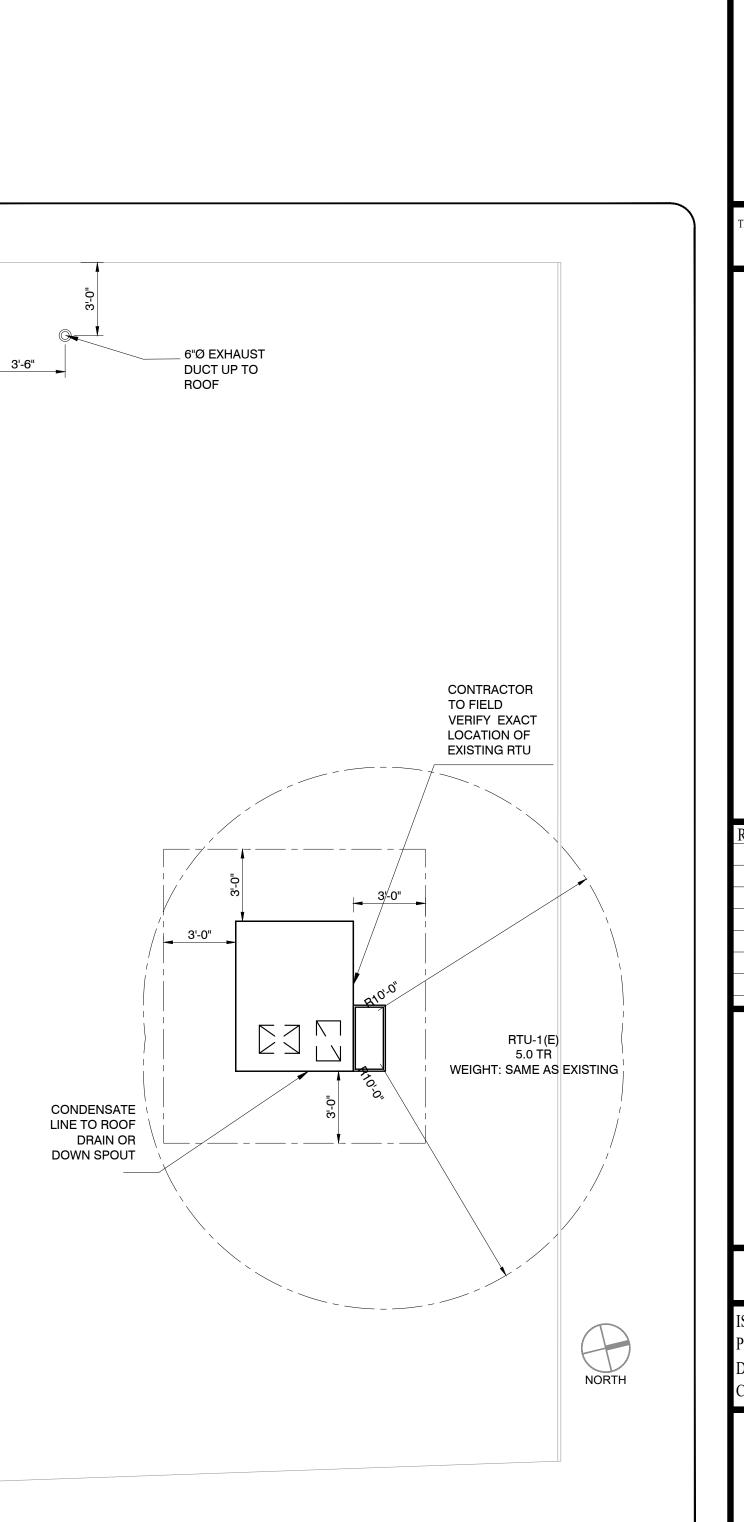












**ROOF PLAN** 

1/4" = 1'-0"



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930-M NW BLUE PKWY,

REVISIONS DATES:

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ERIC
ENGEL

NUMBER
PE-2002014528

ERIC ENGELL #2002014528 PROFESSIONAL ENGINEER STATE OF MISSOURI

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CHECKED BY: NYE

HVAC ROOF PLAN & DETAILS

M-2

#### **SCOPE OF WORK**

USE THE EXISTING 100 AMP 277/480V - 3¢ ELECTRICAL SERVICE AND EXISTING ELECTRICAL PANEL AND TRANSFORMER. PROVIDE ALL NECESSARY EQUIPMENT AND ALL WIRING AND LIGHTING FOR DRIPBAR BUILDOUT INCLUDING WIRING FOR HVAC. COORDINATE WITH G.C. FOR LOW VOLTAGE

## **ELECTRICAL PLAN NOTES**

- ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT. CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS 36. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE WRITTEN INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING DIRECTORIES. CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION 38. ALL LIGHT SWITCHES TO BE AT 42" A.F.F. OF THE NATIONAL ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
- ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
- 9. CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.
- 10. ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
- 11. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146
- 12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
- B. ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
- 4. SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
- 15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.
- 16. PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
- 17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL | 47. GAS PIPING SHALL BE BONDED. CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THHN INSULATION.
- 9. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- 0. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL 50. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER
- 1. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS THE BUILDING OWNER. REQUIRED BY THE N.E.C. OR LOCAL CODES.
- 22. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- 23. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR 53. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- 24. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- 25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
- 26. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL | 56. ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS. CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE 28. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND

ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST

- TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
- 29. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
- 30. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- 31. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR

- TYPE CIRCUIT BREAKERS.
- 32. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
- 33. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C. NEMA, AND IECE.
- 34 CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY
- 35. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
- 37. ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 24" A.F.F.
- UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.
- 39. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 40. BREAKER AND PANELS -- ALL CURRENT CARRYING BUSSES SHALL BE COPPER, ALL GROUND BUS BARS SHALL BE COPPER, PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD
- 41. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- 42. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
- 43. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
- 44. CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH
- 45 VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3% WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
- 46. CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION -- FOR THE WHOLE CIRCUIT.
- 48. ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
- 49. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
- PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
- 51. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO
- ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY
- IN RIGHT ANGLES TO THE BUIDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
- 54. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE
- 55. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
- 57. 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTR LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN
- 58. TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANY/ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANT'S GC AT TENANT'S SOLE EXPENSE.
- 59. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
- 60. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.

LIT DURING ALL MALL BUSINESS HOURS.

## **GENERAL LIGHTING NOTES**

- A. WHERE LIGHT FIXTURE IS FOLLOWED BY "NL", THIS FIXTURE IS DESIGNATED AS A NIGHT LIGHT AND SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.
- UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE AND LOWER CASE LETTER DENOTES SWITCHING SCHEME.
- C. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR

SYMBOL	DESCRIPTION					
	EXHAUST FAN					
	COMBINATION EXHAUST FAN/LIGHT (REFER TO MECHANICAL PLANS)					
S	SPEAKERS @ CEILING					
J	JUNCTION BOX					
DS	CEILING MOUNTED DAYLIGHT SENSOR					
<b>3</b>	BATTERY BACK UP EXIT LIGHT					
Q_\_\Q	BATTERY BACK UP EMERGENCY LIGHT					
\$\$	WALL SWITCH (SINGLE, DOUBLE, )					
\$ <sub>3</sub>	WALL SWITCH (3 WAY, 4 WAY)					
\$ <sub>⊤</sub>	WALL SWITCH (TIMER)					
\$₀	DIMMER WALL SWITCH					
S <sub>D</sub>	OCCUPANCY SENSOR WALL SWITCH					
\$ <sub>vs</sub>	VARIABLE SPEED SWITCH					
$\Phi_{\!\!A}$	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED.					
'A	SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R					
	B - NEMA 6-15R					
	C - NEMA 14-30R					
	D - NEMA 14-50R E - NEMA L6-30R					
<b>⊕</b>	DUPLEX RECEPTACLE					
<del></del>	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS					
<del>-</del>	HALF SWITCHED DUPLEX RECEPTACLE					
•	230 VOLT RECEPTACLE					
<u>*</u>	QUADRUPLEX RECEPTACLE					
	FLOOR MOUNTED. FLUSH DUPLEX RECEPTACLE					
	FLOOR MOUNTED. FLUSH QUAD. RECEPTACLE					
	FLOOR MOUNTED. FLUSH 230 VOLT RECEPTACLE					
CL <del>D</del>	CEILING MOUNTED DUPLEX RECEPTACLE					
CLE	ELECTRICAL PANEL					
	DISCONNECT SWITCH					
<del>_</del> _	USB CHARGER RECEPTACLE					
<u></u>	TELEVISION OUTLET					
	TELEPHONE OUTLET					
	TELEPHONE/DATA OUTLET					
	DATA OUTLET					
	2					
	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET					
QU <sub>A</sub>	QUAD. DATA OUTLET RJ45					
Ū	THERMOSTAT DEVICE					
M	AC OUTDOOR UNIT MOTOR AS NOTED WITH WEATHERPROOF CONTROLLER AND DISCONNECT SWITCH WITH					
	NON FUSED DISCONNECT SWITCH AMPERAGE,A ND NUMBER OF POLES AS NOTED					
	30A/240V NON FUSED DISCONNECT SWITCH					
60A/240V NON FUSED DISCONNECT SWITCH						
100A/240V NON FUSED DISCONNECT SWITCH						
	200A/240V NON FUSED DISCONNECT SWITCH					
ABBRE	VIATIONS:					
	ABOVE FINISH FLOOR= A.F.F. BELOW COUNTER= BC					
	COUNTER TOP LEVEL= C PUSH BUTTON= PB					
	GROUND FAULT INTERRUPTER= GFCI UNDER CABINET= UC					
	VERIFY PRIOR TO INSTALL= VH VAPOR PROOF= VP					
	WEATHER PROOF= WP SAI VAGED = S					

