## VOLUME 2

## AN ADDITION AND REMODEL FOR

# Washington Co. Covid Mitigation

FAYETTEVILLE, AR

Issue Date: 08/30/2024

**Revision Date: 10/04/2024** 

Project No.: 2333

## **CIVIL ENGINEER:**

McCLELLAND CONSULTING ENGINEERS, INC. 1580 E. STEAMS ST FAYETTEVILLE, AR 72703

## STRUCTURAL ENGINEER:

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## **SECURITY ENGINEER:**

LATTATECH 1255 W 15TH ST PLANO, TX 75075

## HightJackson ASSOCIATES

5201 W Village Parkway, Suite 300 Rogers, Arkansas 72758 (479) 464-4965 www.hjarch.com

KNOWLEDGE AND ABILITY, COMPLETE AND

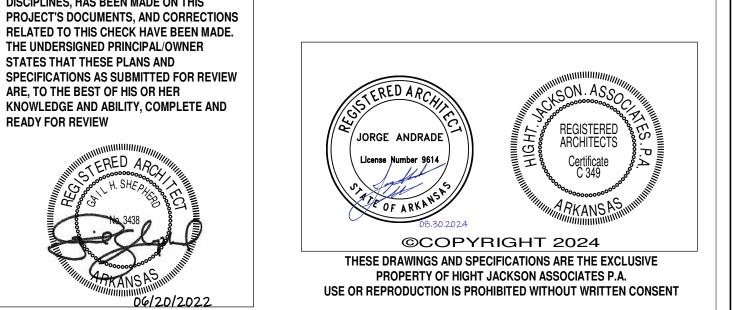
A QUALITY CONTROL CHECK, INCLUDING THE

APPROPRIATE COORDINATION AMONG

DISCIPLINES, HAS BEEN MADE ON THIS

THE UNDERSIGNED PRINCIPAL/OWNER

ARE, TO THE BEST OF HIS OR HER



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OVERALL MECHANICAL POWER PLAN

AREA A FIRST FLOOR POWER PLAN AREA B FIRST FLOOR POWER PLAN

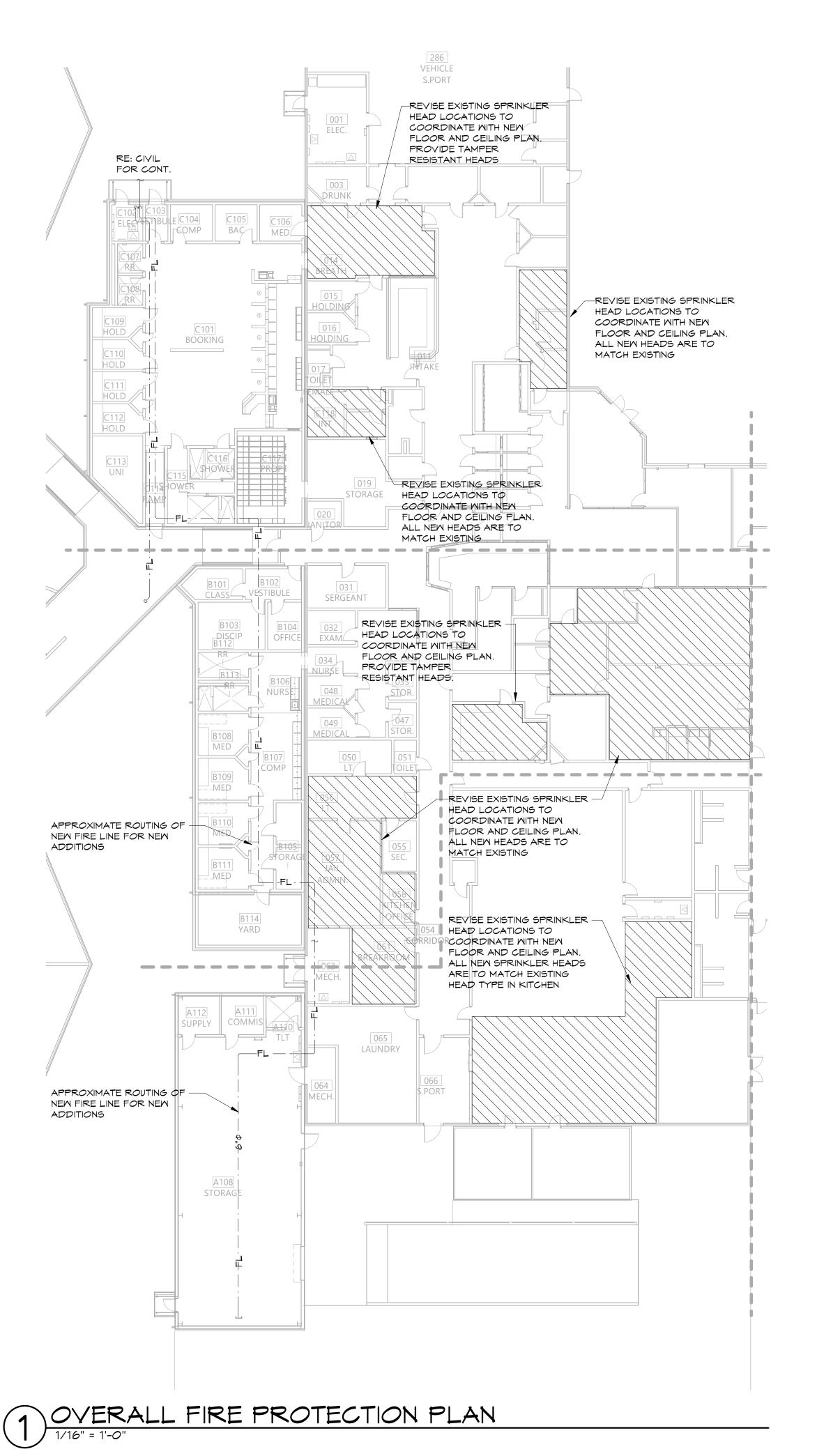
OVERALL POWER PLAN

AREA B FIRST FLOOR MECHANICAL POWER PLAN AREA C FIRST FLOOR MECHANICAL POWER PLAN AREA D FIRST FLOOR MECHANICAL POWER PLAN AREA E FIRST FLOOR MECHANICAL POWER PLAN **OVERALL SPECIAL SYSTEMS PLAN** 

AREA A FIRST FLOOR SPECIAL SYSTEMS PLAN AREA B FIRST FLOOR SPECIAL SYSTEMS PLAN AREA C FIRST FLOOR SPECIAL SYSTEMS PLAN AREA D FIRST FLOOR SPECIAL SYSTEMS PLAN AREA E FIRST FLOOR SPECIAL SYSTEMS PLAN

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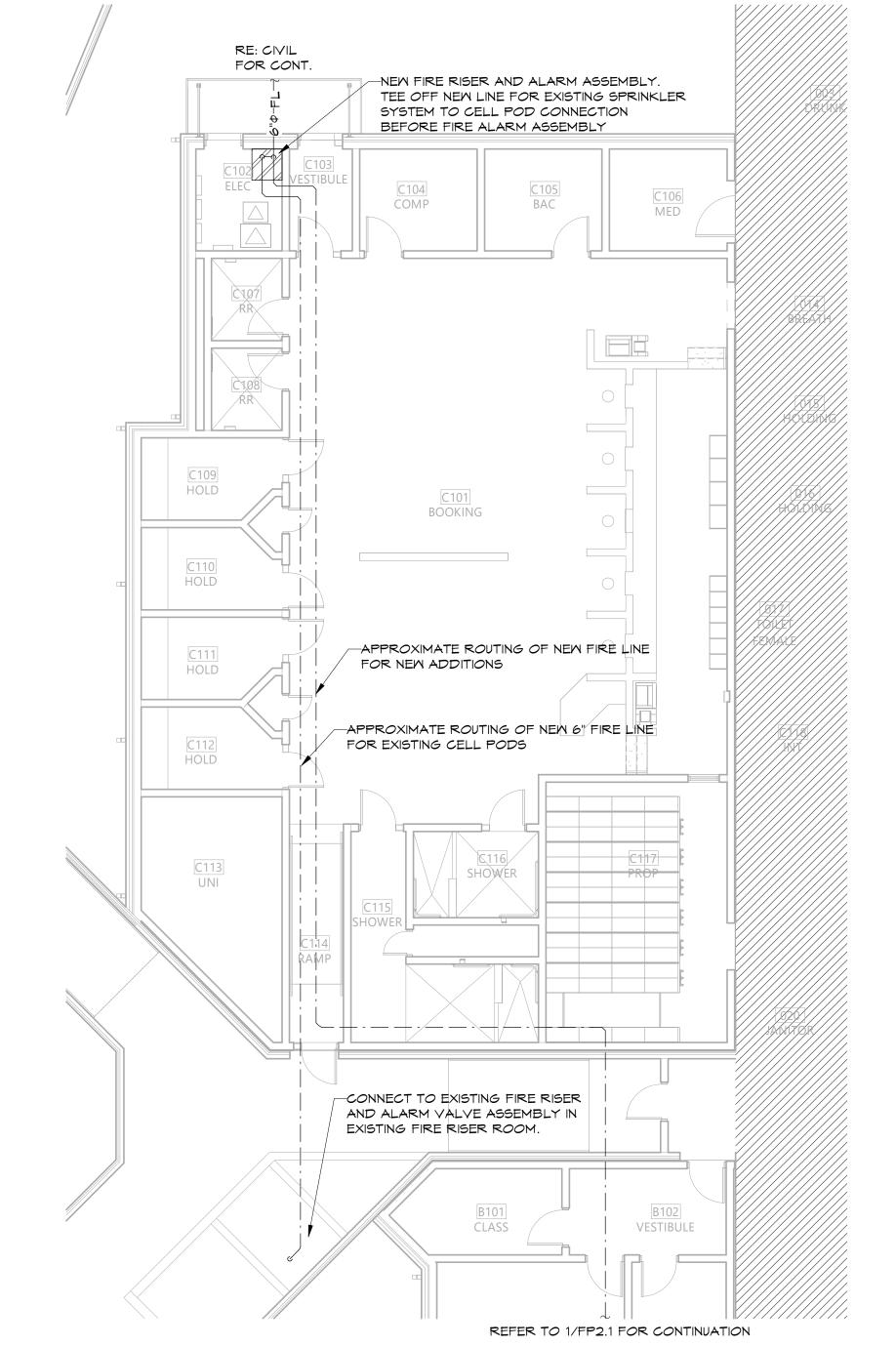


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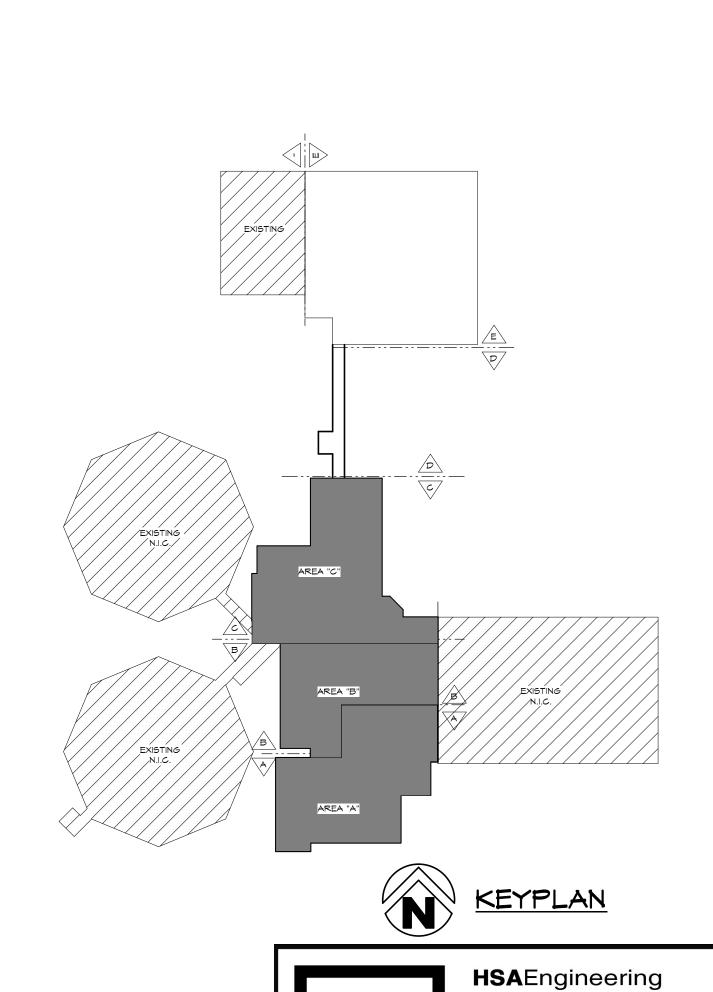
FIRE SPRINKLE CONTRACTOR TO SUPPLY TAMPER-PROOF SPRINKLER HEADS IN ALL DETENTION LOCATION.

#### SEISMIC DESIGN INFORMATION

ALL FIRE PROTECTION SYSTEMS SHALL HAVE A COMPONENT IMPORTANCE FACTOR OF 1.5. VIBRATION ISOLATION OF FIRE PROTECTION EQUIPMENT AND PIPING IS NOT REQUIRED UNLESS INDICATED SPECIFICALLY ON DRAWINGS OR SCHEDULES. REFER TO SPECIFICATIONS FOR MORE INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR BUILDING SEISMIC DESIGN INFORMATION.







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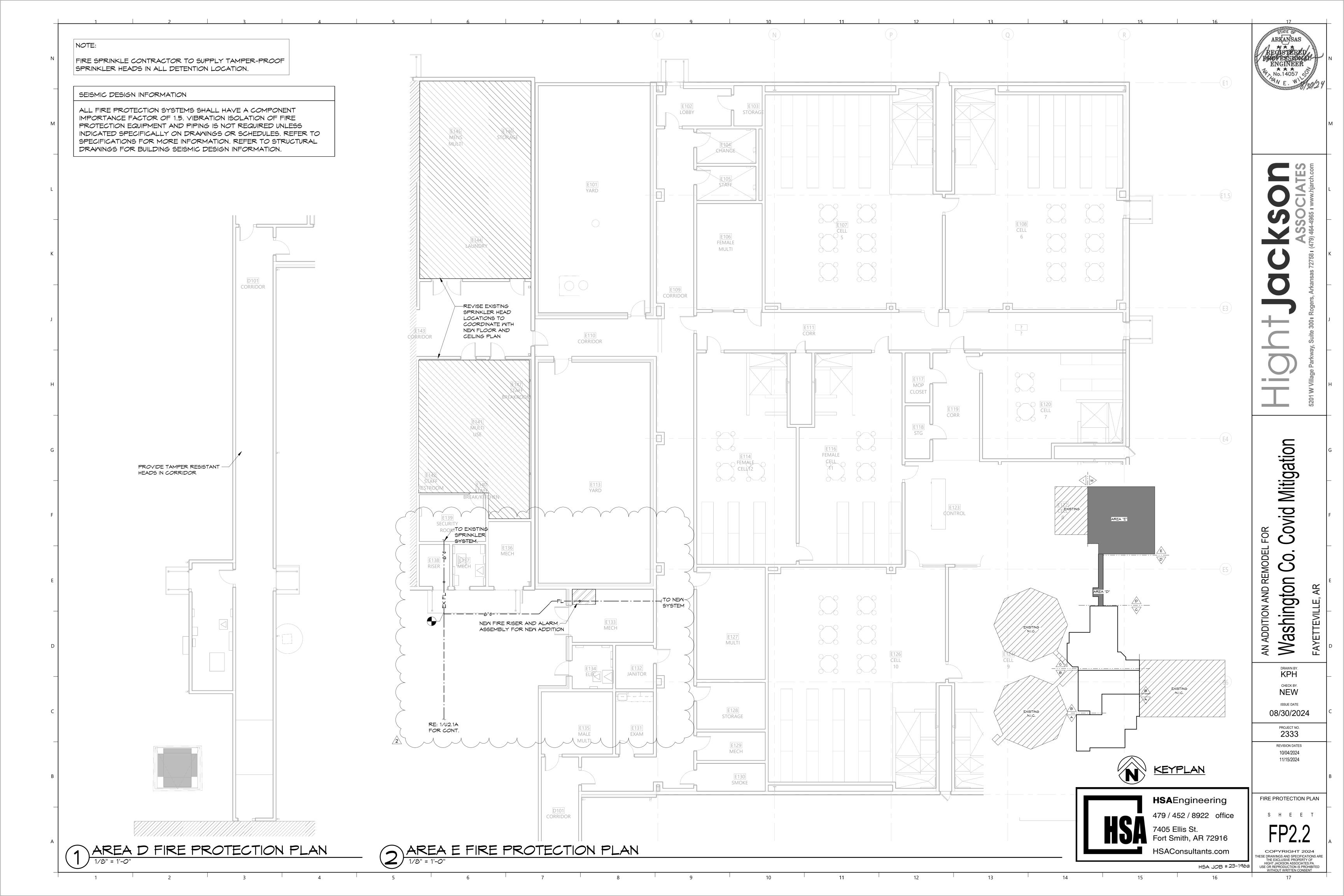
FIRE PROTECTION PLAN

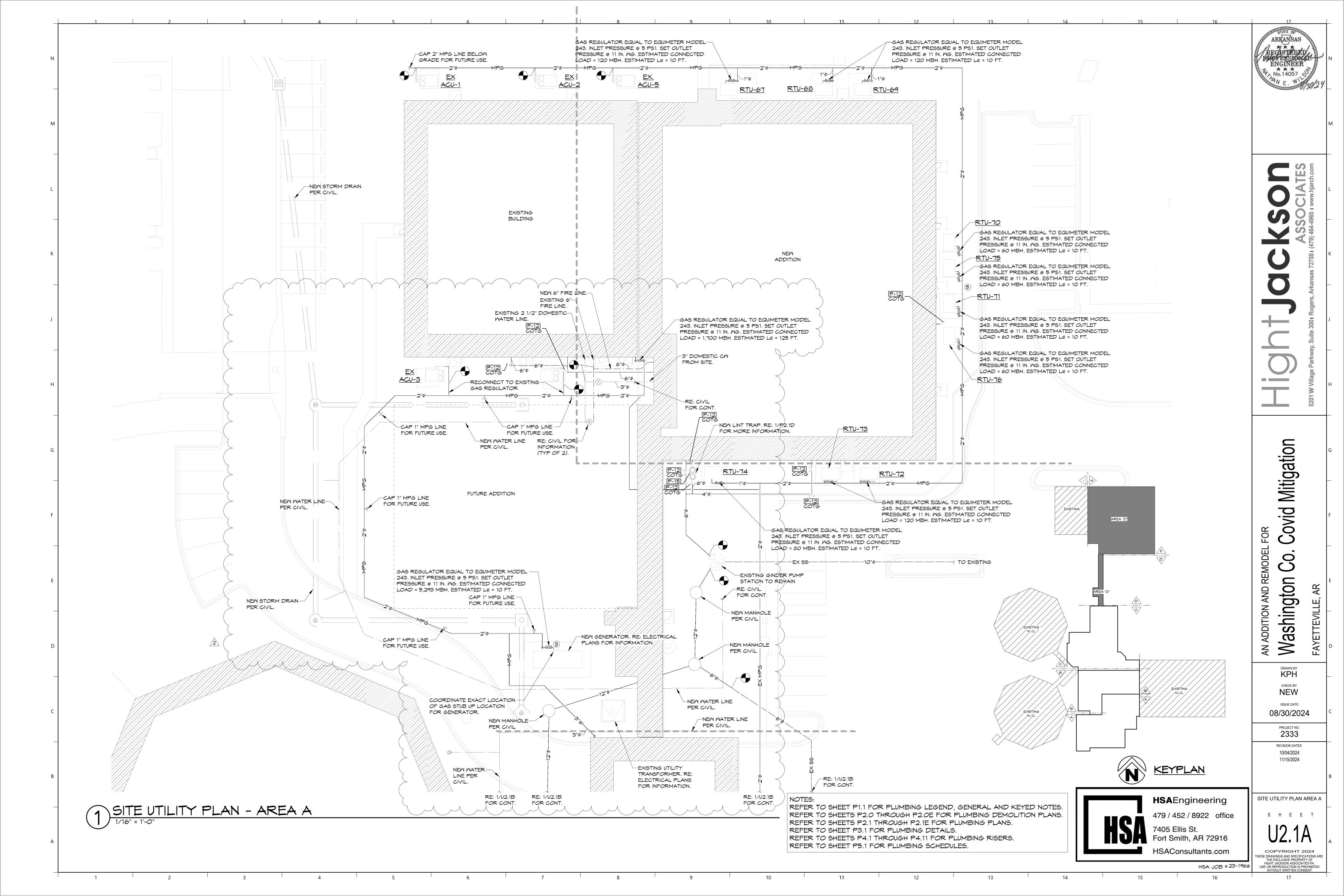
479 / 452 / 8922 office Fort Smith, AR 72916

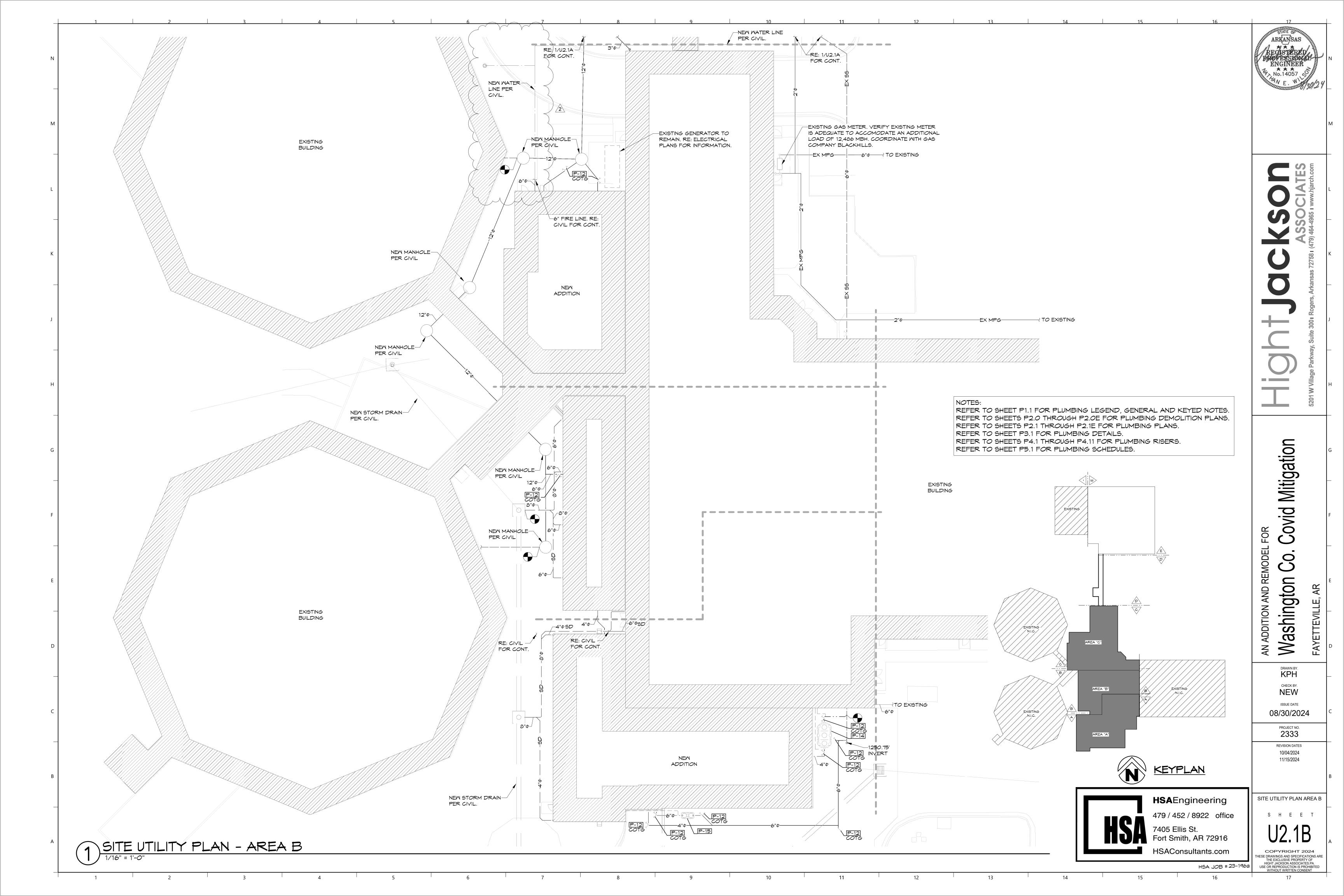
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## GENERAL PLUMBING NOTES

- 1. ALL PLUMBING MATERIALS AND INSTALLATION SHALL COMPLY WITH THE ARKANSAS STATE PLUMBING CODE, LATEST EDITION.
- 2. INSTALL ALL DOMESTIC HOT AND COLD WATER PIPING AS PER STATE
- AND LOCAL CODES. 3. INSULATE ABOVE GRADE CONCEALED DOMESTIC HOT AND COLD WATER LINES PER SPECIFICATIONS, SECTION 22 07 19.
- 4. PROVIDE MAIN DOMESTIC COLD WATER LINE BUILDING SHUT OFF VALVE AT ENTRY INTO THE BUILDING. INSTALL IN FREEZE PROOF VAULT WITH ACCESS COVER.
- 5. INSTALL DEEP SEAL TRAPS AT ALL DRAIN CONNECTIONS. 6. COORDINATE UNDER SLAB PIPING WITH COLUMNS AND FOOTINGS. REFER
- TO STRUCTURAL DRAWINGS. 7. MINIMUM DEPTH OF COVER FOR WATER LINES IS 30 IN. 8. BURY YELLOW #10 THMN COPPER TRACER WIRE IN TRENCH WITH ALL
- UNDER GROUND PLASTIC SERVICES. LEAVE ENDS EXPOSED FOR FUTURE 9. PROVIDE AND INSTALL 6 IN. DIRT LEG AND GAS STOP (BALL VALVE
- ONLY) AT ALL EQUIPMENT GAS CONNECTIONS. 10. PROVIDE GAS MAIN BUILDING SHUT OFF VALVE NEAR ENTRY TO THE
- BUILDING. 11. ALL GAS PIPING SYSTEMS WITHIN A BUILDING AND OTHER ABOVE GROUND GAS PIPING SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO A GROUNDED ELECTRODE AS DEFINED IN N.F.P.A. 70.
- 12. VERIFY LOCATION AND SIZE OF EXISTING SITE UTILITIES WITH UTILITY AUTHORITIES PRIOR TO CONSTRUCTION. 13. ALL IMPROVEMENTS (PAVEMENTS, CURB AND GUTTER, SOD, ETC.) SHALL

BE REPLACED AS ASSIGNED BY CONSTRUCTION MANAGER TO

- PRECONSTRUCTION CONDITION. 14. WHERE FIRE RATED PARTITIONS OR FLOORS OCCUR, ALL FLOOR TO FLOOR AND ROOM TO ROOM PENETRATIONS SHALL BE PROPERLY FIRE SEALED WITH U.L. LISTED AND CLASSIFIED FIRE CAULK OR FIRE SEALED BY USING AN APPROVED FIRE SEAL SLEEVE METHOD WHICH MEETS U.L. REQUIREMENTS. ALL OTHER PENETRATIONS OF RATED CHASES OR WALLS SHALL BE PROPERLY FIRE SEALED AND WHERE EXTENDING THROUGH SUCH RATED SURFACE SHALL BE A RATED FIRE STOP PENETRATION. ALL FIRE STOPPING, FIRE CAULKING AND FIRE SLEEVING OR OTHER FIRE SEALING SHALL BE ACCEPTABLE BY THE LOCAL AUTHORITIES AND SHALL BEAR THE U.L. SEAL
- 15. INSTALL DOMESTIC WATER, GAS AND COMPRESSED AIR LINES TIGHT AGAINST BUILDING ROOF STRUCTURE. 16. VERIFY LOCATION, INVERT AND SIZE OF ALL EXISTING UTILITIES PRIOR TO
- BEGINNING CONSTRUCTION. 17. PROVIDE CITY APPROVED REDUCED PRESSURE BACKFLOW PREVENTERS ON ALL DOMESTIC SERVICE LINES CONNECTED TO ALL DEVICES, APPURTENANCES, APPLIANCES AND APPARATUS INTENDED TO SERVE SOME SPECIAL FUNCTION, SUCH AS STERILIZATION, DISTILLATION, PROCESSING, COOLING OR STORAGE OF FOODS OR ICE. WATER PUMPS, FILTERS, SOFTENERS, TANKS AND ALL OTHER APPLIANCES AND DEVICES THAT HANDLE OR TREAT POTABLE WATER SHALL BE PROTECTED
- AGAINST CONTAMINATION WITH SIMILAR BACKFLOW PREVENTER. 18. CONDENSATE PIPING FROM ROOF TOP AIR CONDITIONERS SHALL BE SCHEDULE 40 PVC. PROVIDE CONDENSATE TRAP. ROUTE CONDENSATE LINE TO NEAREST ROOF DRAIN OR GUTTER.
- 19. PROVIDE WEATHERPROOF PIPE BOOT WITH ULTRAPLY TPO MEMBRANE AS FLASHING AND STAINLESS STEEL CLAMPING RING FOR ALL GAS LINES PENETRATING THE ROOF.
- 20. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO THE LATEST ACCEPTABLE ARKANSAS STATE MECHANICAL CODE.
- 21. ALL WATER AND SEMER LINE MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF FAYETTEVILLE STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION AS WELL AS THE ARKANSAS STATE PLUMBING CODE.
- 22. MECHANICAL CONTRACTOR SHALL REFER TO THE FOOD SERVICE DRAMINGS AND PROVIDE ALL REQUIRED MECHANICAL FOOD SERVICE EQUIPMENT CONNECTIONS.
- 23. HORIZONTAL BRANCHES SHALL CONNECT TO HORIZONTAL STACK OFFSETS AND TO THE BASES OF STACKS AT A POINT LOCATED NOT LESS THAN 10 PIPE DIAMETERS DOWNSTREAM FROM THE STACK.
- 24. CONTRACTOR SHALL PROVIDE "AS BUILT" DRAWINGS OF ALL PLUMBING AND PIPING SYSTEMS UPON COMPLETION OF THE PROJECT.
- 25. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DRAWINGS, THE BUILDING SITE, AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. IF CONTRACTOR HAS QUESTIONS REGARDING ASSEMBLIES OR LAYOUTS WITH THE PROJECT HE SHALL MAKE THEM KNOWN TO THE ENGINEER IN WRITING PRIOR TO BIDDING THE PROJECT. CLAIMS MADE SUBSEQUENT TO THE BID WILL NOT BE ACCEPTED IF IT IS DETERMINED THAT PROPER FAMILIARIZATION COULD HAVE AVOIDED SUCH CLAIM.
- 26. MECHANICAL CONTRACTOR SHALL COORDINATE INSTALLATION PLUMBING SITE UTILITIES WITH SITE WORK OF OTHER TRADES. IN INSTANCES WHERE COORDINATION REQUIRES DEVIATION FROM PLANS MECHANICAL CONTRACTOR SHALL NOTIFY ENGINEER OF PROPOSED CHANGES.
- 27. COMPLY WITH STATE OF ARKANSAS ADOPTED ADA ACCESSIBLE
- GUIDELINES IN REGARD TO ACCESSIBLE FEATURES. 28. PROVIDE DRIP PAN FOR ENTIRE LENGTH OF PIPE WHERE PIPE MUST BE INSTALLED ABOVE ELECTRICAL EQUIPMENT.
- 29. DO NOT ROUTE GROUPS OF CONDUIT, PIPES, AND SLEEVES ABOVE FOOTINGS UNLESS NOTED TO DO SO. IF CONFLICT OCCURS, CONSULT ARCHITECT/ENGINEER
- 30. LIMIT WIDTH OF CONDUIT, PIPES AND SLEEVES NOT TO EXCEED 3 FEET IN WIDTH AS IT PASSES UNDER WALL FOOTING. AS MUCH AS POSSIBLE, ALIGN THE ITEMS PERPENDICULAR TO THE FOOTING AS IT PASSES BELOW
- 31. PROVIDE A MINIMUM SPACING OF 2 FEET BETWEEN CONDUIT OR PIPE GROUPS AS ITEMS PASS UNDER FOOTINGS.
- 32. DO NOT ROUTE CONDUITS, PIPE OR SLEEVES UNDER COLUMN FOOTINGS OR PAD FOOTINGS.
- 33. MECHANICAL CONTRACTOR MUST REVIEW ALL ARCHITECTURAL DRAMINGS FOR EXACT LOCATION OF PLUMBING FIXTURES, ROOF, OVERFLOW AND FLOOR DRAINS. IF PLUMBING FIXTURES OR DRAINS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS THEY MUST BE INCLUDED IN THE CONTRACT EVEN IF NOT SHOWN ON THE MECHANICAL DRAWINGS.
- 34. WHERE THE BUILDING SEMER IS INSTALLED MITHIN 10 FEET OF THE MATER SERVICE THE WATER SERVICE PIPE SHALL BE A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE HIGHEST POINT OF THE SEWER. REQUIRED SEPARATION DISTANCE SHALL NOT APPLY WHERE A WATER SERVICE PIPE CROSSES A SEWER PIPE IS SLEEVED 10 FEET HORIZONTALLY FROM THE SEMER PIPE CENTERLINE ON BOTH SIDES OF SUCH PIPE CROSSINGS.
- 35. DO NOT SCALE DIRECTLY FROM THE PLUMBING DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL INFORMATION. 36. ALL PLUMBING SANITARY WASTE AND VENT PIPING INSTALLED IN FIRE RATED WALLS OR PLENUM RETURN AIR SYSTEMS SHALL BE CAST IRON.

REFER TO ARCHITECTURAL PLANS FOR LIFE SAFETY INFORMATION.

## PLUMBING KEYED NOTES

- [1] INSTALL AN APPROVED TRAP GUARD PRODUCT THAT CONFORMS TO NSF-14, CSA B602-99 AND CSA B79-94.
- 2 COORDINATE UNDERSLAB PIPING WITH STRUCTURAL FOOTINGS. REFER TO STRUCTURAL PLANS FOR LOCATIONS AND SIZES OF FOOTINGS.
- 3 PROVIDE AND INSTALL 6 INCH DIRT LEG AND GAS STOP (BALL VALVE ONLY) AT ALL EQUIPMENT GAS CONNECTIONS. REFER TO DETAIL 7/P3.1.

(4) MECHANICAL CONTRACTOR SHALL NOT INSTALL ANY WATER LINES ABOVE ELECTRICAL PANELS

TAPE SHOULD STATE AT REGULAR INTERVALS: "CAUTION (STATE UTILITY) PIPE BELOM". INSTALL

- PANELS. REFER TO ELECTRICAL PLANS FOR PANEL LOCATIONS. [5] IDENTIFY OUTDOOR UNDERGROUND LINES WITH CONTINUOUS STRIP OF PLASTIC UTILITY MARKER.
- TAPE ONE FOOT DIRECTLY ABOVE PIPE BEFORE BACKFILLING TO GRADE. 6 MECHANICAL CONTRACTOR TO PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER (RPZ) AND PRESSURE REDUCING VALVE (IF REQUIRED) AT THE DOMESTIC WATER SERVICE ENTRANCE IN
- BUILDING. THERE SHALL BE NO MYES OR TEES PRIOR TO THE RPZ. PROVIDE WATTS MODEL LF909 OR APPROVED EQUAL RPZ. REFER TO 3/P3.2 FOR DETAIL. MAINTAIN A MINIMUM OF 10 FOOT CLEARANCE BETWEEN THE NEW WATER LINES AND NEW SANITARY
- SEWER PIPE. (8) MECHANICAL CONTRACTOR SHALL INSTALL DUCTILE IRON SLEEVE ON NEW WATER LINES WHERE THEY CROSS ABOVE ANY SANITARY SEMER LINES. SLEEVE SHALL BE 10 FEET IN BOTH
- PROVIDE ACCESS PANEL WITHIN B112 RR TO ACCESS DETENTION FIXTURES IN B113 RR.

#### SEISMIC DESIGN INFORMATION

DIRECTIONS OF THE SANITARY SEMER PIPE CENTER LINE.

ALL GAS PIPING SHALL HAVE A COMPONENT IMPORTANCE FACTOR OF 1.5. VIBRATION ISOLATION OF PLUMBING EQUIPMENT AND PIPING SYSTEMS IS NOT REQUIRED UNLESS INDICATED SPECIFICALLY ON DRAWINGS OR SCHEDULES. REFER TO SPECIFICATIONS FOR MORE INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR BUILDING SEISMIC DESIGN INFORMATION.

## DILIKADINIZ I EZEND

<u>PLUMBING</u>	LEGEND
	SANITARY WASTE PIPING
———-EX 55-———	EXISTING SANITARY WASTE PIPING
	GREASE SANITARY WASTE PIPING
EX 65	GREASE SANITARY WASTE PIPING
	VENT PIPING
	EXISTING VENT PIPING
	COLD WATER PIPING
EX CM	EXISTING COLD WATER PIPING
	HOT WATER PIPING
EX HM	EXISTING HOT WATER PIPING
	HOT MATER RETURN PIPING
EX HMR	EXISTING HOT WATER RETURN PIPING
— — HTMS—— —	HIGH TEMPERATURE WATER SUPPLY (140°F)
MPG	MEDIUM PRESSURE GAS PIPING (5 PSIG)
	LOW PRESSURE GAS PIPING (11 IN. M.C.)
———EX <i>G</i> ———	EXISTING LOW PRESSURE GAS PIPING
	CONDENSATE DRAIN PIPING
— — — <del></del>	STORM DRAIN PIPING
	FIRE LINE
	FIRE DEPARTMENT CONNECTION
	PIPING TO BE REMOVED
	BALL VALVE
<del></del>	GAS REGULATOR EQUAL TO EQUIMETER 243
	GAS BALL VALVE
	CONNECTION POINT
	FIXTURES TO BE REMOVED
<b>X</b>	MATER HAMMER ARRESTOR (SIZE PER MANUFACTURER'S RECOMMENDED FIXTURE UNIT CAPACITY)
	FIRE HYDRANT
	REFER TO KEYED NOTES
P-1	PLUMBING FIXTURE NUMBER (REFER TO PLUMBING FIXTURE SCHEDULE)
COTG	CLEAN OUT TO GRADE
FD	FLOOR DRAIN
FS	FLOOR SINK
FPHB	FREEZE PROOF HOSE BIB
HB	HOSE BIB
ADA	ACCESSIBLE
HD	HUB DRAIN
MCO	MALL CLEAN OUT

MATER HEATER

ROOF DRAIN

SANITARY SEMER

**\** 

ARKANSAS

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RECISTERED PHOTESSIONAL ENGINEER

No.14057 6

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> ISSUE DATE 08/30/2024

> > REVISION DATES

PLUMBING NOTES & LEGEND SHEET

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REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

REFER TO SHEETS P2.1 THROUGH P2.1E FOR PLUMBING PLANS. REFER TO SHEET P3.1 FOR PLUMBING DETAILS.

REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

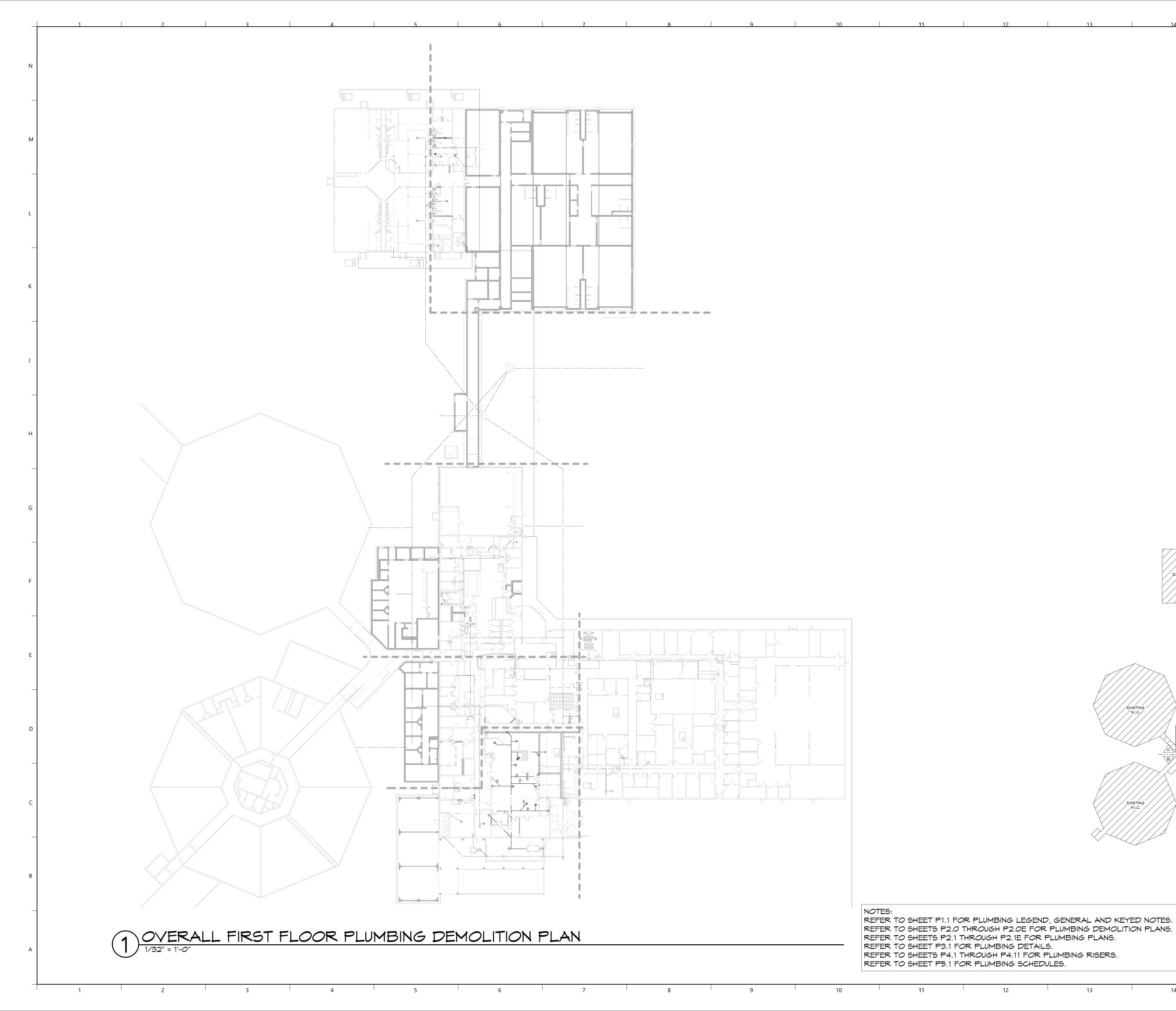
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OVERALL PLUMBING DEMOLITION PLAN S H E E T

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<u>KEYPLAN</u>

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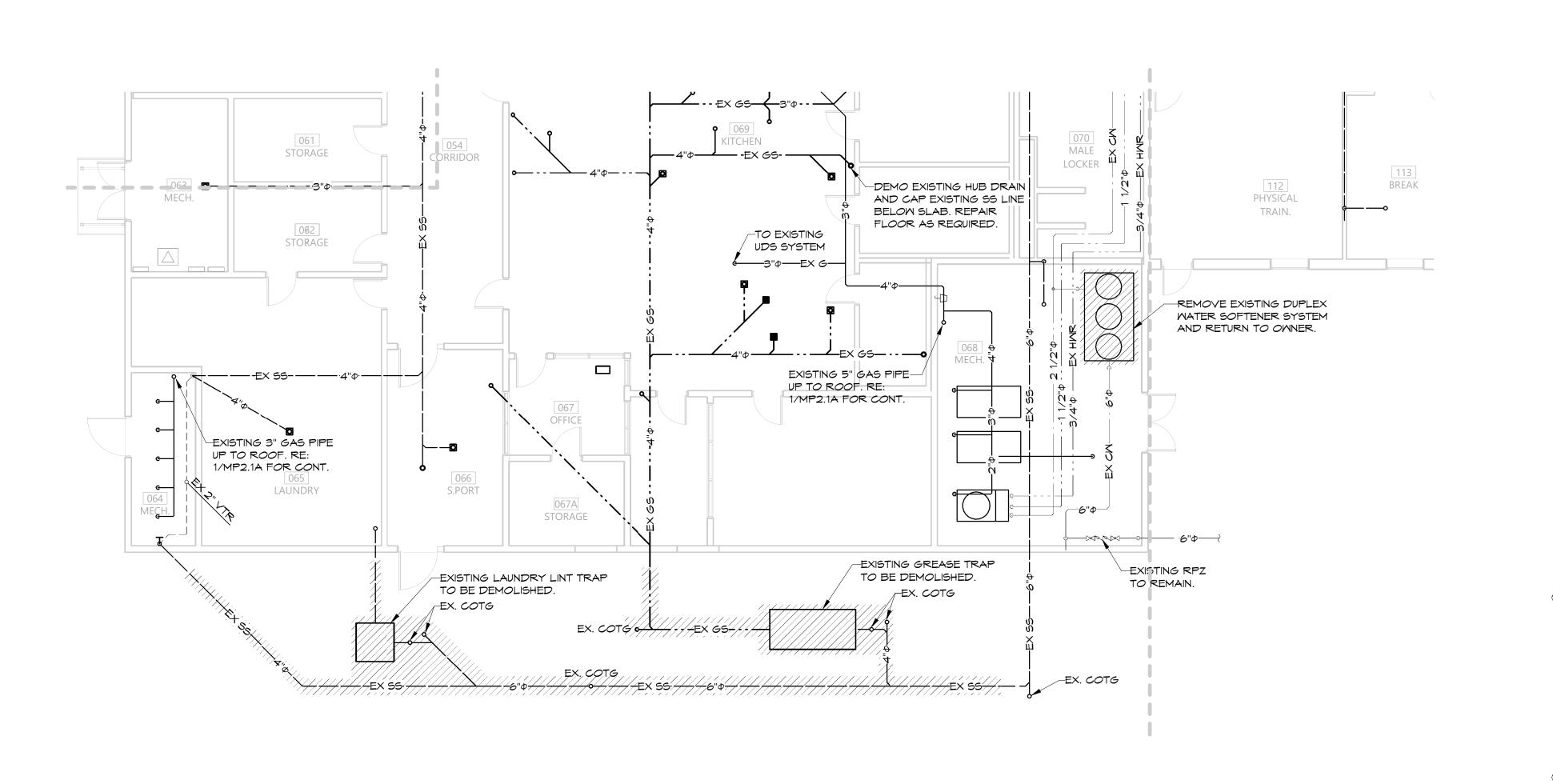
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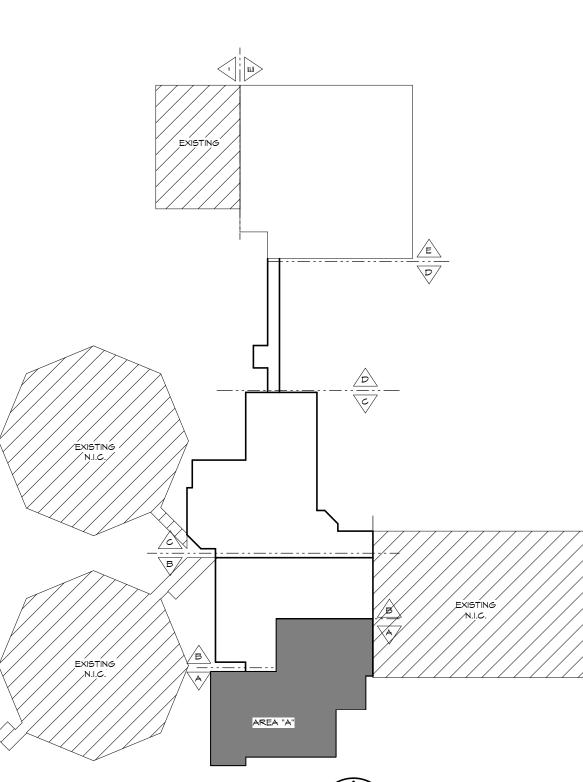
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AREA "E"

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AREA A FIRST FLOOR PLUMBING DEMOLITION PLAN

1/8" = 1'-0"



REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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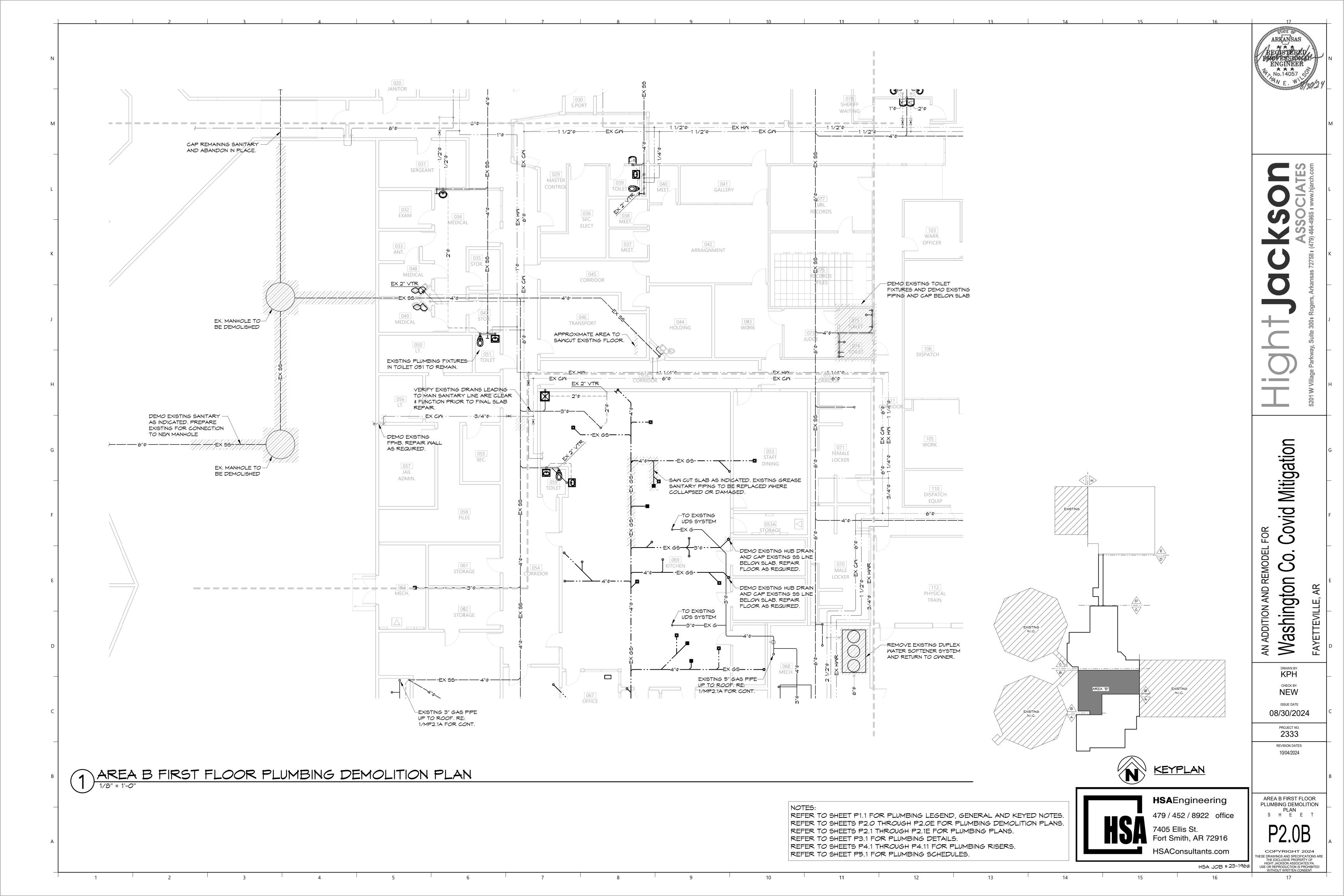
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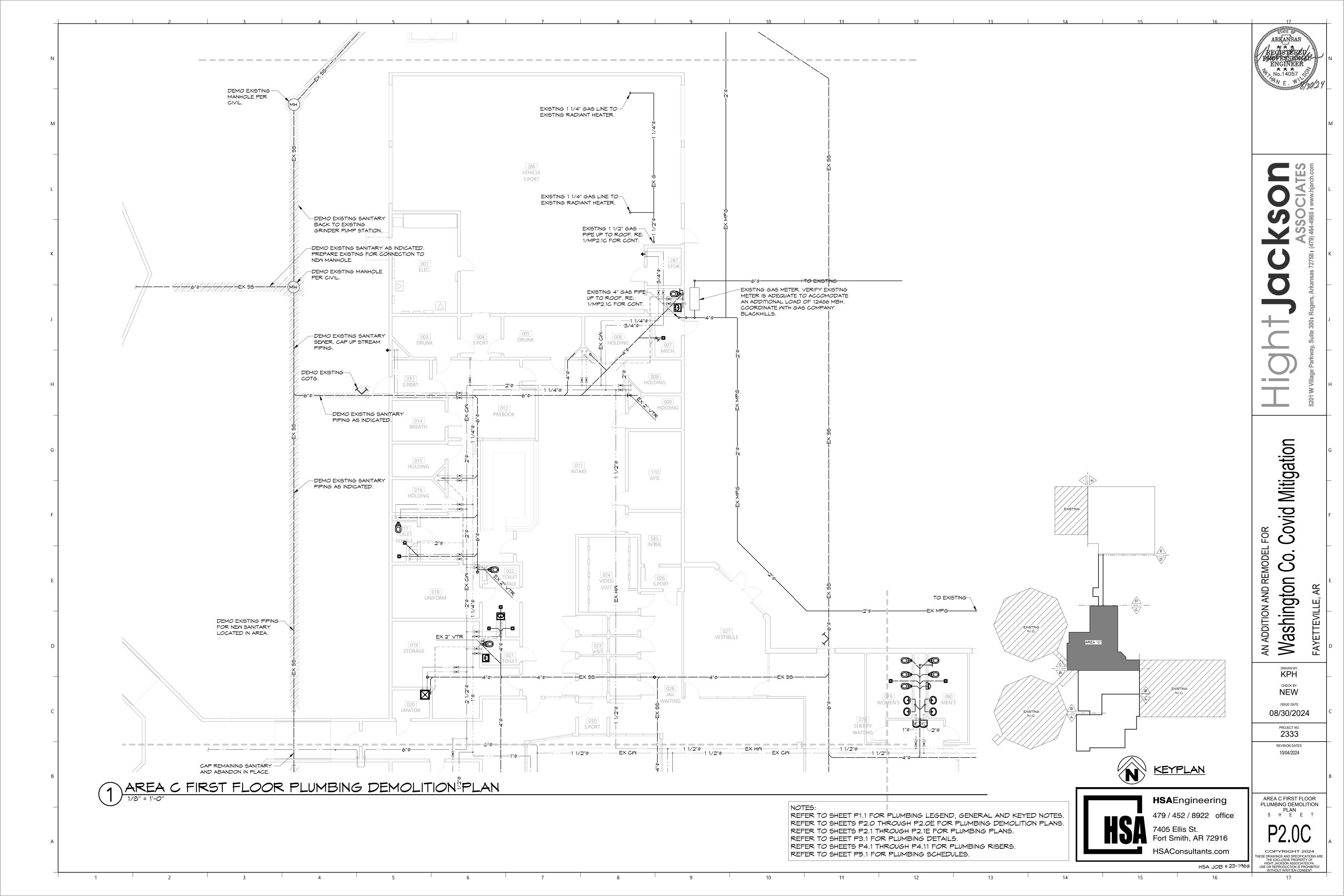
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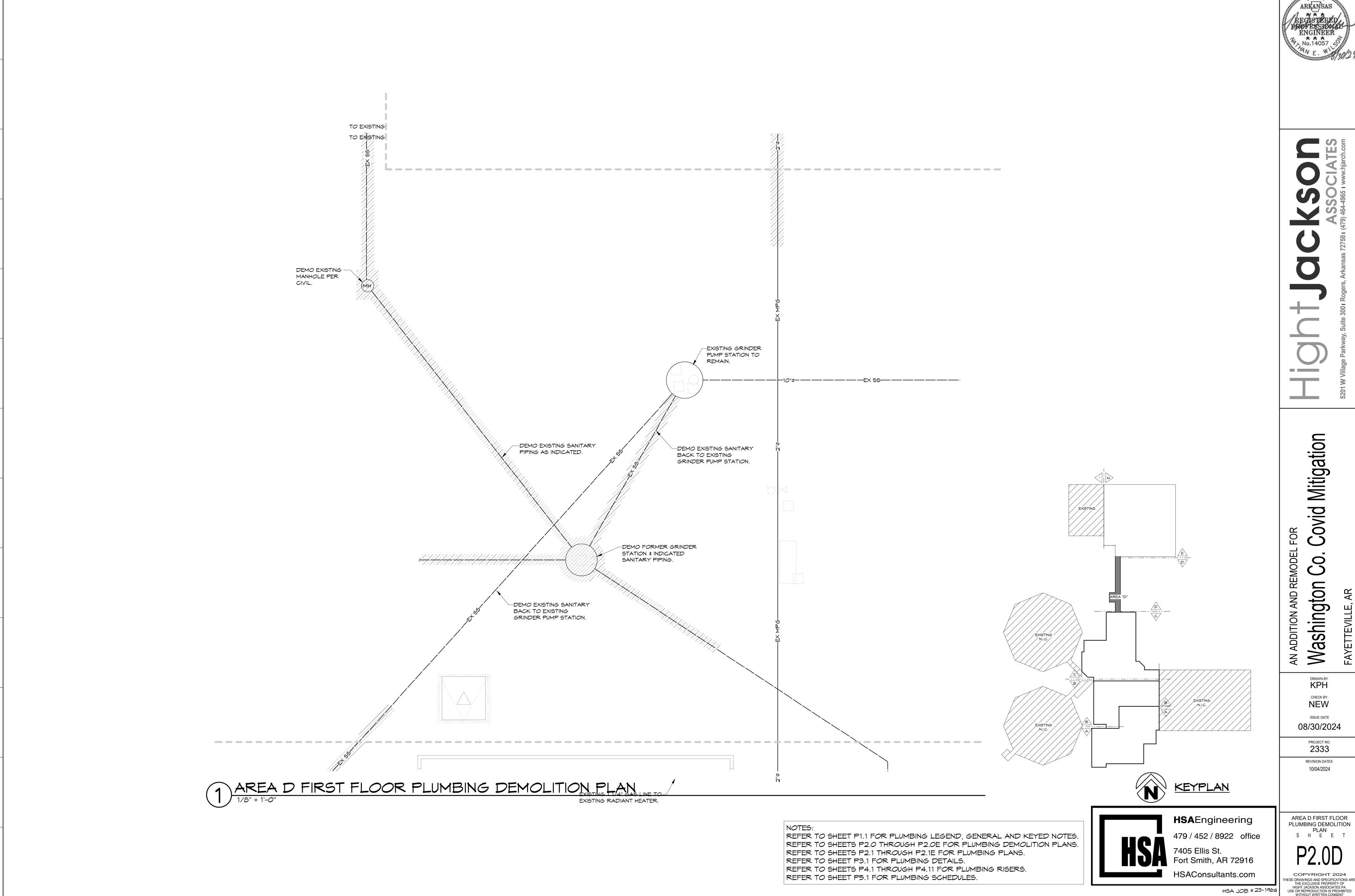
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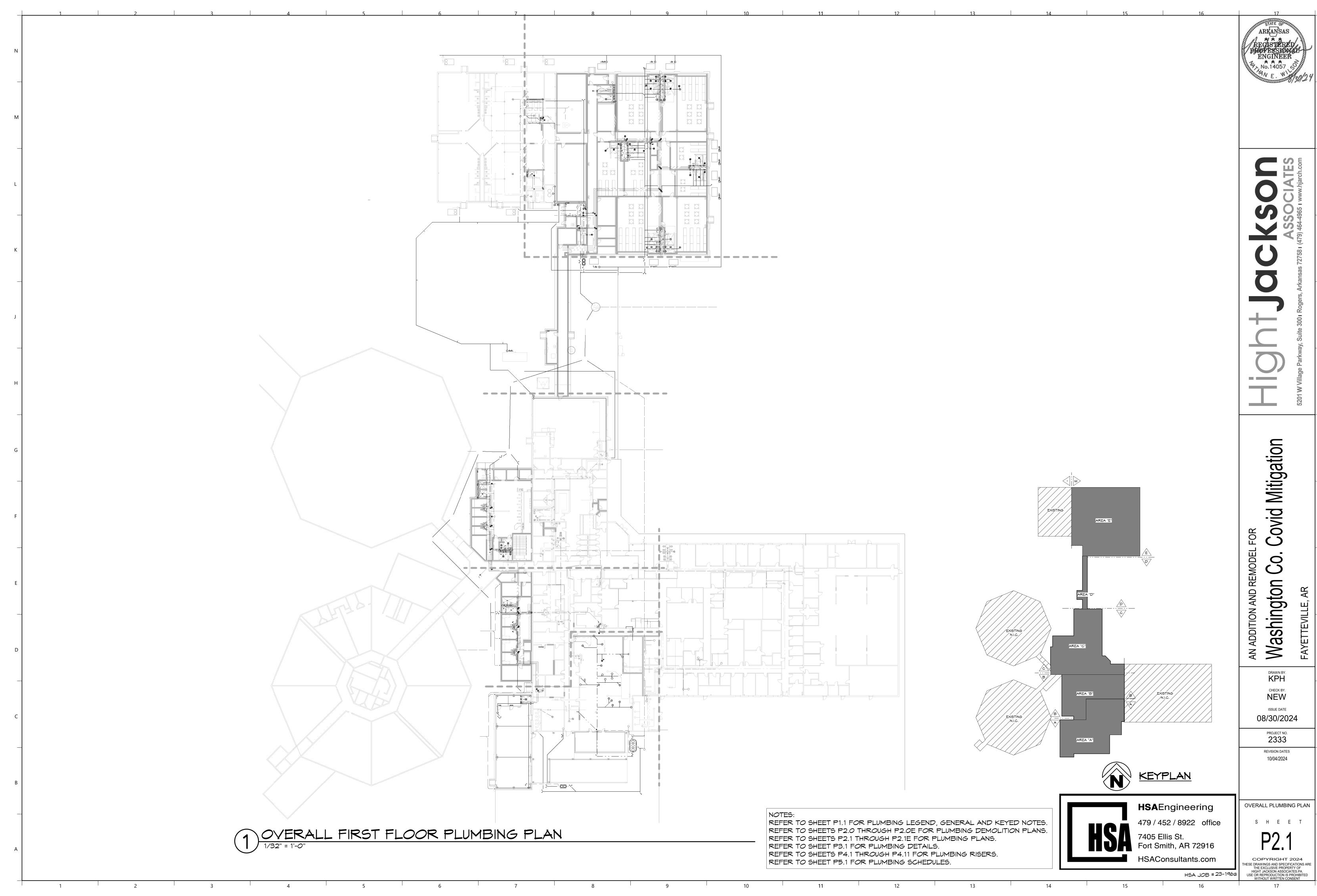


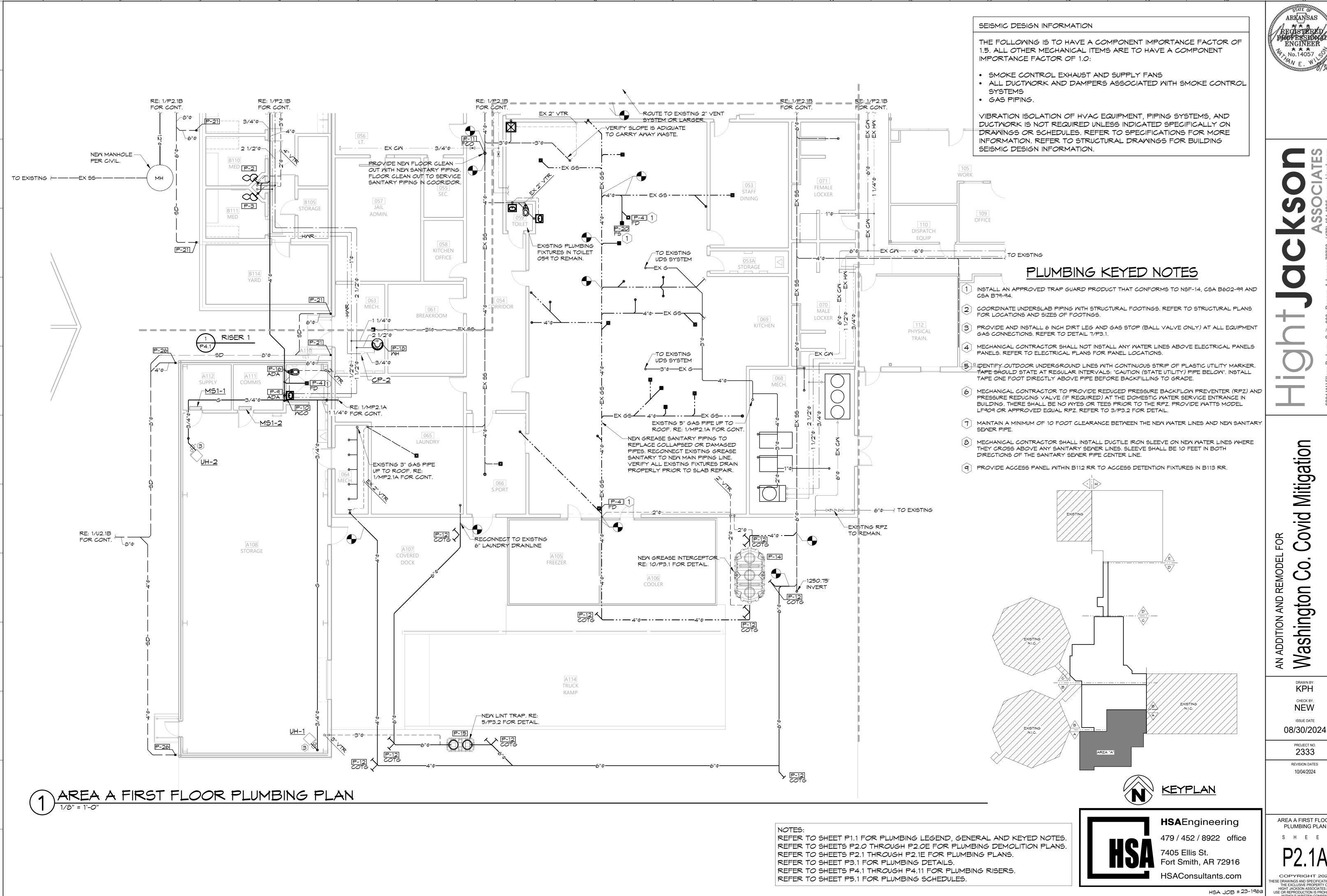
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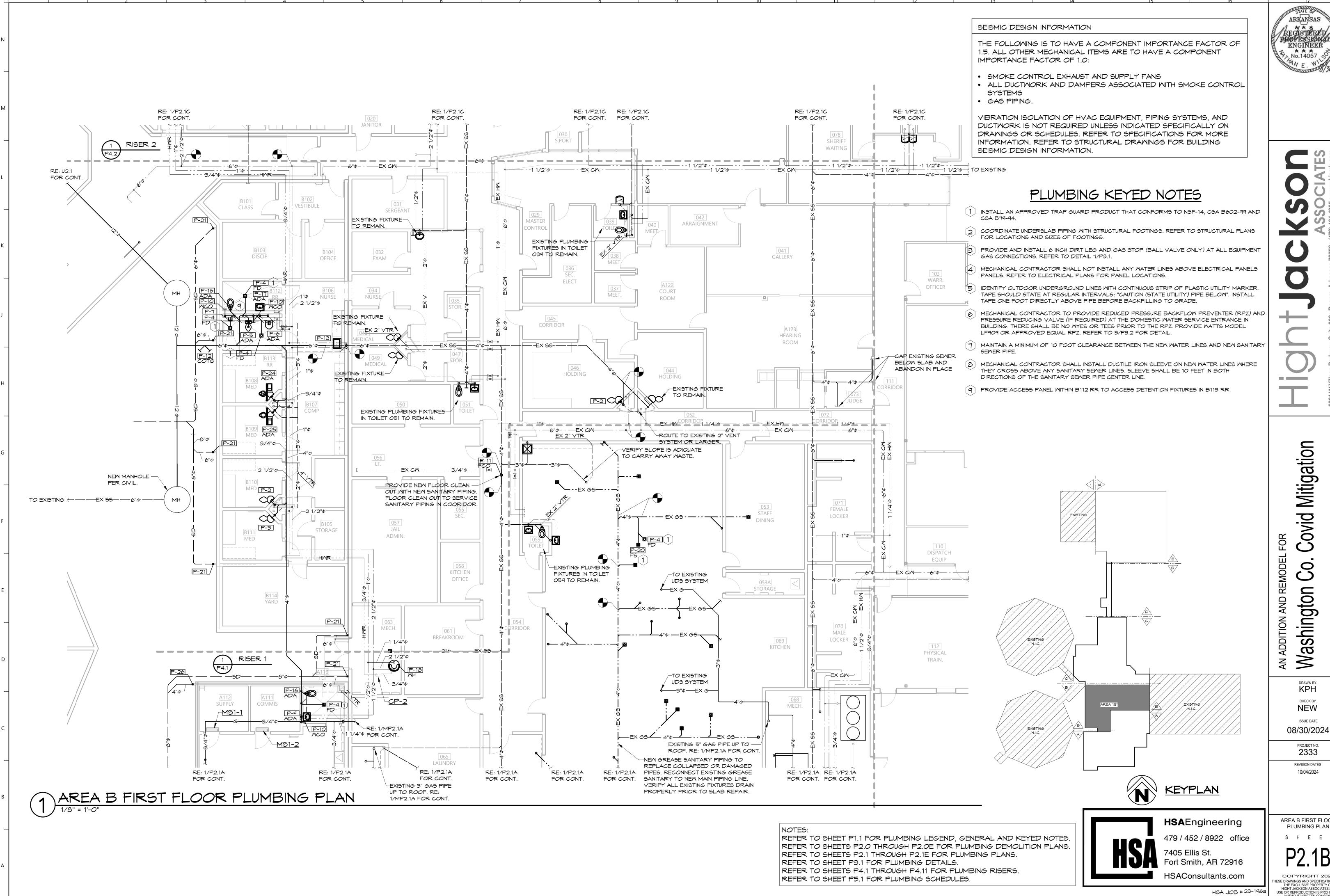
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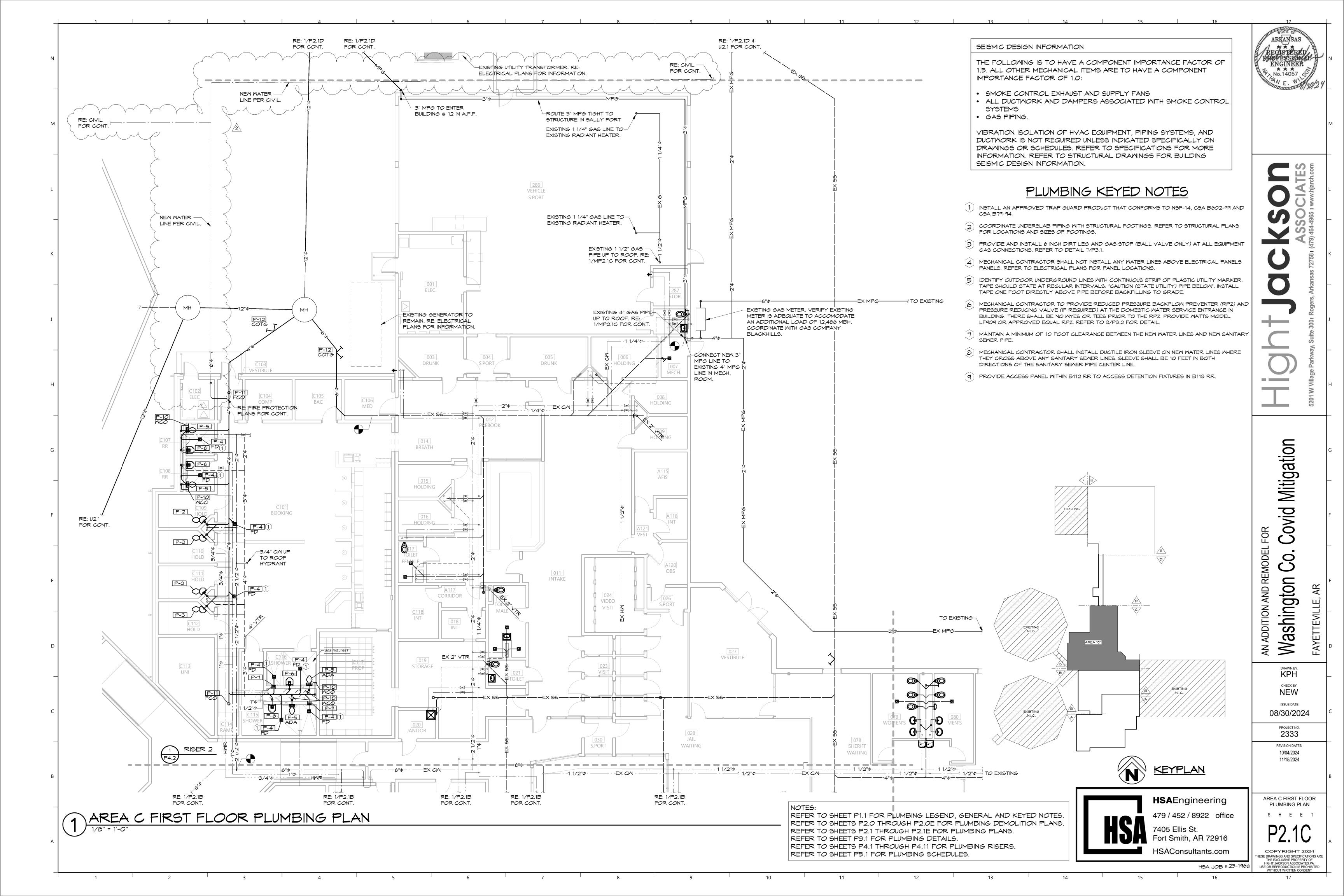
RECISTERED PROFESSION AND ENGINEER

