





# UACCB GATEWAY CENTER FARM

2210 E. Main Street, Batesville, AR

University of Arkansas Community College at Batesville

# 100% CONSTRUCTION DRAWINGS

04.18.2025

**COVER SHEET** 

SITE DETAILS

SITE DETAILS

# CODE RESEARCH

#### **Applicable Codes:**

**Building Code:** 2021 AR Fire Prevention Code Vol. 2 (AFPC) Fire Code: 2021 AR Fire Prevention Code Vol. 1 (AFPC) Accessibility Standard: ICC/ANSI A117.1 as referenced in 2021 APFC Vol. 2 Chapter 11 Accessibility Act Standard: 2010 American Disability Act Standards for Accessible Design **Energy Code:** 2014 Arkansas Energy Code Plumbing Code: 2018 Arkansas Plumbing Code with appendices B, C, D, E, F Mechanical Code: 2021 International Mechanical Code with appendix A Electrical Code: 2020 National Electrical Code

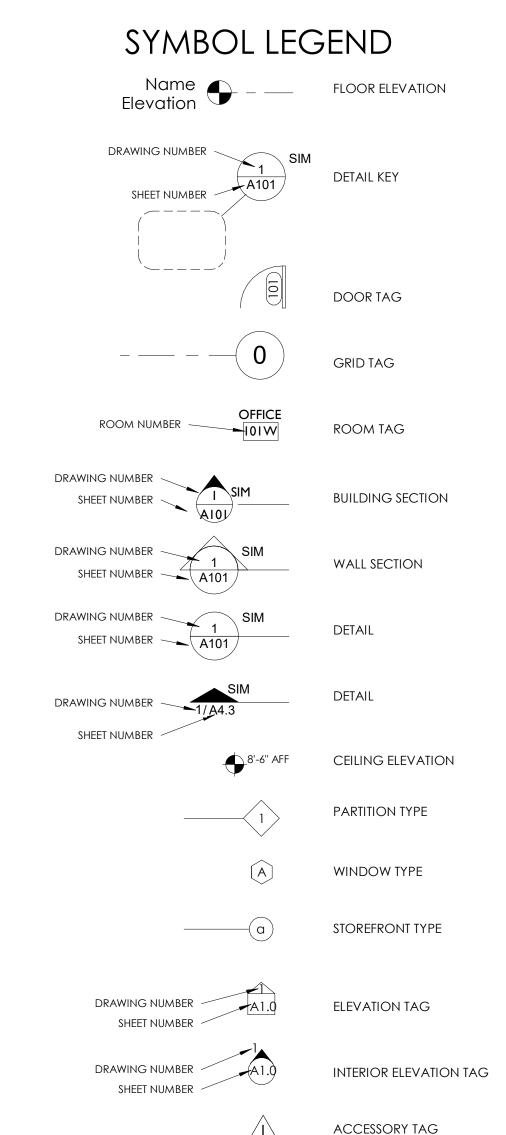
#### **Building Code Requirements:**

Occupancy (303.3): Business & Group F-1 (Factory Moderate Hazard) Accessory Occupancy: Group B (Business) Allowable Area Per Story (Table 506.2): 6,000 s.f. total allowable area per story Allowable Height (Table 504.3): 40 feet total allowable building height **Actual Area:** 99,872 s.f. actual building area; project scope: 9,589 s.f. **Construction Type:** Type II - Existing Non-Sprinklered Building (Section 602.5) Fire-Resistance Rating Requirements for Building Elements (Table 601 & 705.5): Primary Structural Frame: 0 hrs Bearing Walls: Exterior: 0 hrs 0 hrs Interior: Nonbearing Walls: 0 hrs Exterior: Interior: 0 hrs Floor Construction: 0 hrs Roof Construction: Interior Wall and Ceiling Finish Requirements by Occupancy in Sprinklered Buildings (Table 803.13): Interior Exit Passageways: A Corridors: Rooms & Enclosed Spaces: B Interior Floor Finish Requirements: See 804.4 Occupant Load (Table 1004.5): 273 occupants Means of Egress Required Capacity based on Occupant Load (1005.3): Egress Width: Required: 25.2" Actual: 32" Size of Doors (1010.1.1): Minimum of 32 in clear width Common Path of Egress Travel (Table 1030.8): 75' Exit Access Travel Distance (Table 1017.2): 250' Corridor Fire-Resistance Rating (Table 1020.2): 2 hour Minimum Corridor Width (Table 1020.3): 44" **Dead End Corridors (1020.5):** 50' Minimum Number of Required Plumbing Fixtures (Table 403.1 of 2018 Arkansas Plumbing Code): Water Closets (1 per 25 for first 50; 1 per 50 remainder occupants): 7

Lavatories (1 per 40 for first 80; 1 per 80 for remainer occupants): 5

Drinking Fountains (1 per 400 occupants): 1

Other: 1 Service sink



CENTERLINE

CONTROL JOINT

**EXPANSION JOINT** 

FIRE EXTINGUISHER CABINET

# CONSULTANTS

#### **MECHANICAL / ELECTRICAL**

**BROWN ENGINEERS** 

17200 CHENAL PARKWAY SUITE 300 PMB 324 LITTLE ROCK, AR 72223

(501) 448-0100

#### STRUCTURAL

ECI

401 W CAPITOL AVE # 305 LITTLE ROCK, AR 72201

(501) 376-3752 (501) 376-7314

#### CIVIL

ECOLOGICAL DESIGN GROUP

120 SOUTH IZARD STREET LITTLE ROCK, AR 72201

(501) 378-0200 (501) 516-1133

A0.1	PROJECT INFO AND CODE RESEARCH	<u>MECHANICAL</u>	
CIVIL		M1.0	MECHA
	CENEDAL NOTEC O LECENDO	<b>M2.0</b>	MECH
C0.0	GENERAL NOTES & LEGENDS	<b>M2.1</b>	ENLAR
C0.1	DEMOLITION PLAN	M2.2	ENLAR
C1.0	SITE PLAN	M2.3	ENLAR
C2.0	UTILITY PLAN	M3.0	MECHA
C3.0	GRADING & DRAINAGE OVERALL PLAN	M4.0	MECH
C4.0	EROSION CONTROL PLAN	M5.0	MECHA
C4.1	EROSION CONTROL DETAILS		
C5.0	SITE DETAILS	M5.1	MECHA
C5.1	SITE DETAILS		

#### ARCHITECTURAI

C5.2

C5.3

ARCHITE	<u>CCTURAL</u>
0.2	DEMOLITION FLOOR PLAN
10.3	DEMOLITION - RCP & ROOF PLAN
0.4	DEMOLITION ELEVATIONS
1.0	SITE PLAN – OVERALL
1.1	SITE PLAN - ENLARGED
12.0	OVERALL FLOOR PLAN
2.1	ENLARGED FLOOR PLAN - CLASSROOM
2.2	ENLARGED FLOOR PLAN - OFFICES
12.3	ENLARGED FLOOR PLAN - MEETING
12.4	ENLARGED RESTROOM PLAN
13.0	REFLECTED CEILING PLAN OVERALL
<b>\3.1</b>	REFLECTED CEILING PLAN – OFFICES
13.2	REFLECTED CEILING PLAN – CLASSROOM
13.3	REFLECTED CEILING PLAN – MEETING
14.0	ROOF PLAN
<b>\5.0</b>	BUILDING ELEVATIONS
<b>\5.1</b>	BUILDING SECTIONS
16.0	BUILDING SECTIONS
<b>17.0</b>	INTERIOR ELEVATIONS
<b>17.1</b>	INTERIOR ELEVATIONS
17.2	INTERIOR ELEVATIONS
17.3	INTERIOR ELEVATIONS
18.0	TYPES AND SCHEDULES
19.0	MILLWORK ELEVATIONS
10.0	FINISH PLAN

#### **MECHANICAL**

M1.0	MECHANICAL NOTES AND LEGENDS
M2.0	MECHANICAL FLOOR PLAN
M2.1	ENLARGED HVAC PLAN - CLASSROOM
M2.2	ENLARGED HVAC PLAN - OFFICE
M2.3	ENLARGED HVAC PLAN - MEETING
M3.0	MECHANICAL ROOF PLANS
M4.0	MECHANICAL SCHEDULES
M5.0	MECHANICAL DETAILS I
M5.1	MECHANICAL DETAILS II
	M2.1 M2.2 M2.3 M3.0 M4.0 M5.0

#### **ELECTRICAL**

<b>E2.0</b>	ELECTRICAL SITE PLAN
E3.0	ELECTRICAL LIGHTING PLAN
<b>E4.0</b>	ELECTRICAL POWER PLAN
E5.0	ELECTRICAL SYSTEMS PLAN
E6.0	ELECTRICAL POWER PLAN
E7.0	ELECTRICAL PANEL SCHEDULE AND ONE-LINE
E8.0	ELECTRICAL DETAILS

ELECTRICAL POWER AND LIGHTING LEGEND

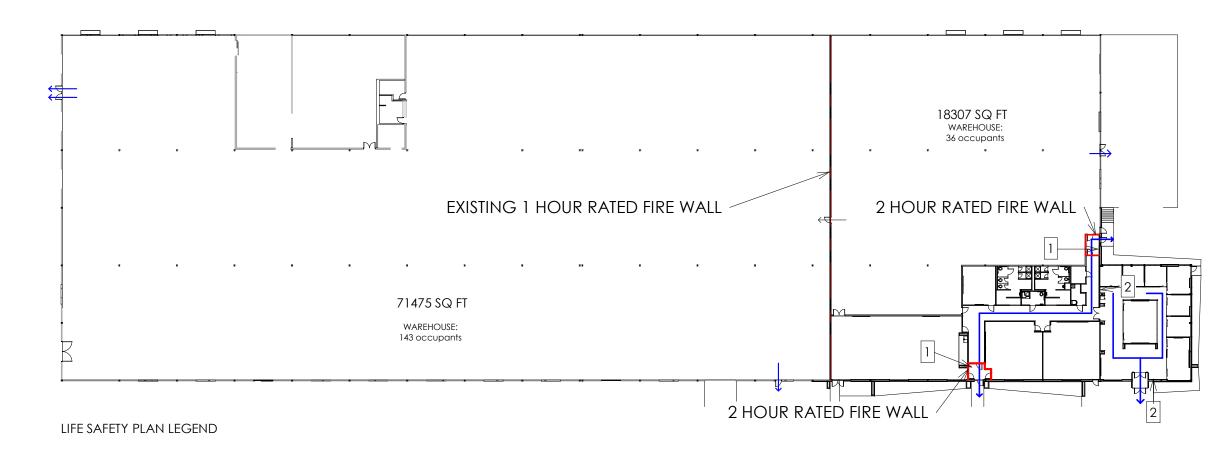
#### **PLUMBING**

P1.0	PLUMBING NOTES, SCHEDULES AND LEGENI
P2.1	PLUMBING DEMOLITION PLAN
P2.2	PLUMBING SANITARY WASTE PLAN
P2.3	PLUMBING DOMESTIC WATER PLAN
P2.4	PLUMBING GREENHOUSE WATER PLAN
P3.1	PLUMBING RISERS I - DMV
P3.2	PLUMBING RISERS II - WATER
P4.1	PLUMBING DETAILS I
P4.2	PLUMBING DETAILS II

# LIFE SAFETY PLAN

FIRE-RATED SEMI-RECESSED FIRE EXTINGUISHER CABINET

SEMI-RECESSED FIRE EXTINGUISHER CABINET



# GENERAL NOTES

- 1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS SHALL ESTABLISH LOCATION OF ALL PARTITIONS. LARGER SCALE DRAWINGS HAVE PRIORITY OVER SMALLER SCALE DRAWINGS. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION.
- 2. NOTES TO "ALIGN" SHALL MEAN TO ALIGN FINISHED FACE OF PARTITION UNLESS OTHERWISE NOTED AND SHALL HAVE PRIORITY OVER A DIMENSIONED LOCATION.
- 3. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING OR METAL BLOCKING AS SHOWN OR AS REQUIRED FOR ATTACHMENT OF WALL MOUNTED HARDWARE, TOILET ACCESSORIES, CASEWORK, MILLWORK, FINISH CARPENTRY AND WHEREVER ELSE IT MAY BE REQUIRED FOR THE SECURE ATTACHMENT OF ADJOINING WORK REFER TO SPECIFICATION SECTION 06100 FOR SPECIFICS ON WOOD BLOCKING.
- PLAN DIMENSIONS SHOWN ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE ON DETAILS.
- LIGHT SWITCHES MAY BE MOUNTED NO HIGHER THAN 48" ABOVE FINISHED FLOOR IN ORDER TO COMPLY WITH ADA REQUIREMENTS.
- INSTALL FLOOR & OVERHEAD TRACKS IN CONT. BEAD OF ACOUSTICAL SEALANT. INSTALL ELEC. BOXES ON OPPOSITE SIDES OF WALL 24" APART MIN. INSTALL ACOUSTIC BATT INSULATION BETWEEN STUDS AS REQUIRED TO ACHIEVE STC RATING PER PARTITION SCHEDULE. INSULATE BETWEEN STUDS AND HOLLOW METAL FRAMES-TYP FOR ALL.
- 7. MAINTAIN FIRE RATING AT RECESSED PANELS AND CABINETS.
- 8. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS. WORK PERFORMED WITHOUT CLARIFICATION FROM ARCHITECT IS ENTIRELY AT CONTRACTOR'S RISK.

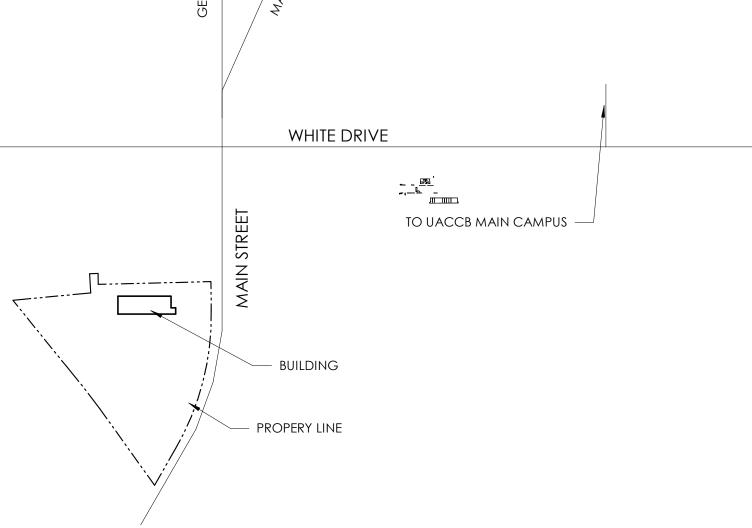
### SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOBSITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE DUTY OF THE ARCHITECT IS TO CONDUCT CONSTRUCTION OBSERVATION OF THE CONTRACTOR'S PERFORMANCE AND IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, OR NEAR THE CONSTRUCTION SITE.

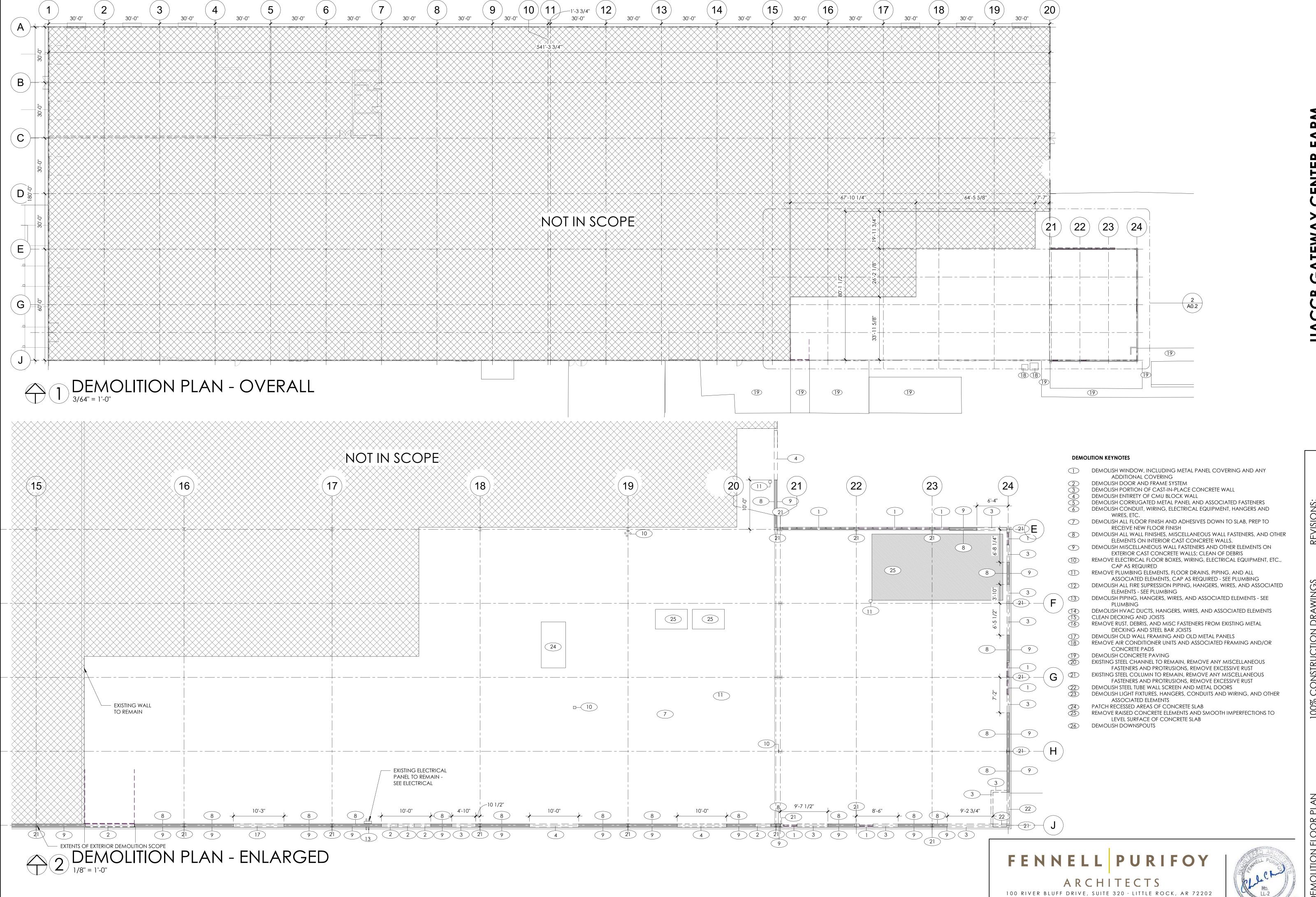
### OWNERSHIP OF DOCUMENTS

THESE DOCUMENTS, AND THE DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICES, ARE THE PROPERTY OF FENNELL PURIFOY ARCHITECTS, PLC, AND ARE NOT TO BE USED IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF FENNELL PURIFOY ARCHITECTS, PLC.



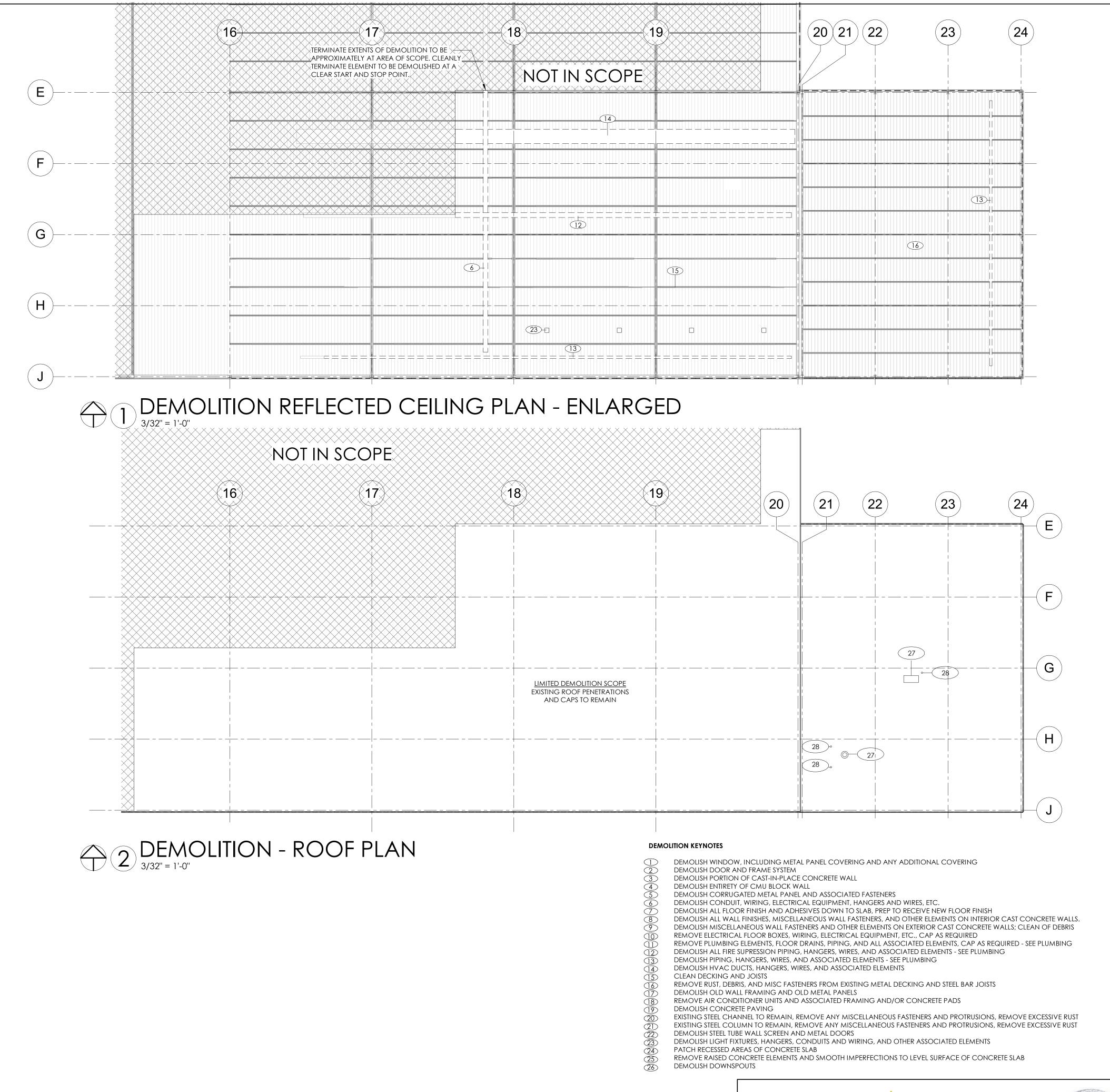


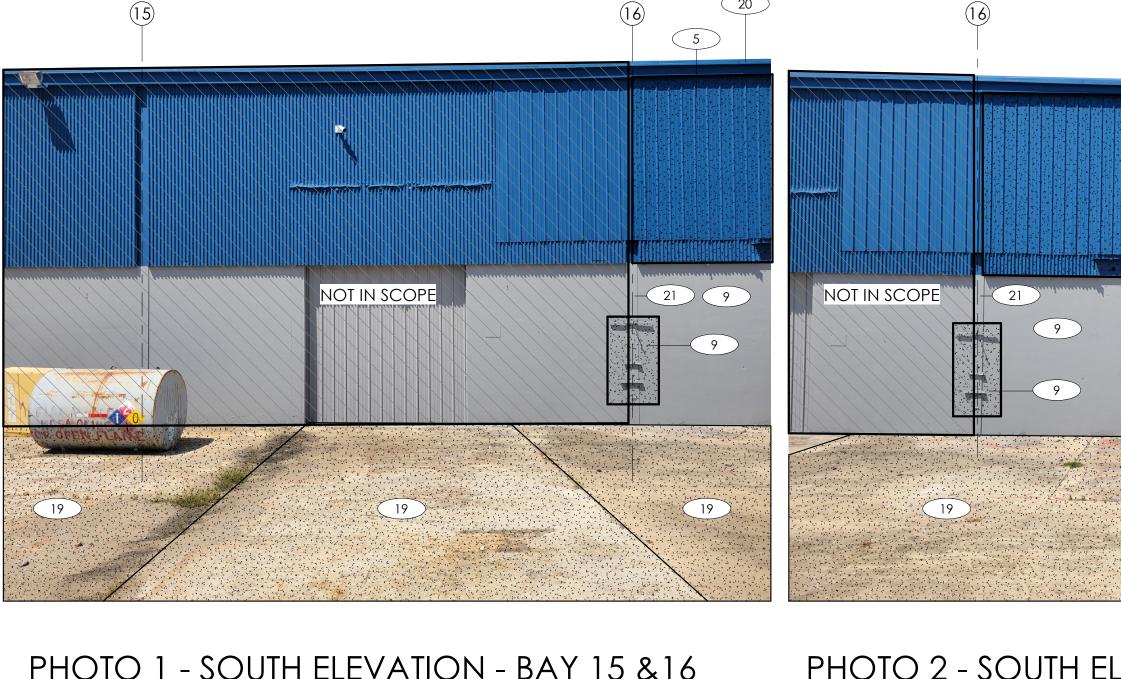




CENTER Batesville, AR UACCB GATEWAY 2210 E. Main Street,

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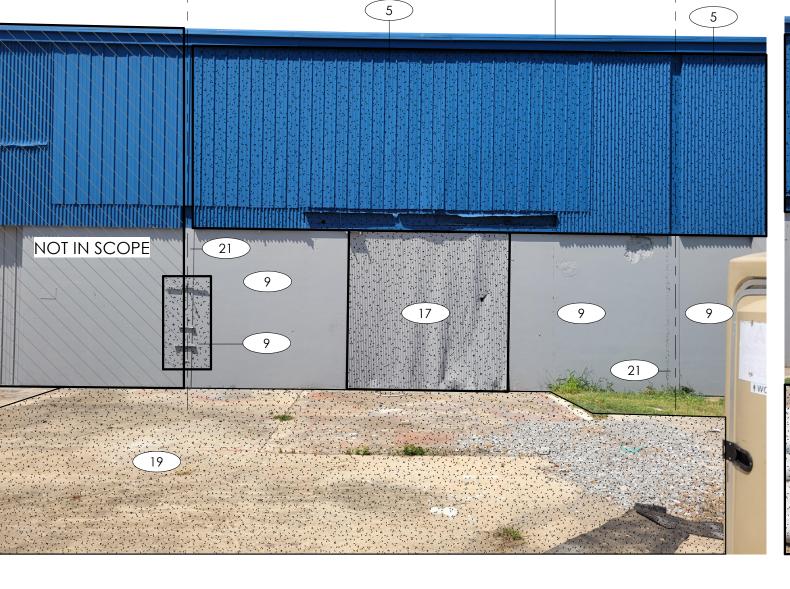






PHOTO 1 - SOUTH ELEVATION - BAY 15 & 16 EXISTING CAMERA TO -REMAIN, REMOVE AND

PHOTO 2 - SOUTH ELEVATION - BAY 16 & 17

PHOTO 3 - SOUTH ELEVATION - BAY 17 & 18

PHOTO 4 - SOUTH ELEVATION - BAY 18 & 19







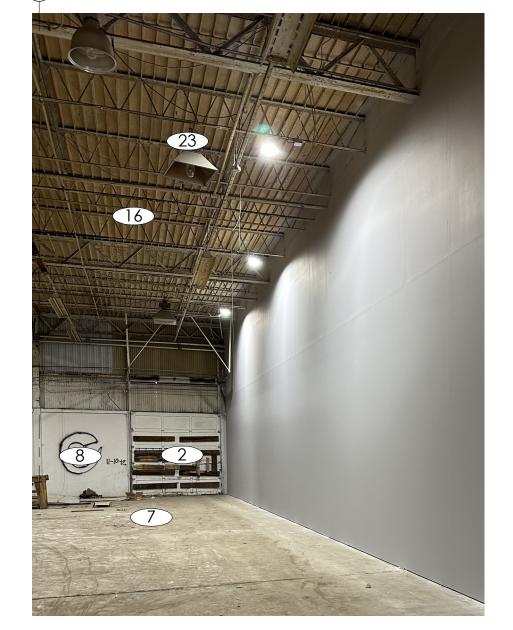
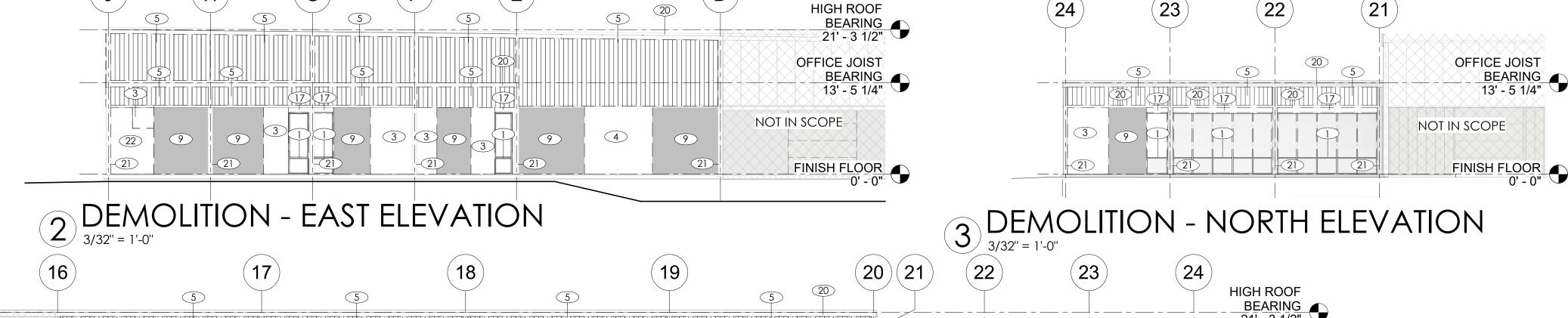


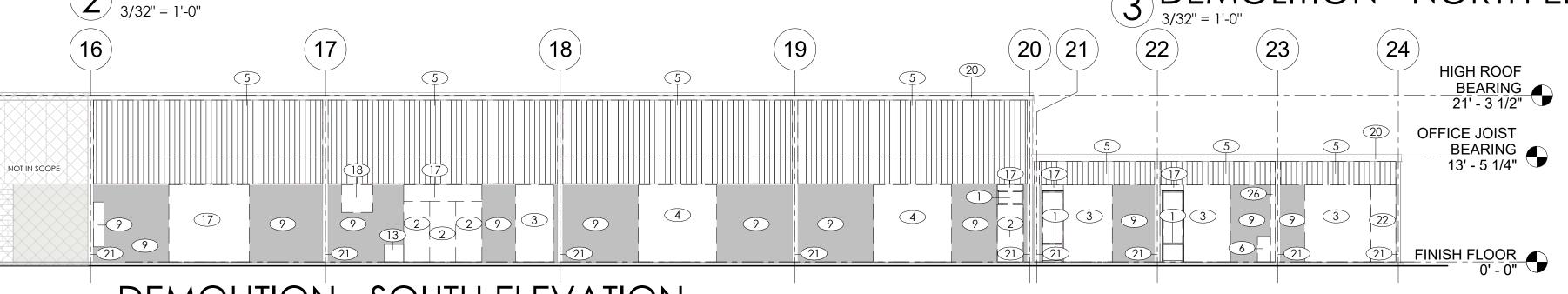
PHOTO 5 - SOUTH ELEVATION - BAY 19 & 20

PHOTO 6 - INTERIOR ELEVATION - BAY 22 & 23

PHOTO 7 - INTERIOR ELEVATION - BAY 20, 19 & 18

PHOTO 8 - INTERIOR ELEVATION - BAY 16 & (PARTIAL) BAY 15







DEMOLISH WINDOW, INCLUDING METAL PANEL COVERING AND ANY ADDITIONAL COVERING DEMOLISH DOOR AND FRAME SYSTEM

DEMOLISH PORTION OF CAST-IN-PLACE CONCRETE WALL DEMOLISH ENTIRETY OF CMU BLOCK WALL

DEMOLISH CORRUGATED METAL PANEL AND ASSOCIATED FASTENERS

DEMOLISH CONDUIT, WIRING, ELECTRICAL EQUIPMENT, HANGERS AND WIRES, ETC. DEMOLISH ALL FLOOR FINISH AND ADHESIVES DOWN TO SLAB, PREP TO RECEIVE NEW FLOOR FINISH

DEMOLISH PIPING, HANGERS, WIRES, AND ASSOCIATED ELEMENTS - SEE PLUMBING

DEMOLISH HVAC DUCTS, HANGERS, WIRES, AND ASSOCIATED ELEMENTS

REMOVE RUST, DEBRIS, AND MISC FASTENERS FROM EXISTING METAL DECKING AND STEEL BAR JOISTS

DEMOLISH OLD WALL FRAMING AND OLD METAL PANELS

REMOVE AIR CONDITIONER UNITS AND ASSOCIATED FRAMING AND/OR CONCRETE PADS DEMOLISH CONCRETE PAVING

EXISTING STEEL CHANNEL TO REMAIN, REMOVE ANY MISCELLANEOUS FASTENERS AND PROTRUSIONS, REMOVE EXCESSIVE RUST EXISTING STEEL COLUMN TO REMAIN, REMOVE ANY MISCELLANEOUS FASTENERS AND PROTRUSIONS, REMOVE EXCESSIVE RUST

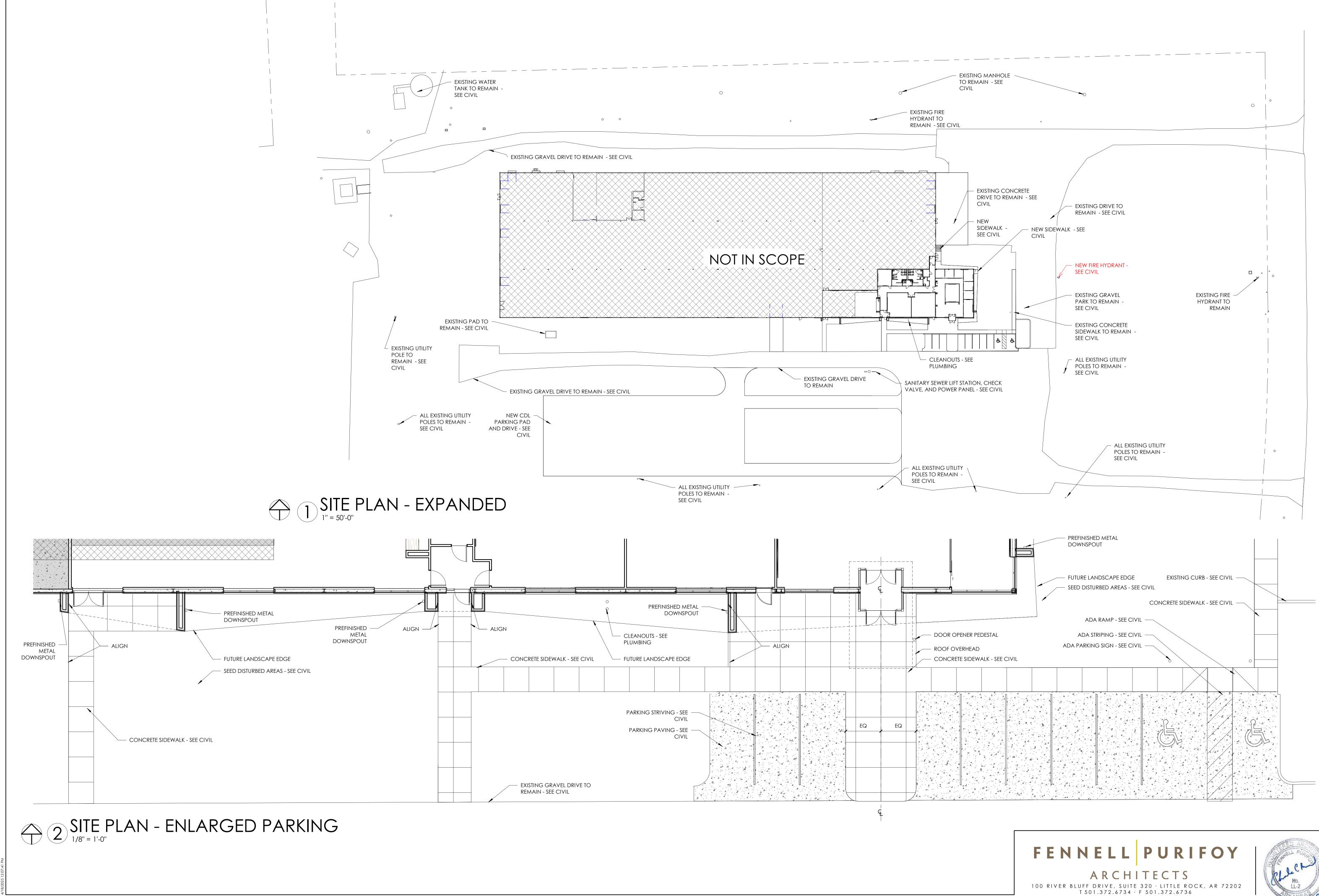
DEMOLISH STEEL TUBE WALL SCREEN AND METAL DOORS

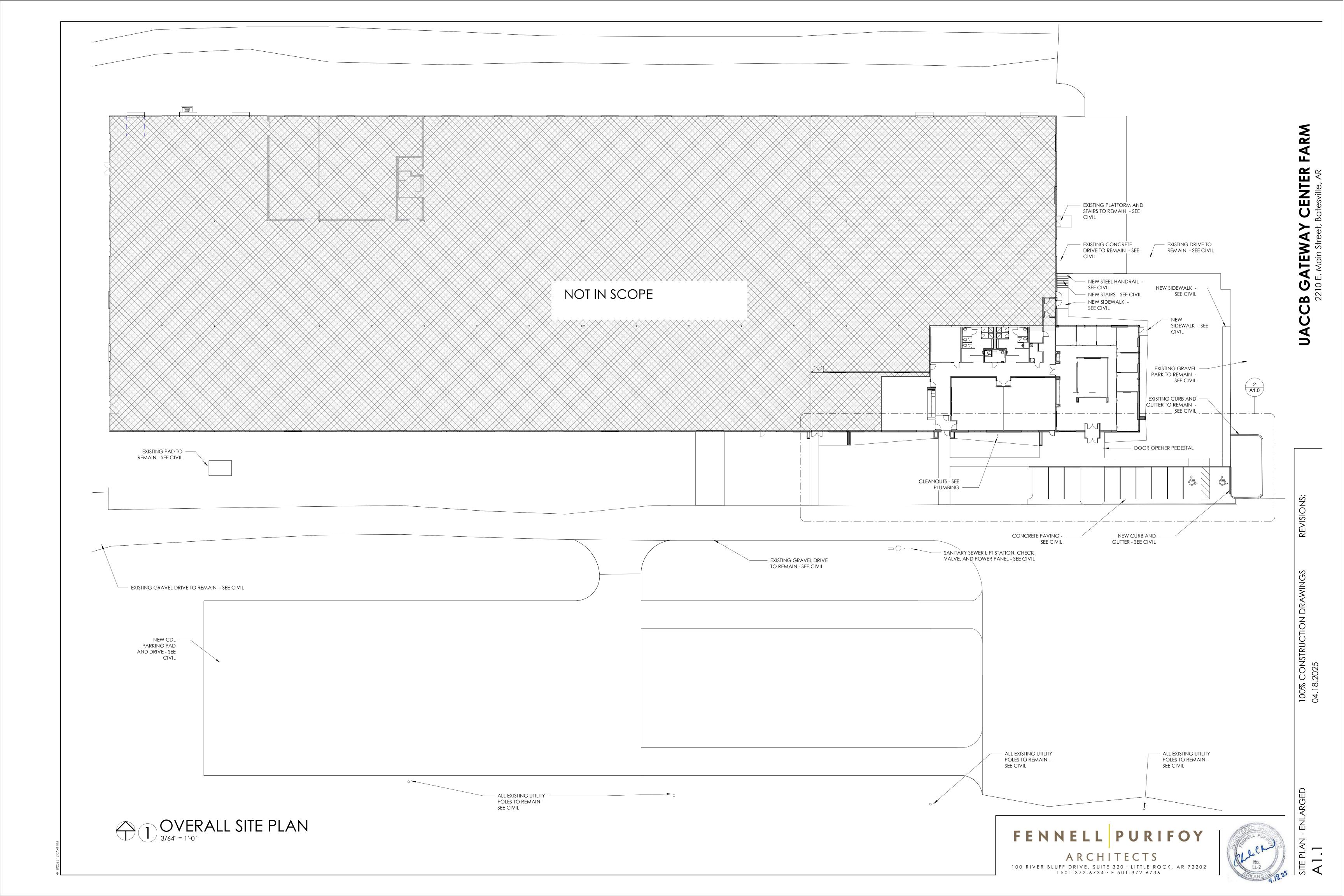
DEMOLISH LIGHT FIXTURES, HANGERS, CONDUITS AND WIRING, AND OTHER ASSOCIATED ELEMENTS