# **EXISTING CONTIDITONS NOTES**

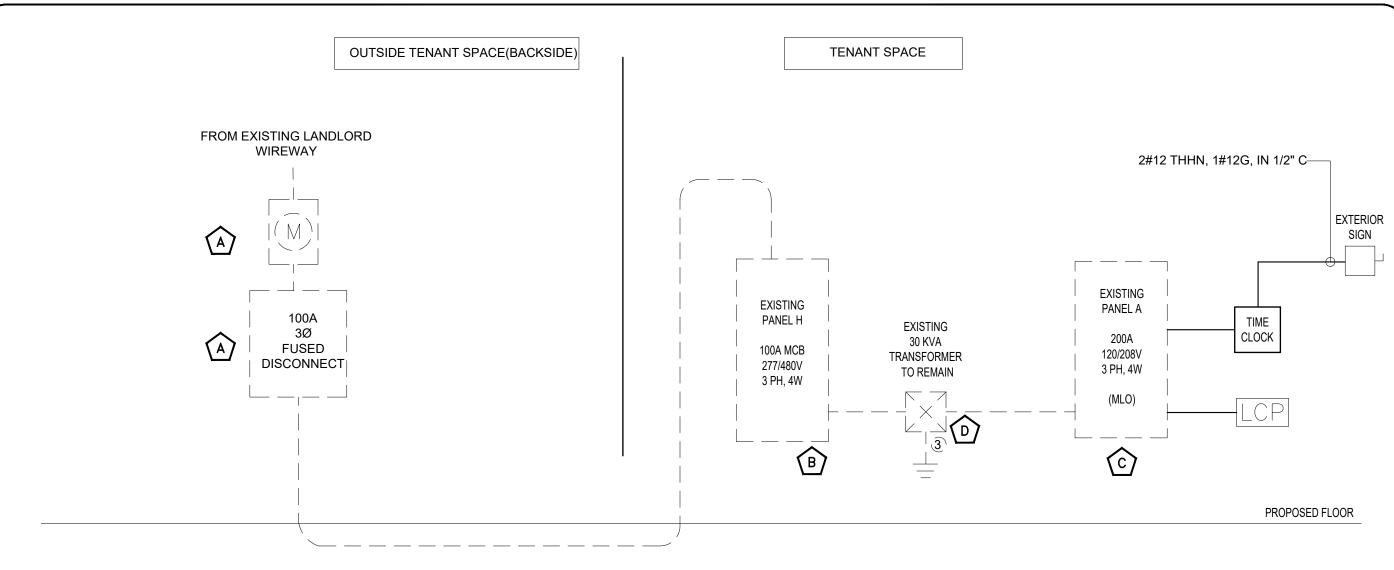
WEATHER PROOF= WP

# **STOP AND READ**

THE CONTRACTOR AND SUB-CONTRACTORS SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

SALVAGED = S

#### LIGHTING FIXTURE SCHEDULE NUMBER OF TYPE DESCRIPTION MANUFACTURER LAMP TYPE MOUNTING **FIXTURES** WATTS NUMBER 4" RECESSED DOWN LIGHT LED COMMERCIAL LIGHTING 10 WATTS RECESSED SS4G4DR W/DIMMING 4" RECESSED LED WALL COMMERCIAL LIGHTING 120 LED 10 WATTS RECESSED SS4G4DR WASH W/DIMMING 0 ACCENT PENDANT LIGHTS COMMERCIAL LIGHTING TBD 120 LED 40 WATTS PENDANT $\odot$ PENDANT CHANDELIER COMMERCIAL LIGHTING 120 TBD LED 50 WATTS LED WALL SCONE 120 TRACK COMMERCIAL LIGHTING TBD LED 10 WATTS 4" RECESSED DOWN LIGHT LED COMMERCIAL LIGHTING 120 LED 21 WATTS RECESSED SS4G4DR W/DIMMING 4" RECESSED DOWN LIGHT LED **COMMERCIAL LIGHTING** 120 LED 13 WATTS RECESSED SS4G4DR W/DIMMING - - - -LED ROPE LIGHT COMMERCIAL LIGHTING TBD 120 LED EXIT/EMERGENCY COMBO COMMERCIAL LIGHTING WALL/CEILING LRP-LED 120 LED 5 WATTS WALL EU EMERGENCY LIGHTS COMMERCIAL LIGHTING ECR-LED 120 LED 5 WATTS EXIT/EMERGENCY COMBO EX WALL COMMERCIAL LIGHTING ELM2 120 LED 5 WATTS EXISTING TRACK LIGHT DIMMER WALL SWITCH CLI-NAROSDS 120 COMMERCIAL LIGHTING INDUSTRY TIMER WALL SWITCH 6124 120 120 OS OCCUPANCY WALL SWITCH ODS10 LEVITON \$<sub>os</sub> CEILING OCCUPANCY SENSOR O2C10-UDW 120 LEVITON LITEKEEPER LIGHTING CONTROL PANEL 120 COMMERCIAL LIGHTING



# **ELECTRICAL RISER KEYED WORK NOTES**

- EXISTING 100A, 277/480 VOLTS 3-PHASE ELECTRICAL DISCONNECT SWITCH AND METER ARE LOCATED AT THE BACK OF SPACE. E.C. SHALL VERIFY THE LOCATION AND COORDINATE WITH THE OWNER FOR EXACT DISTRIBUTION.
- EXISTING 100A, 277/480V, 3-PHASE ELECTRICAL PANEL "H" AND ITS CONNECTIONS TO REMAIN . E.C. TO VERIFY OPERABLE CONDITIONS OF PANEL IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
- EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL PANEL "A" TO REMAIN . E.C. TO VERIFY OPERABLE CONDITION OF PANEL IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
- EXISTING 30KVA, 3-PHASE TRANSFORMER AND ITS CONNECTIONS TO REMAIN. E.C TO VERIFY OPERABLE CONDITION OF TRANSFORMER

D EXISTING 30KVA, 3-PHASE TRANSPONVIEW TO SEE THAT IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.

**ELECTRICAL RISER** 

SCALE N.T.S.