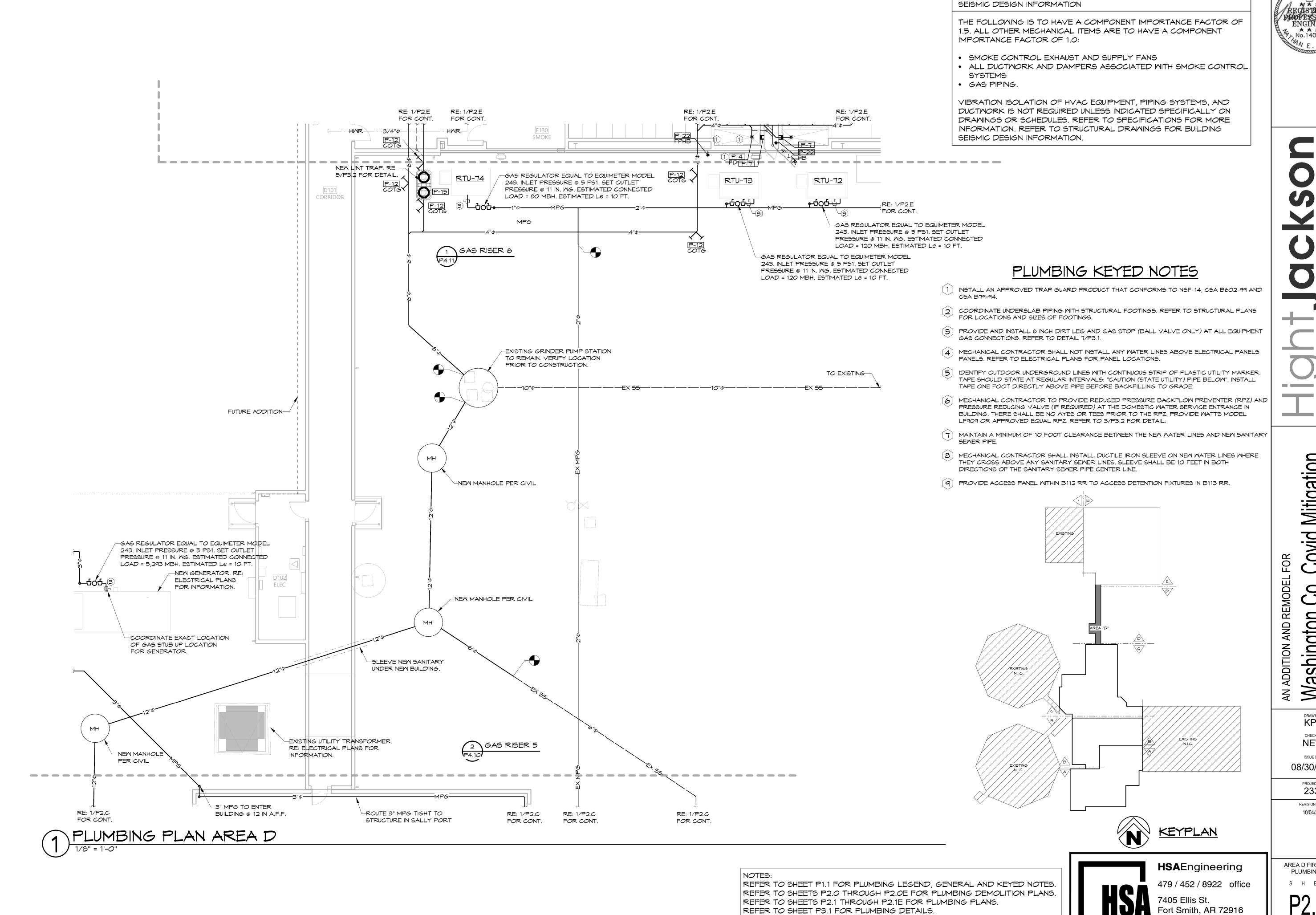
AREA A FIRST FLOOR PLUMBING PLAN SHEET



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AREA B FIRST FLOOR PLUMBING PLAN SHEET





REFER TO SHEET P3.1 FOR PLUMBING DETAILS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

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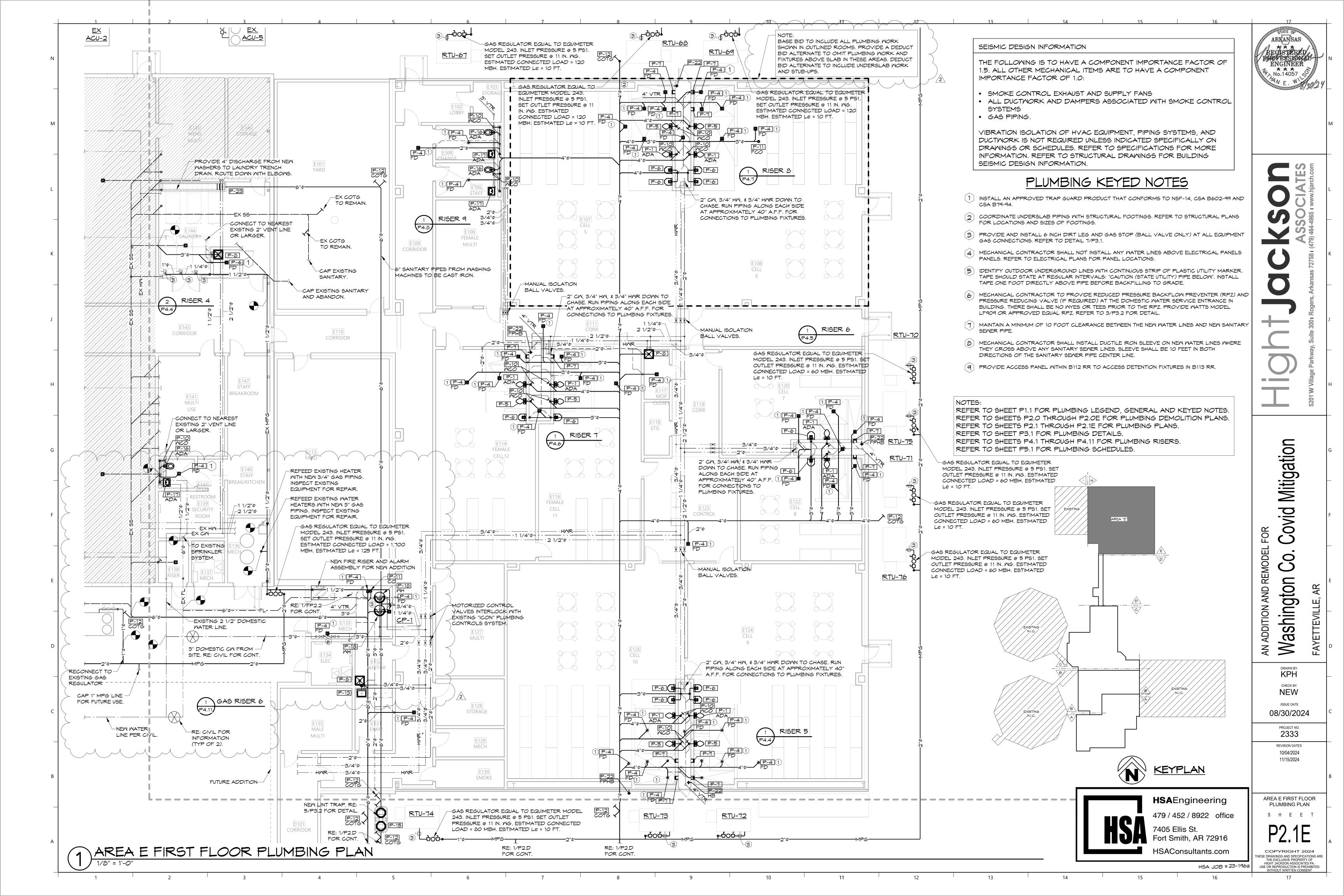
REVISION DATES 10/04/2024

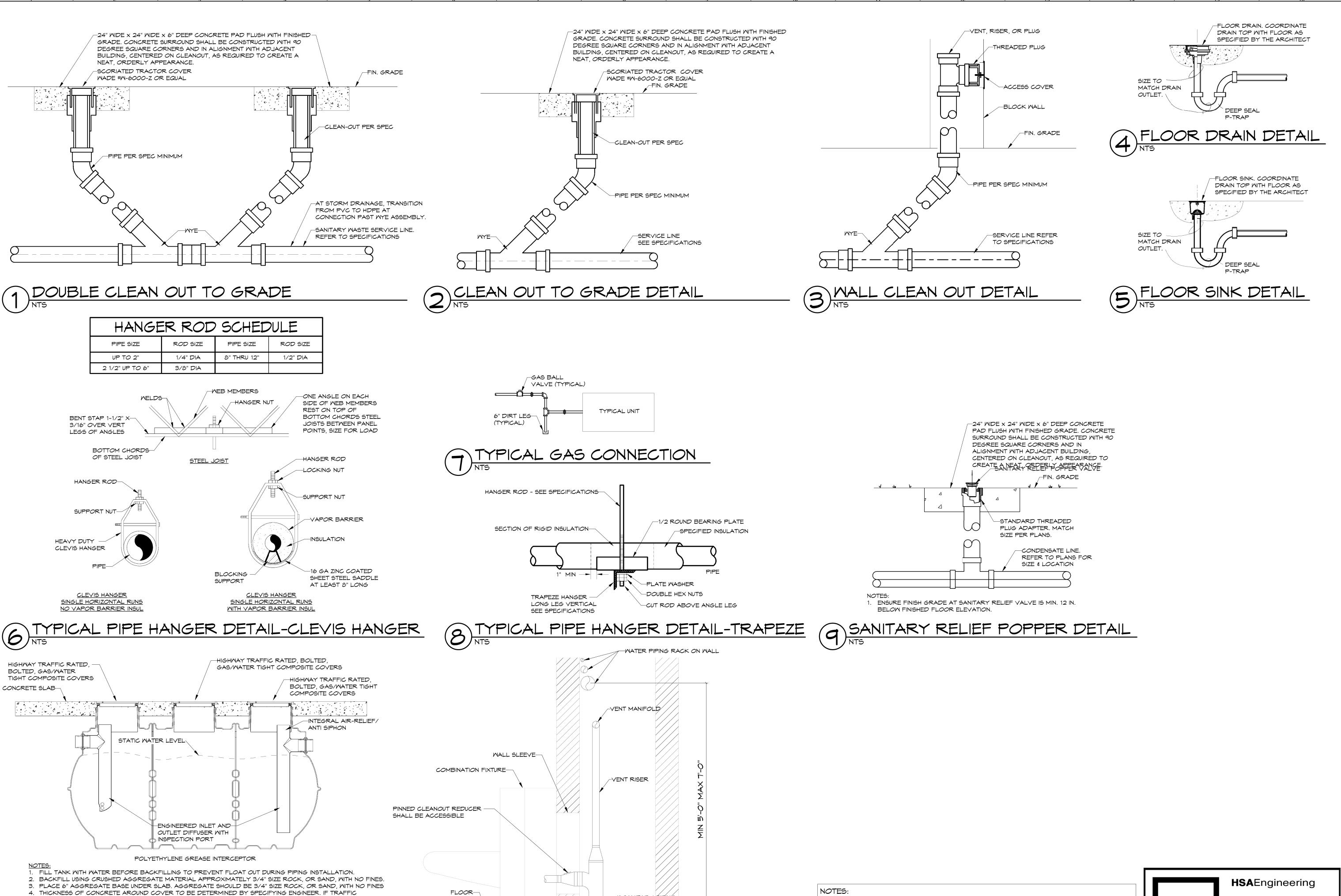
AREA D FIRST FLOOR PLUMBING PLAN S H E E T

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~4" SANITARY ÞIÞING,

SECURITY FIXTURE PLUMBING CHASE

LOADING IS REQUIRED, THE CONCRETE SLAB DIMENSIONS SHOWN ARE FOR GUIDELINE PURPOSE ONLY.

6. PROVIDE REQUIRED FACTORY MANHOLE EXTENSIONS TO GRADE. FIELD VERIFY EXTENSION DIMENSIONS

5. ALL PIPE PENETRATIONS TO BE SLEEVED OR HAVE SLIP CONNECTIONS

PRIOR TO ORDERING.

REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES.

REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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PLUMBING DETAILS

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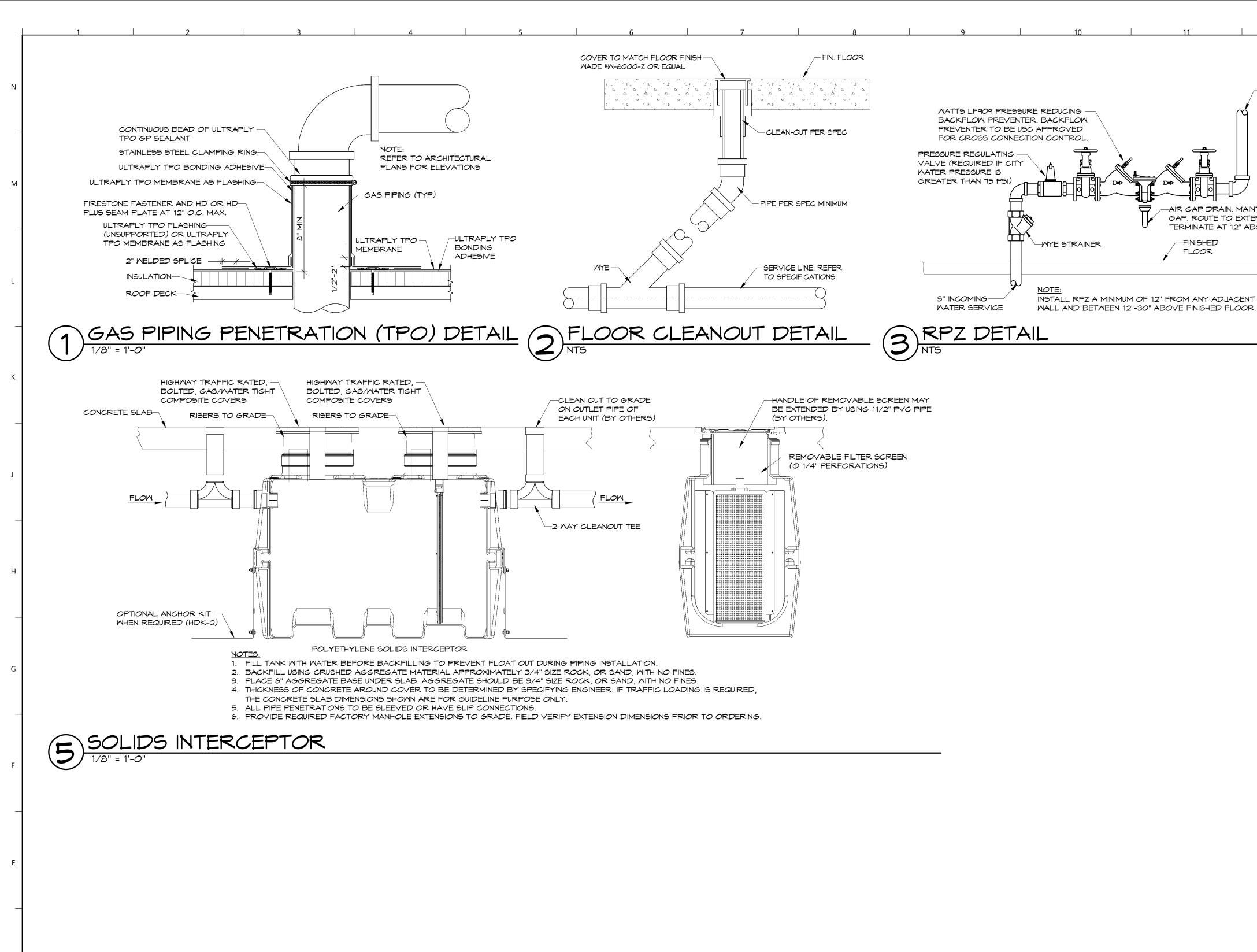
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GAS PIPING (PAINTED) GAS PIPING SUPPORT EQUAL TO -COOPER INDUSTRIES BLINE DURABLOCK DBR SERIES ADJUSTABLE HEIGHT. ELECTRO ZING ALL-THREADED-ROD RISERS. (TYP.) PROVIDE CLDP10 LOAD -DISTRIBUTION PLATE. 1/2" RUBBER DECK PAD.-ATTACH RUBBER PAD -FINISHED ROOF TO BASE ONLY. STRUCTURE

-3" SERVICE

—AIR GAP DRAIN. MAINTAIN APPROVED AIR

TERMINATE AT 12" ABOVE FINISHED GRADE.

GAP. ROUTE TO EXTERIOR WALL.

-FINISHED

FLOOR

TO BUILDING

PIPING SHALL BE SUPPORTED AT ALL ELBOWS AND TEES AND AT 10 FT. MAX. SPACING. 2. GAS PIPING PENETRATIONS THRU ROOF SHALL BE MADE WITH WEATHERPROOF PIPE

3. SUPPORT BASE SHALL HAVE 1/2" MEMBRANE PAD AT ROOF SURFACE. ATTACH PAD TO BASE BOTTOM WITH WEATHERPROOF CEMENT.

BOOT WITH ULTRAPLY TPO MEMBRANE AS FLASHING AND STAINLESS STEEL CLAMPING

4. DO NOT ATTACH BASE TO ROOF.

5. PROVIDE CLDP10 LOAD DISTRIBUTION PLATE AS REQUIRED FOR GAS PIPING 3" DIAMETER AND LARGER.

GAS PIPING SUPPORT DETAIL

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ARKAŊSAS

RECISTERED PHOTESSIONAL ENGINEER

\* \* \* No.14057 6

ADDITION AND REMODEL Washington

> NEW ISSUE DATE 08/30/2024

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PLUMBING DETAILS

REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

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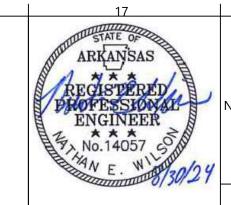
HSA JOB # 23-196a

Fort Smith, AR 72916 HSAConsultants.com

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479 / 452 / 8922 office

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PLUMBING RISERS

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REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS. REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

RE:1/P2.IB FOR CONT.

RE: I/P4.2 FOR CONT.

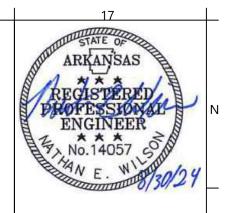
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**J** P-4 () FD

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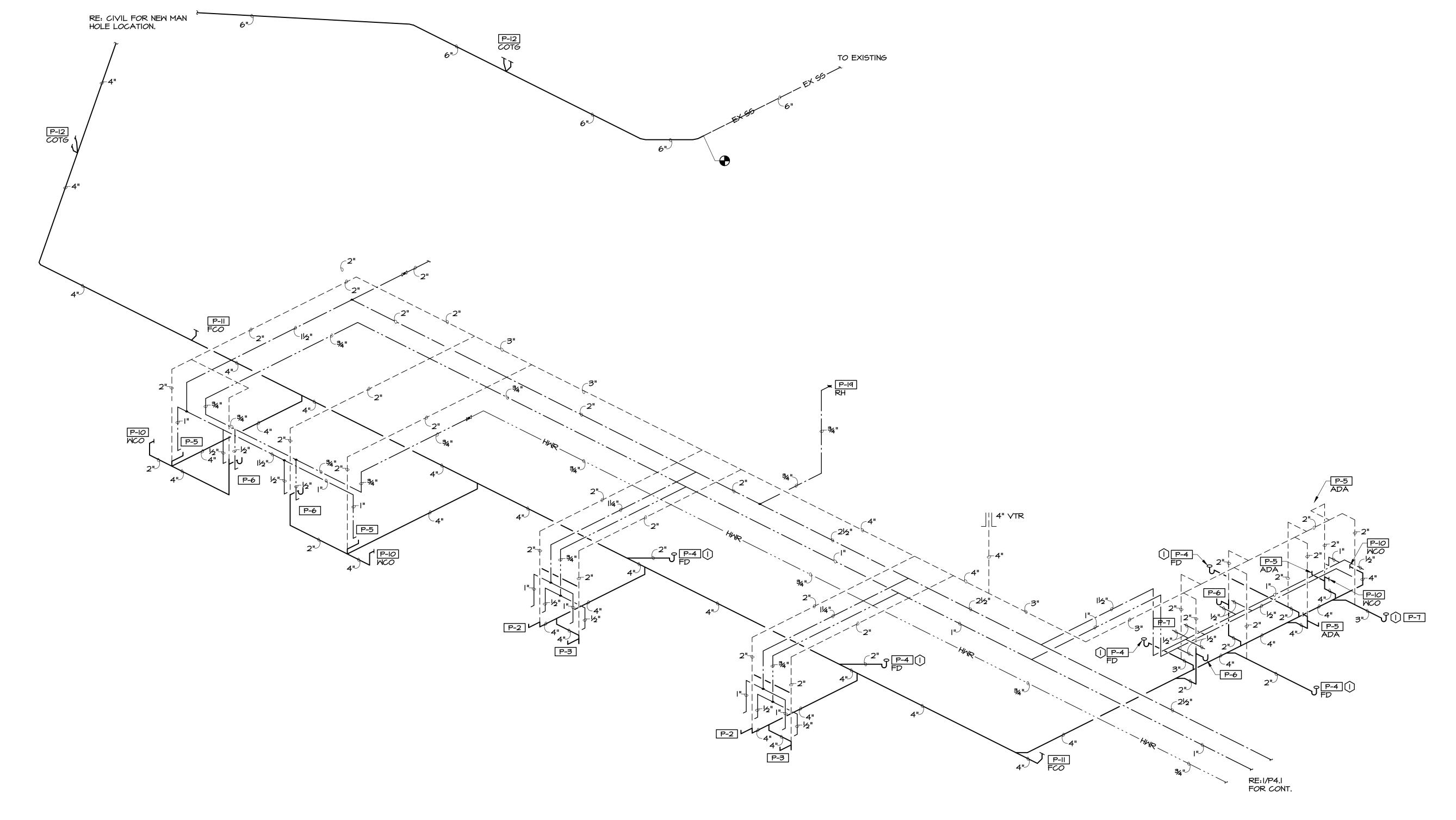
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REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

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REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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AN ADDITION AND REMODEL

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

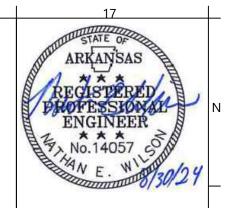
REFER TO SHEET P3.1 FOR PLUMBING DETAILS.

REFER TO SHEETS P2.1 THROUGH P2.1E FOR PLUMBING PLANS.

REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

SEISMIC DESIGN INFORMATION

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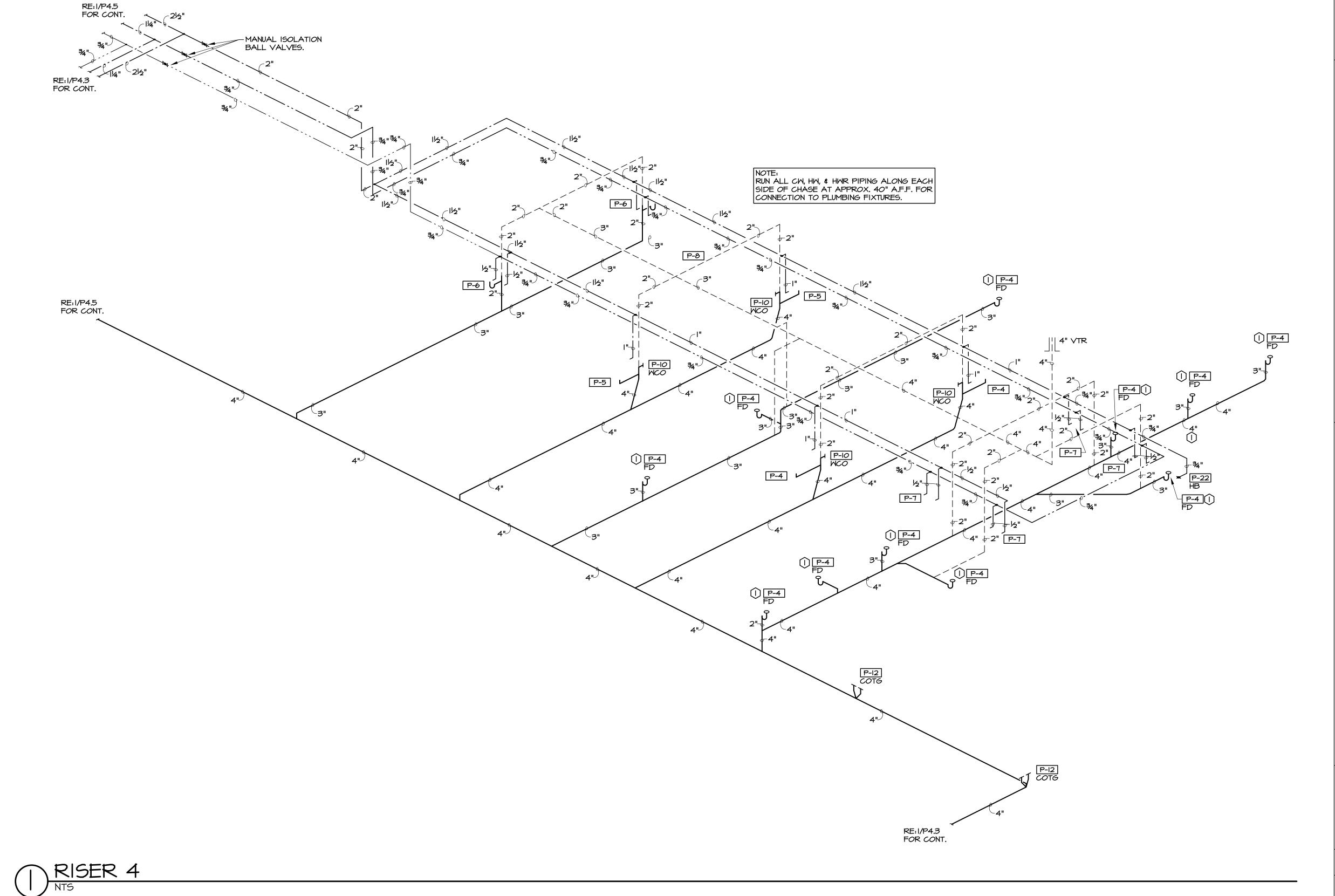
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REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

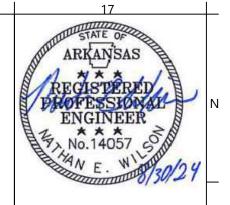
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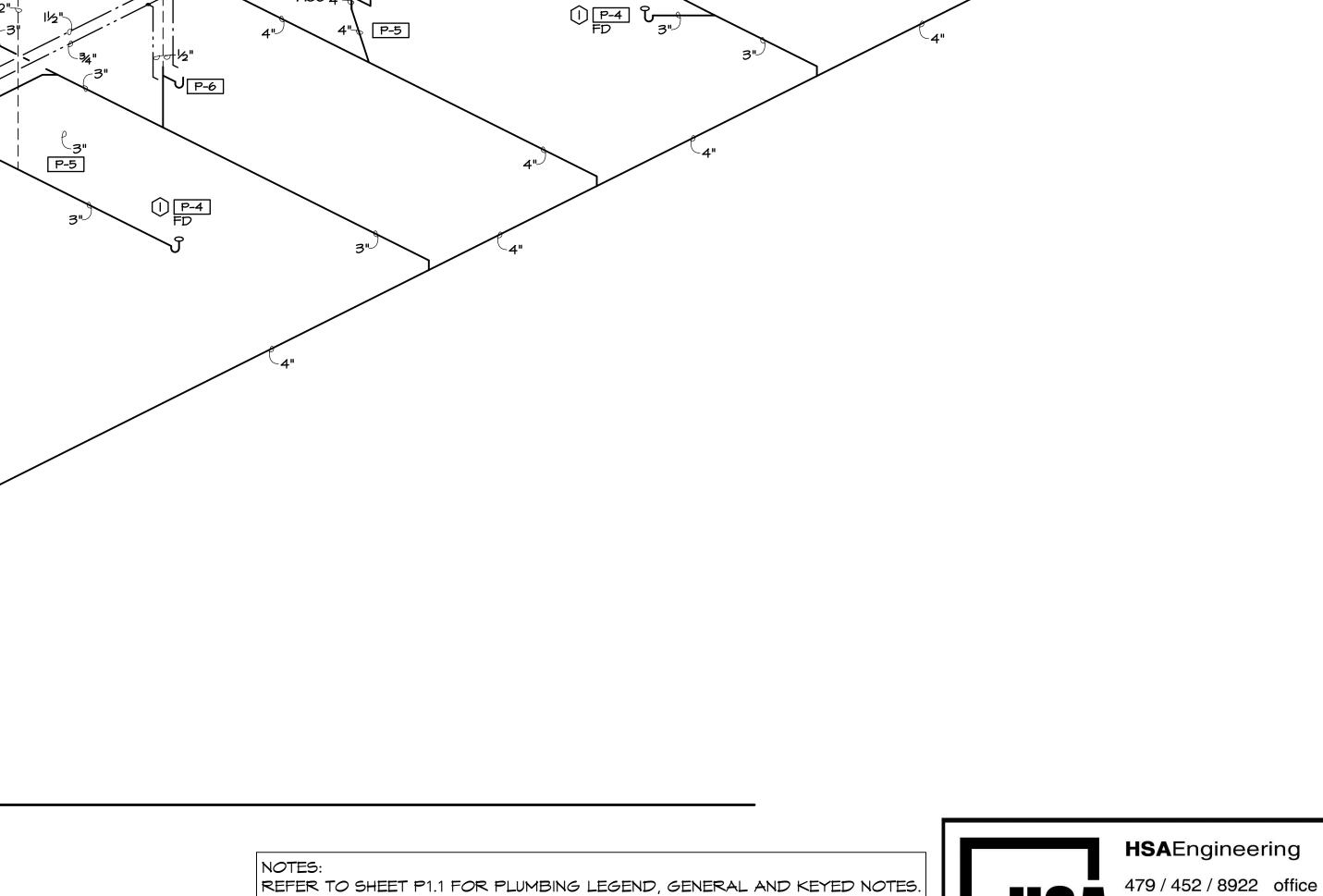
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RE:1/P4.6 FOR CONT.

MANUAL ISOLATION BALL VALVES.

RE:1/P4.4 FOR CONT.

RE:1/P4.6 FOR CONT.

RE:1/P2.1E FOR CONT.

, RE:1/P4.4 FOR CONT.

NOTE:
RUN ALL CW, HW, & HWR PIPING ALONG EACH
SIDE OF CHASE AT APPROX. 40" A.F.F. FOR
CONNECTION TO PLUMBING FIXTURES.

REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

REFER TO SHEETS P2.1 THROUGH P2.1E FOR PLUMBING PLANS. REFER TO SHEET P3.1 FOR PLUMBING DETAILS.

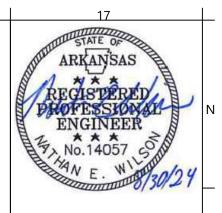
REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

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RE:1/P4.5 FOR CONT.

REFER TO SHEET P3.1 FOR PLUMBING DETAILS. REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

() P-4 %

P-6

3" () P-4 FD

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RE:1/P4.5 FOR CONT.

P-7

RE:1/P4.7 FOR CONT.

NOTE:
RUN ALL CW, HW, & HWR PIPING ALONG EACH
SIDE OF CHASE AT APPROX. 40" A.F.F. FOR
CONNECTION TO PLUMBING FIXTURES.

() [P-4] (>)

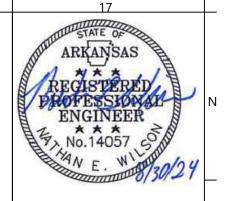
RE:1/P4.8 FOR CONT.

RE:1/P4.7 FOR CONT.

P-7

RISER 6

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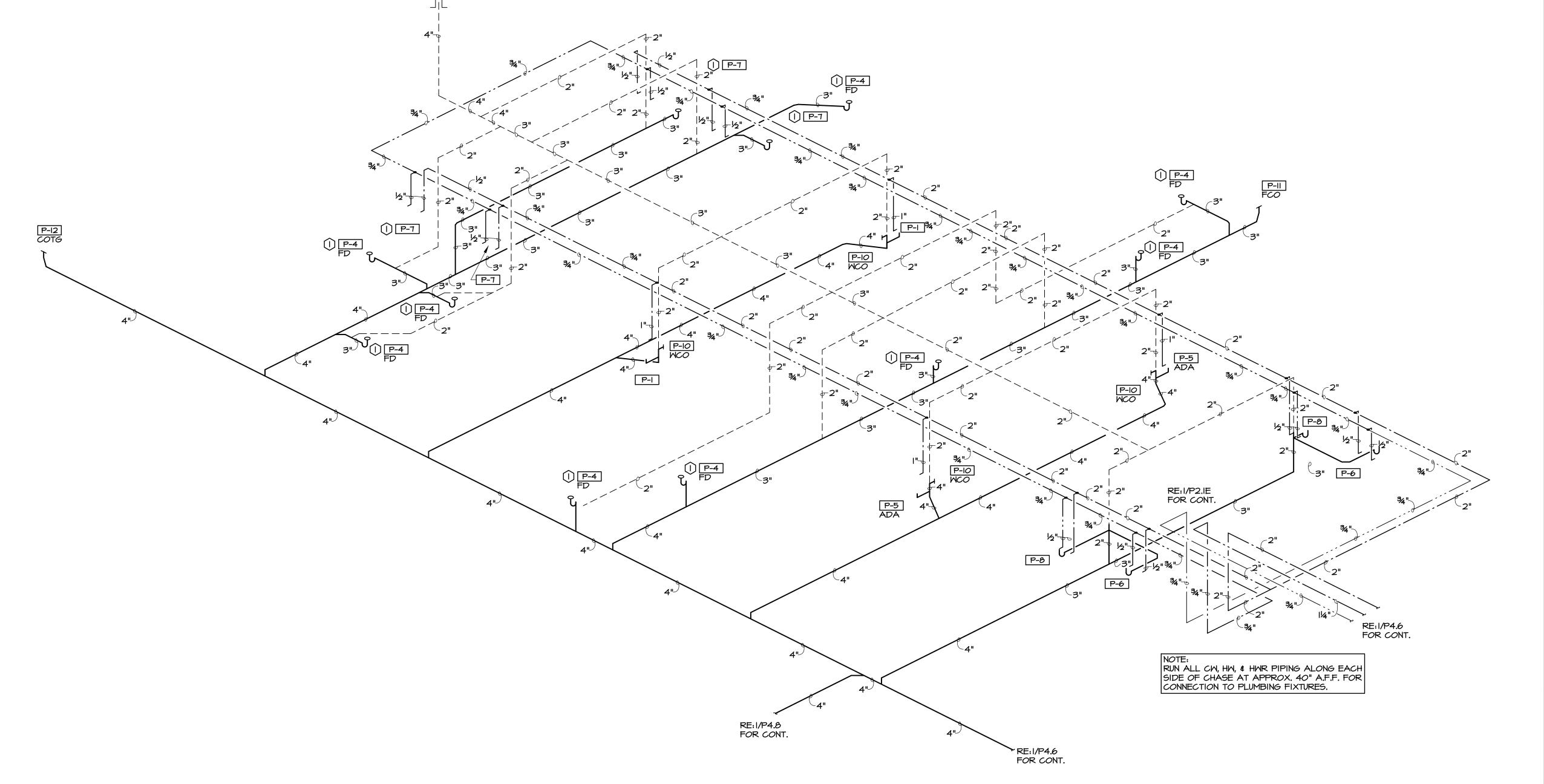
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RISER 7

REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

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RE:1/P4.7 FOR CONT. - MANUAL ISOLATION BALL VALVES. RE:1/P4.6 FOR CONT. P-I7 ADA

RISER 8

||| 3" VTR

REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

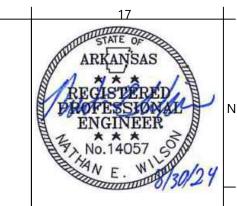
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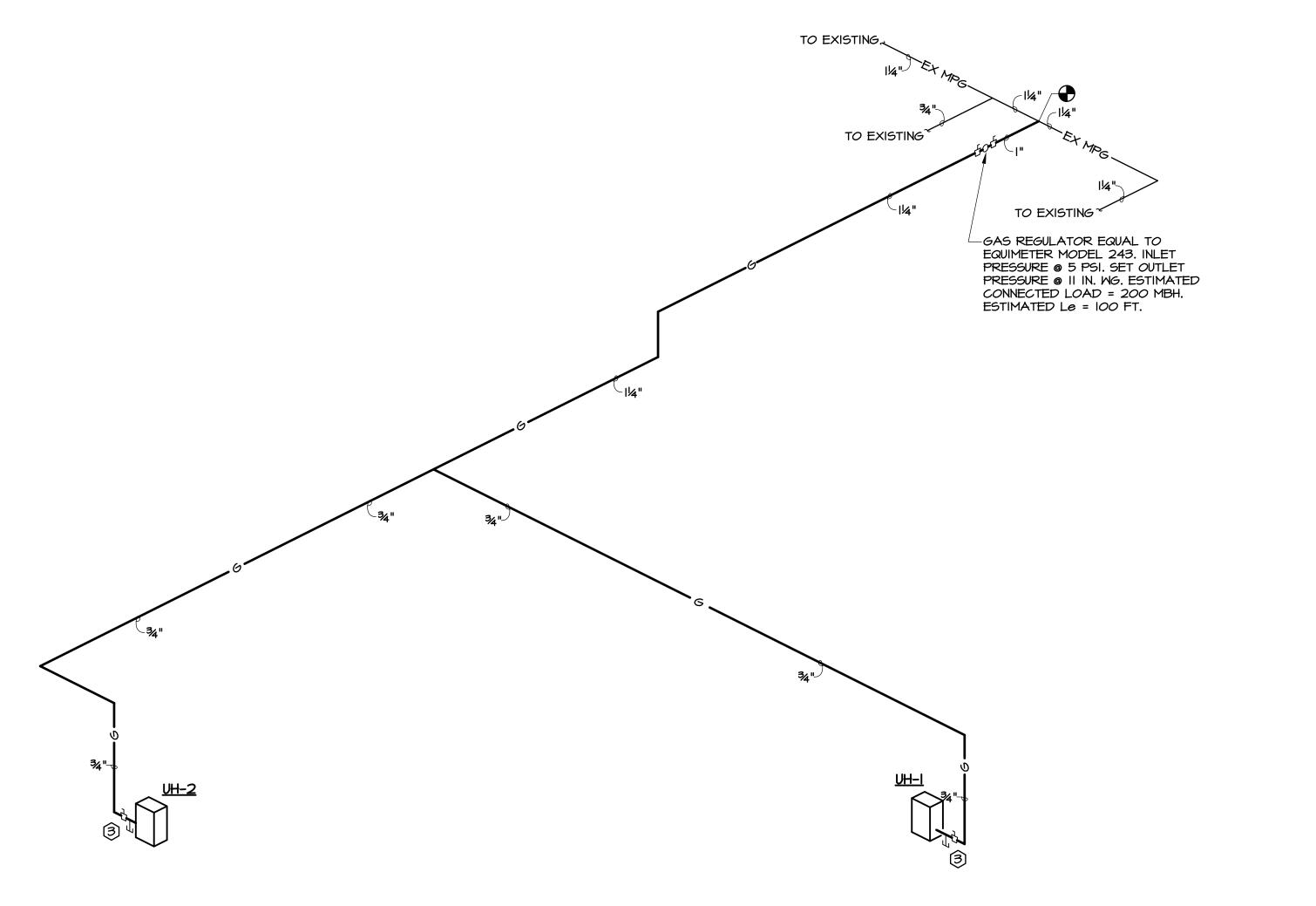
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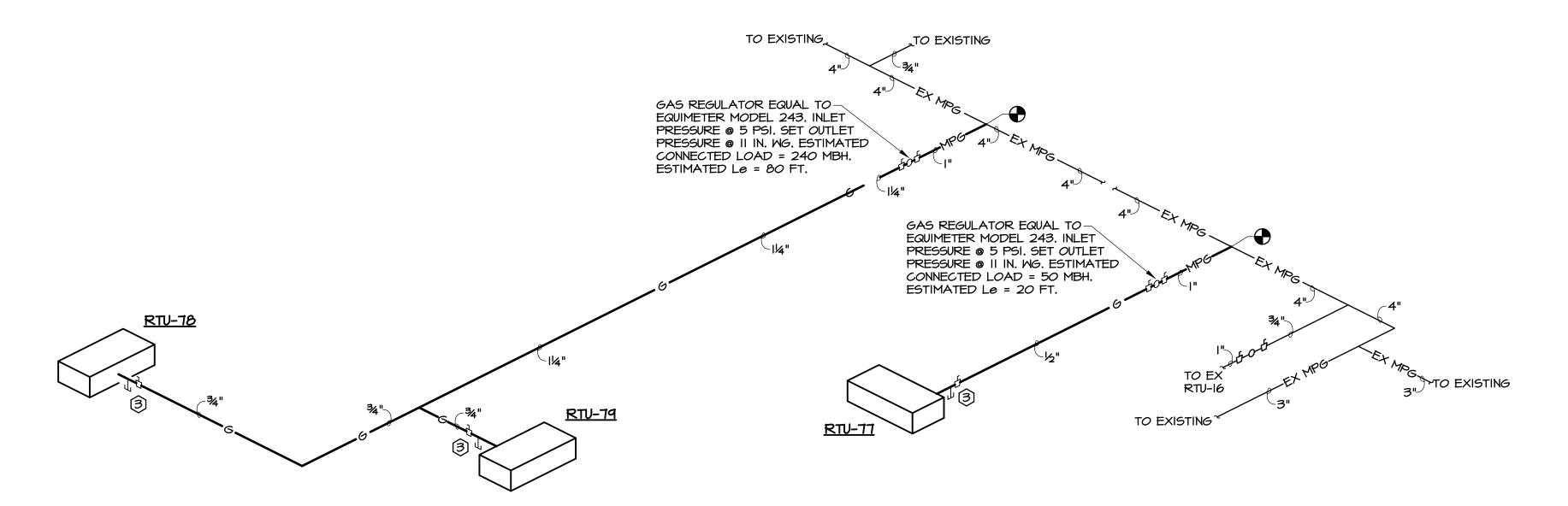
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-GAS REGULATOR EQUAL TO EQUIMETER MODEL 243. INLET PRESSURE @ 5 PSI. SET OUTLET PRESSURE @ II IN. WG. ESTIMATED CONNECTED LOAD = 120 MBH. ESTIMATED Le = 15 FT. TO EXISTING TO EXISTING GAS REGULATOR EQUAL TO-21/2" TO EXISTING EQUIMETER MODEL 243. INLET PRESSURE @ 5 PSI. SET OUTLET PRESSURE @ II IN. WG. ESTIMATED CONNECTED LOAD = 120 MBH. ESTIMATED Le = 40 FT. <u>RTU-80</u> RTU-12 TO EXISTING TO EXISTING

) GAS RISER I



REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

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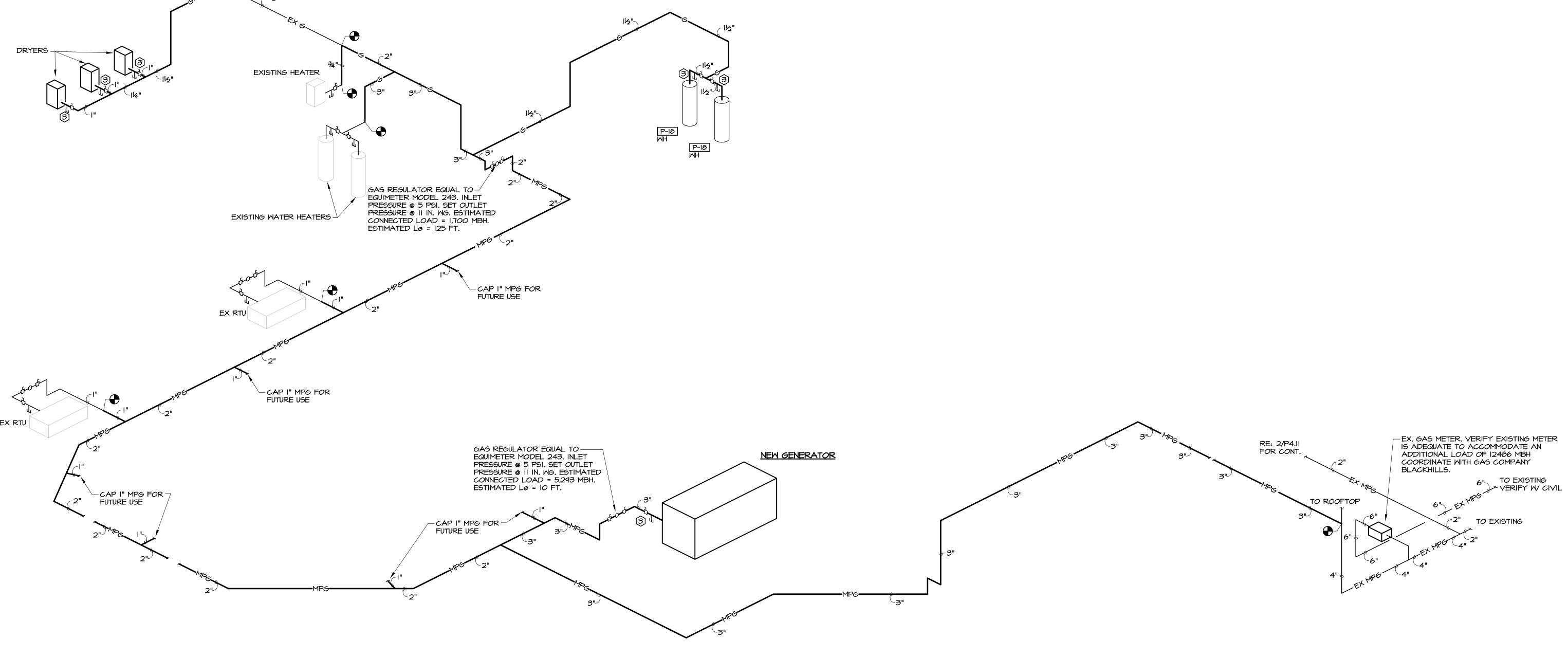
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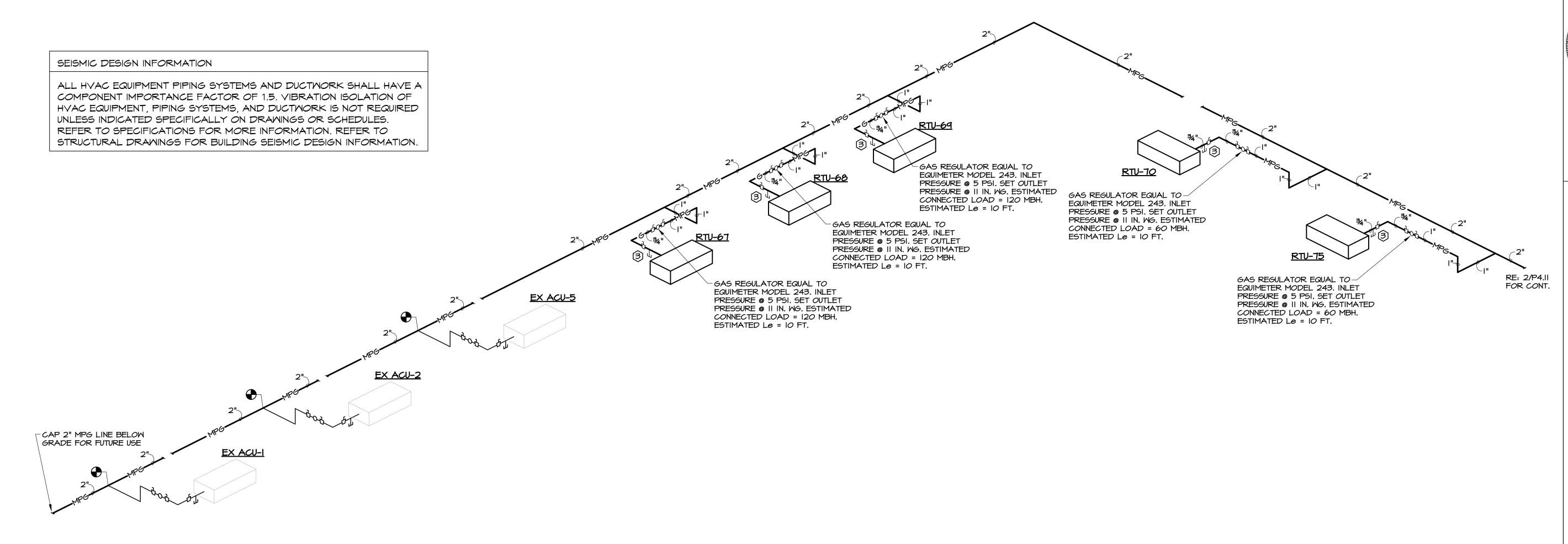
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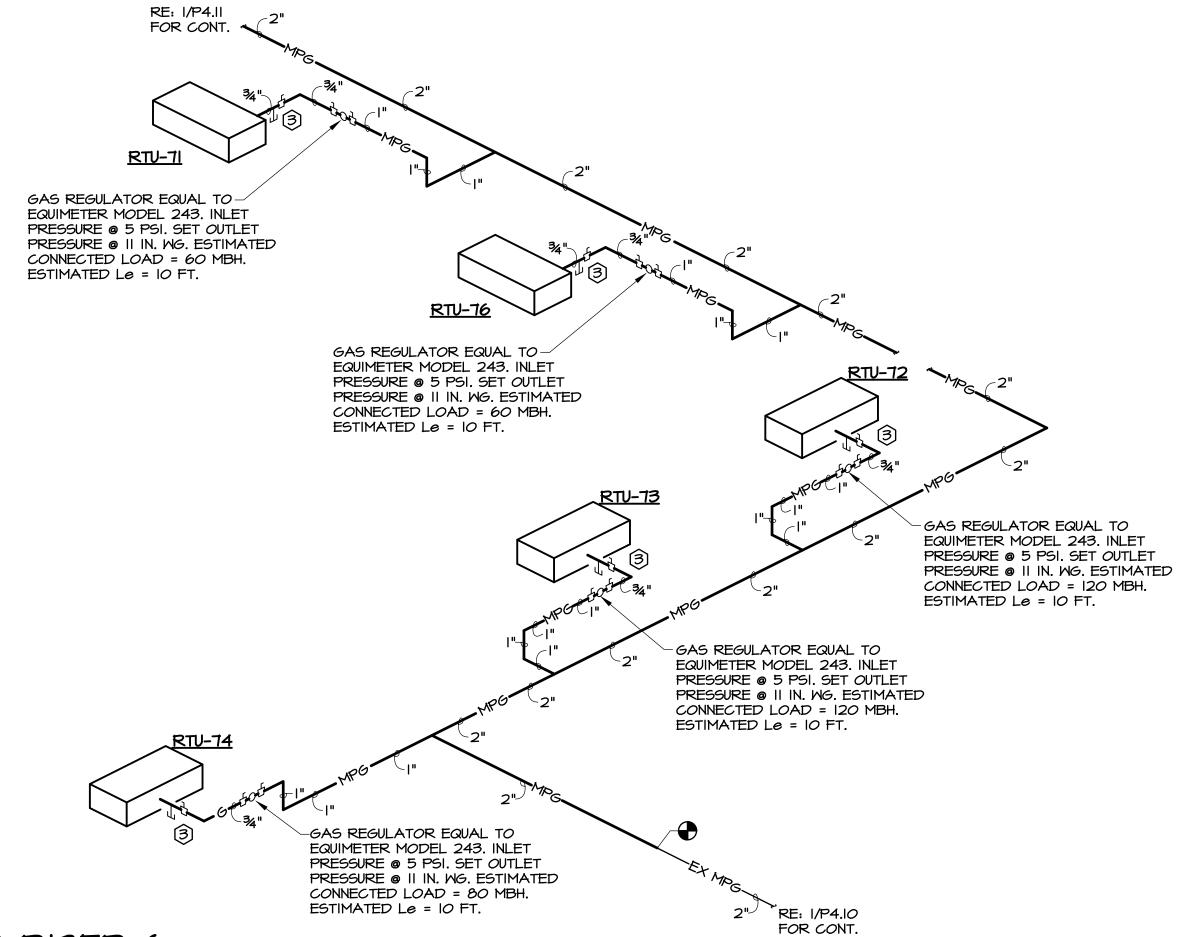
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GAS RISER 5



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REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

GAS RISER 6

				PLUM	BING F	IXTURE	E SCH	EDULE
					CC	NNECTIC	DN .	
MARK	FIXTURE	MANUFACTURER	MODEL	MOUNT	CM	HM	55	REMARKS / ACCESSORIES
P-1	ACCESSIBLE LIGATURE RESISTANT MC	MILLOUGHBY INDUSTRIES	ETM-1490FM-FA-HC	FLOOR	1	-	4	STAINLESS STEEL BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GPF, CENTER BOWL & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER. INSTALL FIXTURE 18 IN. FROM TOP OF SEAT TO FLOOR. MOUNT GRAB BARS AT 34 IN. A.F.F.
P-2	COMIBATION LAY/WC FIXTURE - LEFT	MILLOUGHBY INDUSTRIES	ECW-1846-L-ON	FLOOR	1	1/2	4	STAINLESS STEEL, BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GFP, CENTERED FIXTURE, CODE BUBBLER & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER.
P-3	COMIBATION LAV/WC FIXTURE - RIGHT	MILLOUGHBY INDUSTRIES	ECW-1846-R-ON	FLOOR	1	1/2	4	STAINLESS STEEL, BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GFP, CENTERED FIXTURE, CODE BUBBLER & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER.
P-4	FLOOR DRAIN	WADE	1100	FLOOR	-	-	*	*CAST IRON FLOOR DRAIN, SIZE AS INDICATED ON PLANS OR MATCH INDICATED WASTE LINE. PROVIDE 1/2 IN. TRAP PRIMER CONNECTION AND DEEP SEAL TRAP. COORDINATE DRAIN TOP MATERIAL WITH SPECIFIED FLOOR FINISH.
P-5	LIGATURE RESISTANT MC	WILLOUGHBY INDUSTRIES	ETW-1490FM-FA	FLOOR	1	-	4	STAINLESS STEEL, BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GPF, CENTER BOWL & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER. MOUNT FIXTURE 15 IN. A.F.F. TO RIM.
P-6	STAINLESS STEEL LAVATORY	WILLOUGHBY INDUSTRIES	HS-1013-46-HC-EB	MALL	1/2	1/2	2	STAINLESS STEEL, WALL HUNG W/ CODE BUBBLER/FILLER BOWL, ADA COMPLIANT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER. PROVIDE THERMOSTATIC MIXING VALVE.
P-7	LIGATURE RESISTANT SHOWER	WILLOUGHBY INDUSTRIES	WRS-ADA-PZPB-TMV-TF24H	MALL	1/2	1/2	2	STAINLESS STEEL SECURITY PENAL PAK TYPE SHOWER HEAD (SINGLE TEMP.) PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER. PROVIDE THERMOSTATIC MIXING VALVE. SET SHOWER HEAD 17° ANGLE. PROVIDE 3" P-4 FLOOR DRAIN.
P-8	SERVICE SINK	FLORESTONE	MODEL 80	FLOOR	1/2	1/2	3	TERRAZZO 24x24x12 SERVICE SINK. PROVIDE CHROME-PLATED #830-AA FAUCET WITH TOP BRACE AND VACUUM BREAKER, #832-AA HOSE AND BRACKET, 3 IN. GRID DRAIN AND STRAINER, 3 MOP HOLDER, AND TWO STAINLESS STEEL WALL GUARDS. MOUNT MOP HOLDER AT 60 IN. A.F.F.
P-9	ACCESSIBLE LAVATORY	AMERICAN STANDARD	0355.012	MALL	1/2	1/2	2	WHITE VITREOUS CHINA LAVATORY WITH FAUCET LEDGE AND BACK SPLASH. PROVIDE HARDWIRED SLOAN EBF-650 SENSOR OPERATED FAUCET, GRID DRAIN, WADE #520 WALL CARRIER, HANDILAV MOLDED DRAIN & SUPPLY INSULATION KIT. MOUNT 34 IN. A.F.F. TO TOP OF RIM.
P-10	WALL CLEAN OUT	MADE	8550-R	MALL	-	-	*	*SIZE TO MATCH WASTE LINE, MAXIMUM TO 4 INCHES. PROVIDE WADE 8304 STAINLESS STEEL WALL ACCESS COVER.
P-11	FLOOR CLEANOUT	WADE	6000	FLOOR	-	1	*	*SIZE TO MATCH WASTE LINE, MAXIMUM TO 4 INCHES. PROVIDE OPTIONAL TOP TO MATCH FLOOR FINISH. REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISH SCHEDULE.
P-12	CLEAN OUT TO GRADE	MADE	6000Z	TO GRADE	-	-	*	*SIZE TO MATCH WASTE LINE MAXIMUM TO 4 INCHES. PROVIDE HEAVY DUTY TRACTOR TYPE COVER.
P-13	SINGLE STAINLESS STEEL SINK	ELKAY	LRQ2522	COUNTER	1/2	1/2	2	STAINLESS STEEL SINK, ZURN Z-8741 S/S CUP STRAINER, Z8702=9-PC TRAP, Z8802LRLK SUPPLIES WITH LOOSE KEY STOPS, GOOSENECK FAUCET WITH SPRAY & HAMS MODEL 7620 FAUCET MOUNTED EYEMASH (AXION EYEPOD).
P-14	GREASE INTERCEPTOR	SCHIER PRODUCTS	GB-1500	FINISHED GRADE	-	-	4	100 GPM FLOW RATE GREASE INTERCEPTOR WITH 10,061 LBS GREASE CAPACITY (1588 GALLON LIQUID CAPACITY, 318 GALLONS SOLIDS CAPACITY). PROVIDE POLYETHYLENE INTERCEPTOR WITH HEAVY DUTY GASKETED COVERS. PROVIDE EXTENSIONS TO GRADE AS REQUIRED FOR SERVICE. PROVIDE WITH PICKABLE CAST IRON COVER (16,000 LBS RATED). RE: 10/P3.1 FOR DETAIL.
P-15	SCREEN STYLE SOLIDS INTERCEPTOR	STRIEM	PS-275-5	BELOW GRADE	-	ı	6	100 GPM FLOW RATE, POLYPROPYLENE SCREEN STYLE SOLIDS INTERCEPTOR WITH HEAVY DUTY GASKETED COVERS. PROVIDE EXTENSIONS TO GRADE AS REQUIRED FOR SERVICE. PROVIDE WITH PICKABLE CAST IRON COVER (16,000 LBS RATED).
P-16	ACCESSIBLE WATER CLOSET	AMERICAN STANDARD	3043.102	FLOOR	1 1/2	-	4	WHITE VITREOUS CHINA, LOW CONSUMPTION, ELONGATED BOWL, FLUSH VALVE TOILET. PROVIDE HARDWIRED SLOAN SENSOR OPERATED FLUSH VALVE, OLSONITE #10 SCC OPEN SEAT AND SLOAN YJ TYPE PIPE SUPPORT. PROVIDE BLOCKING IN WALL AS REQUIRED FOR INSTALLATION OF YP PIPE SUPPORT. INSTALL 17" FROM TOP OF SEAT TO FLOOR.
P-17	ACCESSIBLE LAVATORY	AMERICAN STANDARD	<i>0</i> 355. <i>0</i> 12	MALL	1/2	1/2	2	WHITE VITREOUS CHINA LAVATORY WITH FAUCET LEDGE AND BACKSPLASH. PROVIDE AMERICAN STANDARD, 0.5 GPM HARDWIRED SENSOR OPERATED FAUCET, BASE PLATE, GRID DRAIN, WADE #520 WALL CARRIER, HANDILAV MOLDED DRAIN & SUPPLY INSULATION KIT. MOUNT 34 IN. A.F.F. TO TOP OF RIM. PROVIDE WATTS LFMMV UNDER COUNTER THERMOSTATIC MIXING VALVE. SET WATER TEMPERATURE AT 105 DEGREES F.
P-18	MATER HEATER	A. O. SMITH	BTH-120	FLOOR	3/4	3/4	-	DOMESTIC WATER HEATER SHALL BE EQUAL TO A. O. SMITH MODEL BTH 300; 300,000 BTUH INPUT, 96% EFFICIENCY, 130 GAL. STORAGE.
P-19	ROOF HYDRANT	WOODFORD	SRH-MS	ROOF	3/4	-	-	AUTOMATIC DRAINING, BACKFLOW PROTECTED, FREEZE PROOF ROOF HYDRANT.
P-20	FLOOR SINK	WADE	9110	FLOOR	-	-	*	*CAST IRON FLOOR SINK WITH NICKEL BRONZE GRATE. SIZE AS INDICATED ON PLANS OR MATCH WASTE LINE SIZE WHEN NOT INDICATED. PROVIDE 3/4 GRATE AND DEEP SEAL TRAP.
P-21	DOWNSPOUT BOOT	J.R. HOE	O-6632C	MALL	-	-	-	6x6 BELL TOP CAST IRON DOWNSPOUT BOOT WITH 6" OUTLET AND CLEANOUT ACCESS PLUG. PAINT PER ARCHITECTURAL SPECIFICATIONS; COLOR TO BE SELECTED BY ARCHITECT.
P-22	FREEZE PROOF HOSE BIB	WOODFORD	B67	MALL	3/4	-	-	FREEZE PROOF HOSE BIB WITH WHEEL-TYPE HANDLE, NOT LOCKING. PROVIDE VACUUM BREAKER AND BACKFLOW PREVENTION.
P-23	LAUNDRY TRENCH	STRIEM	TT-10	FLOOR	-	-	6	STRIEM TUFF TROUGH SHALL BE LIFETIME GUARANTEED AND MADE IN THE USA OF 3/4" POLYETHYLENE. TROUGH SHALL BE CERTIFIED TO IAPMO/ANSI/CAN Z1167 AND CARRY A UPC LISTING. TROUGH SHALL HAVE REMOVABLE, CORROSION-RESISTANT PRIMARY FILTER SCREEN AND SECONDARY FILTER BASKET. TROUGH SHALL BE FURNISHED WITH A NESTED COVER, INTERNALLY SLOPED FLOOR, AND SUITABLE FOR ABOVE- OR BELOW-GRADE INSTALLATION. TROUGH SHALL BE EQUIPPED WITH A PLAIN END OUTLET. INLET CONNECTIONS ARE FIELD INSTALLED. COVER SHALL HAVE A MAXIMUM 450 LBS. LOAD CAPACITY. MAXIMUM OPERATING TEMPERATURE 165°F INTERMITTENT.
P-24	ACCESSIBLE COMIBATION LAV/WC FIXTURE - RIGHT	WILLOUGHBY INDUSTRIES	ECM-1545-R-ON	FLOOR	1	1/2	4	STAINLESS STEEL, BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GFP, CENTERED FIXTURE, CODE BUBBLER & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER.
P-25	ACCESSIBLE COMIBATION LAV/WC FIXTURE - LEFT	WILLOUGHBY INDUSTRIES	ECW-1545-L-ON	FLOOR	1	1/2	4	STAINLESS STEEL, BACK OUTLET CONCEALED FLUSH VALVE, INTEGRAL SEAT, 1.6 GFP, CENTERED FIXTURE, CODE BUBBLER & PINNED CLEAN-OUT. PROVIDE WITH ELECTRONIC PUSH BUTTON AND HARDWIRED TRANSFORMER.
P-26	DOWNSPOUT BOOT	J.R. HOE	O-4432A	MALL	-	-	-	4x4 BELL TOP CAST IRON DOWNSPOUT BOOT WITH 4" OUTLET AND CLEANOUT ACCESS PLUG. PAINT PER ARCHITECTURAL SPECIFICATIONS; COLOR TO BE SELECTED BY ARCHITECT.
P-27	MATER HAMMER ARRESTOR	MADE BELLOWS	SHOKSTOP	<del>-</del>	*	*	-	*SIZE WATER HAMMER ARRESTOR PER MANUFACTURER'S RECOMMENDATIONS. ALL STAINLESS STEEL CONSTRUCTION WITH WELDED NESTED BELLOWS. PROVIDE BALL VALVE FOR SHUT-OFF.

- NOTES

  1. COORDINATE COUNTER TOP FIXTURE INSTALLATION WITH MILLWORK.
- 2. INSTALL ACCESSIBLE FLUSH VALVE TO THE ACCESSIBLE SIDE.
- 3. () DENOTES INDIRECT DRAIN. 4. MECHANICAL CONTRACTOR SHALL PROVIDE APPROVED TRAP GUARDS ON ALL FLOOR SINKS AND FLOOR DRAINS.

CIRCULATING PUMP SCHEDULE							
MARK	MFG	MODEL	GPM	HEAD (FT)	VLT / PH / HZ	MATTS	REMARKS / ACCESSORIES
CP-1	BELL & GOSSETT	NFB-36	5	.5	115 / 1 / 60	270	1, 2, 3, 4
CP-2	BELL & GOSSETT	NFB-36	5	.5	115 / 1 / 60	270	1, 2, 3, 4

### ACCESSORIES

1. BRONZE CONSTRUCTION FOR HOT WATER RECIRCULATION.

PROVIDE AQUASTAT.
 PLUMBING CONTRACTOR TO PROVIDE TC-1 AUTOMATIC TIMER.

4. PROVIDE 3 SPEED MOTOR.

REFER TO SHEET P1.1 FOR PLUMBING LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEETS P2.0 THROUGH P2.0E FOR PLUMBING DEMOLITION PLANS.

REFER TO SHEETS P2.1 THROUGH P2.1E FOR PLUMBING PLANS. REFER TO SHEET P3.1 FOR PLUMBING DETAILS.

REFER TO SHEETS P4.1 THROUGH P4.11 FOR PLUMBING RISERS.

REFER TO SHEET P5.1 FOR PLUMBING SCHEDULES.