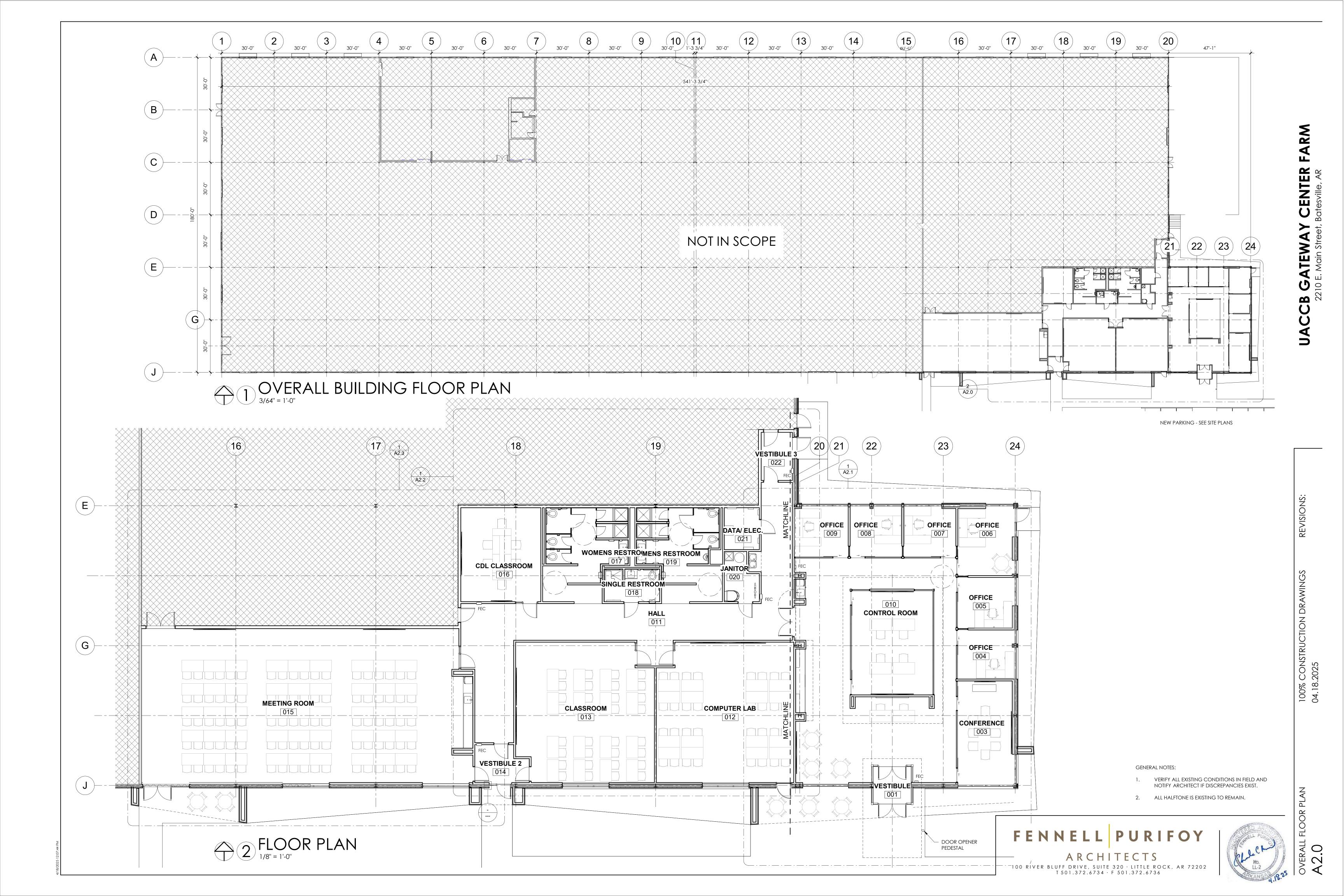
PATCH RECESSED AREAS OF CONCRETE SLAB

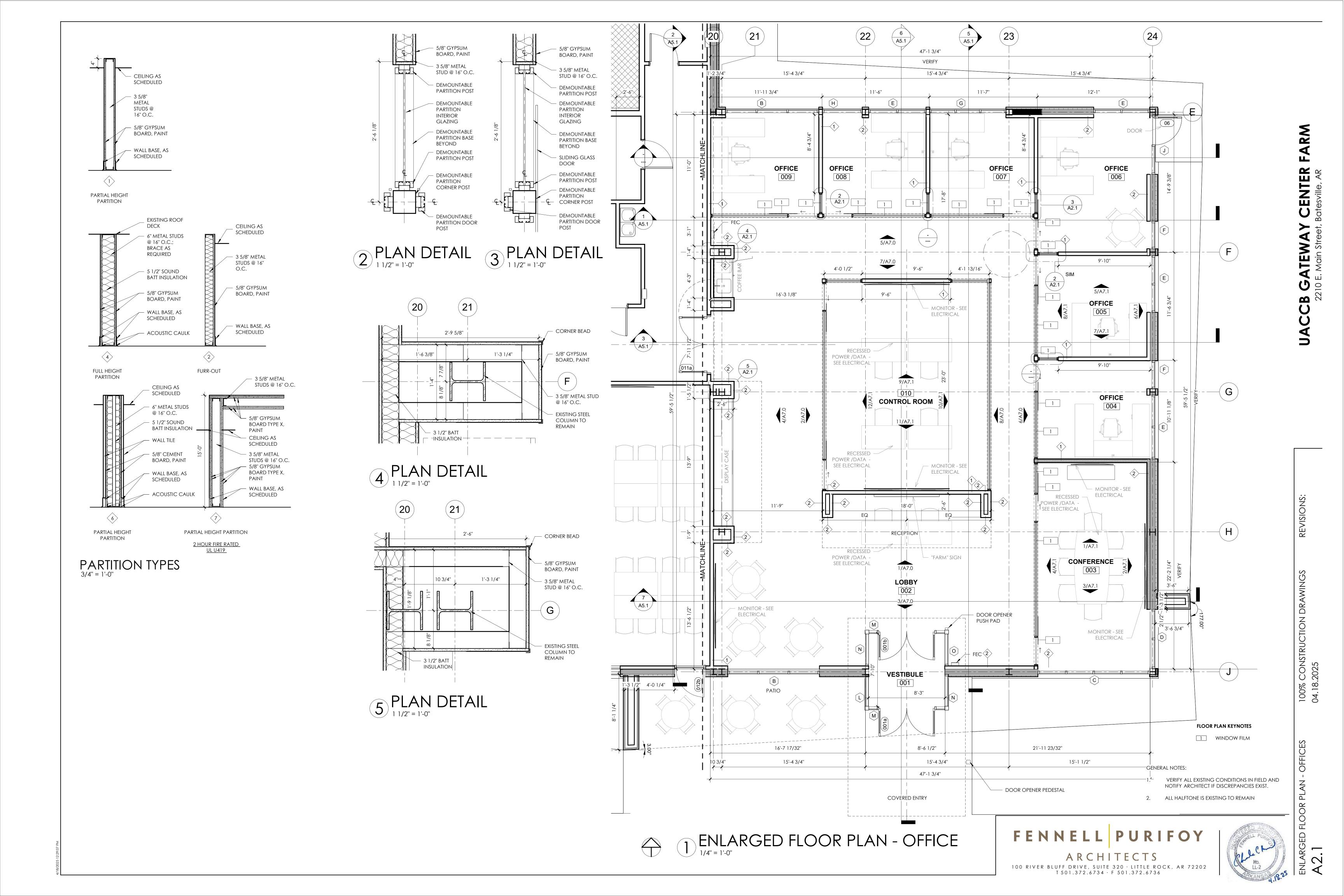
REMOVE RAISED CONCRETE ELEMENTS AND SMOOTH IMPERFECTIONS TO LEVEL SURFACE OF CONCRETE SLAB

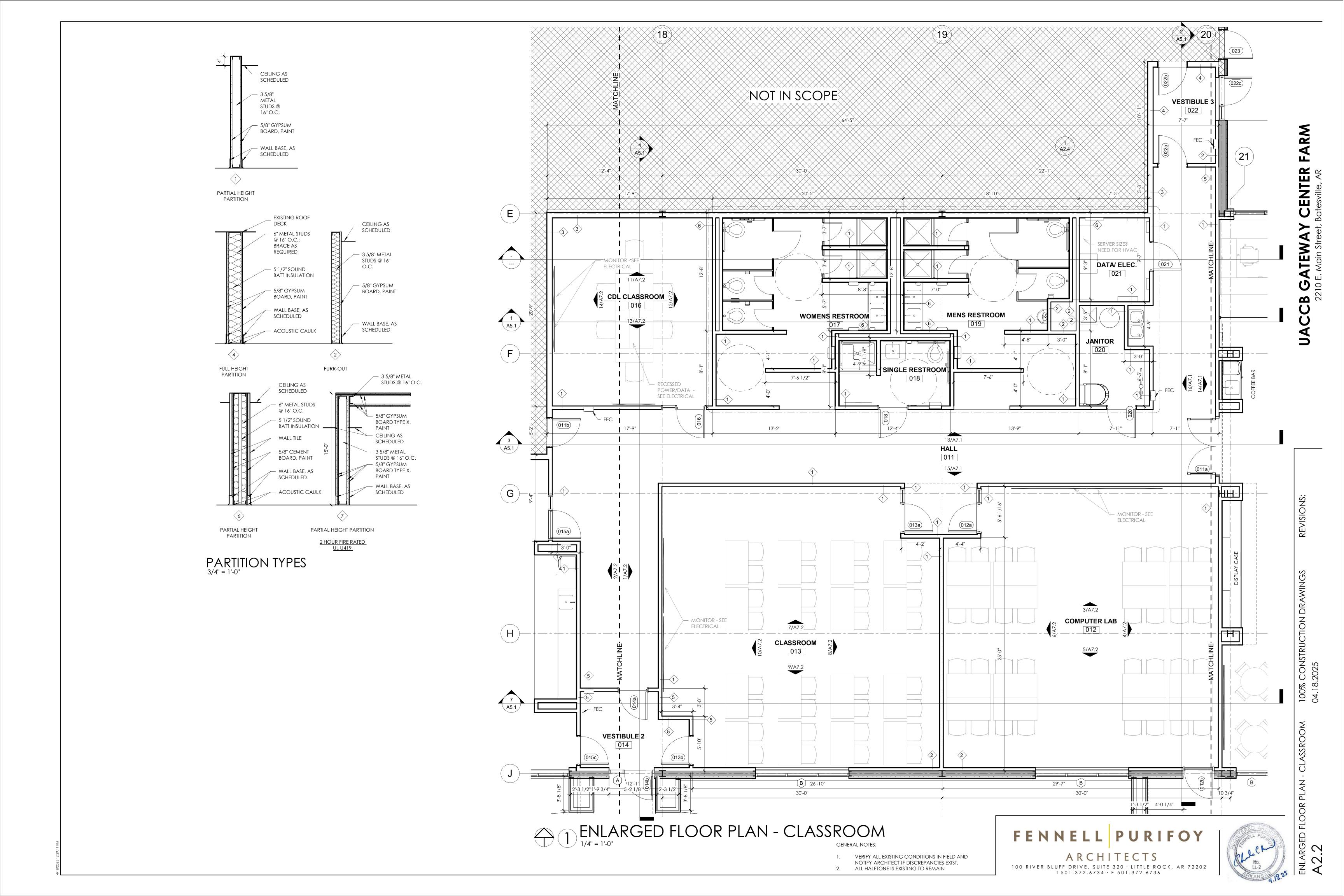


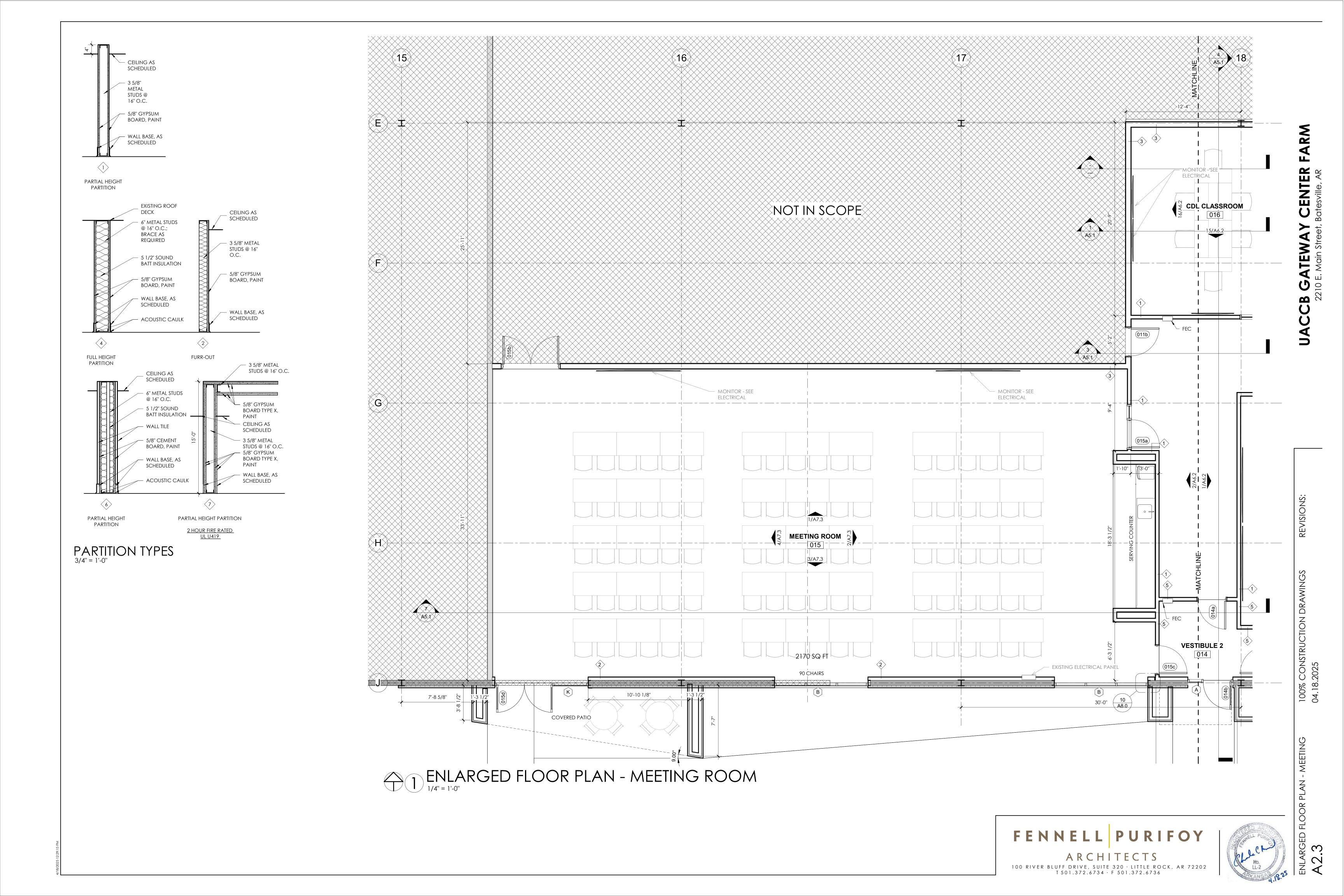


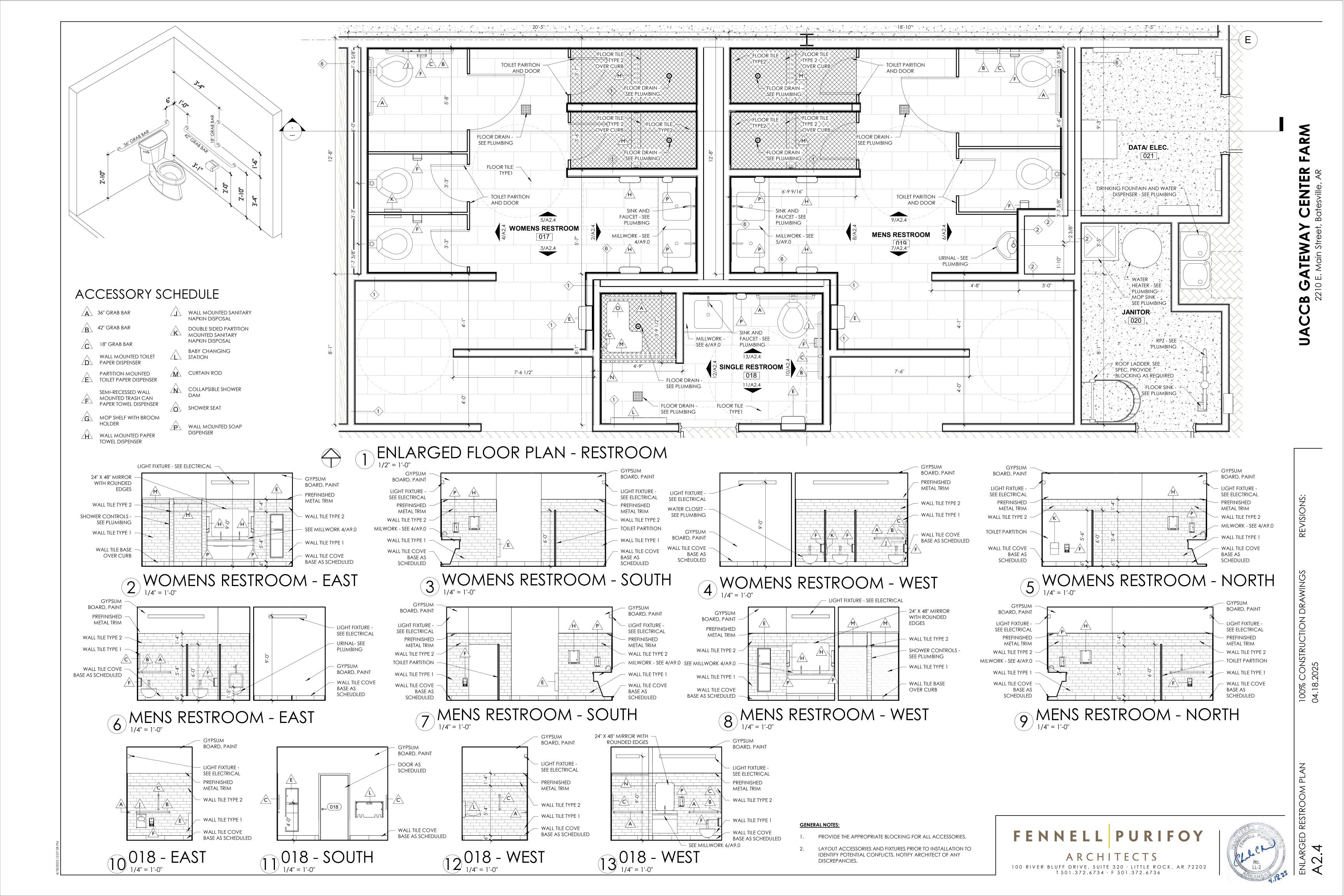


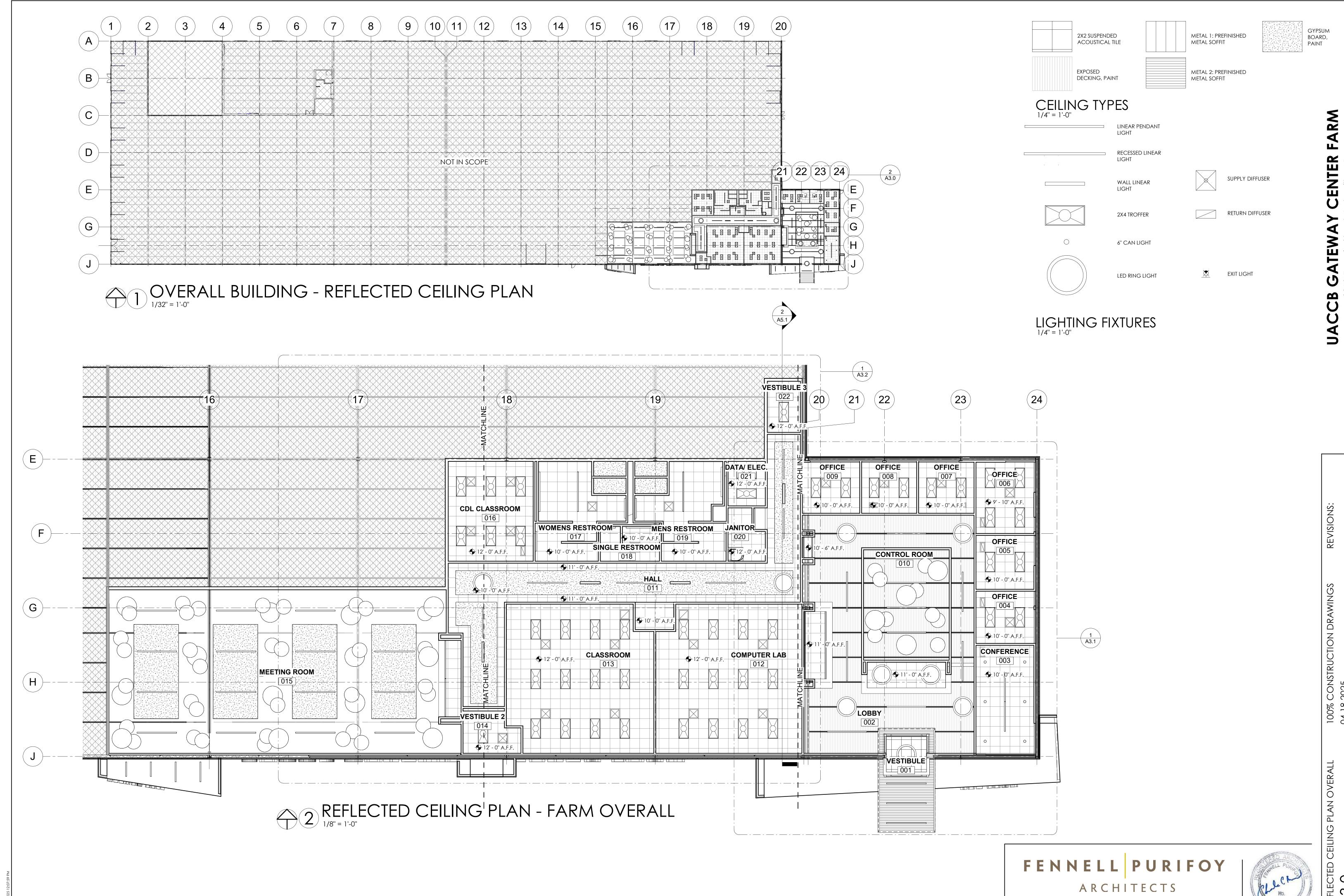




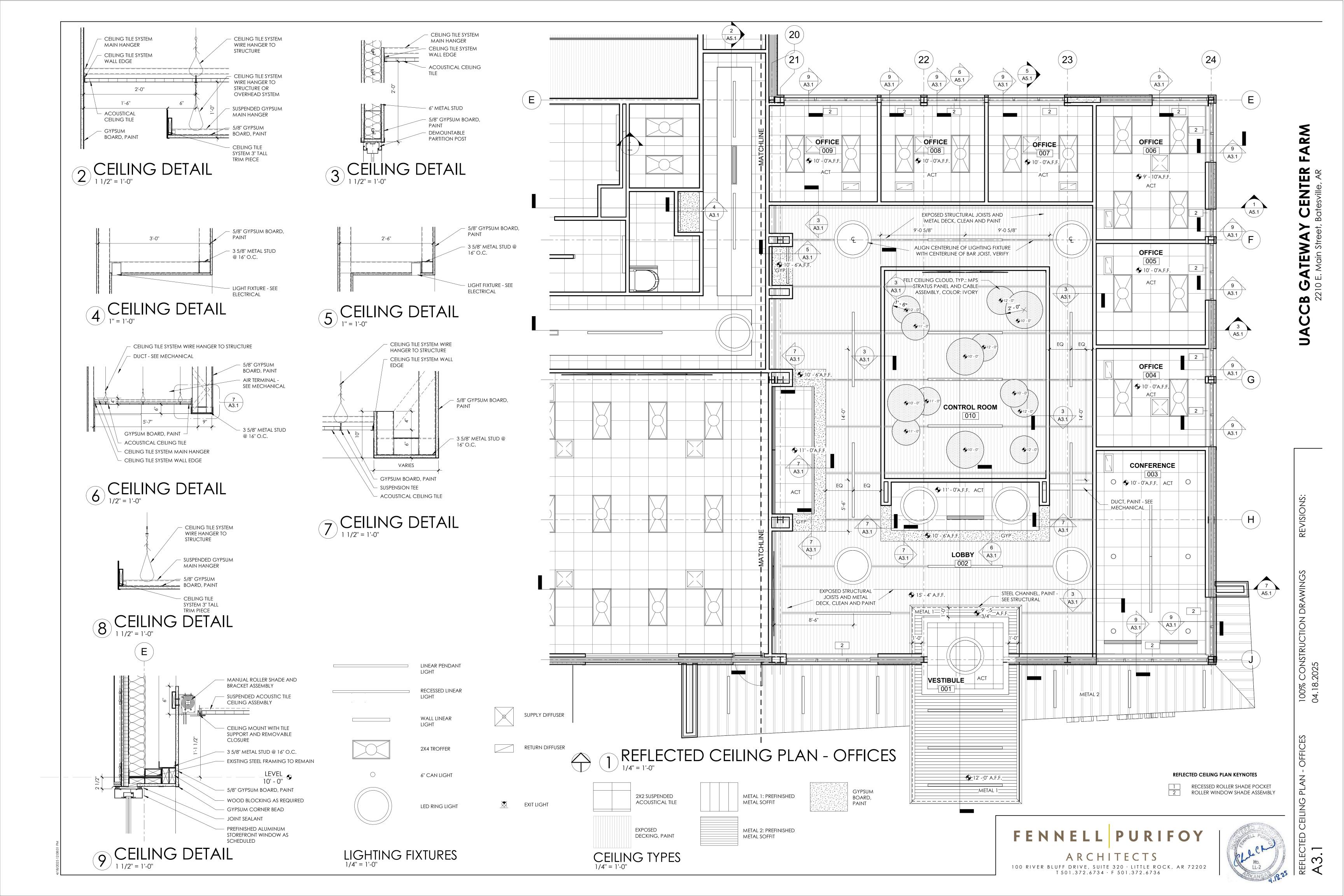


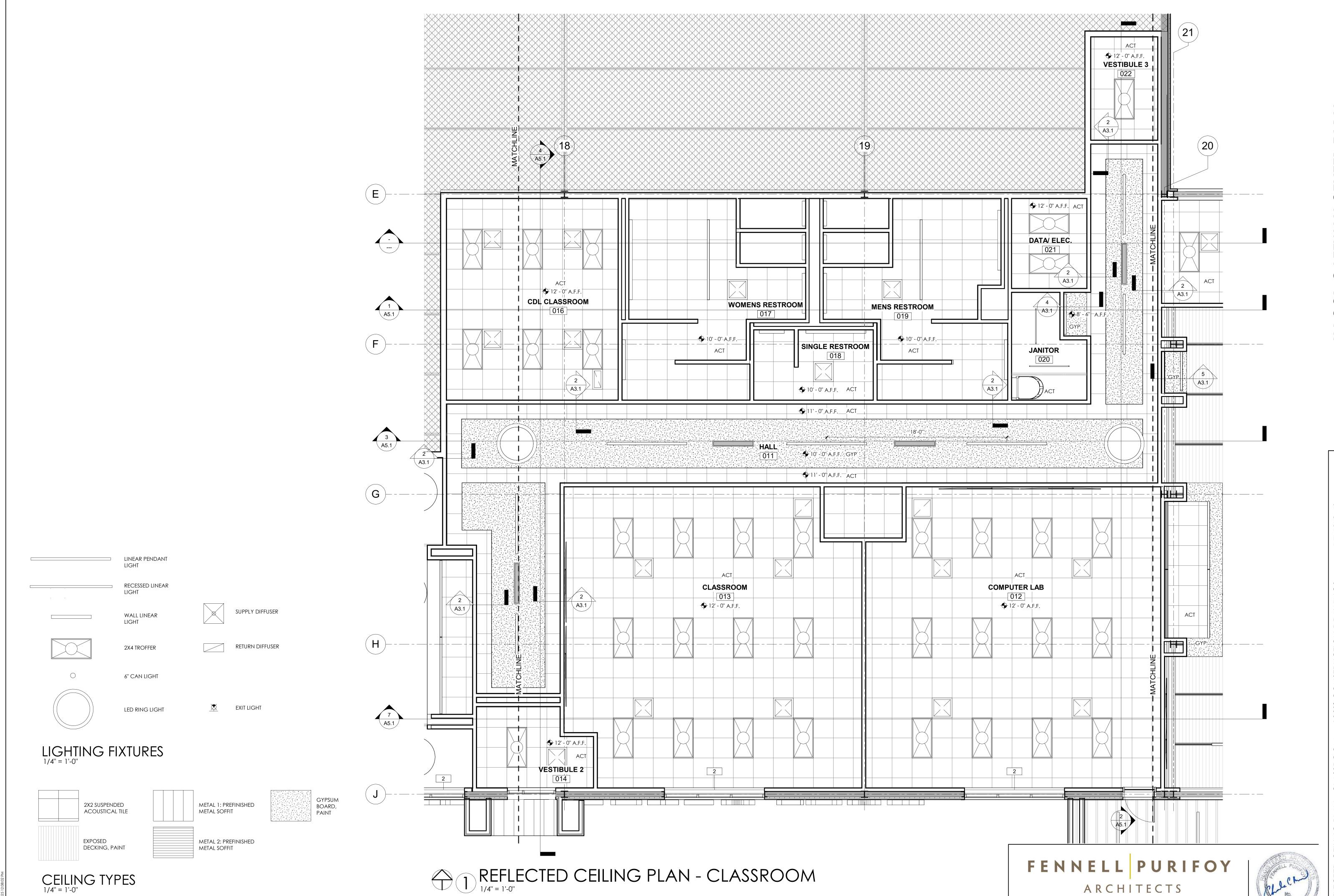






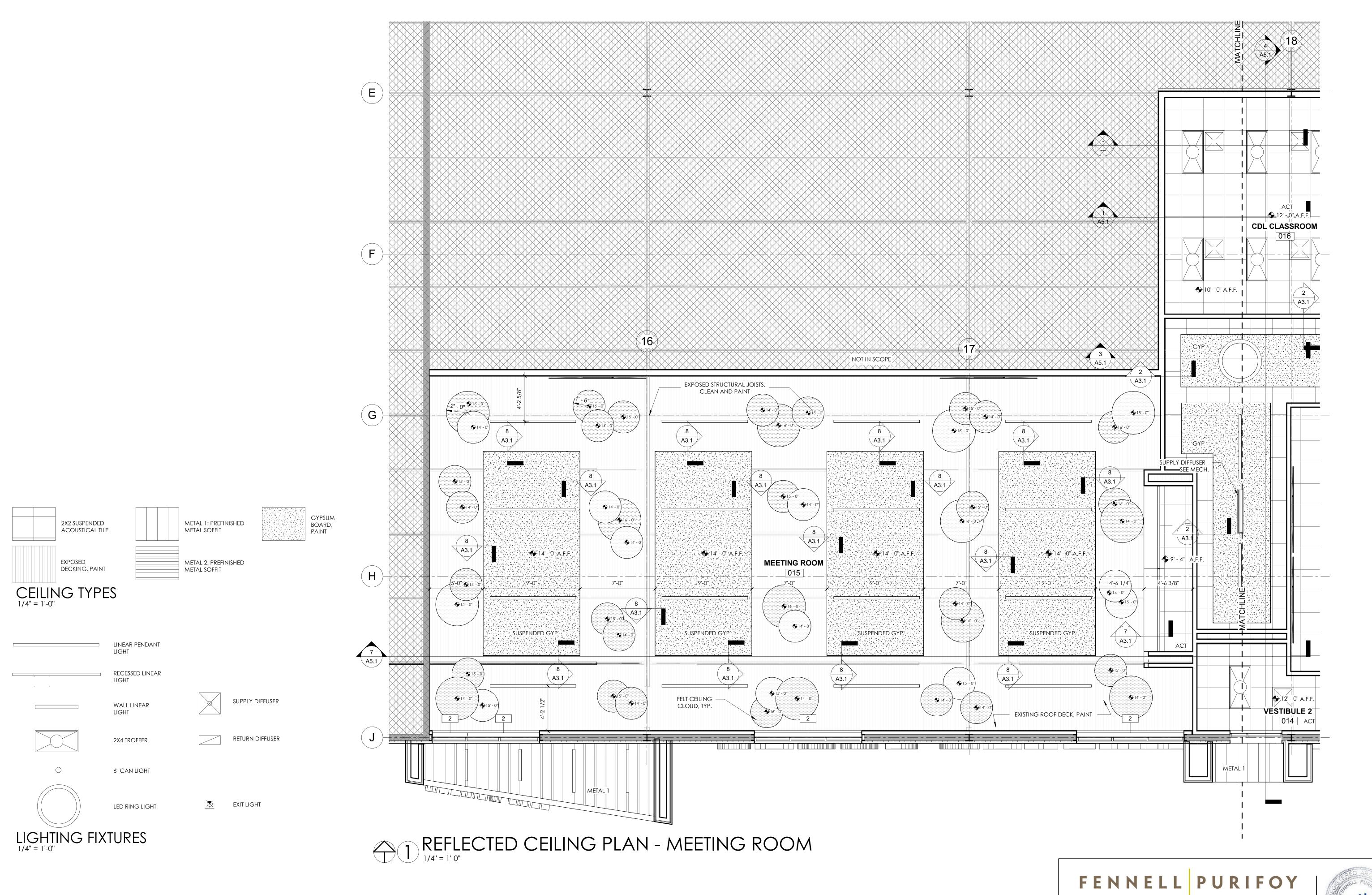
CENTER | UACCB GATEWAY
2210 E. Main Street,

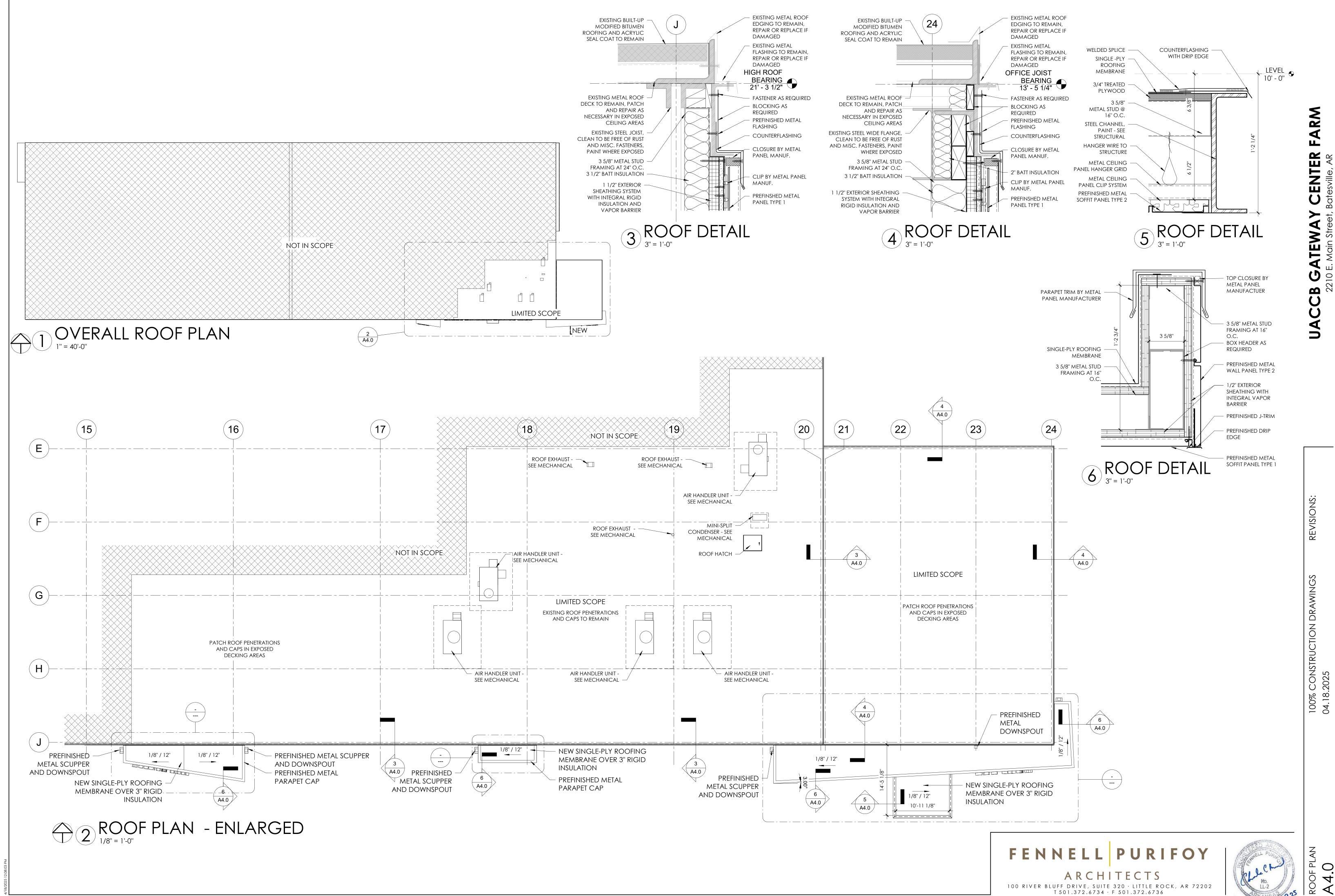


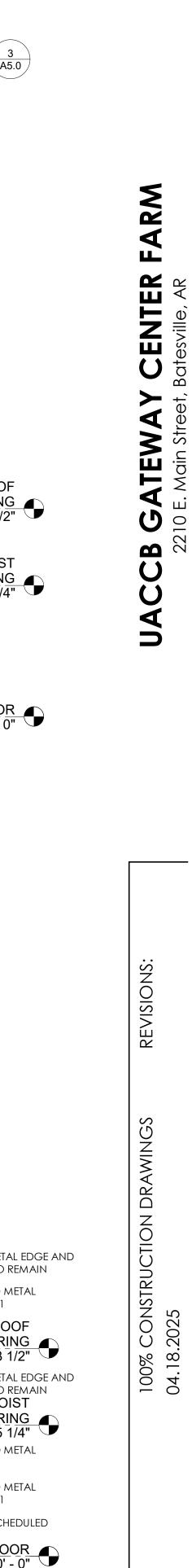


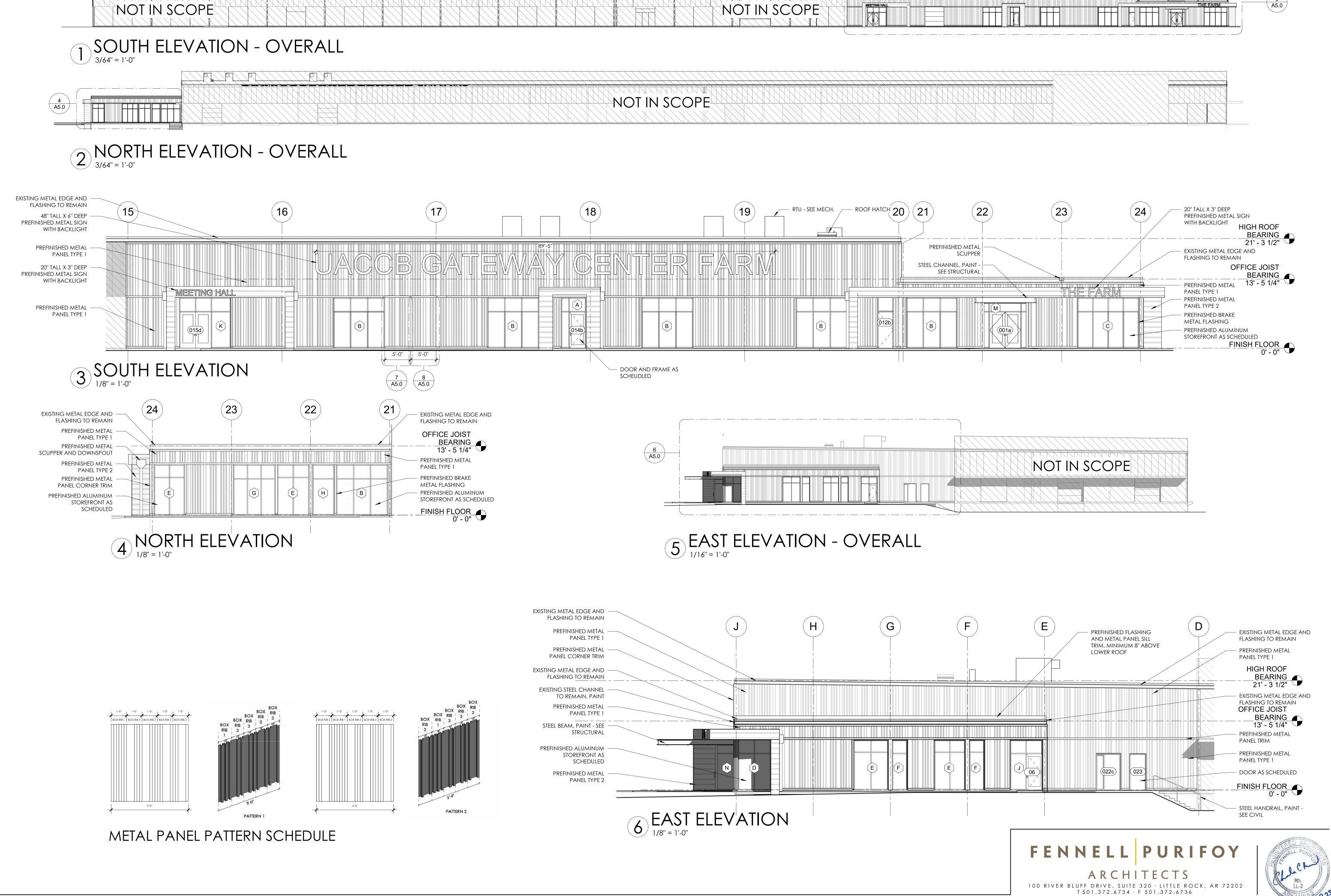
CENTER FARM Batesville, AR UACCB GATEWAY
2210 E. Main Street,

