

699 NW BLUE PARKWAY LEE'S SUMMIT, MO 64086



MEP ENGINEER

Renaissance nfrastructure

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8653 Penrose Lane Tel: (913) 317-9500

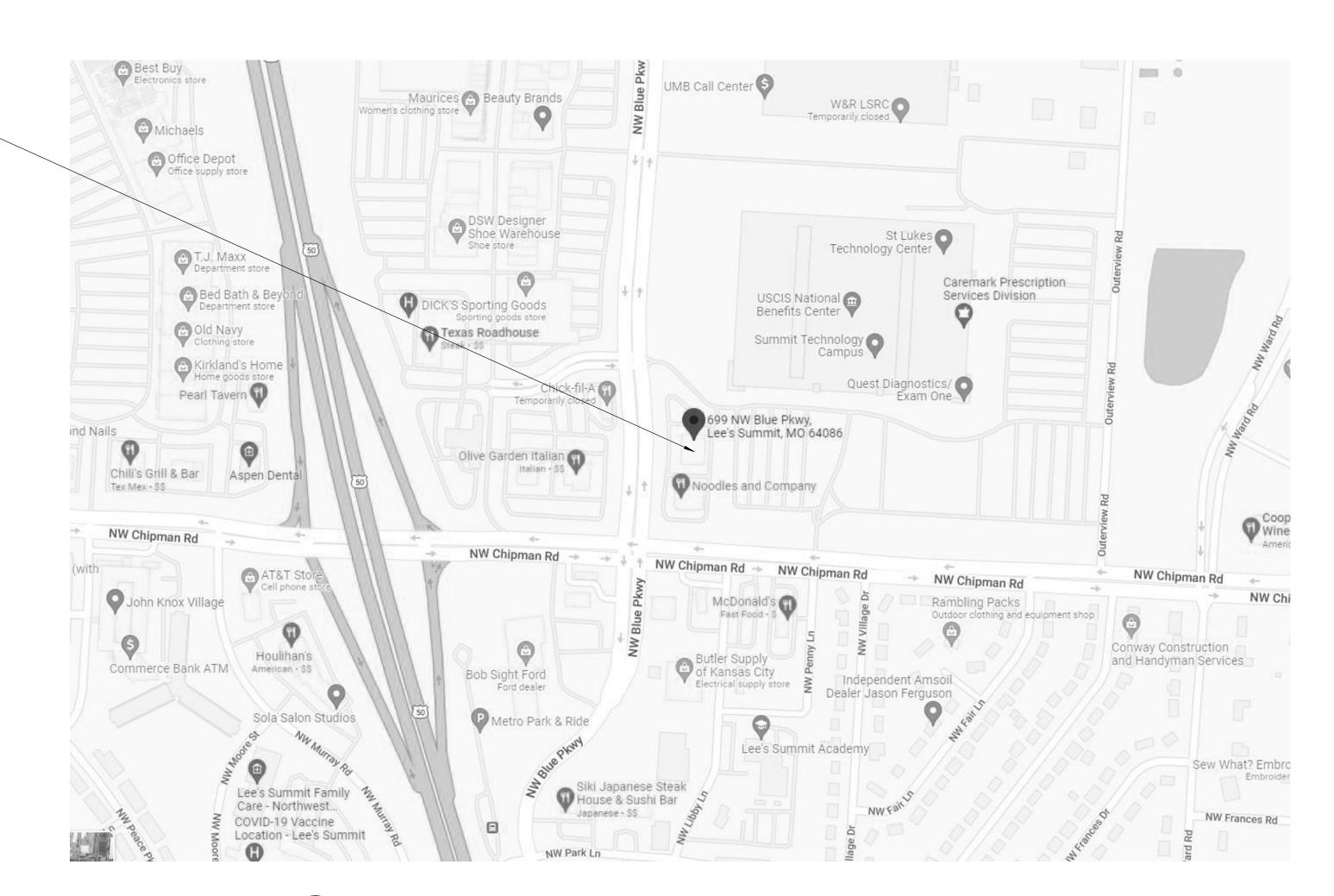
CIVIL ENGINEER

Lenexa, KS 66219

DRAWING INDEX

SHEET#	SHEET NAME	BID DOCUMENTS 02-17-2023	PERMIT SET 03-01-2023
A 000	COVER	V	Х
A-000		X	X
C01	CIVIL TITLE SHEET EXISTING CONDITIONS	X	X
C02 C03	AREA PLAN	X	X
C03	GENERAL LAYOUT	X	X
C05	PAVEMENT PLAN	X	X
C06	GRADING PLAN	X	X
C07	STANDARD DETAILS 1	X	X
A-001	ABBREVIATIONS SYMBOLS AND GENERAL NOTES	X	X
A-005	CODE PLAN	X	X
AD100	FIRST FLOOR DEMOLITION PLAN	X	X
A-101	OVERALL FLOOR PLAN	X	X
A-102	TENANT PLANS	X	X
A-220	INTERIOR ELEVATIONS	X	X
A-221	INTERIOR ELEVATIONS	X	X
A-222	INTERIOR ELEVATIONS	X	X
A-320	INTERIOR SECTIONS	X	X
A-400	ENLARGED FLOOR PLANS	X	X
A-520	EXTERIOR DETAILS	X	X
A-521	EXTERIOR DETAILS	X	X
A-600	FINISH SCHEDULES	X	Х
MEP001	COVER SHEET	X	X
MEP101	SPECIFICATIONS	Х	X
MEP102	SPECIFICATIONS	X	Х
MEP103	SPECIFICATIONS	X	X
DMP101	HVAC DEMOLITION PLAN	X	X
M101	MECHANICAL-HVAC	X	Х
P101	PLUMBING	X	X
DE101	ELECTRICAL - DEMOLITION PLAN	X	X
E101	ELECTRICAL - LIGHTING	X	X
E201	ELECTRICAL - POWER	X	X

PROJECT LOCATION



VICINITY MAP

1. ALL WORK SHALL CONFORM WITH APPLICABLE BUILDING CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.

FIRE DEPARTMENT INSPECTOR OR MARSHAL.

2. INFORMATION ON THE DRAWINGS REGARDING EXISTING CONDITIONS IS BASED UPON DRAWINGS FURNISHED BY THE OWNER. THE INFORMATION IS BELIEVED TO BE AN ACCURATE REFLECTION

OF THE EXISTING CONDITIONS BUT IS IN NO WAY INTENDED TO GUARANTEE EXACT CONDITIONS.

3. CONTRACTOR AND/OR SUPPLIER SHALL FIELD VERIFY DIMENSIONS AND SITE CONDITIONS PRIOR TO FABRICATION OF NEW ASSEMBLIES, PRODUCTS, AND EQUIPMENT.

4. THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO THE ARCHITECT IMMEDIATELY. FAILURE OF THE CONTRACTOR TO PERFORM SURVEY, FIELD VERIFY CONDITIONS, AND COORDINATE WORK DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR WORK.

5. CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN AND PROTECT EXISTING SYSTEMS AND FINISHES WHICH ARE TO REMAIN. ANY DAMAGES TO SUCH SYSTEMS AND FINISHES SHALL BE REPAIRED IN A MANNER ACCEPTABLE TO THE ARCHITECT AT THE CONTRACTOR'S EXPENSE.

6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCES OF CONSTRUCTION AND THE SAFETY OF ALL CONSTRUCTION PERSONNEL AND VISITORS. 7. ALL FIRE, LIFE-SAFETY SYSTEMS MUST BE MAINTAINED IN PROPER WORKING ORDER THROUGHOUT THE DURATION OF THE WORK. PORTABLE FIRE EXTINGUISHERS OF APPROVED

TYPE ARE TO BE PLACED WITHIN THE CONSTRUCTION AREA IN ACCORDANCE WITH THE LOCAL

8. THE CONSTRUCTION DOCUMENTS REPRESENT A STABLE STRUCTURE IN THE COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY BRACING AND/OR SHORES TO SAFELY DECONSTRUCT AND CONSTRUCT THE BUILDING AND PREVENT DAMAGE DURING CONSTRUCTION.

9. "TYPICAL" / "TYP." AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITIONS OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT.

10. "SIM." AS USED IN THESE DOCUMENTS IS REPRESENTATIVE FOR SIMILAR OR OPPOSITE HAND, MIRRORED. CONDITIONS.

11. ALL DISSIMILAR METAL MATERIALS SHALL BE ISOLATED WITH AN APPROVED NON-METAL ISOLATION MATERIAL.

12. REFER TO LIFE SAFETY DRAWINGS FOR LOCATIONS OF FIRE RATED WALLS. ASSEMBLIES NOTED TO BE FIRE-RATED (ONE HOUR, TWO HOUR, ETC.) SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE FIRE TEST REFERENCED OR, IF NO TEST IS REFERENCED, AN INDUSTRY RECOGNIZED FIRE-TEST APPLICABLE TO THE ASSEMBLY.

13. REFER TO ALL OTHER DISCIPLINE'S DRAWINGS FOR MORE INFORMATION THAT MAY NOT BE IN A SINGLE DISCIPLINE'S DRAWING SET. CONTRACTOR TO NOTIFY AND COORDINATE WITH ARCHITECT ANY ISSUES THAT CONFLICT WITH THE NEW WORK.



ARCHITECT

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ZS

699 LEE'

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GENERAL PROJECT NOTES SCALE: NTS

KEY NOTE NORTH ARROW REFERENCE PARTITION TYPE TRUE NORTH ARROW EQUIPMENT/ACCESSORY TAG (xx)REFERENCE TRUE NORTH SIGNAGE MARK AND LOCATION DOOR MARK REFERENCE XXX XXX FINISH FLOOR REFERENCE ASSOCIATED ROOM NUMBER **ROOM TAG**

PROPERTY LINE

GRID BUBBLE REFERENCE

WALL SECTION REFERENCE

DETAIL SECTION REFERENCE VIEW NO SHEET **EXTERIOR ELEVATION REFERENCE**

VIEW NO/SHEET NO

INTERIOR ELEVATION REFERENCE

ELEV.

FIXED REFERENCE ELEVATION

SPOT ELEVATION

ABBREVIATIONS SYMBOLS AND **GENERAL NOTES**

REVISED DATE DESCRIPTION

PROJECT NO:

DRAWN BY:

CHECKED BY:

CHECKED BY:

DATE:

A-001

22056

2023-02-17

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ABBREVIATIONS

SYMBOLS

SCALE: NTS

CD

CD

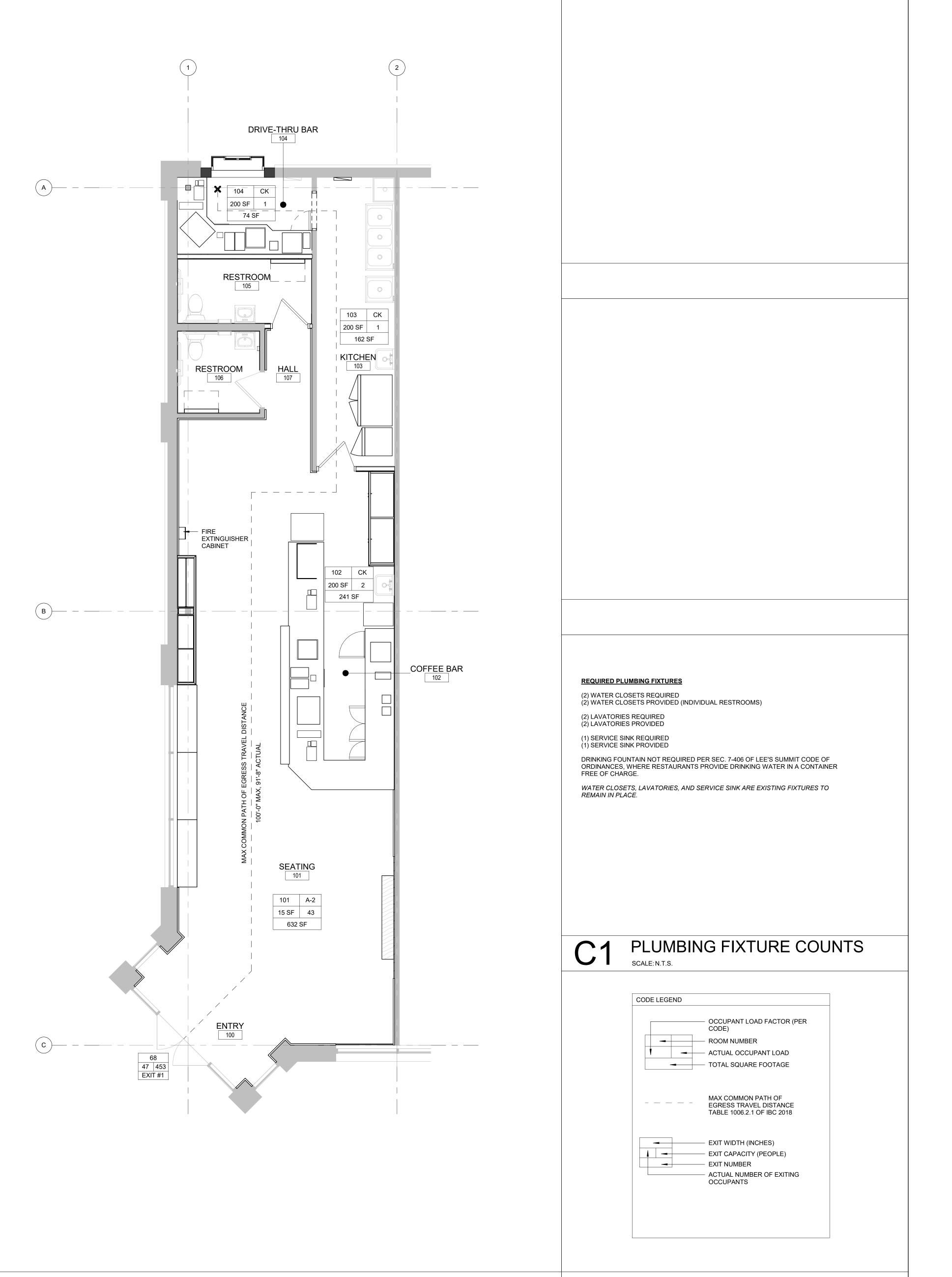
CH

CJ

CL

CL

SCALE: NTS



CONSTRUCTION
As Noted on Plans Review

KEYNOTES



ARCHITECT

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> NW BLUE I'S SUMMIT, 699 LEE



PROJECT NO: DATE: DRAWN BY: CHECKED BY:

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CODE PLAN

PLAN NORTH

A-005 © YAEGER ARCHITECTURE, INC.

A5 CODE ANALYSIS SCALE: N.T.S.

CODE ANALYSIS:

FACILITY NAME:

FACILITY ADDRESS:

CODE REGULATIONS:

BUILDING CODE:

MECHANICAL CODE:

PLUMBING CODE:

ELECTRICAL CODE:

FIRE PREVENTION:

CONSTRUCTION TYPE:

OCCUPANCY CLASSIFICATION:

ALLOWABLE BUILDING STORIES:

BASE ALLOWABLE BUILDING AREA:

SPRINKLER SYSTEM PER SECTION 903 (NFPA 101):

OCCUPANCY LOAD FACTORS PER (TABLE 1004.1.2)

FOR INDIVIDUAL ROOM CALCULATIONS AND EXITING OCCUPANT LOADS:

PORTABLE FIRE EXTINGUISHERS (NFPA 101):

MANUAL FIRE ALARM SYSTEM PER (NFPA 101):

ACTUAL BUILDING STORIES:

ACTUAL BUILDING AREA: TOTAL TENANT AREA:

NUMBER OF REQUIRED EXITS: **REQUIRED NUMBER OF EXITS:**

EXIT TRAVEL DISTANCE (TABLE 1017.2):

DEAD END CORRIDOR (SECTION 1020.4):

EXITS PROVIDED:

GAS CODE:

SPRINKLERS:

TYPE OF CONSTRUCTION:

CODE ANALYSIS 2018

INTERIOR REMODEL

SUMMER MOON COFFEE

LEE'S SUMMIT, MO 64086

2018 INTERNATIONAL BUILDING CODE

2018 INTERNATIONAL PLUMBING CODE

2018 INTERNATIONAL FUEL GAS CODE

2017 NATIONAL ELECTRICAL CODE

2018 INTERNATIONAL FIRE CODE

(SECTION 903) TENANT SPACE IS CURRENTLY SPRINKLERED

(SECTION 302) GROUP B BUSINESS

1 STORY

1.510 SF

PROVIDED

47 PEOPLE

(1) ONE

RE: SHEET A-005

300 FT (WITH SPRINKLER)

NOT TO EXCEED 50 FT (WITH SPRINKLER)

PROVIDED (NFPA 13)

PROVIDED (NFPA 10)

(TABLE 504.3) V-B

(TABLE 504.4) 2 STORIES

(TABLE 506.2) 9,000 SF

(SECTION 1006)

2018 INTERNATIONAL MECHANICAL CODE

699 NW BLUE PARKWAY

A2 TENANT CODE PLAN

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

A1 CODE LEGEND SCALE: N.T.S.

KEYNOTES

DEMOLITION KEYNOTES (X)

ALL WALLS. PATCH AND REPAIR GYPSUM BOARD AND PREP FOR NEW BASE FINISH.

. PREP FLOOR TO RECEIVE NEW FLOORING AS SCHEDULED. PATCH ANY

CASEWORK OR PARTITION REMOVAL 3. REMOVE EXISTING QUARRY TILE BEHIND SERVING COUNTER UP TO DOOR TO KITCHEN. QUARRY TILE INSIDE KITCHEN SHALL REMAIN IN PLACE. REMOVE ALL TILE SETTING BED MATERIAL FROM CONCRETE SUBSTRATE. PENDING CONDITION OF CONCRETE SUBSTRATE, A GRIND AND SEAL CONCRETE FINISH IS PREFERRED. PROVIDE ALLOWANCE FOR EPOXY FLOOR FINISH IF

FOR A GRIND AND SEAL FINAL FINISH. 4. REMOVE ALL WALL TILE. PATCH AND REPAIR GYPSUM BOARD TO RECEIVE NEW FINISH PER SCHEDULE.

CONCRETE CONDITION IS TOO POOR

5. SALVAGE WINDOW ROLLER SHADES FOR REUSE. TEMPORARILY REMOVE SHADES TO PAINT WALLS AND REINSTALL IN SAME LOCATION. 6. REMOVE ALL SHELVING, SIGNAGE, AND WOOD TRIM. PATCH AND REPAIR

> FINISH PER SCHEDULE. EXISTING PLUMBING FIXTURE SHALL REMAIN IN PLACE. PROTECT DURING CONSTRUCTION.

SHALL REMAIN IN PLACE. QUARRY TILE

FLOORING, STAINLESS STEEL WALL

PANELS, AND LAY-IN CEILING SHALL

11. EXISTING ELECTRICAL PANEL SHALL

12. DEMO EXISTING DOUBLE SWINGING

DOORS AND HOLLOW METAL FRAME.

REFER TO NEW CONSTRUCTION PLANS FOR NEW AUTOMATIC DRIVE-THRU

REMAIN. PROTECT DURING

WINDOW AND WALL INFILL

13. REMOVE EXISTING DOOR AND

ASSOCIATED HARDWARE. FRAME

SHALL REMAIN IN PLACE. PATCH

14. RELOCATE EXISTING RESTROOM DOOR AND FRAME. REFER TO NEW

EXISTING HOLES FROM HARDWARE REMOVAL AND PAINT FRAME PNT.4.

15. REMOVE WALL TILE WAINSCOT ON ALL WALLS WITHIN RESTROOM. PATCH AND REPAIR GYPSUM BOARD. PREP TO RECEIVE NEW FINISH PER

16. REMOVE EXISTING LVT FLOORING. PREP FLOOR TO RECEIVE NEW FINISH

TEMPORARILY REMOVE ACCESSORIES FOR INSTALLATION OF NEW FINISHES. REINSTALL IN SAME LOCATION.

18. SALVAGE EXISTING WATER CLOSET AND LAVATORY. TEMPORARILY REMOVE PLUMBING FIXTURES FOR INSTALLATION OF NEW FINISHES. REINSTALL IN SAME LOCATION.

19. DEMOLISH EXISTING SERVICE COUNTER, DIE WALL, AND ANY

FINISHES PER SCHEDULE.

OWNER'S REUSE.

LIGHTING.

EQUIPMENT NOT TO BE REUSED BY OWNER IN NEW CONSTRUCTION. PATCH AND REPAIR FLOORING AND ADJACENT WALLS TO RECEIVE NEW

20. DEMOLISH EXISTING CEILING PANELS AND GRID, INCLUDING ALL LIGHT FIXTURES AND HVAC GRILLES. SALVAGE FOR REUSE PER OWNER'S

DIRECTION. SALVAGE ALL SPEAKERS AND SECURITY CAMERAS FOR

21. DEMOLISH ALL EXISTING TRACK

22. CEILING IN THIS ROOM SHALL REMAIN

23. DEMOLISH EXISTING GYPSUM BOARD

24. GYPSUM BOARD HEADER SHALL REMAIN IN PLACE. REMOVE EXISTING EXIT SIGN FROM FACE. PATCH AND REPAIR ANY DAMAGE TO GYPSUM BOARD AND PREP FOR NEW FINISH

SOFFIT IN ITS ENTIRETY.

25. DEMOLISH EXISTING TRASH

ENCLOSURE MASONRY WALLS, STEEL GATES. AND ASSOCIATED CONCRETE FILLED BOLLARDS. PATCH AND REPAIR AREA ATTACHING TO BUILDING. REFER TO EXTERIOR ELEVATION AND CIVIL SITE PLANS FOR ADDITIONAL INFORMATION FOR NEW

PER SCHEDULE.

CONSTRUCTION.

IN PLACE, INCLUDING ALL LIGHT FIXTURES AND HVAC GRILLES. PROTECT DURING CONSTRUCTION.

17. SALVAGE ALL WASHROOM ACCESSORIES FOR REUSE.

GYPSUM BOARD TO RECEIVE NEW

8. REMOVE EXISTING PARTITION. PATCH AND REPAIR ADJOINING PARTITIONS TO REMAIN.

9. RELOCATE EXISTING ELIASON DOOR AND FRAME. REFER TO NEW WORK PLANS. 10. EXISTING FINISHES INSIDE KITCHEN

CONSTRUCTION.

REMAIN IN PLACE.

SPECIFICATIONS.

WORK PLANS.

SCHEDULE.

PER SCHEDULE.

7. REFER TO ELECTRICAL DRAWINGS FOR EXTENTS OF ELECTRICAL, LIGHTING, AND TELECOMMUNICATION SYSTEMS TO BE DEMOLISHED. NOTE ITEMS TO

8. ALL DIMENSIONS OF EXISTING ELEMENTS ARE APPROXIMATE. FIELD VERIFY ALL DIMENSIONS AS REQUIRED.

9. PROTECT FROM DAMAGE OR SOILING, ALL EXISTING CONSTRUCTION INDICATED TO REMAIN, OR INDICATED TO BE REUSED, SALVAGED, REINSTALLED, OR OTHERWISE INDICATED TO REMAIN. REPAIR OR REPLACE DAMAGED ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL

DOOR AND FRAME TO BE DEMOLISHED

EXISTING DOOR AND FRAME TO

REMAIN AND PREPARE FOR APPLICATION OF NEW WALL FINISH. 11. DEMOLISH ALL INTERIOR FLOOR FINISHES DOWN TO STRUCTURE / CONCRETE. FIX AND PREPARE ALL SURFACES, AS REQUIRED, TO RECEIVE NEW FINISH.

. REMOVE BLACK TILE WALL BASE FROM

HOLES IN CONCRETE FROM

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699 LEE'



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2023-02-17

FIRST FLOOR DEMOLITION PLAN



AD100

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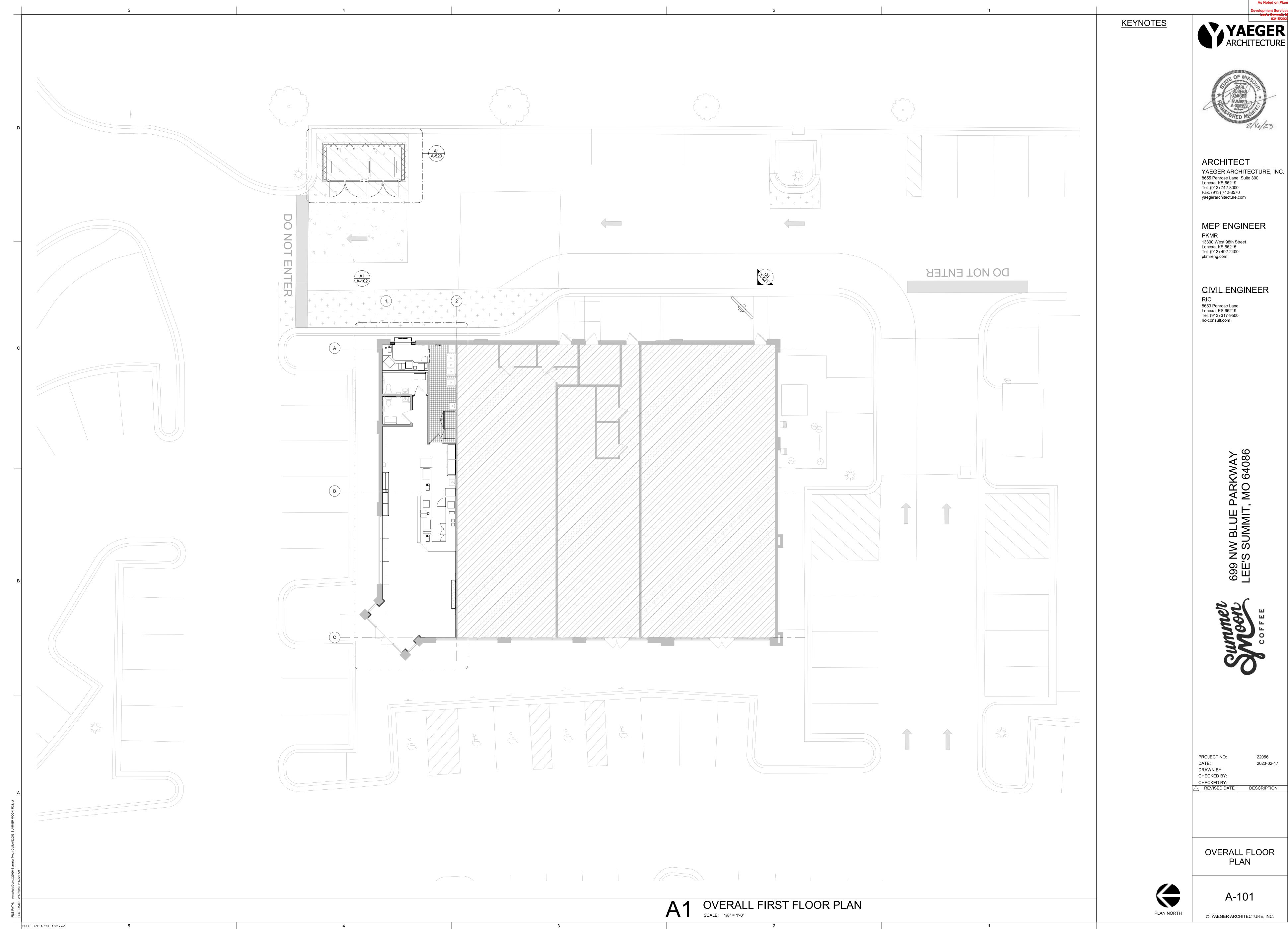
TENANT DEMOLITION PLAN

TENANT DEMOLITION REFLECTED CEILING PLAN

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+--+--+--+



RELEASED FOR
CONSTRUCTION
As Noted on Plans Review

DR<u>IVE-THRU B</u>AR (11) -1.4AS (12) RESTROOM lue (11) -- ALIGN -

(11)

C3/ A-221

1' - 11 1/2" 3' - 6" 2' - 6"

A1/ A-220

C5/ A-221

TYPE COMMENTS

1' - 0 1/2"

RESTROOM

GENERAL FLOOR PLAN NOTES

- 3. REFER TO LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS. ALL FIRE
- 4. REFER TO INTERIOR PARTITION TYPES SHEET FOR PARTITION TYPES, CONSTRUCTION, AND DESCRIPTION.
- 5. ALL DIMENSIONS OF EXISTING ELEMENTS ARE APPROXIMATE. FIELD VERIFY ALL DIMENSIONS.
- 6. REFER TO PLAN DETAILS FOR TYPICAL COLUMN DETAILS AT EXTERIOR AND INTERIOR WALLS.
- 7. INTERIOR PARTITION TAGS NOT SHOWN ON THIS PLAN CAN BE FOUND ON
- 8. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, OR FINISH
- 9. EACH INSTALLER MUST EXAMINE SUBSTRATE AND/OR CONDITIONS UNDER WHICH THE WORK WILL BE INSTALLED AND REPORT TO THE CONTRACTOR IN WRITING ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY EXECUTION OF THE INSTALLER'S WORK. DO NOT PROCEED UNTIL
- CONSTITUTE ACCEPTANCE OF THE SUBSTRATE AND/OR CONDITIONS. 10. PROVIDE BLOCKING IN PARTITIONS FOR ALL WALL-MOUNTED ARCHITECTURAL WOODWORK, FINISH CARPENTRY, EQUIPMENT, GRAB BARS, TOILET ACCESSORIES, TOILET FIXTURES AND PARTITIONS, WALL-MOUNTED HANDRAILS, ETC. ALL BLOCKING SHALL BE FIRE RETARDANT TREATED WOOD. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING BLOCKING WITH ALL WALL-
- 11. INSTALL HINGE-SIDE OF DOORS 6 INCHES FROM FACE OF ADJACENT PERPENDICULAR FINISH WALL UNO.
- 12. ALL FINISHES SHALL AS NOTED ON THE DRAWINGS OR SELECTED BY ARCHITECT.