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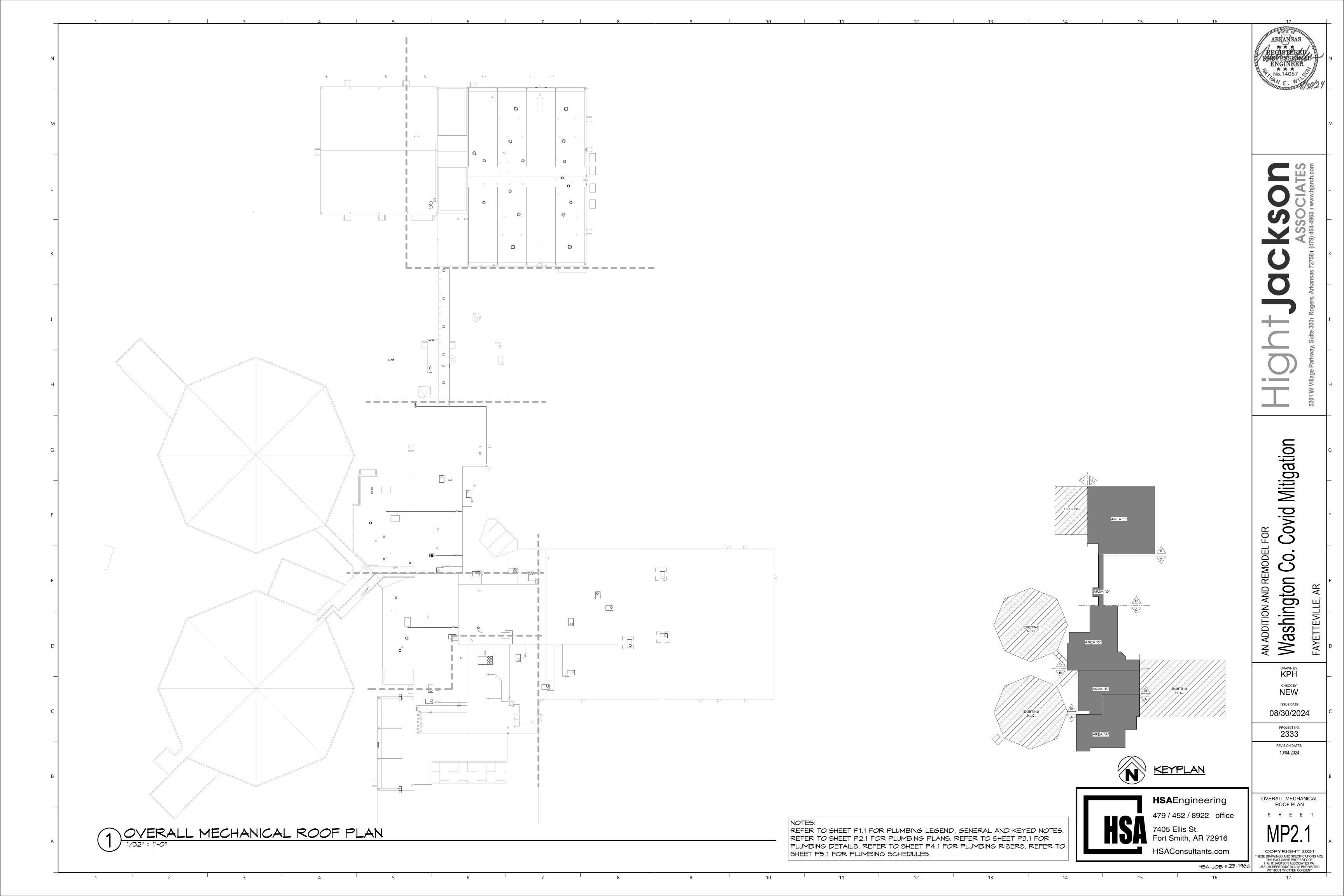
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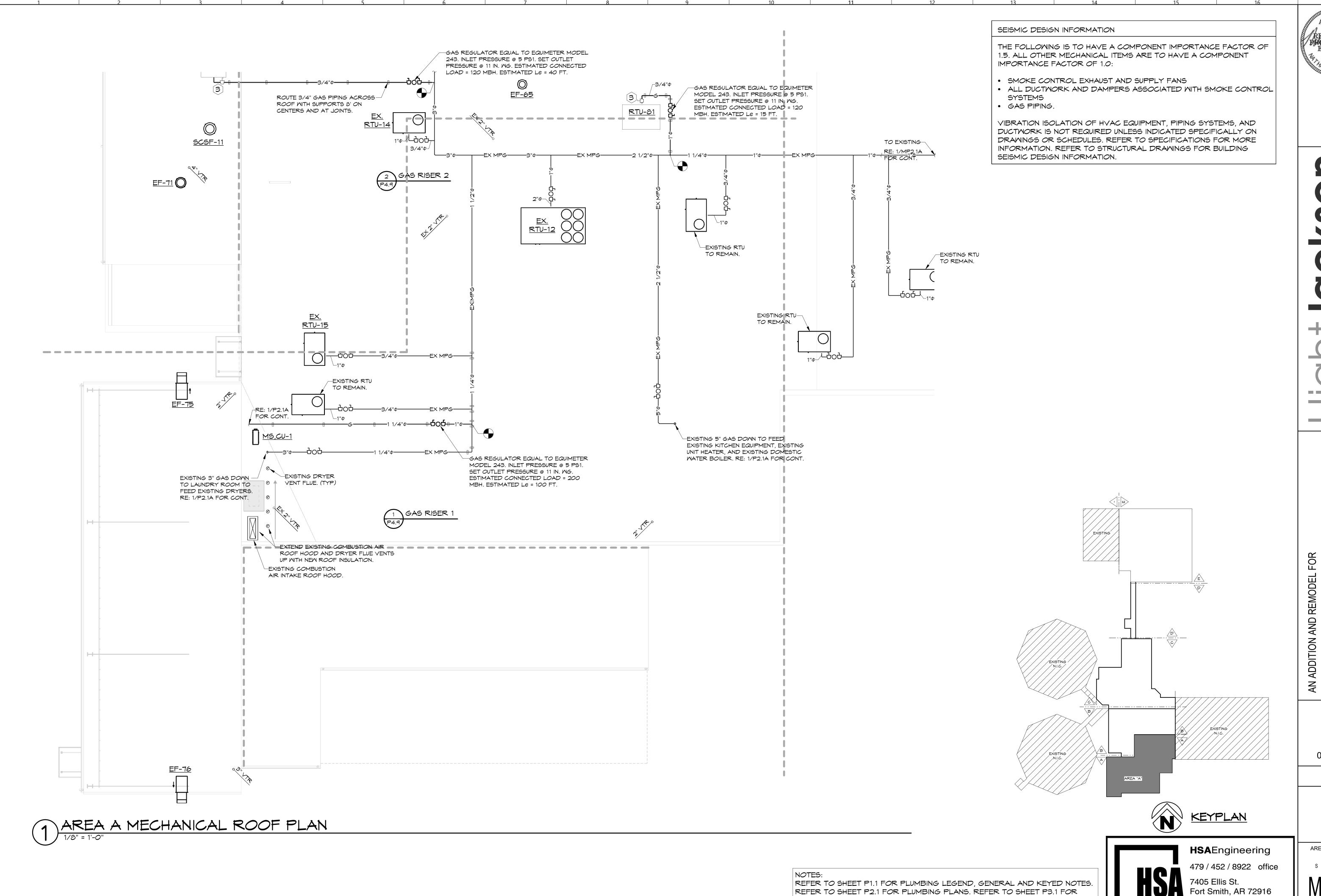
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10/04/2024

PLUMBING SCHEDULES

S H E E T





PLUMBING DETAILS. REFER TO SHEET P4.1 FOR PLUMBING RISERS. REFER TO

SHEET P5.1 FOR PLUMBING SCHEDULES

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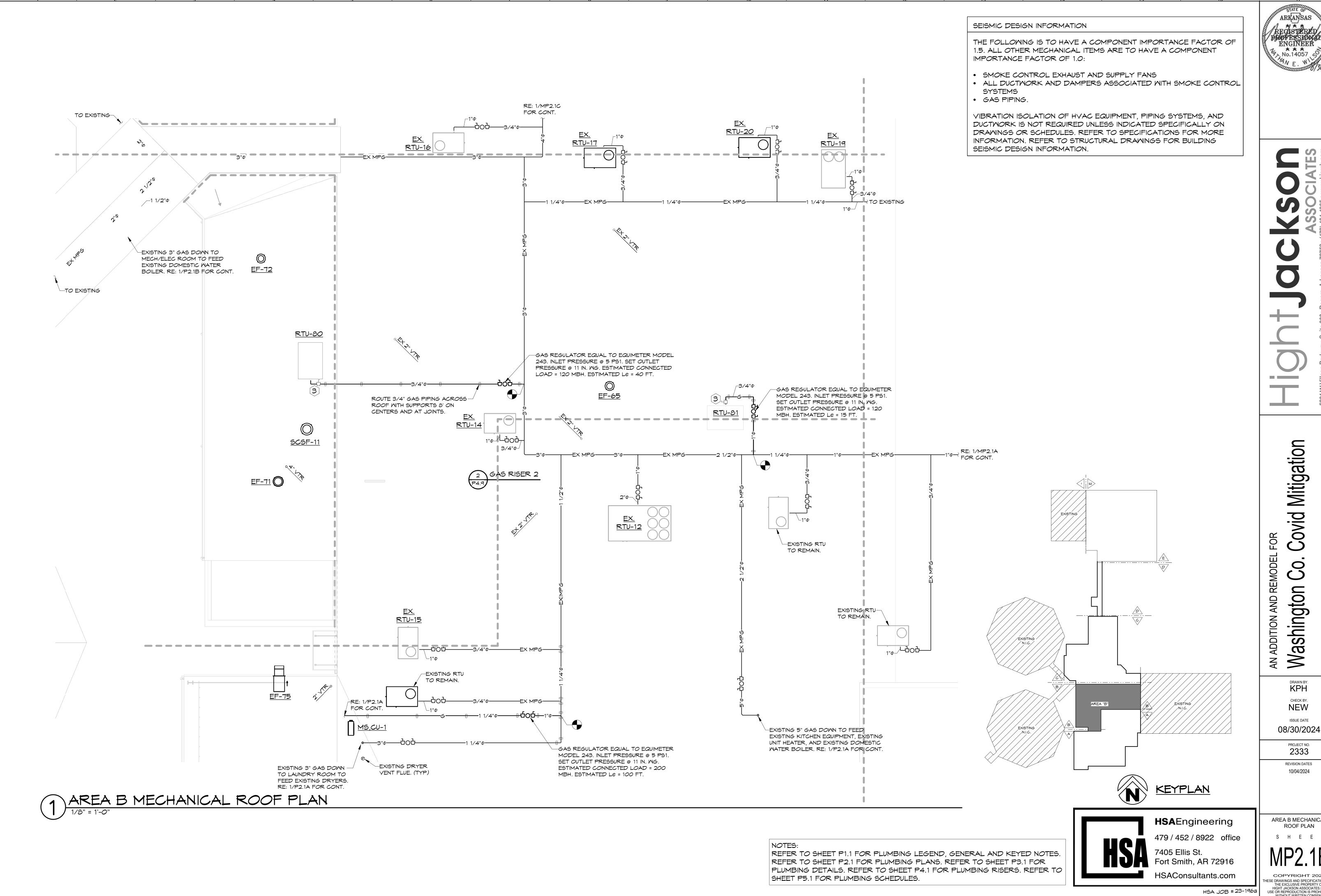
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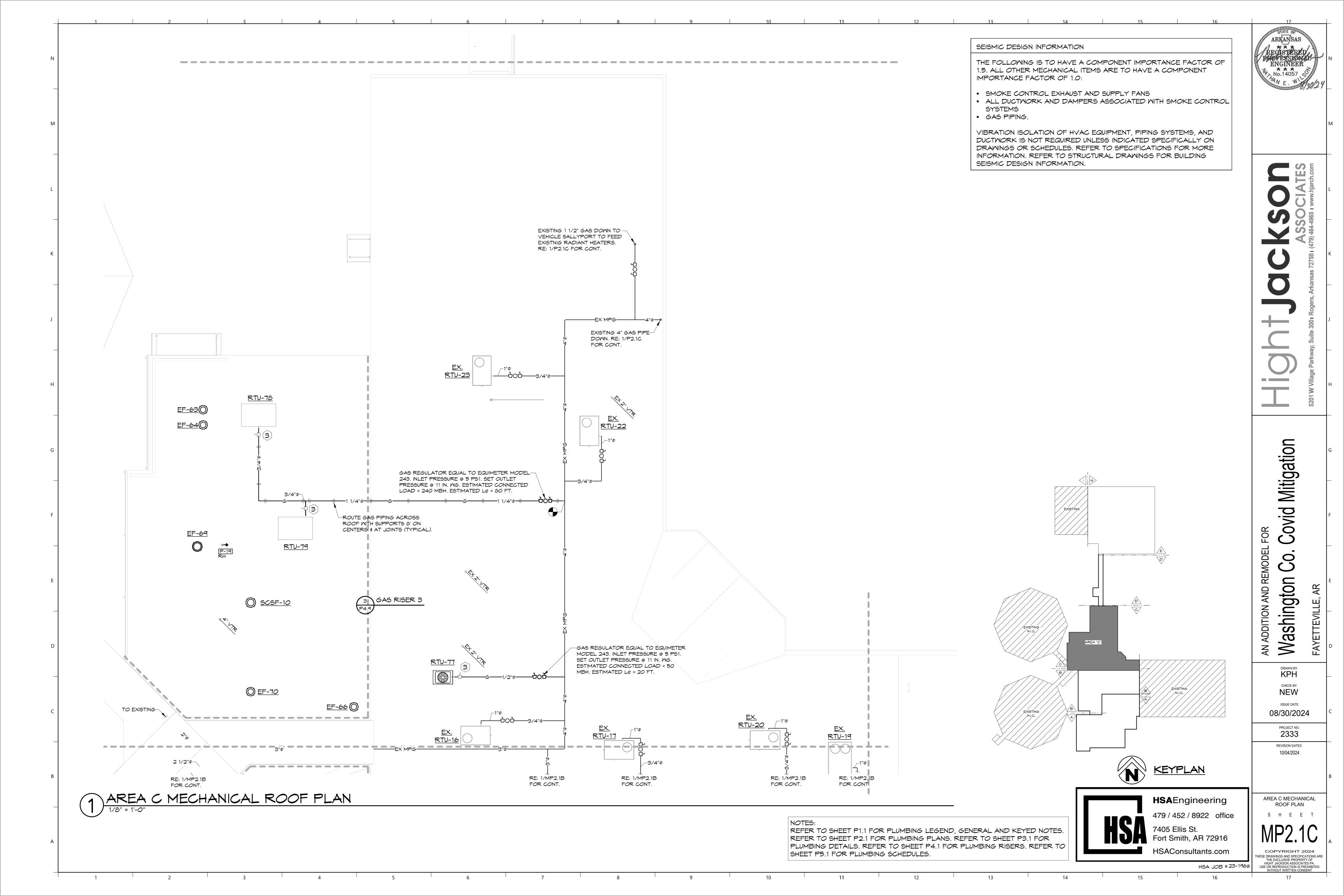
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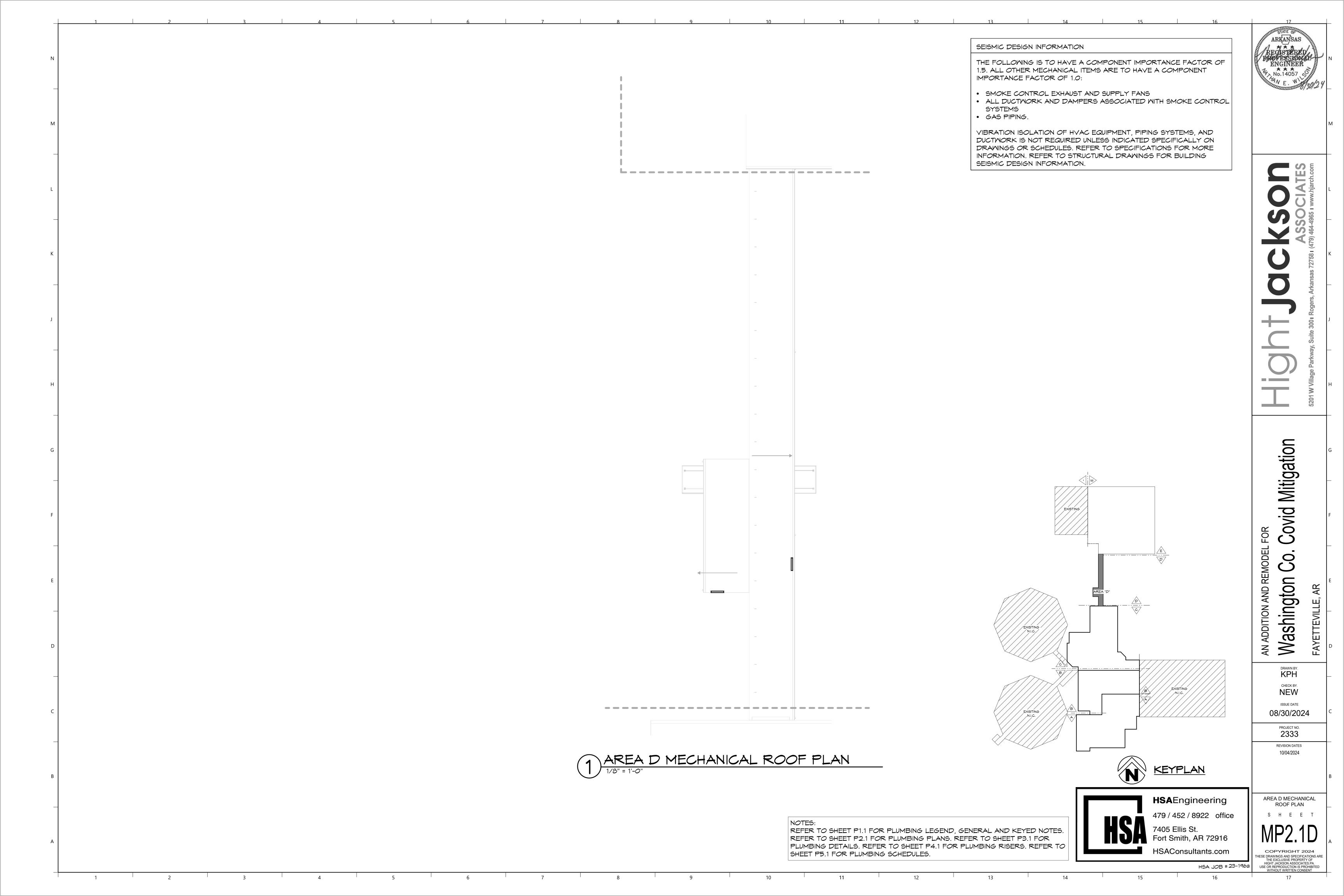


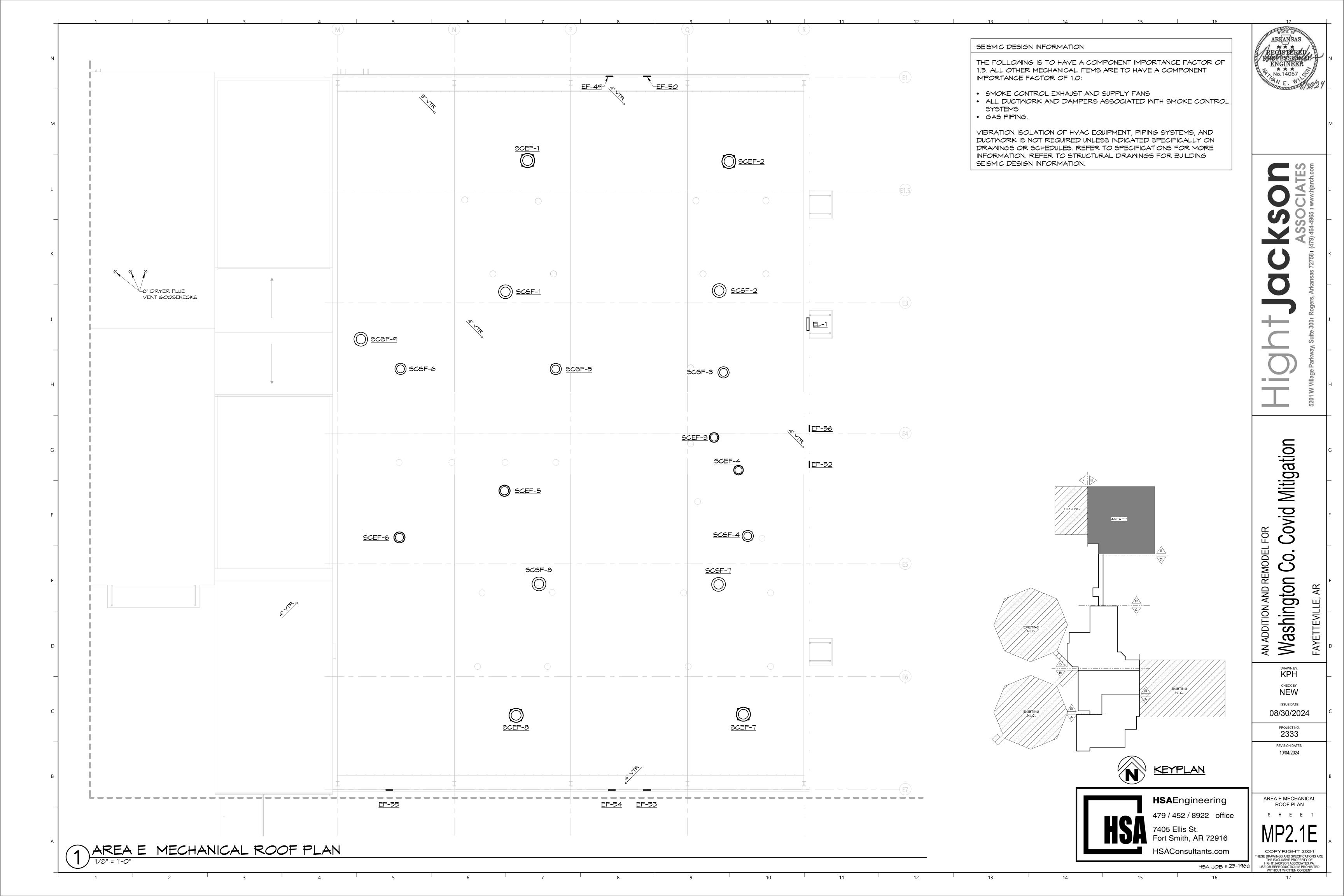
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REVISION DATES

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## GENERAL HYAC NOTES

- COORDINATE GRILLE LOCATIONS WITH LIGHT FIXTURES, SPRINKLERS AND CEILING GRID.
- 2. INDICATED DUCT SIZES ARE NET FREE AREA.

CONDENSATE OVER FLOW IS SENSED.

- 3. ADJUST ALL AIR QUANTITIES AS SHOWN ON THE PLANS AFTER COMPLETION OF THE JOB. 4. INSULATE THE SUPPLY GRILLE TOPS, RETURN AIR GRILLE PLENUMS AND EXHAUST AIR PLENUMS
- WITH 2 IN., 3/4 LB DENSITY FOIL BACKED INSULATION. 5. FIRE AND/OR SMOKE DAMPERS ARE INDICATED ON MECHANICAL DRAWINGS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY LOCATIONS AND FIRE RATING
- REQUIREMENTS WHERE ANY DUCT PASSES THROUGH A PARTITION. REFER TO ARCHITECTURAL PLANS FOR LOCATION OF ALL FIRE AND SMOKE PARTITIONS. VERIFY REQUIRED DAMPER ASSEMBLY IN ALL DUCTS PENETRATING THESE WALLS PER ALL STATE AND LOCAL CODES. 6. EXTERNALLY INSULATE ALL ROUND SUPPLY AND RETURN DUCT. INTERNALLY INSULATE ALL RECTANGULAR SUPPLY AND RETURN DUCT PER MECHANICAL CODE. ATTACH THE INTERNAL
- INSULATION TO THE DUCT WITH APPROVED ADHESIVE AND WELDED FASTENERS. 7. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK WITH FIELD CONDITIONS AND PROVIDE ALL OFFSETS, BENDS, TRANSITIONS AND SPECIAL FITTINGS FOR A COMPLETE
- INSTALLATION OF THE SYSTEMS. 8. USE FLANGED AND GASKETED DUCT CONSTRUCTION FOR RECTANGULAR DUCT CONVEYING AIR AT STATIC PRESSURES ABOVE 2 IN. W.G. USE LOCKED SEAM SPIRAL DUCT CONSTRUCTION FOR ROUND DUCT CONVEYING AIR AT STATIC PRESSURES ABOVE 2 IN. M.G. ALL HIGH PRESSURE DUCT CONSTRUCTION SHALL ADHERE TO SMACNA DUCT CONSTRUCTION STANDARDS (LATEST EDITION) FOR DUCT CLASSIFICATION UP TO 5 IN. W.G.
- 9. INTERIOR OF ALL DUCT PLENUMS VISIBLE THROUGH GRILLE SHALL BE PAINTED MATTE BLACK
- PRIOR TO INSTALLATION. 10. INTERLOCK EXHAUST FANS WITH LIGHT SMITCHES. REFER TO ELECTRICAL PLANS.
- 11. PAINT ALL SUPPLY AND RETURN AIR GRILLES NOT SPECIFIED AS PRE-FINISHED, TO ARCHITECT'S SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
- 12. MAINTAIN 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST OUTLETS, GAS FLUES AND PLUMBING VENTS.
- 13. INSTALL VOLUME CONTROL DAMPERS IN SUPPLY, RETURN, EXHAUST AND FRESH AIR BRANCH DUCT RUNS.
- 14. RECIRCULATING AIR SYSTEMS WITH A FAN CAPACITY GREATER THAN 2,000 NOMINAL CFM SHALL AUTOMATICALLY SHUT DOWN BY MEANS OF AN APPROVED SMOKE DETECTOR PLACED IN THE RETURN AIR STREAM PRIOR TO ANY EXHAUSTING FROM THE BUILDING OR MIXING WITH FRESH AIR MAKEUP, ALL CONTROLS SHALL BE LISTED. UPON ACTIVATION OF THE SAFETY CONTROL, THE SYSTEM SHALL NOT RESTART UNTIL THE SAFETY CONTROL IS MANUALLY RESET
- 15. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO THE LATEST ACCEPTABLE MECHANICAL
- 16. SEAL ALL DUCT SEAMS WITH HARDCAST IRON GRIP 601 SEALANT SYSTEM OR AN APPROVED EQUAL. DUCT TAPE, WHETHER LISTED OR NOT, WILL NOT BE ACCEPTED.
- 17. FABRICATE AND INSTALL ALL GALVANIZED DUCT SYSTEMS TO SMACNA DUCT CONSTRUCTION STANDARDS, LATEST EDITION, AND MECHANICAL CODE.
- 18. MECHANICAL CONTRACTOR SHALL REFER TO THE FOOD SERVICE DRAWINGS AND PROVIDE
- ALL REQUIRED MECHANICAL FOOD SERVICE EQUIPMENT CONNECTIONS. 19. FABRICATE AND INSTALL AUXILIARY CONDENSATE DRAIN PAN UNDER ENTIRE AIR HANDLER WITH CONDENSATE PAN SMITCH INTERLOCKED WITH AIR HANDLER FOR SHUT DOWN WHEN
- 20. EVERY ATTIC OR FURRED SPACE IN WHICH MECHANICAL EQUIPMENT IS INSTALLED SHALL BE ACCESSIBLE BY AN OPENING AND PASSAGEWAY AS LARGE AS THE LARGEST PIECE OF THE EQUIPMENT AND IN NO CASE LESS THAN 22 X 36 INCHES CONTINUOUS FROM THE OPENING TO THE EQUIPMENT AND ITS CONTROLS. THE OPENING TO THE PASSAGEMAY SHALL BE LOCATED NOT MORE THAN 20 FT. FROM THE EQUIPMENT MEASURED ALONG THE CENTERLINE OF SUCH PASSAGEMAY. EVERY PASSAGEMAY SHALL BE UNOBSTRUCTED AND SHALL HAVE SOLID CONTINUOUS FLOORING NOT LESS THAN 24 IN. WIDE FROM THE EQUIPMENT. ON THE CONTROL SIDE AND OTHER SIDES WHERE ACCESS IS NECESSARY FOR SERVICING THE EQUIPMENT, A LEVEL PLATFORM EXTENDING A MINIMUM 30 IN. FROM THE EDGE OF THE EQUIPMENT WITH A 36 IN. HIGH CLEAR WORKING SPACE SHALL BE PROVIDED. TOP OR BOTTOM SERVICE EQUIPMENT SHALL HAVE A FULL CLEARANCE ABOVE OR BELOW THE UNIT FOR COMPONENT REMOVAL.
- 21. SMOKE DETECTOR PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. 22. SUPPLY AIR SYSTEMS AND RETURN AIR SYSTEMS INSTALLED IN AN ATTIC, VENTILATED CRAWL SPACE OR OTHER NON-CONDITIONED AREA SHALL BE INSULATED.
- 23. SPRINKLER CONTRACTOR TO BE RESPONSIBLE FOR ROUTING ALL SPRINKLER PIPING TO
- AVOID ALL UNCONDITIONED SPACES. 24. DO NOT SCALE DIRECTLY FROM THE HVAC DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL INFORMATION.
- 25. MECHANICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT, FANS AND APPLIANCES A MINIMUM OF 10 FEET FROM A ROOF EDGE OR OPEN SIDE WHERE SUCH EDGE OR OPEN SIDE IS GREATER THAN 30 INCHES ABOVE A FLOOR, ROOF OR GRADE BELOW. GUARD RAILS A MINIMUM OF 42 INCHES ABOVE THE ELEVATED SURFACE SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR AND EXTENDED A MINIMUM OF 30 INCHES BEYOND EACH END OF SUCH EQUIPMENT, FAN OR APPLIANCE WHERE APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS ARE LOCATED WITHIN THE REQUIRED 10 FOOT CLEARANCE REQUIREMENT. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21 INCH DIAMETER SPHERE AND COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE LATEST ACCEPTED INTERNATIONAL BUILDING CODE.
- 26. EVERY APPLIANCE LOCATED ON A ROOF OF A BUILDING SHALL BE INSTALLED ON A SUBSTANTIAL LEVEL PLATFORM. WHENEVER THE ROOF HAS A SLOPE 4:12 OR GREATER, A LEVEL WORKING PLATFORM NOT LESS THAN 30 IN. DEEP SHALL BE PROVIDED IN FRONT OF THE ENTIRE FIREBOX AND CONTROL SIDES OF THE APPLIANCE. ALL SIDES OF ANY WORKING PLATFORM FACING ANY PORTION OF THE ROOF EDGE BELOW THE PLATFORM SHALL BE PROTECTED BY SUBSTANTIAL RAILING 42 IN. HIGH WITH VERTICAL RAILS NOT MORE THAN 21 IN. APART, EXCEPT THAT PARAPETS AT LEAST 24 IN, HIGH MAY BE UTILIZED IN LIEU OF RAILS OR GUARDS. REQUIRED WORKING PLATFORMS AND RAILINGS MAY BE OMITTED WHEN ACCESS TO THE EQUIPMENT IS THROUGH A REQUIRED ROOF SCUTTLE AND ALL OF THE FOLLOWING PROVISIONS ARE MET:
- A. THE REQUIRED SCUTTLE IS LOCATED IMMEDIATELY ADJACENT TO THE CONTROL
- SIDE OF THE EQUIPMENT UNIT.
- B. ALL CONTROLS, FILTERS, BURNERS, FANS, AND MOTORS ARE ACCESSIBLE FOR SERVICE AND REPAIR WITHIN 2 FT. OF THE EDGE OF THE EQUIPMENT PLATFORM ON THE SCUTTLE SIDE.
- C. THE EQUIPMENT PLATFORM IS NOT MORE THAN 20 IN. ABOVE THE HIGH SIDE OF
- THE SCUTTLE OPENING. D. A SUBSTANTIAL WORKING PLATFORM NOT LESS THAN 30 IN. BY 30 IN. SHALL BE
- PROVIDED DIRECTLY BELOW THE SCUTTLE AT A POINT NOT LESS THAN 30 IN. OR MORE THAN 32 IN. BELOW THE HIGH SIDE OF THE SCUTTLE OPENING.
- E. SCUTTLES LOCATED ON OTHER THAN THE ROOF INCLINE SIDE OF THE EQUIPMENT UNIT SHALL HAVE THEIR LIDS OR TRAP DOORS HINGED ON THE LOW SIDE OF THE SCUTTLE.

#### SEISMIC DESIGN INFORMATION

THE FOLLOWING IS TO HAVE A COMPONENT IMPORTANCE FACTOR OF 1.5. ALL OTHER MECHANICAL ITEMS ARE TO HAVE A COMPONENT IMPORTANCE FACTOR OF 1.0:

- SMOKE CONTROL EXHAUST AND SUPPLY FANS
- ALL DUCTWORK AND DAMPERS ASSOCIATED WITH SMOKE CONTROL
- SYSTEMS · GAS PIPING.

VIBRATION ISOLATION OF HVAC EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK IS NOT REQUIRED UNLESS INDICATED SPECIFICALLY ON DRAWINGS OR SCHEDULES. REFER TO SPECIFICATIONS FOR MORE INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR BUILDING SEISMIC DESIGN INFORMATION

## MECHANICAL LEGEND

SUPPLY DUCT SECTION

RETURN OR EXHAUST DUCT SECTION

CEILING SUPPLY GRILLE

CEILING RETURN GRILLE

CEILING EXHAUST GRILLE

SIDEMALL SUPPLY OR RETURN GRILLE

SEE KEYED NOTES

MAN BAR

MOTORIZED DAMPER

SUPPLY, RETURN, OR EXHAUST DUCT

///// SUPPLY, RETURN, OR EXHAUST DUCT

EXISTING SUPPLY, RETURN, OR EXHAUST DUCT

FOR VOLUME DAMPER

RECTANGULAR DUCT FIRE DAMPER

ROUND DUCT FIRE DAMPER (NUMBER DENOTES FIRE RATING OF 1FD WALL. EXAMPLE: 1FD = ONE HR. RATED WALL)

FLEX DUCT CONNECTION MAXIMUM OF 5 FT.

THERMOSTAT. MOUNT AT 48" A.F.F TO TOP (NUMBER DENOTES FURNACE OR AIR HANDLER UNIT)

ARKANSAS \* \* \* RECISTERED ENGINEER No.14057

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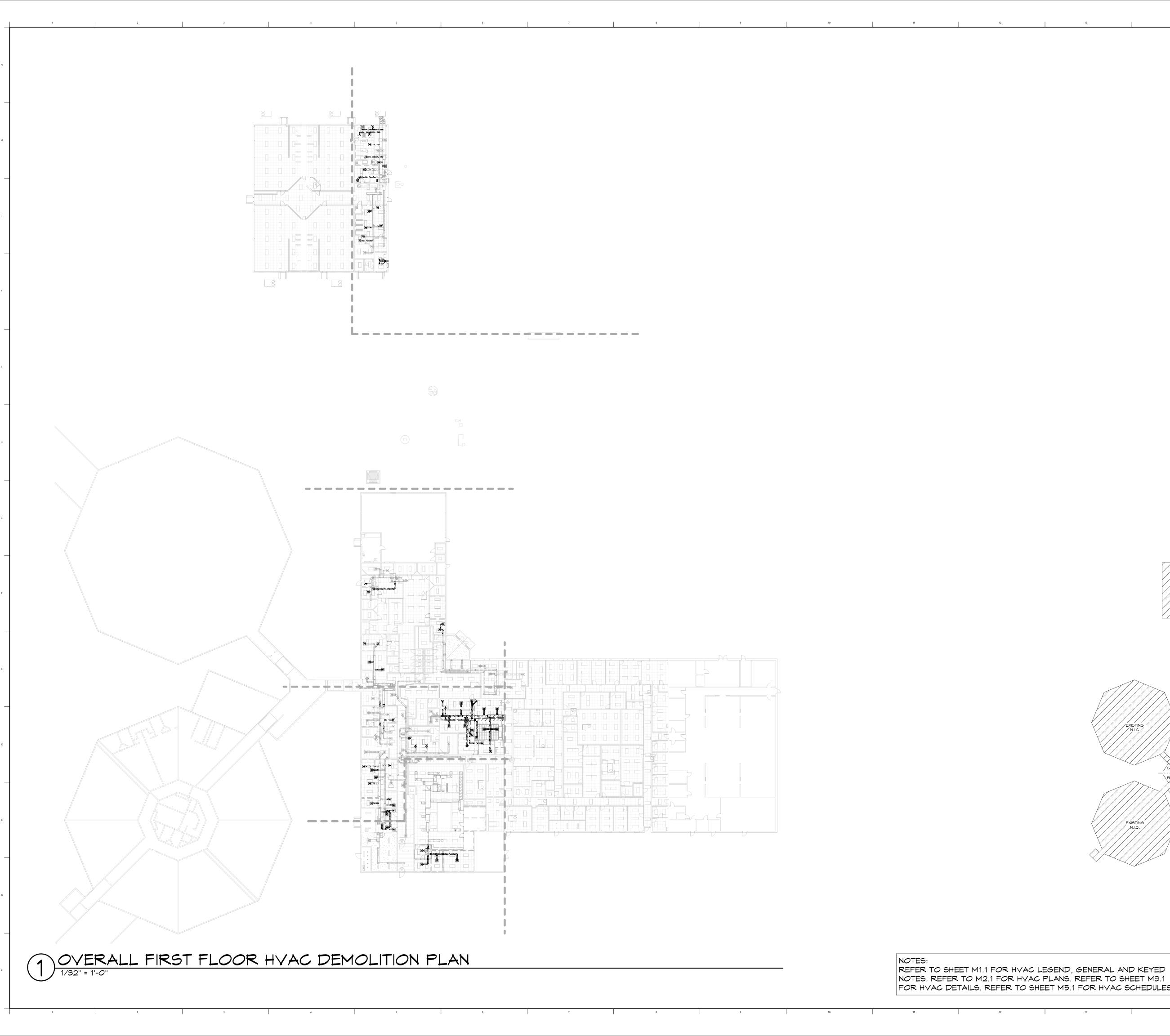
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REFER TO SHEET M2.1 FOR HVAC PLANS. REFER TO SHEET M3.1 FOR HVAC DETAILS. REFER TO SHEET M5.1 FOR HYAC SCHEDULES.



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OVERALL MECHANICAL DEMO PLAN

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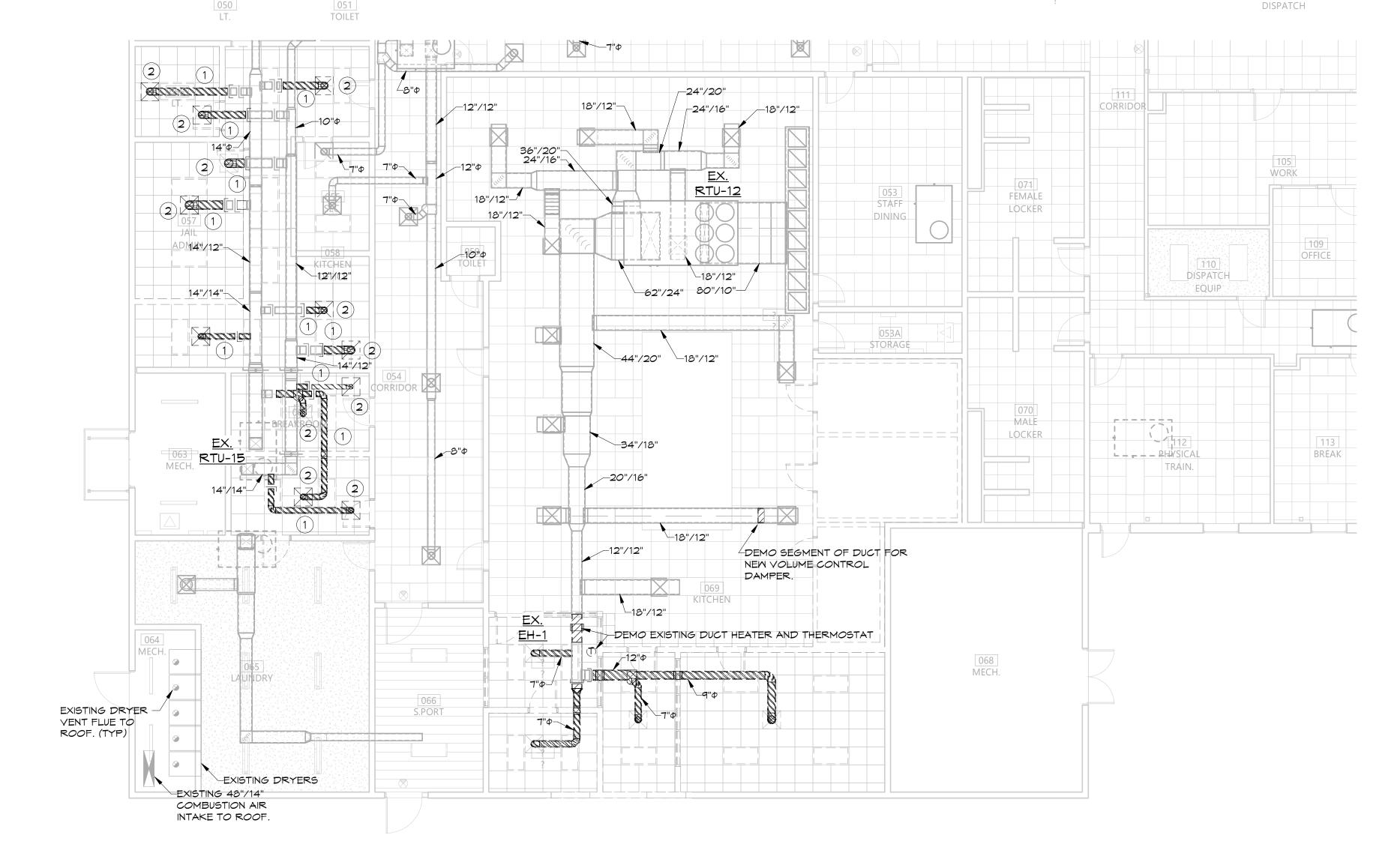
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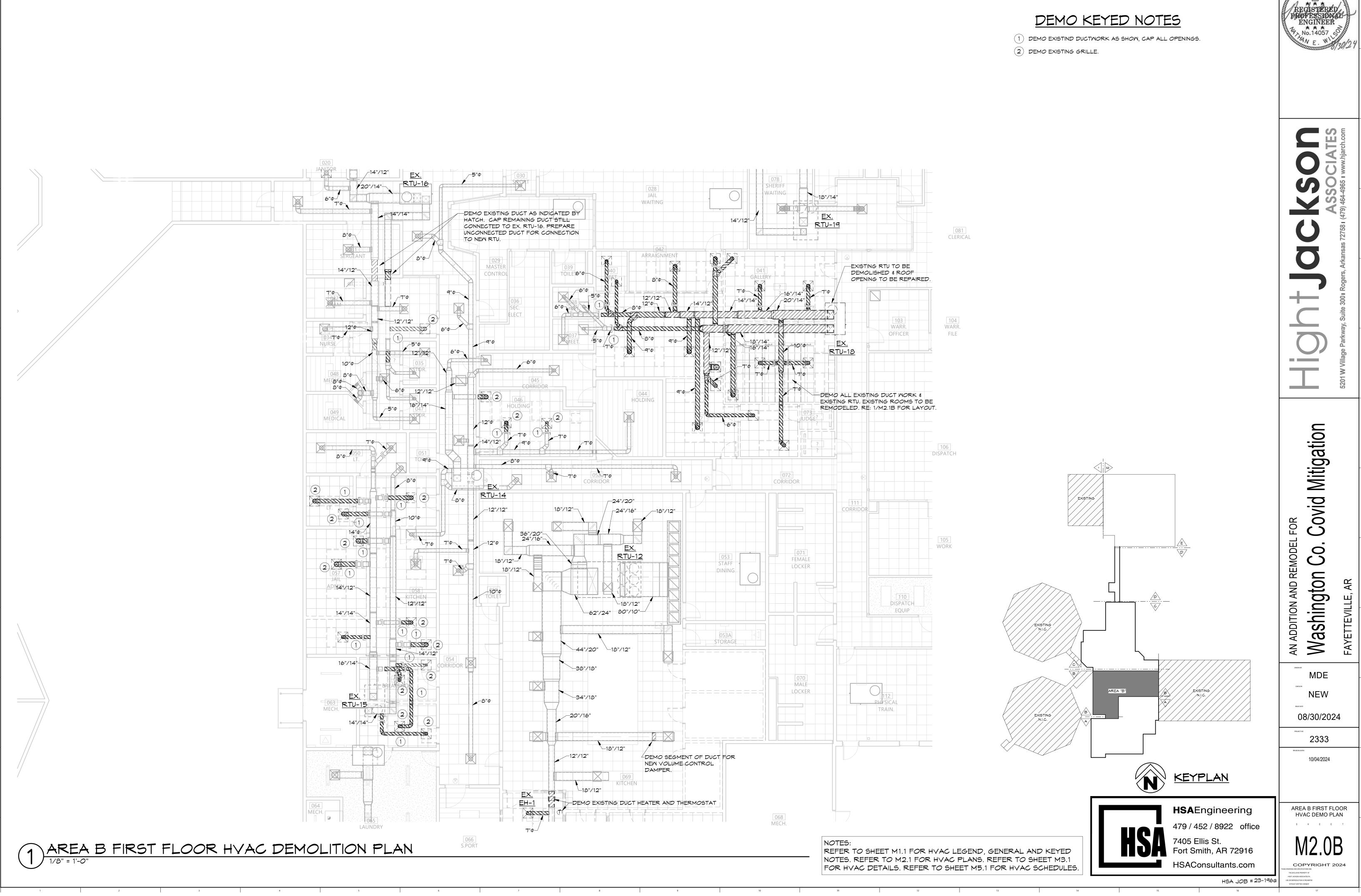
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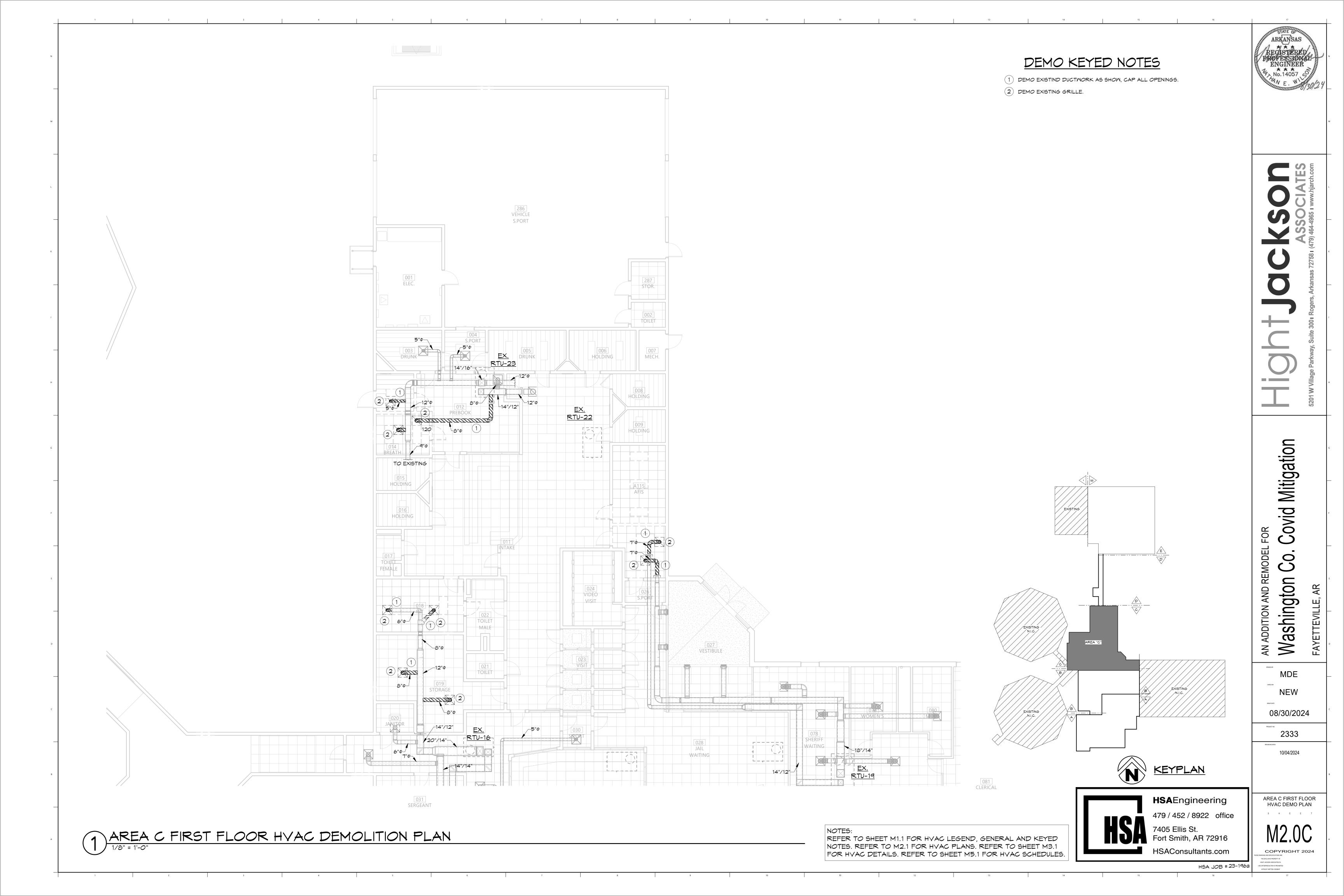
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FOR HVAC DETAILS. REFER TO SHEET M5.1 FOR HVAC SCHEDULES.



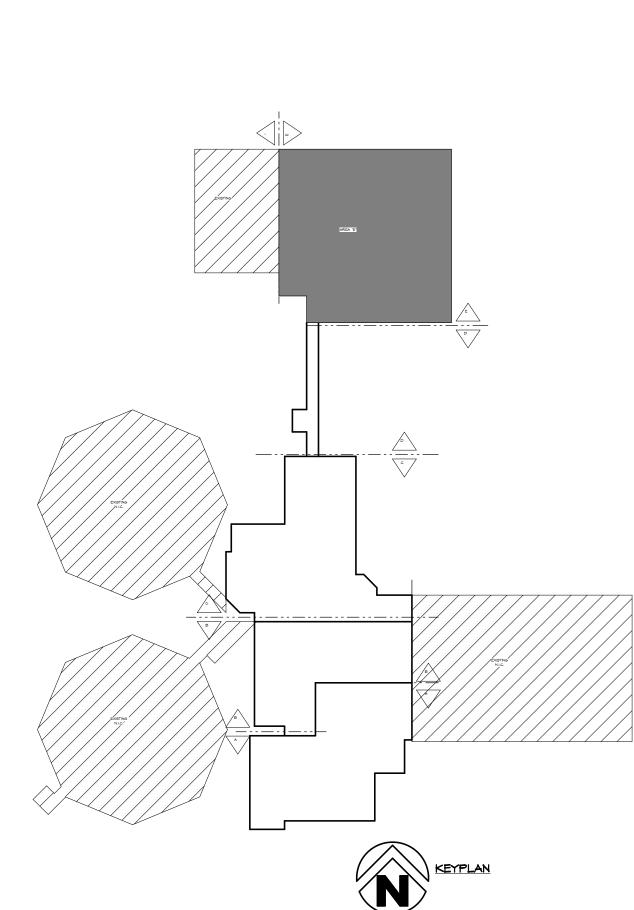
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# DEMO KEYED NOTES

1) DEMO EXISTIND DUCTMORK AS SHOW, CAP ALL OPENINGS.

2 DEMO EXISTING GRILLE.



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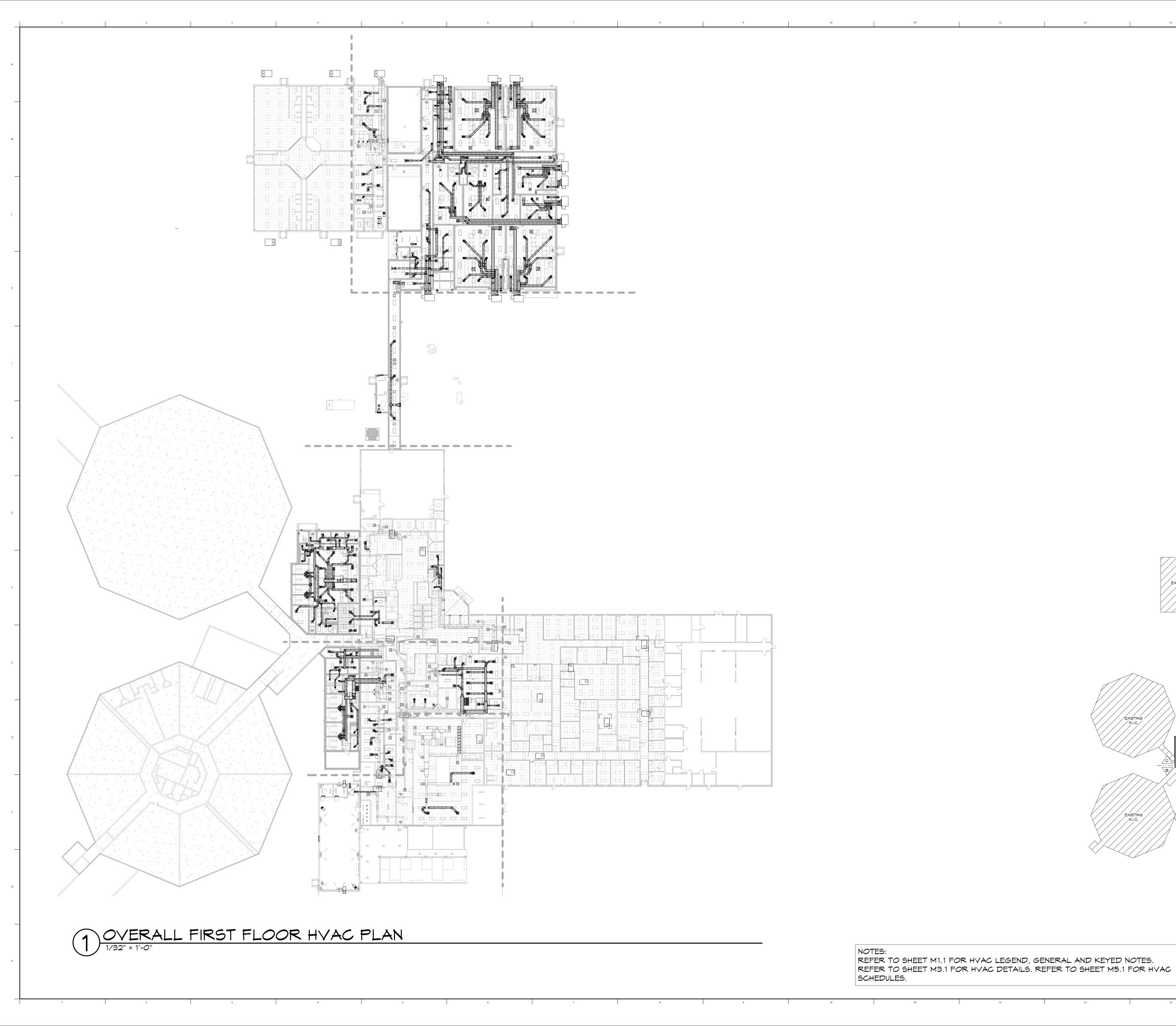
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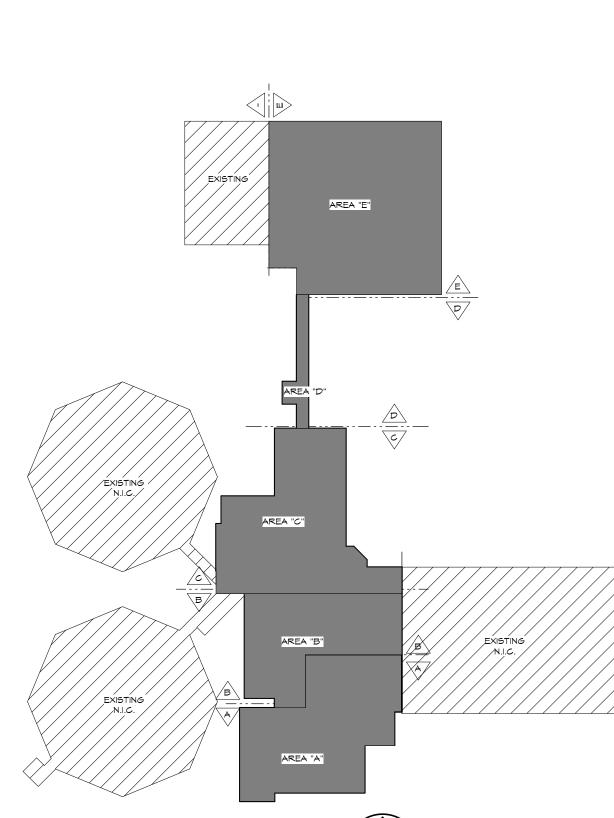
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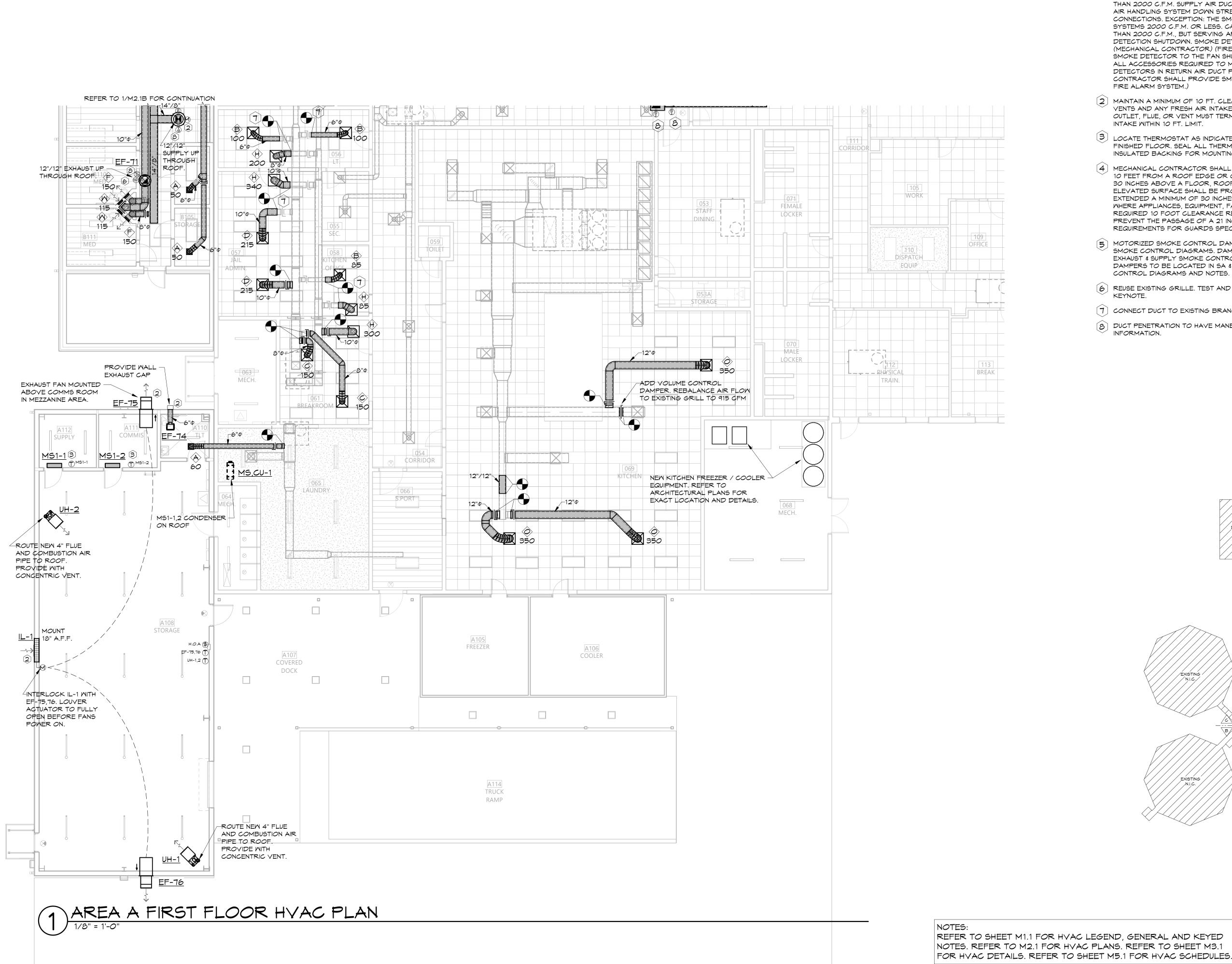
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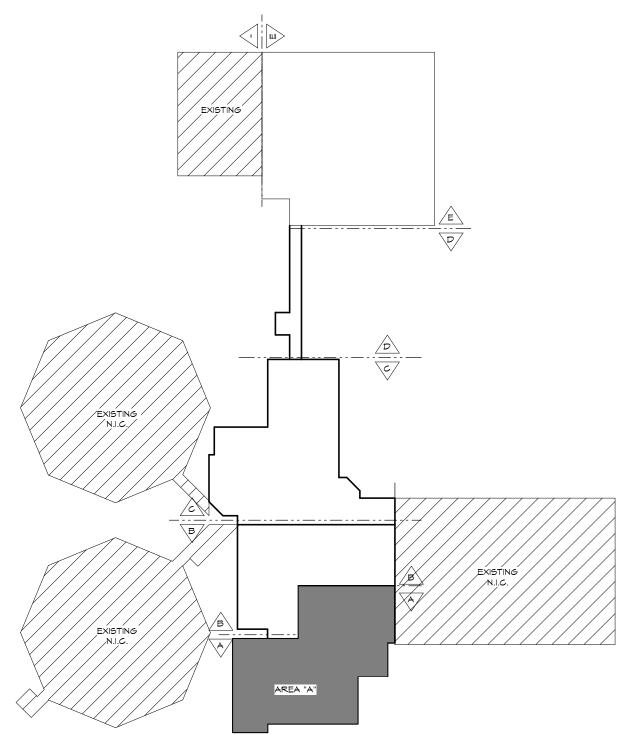
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OVERALL HVAC PLAN



# HVAC KEYED NOTES

- 1 SMOKE DETECTORS TO BE INSTALLED IN THE SUPPLY AND RETURN AIR DUCTS AND INTERLOCKED WITH AIR HANDLER FAN FOR SHUT-OFF PER N.F.P.A. 90 A & B ON ALL AIR HANDLERS GREATER THAN 2000 C.F.M. SUPPLY AIR DUCT SMOKE DETECTOR SHALL BE INSTALLED ON SUPPLY SIDE OF AIR HANDLING SYSTEM DOWN STREAM OF ANY AIR FILTERS AND PRIOR TO ANY BRANCH DUCT CONNECTIONS. EXCEPTION: THE SMOKE DETECTOR IN THE SUPPLY AIR STREAM MAY BE OMITTED IN SYSTEMS 2000 C.F.M. OR LESS. CAPACITY. RECIRCULATING AIR SYSTEMS WITH FAN CAPACITY LESS THAN 2000 C.F.M., BUT SERVING AREAS USED FOR EGRESS SHALL HAVE AUTOMATIC SMOKE DETECTION SHUTDOWN. SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED BY (MECHANICAL CONTRACTOR) (FIRE ALARM CONTRACTOR). MECHANICAL CONTRACTOR SHALL WIRE SMOKE DETECTOR TO THE FAN SHUT OFF CONTACTS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL ACCESSORIES REQUIRED TO MAKE THE FAN SHUT OFF CONNECTION. LOCATE SMOKE DETECTORS IN RETURN AIR DUCT PRIOR TO THE INTRODUCTION OF THE OUTSIDE AIR. (MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE BUILDING'S EXISTING FIRE ALARM SYSTEM.)
- 2 MAINTAIN A MINIMUM OF 10 FT. CLEARANCE BETWEEN ALL EXHAUST OUTLETS, FLUES, PLUMBING VENTS AND ANY FRESH AIR INTAKES. IF 10 FT. CLEARANCE CAN NOT BE MAINTAINED EXHAUST OUTLET, FLUE, OR VENT MUST TERMINATE AT A POINT AT LEAST 36 IN. ABOVE HIGHEST FRESH AIR INTAKE MITHIN 10 FT. LIMIT.
- 3 LOCATE THERMOSTAT AS INDICATED WITH THE CENTER OF THE THERMOSTAT AT 48 IN. ABOVE FINISHED FLOOR. SEAL ALL THERMOSTAT CONDUITS AT TOP AND BOTTOM OF CONDUIT. PROVIDE INSULATED BACKING FOR MOUNTING THERMOSTATS.
- [4] MECHANICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT, FANS AND APPLIANCES A MINIMUM OF 10 FEET FROM A ROOF EDGE OR OPEN SIDE WHERE SUCH EDGE OR OPEN SIDE IS GREATER THAN 30 INCHES ABOVE A FLOOR, ROOF OR GRADE BELOW. GUARD RAILS A MINIMUM OF 42 INCHES THE ELEVATED SURFACE SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR AND EXTENDED A MINIMUM OF 30 INCHES BEYOND EACH END OF SUCH EQUIPMENT, FAN OR APPLIANCE WHERE APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS ARE LOCATED WITHIN THE REQUIRED 10 FOOT CLEARANCE REQUIREMENT. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21 INCH DIAMETER SPHERE AND COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE LATEST ACCEPTED INTERNATIONAL BUILDING CODE.
- 5 MOTORIZED SMOKE CONTROL DAMPERS LOCATED IN DUCT TO BE INTERLOCKED PER HVAC SMOKE CONTROL DIAGRAMS. DAMPERS TO BE LOCATED IN ALL VERTICAL DUCT RUNS FOR EXHAUST & SUPPLY SMOKE CONTROL FANS SERVING ZONES. MOTORIZED SMOKE CONTROL DAMPERS TO BE LOCATED IN SA & RA FOR UNITS SERVING ZONES. REFER TO M3.2-M3.5 FOR ZONE CONTROL DIAGRAMS AND NOTES.
- 6 REUSE EXISTING GRILLE. TEST AND BALANCE TO ADJUST DAMPER TO MATCH LISTED CFM BELOW KEYNOTE.
- 7 CONNECT DUCT TO EXISTING BRANCH. SIZE TO MATCH EXISTING.
- (8) DUCT PENETRATION TO HAVE MANBARS. REFER TO DETAILS 5 THROUGH 7 FOR MORE INFORMATION.





**HSA**Engineering 479 / 452 / 8922 office

Fort Smith, AR 72916 HSAConsultants.com

HSA JOB # 23-196a

ARKANSAS REGISTERED PROFESSIONAL ENGINEER \* \* \* No.14057 S

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Washington

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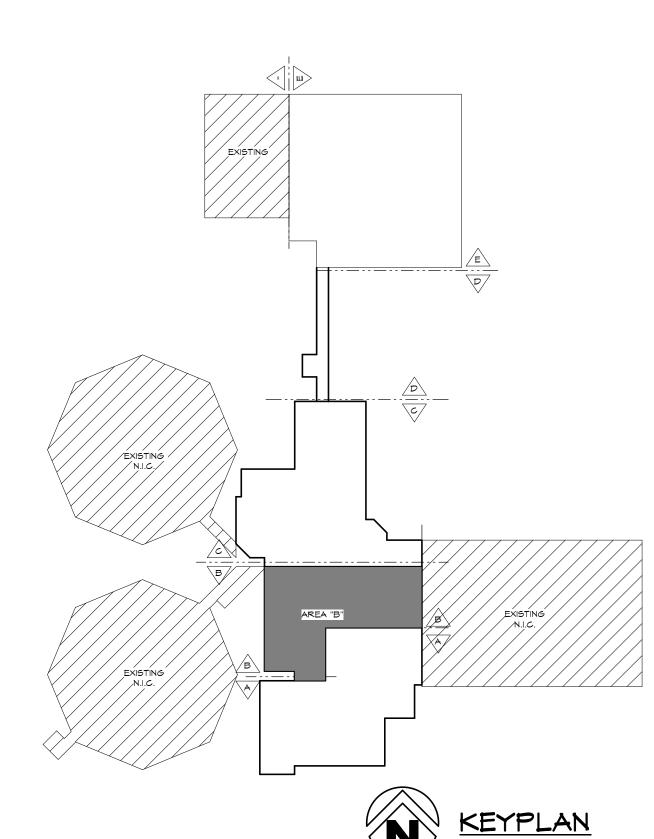
2333

10/04/2024

AREA A FIRST FLOOR HVAC PLAN

# HVAC KEYED NOTES

- 1 SMOKE DETECTORS TO BE INSTALLED IN THE SUPPLY AND RETURN AIR DUCTS AND INTERLOCKED WITH AIR HANDLER FAN FOR SHUT-OFF PER N.F.P.A. 90 A & B ON ALL AIR HANDLERS GREATER THAN 2000 C.F.M. SUPPLY AIR DUCT SMOKE DETECTOR SHALL BE INSTALLED ON SUPPLY SIDE OF AIR HANDLING SYSTEM DOWN STREAM OF ANY AIR FILTERS AND PRIOR TO ANY BRANCH DUCT CONNECTIONS. EXCEPTION: THE SMOKE DETECTOR IN THE SUPPLY AIR STREAM MAY BE OMITTED IN SYSTEMS 2000 C.F.M. OR LESS. CAPACITY. RECIRCULATING AIR SYSTEMS WITH FAN CAPACITY LESS THAN 2000 C.F.M., BUT SERVING AREAS USED FOR EGRESS SHALL HAVE AUTOMATIC SMOKE DETECTION SHUTDOWN. SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED BY (MECHANICAL CONTRACTOR) (FIRE ALARM CONTRACTOR). MECHANICAL CONTRACTOR SHALL WIRE SMOKE DETECTOR TO THE FAN SHUT OFF CONTACTS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL ACCESSORIES REQUIRED TO MAKE THE FAN SHUT OFF CONNECTION. LOCATE SMOKE DETECTORS IN RETURN AIR DUCT PRIOR TO THE INTRODUCTION OF THE OUTSIDE AIR. (MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE BUILDING'S EXISTING FIRE ALARM SYSTEM.)
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- 6 SMOKE DETECTORS TO BE INSTALLED AS PART OF SMOKE CONTROL SYSTEM. REFER TO HVAC CONTROLS FOR DETAILS OF OPERATION. SMOKE DETECTORS SHALL BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR AND WIRED BY FIRE ALARM CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE BUILDING'S EXISTING FIRE ALARM SYSTEM AND INSTALL THEM IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE.
- [8] DUCT PENETRATION TO HAVE MANBARS. REFER TO DETAILS 5 THROUGH 7 FOR MORE
- [9] REBALANCE EXISTING DIFFUSER TO MATCH CFM NOTED BELOW.



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AREA B FIRST FLOOR HVAC PLAN

EXHAUST FAN MOUNTED

ABOVE COMMS ROOM

IN MEZZANINE AREA.

12"/12" EXHAUST UP

10"/10" EXHAUST UP THROUGH ROOF.

> REFER TO SHEET M1.1 FOR HVAC LEGEND, GENERAL AND KEYED NOTES. REFER TO M2.1 FOR HVAC PLANS. REFER TO SHEET M3.1 FOR HVAC DETAILS. REFER TO SHEET M5.1 FOR HVAC SCHEDULES

028

JAIL

WAITING

-10"/10" EXHAUST UP THROUGH ROOF.

12"Φ-

215

-24"/22" SUPPLY

28"/18 RETURN UP THROUGH ROOF.

\$TORAGE

ADD VOLUME CONTROL

DAMPER. REBALANCE AIR FLOW TO EXISTING GRILL TO 915 CFM

NEW KITCHEN FREEZER / COOLER

EQUIPMENT. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DETAILS.

REFER TO 1/M2.1C FOR CONTINUATION

\_20"/16"

FEMALE

<sup>1</sup>–28"/16"

EX.

<u>RTU-19</u>

WAITING

WARR.

OFFICER

REFER TO 1/M2.1C FOR CONTINUATION

\_\_14"/10"

-12"/1<del>4</del>"

200

THROUGH ROOF.

PROVIDE WALL

EXHAUST CAP

MS1-1,2 CONDENSER

ON ROOF

RTU-16

-150

REFER TO 1/M2.1A FOR CONTINUATION

> CAP END DUCT

EX. RTU-14

S.PORT

REFER TO 1/M2.1A FOR CONTINUATION

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Covid

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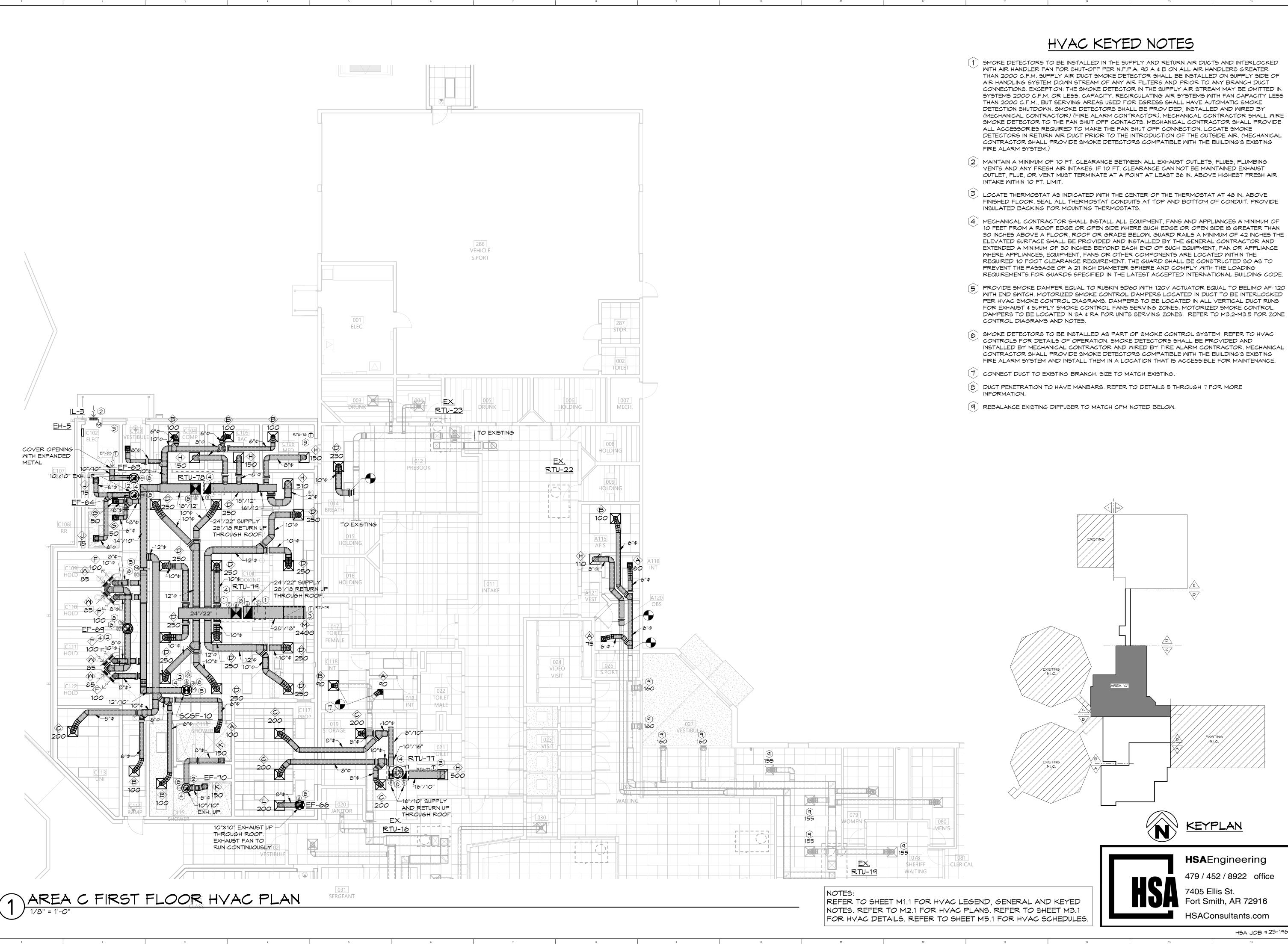
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INTAKE MITHIN 10 FT. LIMIT.

[4] MECHANICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT, FANS AND APPLIANCES A MINIMUM OF

[7] CONNECT DUCT TO EXISTING BRANCH. SIZE TO MATCH EXISTING.

INFORMATION.





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**Covid Mitigation** AN ADDITION AND REMODEL 00 Washington

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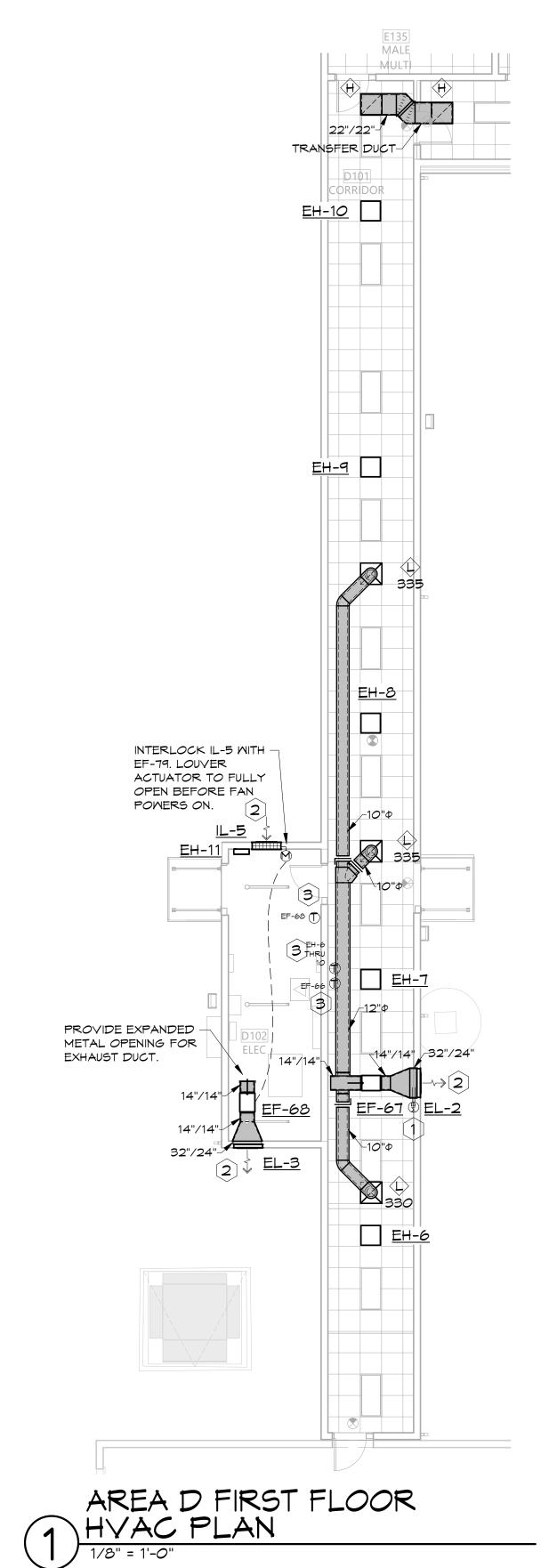
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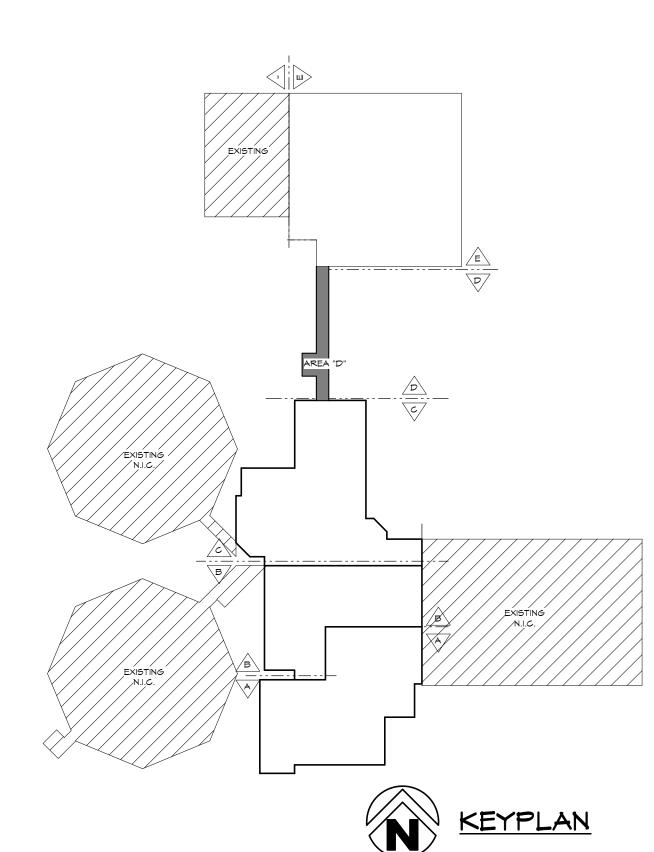
AREA C FIRST FLOOR HVAC PLAN

HSA JOB # 23-196a

# HYAC KEYED NOTES

- 1 DUCT PENETRATION TO HAVE MANBARS. REFER TO DETAILS 5 THROUGH 7 FOR MORE
- MAINTAIN A MINIMUM OF 10 FT. CLEARANCE BETWEEN ALL EXHAUST OUTLETS, FLUES, PLUMBING VENTS AND ANY FRESH AIR INTAKES. IF 10 FT. CLEARANCE CAN NOT BE MAINTAINED EXHAUST OUTLET, FLUE, OR VENT MUST TERMINATE AT A POINT AT LEAST 36 IN. ABOVE HIGHEST FRESH AIR INTAKE MITHIN 10 FT. LIMIT.
- 3 LOCATE THERMOSTAT AS INDICATED WITH THE CENTER OF THE THERMOSTAT AT 48 IN. ABOVE FINISHED FLOOR. SEAL ALL THERMOSTAT CONDUITS AT TOP AND BOTTOM OF CONDUIT. PROVIDE INSULATED BACKING FOR MOUNTING THERMOSTATS.