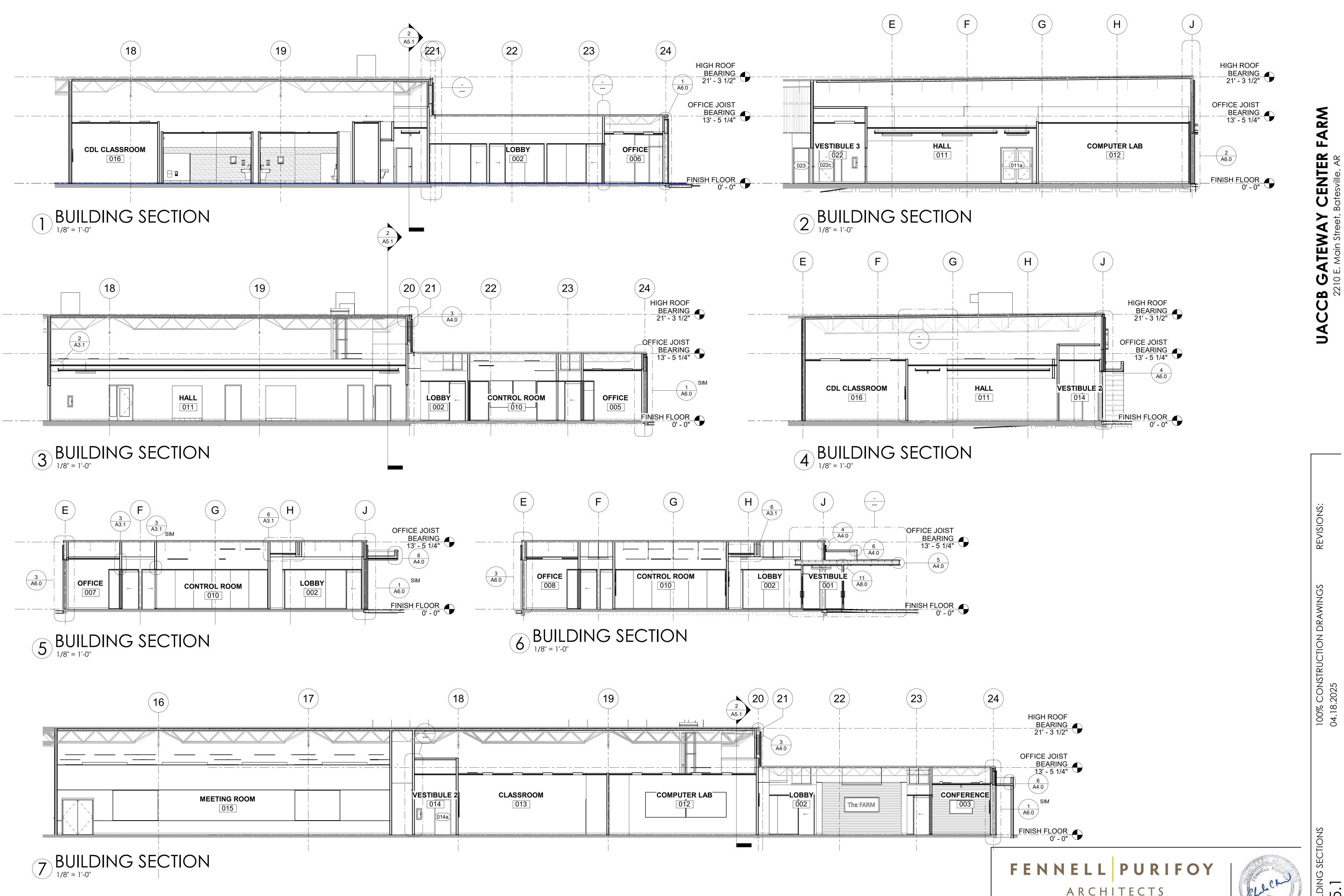
100% CONSTRUCTION DRAWIN 04.18.2025

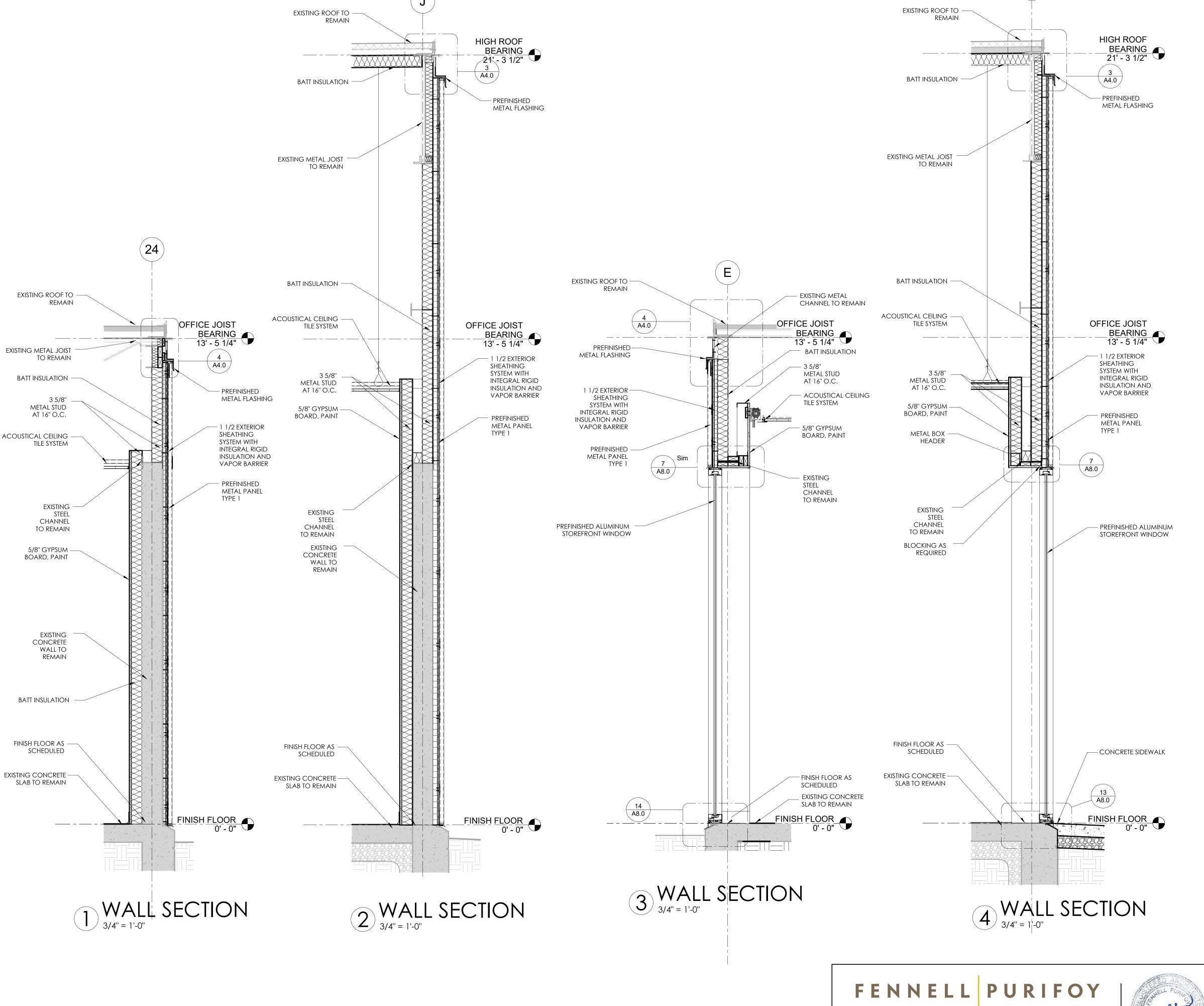


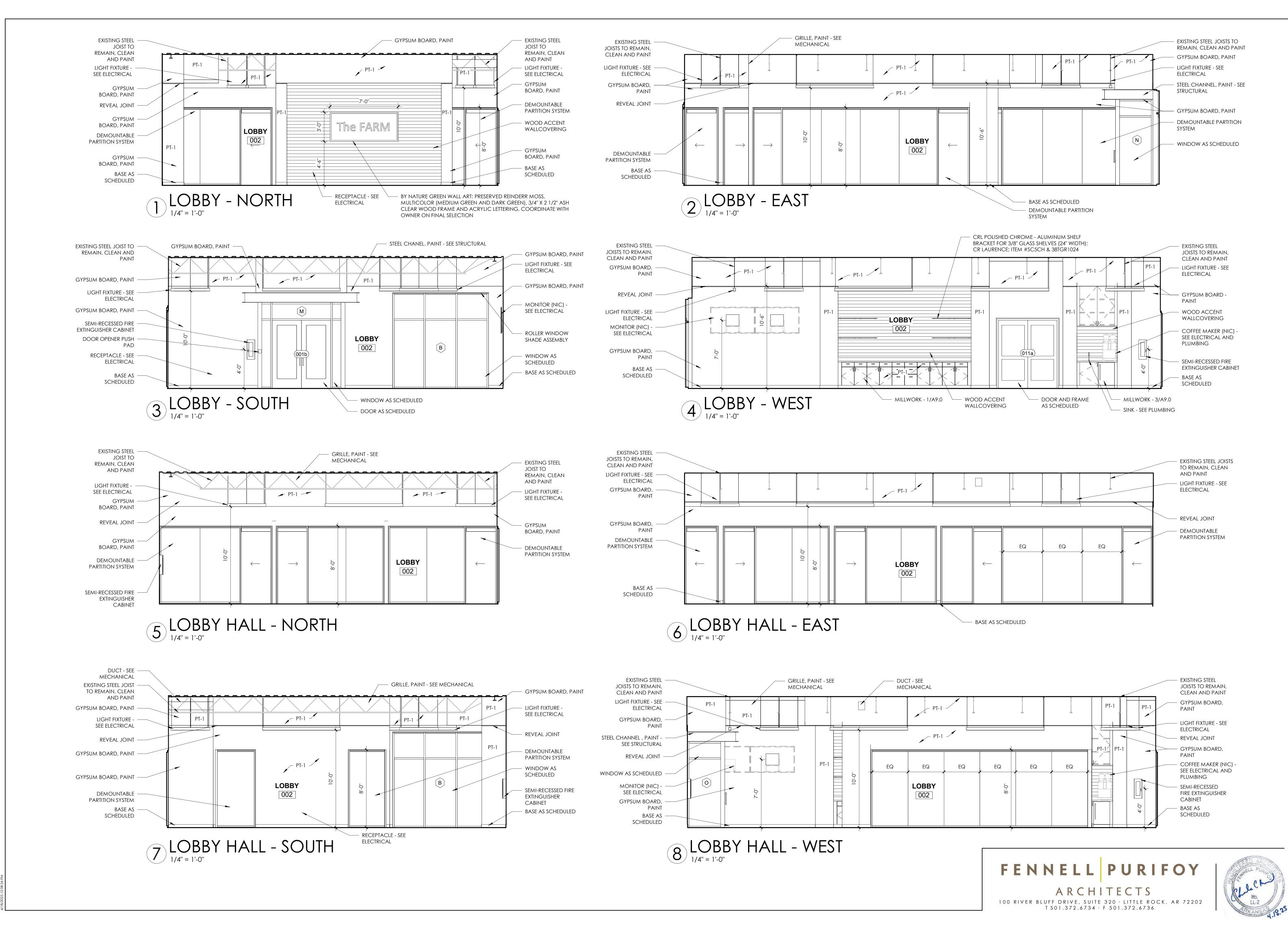


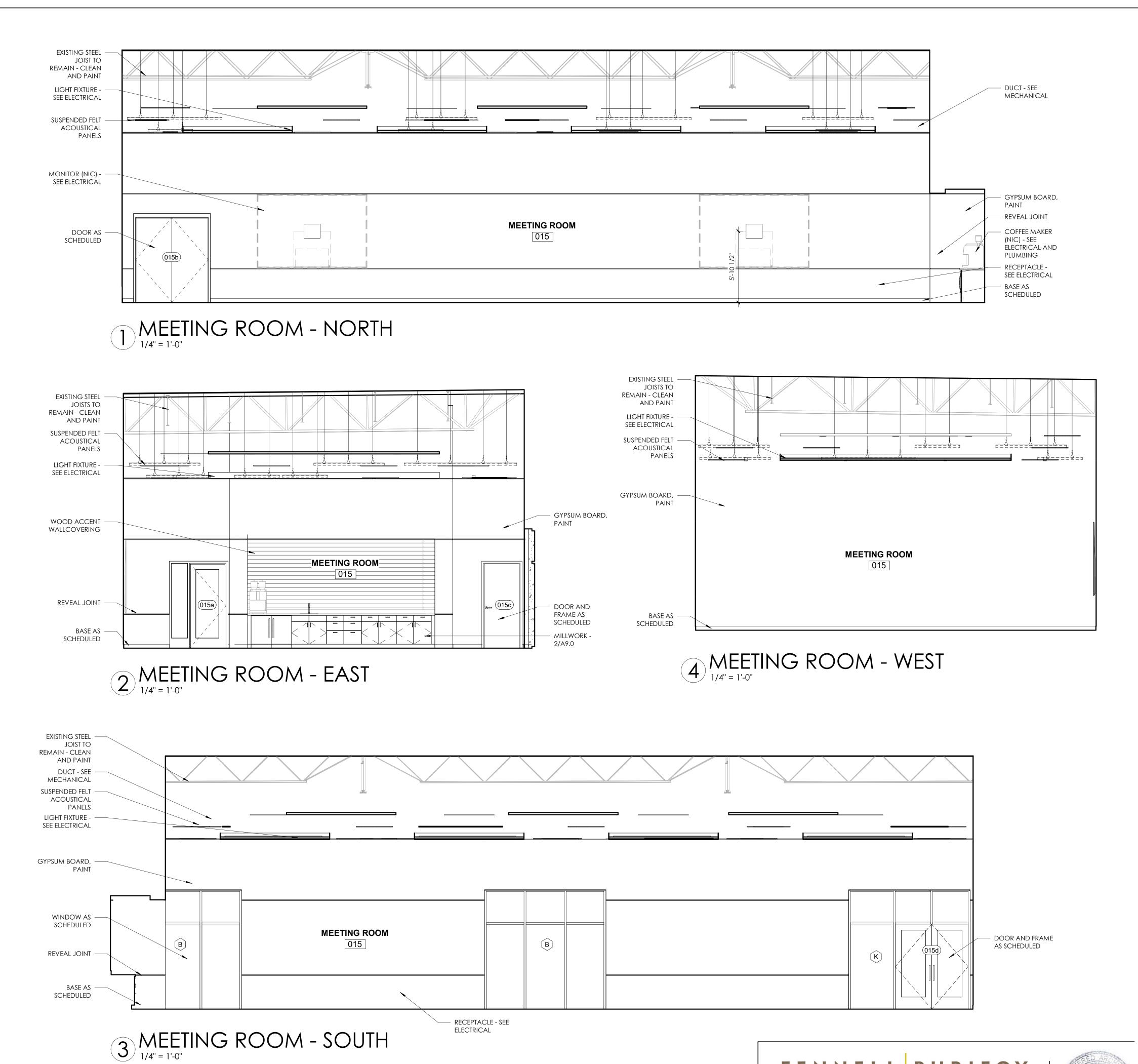




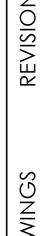


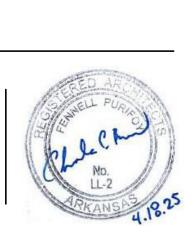


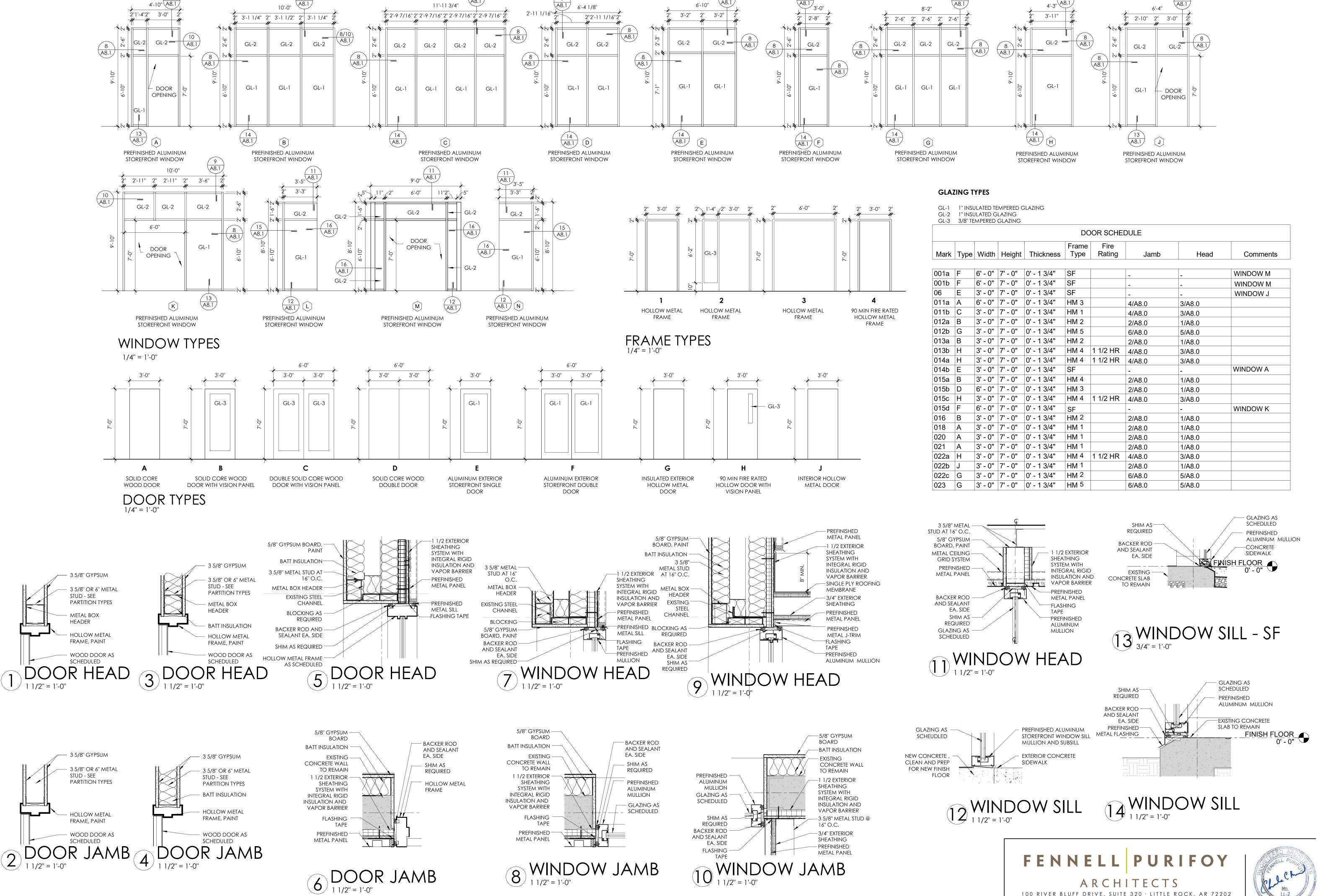






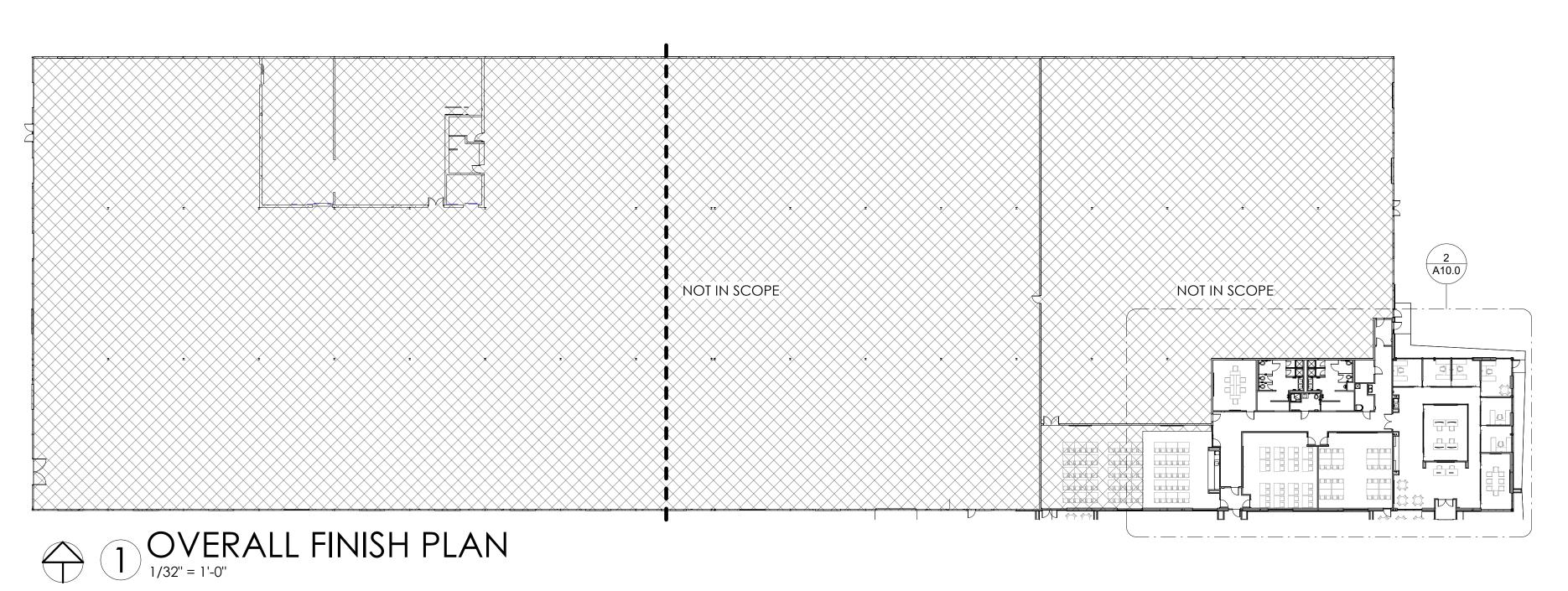




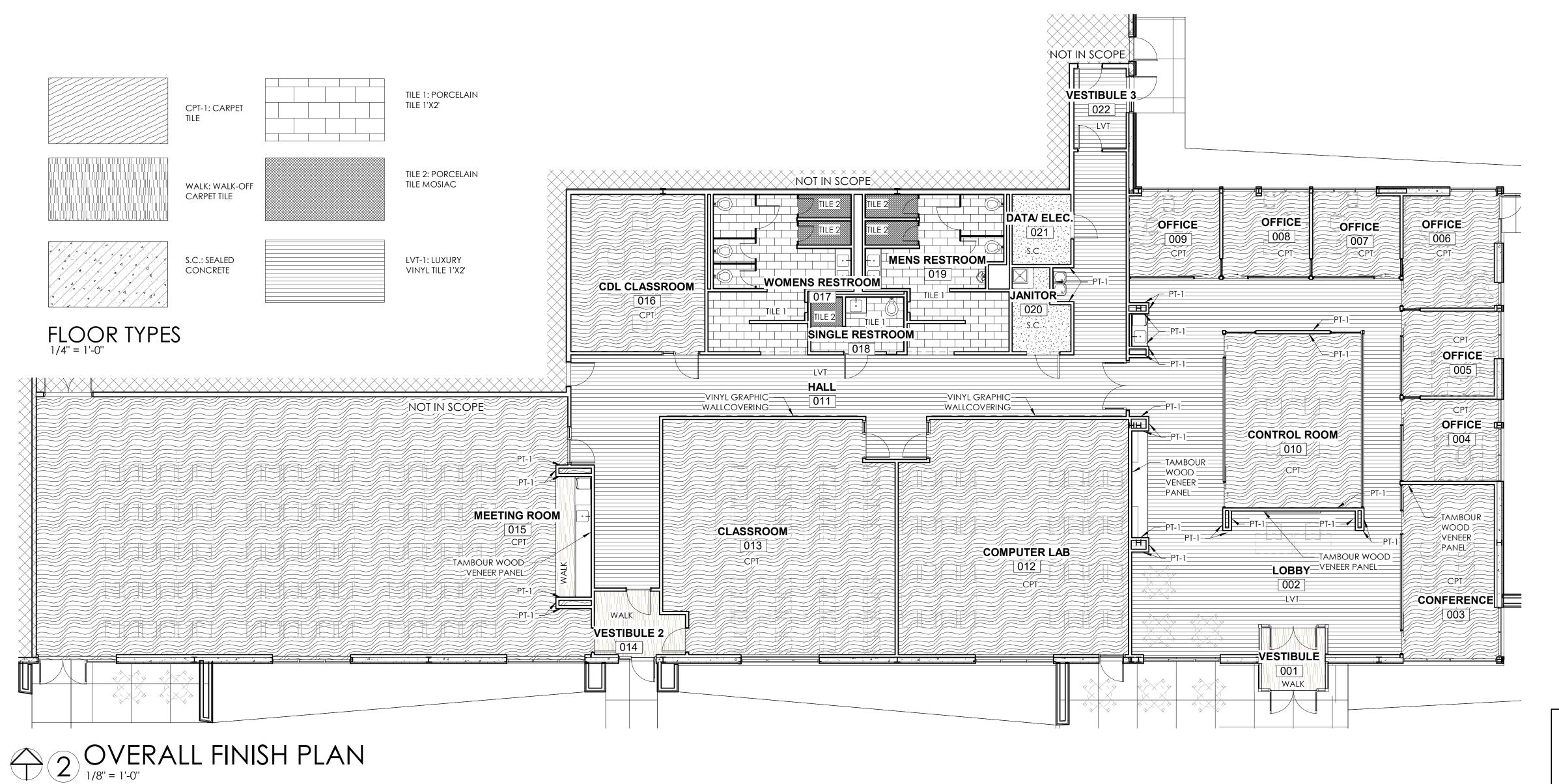


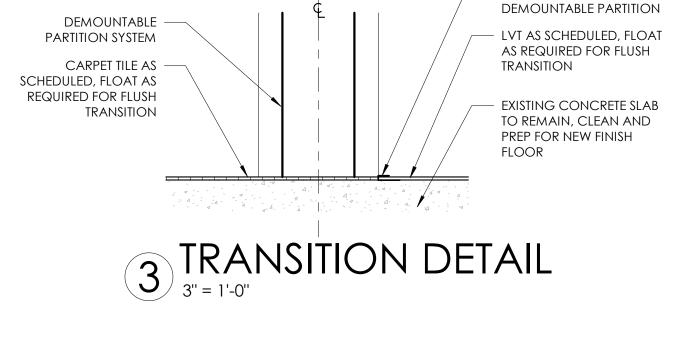
SATEWAY

E. Main Street, I **CB** 22

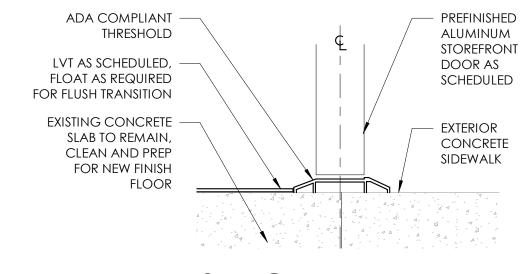




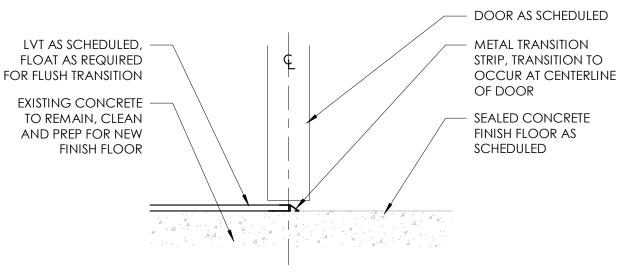




- METAL TRANSITION STRIP, ALIGN TO OUTSIDE FACE OF







# TRANSITION DETAIL 5 TRANSITION DETAIL

# FENNELL PURIFOY

DIAMETER

**EASTING** 

**EXISTING** 

**ELEVATION** 

CAD DRAWING

**EXISTING GRADE** 

FINISH GRADE

HORIZONTAL

INSIDE DIAMETER

FLOWLINE

FEET

GAUGE

INVERT

POUNDS

LENGTH

LINEAR FEET

MAXIMUM

**MANHOLE** 

MINIMUM NORTHING

NOT TO SCALE

ON CENTER EACH WAY

OUTSIDE DIAMETER

POLYVINYL CHLORIDE

REINFORCED CONCRETE PIPE

PROPERTY LINE

RIGHT-OF-WAY

STAINLESS STEEL

ON CENTER

**PAVEMENT** RADIUS

SCHEDULE

SOUARE

STATION

TYPICAL

VERTICAL

STANDARD

TOP OF CURB

TOP OF WALL

CONSTRUCTION ENTRANCE

CONCRETE WASHOUT

───── WIRE REINFORCED SILT FENCE

**GRATE INLET PROTECTION** 

**CURB INLET PROTECTION** 

LIMITS OF DISTURBANCE

FLOW ARROW

TEMPORARY ROCK CHECK DAM

FLARED END SECTION

FINISH FLOOR ELEVATION

GAS MONITORING PROBE

HIGH DENSITY POLYETHYLENE

CORRUGATED METAL PIPE

**ABBREVIATIONS** 

CL

CLR

FES

FFE

GΑ

HDPE

HORZ

OCEW

ROW

SCH

STA

STD

VERT

PROPOSED EROSION CONTROL LEGEND

#### 1. EXISTING SURVEY DATA WAS OBTAINED FROM A TOPOGRAPHIC & BOUNDARY SURVEY PERFORMED BY BLEW & ASSOCIATES, P.A. AND DATED 12/29/2022.

- 2. SURVEY DATA IS BASED UPON NAD 83, STATE STATE PLANE, ARKANSAS NORTH FEET COORDINATE SYSTEM.
- 3. ELEVATIONS ARE BASED UPON NATIONAL GEODETIC VERTICAL DATUM.
- 4. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY, STATE, AND FEDERAL REGULATIONS AND CODES AS WELL AS OSHA STANDARDS. SITE CONTRACTOR SHALL MEET OR EXCEED ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL MEASURES
- 5. THE APPROXIMATE LOCATION OF KNOWN UTILITIES & SUBSURFACE STRUCTURES AS SHOWN HEREON ARE BASED ON ABOVE-GROUND VISIBLE STRUCTURES & RECORD DRAWINGS PROVIDED. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF THESE & ALL OTHER SUBSURFACE AND/OR LATENT FACILITIES PRIOR TO BEGINNING WORK. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE & THE COST OF SUCH REPAIRS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
- ALL WORK PERFORMED WITHIN THE RIGHT-OF-WAY SHALL BE COORDINATED WITH THE CITY OF BATESVILLE'S ENGINEERING DEPARTMENT AND TRAFFIC DEPARTMENT.
- ALL STREETS, DRIVES, WALKS, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISION FOR PAYMENT IS MADE IN THE PROPOSAL.
- 8. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT 1-800-482-8998 48 HOURS PRIOR TO DIGGING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
- 9. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN IMPLEMENTED, AND THE SWPPP, EROSION CONTROL PLAN, AND SIGNED AUTOMATIC NOTICE OF COVERAGE IS POSTED ON
- 10. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD TESTING AS DESCRIBED IN THE SPECIFICATIONS (INCLUDING BUT NOT LIMITED TO COMPACTION DENSITY TESTING, ETC.), AND SHALL PROVIDE RESULTS TO ENGINEER, AND MAINTAIN RECORDS AND RESULTS OF ALL TESTS PERFORMED DURING CONSTRUCTION. TESTING BY THE CONTRACTOR SHALL BE INCLUDED IN THE BID.
- 11. EXISTING FACILITIES AND FEATURES ARE SHOWN LIGHT-LINED AND/OR SCREENED. NEW FACILITIES AND FEATURES ARE SHOWN SOLID AND HEAVY-LINED.
- 12. SLOPES AND GRADES SHOWN ARE IN UNITS OF FT/FT UNLESS OTHERWISE NOTED.
- 13. ALL PAVEMENT AND CURB MEASUREMENTS ARE TAKEN FROM FACE OF CURB OR EDGE OF PAVEMENT
- 14. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

#### **DEMOLITION NOTES**

- DEMOLITION SHALL NOT BEGIN UNTIL THE APPROPRIATE EROSION CONTROL MEASURES AND REQUIRED TREE PRESERVATION FENCING HAVE BEEN INSTALLED.
- 2. CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE, AND LOCAL CODES FOR DEMOLITION AND DISPOSAL OF ALL MATERIALS.
- 3. CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTY IS NOT DAMAGED.
- 4. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES REGARDING RELOCATION, REMOVAL, AND/OR DISCONNECTION.
- CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
- CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY UNDERGROUND TANKS ARE FOUND ON SITE.
- 7. ALL TREES (EXCEPT THOSE SHOWN TO BE PROTECTED) AND VEGETATION WITHIN THE CLEARING AND GRADING LIMITS SHALL BE CLEARED AND GRUBBED INCLUDING TREE ROOT SYSTEMS. ALL DEBRIS IS TO BE REMOVED FROM THE SITE.
- 8. STRIP TOPSOIL AND STOCKPILE IN A DESIGNATED AREA FOR FUTURE USE. COORDINATE DESIGNATED AREA WITH AE PRIOR TO STRIPPING TOPSOIL.
- LARGE ROCKS AND BOULDERS SHALL BE REMOVED AND DISPOSED FROM THE SITE.

### STREET CONSTRUCTION (GRADING) AND EARTHWORK NOTES:

- 1. THE ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO PLACEMENT OF ANY FILL MATERIAL, INSTALLATION OF STORM DRAINAGE PIPE, DRAINAGE STRUCTURES, CURB AND GUTTER, OR PLACEMENT OF CRUSHED STONE OR ASPHALT.
- 2. CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT PERFORM EARTHWORK IN ACCORDANCE WITH THE RECOMMENDATIONS IN SAID REPORT.
- 3. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER TO INSPECT THE SUBGRADE PRIOR TO PLACING FILL.
- 4. FILL AND BACKFILL SHALL BE PLACED IN HORIZONTAL, NOMINAL 6- TO 8-IN THICK LOOSE LIFTS. EACH LIFT SHALL BE TESTED AND APPROVED PRIOR TO PLACING SUBSEQUENT LIFTS.
- 5. THE SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND SECTION 212 OF THE ARKASAS STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. PRIOR TO PLACING THE CRUSHED STONE BASE COURSE THE SUBGRADE SHALL BE PROOF ROLLED, AND MUST BE VERIFIED TO CONFORM TO THE GRADES AND SLOPES SHOWN ON THE DRAWINGS.
- ALL MUD SOIL, AND LOOSE GRAVEL SHALL BE REMOVED FROM THE CRUSHED STONE BASE AND CONCRETE CURB PRIOR TO PLACEMENT OF ASPHALT.
- 7. THE CONTRACTOR SHALL PROVIDE APPROPRIATE ADVANCED WARNING DEVICES, BARRICADES, BARRELS, AND OTHER MEASURES AS NEEDED TO PROPERLY CONTROL AND ADVISE TRAFFIC OF CONSTRUCTION EQUIPMENT.
- 8. THE CONTRACTOR SHALL REPAIR ANY DAMAGE THE CONSTRUCTION ACTIVITY OR HAULING OF MATERIAL MAY HAVE ON THE EXISTING STREETS AND/OR ACCESS ROADS.
- 9. COORDINATE WORK WITH OWNER TO MINIMIZE THE EFFECTS OF CONSTRUCTION ON DAILY OPERATIONS OF THE FACILITY.
- 10. COORDINATE ALL DEMOLITION WORK WITH OWNER. VERIFY OWNER DOES NOT WISH TO RETAIN MATERIAL BEFORE IT IS
- 11. ALL CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE DESIGNATED AREAS SHOWN ON THE PLANS. ALL AREAS OUTSIDE OF
- 13. GRADING SHALL BE LIMITED TO THE EXTENT OF THE PROPOSED CONTOURS AND SPOT GRADES SHOWN ON THE PLANS.
- 14. ALL CUT AND/OR FILL SLOPES SHALL BE A MAXIMUM 3H:1V SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
- 15. ALL STORM DRAINAGE PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO PROVIDE A WATERTIGHT CONNECTION AT THE STRUCTURE.
- 16. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES INSTALLED IN PAVED AND TRAFFIC AREAS SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND INSTALLED IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS FOR H20 LOADING.
- 17. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS.
- 18. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL OR STRUCTURAL ENGINEERING PLANS AND SPECIFICATIONS.

#### **GENERAL EROSION CONTROL NOTES:**

- 1. SITE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MONITORING, AND MAINTAINING ALL EROSION & SEDIMENT CONTROL
- 2. SITE CONTRACTOR IS RESPONSIBLE TO KEEP AND UPDATE ALL STORM EVENT LOG BOOKS.
- 3. THE CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PLAN TO PREVENT MUD, SEDIMENT, AND CONSTRUCTION MATERIALS FROM BEING WASHED OR TRACKED OFF SITE ONTO ADJACENT PROPERTY. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE APPROVED ADEQ CONSTRUCTION STORMWATER PERMIT AND MAINTAIN THE STORMWATER POLLUTION PREVENTION PLAN AT ALL TIMES.
- 4. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (SITE MAP), THE EROSION CONTROL DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE TEMPORARY EROSION CONTROL SECTION OF THE SPECIFICATIONS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- 5. EROSION CONTROL DEVICES SHALL BE INSTALLED AS THE PROJECT PROGRESSES AND AREAS ARE DISTURBED.
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- 7. BEST MANAGEMENT PRACTICES AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, AND OR LOCAL MANUAL OF PRACTICE, AND THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECT BY THE PERMITTING AGENCY OR OWNER.
- 8. THIS EROSION CONTROL PLAN MAY BE REVISED BY ADDING OR DELETING EROSION CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
- 9. THE LOCATIONS OF THESE EROSION CONTROL DEVICES MAY BE CHANGED IF SITE CONDITIONS WARRANT TO PREVENT EROSION.
- 10. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE AND EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- 11. ALL INLETS ON AND ADJACENT TO THE SITE SHALL BE PROTECTED FROM SEDIMENT.
- 12. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- 13. PERFORM EQUIPMENT AND VEHICLE MAINTENANCE ONLY IN DESIGNATED AREAS. USE DRIP PANS UNDER EQUIPMENT.
- 14. INSPECT ALL EROSION CONTROL DEVICES WEEKLY AND FLOWING RAINFALL EVENTS OF 0.5 INCHES THROUGHOUT THE DURATION OF THIS PROJECT AND UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- 15. ALL DISTURBED AREAS LEFT IDLE FOR A PERIOD OF 14 DAYS OR LONGER ARE TO RECEIVE TEMPORARY VEGETATION AND MULCHED.
- 16. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND/OR OTHER PETROLEUM-BASED, OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATION IS PROHIBITED.
- 17. SOLID WASTE (INCLUDING TRASH AND DEBRIS) MUST BE DISPOSED OF PROPERLY, AND HAZARDOUS MATERIALS (INCLUDING OIL, GASOLINE, AND PAINT) MUST BE PROPERLY STORED (WHICH INCLUDES SECONDARY CONTAINMENT). PROPERLY MANAGE PORTABLE SANITARY FACILITIES.
- 18. USE DRY CLEANUP METHODS TO COLLECT LITTER AND ABSORB ANY LIQUID WASTES PRIOR TO ANY PRESSURE WASHING. THESE INCLUDE USING ABSORBENTS (RAGS, SAND, ETC.), SWEEPING, AND SCRAPPING OFF DRIED DEBRIS.
- 19. RUBBISH, TRASH, GARBAGE, OR LITTER SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM BEING BLOWN OR WASHED OFF-SITE.
- 20. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS
- 21. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- 22. ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH ADEQ CONSTRUCTION STORMWATER PERMIT.
- 23. ALL MATERIALS MUST BE STORED OUT OF THE WAY OF VEHICULAR TRAFFIC.
- 24. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- 25. EROSION CONTROL FACILITIES REQUIRED BY THESE PLANS AND/OR THE FACILITY PERMIT ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL FACILITIES AS NECESSARY.
- 26. REMOVE EROSION CONTROL DEVICES AFTER PERMANENT VEGETATION IS ESTABLISHED.

### ADDITIONAL EROSION CONTROL NOTES

### **INITIAL SITE PREPARATION:**

- 1. INSTALL STABILIZED CONSTRUCTION ENTRANCES/EXITS.
- SITE CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL A SITE MAP SHOWING THE PROPOSED LOCATIONS OF THE FOLLOWING: TRAILER, PARKING, LAY DOWN, PORTAJ-POTTY, WHEEL WASH, CONCRETE WASH-OUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROGRESS
- 3. CONSTRUCT THE SILT FENCES ON THE SITE AS INDICATED ON THE PLANS.
- 4. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS
- CONTACT THE ENGINEER TO PERFORM INSPECTION OF THE BMPS. SITE CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING SUB-CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
- CLEAR AND GRUB THE SITE WITHIN THE LIMITS OF WORK SHOWN ON THE PLANS.
- CONTRACTOR SHALL BEGIN GRADING THE SITE AND BEGIN CONSTRUCTION.

### **DURING CONSTRUCTION:**

- 1. TEMPORARILY SEED DISTURBED AREAS.
- INSTALL INLET PROTECTION AROUND ALL NEWLY CONSTRUCTED STORM SEWER STRUCTURES.
- 3. AFTER PAVING, INSTALL INLET PROTECTION DEVICES.
- 4. AT THE COMPLETION OF GRADING INSTALL PERMANENT SEEDING AND PLANTINGS.
- ONCE SITE IS STABILIZED, THE CONTRACTOR CAN REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
- 6. ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE CITY OR OWNER, THE CONTRACTOR SHALL CONTROL DUST BY EXPOSING THE SOIL SURFACE TO MOISTURE PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.

## **UTILITY NOTES:**

- EXISTING STRUCTURES AND UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND FOR INFORMATION PURPOSES ONLY. ALL STRUCTURES AND UTILITIES MAY NOT BE SHOWN. ALL EXISTING UTILITY LOCATIONS MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION (WHETHER SHOWN OR NOT SHOWN). UTILITY SERVICE MUST BE MAINTAINED DURING AND AFTER CONSTRUCTION
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- ALL WATER LINE AND SANITARY SEWER WORK MUST BE PERFORMED IN ACCORDANCE WITH (LOCAL JURISDICTION) STANDARD SPECIFICATIONS AND DETAILS, AND SHALL BE COORDINATED WITH LOCAL JURISDICTION
- 4. THE CONTRACTOR SHALL COORDINATE THE CONNECTIONS TO THE EXISTING WATER LINES WITH THE LOCAL JURISDICTION.
- PROVIDE THRUST BLOCKING FOR THE PROPOSED WATERLINES AS SHOWN ON THE DETAIL SHEETS AND AS REQUIRED BY THE LOCAL JURISDICTION.
- ALL WATER AND SEWER LINES AND SERVICES CROSSING ROADWAYS ARE TO BE BACKFILLED WITH COMPACTED CLASS 7 AGGREGATE BASE COURSE.
- ALL WATER MAINS SHALL BE A MINIMUM OF 3-FT BELOW FINISHED GRADE AND A MINIMUM OF 1-FT BELOW STORM DRAINS.
- ALL WATER MAINS ARE TO CROSS OVER SEWER MAINS WITH A MINIMUM OF 18-IN OF VERTICAL SEPARATION AND WATER AND SEWER MAINS SHALL HAVE A MINIMUM OF 10-FT HORIZONTAL SEPARATION.
- ALL SANITARY SEWER WORK SHALL BE PERFORMED. AND INSTALLED IN ACCORDANCE WITH THE LOCAL JURISDICTIONS. STANDARD SPECIFICATIONS AND DETAILS AND SHALL BE COORDINATED WITH THE LOCAL JURISDICTION.