DOOR SCHEDULE

COMMENTS

RELOCATED EXISTING DOOR

RELOCATED EXISTING DOOR

HARDWARE

REUSE EXISTING

HARDWARE

REUSE EXISTING HARDWARE

NOTE: PAINT RESTROOM DOORS AND FRAMES PNT.4

To Room:

Number

- 1. THE FIRST FLOOR FINISHED FLOOR ELEVATION IS 100'-0" UNO.
- 2. REFER TO A-001 FOR GENERAL PROJECT NOTES, MATERIAL LEGEND, AND ABBREVIATIONS.
- RATED, SOUND TRANSMISSION CLASS (STC) RATED, AND SMOKE-RESISTANT PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENING. PROTECT ALL PENETRATIONS.

- ENLARGED FLOOR PLANS.
- FACE OF STUD WALL UNO. REFER TO LARGER SCALE DRAWINGS FOR DIMENSIONS OR ADDITIONAL INFORMATION NOT ILLUSTRATED ON 100 SERIES
- UNSATISFACTORY CONDITIONS ARE CORRECTED. INSTALLATION SHALL
- MOUNTED ITEMS INCLUDING, BUT NOT LIMITED TO, THOSE LISTED ABOVE. AT CONTRACTOR'S OPTION, UNO, METAL SUPPORT MAY BE PROVIDED IN LIEU OF

KEYNOTES

NEW WORK KEYNOTES (X)

WD.2/PNT.2

TO ELEVATIONS AND TYPICAL

SECTION FOR TRIM PROFILES.

PER SCHEDULE. INSTALL AT 45 DEGREE ANGLE RUNNING

NORTHEAST TO SOUTHWEST.

3. GRIND AND SEAL CONCRETE

QUARRY TILE IS REMOVED.

4. PROVIDE METAL EDGE STRIP

CHROME ANODIZED FINISH.

TILE TO SEALED CONCRETE

6. ALL FINISHES IN KITCHEN SHALL

TRANSITION.

ON FLOOR.

CONCRETE FLOORING.

FLOORING BEHIND BAR, PENDING

CONDITION OF CONCRETE ONCE

BETWEEN LVT FLOORING AND SEALED

SCHLUTER VINPRO-U IN BRUSHED

. PROVIDE SCHLUTER METAL RENO-

RAMP FLOOR TRANSITION AT QUARRY

REMAIN IN PLACE. PROTECT DURING

CLEAN KITCHEN, INCLUDING GROUT

CONSTRUCTION. THOROUGHLY

7. BUILT-IN CUSTOM CASEWORK, PART

CUSTOM CASEWORK SHALL BE AWI

ELEVATIONS AND DETAILS. ALL

CUSTOM GRADE OR HIGHER.

8. BUILT-IN CUSTOM MANTEL WITH

EXTINGUISHER WITH CABINET.

10. ALL FOOD SERVICE EQUIPMENT

CUSTOM CASEWORK SHALL BE

COORDINATED WITH CUTSHEETS

PROVIDED BY THE OWNER AND/OR

11. EXISTING PLUMBING FIXTURE SHALL REMAIN IN PLACE. FIXTURE WILL NEED TO BE TEMPORARILY MOVED TO INSTALL NEW FINISHES, BUT SHALL BE REINSTALLED IN THE SAME LOCATION.

9. SURFACE MOUNTED FIRE

WHITE FINISH.

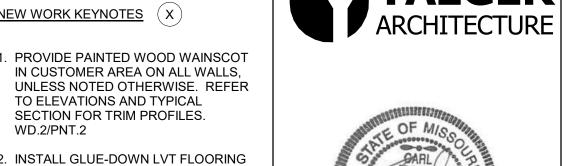
ARCHITECT.

ELECTRIC FIREPLACE. FIREPLACE

SHALL BE TOUCHSTONE MODEL NO.

OF GC SCOPE. REFER TO







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FINISH SCHEDULE. 13. REINSTALL SALVAGED WASHROOM ACCESSORIES AFTER NEW FINISHES HAVE BEEN INSTALLED PER FINISH

12. INSTALL NEW TILE FLOORING PER

SCHEDULE. 14. PROVIDE METAL SCHLUTER SHIENE TRANSITION STRIP BETWEEN TILE

15. REINSTALL SALVAGED WINDOW ROLLER SHADES ON ALL WINDOWS,

FLOORING AND LVT.

PENDING OWNER'S APPROVAL. 16. INSTALL NEW GRID AND TIN CEILING PANELS PER FINISH SCHEDULE. ALL RECESSED DOWNLIGHTS SHALL BE CONTRACTOR FURNISHED AND INSTALLED.

17. REFER TO ENGINEER'S LIGHTING PLAN FOR LIGHT FIXTURE INFORMATION. DECORATIVE PENDANT LIGHTS SHALL BE OWNER FURNISHED/CONTRACTOR INSTALLED. PENDANTS SHALL BE CENTERED IN CEILING TILE, TYPICAL.

18. REFER TO ENGINEER'S LIGHTING PLAN FOR LIGHT FIXTURE INFORMATION. DECORATIVE WALL SCONCES SHALL BE OWNER FURNISHED/CONTRACTOR INSTALLED. REFER TO ELEVATIONS FOR

19. REFER TO ENGINEER'S LIGHTING PLAN FOR LIGHT FIXTURE INFORMATION. DECORATIVE PENDANT LIGHTS SHALL BE OWNER FURNISHED/CONTRACTOR INSTALLED. PENDANTS SHALL BE CENTERED IN CEILING TILE, TYPICAL. INTENTION FOR THESE FOUR PENDANTS IS TO BE CENTERED OVER THE HIGH SERVICE COUNTER. COORDINATE GRID

MOUNTING LOCATIONS.

20. NEW CEILING GRID WITH VINYL FACED PANELS PER FINISH SCHEDULE. CT.2

LAYOUT WITH SERVICE COUNTER.

21. EXISTING CEILING SHALL REMAIN IN PLACE. PROTECT DURING CONSTRUCTION.

POWER REQUIREMENTS. 23. NEW CEILING GRID WITH MINERAL FIBER PANELS PER FINISH SCHEDULE.

22. ILLUMINATED EXTERIOR SIGNAGE SHALL BE OWNER PROVIDED/OWNER INSTALLED. RE: ELECT. DWGS. FOR

26. INFILL EXISTING DOOR OPENING. NOTED ON ELEVATIONS. FINISH WALL FINISHES. REUSE EXISTING STAINLESS STEEL IF FEASIBLE.

PROJECT NO: 22056 DATE: 2023-02-17 DRAWN BY: CHECKED BY:

REVISED DATE DESCRIPTION

699 LEE'

CHECKED BY:

TENANT PLANS



A-102

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PARTITION SCHEDULE

WIDTH RATING STC

TENANT FLOOR PLAN

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

DESCRIPTION

BOARD ON EACH SIDE BOTH TO METAL

DECK, WITH SOUND BATTS

3 5/8" MTL STUD WITH 5/8" GYPSUM 4 7/8"

TYPE

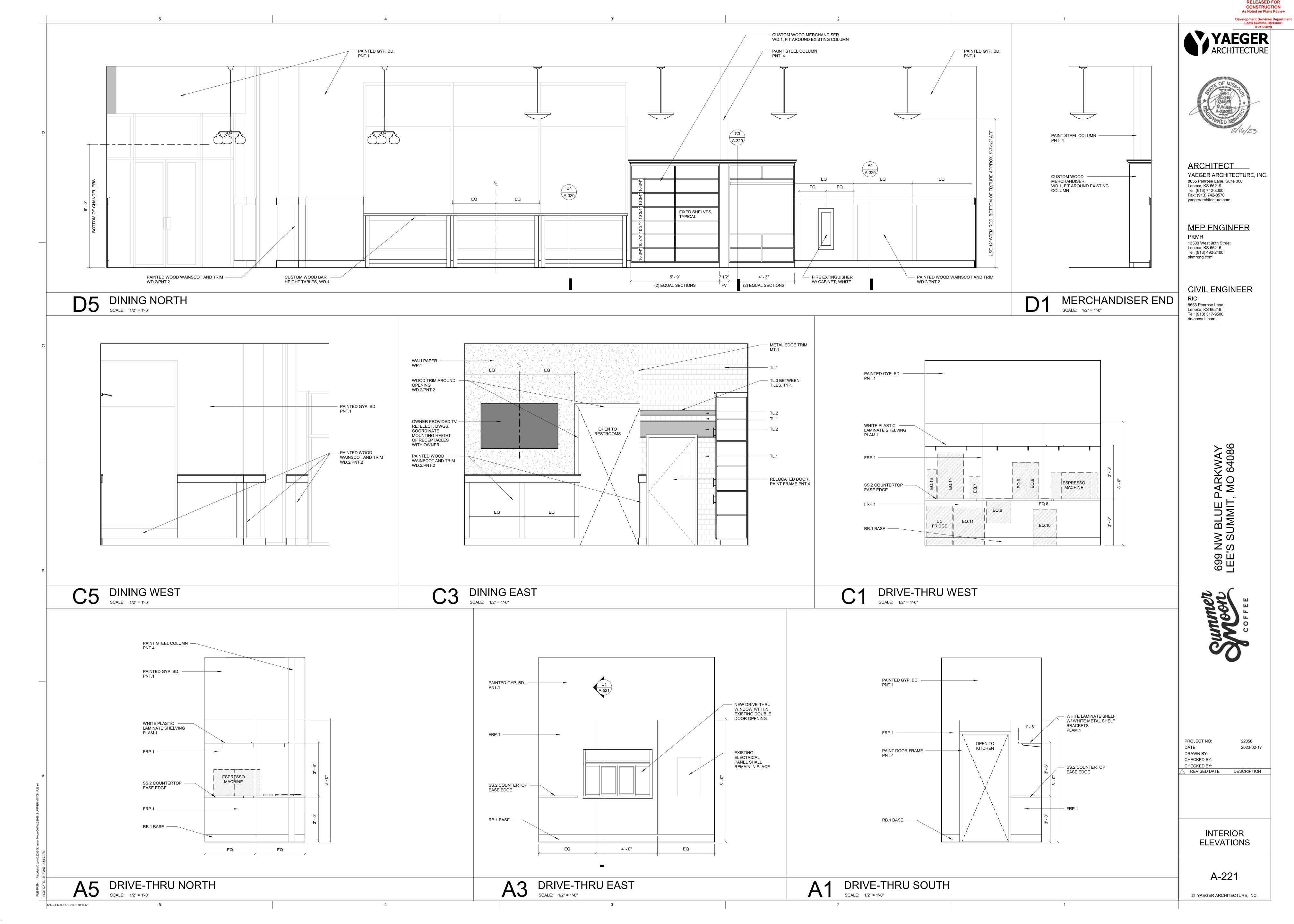
A5 TENANT REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

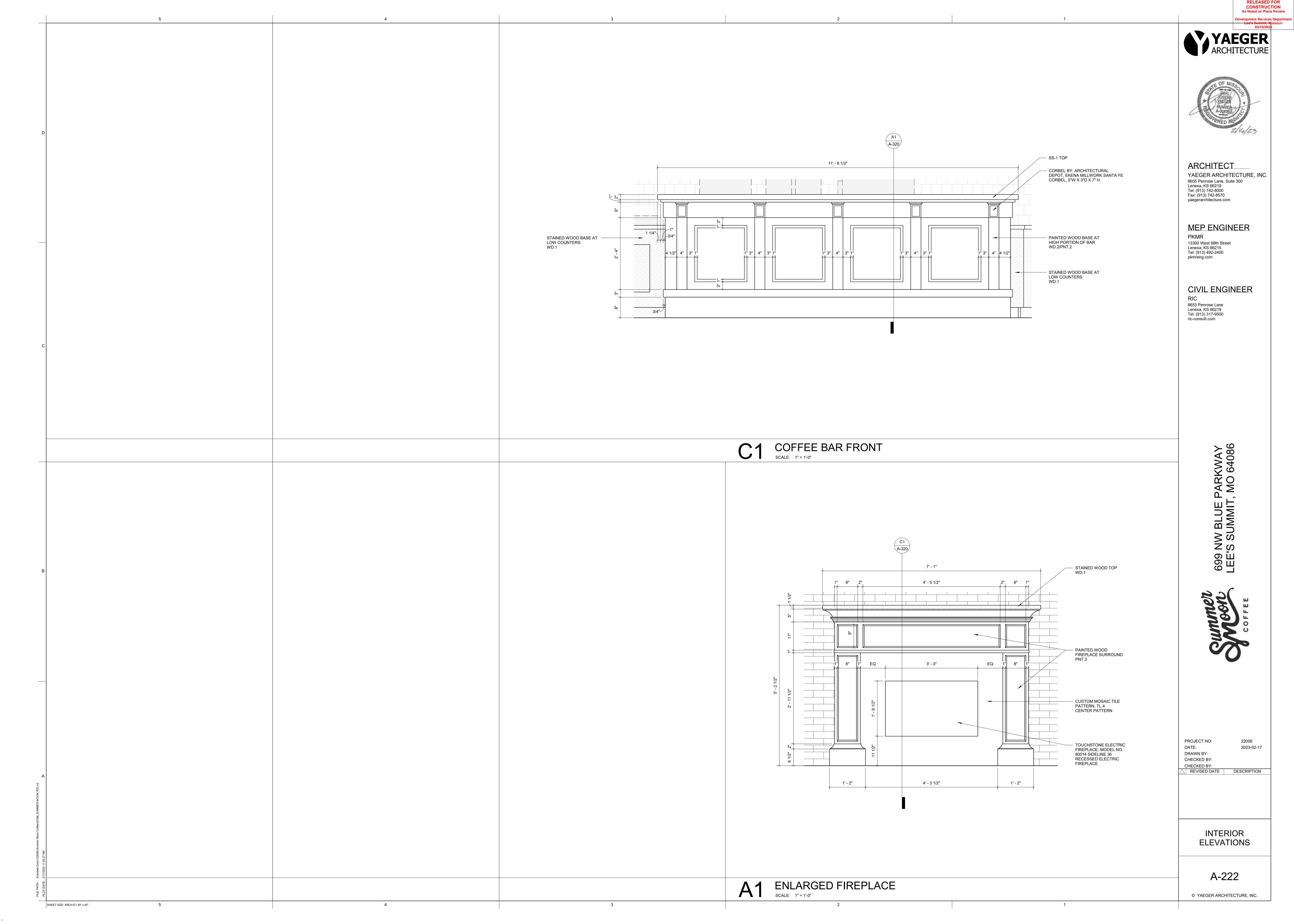
24. NEW AUTOMATIC DRIVE-THRU WINDOW WITHIN EXISTING OPENING. REFER TO ELEVATIONS AND DETAILS. 25. INSTALL OWNER PROVIDED MENU BOARD FOR DRIVE-THRU AS INDICATED ON OVERALL FLOOR PLAN AND CIVIL SITE PLAN. CONTRACTOR SHALL PROVIDE CONCRETE FOOTING

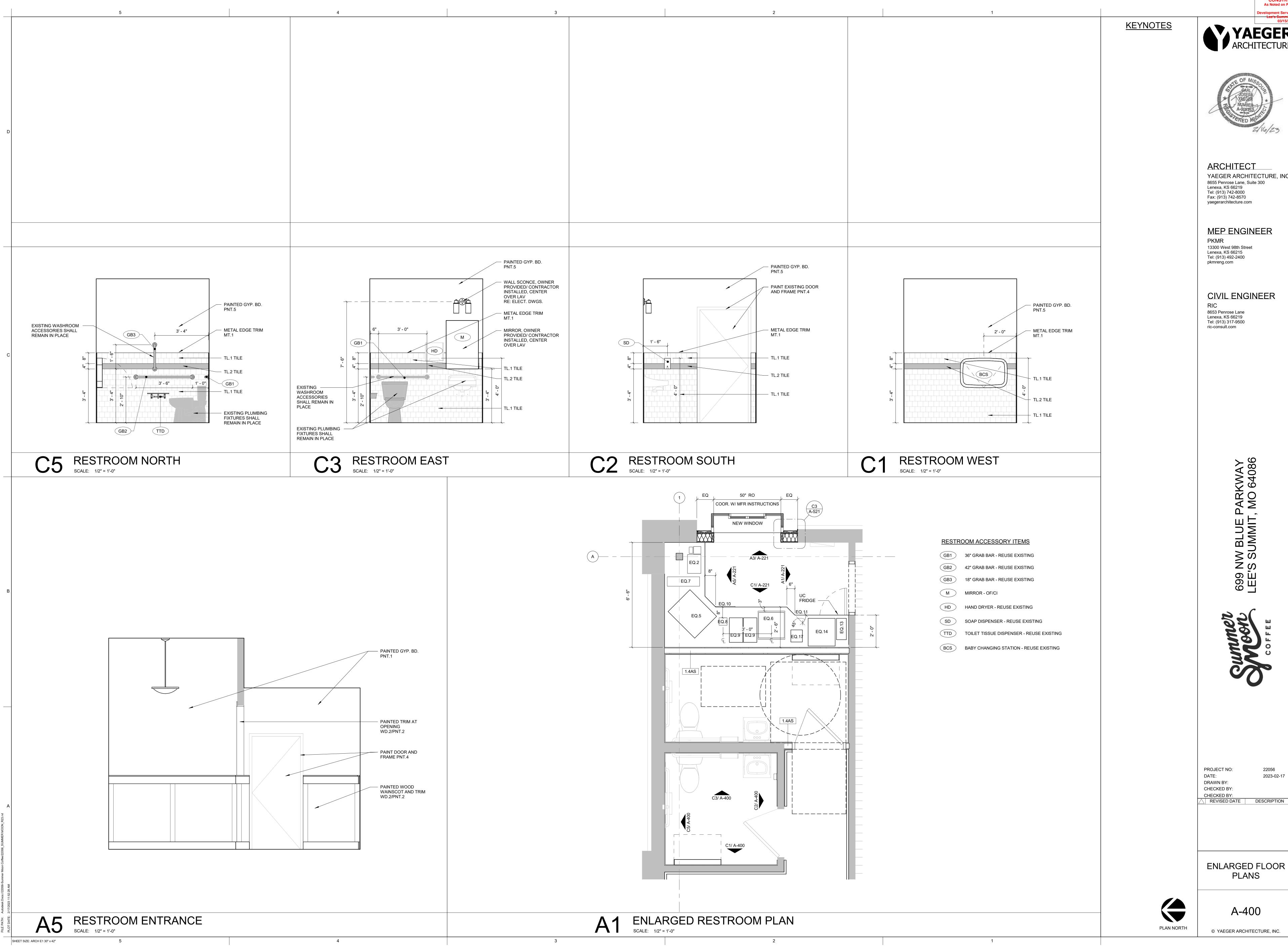
> DWGS. CONFIRM ALL REQUIREMENTS WITH MENU BOARD MANUFACTURER. FINISH PUBLIC SIDE PER FINISHES KITCHEN SIDE WITH STAINLESS STEEL WALL PANELING TO MATCH EXISTING

AND ELECTRICAL INFEED PER ELECT.

27. EXISTING CONCRETE FLOOR TO REMAIN. PATCH AND REPAIR ANY HOLES IN CONCRETE FROM CASEWORK AND PARTITION REMOVAL. CLEAN AND RESEAL