NOTES: REFER TO SHEET M1.1 FOR HVAC LEGEND, GENERAL AND KEYED

FOR HVAC DETAILS. REFER TO SHEET M5.1 FOR HVAC SCHEDULES.

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Covid Mitigation FOR AN ADDITION AND REMODEL 8

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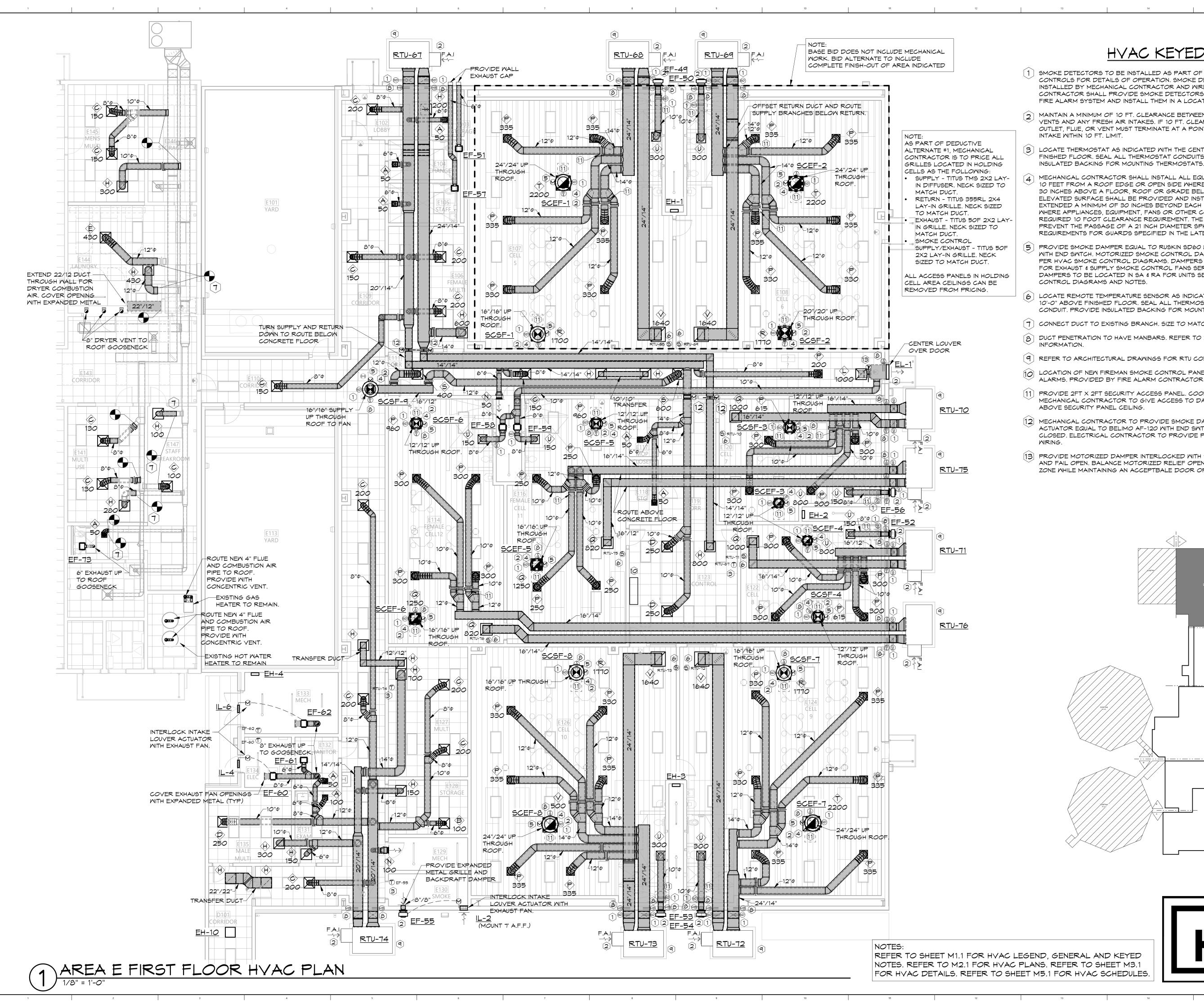
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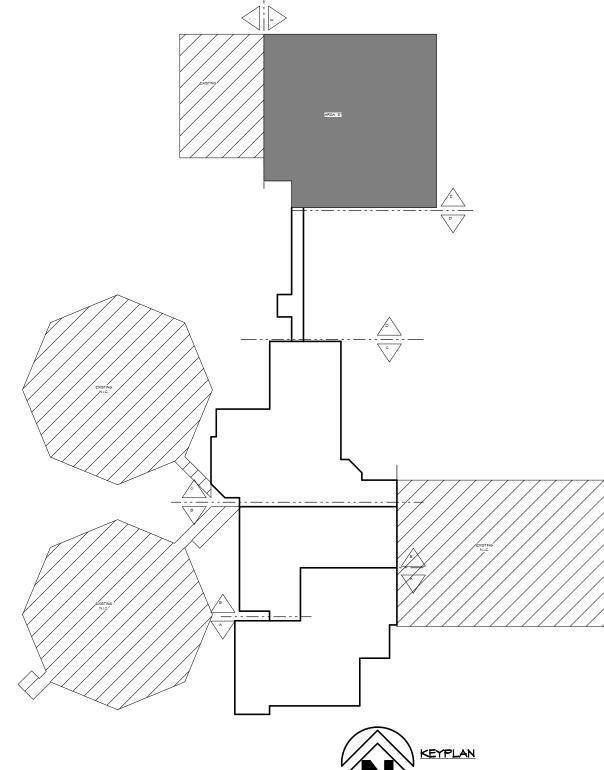
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AREA D FIRST FLOOR HVAC PLAN



# HVAC KEYED NOTES

- 1 SMOKE DETECTORS TO BE INSTALLED AS PART OF SMOKE CONTROL SYSTEM. REFER TO HVAC CONTROLS FOR DETAILS OF OPERATION. SMOKE DETECTORS SHALL BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR AND WIRED BY FIRE ALARM CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE BUILDING'S EXISTING FIRE ALARM SYSTEM AND INSTALL THEM IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE.
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- 6 LOCATE REMOTE TEMPERATURE SENSOR AS INDICATED WITH THE CENTER OF THE THERMOSTAT AT 10'-0" ABOVE FINISHED FLOOR. SEAL ALL THERMOSTAT CONDUITS AT TOP AND BOTTOM OF CONDUIT. PROVIDE INSULATED BACKING FOR MOUNTING SENSOR.
- (7) CONNECT DUCT TO EXISTING BRANCH. SIZE TO MATCH EXISTING.
- DUCT PENETRATION TO HAVE MANBARS. REFER TO DETAILS 5 THROUGH 7 FOR MORE
- [9] REFER TO ARCHITECTURAL DRAWINGS FOR RTU CONCRETE PAD DIMENSIONS.
- [10] LOCATION OF NEW FIREMAN SMOKE CONTROL PANEL FOR ZONES 1 THRU 9 HOA SMITCHES AND ALARMS. PROVIDED BY FIRE ALARM CONTRACTOR
- [11] PROVIDE 2FT X 2FT SECURITY ACCESS PANEL. COORDINATE LOCATION OF PANEL WITH MECHANICAL CONTRACTOR TO GIVE ACCESS TO DAMPERS AND OTHER MECHANICAL DEVICES
- [12] MECHANICAL CONTRACTOR TO PROVIDE SMOKE DAMPER EQUAL TO RUSKIN SD60 WITH 120V ACTUATOR EQUAL TO BELIMO AF-120 WITH END SWTCH. DAMPER TO BE NORMALLY OPEN AND FAIL CLOSED. ELECTRICAL CONTRACTOR TO PROVIDE POWER. REFER TO ELECTRICAL PLANS FOR
- 13 PROVIDE MOTORIZED DAMPER INTERLOCKED WITH SCSF-9. DAMPER TO BE NORMALLY CLOSED AND FAIL OPEN. BALANCE MOTORIZED RELIEF OPEN POSITION TO PROVIDE POSITIVE PRESSURE IN ZONE WHILE MAINTAINING AN ACCEPTBALE DOOR OPENING FORCE.





**HSA**Engineering

479 / 452 / 8922 office Fort Smith, AR 72916

HSAConsultants.com

HSA JOB # 23-196a

ARKANSAS RECISTERED PROFESSION AN ENGINEER \* \* \* No.14057

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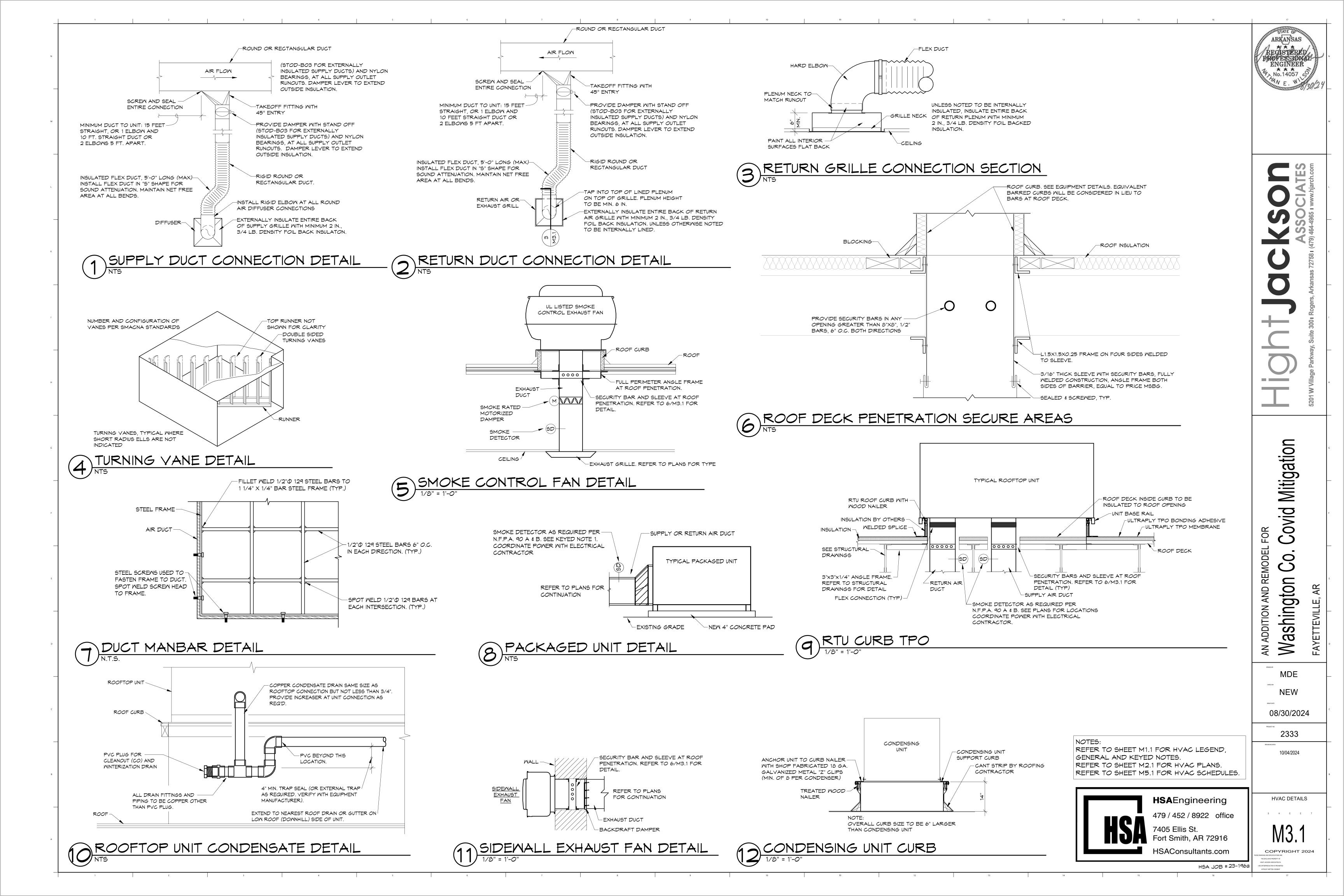
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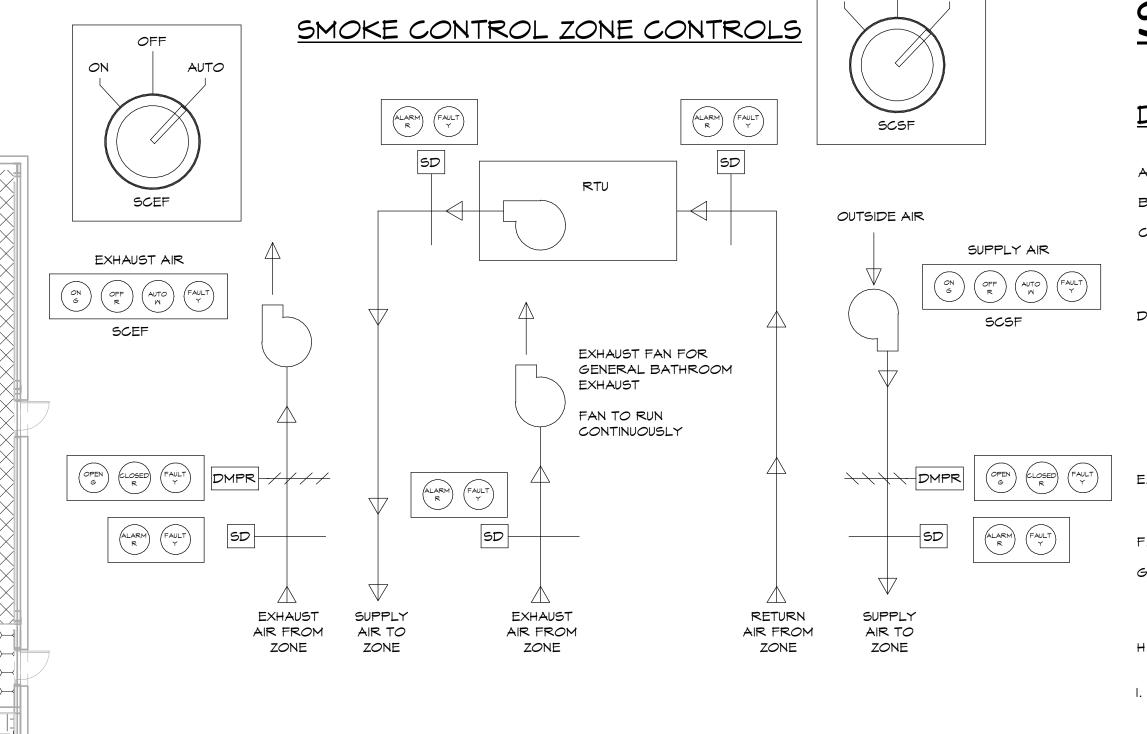
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AREA E FIRST FLOOR HVAC PLAN





EACH SMOKE CONTROL ZONE IDENTIFIED ON THIS SHEET HAVE THE FOLLOWING EQUIPMENT THAT IS

CONTROLLED INDEPENDENT OF EACH ZONE:

SINGLE ZONE PACKAGED UNIT GENERAL EXHAUST FAN

SMOKE CONTROL EXHAUST FAN SMOKE CONTROL SUPPLY FAN

SMOKE CONTROL DESIGN

## DESIGN ELEMENTS

- SYSTEM DESIGN OBJECTIVE: CONTAIN SMOKE TO THE ZONE OF FIRE ORIGIN
- DESIGN APPROACH: PRESSURIZED SMOKE CONTROL
- DESIGN ASSUMPTIONS: BUILDING HEIGHT 18' FT. AMBIENT CONDITIONS - ASHRAE - WASHINGTON COUNTY AR MET SPRINKLER SYSTEM INSTALLED

NEW CONSTRUCTION LEAKAGE: LESS THAN 0.1 CFM/SF

- LOCATION OF SMOKE ZONES:
  - ZONE 1 ZONE 2 ZONE 3 ZONE 4 ZONE 5 ZONE 6 ZONE 7

ZONE 8 ZONE 9

- MINIMUM DESIGN PRESSURE DIFFERENCE: -0.05" MG MITHIN SMOKE ZONE MAXIMUM DESIGN PRESSURE DIFFERENCE: -0.08" MG MITHIN SMOKE ZONE (TO PROVIDE A MAXIMUM DOOR OPENING FORCE OF 5 LBS.)
- BUILDING USE LIMITATIONS: DETENTION FACILITY (I-3)
- DESIGN CALCULATIONS:
- EXHAUST 6 AIR CHANGES/HOUR IN SMOKE ZONE TO REMOVE SMOKE AND SUPPLY 80% OUTSIDE AIR TO DILUTE SMOKE AND ALLOW FOR NEGATIVE PRESSURIZATION OF SMOKE ZONE
- FAN AND DUCT SPECIFICATIONS: SEE FAN SCHEDULE, DRAWING NOTES, AND PROJECT MANUAL.
- DAMPER SPECIFICATIONS: PROVIDE AIR FOIL MOTORIZED SMOKE DAMPERS WITH END SWITCHES TO ISOLATE AIR SYSTEMS.
- SEQUENCE OF OPERATIONS: REFER TO M3.5 FOR ZONED SMOKE CONTROL SEQUENCE OF OPERATIONS

								SMC	OKE MANA	GEMENT OF	PERATION MA	ATRIX							
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		OPERATION MODE	STATUS	OPERATION MODE	STATUS	OPERATIO MODE	STATUS	OPERATION MODE	STATUS	OPERATIO MODE	N STATUS	OPERATION MODE	STATUS	OPERATION MODE	STATUS	OPERATION MODE	STATUS	OPERATION MODE	STATUS
ZONE 1	RTU EF (S)	FZ FZ	OFF ON	ADJ ADJ	ON OFF	NORMAL C	OPERATION	NORMAL OF	PERATION	NORMAL C	PERATION	NORMAL OF	PERATION	NORMAL OF	PERATION	NORMAL OF	PERATION	ADJ ADJ	ON OFF
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ZC	EF (G)													ADJ	ON	FZ	OFF	ADJ	ON
ONE 9	RTU	LDA	ON	ADJ	ON	LCA	ON	LDA	ON	LDA	ON	ADJ	ON	ADJ	ON	ADJ	ON	FZ	OFF
22 P	EF (5)	LDA	ON	LDA	ON	LDA	ON	LDA	ON	LDA	ON	ADJ	ON	ADJ	ON	LDA	ON	FZ	ON

RTU IN "ON" POSITION INDICATES RTU FAN RUNNING IN ECONOMIZER MODE WITHOUT COMPRESSOR IN OPERATION. IN THE WINTER, HEAT IS TO BE PROVIDED TO TEMPER OUTSIDE AIR. EF(S) INDICATES SMOKE DUTY FAN. REFER TO SCHEDULE OR FLOOR PLANS FOR DUTY INDICATION.

**OFF** 

AUTO

ON

EF(G) INDICATES GENERAL EXHAUST DUTY FAN. REFER TO SCHEDULES OR FLOOR PLAN FOR DUTY INDICATION. FZ INDICATES FIRE ZONE OR ZONE OF INCIDENT.

ADJ INDICATES ZONE ADJACENT TO FIRE ZONE.

WHEN EF(S) IS "ON", NORMALLY CLOSED DAMPERS SHALL OPEN TO ALLOW AIR FLOW FROM THE ZONE. DAMPERS SHALL REMAIN CLOSED WHEN FAN IS NON-ENERGIZED ZONE 9 FOR PRESSURIZATION ONLY AND NOT PROVIDED WITH SMOKE EXHAUST FAN. BALANCE MOTORIZED EXHAUST LOUVER. OPEN POSITION

IN ZONE 9 TO PROVIDE POSITIVE PRESSURE IN ZONE WHILE MAINTAINING AN ACCEPTABLE DOOR OPENING FORCE.

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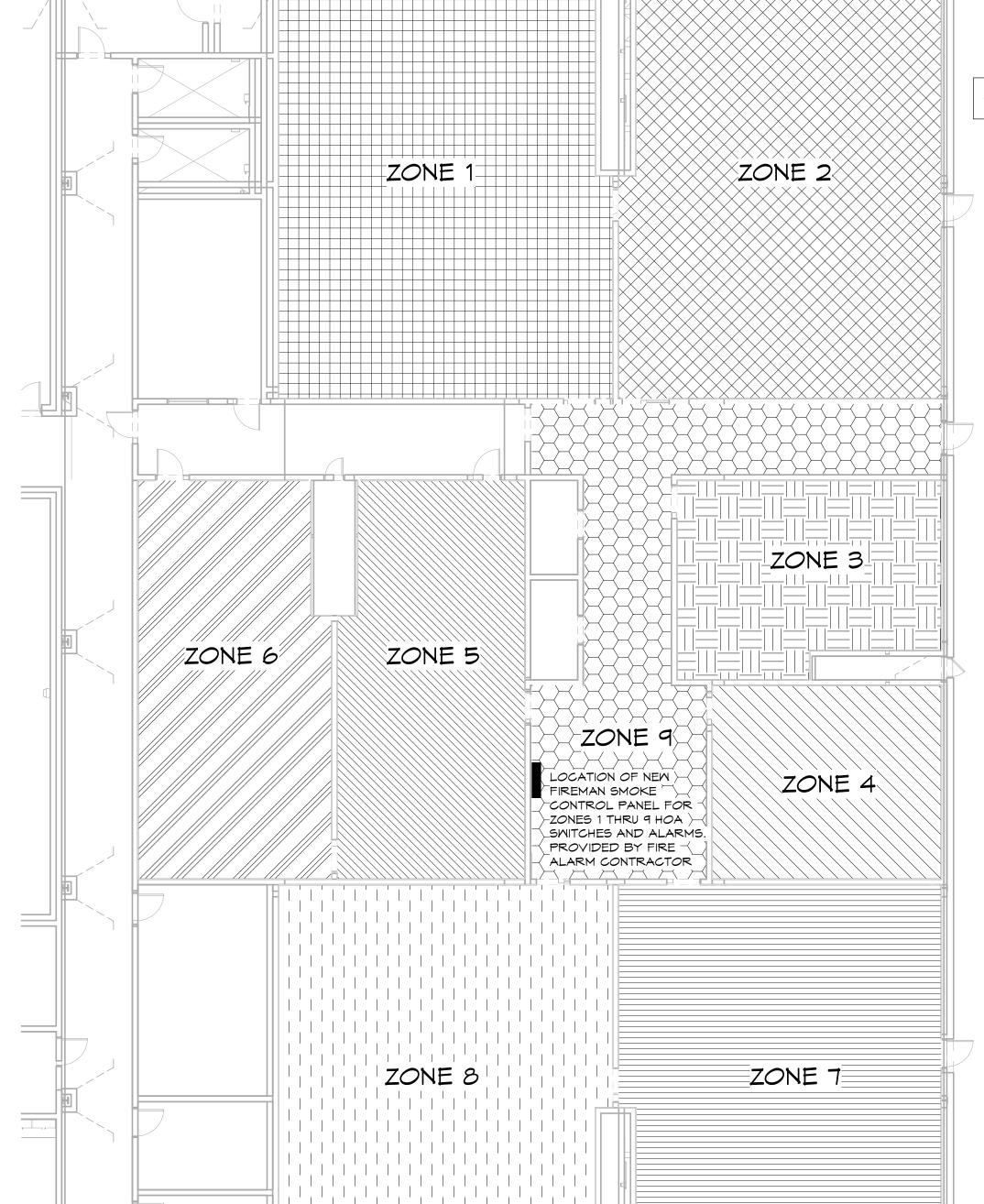
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**HVAC DETAILS** 

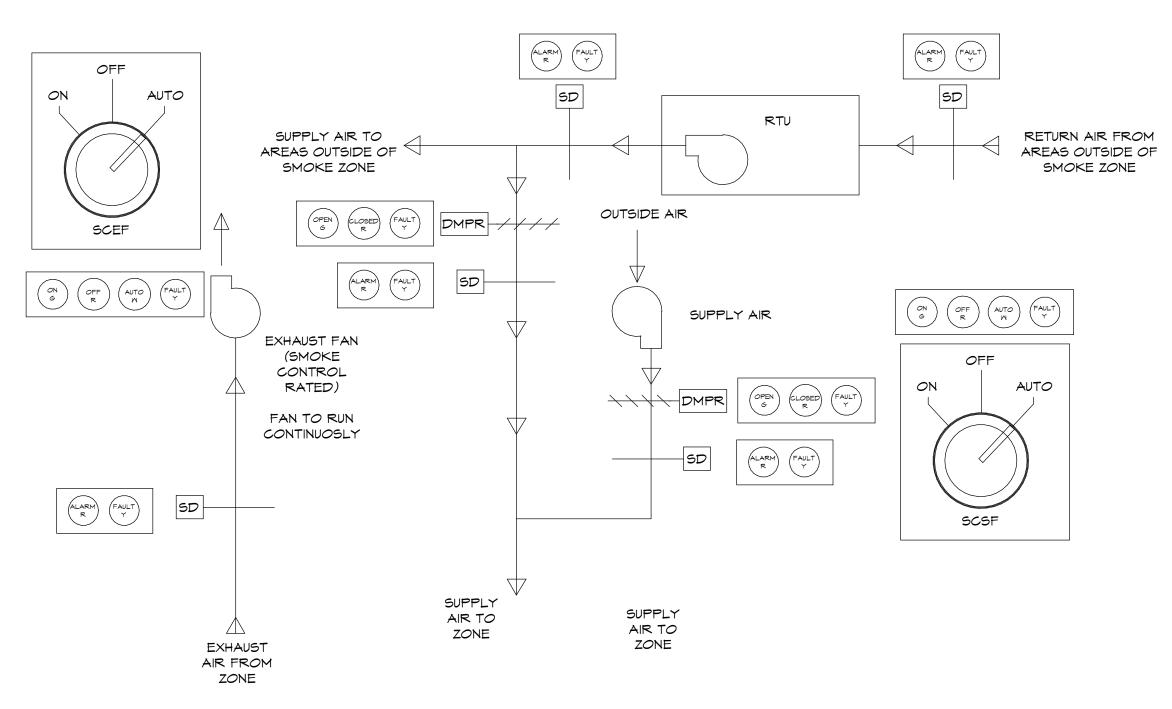
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SMOKE CONTROL ZONES - AREA E

# SMOKE CONTROL ZONE CONTROLS



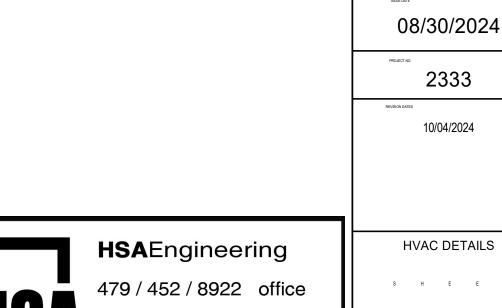
EACH SMOKE CONTROL ZONE IDENTIFIED ON THIS SHEET HAVE THE FOLLOWING EQUIPMENT THAT IS CONTROLLED INDEPENDENT OF EACH ZONE:

- MULTI-ZONE PACKAGED UNIT WITH SMOKE DAMPERS ISOLATING SMOKE ZONES.
- GENERAL EXHAUST FAN THAT IS SMOKE CONTROL RATED AND OPERATES CONTINUOUSLY
- SMOKE CONTROL SUPPLY FAN

# SMOKE CONTROL DESIGN

# DESIGN ELEMENTS

- SYSTEM DESIGN OBJECTIVE: CONTAIN SMOKE TO THE ZONE OF FIRE ORIGIN
- DESIGN APPROACH: PRESSURIZED SMOKE CONTROL
- DESIGN ASSUMPTIONS: BUILDING HEIGHT 18' FT. AMBIENT CONDITIONS - ASHRAE - MASHINGTON COUNTY AR MET SPRINKLER SYSTEM INSTALLED NEW CONSTRUCTION LEAKAGE: LESS THAN 0.1 CFM/SF
- LOCATION OF SMOKE ZONES:
  - ZONE 10 ZONE 12
- MINIMUM DESIGN PRESSURE DIFFERENCE: -0.05" MG WITHIN SMOKE ZONE MAXIMUM DESIGN PRESSURE DIFFERENCE: -0.08" MG WITHIN SMOKE ZONE (TO PROVIDE A MAXIMUM DOOR OPENING FORCE OF 5 LBS.)
- BUILDING USE LIMITATIONS: DETENTION FACILITY (1-3)
- DESIGN CALCULATIONS:
- EXHAUST 6 AIR CHANGES/HOUR IN SMOKE ZONE TO REMOVE SMOKE AND SUPPLY 80% OUTSIDE AIR TO DILUTE SMOKE AND ALLOW FOR NEGATIVE PRESSURIZATION OF SMOKE ZONE
- FAN AND DUCT SPECIFICATIONS: SEE FAN SCHEDULE, DRAWING NOTES, AND PROJECT MANUAL.
- DAMPER SPECIFICATIONS: PROVIDE AIR FOIL MOTORIZED SMOKE DAMPERS WITH END SWITCHES TO ISOLATE AIR SYSTEMS.
- SEQUENCE OF OPERATIONS: REFER TO M3.5 FOR ZONED SMOKE CONTROL SEQUENCE OF OPERATIONS



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08/30/2024

10/04/2024

# RTU CONSTANT SPEED FAN - CONTROL SCHEMATIC

# SMOKE CONTROL/FIREMAN'S OVERRIDE PANEL SEQUENCE OF OPERATION:

THIS CONTROL SEQUENCE SHALL BE PROVIDED BY SMOKE CONTROL SYSTEM CONTRACTOR. COORDINATE ALL WORK WITH CONTROL (WHERE APPLICABLE), ELECTRICAL, FIRE ALARM, AND TEST AND BALANCE CONTRACTORS AND MECHANICAL AND ELECTRICAL EQUIPMENT VENDORS FOR A FULLY FUNCTIONAL CONTROL SYSTEM

SMOKE CONTROL FANS SHALL BE CONTROLLED EITHER AUTOMATICALLY OR MANUALLY FROM THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL LOCATED IN THE GUARDS CONTROL ROOM. THERE ARE MULTIPLE SMOKE CONTROL ZONES THAT OPERATE INDEPENDENTLY FROM EACH OTHER. REFER TO SHEET M3.2. M3.3 FOR SMOKE CONTROL ZONE LAYOUTS. THE FOLLOWING SEQUENCE IS TYPICAL FOR SMOKE ZONES 1 THRU 8.

THE MECHANICAL CONTRACTOR WILL PROVIDE DIFFERENTIAL PRESSURE SWITCH IN THE SMOKE CONTROL SUPPLY AND EXHAUST AIR DUCTS LOCATED BETWEEN THE AIR INLETS / OUTLETS AND SMOKE CONTROL DAMPERS TO PROVE SCSF AND SCEF OPERATION.

THERE WILL BE A TWO HAND-OFF-AUTOMATIC SWITCH FOR EACH ZONE ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL PROVIDED FOR INDIVIDUAL CONTROL OF THE SMOKE CONTROL SUPPLY AND EXHAUST FAN IN EACH ZONE.

THERE WILL BE INDICATOR LIGHTS ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL TO INDICATE EQUIPMENT STATUS, E.G. SMOKE CONTROL FANS ON, OFF, AUTO, OR FAULT, AND SMOKE CONTROL DAMPERS OPEN, CLOSED, OR FAULT. ANNUNCIATE A FAULT CONDITION IF SMOKE CONTROL FAN STATUS OR IF ANY SMOKE CONTROL DAMPER END SWITCH DOES NOT MATCH ITS COMMANDED STATE. PROVIDE INDICATOR LAMP TEST SWITCH TO TEST CONDITION OF INDICATOR LAMPS.

NORMAL OPERATION: SCSF AND SCEF HAND-OFF-AUTO SWITCH IN 'AUTO' POSITION:

THE FIRE ALARM SYSTEM UPON DETECTION OF SMOKE IN THE SMOKE ZONE, E.G. DUCT SMOKE DETECTOR GOES INTO ALARM IN AN EXHAUST OR RETURN DUCT THAT SERVES THE SMOKE ZONE, OR ACTIVATION OF MANUAL PULL STATION IN THE SMOKE ZONE, SHALL SIGNAL THE SMOKE CONTROL SYSTEM. THE SMOKE CONTROL SYSTEM WILL OPEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCEF AND SCSF. WHEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCEF AND SCSF.

THE END SWITCH WILL START THE ASSOCIATED FAN. AT THE SAME TIME, THE RTU AND GENERAL EXHAUST FAN ARE SHUT DOWN. AFTER THE SCSF DAMPER IS OPENED, IF SMOKE IS DETECTED IN ITS SUPPLY DUCT, INDICATING SMOKE OR FIRE FROM OUTSIDE, THE SCSF AND SCEF SHALL SHUT DOWN. IF SMOKE IS DETECTED IN THE EXHAUST / RETURN AIR DUCT, THE SCEF SHALL CONTINUE TO OPERATE. IF THERE IS A FAILURE OF THE SCEF, E.G. SMOKE CONTROL DAMPER FAILS TO OPEN, SMOKE CONTROL FAN FAILS TO START, ETC., AS PROVED THROUGH SMOKE CONTROL DAMPER END SWITCH OR EXHAUST DDUCT DIFFERENTIAL PRESSURE SWITCH, SHUT DOWN THE SCSF

THE GENERAL EXHAUST FANS IN THE SMOKE CONTROL ZONES SHALL BE INTERLOCKED WITH RTU. WHEN RTU IS SHUT DOWN, GENERAL EXHAUST FAN IS TO BE SHUT DOWN

WHEN THE FIRE CONDITION IS CLEARED, THE FIRE ALARM SYSTEM SHALL SIGNAL THE SMOKE CONTROL SYSTEM WHICH WILL CLOSE THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCEF AND SCSF. WHEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCEF AND

BEGIN TO CLOSE AS PROVED THROUGH THEIR END SMITCHES THE END SMITCH MILL SHUT DOWN THE ASSOCIATED FANS. AT THE SAME TIME, THE RTU IS STARTED.

IF THE SMOKE CONTROL EXHAUST OR SUPPLY FAN HAND-OFF-AUTO SMITCH IS SMITCHED FROM THE AUTO POSITION, THE ASSOCIATED RTU IS OVERRIDDEN OFF.

FIREMAN'S OVERRIDE CONDITIONS:

SCSF IS OVERRIDDEN OFF, HAND-OFF-AUTO SMITCH IS IN 'OFF' POSITION

SCSF SMOKE CONTROL DAMPERS ARE DRIVEN CLOSED AND SCSF SHALL BE OVERRIDDEN OFF. SMOKE CONTROL DAMPER END SWITCH CONTROL OF THE SCSF IS OVERRIDDEN. THE SCEF WILL CONTINUE TO OPERATE PER THE NORMAL CONTROL SEQUENCE

SCSF IS OVERRIDDEN ON, HAND-OFF-AUTO SMITCH IS IN THE 'ON' POSITION,

SCSF SMOKE CONTROL DAMPERS ARE DRIVEN OPEN AND SCSF IS OVERRIDDEN ON. SMOKE CONTROL DAMPER END SWITCH CONTROL OF THE SCSF IS OVERRIDDEN. THE SCEF WILL CONTINUE TO OPERATE PER THE NORMAL CONTROL SEQUENCE.

SCEF IS OVERRIDDEN OFF, HAND-OFF-AUTO SWITCH IS IN 'OFF' POSITION.

SCEF SMOKE CONTROL DAMPERS ARE DRIVEN CLOSED AND SCEF SHALL BE OVERRIDDEN OFF. SMOKE CONTROL DAMPER END SWITCH CONTROL OF THE SCEF IS OVERRIDDEN

SCEF IS OVERRIDDEN ON, HAND-OFF-AUTO SMITCH IS IN THE 'ON' POSITION.

SCEF SMOKE CONTROL DAMPERS ARE DRIVEN OPEN AND SCEF IS OVERRIDDEN ON. SMOKE CONTROL DAMPER END SWITCH CONTROL OF THE SCEF IS OVERRIDDEN

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SMOKE ZONE 1 THRU 8 - CONTROL DIAGRAM

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**HVAC DETAILS** 

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# RTU CONSTANT SPEED FAN - CONTROL SCHEMATIC

# SMOKE CONTROL/FIREMAN'S OVERRIDE PANEL SEQUENCE OF OPERATION:

THIS CONTROL SEQUENCE SHALL BE PROVIDED BY SMOKE CONTROL SYSTEM CONTRACTOR. COORDINATE ALL WORK WITH CONTROL (WHERE APPLICABLE), ELECTRICAL, FIRE ALARM, AND TEST AND BALANCE CONTRACTORS AND MECHANICAL AND ELECTRICAL EQUIPMENT VENDORS FOR A FULLY FUNCTIONAL CONTROL SYSTEM.

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THE MECHANICAL CONTRACTOR WILL PROVIDE DIFFERENTIAL PRESSURE SWITCH IN THE SMOKE CONTROL SUPPLY AND EXHAUST AIR DUCTS LOCATED BETWEEN THE AIR INLETS / OUTLETS AND SMOKE CONTROL DAMPERS TO PROVE EF AND SCSF OPERATION.

THERE WILL BE A TWO HAND-OFF-AUTOMATIC SWITCHES FOR EACH ZONE ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL PROVIDED FOR INDIVIDUAL CONTROL OF THE SMOKE CONTROL EXHAUST AND SUPPLY FAN IN EACH ZONE.

THERE WILL BE INDICATOR LIGHTS ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL TO INDICATE EQUIPMENT STATUS, E.G. SMOKE CONTROL FANS ON, OFF, AUTO, OR FAULT, AND SMOKE CONTROL DAMPERS OPEN, CLOSED, OR FAULT. ANNUNCIATE A FAULT CONDITION IF SMOKE CONTROL FAN STATUS OR IF ANY SMOKE CONTROL DAMPER END SWITCH DOES NOT MATCH ITS COMMANDED STATE. PROVIDE INDICATOR LAMP TEST SWITCH TO TEST CONDITION OF INDICATOR LAMPS.

NORMAL OPERATION: THE EF AND SCSF HAND-OFF-AUTO SWITCH IN 'AUTO' POSITION:

THE EXHAUST FAN IS TO RUN CONTINUOUSLY. THE FIRE ALARM SYSTEM UPON DETECTION OF SMOKE IN THE SMOKE ZONE, E.G. DUCT SMOKE DETECTOR GOES INTO ALARM IN THE EXHAUST THAT SERVES THE SMOKE ZONE, OR ACTIVATION OF MANUAL PULL STATION IN THE SMOKE ZONE, SHALL SIGNAL THE SMOKE CONTROL SYSTEM. THE SMOKE CONTROL DAMPERS ASSOCIATED WITH THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF ARE FULLY OPEN AND PROVED THROUGH THEIR END SWITCHES THE END SWITCHES THE ASSOCIATED FAN. AT THE SAME TIME, THE SMOKE CONTROL DAMPERS ASSOCIATED WITH RTU ARE CLOSING AND PROVED THROUGH END SWITCHES. IF EITHER END SWITCH OPENS, THE RTU IS SHUT DOWN. AFTER THE SCSF DAMPER IS OPENED, IF SMOKE IS DETECTED IN ITS SUPPLY DUCT, INDICATING SMOKE OR FIRE FROM OUTSIDE, THE SCSF SHALL SHUT DOWN. IF THERE IS A FAILURE OF THE EF, E.G. SMOKE CONTROL FAN

TO START, ETC., AS PROVED THROUGH EXHAUST DUCT DIFFERENTIAL PRESSURE SWITCH, SHUT DOWN THE SCSF.

WHEN THE FIRE CONDITION IS CLEARED, THE FIRE ALARM SYSTEM SHALL SIGNAL THE SMOKE CONTROL SYSTEM WHICH WILL CLOSE THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF. WHEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF BEGIN TO CLOSE

PROVED THROUGH THEIR END SMITCHES THE END SMITCH MILL SHUT DOWN THE ASSOCIATED FANS. AT THE SAME TIME, THE RTU IS STARTED IF SHUT DOWN.

FIREMAN'S OVERRIDE CONDITIONS:

SCSF IS OVERRIDDEN OFF, HAND-OFF-AUTO SWITCH IS IN 'OFF' POSITION

SCSF SMOKE CONTROL DAMPERS ARE DRIVEN CLOSED AND SCSF SHALL BE OVERRIDDEN OFF. SMOKE CONTROL DAMPER END SWITCH CONTROL OF THE SCSF IS OVERRIDDEN. THE EF WILL CONTINUE TO OPERATE PER THE NORMAL CONTROL SEQUENCE.

SCSF IS OVERRIDDEN ON, HAND-OFF-AUTO SMITCH IS IN THE 'ON' POSITION.

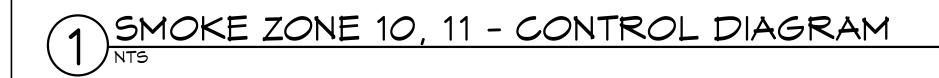
SCSF SMOKE CONTROL DAMPERS ARE DRIVEN OPEN AND SCSF IS OVERRIDDEN ON. SMOKE CONTROL DAMPER END SMITCH CONTROL OF THE SCSF IS OVERRIDDEN. SMOKE CONTROL DAMPERS IN RTU DUCTWORK ARE DRIVEN CLOSED. THE SCSF WILL CONTINUE TO OPERATE PER THE NORMAL CONTROL SEQUENCE.

EF IS OVERRIDDEN OFF, HAND-OFF-AUTO SWITCH IS IN 'OFF' POSITION.

SCEF SHALL BE OVERRIDDEN OFF

SCEF IS OVERRIDDEN ON, HAND-OFF-AUTO SMITCH IS IN THE 'ON' POSITION.

EF IS OVERRIDDEN ON





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STAINLESS STEEL

MALL PLATE

TEMPERATURE SENSOR

SPACE HUMIDITY/

TEMPERATURE

SENSOR

SEQUENCE OF OPERATIONS

BUILDING AUTOMATION SYSTEM INTERFACE: THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARM-UP / PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

OCCUPIED MODE: DURING OCCUPIED PERIODS, THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER SHALL OPEN TO MAINTAIN MINIMUM VENTILATION REQUIREMENTS. THE DX COOLING AND GAS HEAT SHALL STAGE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

UNOCCUPIED MODE: WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) THE SUPPLY FAN SHALL START, THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE GAS HEAT SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN SHALL STOP AND THE GAS HEAT SHALL BE DISABLED. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.) THE SUPPLY FAN SHALL START, THE OUTSIDE AIR DAMPER SHALL OPEN IF ECONOMIZING IS ENABLED AND REMAIN CLOSED IF ECONOMIZING IS DISABLED AND THE DX COOLING SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.) MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN SHALL STOP, THE DX COOLING SHALL BE DISABLED AND THE OUTSIDE AIR DAMPER SHALL CLOSE.

OPTIMAL START: THE BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS.

MORNING WARM-UP MODE: DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT A MORNING WARM-UP MODE SHALL BE ACTIVATED. WHEN MORNING WARM-UP IS INITIATED THE UNIT SHALL ENABLE THE HEATING AND SUPPLY FAN. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. WHEN THE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE SHALL BE ACTIVATED. WHEN PRE-COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

OPTIMAL STOP: THE BAS SHALL MONITOR THE SCHEDULED UNOCCUPIED TIME, OCCUPIED SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL STOP OCCURS. WHEN THE OPTIMAL STOP MODE IS ACTIVE THE UNIT CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE TO THE SPACE TEMPERATURE OFFSET SETPOINT.

COOLING MODE: THE UNIT CONTROLLER SHALL USE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR COOLING. WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE UNIT CONTROLLER SHALL MODULATE THE ECONOMIZER OR STAGE THE DX COOLING AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT THE COMPRESSOR SHALL BE DEACTIVATED AND THE ECONOMIZER SHALL RETURN TO MINIMUM POSITION. HEATING MODE:

THE UNIT CONTROLLER SHALL USE THE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR HEAT. WHEN THE SPACE TEMPERATURE DROPS BELOW THE SETPOINT, THE UNIT CONTROLLER SHALL ENABLE GAS HEATING STAGES TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT THE GAS HEATING STAGES SHALL BE DISABLED. DEHUMIDIFICATION:

FACTORY INSTALLED HOT GAS REHEAT SHALL ALLOW APPLICATION OF DEHUMIDIFICATION. DEHUMIDIFICATION SHALL BE ALLOWED ONLY WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 40.0 DEG. F AND BELOW 100.0 DEG. F. THE ECONOMIZER OUTSIDE AIR DAMPER SHALL DRIVE TO MINIMUM POSITION DURING DEHUMIDIFICATION.

ON A CALL FOR DEHUMIDIFICATION, THE REHEAT VALVE SHALL ENERGIZE AND THE COMPRESSOR SHALL ENABLE. WHEN THE HUMIDITY CONTROL SETPOINT IS SATISFIED, THE VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR SHALL BE DISABLED. IF THERE IS A CALL FOR COOLING FROM THE SPACE TEMPERATURE CONTROLLER, WHILE IN REHEAT, THE REHEAT VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR CONTINUES TO RUN.

THE MIXED AIR SENSOR SHALL MEASURE THE DRY BULB TEMPERATURE OF THE AIR LEAVING THE EVAPORATOR COIL WHILE ECONOMIZING. WHEN ECONOMIZING IS ENABLED AND THE UNIT IS OPERATING IN THE COOLING MODE, THE ECONOMIZER DAMPER SHALL BE MODULATED BETWEEN ITS MINIMUM POSITION AND 100% TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE ECONOMIZER DAMPER SHALL MODULATE TOWARD MINIMUM POSITION IN THE EVENT THE MIXED AIR TEMPERATURE FALLS BELOW THE LOW LIMIT TEMPERATURE SETTING. COMPRESSORS SHALL BE DELAYED FROM OPERATING UNTIL THE ECONOMIZER HAS OPENED TO 100%.

COMPARATIVE ENTHALPY:

OUTSIDE AIR (OA) ENTHALPY SHALL BE COMPARED WITH RETURN AIR (RA) ENTHALPY POINT. THE ECONOMIZER SHALL ENABLE WHEN OA ENTHALPY IS LESS THAN RA ENTHALPY - 3.0 BTU/LB. THE ECONOMIZER SHALL DISABLE WHEN OA ENTHALPY IS GREATER THAN RA ENTHALPY.

THE SUPPLY FAN SHALL BE ENABLED WHILE IN THE OCCUPIED MODE AND CYCLED ON DURING THE UNOCCUPIED MODE. A DIFFERENTIAL PRESSURE SMITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN. IF THE SWITCH DOES NOT OPEN WITHIN 40 SECONDS AFTER A REQUEST FOR FAN OPERATION A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS, THE UNIT SHALL STOP, REQUIRING A MANUAL RESET.

BUILDING PRESSURE CONTROL: THE BAROMETRIC RELIEF DAMPERS SHALL OPEN WITH INCREASED BUILDING PRESSURE. AS THE BUILDING PRESSURE INCREASES, THE PRESSURE IN THE UNIT RETURN SECTION ALSO INCREASES, OPENING THE DAMPERS AND RELIEVING AIR.

SMOKE DETECTOR SHUTDOWN:

THE UNIT SHALL SHUT DOWN IN RESPONSE TO A SIGNAL FROM EITHER SMOKE DETECTOR INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTORS SHALL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTORS. A MANUAL RESET OF THE SMOKE DETECTORS SHALL BE REQUIRED TO RESTART THE UNIT.

A DIFFERENTIAL PRESSURE SMITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SMITCH CLOSES FOR 2 MINUTES AFTER A REQUEST FOR FAN OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED AT THE BAS.

RTU CONTROLS AND SEQUENCE OF OPERATIONS

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RETURN AIR

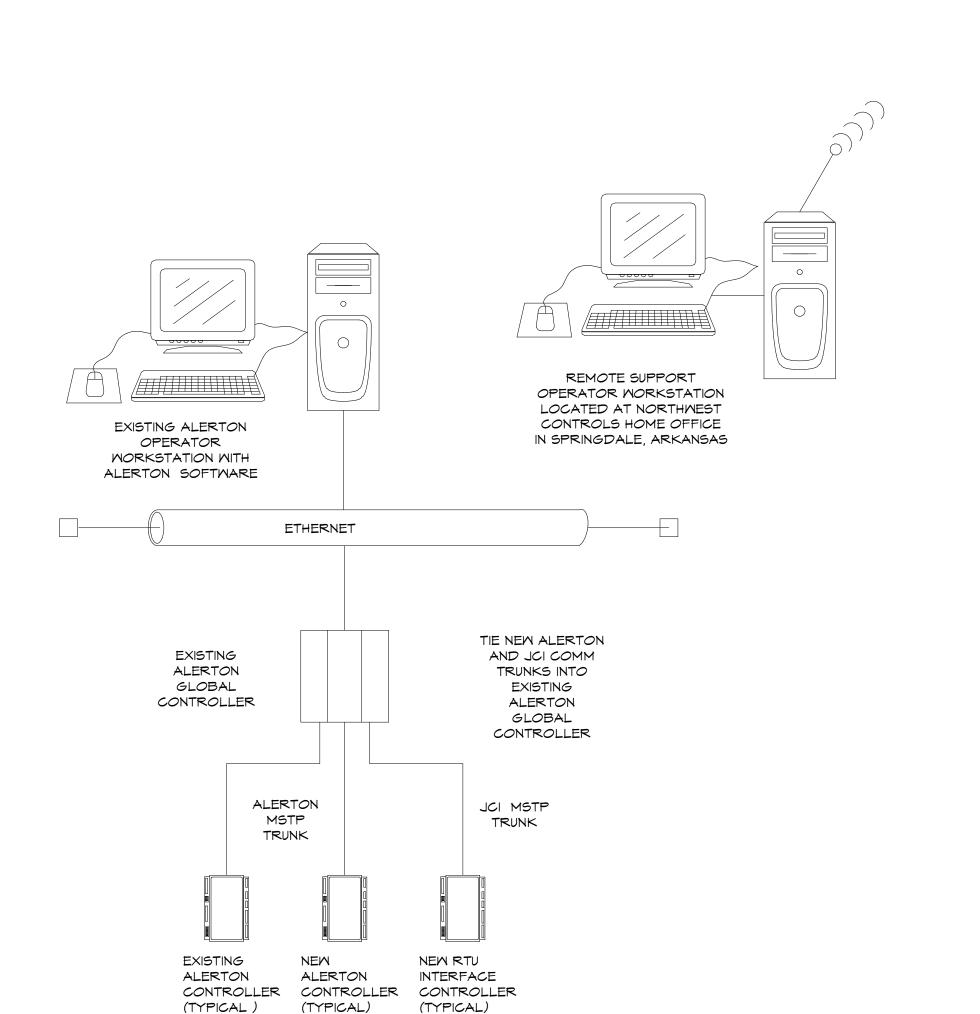
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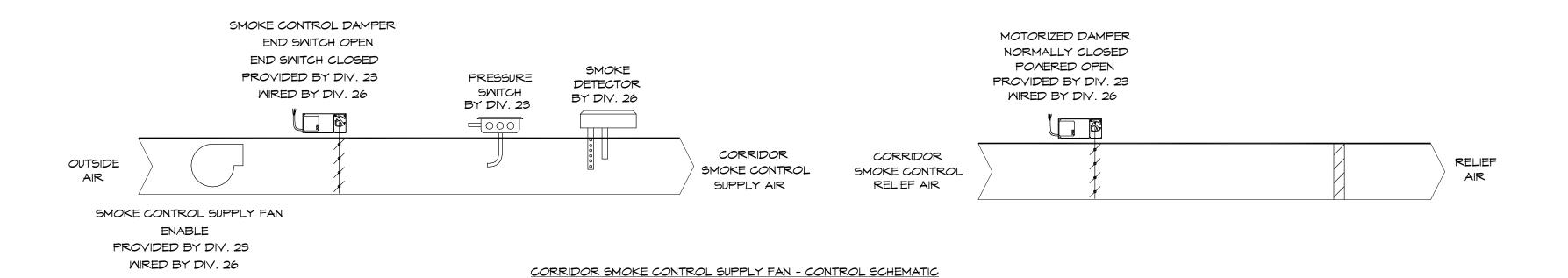
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SMOKE CONTROL/FIREMAN'S OVERRIDE PANEL SEQUENCE OF OPERATION:

THIS CONTROL SEQUENCE SHALL BE PROVIDED BY SMOKE CONTROL SYSTEM CONTRACTOR. COORDINATE ALL WORK WITH CONTROL (WHERE APPLICABLE), ELECTRICAL, FIRE ALARM, AND TEST AND BALANCE CONTRACTORS AND MECHANICAL AND ELECTRICAL EQUIPMENT VENDORS FOR A FULLY FUNCTIONAL CONTROL SYSTEM.

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THE MECHANICAL CONTRACTOR WILL PROVIDE DIFFERENTIAL PRESSURE SWITCH IN THE SMOKE CONTROL SUPPLY AND EXHAUST AIR DUCTS LOCATED BETWEEN THE AIR INLETS / OUTLETS AND SMOKE CONTROL DAMPERS TO PROVE SCSF AND SCEF OPERATION.

THERE WILL BE A HAND-OFF-AUTOMATIC SWITCH FOR EACH ZONE ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL PROVIDED FOR INDIVIDUAL CONTROL OF THE SMOKE CONTROL SUPPLY FAN IN THE ZONE.

THERE WILL BE INDICATOR LIGHTS ON THE FACE OF THE SMOKE CONTROL / FIREMAN'S OVERRIDE PANEL TO INDICATE EQUIPMENT STATUS, E.G. SMOKE CONTROL FANS ON, OFF, AUTO, OR FAULT, AND SMOKE CONTROL DAMPERS OPEN, CLOSED, OR FAULT. ANNUNCIATE FAULT CONDITION IF SMOKE CONTROL FAN STATUS OR IF ANY SMOKE CONTROL DAMPER END SWITCH DOES NOT MATCH ITS COMMANDED STATE. PROVIDE INDICATOR LAMP TEST SWITCH TO TEST CONDITION OF INDICATOR LAMPS. NORMAL OPERATION: SCSF HAND-OFF-AUTO SWITCH IN 'AUTO' POSITION:

THE FIRE ALARM SYSTEM UPON DETECTION OF SMOKE IN AN ADJACENT SMOKE ZONE, OR ACTIVATION OF MANUAL MATRIX, M3.2), E.G. DUCT SMOKE DETECTOR GOES INTO ALARM IN AN EXHAUST OR RETURN DUCT THAT SERVES THE SMOKE ZONE, OR ACTIVATION OF MANUAL PULL STATION IN THE SMOKE ZONE, SHALL SIGNAL THE SMOKE CONTROL SYSTEM. THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF. WHEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF ARE FULLY OPEN AND PROVED THROUGH THEIR END SWITCHES THE END SWITCH WILL START THE ASSOCIATED FAN. AT THE SAME TIME, THE MOTORIZED DAMPER IN THE RELIEF DUCT IS OPENED. AFTER THE SCSF DAMPER IS OPENED, IF SMOKE IS DETECTED IN ITS SUPPLY DUCT, INDICATING SMOKE OR FIRE FROM OUTSIDE, THE SCSF SHALL SHUT DOWN.

WHEN THE FIRE CONDITION IS CLEARED, THE FIRE ALARM SYSTEM SHALL SIGNAL THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF. WHEN THE SMOKE CONTROL DAMPERS ASSOCIATED WITH SCSF BEGIN TO CLOSE AS PROVED THROUGH THEIR END SMITCHES THE END SMITCH MILL SHUT DOWN THE ASSOCIATED FAN.

FIREMAN'S OVERRIDE CONDITIONS:

SCSF IS OVERRIDDEN OFF, HAND-OFF-AUTO SWITCH IS IN 'OFF' POSITION

SCSF SMOKE CONTROL DAMPER AND RELIEF AIR DAMPER ARE DRIVEN CLOSED AND SCSF SHALL BE OVERRIDDEN OFF

SCSF IS OVERRIDDEN ON, HAND-OFF-AUTO SWITCH IS IN THE 'ON' POSITION.

SCSF SMOKE CONTROL DAMPER AND RELIEF AIR DAMPER ARE DRIVEN OPEN AND SCSF IS OVERRIDDEN ON. SMOKE CONTROL DAMPER END SMITCH CONTROL OF THE SCSF IS OVERRIDDEN.

3 SMOKE ZONE 9 - CONTROL DIAGRAM



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MARK	MFG.	MODEL #	TONS	TMBH	SMBH	EER	CFM	MG	(MBH)	(MBH)	AFUE %	(CFM)	HP	M.C.A.	MOP	YOLT/PH/HZ	(lbs)	UNIT (lbs)	(lbs)	REMARKS/ ACCESSORIES
RTU-67	YORK	KJ061N12B4	5	65.3	46.7	12.5	2000	0.5	120	97	80	400	1-1/2	19 A	25 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-68	YORK	KJ061N12B4	5	65.3	46.7	12.5	2000	0.5	120	97	80	360	1-1/2	19 A	25 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-69	YORK	KJ061N12B4	5	65.3	46.7	12.5	2000	0.5	120	97	80	360	1-1/2	19 A	25 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-70	YORK	KJ037N06B4	3	38	27.5	12.5	1200	0.5	60	49	80	200	1-1/2	15 A	20 A	460 / 3 / 60	0	1000	1000	1, 2, 3, 4, 5, 6, 7, 8
RTU-71	YORK	KJ037N06B4	3	38	27.5	12.5	1200	0.5	60	49	80	200	1-1/2	15 A	20 A	460 / 3 / 60	0	1000	1000	1, 2, 3, 4, 5, 6, 7, 8
RTU-72	YORK	KJ061N12B4	5	65.3	46.7	12.5	2000	0.5	120	97	80	360	1-1/2	19 A	25 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-73	YORK	KJ061N12B4	5	65.3	46.7	12.5	2000	0.5	120	97	80	360	1-1/2	19 A	25 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-74	YORK	KJ049N08B4	4	51.4	36.9	12.3	1600	0.5	80	65	80	300	1-1/2	17 A	20 A	460 / 3 / 60	0	1250	1250	1, 2, 3, 4, 5, 6, 7, 9
RTU-75	YORK	KJ037N06B4	3	38	27.5	12.5	1200	0.5	60	49	80	200	1-1/2	15 A	20 A	460 / 3 / 60	0	1000	1000	1, 2, 3, 4, 5, 6, 7, 8
RTU-76	YORK	KJ037N06B4	3	38	27.5	12.5	1200	0.5	60	49	80	200	1-1/2	15 A	20 A	460 / 3 / 60	0	1000	1000	1, 2, 3, 4, 5, 6, 7, 8
RTU-77	YORK	PCG4A24	2	24.7	18.3	11	800	0.5	50	40	80	150	1/3	17 A	25 A	208 / 1 / 60	125	320	445	1, 2, 4, 8
RTU-78	YORK	KJ037N06B4	3	38	27.5	12.5	1200	0.5	60	49	80	240	1-1/2	15 A	20 A	460 / 3 / 60	150	1000	1150	1, 2, 3, 4, 5, 6, 7, 8
RTU-79	YORK	KJ090N18P4	7.5	94.5	67.7	12.2	3000	0.5	180	146	80	600	1-1/2	26 A	30 A	460 / 3 / 60	150	1350	1500	1, 2, 3, 4, 5, 6, 7, 8
RTU-80	YORK	KJ078N12P4	6	78.3	54	12	2400	0.5	120	97	80	480	1-1/2	23 A	25 A	460 / 3 / 60	150	1150	1300	1, 2, 3, 4, 5, 6, 7, 8
RTU-81	YORK	KJ078N12P4	6	78.3	54	12	2400	0.5	120	97	80	480	1-1/2	23 A	25 A	460 / 3 / 60	150	1150	1300	1, 2, 3, 4, 5, 6, 7, 8

			UNIT	HEAT	ER SCI	HEDU	ILE		
				HEATING	5		ELEC	TRICAL	
MARK	MFG	MODEL	INPUT MBH	OUTPUT MBH	TYPE OF FUEL	MCA	MOP	VOLT/PH/H7	ACCESSORIES
UH-1	REZNOR	UDXC-100	100	87.15	GAS	4.3	15	115 / 1 / 60	1, 2, 3
UH-2	REZNOR	UDXC-100	100	87.15	GAS	4.3	15	115 / 1 / 60	1, 2, 3

### 1. PROVIDE THERMOSTAT WITH UNIT

PROVIDE HEATER MOUNTING BRACKET FOR MOUNTING TO ROOF STRUCTURE.
 PROVIDE WITH FACTORY CONCENTRIC VENT KIT.

#### REMARKS/ACCESSORIES

- 1. PROVIDE FACTORY INSTALLED BACNET CONTROLLER TO CONNECT TO BAS.
- 2. PROVIDE 2" MERV 8 PLEATED MEDIA FILTER.
- 3. PROVIDE FACTORY HOT GAS REHEAT. 4. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS.
- 5. PROVIDE HINGED ACCESS DOORS.
- 6. PROVIDE 100% ECONOMIZER WITH DUAL ENTHALPY CONTROL AND BAROMETRIC RELIEF. 7. PROVIDE NON-FUSED DISCONNECT SMITCH AND NON-POWERED CONVENIENCE OUTLET.
- 8. PROVIDE 14" ROOF CURB.
- 9. PROVIDE HORIZONTAL DISCHARGE.

				LOUVER	SCHEDULE			
MARK	CFM	NECK SIZE	MFG	MODEL	TYPE	FINISH	FRAME	ACCESSORIES
EL-1	300	16" X 16"	GREENHECK	ESD-635	EXHAUST LOUVER	PRIMED	FLANGED	1, 2
EL-2	1000	32" X 24"	GREENHECK	ESD-635	EXHAUST LOUVER	PRIMED	FLANGED	1, 2
EL-3	1000	32" X 24"	GREENHECK	ESD-635	EXHAUST LOUVER	PRIMED	FLANGED	1, 2
IL-1	3500	48" X 32"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4
IL-2	200	16" X 16"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4
IL-3	200	16" X 16"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4
IL-4	200	16" X 16"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4
IL-5	1000	36" X 24"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4
IL-6	200	16" X 16"	GREENHECK	EAD-635	INTAKE LOUVER	PRIMED	FLANGED	1, 2, 3, 4

### REMARKS/ACCESSORIES

- 1. ALUMINUM CONSTRUCTION.
- 2. PROVIDE STEEL BIRD SCREEN. 3. PROVIDE BELIMO AF-120 120 VOLT TWO POSITION SPRING RETURN ACTUATOR AND LINKAGE. PROVIDE 110V ACTIVATION WITH AUXILIARY CONTACTS.
- 4. MOTORIZED DAMPER TO INTERLOCK WITH ASSOCIATED EXHAUST FANS AS INDICATED ON PLANS.

			SI	JPPL`	Y FAN SCI	HEDULE			
MARK	MFG.	MODEL	CFM	ESP.	H.P./WATTS	VOLT/PH/HZ	SONE	RPM	REMARKS / ACCESSORIES
SCSF-1	GREENHECK	AS-16-420-A	1770	0.25	1/2	115 / 1 / 60	19.5	1750	1, 2, 3, 4
SCSF-2	GREENHECK	AS-16-420-A	1770	0.25	1/2	115 / 1 / 60	19.5	1750	1, 2, 3, 4
SCSF-3	GREENHECK	AS-12-420-A	615	0.25	1/4	115 / 1 / 60	14.6	1750	1, 2, 3, 4
505F-4	GREENHECK	AS-12-420-A	615	0.25	1/4	115 / 1 / 60	14.6	1750	1, 2, 3, 4
SCSF-5	GREENHECK	AS-12-433-A	960	0.25	1/4	115 / 1 / 60	13.6	1750	1, 2, 3, 4
SCSF-6	GREENHECK	AS-12-433-A	960	0.25	1/4	115 / 1 / 60	13.6	1750	1, 2, 3, 4
SCSF-7	GREENHECK	AS-16-420-A	1770	0.25	1/2	115 / 1 / 60	19.5	1750	1, 2, 3, 4
SCSF-8	GREENHECK	AS-16-420-A	1770	0.25	1/2	115 / 1 / 60	19.5	1750	1, 2, 3, 4
5C5F-9	GREENHECK	AS-16-420-A	1000	0.5	1/2	115 / 1 / 60	13.6	1750	1, 2, 3, 4
SCSF-10	GREENHECK	AS-10-420-A	270	0.25	1/8	115 / 1 / 60	10.2	1750	1, 2, 3, 4
SCSF-11	GREENHECK	AS-12-420-A	370	0.25	1/4	115 / 1 / 60	14.2	1750	1, 2, 3, 4

#### REMARKS/ACCESSORIES

- 1. PROVIDE FACTORY BACK DRAFT DAMPER.
- 2. PROVIDE DIRECT DRIVE MOTOR WITH FAN SPEED CONTROLLER. 3. INTERLOCK SUPPLY FAN WITH SMOKE DETECTOR BY ELECTRICAL CONTRACTOR.
- 4. PROVIDE FACTORY ROOF CURB.

			HEA.	TING			
1ARK	MFG	MODEL	INPUT MBH/KM	TYPE OF FUEL	MCA	VOLT/PH/HZ	ACCESSORIES
EH-1	MARKEL	F3422T	2 KW	ELECTRIC	9.6	208 / 1 / 60	1, 2, 3
EH-2	MARKEL	F3422T	2 KW	ELECTRIC	9.6	208 / 1 / 60	1, 2, 3
EH-3	MARKEL	F3422T	2 KW	ELECTRIC	9.6	208 / 1 / 60	1, 2, 3
EH-4	MARKEL	J3425T	5 KM	ELECTRIC	13.9	208 / 3 / 60	1, 2, 3
EH-5	MARKEL	F3423	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 3
EH-6	MARKEL	F3483A1	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 4, 5
EH-7	MARKEL	F3483A1	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 4, 5
EH-8	MARKEL	F3483A1	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 4, 5
EH-9	MARKEL	F3483A1	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 4, 5
EH-10	MARKEL	F3483A1	3 KM	ELECTRIC	14.4	208 / 1 / 60	1, 2, 4, 5
EH-11	MARKEL	F3423	3 KW	ELECTRIC	14.4	208 / 1 / 60	1, 2, 3

1. PROVIDE BUILT IN THERMOSTAT WITH TAMPER PROOF THERMOSTAT COVER.

- 2. PROVIDE FACTORY DISCONNECT
- 3. UNIT IS TO BE WALL MOUNTED. PROVIDE NECESSARY HARDWARE.
- 4. HEATER IS TO BE MOUNTED IN LAY-IN CEILING. PROVIDE NECESSARY HARDWARE. 5. PROVIDE LINE-VOLTAGE THERMOSTAT. TIE EH-6,7,8,9,10 TO SAME THERMOSTAT.

MARK	MFG.	MODEL	CFM	ESP. IN. WC	H.P./WATTS	VOLT/PH/HZ	INTERLOCK	SONE	RPM	MEIGHT (LBS)	REMARKS / ACCESSORIES
EF-49	GREENHECK	CUE-090-VG	300	0.25	1/10	115 / 1 / 60	RTU-68	4.3	1062	50	1, 2, 9
EF-50	GREENHECK	CUE-090-VG	300	0.25	1/10	115 / 1 / 60	RTU-69	4.3	1062	50	1, 2, 9
EF-51	GREENHECK	SP-A90	75	0.4	1/8	115 / 1 / 60	LIGHT-SMITCH	_	886	30	1, 2, 3, 5
EF-52	GREENHECK	CUE-070-VG	150	0.25	1/15	115 / 1 / 60	RTU-71	2.5	1321	50	1, 2, 9
EF-53	GREENHECK	CUE-090-VG	300	0.25	1/10	115 / 1 / 60	RTU-72	4.3	1062	50	1, 2, 9
EF-54	GREENHECK	CUE-090-VG	300	0.25	1/10	115 / 1 / 60	RTU-73	4.3	1062	50	1, 2, 9
EF-55	GREENHECK	CUE-070-VG	200	0.25	1/15	115 / 1 / 60	T-STAT	3.3	1404	50	1, 2, 6
EF-56	GREENHECK	CUE-070-VG	150	0.25	1/15	115 / 1 / 60	RTU-70	2.5	1321	50	1, 2, 9
EF-57	GREENHECK	SP-A90	75	0.4	1/4	115 / 1 / 60	LIGHT-SMITCH	_	886	30	1, 2, 3, 5
EF-58	GREENHECK	CSP-A390-VG	150	0.5	31 M	115 / 1 / 60	RTU-76	2.1	1244	30	1, 2, 4, 9
EF-59	GREENHECK	CSP-A390-VG	150	0.5	31 M	115 / 1 / 60	RTU-75	2.1	1244	30	1, 2, 4, 9
EF-60	GREENHECK	CSP-A390-VG	200	0.5	40 M	115 / 1 / 60	T-STAT	2.2	1263	30	1, 2, 6
EF-61	GREENHECK	SP-A90	75	0.25	14 M	115 / 1 / 60	LIGHT-SMITCH	0.4	886	30	1, 2, 3, 5
EF-62	GREENHECK	CSP-A390-VG	200	0.5	40 M	115 / 1 / 60	T-STAT	2.2	1263	30	1, 2, 6
EF-63	GREENHECK	G-095-VG	300	0.5	1/6	115 / 1 / 60	T-STAT	7.4	1359	75	1, 2, 6, 7
EF-64	GREENHECK	G-080-VG	150	0.5	1/10	115 / 1 / 60	LIGHT-SMITCH	7.2	1461	30	1, 2, 3, 7
EF-65	GREENHECK	6-080-VG	150	0.5	1/10	115 / 1 / 60	EX. RTU-14	7.2	1461	30	1, 2, 7
EF-66	GREENHECK	6-095-V6	200	0.5	1/6	115 / 1 / 60	CONTINUOUS	7.2	1330	75	1, 2, 7
EF-67	GREENHECK	5Q-100-VG	1000	0.5	1/4	115 / 1 / 60	T-STAT	8.8	1527	75	1, 2, 4, 6
EF-68	GREENHECK	5Q-100-VG	1000	0.5	1/4	115 / 1 / 60	T-STAT	8.8	1527	75	1, 2, 4, 6
EF-69	GREENHECK	CUBE-100HP	340	0.5	1/4	115 / 1 / 60	CONTINUOUS	5.7	1325	85	1, 7, 8, 9
EF-70	GREENHECK	G-095-VG	300	0.5	1-6	115 / 1 / 60	LIGHT-SMITCH	7.4	1359	75	1, 2, 3, 7
EF-71	GREENHECK	CUBE-100HP	460	0.5	1/4	115 / 1 / 60	CONTINUOUS	7.5	1504	85	1, 7, 8, 9
EF-72	GREENHECK	G-080-VG	150	0.5	1/10	115 / 1 / 60	LIGHT-SMITCH	7.2	1461	30	1, 2, 3, 7
EF-73	GREENHECK	SP-A90	75	0.25	14 M	115 / 1 / 60	LIGHT-SMITCH	0.4	886	30	1, 2, 3, 5
EF-74	GREENHECK	SP-A90	75	0.25	14 M	115 / 1 / 60	LIGHT-SWITCH	0.4	886	30	1, 2, 3, 5
EF-75	GREENHECK	AER-20-02-0610-VG	1750	0.5	3/4	115 / 1 / 60	T-STAT / HOA SMITCH	15.2	1319	80	1, 2, 6, 10, 11
EF-76	GREENHECK	AER-20-02-0610-VG	1750	0.5	3/4	115 / 1 / 60	T-STAT / HOA SMITCH	15.2	1319	80	1, 2, 6, 10, 11
5CEF-1	GREENHECK	CUBE-180	2200	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	7.0	702	120	1, 7, 8, 9
SCEF-2	GREENHECK	CUBE-180	2200	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	10.2	887	120	1, 7, 8, 9
CEF-3	GREENHECK	CUBE-120	800	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	5.8	880	80	1, 7, 8, 9
CEF-4	GREENHECK	CUBE-120	800	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	5.8	880	80	1, 7, 8, 9
OCEF-5	GREENHECK	CUBE-140	1250	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	7.0	861	80	1, 7, 8, 9
CEF-6	GREENHECK	CUBE-140	1250	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	7.0	861	80	
BCEF-7	GREENHECK	CUBE-180	2200	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR		887	120	1, 7, 8, 9
SCEF-8	GREENHECK	CUBE-180	2200	0.25	1/4	115 / 1 / 60	SMOKE DETECTOR	10.2	887	120	1, 7, 8, 9 1, 7, 8, 9

### REMARKS/ACCESSORIES

- 1. PROVIDE FACTORY BACK DRAFT DAMPER.
- 2. PROVIDE DIRECT DRIVE MOTOR WITH FAN SPEED CONTROLLER. 3. INTERLOCK EXHAUST FAN WITH LIGHT SMITCH BY ELECTRICAL CONTRACTOR.
- 4. PROVIDE FACTORY CEILING HUNG VIBRATION ISOLATORS.
- 5. PROVIDE STANDARD GRILLE CONSTRUCTION. 6. PROVIDE LINE VOLTAGE THERMOSTAT.
- 7. PROVIDE FACTORY 14 INCH ROOF CURB. 8. PROVIDE UL LISTED FAN FOR SMOKE CONTROL SYSTEMS. PROVIDE WITH 1.5X BELTS.
- 9. INTERLOCK FAN WITH SMOKE CONTROL SYSTEM. REFER TO CONTROL DETAILS FOR INFORMATION.
- 10. PROVIDE WEATHER HOOD 11. PROVIDE MOTOR GUARD

					MINISPLIT	SCH	EDULE	=			
MARK	MFG		CONNECT ED	TON(S)	CFM	coc	PLING	HEATING		RICAL (POMERED I OUTDOOR UNIT)	ACCESSORIES
14174171	1911	MODEL	OUTDOO R UNIT	1014(3)	(Lo-M1-M2-Hi)	TMBH	SMBH		M.C.A.	VOLT / PH / HZ	ACCESSORIES
MS1-1	DAIKIN	FTKO9NMVJU	M5,CU-1	3/4 TON	145-194-279-381	9	7.04	9.45	0.11	208-230 / 1 / 60	1, 2, 3, 4
M51-2	DAIKIN	FTKO9NMVJU	MS,CU-1	3/4 TON	145-194-279-381	9	7.04	9.45	0.11	208-230 / 1 / 60	1, 2, 3, 4

REMARKS/ACCESSORIES 1. PROVIDE WIRELESS THERMOSTAT

2. PROVIDE FACTORY WALL MOUNTING HARDWARE. 3. INSTALL REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. 4. POWERED FROM OUTDOOR UNIT

			MINIS	SPLIT C	ONDE	ENSER		
MARK	MFG		COOLING		ELE		(SINGLE POINT ECTION)	ACCESSORIES
		MODEL	TMBH	TMBH	M.C.A.	M.O.P.	YOLT / PH / HZ	
M5,CU-1	DAIKIN	2MXS18NMVJUA	18	18.9	15.8	20	208-230 / 1 / 60	1, 2, 3, 4

## REMARKS/ACCESSORIES

- 1. PROVIDE HAIL GUARD 2. PROVIDE WIND BAFFLE KIT
- 3. INSTALL REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS.
- 4. PROVIDE LOW AMBIENT KIT

				T				T
MARK	CFM	NECK SIZE	MFG.	MODEL	TYPE	FINISH	FRAME	REMARKS/ ACCESSORIES
Α	50-100	6"Ф	TITUS	12X12 TM5	SUPPLY	MHITE	LAY-IN	<varies></varies>
В	50-100	6"Ф	TITUS	TMS	SUPPLY	MHITE	LAY-IN	1
C	105-200	8"Ф	TITUS	TMS	SUPPLY	MHITE	LAY-IN	1
D	225-300	10"Ф	TITUS	TMS	SUPPLY	MHITE	LAY-IN	1
E	400	12"Ф	TITUS	TMS	SUPPLY	MHITE	LAY-IN	1
F	100-150	12" X &"	TITUS	SG-SD	MAX SECURITY - SUPPLY	MHITE	SURFACE	1, 4
G	50	12" X 12"	TITUS	56-5D	MAX SECURITY - SUPPLY	MHITE	SURFACE	1, 4
Н	200-1200	22" X 22"	TITUS	355RL	RETURN	MHITE	LAY-IN	1, 3
L	75	12" X 12"	TITUS	56-5D	MAX SECURITY - EXHAUST	MHITE	SURFACE	1, 4, 5
K	75	12" X 12"	TITUS	50F	EXHAUST	MHITE	LAY-IN	1, 3
L	200-550	24" X 24"	TITUS	50F	EXHAUST	MHITE	LAY-IN	1, 3
М	1000-1600	48" X 24"	TITUS	355RL	RETURN	MHITE	LAY-IN	1, 3
N	50-100	12" X 8"	TITUS	272RL	SUPPLY	MHITE	SURFACE	1, 2, 3
0	350	12" X 12"	TITUS	SG-TDC	MIN. SECURITY - LATTICE FACE SUPPLY	MHITE	SURFACE	1, 5, 6
P	0-350	18"X18"	TITUS	56-5D	MAX SECURITY - SUPPLY	MHITE	SURFACE	1, 4
Q	200-1200	24" X 24"	TITUS	56-5D	MAX SECURITY - RETURN	MHITE	SURFACE	1, 4
R	0-350	30"x30"	TITUS	SG-SD	MAX SECURITY - SUPPLY	MHITE	SURFACE	1, 4
5	550-1000	22"x22"	TITUS	50F	SUPPLY	MHITE	LAY-IN	1, 3
Т	2200	30"x30"	TITUS	56-5D	MAX SECURITY - EXHAUST	MHITE	SURFACE	1, 4
U	800	18"X18"	TITUS	56-5D	MAX SECURITY - EXHAUST	MHITE	SURFACE	1, 4
V	1640	30" × 30"	TITUS	56-5D	MAX SECURITY - RETURN	MHITE	SURFACE	1, 4
M	85-100	12" X 8"	TITUS	5G-5D	MAX SECURITY - EXHAUST	MHITE	SURFACE	1, 4

### REMARKS/ACCESSORIES

- STEEL CONSTRUCTION. 2. PROVIDE DOUBLE DIRECTIONAL BLADES.
- 3. PROVIDE RAPID-MOUNT FRAME FOR GRILLES IN GYPSUM CEILINGS.
- 4. PROVIDE MAXIMUM SECURITY GRILLE. 5. PROVIDE MINIMUM SECURITY GRILLE. 6. PROVIDE OPPOSED BLADE DAMPERS.