 $- 
ot \times -$  REMOVED

**ELECTRICAL RISER SYMBOLS:** 

EXISTING

ITEM/FEEDER

EXISTING ITEM/FEEDER

TO BE DISCONNECTED &

TO REMAIN

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SUM

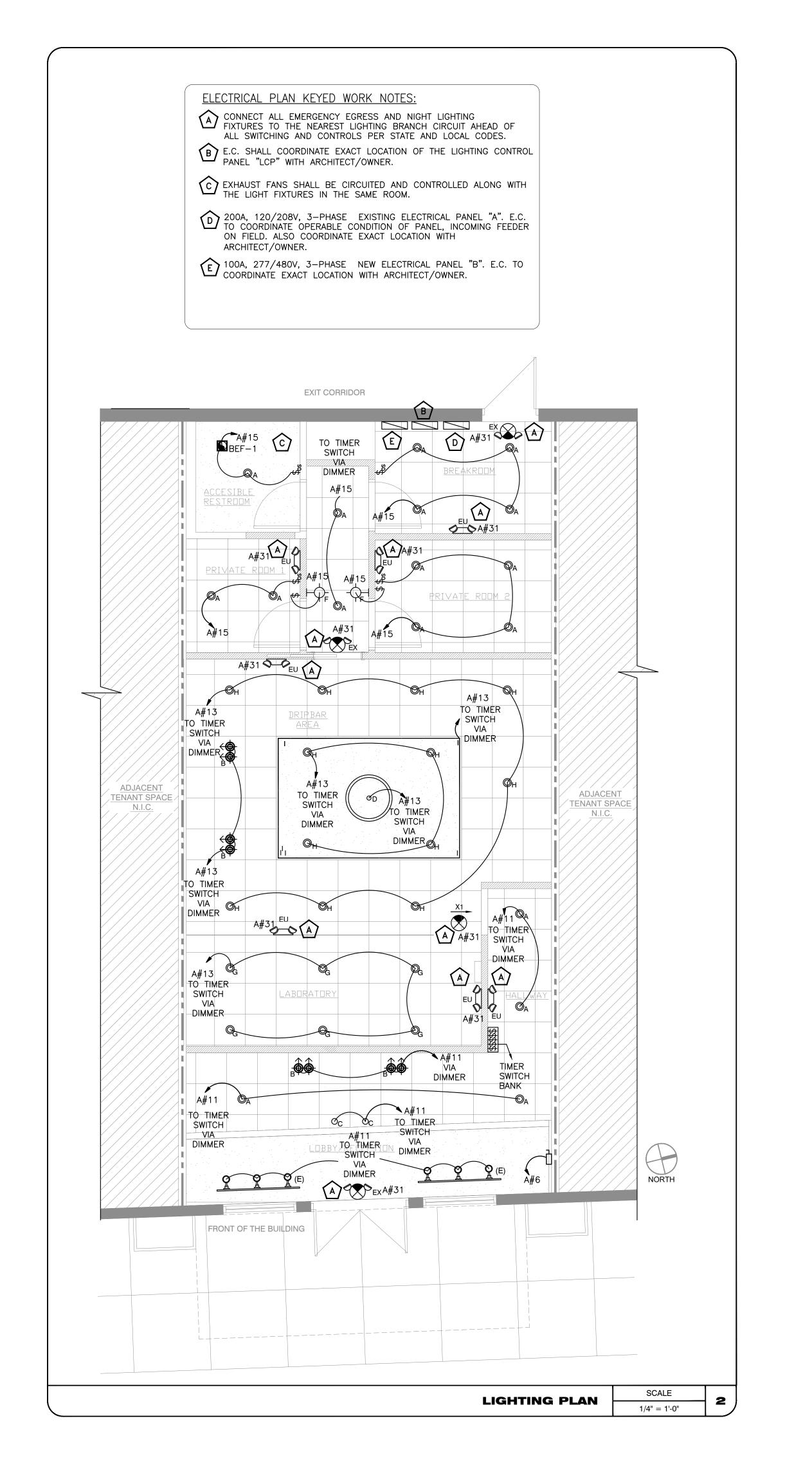
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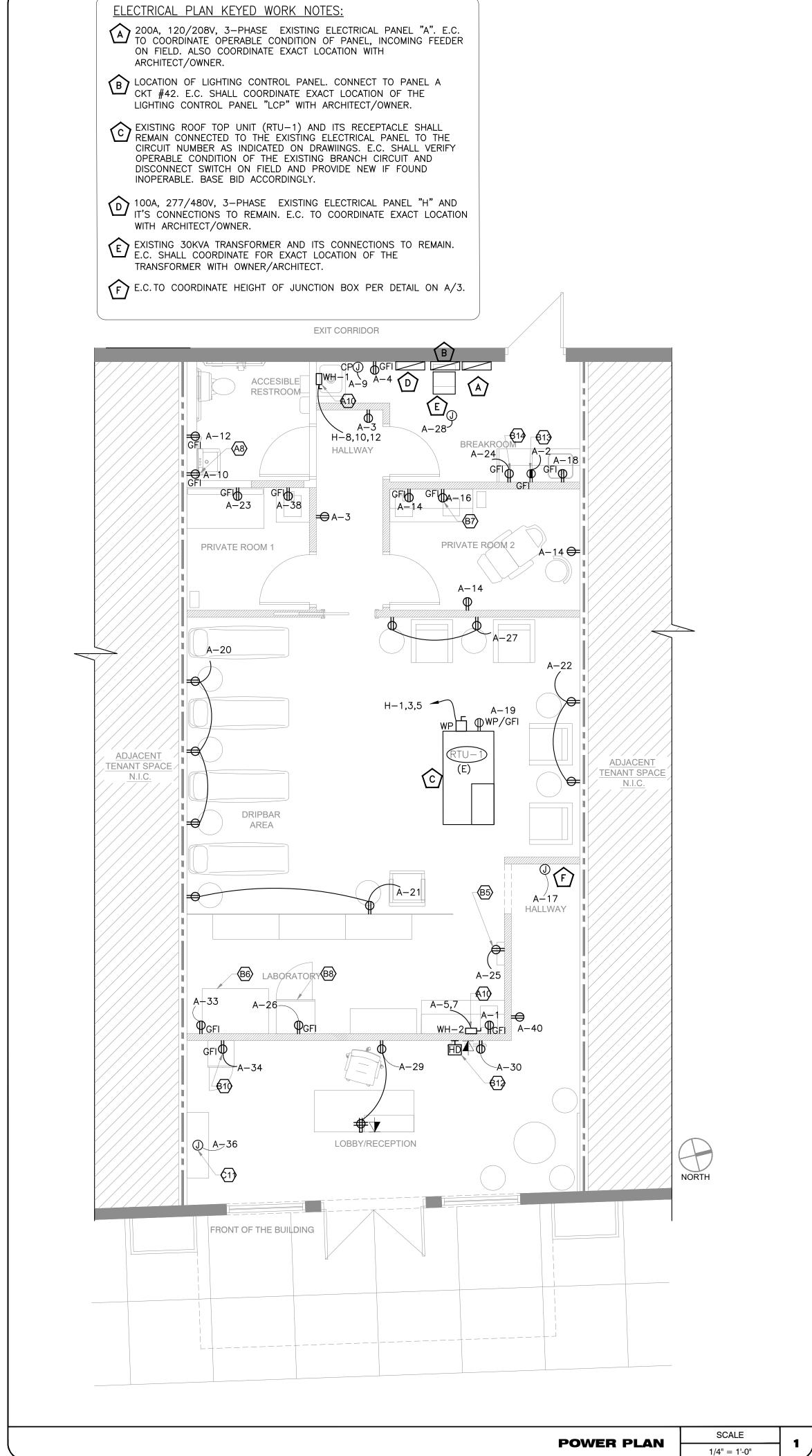
PROFESSIONAL SEAL NUMBER PE-2002014528 -