#### EXISTING LEGEND

PROPOSED DEMOLITION LEGEND

TREE TO BE REMOVED

REMOVAL AREA

PAVEMENT & STRUCTURE

MILL & OVERLAY AREA

SAWCUT PAVEMENT LINE

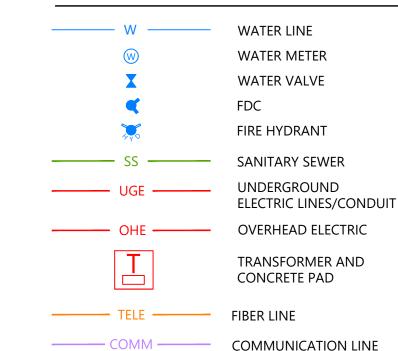
TREE PRESERVATION

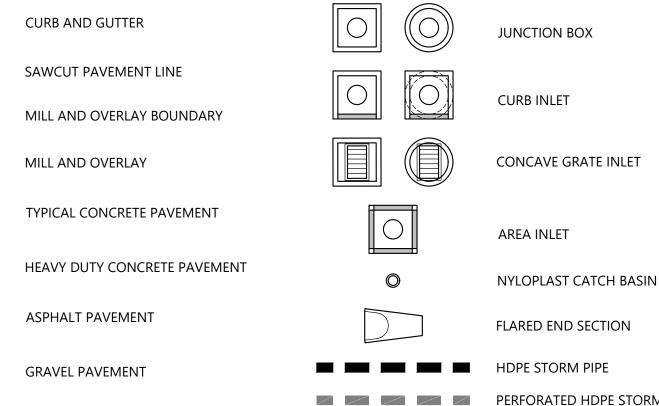
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•	FOUND MONUMENT (AS NOTED)	$\oplus$	DOWNSPOUT	OVH	OVERHANG
$\Leftrightarrow$	COMPUTED POINT	MP	METAL PIPE	N/F	NOW OR FORMERLY
igoplus	TEMPORARY BENCHMARK	PVC	POLYVINYL CHLORIDE		BOUNDARY LINE
<b>,</b>	FIRE HYDRANT	CMP	CORRUGATED METAL PIPE	R/W — — —	
*	LIGHT	RCP	REINFORCED CONCRETE PIPE	•	RIGHT-OF-WAY LINE
•	GUY ANCHOR	EG	EDGE OF GRAVEL	C/L	CENTERLINE
AC	AIR CONDITIONER	EC	EDGE OF CONCRETE		FENCE LINE
8	POWER POLE	TC	TOP OF CONCRETE	OHE	OVERHEAD POWER LINE
<b></b>	FIRE DEPARTMENT CONNECTION	EA	EDGE OF ASPHALT	FOP	UNDERGROUND FIBER OPTIC LINE
Ĵ	ELECTRIC BOX	CR	CROWN OF ROAD	—— ss ——	UNDERGROUND SANITARY SEWER LIN
3	SANITARY SEWER MANHOLE	TA	TOP OF ASPHALT	GAS	UNDERGROUND GAS LINE
		TB	TOP OF BANK	WL	UNDERGROUND WATER LINE
•	SIGN	TG	TOP OF GRAVEL		CULVERT
W	WATER VAULT	BB	BOTTOM OF BANK		CONTOUR INDEX LINE
	DRAIN GRATE	NG	NATURAL GROUND		CONTOUR INTERIOR LINE
FO	FIBER OPTIC MARKER	SW	SIDEWALK		DRIP LINE

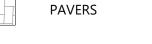
## PROPOSED UTILITY LEGEND

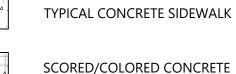






PROPOSED SITE PLAN LEGEND



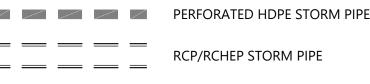


# GAS LINE GAS METER



**CONCAVE GRATE INLET** 

FLARED END SECTION



PROPOSED 1 FT. CONTOUR ELEVATION PROPOSED 5 FT. CONTOUR ELEVATION SPOT ELEVATIONS

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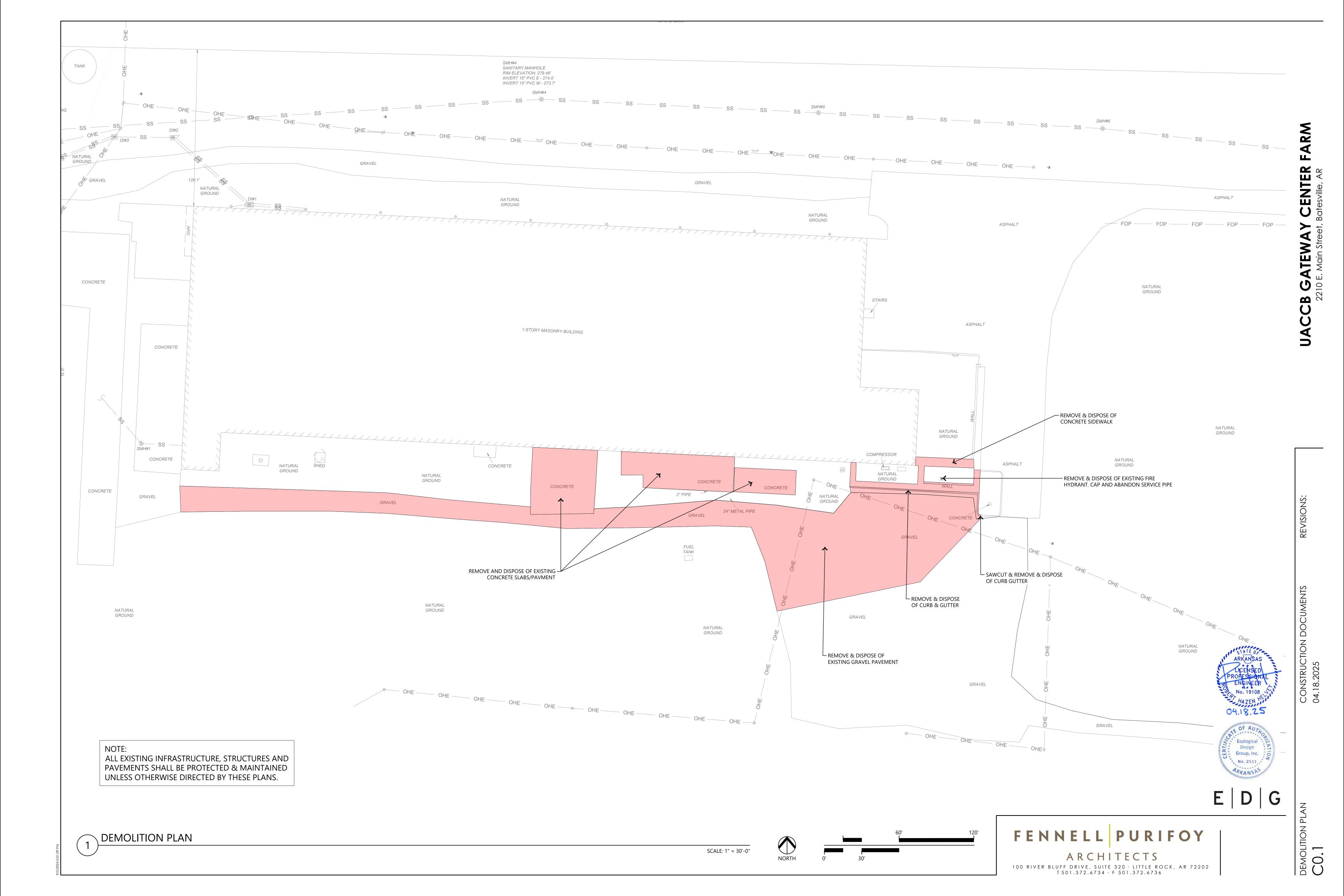
**GENERAL NOTES & LEGENDS** 

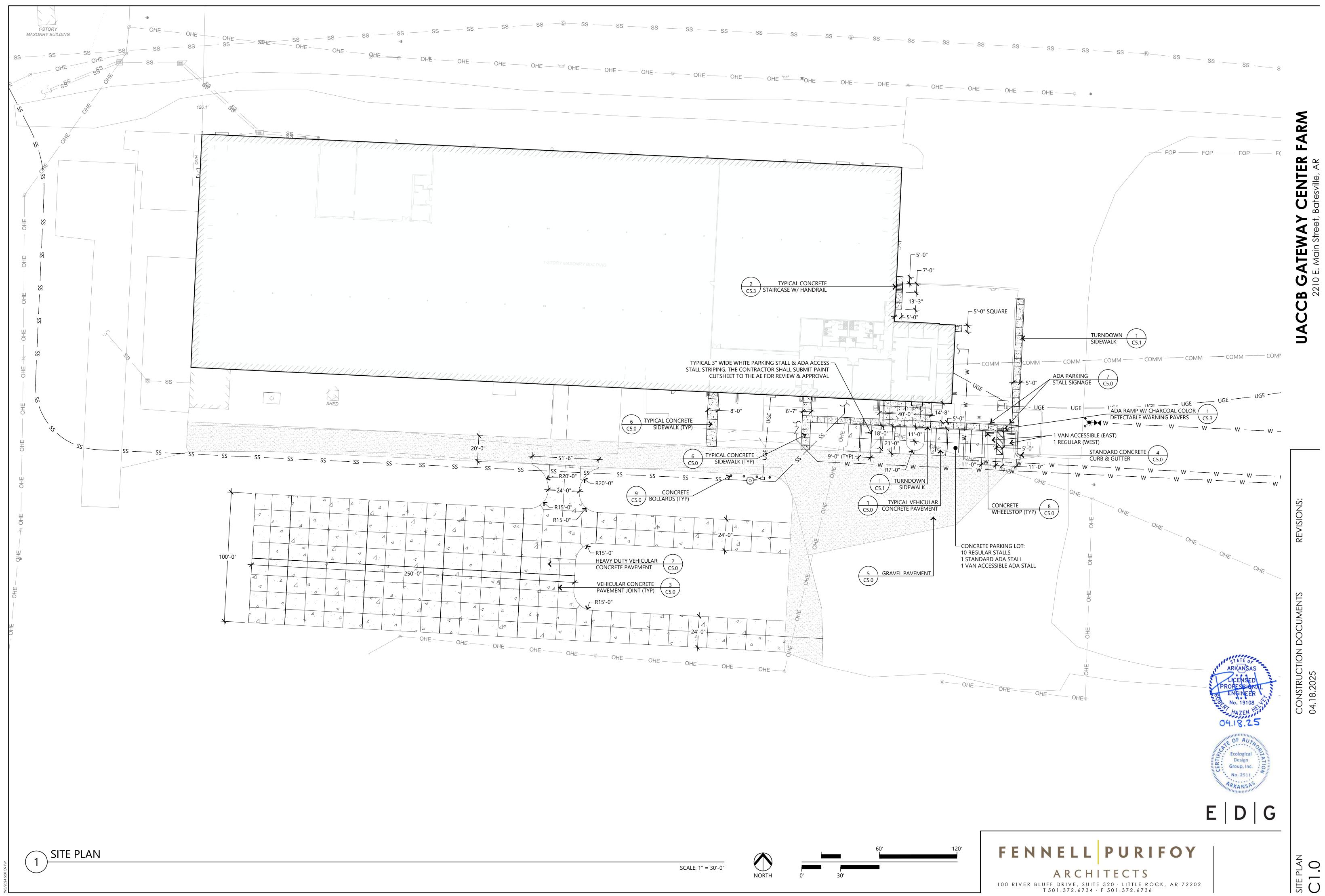
THOSE LIMITS SHALL BE PROTECTED AND MAINTAINED.

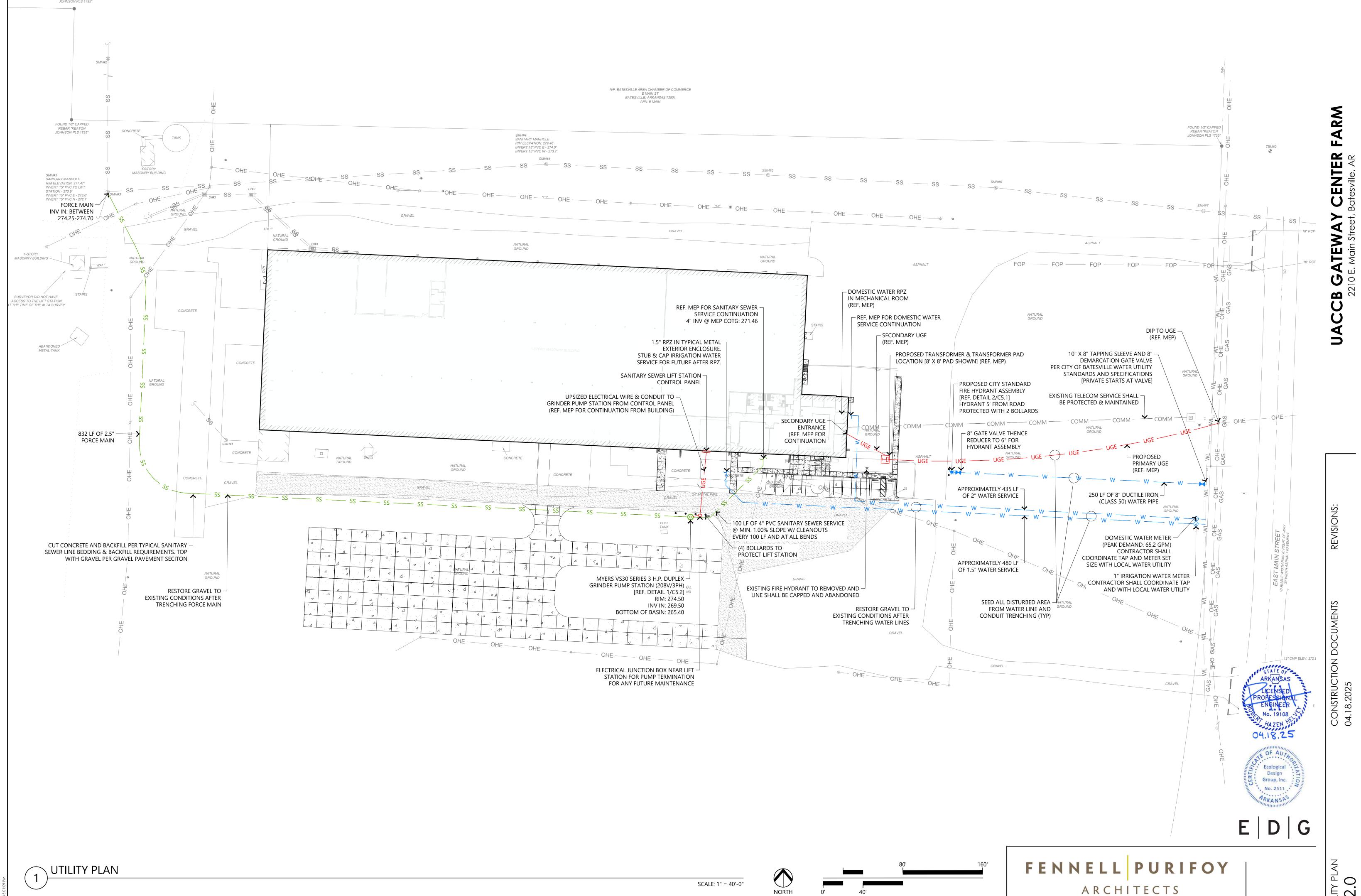
REMOVED AND DISPOSED.

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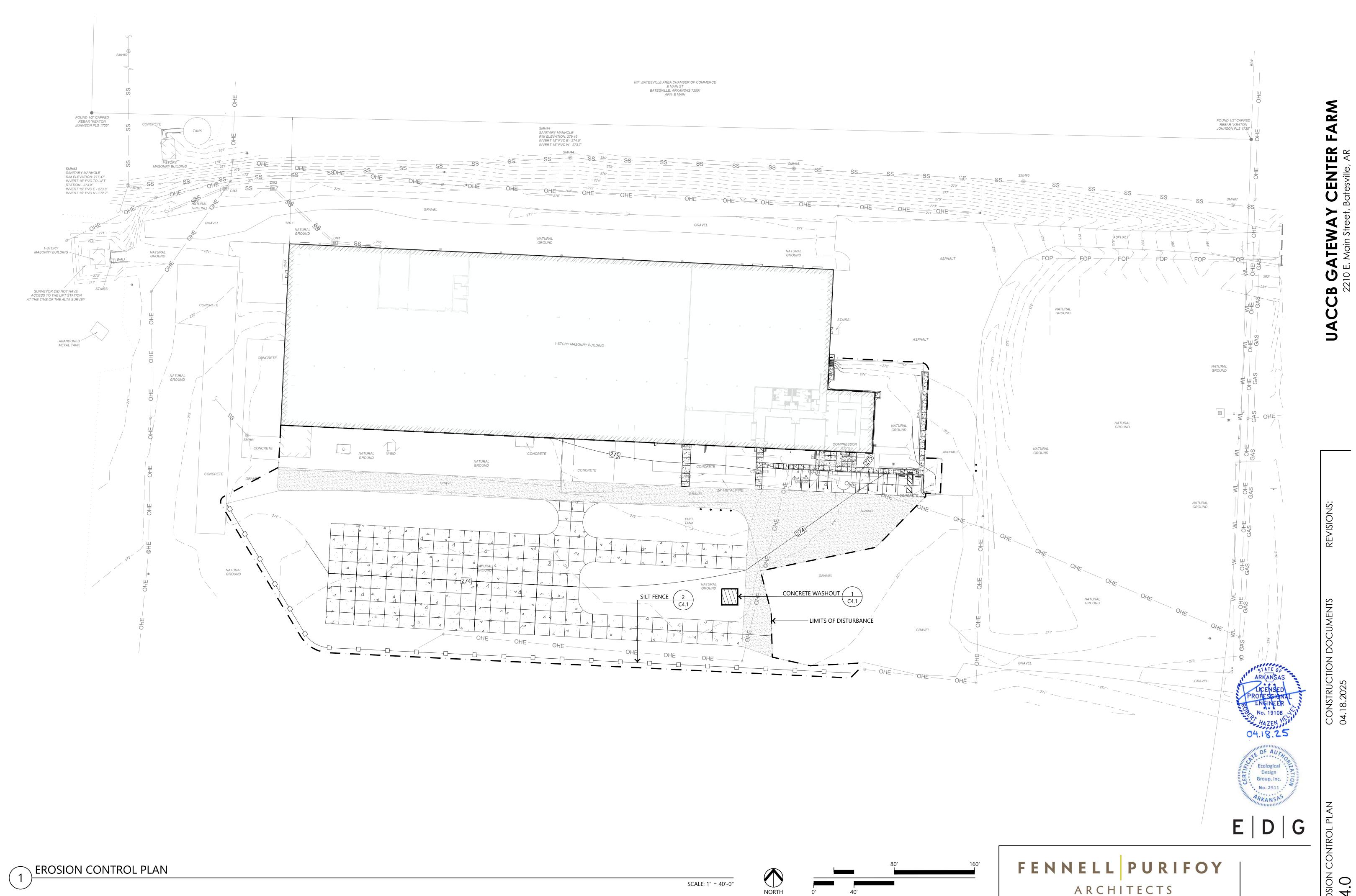






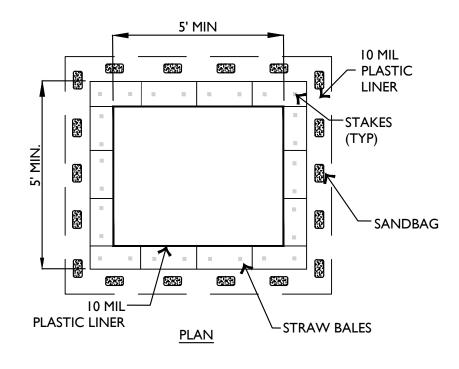


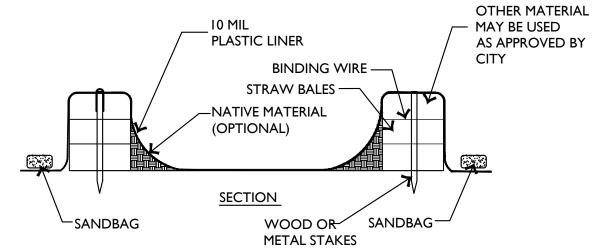




Design

Group, Inc.



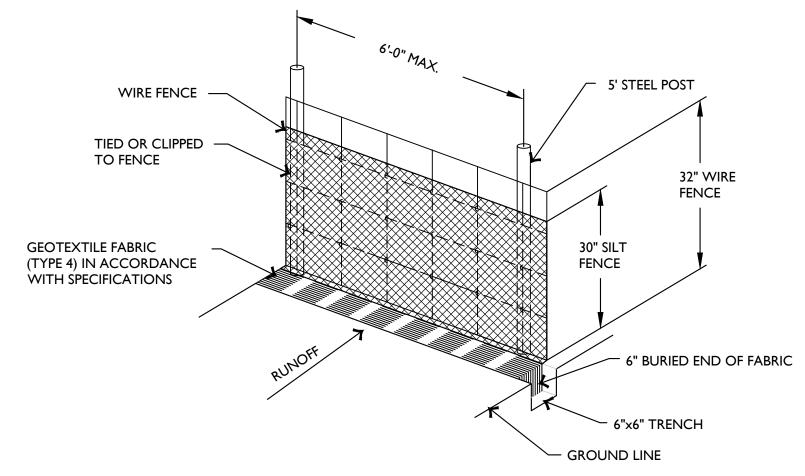


#### **WASHOUT NOTES**

- . NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
- 2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
- 3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
- 4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- 5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
- 6. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
- 7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.

SCALE: NTS

SCALE: N.T.S.

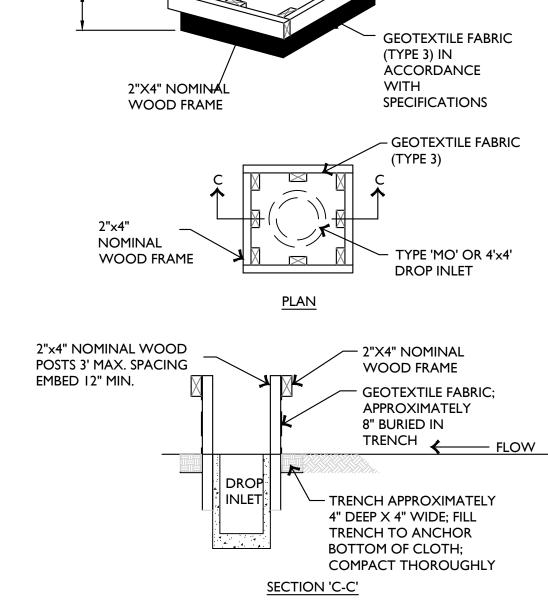


#### SILT FENCE NOTES:

- I. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE
- ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT. 2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. HERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
- 3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
- 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
- REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- 7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

# WIRE REINFORCED SILT FENCE

SCALE: N.T.S.



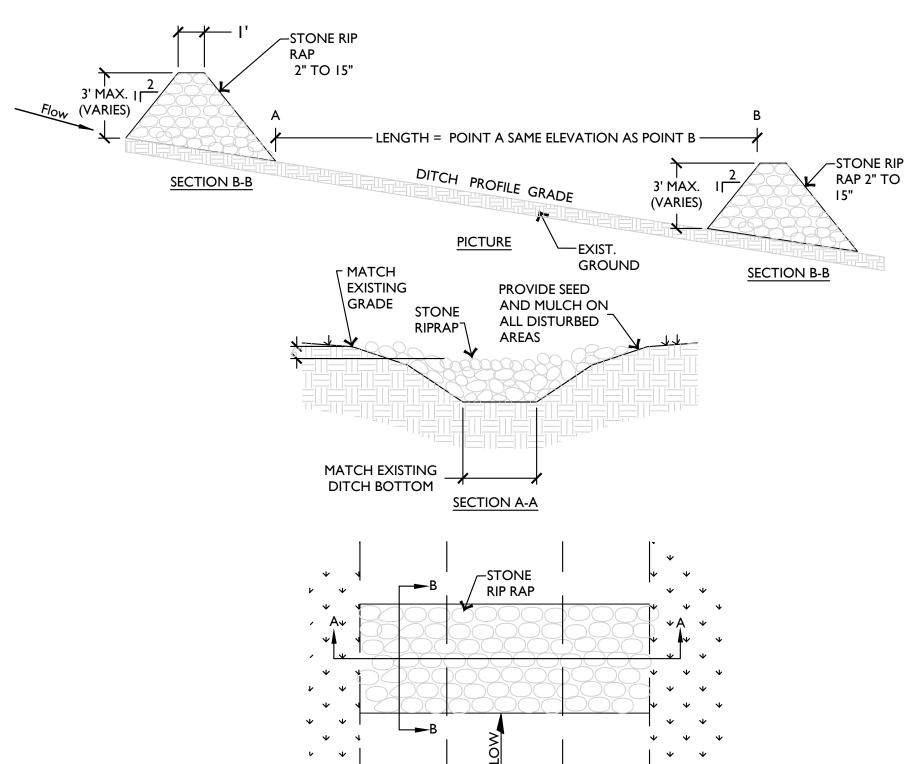
DROP INLET PROTECTION

SCALE: N.T.S.

- 2"X4" NOMINAL WOOD POSTS

3' MAX. SPACING EMBED 12" MIN.

CONCRETE WASHOUT



### **INSTALLATION:**

I. EXCAVATE KEY-WAY (IF REQUIRED)

ROCK CHECK DAM

- A GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK IS TO BE PLACED (IF REQUIRED)
- 3. ROCK DIAMETERS SHOULD BE 2" TO 15" IN DIAMETER 4. ROCK DITCH CHECKS SHOULD NOT EXCEED 3 FEET
- . STONES SHOULD BE PLACED UP THE CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK
- 6. INSTALLATION SHALL BE PLACED EITHER BY HAND OR MECHANICALLY AND NOT JUST DUMPED TO ACHIEVE COMPLETE COVERAGE OF THE DITCH AND ENSURE THE CENTER OF THE DAMN IS LOWER THAN THE EDGES
- 7. MAXIMUM SPACING BETWEEN MULTIPLE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS THE SAME AS THE TOP
- OF THE DOWNSTREAM CHECK

### **INSPECTION:**

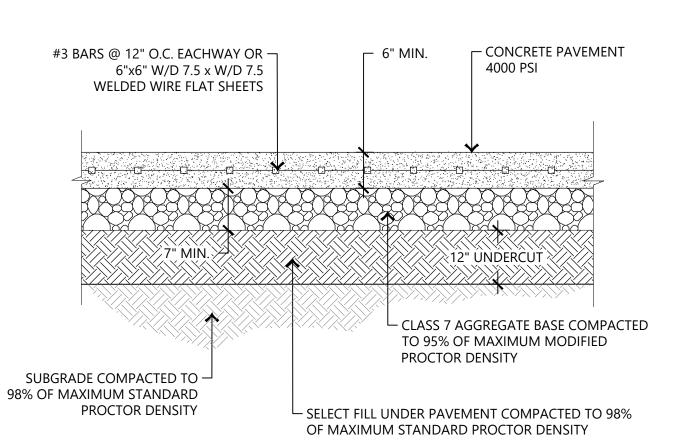
- INSPECT ROCK DITCH CHECKS EVERY (7) CALENDAR DAYS AND WITH-IN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES
- THE AREA BENEATH THE ROCK DITCH CHECKS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THE CHECK DAM REMOVAL

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1/2" PRECIPITATION. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 1/2 THE ORIGINAL CHECK HEIGHT

• IN THE CASE OF GRASS-LINED DITCHES OR SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED

SUFFICIENTLY TO PROTECT THE DITCH OR SWALE, IF THE SLOPE IS 4% OR LESS.



## 1. SUBGRADE SHALL BE INSPECTED BY GEOTECHNICAL

- ENGINEER PRIOR TO PLACING FILL, SUBBASE OR BASE. 2. BASE SHALL BE TESTED BY GEOTECHINICAL ENGINEER
- PRIOR TO PLACING PAVEMENT. 3. SEE SEPARATE DETAIL FOR JOINT DETAILS.

# TYPICAL VEHICULAR CONCRETE PAVEMENT

SCALE: N.T.S.

CONCRETE PAVEMENT #3 BARS @ 12" O.C. EACHWAY OR -4000 PSI 6"x6" W/D 7.5 x W/D 7.5 WELDED WIRE FLAT SHEETS 7" MIN. 2" UNDERCUT CLASS 7 AGGREGATE BASE COMPACTED TO 95% OF MAXIMUM MODIFIED PROCTOR DENSITY SUBGRADE COMPACTED TO 98% -OF MAXIMUM STANDARD PROCTOR DENSITY └─ SELECT FILL UNDER PAVEMENT COMPACTED TO 98% OF MAXIMUM STANDARD PROCTOR DENSITY

1. SUBGRADE SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING FILL, SUBBASE OR BASE.

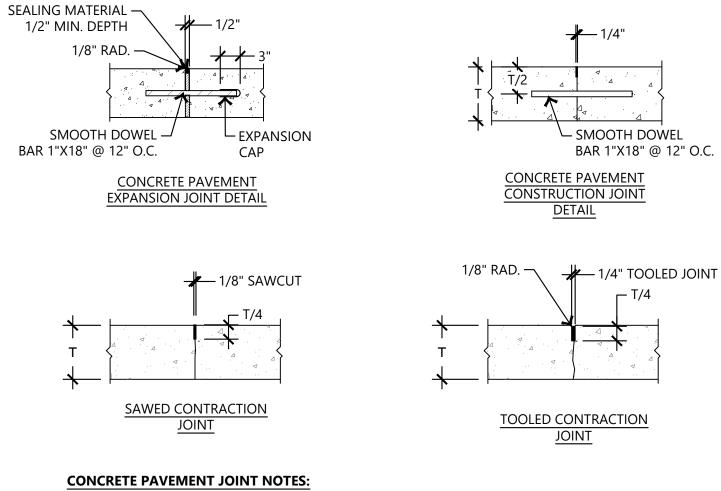
2. BASE SHALL BE TESTED BY GEOTECHINICAL ENGINEER PRIOR TO PLACING PAVEMENT. 3. SEE SEPARATE DETAIL FOR JOINT DETAILS.

OF MAXIMUM STANDARD PROCTOR DENSITY

SCALE: N.T.S.

# HEAVY DUTY VEHICULAR CONCRETE PAVEMENT

SCALE: N.T.S.



SIDEWALKS WIDER THAN 10'-0". SPACING OF CENTERLINE CONTRACTION JOINTS

SHALL NOT EXCEED 10'-0" OR AS SHOWN ON PLAN.

PROVIDE TRANSVERSE CONTRACTION JOINTS AT INTERVALS NOT EXCEEDING 15'-0" ON CENTER AND EACH WAY. REF. PLANS

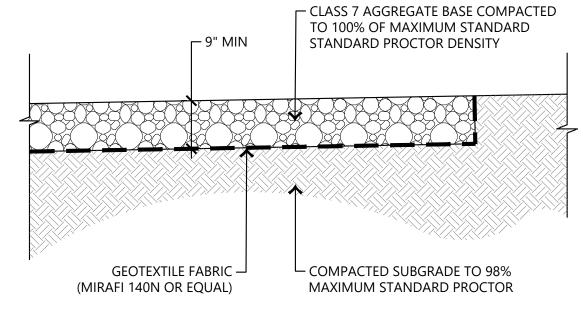
2. PROVIDE EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 60'-0" ON CENTER AND EACH WAY. REF. PLANS

VEHICULAR CONCRETE PAVEMENT JOINT DETAILS SCALE: N.T.S. **GUTTER NOTE:** GUTTER SHALL BE SLOPED TO MATCH CROSS SLOPE OF THE PAVEMENT WHICH COULD BE SLOPED TOWARDS CURB OR AWAY (REF. PLANS) SLOPE 3/4" PER FOOT MIN. 1'-MIN. 6" COMPACTED CLASS 7 BASE PER — ADJACENT PAVEMENT DETAIL

STANDARD CONCRETE CURB & GUTTER

(REF. SEPARATE DETAIL)

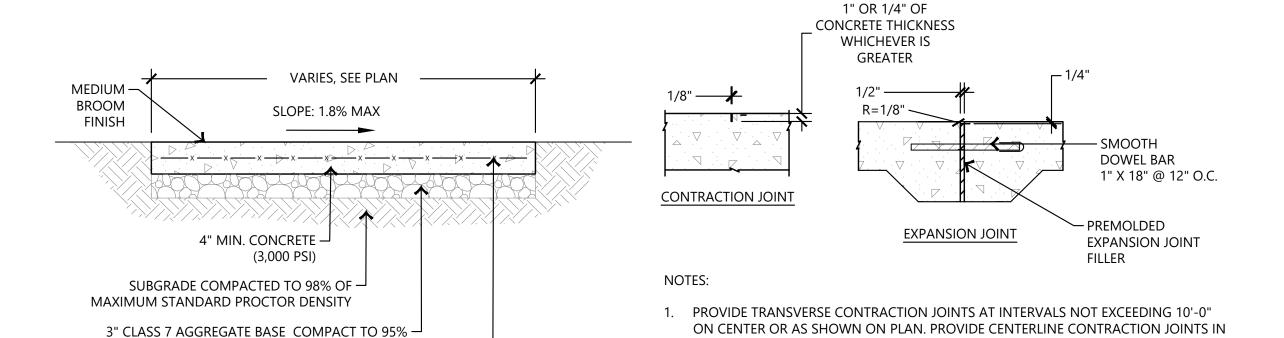
SCALE: N.T.S.



1. SUBGRADE SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING BACKFILL, BASE AND PAVEMENT.

2. SUBGRADE AND BASE MATERIAL SHALL BE TESTED PER REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.

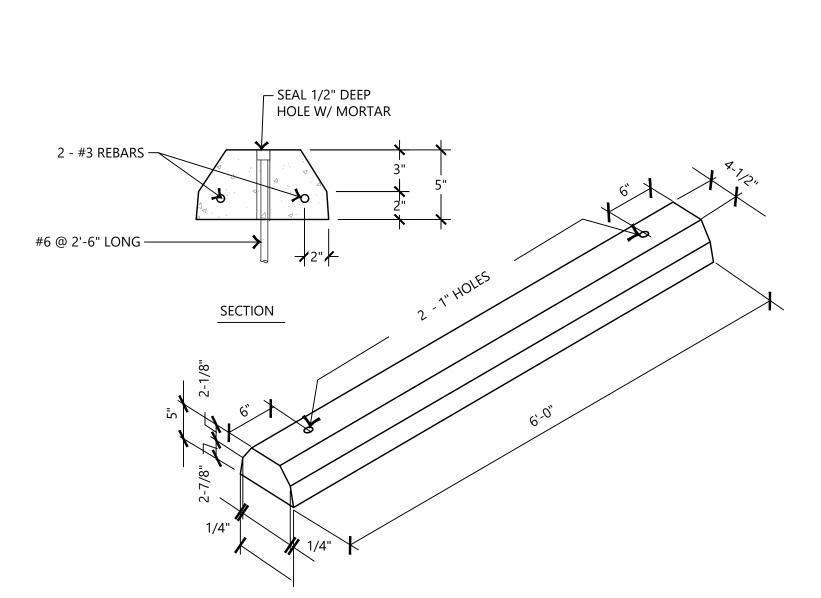




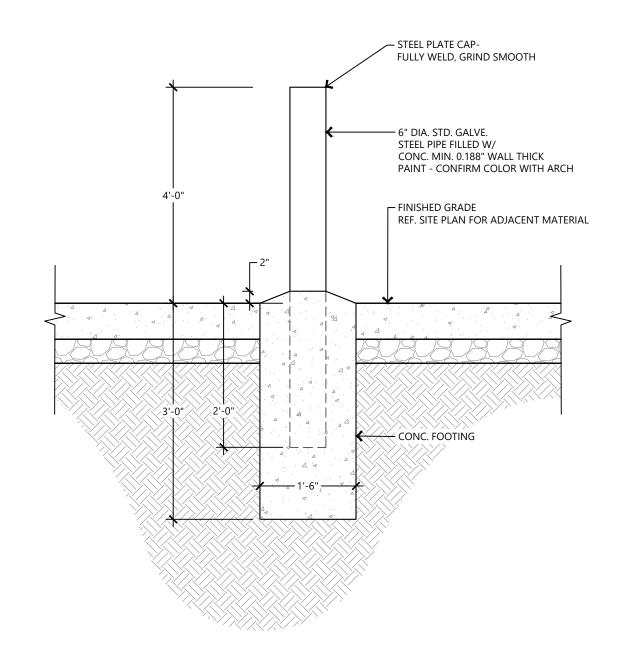
6"x6" W2.9xW2.9 WELDED WIRE FLAT SHEETS -2. PROVIDE EXPANSION JOINTS AT INTERVALS NOT EXCEEDING 40'-0" ON CENTER OR OR #3 BARS @ 18" O.C. EACH WAY, CENTERED NEXT TO STRUCTURES OR DRIVES. 3. REF. PLANS FOR JOINT LAYOUT.

TYPICAL CONCRETE SIDEWALK

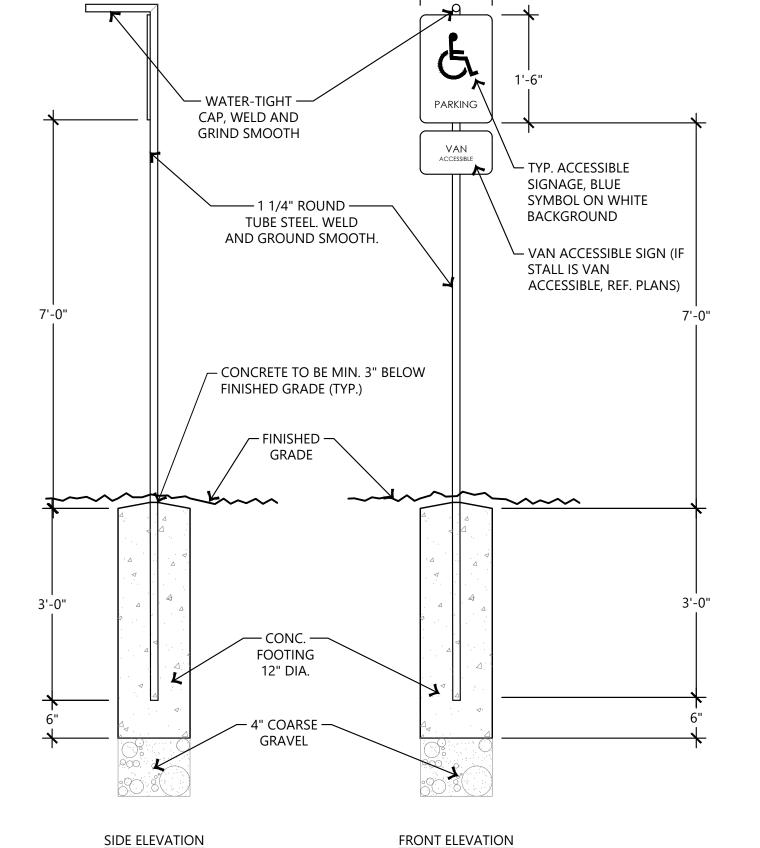
SCALE: N.T.S.



CONCRETE WHEELSTOP



CONCRETE INFILLED STEEL TUBE BOLLARD SCALE: N.T.S.



1. FIELD LOCATION TO BE APPROVED PRIOR TO INSTALLATION.

3. BOTTOM OF LOWEST SIGN SHALL BE 7'-0" FROM FINISH GRADE

CENTER POST ON PARKING STALL.

ADA PARKING STALL SIGNAGE

SCALE: N.T.S.

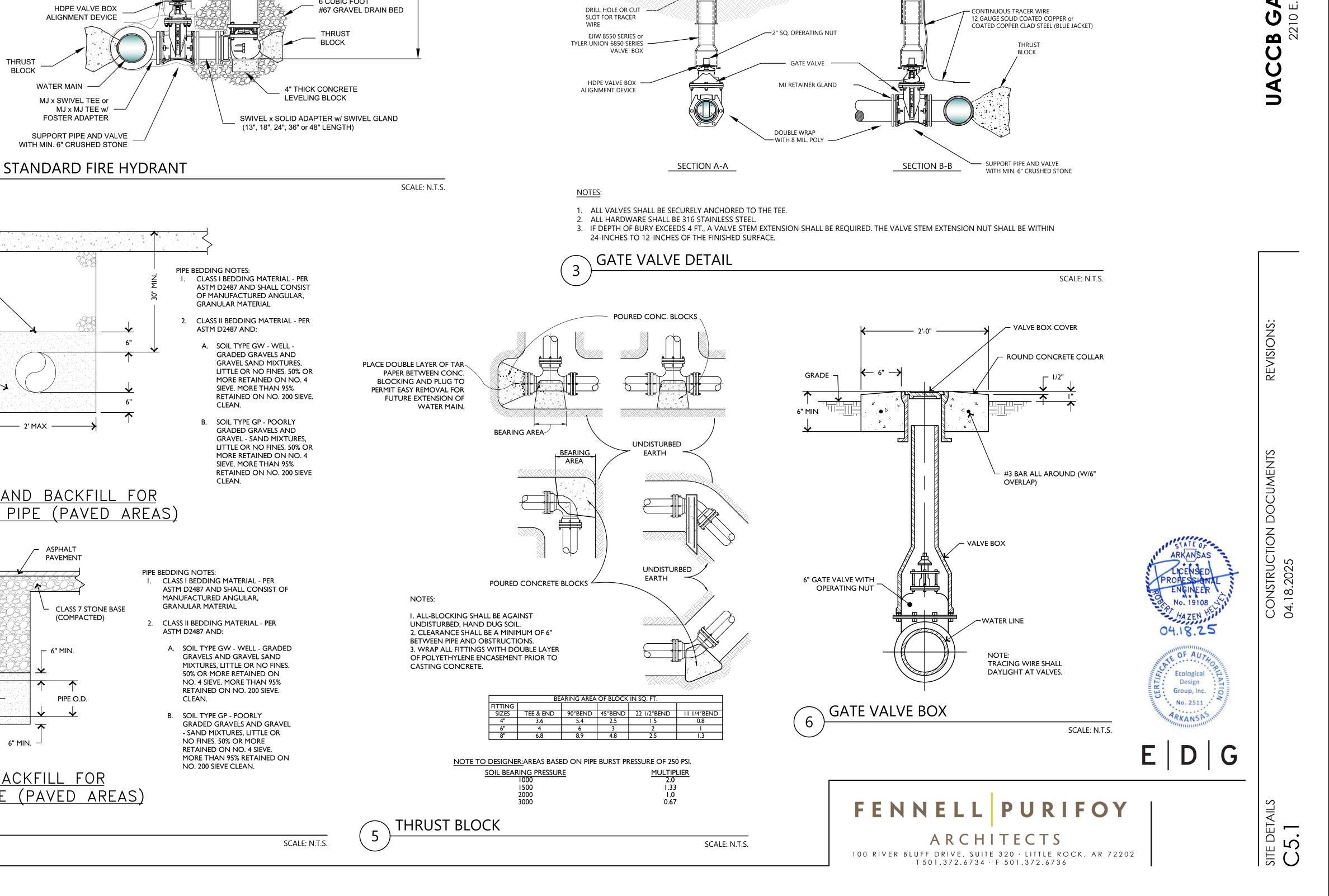




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PERMITTED VALVES

4. CLOW 2638

PROVIDE 18" DIA. CONC. COLLAR AROUND ALL VALVE

BOXES UP TO 18" DIA.