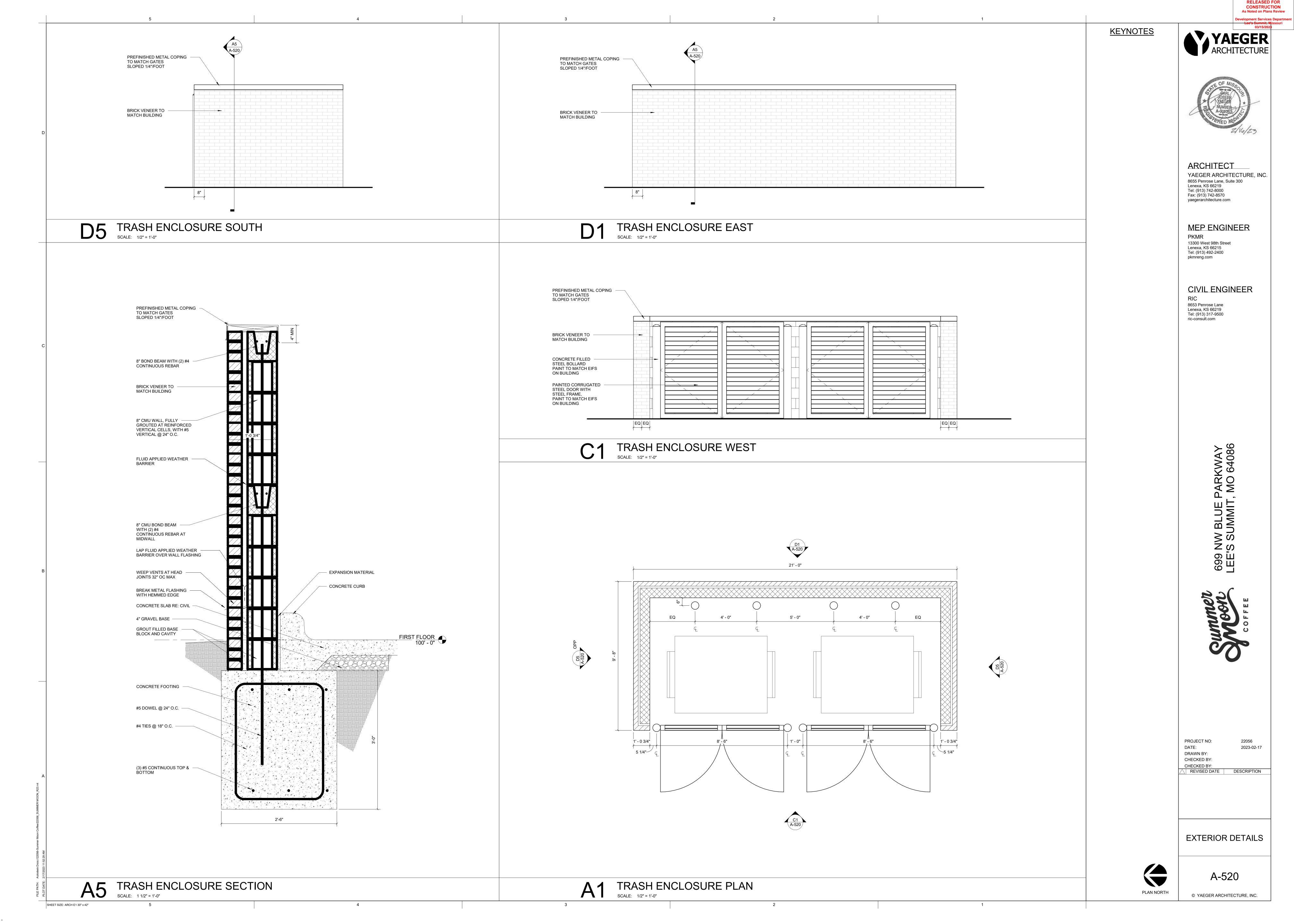




CONSTRUCTION
As Noted on Plans Review







5		3		2		1	As Noted on Plans Development Services Lee's Summit, M 03/15/2023
					• Al	TOM CASEWORK SPECIFICATIONS LL CUSTOM ARCHITECTURAL CASEWORK AND MILLWORK SHALL BE AWI CUSTOM GRADE R HIGHER	YAEGER ARCHITECTURE
					• W	D.1 SHALL BE SELECT WHITE OAK, STAINED PER SCHEDULE. FINISH WITH SATIN OLYURETHANE DLYURETHANE D.2 SHALL BE PAINT GRADE HARDWOOD, PAINTED PER SCHEDULE.	OF MISCORDE
					• C/	ABINETRY SHALL BE FULL OVERLAY CONSTRUCTION. LL CABINET DOORS SHALL USE EUROSTYLE, CONCEALED HINGES.	JOSEPH VAEGER *
					C/	LL CABINET DOORS SHALL USE PULLS BY HOUSE OF ANTIQUE HARDWARE; BRIXTON ABINET PULL, 7-9/16", COLOR: SABLE ABRICATOR SHALL COORDINATE CASEWORK WITH ALL OWNER PROVIDED FOOD SERVICE	A-005753
D					EG	QUIPMENT. SOME PIECES OF EQUIPMENT REQUIRE PARTICULAR CLEARANCES AND UTOUTS.	2/16/23
							ARCHITECT
							8655 Penrose Lane, Suite 300 Lenexa, KS 66219 Tel: (913) 742-8000 Fax: (913) 742-8570
							yaegerarchitecture.com
						1 CASEWORK SPECS SCALE: NTS	MEP ENGINEER PKMR
							13300 West 98th Street Lenexa, KS 66215 Tel: (913) 492-2400 pkmreng.com
	0005			R FINISH SCHEDU			
	ODE 01 BRICK BK.1	MANUFACTURER MCNEAR BRICK	MODEL OR ITEM NO. MODULAR FLAT	VERONA	PRODUCT DESCRIPTION THIN BRICK VENEER	MORTAR COLOR TBD FROM MANUFACTURER'S FULL RANGE	CIVIL ENGINEER RIC
	02 CEILING TILE CT.1	AMERICAN TIN CEILINGS ARMSTRONG	PATTERN #2 KITCHEN ZONE	MATTE WHITE	24" X 24" TIN CEILING WITH GRID 24" X 48" VINYL FACED CEILING PANELS	WHITE GRID WHITE 15/16" GRID	8653 Penrose Lane Lenexa, KS 66219 Tel: (913) 317-9500 ric-consult.com
	CT.3	ARMSTRONG	DUNE	WHITE	24" X 48" VINYL FACED CEILING PANELS WITH GRID 24" X 24" MINERAL FIBER CEILING PANEL WITH GRID		
c	03 SEALED CONCRETE SC.1	-	-	-	GRIND AND SEALED CONCRETE FLOOR	PENDING CONDITION OF CONCRETE ONCE QUARRY TILE IS REMOVED	
	04 LVP LVP.1	SLCC FLOORING	BORROWED SCENERY	CITRON	GLUE DOWN LVP FLOORING	INSTALL AT 45 DEGREE ANGLE RUNNING NORTHEAST TO SOUTHWEST	
	05 METAL TRIM MT.1	SCHLUTER	JOLLY	BRUSHED GRAPHITE	METAL EDGE TRIM FOR TILE	SIZE PER TILE THICKNESS	
	06 PAINT PNT.1	SHERWIN WILLIAMS	EMERALD PROCLASSIC WATERBORNE INTERIOR ACRYLIC ENAMEL	PURE WHITE SW7055	INTERIOR PAINT, FOR GYPSUM BOARD SUBSTRATE INTERIOR PAINT, FOR WOOD SUBSTRAT		
	PNT.2 PNT.3 PNT.4	SHERWIN WILLIAMS SHERWIN WILLIAMS SHERWIN WILLIAMS	PROCLASSIC WATERBORNE INTERIOR ACRYLIC ENAMEL PROCLASSIC WATERBORNE INTERIOR ACRYLIC ENAMEL PROCLASSIC INTERIOR WATERBASED ACRYLIC ALKYD	ENDLESS SEA SW9150 TRICORN BLACK SW6258 PURE WHITE SW7055	INTERIOR PAINT, FOR WOOD SUBSTRAT INTERIOR PAINT, FOR WOOD SUBSTRAT INTERIOR PAINT, FOR METAL DOORS AN FRAMES	E SATIN FINISH	
	PNT.5	SHERWIN WILLIAMS	EMERALD	ENDLESS SEA SW9150	INTERIOR PAINT, FOR GYPSUM BOARD SUBSTRATE	SATIN FINISH	
	08 SOLID SURFACE SS.1 SS.2	MSI	QUARTZ SLAB 1/2" THICK SOLID SURFACE COUNTERTOP OVER	CARRARA MARMI GLACIER WHITE	3CM SLAB 1/2" SOLID SURFACE COUNTERTOP,	EASE EDGE, TYPICAL, FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR SUPPORTING COUNTERTOP 1.5" BUILT UP EDGE, EASE EDGE, COORDINATE WALL BRACKET	WAY 408
					SUPPORT WITH 3/4" MOISTURE RESISTA PLYWOOD SUBSTRATE AND STEEL WAL BRACKETS	NT PLACEMENT WITH OWNER'S EQUIPMENT	ARKWAY MO 64086
	09 TILE TL.1 TL.2	DALTILE DALTILE	COLOR WHEEL CLASSIC RETRO ROUNDS		4X4, GLOSSY TILE 14 MOSAIC PENNY ROUNDS	BRICK LAY, GROUT - CUSTOM CHARCOAL #60 GROUT - CUSTOM CHARCOAL #60	
	TL.3 TL.4	DALTILE AMERICAN OLEAN MSI	JOLLY PENCIL TRIM CUSTOM MOSIC PATTERN (SEE PHOTO BELOW OF PATTERN) KASBAH	ARTIC WHITE ICE WHITE (A25), SERENITY (A50) AND DISCOVERY (A36)	1/2" X 12" TRIM CUSTOM MOSAIC PATTERN 8" SQUARE FLOOR TILE	GROUT - CUSTOM CHARCOAL #60 GROUT - CUSTOM CHARCOAL #60 MATTE, GROUT - CUSTOM CHARCOAL #60	BLUE
	10 WOOD WD.1	-	-	MINWAX HEIRLOOM OAK	SELECT WHITE OAK	STAIN AND SEAL WITH SATIN FINISH	SUN SUN
	WD.1 WD.2 11 WALLPAPER	-	-	PAINT PNT.2	PAINT GRADE WOOD	PAINTED FINISH	Zω
В	WP.1 12 BASE RB.1	MDC ROPPE	CUSTOM SUMMER MOON PRINT 6" RUBBER BASE WITH STANDARD TOE	CUSTOM	WALLCOVERING RUBBER BASE		699 LEE
	13 FRP FRP.1	MARLITE	STANDARD FRP	P151 LIGHT GRAY	4X8 SHEETS	USE MATCHING TOP CAP AND JOINT TRIMS	226
	14 PLASTIC LAMINATE PLAM.1	WILSONART	HIGH PRESSURE PLASTIC LAMINATE	DESIGNER WHITE		USE MATCHING EDGEBAND	38/ ==
							\$5.00 m
		TERIALS PER MANUFACTURER'S WRI					
		DOOR FRAMES PNT.4, UNLESS NOTE BE AWI CUSTOM GRADE OR HIGHER					
	TL.4 CUSTOM MOSAIC PA	<u>TTERN</u>					
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는 전 SHEET SIZE: ARCH E1 30" x 42" 5		3		2	SCALE:	1	© YAEGER ARCHITECTURE, INC.

RELEASED FOR CONSTRUCTION As Noted on Plans Review





evelopment Services Departi

GENERAL NOTES

MLO MAIN LUGS ONLY

NFA NET FREE AREA

NL NIGHT LIGHT

OA OUTSIDE AIR

RA RETURN AIR

RF RELIEF FAN

RR RESTROOM

SA SUPPLY AIR

ST SHUNT TRIP

TA TRANSFER AIR

TFA TO FLOOR ABOVE

TFB TO FLOOW BELOW

TP TAMPER PROOF

TYP TYPICAL

RL RELOCATED ITEM

ORD OVERFLOW ROOF DRAIN

P/C PLUMBING CONTRACTOR

PVC POLYVINYL CHLORIDE

RE/REF REFER TO / REFERENCE

RPZ REDUCED PRESSURE ZONE

SPD SURGE PROTECTIVE DEVICE

UNO UNLESS NOTED OTHERWISE

VTR VENT THROUGH ROOF

WCO WALL CLEANOUT

WG WIRE GUARD

WP WEATHERPROOF

VRF VARIABLE REFRIGERANT FLOW

PSI POUNDS PER SQUARE INCH

ABBREVIATIONS

AHJ AUTHORITY HAVING JURISDICTION

BMS BUILDING MANAGEMENT SYSTEM

CM COORDINATE MOUNTING HEIGHT

DCVA DOUBLE CHECK VALVE ASSEMBLY

ELEV ELEVATION

EX EXISTING ITEM

FLR FLOOR

FFA FROM FLOOR ABOVE

FFB FROM FLOOR BELOW

FP FIRE PROTECTION

FPM FEET PER MINUTE

G GROUND / GANG

HD HOT DECK

HTG HEATING

FWCO FLUSH WALL CLEANOUT

G/C GENERAL CONTRACTOR

GPM GALLONS PER MINUTE

IG ISOLATED GROUND

LED LIGHT EMMITING DIODE

LWT LEAVING WATER TEMPERATURE

M/C MECHANICAL CONTRACTOR

JB JUNCTION BOX

MA MIXED AIR

MECH MECHANICAL

MH MANHOLE

MAU MAKE UP AIR UNIT

MCB MAIN CIRCUIT BREAKER

GFCI GROUND FAULT CIRCUIT INTERRUPTER

FFCO FINISH FLOOR CLEANOUT

FGCO FINISH GRADE CLEANOUT

EM EMERGENCY FIXTURE/DEVICE

EWT ENTERING WATER TEMPERATURE

A/E ARCHITECT / ENGINEER

AFF ABOVE FINISHED FLOOR

AFG ABOVE FINISHED GRADE

AG ABOVE GRADE

ARCH ARCHITECT

BG BELOW GRADE

BLDG BUILDING

C CONDUIT

CD CANDELA

CLG COOLING

CO CLEANOUT

DIA DIAMETER

EA EXHAUST AIR

DN DOWN

CTE CONNECT TO EXISTING

DCW DOMESTIC COLD WATER

DF DRINKING FOUNTAIN

DHW DOMESTIC HOT WATER

DDC DIRECT DIGITAL CONTROLS

DHWR DOMESTIC HOT WATER RETURN

E/C ELECTRICAL CONTRACTOR

EDF ELECTRIC DRINKING FOUNTAIN

CD COLD DECK

AHU AIR HANDLING UNIT

BFP BACKFLOW PREVENTER

1. SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR REFERENCE TO ROOM NAMES NOT SHOWN. 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE. AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY. 3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE

COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION. 4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS.

5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

FIRE SEALING NOTES

1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS. 2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH-PENETRATION FIRESTOP SYSTEMS. 3. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS

UNTIL EXAMINED BY INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING

JURISDICTION 4. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS. IF ANY. PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE

5. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM

THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED. 6. PROVIDE SLEEVES THROUGH ALL FIRE-RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE

STOP PUTTY WITH UL LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS. FIRE RATED WALLS.

ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH 8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF

-----DI----- DE-IONIZED WATER PRESSURE REDUCING VALVE ————G——— NATURAL GAS -----LP------ PROPANE RELIEF VALVE NP-NP-NON-POTABLE WATER WATER HAMMER ARRESTOR ———ACID——— ACID WASTE ———ACID——— ACID VENT PIPING FIXTURES / EQUIPMENT -----PD------ PUMPED DISCHARGE (FROM SUMP PUMPS / HOSE BIBB EJECTORS) WALL HYDRANT FIRE SPRINKLER Þ® CLEANOUTS RPZ REDUCED PRESSURE BACKFLOW PREVENTER FIRE SPRINKLER HEAD - PENDANT DCPB DOUBLE CHECK BACKFLOW PREVENTER ───── FIRE SPRINKLER HEAD - SIDEWALL FIRE DEPARTMENT SIAMESE CONNECTION PLUMBING FIXTURE AND CALLOUT POST INDICATOR VALVE FLOOR DRAIN, AREA DRAIN, OR FLOOR SINK

COORDINATION NOTES

1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES. 2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, PIPES, DUCTS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.

MECHANICAL AND PLUMBING SYMBOL LEGEND

MECHANICAL PIPING

-----RL------ REFRIGERANT LIQUID

-----RV------ REFRIGERANT VENT

-----RD------ RUPTURE DISK

-----RS------ REFRIGERANT SUCTION

-----CWS------ CHILLED WATER SUPPLY

-----HWS------ HOT WATER SUPPLY

——HWR—— HOT WATER RETURN

----- DOMESTIC COLD WATER

——— - - — DOMESTIC HOT WATER

— V—— PLUMBING VENT

----- WATER SERVICE

——C/HWS—— CHILLED/HOT WATER SUPPLY

-----CTWS----- COOLING TOWER WATER SUPPLY

——CTWR—— COOLING TOWER WATER RETURN

STEAM (ANY #'S DENOTE PRESSURE)

----- RECIRCULATING DOMESTIC HOT WATER

STORM DRAIN ABOVE GRADE OR FLOOR

— ST: — STORM DRAIN BELOW GRADE OR FLOOR

-----RO------- REVERSE OSMOSIS WATER

AND REQUIREMENTS OF THE AHJ.

FASTENED FROM STRUCTURE

COORDINATE WITH OTHER TRADES.

ADDITIONAL REQUIREMENTS.

REQUIREMENTS OF THE AHJ.

REQUIREMENTS OF THE AHJ.

NOT INDICATED OTHERWISE.

WHERE REASONARI Y POSSIRI E

ONLY UNDER THE FOLLOWING CONDITIONS

BIDS, FOR OWNER ACCEPTANCE.

CASEWORK AND ELEVATIONS.

THE CHASE.

ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING

SYSTEM SHALL BE PROVIDED BY THE M/C CONTRACTOR OR SUBS.

REQUIREMENTS OF THE WALL/CEILING THEY ARE INSTALLED.

3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND

ACCESS SHALL BE PROVIDED WITH ACCESS DOORS MEETING ANY FIRE

DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ.

5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE

AND START UP REPORTS TO THE A/F REFER TO SPECIFICATIONS FOR ANY

2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO FREEZING

2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART MEASURED

5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER.

3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE

OR SOIL LINES GREATER THAN 45 DEGREES. WHERE MORE THAN ONE CHANGE

REQUIRED FOR EACH 40 FEFT OF DEVELOPED LENGTH OF THE DRAINAGE PIPING.

OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED

VERSION OF THE NATIONAL ELECTRICAL CODE. LOCAL AND STATE CODES. AND

3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES

5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW

6. ALL CONDUCTOR SIZES INDICATED ON DRAWINGS ARE FOR COPPER CONDUCTORS

UNLESS SPECIFICALLY NOTED OTHERWISE. ALUMINUM CONDUCTORS MAY BE USED

CONTRACTOR SHALL INCLUDE A DEDUCT ALTERNATE FOR USE OF SAME WITH

AL CONDUCTORS MAY ONLY BE USED ON FEEDERS 100A OR GREATER - NO

PROVIDE COMPRESSION-TYPE ONE-HOLE OR TWO-HOLE LUG TERMINATIONS.

ALUMINUM SERVICE CONDUCTORS MUST HAVE "AA-8000" SERIES LABELING ON

ALLIMINUM CABLING SHALL BE COMPACTED ALLIMINUM (STABILOY)

CABLE JACKETS PER EVERGY REQUIREMENTS - NO EXCEPTIONS.

ENGINEER RESERVES FINAL RIGHT TO ACCEPT/DENY USE OF ALUMINUM

PROVIDE ANTI-OXIDANT COMPOUND AT TERMINATIONS.

FINAL SIZES OF CONDUCTORS TO BE CONFIRMED BY ENGINEER

CABLE TERMINATIONS SHALL BE MARKED "AL/CU".

CONDUCTORS FOR PART OR ALL OF PROJECT.

PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED ENDS.

3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS:

4. AT THE BASE OF EACH WASTE OR SOIL STACK.

FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT.

STORM OVERFLOW ABOVE GRADE OR FLOOR

— ST/O — STORM OVERFLOW BELOW GRADE OR FLOOR

— — SAN — — WASTE BELOW GRADE OR FLOOR

------CR-------CONDENSATE RETURN (ANY #'S DENOTE PRESSURE)

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

HIGH-FFFICIENCY DUCT TAKEOFF

SPIN-IN ROUND DUCT TAKEOFF

(WITH AND WITHOUT MANUAL DAMPER)

CONICAL BELLMOUTH ROUND DUCT TAKEOFF

(MAXIMUM FLEX DUCT LENGTH IS 6'-0")

AUTOMATIC MOTORIZED DAMPER

(NECK SIZE, TYPE, AND CFM)

CFM), LY AIR FLOW INDICATOR

TEMPERATURE SENSOR

22x22 R) RETURN GRILLE (NECK SIZE AND TYPE, MAY ALSO INCLUDE

 \bigcirc $\frac{10x10}{\cancel{E}}$ EXHAUST GRILLE (NECK SIZE AND TYPE, MAY ALSO INCLUDE

RETURN OR EXHAUST AIR FLOW INDICATOR

8"Ø\$1 225 SUPPLY DIFFUSER AND CALLOUT

THERMOSTAT

HUMIDISTAT

-----MV------ MEDICAL VACUUM PIPING

OXYGEN PIPING

——NO—— NITROUS OXIDE PIPING

N-----N NITROGEN PIPING

CO—CARBON DIOXIDE PIPING

——GV—— MEDICAL GAS VENT PIPING

FL? INDICATES ELEVATION

MEDICAL SLIDE

-----VV------ VACUUM VENT PIPING

CONTROL WIRING

-----MA------ MEDICAL COMPRESSED AIR PIPING

MEDICAL GAS INLET/OUTLET W/DESIGNATION (RE: PIPE

MEDICAL GAS ALARM WIRING - PRESSURE SWITCH

MEDICAL GAS ALARM WIRING - TRANSDUCER

PLUMBING RISER CALLOUT (TYPE/RISER NO.)

FOR FOLIPMENT (KITCHEN SHOP FTC.)

(W&V = WASTE AND VENT, WAT = DOMESTIC WATER)

EQUIPMENT TAG. REFER TO CONNECTIONS SCHEDULE(S) FOR ELECTRICAL CONNECTIONS AND LOAD INFORMATION

INDICATES CONNECT TO EXISTING

MEDICAL GAS ALARM WIRING CONNECTION

LINEAR/SLOT DIFFUSER

ROUND DUCT TAKEOFF WITH FLEX DUCT RUNOUT

DUCTWORK ELBOWS (WITH AND WITHOUT TURNING VANES)

SD: SMOKE DAMPER BD: BACKDRAFT DAMPER (GRAVITY)

FD: FIRE DAMPER FS: FIRE/SMOKE DAMPER

SHEET METAL

(MD)

MEDICAL GAS

GENERAL SYMBOLS

3 COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS. 4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.

5. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION 6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES. COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND FOUIPMENT IDENTIFY ALL ITEMS OF WORK THAT REQUIRE

ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS. 7. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE 8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND **GENERAL PLUMBING NOTES** APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO 1 COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS

APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. 9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES. 10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND I OCATION OF EACH ITEM PRIOR TO FABRICATION MAKE OFFSETS TRANSITIONS

CLEARANCES AND HEADROOM. 11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED. SUBCONTRACTORS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES. AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR FRECTION IN THE FIFI D 12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS,

AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE

RENOVATION NOTES

LABOR AND TESTING TO ACCOMPLISH THE WORK.

1 DISCONNECT AND REMOVE ANY EQUIPMENT PIPING OR DUCTWORK THAT WAS INSTALLED AS PART OF THE BUILDING SHELL THAT IS NOT NEEDED OR CONFLICTS WITH THIS BUILD OUT. 2. EXISTING UNDERGROUND PIPING LOCATIONS ARE ESTIMATED BASED UPON

ANTICIPATED ROUTINGS. FIELD VERIFY EXACT LOCATIONS DURING CONSTRUCTION AND PROVIDE ALL NECESSARY MODIFICATIONS. 3. SAWCUT GRADE FLOOR SLABS TO INSTALL NEW PIPING, MECHANICAL SYSTEMS, ELECTRICAL FLOOR BOXES AND ALL ASSOCIATED CONDUIT, ETC. PATCH FLOOR TO MAKE LIKE NEW AFTER INSTALLATION TAKE CARE TO LOCATE EXISTING CONDUIT FTC AND AVOID CUTTING FXISTING CONDUITS BY NOT OVER-CUTTING SI AB DEPTH 4. SAWCUT AND CORE DRILL OPENINGS AS REQUIRED FOR ABOVE GRADE SLAB PENETRATIONS. X-RAY SLABS TO ASCERTAIN STEEL AND EXISTING CONDUIT PENETRATIONS PRIOR TO CUTTING. VERIFY OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING.

INDICATED. UTILIZE SPARE BREAKERS MADE AVAILABLE BY DEMOLITION, IF NO SPARE BREAKER IS AVAILABLE PROVIDE NEW BREAKER 6. EXISTING CIRCUITING MAY BE RE-USED WHERE POSSIBLE, AND SAME COMPLIES WITH ALL APPLICABLE SECTIONS OF THE SPECIFICATIONS. . CONCEAL NEW CIRCUITING IN WALLS WHERE POSSIBLE. FOR NEW DEVICES INSTALLED ON EXISTING SOLID WALLS CONCEAL CIRCUITING IN WIREMOLD COORDINATE FINISH AND GENERAL ROUTING OF WIREMOLD WITH ARCHITECT TO BE AS CONCEALED AND/OR ROUTED IN A NEAT AND ORGANIZED CONSISTENT MANNER.

5. HOMERUN CIRCUITS TO 20 AMP, SINGLE POLE BREAKERS IN PANELBOARDS

GENERAL MECHANICAL NOTES DEMOLITION NOTES

PIPING SYMBOLS

 \longrightarrow

——>

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—#—

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→ / -

PIPING SPECIALTIES

SHUTOFF VALVE

BALANCING VALVE

PIPING ELBOW UP

PIPING TEE

UNION

PIPE FLEX

3-WAY VALVE

CHECK VALVE

Y-STRAINER

SOLENOID VALVE

THERMOMETER

IN-LINE (BASKET) STRAINER

AUTOMATIC 2-WAY CONTROL VALVE

AUTOMATIC 3-WAY CONTROL VALVE

PRESSURE AND TEMPERATURE GAUGE (WITH COCK)

PIPING ELBOW

PIPING TEE UP

PIPING TEE DOWN

INCREASER/REDUCEI

PIPING ELBOW DOWN

SHUTOFF VALVE IN RISER

I. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED 1 ALL WORK SHOWN DARK AND DASHED IS TO BE DEMOLISHED. VERSION OF THE INTERNATIONAL MECHANICAL CODE LOCAL AND STATE CODES WORK SHOWN LIGHT IS EXISTING TO REMAIN. . REFER TO ARCHITECTURAL PLANS FOR FURTHER EXTENT OF 2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON DEMOLITION REQUIREMENTS.

> BELOW SLAB SHALL BE GROUND FLUSH WITH FLOOR, PLUGGED AND THE FLOOR PATCHED TO MATCH SURROUNDING FLOOR. 4. COORDINATE ALL DEMOLITION WORK WITH OWNER. 5. CONTACT UTILITY LOCATING SERVICE TO LOCATE EXACT

4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING LOCATION OF UTILITIES BELOW GRADE. 6. MAINTAIN ALL EXISTING DEVICES, EQUIPMENT, ASSOCIATED CIRCUITS ETC. SHOWN AS EXISTING TO REMAIN OR OTHERWISE LINRELATED TO THE SCOPE OF THE PROJECT IN WORKING ORDER CONTRACTOR SHALL REMOVE LAY-IN CEILINGS, LIGHT FIXTURES, ETC. AS REQUIRED FOR CONSTRUCTION WHERE NEEDED PRIOR

3. ALL EXISTING PIPING SCHEDULED FOR DEMOLITION THAT ROUTES

ROOF DRAIN OR OVERFLOW ROOF DRAIN

6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN TO DEMOLITION AND REPLACE SAME AFTER CONSTRUCTION. OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE EXISTING CONDUITS ABOVE CEILINGS SHALL BE RELOCATED AND/OR TEMPORARILY REMOVED TO FACILITATE THE INSTALLATION OF NEW EQUIPMENT.

8. THE OWNER SHALL REMOVE ALL ITEMS THEY DESIRED TO SALVAGE PRIOR TO CONSTRUCTION BEGINNING. 9. NOTES AND DRAWINGS ARE BASED UPON A FIELD EXAMINATION OF THE SITE AND MAY NOT INDICATE ALL ITEMS. THE

CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH

THE SITE AND THE SCOPE OF WORK FOR THE CONTRACT PRIOR TO BID. ANY EXISTING CONDITION WHICH IS APPARENT OR COULD BE REASONABLY INFERRED FROM A VISIT TO THE SITE SHALL NOT BE THE BASIS FOR A CHANGE IN THE CONTRACT AMOUNT. 10. REFER TO NEW WORK PLANS FOR ANY ITEMS THAT MAY REQUIRE VERSION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND RELOCATION AFTER DEMOLITION. 11. PROPERLY DISPOSE OF ALL DEMOLISHED ITEMS OFF SITE. 12. REMOVE ALL MISCELLANEOUS CONDUITS, PIPES, ETC, THOUGH TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM

NOT SPECIFICALLY SHOWN ON PLAN THAT ARE FITHER UNUSED. SIDE OF BUILDING INSULATION, INSULATED AND THE CHASE SHALL BE VENTILATED OR WILL BECOME UNUSED DUE DEMOLITION ACTIVITIES, IN ORDER WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH TO PROVIDE A "CLEAN" SPACE FOR THE OWNER. 13. PROTECT ALL EXISTING SURFACES AND EQUIPMENT DURING CONSTRUCTION. EXISTING ITEMS TO REMAIN SHALL BE 1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE THAN 100 FEET ADEQUATELY PROTECTED FROM DEMOLITION AND NEW CONSTRUCTION WORK, AS REQUIRED. ANY ITEMS DAMAGED OR MARRED SHALL BE ADEQUATELY CLEANED OR REPLACED TO THE

OWNERS SATISFACTION TO ORIGINAL CONDITION BEFORE CONSTRUCTION. 14. PATCH ANY HOLES IN STRUCTURE CREATED BY REMOVAL OF DUCTWORK, CONDUITS, PIPES, ETC. 15. REMOVE ALL ITEMS SHOWN IN WALLS TO BE DEMOLISHED. ALL ELECTRICAL CONDUIT AND WIRING SHALL BE REMOVED BACK TO PANELBOARDS AND PROPERLY TERMINATED.

16. SAW CUT FLOOR FOR THE INSTALLATION OF NEW SANITARY PIPING. REFER TO PLUMBING PLANS SHOWING NEW WORK. 17. SAVE, CLEAN, AND RE-LAMP ALL LIGHT FIXTURES NOTED AS BEING RELOCATED. REFER TO NEW WORK PLANS AND LIGHT FIXTURE SCHEDULE FOR DESCRIPTIONS, QUANTITIES, AND LOCATIONS OF FIXTURES TO BE RE-USED.