PROFESSIONAL ENGINEER STATE OF MISSOURI

ISSUE DATE: 08.23.2021 PROJECT #: 328P.1313P DRAWN BY: NYE CHECKED BY: NYE

> **ELECTRICAL** PLAN NOTES AND RISER DIAGRAM





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PROFESSIONAL SEAL

ERIC
ENGEL

NUMBER
PE-2002014528

ERIC ENGELL #2002014528 PROFESSIONAL ENGINEER

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LIGHTING & POWER PLAN

E-2

SCALE 1

PANEL:	A(EXISTIN	NG)						T		T			Ι		MOUNTING:	SURFA	ACE	
208Y/120	VOLTS,		3	PHASE,			4	WIRE										
		MLO	200A	BUS	225A		MIN,											
CKT NO.	TRIP AMPS		DESCRIPTIO	N OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PE A	R PHASE (I	(VA)	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE			TRIP AMPS	CKT NO.	
1	20*	GECL REC	EPTACLE- LA	BORATORY	R	0.18	2#12, #12G, 3/4"C	0.99	В		2#12, #12G, 3/4"C	0.81	E	B13-UNDE	RCOUNTER REFRI	GERATOR	20*	2
3	20		CLE HALLWA		R	0.36	2#12, #12G, 3/4"C	0.33	0.54		2#12, #12G, 3/4"C	0.18	R		OM RECEPTACLE		20	4
5					Н	2.10				4.30	2#12, #12G, 3/4"C	2.20	L	BUILDING :	SIGNAGE		20	6
7	28/30	WATER I	HEATER(WH-2	2)	Н	2.10	2#10, #10G, 3/4"C	2.10			, , ,			SPARE			20	8
9	20	СР			М	0.10	2#12, #12G, 3/4"C		0.22		2#12, #12G, 3/4"C	0.12	R	(A8)LIGHT	ED MIRROR		20*	10
11	20	LIGHTING	G RECEPTION	& HALLWAY	L	0.24	2#12, #12G, 3/4"C			0.42	2#12, #12G, 3/4"C	0.18	R	GFCI RECEPTACLE			20*	12
13	20	LIGHTING	G DRIPBAR &	LABORATORY	L	0.32	2#12, #12G, 3/4"C	0.86			2#12, #12G, 3/4"C	0.54	R	CONVENIENCE RECEPTACLE			20*	14
15	20	RESTROC	OM BREAKRO	OM & PVT ROOM	L	0.14	2#12, #12G, 3/4"C		1.58		2#12, #12G, 3/4"C	1.44	Е	SPINNER			20*	16
17	20	DROP SIG	3N		L	0.25	2#12, #12G, 3/4"C			0.43	2#12, #12G, 3/4"C	0.18	R	GFCI RECEI	PTACLE		20*	18
19	20	RTU REC	EPTACLE		R	0.36	2#12, #12G, 3/4"C	0.90			2#12, #12G, 3/4"C	0.54	R	DRIPBAR R	ECEPTACLE		20	20
21	20	DRIPBAR	RECEPTACLE		R	0.36	2#12, #12G, 3/4"C		0.90		2#12, #12G, 3/4"C	0.54	R	DRIPBAR R	ECEPTACLE		20	22
23	20	PRIVATE	ROOM 1 REE	PTACLE	R	0.36	2#12, #12G, 3/4"C			0.72	2#12, #12G, 3/4"C	0.36	Е	(B14)MICR	OWAVE		20*	24
25	20*	DEFRILLA	ATOR		R	0.18	2#12, #12G, 3/4"C	0.88			2#12, #12G, 3/4"C	0.70	Е	(B8)PHARN	AACY REFRIGERAT	ΓOR	20*	26
27	20*	DRIPBAR	RECEPTACLE		R	0.36	2#12, #12G, 3/4"C		0.94		2#12, #12G, 3/4"C	0.58	Е	RECIRCULA	ATION PUMP-CP		20	28
29	20	RECEPTION	ON DESK		R	0.54	2#12, #12G, 3/4"C			0.72	2#12, #12G, 3/4"C	0.18	Е	(B12) TELE	VISION		20	30
31	20	EMERGE	NCY LIGHTIN	G	L	0.04	2#12, #12G, 3/4"C	0.04						SPARE			20	32
33	20*	(B6)ASEF	TIC ISOLATO	R	E	0.69	2#12, #12G, 3/4"C		0.93		2#12, #12G, 3/4"C	0.24	Е	(B10) COU	NTER TOP REF.		20*	34
35	20	SPARE								0.18	2#12, #12G, 3/4"C	0.18	R	RETAIL DIS	PLAY		20	36
37	20	SPARE						1.00			2#12, #12G, 3/4"C	1.00	R	GFIC RECEI	PTACLE-PVT ROOI	M	20*	38
39	20*	SPARE							0.18		2#12, #12G, 3/4"C	0.18	R	RECEPTACI	LE-HALLWAY		20	40
41	20*	SPARE								1.00	2#12, #12G, 3/4"C	1.00	Е	LIGHTING	CONTROL PANEL(	LCP)	20	42
					TOTAL	LOAD (K	VA)	6.77	5.29	7.77								