2. MUELLER SERIES 2360

1. AMERICAN FLOW CONTROL SERIES 2500

3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45

GATE VALVE —

MJ x SWIVEL TEE or

— WORD " WATER " ON COVER

" FIRE " FOR FIRE LINES " 2" VALVE " FOR 2" VALVES

<u>PLAN</u>

MJ x MJ TEE w/ FOSTER -

ADAPTER ON OUTLET

2" SQ. OPERATING NUT

CONTINUOUS TRACER WIRE

12 GAUGE SOLID COATED COPPER or

COATED COPPER CLAD STEEL (BLUE JACKET)

\_ USE 316 STAINLESS

DOUBLE WRAP

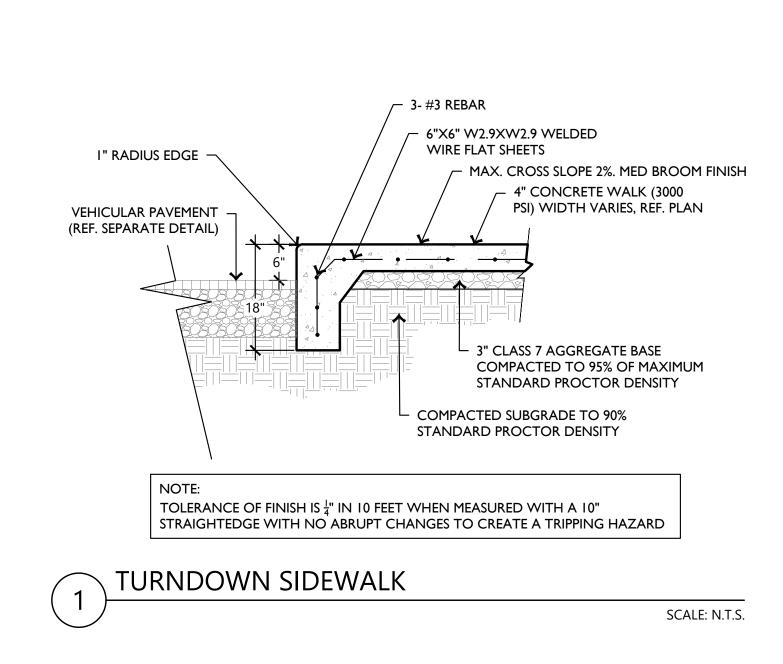
WITH 8 MIL. POLY

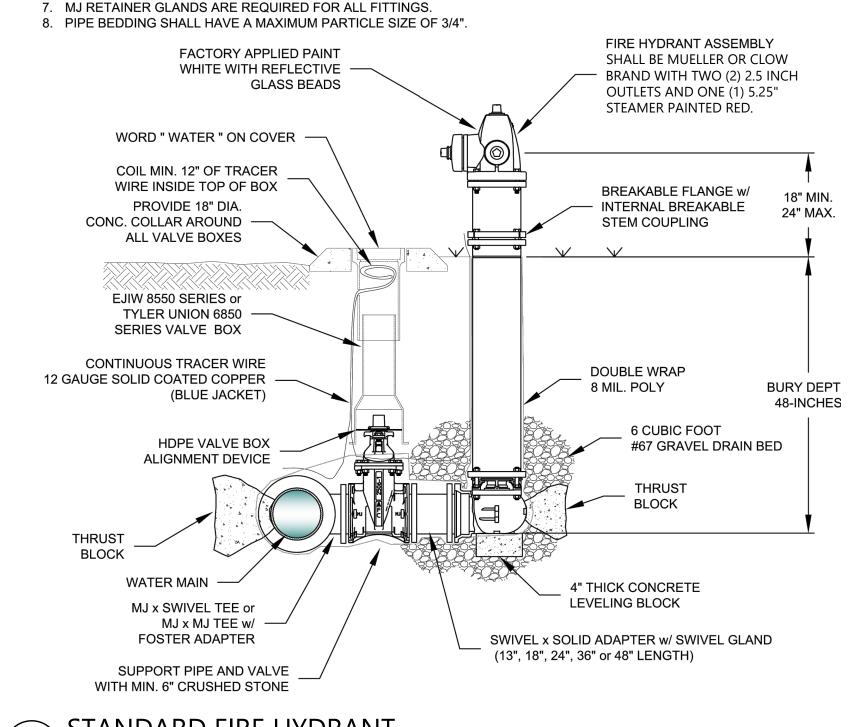
SPLICE TRACER WIRE WITH 3M WATERPROOF CONNECTOR

COIL MIN. 12" OF TRACER

WIRE INSIDE TOP OF BOX

STEEL T-BOLTS





1. THE 8" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF

3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED

ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.

4. HYDRANTS SHALL BE MUELLER OR CLOW BRAND WITH TWO (2) 2.5 INCH OUTLETS

5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND

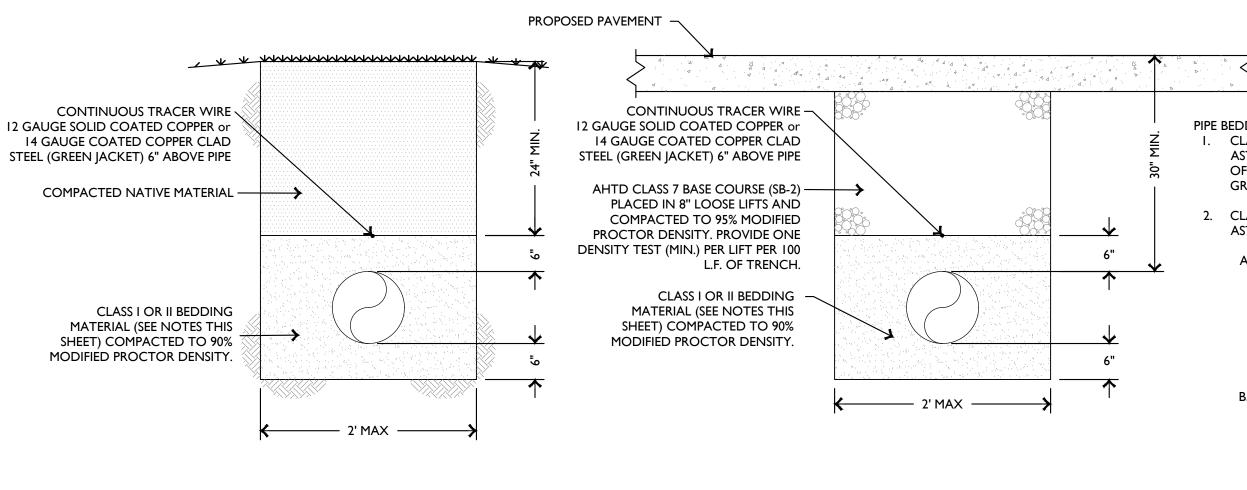
EITHER A SWIVEL TEE OR FOSTER ADAPTER.

AND ONE (1) 5.25" STEAMER AND PAINTED RED.

6. DO NOT COVER UP WEEP HOLE WITH CONCRETE

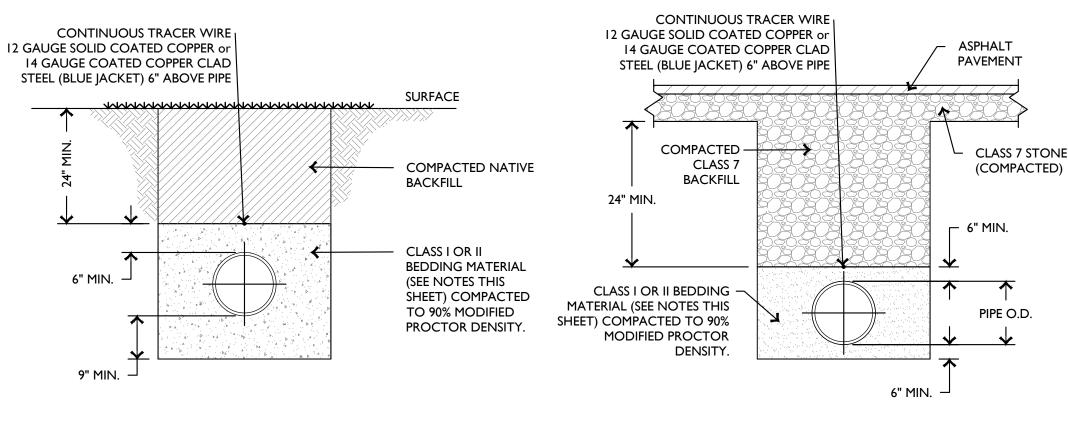
THE BACK OF THE SIDEWALK OR CURB.

2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.



# BEDDING AND BACKFILL FOR PVC SEWER PIPE (LAWN AREAS)

# BEDDING AND BACKFILL FOR PVC SEWER PIPE (PAVED AREAS)



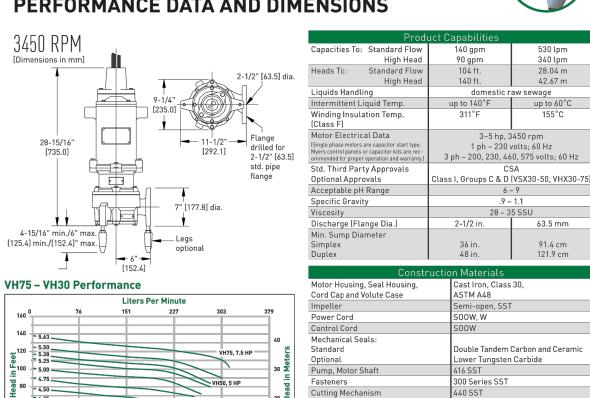
BEDDING AND BACKFILL FOR POTABLE WATER LINE (LAWN AREAS) POTABLE WATER LINE (PAVED AREAS)

SANITARY SEWER AND POTABLE WATER BEDDING & BACKFILL

BEDDING AND BACKFILL FOR



#### PERFORMANCE DATA AND DIMENSIONS



0/1/60 5 145 35 8.0 33.4 8.1 H 1.7 VS()

80/3/60 5 150 21.9 8.0 59.7 8.7 N 1.7 VS(X)

M-02-4050 (05/26/17)

VS50 - VS30 Performance 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

**PENTAIR** 

1101 MYERS PARKWAY, ASHLAND, OH 44805 WWW.FEMYERS.COM

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# **PENTAIR**

**MYERS**°

**Specifications VS50** 

<u>PUMP MODEL</u> – Pump shall be of the centrifugal type Myers<sup>®</sup> model <u>VS30</u> or equal with an integrally built-in grinder unit and submersible type motor. Discharge shall be standard 2" flange.

**OPERATING CONDITIONS** – Pump shall have a capacity of \_\_70\_\_ GPM at a total head of \_\_82\_\_ feet and shall use a 3 HP motor operating at 3450 RPM.

**MOTOR** – Pump motor shall be of the totally enclosed, submersible, squirrel cage induction type rated 3 horsepower at 3450 RPM, 60 Hz.

Motor shall be for three phase 460 volts. Three-phase motors shall be NEMA B type.

Stator winding shall be of the open type with Class F insulation good for 155°C (311°F) maximum operating temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings and rotor to outer shell. Air-filled motors, which do not have the superior heat dissipating capabilities of oil-filled motors, shall not be considered equal.

Motor shall have two heavy duty ball bearings to support pump shaft and take radial and thrust loads and a sleeve guide bushing directly above the lower seal to take radial load. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be heat shrunk into motor housing.

A heat sensor thermostat shall be attached to top end of motor winding and shall be connected in series with the magnetic contactor coil in control box to stop motor if motor winding temperature reaches 221°F. Thermostat to reset automatically when motor cools. Three heat sensors shall be used on three-phase motors.

The common motor pump and grinder shaft shall be of #416 stainless steel threaded to take pump impeller and

SEALS - Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell.

Seal face shall be carbon and ceramic and lapped to a flatness of one light band. Lower seal faces shall be \_\_\_\_\_ carbide (optional).

A double electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop motor but shall act as a warning only, indicating service is required.

PUMP IMPELLER – The pump impeller shall be of the semi-open type. Impeller shall be of 316 SST and shall be threaded onto stainless steel shaft.

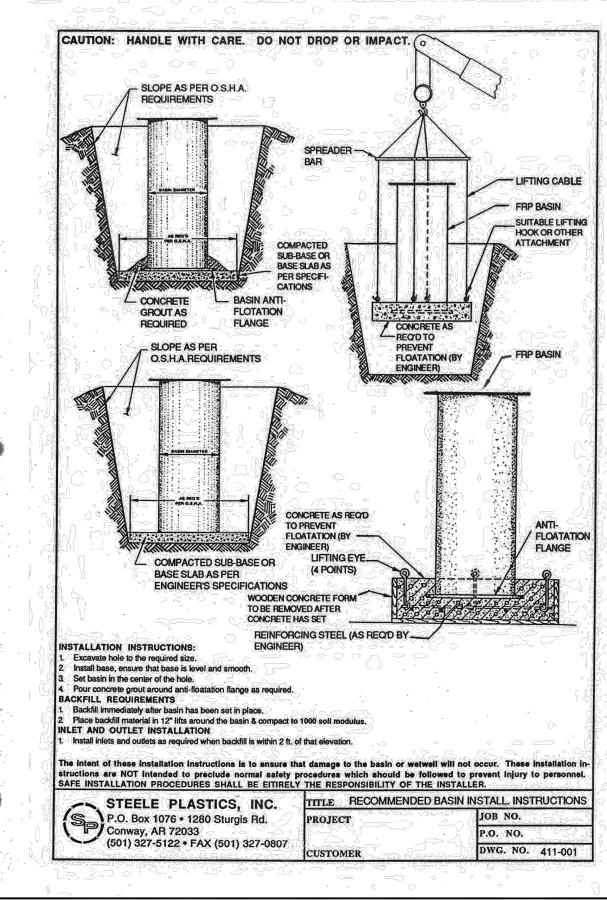
**GRINDER MECHANISM** – The stationary cutter shall be circular in design and contain evenly spaced cutting slots that extend outwards from the inlet of the pump. The slots are tapered inward toward the inlet to help direct slurry through the cutting slots into the pump. The slots are to be angled, or undercut, to help maintain a sharp axial cutting edge, even as the axial face wears during use. The stationary cutter shall be pressed into the suction opening of the volute and held in place by four 300 series stainless steel screws. The stationary cutter shall be provided with tapped back-off holes so that screws can be used to remove the cutter from the volute. The rotating cutter shall contain three axial cutting arms extending from the hub, perpendicular to the pump shaft, that are shaped to aid in the rejection of suspended debris that has not been sufficiently reduced in size by the axial cutting action. The curved, leading edge of the cutting arms shall create a scissor action with the cutting slots of the stationary cutter plate to minimize the required torque. This will allow the cutter to macerate tough objects and prolong cutter life. Serrations on the hub of the cutter add additional cuts that prevent debris from becoming entangled within the rotating cutter. The rotating cutter shall thread onto the end of the pump shaft and be secured by a 300 series stainless steel washer in conjunction with a 300 series stainless steel flat head cap screw threaded into the end of the shaft. Both stationary and rotating cutters shall be made of 440C stainless steel, hardened to Rockwell 57-60C and ground close to tolerance. The grinder shall be capable of grinding normal domestic sewage into a fine slurry.

**CORROSION PROTECTION** – The pump shall be painted with waterborne hybrid acrylic/alkyd paint. This custom engineered, quick dry paint shall provide superior levels of corrosion and chemical protection. All fasteners to be 300 series stainless steel.

**BEARING END CAP** – Upper motor bearing cap shall be a separate casting for easy mounting and replacement.

**POWER CABLES** – Power cord and control cord shall be double sealed. The power and control conductor shall be single strand sealed with epoxy potting compound and then clamped in place with rubber seal bushing to seal outer jacket against leakage and to provide for strain pull. Cords shall withstand a pull strain.

Insulation of power and control cords shall be type SOOW or W. Both control and power cords shall have a green carrier ground conductor that attaches to motor frame.



#### Myers VS30/50 Duplex Station **Grinder Pump Station Feature Identification**

1. Alarm Panel – NEMA 4x Enclosure, Equipped with circuit breakers and audio visual alarm. Available in 1 or 3 phase. Locate according to local codes. Should be placed in a

#### a. Standard pump cords are 35ft. long.

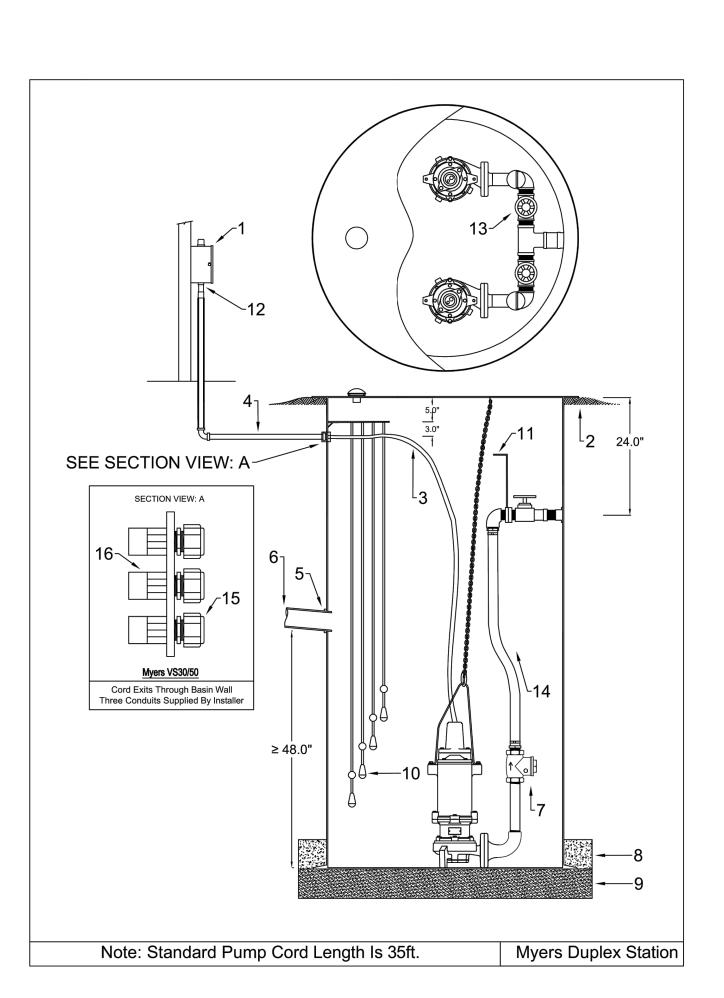
- 2. Finish Grade Grade line to be 1''- 4'' below removable lid and sloped away from the
- 3. Power and Alarm Supply Cable Must meet national and local electrical codes. ALL excess cable should be pull from basin to factory cable stop.
- **4.** Three Conduits Installer must supply three 1" conduits from the basin to the control panel. Burial depth as required by national and local codes. Conduits must enter the panel from bottom and be sealed per NEC Code 300.5 and 300.7. Supplied by others.
- 5. Inlet 4" Sch. 40 PVC grommet, supplied loose. Field installation utilizing 5" hole saw. Inlet must be a minimum of 48" from the bottom of the basin.
- 6. 4" Gravity Service Line Supplied by others.
- 7. Brass Check Valve, 2.00"
- **8. Concrete Ballast** Per local requirements. Supplied by others.
- 9. Bedding Material 6" Minimum depth, round aggregate (gravel). Supplied by others. 10. Level Sensing Floats
- 11. SST Pull Out Rod
- **12. Sealed Conduit Connector -** O-ring type. Supplied by others.
- 13. Brass Gate Valve, 2.00"
- 14. Flexible Hose Assembly Includes SST hose barb adapters.
- 15. 1" Cord Grip
- 16. 1" PVC Coupling, Glue End

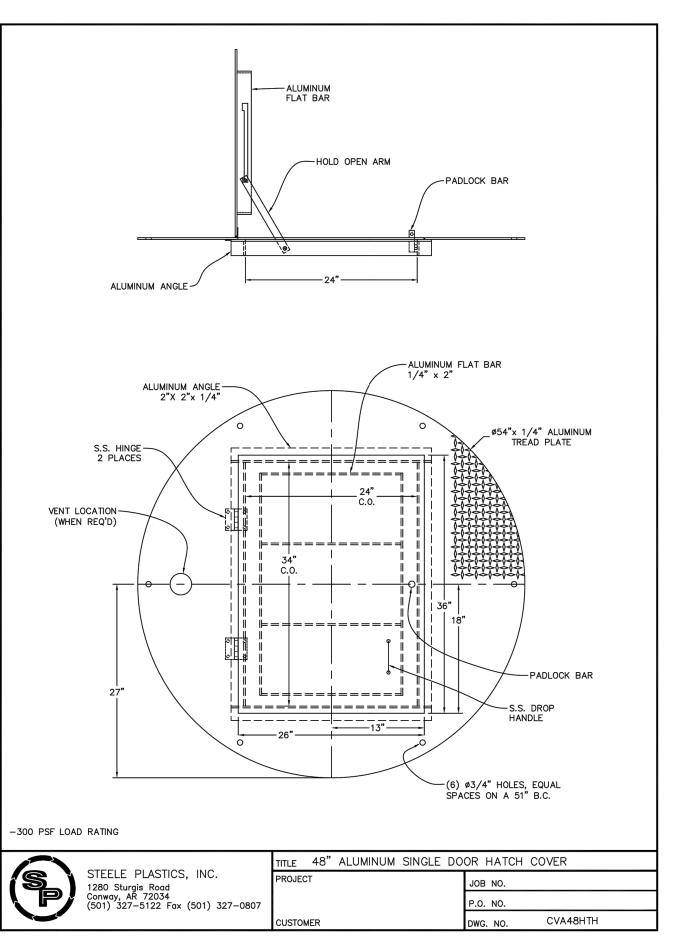
#### **NOTE:**

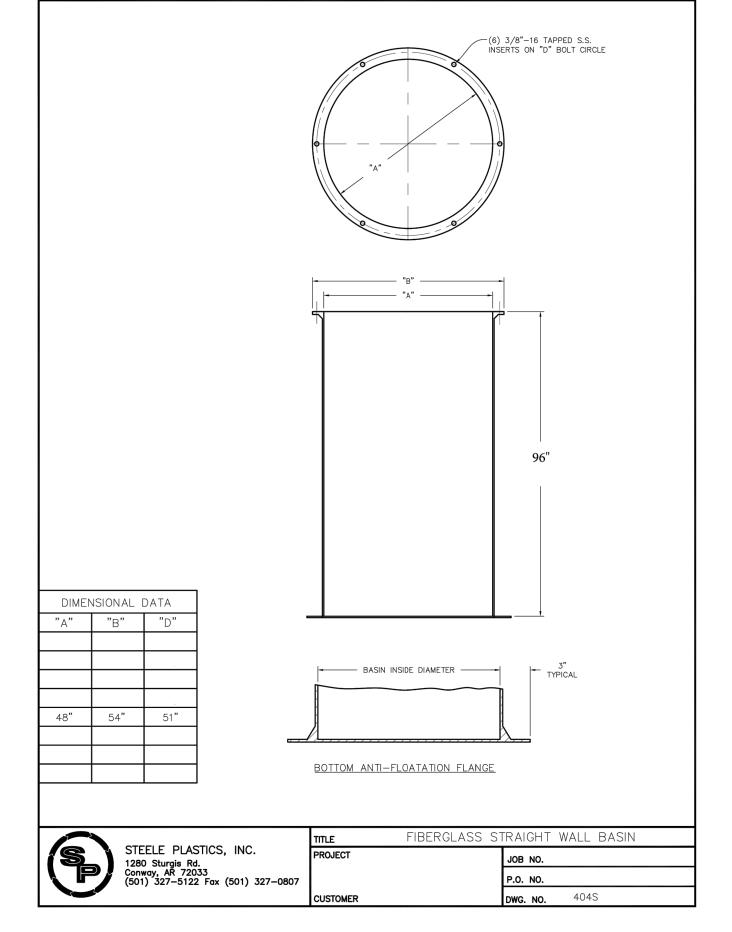
CONTACT JACK TYLER ENGINEERING INCORPORATED FOR FULL SUBMITTAL DETAILS AND FOR ANY QUESTIONS. (501) 562.2296

PROJECT CONTACT: KAMMI CONWAY

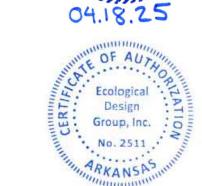
KCONWAY@JTENG.COM







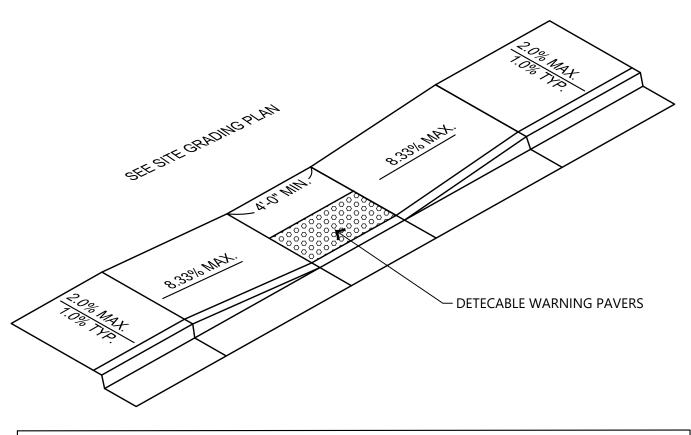




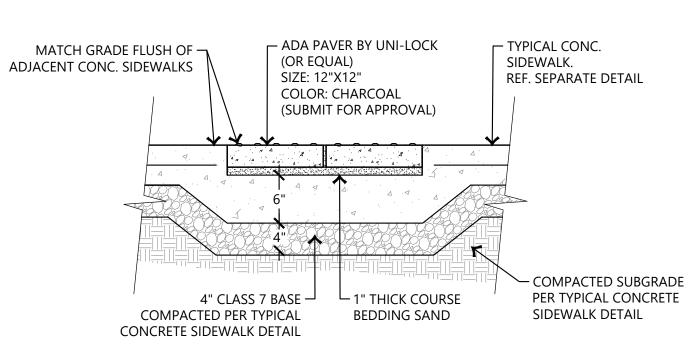


SCALE: N.T.S.

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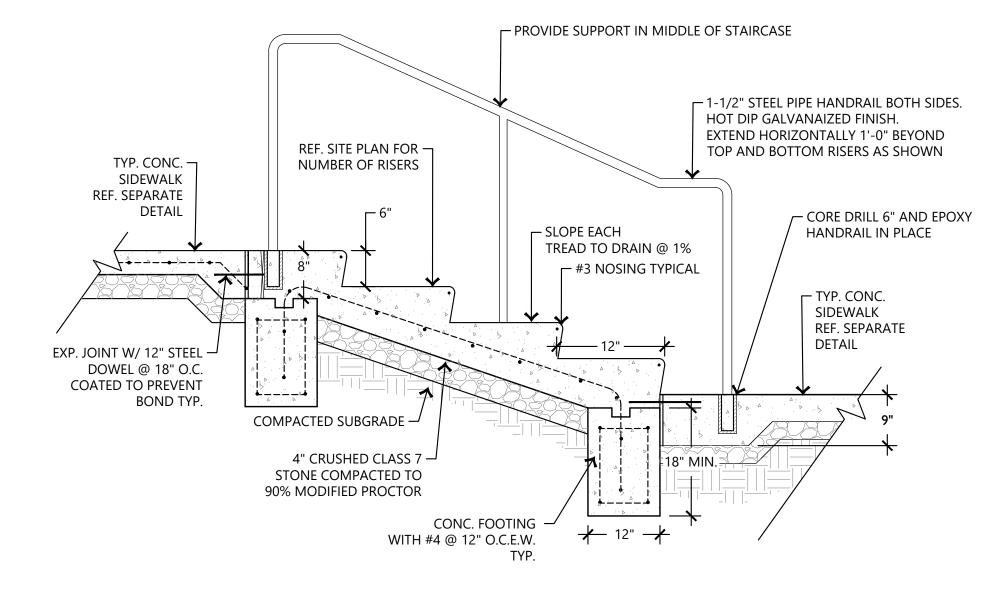


- FULL DEPTH EXPANSION JOINTS (FOUR INCHES) SHALL BE PROVIDED AT THE EDGE OF THE SIDEWALK AND RAMP.
- CONCRETE TO BE SAWCUT OR PLACE A TOOL JOINT AT THE CENTER OF DRIVE AND SEALED. IF POSSIBLE CONTRACTOR SHALL TRY TO ALIGN THE JOINT AT THE CENTER OF THE DRIVE WITH THE A JOINT IN THE ADJACENT SIDEWALK.
- ALL CONCRETE DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED OF A PORTLAND CEMENT CONCRETE MIXTURE WHICH WILL PRODUCE A CONCRETE OF A COMPRESSIVE STRENGTH OF 3500 P.S.I. AFTER 28 DAYS SET UNDER STANDARD LABORATORY METHODS.
- . ALL SIDEWALKS REQUIRE A CONCRETE CURING COMPOUND, SUCH AS SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL
- ALL SIDEWALKS AND DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH A BROOM FINISH.



#### DETECTABLE WARNING PAVER NOTES:

- THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS LOCATED AT THE BACK OF CURB. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL
- BETWEEN DOMES. DETECTABLE WARNING DEVICE SHALL BE 24" IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. (MIN. 4')
- INSTALL ADA PAVERS PER MANUFACTURER'S RECOMMENDATIONS.



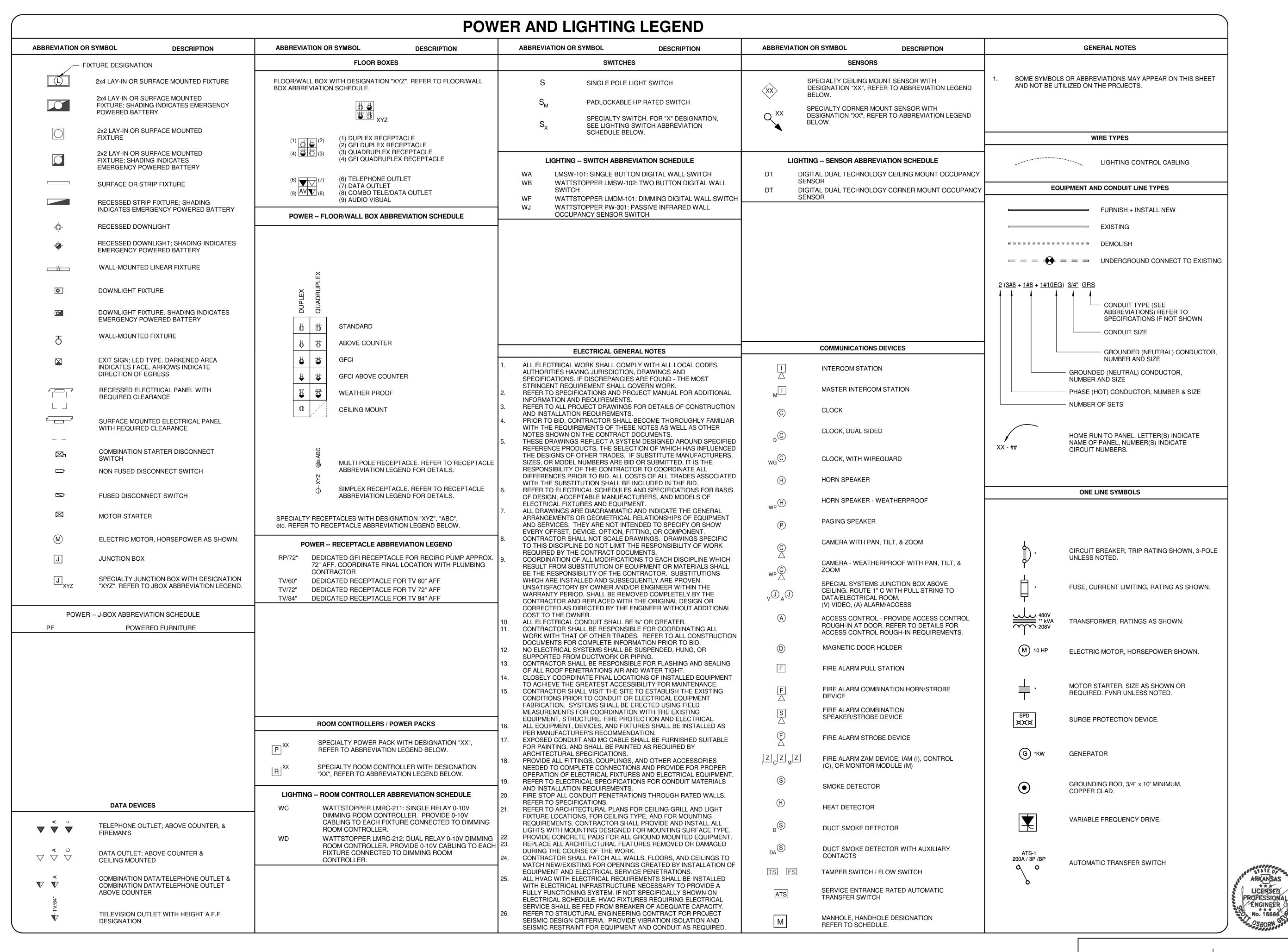
TYPICAL CONCRETE STAIRCASE W/ HANDRAIL

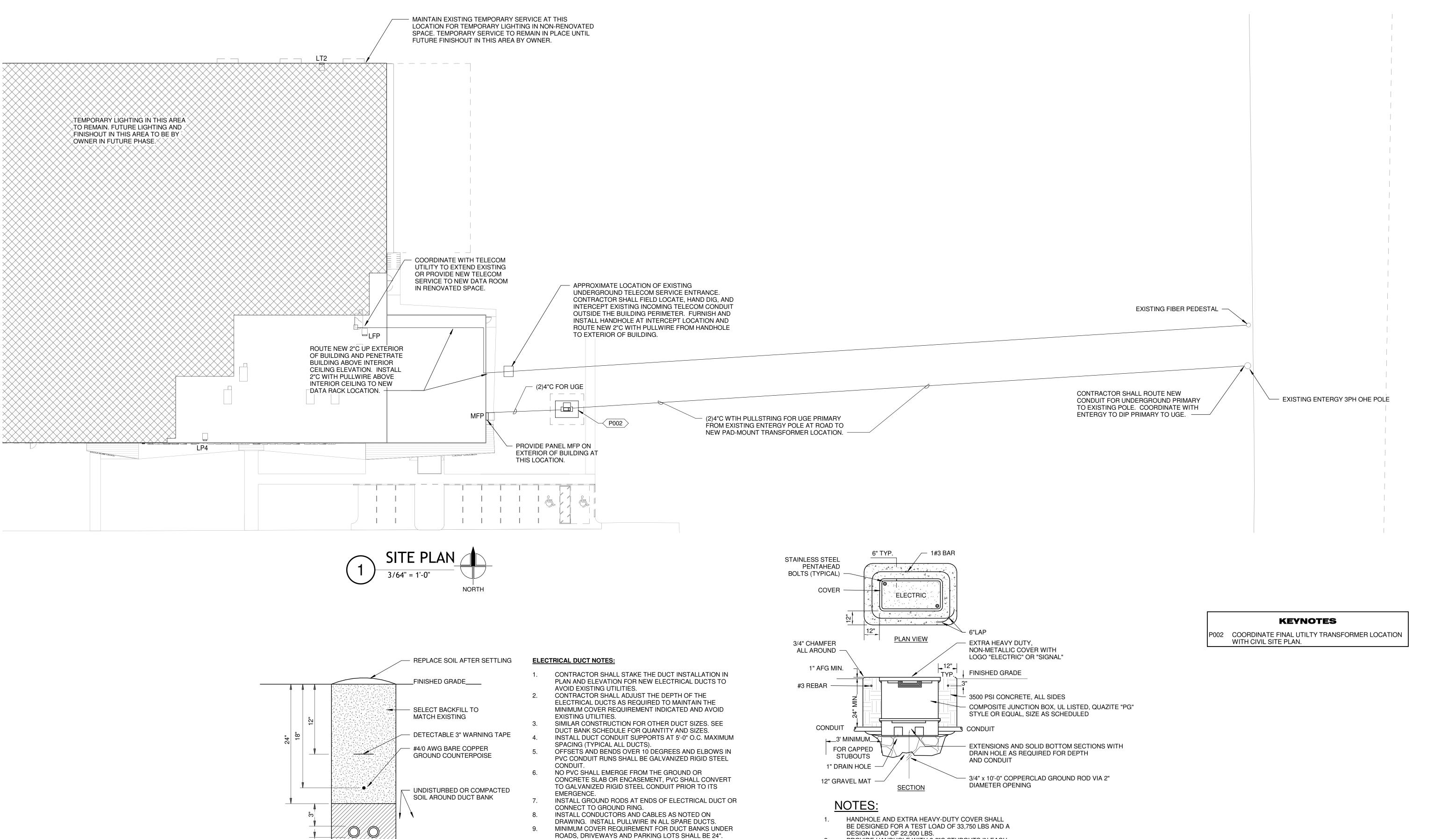
ADA RAMP & DETECABLE WARNING PAVERS

SCALE: N.T.S.

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SCALE: N.T.S.





MINIMUM COVER REQUIREMENTS FOR ELECTRICAL

SECONDARY SERVICE DUCT BANKS SHALL BE 30".

MINIMUM COVER REQUIREMENTS FOR ELECTRICAL

PRIMARY SERVICE DUCT BANKS SHALL BE 36".



SELECT BACKFILL REFER

TO SPECIFICATIONS

1-1/2" MIN.

# HANDHOLE DETAIL

17"W x 28"D.

HANDHOLE.

PROVIDE HANDHOLE WITH 2-2"C STUBOUTS IN EACH

HANDHOLE INTERIOR DIMENSIONS SHALL BE 30"L x

PROVIDE MINIMUM 3' SLACK CABLE LOOP FOR EACH

COLOR CODE, TAG AND IDENTIFY ALL CABLES IN

EXACT LOCATION OF EACH HANDHOLE SHALL BE APPROVED BY THE OWNER AND ENGINEER.

FACE, CAPPED WATERTIGHT.



LICENSED PROFESSIONA ENGINEER No. 16666

ENGINEERS



NLS LIGHTING

EVENLITE

#### **LIGHTING NOTES:**

(20)

VIA LCP

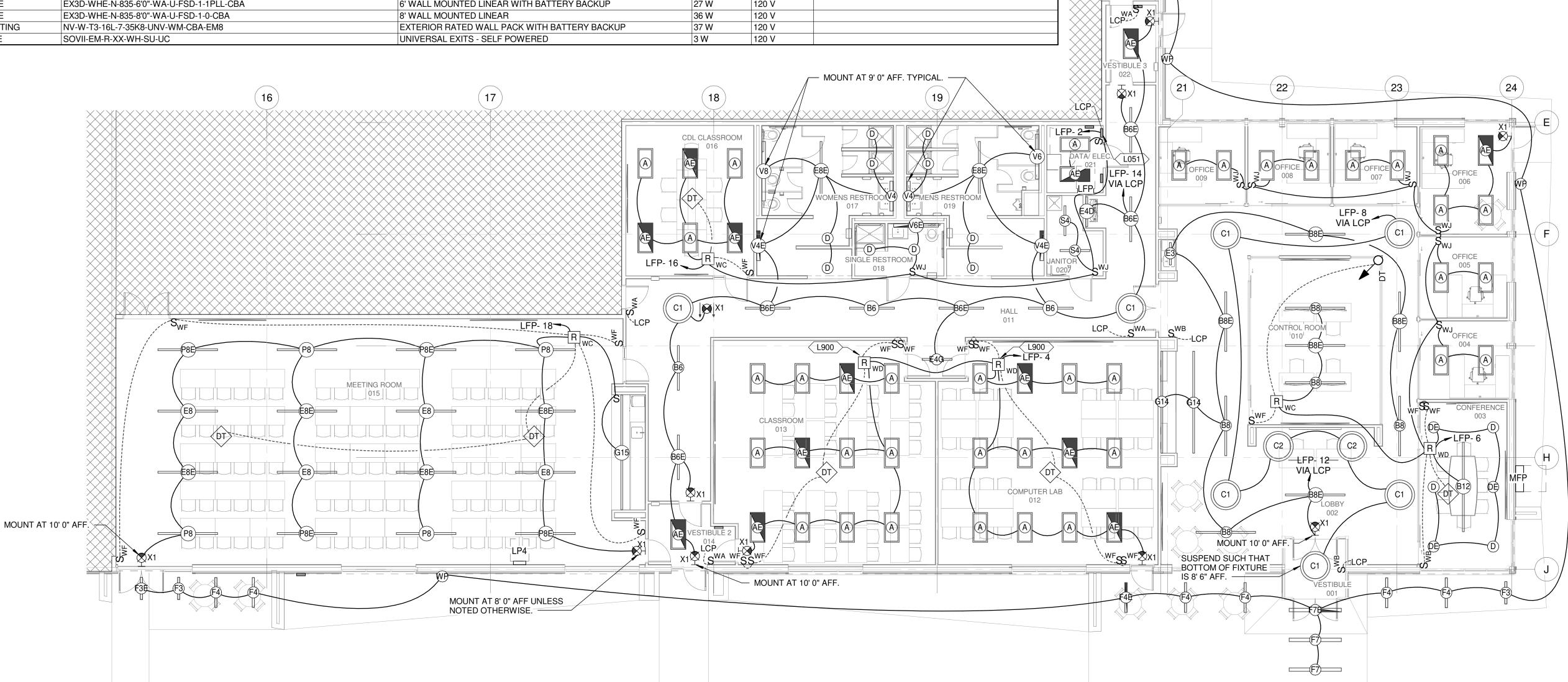
(3#10)1"C

MOUNT 9' 0" ABOVE GRADE. TYPICAL.

- FURNISH AND INSTALL UNSWITCHED CIRCUIT TO ALL EXIT, EMERGENCY, AND EMERGENCY EGRESS LIGHTING FIXTURES.
- COORDINATE WITH OWNER FOR TIME SETTINGS OF ALL OCCUPANCY SENSING DEVICES. OCCUPANCY SENSORS IN RESTROOMS AND/OR SHOWER ROOMS SHALL BE SET TO MAXIMUM TIME DELAY.
- SINGLE BUTTON LOW VOLTAGE SWITCHES IN CORRIDORS/LOBBIES SHALL OVERRIDE LCP NORMAL
- SCHEDULING IN THE AREA THEY ARE PRESENT. PROVIDE MULTI-GANG BOX WHERE MULTIPLE SWITCHES ARE
- SHOWN ADJACENT TO EACH OTHER. WHERE MULTIPLE SWITCHES ARE SHOWN IN ONE ROOM/AREA FOR ONE ZONE, SWITCHES SHALL BE CONFIGURED TO CONTROL THE SINGLE ZONE FROM MULTIPLE LOCATIONS.