SHEET INDEX

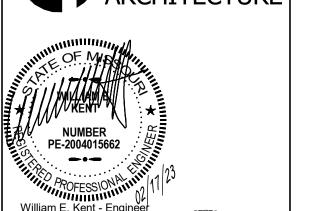
MEP002 THROUGH PENETRATION DETAILS

COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL MEP101 SPECIFICATIONS MEP102 SPECIFICATIONS MEP103 SPECIFICATIONS MEP201 ROOF

MEP001 COVER SHEET

DMP101 HVAC DEMOLITION PLAN M101 MECHANICAL - HVAC P101 PLUMBING

DE101 ELECTRICAL - DEMOLITION PLAN E101 ELECTRICAL - LIGHTING E201 ELECTRICAL - POWER



William E. Kent - Engineer MO# PE-2004015662 NUMBER PE-2014007277 Darren E. Thrasher - Engine MO# PE-2014007277

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PROJECT NO: 22056 DATE: 2023-02-17 DRAWN BY: Author CHECKED BY: Checker CHECKED BY: REVISED DATE DESCRIPTION

COVER SHEET

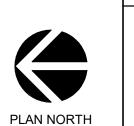


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PEARSON KENT MCKINLEY RAAF ENGINEERS. LL

MO State Certificate of Authority #E-2002020886



LENEXA, KS 66215

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2. GENERAL REQUIREMENTS A.Furnish & install all labor & materials required for complete, functioning, mechanical & plumbing systems w/ all associated equipment & apparatus as

shown on plans. B. Obtain & pay for all permits required for execution of this work & shall make

arrangements for modifications to water, gas & sewer connections to building as C.All materials shall be new & shall bare UL label where applicable.

D. Visit site & observe conditions under which work will be done. Any discrepancies shall be called to architect's attention. No subsequent allowance will be made in contract for any error or negligence on contractor's part. E. Final acceptance of work shall be subject to condition that all systems, equipment, apparatus & appliances operate satisfactorily as designed &

intended. Work shall include required adjustment of systems & control

equipment installed under these specifications. F. Warrant to owner quality of materials, equipment, workmanship & operation of equipment provided under these specifications for one year from & after completion of building & acceptance of mechanical systems by owner. G.All materials installed in plenums shall be noncombustible or have flame/smoke

index of no more than 25/50 in accordance w/ ASTM e 84. H. Requirements under Division one & general & supplementary conditions of these specifications shall be part of this section. Contractor shall become thoroughly acquainted w/ its contents as to requirements that affect this Division of work required under this section includes material. Equipment, appliances Transportation. Services. & labor required to complete entire system as required by drawings & specifications.

I. The specifications & drawings for project are complementary, & portions of work described in one, shall be provided as if described in both. In event of discrepancies, notify engineer & request clarification prior to proceeding w/ work

3. EXTENT OF CONTRACT WORK

scope of work.

A.Provide MEP systems indicated on drawings, specified or reasonably implied. In addition to specific equipment called out in plans and specifications, provide every device, component, programming, interlocking and accessory necessary for proper operation and completion of totally functional MEP systems.

B. In case of an inconsistency between the Drawings and Specifications or within either document, the better quality or the greater quantity of work shall be provided in accordance with the Architect or Engineer's interpretation. C.In no case will claims for "Extra Work" be allowed for work about which

Contractor could have been informed before bids were taken. D. Contractor shall become familiar with equipment provided by other contractors that require plumbing connections and controls.

E. Electrical work required to install and control plumbing equipment, which is not shown on plans or specified under Division 26. shall be included in Contractor's

base bid proposal. F. All automatic temperature control devices shall be mounted as indicated in automatic temperature control section of specifications.

G.The cost of larger wiring, conduit, control and protective devices resulting from installation of equipment which was not used for basis of design as outlined in specifications shall be paid for by the supplying Contractor at no cost to Owner or Architect Engineer

H. Contractor shall be responsible for providing supervision to other trade Contractors to insure that required connections, interlocking and interconnection of MEP equipment is made to attain intended control sequences and system

I. Contractor shall obtain complete MEP data on shop drawings and shall list this data on an approved form that shall be presented on request, to other trade Contractors. Data shall be complete with wiring diagrams received to date and shall contain necessary data on electrical components of plumbing equipment such as HP, voltage, amperes, watts, locked rotor current to allow other trade Contractors to order support or other equipment coordinated as required in his

4. <u>DEFINITIONS</u> A.Whenever used in these specifications or drawings, following terms shall have indicated meanings:

B. Furnish: term "Furnish" is used to mean "supply & deliver to project site. Ready for unloading, unpacking, assembly. Installation & similar operations. C.Install: term "Install" is used to describe operations at project site including actual "unloading, unpacking. Assembly. Erection. Placing. Anchoring. Applying, working to dimension. Finishing, curing, protecting, cleaning. & similar

D. Provide: term "Provide" means "to Furnish & Install. Complete & ready for intended use." furnished by owner or furnished by others: item will be furnished by owner or others. It is to be installed & connected under requirements of this Division, complete & ready for operation, including items incidental to work, including services necessary for proper installation & operation. Installation shall be included under guarantee required by this Division.

E. Engineer: where referenced in this Division, "Engineer" is engineer of record & design professional for work under this Division, & is consultant to, & an authorized representative of, architect. As defined in general &/or supplementary conditions. When used in this Division. It means increased involvement by. & obligations to, engineer, in addition to involvement by. & obligations to,

F. AHJ: local code &/or inspection agency (authority) having jurisdiction over work. G.The terms "Approved equal", "Equivalent". Or "Equal" are used synonymously & shall mean "accepted by or acceptable to engineer as equivalent to item or manufacturer specified".

H. The term "approved" shall mean labeled, listed. Or both. By nationally recognized testing laboratory (e.g. UL. ETL. CSA). & acceptable to AHJ over this

PREBID SITE VISIT

A.Prior to submitting bid. Visit site of proposed work & become fully informed as to conditions under which work is to be done. Failure to do so will not be considered sufficient justification to request or obtain extra compensation over & above contract price. 6. MATERIAL & WORKMANSHIP

A.Provide new material, equipment. & apparatus under this contract unless otherwise stated herein. Of best quality normally used for purpose in good commercial practice & free from defects. Model numbers listed in specifications or shown on drawings are not necessarily intended to designate required trim, written descriptions of trim govern model numbers.

B. Pipe, fittings, specialties & valves shall be manufactured in USA. Work performed under this contract shall provide neat & "workmanlike" appearance when completed to satisfaction of architect & engineer. Workmanship shall be finest possible by experienced mechanics. Installations shall comply w/ applicable codes & laws. Complete installation shall function as designed & intended w/ respect to efficiency, capacity, noise level. etc. Abnormal noise caused by rattling equipment, piping, ducts, air devices & squeaks in rotating components will not be acceptable. In general materials & equipment shall be of commercial specification grade in quality. Light duty & residential equipment is not acceptable.

C.Remove from premises waste material present from work, including cartons, crating, paper, stickers, &/or excavation material not used.

D. Clean equipment installed under this contract to present neat & clean installation

E. Repair or replace public & private property damaged as result of work performed under this contract to satisfaction of authorities & regulations having jurisdiction. COORDINATION

A.Coordinate work w/ other trades so various components of systems will be installed at proper time will fit available space & will allow proper service access for maintenance. Components which are installed without regard to above shall be relocated at no additional cost to owner. B. Obtain equipment submittal information for all pieces of equipment to be

connected to from other trades that clearly indicates all connection requirements,

locations, sizes, and similar requirements. Obtain this information in ample time

to coordinate other trade submittals and equipment coordination. Where requirements differ from that on plans or differs from provisions made in the work, immediately notify the architect/engineer. Do not proceed with work that is incompatible with equipment provided.

C.Unless otherwise indicated, general contractor will provide chases & openings in building construction required for installation of systems specified herein. Contractor shall furnish general contractor w/ information where chases & openings are required.

D. Keep informed as to work of other trades engaged in construction of project & execute work in manner as to not interfere w/ or delay work of other trades. Figured dimensions shall be taken in preference to scale dimensions. E. Contractor shall take his own measurements at building, as variations may

by proper checking & inspection.

SHEET SIZE: ARCH E1 30" x 42"

occur. Contractor will be held responsible for errors that could have been avoided

F. Provide materials w/ trim that will properly fit types of ceiling, wall. Or floor finishes actually installed. Model numbers listed in specifications or shown on drawings are not intended to designate required trim.

G.Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work Coordinate construction operations, included in different sections, that depend on

each other for proper installation, connection, and operation. H. Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the work. Each contractor shall coordinate its operations with operations, included in different sections, that depend on each other for proper installation, connection, and operation.

I. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation J. Coordinate installation of different components with other contractors to ensure

maximum accessibility for required maintenance, service, and repair. K. Make adequate provisions to accommodate items scheduled for later installation. L. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and

M.Prepare coordination drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities. Content: project-specific information, drawn accurately to scale. Do not base coordination drawings on reproductions of the contract documents or standard printed data. Include the following information, as

1) Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems. 2) Indicate required installation sequences.

3) Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the contract.

N. Meetings: conduct project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1) Attendees: each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with project and authorized to conclude matters relating to the work. Notify architect of meeting. 2) Agenda: review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect

3) Combined contractor's construction schedule: review progress since the last coordination meeting. Determine whether each contractor is on time, ahead or behind schedule, in relation to construction schedule. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the contract time. Discuss impact of various contractor schedules upon other contractors and how to remedy impacts.

4) Review present and future needs of each contractor present O.After shop drawings have been reviewed and approved by all parties, transmit a set of submittals to each other trade (eq Plumbing, Mechanical, Electrical, Controls, etc) that will interface with installation. Each other contractor shall review the submittal for coordination and return a stamped submittal indicating they have reviewed the submittal for coordination purposes.

ARCHITECTURAL VERIFICATION AND RELATED DOCUMENTS

A.Contractor shall consult all Architectural Drawings and specifications in their entirety incorporating and certifying all millwork, furniture, and equipment rough-in including utility characteristics such as voltage, phase, amperage, pipe sizes. duct sizes. including height, location and orientation. Shop drawings incorporating these requirements should be submitted to the Architect for approval prior to installation or rough in. ORDINANCES & CODES

A.Work performed under this contract shall. At minimum, be in conformance w/ applicable national, state & local codes having jurisdiction B. Installation work performed under this contract shall be in strict compliance w current applicable codes adopted by local AHJ including any amendments & standards as set forth by National Fire Protection Association (NFPA)

Underwriters Laboratories (UL), Occupational Safety & Health Administration (OSHA). American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, & Air Conditioning Engineers (ASHRAE). American national standards institute (ANSI), American Society of Testing Materials (ASTM) & other national standards & codes where applicable. C.Where contract documents exceed requirements of referenced codes. Standards,

etc., contract documents shall take precedence. D. Procure & pay for permits & licenses required for accomplishment of work herein described. Where required, obtain. Pay for & furnish certificates of inspection to

owner. Contractor will be held responsible for violations of law. 10. <u>STANDARDS</u> A.Drawings and specifications indicate minimum construction standard. Should any work indicated be sub standard to any ordinances, laws, codes, rules or

regulations bearing on work, Contractor shall promptly notify Architect Engineer in writing before proceeding with work so that necessary changes can be made. However, if the Contractor proceeds with work knowing it to be contrary to any ordinances, laws, rules, and regulations, Contractor shall thereby have assumed full responsibility for and shall bear all costs required to correct non complying

11. PROTECTION OF EQUIPMENT & MATERIALS

A.Store & protect from damage equipment & materials delivered to job site. Cover as required to protect from dirt & damage. Plug or cap open ends of ductwork & piping systems while stored & installed during construction when not in use to prevent entrance of debris into systems. Equipment & material that has been damaged by construction activities will be rejected, & contractor is obligated to furnish new equipment & material of like kind. Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. Shall have neat & clean appearance at completion.

12. <u>SUBSTITUTIONS</u> A.The base bid shall include only products from manufacturers specifically named in drawings & specifications. No substitution will be considered prior to receipt of bids unless written request for approval to bid has been received by engineer at least ten calendar days prior to date for receipt of bids. Request shall include name of material or equipment for substitution & complete description of proposed substitute including drawings, cuts, performance & test data & other information for evaluation. Statement setting forth changes in other materials, equipment or other work that incorporation of substitute would require shall be

B. The intent of these specifications is to allow ample opportunity for Contractor to use his ingenuity and abilities to perform the work to his and the Owner's best advantage, and to permit maximum competition in bidding on standards of materials and equipment required. C.Material and equipment installed under this contract shall be first class quality,

new, unused and without damage. D. In general, these specifications identify required materials and equipment by naming one or more manufacturer's brand, model, catalog number and/or other identification. The first named manufacturer or product is used as the basis for design; other manufacturers named must furnish products consistent with specifications of first named product as determined by Engineer. Base bid

proposal shall be based only on materials and equipment by manufacturers named, except as hereinafter provided. E. Where materials or equipment are described but not named, provide required items of first quality, adequate in every respect for intended use. Such items shall be submitted to Architect Engineer for review prior to procurement. F. Materials and equipment proposed for substitutions shall be equal to or superior to that specified in construction, efficiency, utility, aesthetic design, and color as determined by Architect Engineer whose decision shall be final and without further recourse. Physical size of substitute brand shall be no larger than space

Requests must be accompanied by complete descriptive and technical data including manufacturer's name, model and catalog number, photographs or cuts, physical dimensions, operating characteristics and any other information needed for comparison. G.The burden of proof of merit of proposed substitute is upon proposer. Engineer's decision of approval or disapproval to bid of proposed substitution shall be final.

provided including allowances for access for installation and maintenance.

Terms approved". "approved equal". & "equal" refer to approval by engineer as an acceptable alternate bid. No substitutions will be considered that are not bid H. No material substitutions shall be considered for approval after to award of contract. Coordinate & verify w/ other trades whether or not substituted

equipment can be installed as shown on construction drawings without

modification to associated systems or architectural or engineering design.

Include additional costs for architectural & engineering design fees in bid if drawing modifications are required because of substituted equipment. 13. SHOP DRAWINGS

A. Equipment to be furnished under this contract, items requiring coordination between contractors & sheet metal ductwork fabrication drawings. Before submitting shop drawings verify equipment submitted is mutually compatible & suitable for intended use & will fit available space & allow ample room for maintenance. Engineer's checking & subsequent approval of such shop drawings will not relieve contractor from responsibility for errors in dimensions, details, size of members, quantities, omissions of components or fittings; coordination of electrical requirements; or for coordinating items w/ actual building conditions. Proceed w/ procurement & installation of equipment only after receiving approved shop drawings relative to each item.

B. Submittal data shall be neatly organized, identified & indexed. Each item or model number shall be clearly marked & accessories indicated. Label catalog data w/ equipment identification acronym or number as used on drawings & include performance curves, capacities, sizes, materials, finishes, wiring diagrams & deviations from specified equipment or materials. Mark out inapplicable items. Shop drawings will be returned without review if above mentioned requirements are not met.

C.Requirements shall be met electronically & submitted as pdf in files less than

D. Contractor's stamp, which shall certify that stamped drawings have been checked by contractor, comply w/ drawings & specifications, & have been

coordinated w/ other trades E. Transmit submittals as early as required to support project schedule. Allow for two weeks a/e review time, plus duplication of this time for resubmittals, if required. Transmit submittals as soon as possible after notice to proceed & before construction starts. Engineer's submittal reviews will not relieve contractor from responsibility for errors in dimensions, details, size of members, or quantities; or for omitting components or fittings; or for not coordinating items w/ actual building conditions

F. Final copies shall be furnished to owner as part of O&M documents in hard & electronic formats.

14. OPERATION & MAINTENANCE INSTRUCTIONS

A.Collect & compile complete brochure of equipment furnished & installed on this project. Include operational & maintenance instructions, manufacturer's catalog sheets, wiring diagrams, parts lists, approved shop drawings, test & balance reports, & descriptive literature as furnished by equipment manufacturer. Include an inside cover sheet that lists project name, date, owner, architect, consulting engineer, general contractor, sub-contractor, & an index of contents. Submit three copies of literature bound in 3-ring binders w/ index & tabs separating equipment types to architect at termination of work. Final approval of plumbing systems will be withheld until manual is received & deemed complete by architect & engineer. Provide "as-built" drawings (see Division 1 & general

B. These requirements may shall also be provided to the owner in a well organized pdf electronic submission & delivered on a DVD or USB thumbdrive. . <u>TRAINING</u>

A.Provide factory trained & authorized representative to train owner's designated personnel on operation & maintenance of equipment provided for this project. Provide training to include but not be limited to an overview of system &/or equipment as it relates to facility as whole; operation & maintenance procedures & schedules related to startup & shutdown, troubleshooting, servicing, preventive maintenance & appropriate operator intervention; & review of data included in operation & maintenance manuals. Submit certification letter to architect stating that owner's designated representative has been trained as specified herein. Letter shall include date, time, attendees & subject of training. Contractor & owner's representative shall sign certification letter indicating agreement that training has been provided. Schedule owner training w/ at least 7 days' advance

16. SPARE PARTS

A. Furnish to owner, w/ receipt one set of spare filters of each type required for each unit. In addition to spare set of filters, install new filters prior to testing, adjusting, & balancing work & before turning system over to owner. B. Furnish one complete set of belts for each fan.

17. EQUIPMENT LABELS: A.Material and thickness: multilaver, multicolor, plastic labels for mechanical engraving, 1/16 inch thick, and having predrilled holes for attachment hardware Black letters on white background.

B. Minimum label size: length and width vary for required label content, but not less than 2-1/2 by 3/4 inch. C.Minimum letter size: 1/4" for name of units if viewing distance is less than 24 inches, 1/2" for viewing distances up to 72" & proportionately larger lettering for

greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering. A.Warrant each system & each element thereof against all defects due to faulty workmanship design or material for period of 12 months from date of substantial

completion unless specific items are noted to carry longer warranty in construction documents or manufacturer's standard warranty exceeds 12 months. Remedy all defects, occurring within warranty period(s) stated in general conditions & Division 1. Warranties shall include labor & material. Make repairs or replacements without any additional costs to owner. Perform remedial work promptly, upon written notice from engineer or owner.

B. At time of substantial completion, deliver to owner all warranties in writing & properly executed including term limits for warranties extending beyond one year period. Each warranty instrument being addressed to owner & stating commencement date & term. 9. <u>CUTTING & PATCHING</u>

A.Perform cutting of walls, floors, ceilings, etc. As required to install work under this section. Obtain permission from architect prior to cutting. Do not cut or disturb

structural members without prior approval from architect. Cut holes as small as possible. General contractor shall patch walls, floors, etc. As required by work under this section. Patching shall match original material & construction. Repair & refinish areas disturbed by work to condition of adjoining surfaces in manner satisfactory to architect. 0. EXCAVATION AND BACKFILL A.Perform necessary excavation to receive work. Provide necessary sheathing,

of work. Perform excavation in accordance with appropriate section of these specifications, and in compliance with osha safety standards. B. Excavate trenches of sufficient width to allow ample working space, and no deeper than necessary for installation work. C.Conduct excavations so no walls or footings are disturbed or injured. Backfill

shoring, cribbing, tarpaulins, etc. For this operation, and remove it at completion

excavations made under or adjacent to footing with selected earth or sand and tamp to compaction required by architect_engineer. Mechanically tamp backfill under concrete and pavings in six inch layers to 95% standard density, reference D. Backfill trenches and excavations to required heights with allowance made for settlement. Tamp fill material thoroughly and moistened as required for specified

E. When available, refer to test hole information on architectural or civil drawings or specifications for types of soil to be encountered in excavations. 1. ROUGH-IN

compaction density. Dispose of excess earth, rubble and debris as directed by

A.Coordinate rough-in w/ general construction & other trades. Conceal piping & conduit rough-in except in unfinished areas & where otherwise shown. 2. STRUCTURAL STEEL

A.Structural steel used for support of equipment, ductwork & piping shall be new, clean, & conform to ASTM a-36. Support mechanical components from building structure. Do not support mechanical components from ceilings, other mechanical or electrical components, & other non-structural elements. 23. ACCESS DOORS

A.Provide access doors in ceilings, walls, etc. Where indicated or required for access or maintenance to concealed valves & equipment installed under this section. Provide concealed hinges, screwdriver-type lock, anchor straps; manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size. Location & color before ordering. 24. PENETRATIONS

A.Seal mechanical floor, exterior wall & roof penetrations watertight & weathertight. Seal around mechanical penetrations w/ 3M CP-25 fire barrier caulk (thickness as required & recommended by manufacturer) to maintain resistance rating of fire-rated assemblies. Provide prefabricated roof curbs manufactured by Custom Curb, Pate, Thycurb or approved equal. Provide roof curb w/ factory installed wood nailer: welded. 18 gauge galvanized steel shell, base plate & flashing: 1-1/2" thick, 3 pound rigid insulation; fully mitered 3-inch raised cant; cover of weather-resistant, weather-proof material & pipe collar of weather-resistant material w/ stainless steel pipe clamps. Make roof penetrations by authorized roofing contractor when required.

5. <u>MOTORS & STARTERS</u> A.Provide motors & starting equipment where not furnished w/ equipment package. Motors shall have copper windings, class b insulation, & standard squirrel cage w/ starting torque characteristics suitable for equipment served. Motors for air handling equipment shall be selected for quiet operation. Each motor shall be

checked for proper rotation after electrical connection has been completed. Provide dripproof enclosure for locations protected from weather & not in air stream of fan; & totally enclosed fan cooled enclosure for motors exposed to weather. Motors shall be manufactured by Century, GE, Westinghouse, or approved equal. Provide every motor, except fractional horsepower single phase motors w/ an approved type of "built-in" thermal overload protection, w/ motor starter. Each starter shall be provided w/ overload heaters sized to motor rating & every three phase motor starter shall have overload heaters in each phase. Ambient compensated heaters shall be installed wherever necessary. Unless noted otherwise, motor starters shall be furnished by Division 22/23 contractor

for installation & connection by Division 26 contractor. Starters shall be Allen-Bradley, Clark, Furnas, Square D, or approved equal. 26. ELECTRICAL WIRING A.Line voltage wiring shall be provided by Division 26. Line voltage control & interlock wiring for mechanical systems shall also be provided by Division 26

contractor. Furnish wiring diagrams to Division 26 contractor as required for proper equipment hookup. Coordinate w/ Division 26 contractor actual wire sizing amps for submitted mechanical equipment to ensure proper installation 27. DISCONNECT SWITCHES A.Provide heavy-duty horsepower rated safety switches rated in accordance with

contractor. Low voltage control wiring shall be provided by Division 22/23

NEMA enclosed switch standard KS 1 1969 and l98 standard. B. Each piece of electrical equipment shall be provided with a disconnecting C.Equivalents by: GE, Eaton, Siemens, Square D.

A.Provide full refrigerant & oil charge in refrigeration systems. Maintain for full term of warranty.

29. <u>EQUIPMENT FURNISHED BY OTHERS</u>

28. REFRIGERANT & OIL

service installations.

A.Provide necessary equipment & accessories that are not provided by equipment supplier or owner to complete installation of cooking equipment, washing equipment, etc., furnished by others, in locations as indicated on drawings &/or described in general notes to this contractor. Equipment & accessories not provided by equipment supplier may include flues, vents, intakes, associated roof jacks & caps to outdoors, dampers. In-line fans, roof fans, control interlocks, etc. As required for proper operation of complete system in accordance w/ manufacturer's instructions. Contractor shall be responsible for correct rough-in dimensions, & shall verify same w/ architect &/or equipment supplier prior to

30. <u>SETTING</u>, <u>ADJUSTMENT AND EQUIPMENT SUPPORTS</u> A.Work shall include mounting, alignment and adjustment of systems and equipment. Set equipment level on adequate foundation and provide proper

repaired or replaced by Contractor at no cost to Owner.

anchor bolts and isolation as shown, specified or required by manufacturers in installation instructions. Level, shim and grout equipment bases as recommended by manufacturer. Mount motors, align and adjust drive shafts and belts according to manufacturer's instructions. B. Equipment failures resulting from improper installation or field alignment shall be

C.Floor or pad mounted equipment shall not be held in place solely by its own dead weight. Include anchor fastening in all cases. D. Provide floor or slab mounted equipment with 3 1/2" high concrete bases unless specified otherwise. Individual concrete pad shall be no less than 4" wider and 4" longer than equipment, and shall extend no less than 2" from each side of

E. Provide each piece of equipment or apparatus suspended from ceiling or mounted above floor level with suitable structural support, platform or carrier in accordance with best-recognized practice. Verify that structural members of buildings are adequate to support equipment and unless otherwise indicated on plans or specified, arrange for their inclusion and attachment to building structure. Provide hangers with vibration isolators.

F. Submit details of hangers, platforms and supports together with total weights of mounted equipment to Architect Engineer for review before proceeding with fabrication or installation.

MISCELLANEOUS REMODELING WORK

A.Remove all unused equipment, ductwork, piping & associated supports. Cap ductwork & piping at mains & seal air & water tight. Provide items of HVAC systems modification required because of building remodeling, as noted on drawings or necessary for proper operation. Match existing materials & construction techniques when modifying existing systems unless specifie otherwise. Coordinate additional requirements w/ general contractor & architect. Seal airtight existing ductwork required to be abandoned in place or not in use at termination of work. Cap & seal weathertight existing roof curbs & roof openings to be abandoned in place as result of equipment removal. Clean & rebalance existing ductwork, diffusers, registers, & grilles intended for reuse as required or as indicated on drawings. Clean & refurbish existing HVAC equipment intended for reuse as required for proper operation including replacement of filters, belts, motors, remote controls, & safety interlocks.

32. <u>BUILDING OPERATION</u> A.Comply w/ schedule of operations as outlined in architectural portions of this specification. Building shall be in continuous operation. Accomplish work requiring interruption of building operation at time when building is not in operation, & only w/ written approval of building owner &/or tenant. Coordinate

interruption of building operation w/ owner &/or tenant minimum of seven days in advance of work. B. The following Work shall be performed at night or weekend other than holiday weekends as directed and coordinated with the Owner: All tie-in, cut-over and modifications to the existing electrical system and other existing system requiring tie-ins or modifications shall be arranged and scheduled with the Owner to be done at a time as to maintain continuity of the service and not interfere with

normal building operations. 33. <u>VIBRATION ISOLATION</u> A.Provide vibration isolation equipment & materials by single manufacturer. Amber booth, kinetics noise control, mason industries, inc., vibration eliminator co., inc., & vibration mounting & controls. General requirements: select vibration isolators by weight distribution to produce uniform deflection. Isolators shall operate in linear portion of their load versus deflection curves. Spring isolators shall have 50 percent excess capacity without becoming coil bound. Coat vibration isolators w/ factory-applied paint. Coat vibration isolators exposed to weather & corrosion w/ factory-applied protection. Install & adjust isolators in accordance w/

manufacturers instructions. . <u>FIRE BARRIERS</u> A.General: for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction

penetrated.