REFER TO SHEET M1.1 FOR HVAC LEGEND, GENERAL AND KEYED NOTES. REFER TO SHEET M2.1 FOR HVAC PLANS. REFER TO SHEET M3.1 FOR HVAC DETAILS.

**HSA**Engineering 479 / 452 / 8922 office Fort Smith, AR 72916 HSAConsultants.com

HSA JOB # 23-196a

ARKANSAS

RECISTERED PHOFESSIONAL ENGINEER No.14057

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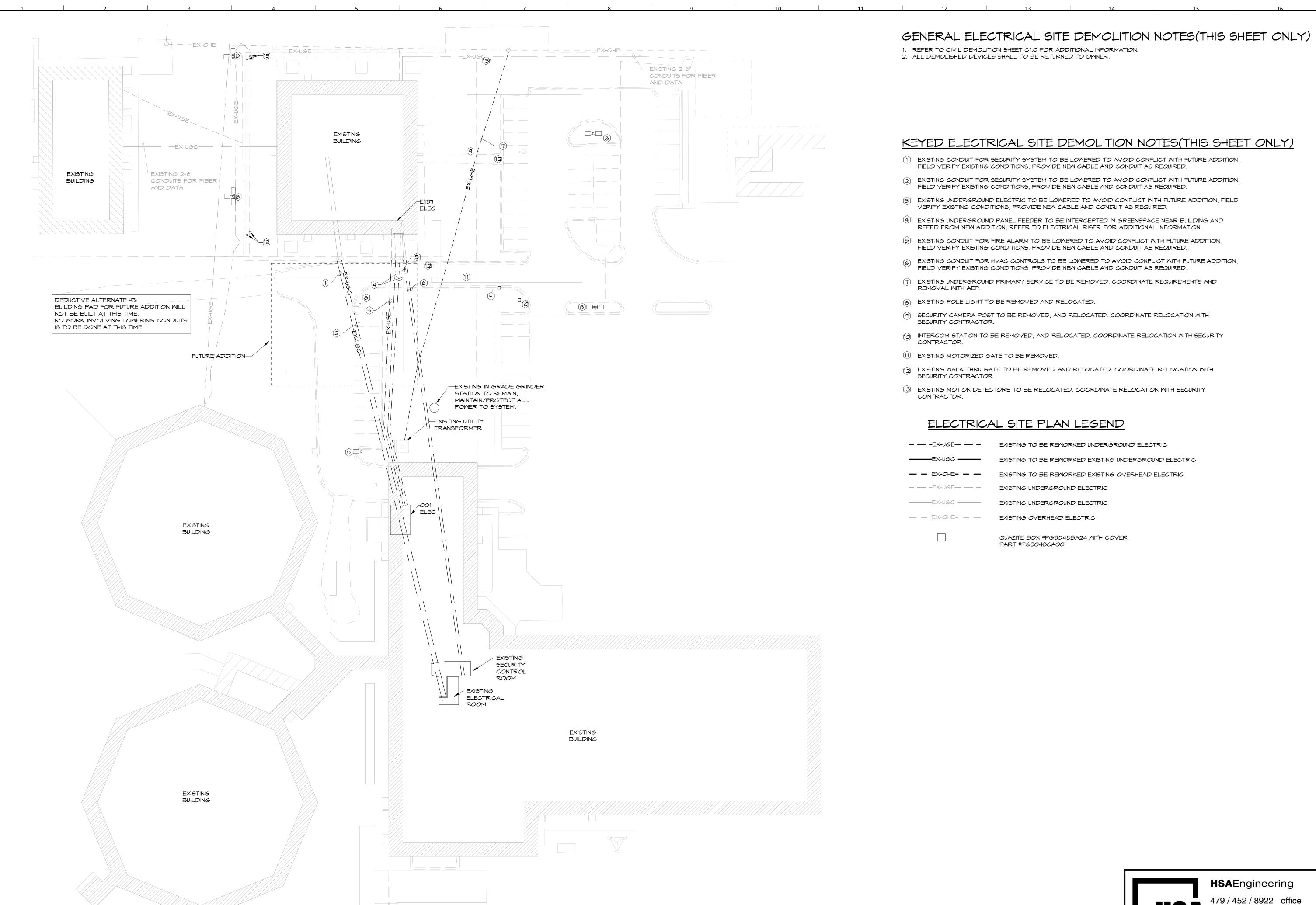
NEW

**ADDITION AND** 

08/30/2024

10/04/2024

**HVAC SCHEDULES** 



ELECTRICAL SITE DEMOLITION PLAN

REGISTERED PROFESSIONAL ENGINEER

No.16929

No.16929

No.16929

No.2024

S I www.hjarch.com

ASSOCIA Ogers, Arkansas 72758 I (479) 464-4965 I www.hja

5201 W Village Parkway, Suite 3001 Rogers, Arkansas 72

AN ADDITION AND REMODEL FOR Washington Co. Covid Mitigation

DRAWN BY.
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CHECK BY.
MTR

08/30/2024

PROJECT NO. **2333** 

REVISION DATES 10/04/2024

ELECTRICAL SITE DEMOLITION PLAN

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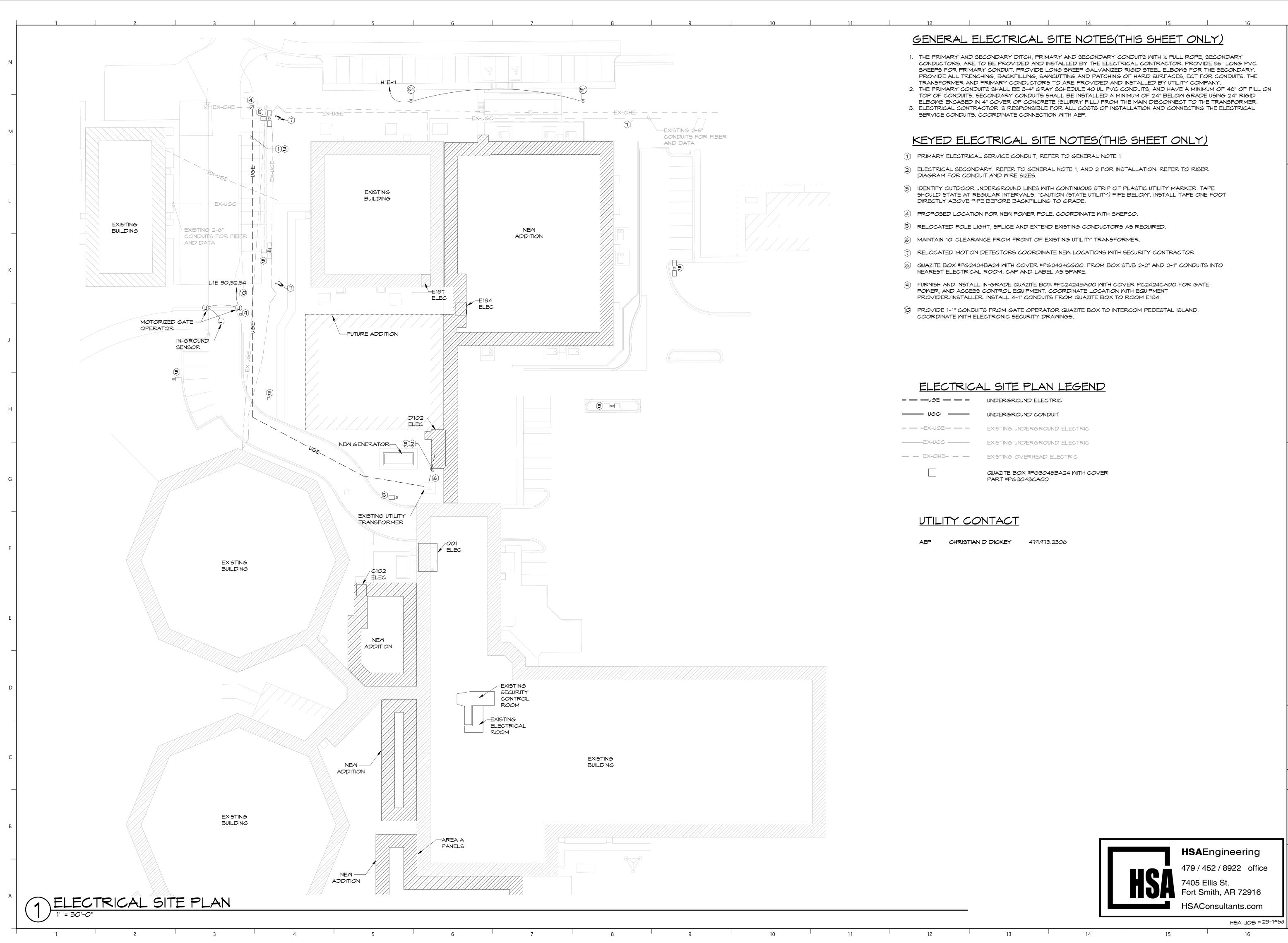
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ASSIGNATION Straight 3001 Bodger Arkanga 27758 1479 464

AN ADDITION AND REMODEL FOR Washington Co. Covid Mitigation

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ISSUE DATE

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ELECTRICAL SITE PLAN

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DUPLEX RECEPTACLE GROUND FAULT NEMA 5-20R. TAMPER RESISTANT, COMMERCIAL SPECIFICATION GRADE.

DUPLEX RECEPTACLE GROUND FAULT TYPE GF5362, MOUNTED WITH ROOF TOP HYAC UNIT DISCONNECT

TELEVISION CABLE OUTLET VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH THE OWNER PRIOR TO ROUGH-IN REQUIRES RECEPTACLE. TWO 3/4 CONDUITS TO ABOVE ACCESSIBLE CEILING. PROVIDE 3 GANG BACK BOX ARLINGTON #TVBS507.

WIREMOLD TYPE "RFB6E-OG" FLOOR BOX WITH TWO DUPLEX RECEPTACLE, AND TWO COMMUNICATION BRACKETS TO MATCH OMNER'S DATA EQUIPMENT. INSTALL ONE 1" CONDUIT FOR POWER AND ONE 1" CONDUIT FOR DATA. INCLUDE ONE BRASS COVER, TYPE 8CT FLUSH COVER, AT EACH LOCATION. SET BOX HEIGHT WITH FLOOR TYPE. COVER IS TO BE FLUSH IN FLOOR. (FOR BARE/POLISHED CONCRETE FLOOR PROVIDE RFB6E CONCRETE EDGE BARRIER KIT).

MIRELESS INTERNET EQUIPMENT FURNISHED AND INSTALLED BY THE OWNER. PROVIDE SINGLE GANG JUNCTION BOX AND 34" CONDUIT. DATA: REQUIRES 4" SQUARE OUTLET BOX, APPROPRIATE

LOCATION ABOVE A REMOVABLE CEILING TILE. TELEPHONE: REQUIRES 4" SQUARE OUTLET BOX, APPROPRIATE PLASTER RING, AND 3/4" C. STUBBED TO AN ACCESSIBLE LOCATION ABOVE A REMOVABLE CEILING TILE. NUMBER DENOTES THE NUMBER OF TELEPHONE

PORTS/CABLES TO BE PROVIDED.

PLASTER RING, AND 1" C. STUBBED TO AN ACCESSIBLE

FLUSH MOUNTED JUNCTION BOX. YERIFY MOUNTING HEIGHT WITH MILLWORK DETAILS AND/OR THE OWNER'S REPRESENTATIVE. AT EQUIPMENT LOCATIONS VERIFY THE EXACT LOCATION WITH THE EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.

FUSED/NON-FUSED DISCONNECT-FUSE ALL EQUIPMENT PER MANUFACTURER RECOMMENDATION FOR THE ACTUAL EQUIPMENT FURNISHED. FURNISH NEMA-4X IN THE KITCHEN. MOUNT DISCONNECT FOR HVAC CONDENSER UNITS WITH TOP OF SWITCH AT 36" A.F.F. COMBINATION MAGNETIC STARTER/FUSIBLE DISCONNECT SWITCH

FUSE PER EQUIPMENT FURNISHED. MOTOR - VERIFY THE SIZE WITH ACTUAL EQUIPMENT FURNISHED. NUMBER REPRESENTS HORSE POWER RATING

MOTOR RATED SMITCH USED FOR EQUIPMENT DISCONNECTING MEANS. SINGLE PHASE: PROVIDE WITH THERMAL OVERLOAD SIZED PER MOTOR LOAD.

SWITCH TYPE 1221 ("3" INDICATES 3-WAY SWITCH, "D" INDICATES DIMMER COORDINATE WITH FIXTURE/LAMP TYPE AND CIRCUIT

WALL MOUNTED DUAL TECHNOLOGY MOTION SENSOR SWITCH

WIRE PER MANUFACTURERS RECOMMENDATION. PROVIDE CONTACTORS TO CONTROL EXHAUST FAN WITH LIGHTS. WALL MOUNTED PASSIVE INFRARED COMBINATION MOTION SENSOR SMITCH AND SINGLE POLE WALLBOX SLIDE DIMMER. WIRE PER MANUFACTURERS RECOMMENDATION. PROVIDE CONTACTORS TO CONTROL EXHAUST FAN WITH LIGHTS.

LEVITON OSD10 OR EQUAL "OS" - CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR PROVIDE AND INSTALL THE APPROPRIATE POWER PACK. COORDINATE SWITCHING WITH ACTUAL MOTION SENSOR USED COORDINATE LOCATION AND NUMBER WITH ACTUAL MOTION SENSOR USED. WIRE PER MANUFACTURERS RECOMMENDATION PROVIDE OCCUPANCY SENSOR WHICH IS THE CORRECT TYPE FOR THE SPACE. PROVIDE CONTACTORS TO CONTROL

EXHAUST FAN WITH LIGHTS. "OS" - WALL MOUNTED DUAL TECHNOLOGY MOTION SENSOR PROVIDE AND INSTALL THE APPROPRIATE POWER PACK. COORDINATE SMITCHING MITH ACTUAL MOTION SENSOR USED COORDINATE LOCATION AND NUMBER WITH ACTUAL MOTION SENSOR USED. WIRE PER MANUFACTURERS RECOMMENDATION PROVIDE OCCUPANCY SENSOR WHICH IS THE CORRECT TYPE

FOR THE SPACE. EXIT LIGHT - ARROW DENOTES INCLUSION OF ARROW ON LENS. CONTRACTOR TO COORDINATE PROPER MOUNTING DETAILS. TIME CLOCK: INTERMATIC #ET8215C FOR LIGHTING CONTROL

APPLICATIONS. INTERMATIC #T2005 FOR CIRCULATION PUMPS.

LIGHTING CONTACTOR-SQUARE D #8903. PHOTO-ELECTRIC CELL: EQUAL TO INTERMATIC NO. K4136M.

THERMOSTAT, MOUNT. @ 48" A.F.F TO CENTER OF BOX (NUMBER ①F-1,2

SENSOR, MOUNT @ 54" TO CENTER IN SEPARATE SINGLE GANG BOX. 9002

GENERATOR ANNUNCIATOR PANEL

BUILDING AUTOMATION SYSTEM; PROVIDED BY MECHANICAL CONTRACTOR, CONNECTIONS BY ELECTRICAL CONTRACTOR.

PUSH BUTTON, COORDINATE TYPE WITH EQUIPMENT

PUSH BUTTON FOR EMERGENCY SHUT OFF

 $_{f DETAIL}$  NUMBER SHEET NUMBER

#### <u>LEGEND(CONT.</u>

ELECTRICAL PANEL. DRY TYPE TRANSFORMER-480/120-208 VOLTS. PROVIDE VIBRATION-ISOLATION MOUNTING PADS.

BRANCH CIRCUIT HOMERUN. PANEL AND CIRCUIT NUMBER

SPRINKLER SYSTEM FLOW AND TAMPER SMITCHES. FS TS DUCT DETECTOR-FURNISHED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE QUANTITY AND LOCATION WITH MECHANICAL PLANS.

FIRE ALARM CONTROL PANEL MOUNTED 50" A.F.F. FIRE ALARM ANNUNCIATOR PANEL MOUNTED 52" A.F.F. MANUAL PULL STATION MOUNTED MINIMUM OF 42"; MAXIMUM OF 48" A.F.F.

FIRE ALARM MODULE FOR CONTROL; PROVIDE ALL LOW VOLTAGE MIRING.

PHOTOELECTRIC SMOKE DETECTOR. WALL MOUNTED HEAT DETECTOR. WALL MOUNTED

PHOTOELECTRIC SMOKE DETECTOR. CEILING MOUNTED

HEAT DETECTOR. CEILING MOUNTED CEILING FIRE ALARM VISUAL STROBE LIGHT-WP DENOTES MEATHER RESISTANT. REQUIRES 4" SQUARE BOX MITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.

MALL MOUNT FIRE ALARM VISUAL STROBE LIGHT-MP DENOTES WEATHER RESISTANT. REQUIRES 4" SQUARE BOX WITH 34" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.

WALL MOUNT FIRE ALARM HORN/STROBE LIGHT-WP DENOTES MEATHER RESISTANT. REQUIRES 4" SQUARE BOX WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.

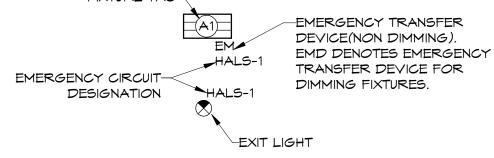
CEILING FIRE ALARM HORN/STROBE LIGHT-WP DENOTES MEATHER RESISTANT. REQUIRES 4" SQUARE BOX WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.

CEILING FIRE ALARM SPEAKER/STROBE LIGHT-WP DENOTES MEATHER RESISTANT. REQUIRES 4" SQUARE BOX MITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING; LETTER DENOTES VOICE (S) OR

WALL MOUNT FIRE ALARM SPEAKER/STROBE LIGHT-WP DENOTES WEATHER RESISTANT. REQUIRES 4" SQUARE BOX WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING. NUMBER DENOTES CANDELA RATING.

MOTORIZED DAMPER, INTERLOCKED WITH SMOKE CONTROL

#### LIGHTING FIXTURE NOTATION FIXTURE TAG-



SUBSCRIPTS

C = COORDINATE LOCATION WITH MILLWORK-MOUNTING HEIGHTS VARY. REFER TO THE ARCHITECTURAL MILLMORK DRAWINGS. W = WALL MOUNTED @ 48" A.F.F.-OR AS SHOWN.

GFI = GROUND FAULT CIRCUIT INTERRUPTER. MP = MEATHER RESISTANT RECEPTACLES ARE "GFI", WITH METAL MEATHER RESISTANT "WHILE-IN-USE" COVERS.

MM = MICRONAYE OVEN. GD = GARBAGE DISPOSER.

EM = FIXTURE CONTAINS EMERGENCY BATTERY PACK.

NL = UNSWITCHED EMERGENCY FIXTURE.

H = MOUNT HORIZONTALLY IN MILLWORK.

EC = ELECTRICAL CONTRACTOR

AFF = ABOVE FINISHED FLOOR AFG = ABOVE FINISHED GRADE

EMC = ELECTRIC MATER COOLER

EWH = ELECTRIC WATER HEATER

NTS = NOT TO SCALE

FVNR = FULL VOLTAGE NONREVERSING STARTER

#### GENERAL ELECTRICAL NOTES-ALL SHEETS THESE NOTES ARE ONLY A SUPPLEMENT TO THE SPECIFICATIONS

1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR A COMPLETE WORKING

IS CONCEALED IN PUBLIC PLACES.

2. THIS ELECTRICAL CONTRACTOR IS TO COMPLY WITH THE STATE OF ARKANSAS ADOPTED ADA ACCESSIBLE GUIDELINES IN REGARD TO ACCESSIBLE FEATURES

3. AT ALL MILLWORK LOCATIONS COORDINATE THE ELECTRICAL INSTALLATION WITH THE

ARCHITECTURAL DRAWINGS 4. PROVIDE FIRE RATED CAULKING WHERE CONDUIT OR OTHER ELECTRICAL ITEMS

PASS THOUGH FIRE-RATED WALLS, CEILINGS AND FLOORS. 5. INSTALL ALL CONDUIT STRAIGHT AND PARALLEL WITH THE BUILDING LINES. ALL CONDUIT

6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND FEE COSTS AND SHALL INCLUDE THESE COSTS IN THE BID PRICE FOR THIS PROJECT.

7. THE ENTIRE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES AND ORDINANCES. IF A CONFLICT IS FOUND BETWEEN APPLICABLE CODES, THE MORE STRINGENT SHALL APPLY. THE ELECTRICAL CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL APPLICABLE MUNICIPAL CODES AND ORDINANCES.

8. THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE THAT THE ELECTRICAL CONTRACTOR HAS FAMILIARIZED THEMSELVES WITH THE DRAWINGS, SPECIFICATION BOOK THE BUILDING SITE AND OTHER INFORMATION PRESENTED FOR THE CONSTRUCTION OF THIS PROJECT. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD A COMPLETE AND THOROUGH EXAMINATION BEEN MADE.

9. DO NOT SCALE DIRECTLY FROM THE ELECTRICAL DRAWINGS. REFER TO THE

ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION. 10. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MORK FOR MHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED. THIS CONTRACTOR GUARANTEE SHALL EXIST FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL OWNER ACCEPTANCE OF THE WORK AND SHALL APPLY TO ALL DEFECTS IN MATERIALS AND/OR WORKMANSHIP OF

11. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OR NATURE OF THE WORK REQUIRED, THE ELECTRICAL CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MILL BE MADE WITH OUT THE EXPRESSED WRITTEN CONSENT OF THE OWNER

12. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES TO INSURE THAT ALL CIRCUITS AND DEVICES ARE OF A PROPER SIZE FOR ACTUAL EQUIPMENT FURNISHED. THE CONSTRUCTION MANAGER AND ENGINEER SHALL BE NOTIFIED OF ANY CONFLICT WHICH CAUSES CHANGES TO ANY SYSTEM AS DESIGNED ON THESE DRAWINGS. FAILURE ON THE PART OF THE ELECTRICAL CONTRACTOR TO NOTIFY THE CONTSTRUCTION MANAGER OF SUCH CONFLICTS PLACES THE SUBSEQUENT CHANGES UPON THE ELECTRICAL CONTRACTOR.

13. CONDUIT FOR FLOOR BOXES IS TO BE INSTALLED UNDER THE SLAB, UP INTO THE BOTTOM OF THE FLOOR BOX. NO CONDUIT IS TO BE INSTALLED IN THE SLAB.

14. WHEN INSTALLING POLE BASES OR UNDERGROUND UTILITIES, FIELD VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES. EXACT LOCATION OF POLE BASES AND CONDUIT TO BE DETERMINED IN THE FIELD.

15. THE ELECTRICAL CONTRACTOR IS TO PROVIDE, AT YET TO BE DECIDED LOCATIONS, FIFTY (50) CONDUIT STUB-UPS, WHICH ARE TO INCLUDE 4" OUTLET BOXES, PLASTER RINGS, COVER PLATES, AND CONDUIT TO ABOVE THE CEILING, TWENTY FIVE ONE GANG AND TWENTY FIVE TWO GANG. IN ADDITION, PROVIDE FIFTY (50) SINGLE GANG STUB-UPS WHICH ARE TO INCLUDE 4" OUTLET BOXES, PLASTER RINGS, COVER PLATES, INCLUDING ONE RECEPTACLE OR SMITCH WITH 50 FEET OF CIRCUIT WIRING PER SINGLE GANG STUB-UF COMBINED TOTAL NUMBER OF STUB-UPS REQUIRED IS ONE HUNDRED (100).

16. ALLOM FOR THE ADDITION OF 10 (TEN) NEW EXIT LIGHTS WITH WIRING TO UNSWITCHED LIGHTING CIRCUIT

17. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING

1. ALL DEVICE PLATES ARE STAINLESS STEEL. COORDINATE COLOR OF DEVICES WITH THE ARCHITECT

2. ALL 20A 120V AND 250V NON-LOCKING TYPE RECEPTACLES, UNLESS OTHERWISE NOTED, SHALL BE TAMPER RESISTANT TYPE PER NEC 406.12.

3. WHERE DEVICES ARE SHOWN NEXT TO EACH OTHER, THEY ARE INTENDED TO BE GANGED. FIELD VERIFY ACTUAL SPACE AVAILABLE AND NOTIFY THE CONTRSTRUCTION MANAGER WHERE THERE ARE SPACE CONFLICTS.

4. LOW VOLTAGE WIRING IS TO BE ENCASED IN CONDUIT IN AREAS WITH NO CEILING. 5. RECEPTACLES FOR EQUIPMENT SUCH AS ELECTRIC WATER COOLERS SHALL BE LOCATED

IN THE WALL AT A LOCATION WHICH IS CONCEALED BY THE EQUIPMENT CABINET 6. ALL EMPTY CONDUITS ARE TO CONTAIN A NYLON PULL STRING. EMPTY CONDUITS 2" AND LARGER ARE TO BE SMABBED OUT AND LEFT WITH A NYLON PULL ROPE FOR

THE USE OF THE OWNER. 7. COORDINATE THE EXACT LOCATION OF ALL FLOOR BOXES WITH THE ARCHITECT

AND THE ARCHITECTURAL DRAWINGS.

8. COVER PLATES FOR EXTERIOR RECEPTACLES ARE TO BE METAL, WEATHER PROOF 9. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL DRIVER AND LAMP

COMBINATIONS THAT WILL PROVIDE THE OWNER WITH A FIVE YEAR WARRANTY ON 10. COORDINATE WITH THE CONSTRUCTION MANAGER AND THE INSULATION

CONTRACTOR TO HOLD THE BATT INSULATION AWAY FROM ALL LAY-IN FIXTURES. CLEARANCE SHOULD BE 3" ON ALL SIDES, AND TOTALLY CLEAR ON THE TOP. 11. ROOM NUMBERS USED IN THE PANEL SCHEDULES ARE TO REFLECT ROOM NUMBERS

BY THE OWNER. ARCHITECT WILL PROVIDE CROSS OVER LIST DURING THE 12. OCCUPANCY SENSORS ARE TO BE LAID OUT BY THE LIGHTING REPRESENTATIVE

FURNISHING THE EQUIPMENT HSA WILL PROVIDE AUTO CAD DRAWINGS AS NECESSARY ELECTRICAL CONTRACTOR RESPONSIBLE FOR LOCATION DETAILS AND MOUNTING. SENSORS SHOWN ARE FOR REFERENCE ONLY.

13. FURNISH 4-4" CONDUITS SLEEVES THOUGH FIRE WALLS UNLESS OTHERWISE NOTED. SEAL PER RATING OF THE WALL.

14. WHERE INDIRECT (SUSPENDED) LIGHTING IS USED, THE ELECTRICAL CONTRACTOR SHALL CONTRACT WITH THE CEILING CONTRACTOR TO PROVIDE THE NECESSARY TIES TO THE STRUCTURE ABOVE AT EACH POINT OF ATTACHMENT OF THE FIXTURE

HANGERS. 15. WIRE SIZES:

### MIRE SIZE 120V

A. #12 LESS THAN 75 FEET LESS THAN 150 FEET BETWEEN 150-300 FEET BETWEEN 300-450 FEET

MIRE SIZE 277V

BETWEEN 450-700 FEET

B. #10 BETWEEN 75-150 FEET C. #8 BETWEEN 150-250 FEET D. #6 BETWEEN 250-375 FEET

1. ALL FIRE ALARM OUTLET BOXES ARE TO BE PAINTED RED. 2. ALL NEW FIRE ALARM DEVICES ARE TO BE ADDRESSABLE TO EXISTING SYSTEM

3. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING A PLAN BOX NEXT TO THE FIRE ALARM CONTROL PANEL. COORDINATE EXACT SIZE AND LOCATION OF BOX WITH THE CITY FIRE MARSHAL PRIOR TO INSTALLATION. IT SHOULD BE LARGE ENOUGH FOR A SET OF SPRINKLER PLANS ALSO.

4. INSTALL FIRE ALARM SYSTEM PER N.F.P.A. AND ALL STATE AND LOCAL ORDINANCES. 5. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE FLOW AND TAMPER SMITCHES, WHILE THE FIRE ALARM CONTRACTOR IS

RESPONSIBLE FOR THE WIRING AND MODULES NECESSARY TO TIE THEM TO THE FIRE

ALARM SYSTEM, VERIFY COUNT WITH THE SPRINKLER CONTRACTOR 6. COORDINATE THE OVERALL FIRE ALARM SYSTEM WITH THE FIRE MARSHAL, FURNISHING ALL DEVICES AND SYSTEMS NECESSARY FOR A COMPLETE ACCEPTABLE SYSTEM. NO EXTRA CHARGES WILL BE ALLOWED, OUTSIDE OF THE CONTRACT PRICE. THE FIRE ALARM CONTRACTOR IS TO SUBMIT PLANS TO THE FIRE MARSHAL FOR FINAL APPROVAL PRIOR TO BEGINNING CONSTRUCTION.

7. DUCT DETECTORS ARE SUPPLIED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. IT IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR TO FURNISH ALL WIRING NECESSARY TO CONNECT THESE DEVICES TO THE FIRE ALARM SYSTEM. PROVIDE WITH REMOTE INDICATOR OR SEPARATELY ZONED COORDINATE QUANTITY AND LOCATION WITH THE MECHANICAL DRAWINGS.

#### GENERAL ELECTRICAL NOTES (CONTINUED.)

C. CONDUIT AND CABLE SYSTEM FOR DATA AND TELEPHONE WIRING. 1. CONDUIT FOR DATA AND TELEPHONE SYSTEM, TO INCLUDE SLEEVES IN FIRE WALLS.

2. DATA OUTLETS IN THE FLOOR REQUIRE 1" CONDUIT FROM EACH ONE TO A POINT ABOVE AN ACCESSIBLE CEILING. NO DAISY CHAINING OF DATA

OUTLETS/CONDUITS IS ALLOWED 3. CABLE IS NOT TO BE INSTALLED EXPOSED. VERIFY WITH MECHANICAL PLANS FOR PLENUM SPACES CABLE IN THESE AREAS IS PLENUM RATED.

ELECTRICAL CONTRACTOR IS TO PROVIDE, CONDUITS AND BACK BOXES REQUIRED. COORDINATE WITH LOCATIONS AND REQUIREMENTS WITH OWNER.

5. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL A SYSTEM OF CABLE TRAY AND J-HOOKS TO FACILITATE THE INSTALLATION OF LOW VOLTAGE WIRING. THE PLANS DEPICT SIZE AND ROUTING FOR CABLE TRAY, BUT FIELD MODIFICATIONS WILL BE NECESSARY. COORDINATE WITH ALL TRADES.

6. CABLE TRAY. PROVIDED BY THE E.C. INSTALL CONDUIT & PULL STRING OVER HARD CEILING. PROVIDE 4"X12" BASKET CABLE TRAY DOWN.

7. PROVIDE STI EZ PATH SERIES 33 OR EQUAL THROUGH ALL FIREMALLS AND MINIMUM OF FOUR PATHWAYS OUT OF IT ROOMS.

D. UNDERGROUND CONDUITS AND SLEEVES AS NECESSARY FOR DISTRIBUTION: 1. DO NOT ROUTE GROUPS OF CONDUITS OR SLEEVES ABOVE FOOTINGS UNLESS NOTED TO DO SO. IF CONFLICT OCCURS, CONSULT ARCHITECT AND ENGINEER. 2. DO NOT ROUTE CONDUIT OR SLEEVES BELOW BEARING WALLS WHEN RUNNING

PARALLEL WITH WALLS 3. LIMIT WIDTH OF CONDUIT AND SLEEVES NOT TO EXCEED 3'-0" IN WIDTH AS IT PASSES UNDER WALL FOOTING. ALIGN ITEMS PERPENDICULAR TO THE FOOTINGS

AS IT PASSES BELOW THE FOOTING. 4. PROVIDE A MINIMUM SPACING OF 2'-O" BETWEEN CONDUIT GROUPS AS THEY PASS UNDER FOOTINGS.

5. DO NOT ROUTE CONDUITS OR SLEEVES UNDER COLUMN FOOTINGS OR PAD

#### E. GROUNDING SYSTEM

ALL CONDUITS ARE TO CONTAIN A GREEN GROUNDING CONDUCTOR, SIZED

2. GROUND BUILDING STEEL AS INDICATED ON DRAWINGS.

F. EQUIPMENT REQUIREMENTS: VERIFY EXACT FUSE SIZE AND EQUIPMENT REQUIREMENTS WITH THE ACTUAL

EQUIPMENT FURNISHED BY THE OTHER CONTRACTORS. 2. ALL HOT WATER CIRCULATION PUMPS ARE TO BE CONTROLLED VIA 7 DAY

TIME CLOCKS PROVIDED BY THE MECHANICAL CONTRACTOR. 3. FINAL EQUIPMENT CONNECTIONS: THE ELECTRICAL CONTRACTOR IS

RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED ON THIS PROJECT. VERIFY ALL REQUIREMENTS, CONDUCTOR SIZES, OVERCURRENT PROTECTION, PHASES, VOLTAGES, MOTOR ROTATION, ETC., WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE FUSED DISCONNECT IF REQUIRED BY MANUFACTURER. FURNISH HARD WIRING FOR ALL WATER HEATERS AND CIRCULATION PUMPS

4. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL CONTACTORS, MAGNETIC STARTERS, AND MISCELLANEOUS WIRING NECESSARY TO CONTROL EXHAUST FANS AND OTHER AUTOMATICALLY OPERATED EQUIPMENT. THE CONTROLS CONTRACTOR IS TO FURNISH ONE RELAY PER ITEM AS COMPATIBLE WITH THEIR CONTROL SYSTEM.

### G. HVAC CONTROL:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT FROM EACH HVAC UNIT TO ITS RESPECTIVE THERMOSTAT, HUMIDISTAT, AND/OR SENSOR, AS REQUIRED. COORDINATE EXACT LOCATIONS WITH MECHANICAL CONTRACTOR AND ARCHITECT PRIOR TO ROUGH-IN.

2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING

NECESSARY FOR LINE VOLTAGE CONTROL SYSTEMS. 3. ALL LOW VOLTAGE CONTROL WIRING SHALL BE ENCLOSED IN CONDUIT IN SPACES

4. COORDINATE ALL HVAC WIRING WITH THE MECHANICAL DRAWINGS

AND THE MECHANICAL CONTRACTOR. 5. THE ELECTRICAL CONTRACTOR IS TO PROVIDE A MAGNETIC STARTER/RELAY WITH AUXILIARY CONTACTS FOR EACH EXHAUST FAN. THIS STARTER IS

CONTROLLED AS NOTED ON THE MECHANICAL AND ELECTRICAL DRAWINGS. 6. THE ELECTRICAL CONTRACTOR IS TO PROVIDE AND INSTALL ALL LINE VOLTAGE

## THERMOSTATS.

H. HOUSEKEEPING PAD 1. FLOOR MOUNTED SWITCH GEAR AND TRANSFORMERS REQUIRE HOUSE

KEEPING PAD. 2. PROVIDE 31/2" CONCRETE PADS WITH 3000 PSI CONCRETE AND WIRE

REINFORCING MAT.

#### 3. PADS TO BE ISOLATED FROM SLAB. SEISMIC CONSTRUCTION FOR ELECTRICAL INSTALLATION

CONTRACTOR PRIOR TO INSTALLATION.

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL SEISMIC BRACING REQUIRMENTS OF ELECTRICAL EQUIPMENT CALLED OUT IN SPECIFICATION

J. SECURITY SYSTEM, ACCESS CONTROL, AND COMMUNICATION SYSTEMS: 1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL BOXES AND CONDUIT FOR ALL ACCESS CONTROL DEVICES. CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING 120 VOLT POWER TO EACH ACCESS CONTROL/SECURITY SYSTEM CABINET LOCATED IN THE SECURITY ROOMS

3. REFER TO ELECTRONIC SECURITY DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ALL REQUIREMENTS WITH SECURITY SYSTEM CONTRACTOR PRIOR TO INSTALLATION.

2. CONDUIT AT DOORS WITH LOCKS IS TO BE INSTALLED CONCEALED IN THE

# K. CAMERA SYSTEM:

1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL BOXES AND

CONDUIT FOR ALL SECURITY CAMERA SYSTEMS 2. REFER TO ELECTRONIC SECURITY DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ALL REQUIREMENTS WITH SECURITY SYSTEM

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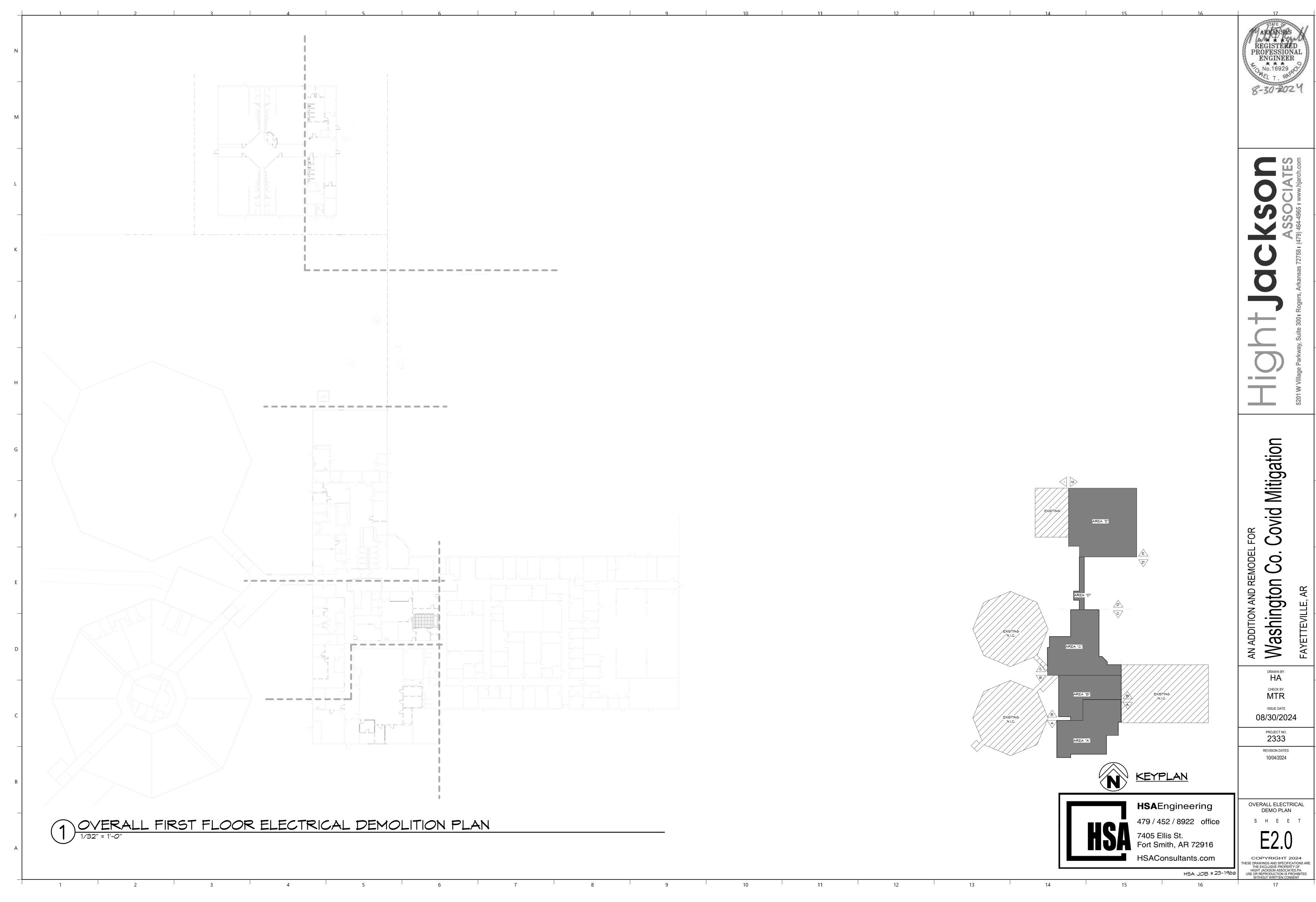
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ISSUE DATE 08/30/2024

REVISION DATES

ELECTRICAL LEGEND, NOTES & DETAILS SHEE



## DEMOLITION LEGEND

ELECTRICAL DEVICES WITH DASHED LINES ARE TO BE DEMOLISHED; DISCONNECT REMOVE CONDUIT AND WIRE BACK TO JUNCTION POINT. MAINTAIN CONTINUITY TO REMAINING DEVICES ON THAT CIRCUIT. FIELD VERIFY EXISTING CONDITIONS.

SUBSCRIPTS: ER= EXISTING TO REMAIN RE= REMOVE EXISTING RRE= REMOVE AND RELOCATE EXISTING S= SURFACE MOUNT

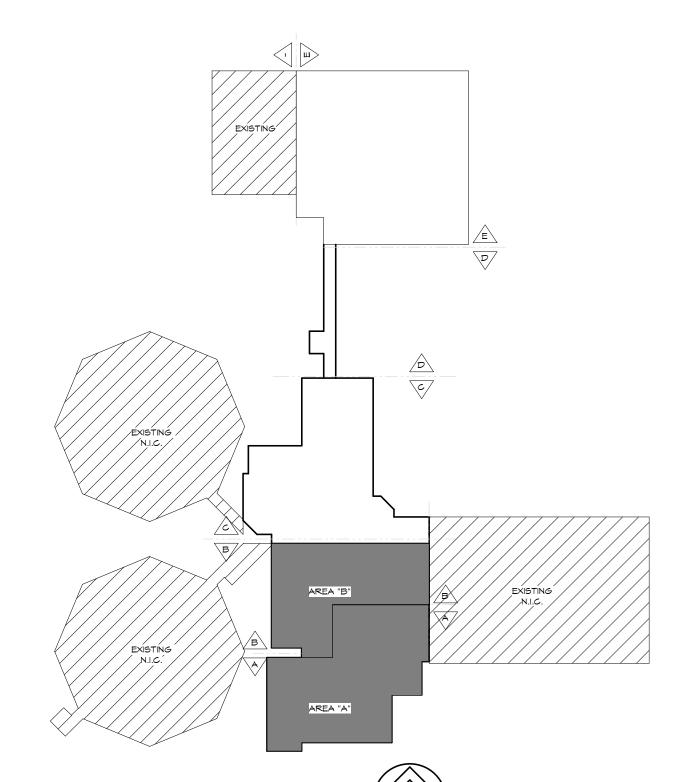
GRAYED OUT ELECTRICAL DEVICES ARE TO EXISTING TO REMAIN DEVICES.

- 1. FOR ALL DEVICES IN WALLS/MILLWORK BEING DEMOLISHED: DISCONNECT REMOVE CONDUIT AND WIRE BACK
- TO JUNCTION POINT. MAINTAIN CONTINUITY TO REMAINING DEVICES ON THAT CIRCUIT. 2. REMOVE ALL DEVICES IN CEILINGS THAT ARE TO BE DEMOLISHED: DISCONNECT AND REMOVE CONDUIT AND
- WIRE BACK TO SOURCE, LABEL BREAKER AS SPARE. 3. ALL EXISTING LIGHT FIXTURES AND LIGHTING CONTROL DEVICES ARE TO BE REMOVED AND DISPOSED OF
- UNLESS OTHERWISE NOTED. 4. FOR ALL UNUSED CIRCUITS, REMOVE CONDUIT AND WIRE BACK TO SOURCE, LABEL BREAKER AS SPARE.
- 5. REFER TO ARCHITECTURAL DRAWINGS FOR AREAS TO BE DEMOLISHED 6. GRAYED OUT DEVICES SHOW EXISTING TO REMAIN DEVICE LOCATIONS.
- 7. DEVICES SHOWN AS BOLD OR DASHED ARE TO BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED. 8. FIELD VERIFY ALL EXISTING CONDITIONS.
- 9. REMOVE POWER TO ALL EXISTING EQUIPMENT TO BE DEMOLISHED, COORDINATE WITH ALL TRADES.
- 10. ALL DEMOLISHED DEVICES, FIXTURES, AND EQUIPMENT SHALL TO BE RETURNED TO OWNER.

## KEYED ELECTRICAL DEMOLITION NOTES

ELECTRICAL DEMOLITION GENERAL NOTES

- (1) EXISTING WALK-IN FREEZER/COOLER, DISCONNECT AND REMOVE CONDUIT AND WIRE BACK TO SOURCE, LABEL BREAKER AS SPARE.
- 2 EXISTING SALT WATER EQUIPMENT TO BE DEMOLISHED, DISCONNECT AND REMOVE ALL CONNECTIONS, COORDINATE WITH ALL TRADES.
- 3 REMOVE POWER TO ALL EXISTING EQUIPMENT TO BE DEMOLISHED, COORDINATE WITH ALL TRADES.
- (4) SAW CUT SLAB AS REQUIRED FOR INSTALLATION OF NEW FLOOR BOXES. REFER TO POWER PLANS FOR LOCATIONS.





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No.16929

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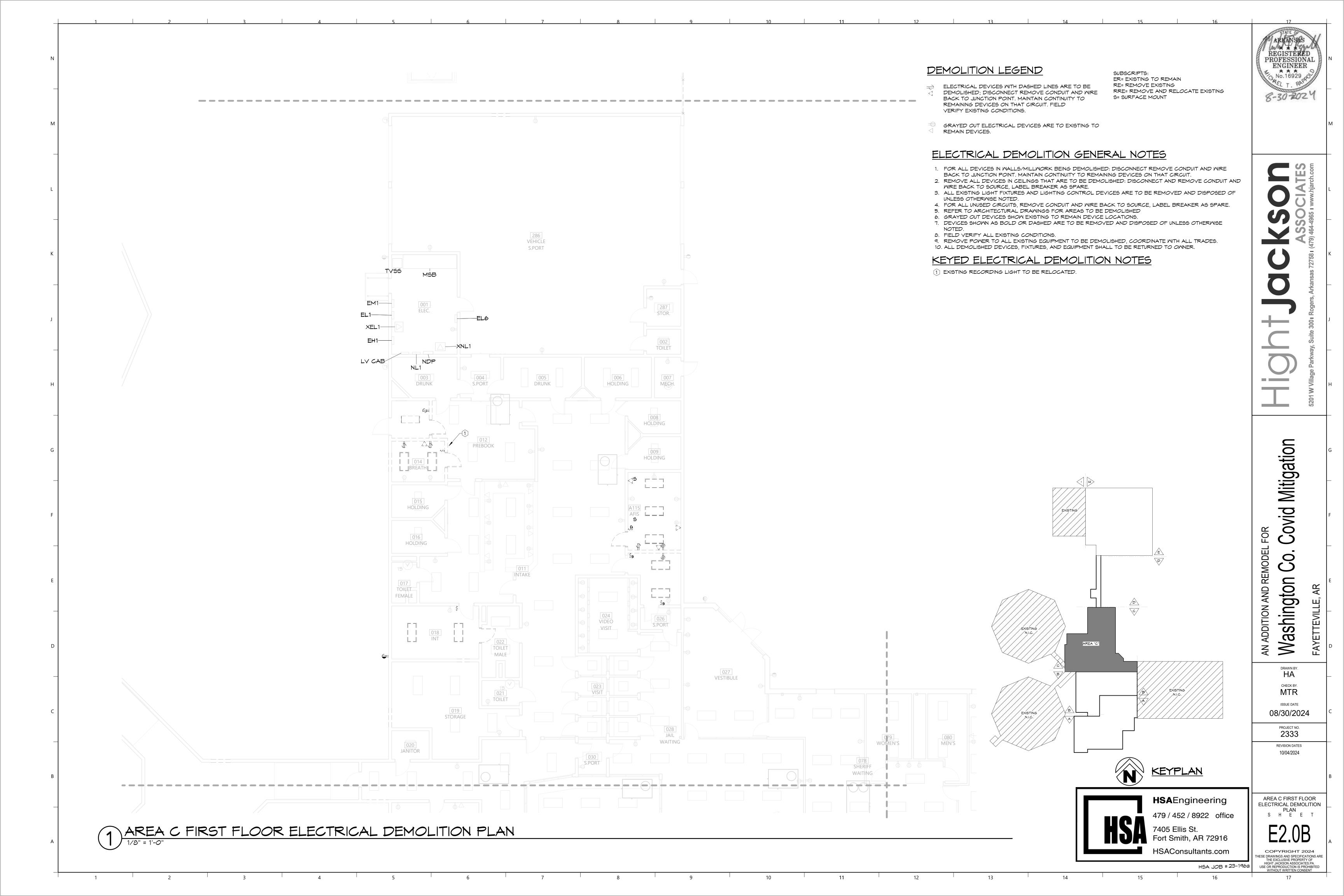
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AREA A & B FIRST FLOOR ELECTRICAL DEMOLITION PLAN S H E E T

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## DEMOLITION LEGEND

ELECTRICAL DEVICES WITH DASHED LINES ARE TO BE DEMOLISHED; DISCONNECT REMOVE CONDUIT AND WIRE BACK TO JUNCTION POINT. MAINTAIN CONTINUITY TO

REMAINING DEVICES ON THAT CIRCUIT. FIELD VERIFY EXISTING CONDITIONS.

SUBSCRIPTS: ER= EXISTING TO REMAIN RE= REMOVE EXISTING RRE= REMOVE AND RELOCATE EXISTING S= SURFACE MOUNT

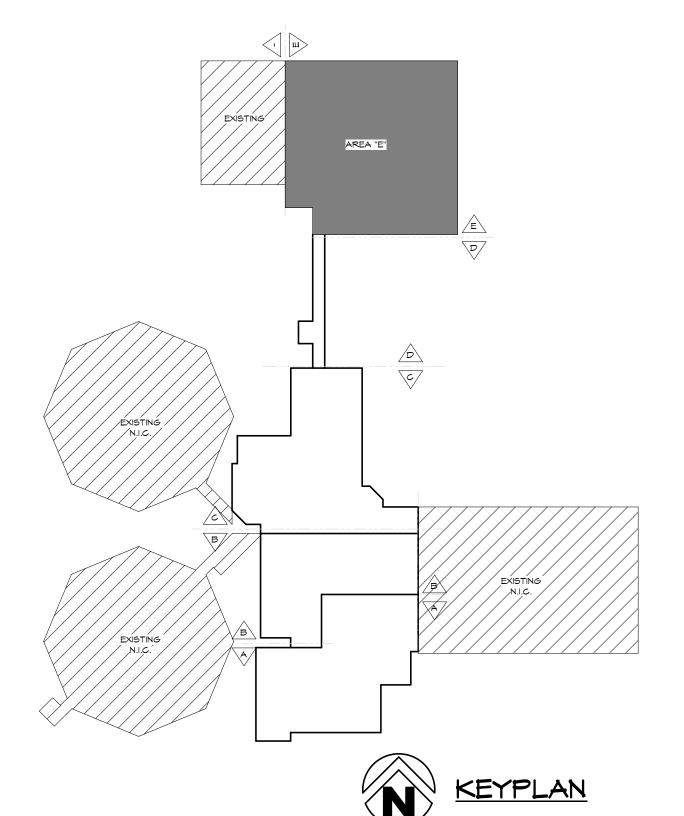
GRAYED OUT ELECTRICAL DEVICES ARE TO EXISTING TO REMAIN DEVICES.

## ELECTRICAL DEMOLITION GENERAL NOTES

- 1. FOR ALL DEVICES IN WALLS/MILLWORK BEING DEMOLISHED: DISCONNECT REMOVE CONDUIT AND WIRE BACK TO JUNCTION POINT. MAINTAIN CONTINUITY TO REMAINING DEVICES ON THAT CIRCUIT.
- 2. REMOVE ALL DEVICES IN CEILINGS THAT ARE TO BE DEMOLISHED: DISCONNECT AND REMOVE CONDUIT AND WIRE BACK TO SOURCE, LABEL BREAKER AS SPARE.
- 3. ALL EXISTING LIGHT FIXTURES AND LIGHTING CONTROL DEVICES ARE TO BE REMOVED AND DISPOSED OF
- UNLESS OTHERWISE NOTED. 4. FOR ALL UNUSED CIRCUITS, REMOVE CONDUIT AND WIRE BACK TO SOURCE, LABEL BREAKER AS SPARE.
- 5. REFER TO ARCHITECTURAL DRAWINGS FOR AREAS TO BE DEMOLISHED 6. GRAYED OUT DEVICES SHOW EXISTING TO REMAIN DEVICE LOCATIONS.
- 7. DEVICES SHOWN AS BOLD OR DASHED ARE TO BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED. 8. FIELD VERIFY ALL EXISTING CONDITIONS.
- 9. REMOVE POWER TO ALL EXISTING EQUIPMENT TO BE DEMOLISHED, COORDINATE WITH ALL TRADES.
- 10. ALL DEMOLISHED DEVICES, FIXTURES, AND EQUIPMENT SHALL TO BE RETURNED TO OWNER.

## KEYED ELECTRICAL DEMOLITION NOTES

- 1 PANEL "EHW" TO BE REFED FROM NEW DISTRIBUTION PANEL "MDP2" DISCONNECT AND REMOVE EXISTING FEED. INTERCEPT EXISTING CONDUIT FEED BEFORE CONDUITS ENTER THE BUILDING. PROVIDE NEW WIRE AND CONDUITS, REFER TO ELECTRICAL RISER FOR ADDITIONAL INFORMATION. BURY CONDUITS BELOW FUTURE ADDITION EXCAVATION DEPTH, COORDINATE WITH GENERAL CONTRACTOR.
- 2 PANEL "NHW" TO BE REFED FROM NEW DISTRIBUTION PANEL "MDP2" DISCONNECT AND REMOVE EXISTING FEED. INTERCEPT EXISTING CONDUIT FEED BEFORE CONDUITS ENTER THE BUILDING. PROVIDE NEW WIRE AND CONDUITS, REFER TO ELECTRICAL RISER FOR ADDITIONAL INFORMATION. BURY CONDUITS BELOW FUTURE ADDITION EXCAVATION DEPTH, COORDINATE WITH GENERAL CONTRACTOR.
- (3) REMOVE EXISTING EXTERIOR WALL PACKS AND LIGHTS ALONG WALL.





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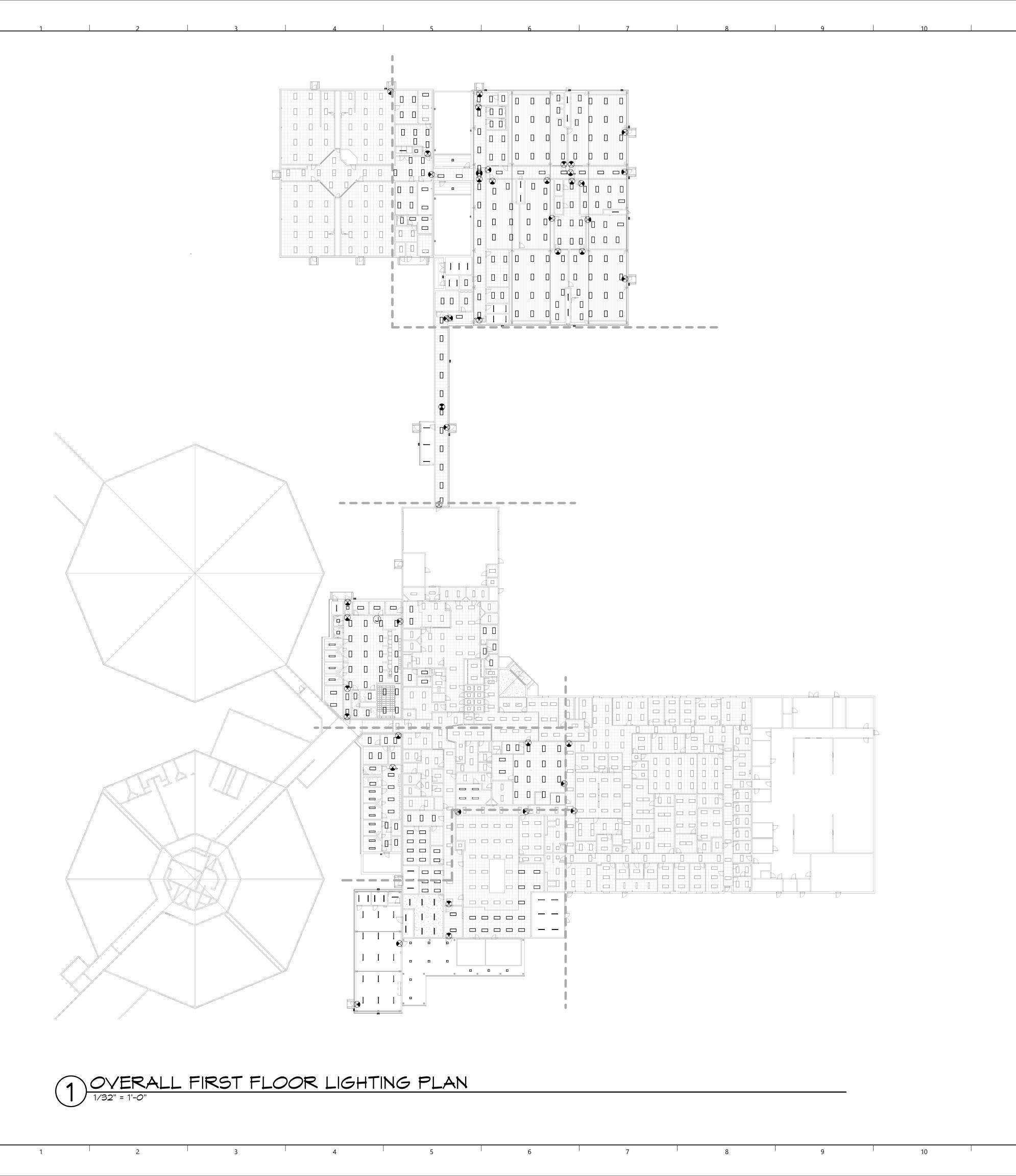
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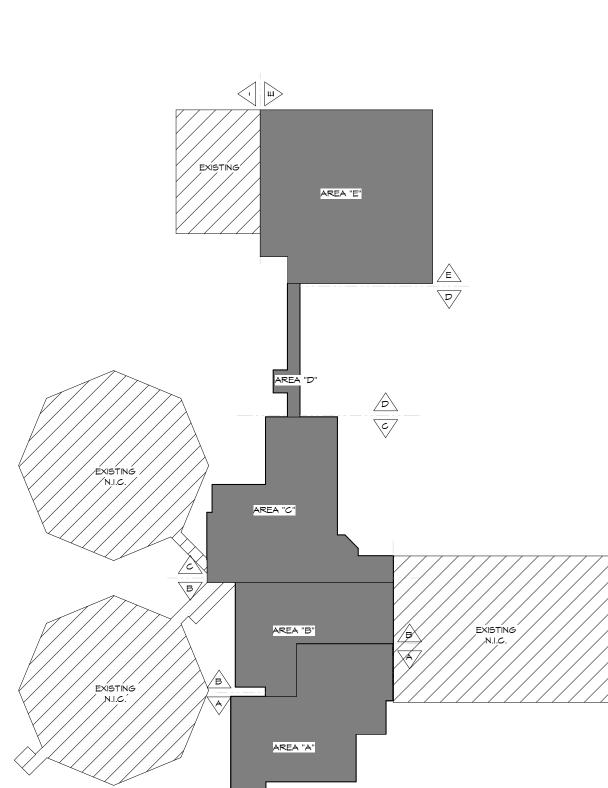
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AREA E FIRST FLOOR ELECTRICAL DEMOLITION PLAN S H E E T





**KEYPLAN** 

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OVERALL LIGHTING PLAN S H E E T

Covid Mitigation

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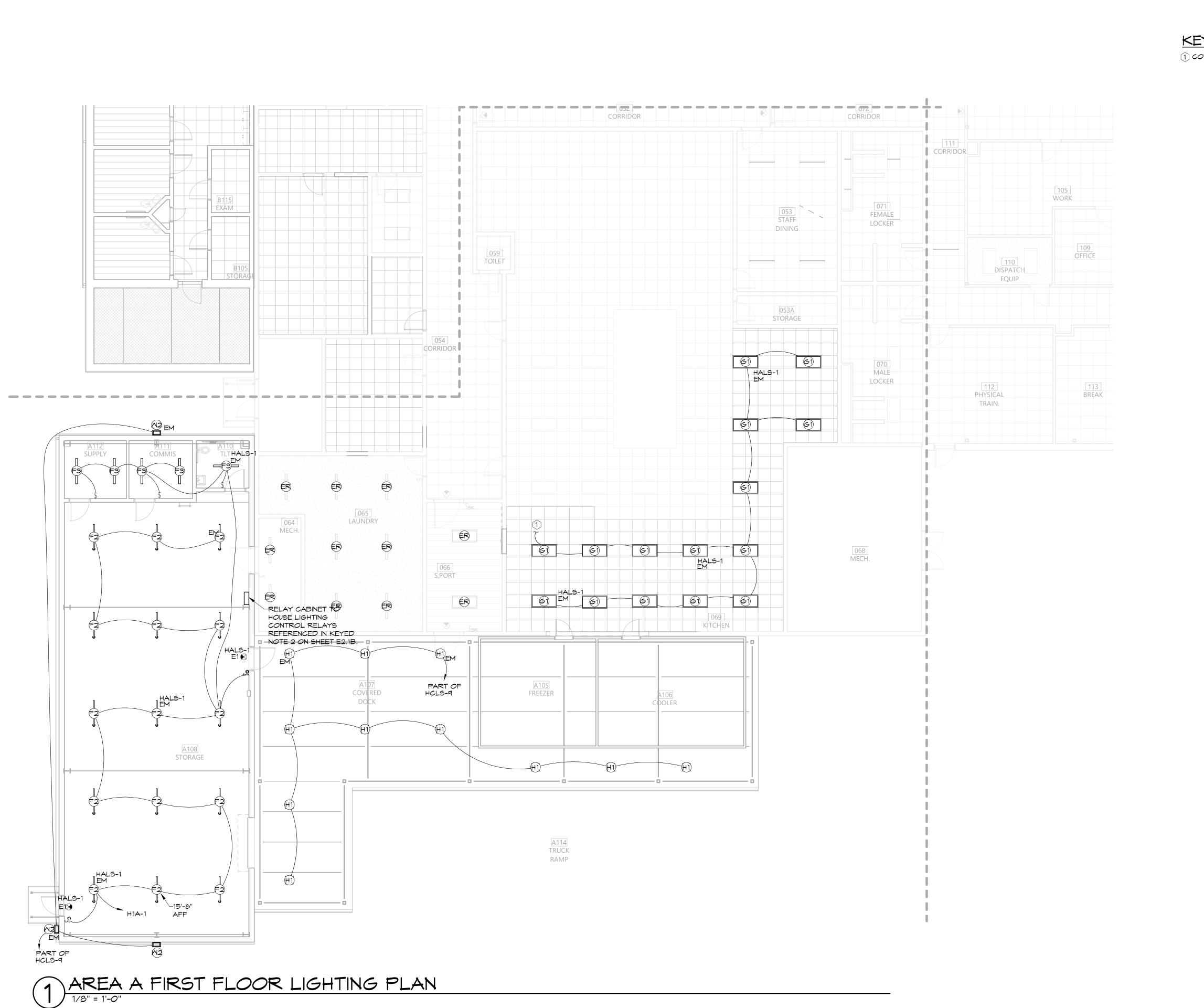
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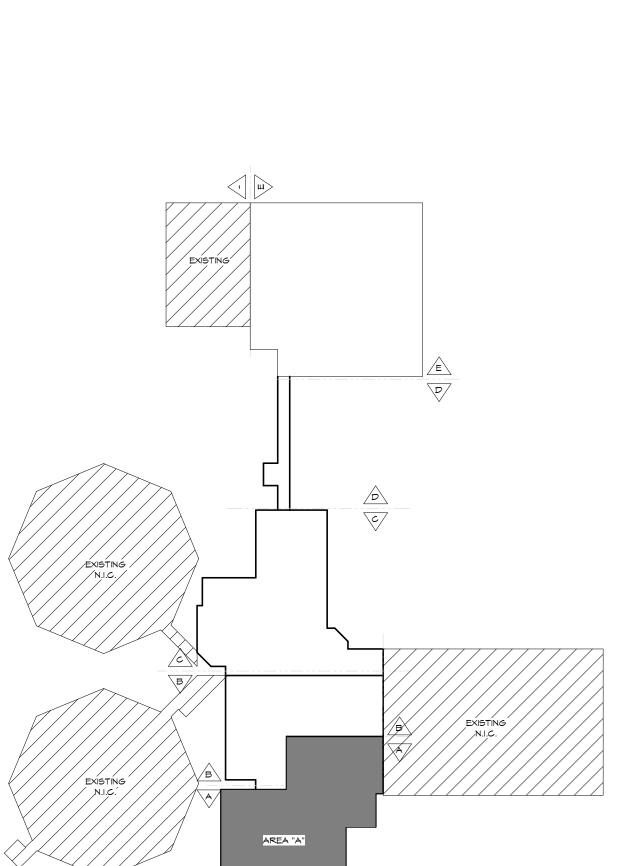
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KEYED LIGHTING NOTES (1) CONNECT TO EXISTING LIGHTING CIRCUIT IN SPACE.