#### **KEYNOTES**

- L051 FURNISH AND INSTALL "WATTSTOPPER LMCP SERIES" LIGHTING CONTROL PANEL, PROVIDE WITH PHOTOCELL AND TIMECLOCK FOR AUTOMATIC CONTROL. REFERENCE LIGHTING CONTROL NOTES AND COORDINATE WITH OWNER FOR FINAL PROGRAMMING.
- L900 FIXTURES AT TEACHING WALL SHALL BE SWITCHED AND DIMMED SEPARATELY THAN REST OF ROOM.



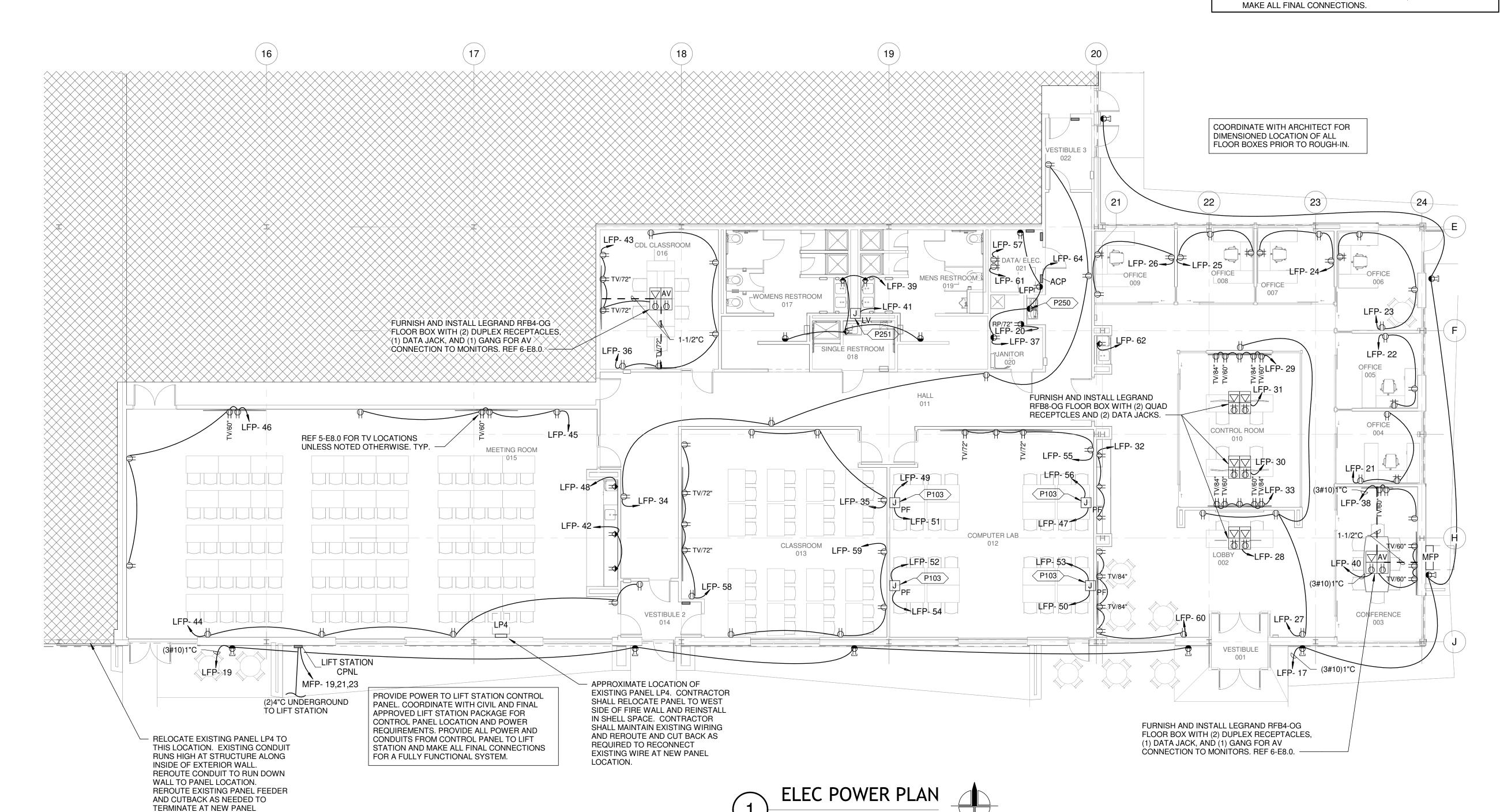
LIGHTING PLAN

LICENSED

PROPESSIONA ENGINEER

#### **KEYNOTES**

- P103 RECEPTACLES FURNISHED WITH FURNITURE WILL HAVE PRE-MANUFACTURED FLEXIBLE METAL CONDUITS TO JUNCTION BOX. CONTRACTOR SHALL ROUTE POWER FROM PANEL AS INDICATED TO JUNCTION BOX AT WALL AND MAKE CONNECTIONS TO FURNITURE WHIP FOR A COMPLETE INSTALLATION. COORDINATE WITH EQUIPMENT VENDOR FOR JUNCTION BOX INSTALLATION LOCATION.
- P250 ELECTRIC WATER COOLER RECEPTACLE: CONCEAL WITHIN CABINET PER MANUFACTURER'S REQUIREMENTS. PROVIDE 120V CONNECTION TO POWER CONVERTER FOR HARDWIRED AUTOMATIC SENSOR-CONTROLLED PLUMBING FIXTURES IN RESTROOMS. HARDWIRE POWER FROM CONVERTER TO URINAL, WATER CLOSETS, AND LAVATORIES.



LOCATION.











P300 FURNISH AND INSTALL 4'X4' PLYWOOD TELEPHONE BACKBOARD. REFERENCE TELPHONE AND DATA RISER DIAGRAM.

**KEYNOTES** 

P302 FURNISH AND INSTALL WALL MOUNTED DATA RACK IN AV/IT ROOM. RACK SHALL BE 19.86"W X 18"D X 22.25"H. RACK SHALL BE DAMAC WR24S-3 OR EQUAL.

CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL COMPLETE U.L. LISTED

FIRE ALARM SYSTEM TO MEET THE REQUIREMENTS OF THE NFPA 101, NFPA

72, ADA-AG, AND THE LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL EMPLOY THE SERVICES OF A NICET LEVEL 4 TECHNICIAN TO LAYOUT ALL REQUIRED DEVICES AND COMPLY WITH ALL

**FIRE ALARM NOTE:** 

APPLICABLE SECTIONS OF NFPA 72.

# ACCESS CONTROL TYPE 2 - SINGLE DOOR

**EQUIPMENT** 

3/4" CONDUIT TO ACCESSIBLE LOCATION

- 3/4" CONDUIT

- IF REQUIRED, COORDINATE

APPROVED EQUIPMENT

IF REQUIRED, COORDINATE EXTERNAL ACCESS BOX LOCATION

INTERNAL "PÚSH TO EXIT" BOX

LOCATION AND SIZE WITH FINAL

AND SIZE WITH FINAL APPROVED

3/4" CONDUIT TO ACCESSIBLE LOCATION

ACCESS CONTROL TYPE 1 - DOUBLE DOOR

- IF REQUIRED, COORDINATE

IF REQUIRED, COORDINATE

APPROVED EQUIPMENT

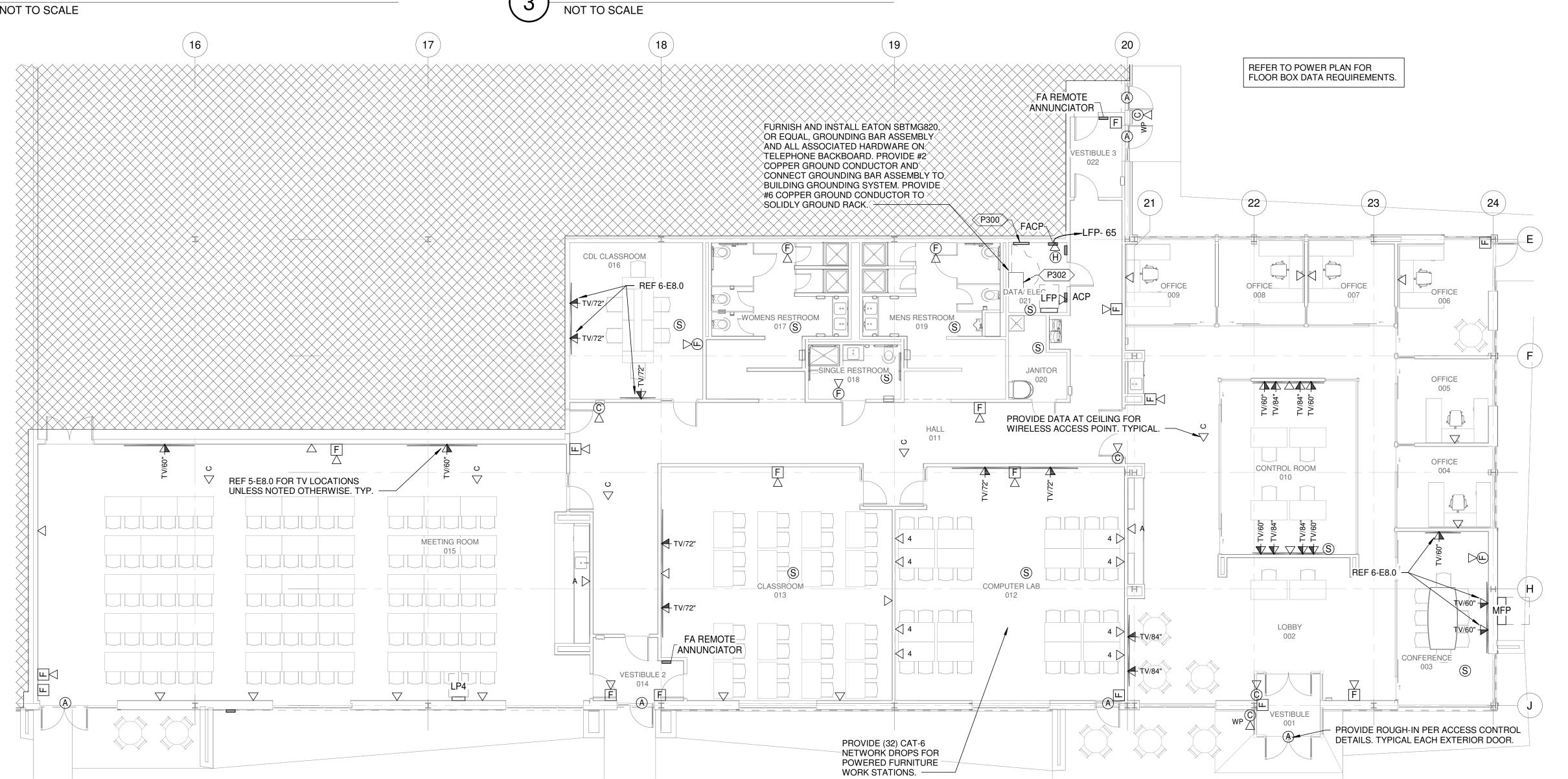
**EQUIPMENT** 

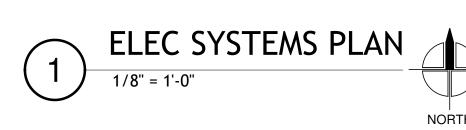
INTERNAL "PUSH TO EXIT" BOX

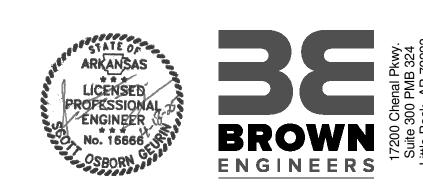
LOCATION AND SIZE WITH FINAL

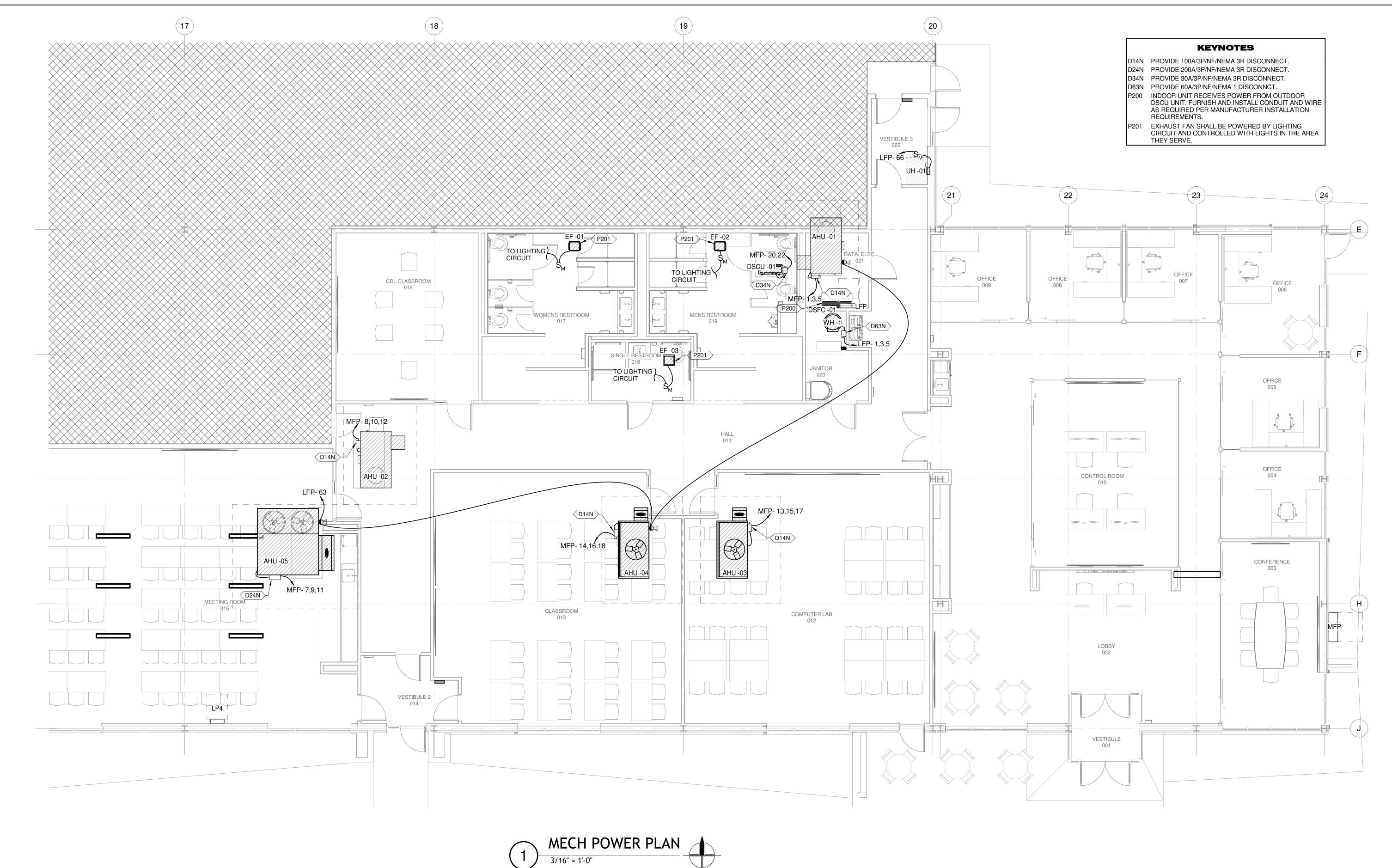
EXTERNAL ACCESS BOX LOCATION

AND SIZE WITH FINAL APPROVED













Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: 22kA Panel Rating: 800 A MCB

Location:

Mounting: Surface

Supply From:

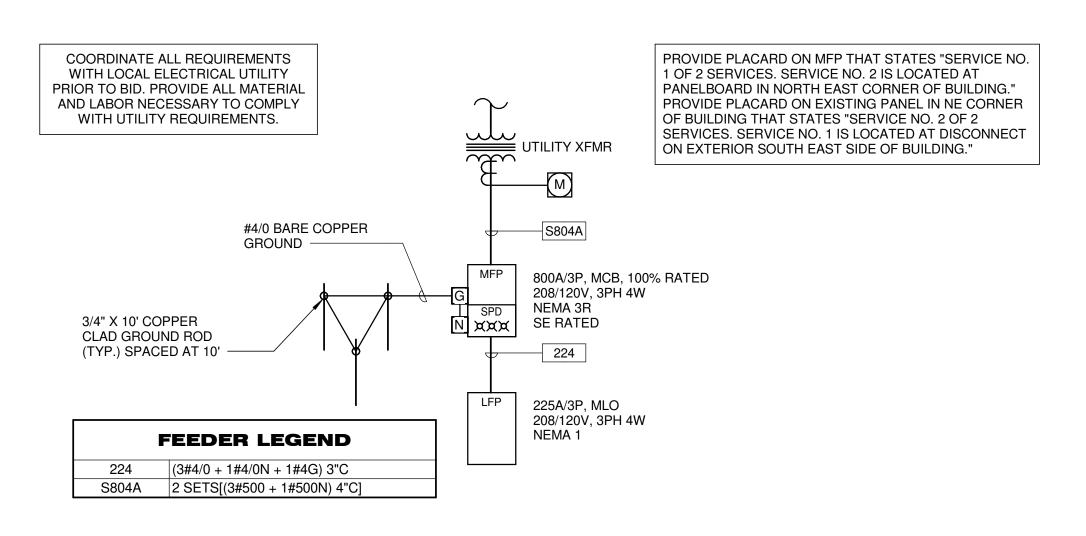
				A	В	С	A	В	С				
СКТ	Load Name	Trip	Poles							Poles	Trip	Load Name	СКТ
1				10.06			16.49						2
3	AHU -01	90 A	3		10.06			17.16		3	225 A	LFP	4
5						10.06			17.55				6
7				16.33			9.79						8
9	AHU -05	175 A	3		16.33			9.79		3	90 A	AHU -02	10
11						16.33			9.79				12
13				8.41			8.41						14
15	AHU -03	90 A	3		8.41			8.41		3	90 A	AHU -04	16
17						8.41			8.41				18
19				2.35			2.78			2	30 A	DSCU -01	20
21	LIFT STATION CPNL AND PUMP	70 A	3		2.35			2.78			30 A	DSC0 -01	22
23						2.35			0.00	2	30 A	SPARE	24
25				0.00			0.00				30 A	SPARE	26
27	SPARE	90 A	3		0.00			0.00		2	20.4	SPARE	28
29						0.00			0.00	] ~	20 A	SPANE	30

		Panel Totals	
	PHASE A	PHASE B	PHASE C
Total Load:	74.07 kVA	74.75 kVA	72.89 kVA
Total Amps:	619 A	624 A	607 A
Total Conn. Load:	221.72 kVA		
Total Design Current:	771 A		

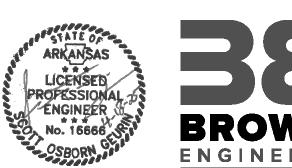
## PANELBOARD NOTES

- (1) INSTALL LOCKING DEVICE (LOCK-OFF FOR MAINTENANCE)
- (2) INSTALL LOCKING DEVICE (LOCK-ON FOR CRITICAL LOAD).
- (3) REFER TO SITE LIGHTING PLAN FOR WIRE SIZES.
- (4) PROVIDE GFI CIRCUIT BREAKER OR INLINE GFI FOR PERSONNEL PROTECTION (5 mA).
- (6) PROVIDE U.L. LISTED OVERCURRENT DEVICE TO COORDINATE AND MAINTAIN MANUFACTURER'S SERIES RATED SYSTEM.
- REMAIN. VERIFY CONDITION OF CIRCUIT BREAKER TO ENSURE THAT IT IS OPERATIONAL AND MEETS ALL U.L. RATINGS.
- TRACE EXISTING CIRCUIT, IDENTIFY LOAD AND PROVIDE TYPEWRITTEN PANELBOARD SCHEDULE AND PLACE ON INTERIOR OF PANELBOARD DOOR. IF CIRCUIT IS A "SPARE", REFER TO NOTE (8).

	Location: DATA/ EL Supply From: MFP Mounting: Surface Enclosure: 1	EC. 021				Volts Phases Wires		3 Wye				C. Rating: 22kA nel Rating: 225 A MLO	
Notes:													
СКТ	Load Name	Trip	Poles	A	В	С	A	В	С	Poles	Trip	Load Name	CK-
1	Load Name	ШР	1 0103	4.10			0.06			1	20 A	LCP	2
3	-  WH-1	50 A	3		4.10			0.86		1	20 A	LIGHTING CDL CLASSROOM 016	4
5						4.10			0.85	1	20 A	OFFICES, CONTROL ROOM LTG	6
7	FOR FUTURE USE AT GARDEN AREA (4)	20 A	1	0.00			0.81			1	20 A	LIGHTING LOBBY 002	8
9	FOR FUTURE USE AT GARDEN AREA (4)	20 A	1		0.00			0.38		1	20 A	EXTERIOR LIGHTING	10
11	FOR FUTURE USE AT GARDEN AREA (4)	20 A	1			0.00			0.72	1	20 A	LIGHTING LOBBY 002	12
13	FOR FUTURE USE AT GARDEN AREA (4)	20 A	1	0.00			1.45			1	20 A	LIGHTING VESTIBULE 2 014	14
15	FOR FUTURE USE AT GARDEN AREA (4)	20 A	1		0.00			0.61		1	20 A	LTG RM 15, 016, 17, 18, 19, 20, 21	16
17	EAST EXTERIOR RECEPTS	20 A	1			0.72			1.16	1	20 A	LIGHTING MEETING ROOM 015	18
19	WEST EXTERIOR RECEPTS	20 A	1	0.72			0.18			1	20 A	RECIRC PUMP	20
21	RECEPTACLES OFFICE 004	20 A	1		0.72			0.72		1	20 A	RECEPTACLES OFFICE 005	22
23	RECEPTACLES OFFICE 006	20 A	1			0.90			0.72	1	20 A	RECEPTACLES OFFICE 007	24
25	RECEPTACLES OFFICE 008	20 A	1	0.72			0.72			1	20 A	RECEPTACLES OFFICE 009	26
27	RECEPTACLES LOBBY 002	20 A	1		0.72			0.72		1	20 A	RECEPTACLES LOBBY 002	28
29	RECEPTACLES CONTROL ROOM 010	20 A	1			0.90			0.72	1	20 A	RECEPTACLES CONTROL ROOM 010	30
31	RECEPTACLES CONTROL ROOM 010	20 A	1	0.72			0.54			1	20 A	ABOVE COUNTER RECEPTS LOBBY 002	32
33	RECEPTACLES CONTROL ROOM 010	20 A	1		0.90			0.90		1	20 A	RECEPTACLES HALL 011	34
35	RECEPTACLES CLASSROOM 013	20 A	1			0.18			0.90	1	20 A	RECEPTACLES CDL CLASSROOM 016	36
37	GFI RECEPTS, EWC (4)	20 A	1	0.72			0.54			1	20 A	RECEPTACLES CONFERENCE 003	38
39	RESTROOMS RECEPTS	20 A	1		0.90			0.90		1	20 A	RECEPTACLES CONFERENCE 003	40
41	BATHROOM SENSORS	20 A	1			0.25			0.72	1	20 A	AC RECEPTS MEETING ROOM	42
43	RECEPTACLES CDL CLASSROOM 016	20 A	1	0.90			0.90			1	20 A	RECEPTACLES MEETING ROOM 015	44
45	RECEPTACLES MEETING ROOM 015	20 A	1		0.72			0.72		1	20 A	RECEPTACLES MEETING ROOM 015	46
47	POWERED FURNITURE COMP LAB 012	20 A	1			0.72			0.36	1	20 A	COFFEE MAKER MEETING ROOM 015	48
49	POWERED FURNITURE COMP LAB 012	20 A	1	0.72			0.72			1	20 A	POWERED FURNITURE COMP LAB 012	50
51	POWERED FURNITURE COMP LAB 012	20 A	1		0.72			0.72		1	20 A	POWERED FURNITURE COMP LAB 012	52
53	POWERED FURNITURE COMP LAB 012	20 A	1			0.72			0.72	1	20 A	POWERED FURNITURE COMP LAB 012	54
55	RECEPTACLES COMP LAB 012	20 A	1	0.72			0.72			1	20 A	POWERED FURNITURE COMP LAB 012	56
57	RECEPTACLES DATA/ ELEC. 021	20 A	1		0.36			0.90		1	20 A	RECEPTACLES CLASSROOM 013	58
59	RECEPTACLES CLASSROOM 013	20 A	1			0.72			0.90	1	20 A	RECEPTACLES LOBBY 002	60
61	RECEPTACLES DATA/ ELEC. 021	20 A	1	0.36			0.18			1	20 A	COFFEE MAKER LOBBY 002	62
63	HVAC CONVENIENCE RECEPTS	20 A	1		0.54			0.06		1	20 A	ACP	64
65	FACP (2)	20 A	1			0.06			0.50	1	20 A	UH -01	66
67	SPARE	20 A	1	0.00			0.00			1	20 A	SPARE	68
69	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	70
71	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	72
73	SPARE	20 A	1	0.00			0.00			1	20 A	SPARE	74
75	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	76
77	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	78
79	SPARE	20 A	1	0.00			0.00			1	20 A	SPARE	80
81	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	82
83	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	84
				D	CE 4	Panel		Dilla	CE C				
	Tatal	Load:			SE A 9 kVA	17.16	SE B		SE C 5 kVA				
		Load:			9 KVA 87 A		4 A		7 A	-			
	Total	Conn. L		51.20 kV					- •	1			
	Total	Design	Current:	223 A						1			









- (7) EXISTING CIRCUIT TO REMAIN.
- (8) EXISTING CIRCUIT BREAKER TO

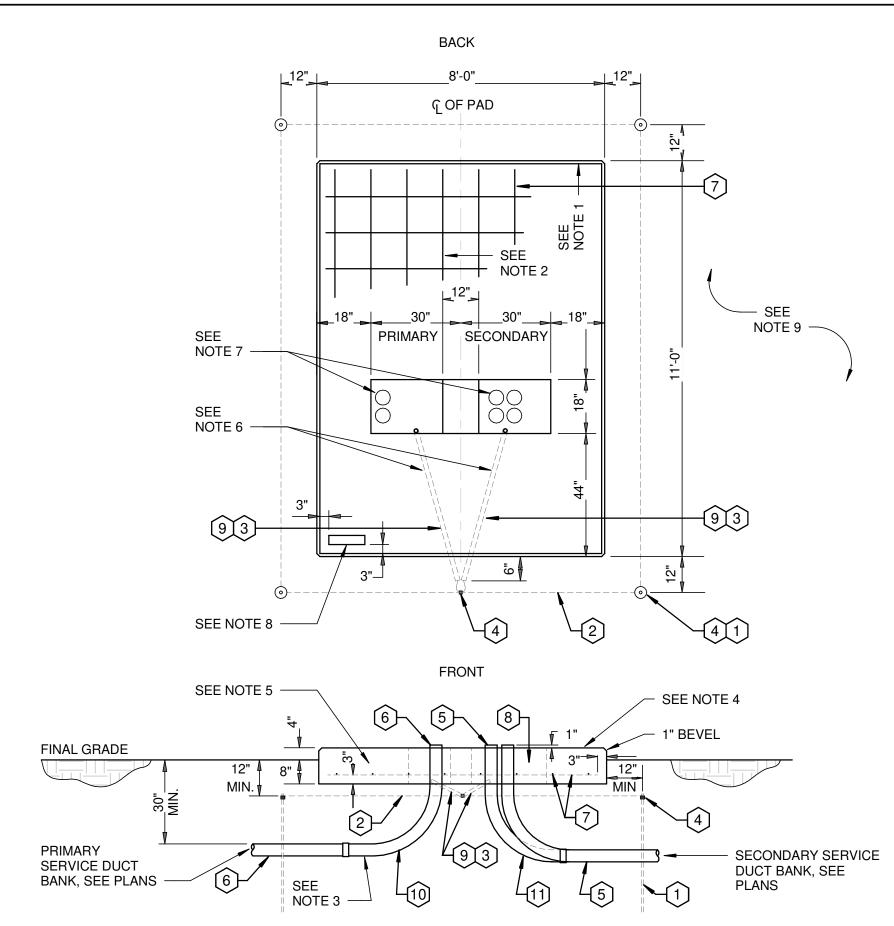
## # TRANSFORMER PAD KEYED NOTES:

- INSTALL NEW COPPER CLAD GROUND ROD, 3/4" x 10"-0", TYPICAL
- INSTALL NEW #2/0 BARE COPPER CONDUCTOR (TYPICAL). INSTALL NEW #2 BARE COPPER CONDUCTOR.
- INSTALL NEW EXOTHERMIC WELD, TYPICAL OF 5.
- INSTALL NEW SECONDARY CONDUITS, SEE SITE PLAN. INSTALL NEW PRIMARY CONDUITS, SEE SITE PLAN.
- INSTALL NEW #4 REBAR, 12"O.C. BOTH WAYS. CONSTRUCT NEW PAD USING CONCRETE, 3500 PSI AT 28 DAYS. INSTALL NEW 1" GRSC UNDER PAD FOR GROUND WIRES
- UTILIZE LONG SWEEP 90° BEND PVC CONDUITS ON PRIMARY
- UTILIZE LONG SWEEP 90° BEND CONDUITS ON SECONDARY CONDUITS.

#### TRANSFORMER PAD NOTES:

- WHERE POSSIBLE. DO NOT PLACE CONDUIT UNDER THIS
- SECTION OF FOUNDATION. REINFORCING - #4 BARS 12" O.C. BOTH WAYS.
- WHEN INSTALLING CONDUIT, DISTURB GROUND IN FOUNDATION AREA AS LITTLE AS POSSIBLE. EXTEND
- CONDUIT 1" ABOVE FOUNDATION. TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL
- GRADE SHALL SLOPE AWAY FROM PAD. CONCRETE SHALL BE 3500 PSI AT 28 DAYS AND 1:2:4 MIXTURE
- WITH 6 GAL. MAX. WATER CONTENT PER SACK OF CEMENT.
- CONTRACTOR TO FURNISH 1" CONDUIT UNDER PAD FOR GROUND WIRE.
- LOCATE CONDUITS UNDER PRIMARY AND SECONDARY BUSHINGS. TRANSFORMER LOCATION TAG SHALL BE ATTACHED TO PAD
- WITH CONCRETE NAILS OR SHEET METAL SCREWS. TRANSFORMER PAD REQUIRES A MINIMUM 3'-0" CLEARANCE AROUND EACH SIDE AND BACK OF PAD. A 15'-0" CLEARANCE IS

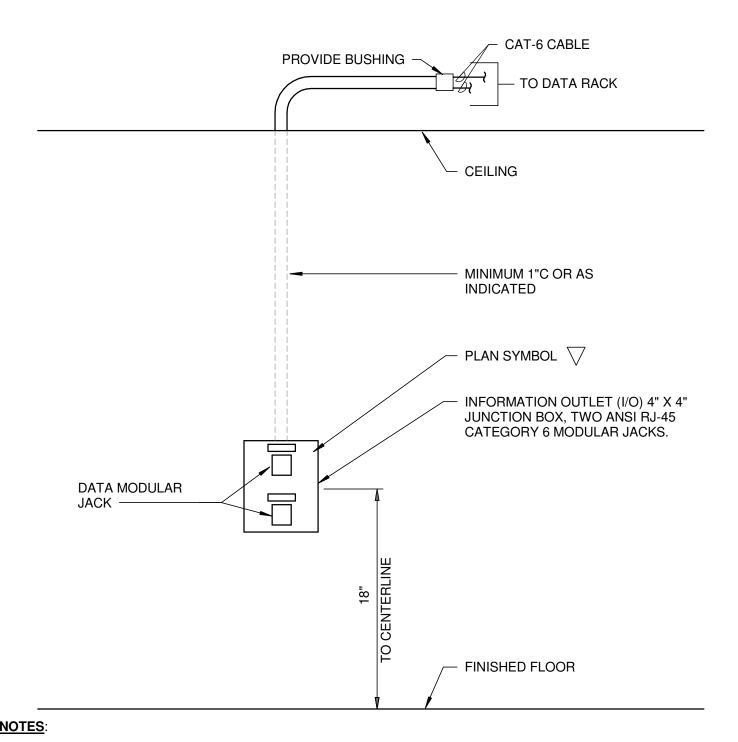
REQUIRED ON FRONT SIDE OF PAD.





## TRANSFORMER PAD DETAIL

NOT TO SCALE

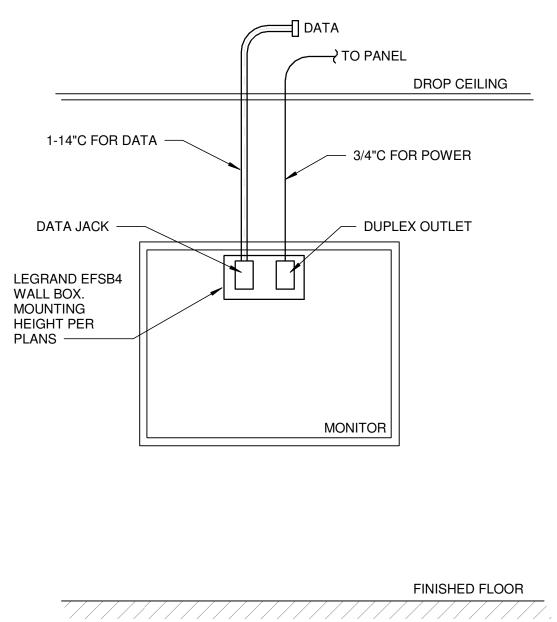


FLUSH MOUNTED INFORMATION OUTLET: 1 BOX, 2 JACKS, 2 CABLES, 1 CONDUIT PER INFORMATION OUTLET. ROUTE UP THROUGH WALL AND STUB ABOVE CEILING. CAP, TAG, AND IDENTIFY ALL CONDUIT. PROVIDE PULLWIRE IN ALL CONDUIT. PULLWIRE TO REMAIN AFTER CABLE INSTALLATION. TWO JACKS AND CABLES UNLESS OTHERWISE NOTED.



## TYPICAL INFORMATION OUTLET

NOT TO SCALE



MONITOR DETAIL

NOT TO SCALE



# FLOOR BOX AND MONITOR DETAIL NOT TO SCALE

**─**□DATA

1-1/4"C FOR DATA -

LEGRAND RFB4-OG

FLOOR BOX. REF 1-E4.0. —

DATA JACK

LEGRAND EFSB4

WALL BOX.

MOUNTING

PLANS. -

HEIGHT PER

—∫ TO PANEL

√ 3/4"C FOR POWER

- 3/4"C FOR POWER

- 1-1/2"C FOR DATA AND AV

TO MONITOR.

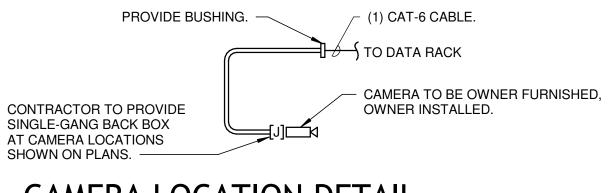
CONNECTION FROM FLOOR BOX

FINISHED FLOOR

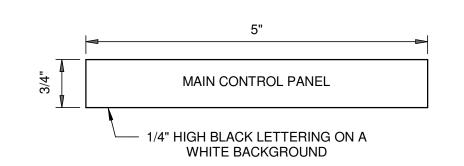
MONITOR

DROP CEILING

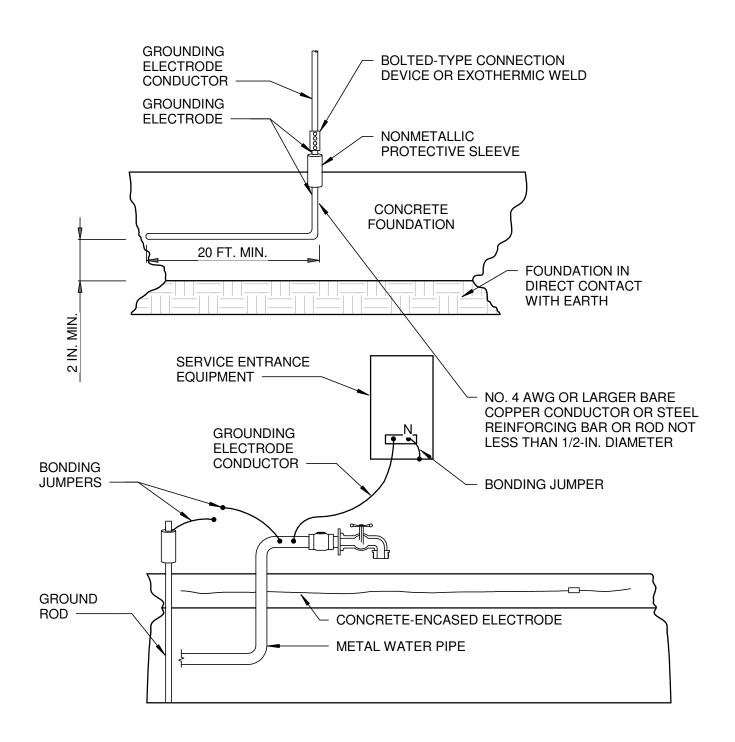
- DUPLEX OUTLET



# CAMERA LOCATION DETAIL



# NAMEPLATE DETAIL NOT TO SCALE



#### **GROUND GRID NOTES:**

- INSTALL 1/0 AWG STRANDED BARE SOFT DRAWN COPPER (BSDC) WIRE AND BOND GROUND TO REINFORCING STEEL BAR IN CONCRETE STRUCTURE FOOTING.
- MAKE ALL CONNECTIONS USING EXOTHERMIC WELDING (CADWELD) **PROCESS**
- INSTALL 3/4" CONDUIT WITH (1)-#1/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR BETWEEN BUILDING STEEL COLUMN AND GROUND. REMOVE PAINT DOWN TO BARE AND BOND GROUND TO STEEL WITH MECHANICAL LUG. REPAINT AFTER INSTALLATION IS COMPLETE.







IF, DURING DEMOLITION, IT BECOMES NECESSARY TO TEMPORARILY REMOVE ANY EQUIPMENT, PIPING, OR OTHER SYSTEM WHICH IS NOT SPECIFICALLY NOTED TO BE REMOVED. (THEREBY IMPLYING THAT THEY ARE TO BE LEFT FOR FUTURE USE), THE CONTRACTOR SHALL REINSTALL SAID SYSTEMS TO FULLY OPERABLE CONDITION IN THEIR ORIGINAL LOCATIONS.

ALL DEMOLITION WORK SHALL BE SCHEDULED WITH THE OWNER'S REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO THE WORK.

PATCH ALL OPENINGS IN WALLS, FLOORS, AND CEILINGS WHERE DUCT, PIPING, AND CONTROLS HAVE BEEN REMOVED TO MATCH EXISTING. ANY DAMAGE TO THE OWNER'S PROPERTY, BUILDING, EXISTING SYSTEMS, OR EQUIPMENT RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY

THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER. MAINTAIN THE SECURITY OF THE BUILDING AT ALL TIMES.

REMOVE EXISTING CONTROL SYSTEMS SERVING DEMOLISHED HVAC EQUIPMENT UNLESS OTHERWISE NOTED. REMOVE ALL EXISTING SUPPORTS ASSOCIATED WITH EQUIPMENT, DUCTWORK, AND PIPE BEING REMOVED UNLESS NOTED OTHERWISE.

DISPOSE OF ALL REMOVED EQUIPMENT AS DIRECTED BY THE OWNER.

CONTRACTOR SHALL COORDINATE REMOVAL OF UTILITY SERVICES WITH UTILITY COMPANIES AND LOCAL AUTHORITIES AND PAY ALL FEES.

SCHEDULE UTILITY WORK WITH OWNER TO KEEP TO A MINIMUM ACCEPTABLE DOWNTIME AND TO NOT INTERFERE WITH THE BUILDING OPERATIONAL SCHEDULE, IF POSSIBLE.

MAINTAIN THE FIRE AND SMOKE CONSTRUCTION INTEGRITY OF THE EXISTING BUILDINGS. DO NOT VENT REFRIGERANT TO ATMOSPHERE. RECOVER REFRIGERANT FOR REUSE USING ASHRAE RECOMMENDED PROCEDURES.

IF DURING THE COURSE OF THE WORK MATERIAL WHICH MAY CONTAIN ASBESTOS IS DISCOVERED, STOP WORK IMMEDIATELY AND COMPLY WITH EPA REGULATIONS TO PROTECT WORKERS AND OCCUPANTS. NOTIFY OWNER AND ENGINEER.

ALL UNDERGROUND PIPING WHICH IS SHOWN TO BE TAKEN OUT OF SERVICE SHALL BE REMOVED TO POINTS INDICATED, AND REMAINING PIPE SHALL BE PURGED AND PLUGGED. EXISTING EQUIPMENT SHALL BE RELOCATED AS NECESSARY FOR THE INSTALLATION OF THE NEW SYSTEMS. METHODS AND POSITIONS OF THE RELOCATIONS SHALL HAVE PRIOR

APPROVAL OF THE ARCHITECT. DEMOLITION AND SHUTDOWN OF EXISTING HVAC SYSTEMS SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE AND PLANNED TO LIMIT INCONVENIENCE AND DISRUPTION OF

BUILDING OPERATIONS AS MUCH AS POSSIBLE. WORK SHALL BE PHASED ACCORDINGLY. PLUMBING OR HVAC WORK REQUIRED IN OCCUPIED AREAS SHALL BE SCHEDULED WITH THE SPECIAL CARE SHALL BE TAKEN ON THE EXISTING ROOFS TO PREVENT DAMAGE. ANY DAMAGE SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER. COMPLY WITH BONDING

REQUIREMENTS OF EXISTING ROOF.

DEMOLITION AND SHUTDOWN OF EXISTING HVAC SYSTEMS THAT WILL AFFECT PORTIONS OF THE BUILDING OUTSIDE OF PROJECT AREA SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE AND PLANNED TO LIMIT INCONVENIENCE AND DISRUPTION OF BUILDING OPERATIONS AS MUCH AS POSSIBLE. WORK SHALL BE PHASED ACCORDINGLY.