35. WELDING A.Contractor shall be responsible for quality of welding and suitability of welding procedures. All welding shall be in accordance with American Welding Society standard B3.0 and ANSI standard b31.1

B. Welded pipe joints shall be made by certified welding procedures and welders.

Welding electrodes shall be type and material recommended by electrode manufacturer for materials to be welded. All pipe and fittings ends shall be beveled a minimum of 30 degrees prior to welding. C.Only welders who have successfully passed welder qualifications tests in previous 12 months for type of welding required shall do welding. Each welder shall identify his work with a code marking before starting any welded pipe fabrication. Contractor shall submit three copies of a list of welders who will work on project listing welders' code, date and types of latest qualification test passed

by each welder. D. Welded joints shall be fusion welded in accordance with level AR3 of American Welding Society standard AWS D10.9 "Standard For Qualification Of Welding Procedures And Welders For Pipe And Tubing". Welders qualified under national certified pipe welding bureau will be acceptable.

E. Bevel all piping and fittings in accordance with recognized standards by flame

cutting or mechanical means. Align and position parts so that branches and

fittings are set true. Make changes in direction of piping systems with factory

made welding fittings. Make branch connections with welding tees or forged

END OF GENERAL MEP REQUIREMENTS

William E. Kent - Engineer MO# PE-2004015662

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PROJECT NO: DRAWN BY: CHECKED BY:

2023-02-17 Author CHECKED BY:

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SPECIFICATIONS



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MEP10²

B. An approved automatic sprinkler contractor shall perform all work under this heading. System shall be installed in strict accordance w/ NFPA 13 Underwriters Laboratories (UL), & must be acceptable to owner's insurer, authority having iurisdiction & all applicable local, state & national codes & standards. Where contract documents exceed requirements of referenced codes, standards, etc., contract documents shall take precedence

C.Sprinkler system shall be certified. Contractor shall retain certification until contractor turns copies of certificates & permits over to owner. Contractor shall be approved & state licensed for design & installation of fire protection systems. Work done under this section shall be performed only by a contractor whose workmen are experienced & regularly engaged in installation of fire protection

D. System shall be hydraulically designed. Design of sprinkler system shall coordinate main & branch lines w/ structure, ceilings, piping, ductwork & light fixtures. Entire building shall be sprinkled.

E. Work shall include, but shall not necessarily be limited to following: design & installation of a complete wet-pipe fire protection sprinkler system for project space. Portions of systems subject to freezing or temperatures below 40' f shall be protected against freezing as required by NFPA 13. Contractor shall be responsible for repairs & for all costs incurred from damage caused by freezing of fire protection system

3. SYSTEM DESIGN A.This contractor shall verify design criteria & rating hazards with owner's insurer prior to designing system. Waterflow & pressure test data shall be acquired before system is calculated & be dated not more than 12 months prior to submittal of sprinkler drawings.

B. Contractor shall verify with authority having jurisdiction any minimum safety factor requirements. Regardless, demand shall not be less than 10% below supply at demand point.

C.The contractor shall be fully responsible for hydraulic calculations, arrangements for & cost of flow tests, final system design, & layout of all components of system as required for approval by owner's insurer, authority having jurisdiction & all applicable local, state & national codes & standards

D. The contractor shall be fully responsible for coordinating system layout with other contractors. Changes to system design due to lack of coordination shall be E. Sprinkler spacing shall conform to NFPA 13. Extended coverage sprinklers shall

not be used in unfinished (shell) spaces. Hydraulic area of operation shall not be reduced as allowed by NFPA 13 for areas utilizing quick response sprinklers. 4. SHOP DRAWINGS

A.Shop drawings & hydraulic calculations shall be furnished to architect &/or engineer, for his approval. Architect will forward one set to contractor after final approval. Submitted shop drawings shall bear a stamp indicating approval by authority having jurisdiction. Provide drawings electronically in pdf format. B. Shop drawings shall meet requirements of NFPA 13 & shall include following:

1) Submit working plans per NFPA 13 including layout drawings of complete overhead sprinkler system indicating relationship of sprinkler piping & sprinklers to all other overhead items including ceiling grid & tiles, light fixtures, diffusers, registers, grilles, ductwork, etc. Location of risers, piping, etc., shall be as inconspicuous as possible & shall fulfill all functional requirements. System design capabilities & water demands shall also be noted on drawings. 2) Submit complete details & sections as required to clearly define & clarify

design, including a materials list describing all proposed materials by manufacturer's name & catalog number. 3) Hydraulic calculations. 4) Product data for all fire sprinkler system components. Provide next to

sprinkler riser main, a printed sheet, protected by glass or a transparent plastic cover, giving brief instructions regarding control, emergency procedure & other data as required by NFPA 13. For hydraulically designed systems, a placard must be permanently attached to riser indicating location, & basis of design (discharge density & system demand). SYSTEM MANUAL

A.Upon completion of installation, & as a condition of its acceptance, contractor shall compile three 8-1/2" by 11" manuals, firmly bound in heavyweight plastic or paper cover to withstand hard use. Loose-leaf binding is not acceptable. Manuals shall be delivered to architect, & shall contain following items:

1) Identification clearly visible on or through cover, name of project & "fire sprinkler system manual". 2) Neatly typed index at front with all emergency information clearly identified. 3) Complete list of all system components with manufacturer's names,

catalog numbers, & all data for ordering parts. 4) One copy of record drawings, as described above. 5) All information required to secure emergency repairs or service. 6) Contractor's "material & test certificate(s) for sprinkler system", as

described in NFPA 13. 6. SPRINKLER HEADS

A.Sprinkler heads - as required by NFPA 13 manufactured by Viking, Reliable, Tyco and Victaulic Semi recessed chrome plated brass where exposed. Sidewall where required. Rough brass where concealed & exposed in mechanical rooms. Concealed heads where located in sheet rock ceilings Provided w/ necessary hardware for mounting into hard or acoustical ceilings. Reference architectural drawings for ceiling types & locations. Where no ceilings occur, provide standard brass upright or pendant as required by construction.

B. Sprinkler heads shall be underwriters-approved, automatic spray type. Temperature rating of heads shall be 165 deg f., except furnish 212 deg f. Heads where required.

C.Location of sprinkler heads is not shown on drawings but nevertheless shall be furnished & installed to meet requirements of specifications & NFPA. Center heads in 2x2 tile spacing in acoustic ceilings. Location of heads shall be as approved by architect. Provide head guards where required by NFPA. Furnish spare heads & wrenches mounted in metal cases where directed by architect & as required by NFPA.

7. PIPE, FITTINGS, & HANGERS A.Sprinkler piping 2-1/2" & larger shall be schedule 10 or schedule 40 black steel. Sprinkler piping 2" & smaller shall be schedule 40. Pipes shall have welded, threaded, or mechanically joined fittings, based on pipe material & size per NFPA 13 requirements. Piping shall be UL listed & FM approved. B. Acceptable alternatives to schedule 10 & schedule 40 pipe shall be manufactured to standards recognized by NFPA 13. Threaded pipe shall have a

used. Threadable thinwall pipe with corrosion resistance rating less than 1.0 not C.Hangers shall be of type & spacing to support pipes & meet approval of UL & FM. Hangers shall be attached to structural components only. Support risers from structure below. Do not support exposed risers from clamps above floor. D. Conceal mains back or above construction in finished areas. Piping shall be

corrosion resistance rating of 1.0 or greater. Crimp-type couplings shall not be

E. Pitch all dry pipe sprinkler piping to drain according to NFPA requirements, without exception & without traps. Wet pipe sprinkler systems may be pitched to drain or run level, but piping must be installed straight & true, without traps. F. Provide drain valves & inspector test valves as necessary to drain system & meet requirements of NFPA.

designed to provide maximum head room in all areas. Piping shall not pierce

8. TESTING & ACCEPTANCE A.Upon completion of each phase of installation, each system shall be tested in conformance with local code requirements & as noted below. Contractor shall furnish all labor & equipment required to properly test all sprinkler equipment installed under this contract & he shall assume all costs involved in making tests, & repairing &/or replacing all damage resulting therefrom.

B. Upon completion of systems installation, & prior to acceptance by engineer & owner, this contractor shall make general operating tests to demonstrate that all equipment & systems are in proper working order, & are functioning in conformance with intent of drawings & specifications. C.After completion of installation, test, retest, & make all corrections necessary to

secure acceptance by fire marshal &/or any other authority having jurisdiction. Furnish all test equipment & personnel required. D. After completion of all installation, tests, etc., & prior to final acceptance date, contractor shall instruct building owner & his selected personnel in operation of sprinkler system & procedure to conduct quarterly main drain tests as required

by NFPA 25.

9. EXECUTION A.All modifications & additions shall be performed without hampering proper operation of remaining system. Shop drawing submittals shall indicate by calculation total system compliance

B. Provide installation of water flow switches & tamper switches on bypass lines & shut off valves. Wiring by electrical contractor. Coordinate w/ fire alarm system. C.Submit drawings & calculations to state fire marshall, owner's insurance company & local building officials for approval.

D. Furnish all gauges, pumps, compressors & equipment required to perform tests. Coordinate all scheduling & work with other trades so as to prevent conflicts, & to ensure orderly progress of work, with a minimum of delays. When sprinkler piping is installed without coordinating with other trades & conflicts occur, sprinkler piping shall be relocated as required at no additional cost to owner to resolve conflicts. E. Piping in areas having ceilings, other than underside of roof deck, shall be

concealed. Piping in areas without ceilings may be exposed but kept at a minimum distance from deck. All piping shall be clean & free of rust. Install system such that all piping is rigidly secured & supported. All ductwork, lights, structural members & main runs of piping shall take precedence over sprinkler piping. Cutting of structural members for passage of sprinkler pipes or hangers will not be permitted. All horizontal piping in ceiling space shall be at an elevation above top of light fixtures & air outlets to allow for access to light fixtures & air outlets without removing horizontal piping. Route all sprinkler piping & provide all offsets, bends, & elbows around all mechanical, electrical, & structural members as required.

F. Contractor shall coordinate with fire alarm contractor &/or electrical contractor connection of fire sprinkler alarm devices to fire alarm system or fire sprinkler monitoring panel as required. G.Where exposed piping passes through finish work, chrome plated (or other finish

acceptable to architect) split wall plates or escutcheons shall be installed to fit

H. Piping shall be routed parallel to building lines. I. Seal all fire protection floor, wall & roof penetrations watertight & weathertight. Caulk around fire protection penetrations with approved fire barrier caulk as

required to maintain fire resistance rating of fire-rated assemblies. END OF DIVISION 210000

DIVISION 220000 - PLUMBING

snugly around piping.

PLUMBING GENERAL REQUIREMENTS

A.Refer to GENERAL MECHANICAL, ELECTRICAL AND PLUMBING requirements

. PIPING & INSULATION A.Water piping - all water piping shall be 95-5 tin-antimony joined type L copper.

ASHRAE 90.1. B. Waste & vent piping - Cl bell & spigot below grade or hubless Cl w/ neoprene gasket fittings w/ stainless steel bands above grade. Sched 40 PVC w/ solvent welds may be used where allowed by local code. PVC not allowed in plenums. C.Roof/storm drain piping - CI bell & spigot below grade or hubless CI w/ neoprene gasket fittings w/ stainless steel bands above grade. Sched 40 PVC w/ solvent welds may be used where allowed by local code. PVC not allowed in plenums.

Insulate w/ fiberglass w/ ASJ & PVC covers. Thickness in accordance w/

Insulate w/ min 1/2" fiberglass pipe wrap w/ ASJ jacket. A.Provide pipe markers and flow direction arrows at 10'_0" maximum spacing to identify piping in mechanical rooms and 20'_0" maximum spacing in all other

B. Pipe marker nomenclature/colors shall meet applicable ANSI standard and OSHA requirements from Seaton or equal. Submit for approval list of colors and wording prior to purchase of pipe markers.

A.Equivalent valves listed on current comparison charts of specified valve manufacturers by Milwaukee, Stockham, Powell, Red-White, Crane, Apollo, Mueller, Muessco, Watts, Hays, Rockwell-Nordstrom.

B. Ball valves - 2" & under - bronze full port w/ teflon seats, bronze ball & insulated C.Balancing valves - Armstrong model CBV I or CBV II, 125 psi-wp at 250 degrees f., meter connections w/ built-in check valves screwed or flanged ends. Provide

D. Check valves - 2" & smaller screwed or solder bronze check valve, 200 psi-wog/125 psi-wsp, teflon or bronze disc & seat ring. 2-1/2" & larger flanged, ASTM 126 iron body, bronze trimmed, 200psi-wog/125 psi-wsp.

1) Install necessary valves within piping systems to provide required flow control, to allow isolation for inspection, maintenance and repair of each piece of equipment or fixture, and on each main and branch service loop. 2) Each valve shall be installed so that it is easily accessible for operation, visual inspection, and maintenance and wherever possible, gate, check and ball valves shall be installed on a horizontal run with the handle upright and within 15 degrees of vertical. Butterfly valves shall be installed with the stem in the horizontal position and the handle at 90 degrees from vertical.

3) Valves installed in piping systems shall be compatible with system maximum test pressure, pipe materials, pipe joining method, and fluid or gas conveyed in system.

A.See schedules for further requirements and specific fixtures. B. Fixtures: American Standard, Kohler, Crane, Zurn, Toto.

polyurethane insulation cover.

C.Stainless steel fixtures: Elkay, Just, Moen Commercial D. Fittings & supports: Josam, Smith, Wade, Zurn, Or Jonespec. E. Seats: Church, Olsonite, Bemis Or Beneke.

F. Drinking fountains: Halsey Taylor, Elkay, Oasis, Or Haws. G.Trim by Moen, Delta, Eljer, Kohler, American St&Ard, Crane, Sloan. H. Flushvalves: Sloan, Zurn, Toto

I. Drains by Wade, Zurn, Woodford, Smith, Josam. J. Roof drains - cast iron roof drain w/ flange, CI mushroom dome. 2" dam for

K. Wall hydrants Josam series 71000 w/ connections for ¾" pipe & hose. Non-freezing w/ key, vacuum breaker, locking cover. Equivalent by J.R. Smith, Wade. Woodford or Zurn. L. Downspout nozzels - Wade series 3940 cast bronze downspout nozzles w/ threaded outlet & flange to secure nozzle to wall.

6. PLUMBING EQUIPMENT A.See schedules for further requirements and specific equipment. B. Tank Water heaters - State, Rheem, National, A.O. Smith, Porcelainized glasslined tank. Cold water inlet drop tube. Magnesium anode rods. UL seal, 160 psi, factory temperature & pressure relief valve. NSF. construction. 3 yr warranty C.Backflow preventers provide where shown on plans or as required by Code/AHJ the following types of backflow preventers. Provide isolation valve ahead of

backflow preventers. Equivalent backflow prevents by Watts, Febco, Lawler. 1) Reduced pressure zone principle (1/4"-1/2"); watts series 009 reduced pressure backflow preventer complete with strainers and valves. 2) Reduced pressure zone principle (3/4"-10"): watts series 909 reduced pressure backflow preventer complete with strainers and valves. Provide isolation valve ahead of backflow preventers. Provide with air gap fitting

3) Double check valve (1/2"-2"): watts series 007 double check valve assembly complete with ball type test cocks, full port ball valve shut offs

4) Pressure vacuum breakers (3/8"-1/2"): watts series 008qt pressure vacuum breaker for anti-spill applications, with integral ball valve shut offs. 5) Atmospheric vacuum breaker (1/4"-3"): watts series 288a atmospheric

vacuum breaker in plain brass finish. 6) Hose bibb vacuum breakers vacuum breakers for hose end connections shall be Watts series 8 non-removable type.

PLUMBING EXECUTION A. Provide unions or flanged joints in each pipe line preceding connections to equipment to allow removal for repair or replacement. Provide all screwed & control valves w/ unions adjacent to each connection. Provide screwed end valves w/ union adjacent to valve unless valve can be otherwise easily removed

B. All piping shall be properly supported with hangers and supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets and pipe clamps and similar systems. Protect integrity of insulation and provide rigid insulation inserts or pipe saddles as necessary.

C.After piping is in place test lines to insure no leaks. D. All piping & equipment shall be supported properly from structure. E. Escutcheons - provide nickel-brass or chrome plated on all exposed pipes when passing thru wall or ceiling of finished rooms.

F. Verify floor materials used from architectural plans & provide proper cleanout tops, where they occur in carpet, quarry tile, vinyl tile or ceramic tile. G.Provide water hammer arrestors for all plumbing banks w/ fixtures utilizing flush

valves in any capacity. Locate arrester between last two fixtures served on

END OF DIVISION 220000

DIVISION 230000 - MECHANICAL . MECHANICAL GENERAL REQUIREMENTS

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements 2. SHEET METAL WORK

SMACNA manual. Provide turning vanes in elbows. B. Coordinate routing of ductwork w/ other contractors such that piping, electrical conduit, & associated supports are not routed through ductwork. Construct supply ducts to meet SMACNA positive pressure of 3" WG. Construct return. outdoor & exhaust ductwork upstream of fans to meet SMACNA negative pressure of 1" WG. construct exhaust ductwork downstream of fans to meet SMACNA positive pressure of 1" WG.

A.HVAC ductwork shall be galv sheet metal of gauges & joint types specified in

C.Seal ductwork w/ heavy liquid sealant, Hardcast Irongrip 601, Design Polymer DP 1010, United McGill duct sealer or approved equal, applied according to sealant manufacturer's instructions.

D. Ducts shall be connected to fans, fan casings & fan plenums by means of flexible connectors. Flexible connectors shall be neoprene coated glass cloth canvas connections, Duro-Dyne, Elgen, Ventfabric or equal. Flexible connectors shall have flame spread of 25 or less & smoke developed rating not higher than 50. Make airtight joints & install w/ minimum 1-1/2" slack.

E. All ductwork must be supported properly from structure. 3. DUCTWORK SPECIALTIES

A.Flexible ducts - Thermaflex or equal sound rated type G-KM insulated. (duct w/o published acoustical attenuation ratings not acceptable). Take off fitting shall be hi-eff style w/ locking damper. Maximum length of flexible ductwork shall be

B. Diffusers & grilles - see schedule. Equivalent by Price, Tuttle & Bailey, Titus, Metal-Aire, Krueger. Coordinate color, mounting w/ duct, ceilings, architect. Select air devices to limit room noise level to no higher than NC-30 unless otherwise shown. Provide devices w/ soft plastic gasket to make an airtight seal against mounting surface. Coordinate final location, frame, & mounting type of air devices w/ architectural reflected ceiling plans. Submit complete shop drawings including information on noise level, pressure drop, throw, cfm for each air device, styles, borders, etc. Clearly marked w/ specified equipment number. Provide ceiling supply air diffusers & return air grilles of lay-in or surface mounted type as required to be compatible w/ ceiling construction. Provide ceiling diffusers & grilles w/ white enamel finish unless noted otherwise. Provide slot plenums by diffuser manufacturer. Plenums shall be internally insulated by

manufacturer. C.Provide balancing dampers, manufactured by Ruskin, Greenheck, Nailor Industries, Cesco, Louvers & Dampers, Pottorff or approved equal, where 'shown on drawings & wherever necessary for complete control of air flow. Splitter dampers shall be controlled by locking quadrants; provide young regulator or ventlok end bearings for damper rod. Rectangular volume dampers shall be opposed blade interlocking type. Round volume dampers shall be butterfly type

consisting of circular blade mounted to shaft. D. Fire Dampers - Static & dynamic; UL 555. Closing rating up to 4" WG static pressure class & min. 4000-fpm velocity. Rating of 1-1/2 & 3 hours as req'd. Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream. Provide with mounting sheet metal

E. Fire/Smoke & Smoke Dampers - Multiple-blade type; galvanized steel frame & construction. UL 555S. Roll-formed blades, horizontal, interlocking, 0.034-inchthick, galvanized sheet steel. Leakage Class L. Rated pressure & velocity to exceed design airflow conditions. Provide with mounting sheet metal mounting sleeve to suit installation location. Damper Motors: two-position action. Electrical Connection: 115 V, single phase, 60 Hz. Coordinate voltage with Fire alarm contractor prior to ordering. Where building is not equipped with a fire alarm system, provide a stand alone 120v smoke detector & remote LED indicator light mounted in ceiling below duct detector. Mount detector within 5' of damper & provide all necessary wiring & interconnections to damper & detector & relays/power supplies. Power open, locked & reset, spring closed.

F. Damper leakage for outside air dampers shall not exceed 6.5 cfm/square foot in full closed position at 4" we pressure differential across damper. Reference manufacturer & model number for outside air dampers is Ruskin model CD-50. 4. DUCT INSULATION WORK

A.Duct insulation & wraps shall meet flame/smoke rating of 25/50 per ASTM E 84. B. Line all low pressure supply & return air ductwork w/ 1/2" liner. Line all medium pressure supply w/ 1" liner. C.Line all transfer boots w/ 1/2" liner

D. Do no wrap exposed spiral ducts. Provide pre-manufactured 1/2" or 1" round liner for all exposed round ducts. Contractor has the option to use double wall perforated lined round spiral ducts for exposed ducts. Wrap all concealed round supply HVAC ductwork w/ Certainteed 1-1/2" thick insulation w/ vapor barrier in concealed locations or in unfinished shell spaces.

E. Wrap all outside air HVAC ductwork w/ Certainteed 1-1/2" thick insulation w/ vapor barrier in concealed locations. Exposed installations shall use 1-1/2" thick rigid board insulation or lined with 1" liner.

EXHAUST FANS A.Equivalent by Cook, Penn, Acme, Greenheck, Jennaire, Captive Air. B. Bearings shall be designed for 200,000 hours operation. Variable pitch motor

sheaves shall be standard C.Fans shall be furnished with acceptable electrical disconnect & birdscreen. Provide single phase motor equipped fans with motor rated start relay. Provide multiphase motor equipped fans with magnetic motor starter. Provide local disconnect means for all fans. Coordinate location of starter & disconnects with

D. Ceiling & Cabinet Exhaust Fans - Available Manufacturers: Cook, Penn, Acme, Greenheck, Jennaire, Panasonic. Shall bear the AMCA Certified Ratings Seal for sound and air performance. Provide speed controls to be furnished to E/C for mounting at fan. Provide wall/roof jacks as indicated on plans.

E. Centrifugal Roof Fan - Fan covers shall be aluminum specifically designed to withstand high wind loads. Wheels 12" in diameter & larger shall have air foil or medium foil blades. The motor & drive compartment shall be positively externally ventilated. Drive components shall be isolated from the structure. Horsepower shall not exceed the values shown & oversize motors will not be acceptable. Furnished with acceptable electrical disconnect & birdscreen. Single phase motors shall have integral overload protection. V-belt drives shall be adjustable & provided with automatic tensioner. Direct drive fans shall be supplied with speed controls & located at the fan. This speed control shall be furnished to electrical contractor for mounting. Provide minimum 14" tall (min 8" above roof insulation) roof curb designed to mate with the unit & provide support & a watertight installation. Provide sloped curb as required for level unit installation Provide electric motorized backdraft dampers to open when fan motor is started. When motor voltage differs from damper motor voltage, provide relay & control transformer with fan o provide proper voltage for damper operation.

MECHANICAL EXECUTION A.Coordinate w/ e/c to provide all wiring between equipment, dampers, thermostats

& all other required controls & devices. M/C is responsible for all control & interlock wiring unless specifcally shown on electrical drawings. All electrical work shall comply w/ electrical specifications. B. All piping shall be properly supported with hangers & supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets & pipe

inserts or pipe saddles as necessary C.All exterior control wiring shall be in conduit. D. Provide any required interfaces to fire alarm or similar systems. E. Provide ground-mounted units on 4", reinforced concrete base, 6" larger than

clamps & similar systems. Protect integrity of insulation & provide rigid insulation

F. Roof-mounted units on equipment supports or curbs, sloped as reg'd. Anchor units to supports. Coordinate all requirements to maintain roof warranties. G.Provide factory-authorized service start up on equipment. Train owner's

maintenance personnel on startup, shutdown, troubleshooting, servicing, preventive maintenance.

unit on each side.

7. FINAL TESTING & ADJUSTMENTS

H. Provide clean filters at time of project turnover. A.Final system testing. Balancing & adjustments shall be performed by contractor certified by NEBB, AABC or other approved agency. Perform test readings on fans, units, coils, etc. & adjust equipment to deliver specified amounts of air or

water. Prepare testing & balancing report log showing air supply quantities, air entering & leaving temperatures & pressures, fan & unit test readings, motor voltage & amp draws. etc., & submit PDF of final compilation of data to architect for evaluation & approval before final inspection of project. Balance air systems to within plus or minus 10 percent for terminal devices & branch lines & plus or minus 5 percent for main ducts & air handling equipment of amount of air shown on drawings. Further adjustments shall be made to obtain uniform temperature in spaces. Adjust equipment to operate as intended by specification. Align bearings & replace bearings that have dirt or foreign material in them w/ new bearings without additional cost to owner. Balance contractor shall include in report any improperly installed or missing balancing devices that would negatively impact system operation. Adjust thermostats & control devices to operate as intended. Adjust burners, pumps, fans, etc. For proper & efficient operation. Certify to architect that adjustments have been made & that system is operating satisfactorily. Further adjustments shall be made to obtain uniform temperature in spaces. Calibrate, set, & adjust automatic temperature controls. Check proper

sequencing of interlock systems, & operation of safety controls. Verify clean . WALL & CEILING HEATERS A.Nickel-chromium heating wire, free from expansion noise & hum, mounted in

ceramic inserts in a galvanized-steel housing; with fuses in terminal box for

overcurrent protection & limit controls for high-temperature protection. Terminate

elements in stainless-steel machine-staked terminals secured with stainless-steel

hardware. Manufacturers: Berko, Chromalox, Indeeco, Markel, Marley, QMark.

8. <u>STARTUP SERVICE</u> A.Engage a factory-authorized service representative to perform startup service for all equipment & systems. B. Complete installation & startup checks according to manufacturer's written

instructions. Maintain written records of all startup activities & also do the

1) Inspect for visible damage to any part, casing or component. 2) Verify that labels are clearly visible. 3) Verify service clearances are provided. 4) Verify that controls are connected & operable.

5) Verify that filters are installed. 6) Clean all interior and exterior components of construction debris.

7) Release and adjust vibration isolators. 8) Inspect all rotating components for direction and correct. 9) Start unit according to manufacturer's written instructions. 10)Inspect & record performance of interlocks & protective devices; verify

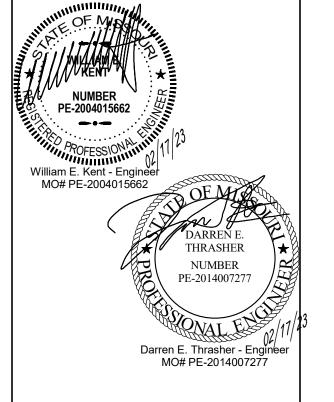
sequences. 11)Calibrate thermostats, sensors and similar equipment. 12)Inspect controls for correct sequencing of heating, mixing dampers, refrigeration, & normal & emergency shutdown.