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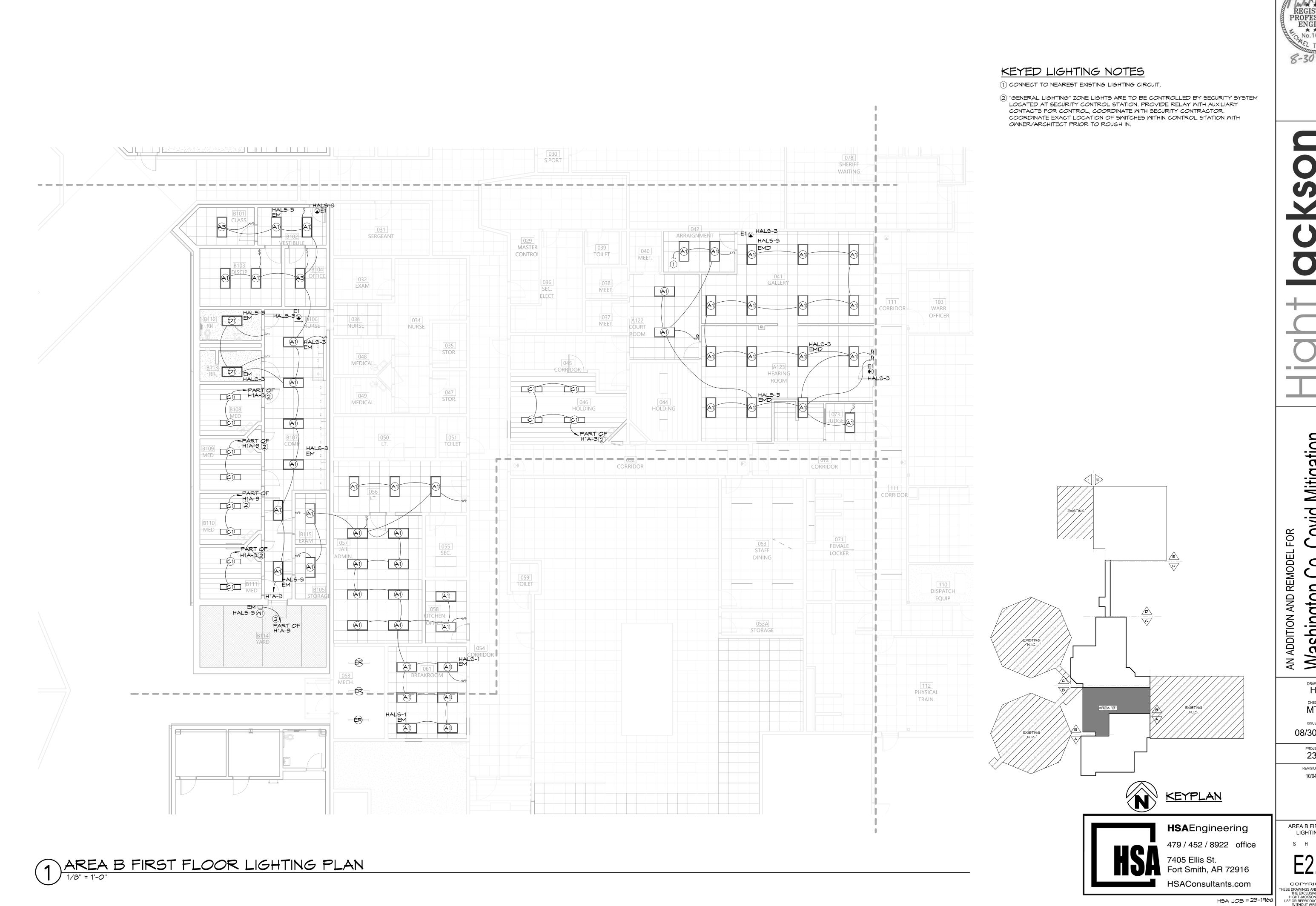
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<u>KEYPLAN</u>

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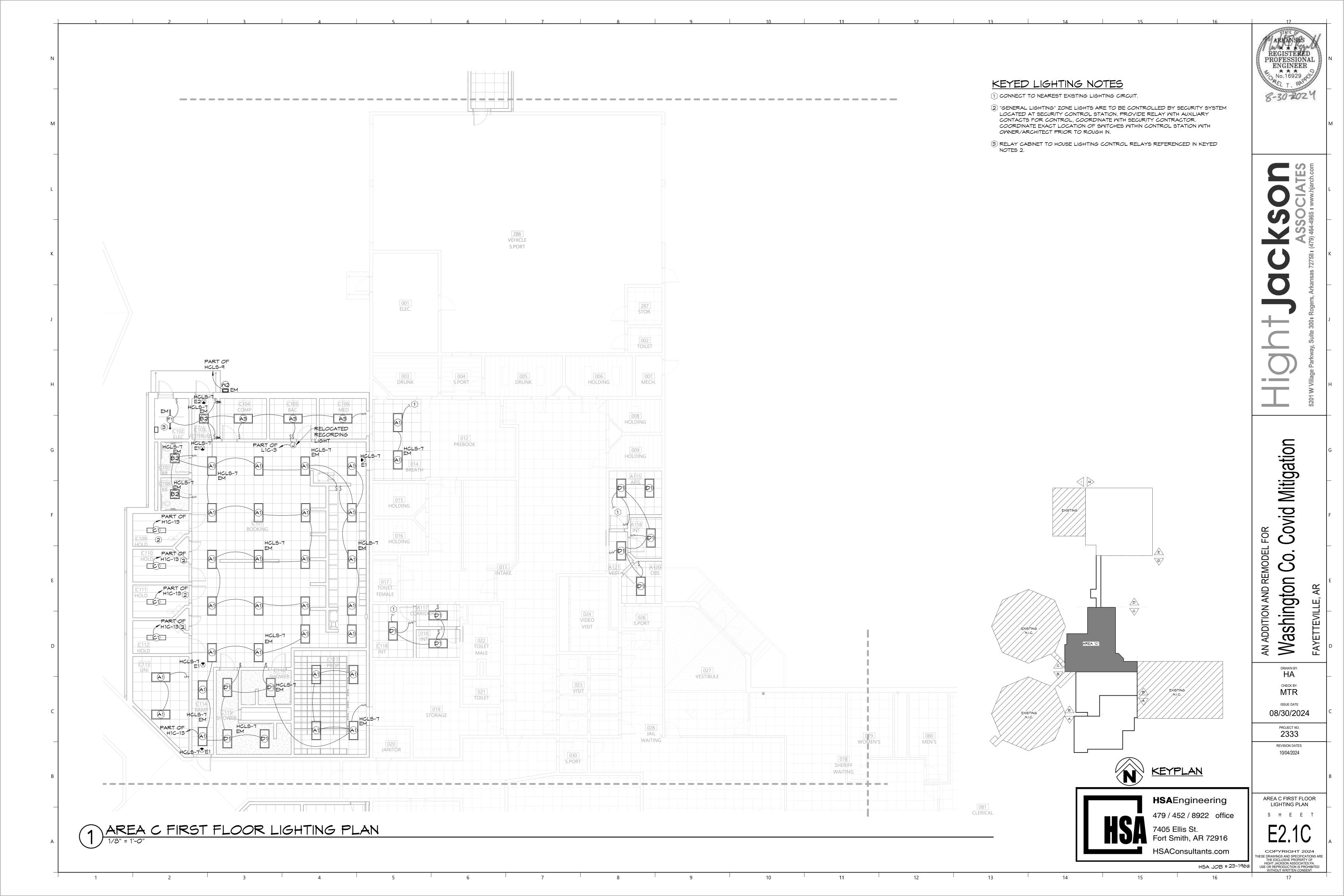
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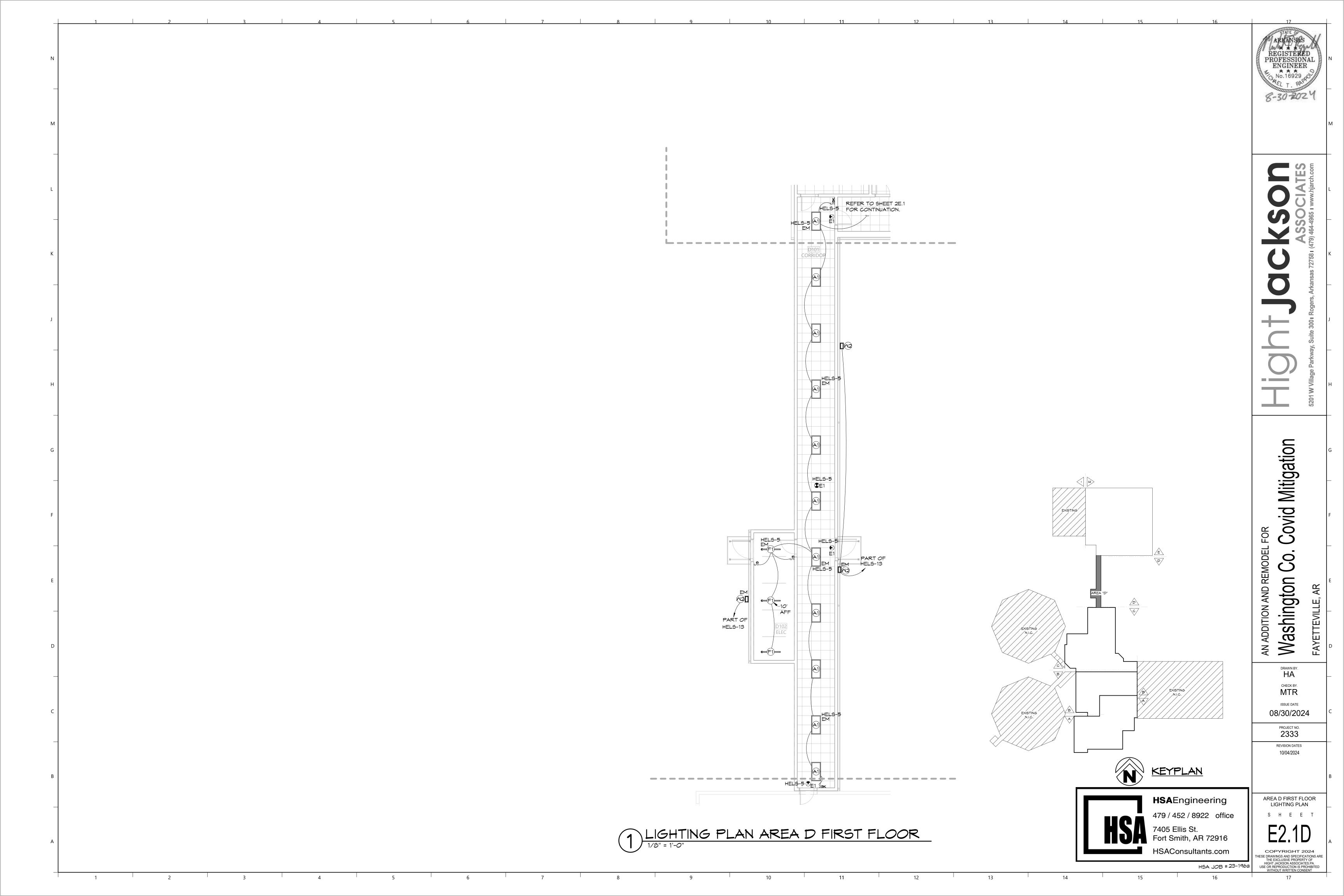
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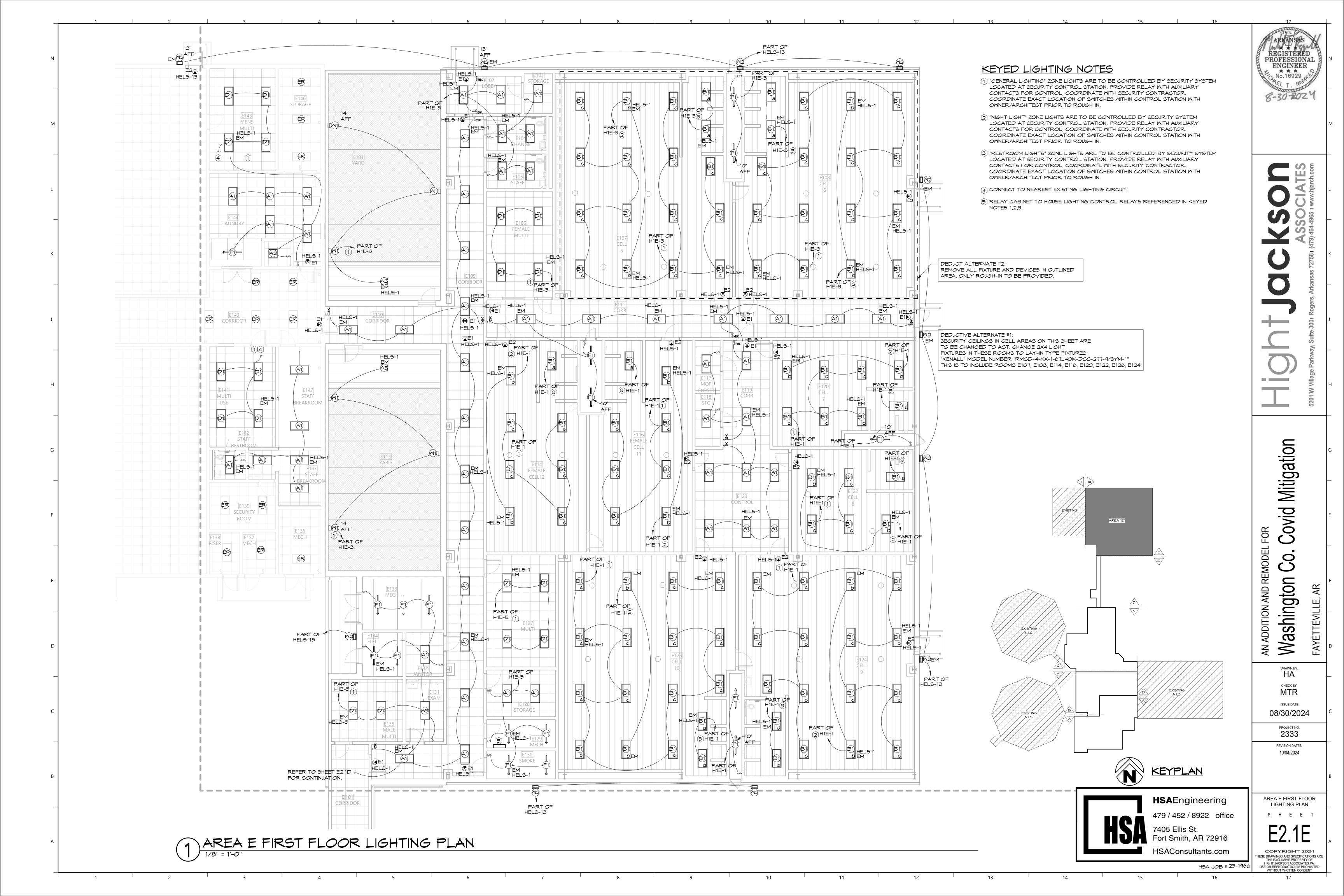
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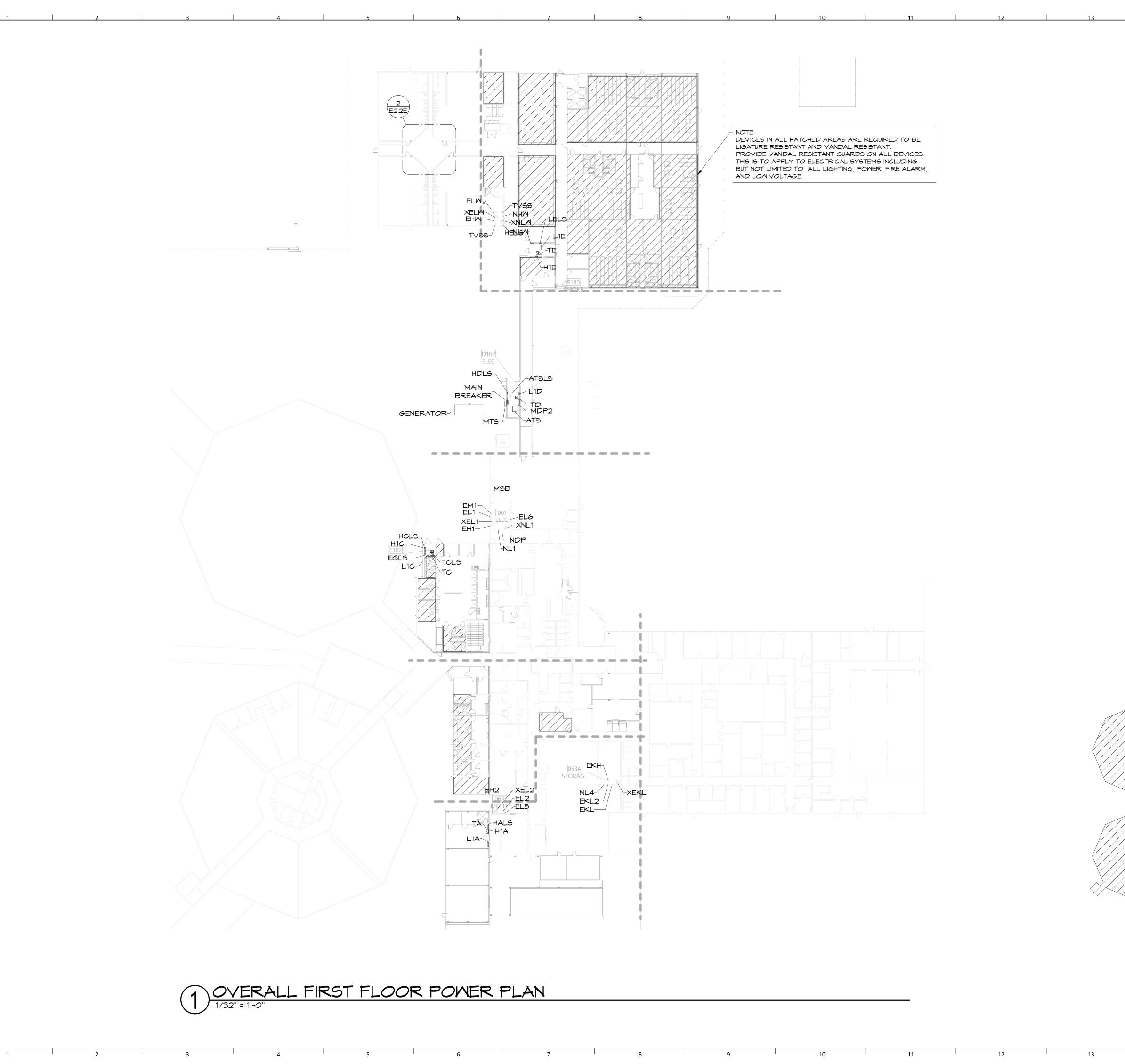
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OVERALL POWER PLAN S H E E T

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AREA "C"

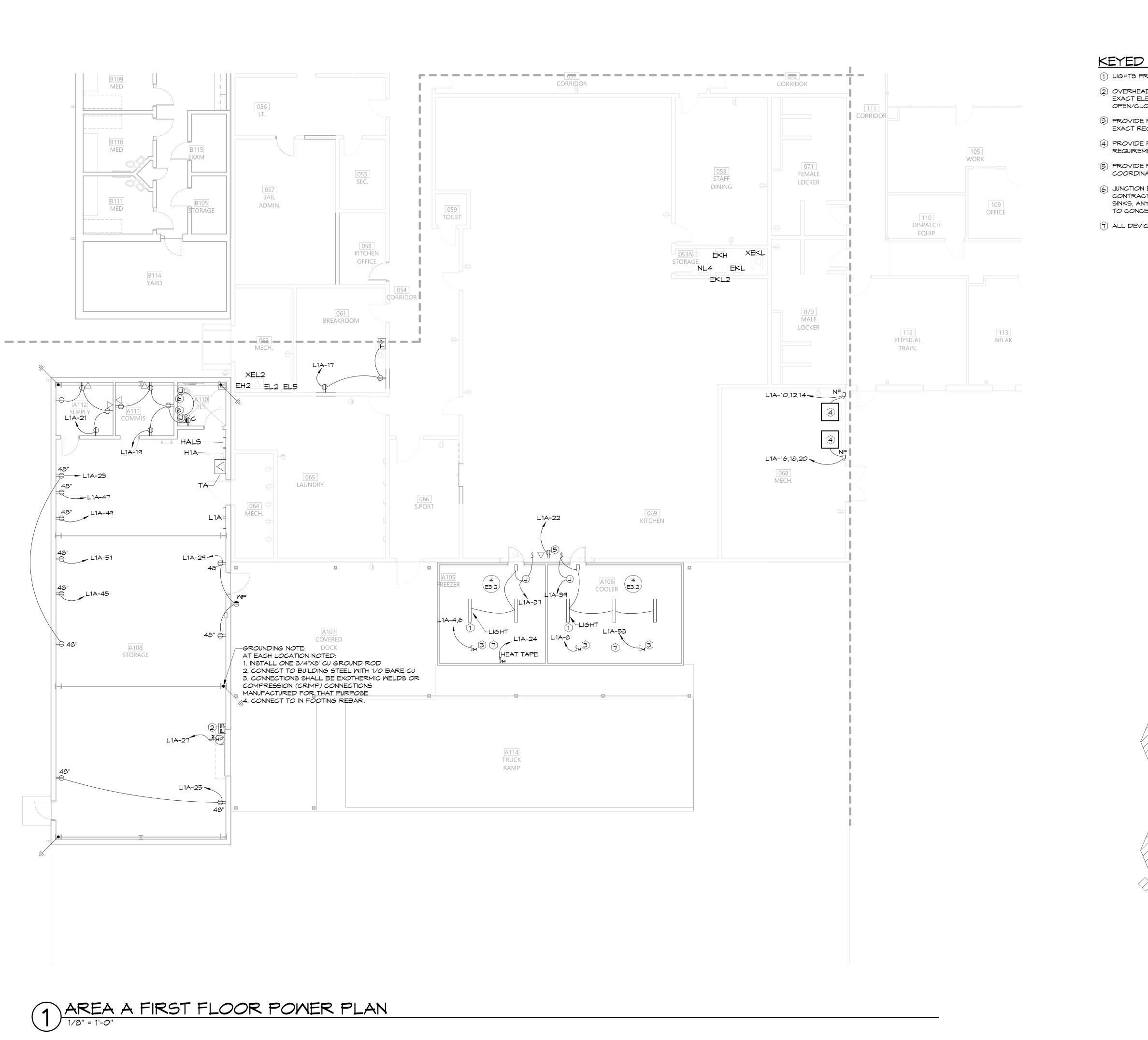
AREA "E"

<u>KEYPLAN</u>

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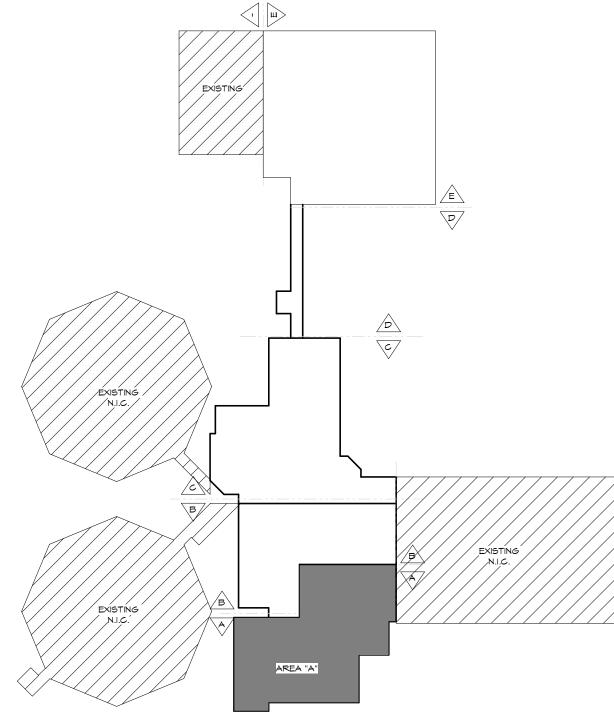
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# KEYED POWER NOTES (THIS SHEET ONLY)

- 1 LIGHTS PROVIDED WITH COOLER/FREEZER
- 2 OVERHEAD DOOR MOTOR INSTALL DOOR SENSORS FURNISHED WITH UNIT VERIFY EXACT ELECTRICAL REQUIREMENTS WITH THE ACTUAL EQUIPMENT FURNISHED. PROVIDE OPEN/CLOSE/STOP PUSH BUTTON FOR CONTROL.
- 3 PROVIDE FINAL CONNECTION TO FREEZER/COOLER EVAPORATOR COIL. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED
- 4 PROVIDE FINAL CONNECTION TO FREEZER/COOLER CONDENSER. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
- (5) PROVIDE POWER AND DATA ABOVE CEILING FOR COOLER FREEZER MONITORING. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
- 6 JUNCTION BOXES FOR SENSOR OPERATED FIXTURES. COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT ELECTRICAL REQUIREMENTS AND TRANSFORMER LOCATION. FOR SINKS, ANY EXPOSED WIRING SHALL BE WIRE TIED NEATLY AND ALL EFFORT SHALL BE MADE TO CONCEAL UNDER SINK.
- 1 ALL DEVICES IN WALK-IN FREEZER/COOLER SHALL BE NEMA 4 RATED.







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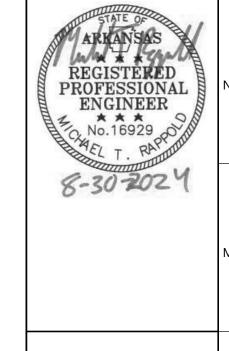
AREA A FIRST FLOOR POWER PLAN S H E E T

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## KEYED POWER NOTES (THIS SHEET ONLY) (1) CONNECT TO NEAREST 120V RECEPTACLE CIRCUIT.

SHERIFF WAITING

- 2 JUNCTION BOXES FOR SENSOR OPERATED FIXTURES. COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT ELECTRICAL REQUIREMENTS AND TRANSFORMER LOCATION. FOR SINKS, ANY EXPOSED WIRING SHALL BE WIRE TIED NEATLY AND ALL EFFORT SHALL BE MADE TO CONCEAL UNDER SINK.
- 3 COORDINATE SMITCH LOCATION WITH OWNER PRIOR TO ROUGH-IN, CIRCUIT RECEPTACLE THROUGH SMITCH.





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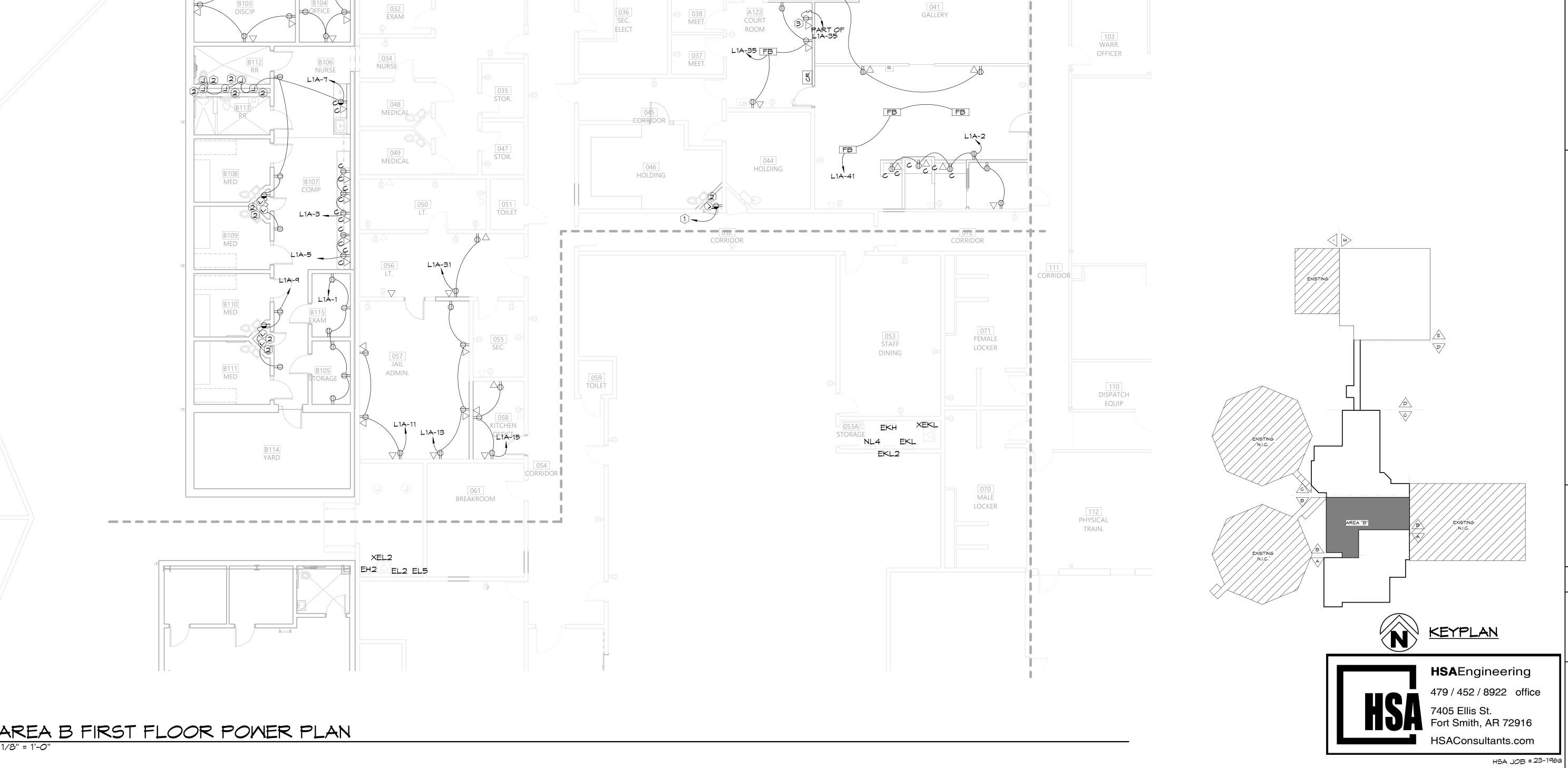
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AREA B FIRST FLOOR POWER PLAN

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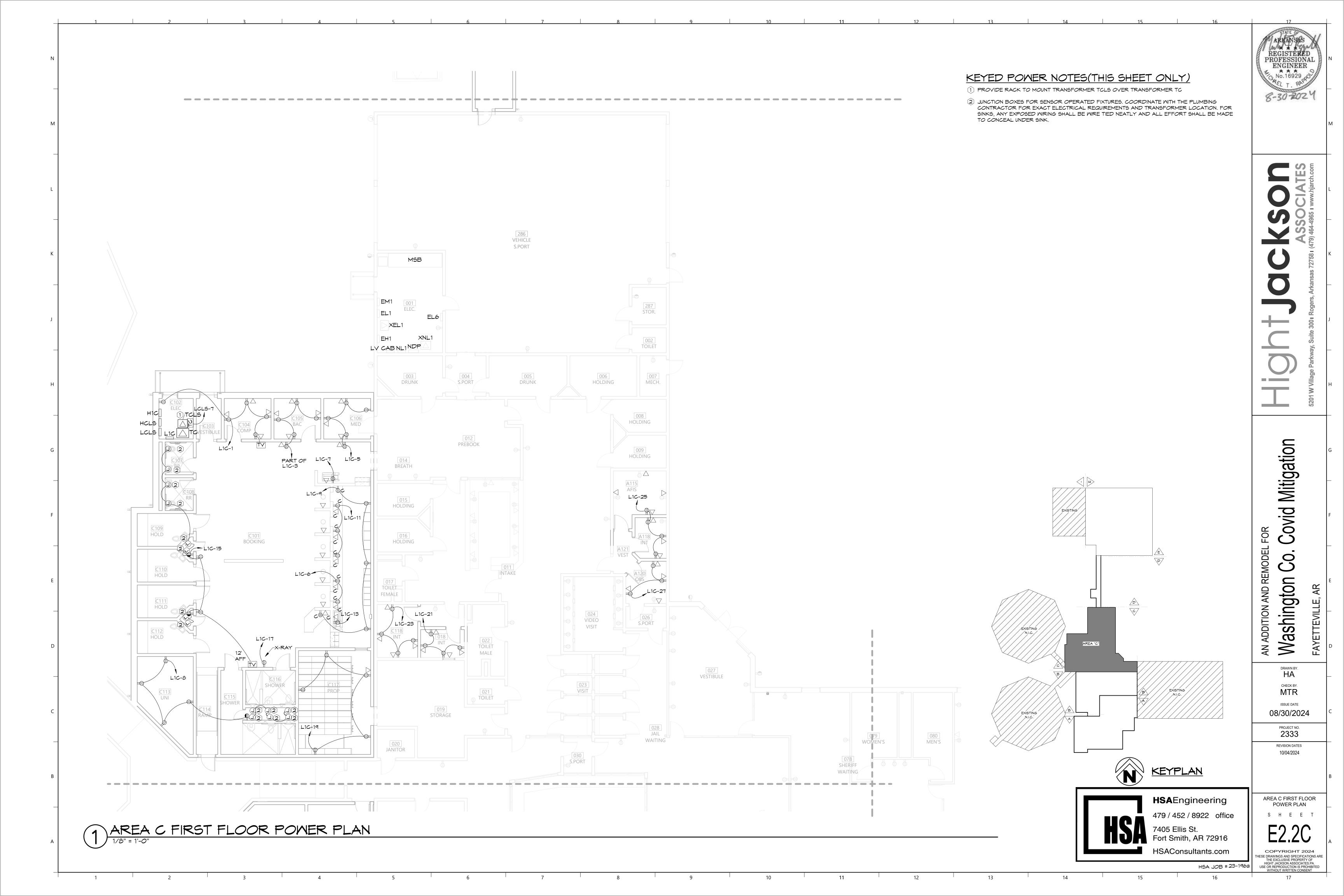


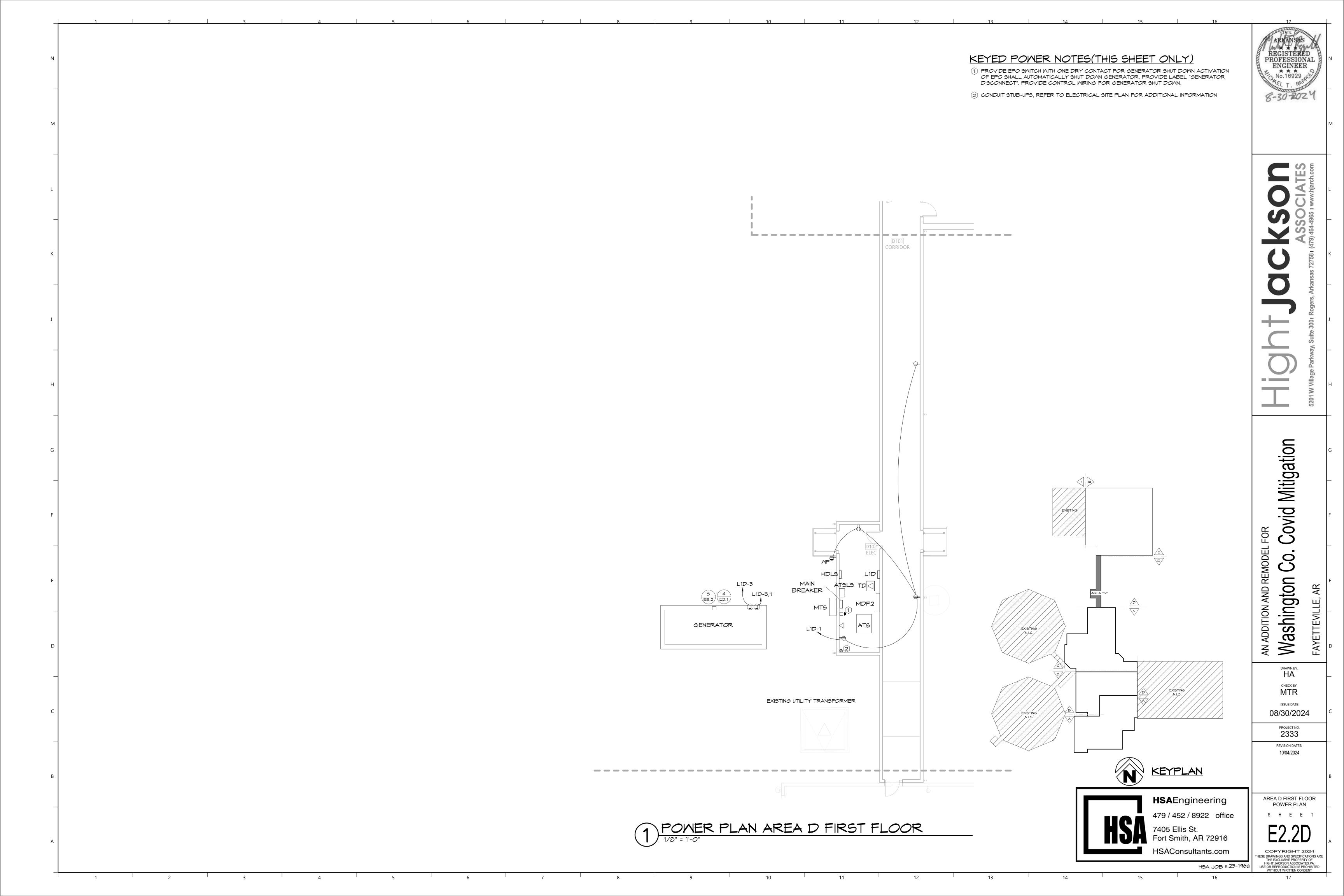
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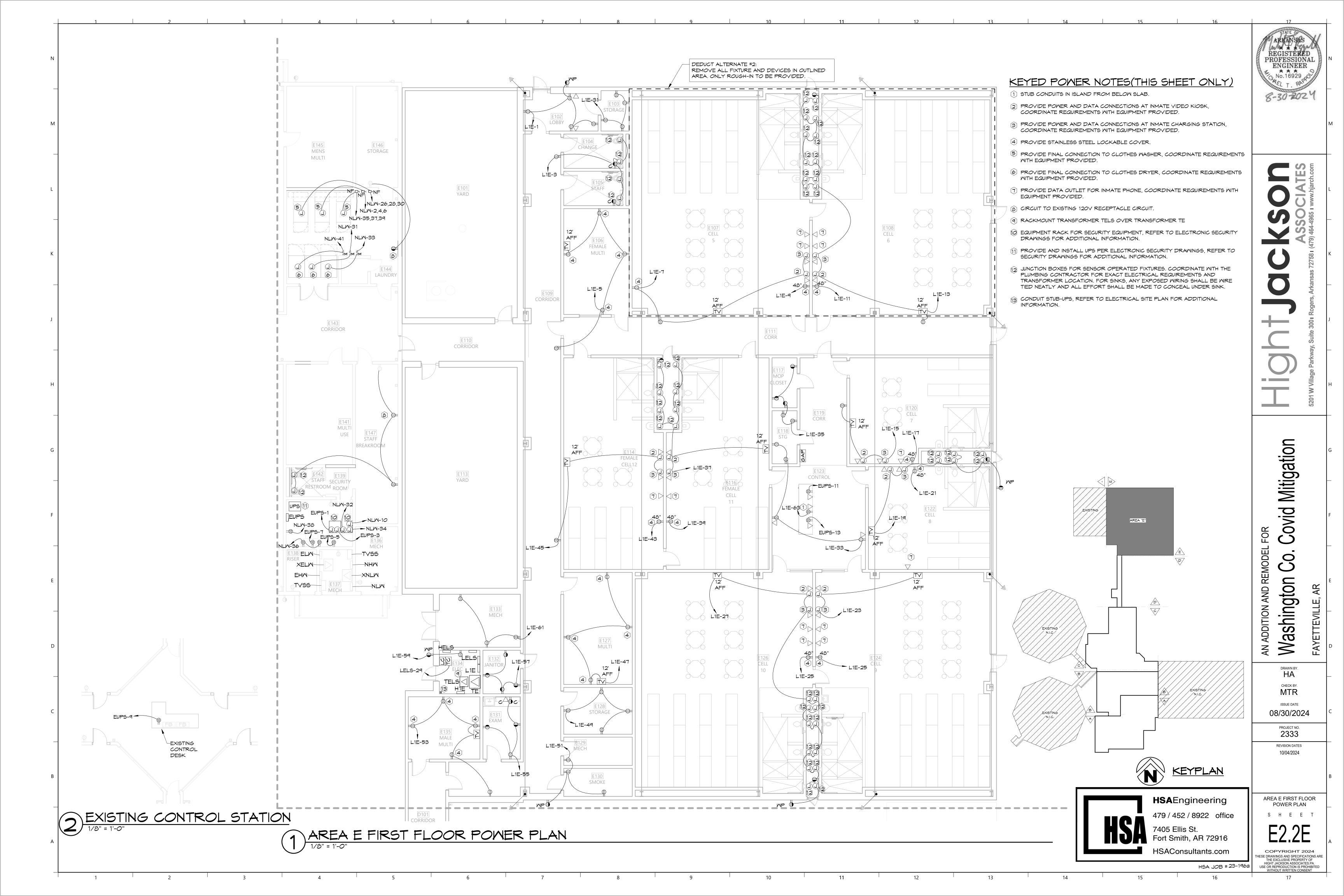
1 AREA B FIRST FLOOR POWER PLAN

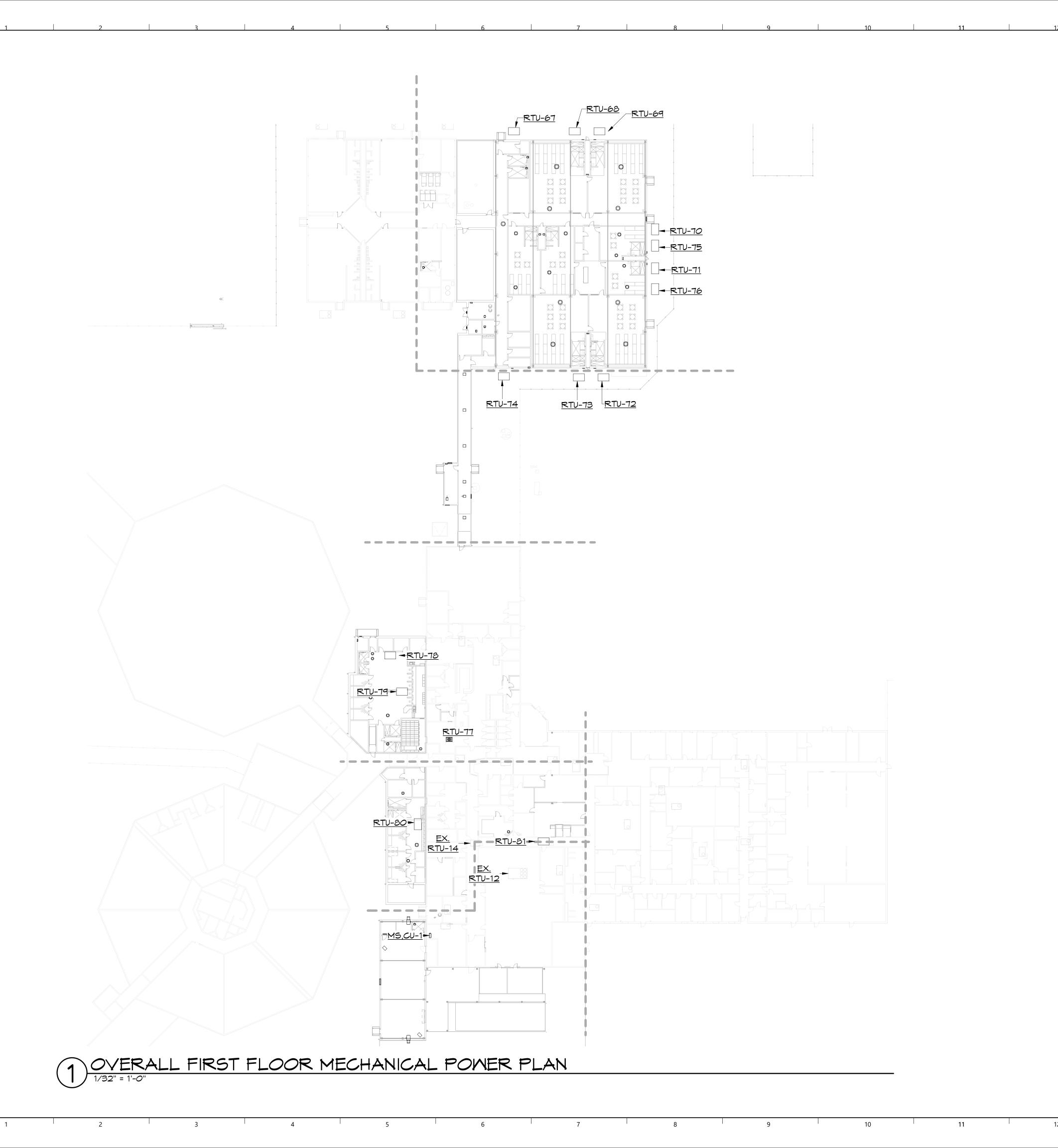
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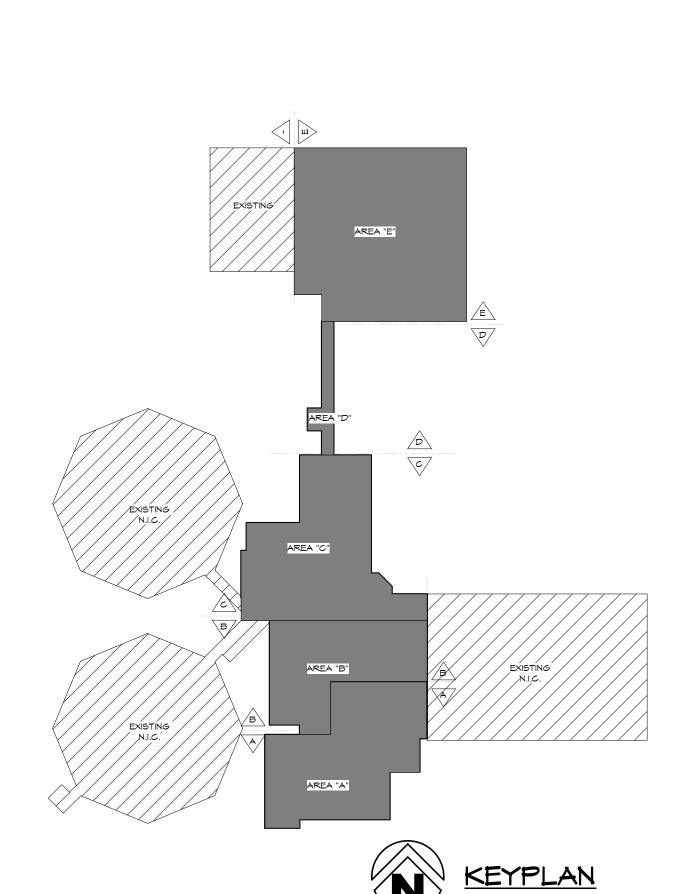
MASTER CONTROL











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OVERALL MECHANICAL POWER PLAN

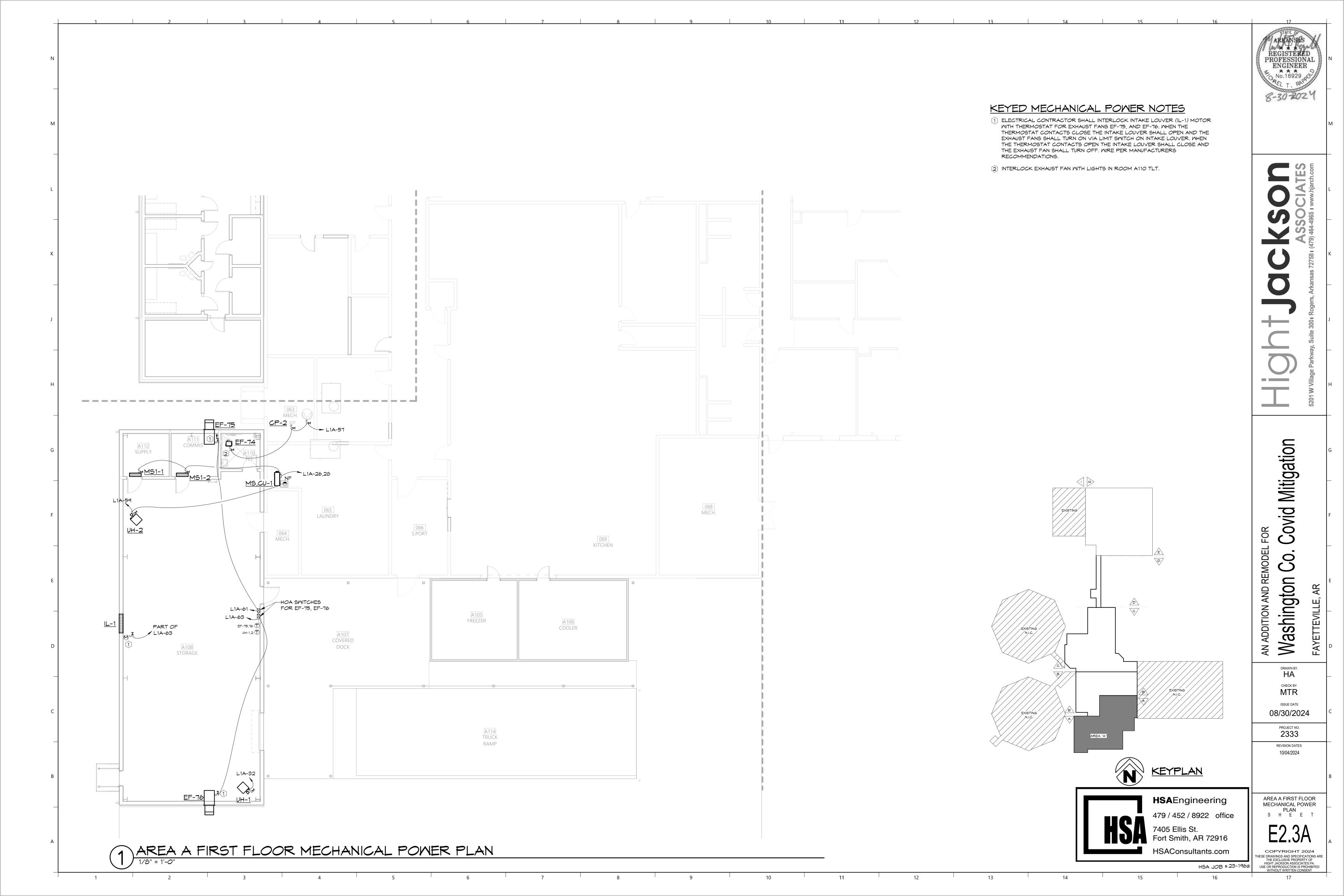
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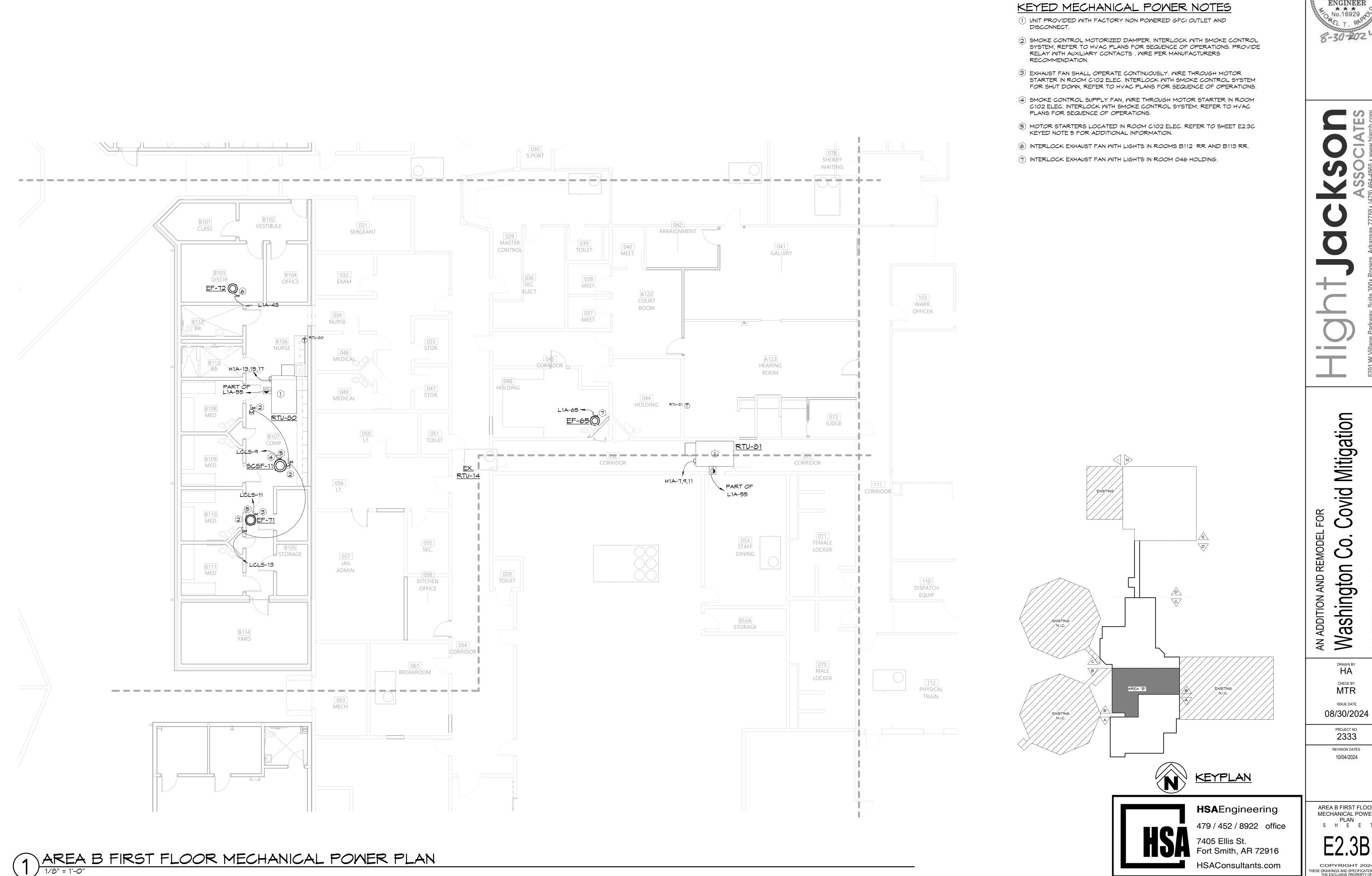
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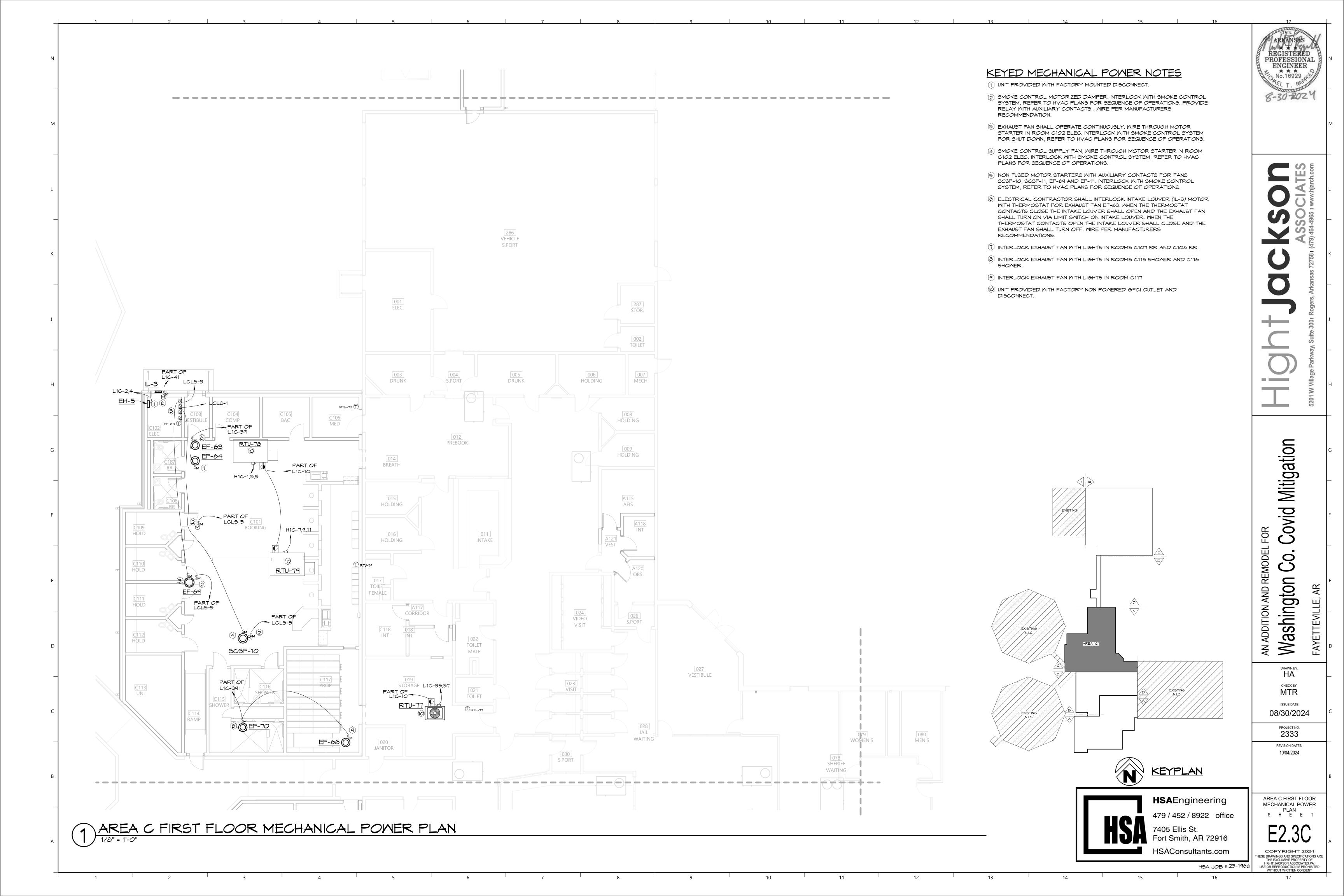
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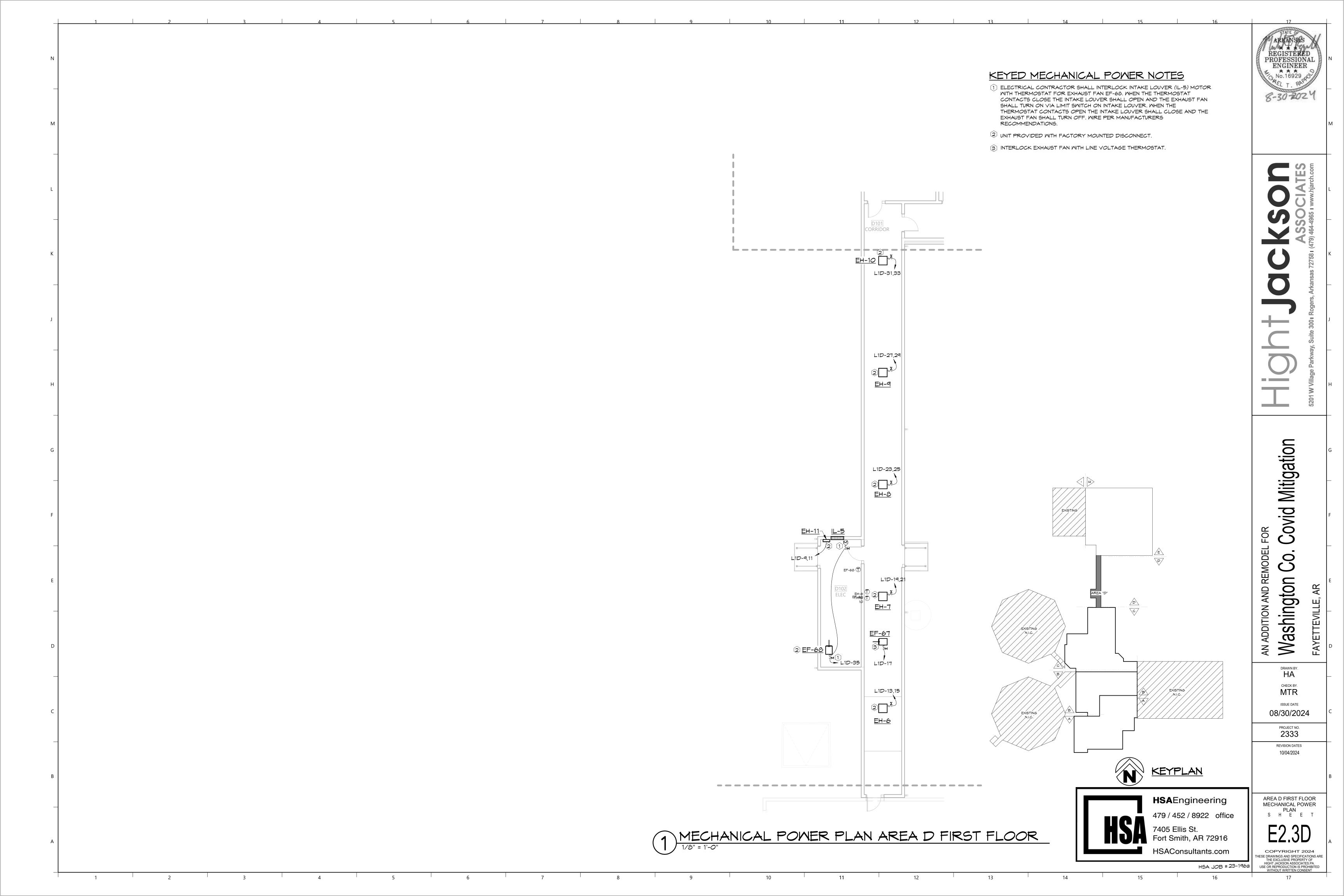
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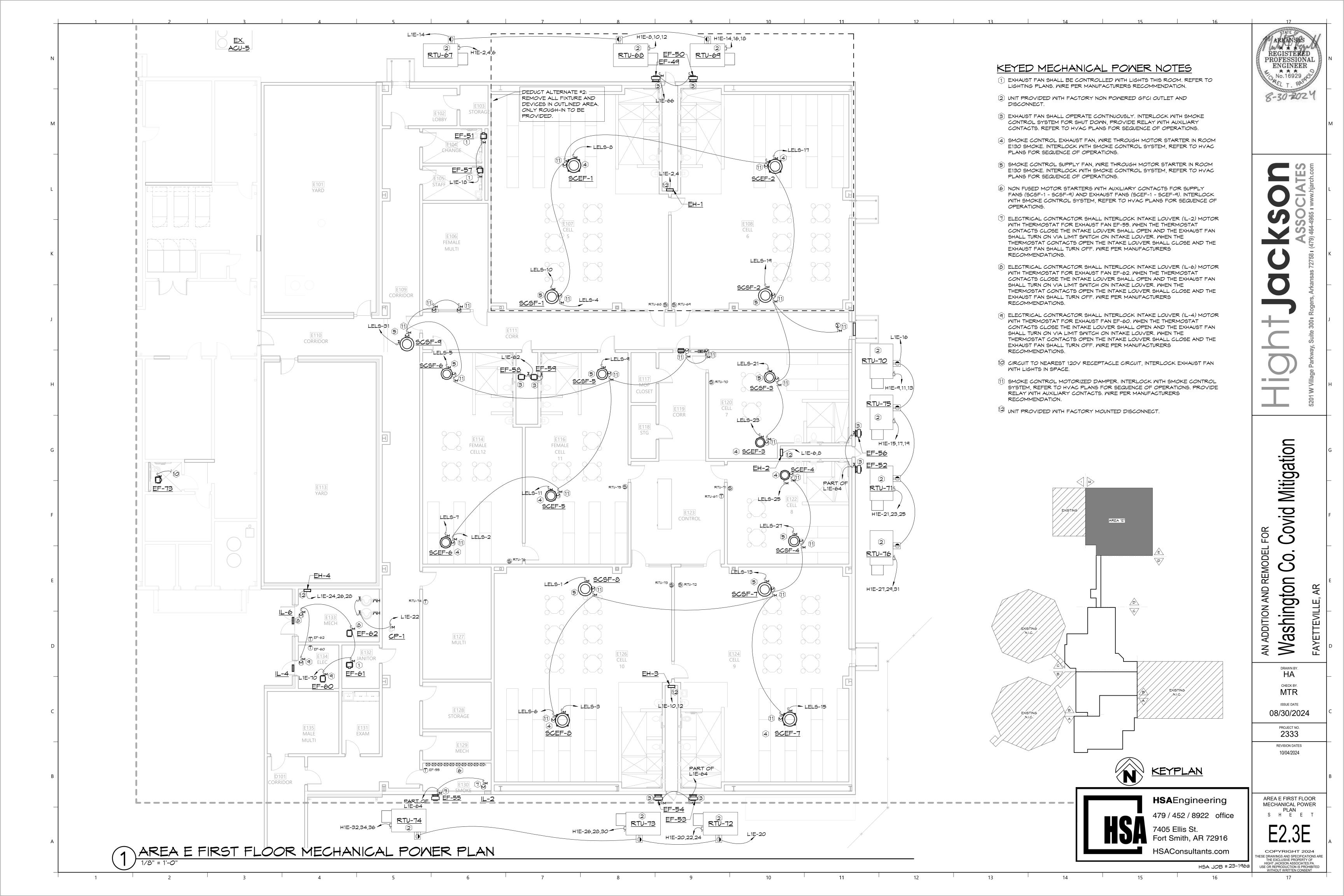
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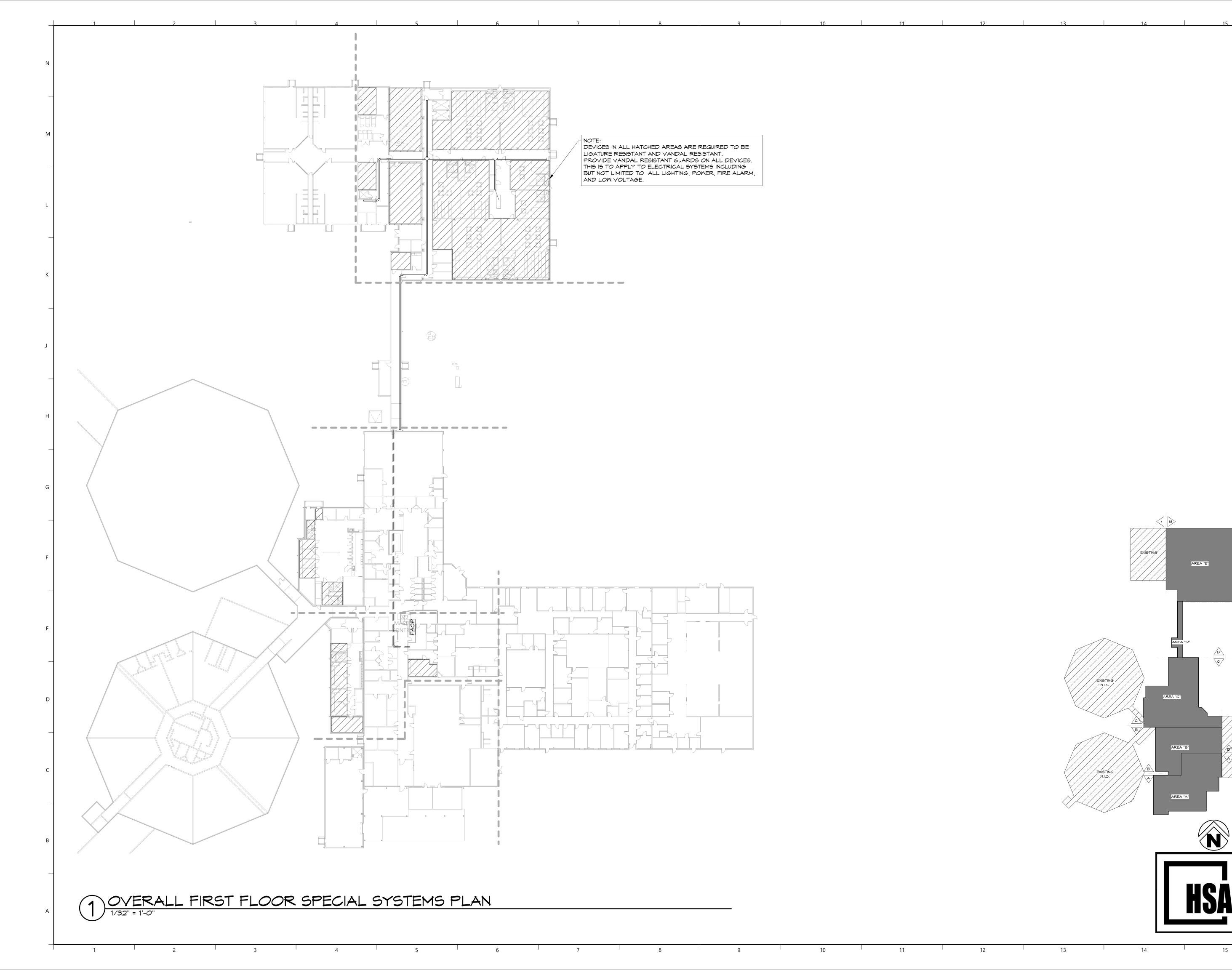
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<u>KEYPLAN</u>

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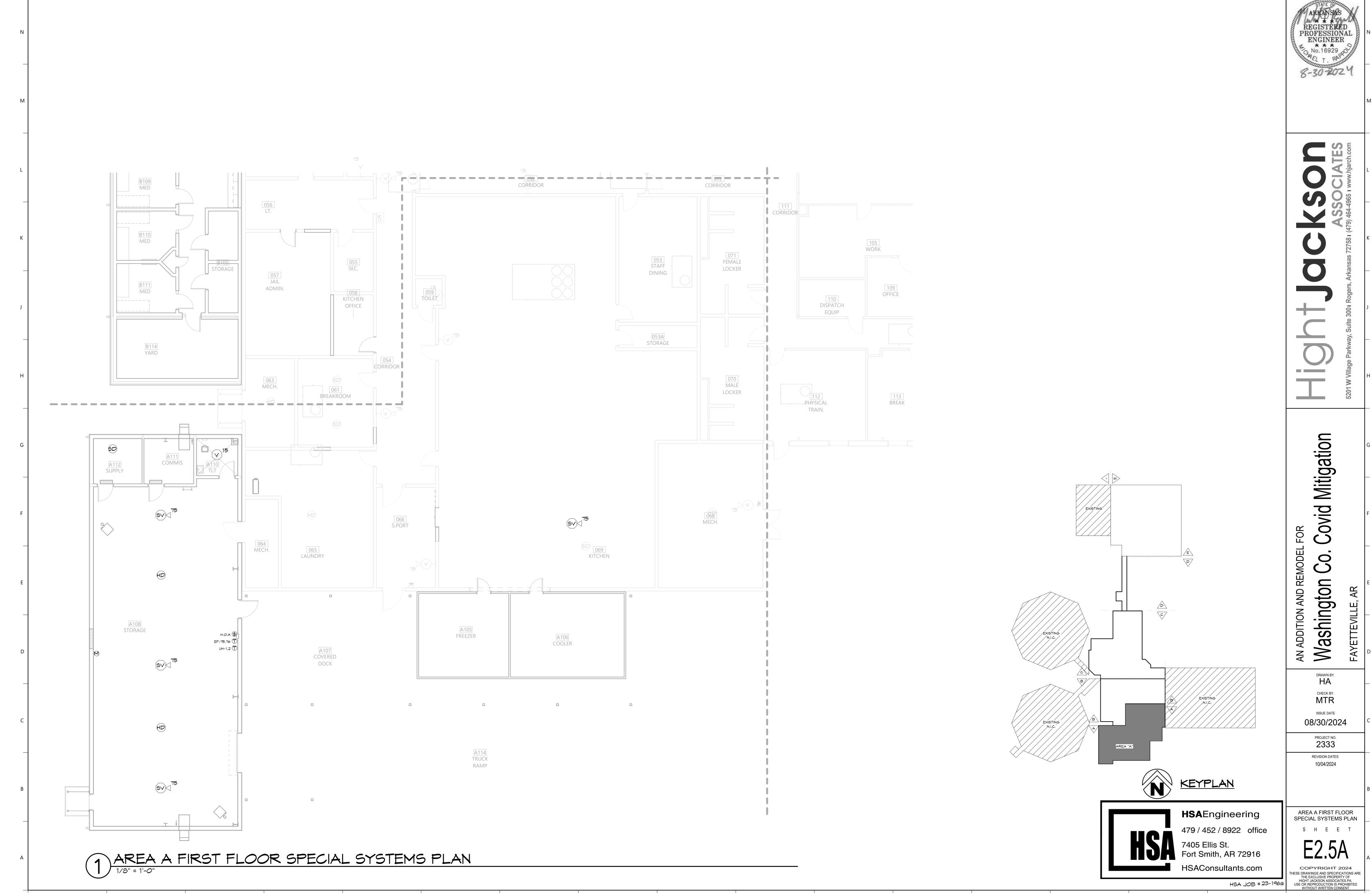
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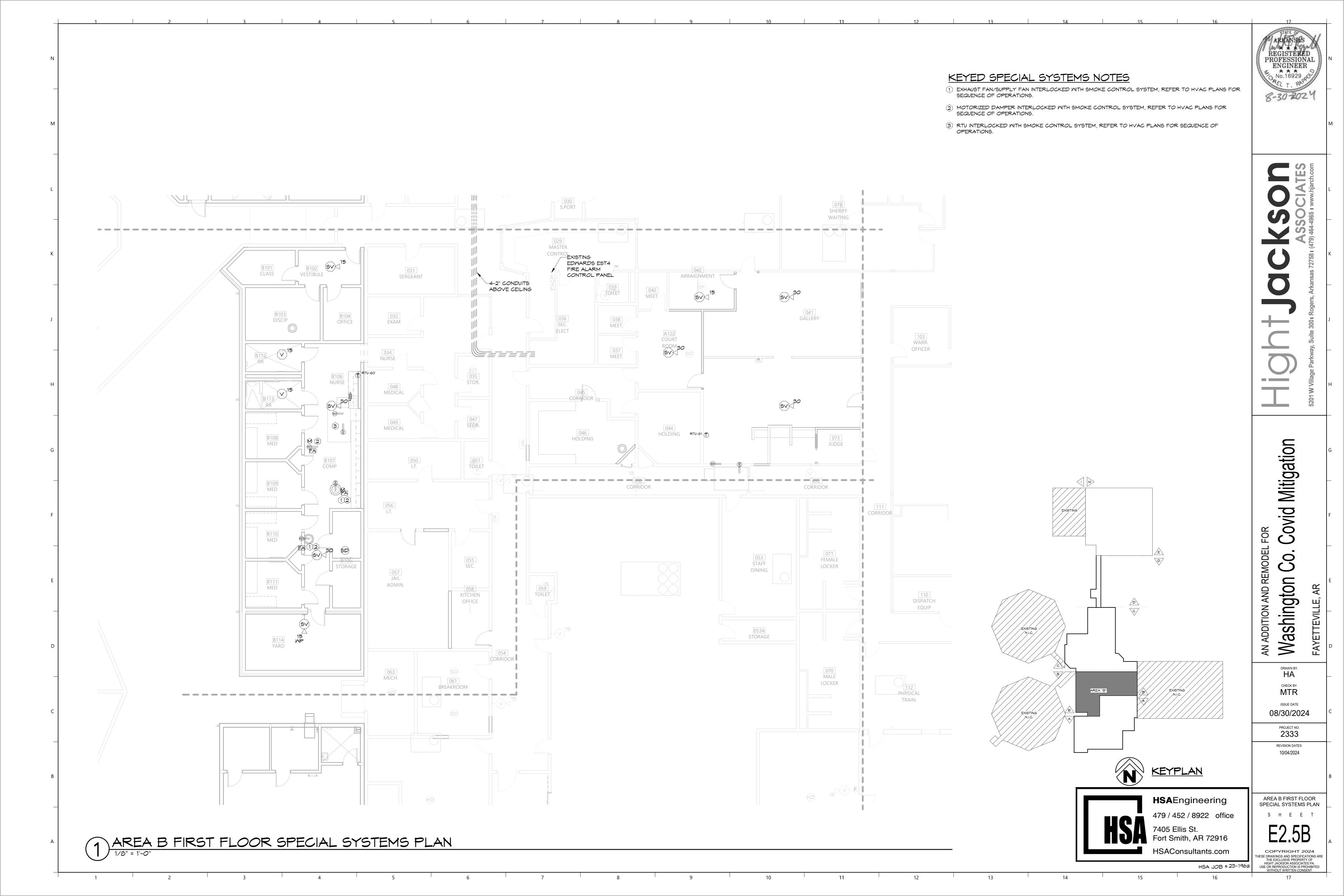
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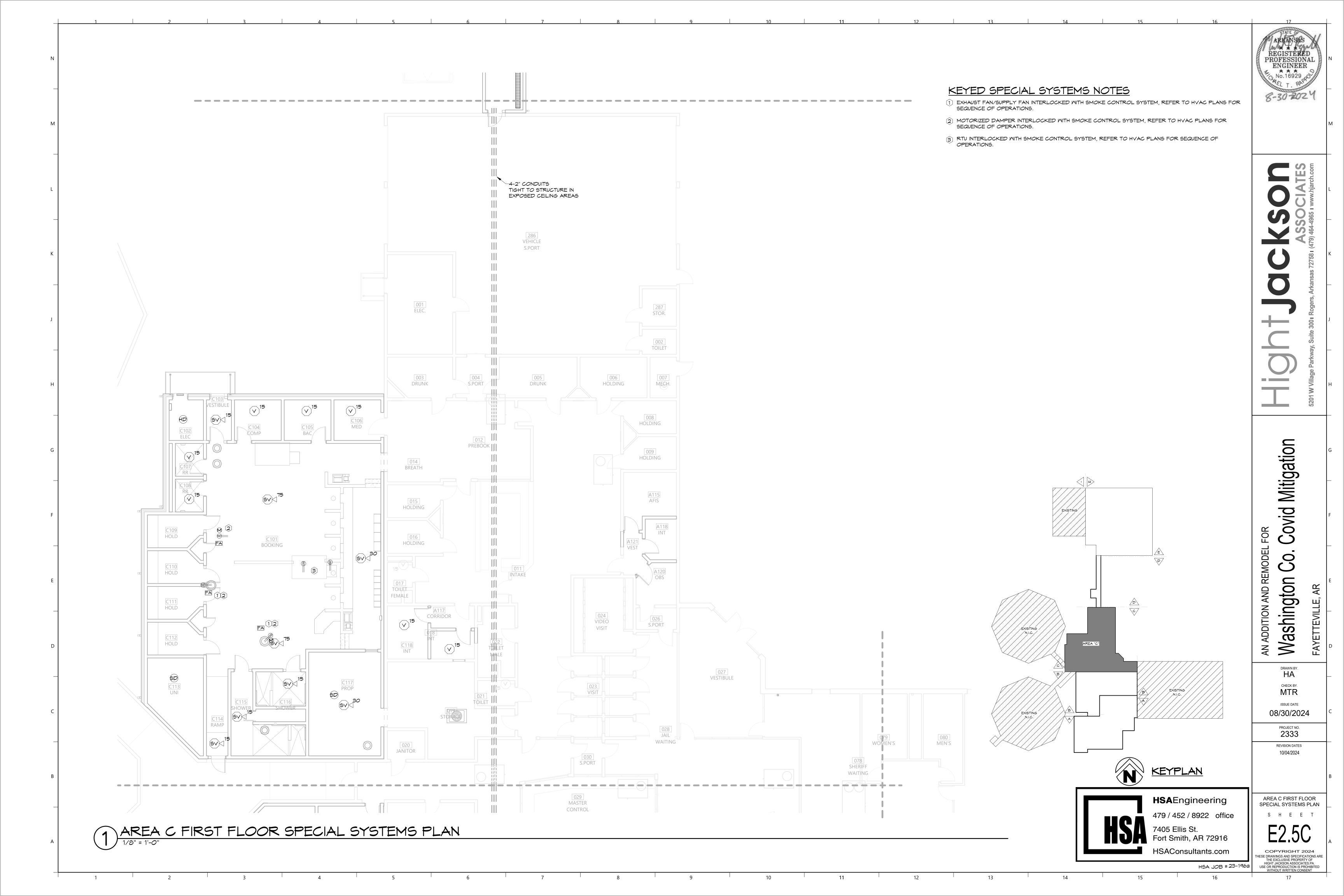
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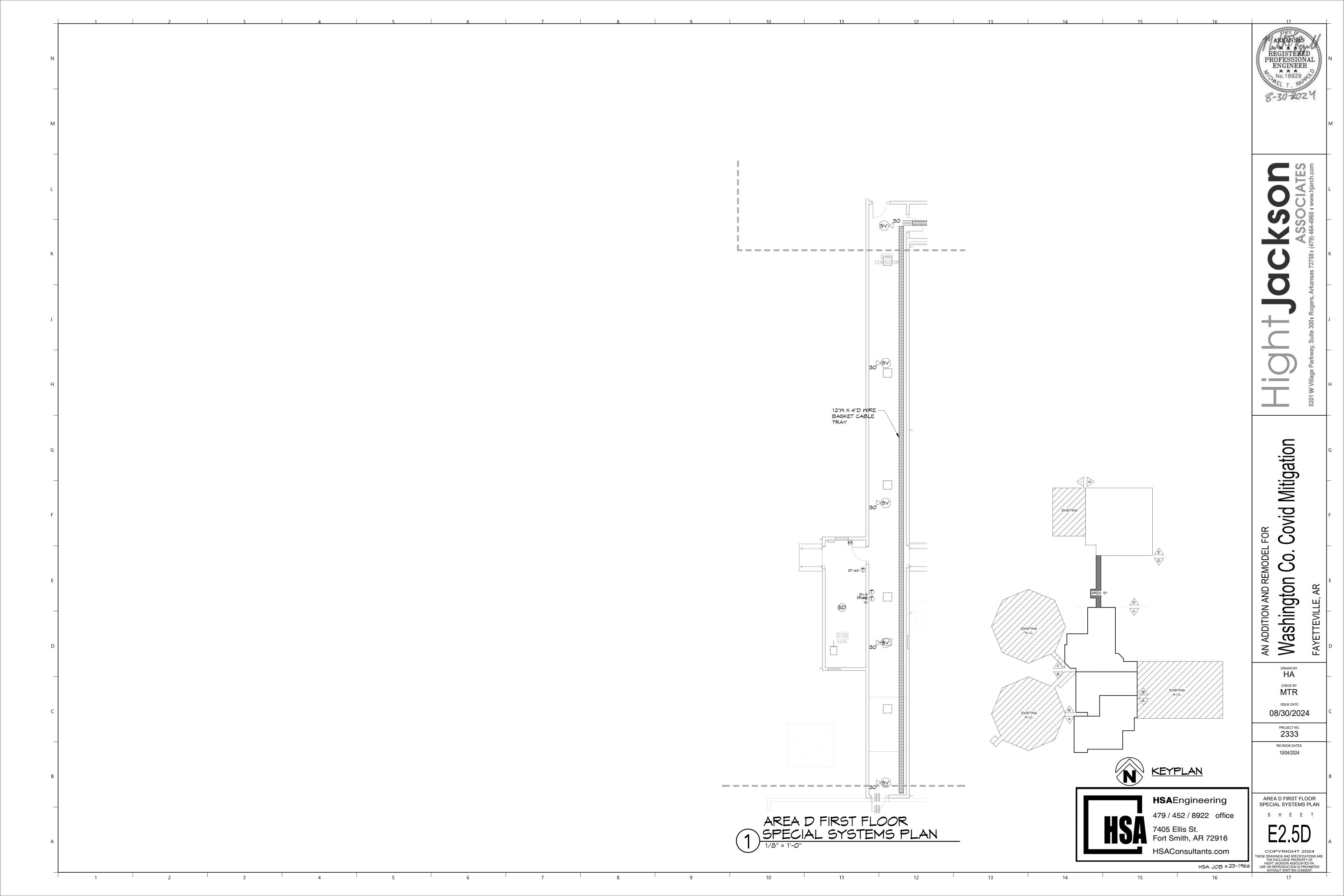
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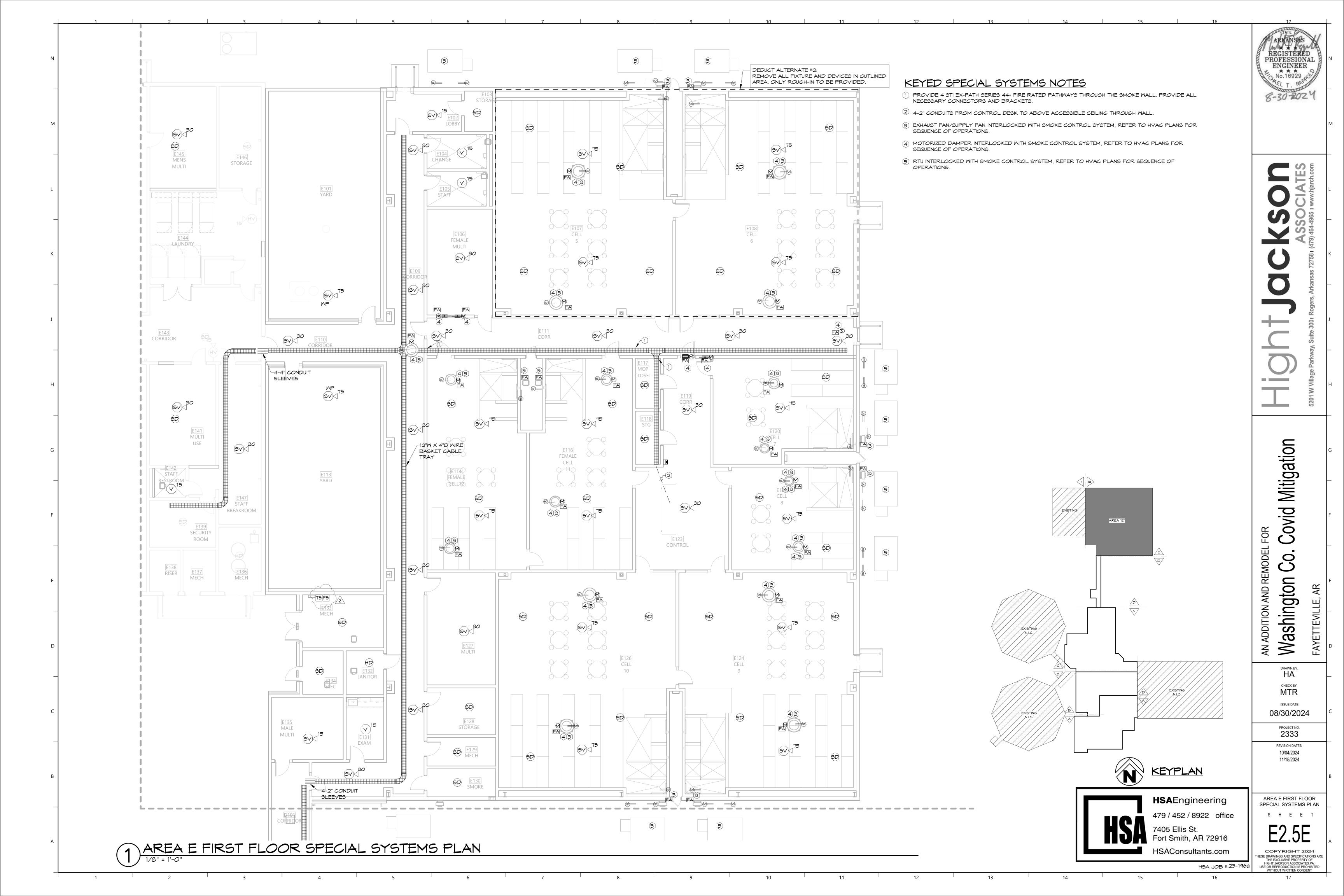
OVERALL SPECIAL SYSTEMS PLAN S H E E T











- MOUNTING HEIGHT KEYED NOTE:  $[\ 1\ ]$  4'-0" MAXIMUM TO TOP OF DEVICE UNLESS LOCATED ABOVE OBSTRUCTION (OR NOTED OTHERWISE) THEN MAXIMUM 4" ABOVE THE OBSTRUCTION. COORDINATE WITH MILLWORK.
- (2) MOUNT NEAR RETURN AIR GRILLE.
- (3) THE HEIGHT OF THE MANUAL FIRE ALARM BOXES SHALL BE A MINIMUM OF 42" AND A MAXIMUM OF 48" MEASURED VERTICALLY, FROM THE
- FLOOR LEVEL TO THE ACTIVATING HANDLE OR LEVER OF THE BOX. 4 ABOVE COUNTER MOUNTED DEVICES. INSTALL DEVICES ABOVE BACKSPLASH AND COORDINATED WITH MILLWORK. DATA/TELEPHONE DEVICES SHOWN ADJACENT TO ABOVE COUNTER RECEPTACLES TO BE TO BE MOUNTED AT SAME HEIGHT.