#### **MECHANICAL GENERAL NOTES**

- ALL MECHANICAL WORK SHALL COMPLY WITH ALL LOCAL CODES, DRAWINGS, SPECIFICATIONS, AND AUTHORITIES HAVING JURISDICTION. IF DISCREPANCIES ARE FOUND, THE MOST STRINGENT REQUIREMENT SHALL GOVERN WORK. WHERE INSPECTIONS ARE REQUIRED BY AUTHORITIES HAVING JURISDICTION, WORK MUST NOT BE CONCEALED UNTIL INSPECTIONS AND TESTING ARE COMPLETE AND WORK IS ACCEPTED.
- REFER TO SPECIFICATIONS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO ALL PROJECT DRAWINGS FOR DETAILS OF CONSTRUCTION AND INSTALLATION REQUIREMENTS PRIOR TO BID, CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE REQUIREMENTS OF THESE NOTES AS WELL AS OTHER NOTES SHOWN ON THE CONTRACT DOCUMENTS.
- THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIED REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS INFLUENCED THE DESIGNS OF OTHER TRADES. IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID OR SUBMITTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATED WITH THE SUBSTITUTION SHALL BE INCLUDED IN THE BID.
- COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER WITHIN THE WARRANTY PERIOD, SHALL BE REMOVED
- COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT.
- INFORMATION AND COMPONENTS ON DETAILS OR IN SPECIFICATIONS, BUT NOT SHOWN ON PLANS, AND VICE VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. CONTRACTOR SHALL NOT SCALE DRAWINGS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY THE CONTRACT DOCUMENTS. EXACT LOCATIONS OF ALL EQUIPMENT, ROOF CURBS, DUCTS, DIFFUSERS, AND PIPING SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING, AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL REQUIREMENTS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND
- LIGHTING LAYOUT FOR COORDINATION OF FINAL DIFFUSER LOCATIONS. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS. COORDINATE PLACEMENT OF MECHANICAL SYSTEMS WITH ARCHITECTURAL TRADES CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES. REFER TO ALL CONSTRUCTION DOCUMENTS FOR COMPLETE INFORMATION PRIOR
- ALL MECHANICAL CONSTRUCTION DETAILS SHALL BE AS SHOWN AND AS REQUIRED TO MAINTAIN "UL" ASSEMBLY RATINGS AS SHOWN ON ARCHITECTURAL SHEETS. SEAL AROUND ALL
- PENETRATIONS THROUGH UL RATED ASSEMBLIES, FIRE AND SMOKE WALLS. COORDINATE WITH GENERAL CONTRACTOR. NO OTHER TRADES, I.E., ELECTRICAL, CEILING, PLUMBING, OR OTHER SYSTEMS SHALL BE SUSPENDED, HUNG, OR SUPPORTED FROM DUCTWORK OR PIPING SPECIAL CARE SHALL BE TAKEN ON EXISTING ROOFS TO PREVENT DAMAGE. ANY DAMAGE SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER. COMPLY WITH BONDING
- REQUIREMENTS OF EXISTING ROOF.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FLASHING AND SEALING OF ALL ROOF PENETRATIONS AIR AND WATER TIGHT CLOSELY COORDINATE FINAL LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY FOR MAINTENANCE PURPOSES
- CONTRACTOR SHALL VISIT THE SITE TO ESTABLISH THE EXISTING CONDITIONS PRIOR TO DUCT, PIPE OR EQUIPMENT FABRICATION. SYSTEMS SHALL BE ERECTED USING FIELD MEASUREMENTS FOR COORDINATION WITH THE EXISTING EQUIPMENT, STRUCTURE, FIRE PROTECTION AND ELECTRICAL IN THE SPACE.
- MAINTAIN THE SECURITY OF THE BUILDING AT ALL TIMES CORE DRILL ALL PIPING PENETRATIONS OF CONCRETE WALLS AND FLOORS
- ALL HVAC WORK TO BE PER SMACNA AND ALL APPLICABLE CODES. DUCT SIZES REPRESENT FREE AREA.
- ALL LOW PRESSURE DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE OFFSET WITH TWO 45 DEGREE. 1.5 RADIUS ELBOWS UNLESS OTHERWISE NOTED. PROVIDE ACCESS DOORS IN WALLS, FLOORS, OR CEILINGS FOR ACCESS TO ALL FIRE DAMPERS, SMOKE DAMPERS, EQUIPMENT, COILS, VALVES, AND BALANCING DAMPERS. ACCESS DOORS ARE NOT REQUIRED WHERE DEVICES ARE DIRECTLY ACCESSIBLE THROUGH AIR DEVICES.
- PROVIDE FIRE DAMPERS AND SMOKE DAMPERS IN ALL RATED WALLS AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION. SEAL AROUND ALL PENETRATIONS OF RATED WALLS,
- CHASES, CEILINGS, AND FLOORS TO MAINTAIN THE FIRE/SMOKE RATING OF THE ASSEMBLY. ALL DUCTWORK UPSTREAM OF VAV BOXES SHALL BE CONSIDERED "MEDIUM-PRESSURE DUCT".
- DUCT FITTINGS ARE AS FOLLOWS: 1) FLEX DUCT IS ONLY PERMITTED IN LINEAR DUCT RUNS. FLEX DUCT SHALL NOT BE USED WHERE DUCTWORK CHANGES DIRECTION. ALL ELBOWS SHALL BE HARD DUCTED. 2) ALL 90 DEGREE ELBOWS TO HAVE R/D = 1.5, UNLESS OTHERWISE NOTED. 3) ALL MITERED RECTANGULAR ELBOWS GREATER THAN 90 DEGREES NOTED ARE TO HAVE TURNING VANES. 4) SIDE TAKE-OFF FITTINGS SHALL BE EQUAL TO FLEXMASTER STODB03. 5) DAMPERS SHALL BE EQUAL TO FLEXMASTER SLDB03
- PROVIDE BRANCH TAKEOFF AND DAMPER AT EACH CONNECTION OF ROUND OR RECTANGULAR BRANCH DUCTS TO A RECTANGULAR DUCT, SEE DETAILS REFER TO ARCHITECTURAL PLANS FOR LOCATION OF FIRE AND SMOKE WALLS.
- MAINTAIN A MINIMUM OF 10'-0" BETWEEN ALL FRESH AIR INTAKES AND PLUMBING VENTS, EXHAUST FAN DISCHARGE, AND FLUES. MAINTAIN MINIMUM CLEAR DISTANCE OF 5'0" BETWEEN PARAPET WALL AND ALL ROOF MOUNTED MECHANICAL EQUIPMENT.
- ALL ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED WITH MANUFACTURER'S FABRICATED CURBS WHICH FACILITATE LEVEL MOUNTING OF THE EQUIPMENT (I.E. FACTORY FABRICATED TO COMPENSATE FOR ROOF SLOPE). OBTAIN ROOF SLOPES AND DIRECTION OF SLOPE FROM ARCHITECTURAL AND/OR STRUCTURAL PLANS. ALL ROOF CURBS SHALL BE A MINIMUM OF 8" HIGH. SHIMMING OF CURBS IS NOT ACCEPTABLE.
- ROOF PENETRATIONS AND FLASHING OR SEALING MUST COMPLY WITH ROOF MANUFACTURER'S RECOMMENDATIONS AND WARRANTY REQUIREMENTS. ALL DUCTS SHALL BE MOUNTED HIGH AS POSSIBLE AGAINST BOTTOM OF STRUCTURE EXCEPT AS REQUIRED TO AVOID CONFLICTS WITH INTERSECTING SYSTEMS. DIAGONALLY OFFSET
- DUCTS IMMEDIATELY BEFORE AND AFTER PASSING UNDER INTERSECTING SYSTEMS TO MAINTAIN DUCT TIGHT TO STRUCTURE. CONTRACTOR SHALL FIELD VERIFY ALL PIPE ROUTING AND ADJUST ELEVATIONS AS REQUIRED TO AVOID CONFLICTS. FINAL PLACEMENT OF PIPING SHALL BE DETERMINED BY FIELD
- MEASUREMENT AND VERIFICATION. ELEVATIONS ARE REFERENCED TO PIPE CENTERLINE UNLESS OTHERWISE NOTED.
- DUCTWORK SHALL CONFORM TO THE FOLLOWING PRESSURE CLASSES: SUPPLY: 2" SP; RETURN/RELIEF/OUTSIDE AIR/EXHAUST: 2" SP. ALL DUCTWORK IS REQUIRED TO BE TESTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL EQUIPMENT, DEVICES, AND FIXTURES SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.
- CONTRACTOR SHALL VERIFY CLOSELY AT SITE TRANSPORTATION OF NEW HVAC EQUIPMENT INTO MECHANICAL AREAS BEFORE BIDDING. PROVIDE COMPLETE DISASSEMBLY AND RE-ASSEMBLY OF NEW EQUIPMENT AS REQUIRED FOR A COMPLETE INSTALLATION.
- PROVIDE FLEXIBLE CONNECTIONS AND TRANSITIONS ON DUCT INLET AND OUTLET CONNECTIONS TO ALL EQUIPMENT WITH MOVING PARTS.
- DUCTWORK VISIBLE THROUGH RETURN AIR OPENINGS SHALL BE PAINTED FLAT BLACK TO REDUCE VISIBILITY. EXPOSED DUCTWORK AND PIPING SHALL BE FURNISHED SUITABLE FOR PAINTING, AND SHALL BE PAINTED AS REQUIRED BY ARCHITECTURAL SPECIFICATIONS.
- NOT ALL REQUIRED PIPING, VALVES, OR FITTINGS ARE SHOWN ON DRAWINGS FOR CLARITY. COORDINATE PLAN DETAILS WITH SPECIFICATIONS, SCHEMATICS, FLOW DIAGRAMS, AND
- OTHER DETAILS TO PROVIDE COMPLETE PIPING SYSTEMS. COORDINATE WORK CLOSELY WITH CONTROL REQUIREMENTS. PROVIDE ALL NECESSARY DUCT TAPS, PIPE TAPS, WELLS, AND OTHER APPURTENANCES REQUIRED BY CONTROL
- SYSTEM. PROVIDE SPARE PIPE WELL ADJACENT TO EACH TEMPERATURE SENSOR IN PIPING. REFER TO ARCHITECTURAL PLANS FOR CEILING GRILLE AND DIFFUSER LOCATIONS, FOR CEILING TYPE, AND FOR MOUNTING REQUIREMENTS. CONTRACTOR SHALL PROVIDE AND INSTALL ALL AIR DEVICES WITH MOUNTING SYSTEM DESIGNED FOR MOUNTING SURFACE TYPE.
- COORDINATE FINAL PLACEMENT OF ALL THERMOSTATS WITH WALL-MOUNTED DEVICES AND OWNER'S REPRESENTATIVE. MOUNT PER A.D.A. REQUIREMENTS. ANY THERMOSTAT THAT IS REQUIRED TO BE MOUNTED ON AN EXTERIOR WALL SHALL BE MOUNTED ON AN INSULATED PAD.
- INSTALL SMOKE DETECTOR IN SUPPLY AND RETURN DUCT OF ALL AIR HANDLERS SUPPLYING GREATER THAN 2,000 CFM.
- PROVIDE CONCRETE PADS FOR ALL GROUND MOUNTED EQUIPMENT.
- REPLACE ALL ARCHITECTURAL FEATURES REMOVED OR DAMAGED DURING THE COURSE OF THE WORK. CONTRACTOR SHALL PATCH ALL WALLS, FLOORS, AND CEILINGS TO MATCH NEW FOR ALL OPENINGS CREATED BY INSTALLATION OF EQUIPMENT AND HVAC SERVICE PENETRATIONS.
- ALL SUPPLY, RETURN, RELIEF, AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED EXCEPT WHERE LINER, DOUBLE WALL LINED DUCT, OR FABRIC DUCT IS INDICATED. INSULATE TOPS OF SUPPLY AIR DIFFUSERS WITH 2" THICK FIBERGLASS DUCT WRAP.
- REFER TO SPECIFICATIONS FOR INSULATION AND R-VALUES FOR MECHANICAL PIPING AND DUCTWORK INSULATION. SEE ARCHITECTURAL PLANS FOR ROOF PENETRATION DETAILS. ALL HVAC COMPONENTS WITH ELECTRICAL REQUIREMENTS SHALL BE INSTALLED WITH ELECTRICAL INFRASTRUCTURE NECESSARY TO PROVIDE A FULLY FUNCTIONING SYSTEM. IF NOT
- SPECIFICALLY SHOWN ON ELECTRICAL SCHEDULE, HVAC FIXTURES REQUIRING ELECTRICAL SERVICE SHALL BE FED FROM BREAKER OF ADEQUATE CAPACITY. ALL CONTROL WIRING SHALL BE INSTALLED IN CONDUIT. PLENUM CABLING SHALL HAVE ITS OWN SYSTEM OF SUPPORT AND BE STRUCTURALLY SOUND. ATTACHMENT TO CEILING GRID AND HANGER WIRES IS PROHIBITED. WHERE NOT
- INSTALLED IN CONDUIT, CABLING SHALL BE RUN IN CABLE HOOKS. CABLING LAYING ON CEILING TILES IS PROHIBITED.
- CONTRACTOR SHALL PROVIDE FURR DOWN AND ANY OTHER CEILING MODIFICATIONS NEEDED TO ACCOMMODATE DUCTWORK PENETRATIONS. PROVIDE ALL HVAC UNITS WITH AN EXTRA SET OF MANUFACTURER'S RECOMMENDED FILTERS AFTER PROJECT COMPLETION.
- REFER TO STRUCTURAL ENGINEERING CONTRACT DOCUMENTS FOR PROJECT SEISMIC DESIGN CRITERIA. PROVIDE VIBRATION ISOLATION AND SEISMIC RESTRAINT SYSTEMS EQUIPMENT, DUCTWORK, AND PIPING AS REQUIRED.

#### **HVAC LEGEND ABBREVIATION OR SYMBOL** ABBREVIATION OR SYMBOL ABBREVIATION OR SYMBOL DESCRIPTION **DESCRIPTION DESCRIPTION NEW EQUIPMENT** CEILING SUPPLY DIFFUSER AIR HANDLING UNIT **EXISTING EQUIPMENT TO REMAIN** ABOVE FINISHED FLOOR **ACCESS PANEL** CEILING RETURN/EXHAUST GRILLE **BRAKE HORSEPOWER** BRITISH THERMAL UNIT PER HOUR CFM CUBIC FEET PER MINUTE GRILLE OR REGISTER ON BOTTOM OF EXISTING EQUIPMENT TO BE REMOVED COMPUTER ROOM AIR CONDITIONING UNIT **DUCTWORK** DRY BULB TEMPERATURE **NEW DUCT** 18/12 SA EAT ENTERING AIR TEMPERATURE OF THE COIL SIDEWALL SUPPLY (RETURN SIMILAR) EXTERNAL STATIC PRESSURE **ESP** EXISTING DUCT TO REMAIN ENTERING WATER TEMPERATURE EWT FAN COIL UNIT 18/12 RECTANGULAR DUCT WITH DUCT SIZE TAG **DEMOLISH EXISTING DUCT** FLAT OVAL BACK TO POINT. FEET PER MINUTE (VELOCITY) 20ø ROUND DUCT WITH DUCT SIZE TAG GPM GALLONS PER MINUTE HORSEPOWER HP CONNECT TO EXISTING DUCT. KILOWATT KW 20/14Ф OVAL DUCT WITH DUCT SIZE TAG LEAVING AIR TEMPERATURE OF THE COIL LEAVING WATER TEMPERATURE MAKE-UP AIR UNIT MAX MAXIMUM × 24/24 SA SUPPLY DUCT UP MOTOR HORSEPOWER MHP NTS NOT TO SCALE OSA **OUTSIDE AIR** AIR DEVICE DESIGNATION × 24/24 SA SUPPLY DUCT DOWN POUNDS PER SQUARE INCH RETURN AIR AIR DEVICE RELATIVE HUMIDITY 24/24 RA RPM REVOLUTION PER MINUTE RETURN DUCT UP RTU ROOF TOP (AIR CONDITIONING) UNIT SA SUPPLY AIR STATIC PRESSURE 24/24 RA RETURN DUCT DOWN TYP **TYPICAL** VARIABLE AIR VOLUME VAV WET BULB TEMPERATURE EXHAUST DUCT UP 24/24 EA **XFR** TRANSFER AIR **INCHES** > 24/24 EA EXHAUST DUCT DOWN **ROUND DUCT** OVAL DUCT 18/18Ф 24/12 RECTANGULAR/OVAL TRANSITION 18ø 24/12 RECTANGULAR/ROUND TRANSITION DETAIL/SECTION NUMBER FLEXIBLE DUCT CONNECTION DETAIL/SECTION DESIGNATION (1) FIRE DAMPER (2) SMOKE DAMPER acksim Sheet NUMBER (4) CONTROL DAMPER THERMOSTAT OR SENSOR, (SUBSCRIPT DESIGNATES CONTROLLED EQUIPMENT) (1) BALANCING DAMPER (2) SMOKE DETECTOR KEYED NOTE BALANCING DAMPER, SET TO INDICATED CFM

\* NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT





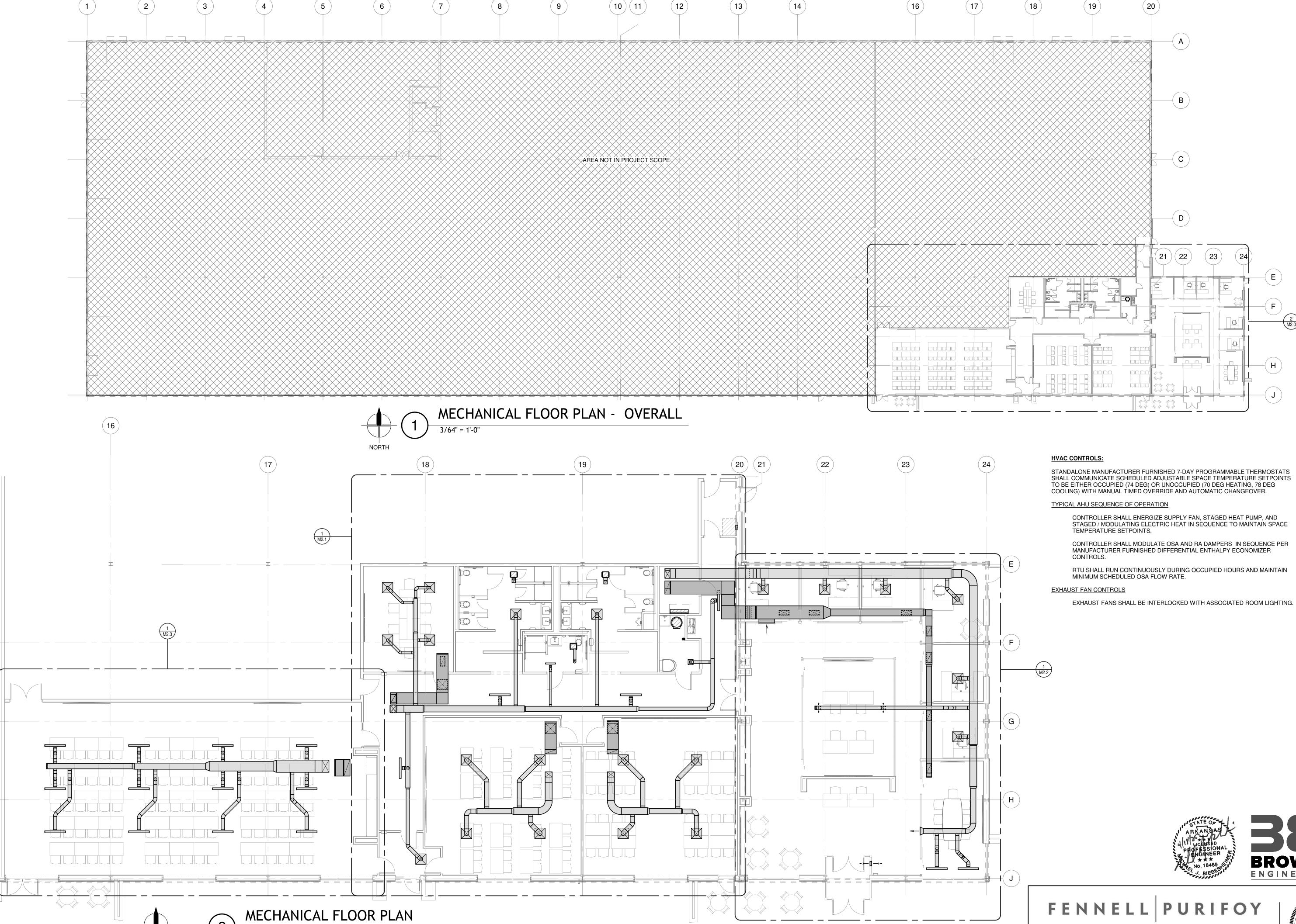


CENTER





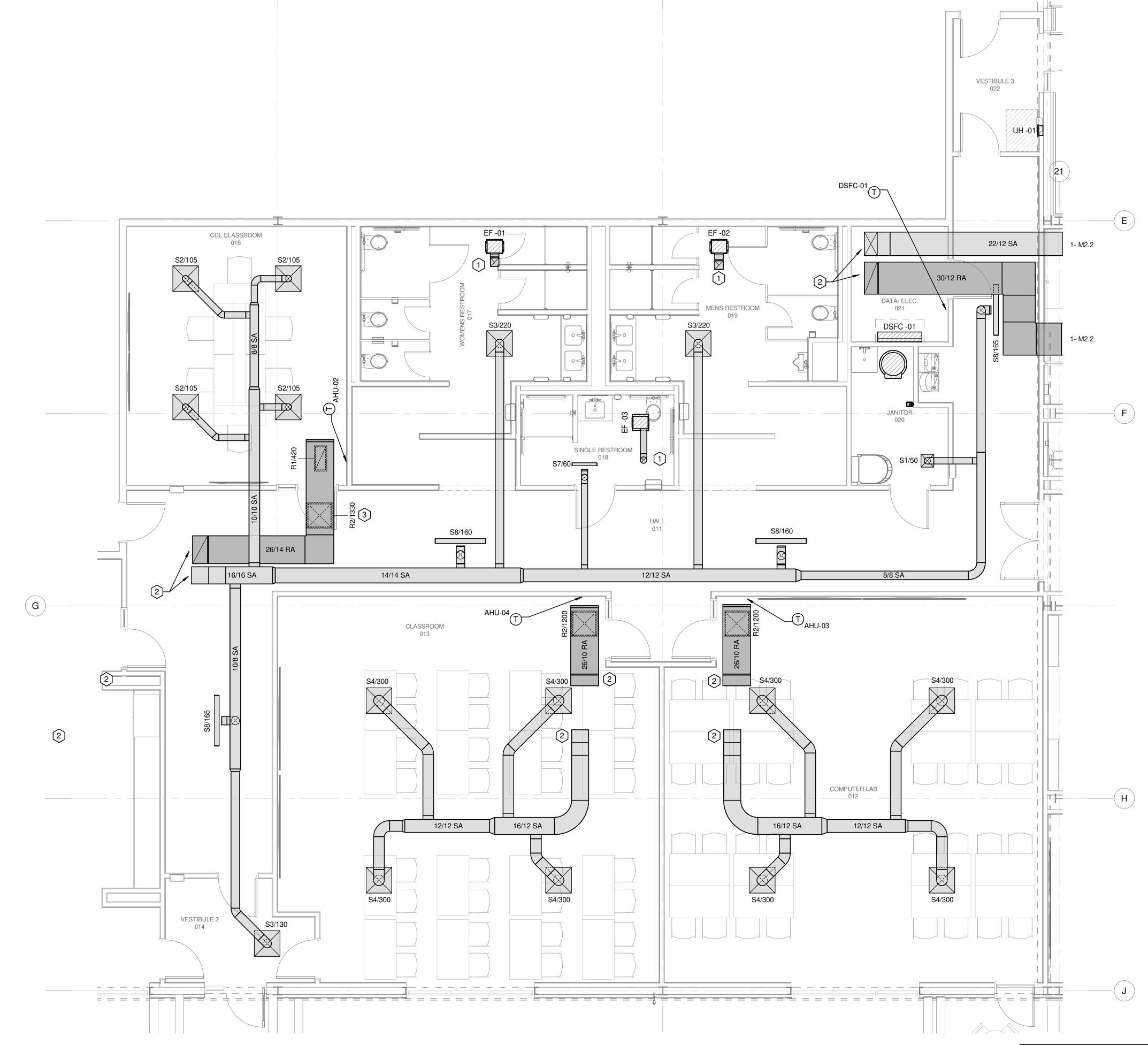
ARCHITECTS



- THERMOSTATS SHALL BE MOUNTED NEXT TO LIGHT SWITCH OF ASSOCIATED ROOM PER ADA REQUIREMENTS. ALIGN TOP OF THERMOSTAT WITH TOP OF LIGHT SWITCH FACE PLATE. MOUNT ALL WALL-MOUNTED MINI-SPLIT FAN COILS AT
- APPROX. 8'-0" A.F.F. ADJUST HEIGHT AS REQUIRED FOR COORDINATION WITH OTHER SYSTEMS IN ROOM. PROVIDE MANUAL BALANCING DAMPERS AT EACH TAKEOFF
- AND FINAL TRANSITION FROM DUCT MAIN. REFER TO MECHANICAL DETAILS FOR FURTHER REQUIREMENTS. ALL EXPOSED DUCT IN INTERIOR SPACES SHALL BE LINED AND SUITABLE FOR PAINTING. COORDINATE FINISH WITH
- ALL THERMOSTATS, INCLUDING THOSE ASSOCIATED WITH MINI-SPLITS, SHALL BE HARD-WIRED AND WALL-MOUNTED. ADJUST LINEAR SLOT DIFFUSERS FOR VERTICAL THROW.

## # KEYED NOTES:

- UP TO FAN MANUFACTURER FURNISHED ROOF JACK UP TO AHU ON ROOF.
- INSTALL GRILLE IN ACT ABOVE SUSPENDED GYP CEILING.



19











## HVAC -- BRANCH DUCT CONNECTION SIZES

## \*\*Note: For Rectangular Ducts, shortest dimension reflects depth

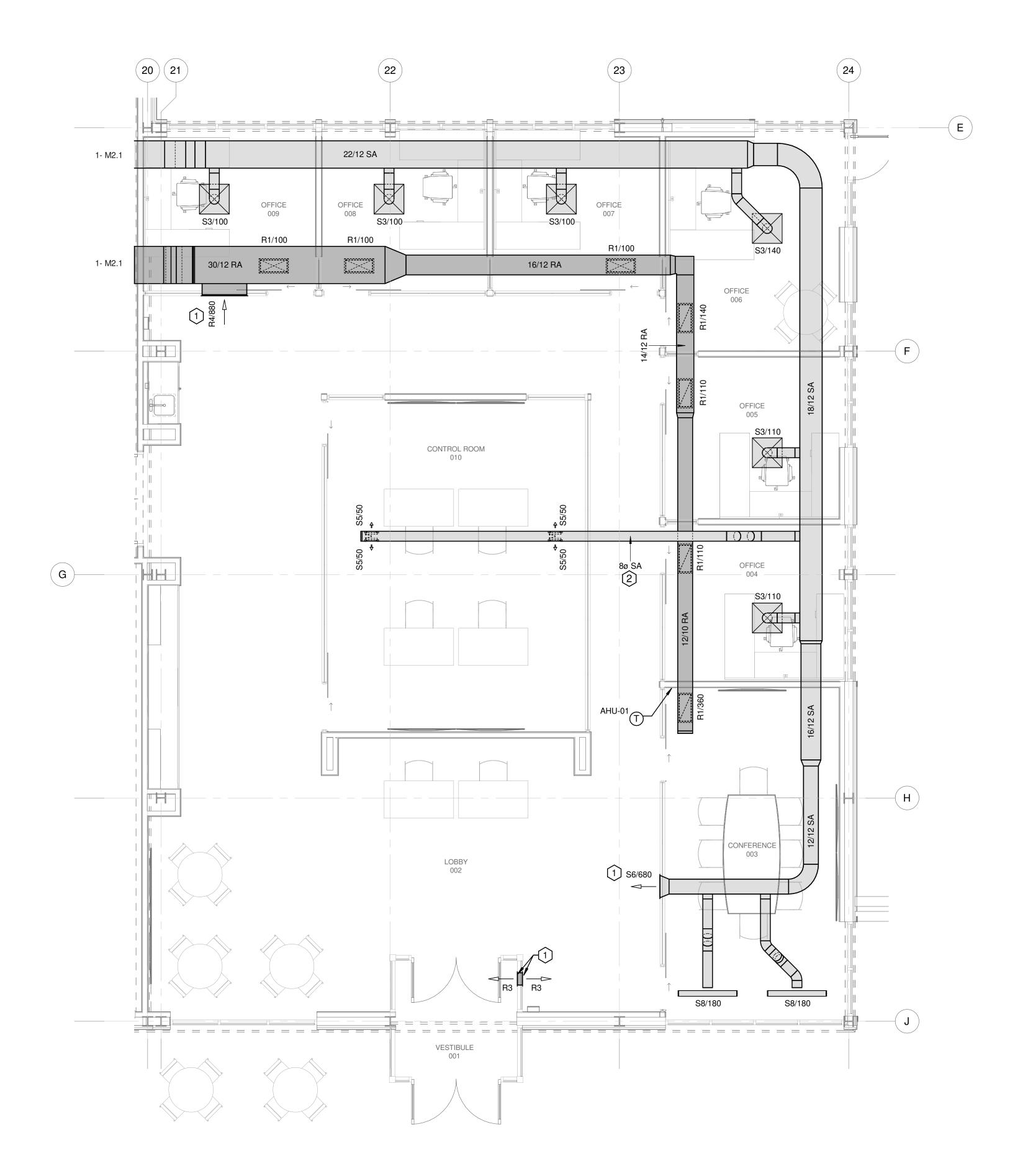
uni	less otherwise n	oted on plans.	
DESIGNATION	INLET Ø	INLET HT.	INLET W.
S1	6"		
S2	6"		
S3	8"		
S4	10"		
S5		3"	10"
S6		12"	18"
S7	6"		
S8	8"		
R1		10"	22"
R2		22"	22"
R3		6"	10"
R4		6"	36"

#### **GENERAL NOTES:**

- THERMOSTATS SHALL BE MOUNTED NEXT TO LIGHT SWITCH OF ASSOCIATED ROOM PER ADA REQUIREMENTS. ALIGN TOP OF THERMOSTAT WITH TOP OF LIGHT SWITCH FACE PLATE.
- MOUNT ALL WALL-MOUNTED MINI-SPLIT FAN COILS AT APPROX. 8'-0" A.F.F. ADJUST HEIGHT AS REQUIRED FOR COORDINATION WITH OTHER SYSTEMS IN ROOM.
- PROVIDE MANUAL BALANCING DAMPERS AT EACH TAKEOFF AND FINAL TRANSITION FROM DUCT MAIN. REFER TO MECHANICAL DETAILS FOR FURTHER
- ALL EXPOSED DUCT IN INTERIOR SPACES SHALL BE LINED AND SUITABLE FOR PAINTING. COORDINATE FINISH WITH ARCHITECT.
- ALL THERMOSTATS, INCLUDING THOSE ASSOCIATED WITH MINI-SPLITS, SHALL BE HARD-WIRED AND WALL-MOUNTED.
- ADJUST LINEAR SLOT DIFFUSERS FOR VERTICAL THROW.

## # KEYED NOTES:

- INSTALL SIDEWALL GRILLES 11'-0" AFF.
- ROUTE LINED SUPPLY AIR DUCT AT 12'-6" AFF.







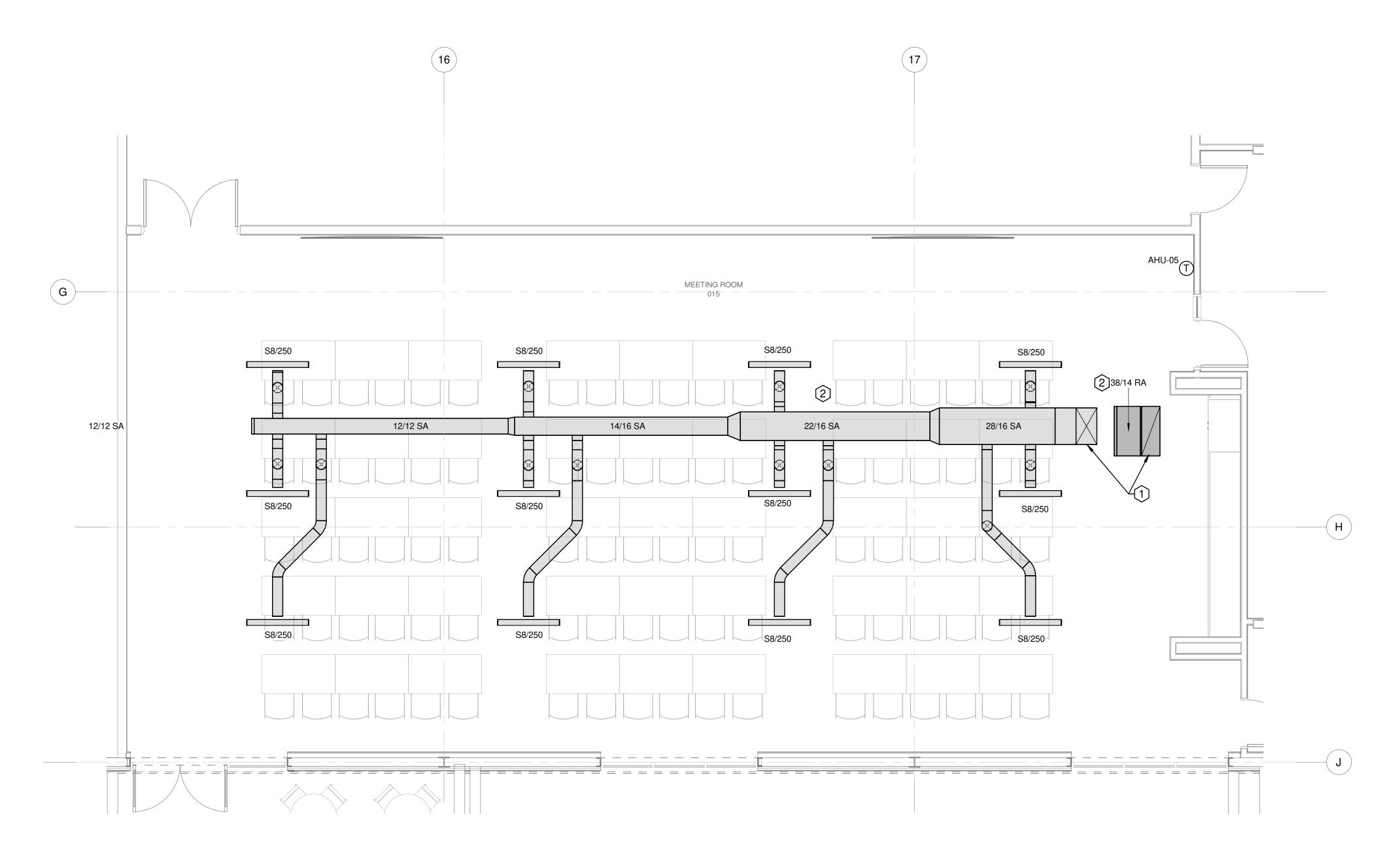


HVAC BRA	NCH DUCT	CONNECTIO	ON SIZES
**Note: For Rectang	gular Ducts, sh ess otherwise r		reflects dept
DESIGNATION	INLET Ø	INLET HT.	INLET W.
S1	6"		
S2	6"		
S3	8"		
S4	10"		
S5		3"	10"
S6		12"	18"
S7	6"		
S8	8"		
R1		10"	22"
R2		22"	22"
R3		6"	10"
R4		6"	36"

- OF THERMOSTAT WITH TOP OF LIGHT SWITCH FACE PLATE.
- MOUNT ALL WALL-MOUNTED MINI-SPLIT FAN COILS AT APPROX. 8'-0" A.F.F. ADJUST HEIGHT AS REQUIRED FOR
- PROVIDE MANUAL BALANCING DAMPERS AT EACH TAKEOFF AND FINAL TRANSITION FROM DUCT MAIN. REFER TO
- AND SUITABLE FOR PAINTING. COORDINATE FINISH WITH
- MINI-SPLITS, SHALL BE HARD-WIRED AND WALL-MOUNTED. ADJUST LINEAR SLOT DIFFUSERS FOR VERTICAL THROW.

## # KEYED NOTES:

- ROUTE LINED SUPPLY DUCT MAIN BELOW STRUCTURE AT 17'-0" AFF. CONCEAL BRANCH DUCT RUNOUTS ABOVE SUSPENDED CEILING PANELS.







ENLARGED HVAC PLAN - MEETING ROOM

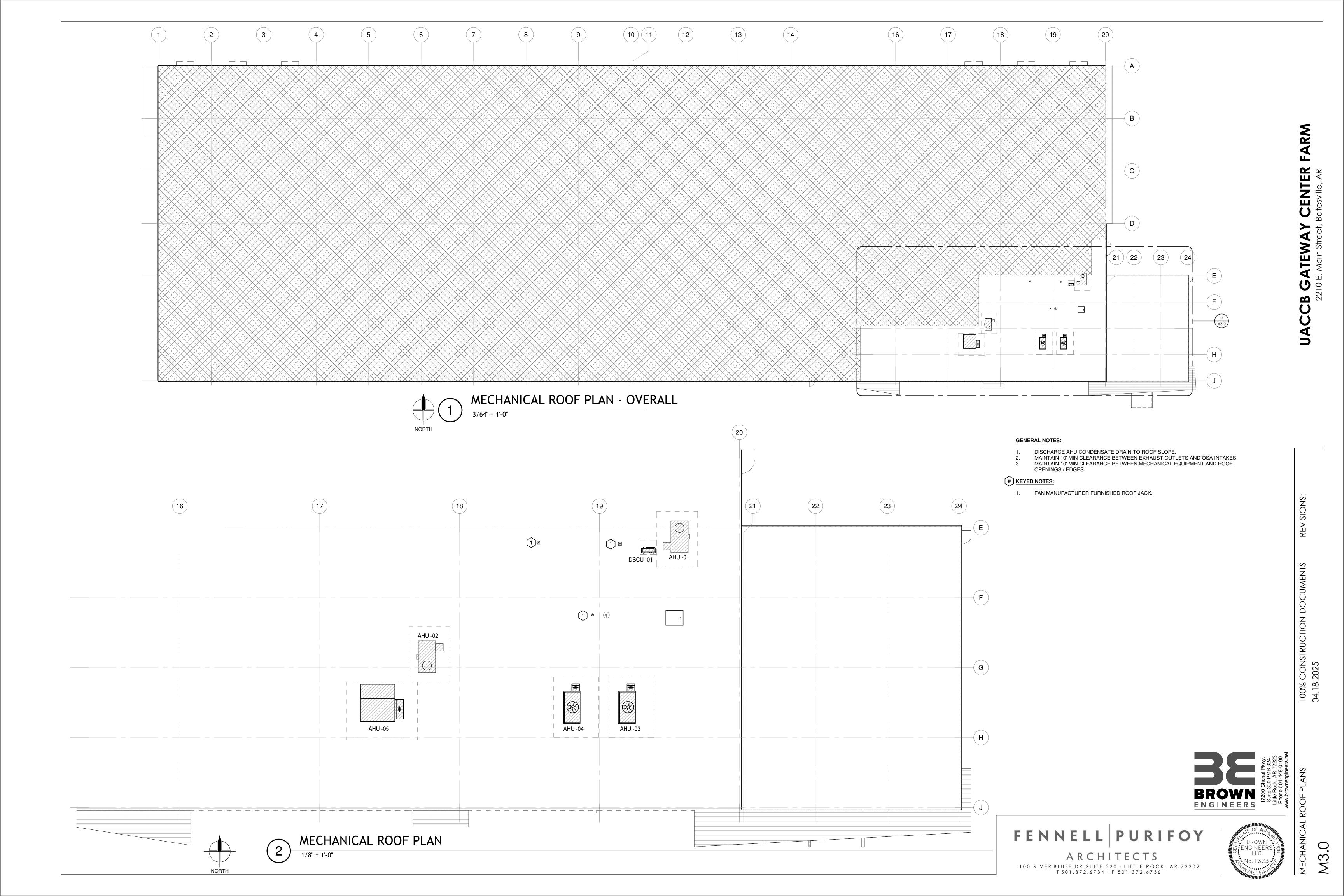
100 RIVER BLUFF DR. SUITE 320 · LITTLE ROCK, AR 72202 T 501.372.6734 · F 501.372.6736

BROWN ENGINEERS

# THERMOSTATS SHALL BE MOUNTED NEXT TO LIGHT SWITCH OF ASSOCIATED ROOM PER ADA REQUIREMENTS. ALIGN TOP

- COORDINATION WITH OTHER SYSTEMS IN ROOM.
- MECHANICAL DETAILS FOR FURTHER REQUIREMENTS. ALL EXPOSED DUCT IN INTERIOR SPACES SHALL BE LINED
- ALL THERMOSTATS, INCLUDING THOSE ASSOCIATED WITH

- UP TO AHU ON ROOF. INSTALL LINED RETURN DUCT AT 19'-0" AFF. PROVIDE 38/14 OPENING WITH EXPANDED METAL FACE ON TOP OF DUCT.



								HVA	C AHU	- PACK/	AGED SC	HEDULE												
DES	GNATION				AIRFL	OWS		SUPPLY FAI	N			C	COOLING DAT	A			HEATING DATA	HEATIN	G DATA		ELECTRO	CIAL DATA		
							EXTERNAL					NET	ENTI	ERING	LEA	VING		HEAT PUMP						1
						OUTSIDE AIR	STATIC			NOMINAL	NET TOTAL	SENSIBLE						CAPACITY					ı	
TYPE	MARK	DESCRIPTION	MANUFACTURER	MODEL	SUPPLY AIR	(MINIMUM)	PRESS.	(QTY) @ HF	P (QTY) @ BHP	COOLING	COOLING	COOLING	DB	WB	DB	WB	TYPE	@ 17° F	ELEC HEAT	VOLTAGE	PHASE	MCA	MOCP	REMARKS
AHU	01	STANDARD HEAT PUMP AIR HANDLING UNIT	TEMPMASTER	WN060C00A2ABQAA5A1	1,900 CFM	330 CFM	0.91 in-wg	(1) @ 1.0	(1) @ 0.98	5.0 ton	55,400 Btu/h	40,300 Btu/h	79 °F	65 °F	58 °F	55 °F	HEAT PUMP + AUX ELEC	31,800 Btu/h	20 kW	208 V	3	83.8 A	90 A	1,4,5,6,7
AHU	02	STANDARD HEAT PUMP AIR HANDLING UNIT	TEMPMASTER	WN048C00A2ABQAA5A1	1,750 CFM	150 CFM	0.83 in-wg	(1) @ 1.0	(1) @ 0.83	4.0 ton	48,500 Btu/h	35,300 Btu/h	77 °F	64 °F	57 °F	54 °F	HEAT PUMP + AUX ELEC	26,000 Btu/h	20 kW	208 V	3	81.5 A	90 A	2,4,5,6,7
AHU	03	HIGH OUTDOOR AIR HEAT PUMP AIR HANDLING UNIT	AAON	RQ-005-A-A-8-FJB02-A03MB	1,200 CFM	540 CFM	1.05 in-wg	(1) @ 1.0	(1) @ 0.65	5.0 ton	57,400 Btu/h	39,900 Btu/h	86 °F	70 °F	53 °F	53 °F	HEAT PUMP + AUX ELEC	33,900 Btu/h	15 kW	208 V	3	87.0 A	90 A	3,4,5,6,7
AHU	04	HIGH OUTDOOR AIR HEAT PUMP AIR HANDLING UNIT	AAON	RQ-005-A-A-8-FJB02-A03MB	1,200 CFM	530 CFM	1.05 in-wg	(1) @ 1.0	(1) @ 0.65	5.0 ton	57,200 Btu/h	39,800 Btu/h	86 °F	70 °F	53 °F	53 °F	HEAT PUMP + AUX ELEC	33,900 Btu/h	15 kW	208 V	3	87.0 A	90 A	3,4,5,6,7
AHU	05	HIGH OUTDOOR AIR HEAT PUMP AIR HANDLING UNIT	AAON	RNA-013-B-A-8-GJB0B-A05NA	3,000 CFM	1,400 CFM	1.05 in-wg	(1) @ 3.0	(1) @ 1.46	13.0 ton	154,300 Btu/h	105,400 Btu/h	87 °F	70 °F	52 °F	52 °F	HEAT PUMP + AUX ELEC	83,100 Btu/h	45 kW	208 V	3	170.0 A	170 A	3,4,5,6,7

PROVIDE TWO-STAGE R-454B HEAT PUMP WITH TWO-STAGE ELECTRIC AUXILLIARY HEAT, SUPPLY FAN VFD, AND DUAL ENTHALPY ECONOMIZER.