13)After startup & performance testing, change filters, vacuum heat exchanger & cooling & outside coils, lubricate bearings, adjust belt tension, & inspect operation of power vents. 14)Provide one spare set of clean filters & deliver to owner.

1) Adjust initial temperature & humidity set points. 2) Set field-adjustable switches & circuit-breaker trip ranges as indicated. 3) Occupancy adjustments: when requested within 12 months of date of substantial completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to site outside normal occupancy hours for this purpose, without additional cost. D. Demonstration

1) Engage a factory-authorized service representative to train owner's maintenance personnel to adjust, operate, & maintain all HVAC equipment

END OF DIVISION 230000



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CHECKED BY:

REVISED DATE DESCRIPTION

22056 2023-02-17

Author

SPECIFICATIONS



13300 W 98TH STREET

913.492.2400

PEARSON KENT MCKINI FY RAAF ENGINEERS LI

MO State Certificate of Authority #E-2002020886



LENEXA, KS 66215

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MEP102

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ELECTRICAL SPECIFICATIONS

SECTION 26000 - ELECTRICAL

1. GENERAL ELECTRICAL REQUIREMENTS

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements. B. Wiring of Mechanical Equipment

1) Provide all raceways & power wiring for all division 23 equipment requiring electrical connections, including, but not limited to, pumps, water heaters, & HVAC equipment, & all line voltage control & interlock wiring not provided under division 23. Connect per manufacturers' wiring diagrams. Coordinate with division 23 for disconnects furnished w/ equipment, & provide all disconnect switches as required. After installing wiring, verify that each motor load has correct phase rotation.

2) Verify actual "maximum overcurrent protection" (MOCP) device ratings &

"minimum circuit ampacity" (MCA) conductor sizing for mechanical equipment from equipment nameplate. Base electrical installations on actual required amperages, which may vary somewhat from conductor & equipment sizes shown on drawings: however, in no case, reduce size of conductors indicated on drawings without authorization from engineer. Provide properly sized electrical wiring & equipment without extra cost to owner. Notify engineer of all changes required in electrical installation due to equipment variances so that effects on feeders, branch circuits, panelboards, fuses & circuit breakers can be checked prior to purchasing & installation. Be responsible for coordinating w/ division 23 to verify actual ampacities & correct sizes of all conductors & overcurrent protective devices for all equipment, & correct overload heaters for all motors, when starters are provided under division 26.

C.Wiring of Thermostats. Time, & Temperature Controls 1) Provide all raceways, power wiring, & line-voltage control and interlock

wiring not provided under division 23, for all thermostats, temperature control devices, & controls, including, but not limited to, night-stats, water heater interlocks, time switches & override timers. See mechanical drawings for locations & temperature control diagrams. Low-voltage conductors for thermostats & temperature control system may be run exposed above finished accessible ceilings, if approved & listed for this purpose, but shall be installed in conduit within walls & where exposed in

work areas. 2. CONDUIT & CONDUCTORS

A.Follow circuiting shown on plans. Use no conduit smaller than 3/4" & no conductors smaller than #12 ga. Unless noted otherwise.

B. Conductors #10 and smaller shall be solid. C.If no conductor size is indicated on drawings for branch circuit, provide

conductors & conduit sized per NFPA 70 & based on indicated branch circuit overcurrent protective device (OCPD) rating & number of poles. D. Wire shall be in non-flexible metallic conduit (EMT, IMC or RMC) for: 1) All circuits & feeders greater than 30A.

Kitchen circuits. 3) Home runs.

E. MC cable acceptable for branch convenience circuits & lighting circuits. Do not daisy chain light fixtures. Provide cable whips of sufficient lengths to allow for relocating each light fixture within 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths.

1) Do not use MC cable for following: homeruns to panelboards, where exposed to view or damage, hazardous locations, in concrete, block walls or wet locations, & when disallowed by local AHJ or landlord. 2) Provide health care rated MC for patient care areas (as defined by the

NEC) when not in conduit.

F. Lighting & receptacle circuit conductors shall be copper THHN-THWN-2 600 volt, 75 deg c, color coded as described under applicable codes. No romex, plastic flex tubing etc permitted. Light fixture wire insulation shall have temp rating not less than individual fixture manufacturers recommended rating.

G.Circuits w/ no. 8 or larger conductors, motor circuits, power & feeder circuits & building service feeders shall be copper THHN-THWN-2 600 volt, 75 deg c.

H. All materials used to terminate, splice or tap conductors: designed for, properly sized for, & UL listed for specific application & conductors involved, & installed in strict accordance w/ manufacturer's recommendations, using the manufacturer's recommended tools.

I. Where wiring is indicated as installed, but connection is indicated "future" or "by other division, trades, or contracts", leave minimum 3-foot "pigtail" at box, tape ends of conductors, & cover box.

J. Number of conductors in specific raceway "home run" is indicated w/ cross lines (tick marks) on each "circuit run" on drawings. In general, direction of branch circuit "home run" routing is indicated on drawings, complete w/ circuit numbers & panelboard designation. Continue all such "home run" wiring to designated panelboard, as though "circuit runs" were indicated in their entirety.

K. Wiring shall have insulation of proper color to match NEC color code. In larger sizes, where properly colored insulation is not available, use vinyl plastic electrical tape of appropriate color around each conductor at all termination points, junction & pull boxes.

GROUNDING A.Supplement grounded neutral of secondary distribution system w/ equipment grounding system, installed so that metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment & other conductive items operate continuously at ground potential & provide low

impedance path for ground fault currents. B. System shall comply w/ national electrical code, drawings & as specified.

C.Provide equipment ground bus in base of low voltage, switchgear brazed or otherwise adequately connected by an approved method to ground rods. D. Provide in conduit green insulated copper ground conductor to main metallic

water service entrance & connect by means of adequate ground clamps. E. Equipment grounding conductors for branch circuit home runs shown on drawings shall indicate an individual & separate ground conductor for that branch circuit which shall be terminated at branch circuit panelboard, switchboard, or other distribution equipment.

F. Provide low voltage distribution system w/ separate green insulated equipment grounding conductor for each single or three-phase feeder. Single phase 120 volt branch circuits for lighting & power shall consist of phase & neutral conductors & green ground conductor installed in common conduit which shall serve as grounding conductor. G.Grounding conductors shall be as shown on plans or if not specifically shown

shall be no smaller than that required by NEC. 4. RACEWAY INSTALLATION

A.Install all conductors & cable in raceways continuous without taps or splices. Splice or tap only in approved boxes & enclosures w/ approved solderless connectors, or crimp connectors & terminal blocks for control wiring, & keep to minimum required. Insulate all splices, taps, & joints as required by codes. B. Install all circular raceways concealed above suspended ceilings or concealed in

walls or floors wherever possible except where otherwise indicated. 1) All conduit, junction boxes, etc. Above ceilings shall be supported from structure. Pipe sleeves, hangers & supports shall be furnished & set & contractor shall be responsible for proper & permanent locations.

2) Support all conductors & cables in vertical installations, as required by NFPA 70, by installing cable supports or plug-type conduit riser supports, or wire-mesh safety grips.

C.Conduit installed below grade shall be Schd. 80 PVC heavy wall plastic conduit meeting NEMA standards & UL listed for underground & exposed use. Provide GRS radius bends & risers as conduits rise above grade or above floor slab. D. Provide GRS for all conduits run exposed to weather or exposed to other hazardous conditions. Provide any GRS installed below grade w/ corrosion

resistant bonded-plastic or approved mastic coating. This shall include 90-degree elbow below grade & entire vertical transition to above grade. E. Provide interlocking spacers for multiple runs of UG conduits in same trench. F. All other raceway may be EMT where approved by local code. Use compression

G.Use FMC for final connection to each motor & transformer, & to any device that would otherwise transmit motion, vibration, or noise. Use I FMC where exposed

type fittings for EMT, w/ all fittings UL listed for environment in which they are

to liquids, vapors or sunlight. 1) Provide all FMC & LFMC w/ an insulated bonding conductor.

H. Install raceways parallel & perpendicular to building lines. I. Install raceways to requirements of structure & to requirements of all other work on project. Install raceway to clear all openings, depressions, pipes, ducts. reinforcing steel, & other immovable obstacles. Install raceways set in forms for concrete structure in such manner that installation will not affect strength of

J. Install raceways continuous between connections to outlets, boxes & cabinets w/ minimum possible number of bends & not more than equivalent of four 90-degree bends between connections. Use manufactured elbows for all 45- & 90-degree bends, unless approved by engineer in advance. Make other bends smooth & even & without flattening raceway or flaking galvanizing or enamel.

trade elbow. Use long radius elbows where necessary, indicated, or both. K. Securely fasten raceways in place w/ approved straps, hangers & steel supports as required. Attach raceway supports to building structure. Hang single raceways for feeders w/ malleable split ring hangers w/ rod & turnbuckle suspension from

Radii of bends shall be as long as possible & never shorter than corresponding

inserts spaced not over 10 feet apart in construction above. L. Clamp groups of horizontal feeder raceways to steel channels that are suspended from inserts spaced not over 10 feet apart in construction above. Securely clamp vertical feeder raceways to structural steel members attached to structure. Install cable clamps for support of vertical feeders where required. Add raceway supports within 12 inches of all bends, on both sides of bends. Do not support raceways from suspended ceiling components.

M.Ream raceway ends, thoroughly clean raceways before installation, & keep clean after installation. Plug or cover openings & boxes as required to keep raceways clean during construction & fish all raceways clear of obstructions before pulling conductors wires. Provide raceways of ample size for pulling of wire & not smaller than code requirements & not less than 3/4", unless indicated otherwise on drawings.

N. Protect all raceway installations against damage during construction. Repair all raceways damaged or moved out of line after roughing-in to meet engineer's approval without additional cost to owner.

O.Align & install true & plumb all raceway terminations at panelboards,

switchboards, motor control equipment & junction boxes.

plastic line. Leave min. 24" slack at each end.

P. Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints. Q.Install pull wire in each empty raceway that is left for installation of conductors or cables under other divisions or contracts. Use polypropylene or monofilament

R. Make all joints & connections in manner that will ensure mechanical strength &

electrical continuity. S. Effectively seal raceways, by installing conduit fitting at boundary of two spaces, & filling it w/ an approved pliable material, after conductors or cables have been installed & tested, whenever raceways pass from non-cooled to cooled spaces or transition from outside facility or enclosure to inside, whether buried or exposed.

BUSHINGS & LOCKNUTS A.Rigidly terminate conduits entering sheet metal enclosures to enclosure w/ bushing & locknut on inside & locknut or an approved hub on outside. Conduit shall enter enclosure squarely.

B. Provide bushings & locknuts made of galvanized malleable iron w/ sharp, clean-cut threads. Where EMT enters box, provide approved EMT compression

C.Use insulated, grounding, or combination, bushings wherever connection is subject to vibration or moisture when required by NFPA 70, or both.

6. JUNCTION & OUTLET BOXES A.All boxes including light fixture, switch, receptacle, & similar outlet boxes: National Electrical, Appleton, Steel City, Raco, or approved equal, galvanized steel knockout boxes, suitable in design to purpose they serve & space they occupy. Size as required for specific function or as required by NFPA 70,

whichever is larger. 1) Lighting fixture boxes in ceilings shall not be less than 4" octagonal knockout type.

B. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush w/ finished surface, accurately set, & rigidly secured in position. Provide plaster rings, extension rings &/or masonry rings as req'd for flush mounting. Provide approved cast outlet boxes, w/ hubs & weatherproof covers, in all areas subject to damp, wet, or harsh conditions. C.Coordinate locations of outlet boxes. Outlets are only approx located on small

scale drawings. Use great care in actual location by consulting various large scale detailed drawings used by other division trades, & by securing definite locations from architect. D. All outlets, shall be mounted w/ bottom at 18" AFF & switches w/ bottom at 44"

AFF floor unless noted otherwise on plans. Refer to arch for other required elevations & cabinetry coordination. **ELECTRICAL IDENTIFICATION**

A.Manufactured labels for each Panelboard & Transformer. Typewritten panel schedules mounted in panels. Where electrical equipment is installed as service entrance equipment, contractor shall furnish & install nameplate listing the following: Equip Short-Circuit Current Rating in Amps (RMS SYM), as indicated on the drawings, Whether or not equipment is fully or series-rated, Available Fault Current in Amps. Contractor shall perform available fault current calculation to obtain available fault at Service Equipment, Date fault current calculations were performed.

B. Printed tape style label for each receptacle indicating Panel & Ckt #. C.Manufactured labels for all disconnect switches indicating equipment served. D. Branch circuits - identify each circuit w/ wire markers when enclosure label & wire colors do not provide enough information to identify each circuit without tracing. Feeders & branch circuit home runs w/ wire marker w/ Panel & Ckt #. Box covers above lay-in ceilings neatly marked w/ indelible marker.

E. Fire alarm - nameplate on each fire alarm terminal cabinet. Label all wiring. 8. <u>DIGITAL LIGHTING CONTROLS</u> A.Provide DLM systems consisting of lighting control panels, room controllers, motion sensors, daylight sensors, & other other controls as necessary to achieve

lighting switching & dimming control indicated on the drawings. B. Provide all interconnecting wiring, controls, programming & owner training for the C.Provide systems by: Cooper, Hubbell, Leviton, Phillips, Sensor Switch, Watt

Stopper, Lutron, nLight. D. Execution: 1) Calibrate all sensor time delays & sensitivity for proper detection of occupants & energy savings. Adjust time delays.

2) Provide documentation of room by room system configuration including: sensor parameters, time delays, sensitivities, & daylighting setpoints, sequence of operation, load parameters.

3) Post start-up tuning - 30 days after occupancy contractor shall adjust sensors to meet the owner's requirements. Provide a detailed report to the architect / owner of post start-up activity.

A.Branch circuit 208/240v panels shall be capacity shown w/ tin plated copper bussing & braced for minimum of 10,000a aic or as otherwise noted or required (series rated acceptable). Bolt on circuit breakers. 480v panels same except 14,000a aic min. or as otherwise noted. Minimum 20" wide w/ galv steel enclosure w/ hinged door & keyed lock. Coord trim w/ mounting location.

Typewritten card directory. B. Distribution panels shall be capacity shown & shall be Square D I-Line w/ tin plated copper bussing. 65kaic min or as otherwise noted/reg'd. Bolt on circuit breakers (series rated acceptable). Galv steel enclosure. CB's labeled w/ plastic printed labels to load served.

C.Equivalent by Square D, Siemens, Cutler Hammer, Or GE. 10. <u>CIRCUIT BREAKERS IN EXISTING PANELBOARDS</u> A.Provide new circuit breakers, for installation in existing panelboards, of same manufacturer, type & short circuit current interrupting ratings as existing

panelboard circuit breakers. 11. WIRING DEVICES

A.Color of devices as directed by architect.

B. Convenience outlets: 1) Spec grade 20 amp duplex w/ ground & SS wall plates. Other outlets shall be verified w/ equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where indicated & as req'd per code. 2) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass &

Seymour/Legrand C.Switches:

1) Light switches - spec grade 20 amp toggle switches w/ SS wall plates. 2) Wall motion switches - spec grade, PIR, override. 3) Ceiling motion switches - spec grade, dual technology, model as req'd by room configuration, all necessary power packs & relays. 4) Wall motion switches (bathroom) - dual relay, spec grade, PIR, 2nd relay

for operation of exhaust fan delay. 5) Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters. Continuously adjustable slider; with single-pole or three-way switching. Comply with UL 1472. 600W or 1200W as required by load. Incandescent Lamp Dimmers: 120 V: control shall follow square-law dimming curve. On-off switch positions shall bypass dimmer module. LED Dimmers: Modular; compatible with dimming drivers in fixture(s); if other than 0-10V dimming is provided, verify dimmer is compatible with driver for full range of dimming (100-10%). 6) Equivalent devices by Leviton, Bryant, Hubbell, Wattstopper, Lithonia,

Sensor Switch. D. Weatherproof cover plates:

1) Provide GFCI receptacles for weatherproof receptacles. 2) For wet locations: in-use NEMA 3R, UL-labeled plates die cast metal and

aluminum or type 302 SS; single-cover for switches & vertically mounted

receptacles; double-cover for horizontally mounted receptacles; self-closing

3) For damp locations: UL-listed for wet locations w/ cover(s) closed; die-cast

12. DISCONNECT (SAFETY) SWITCHES

A.Disconnect (safety) switches: Square D, Siemens, Cutler Hammer, or General Electric fused or non-fused (as indicated on drawings or required) NEMA KS1, heavy duty, externally operated, visible-blade safety switches: NEMA enclosure type indicated on drawings or suitable for environment in which installed. Based on fusible switch & fuse sizes indicated, include class R, J, or L fuse provisions as applicable.

B. Where indicated, provide fusible switches permanently labeled as suitable for use as service entrance equipment, w/ integral & separate neutral & ground assemblies, suitable for sizes of conductors indicated. Do not double-lug any terminations not specifically listed as suitable for more than one conductor. C.Provide switches where not furnished w/ starting equipment, at all other points required by NFPA 70, & where indicated on drawings. 13. <u>LUMINAIRES</u>, <u>LAMPS</u> & <u>BALLASTS</u>

A.Refer to lighting fixture schedule plans for fixture types. B. Equivalent luminaires by Hubbell, Infinity, Lithonia, Williams, Eaton [Cooper].

C.Fluorescent Fixtures: 1) Lamps shall be type recommended by fixture manuf. Lamp none above manuf recommended max wattage. Color temperature shall be coordinated throughout project, with generally 4100k interior lamps and min 85 CRI. Equivalent lamps by G.E., Venture, Phillips Or Sylvania. 2) Ballasts - Fluorescent - electronic, <20%THD, Equivalent by Advance,

G.E., Motorola, Or Magnetek. D. LED Fixtures: 1) Lamps & modules: Philips, General Electric, Osram/Sylvania, Cree, Nichia. 2) LED components, lamps, drivers, and fixtures shall comply with: PCC 47 CFR Part 15: UL 8750: ANSI/NEMA Standards C78 377, NEMA SSI -1

C82.77, IESNA Standards TM-16-05, RP-16, LM-79, LM-80 and TM-21.

3) Drivers shall be integral to the fixture unless otherwise shown or specified. E. Emergency ballasts/drivers/batteries/inverters - shall be Bodine, lota. Coordinate voltages and outputs for min. 90 minute operation with fixtures scheduled and controls indicated and provided.

1) Provide lighting fixtures w/ lamps & accessories req'd for hanging. Coord mounting of lighting fixtures w/ architect & G/C. Additional fixture supports shall be provided by E/C. Supports shall comply w/ latest edition of NEC. Provide lighting fixture securing clips as required. Consult arch plans for ceiling types & provide surface & recessed lighting fixtures w/ appropriate mounting components & accessories.

2) Fixtures mounted in fire rated ceilings shall be provided & installed w/ fire rated enclosures to maintain ceiling integrity. 3) Poles & support components: comply w/ AASHTO LTS-4. Provide steel poles in color as specified or selected by architect. Provide bolt covers. Provide concrete base for pole & ground rod.

14. ADJUSTING. ALIGNING & TESTING A.Adjust, align, & test all electrical equipment on this project provided under this division & all electrical equipment furnished by others for installation or wiring under this division for proper operation. Test all systems & equipment according to requirements in NETA ATS (latest edition) & all additional requirements

B. In following sections. Maintain following on project premises at all times: true RMS reading voltmeter, true RMS reading ammeter, & megohmmeter insulation resistance tester. Provide test data readings as requested or as required by

15. SYSTEM START UP A.Prior to starting up electrical systems:

1) Check all components & devices. Lubricate items accordingly.

3) Tighten screws & bolts for connectors & terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486a & UL 486b. 4) Check & record building's service entrance voltage, grounding conditions, grounding resistance, & proper phasing.

B. Replace all burned-out lamps & lamps used for temporary construction lighting in permanent light fixtures. C.After all systems have been inspected & adjusted, confirm all operating features required by drawings & specifications & make final adjustments as necessary.

END OF DIVISION 26000

SECTION 27000 - COMMUNICATIONS

1. GENERAL ELECTRICAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements. 2. <u>TELECOMMUNICATIONS SYSTEMS PROVISIONS</u>

A.Provide incoming telephone and/or data service raceways as indicated on drawings or as required by serving telecommunications company.

B. Provide 3/4-inch thick plywood board, fire-retardant- treated & stamped FRT, securely anchored to wall, at location & of size as indicated on drawings. C.Provide flush mounted telephone and/or data outlet boxes w/ 3/4-inch EMT stub-up concealed to accessible ceiling space at locations as indicated on

3. <u>BACKBOARDS</u> A.Backboards: Plywood, fire-retardant treated, 3/4"X48"X96".

SECTION 28000 - SAFETY & SECURITY

END OF DIVISION 27000

1. GENERAL ELECTRICAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements.

2. EXISTING FIRE ALARM SYSTEM MODIFICATIONS A.Provide following new equipment, compatible w/, or of same manufacturer as, existing fire alarm control panel & system, at locations indicated on drawings, as required by building codes, landlord, or all three, & connect to existing fire alarm

1) Additional initiating devices, indicating appliances, & interconnecting

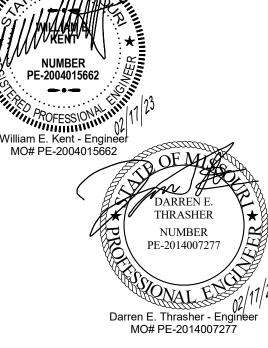
2) Additional zone modules required by new zoning. 3) New amplifiers & other equipment that may be required to incorporate new initiating devices & indicating appliances into existing system. 4) A new zone map, including all existing zones & all new zones, framed, mounted under glass, & installed adjacent to fire alarm control panel. Horn/strobes shall meet all requirements of ADA.

B. Install all wiring in raceway. C.Where acceptable to AHJ, plenum rated cables may be used above suspended accessible ceilings. D. Execution:

1) Submit shop drawings w/ wiring diagrams & battery calcs for approval to Fire Marshal & AHJ. 2) Coordinate to provide power & shutdown or operation of fire/smoke dampers, door hold opens, power to door locks &access control & other

similar systems. 3) Installed & tested per NFPA 72 & applicable sections of NFPA 70. Provide complete fire alarm system as described herein & shown to be wired. connected, & in first class condition. Include sufficient control unit(s), annunciator(s), manual stations, automatic fire detectors, smoke detectors, audible & visible notification appliances, wiring, terminations, electrical boxes, & all necessary material for complete operating system.

END OF DIVISION 28000



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PROJECT NO: 22056 2023-02-17 DRAWN BY: Author CHECKED BY: Checker CHECKED BY:

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MEP103

PLAN NORTH TRUE NORTH © YAEGER ARCHITECTURE, INC.

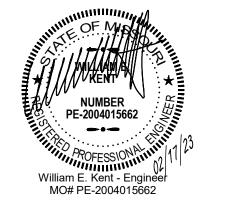
GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.



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- 1 REMOVE DIFFUSER/GRILLE. CLEAN AND PREPARE TO BE RE-INSTALLED IN NEW CEILING. 2 REMOVE EXISTING EXHAUST FAN. CLEAN, INSPECT, AND PREPARE TO BE RE-INSTALLED IN NEW BATHROOM CEILING. 3 EXISTING DUCT MAIN SUPPLY/RETURN SERVING SPACE TO REMAIN AND BE REUSED. FIELD CONFIRM EXACT LOCATION AND PREPARE EXISTING SUPPLY TAPS FOR
- CONNECTION TO NEW DIFFUSERS. 4 EXISTING RTU TO REMAIN AND BE REUSED.
- 5 EXISTING THERMOSTAT TO REMAIN.
- 6 EXISTING FIXTURE TO REMAIN.
 7 REMOVE EXISTING FIXTURE CLEAN AND PREPARE TO BE RE-INSTALLED IN SAME
- LOCATION AFTER RESTROOM RENOVATION. 8 EXISTING WATER HEATER TO REMAIN.
- 9 EXISTING PIPING. FIELD VERIFY EXACT LOCATION.