- 1. ALL DEVICES SHOWN MAY NOT BE USED. 2. DETAIL INDICATES TYPICAL MOUNTING HEIGHTS ONLY.
- 3. DEVICES SHALL BE INSTALLED PLUMB, SQUARE AND TRUE.
- 4. ALL DEVICES INSTALLED AT A SINGLE LOCATION SHALL BE ALIGNED U.N.O. 5. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.

MOUNTING HEIGHT DETAIL



 $\times, \times \times$ (SYMMETRICAL RMS AMPERES) DATE: XX/XX/XX

- 1. LABEL SHALL BE ATTACHED TO ELETRICAL SERVICE EQUIPMENT PER NEC 110.24.
- 2. PROVIDE DURABLE WEATHERPROOF LABEL.
- 3. LABEL IS SHOWN TO SCALE. 4. ELECTRICAL CONTRACTOR SHALL COORDINATE
- AVAILABLE FAULT CURRENT WITH UTILITY AND COMPLETE LABEL ACCORDINGLY

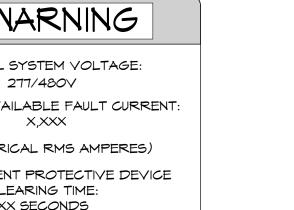
MARNING

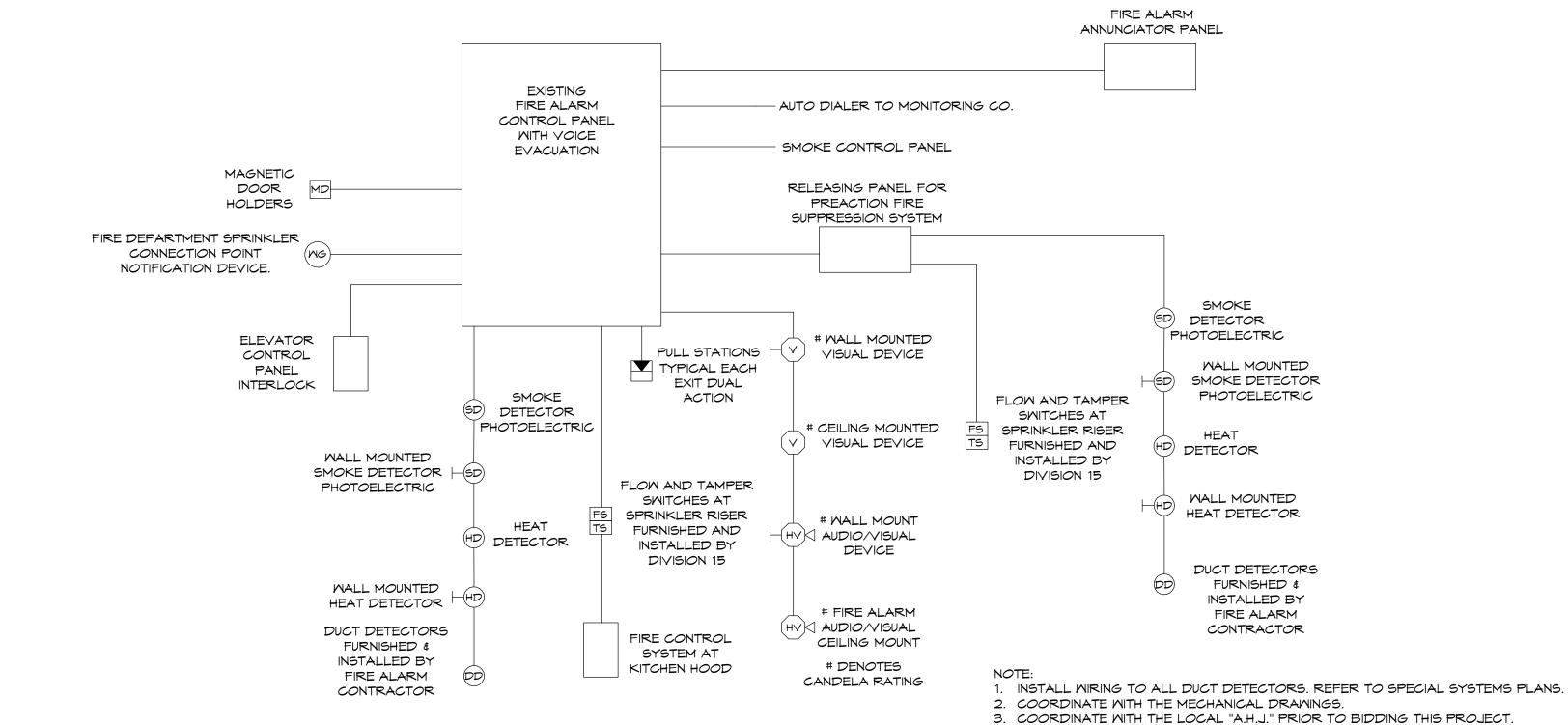
NOMINAL SYSTEM VOLTAGE: 277/480V MAXIMUM AVAILABLE FAULT CURRENT:

(SYMMETRICAL RMS AMPERES) OVERCURRENT PROTECTIVE DEVICE CLEARING TIME: XX SECONDS

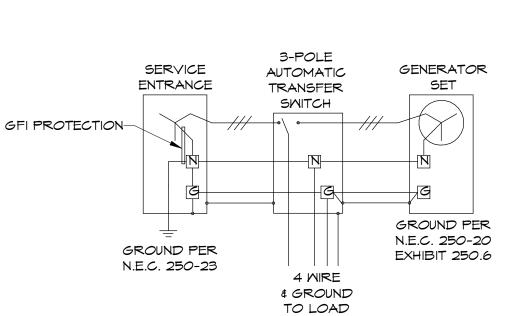
DATE: XX/XX/XX

3 FAULT CURRENT LABEL
N.T.S.

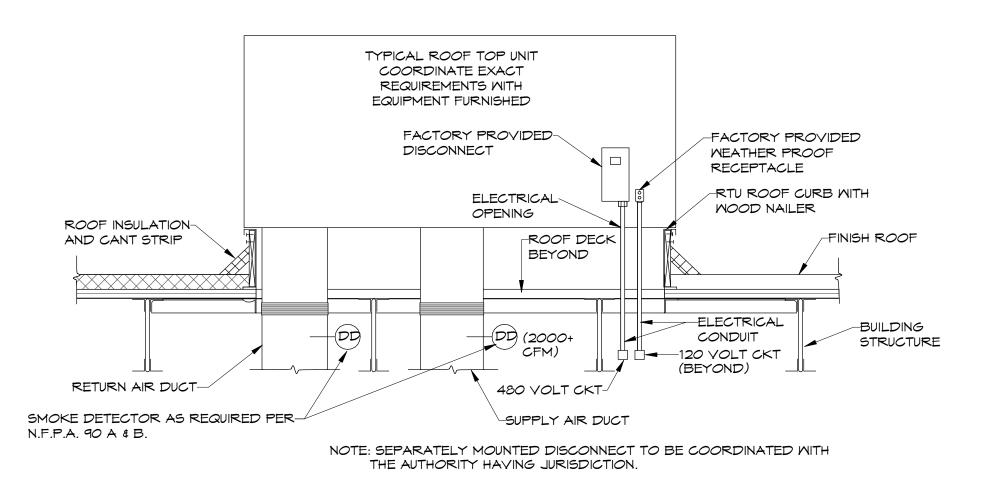




PIRE ALARM SYSTEM RISER DIAGRAM
N.T.S.



GENERATOR GROUNDING DIAGRAM
N.T.S.



4. FIRE ALARM CONTRACTOR TO MODIFY AS NECESSARY FOR SYSTEM PROVIDED.

6. FIRE ALARM CONTRACTOR TO PROVIDE DETECTION AND RELEASE OF PREACTING

FIRE SUPPRESSION SYSTEM. COORDINATE WITH FIRE SUPPRESSION CONTRACTOR TO

5. PROVIDE ALL NECESSARY CONNECTIONS TO SMOKE CONTROL SYSTEM.

PROVIDE ALL COMPONENTS FOR A COMPLETE AND WORKING SYSTEM



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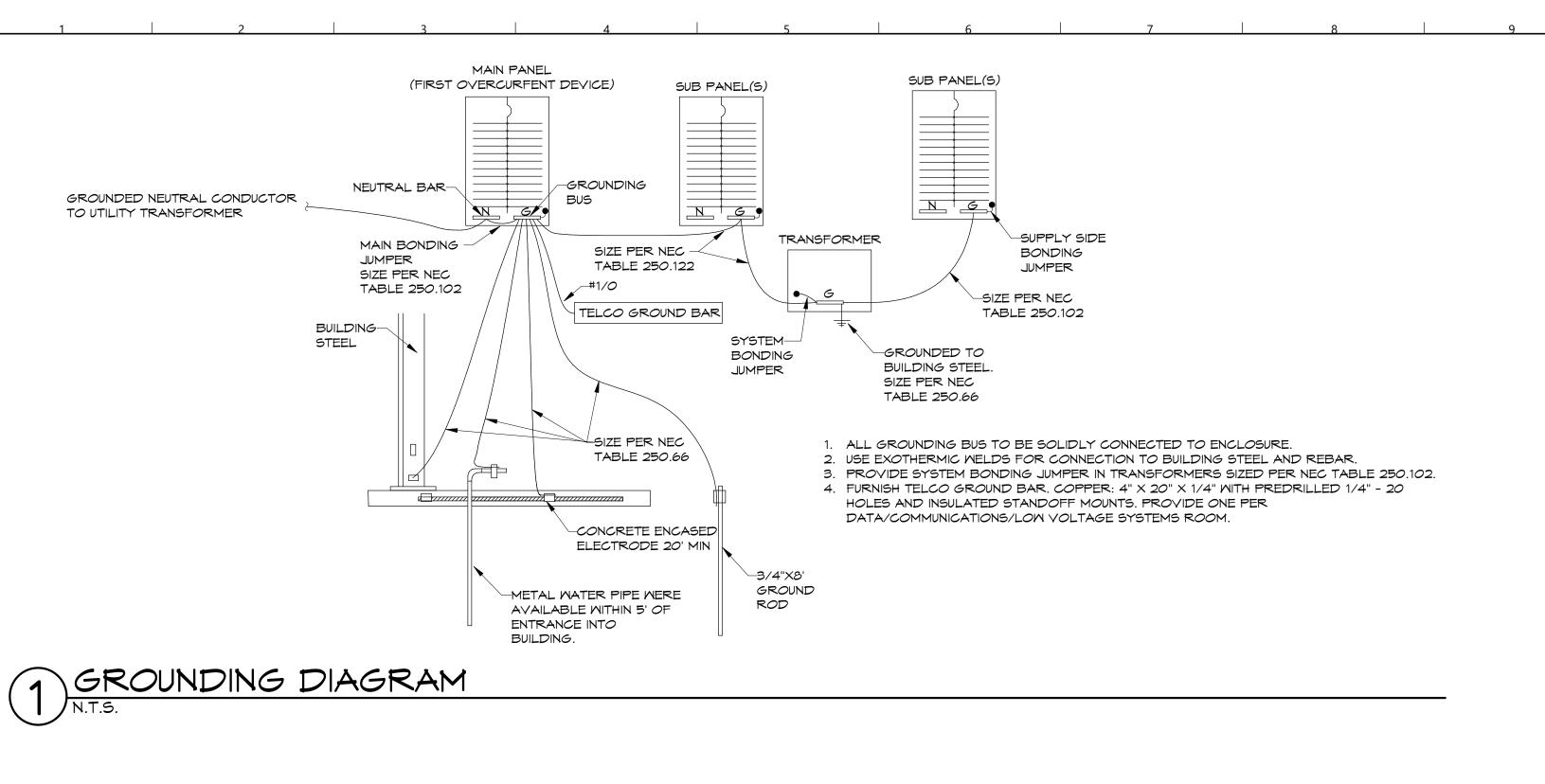
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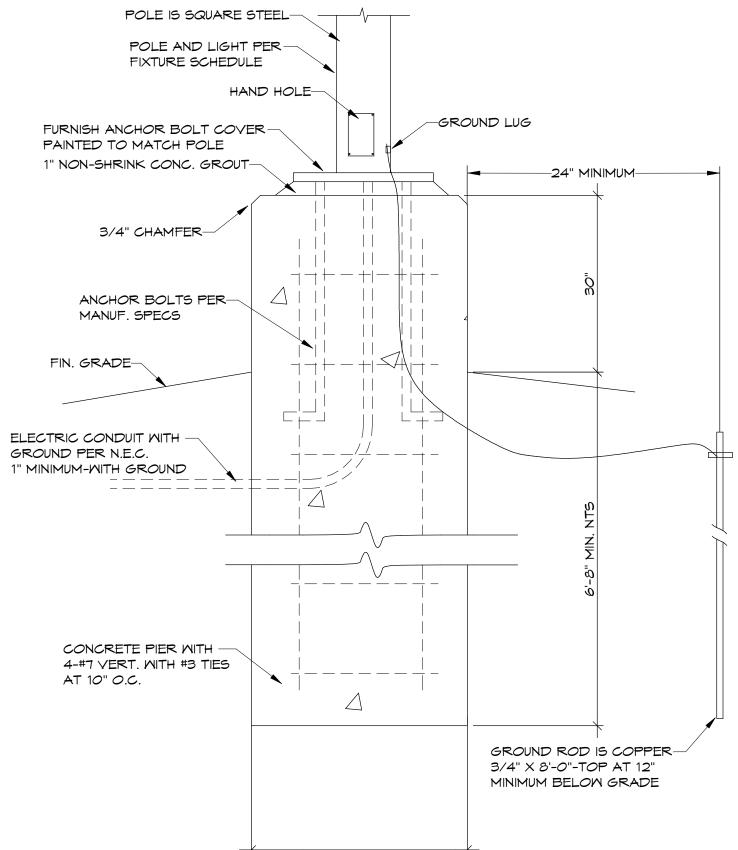
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ELECTRICAL DETAILS

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3 EXTERIOR LIGHT POLE BASE N.T.S.

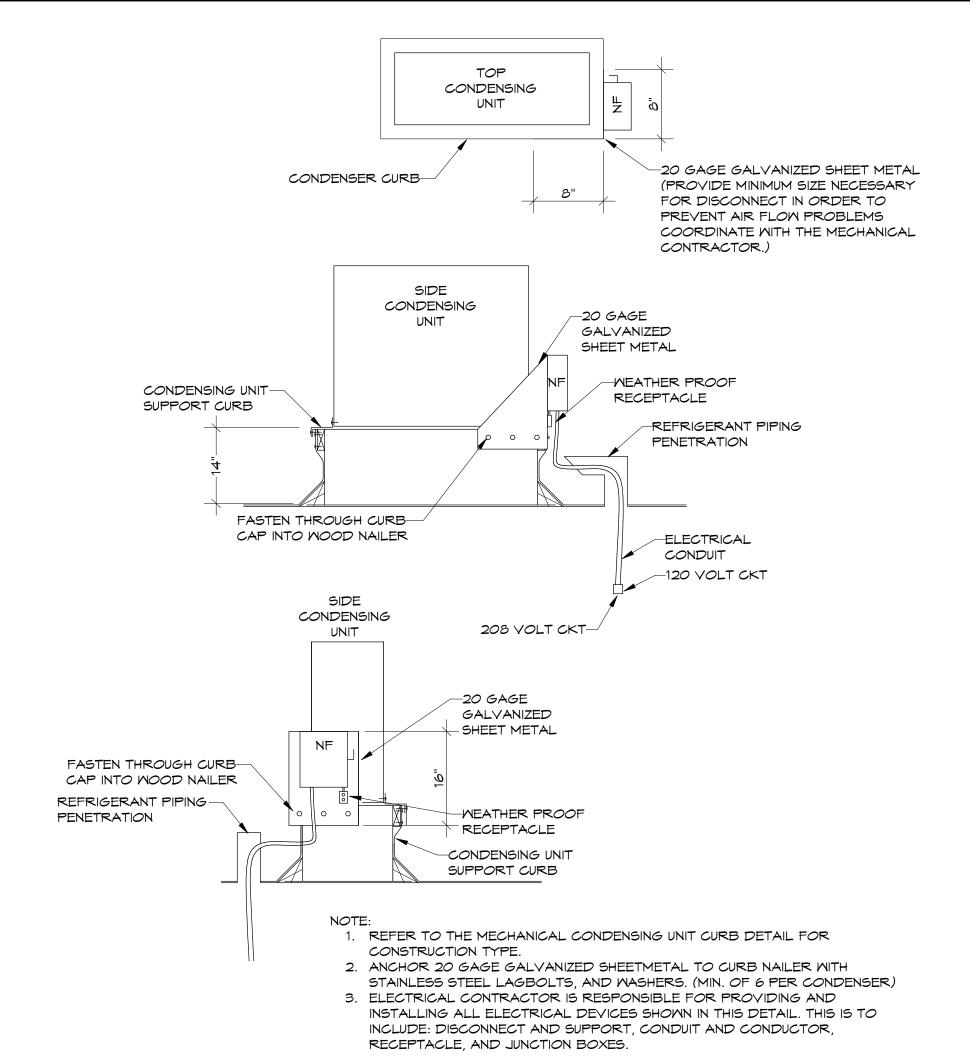
EXTERIOR OF WALK IN WARM NEMA 4 PVC JUNCTION BOX CONDUIT ON TOP OF WALK IN MALK IN PANEL SPRAY FOAM INSULATION, NO VOIDS AIRTIGHT SEAL AROUND WIRES, NO VOIDS WATERTIGHT COMPONENTS IN WALK IN NEMA 4 PVC RIGID CONDUIT INTERIOR OF WALK IN COLD NEMA 4 PVC JUNCTION BOX

MALK IN ELECTRICAL CONDUIT PENETRATION DETAIL

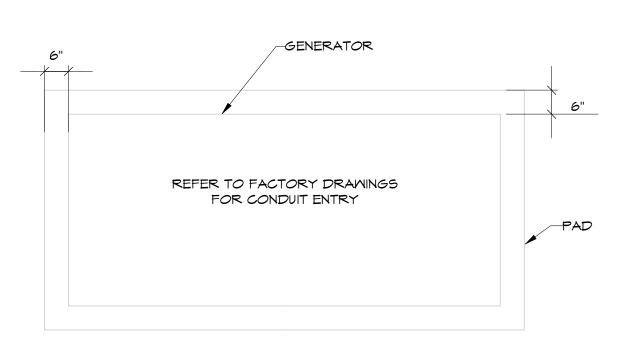
- HOLE 1/2" DIAMETER LARGER THAN CONDUIT/PIPE - NEMA 4 PVC CONDUIT OR REFRIGERANT/DRAIN PIPE - PROVIDE EQUAL SPACE FOR AIRTIGHT INSULATING — INSULATE SPACE W/ URETHANE FOAM SEALANT, NO VOIDS, ALLOW TO FULLY CURE & TRIM EXCESS — SEAL ALL EXPOSED FOAM INSULATION WATERTIGHT W/ SILVER NSF FOOD GRADE 100% SILICONE SEALANT

MALK IN CONDUIT/PIPE SEALING DETAIL

FREEZER JB DETAIL
N.T.S.



# 2 ROOFTOP CONDENSING UNIT DISCONNECT



NOTES:

1. REINFORCE WITH #4 @ 12" O.C. EACH WAY TOP AND BOTTOM 2. THICKEN THE PAD TO 2'6" DEEP BY 1'-0" WIDE TURN DOWN AROUND THE PERIMETER 3. SET TOP OF PAD AT 6" ABOVE FINISHED GRADE.

4. CONCRETE TO BE 4000 PSI.

5. CONSTRUCT CONCRETE PAD FOR THE ACTUAL EQUIPMENT SUPPLIED.





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ELECTRICAL DETAILS

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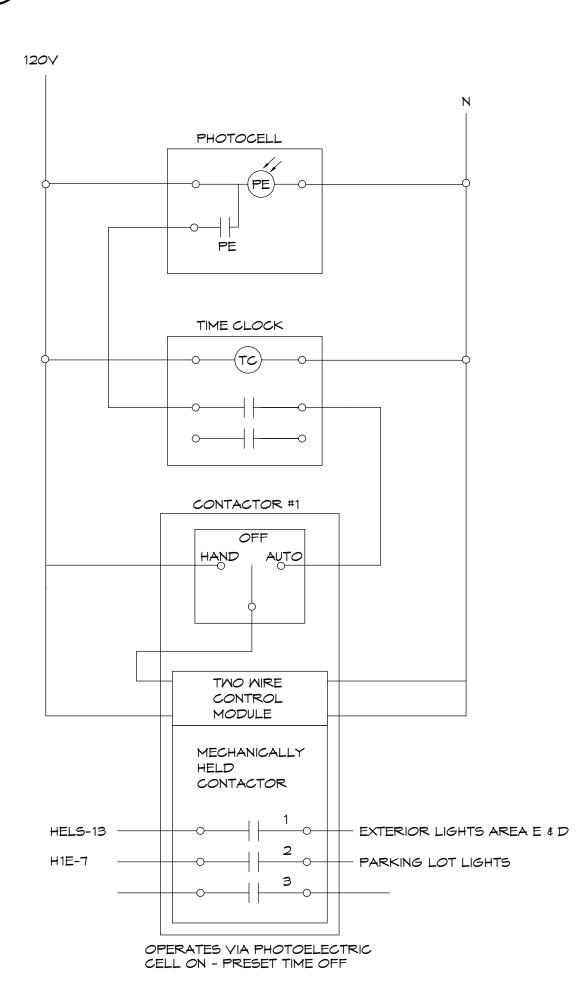
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STANDARD WIRING FOR SWITCHED CONTROL OF EMERGENCY LIGHTING ALONG WITH NORMAL LIGHTING NORMAL LINE CONTROL LIGHTING DEVICE NORMAL NEUTRAL POWER SENSE EMERGENCY NEUTRAL NORMAL (WHITE) SMITCH SENSE (BLACK) POWER IN EMERGENCY NEUTRAL (GRAY) (BLACK) (RED) WATTSTOPPER #ELCU-200 EMERGENCY CUT JUMPER LOOP OR EQUAL TO USE WITH NORMALLY CLOSED POWER OUT - TEST SMITCH - FIRE ALARM PANEL - SECURITY PANEL - OTHER EMERGENCY LINE EMERGENCY "ALMAYS ON" LIGHTING EMERGENCY NEUTRAL

1 EM AUTOMATIC TRANSFER SMITCH DEVICE (DIMMING FIXTURES)

2 EM AUTOMATIC TRANSFER SMITCH DEVICE(NON-DIMMING)
N.T.S.



- 1. PHOTOELECTRIC CELL SHALL BE INTERMATIC #K4136M,
- WITH ADJUSTABLE SENSITIVITY, OR EQUAL. THE CONTRACTOR
- SHALL ADJUST DURING NIGHT HOURS TO INSURE PROPER OPERATION. 2. PROVIDE ALL ACCESSORIES AND HARDWARE FOR A MORKING
- 3. MOUNT PHOTOELECTRIC CELL FACING NORTH. AVOID ALL ARTIFICIAL LIGHT SOURCES.

		LIG	HTING CONTACTOR S	SCHEDULE					
	MARK	EQUIPMENT SERVED	CIRCUITS	COIL VOLTAGE	CONTROLLED BY	TYPE	AMP	ENCLOSURE	ACCESSORIES
*	LC1	EXTERIOR PARKING LOT	HELS-13 H1E-7	120	TIME CLOCK & PE CELL	MECH HELD	30	NEMA 1	HOA, TMO WIRE CONTROL MODULE

HOA - HAND-OFF-AUTO SMITCH: OVER RIDES OTHER CONTROLS \* COORDINATE PRESET "TIME-ON" & "TIME OFF" WITH THE OWNER.

3 LIGHTING CONTACTOR DETAIL
N.T.S.



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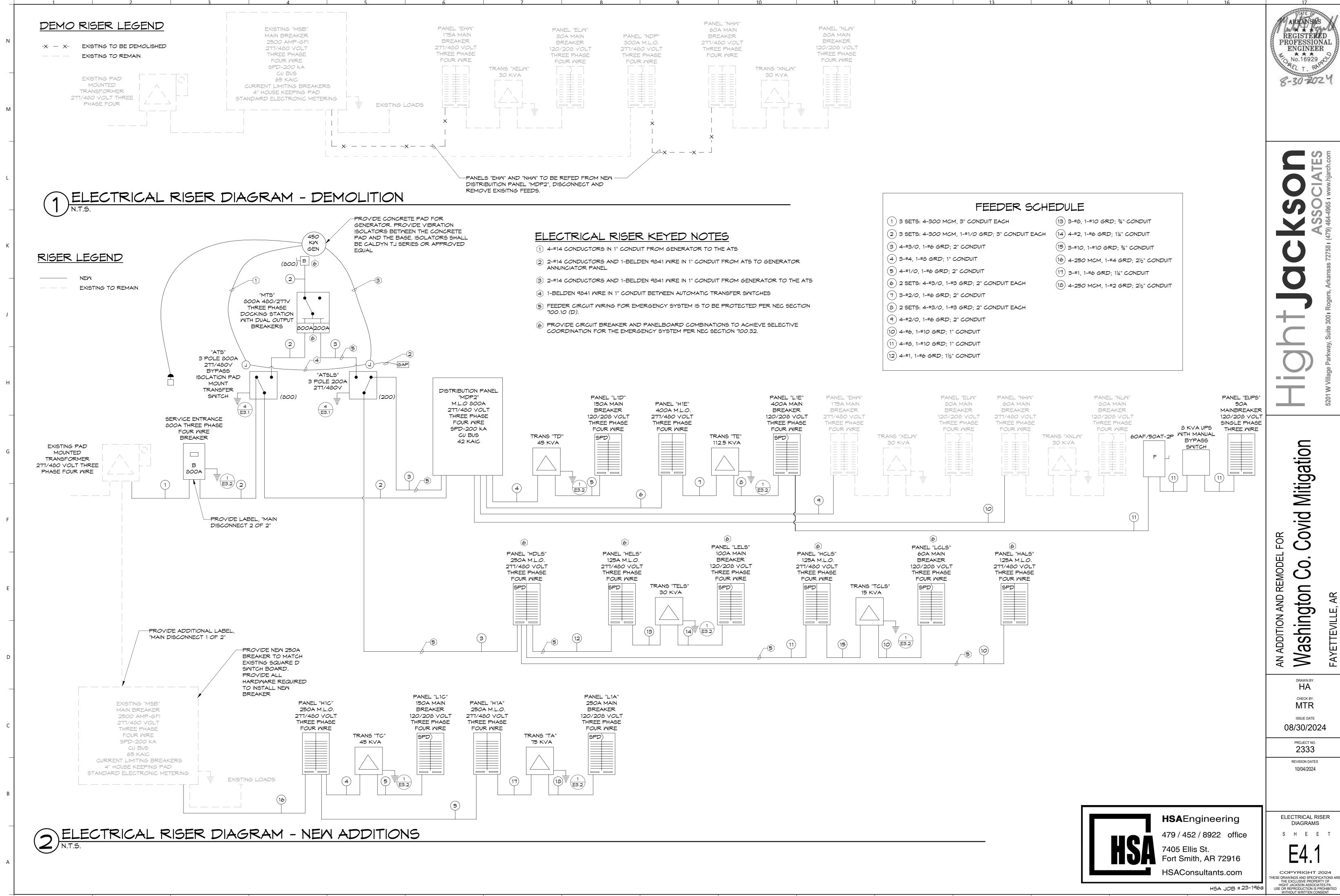
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8-30-2024

ELECTRICAL DETAILS

S H E E T



								L	IGHTING FIXTURE SCHEDULE	
MARK	VOLT	MATT		LAMP	MOUN	NTING		MANUFACTURER	CATALOG NO.	REMARKS
IVIAIN	VOLI		NO.	COLOR TEMP	BRKT PEND	REC	SURF	MANULACIUNEN	ORTALOO NO.	
A1	UNY	37		4000K		×		LITHONIA	2GTL-4-48L-A12125-EZ1-LP840	2'X4' LED TROFFER, 4800 LUMEN OUTPUT. 0-10V
/ \ \	0,11			100014				COLUMBIA	LJT-24-40-ML-G-F5-A12125-EDU	
A2	UNY	28		4000K		×		LITHONIA	2GTL-2-33L-A12125-EZ1-LP840	2'X2' LED TROFFER, 3300 LUMEN OUTPUT. 0-10V
	DIVY	20		40001				COLUMBIA	LJT-22-40-ML-G-F5-A12125-EDU	
A3	UNY	65		4000K		×		LITHONIA	2GTL-4-88L-A12125-EZ1-LP840	2'X4' LED TROFFER, 8800 LUMEN OUTPUT. 0-10V
	DIVY			<del>-</del> 000K				COLUMBIA	LJT-24-40-XL-G-F5-A12125-EDU	
B1	UNY	67		4000K			×	KENALL	SSD-4-0-67L40-DCC-277-SYM/B-1	2'X4' TAMPER RESISTANT SURFACE MOUNT TROFFER. 14-GA WHITE DOOR WITH TORX HEAD SECURITY SCREWS
DI	UNY	61		4000K			^	PACO	PUSA-M-24-90-8-40-FA1-M5-MV-D	Anni Portovniki di Selestivi i Sereni
	115.15.7			10001			.,	KENALL	55D-2-0-45L40-DCC-277-5YM/B-1	2'X2' TAMPER RESISTANT SURFACE MOUNT TROFFER. 14-GA WHITE DOOR WITH TORX HEAD SECURITY SCREWS
B2	UNV	45		4000K			×	PACO	PUSA-M-22-60-8-40-FA1-M5-MV-D	MITH TORX HEAD SECONTIT SOILENS
				40001			.,	KENALL	SCT-4-0-45L40K-DCC-DV-SYM/B-1	1'X4' TAMPER RESISTANT SURFACE MOUNT TROFFER. 14-GA WHITE DOOR WITH TORX HEAD SECURITY SCREWS
C1	UNV	46		4000K			×	ADVANTAGE ENVIRONMENTAL LIGHTING	BAX-14-40-5500L-B16-B16-INS-PA156-187P-M	MITH TORK HEAD SECONTIT SOREMS
						_		KENALL	RMCD-4-XX-0-67L40K-DCC-277-9/5YM-1	2'X4' TAMPER RESISTANT RECESSED TROFFER. 14-GA WHITE DOOR WITH TORX HEAD SECURITY SCREWS
D1	UNV	67		4000K		×		PACO	MRGA2-M-24-F-70-8-40-FA1-M4-MV-D	TORX HEAD SECURITY SCRENS
								LITHONIA	EXRG M6	EXIT SIGN, UNIVERSAL MOUNT- SEE PLANS FOR NUMBER OF SIDES AND
E1	UNY	5						COMPASS	CARG	CHEVRONS. REQUIRES UNSWITCHED HOT WIRE.
								KENALL	MMEX-1-0-R-DT-1	SECURITY EXIT SIGN, UNIVERSAL MOUNT- SEE PLANS FOR NUMBER OF
E2	UNY	5						ADVANTAGE ENVIRONMENTAL LIGHTING	BAB-1-B14-R-XX-M-TH-EM-WL	SIDES AND CHEVRONS. REQUIRES UNSWITCHED HOT WIRE.
									<del></del>	EXISTING TO REMAIN FIXTURE.
ER									<del></del>	
								LITHONIA	CLX-L48-5000LM-SEF-FDL-MVOLT-EZ1-40K-80CRI-WH	4' UTILITY STRIP FIXTURE, 5000 LUMEN OUTPUT, SUSPENDED MOUNT.
F1	UNY	32		4000K	×			COLUMBIA	MPS-4-40-HL-FW-EDU-CM48SCF3-KIT	
					.,			LITHONIA	CLX-L48-10000LM-SEF-FDL-MVOLT-EZ1-40K-80CRI-WH	4' UTILITY STRIP FIXTURE, 10000 LUMEN OUTPUT, SUSPENDED MOUNT.
F2	UNV	47		4000K	×			COLUMBIA	MPS-4-40-XL-FW-EDU-CM48SCF3-KIT	
F-0	115.15.7	707		400014				LITHONIA	CLX-L48-5000LM-SEF-FDL-MVOLT-EZ1-40K-80CRI-WH	4' UTILITY STRIP FIXTURE, 5000 LUMEN OUTPUT, SURFACE MOUNT.
F3	UNV	70.7		4000K			×	COLUMBIA	MPS-4-40-HL-FW-EDU	
				40001			.,	LITHONIA	2MRTL-G-L48-10000LM-0AM-AFL-MVOLT-GZ1-40K-80CRI-WH	2'X4' LED LENSED TROFFER, 9000 LUMEN OUTPUT, .125" THICK FROSTED ACRYLIC LENS. TRIPLE GASKET, WET LOCATION RATED.
G1	UNV	76		4000K			×	COLUMBIA	LJT-24-40-UL-G-FS-A12125-EDU-G3	AORTEO LENS. TRIT LE GASRET, MET LOGATION RATED.
								FME	CPM-C-LV-4K-B	EXTERIOR SURFACE MOUNT CANOPY LIGHT, 5300 LUMEN OUTPUT.
H1	UNY	40		4000K			×	BEACON	VSH-30-4K7-UNV-BLT	
								KENALL	H1212EM-PP-CTBS-50L40K-DV	12"X12" SECURITY WALL PACK, 5000 LUMEN OUTPUT. REFER TO PLANS FOR MOUNTING HEIGHTS.
M1	UNY	54		4000K			×	EXO	PVL3-1180L-60W-4K7-U-CTB5	TOR MOUNTING REIGHTS.
								LITHONIA	MDGE3-LED-P3-40K-80CRI-R3-MVOLT-SRM	18" WALL PACK, 10000 LUMEN OUTPUT, TYPE 3 DISTRIBUTION, REFER TO PLANS FOR MOUNTING HEIGHTS.
M2	UNV	71		4000K			×	BEACON	RWL2-160L-50-4K7-3-UNV-CTB5	LAND LON MOUNTING REIGHTS.
								KENALL	H1212FM-PP-CTBS-50L40K-DV	12"X12" SECURITY CANOPY FIXTURE, 5000 LUMEN OUTPUT. CEILING MOUNT.
M3	UNV	54		4000K			×	ADVANTAGE ENVIRONMENTAL LIGHTING	BAU-40-5L-B14-B14-INS-CTBS-PP125-CTG187-M	
								LITHONIA	DSX2-LED-P3-40K-T2M-MVOLT-XX-CTBS	LED POLE LIGHT SINGLE ARRANGEMENT, TYPE 2 DISTRIBUTION, 27000 PROVIDE POLE TO MATCH EXISTING LIGHT POLES, FIELD VERIFY.
51	UNY	262		4000K	×			BEACON	\/P_ST_2_320_185_4K7_2_UN\/_A_CTBS	TROVIDE FOLE TO MATCH EXISTING LIGHT FOLES, FIELD VERIFT.

VP-ST-2-320-185-4K7-2-UNV-A-CTBS

NOTE: HOLD ALL I	INSULATION OFF RECE	SSED FIXTURES AT A MIN	NIMUM OF 3" TO THE SIDE.

NOTE: EXIT LIGHTS AND EMERGENCY LIGHTS REQUIRES UNSWITCHED HOT WIRE PER MANUFACTURER RECOMMENDATION.

BEACON

NOTE : FIXTURES MARKED AS "CTBS" REQUIRE STANDARD FINISHED SELECTED BY THE ARCHITECT.

NOTE: FOR ALL FIXTURES WITH 0-10V DIMMING, PROVIDE LOW VOLTAGE CABLE.

NOTE : FIXTURES MARKED NL REQUIRE UNSWITCHED HOT WIRE. NOTE : ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL LED AND DRIVER COMBINATIONS THAT

WILL PROVIDE THE OWNER WITH A FIVE YEAR WARRANTY ON THE FIXTURE.

COORDINATE WITH THE ARCHITECTURAL DRAWINGS AND THE ARCHITECT.

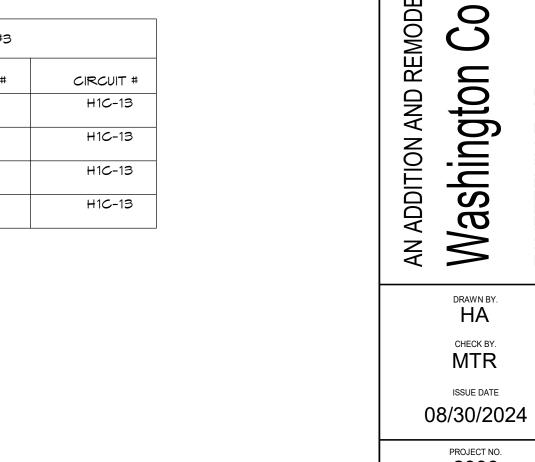
NOTE : EM FIXTURES REQUIRE EMERGENCY BATTERY PACKS, AND GENERATOR TRANSFER DEVICES.

NOTE : FIELD VERIFY ALL FIXTURE LENGTHS NOTES AS LENGTH PER PLANS. PROVIDE CONTINUOUS RUNS OF FIXTURES.

ROOM	ZONES	RELAY #	CIRCUIT
E114 FEMALE CELL 12	RESTROOM	R1	H1E-1
	NIGHT LIGHTS	R2	H1E-1
	GENERAL	R3	H1E-1
E116 FEMALE CELL 11	RESTROOM	R4	H1E-1
	NIGHT LIGHTS	R5	H1E-1
	GENERAL	R6	H1E-1
E126 CELL 10	RESTROOM	R7	H1E-1
	NIGHT LIGHTS	R8	H1E-1
	GENERAL	R9	H1E-1
E124 CELL 9	RESTROOM	R10	H1E-1
	NIGHT LIGHTS	R11	H1E-1
	GENERAL	R12	H1E-1
E122 CELL 8	RESTROOM	R13	H1E-1
	NIGHT LIGHTS	R14	H1E-1
	GENERAL	R15	H1E-1
E120 CELL 7	RESTROOM	R16	H1E-1
	NIGHT LIGHTS	R17	H1E-1
	GENERAL	R18	H1E-1
E108 CELL 6	RESTROOM	R19	H1E-3
	NIGHT LIGHTS	R20	H1E-3
	GENERAL	R21	H1E-3
E107 CELL 5	RESTROOM	R22	H1E-3
	NIGHT LIGHTS	R23	H1E-3
	GENERAL	R24	H1E-3
E106 FEMALE MULTI	GENERAL	R25	H1E-3
E101 YARD	GENERAL	R26	H1E-3
E113 YARD	GENERAL	R27	H1E-3
E127 MULTI	GENERAL	R28	H1E-5
E135 MALE MULTI	GENERAL	R29	H1E-5

	LIGHTING RELA	Y SCHEDULE #2	
ROOM	ZONES	RELAY #	CIRCUIT #
B108 MED	GENERAL	R1	H1A-3
B109 MED	GENERAL	R2	H1A-3
B110 MED	GENERAL	R3	H1A-3
B111 MED	GENERAL	R4	H1A-3
B114 YARD	GENERAL	R5	H1A-3

	LIGHTING RELA	Y SCHEDULE #3	
ROOM	ZONES	RELAY #	CIRCUIT #
C109 HOLD	GENERAL	R1	H1C-13
C110 HOLD	GENERAL	R2	H1C-13
C111 HOLD	GENERAL	R3	H1C-13
C112 HOLD	GENERAL	R4	H1C-13



**HSA**Engineering 479 / 452 / 8922 office Fort Smith, AR 72916 HSAConsultants.com

ELECTRICAL SCHEDULES S H E E T

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#### SMITCHBOARD SCHEDULE

Panel Name: MDP2

Amp Rating: 800 A Mains: MLO MCB Rating: N/A **Volts/Phase/Wire:** 480/277 Wye / 3 / 4

Manufacturer: SQUARE D Panel Type: I-LINE Remarks: CU BUS

Fault Current: SERIES Ground Fault Breaker: NO Shunt Trip Breaker: NO Location: ELEC D102

Circuit Description	Breaker 1	Poles	<b>A</b>	В	c	Remarks
+				_		REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
*TRANSFORMER "TD"	70 A	3	7720 VA			REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
PANEL "EHM"	175 A	3	15125 VA	15125 VA	15125 VA	REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
*AUTOMATIC TRANSFER SMITCH "ATSLS"	200 A	3	11550 VA	5954 VA	4117 VA	REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
PANEL "NHW"	60 A	3	15125 VA	15125 VA	15125 VA	REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
Spare	400 A	3	O VA	O VA	O VA	
Spare	125 A	3	O VA	O VA	O VA	
Spare	200 A	3	O VA	O VA	O VA	
SPD	60 A	3	O VA	O VA	O VA	
	Total Conn.	Load:	119338 VA	113104 VA	105176 VA	
	Total	Amps:	435 A	413 A	380 A	
	PANEL "EHM"  *AUTOMATIC TRANSFER SMITCH "ATSLS"  PANEL "NHM"  Spare  Spare  Spare	PANEL "H1E"  *TRANSFORMER "TD"  PANEL "EHW"  175 A  *AUTOMATIC TRANSFER SMITCH "ATSLS"  PANEL "NHW"  60 A  Spare  400 A  Spare  400 A  Spare  200 A  Total Conn.	PANEL "H1E"  *TRANSFORMER "TD"  PANEL "EHW"  *AUTOMATIC TRANSFER SMITCH "ATSLS"  PANEL "NHW"  Spare  400 A  3  *AUTOMATIC TRANSFER SMITCH "ATSLS"  60 A  Spare  125 A  Spare  5PD  60 A  3  Total Conn. Load:	PANEL "H1E"       400 A       3       69837 VA         *TRANSFORMER "TD"       70 A       3       7120 VA         PANEL "EHW"       175 A       3       15125 VA         *AUTOMATIC TRANSFER SWITCH "ATSLS"       200 A       3       11550 VA         PANEL "NHW"       60 A       3       15125 VA         Spare       400 A       3       0 VA         Spare       125 A       3       0 VA         Spare       200 A       3       0 VA         SPD       60 A       3       0 VA         Total Conn. Load:       119338 VA	PANEL "H1E"  400 A 3 69837 VA 68830 VA *TRANSFORMER "TD"  70 A 3 7720 VA 8100 VA  PANEL "EHW"  175 A 3 15125 VA 15125 VA  *AUTOMATIC TRANSFER SMITCH "ATSLS"  200 A 3 11550 VA 5954 VA  PANEL "NHW"  60 A 3 0 VA 0 VA  Spare  400 A 3 0 VA 0 VA  Spare  200 A 3 0 VA 0 VA  Spare  200 A 3 0 VA 0 VA  Total Conn. Load: 119338 VA 113104 VA	PANEL "H1E"  400 A 3 69837 VA 68830 VA 63897 VA *TRANSFORMER "TD"  70 A 3 7720 VA 8100 VA 6912 VA PANEL "EHW"  175 A 3 15125 VA 15125 VA 15125 VA *AUTOMATIC TRANSFER SMITCH "ATSLS"  200 A 3 1550 VA 5954 VA 4117 VA PANEL "NHM"  60 A 3 15125 VA 15125 VA 15125 VA Spare  400 A 3 0 VA 0 VA Spare  125 A 3 0 VA 0 VA Spare  125 A 3 0 VA 0 VA Spare  125 A 3 0 VA 0 VA Spare  126 A 3 0 VA 0 VA Spare  127 A 3 0 VA 0 VA Spare  128 A 3 0 VA 0 VA Spare  129 A 3 0 VA 0 VA Spare  120 A 3 0 VA 0 VA Spare  120 A 3 113104 VA SPD

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals
Lighting	9496 VA	125.00%	11870 VA		
Receptacle	25440 VA	69.65%	17720 VA	Total Conn. Load:	337617 VA
HVAC	188415 VA	100.00%	188415 VA	Total Est. Demand:	240020 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	409 A
Other	22016 VA	100.00%	22016 VA	Total Est. Demand Current:	289 A
Kitchen	O VA	0.00%	O VA		

\*PROVIDE ELECTRONIC TRIP LSI BREAKER

## PANEL SCHEDULE

Panel Name: L1D Amp Rating: 225 A Mains: MCB MCB Rating: 150 A **Volts/Phase/Wire** 120/208 Mye / 3 / 4

Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface

Fault Rating: 10K AIC Fed From: TD Location: ELEC D102

Circuit Description	COND . SIZE				Poles	TRIP	CKT	/	4	E	3		•	CKT	TRIP	Poles	# OF Mires	MIRE SIZE	CONE . SIZE		Circuit Description
R-RMS: D101, D102	3/4	12	12	3	1	20	1	720	0					2	20	1		 		Spare	•
SENERATOR BATTERY CHARGER	3/4	12	12	3	1	20	3			600	0			4	20	1		 		Spare	
SENERATOR BLOCK HEATER	3/4	12	12	4	2	20	5					1000	0	6	20	1		 		Spare	
-							7	1000	0					8	20	1		 		Spare	
H-11	3/4	12	12	4	2	20	9			1500	0			10	20	1		 		Spare	
-							11					1500	0	12	20	1		 		Spare	
H-6	3/4	12	12	4	2	20	13	1500	0					14	20	1		 		Spare	
-							15			1500	0			16	20	1		 		Spare	
F-67	3/4	10	10	3	1	20	17					696	0	18	20	1		 		Spare	
H-7	3/4	12	12	4	2	20	19	1500	0					20	20	1		 		Spare	
-							21			1500	0			22	20	1		 		Spare	
H-8	3/4	12	12	4	2	20	23					1500	0	24	20	1		 		Spare	
-							25	1500	0					26	20	1		 		Spare	
H-9	3/4	12	12	4	2	20	27			1500	0			28	20	1		 		Spare	
-							29					1500	0	30	20	1		 		Spare	
EH-10	3/4	12	12	4	2	20	31	1500	0					32	20	1		 		Spare	
-							33			1500	0			34	20	1		 		Spare	
F-68	3/4	12	12	3	1	20	35					716	0	36	20	1		 		Spare	
ipare					1	20	37	0	0					38	30	3		 		SPD	
ipare					1	20	39			0	0			40				 			
pare					1	20	41					0	0	42				 			
						Total	Load:	7720	) VA	8100	) VA	6912	VA								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	O VA	0.00%	O VA		
Receptacle	720 VA	100.00%	720 VA	Total Conn. Load: 22732 VA	
HVAC	19412 VA	100.00%	19412 VA	Total Est. Demand: 22732 VA	
Motor	O VA	0.00%	O VA	Total Conn. Current: 64 A	
Other	2600 VA	100.00%	2600 VA	Total Est. Demand Current: 63 A	
Kitchen	O VA	0.00%	O VA		
Notes:	'			'	

#### PANEL SCHEDULE

Panel Name: HDLS Amp Rating: 250 A

> MCB Rating: N/A **Volts/Phase/Wire** 480/277 Wye / 3 / 4

Mains: MLO

Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS

Fault Rating: 35K AIC Fed From: ATSLS, 277 V/480 V, Three Phase, 4... Location: ELEC D102

Circuit Description				# OF Mires		TRIP	CKT	<b>'</b>	4	1	3		5	CKT	TRIP	Poles	# OF Wires	GRD.	SIZE	COND. SIZE	Circuit Description
**PANEL "HALS"	*	*	*	5	3	40	1	300	9298					2	100	3	5	*	*	*	**PANEL "HELS
		<b>-</b>		<u></u>			3	300	12 10	390	4296			4							
										3 10	72 10	0	3361	6							
*PANEL "HCLS"	*	*	*	5	3	50	7	2056	0					8	60	3					Spare
<del></del>							9			1379	0			10							
_			<b></b>				11					756	0	12							
5pare		T			3	50	13	0	0					14	20	1					Spare
<u>.</u>							15			0	0			16	20	1					Spare
-							17					0	0	18	20	1					Spare
5pare					3	20	19	0	0					20	20	1					Spare
- <del>-</del>							21			0	0			22	20	1					Spare
							23					0	0	24	20	1					Spare
5pare					1	20	25	0	0					26	30	3					SPD
5pare					1	20	27			0	0			28							
5pare					1	20	29					0	0	30							
			•			Total	Load:	1155	O VA	595,	4 VA	411	7 VA					•			
						Total .	Amps:	43	3 A	25	3 A	15	5 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	180 VA	125.00%	225 VA	
Receptacle	O VA	0.00%	O VA	Total Conn. Load: 21621 VA
HVAC	12988 VA	100.00%	12988 VA	Total Est. Demand: 20117 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 27 A
Other	6906 VA	100.00%	6906 VA	Total Est. Demand Current: 24 A
Kitchen	O VA	0.00%	O VA	
Notes:	-			,

\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES. \*\*PROVIDE ELECTRONIC TRIP LSI BREAKER

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08/30/2024 PROJECT NO.

MTR

ISSUE DATE

REVISION DATES 10/04/2024

**HSA**Engineering ELECTRICAL SCHEDULES 479 / 452 / 8922 office S H E E T

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HSA JOB # 23-196a

#### Panel Name: HELS

Amp Rating: 125 A Mains: M.L.O. MCB Rating: N/A **Volts/Phase/Wire** 480/277 Mye / 3 / 4 Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS

Fault Rating: 22K AIC Fed From: HDLS Location: ELEC E134

	COND	1	1		1				A	1	В		5				1			COND	·.	
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT							CKT	TRIP	Poles	Mires	SIZE	SIZE	SIZE		Circuit Description
EMERGENCY LIGHTING AREA E	3/4	12	12	3	1	20	1	2982	0					2	20	1					Spare	
Spare					1	20	3			0	0			4	20	1					Spare	
***EMERGENCY LIGHTING AREA D	3/4	10	10	3	1	20	5					237	0	6	20	1					Spare	
**TRANSFORMER "TELS"	*	*	*	4	3	50	7	5052	0					8	20	1					Spare	
							9			4296	0			10	20	1					Spare	
							11					3124	0	12	20	1					Spare	
EMERGENCY LIGHTING EXTERIOR	3/4	10	10	3	1	20	13	1264	0					14	30	3					SPD	
Spare					1	20	15			0	0			16								
Spare					1	20	17					0	0	18								
·	•		•	•	•	Total	Load:	929	8 VA	429	6 VA	336	1 VA					•	•		•	
						Total	Amps:	34	4 A	16	A	12	A									

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	
Lighting	130 VA	125.00%	163 VA	, une	
Receptacle	O VA	0.00%	O VA	Total Conn. Load:	16955 VA
HVAC	12172 VA	100.00%	12172 VA	Total Est. Demand:	16988 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	21 A
Other	4653 VA	100.00%	4653 VA	Total Est. Demand Current:	20 A
Kitchen	O VA	0.00%	O VA		

\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.

\*\*PROVIDE ELECTRONIC TRIP LSI BREAKER

\*\*\*CIRCUIT CONTROLLED VIA PHOTOCELL ON, TIME CLOCK OFF, THROUGH LIGHTING CONTACTOR.

## PANEL SCHEDULE

Panel Name: L1E

Amp Rating: 400 A Mains: MCB MCB Rating: 400 A **Volts/Phase/Wire** 120/208 Wye / 3 / 4 Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: TE Location: ELEC E134

401531 Hase/7411 C 120	,	, , ,	'							NOMA N	FEED T	, FRHU LUG	55								
Circuit Description	COND . SIZE			. # OF Mires	Poles	TRIP	CKT	,	<b>A</b>	1	В		s	CKT	TRIP	Poles	# OF Mires			CONI . SIZE	
R-RM: E102 LOBBY	3/4	8	10	3	1	20	1	900	1000					2	20	2	4	10	10	3/4	EH-1
R-RMS: E103, E105, E109	3/4	8	10	3	1	20	3			560	1000			4							
R-RM: E106 FEMALE MULTI	3/4	10	10	3	1	20	5					1080	1000	6	20	2	4	12	12	3/4	EH-2
R-RM: E107 CELL 5	3/4	10	10	3	1	20	7	1260	1000					8							
R-RM: E107 CELL 5 - VENDING	3/4	10	10	3	1	20	9			1200	1000			10	20	2	4	12	12	3/4	EH-3
*R-RM: E108 CELL 6 - VENDING	3/4	10	10	3	1	20	11					1200	1000	12							
R-RM: E108 CELL 6	3/4	10	10	3	1	20	13	1320	180					14	20	1	3	10	10	3/4	R-MECHANICAL UNITS
R-RM: E120 CELL 7	3/4	10	10	3	1	20	15			1080	720			16	20	1	3	10	10	3/4	R-MECHANICAL UNITS
*R-RM: E120 CELL 7 - VENDING	3/4	10	10	3	1	20	17					1200	1392	18	20	1	4	10	10	3/4	EF-51,57
R-RM: E122 CELL 8	3/4	10	10	3	1	20	19	1290	540					20	20	1	3	12	12	3/4	R-MECHANICAL UNITS
*R-RM: E122 CELL 8 - VENDING	3/4	10	10	3	1	20	21			1200	300			22	20	1	3	12	12	3/4	CP-1, WATER HEATERS
R-RM: E124 CELL 9	3/4	10	10	3	1	20	23					900	1667	24	20	3	5	12	12	3/4	EH-4
*R-RM: E124 CELL 9 - VENDING	3/4	12	12	3	1	20	25	1200	1667					26							
R-RM: E126 CELL 10	3/4	12	12	3	1	20	27			1320	1667			28							
*R-RM: E126 CELL 10 - VENDING	3/4	12	12	3	1	20	29					1200	300	30	20	3	5	10	10	1	GATE OPERATOR
R-RM: E103	3/4	12	12	3	1	20	31	180	300					32							
R-RMS: E118, E123	3/4	10	10	3	1	20	33			720	300			34							
R-RMS: E117, E118	3/4	10	10	3	1	20	35					900	0	36	20	1					Spare
R-RM: E116 CELL 11	3/4	10	10	3	1	20	37	1120	0					38	20	1					Spare
*R-RM: E116 CELL 11 - VENDING	3/4	12	12	3	1	20	39			1200	0			40	20	1					Spare
5pare					1	20	41					0	0	42	20	1					Spare
*R-RM: E114 CELL 12 - VENDING	3/4	12	12	3	1	20	43	1200	0					44	20	1					Spare
R-RM: E114 CELL 12	3/4	12	12	3	1	20	45			1080	0			46	20	1					Spare
R-RM: E127 MULTI	3/4	12	12	3	1	20	47					900	0	48	20	1					Spare
R-RM: E128 STORAGE	3/4	12	12	3	1	20	49	720	0					50	20	1					Spare
R-RM: E129 MECH	3/4	12	12	3	1	20	51			720	0			52	20	1					Spare
R-RM: E135 MALE MULTI	3/4	12	12	3	1	20	53					1080	0	54	20	1					Spare
R-RM: E131 EXAM	3/4	12	12	3	1	20	55	720	0					56	20	1					Spare
R-RM: E132 JANITOR	3/4	12	12	3	1	20	57			720	0			58	20	1					Spare
R-RM: E133 ELEC	3/4	12	12	3	1	20	59					360	0	60	20	1					Spare
R-RM: E133 MECH	3/4	12	12	3	1	20	61	540	62					62	20	1	3	10	10	3/4	EF-58,59
R-RM: E123 CONTROL	3/4	12	12	3	1	20	63			360	345			64	20	1	3	10	10	3/4	EF-52,53,54,55
5pare					1	20	65					0	150	66	20	1	3	10	10	3/4	EF-49,50
5pare					1	20	67	0	0					68	20	1					Spare
5pare					1	20	69			0	134			70	20	1	3	12	12	3/4	EF-60,61,62
5pare					1	20	71					0	0	72	20	1					Spare
5pare					1	20	73	0	1980					74	50	2	4	**	**	**	PANEL "EUPS"
5pare					1	20	75			0	1620			76							
5pare					2	50	77					0	0	78	20	1					Spare
<del></del>							79	0	0					80	30	3					SPD
5pare					2	30	81			0	0			82							
- <del>-</del>							83					0	0	84							
-			-	-1		Total	Load:	1717	9 VA	1724	16 VA	1432	AV P						-		•

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	O VA	0.00%	O VA	
Receptacle	24720 VA	70.23%	17360 VA	Total Conn. Load: 48753 VA
HVAC	13083 VA	100.00%	13083 VA	Total Est. Demand: 41393 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 138 A
Other	10950 VA	100.00%	10950 VA	Total Est. Demand Current: 115 A
Kitchen	O VA	0.00%	O VA	

147 A

119 A

\*REQUIRES GFCI BREAKER

\*\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.

#### PANEL SCHEDULE

Panel Name: H1E Amp Rating: 400 A Mains: MLO MCB Rating: N/A

**Volts/Phase/Wire** 480/277 Wye / 3 / 4

Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS FEED THRU LUGS Fault Rating: SERIES Fed From: MDP2 Location: ELEC E134

	COND.							,	Ą	E	3		c				# OF	GRD.	MIRE	COND.	
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT							CKT	TRIP	Poles	Mires	SIZE	SIZE	SIZE	Circuit Description
L- CELLS	3/4	12	12	3	1	20	1	4384	5263					2	25	3	5	10	10	3/4	RTU-67
L- CELLS	3/4	10	10	3	1	20	3			3940	5263			4							
L- CORRIDOR	3/4	12	12	3	1	20	5					1924	5263	6							
***L-POLE LIGHTS	3/4	12	12	3	1	20	7	630	5263					8	25	3	5	10	10	3/4	RTU-68
RTU-70	3/4	12	12	5	3	20	9			4155	5263			10							
<del></del>							11					4155	5263	12							
<del></del>							13	4155	5263					14	25	3	5	10	10	3/4	RTU-69
RTU-75	3/4	12	12	5	3	20	15			4155	5263			16							
							17					4155	5263	18							
<del></del>							19	4155	5263					20	25	3	5	10	10	3/4	RTU-72
RTU-71	3/4	12	12	5	3	20	21			4155	5263			22							
<del></del>							23					4155	5263	24							
							25	4155	5263					26	25	3	5	10	10	3/4	RTU-73
RTU-76	3/4	12	12	5	3	20	27			4155	5263			28							
							29					4155	5263	30							
							31	4155	4709					32	20	3	5	12	12	3/4	RTU-74
5pare					3	30	33			0	4709			34							
							35					0	4709	36							
							37	0	0					38	20	1					Spare
5pare					3	40	39			0	0			40	20	1					Spare
							41					0	0	42	20	1					Spare
							43	0	0					44	20	1					Spare
5pare					3	20	45			0	0			46	20	1					Spare
							47					0	0	48	20	1					Spare
							49	0	0					50	20	1					Spare
5pare					3	15	51			0	0			52	20	1					Spare
- <del>-</del>							53					0	0	54	20	1					Spare
<del></del>							55	0	17179					56	175	3	5	*	*	*	**TRANSFORMER "TE"
5pare					1	20	57			0	17246			58							
Spare					1	20	59					0	14329	60							
<u> </u>	'					Total	Load:	6983	37 VA	6883	O VA	6389	97 VA				'				
							Amps:		5 A		1 A		31 A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel '	T <i>o</i> tals
_ighting	9316 VA	125.00%	11645 VA		
Receptacle	24720 VA	70.23%	17360 VA	Total Conn. Load:	202563 VA
HVAC	156015 VA	100.00%	156015 VA	Total Est. Demand:	197532 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	246 A
Other	12512 VA	100.00%	12512 VA	Total Est. Demand Current:	238 A
<itchen< td=""><td>O VA</td><td>0.00%</td><td>O VA</td><td></td><td></td></itchen<>	O VA	0.00%	O VA		

\*REFER TO RISER DIAGRAM FOR FEEDER SIZES.
\*\*PROVIDE ELECTRONIC TRIP LSI BREAKER

\*\*\*CIRCUIT CONTROLLED VIA PHOTOCELL ON, TIME CLOCK OFF THROUGH LIGHTING CONTACTOR.

### PANEL SCHEDULE

Panel Name: LELS

Amp Rating: 100 A Mains: MCB ELECTRONIC TRIP LSI MCB Rating: 100 A **Yolts/Phase/Wire** 120/208 Wye / 3 / 4

Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: TELS Location: ELEC E134

											FEED T	HRU LUG	,s								
Circuit Description	COND. SIZE				Poles	TRIP	CKT	Å	•	E	3		;	CKT	TRIP	Poles				COND. SIZE	Circuit Description
5C5F-8	3/4	12	12	3	1	20	1	696	180					2	20	1	3	12	12	3/4	MOTORIZED DAMPERS
SCEF-8	3/4	12	12	3	1	20	3			696	120			4	20	1	3	10	10	3/4	MOTORIZED DAMPERS
5C5F-6	3/4	12	12	3	1	20	5					696	40	6	20	1	3	10	10	3/4	MOTORIZED DAMPERS
SCEF-6	3/4	12	12	3	1	20	7	696	696					ව	20	1	3	10	10	3/4	SCEF-1
5CSF-5	3/4	10	10	3	1	20	9			696	696			10	20	1	3	10	10	3/4	SCSF-1
SCEF-5	3/4	12	12	3	1	20	11					696	0	12	20	1					Spare
5CSF-7	3/4	10	10	3	1	20	13	696	0					14	20	1					Spare Spare
SCEF-7	3/4	10	10	3	1	20	15			696	0			16	20	1					Spare Spare
SCEF-2	3/4	10	10	3	1	20	17					696	0	18	20	1					Spare Spare
5C5F-2	3/4	10	10	3	1	20	19	696	0					20	20	1					Spare Spare
5C5F-3	3/4	10	10	3	1	20	21			696	0			22	20	1					Spare Spare
SCEF-3	3/4	10	10	3	1	20	23					696	0	24	20	1					Spare Spare
SCEF-4	3/4	10	10	3	1	20	25	696	0					26	30	3					SPD
5C5F-4	3/4	10	10	3	1	20	27			696	0			28							
5C5F-9	3/4	12	12	3	1	20	29					300	0	30							
		1				Total	Load:	5052	2 VA	4296	> VA	3124	<b>∀</b> A						'		
						Total .	Amps:	44	· A	37	A	26	A								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals
Lighting	O VA	0.00%	O VA		
Receptacle	O VA	0.00%	O VA	Total Conn. Load:	12472 VA
HVAC	12172 VA	100.00%	12172 VA	Total Est. Demand:	12472 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	36 A
Other	300 VA	100.00%	300 VA	Total Est. Demand Current:	35 A
Kitchen	O VA	0.00%	O VA		



**HSA**Engineering 479 / 452 / 8922 office

Fort Smith, AR 72916 HSAConsultants.com

HSA JOB # 23-196a

REGISTERED PROFESSIONAL ENGINEER

8-30-2024

Covid Mitigation AN ADDITION AND REMODEL 8

Washington

MTR ISSUE DATE

08/30/2024 PROJECT NO.