PANEL:	H (EXISTI	NG)						T		1	T		Ι		MOUNTING:	SURFA	CE	
480Y/277	VOLTS,		3	PHASE,			4	WIRE										
MAIN CB	100			BUS	125A		MIN,		<u> </u>	<u> </u>								
CKT NO	TRIP		) NECCOUNTION	NA OF LOAD	LOAD	LOAD	MINIMUM BRANCH	PE	 R PHASE (k	(VA)	MINIMUM BRANCH	LOAD	LOAD	DESCRIPTION OF LOAD		045	TRIP	CKT
CKT NO.	AMPS	"	DESCRIPTIO	N OF LOAD	TYPE	(KVA)	CIRCUIT	Α	В	С	CIRCUIT	(KVA)	TYPE			AMPS	NO.	
1					М	7.10		13.71				6.61	Е					2
3	30/38	RTU-1 (E)			М	7.10	EXISTING		13.71		EXISTING	6.61	E	30KVA TRA	TRANSFORMER (EX)		50/38	4
5					М	7.10				13.71		6.61	E					6
7	20	SPARE						8.00				8.00	Н	WATER HEATER(WH-1)				8
9	20	SPARE							8.00		3#8, 1#10G, 3/4"C	8.00	Н				40/3P	10
11	20	SPARE								8.00	]	8.00	Н				10/	12
13		SPACE						0.00						SPACE				14
15		SPACE							0.00					SPACE				16
17		SPACE								0.00				SPACE				18
					TOTAL	LOAD (K	VA)	21.71	21.71	21.71								

\* INDICATED GFCI CIRCUIT BREAKER

# PANEL SCHEDULE GENERAL NOTES:

- A. ALL CIRCUITING SHOWN FROM PANEL "A" IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY CIRCUITING OF THE EXISTING DEVICES IN FIELD AND MODIFY/ADJUST CIRCUITING AS REQUIRED.

  B. ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND
- INCOMING FEEDER SIZE.
  C. E.C. SHALL PROVIDE NEW CIRCUIT BREAKERS IN PLACE OF EXISTING CIRCUIT BREAKERS WHEREVER NECESSARY TO BE IN LINE WITH THE PANEL SCHEDULE.

ITEM NO.	DESCRIPTION	VOLTAGE	PHASE	AMPS	kW
В6	ASEPTIC ISOLATOR	115	1	15	1.73
B8	PHARMACY REFRIGERATOR	115	1	5	0.58
B10	COUNTER TOP REFRIGERATOR	120	1	2	0.24
B13	UNDERCOUNTER REFRIGERATOR	120	1	5	0.60
B14	MICROWAVE	120	1	5.8	0.70

## **GENERAL NOTE:**

1. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT POWER REQUIREMENTS WITH THE MANUFACTURER PRIOR TO ROUGH—IN. BASE BID ACCORDINGLY.

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PANEL SCHEDULES

E-3