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PROJECT NO: DATE: DRAWN BY: CHECKED BY:

22056 2023-02-17 Author Checker CHECKED BY: Designer

REVISED DATE DESCRIPTION

HVAC DEMOLITION



PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC 13300 W 98TH STREET LENEXA, KS 66215

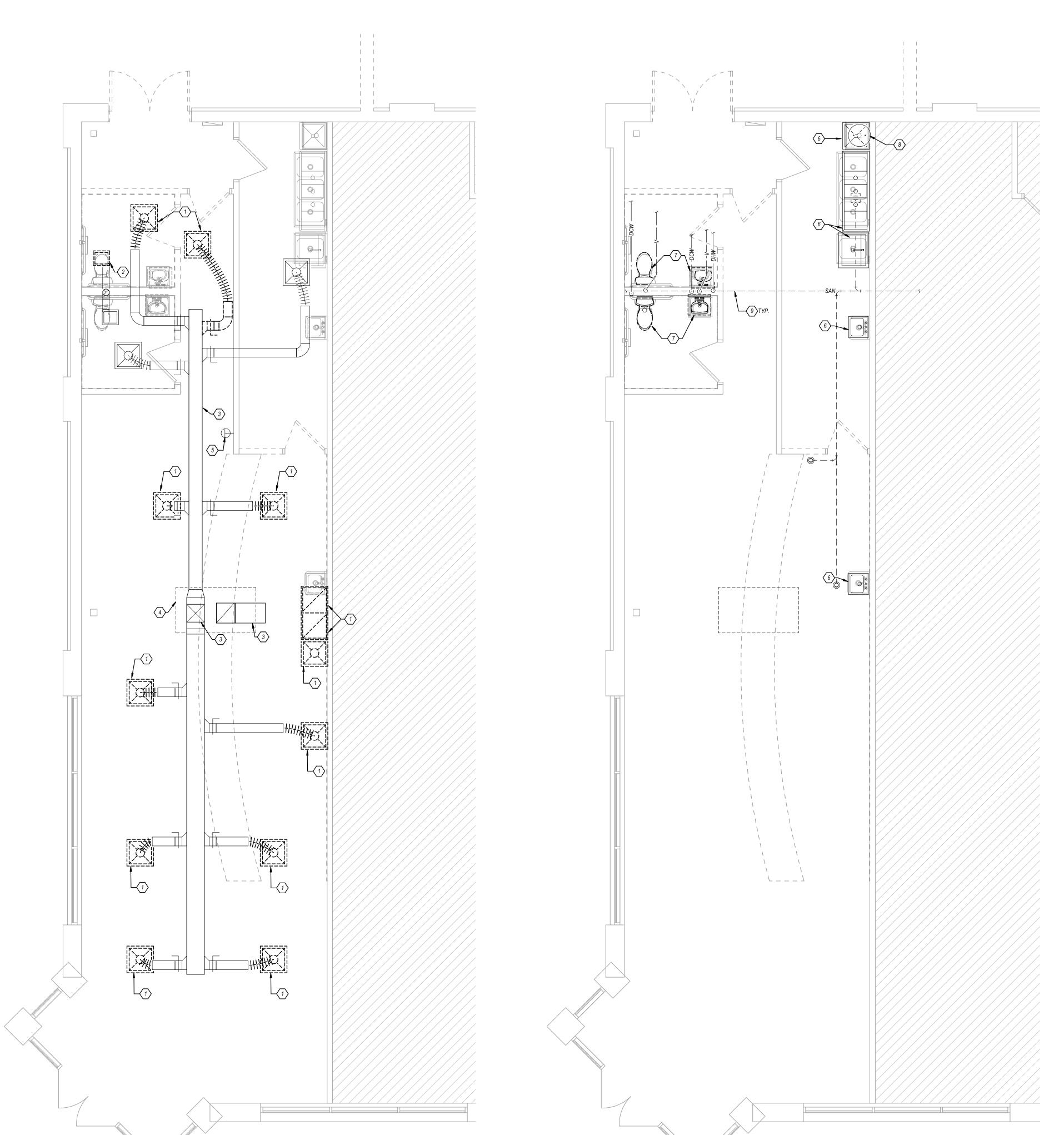
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FLOOR PLAN - DEMOLITION - MECHANICAL
SCALE: 1/4" = 1'-0"

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

8"Ø © 125 EH-1	
22"x22" (2)	
8"Ø Ø 50 1	
RR 150 150 150 150	
ROOM PREP	
RR 161 8**Ø © 50 1	
HALL 159 22"x22" R)	
RR 162	
8"Ø 🕞 150 1 22"x22" 🕞	
22"x22" (2)	
2 8"Ø 150	
1 8"Ø (S) 150	
8"Ø (S) 150 8"Ø (S) 150	

FLOOR PLAN - HVAC

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

SHEET SIZE: ARCH E1 30" x 42"

GRILLE, REGISTER, AND DIFFUSER SCHEDULE MARK MANUFACTURER MODEL DESCRIPTION BORDER TYPE FACE SIZE (IN.) NECK SIZE DAMPER MATERIAL FINISH REMARK SUPPLY EX TITUS TMS SQUARE CEILING DIFFUSER GRID 24x24 AS INDICATED NO STEEL WHITE RETURN EX TITUS 350RL GRILLE WITH 3/4" SPACING AND 35° GRID 24x24 20x20 NO STEEL WHITE R1 TITUS 350RL GRILLE WITH 3/4" SPACING AND 35° GRID 24x24 20x20 NO STEEL WHITE GRILLE WITH 3/4" SPACING AND 35° GRID 24x24 20x20 NO STEEL WHITE GRILLE WITH 3/4" SPACING AND 35° GRID 24x24 20x20 NO STEEL WHITE

REMARKS:

1 PROVIDE WITH ALL NECESSARY MOUNTING HARDWARE.

2 PROVIDE WITHOUT SCREW HOLES WHERE USED IN GRID CEILING.

DUCTWORK INSULATION SCHEDULE

	D	UCT		IN	SULATION		NOTES
PURPOSE	DUTY	LOCATION	STYLE	MATERIAL	APPLICATION	THICKNESS	NOTES
		CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
	LOW PRESSURE / VELOCITY	CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	
	LOW PRESSURE / VELOCITY	EXPOSED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
		EXPOSED	ROUND	FIBERGLASS	LINED	1/2"	
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
	ALL	EXTERIOR	ALL	FLEXIBLE ELASTOMERIC	WRAPPED	2"	
		CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
	LOW PRESSURE / VELOCITY	CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	
RETURN		RETURN/TRANSFER BOOTS	RECTANGULAR	FIBERGLASS	LINED	1/2"	
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
	ALL	EXTERIOR	ALL	FLEXIBLE ELASTOMERIC	WRAPPED	2"	
EXHAUST	LOW PRESSURE / VELOCITY	CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
LATIMUST	LOW FILESONE / VELOCITY	CONCEALED	ROUND	FIBERGLASS	LINED	1/2"	2

NOTES:

1. IN ADDITION TO OTHER SCHEDULED INSULATION.

2. PROVIDE LINER ONLY WITHIN 10' OF FAN FOR ACCOUSTICS.

GENERAL REMARKS (APPLICABLE TO ALL TYPES):

1) ALL DUCTWORK, INSULATION AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2) ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2010 REQUIREMENTS AT A MINIMUM.

3) REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION FOR INSULATION PRODUCTS AND SYSTEMS.

PROVIDE WITH WALL-MOUNTED THERMOSTAT AND INTEGRAL DISCONNECT.

L	ECTRIC HI	EATER S	CHEDULE						
MARK	MANUFACTURER	MODEL	DESCRIPTION	CFM	KW	TEMP. RISE	ELECTI VOLTAGE	RICAL PHASE	REMARKS
EH-1	QMARK	CDF-SE	CEILING HEATER	300	2.5	26 °F	208	1	1
REMARKS.									

GENERAL HVAC NOTES

- REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
 ROUND BRANCH DUCT RUNOUTS AND FLEXIBLE DUCT SHALL BE THE SAME SIZE
- AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
 MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0".
- 4. ALL RUNOUTS TO TERMINAL BOXES SHALL BE ONE SIZE LARGER THAN BOX INLETS UNLESS NOTED OTHERWISE.
- ALL AIR DISTRIBUTION DEVICES SHALL HAVE LOCKABLE VOLUME CONTROL DEVICES.
- 6. ALL 90 DEGREE TURNING ELBOWS SHALL BE SMOOTH ROUND OR SQUARE WITH TURNING VANES.
 7. DUCT SIZES SHOWN ON PLANS ARE INSIDE FREE AREA.
- PROVIDE ACCESS DOORS IN DUCTS AHEAD OF ALL AUTOMATIC, FIRE, AND SMOKE DAMPERS.
 FOR BALANCING THE OUTSIDE AIRFLOW QUANTITIES, REFER TO HVAC SCHEDULES.

IX KEYED NOTES - HVAC

1 EXISTING DIFFUSER/GRILLE RELOCATED IN NEW CEILING. BALANCE TO NEW AIRFLOWS AS SHOWN.

- AS SHOWN.

 2 CONNECT NEW SUPPLY DUCT TO EXISTING TAP FOR RELOCATED DIFFUSER. EXACT LOCATION TO BE FIELD CONFIRMED.
- 3 PROVIDE NEW TAP TO EXISTING MAIN.
 4 EXISTING EXHAUST FAN RELOCATED IN NEW CEILING. RECONNECT TO EXISTING EXHAUST DUCT.



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MEP ENGINEER

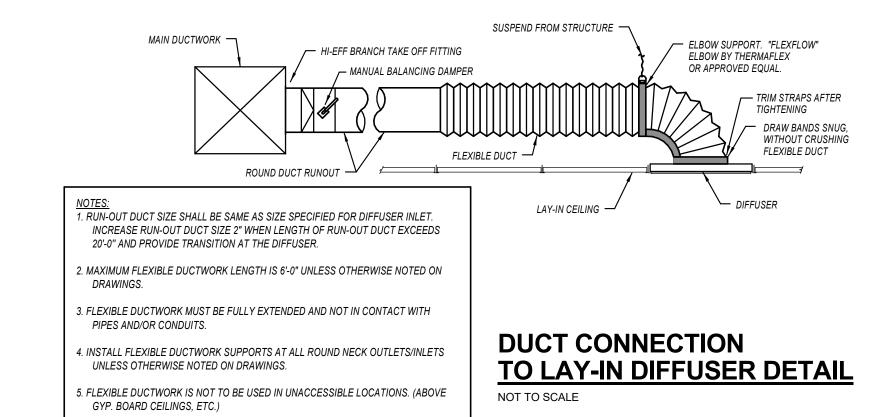
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CIVIL ENGINEER

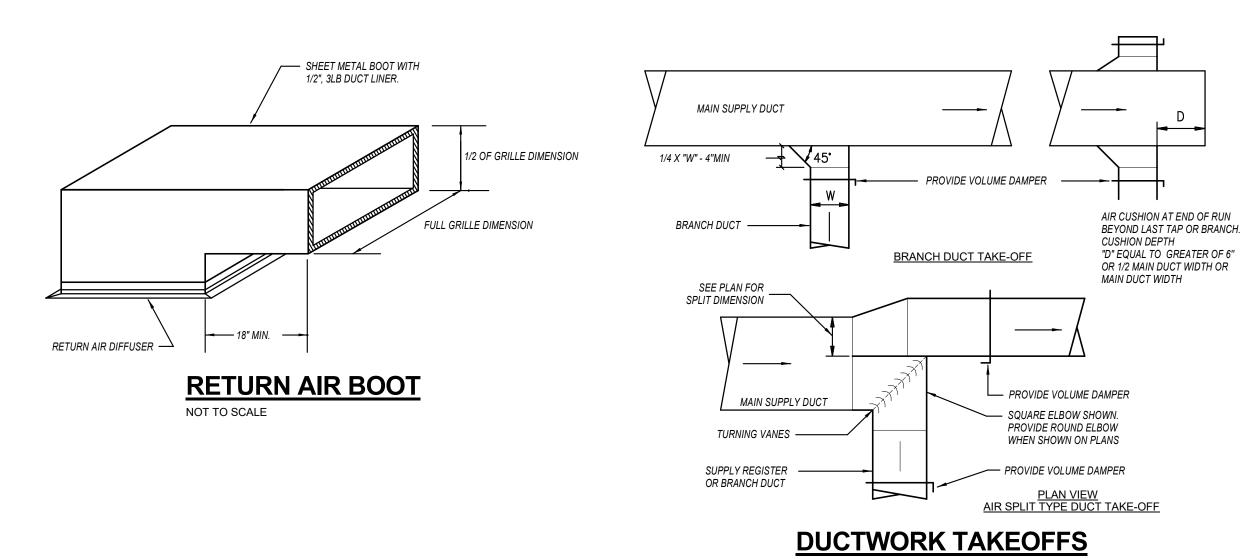
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NOT TO SCALE



REVISED DATE | DESCRIPTION

PROJECT NO:

DRAWN BY:

CHECKED BY:

CHECKED BY:

DATE:

MECHANICAL - HVAC

22056

Author

Checker

2023-02-17





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PLUMBING FIXTURE SCHEDULE

 MARK
 MANUFACTURER
 MODEL
 DESCRIPTION

 GG-1
 GUY GRAY
 BIM875
 GALVANIZED STEEL DCW OUTLET BOX.
 MANUFACTURER MODEL DESCRIPTION REMARKS

1 PROVIDE CHROME-PLATED BRASS TAILPIECE AND GRID DRAIN. PROVIDE CHROME-PLATED BRASS P-TRAP.

PROVIDE LOOSE KEY STOPS AND FLEXIBLE RISERS. PROVIDE CONCEALED ARM TYPE CARRIER WITH SQUARE, TUBULAR STEEL UP-RIGHTS AND BLOCK TYPE BASES. 5 INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS. REFER TO SPECIFICATIONS FOR INSULATION METHODS.

6 PROVIDE FLUSH VALVE HANDLE ON WIDE SIDE OF STALL.

7 PROVIDE HANDLE STOPS AND FLEXIBLE RISERS. PROVIDE CHROME-PLATED BRASS TAILPIECE AND BASKET STRAINER.

9 MOUNT BED PAN WASHER CONNECTION AT 64" A.F.F. UNLESS OTHERWISE NOTED ON PLANS OR RECOMMENDED BY MANUFACTURER. 0 FIXTURE IS OWNER-FURNISHED, CONTRACTOR-INSTALLED. COORDINATE ALL WORK WITH SUPPLIER.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES): 1 ALL LAVATORIES AND SINKS USED FOR HAND WASHING SHALL BE PROVIDED WITH AN ANTI-SCALD TEMPERATURE MIXING VALVE ON THE HOT WATER SUPPLY - REFER TO DETAIL. 2 FIXTURE CONNECTION SIZES SHOWN IN SCHEDULE ARE CONNECTION SIZE AT FIXTURE ON PLANS.

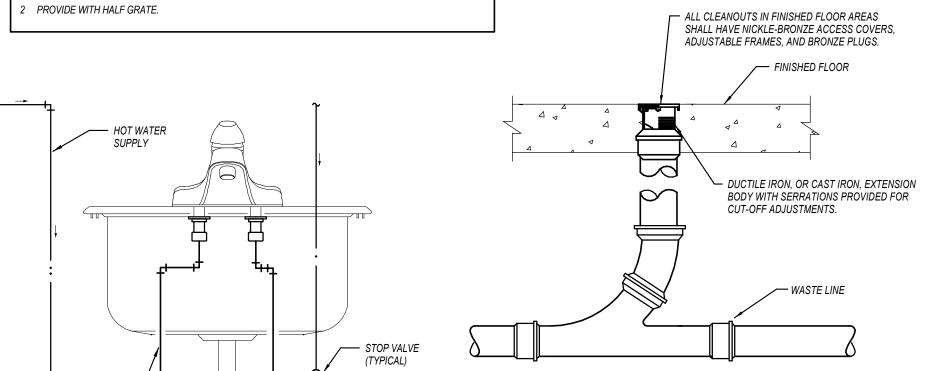
PIPING MATERIAL AND INSULATION SCHEDULE

	PI	PING			FIELD TEST	ALLOWABLE	INSULA ⁻	TION
SYSTEM	SIZE	MATERIAL	TYPE/SCHED	ACCEPTABLE FITTINGS	PRESSURE/TIME	IN PLENUMS	TYPE THICKNE	
DOMESTIC COLD WATER	1/2" - 2-1/2"	Copper	L	Solder, Pro-Press	130 PSI - 1/2 HR	Yes	Fiberglass w/ASJ	1/2"
DOMESTIC COLD WATER - BELOW GRADE	1/2"-1-1/4"	Copper	K	Continuous Tubing, Brazed	130 PSI - 1/2 HR	N/A		
DOMESTIC HOT WATER & HW RETURN	1/2" - 2-1/2"	Copper	L	Solder, Pro-Press	130 PSI - 1/2 HR	Yes	Fiberglass w/ASJ	1"
SANITARY WASTE BELOW GRADE	2"-8"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	N/A		
VENT ABOVE GRADE	1-1/2"-4"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	No		
VENT BELOW GRADE	1-1/4"-2"	PVC	Schedule 40	Solvent Joined	10 FT - 1/2 HR	N/A		

1 ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50. ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.

REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION. WELDED PIPING IS REQUIRED FOR GAS PIPING WHEN: A) PIPING IS AT OR OVER 2PSI; B) WHEN PIPING OF ANY PRESSURE IS ROUTED THROUGH CONCEALED SPACES.

MARK	MANUFACTURER	MODEL	SERVICE	TOP/GRATE SIZE	WASTE SIZE	REMARKS
FD-1	WATTS	FD-100A-6-2	FLOOR DRAIN	6"	2"	1
FS-1	WATTS	FS-712	FLOOR SINK	8"	2"	2



LEONARD #108 — THERMOSTATIC WATER MIXING VALVE HAND WASHING SINK/LAVATORY TEMPERED WATER SCHEMATIC NOT TO SCALE

MIXED WATER -



GENERAL PLUMBING NOTES

2. REFER TO PLUMBING FIXTURE / DRAIN SCHEDULES FOR PIPING SIZES FOR

3. NO SANITARY OR VENT PIPING BELOW GRADE SHALL BE LESS THAN 2". 4. NO DOMESTIC WATER PIPING SHALL BE SMALLER THAN 3/4" UNLESS NOTED

INDIVIDUAL CONNECTIONS TO FIXTURES AND RISERS NOT SHOWN ON PLANS.

5. ALL VENT PIPING SHOWN IS DIAGRAMMATIC. USE APPROPRIATE FITTINGS FOR VENT PIPING BELOW FLOOD RIM OF FIXTURE.

6. NOT ALL CLEANOUTS ARE SHOWN FOR DRAWING CLARITY. CONTRACTOR

COVER SHEET). COORDINATE EXACT LOCATIONS OF CLEANOUTS WITH

Ø KEYED NOTES - PLUMBING

4 FIELD LOCATE EXISTING VENT PIPING AND CONNECT NEW VENT PIPE.

1 FIELD LOCATE EXISTING PIPING AND CONNECT NEW FIXTURE. PROVIDE SHUT OFF VALVE AT DCW

3 ROUTE 1/2" DCW THROUGH CABINETRY, PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTER.

5 EXISTING FIXTURE TO BE RE-INSTALLED IN SAME LOCATION AFTER RESTROOM RENOVATION. 6 CONNECT 1/2" DCW TO SINK SUPPLY AND ROUTE THROUGH CABINETRY TO FIXTURES/APPLIANCES.

7 1/2" DCW STUB UP TO SERVE COFFEE BREWER. PROVIDE SHUT OFF VALVE AND BACKFLOW

9 CONNECT NEW WASTE PIPE TO EXISTING BELOW FLOOR. FIELD COORDINATE EXACT LOCATION AND VERIFY EXISTING PIPE IS OF EQUAL OR LARGER SIZE THAN NEW AND NEW PIPING CAN MEET

SHALL INSTALL ALL CODE-REQUIRED CLEANOUTS (RE: GENERAL NOTES ON

7. PROVIDE 1/2" TRAP PRIMER PIPING FOR ALL FLOOR DRAINS TO NEAREST TRAP PRIMER VALVE. PIPING SHALL BE TYPE "K" SOFT COPPER SEAMLESS WITH NO

REQUIREMENTS OF WORK.

JOINTS FROM VALVE TO DRAIN.

CONNECTION LOCATION TO EXISTING.

2 EXISTING PIPING. FIELD VERIFY EXACT LOCATION.

8 1/2" DCW STUB UP TO SERVE GLASS RINSER.

FLOOR CLEANOUT DETAIL

_ SECURE PIPE HANGER TO STRUCTURE

PIPE SADDLE WITH HIGH
— DENSITY INSULATION
RE: SPECIFICATIONS

INSULATED PIPE SHALLBE
PROVIDED WITH INSULATION

THREADED STEEL ROD WITH NUT AND WASHER

BOTH SIDES

PIPE HANGER DETAIL

P-TRAP DETAIL

NOT TO SCALE

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Darren E. Thrasher - Engineer

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PROJECT NO: 22056 2023-02-17 DATE: DRAWN BY: Author CHECKED BY: Checker CHECKED BY:

REVISED DATE DESCRIPTION

PLUMBING



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PLAN NORTH © YAEGER ARCHITECTURE, INC.

FLOOR PLAN - DOMESTIC WATER

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

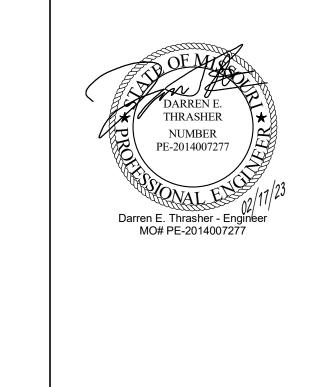
GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

2 CLEAN AND RELAMP EXISTING FIXTURES.

EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EXECUTE: EX 1 REMOVE ALL DEVICES, FIXTURES AND ASSOCIATED WIRING/CONDUIT UNLESS SHOWN TO REMAIN.

___ EXISTING PANELBOARD TP1



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ELECTRICAL -DEMOLITION PLAN



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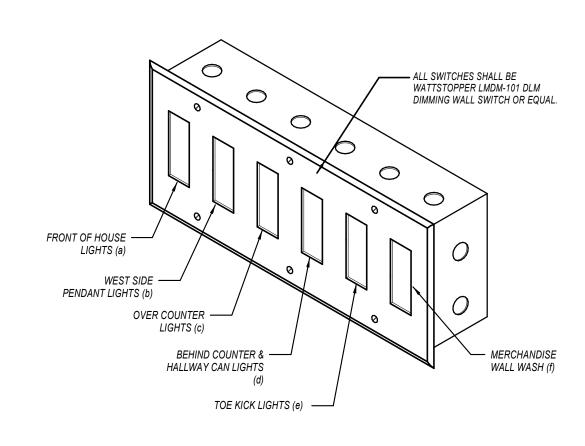




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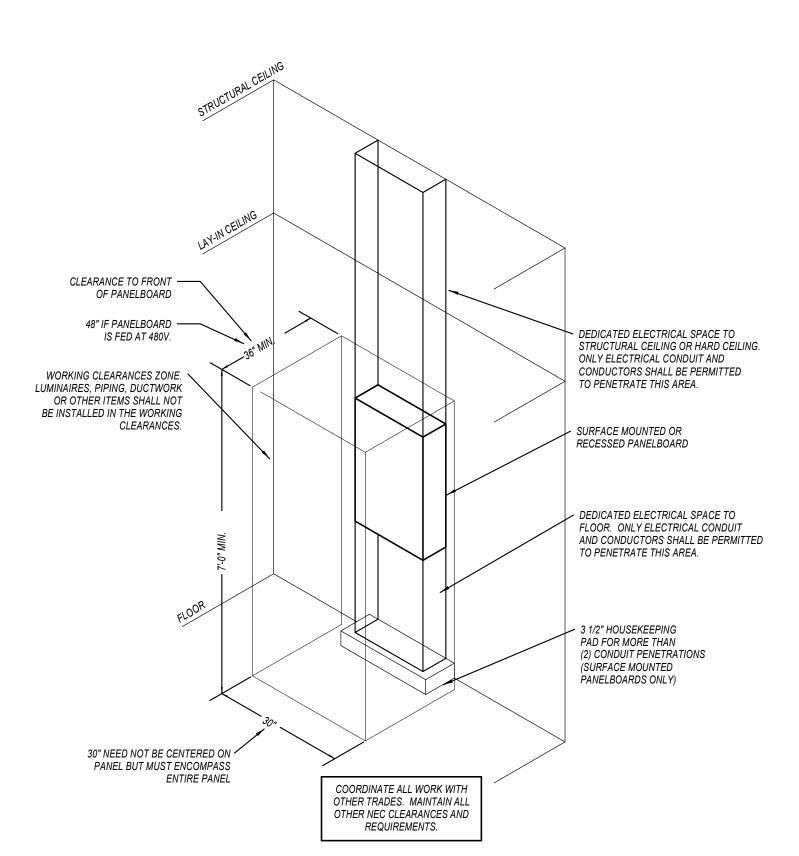
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FLOOR PLAN - DEMOLITION - ELECTRICAL
SCALE: 1/4" = 1'-0"