REVISION DATES 10/04/2024

ELECTRICAL SCHEDULES

S H E E T

Mains: M.L.O. MCB Rating: N/A Volts/Phase/Wire 480/277 Mye / 3 / 4 Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS

Fault Rating: SERIES Fed From: MSB Location: ELEC C102

Circuit Description	COND. SIZE				Poles	TRIP	CKT	•	A	1	3	· ·	C	CKT	TRIP	Poles	# OF Mires			COND. SIZE	
RTU-78	3/4	12	12	5	3	20	1	4155	34357					2	150	3	5	*	*	*	PANEL "H1A"
- <del>-</del>							3			4155	37477			4							
							5					4155	32732	6							
RTU-79	3/4	10	10	5	3	30	7	7202	8638					8	70	3	4	*	*	*	**TRANSFORMER "TC"
							9			7202	7214			10							
							11					7202	5568	12							
-BOOKING ADDITION	3/4	12	12	3	1	20	13	1850	0					14	20	1					Spare
5pare					3	25	15			0	0			16	20	1					Spare
							17					0	0	18	20	1					Spare
							19	0	0					20	20	1					Spare
5pare					3	40	21			0	0			22	20	1					Spare
- <del>-</del>							23					0	0	24	20	1					Spare
							25	0	0					26	20	1					Spare
5pare					1	20	27			0	0			28	20	1					Spare
5pare					1	20	29					0	0	30	20	1					Spare
	•	'	•			Total	Load:	5620	2 VA	5604	18 VA	4965	57 VA						'		
						Total .	Amps:	20	6 A	20	6 A	179	9 A	1							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
	3008 VA	125.00%	3760 VA	Tanor robais
Lighting				
Receptacle	31200 VA	66.03%	20600 VA	Total Conn. Load: 161907 VA
HVAC	86983 VA	100.00%	86983 VA	Total Est. Demand: 152059 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 197 A
Other	40716 VA	100.00%	40716 VA	Total Est. Demand Current: 183 A
Kitchen	O VA	0.00%	O VA	

\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.
\*\*PROVIDE ELECTRONIC TRIP LSI BREAKER

### PANEL SCHEDULE

Panel Name: L1C

Amp Rating: 225 A Mains: MCB MCB Rating: 150 A **Volts/Phase/Wire** 120/208 Wye / 3 / 4 Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: TC Location: ELEC C102

	COND	IAIIDE	CBD	# 05					A		В		5				# 0=	CPD.	IAIIDE	CONT	
Circuit Description	COND	SIZE		1		TRIP	CKT	•	^	,	<i>D</i>		<b>-</b>	CKT	TRIP	Poles	# OF Mires	GRD. SIZE	1		
R-RM: C104 COMP	3/4	12	12	3	1	20	1	900	1500					2	20	2	4	12	12	3/4	EH-5
R-RM: C105 BAC	3/4	12	12	3	1	20	3	100	1200	1000	1500			4			<u> </u>				
R-RM: C106 MED	34	12	12	3	1	20	5			1000	1333	900	360	6	20	1	3	12	12	3/4	R-RM: C101 BOOKING
R-RM: C101 BOOKING - COPIER	3/4	12	12	3	1	20	7	600	930			100		8	20	1	3	12	12	3/4	R-RM: C113 UNI
R-RM: C101 BOOKING	3/4	12	12	3	1	20	a		133	1080	540			10	20	1	3	12	12	3/4	R-ROOF
R-RM: C101 BOOKING	3/4	12	12	3	1	20	11			1000	3-10	540	0	12	20	1					Spare
R-RM: C101 BOOKING - COPIER	3/4	12	12	3	1	20	13	600	0			3-10		14	20	1					Spare
R-RM: C101 BOOKING	3/4	12	12	3	1	20	15	200		940	0			16	20	1					Spare
R-RM: C101 BOOKING - X-RAY	3/4	12	12	3	1	20	17			1-0		180	0	18	20	1					Spare
R-RM: C117 PROP	3/4	10	10	3	1	20	19	900	0			100		20	20	1					Spare Spare
R-RM: 018 INT	3/4	10	10	3	1	20	21	100		720	0			22	20	1					Spare
R-RM: C118 INT	3/4	12	12	3	1	20	23			120		720	0	24	20	1					Spare Spare
R-RM: A118	3/4	10	10	3	1	20		720				120			20	1					
R-RM: A120	3/4	10	10		1	20	25	120	0	540	0			26 28		1					Spare
				3	1		27			540		1020			20	1					Spare
R-RMS: B101, B102	3/4	10	10	3	1	20	29	700				1080	0	30	20	1					Spare
R-RM: B104 OFFICE	3/4	10	10	3		20	31	720	0	700				32	20	1					Spare
R-RM: B103 DISCIP	34	10	10	3	1	20	33			720	0			34	20	1					Spare
RTU-77	3/4	10	10	4	2	25	35					1768	0	36	20	1					Spare
							37	1768	0					38	30	3					SPD
EF-63, -64, 66, -70	3/4	12	12	3	1	20	39			174	0			40							
EF-69, IL-8	34	12	12	3	1	20	41					20	0	42							
						Total	Load:	863	8 VA	721	4 VA	556	S VA								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	O VA	0.00%	O VA	
Receptacle	14160 VA	85.31%	12080 VA	Total Conn. Load: 21420 VA
HVAC	6730 VA	100.00%	6730 VA	Total Est. Demand: 19340 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 61 A
Other	53 <i>0</i> VA	100.00%	53 <i>0</i> VA	Total Est. Demand Current: 54 A
Kitchen	O VA	0.00%	O VA	
Notes:				

62 A

46 A

74 A

Total Amps:

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HSA JOB # 23-196a

#### PANEL SCHEDULE

Panel Name: HCLS

Amp Rating: 125 A Mains: M.L.O. MCB Rating: N/A **Volts/Phase/Wire** 480/277 Wye / 3 / 4 Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: HDLS Location: ELEC C102

	COND	. WIRE	GRD.	# 0F				,	Ą	1	В		5				# OF	GRD.	MIRE	COND.		
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT							CKT	TRIP	Poles	Mires	SIZE	SIZE	SIZE		Circuit Description
**TRANSFORMER "TCLS"	*	*	*	4	3	25	1	1480	0					2	20	1				9	5pare	
							3			696	0			4	20	1				9	5pare	
							5					756	0	6	20	1				9	5pare	
EMERGENCY LIGHTING BOOKING	3/4	12	12	3	1	20	7	630	0					8	20	1				9	5pare	
***EMERGENCY LIGHTING EXTERIOR	3/4	10	10	3	1	20	9			707	0			10	20	1				9	5pare	
Spare Spare					1	20	11					0	0	12	20	1				9	5pare	
Spare Spare					1	20	13	0	0					14	30	3				9	5PD	
Spare Spare					1	20	15			0	0			16								
Spare Spare					1	20	17					0	0	18								
	•	•		•	•	Total	Load:	205	6 VA	137	9 VA	756	VA		•							
						Total	Amps:	8	A	5	Α	3	A									

		l		
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	20 VA	125.00%	25 VA	
Receptacle	O VA	0.00%	O VA	Total Conn. Load: 4190 VA
HVAC	816 VA	100.00%	816 VA	Total Est. Demand: 2439 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 5 A
Other	1602 VA	100.00%	1602 VA	Total Est. Demand Current: 3 A
Kitchen	O VA	0.00%	O VA	

\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES. \*\*PROVIDE ELECTRONIC TRIP LSI BREAKER \*\*\*CIRCUIT CONTROLLED VIA PHOTOCELL ON, TIME CLOCK OFF.

#### PANEL SCHEDULE

Panel Name: LCLS

Amp Rating: 100 A Mains: MCB ELECTRONIC TRIP LSI MCB Rating: 60 A **Volts/Phase/Wire** 120/208 Mye / 3 / 4

Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: TCLS Location: ELEC C102

	COND							,	Ą	i	3		5					GRD.			y <u>.</u>	
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT							CKT	TRIP	Poles	Mires	SIZE	SIZE	SIZE		Circuit Description
SCSF-7	3/4	12	12	3	1	20	1	1176	0					2	20	1					Spare	
SCEF-7	34	12	12	3	1	20	3			696	0			4	20	1					Spare	
MOTORIZED DAMPERS	3/4	12	12	3	1	20	5					60	0	6	20	1					Spare	
TIME CLOCK	3/4	12	12	3	1	20	7	300	0					8	20	1					Spare	
SCSF-11	3/4	10	10	3	1	20	9			0	0			10	20	1					Spare	
EF-71	3/4	10	10	3	1	20	11					696	0	12	20	1					Spare	
MOTORIZED DAMPERS	3/4	10	10	3	1	20	13	60	0					14	20	1					Spare	
Spare					1	20	15			0	0			16	20	1					Spare	
Spare					1	20	17					0	0	18	20	1					Spare	
Spare					1	20	19	0	0					20	20	1					Spare	
Spare					1	20	21			0	0			22	20	1					Spare	
Spare					1	20	23					0	0	24	20	1					Spare	
Spare					1	20	25	0	0					26	30	3					Spare	
Spare					1	20	27			0	0			28								
Spare					1	20	29					0	0	30								
	•					Total	1	1 40	O \ / A	100	. \ / A	756	\ / <b>i</b>					•			•	

_oad Classification	Connected Load	Demand Factor	Estimated Demand	Panel T	T <i>o</i> tals
_ighting	O VA	0.00%	O VA		
Receptacle	O VA	0.00%	O VA	Total Conn. Load: 2	2932 VA
<del>I</del> VAC	816 VA	100.00%	816 VA	Total Est. Demand: 1	1116 VA
Motor	O VA	0.00%	O VA	Total Conn. Current: 8	8 A
Other	300 VA	100.00%	300 VA	Total Est. Demand Current: 3	3 A
<itchen< td=""><td>O VA</td><td>0.00%</td><td>O VA</td><td></td><td></td></itchen<>	O VA	0.00%	O VA		

#### PANEL SCHEDULE

Panel Name: EUPS Amp Rating: 100 A

Mains: MCB MCB Rating: 50 A Volts/Phase/Wire 120/208 Single / 1 / 3 Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: SERIES Fed From: UPS Location: SECURITY ROOM E139

	COND.	1		# <i>O</i> F				,	4	E	3				# <i>O</i> F	GRD.		COND.		ation the man and although
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT					CKT	TRIP	Poles	Mires	SIZE	SIZE	SIZE		Circuit Description
-RM: E123 CONTROL	3/4	12	12	3	1	20	1	900	0			2	20	1					Spare	
-RM: E123 CONTROL	3/4	12	12	3	1	20	3			900	0	4	20	1					Spare	
-RM: E139 SECURITY	3/4	12	12	3	1	20	5	360	0			6	20	1					Spare	
-RM: E139 SECURITY	3/4	12	12	3	1	20	7			360	0	8	20	1					Spare	
-RM: E123 CONTROL	3/4	10	10	3	1	20	9	360	0			10	20	1					Spare	
-RM: E123 CONTROL	3/4	10	10	3	1	20	11			360	0	12	20	1					Spare	
-RM: E123 CONTROL	3/4	10	10	3	1	20	13	360	0			14	20	1					Spare	
oare					1	20	15			0	0	16	20	1					Spare	
oare					1	20	17	0	0			18	20	1					Spare	
						Total	Load:	1980	VA	1620	VA									
						Total	Amna.	19	Δ	16	Δ									

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	T <i>o</i> tals
Lighting	O VA	0.00%	O VA		
Receptacle	1800 VA	100.00%	1800 VA	Total Conn. Load:	3600 VA
HVAC	O VA	0.00%	O VA	Total Est. Demand:	3600 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	17 A
Other	1800 VA	100.00%	1800 VA	Total Est. Demand Current:	17 A
Kitchen	O VA	0.00%	O VA		
Notes:	'				

Washington MTR ISSUE DATE 08/30/2024 PROJECT NO. REVISION DATES

Covid Mitigation

8

AN ADDITION AND REMODEL

PROFESSIONAL ENGINEER

No. 16929

8-30-2024

ELECTRICAL SCHEDULES S H E E T

**Volts/Phase/Wire** 480/277 Wye / 3 / 4

Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: SERIES Fed From: H1C Location: STORAGE A108

Circuit Description	COND. SIZE					TRIP	CKT		A		В	•	C	CKT	TRIP	Poles		GRD. SIZE			
STORAGE	3/4	12	12	3	1	20	1	1061	20554					2	125	3	4	*	*	*	**TRANSFORMER "TA"
NURSE, MED	3/4	12	12	3	1	20	3			1980	22755			4							
ipare					1	20	5					0	19990	6							
RTU-87	3/4	10	10	5	3	25	7	6371	0					8	25	3					Spare
-							9			6371	0			10							
							11					6371	0	12							
RTU-86	3/4	10	10	5	3	25	13	6371	0					14	20	1					Spare
<del>-</del>							15			6371	0			16	20	1					Spare
							17					6371	0	18	20	1					Spare
Spare					1	20	19	0	0					20	20	1					Spare
5pare					1	20	21			0	0			22	20	1					Spare
5pare					1	20	23					0	0	24	20	1					Spare
5pare					1	20	25	0	0					26	25	3					Spare
5pare					1	20	27			0	0			28							
5pare					1	20	29					0	0	30							
						Total	Load:	343	57 VA	374	77 VA	3273	32 VA								
						Total	Amps:	12	25 A	13	6 A	118	8 A	1							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals
Lighting	1374 VA	125.00%	1718 VA		
Receptacle	17040 VA	79.34%	13520 VA	Total Conn. Load:	104566 VA
HVAC	46182 VA	100.00%	46182 VA	Total Est. Demand:	101389 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	126 A
Other	39970 VA	100.00%	39970 VA	Total Est. Demand Current:	122 A
Kitchen	O VA	0.00%	O VA		

\*REFER TO ELECTRICAL RISER FOR WIRE, GROUND, AND CONDUIT SIZES.

\*\*PROVIDE ELECTRONIC TRIP LSI BREAKER

#### PANEL SCHEDULE

Panel Name: L1A Amp Rating: 400 A Mains: MCB MCB Rating: 250 A **Volts/Phase/Wire** 120/208 Mye / 3 / 4

Manufacturer: SQUARE D Panel Type: NQ Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: TA Location: STORAGE A108

Circuit Description	COND			Mires	Poles	TRIP	CKT	•	A	1	В		5	CKT	TRIP	Poles	1 1		SIZE	COND . SIZE	
R-RM: B105 STORAGE	3/4	10	10	3	1	20	1	1080	1080					2	20	1	3	12	12	34	R-RM: 041 GALLERY
R-RM: B107 COMP	3/4	10	10	3	1	20	3	1000	1000	540	3328			4	40	2	4	10	8	3/4	FREEZER EVAP COIL
R-RM: B107 COMP	3/4	10	10	3	1	20	5			7-0	3320	360	3328	6							
R-RMS: B106, B107	3/4	10	10	3	1	20	7	935	400			360	3320	8	20	1	3	12	12	3/4	COOLER EVAP COIL
R-RMS: B107, B112, B113	3/4	12	12	3	1	20	9		700	550	2544			10	30	<u>'</u>	5	10	10	3/4	COOLER CONDENSER
R-RM: 057 JAIL ADMIN.	3/4	12	12	3	1	20	11			750	2277	540	2544	12							
R-RM: 057 JAIL ADMIN.	3/4	12	12	3	1	20	13	720	2544			J0	2544	14							1
R-RM: 058 FILES	3/4	12	12	3	1	20	15	120	2577	540	6000			16	90	3	5	8	3	1¼	FREEZER CONDENSER
R-RM: 051 BREAKROOM	3/4	12	12	3	1	20	17			7-0	2000	540	6000	18							
R-RM: A111 COMMIS	3/4	12	12	3	1	20	19	910	6000			J <del>-</del> -0	2000	20							<del></del>
R-RM: A112 SUPPLY	3/4	12	12	3	1	20	21	-110	2000	720	180			22	20	1	3	12	12	3/4	R-RM: A106 COOLER
R-RM: A112 SUFFET R-RM: A108 STORAGE	3/4	12	12	3	1	20	23			120	100	360	1200	24	20	1	3	12	12	3/4	HEAT TAPE
R-RM: A108 STORAGE	3/4		12	_	1	20	25	360	1663			360	1200	26	20		4	12		3/4	MS1-1, MS1-2, MS, CU-1
<u> </u>	3/4	12		3	1			560	1005	900	1663					2			12		M91-1, M91-2, M9, C0-1
RM: A108 STORAGE - OVERHEAD R-RM: A108 STORAGE	3/4	12	12	3	1	20	27			900	1665	540	0	28							Good
	3/4	12	12	3	1	20	29	260	F16			540		30	20	1		10	10	3/4	Spare
R-RM: 056 LT.	· ·	12	12	3	1	20	31	360	516	700				32	20	I	3	12	12		GUH-1
R-RM: 041 GALLERY	3/4	10	10	3	1	20	33			900	0	1000		34	20	I					Spare
R-RM: A122 COURT ROOM	3/4	10	10	3	1	20	35	700				1080	0	36	20	<u> </u>					Spare
REEZER LIGHTS AND HEATER	3/4	12	12	3	1	20	37	720	0	700				38	20	<u> </u>					Spare
COOLER LIGHTS	3/4	12	12	3	1	20	39			720	0	1000		40	20	1					Spare
R-RM: 041 GALLERY - FLOOR BOX	34	10	10	3	1	20	41					1080	0	42	20	1					Spare
F-72	3/4	12	12	3	1	20	43	50	0					44	20	1					Spare
R-RM: A108 STORAGE	3/4	12	12	3	1	20	45			1200	0			46	20	1					Spare
R-RM: A108 STORAGE	3/4	12	12	3	1	20	47		_			1200	0	48	20	1					Spare
R-RM: A108 STORAGE	3/4	12	12	3	1	20	49	1200	0					50	20	1					Spare
R-RM: A108 STORAGE	3/4	12	12	3	1	20	51			1200	0			52	20	1					Spare
COOLER EVAP COIL	3/4	12	12	3	1	20	53					400	0	54	20	1					Spare
R-R00F	3/4	10	10	3	1	20	55	360	0					56	20	1					Spare
EF-74, CP-2 WATER HEATER	3/4	12	12	3	1	20	57			114	0			58	20	1					Spare
JH-2	3/4	12	12	3	1	20	59					696	0	60	20	1					Spare
F-75	3/4	12	12	3	1	20	61	1656	0					62	20	1					Spare
EF-76	3/4	12	12	3	1	20	63			1656	0			64	20	1					Spare
EF-65	3/4	10	10	3	1	20	65					122	0	66	20	1					Spare
5pare					2	40	67	0	0					68	20	1					Spare
-							69			0	0			70	20	1					Spare
5pare					1	20	71					0	0	72	20	1					Spare
pare					1	20	73	0	0					74	20	1					Spare
pare					1	20	75			0	0			76	20	1					Spare
pare					1	20	77					0	0	78	20	1					Spare
5pare					1	20	79	0	0					80	30	3					SPD
bpare					1	20	81			0	0			82							
bpare					1	20	83					0	0	84							
•			•			Total		2055	54 VA	2275	55 VA	1999	O VA								•

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel <sup>-</sup>	T <i>o</i> tals
Lighting	O VA	0.00%	O VA		
Receptacle	17040 VA	79.34%	13520 VA	Total Conn. Load:	63299 VA
HVAC	7956 VA	100.00%	7956 VA	Total Est. Demand:	59779 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	176 A
Other	38303 VA	100.00%	38303 VA	Total Est. Demand Current:	166 A
Kitchen	O VA	0.00%	O VA		

\*REQUIRES GFCI BREAKER

#### PANEL SCHEDULE

Panel Name: HALS

Amp Rating: 125 A Mains: MLO MCB Rating: N/A **Volts/Phase/Wire** 480/277 Wye / 3 / 4 Manufacturer: SQUARE D Panel Type: NF Mounting: Surface Remarks: CU BUS

Fault Rating: 10K AIC Fed From: HDLS Location: STORAGE A108

	COND	. MIRE	GRD	. # OF				,	A	E	3		5				# OF	GRD	. MIRE	CONE	<u>,</u>	
Circuit Description	SIZE	SIZE	SIZE	Mires	Poles	TRIP	CKT							CKT	TRIP	Poles I	Nires	SIZE	SIZE	SIZE		Circuit Description
EMERGENCY LIGHTING AREA A	3/4	12	12	3	1	20	1	300	0					2	20	1					Spare	
EMERGENCY LIGHTING AREA B	3/4	12	12	3	1	20	3			390	0			4	20	1					Spare	
Spare					1	20	5					0	0	6	20	1					Spare	
Spare					1	20	7	0	0					8	20	1					Spare	
Spare					1	20	9			0	0			10	20	1					Spare	
Spare					1	20	11					0	0	12	20	1					Spare	
Spare					1	20	13	0	0					14	30	3					SPD	
Spare					1	20	15			0	0			16								
Spare					1	20	17					0	0	18								
						Total	Load:	300	) VA	390	VA	0 \	VA									
								4		_		_		1								

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel T	rotals
Lighting	30 VA	125.00%	38 VA		
Receptacle	O VA	0.00%	O VA	Total Conn. Load:	690 VA
HVAC	O VA	0.00%	O VA	Total Est. Demand:	698 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	1 A
Other	660 VA	100.00%	660 VA	Total Est. Demand Current:	1 A
Kitchen	O VA	0.00%	O VA		

#### PANEL SCHEDULE

Panel Name: NLW Amp Rating: 80 A

Mains: MCB MCB Rating: 80 A **Volts/Phase/Wire** 120/208 Mye / 3 / 4 Manufacturer: GE Panel Type: SERIES A Mounting: Surface Remarks: EXISTING

Fault Rating: EXISTING Fed From: XNLW Location: MECH E137

Circuit Description	COND . SIZE			# OF Mires	Poles	TRIP	CKT	A		В		C		CKT	TRIP	Poles			MIRE SIZE	COND . SIZE	Circuit Description
EXISTING					1	20	1	0	840					2	15	3	5	12	12	3/4	*MASHER
EXISTING					1	20	3			0	840			4							
EXISTING					1	20	5					0	840	6							
EXISTING					1	20	7	0	0					8	20	1					DRYER
EXISTING					1	20	9			900	900			10	20	1	3	12	12	3/4	*RACK
							11						0	12	20	1					EXISTING
EXISTING					1	20	13	0	0					14	20	1					EXISTING
EXISTING					1	20	15			0	0			16	20	1					EXISTING
EXISTING					1	20	17					0	0	18	20	1					EXISTING
EXISTING					1	20	19	0	0					20	20	1					EXISTING
EXISTING					1	20	21			0	0			22	20	1					EXISTING
EXISTING					1	20	23					0	0	24	20	1					EXISTING
EXISTING					1	30	25	0	840					26	15	3	5	12	12	34	*MASHER
EXISTING					1	30	27			0	840			28							
EXISTING					1	30	29					0	840	30							
*DRYER	3/4	12	12	3	1	20	31	1656	900					32	20	1	3	12	12	34	*RACK
*DRYER	3/4	12	12	3	1	20	33			1656	900			34	20	1	3	12	12	34	*RACK
*MASHER	3/4	12	12	5	3	15	35					840	720	36	20	1	3	12	12	3/4	*R-RM: E139 SECURITY ROOM
							37	840	360					38	20	1	3	12	12	34	*R-RM: E139 SECURITY ROOM
<del></del>							39			840				40							
*DRYER	3/4	12	12	3	1	20	41					1656		42							
						Total	Load:	543	6 VA	687	6 VA	4896	5 VA								

oad Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals
Lighting	O VA	0.00%	O VA		
Receptacle	1080 VA	100.00%	1080 VA	Total Conn. Load:	17208 VA
tvac	O VA	0.00%	O VA	Total Est. Demand:	16308 VA
Motor	O VA	0.00%	O VA	Total Conn. Current:	48 A
Other	15228 VA	100.00%	15228 VA	Total Est. Demand Current:	45 A
Kitchen	O VA	0.00%	O VA		

\*PROVIDE NEW BREAKER
\*\*PROVIDE GFCI BREAKER



**HSA**Engineering 479 / 452 / 8922 office

Fort Smith, AR 72916 HSAConsultants.com

HSA JOB # 23-196a

Total Amps: 1 A 2 A O A

 Total Load:
 5436 VA
 6876 VA

 Total Amps:
 46 A
 58 A

Washington AN ADDITION AND RE

Covid Mitigation

3

REGISTERED
PROFESSIONAL
ENGINEER

No.16929

8-30-2024

MTR ISSUE DATE 08/30/2024

> PROJECT NO. REVISION DATES 10/04/2024

ELECTRICAL SCHEDULES

S H E E T

## SYMBOLS LEGEND - ELECTRONIC SECURITY SYSTEMS

NOT ALL SYMBOLS WILL BE USED ON THIS PROJECT



LATTA TECHNICAL SERVICES INC. 1255 West 15th Street, Suite 300 Plano, TX 75075 T: (972) 633-5850 \*F: (469)467-0300 Corporate P.E. Board Reg. No. E-880

WIRE TYPE LEGEND

DATA CABLE/CAT 6

FIBER OPTIC CABLE

1. PROVIDE CONDUIT, WIREWAYS, BOXES, FITTINGS AND SUPPORTS FOR A

RECESSED MOUNTED (EXCEPT IN EQUIPMENT ROOMS). BRANCH

3. ALL CONDUITS SHALL BE SIZED FOR MAXIMUM 40 PERCENT FILL. ALL

WATERBLOCKED OR DIRECT BURIAL CABLE WHERE CONDUIT RUNS

UNDERGROUND OUTSIDE OF THE BUILDING.

SECURITY PER SPECIFICATIONS.

PULLBOXES ARE PROVIDED IN NON-ACCESSIBLE AREAS, PROVIDE ACCESS

2. ALL ELECTRONIC SECURITY EQUIPMENT TO BE LOCATED ON WALLS SHALL BE

CEILINGS, FLOOR SLABS AND WALLS. SURFACE MOUNTED CONDUITS NOT

WIRING/HOMERUN CONDUITS TO SUCH EQUIPMENT SHALL BE CONCEALED IN

CONDUCTORS SHALL BE INCLUDED IN FILL CALCULATIONS. MINIMUM CONDUIT

SIZE SHALL BE 3/4". USE PLENUM CABLE WHERE REQUIRED BY CODE. USE

4. SEPARATE CONDUITS SHALL BE PROVIDED FOR EACH SYSTEM TYPE AND FOR

RECOMMENDED BY LOCK MANUFACTURER. SOURCE PLC I/O POWER FROM MANUFACTURER RECOMMENDED NEC CLASS # SUPPLY. IF DPS AND LOCK

CABLING IS RUN IN THE SAME CONDUIT, THEY MUST BE THE SAME NEC

THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH NEC CLASS SEPARATION AND MFR RECOMMENDATIONS AND TO COORDINATE ACCORDINGLY.

5. COORDINATE INSTALLATION AND SUPPORT SYSTEMS WITH WORK OF OTHER

TRADES. PROVIDE IDENTIFICATION OF RACEWAY SYSTEMS FOR ELECTRONIC

NEC CLASS SEPARATION. USE CL2 POWER SUPPLIES FOR LOCK MODELS WHERE

CLASS. USE INTERPOSING RELAYS AT HEAD END FOR STATUS/ALARM INPUTS IF PLC I/O POWER IS A DIFFERENT NEC CLASS THAN LOCK/STATUS POWER. IT IS

COMPLETE RACEWAY SYSTEMS FOR THE ELECTRONIC SECURITY SYSTEM. WHERE

NOTES:

PERMITTED.

# REGISTERED PROFESSIONAL ENGINEER ENGINEER No. 12808 STATE JOSEPH STATE JOS LATTA TECHNICAL SERVICES, INC. No. 2935

ARKANSAS

Mitiga ovid 0 Washington

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MG 08/30/2024 REVISION DATES

09/20/2024

**ELECTRONIC SECURITY** SYMBOLS LEGEND SHEET

THESE DRAWINGS AND SPECIFICATIONS ARE
THE EXCLUSIVE PROPERTY OF
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USE OR REPRODUCTION IS PROHIBITED
WITHOUT WRITTEN CONSENT

#### ELECTRONIC/DOOR/ACCESS CONTROL SYSTEMS

#### ELECTRIC DOOR STATUS INDICATOR DEVICE. SEE HARDWARE AND DOOR SCHEDULE FOR FUNCTIONAL DESCRIPTION

- ELECTRIC CONTROLLED AND MONITORED DOOR. SEE HARDWARE AND DOOR SCHEDULES FOR FUNCTIONAL DESCRIPTION
- INTERLOCK GROUP

#### TOUCHSCREEN STATION ELECTRONIC CONTROL SYSTEM EQUIPMENT CARD READER FOR ACCESS CONTROL REQUEST TO EXIT SWITCH (MICRO-SWITCH) TO BE BUILT IN THE LOCK AND PROVIDED BY THE DOOR HARDWARE CONTRACTOR

REQUEST TO EXIT SWITCH DESK/SURFACE MOUNTED

REQUEST TO EXIT PUSHBUTTON WALL MOUNTED

# **COMMUNICATION SYSTEMS**

⊢⊗ F	INTERCOM STATION, FRAME MOUNTED
o	INTERCOM STATION, FENCE POLE MOUNTED
$\bigotimes_{\iota_{m{v}}}^{D}$	STAFF INTERCOM STATION, DESK MOUNTED
<b>▼</b>	PAGING SPEAKER, CEILING MOUNTED, RECESSED, SECURITY TYPE  INMATE DAYROOMS AND RESIDENCE AREAS: TWO—WAY TALK—BACK PAGING.  CORRIDORS AND GENERAL CIRCULATION: ONE—WAY PAGING.

INTERCOM STATION, WALL MOUNTED, WITH CALL-IN PUSH-BUTTON

- PAGING SPEAKER, WALL MOUNTED, RECESSED, SECURITY TYPE, HEIGHT AS INDICATED • INMATE DAYROOMS AND RESIDENCE AREAS: TWO-WAY TALK-BACK PAGING. CORRIDORS AND GENERAL CIRCULATION: ONE—WAY PAGING.
- PAGING HORN, WALL MOUNTED, RECESSED WITH VANDAL RESISTANT GRILL, HEIGHT AS INDICATED

#### **MISCELLANEOUS**

TSP	TRANSIENT SURGE PROTECTOR
	120VAC DUPLEX RECEPTACLE BY DIVISION 26. NORMAL POWER CIRCUIT
E	120VAC DUPLEX RECEPTACLE BY DIVISION 26. EMERGENCY POWER CIRCUIT
_	120VAC DUPLEX RECEPTACLE BY

- U DIVISION 26. UPS POWER CIRCUIT ELECTRICAL CONNECTION BY DIVISION 26. EMERGENCY POWER CIRCUIT. CHARACTERISTICS
- ELECTRICAL CONNECTION BY DIVISION 26. UPS POWER CIRCUIT. CHARACTERISTICS AS NOTED
- EQUIPMENT CABINET EQUIPMENT ENCLOSURE
- VEHICLE DETECTION FOR INTERCOM

TSP	TRANSIENT SURGE PROTECTOR
<del></del>	120VAC DUPLEX RECEPTACLE BY DIVISION 26. NORMAL POWER CIRCUIT
= E	120VAC DUPLEX RECEPTACLE BY DIVISION 26. EMERGENCY POWER CIRCUIT
$\Rightarrow$	120VAC DUPLEX RECEPTACLE BY

- AS NOTED
- PULL BOX. (NO TERMINATION'S PERMITTED
- PULL POINT ONLY.)
- GROUNDING ELECTRODE & CONDUCTOR
- CALL INITIATION
- LOOP DETECTOR

# ABOVE FINISHED FLOOR

- EXISTING TO REMAIN/MAINTAINED EXISTING TO BE ABANDONED IN PLACE
- ER EXISTING TO BE REMOVED AND TURNED OVER TO OWNER ERR EXISTING TO BE REMOVED, RELOCATED AND RECONNECTED EXISTING CAMERA LOCATION, REPLACED WITH NEW CAMERA

VIDEO SURVEILLANCE SYSTEMS

WALL BRACKET SYMBOL INDICATES SECURITY DEVICE SHALL BE WALL MOUNTED, HEIGHT AS INDICATED

VIDEO WORK STATION (NUMBER REPRESENTS INSTANCE)

TOUCHSCREEN WORK STATION (NUMBER REPRESENTS INSTANCE)

**EQUIPMENT ABBREVIATIONS** 

VIDEO MANAGEMENT SERVER

VIDEO VISITATION STATION

INTERCOM CONTROL SYSTEM

ELECTRONIC CONTROL SYSTEM

UNINTERRUPTIBLE POWER SUPPLY

FRAME MOUNTED SECURITY DEVICE

**SUBSCRIPTS FOR ALL SYMBOLS:** 

ACCESS CONTROL SYSTEM

ACCESS CONTROL PANEL

SURFACE MOUNTED

ABOVE FINISHED GRADE

VMS

VW#

TS#

VVS

ICS

ECS

ACS

ACP

UPS

AFG

NEW IP FIXED CAMERA

RELOCATED EXISTING

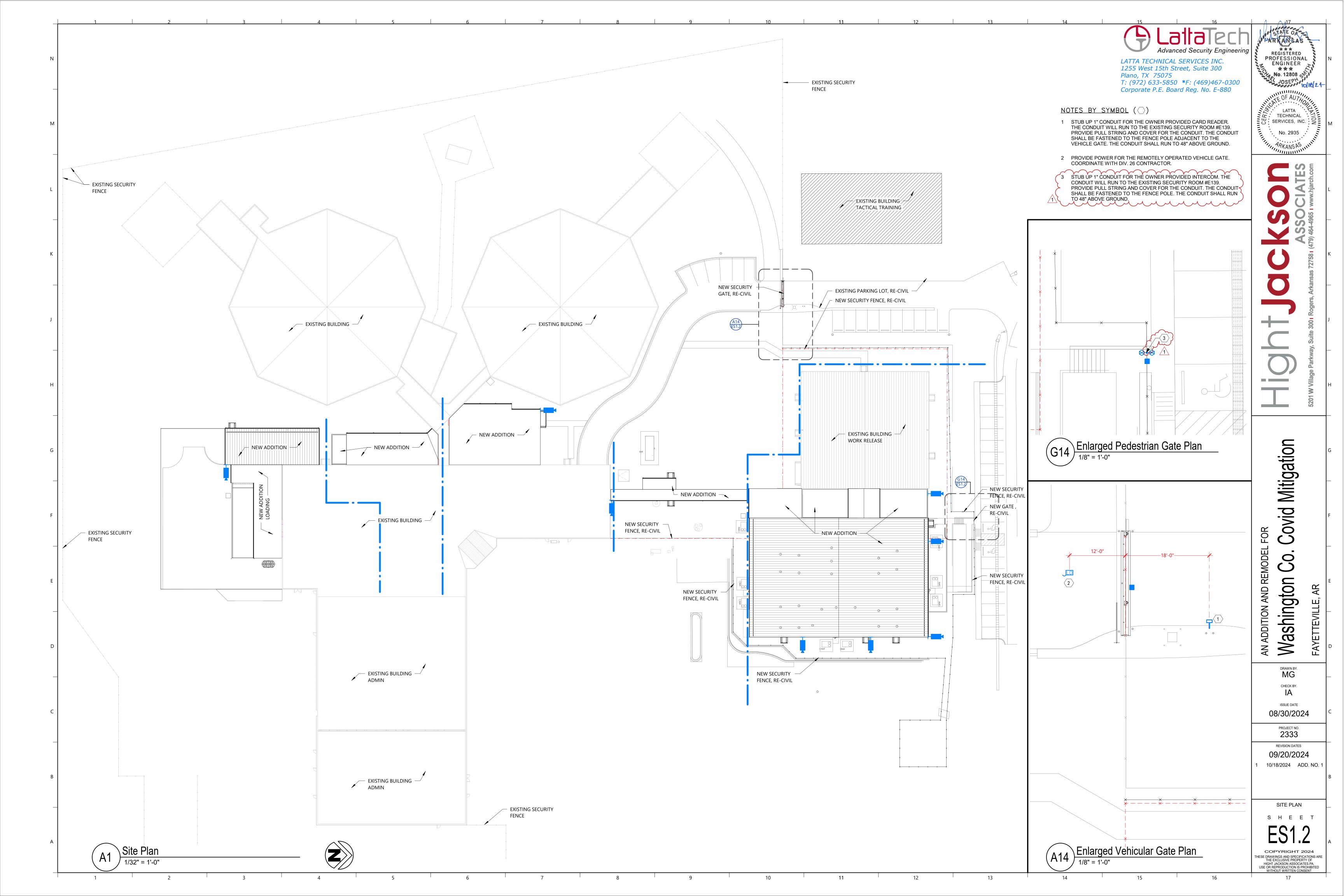
#### CONDUIT FILL SCHEDULE (EMT)

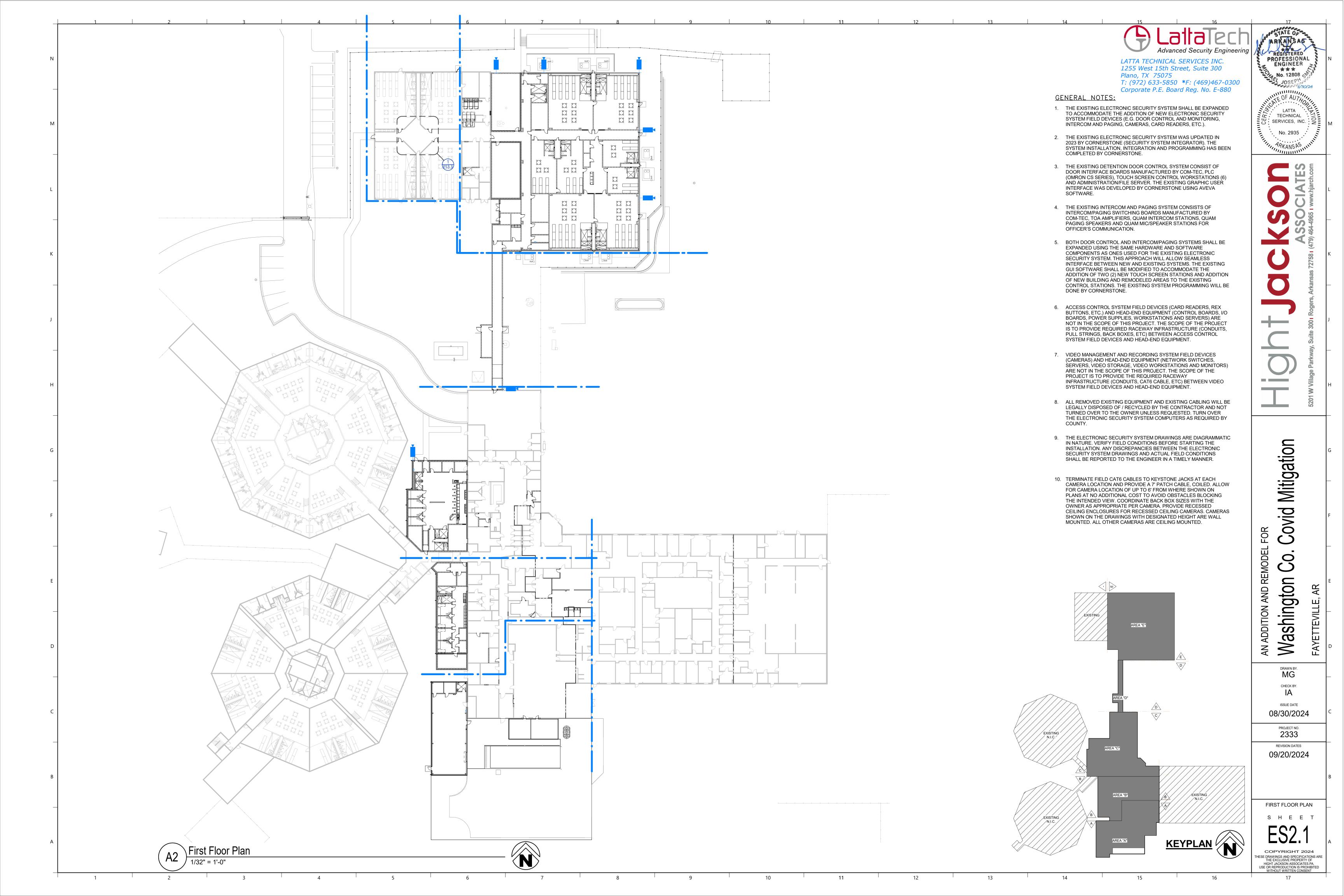
SIZE	40% AREA	INTERCOM (WP 357)	LONG RANGE OUTDOOR READER (WEST PENN AQC3186 & AQC225)	INDOOR READER (WEST PENN 3270)	PAGING SPEAKERS / ALARMS (WEST PENN 224)	2-WAY PAGING SPEAKERS (WEST PENN 293)	COMMERCIAL DOOR STRIKE + DPS (CL2) (WEST PENN #244)	ELECTRO MECHANICAL SLIDER (CL1) (5-#14 THHN + 2-#18 TFFN BUNDLE)	ELECTRO MECHANICAL HALF CYCLE (CL1 OR CL2) (5-#14 THHN + 2-#18 TFFN BUNDLE)	CAT 6 (WEST PENN 4246)	FIBER OPTIC CABLE (OM3) FOR MEDIA CONVERTERS INDOOR/OUTDOOR 4 STRAND (OCC # DX004DALT9QR)
3/4"	0.213	8	1	9	11	10	8	2	2	5	5
1"	0.346	13	2	15	19	18	13	4	4	9	10
1 1/4"	0.598	23	4	28	31	30	22	7	7	15	18
1 1/2"	0.814	32	6	37	42	40	30	10	10	22	25
2"	1.342	53	-	61	70	66	51	16	16	35	40
2 1/2"	2.343	94	-	_	122	116	89	29	29	61	_
3"	3.538	140	-	-	185	175	134	44	44	93	_
3 1/2"	4.618	180	-	-	241	230	175	58	58	121	_
4"	5.901	230	-	_	308	293	224	74	74	155	_

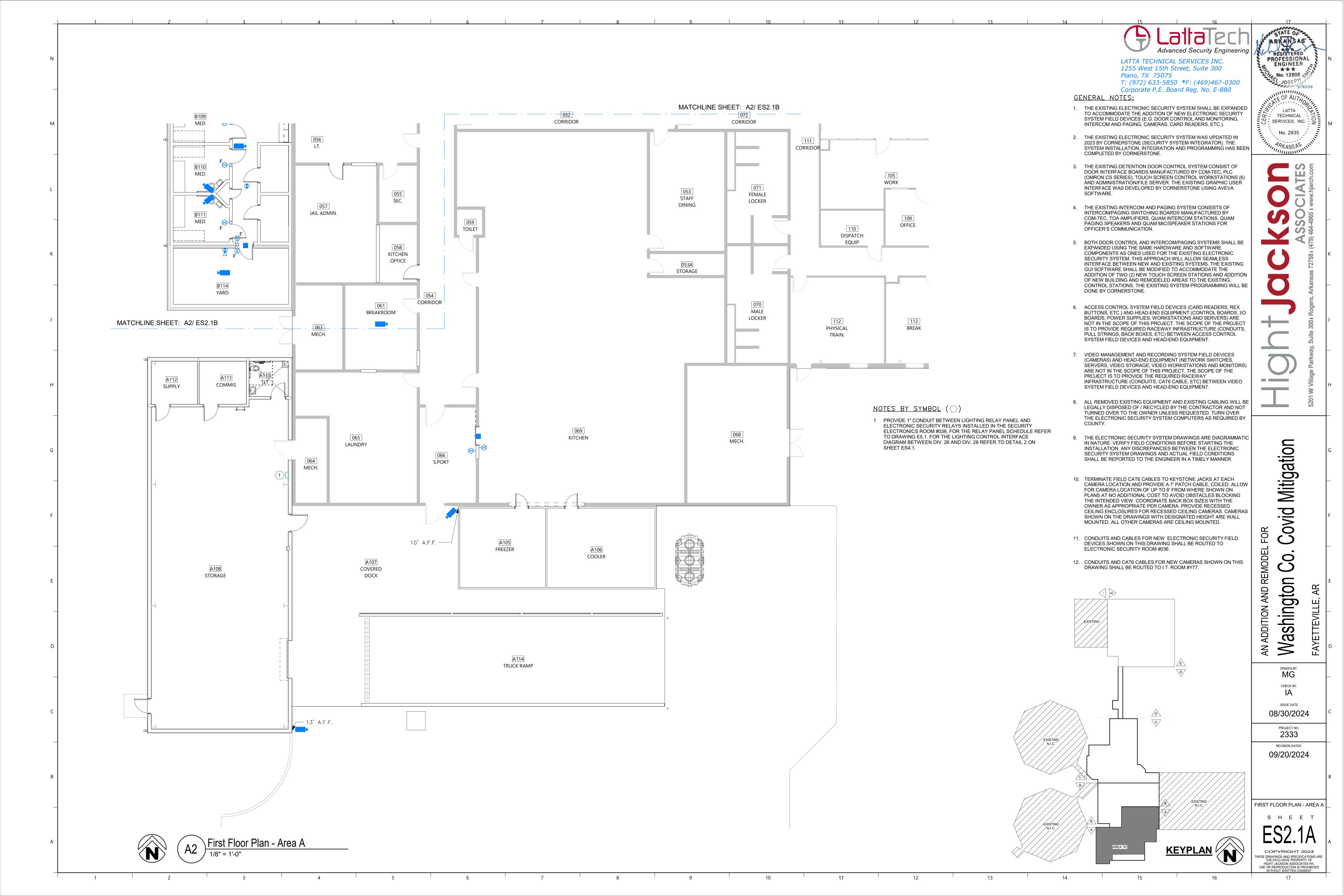
#### SECURITY DRAWING SHEET INDEX

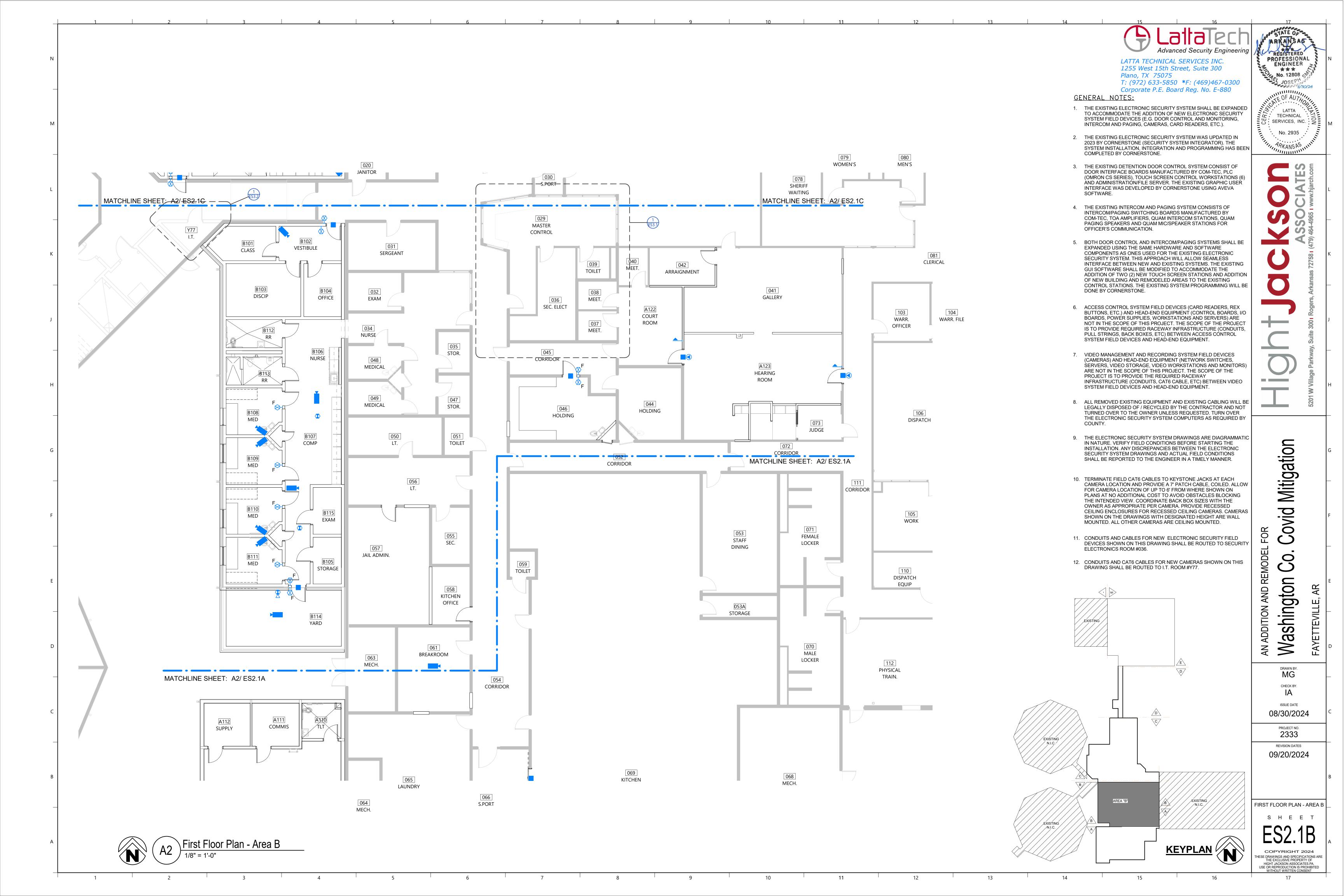
She	et
Num	ber Sheet Name
ES0.1	ELECTRONIC SECURITY SYMBOLS LEGE
ES1.2	SITE PLAN
ES2.1	FIRST FLOOR PLAN
ES2.1A	FIRST FLOOR PLAN - AREA A
ES2.1B	FIRST FLOOR PLAN - AREA B
ES2.1C	FIRST FLOOR PLAN - AREA C
ES2.10	FIRST FLOOR PLAN - AREA D AND AREA
ES3.1	ENLARGED PLANS
ES3.2	ENLARGED PLANS
ES3.3	ENLARGED PLANS
FS4 1	SECURITY SYSTEM DIAGRAMS

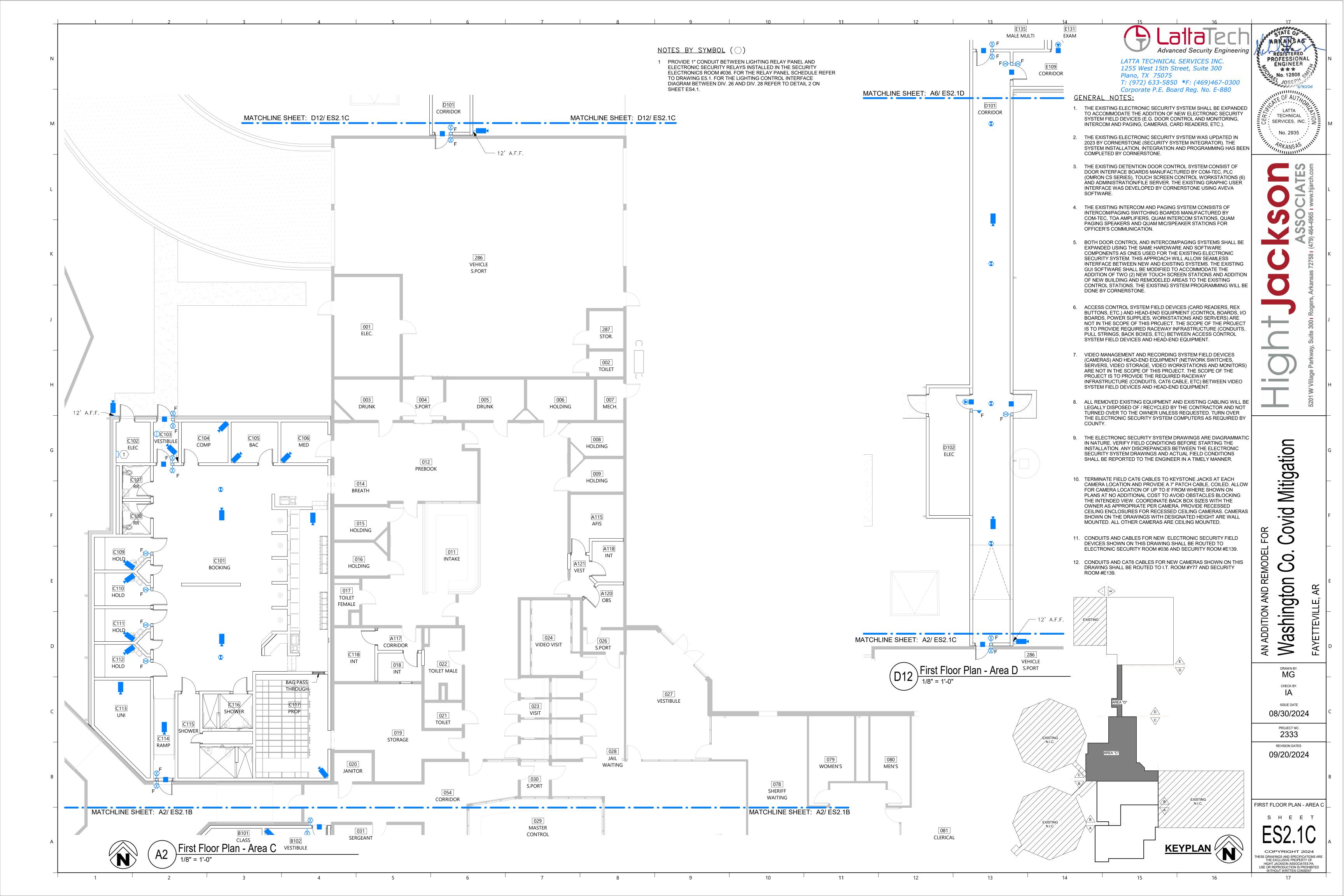
(MFR PART NUMBERS USED FOR MINIMUM SPECS REFERENCE ONLY)

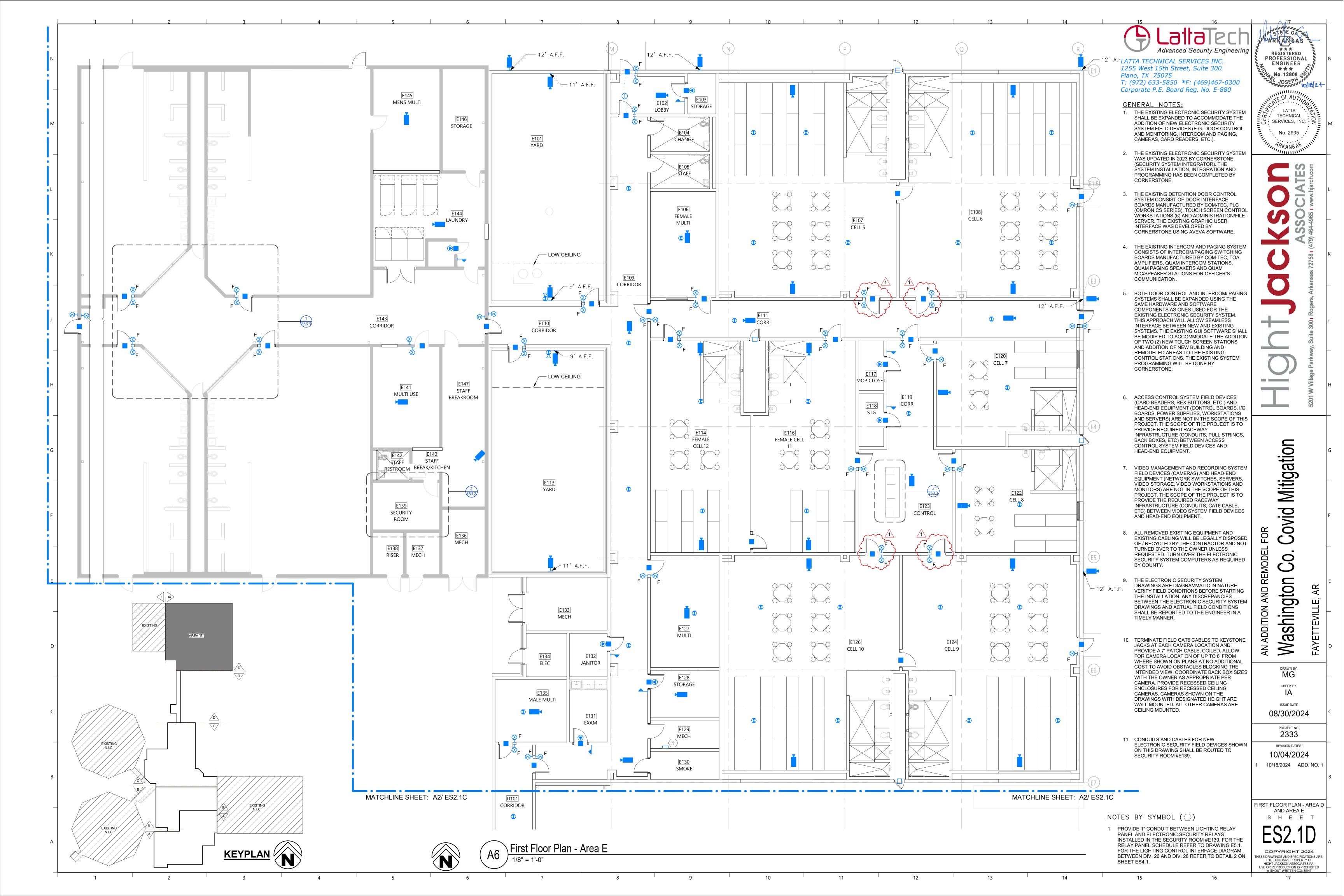


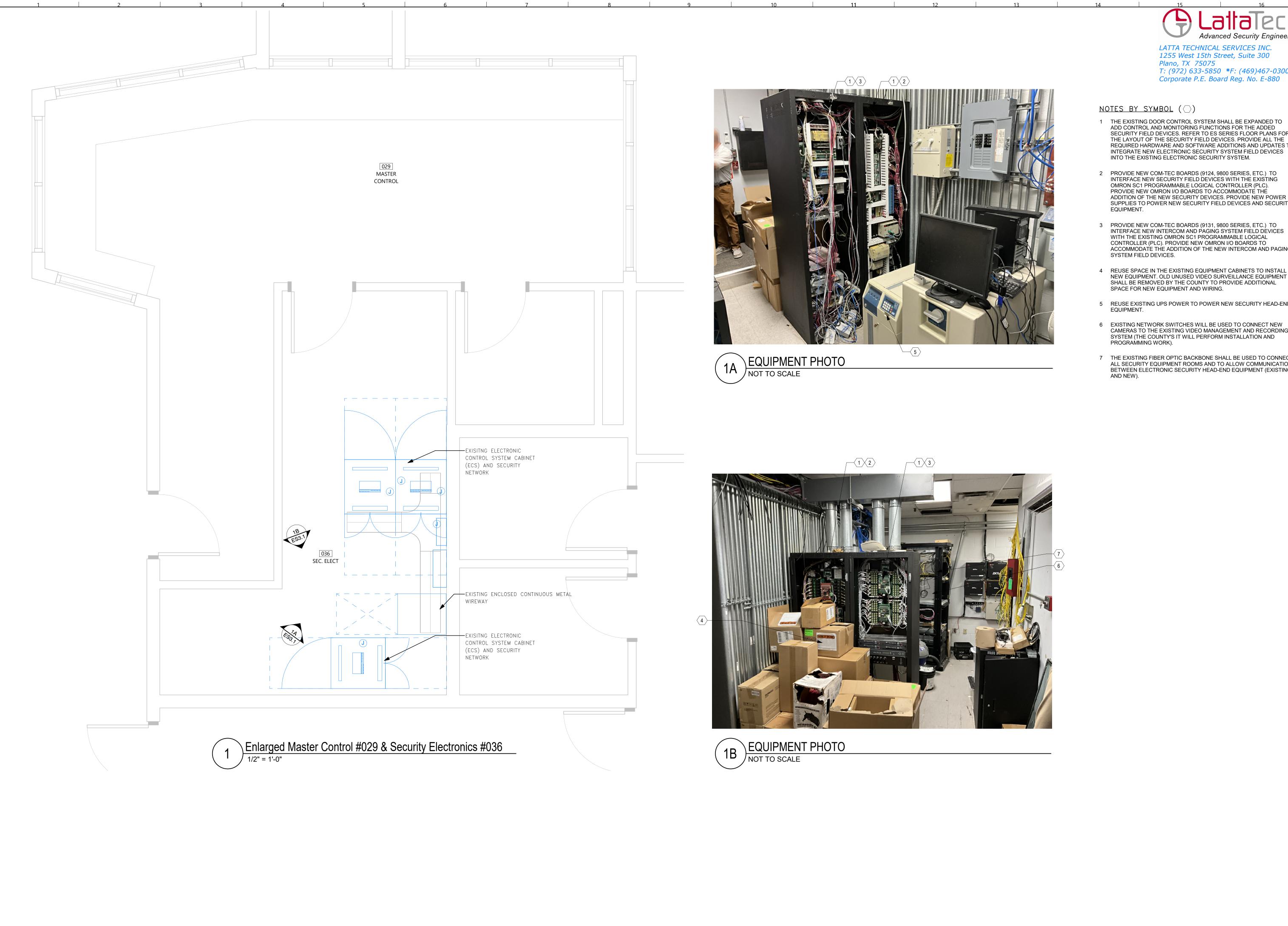












LATTA TECHNICAL SERVICES INC. 1255 West 15th Street, Suite 300 Plano, TX 75075

T: (972) 633-5850 \*F: (469)467-0300 Corporate P.E. Board Reg. No. E-880

- 1 THE EXISTING DOOR CONTROL SYSTEM SHALL BE EXPANDED TO ADD CONTROL AND MONITORING FUNCTIONS FOR THE ADDED SECURITY FIELD DEVICES. REFER TO ES SERIES FLOOR PLANS FOR THE LAYOUT OF THE SECURITY FIELD DEVICES. PROVIDE ALL THE REQUIRED HARDWARE AND SOFTWARE ADDITIONS AND UPDATES TO INTEGRATE NEW ELECTRONIC SECURITY SYSTEM FIELD DEVICES INTO THE EXISTING ELECTRONIC SECURITY SYSTEM.
- 2 PROVIDE NEW COM-TEC BOARDS (9124, 9800 SERIES, ETC.) TO INTERFACE NEW SECURITY FIELD DEVICES WITH THE EXISTING OMRON SC1 PROGRAMMABLE LOGICAL CONTROLLER (PLC). PROVIDE NEW OMRON I/O BOARDS TO ACCOMMODATE THE ADDITION OF THE NEW SECURITY DEVICES. PROVIDE NEW POWER SUPPLIES TO POWER NEW SECURITY FIELD DEVICES AND SECURITY
- 3 PROVIDE NEW COM-TEC BOARDS (9131, 9800 SERIES, ETC.) TO INTERFACE NEW INTERCOM AND PAGING SYSTEM FIELD DEVICES WITH THE EXISTING OMRON SC1 PROGRAMMABLE LOGICAL CONTROLLER (PLC). PROVIDE NEW OMRON I/O BOARDS TO ACCOMMODATE THE ADDITION OF THE NEW INTERCOM AND PAGING
- NEW EQUIPMENT. OLD UNUSED VIDEO SURVEILLANCE EQUIPMENT SHALL BE REMOVED BY THE COUNTY TO PROVIDE ADDITIONAL SPACE FOR NEW EQUIPMENT AND WIRING.
- 5 REUSE EXISTING UPS POWER TO POWER NEW SECURITY HEAD-END
- 6 EXISTING NETWORK SWITCHES WILL BE USED TO CONNECT NEW CAMERAS TO THE EXISTING VIDEO MANAGEMENT AND RECORDING SYSTEM (THE COUNTY'S IT WILL PERFORM INSTALLATION AND PROGRAMMING WORK).
- 7 THE EXISTING FIBER OPTIC BACKBONE SHALL BE USED TO CONNECT ALL SECURITY EQUIPMENT ROOMS AND TO ALLOW COMMUNICATION BETWEEN ELECTRONIC SECURITY HEAD-END EQUIPMENT (EXISTING

REGISTERED
PROFESSIONAL
ENGINEER
No. 12808 S
JOSEPH LATTA TECHNICAL SERVICES, INC. No. 2935 ARKANSAS

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Washington

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REVISION DATES

09/20/2024

**ENLARGED PLANS** SHEET

LATTA TECHNICAL SERVICES INC. 1255 West 15th Street, Suite 300 Plano, TX 75075 T: (972) 633-5850 \*F: (469)467-0300 Corporate P.E. Board Reg. No. E-880

#### NOTES BY SYMBOL $(\bigcirc)$

- 1 EXISTING NETWORK SWITCHES WILL BE USED TO CONNECT NEW CAMERAS TO THE EXISTING VIDEO MANAGEMENT AND RECORDING SYSTEM (THE COUNTY'S IT WILL PERFORM INSTALLATION AND PROGRAMMING WORK).
- 2 THE EXISTING FIBER OPTIC BACKBONE SHALL BE USED TO CONNECT ALL SECURITY EQUIPMENT ROOMS AND TO ALLOW COMMUNICATION BETWEEN ELECTRONIC SECURITY HEAD-END EQUIPMENT (EXISTING AND NEW).
- 3 PROVIDE NEW EQUIPMENT CABINET FOR NEW ELECTRONIC SECURITY HEAD-END EQUIPMENT INCLUDING BUT NOT LIMITED TO COM-TEC INTERFACE RELAY BOARDS, COM-TEC CONTROLLER BOARDS, OMRON CS1 PLC, POWER SUPPLIES, INTERCOM AND PAGING AMPLIFIERS, NETWORK SWITCH, ETC.
- 4 PROVIDE NEW 8KVA UPS AND BYPASS SWITCH (BY DIV. 28). POWER DISTRIBUTION PANEL BY DIV. 26.
- 5 NEW EQUIPMENT CABINETS SHALL BE PROVIDED WITH LOCKABLE DOORS AND 10" FANS TO MAINTAIN TEMPERATURE REQUIRED BY THE EQUIPMENT MANUFACTURERS.
- 6 EXISTING HANWHA VIDEO MANAGEMENT SERVERS AND VIDEO STORAGE WILL BE REUSED.

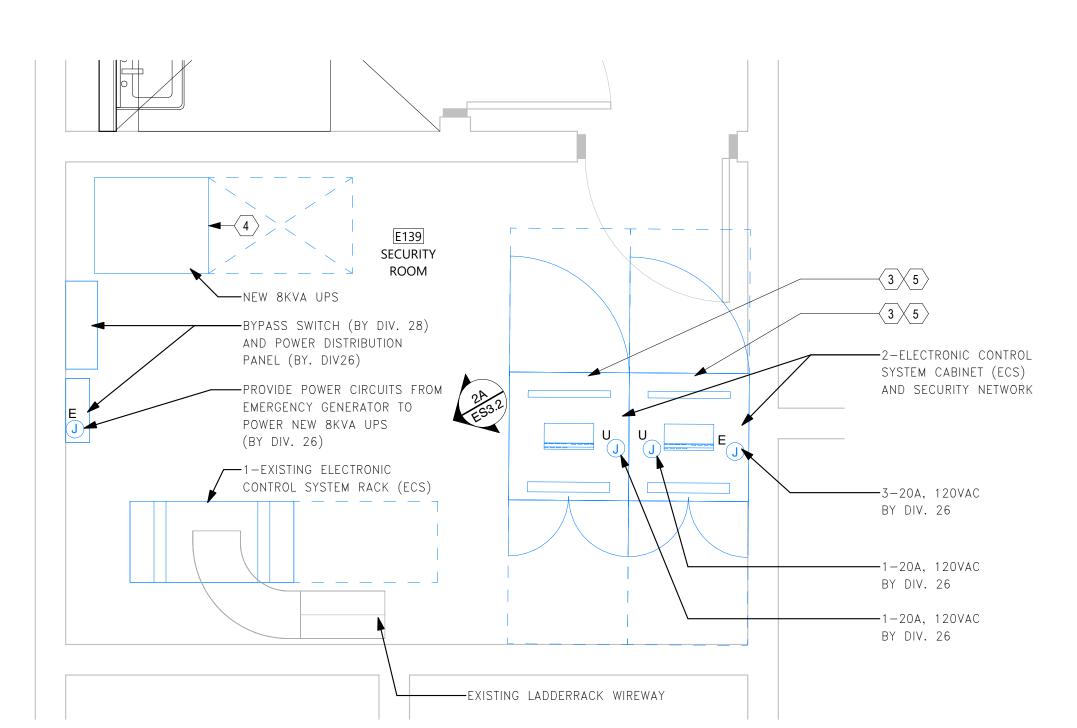


**\EQUIPMENT PHOTO** NOT TO SCALE

EXISTING LADDERRACK WIREWAY

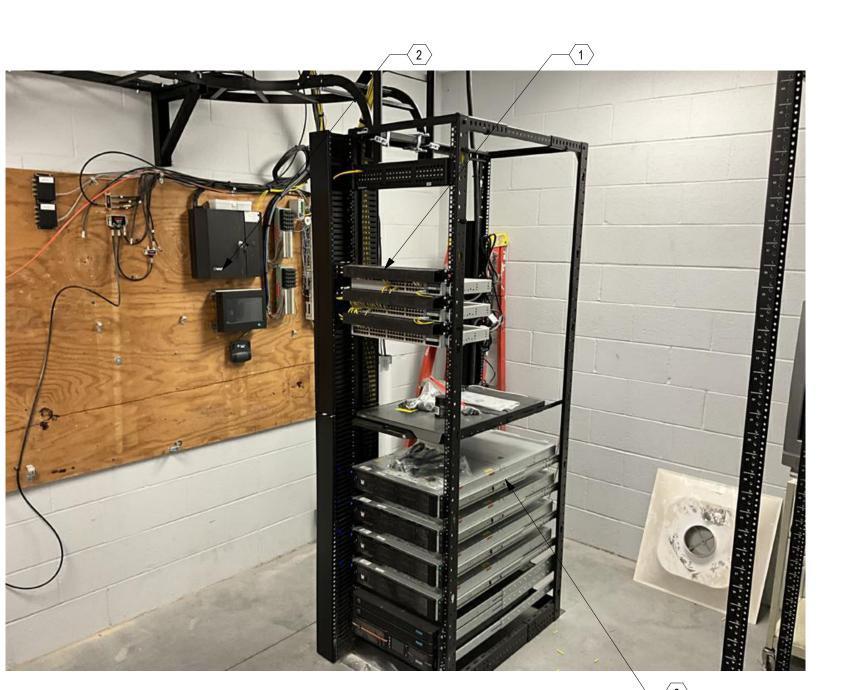
CONTROL SYSTEM RACK (ECS)

—1-EXISTING ELECTRONIC



Enlarged Security Room #E139

Enlarged I.T. Room #Y77



EQUIPMENT PHOTO NOT TO SCALE



REGISTERED
PROFESSIONAL
ENGINEER
No. 12808 SALE
JOSEPH STOOLA

LATTA TECHNICAL TON

No. 2935

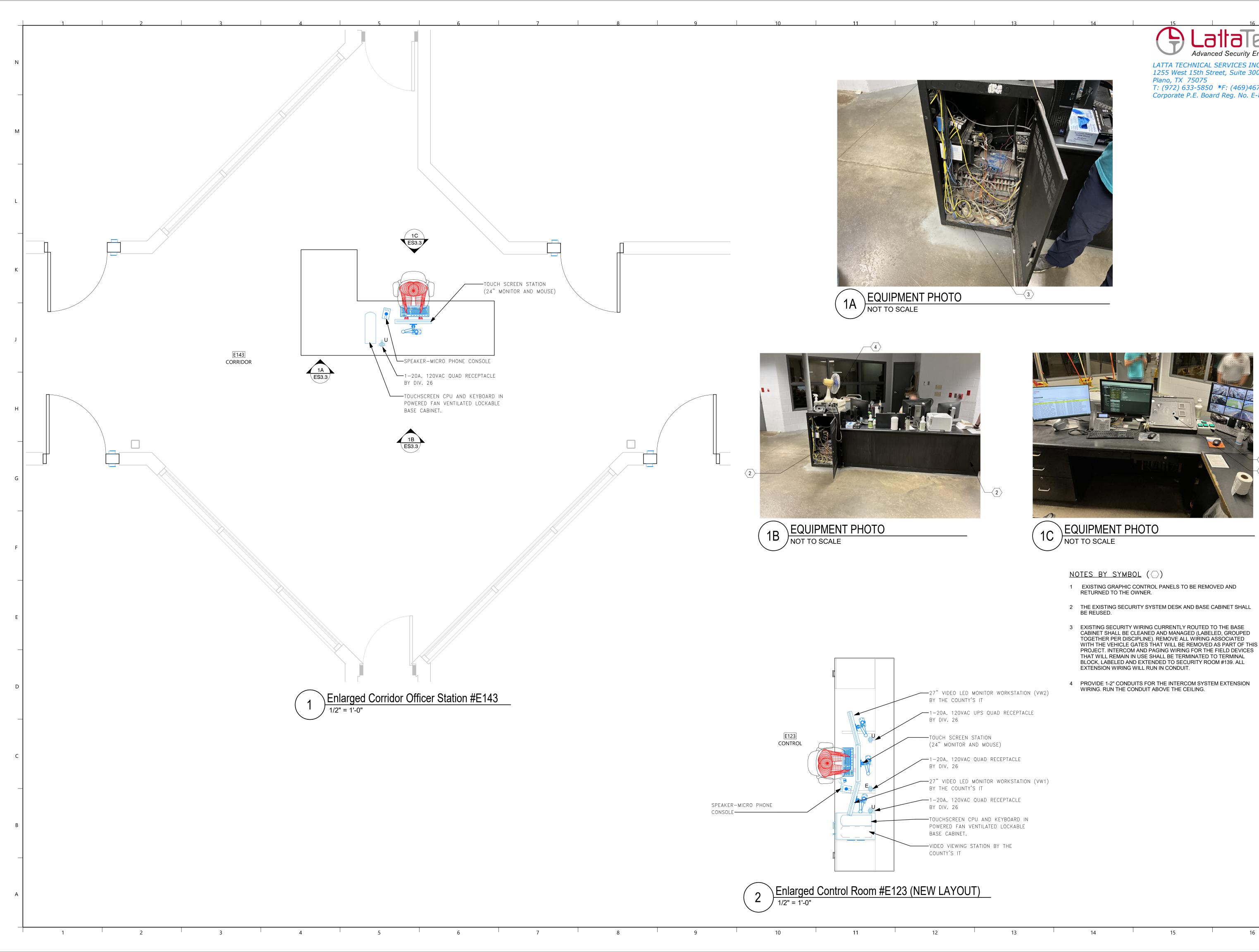
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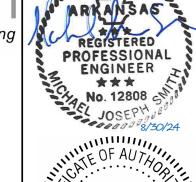
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**ENLARGED PLANS** SHEET





LATTA TECHNICAL SERVICES INC. 1255 West 15th Street, Suite 300 Plano, TX 75075 T: (972) 633-5850 \*F: (469)467-0300 Corporate P.E. Board Reg. No. E-880



TECHNICAL SERVICES, INC. No. 2935 ARKANSAS

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**ENLARGED PLANS** SHEET