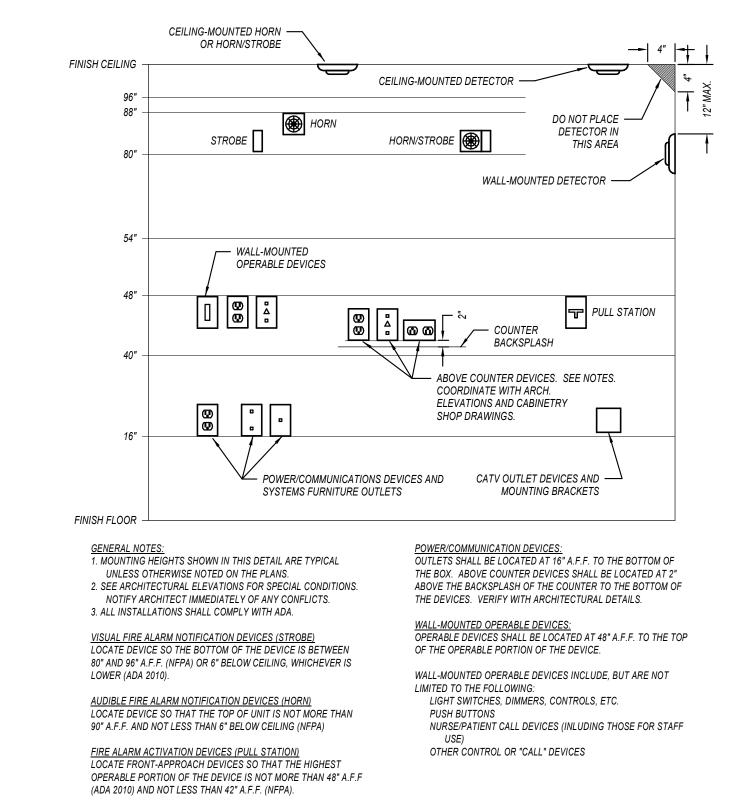


SWITCHBANK DETAIL NOT TO SCALE 613-0

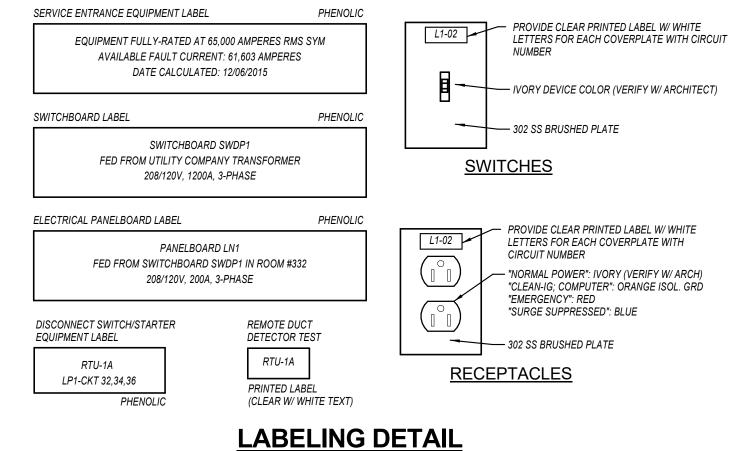
IXTURE	MANUFACTURER	CATALOG	DESCRIPTION		1	LED MOI			1	T	REMARK		
TYPE A	HE WILLIAMS	NUMBER 4DR	4.5" ROUND RECESSED DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH MEDIUM BEAM ANGLE/DISTRIBUTION AND OPTIONAL 'TD' LENS OVER DIODES.	L20	WATTS 19.8	2000	CRI 90	3500K	0-10V	VOLTAGE 120	1		
В	HE WILLIAMS	AT1	2'x2' STATIC GRID TROFFER. MITERED AND FULLY GASKETED DOOR FRAME WITH FULLY ENCLOSED SPRING-LOADED CAM LATCHES125" THICK, #12 PATTERN ACRYLIC LENS. WHITE FINISH.		2'x2' STATIC GRID TROFFER. MITERED AND FULLY GASKETED DOOR FRAME WITH FULLY ENCLOSED SPRING-LOADED CAM LATCHES125" THICK, #12 PATTERN ACRYLIC LENS. WHITE		37.2	4120	90	3500K	0-10V	120	1
С	HUDSON VALLEY	SORIANO	PENDANT-MOUNTED FIXTURE. 3.5"Ø GLASS SHADE WITH DIE-CAST ALUMINUM HOUSING AND HEAT SINK. 6' POWER CORD STANDARD - CONNECTS TO EXPOSED, FLAT CANOPY WITH INTEGRAL 0-10V LED DRIVER. CANOPY MOUNTS TO STANDARD J-BOX. BRASS FINISH.		<u>I</u> 12 W EDISON TUBE LAMP	-	-	-	-	120	1,2		
D	HINKLEY LIGHTING	HATHAWAY 5 LIGHT	27" DIAMETER PENDANT-MOUNTED FIXTURE. SPUN METAL HOUSING WITH MATTE WHITE FORMED ACRYLIC BOTTOM DIFFUSER AND TEMPERED PRISMATIC GLASS TOP LENS. SPECULAR ALUMINUM REFLECTORS. STEM-MOUNTS FROM CANOPY - 24" OVERALL FIXTURE HEIGHT. CANOPY MOUNTS TO STANDARD JUNCTION BOX. BRUSHED ALUMINUM FINISH.	FIVE (5) 12	2 W LED BULBS	-	-	-	-	120	1,2		
E	DUAL-LITE	EV SERIES	LOW-PROFILE EMERGENCY LIGHTING UNIT. FLAME-RATED, UV-STABLE THERMOPLASTIC HOUSING. TWO (2) SEMI-RECESSED, ADJUSTABLE "EYEBALL" HEADS WITH GLASS LENS. WHITE FINISH. MAINTENANCE-FREE BATTERY FOR 90 MINUTE OPERATION OF LAMPS. INTEGRAL TEST SWITCH AND AC-ON INDICATOR.	TWO (2)	-	-	-	-	120	1			
G	CHAPMAN & MYERS	KENYON	WALL SCONCE. 18" WIDE PICTURE LIGHT. BRASS FINISH. MOUNT FIXTURE IN "DOWN" POSITION.	TWO (2)	6 W T10 LED	-	-	-	-	120	1,2		
Н	ADLER & ORE	ALYSSA CHANDELIER	CHAIN-HUNG, CEILING-MOUNTED CHANDELIER. 34" FIXTURE DIAMETER. STEEL CONSTRUCTION WITH WROUGHT IRON DETAILS. NINE (9) 5.13" CYLINDERICAL BULBS.		20 W MAX LED BULBS	-	-	-	-	120	1,2		
J	ANTHROPOLOGIE	ELOISE WALL SCONCE	WALL MOUNTED ARCHITECTUAL LIGHT. TWO HORIZONTALLY MOUNTED LED LAMPS. MILK COLORED GLASS HOUSING. DAMP LOCATION LISTED.		20 W MAX LED BULBS	-	-	-	-	120	1,2		
К	ACCLAIM LIGHTING	FLEX ONE SO EXTERIOR	FLEXIBLE, DIMMABLE TAPE LIGHT. CUTTABLE IN 1" INCREMENTS, 3M ADHESIVE BACKING. FURNISH WITH LOW PROFILE CHANNEL. FURNISH WITH ALL REQUIRED CONNECTION CABLES AND LOW VOLTAGE WIRING. PROVIDE WITH SINGLE DIMMABLE TRANSFORMER SIZED TO ACCOMMODATE ENTIRE LENGTH OF TAPE AT EACH BAR COUNTERTOP IP68 WER LOCATION RATED, IK06 IMPACT PROTECTION, AND RATED FOR USE IN FOOD SERVICE APPLICATIONS.	2.	43 W/ft	151 LUM/ft	80	2700K	LINE/0-10V	120	1		
L	HE WILLIAMS	4AR	4.5" ROUND RECESSED ADJUSTABLE DOWNLIGHT. DIE-FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF-FLANGED, SEMI-SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH MEDIUM BEAM ANGLE/DISTRIBUTION.	L20	19.8	2000	90	3500K	0-10V	120	1,2		
М	HE WILLIAMS	WDGE1	EXTERIOR ROUND WALL PACK FIXTURE. DIE-CAST ALUMINUM HOUSING. CLEAR GLASS LENS. FORWARD THROW OPTICS. POWDER COAT FINISH DARK BRONZE - COORDINATE WITH ARCHITECT/BUILDING OWNER. UL LISTED WET LOCATION.	P2	15	2000	90	3500K	-	120	1,2		
Е	DUAL-LITE	EV SERIES	LOW-PROFILE EMERGENCY LIGHTING UNIT. FLAME-RATED, UV-STABLE THERMOPLASTIC HOUSING. TWO (2) SEMI-RECESSED, ADJUSTABLE "EYEBALL" HEADS WITH GLASS LENS. WHITE FINISH. MAINTENANCE-FREE BATTERY FOR 90 MINUTE OPERATION OF LAMPS. INTEGRAL TEST SWITCH AND AC-ON INDICATOR.	٠,,	L 1.1 WATT 1W ED LED.	-	-	-	-	120	-		
Х	DUAL-LITE	EVE SERIES	COMPACT, LOW-PROFILE EXIT SIGN. UV STABLE THERMOPLASTIC HOUSING. WHITE FINISH WITH RED LETTERS. SIDE, TOP, OR WALL MOUNTED IN SINGLE/DOUBLE FACE CONFIGURATION WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS.	TOTA	IIGH-OUTPUT LEDS. IL POWER UMPTION = WATTS.	-	-	-	-	120	-		





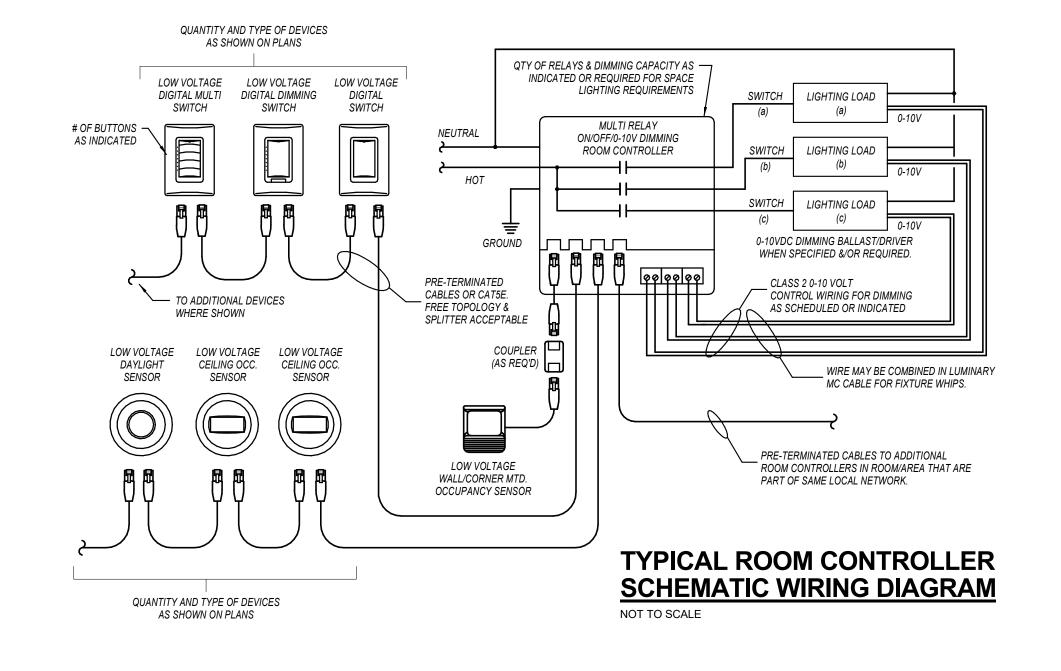


MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES NOT TO SCALE



NOT TO SCALE

SHEET SIZE: ARCH E1 30" x 42"





REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL
REQUIREMENTS OF WORK.
 LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS

NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.

KEYED NOTES - LIGHTING
 CONNECT TO EXISTING KITCHEN LIGHTING CIRCUIT
 EXISTING EXIT LIGHT TO REMAIN. RECIRCUIT TO NEW LIGHTS.
 EXISTING LIGHT TO REMAIN. CIRCUIT NEW LIGHT (TYPE 'B') TO EXISTING CIRCUIT.
 EXISTING LIGHT TO BE RECIRCUITED TO NEW LIGHTS.
 EXISTING TIME CLOCK FOR MASTER OFF OF COMMON AREA LIGHTS.
 ROUTE CIRCUIT THROUGH TIME CLOCK FOR MASTER OFF FUNCTION.
 COORDINATE DIMMING WIRING AND CONFIGURATION WITH FIXTURES AND ROOM CONTROLLER.

8 DO NOT SWITCH FIXTURE. LIGHT IS TO REMAIN ON AT ALL TIMES.

LIGHTING CONTROLS

<u>SYMBOLS</u>

EXISTING PANELBOARD TP1 -

\$\frac{WALL SWITCH VACANCY SENSOR:}{M} PASSIVE INFRARED, 120/277V, WALL SWITCH DECORA STYLE SENSOR. (WATTSTOPPER PW-101, OR EQUAL)

\$LD ROOM CONTROLLER LOW VOLTAGE DIMMING SWITCHES: PUSHBUTTON SWITCHES WITH LED INDICATING LIGHTS. SINGLE GANG IN DECORA STYLE FACEPLATE.
(WATTSTOPPER LMDM-101)

RCD# ROOM CONTROLLER: DIGITAL ON/OFF 0-10V DIMMING ROOM CONTROLLER. 120/277V INPUT. # INDICATES NUMBER OF RELAYS (STD 1-3, UNITS SHALL BE GANGED FOR MORE THAN 3 RELAYS/ZONES) (WATTSTOPPER LMRC-200 SERIES OR EQUAL)

TRAINING AND PROGRAMMING

OWNER TRAINING:

PROVIDE FACTORY REPRESENTATIVE TRAINING TO OWNER FOR EACH LIGHTING CONTROL SYSTEM UTILIZED, INCLUDING PROGRAMMING FOR SCHEDULING AND

OPERATION OF EACH ROOM PER OWNER DIRECTION.
 PROVIDE RECORD OF TIME DELAY SETTINGS ON ALL SENSOR DEVICES FOR OWNER USE.

SYSTEMS SHALL BE SET/PROGRAMMED TO OPERATE TYPICALLY IN MANUAL ON/AUTO OFF MODE.

1. SET WALL MOUNTED MOTION SENSOR TO MANUAL ON MODE.

2. SET POWER PACKS AND ROOM CONTROLLERS CONTROLLED BY MOTION SENSORS TO MANUAL ON AND CONTROL WITH MOMENTARY WALL SWITCH.

 PROVIDE FINAL SETTINGS/ADJUSTMENTS PER OWNER'S DIRECTION.

CONTROLS SEQUENCES

SENSOR ADJUSTMENTS AND SETTINGS:

WALL-MOUNTED LINE VOLTAGE SENSORS:

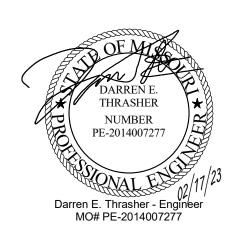
TURN ON LIGHTS IN ROOM/AREA UPON BUTTON ON SENSOR BEING ACTIVATED BY

FLOOR PLAN - LIGHTING

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

TURN OFF LIGHTS AFTER NO MOTION IS DETECTED AND DELAY EXPIRES.

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PROJECT NO: 22056

DATE: 2023-02-17

DRAWN BY: Author

CHECKED BY: Checker

CHECKED BY: Designer

REVISED DATE DESCRIPTION

ELECTRICAL -LIGHTING



13300 W 98TH STREET

913.492.2400

TRUE NORTH

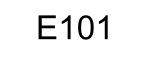
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KIT	CHEN EQUIPMENT	CONNEC	FION SCI	HEDULI					
ITEM	ITEM NAME / DESCRIPTION	CONNECTION	MTG. HT.	VOLTS/PH	AMPS	PANEL	CIRCUIT	WIRE	NOTES
EQ-1	OPEN AIR MERCH	CORD & PLUG	N/A	120/1P	4.2	TP2	1	(2)#12, #12G, 3/4"C	1, 2
EQ-2.1	POS	CORD & PLUG	OVER COUNTER	120/1P	1.5	TP1	13	(2)#12, #12G, 3/4"C	1,2
EQ-2.2	POS	CORD & PLUG	OVER COUNTER	120/1P	1.5	TP2	3	(2)#12, #12G, 3/4"C	1, 2
EQ-4	MICROWAVE	CORD & PLUG	UNDER COUNTER	120/1P	10.0	TP1	38	(2)#12, #12G, 3/4"C	1, 2
EQ-5.1	ESPRESSO MACHINE	CORD & PLUG	OVER COUNTER	208/1P	20.0	TP1	8,10	(2)#12, #12G, 3/4"C	1, 2
EQ-5.2	ESPRESSO MACHINE	CORD & PLUG	OVER COUNTER	208/1P	20.0	TP1	19,21	(2)#12, #12G, 3/4"C	1, 2
EQ-6.1	REFRIGERATED COLD FOOD WELL	CORD & PLUG	OVER COUNTER	120/1P	8.3	TP1	25	(2)#12, #12G, 3/4"C	1, 2
EQ-6.2	REFRIGERATED COLD FOOD WELL	CORD & PLUG	OVER COUNTER	120/1P	8.3	TP2	5	(2)#12, #12G, 3/4"C	1, 2
EQ-9.1	GRINDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	23	(2)#12, #12G, 3/4"C	1, 2
EQ-9.2	GRINDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP2	7	(2)#12, #12G, 3/4"C	1, 2
EQ-9.3	GRINDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	29	(2)#12, #12G, 3/4"C	1, 2
EQ-9.4	GRINDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	4	(2)#12, #12G, 3/4"C	1, 2
EQ-13.1	BULK COFFEE BLENDER	CORD & PLUG	OVER COUNTER	120/1P	9.0	TP1	17	(2)#12, #12G, 3/4"C	1, 2
EQ-13.2	BULK COFFEE BLENDER	CORD & PLUG	OVER COUNTER	120/1P	9.0	TP2	6	(2)#12, #12G, 3/4"C	1, 2
EQ-14.1	COFFEE BREWER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	27	(2)#12, #12G, 3/4"C	1, 2
EQ-14.2	COFFEE BREWER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP2	4	(2)#12, #12G, 3/4"C	1, 2
EQ-15	KEGERATOR	CORD & PLUG	N/A	120/1P	8.3	TP2	14	(2)#12, #12G, 3/4"C	1, 2
EQ-17.1	BLENDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	12	(2)#12, #12G, 3/4"C	1, 2
EQ-17.2	BLENDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP1	14	(2)#12, #12G, 3/4"C	1, 2
EQ-17.3	BLENDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP2	8	(2)#12, #12G, 3/4"C	1, 2
EQ-17.4	BLENDER	CORD & PLUG	OVER COUNTER	120/1P	15.0	TP2	10	(2)#12, #12G, 3/4"C	1, 2
EQ-19E	TRIPLE UNDER COUNTER REFRIGERATOR	CORD & PLUG	OVER COUNTER	120/1P	10.0	TP2	12	(2)#12, #12G, 3/4"C	1, 2
EQ-20.1	SINGLE UNDER COUNTER REFRIGERATOR	CORD & PLUG	UNDER COUNTER	120/1P	10.0	TP2	2	(2)#12, #12G, 3/4"C	1, 2

120/1P

120/1P

SHEET SIZE: ARCH E1 30" x 42"

EQ-21 GEN REC

EQ-20.2 SINGLE UNDER COUNTER REFRIGERATOR

EQ-23 ICE MACHINE AND STORAGE BIN

-27E.1 REACH IN REFRIGERATOR

Q-27E.2 REACH IN REFRIGERATOR

1. PROVIDE RECEPTACLE FOR CONNECTION TO CORD AND PLUG FURNISHED WITH EQUIPMENT.

2. COORDINATE EXACT NEMA CONFIGURATION OF PLUGS AND RECEPTACLES WITH APPROVED KITCHEN EQUIPMENT SUBMITTALS PRIOR TO BEGINNING WORK.

CORD & PLUG

CORD & PLUG

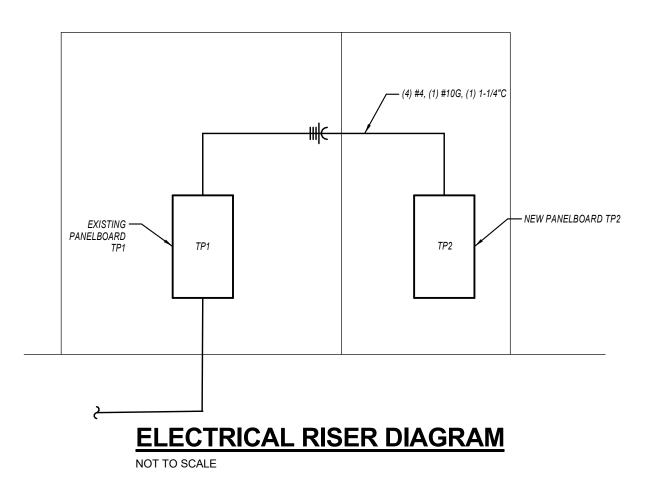
CORD & PLUG

CORD & PLUG

UNDER COUNTER

OVER COUNTER

UNDER COUNTER



13 (W/ EQ2.1) (2)#12, #12G, 3/4"C

TP1

12.0

24 (2)#12, #12G, 3/4"C

16 (2)#12, #12G, 3/4"C

(2)#12, #12G, 3/4"C

1, 2

EXISTING SINGLE-SECTION PANELBOARD SCHEDULE SCCR RATING (AIC): 22,000 MAIN LUG AMPS: 400 PANEL DESIGNATION: **TP1** MAIN BREAKER: 250 MOUNTING: VOLTAGE: 208/120 PHASE/WIRE: 3Ø, 4W LOCATION: -C/B PHASE DESCRIPTION DESCRIPTION A B C TRIP POLE POLE TRIP A B ROOF TOP OUTLET AUTOMATIC DRIVE WINDOW EQ-9.4 GRINDER AC UNIT REC: WINDOW EQ-5.1 ESPRESSO MACHINE REC: BATHROOMS & HALLWAY EQ-17.1 BLENDER JCT: HAND DRYER EQ-2.1 & EQ21 EQ-17.2 BLENDER EQ-27E.2 REACH IN REF JCT: HAND DRYER EQ-13.1 BULK GRINDER KITCHEN LIGHTS EQ-5.2 ESPRESSO MACHINE WATER HEATER EQ-9.1 GRINDER EQ-23 ICE MACHINE EQ-6.1 REF COLD FOOD WELL EQ-27E.3 REACH IN REF EQ-14.1 COFFEE BREWER EQ-9.3 GRINDER PANELBOARD TP2 LIGHTS:FRONT HOUSE LIGHTS: BAR + HALL SPACE HEATER EH-1 LIGHTS: BATHROOM EQ-4 MICROWAVE MENU BOARD 13994 | 11560 | 9853 | TOTALS PANELBOARD SIZING LOAD CONNECTED PHASE LOADS CODE MIN. (VA) CONNECTED LOAD DESCRIPTION DEMAND PHASE VA AMPS 1.25 2,449 22,897 190.7 RECEPTACLES 21,767 181.3 37,784 23,892 10KVA + 50% REST 20,134 167.7 MOTORS 5 x LARGEST + SUM OF REST AIR CONDITIONING TOTALS 64,797 179.9

12,954

48,520

<u>REMARKS:</u>

AS REQUIRED.

1. EXISTING PANELBOARD TP1

2. EXISTING CIRCUIT BREAKERS MAY BE REUSED

WHERE POSSIBLE. PROVIDE NEW CIRCUIT BREAKERS

PANEL DESIGNATION.	TP2	2					#		AIN LUG 1AIN BR			S	SCCR RATING (AIC)): 22,000		
MOUNTING	MOUNTING: -							IV		LANLIN. LTAGE:						
LOCATION						-	CIRCUII			E/WIRE:						
LOCATION	1	PHASE			:/B		2	С		_, vv <u>\</u>	PHASE					
DESCRIPTION	A	В	С	TRIP	POLE	1		POLE	TRIP	A	В	С	DESCRIPTION			
EQ-1 OPEN AIR MERCH	504			20	1	1	2	1	20	1000			EQ-20.1 SINGLE UNDER CTR REF			
EQ-2.2 POS		180		20	1	3	4	1	20		1800		EQ-14.2 COFFEE BREWER			
EQ-6.2 REF COLD WELL			1000	20	1	5	6	1	20			1000	EQ-13.2 BULK COFFEE GRINDER			
EQ-9.2 GRINDER	1800			20	1	7	8	1	20	1800			EQ-17.3 BLENDER			
EQ-20.2 SINGLE UNDER CTR REF		1000		20	1	9	10	1	20		1800		EQ-17.4 BLENDER			
FIREPLACE HEATER			1500	20	1	11	12	1	20			1000	EQ-19E TRIPLE UNDER CNT REF EQ-15 KEGERATOR -			
REC: GENERAL	1080			20	1	13	14	1	20	180						
-		0		-	1	15	16	1	-		-					
-			-	-	1	17	18	1	-			-		-		
-	-			•	1	19	20	1	-	-				-		
-		-		-	1			1	-		-			-		
-			-	-	1	23	24	1	-			-		-		
TOTALS	3384	1180	2500							2980	3600	2000	TOTALS			
	DANEL	00400	0171010 1	040						1		004	MEGTED BUAGE I	2400		
LOAD DESCRIPTION		BOARD :		_	`		COL	DE MIN.	/\/ / \		- DILI		INECTED PHASE LO			
LIGHTS)		1.25			COL	0	(VA)		PHA	4SE	6.364	53.0		
RECEPTACLES		144	10K)	1.25 /A + 50% I	DEST			12.072				<u> </u>	4.780	39.8		
MOTORS	<u> </u>)		RGEST + SUM				0		ł	<u> </u>		4.500	37.5		
AIR CONDITIONING		<u>, </u>	7.20 X EA	0.00	OF REST			0			TOT	-	15,644	43.4		
SPACE HEATING		500		1.00				1.500		1		, 120	10,044	1 10.1		
HEAT PUMP	- ')		1.00				0		1	REMARK	S:				
CONTINUOUS	<u> </u>)	 	1.25		\vdash		0		1			NE 1X OR EQUAL.			

PANELBOARD BREAKER KEYED NOTES

SIZING LOAD:

SIZING LOAD (AMPS):

G FURNISH GFCI-PROTECTED BREAKER.

EX EXISTING CIRCUIT BREAKER.

EXISTING PANELBOARD WORK

12,954

SPACE HEATING

CONTINUOUS

MISC. LOADS 1

NON-CONTINUOUS

HEAT PUMP

1.00

0.00

1.00

SIZING LOAD (AMPS):

SIZING LOAD:

- 1. ALL BREAKERS IN EXISTING PANELBOARDS ARE EXISTING TO REMAIN UNLESS INDICATED OTHERWISE ON THE PANELBOARD SCHEDULES. 2. EXISTING BREAKERS, CIRCUITS, AND LOADS ARE SHOWN LIGHT. NEW LOADS, BREAKERS, AND CIRCUITS ARE
- SHOWN DARK. 3. EXISTING LOAD VALUES ARE ASSUMED AND/OR BASED OFF EXISTING DRAWINGS.
- 4. AVAILABILITY OF CIRCUITS IN EXISTING PANELBOARDS IS BASED ON FIELD OBSERVATION AND EXISTING CIRCUIT DIRECTORIES. CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND PROVIDE WORK ACCORDING TO INTENTION OF CONTRACT DOCUMENTS. ACTUAL CIRCUITS AVAILABLE DUE TO DEMOLITION, CIRCUITS THAT ARE REQUIRED TO REMAIN, AND PANELBOARD AVAILABILITY MAY BE DIFFERENT THAN
- 5. FAULT CURRENT RATINGS AND/OR TYPES OF NEW BREAKERS IN EXISTING PANELBOARDS SHALL MATCH THE TYPE AND AIC RATING OF THE EXISTING BREAKERS IN ORDER TO MAINTAIN THE FAULT CURRENT RATING OF
- 6. PROVIDE NEW TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS WITH UPDATED CIRCUIT INFORMATION AS SHOWN AND/OR FIELD-VERIFIED.

GENERAL POWER NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

EQUIPMENT WITH EXACT EQUIPMENT BEING FURNISHED. 3. EXACT MECHANICAL EQUIPMENT LOCATIONS MAY NOT BE SHOWN FOR CLARITY. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT, DUCT DETECTORS, ETC. WITH MECHANICAL DRAWINGS AND CONTRACTOR.

2. COORDINATE EXACT NEMA CONFIGURATIONS OF RECEPTACLES SERVING

4. COORDINATE EXACT LOCATIONS OF SMOKE DETECTORS WITH CEILING FANS, HVAC DIFFUSERS, SPRINKLER HEADS, ETC. PER NFPA REQUIREMENTS.

KEYED NOTES - POWER 1 MAINTIAN EXISTING HAND DRYER AND CIRCUITS.

2 MAINTAIN EXISTING SIGNAGE CIRCUIT AND VERIFY CONTROL VIA EXISTING TIMECLOCK. COORDINATE EXACT CONNECTION WITH OWNERS NEW SIGNAGE. 3 RECIRCUIT EXISTING RECEPTACLE AS DEDICATED CIRCUIT.

4 EXITSTING DEVICE TO REMAIN. 5 RECONNECT TO PREVIOUS CIRCUIT 6 PROVIDE (1) 1" C FOR MENU CIRCUIT, (1) 1 1/2" C FOR COMMUNICATION, (1) 1" C FOR COMMUNICATION FROM STREET, AND (1) 2" C FOR DATA OR HDMI CONNECTION.

8 RECEPTACLE FOR OPEN SIGN. VERIFY EXACT LOCATION WITH OWNER.

COORDINATE WITH MENU BOARD REQUIREMENTS. VERIFY EXACT LOCATION WITH

ARCHITECTURAL SITE PLAN. CUT & PATCH PAVEMENT AS NECESSARY. 7 COORDINATE ELECTRICAL CONNECTION PER FIREPLACE REQUIREMENTS.

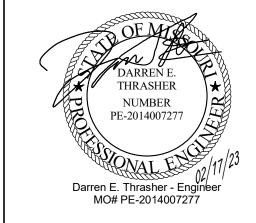
— NEW LOAD CENTER TP2

€Q27E.) →

— EXISTING PANELBOARD TP1

POWERED WINDOW ----

£X 4



ARCHITECT

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CIVIL ENGINEER

RIC 8653 Penrose Lane Lenexa, KS 66219 Tel: (913) 317-9500 ric-consult.com

699 LEE'



PROJECT NO: DATE: DRAWN BY: CHECKED BY:

2023-02-17 Author Checker CHECKED BY: REVISED DATE DESCRIPTION

22056

ELECTRICAL POWER

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TRUE NORTH

PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC 13300 W 98TH STREET LENEXA, KS 66215 913.492.2400 WWW.PKMRENG.COM

MO State Certificate of Authority #E-2002020886





FLOOR PLAN - POWER

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