PROVIDE SINGLE-STAGE R-454B HEAT PUMP WITH TWO-STAGE ELECTRIC AUXILLIARY HEAT AND SUPPLY FAN VFD.

PROVIDE TWO-STAGE R-454B HEAT PUMP WITH MODULATING ELECTRIC AUXILLIARY HEAT, ECM SUPPLY FAN, AND DUAL ENTHALPY ECONOMIZER.

PROVIDE SEISMICALLY CERTIFIED AND WIND RATED DOWNFLOW EQUIPMENT CURB SYSTEMS.

PROVIDE WITH FIELD POWERED CONVENIENCE OUTLET, INTEGRAL DISCONNECT, DOUBLE WALL CONSTRUCTION, AND STAINLESS STEEL DRAIN PAN.

PROVIDE MERV 13- 2" PLEATED FILTERS. PROVIDE EXTRA SET OF FILTERS PER UNIT TO OWNER UPON PROJECT COMPLETION.

PROVIDE WITH BAROMETRIC RELIEF DAMPER.

		HVAC DUCTL	ESS SPLIT CO	ONDENSER SCH	EDULE							
DESIGI	NATION					ELECTRIC	CAL DATA					
TYPE	MARK	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	PHASE	MCA	MOCP				
DSCU	DSCU         01         24 MBH INVERTER HEAT PUMP         SAMSUNG         AC024DXSCCG/AA         208 V         1         26.7 A         30.0 A											
1	OUTDOOR UNI	T SHALL BE PROVIDED WITH DISCONNECT	SWITCH, SEE ELECTRIC	CAL.								

CONDENSER SHALL BE PROVIDED WITH LOW AMBIENT COOLING. CONDENSING UNIT AND INDOOR UNIT SHALL BE PROVIDED FROM SAME MANUFACTURER, AND BE FULLY COMPATIBLE WITH EACH OTHER.

PROVIDE BASIS OF DESIGN EQUIPMENT OR APPROVED ALTERNATE.

PROVIDE SCHEDULED BASIS OF DESIGN EQUIPMENT OR APPROVED EQUAL.

		HVAC DUC	TLESS SPLIT	FAN COIL SCHE	DULE								
DESIG	NATION				NOMINAL CA	APACITY	ELECTRIC	AL DATA					
TYPE	MARK	DESCRIPTION	MANUFACTURER	MODEL	TOTAL COOLING	HEATING	VOLTAGE	PHASE					
DSFC	DSFC 01 WALL HUNG FAN COIL SAMSUNG AC024DNADCG/AA 24,000 Btu/h 27,000 Btu/h 208 V 1												
1	INDOOR UNIT SHALL BE POWERED THROUGH CONDENSER												
2	ROUTE CONDENSATE DRAIN FULL SIZE AND DISCHARGE TO JANITOR MOPSINK PER MANUFACTURER'S RECOMMENDATION												
3	CONDENSING UNIT AND INDOOR UNIT SHALL BE PROVIDED FROM SAME MANUFACTURER, AND BE FULLY COMPATIBLE WITH EACH OTHER.												

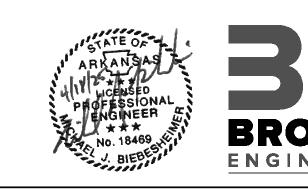
HVAC -- AIR TERMINAL SCHEDULE

PROVIDE BASIS OF DESIGN EQUIPMENT OR APPROVED ALTERNATE.

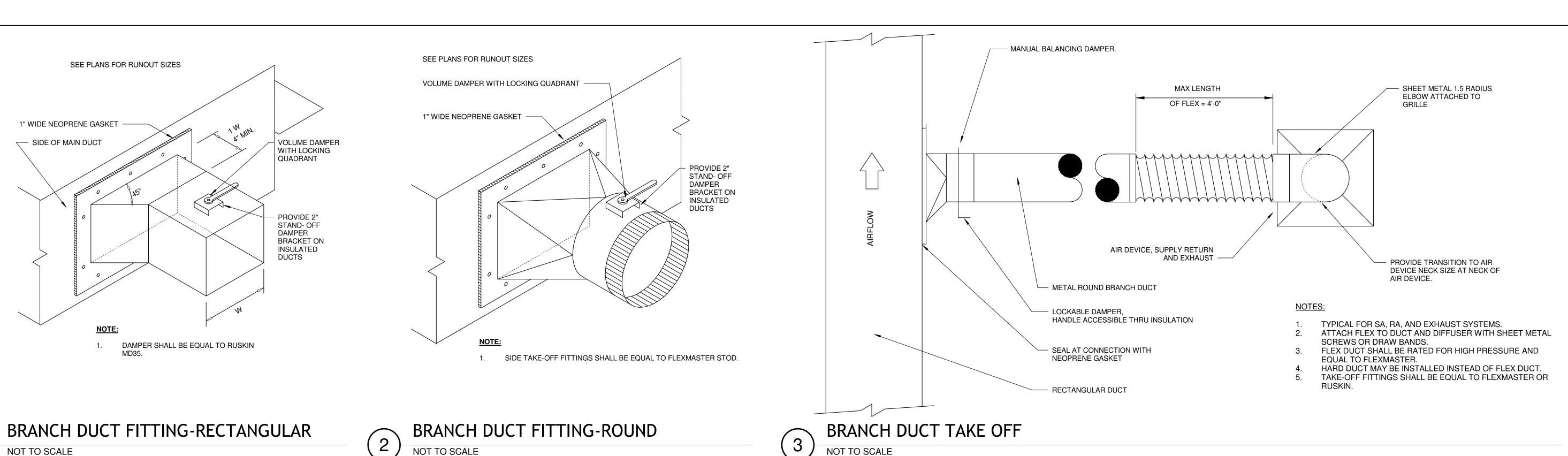
				AIRFLOW DATA		INLET SIZE		FACE	SIZE	MAX. NOISE	OPTIO	NS	
MARK	MANUFACTURER	MODEL	DESCRIPTION	MAX FLOW	DIAMETER	WIDTH	LENGTH	W	L	CRITERIA	FACE STYLE	DAMPER STYLE	MATERIAL
S1	Titus	OMNI-06-1-12x12-26	ALUMINUM SQUARE PLAQUE DIFFUSER	180 CFM	6			12"	12"	25	PLAQUE	OPPOSED BLADE	ALUMINUM
S2	Titus	OMNI-06-1-24x24-26	SQUARE PLAQUE DIFFUSER	215 CFM	6			24"	24"	25	PLAQUE	OPPOSED BLADE	STEEL
S3	Titus	OMNI-08-1-24x24-26	SQUARE PLAQUE DIFFUSER	350 CFM	8			24"	24"	25	PLAQUE	OPPOSED BLADE	STEEL
S4	Titus	OMNI-10-1-24x24-26	SQUARE PLAQUE DIFFUSER	505 CFM	10			24"	24"	25	PLAQUE	OPPOSED BLADE	STEEL
S5	Titus	S300FL	SPIRAL DUCT MOUNTED SUPPLY GRILLE	150 CFM		10"	3"	12"	5"	0	DOUBLE DEFLECTION BLADES	AIR SCOOP	ALUMINUM
S6	Titus	300FL	ADJUSTABLE DOUBLE DEFLECTION SIDEWALL SUPPLY GRILLE	840 CFM		18"	12"	20"	14"	25	DOUBLE DEFLECTION BLADES	OPPOSED BLADE	ALUMINUM
S7	Titus	TBDI-80	INSULATED PLENUM SLOT DIFFUSER , 1-SLOT, 1" SLOT WIDTH	100 CFM	6			3"	24"	25	ADJUSTABLE GASKET TIPPED BLADE	INTEGRAL	STEEL
S8	Titus	TBDI-80	INSULATED PLENUM SLOT DIFFUSER, 2-SLOT, 1" SLOT WIDTH	200 CFM	8			5"	48"	25	ADJUSTABLE GASKET TIPPED BLADE	INTEGRAL	STEEL
R1	Titus	50F	EGGCRATE RETURN GRILLE	960 CFM		22"	10"	24"	12"	25	EGGCRATE	OPPOSED BLADE	ALUMINUM
R2	Titus	50F	EGGCRATE RETURN GRILLE	2,200 CFM		22"	22"	24"	24"	25	EGGCRATE	OPPOSED BLADE	ALUMINUM
R3	Titus	350FL	35° DEFLECTION SIDEWALL RETURN GRILLE	230 CFM		10"	6"	12"	8"	25	HORIZONTAL DEFLECTION BLADES	OPPOSED BLADE	ALUMINUM
R4	Titus	350FL	35° DEFLECTION SIDEWALL RETURN GRILLE	810 CFM		36"	6"	38"	8"	25	HORIZONTAL DEFLECTION BLADES	OPPOSED BLADE	ALUMINUM
1 2			RIBUTION DEVICES WITH MANUFACTURER'S MOUNTING SYSTEM FOR ER'S COLOR OPTIONS TO ARCHITECT BEFORE ORDERING AIR DISTRIE		DEVICE SHALL	BE MOUNTED							

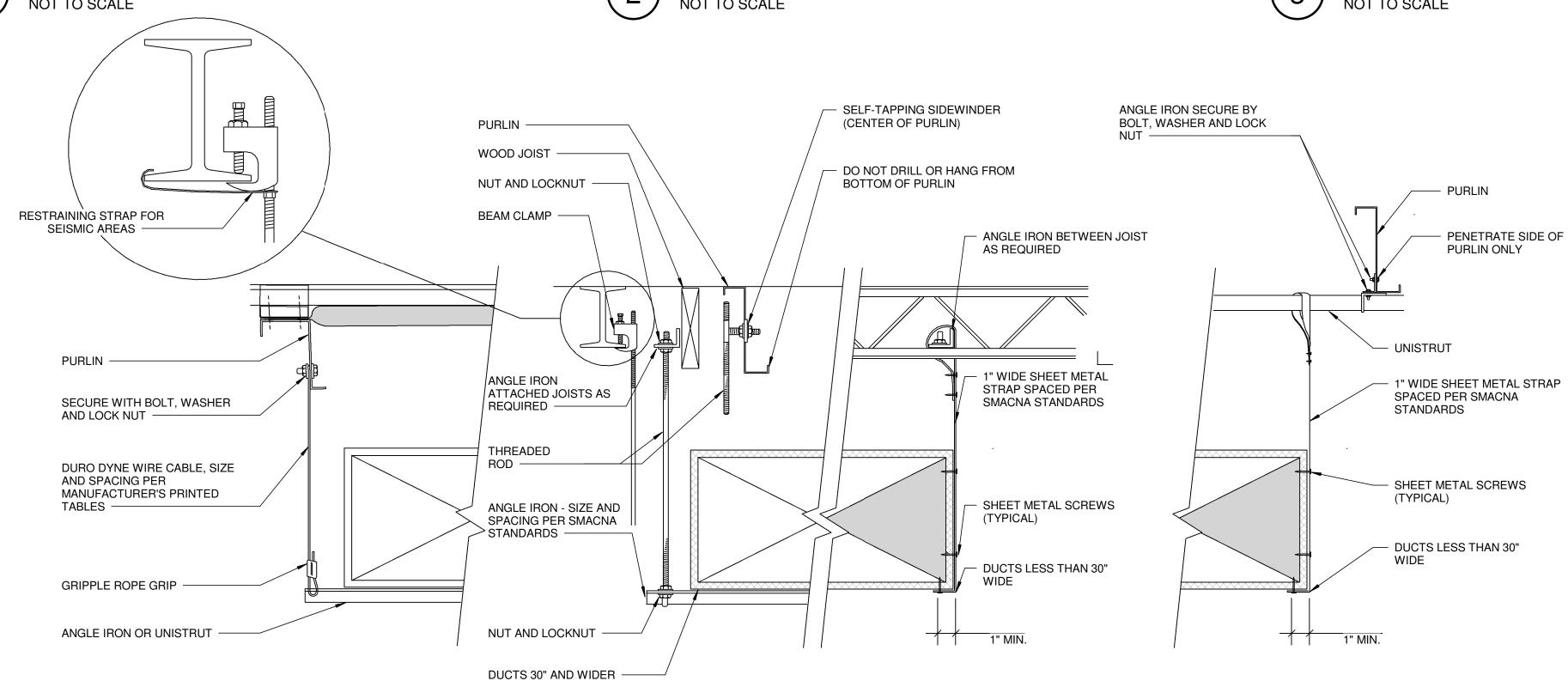
					HVAC	ELECTRI	C UNIT	HEATER	SCHEDULE
DESIG	NATION					ELE	ECTRICAL DA	TA	
TYPE	MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	VOLTAGE	PHASE	WATTAGE	COMMENTS
UH	01	ELECTRIC UNIT HEATER	QMARK	CWH1202DSAF	RECESSED MOUNT	120 V	1	0.5 kW	PROVIDE SHEDULED BASIS OF DESIGN EQUIPMENT OR APPROVED EQUAL WITH INTEGRAL THERMOSTAT. MOUNT 18" A.F.F.

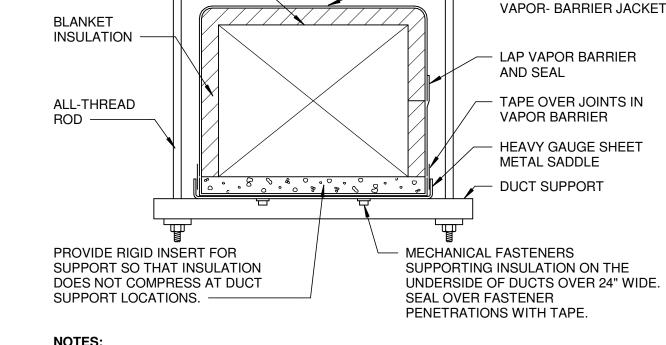
	DESIGN	IATION			LOCATION			EXTERNAL		ELE(	CTRIC MOTOR D	ATA		SOUND
EF 02 GREENHECK SP-A390 MENS RESTROOM 019 350 CFM 0.25 in-wg DIRECT 1302 120 V 1 170 W EF 03 GREENHECK SP-B150 SINGLE RESTROOM 018 150 CFM 0.25 in-wg DIRECT 1025 120 V 1 216 W EXHAUST FANS SHALL BE PROVIDED WITH SOLID STATE SPEED CONTROLLER, DISCHARGE BACKDRAFT DAMPER AND DISCONNECT SWITCH. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S METAL GRILLE. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.	YPE	MARK	MANUFACTURER	MODEL	ROOM	NUMBER			DRIVE	RPM	VOLTAGE	PHASE	MOTOR WATTS	LEVEL (SONES
EF 03 GREENHECK SP-B150 SINGLE RESTROOM 018 150 CFM 0.25 in-wg DIRECT 1025 120 V 1 216 W EXHAUST FANS SHALL BE PROVIDED WITH SOLID STATE SPEED CONTROLLER, DISCHARGE BACKDRAFT DAMPER AND DISCONNECT SWITCH. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S METAL GRILLE. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.	EF	01	GREENHECK	SP-A390	WOMENS RESTROOM	017	350 CFM	0.25 in-wg	DIRECT	1302	120 V	1	170 W	4.0
EXHAUST FANS SHALL BE PROVIDED WITH SOLID STATE SPEED CONTROLLER, DISCHARGE BACKDRAFT DAMPER AND DISCONNECT SWITCH. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S METAL GRILLE. EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.	EF	02	GREENHECK	SP-A390	MENS RESTROOM	019	350 CFM	0.25 in-wg	DIRECT	1302	120 V	1	170 W	4.0
EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S METAL GRILLE.  EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.	EF         03         GREENHECK         SP-B150         SINGLE RESTROOM         018         150 CFM         0.25 in-wg         DIRECT         1025         120 V         1         216 W         3.0													
EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.	EXHAUST FANS SHALL BE PROVIDED WITH SOLID STATE SPEED CONTROLLER, DISCHARGE BACKDRAFT DAMPER AND DISCONNECT SWITCH.													
	EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S METAL GRILLE.													
EXHAUST FANS SHALL BE SUPPORTED BY STRUCTURE BY MEANS OF ALL THREAD RODS AND MANUFACTURER'S MOUNTING BRACKETS.	3 EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S ISOLATOR KIT.													
EXHAUST FANS SHALL BE INTERLOCKED WITH LIGHT SWITCH OF ROOM THE FAN SERVES.														











VAPOR BARRIER, TAPE

PENETRATIONS OF THE

OVER TEARS AND

#### NOTES:

**RECTANGULAR DUCT** 

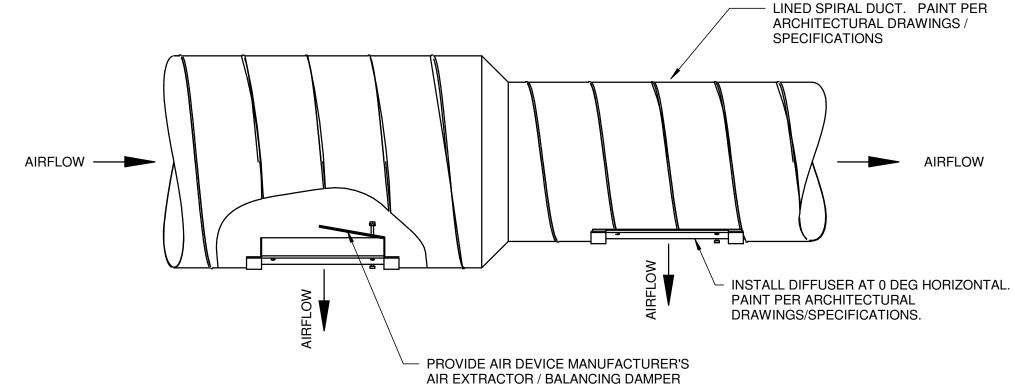
- PROVIDE SADDLES AT DUCT SUPPORT POINTS.
- DO NOT TAKE DUCT SUPPORTS OR STRAPS INTO THE INSULATION. PROVIDE INSULATION INSERT SO THAT INSULATION DOES NOT COMPRESS FROM
- PROVIDE SEMI-RIGID INSULATION ON ALL DUCTWORK IN MECHANICAL EQUIPMENT ROOMS AND OTHER HIGH ABUSE AREAS.
- IN AREAS WHERE SPACE LIMITS INSTALLATION OF TRAPEZE SYSTEM SHOWN, LOW PROFILE DUCT SUPPORT SYSTEM MAY BE PERMITTED. SYSTEM TO BE EQUAL TO

GRIPPLE. ALL SYSTEMS SHALL BE APPROVED BY SMACNA OR WILL NOT BE



# INSULATION AT DUCT SUPPORT







EXHAUST APPLICATIONS (300 CFM OR LESS).

ROOF JACK SHALL BE EQUAL TO GREENHECK MODEL RJ. FOR USE IN LOW-VOLUME

WHERE ROOF JACK IS VISIBLE FROM GROUND LEVEL, COORDINATE FINISH WITH

ROOF JACK SHALL HAVE BIRDSCREEN AND BACKDRAFT DAMPER.

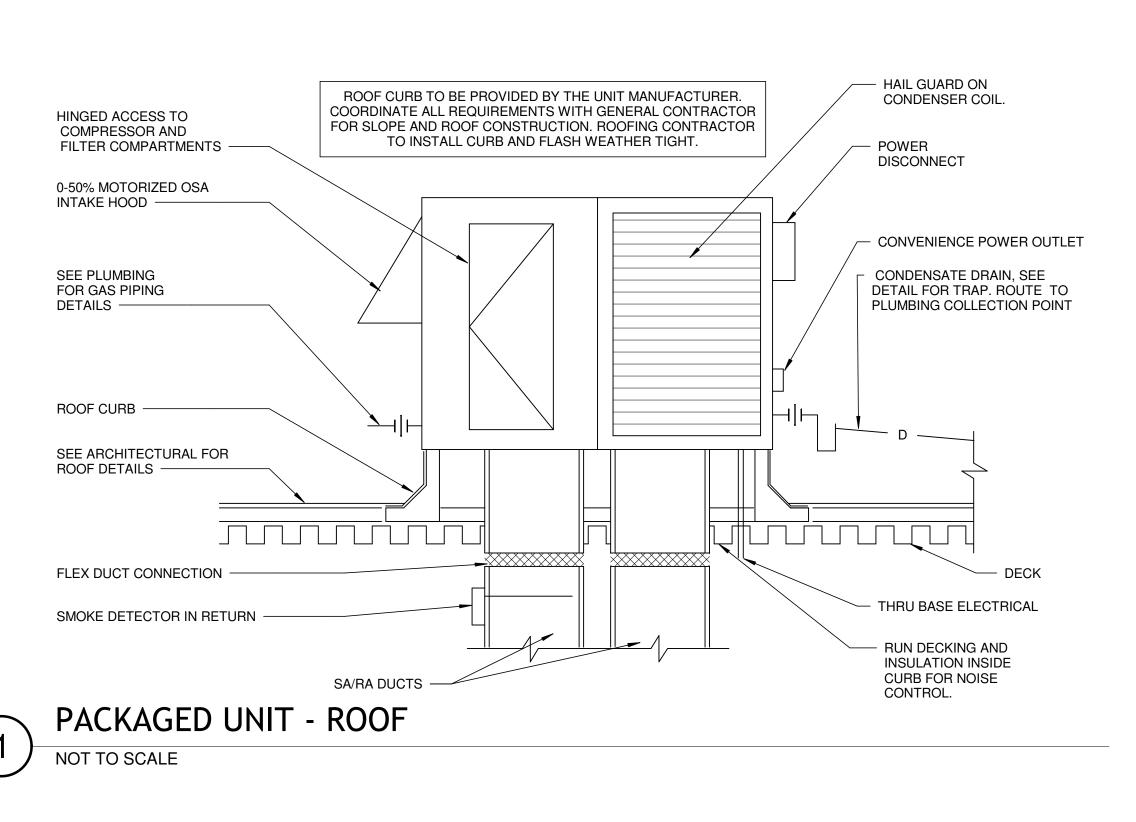
**DUCT SUPPORT** 

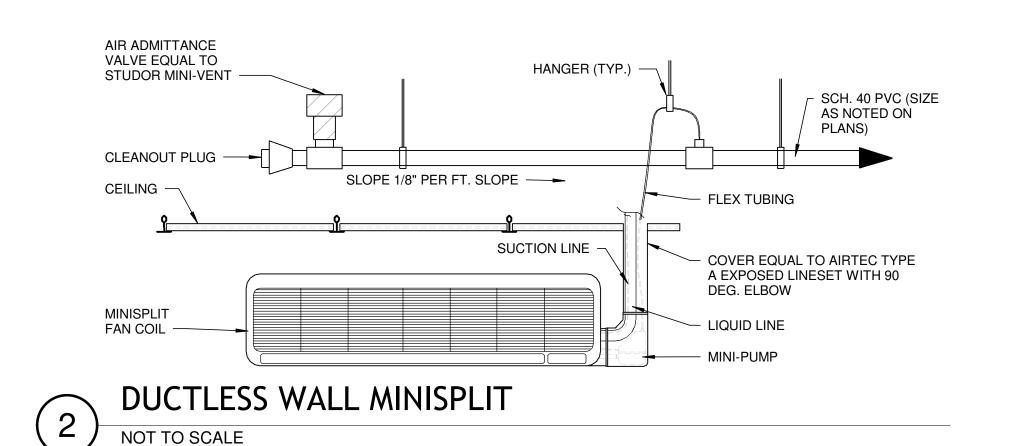
── SIDE OF MAIN DUCT











ALL THREAD, REFER TO SPECIFICATIONS

STANDARD INSULATION

- ALL THREAD, REFER TO SPECIFICATIONS

STANDARD INSULATION

- PIPE, REFER TO

SPECIFICATIONS

- PIPE, REFER TO

**SPECIFICATIONS** 

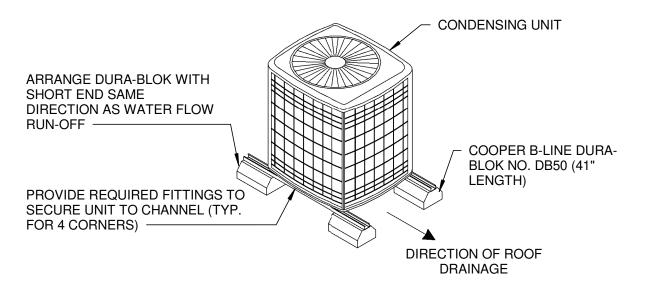
- PIPE HANGER, REFER TO SPECIFICATIONS

16 GAUGE GALVANIZED SHEET SHIELD FULLY WRAPPED INSULATION

16 GAUGE GALVANIZED

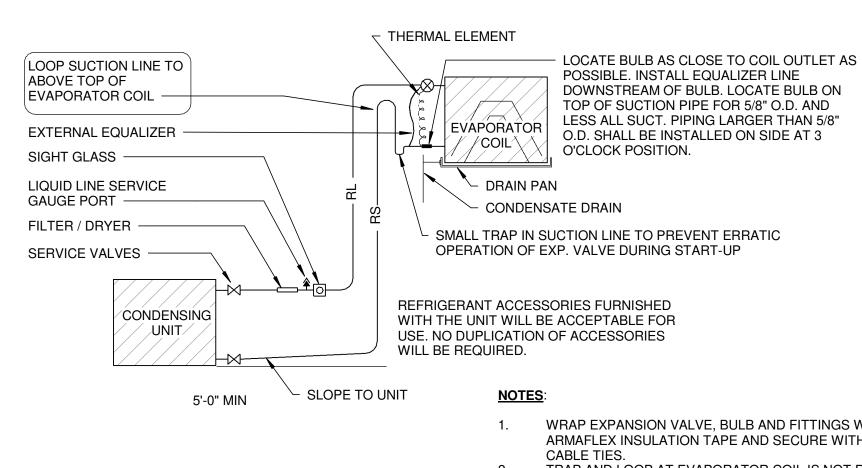
SHEET SADDLE 4——12" MIN.—

\_12" MIN.\_



 OVERFLOW SAFETY SWITCH EQUAL TO LITTLE GIANT MODEL ACS-5 24





- WRAP EXPANSION VALVE, BULB AND FITTINGS WITH ARMAFLEX INSULATION TAPE AND SECURE WITH BLACK TRAP AND LOOP AT EVAPORATOR COIL IS NOT REQUIRED
- FOR UNITS WITH LIQUID LINE SOLENOID VALVES. SUCTION LINES SHALL BE INSULATED. LIQUID LINES
- SHALL BE INSULATED ONLY ON DUCTLESS MINI-SPLITS.



1 PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH

EXTEND 2" BEYOND GALVANIZED SHIELD EACH WAY

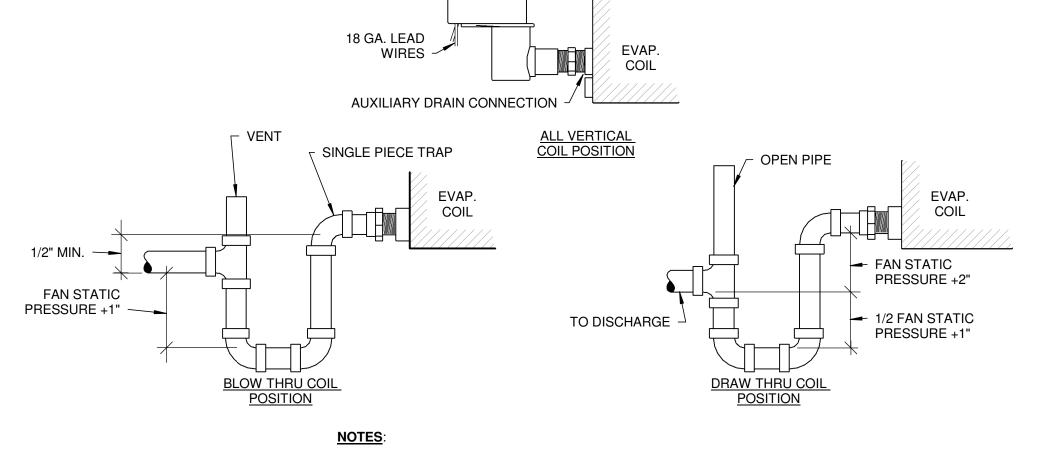
INSULATION AT EACH HANGER POINT; INSULATION SHALL



U-BOLT OR CLAMP

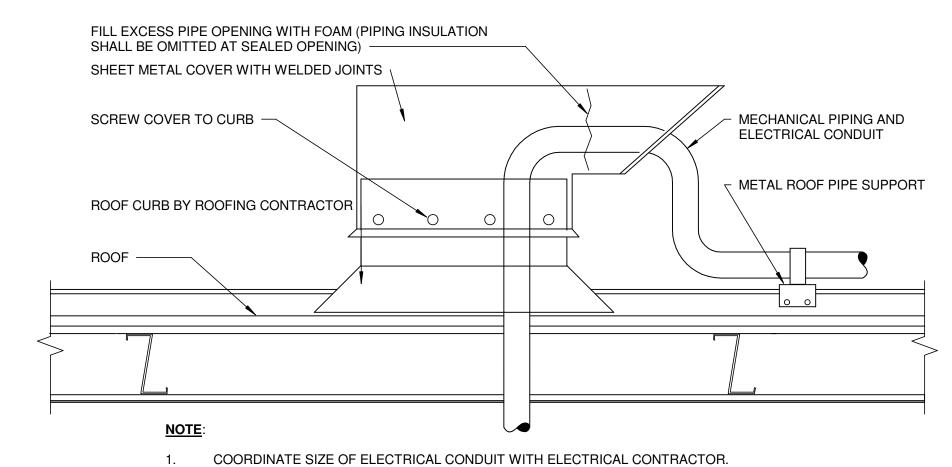
TRAPEZE, REFER TO

**SPECIFICATIONS** 



- RUNNING TRAPS WILL NOT BE ACCEPTED. INSTALL FACTORY FURNISHED TRAP WITH OUTSIDE AIR UNITS. LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
- CONDENSATE DISCHARGE LOCATION SHALL MEET REQUIREMENTS OF ALL





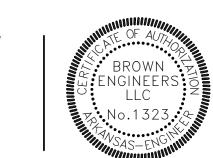
PIPE PENETRATION AT METAL ROOF

REFRIGERANT PIPING

NOT TO SCALE

NOT TO SCALE





**BROWN** 

## SEISMIC DESIGN NOTES:

- BUILDING RISK CATEGORY: CATEGORY II
- SEISMIC DESIGN CATEGORY: D
- DISTRIBUTED PLUMBING SYSTEMS AND EQUIPMENT OF SUFFICIENT SIZE OR WEIGHT, AS DEFINED BY ASCE 7 CHAPTER 13, SHALL BE PROVIDED WITH SEISMIC SUPPORTS. WATER HEATERS OF ALL SIZES SHALL BE PROVIDED WITH SEISMIC RESTRAINT STRAP. SECURED TO STRUCTURE.
- PROVIDE FLEXIBLE CONNECTIONS BETWEEN PIPING SYSTEMS AND MECHANICAL EQUIPMENT.
- FINAL DETERMINATION OF SEISMIC DESIGN PARAMETER SHALL BE PER STRUCTURAL DOCUMENTS.

#### **PLUMBING GENERAL NOTES:**

- ALL PLUMBING WORK SHALL COMPLY WITH ALL LOCAL CODES, AUTHORITIES HAVING JURISDICTION, DRAWINGS AND SPECIFICATIONS. IF DISCREPANCIES ARE FOUND THE MOST STRINGENT REQUIREMENT SHALL
- ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING, OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. EQUIPMENT SCHEDULES SHALL TAKE PRECEDENCE OVER CONFLICTING DRAWING INFORMATION. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO COMPLETE PROJECT DOCUMENTS FOR COORDINATION WITH OTHER DISCIPLINES.
- EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM IN THE DRAWINGS OR SPECIFICATIONS CARRIES WITH IT THE INSTRUCTION TO PROVIDE THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- REFER TO PLUMBING SCHEDULES AND SPECIFICATIONS FOR BASIS OF DESIGN, ACCEPTABLE MANUFACTURERS, AND MODELS OF PLUMBING FIXTURES AND EQUIPMENT.
- PROVIDE CLEANOUTS IN ALL SANITARY LINES, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 100' AND AT EACH CHANGE IN DIRECTION GREATER THAN 45 DEGREES.
- PROVIDE A TWO-WAY CLEANOUT AT THE JUNCTION OF ALL BUILDING DRAINS AND BUILDING SEWERS.
- REFER TO SPECIFICATIONS FOR INSULATION REQUIREMENTS.
- ALL SANITARY SEWER LINES 2 1/2" AND SMALLER SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. ALL SANITARY LINES 3" AND LARGER SHALL HAVE A MINIMUM SLOPE OF 1/8" PER FOOT. VERIFY EXISTING SANITARY LINE ELEVATIONS AND COORDINATE INSTALLATION TO ASSURE PROPER FLOW. ALL GREASE WASTE LINES, REGARDLESS OF SIZE, SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.
- SEAL ALL PIPE PENETRATIONS THROUGH WALLS, ROOF, AND FLOOR AIR AND WATER TIGHT.
- ALL FLOOR DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM UNLESS NOTED OTHERWISE. PROVIDE A TRAP GUARD EQUAL TO PROSET OR SURE SEAL SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR ALL FLOOR DRAINS.
- ALL PIPE DROPS FROM CEILING PLENUM TO BELOW FLOOR SHALL BE MADE IN FURR-OUTS AT COLUMNS, IN WEBB OF BEAMS AT COLUMNS, OR IN WALLS UNLESS SHOWN OTHERWISE.
- ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS. ALL EXPOSED PLUMBING TRIM SHALL BE CHROME PLATED.
- PROVIDE TIGHT-FITTED MOLDED PLASTIC INSULATION AT ALL EXPOSED WATER AND DRAIN PIPING FOR ADA FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS. FINISH SHALL BE WHITE.
- ALL DOMESTIC WATER SHALL BE ROUTED ABOVE CEILING. ALL DOMESTIC WATER ROUTED IN EXTERIOR WALLS SHALL BE INSTALLED ON CONDITIONED SIDE OF ROOM INSULATION.
- MAINTAIN A MINIMUM OF 10'-0" BETWEEN ALL HVAC FRESH AIR INTAKES AND PLUMBING VENTS. COORDINATE WITH MECHANICAL BEFORE INSTALLATION OF VTRs.
- CONTRACTOR SHALL VISIT SITE AND VERIFY CONDITIONS PRIOR TO BIDDING.
- CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF UTILITIES AND INVERTS PRIOR TO ROUTING SERVICES. CONTRACTOR SHALL COORDINATE ALL SANITARY SEWER, FIRE, GAS AND DOMESTIC WATER LINES WITH EXISTING UTILITIES AND WITH CIVIL DRAWINGS. SEE CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITY LINES.
- CONTRACTOR SHALL PAY ALL UTILITY FEES AND CHARGES IN THE CONTRACT.
- PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTORS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROVIDE FOR PROPER OPERATION OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT.
- FIRE STOP ALL PIPE PENETRATIONS THROUGH RATED WALLS. REFER TO SPECIFICATIONS.
- PIPING SHALL NOT BE ROUTED OVER ELECTRICAL ROOMS, COMPUTER ROOMS, ELECTRICAL PANELS, OR ELECTRICAL EQUIPMENT UNLESS OTHERWISE NOTED.
- PROVIDE LEAD-FREE PRESSURE REDUCING VALVE AT DOMESTIC ENTRANCE TO PROVIDE ADEQUATE PRESSURE AT ALL OUTLETS IN ACCORDANCE WITH THE SYSTEM REQUIREMENTS
- EACH FIXTURE GROUP OR BATTERY OF FIXTURES SHALL BE PROVIDED WITH A SHUTOFF VALVE IN THE DOMESTIC HOT AND COLD WATER SUPPLY LINES ABOVE CEILING. VALVES SHALL BE ACCESSIBLE FROM ROOM BELOW.
- PAINT EXPOSED PIPING AND PIPE INSULATION. COORDINATE WITH OWNER FOR FINAL COLOR.
- ALL UNDER FLOOR WATER PIPING SHALL BE PROVIDED WITH A POLYETHYLENE SLEEVE. EXTEND SLEEVE UP THROUGH FLOOR SLAB AND SEAL AIR AND WATER TIGHT.
- PLASTIC PIPE IS PROHIBITED IN RETURN AIR PLENUMS. ALL PIPING AND PIPE CONNECTIONS IN RETURN AIR PLENUMS SHALL BE PLENUM RATED.
- PIPING THROUGH FOUNDATION WALLS AND FOOTINGS SHALL BE SLEEVED AS PER STRUCTURAL DETAILS.
- ALL PIPE CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE THROUGH DIELECTRIC UNIONS.
- ALL PLUMBING COMPONENTS WITH ELECTRICAL REQUIREMENTS SHALL BE INSTALLED WITH THE ELECTRICAL INFRASTRUCTURE NECESSARY TO PROVIDE A FULLY FUNCTIONING SYSTEM. IF NOT SPECIFICALLY SHOWN ON ELECTRICAL SCHEDULE, PLUMBING FIXTURES REQUIRING ELECTRICAL SERVICE SHALL BE FED FROM BREAKER OF ADEQUATE CAPACITY.
- REFER TO PLUMBING SPECIFICATIONS FOR PIPE MATERIAL AND INSULATION REQUIREMENTS.
- EXACT LOCATION OF ALL EQUIPMENT AND PIPING SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER AND LIGHTING SHALL TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL
- PROVIDE FABRICATED EXPANSION LOOP OR MANUFACTURED EXPANSION DEVICE ON ALL PIPING SYSTEMS CROSSING BUILDING EXPANSION JOINTS.
- WATER SUPPLY CONNECTIONS TO COFFEE MACHINES AND NONCARBONATED BEVERAGE DISPENSERS SHALL BE PROVIDED WITH A BACKFLOW PREVENTER OR AN AIR GAP.

					PL	UMBING FIXTUR	RE SCHEDULE					
									BRAI	NCH CONNECT	TONS	
TAG	DESCRIPTION	MANUFACTURER	MODEL	ACCESSORIES	FAUCETS & FITTINGS	STOPS	TRAPS	MOUNTING	DCW	DHW	SS	REMARKS
COTG	CLEAN OUT TO GRADE	ZURN	Z1400	-	-	-	-	AT GRADE			4"	SHALL BE PROVIDED WITH HEAVY DUTY TOP.
FD1	FLOOR DRAIN, SQUARE	ZURN	Z415-3IP-6S	TRAP GUARD	6" SQUARE N.B. STRAINER	-	P-TRAP	FLOOR			2"	STRAINER SHALL BE HEEL-PROOF
FD2	FLOOR DRAIN, ROUND	ZURN	Z415BZ-DP	TRAP GUARD	5" ROUND STRAINER (POLISHED)	-	P-TRAP	FLOOR			2"	
PWH	EXPOSED WALL HYDRANT - EXTERIOR	ZURN	Z1321XL	-	-	BALL VALVE	-	WALL	3/4"			SHALL BE FREEZE-PROOF, SELF-DRAINING, KEY OPERATED, AND ANTI-SIPHON.
FS	8x8 FLOOR SINK - 6" DEPTH	ZURN	ZN1910	PROSET TRAP GUARD	N.B. FRAME AND 1/2 GRATE	-	P-TRAP	FLOOR			4"	SHALL HAVE ACID-RESISTANT COATING
P1	WALL HUNG WATER CLOSET - ADA	ZURN	Z5616	WALL CARRIER; SEAT	Z6000AV (1.6GPF MANUAL FLUSH VALVE)	INTEGRAL	INTEGRAL	WALL	1"		4"	WALL CARRIER SHALL BE RATED FOR 500LB, MINIMUM.
P2	URINAL	ZURN	Z5755-U	WALL CARRIER	Z6003PL-EWS (0.5GPF MANUAL FLUSH VALVE)	INTEGRAL	INTEGRAL	WALL	3/4"		2"	
P3	LAVATORY - SQUARE UNDERMOUNT - ADA	KOHLER	K-5400	GRID DRAIN; HARDWIRED POWER CONVERTER	ZURN ZG6950-N-CWB (0.5GPM HARDWIRED SENSOR FAUCET)	MCGUIRE COMMERCIAL	MCGUIRE COMMERCIAL	UNDERMOUN T	1/2"	1/2"	1 1/2"	SHALL BE SUITABLE FOR ROLL-UNDER ADA CLEARANCES.
P4	SINK - SINGLE COMPARTMENT - 7.5" DEEP	JUST MFG.	US-1818-A	BASKET STRAINER; BADGER 5XP GARBAGE DISPOSAL	JPO-250 (FAUCET W/PULL DOWN SPRAY)	MCGUIRE COMMERCIAL	MCGUIRE COMMERCIAL	UNDERMOUN T	1/2"	1/2"	2"	SHALL BE SUITABLE FOR ROLL-UNDER ADA CLEARANCES.
P5	BI-LEVEL WATER COOLER	ELKAY	EZSTL8WSSK	BOTTLE FILLER	-	MCGUIRE COMMERCIAL	MCGUIRE COMMERCIAL	WALL	1/2"		2"	
P6	MOP SINK	ZURN	Z1996-24	MOP HANGER; HOSE AND HOSE BRACKET; STAINLESS STEEL SPLASH GUARD; GRID DRAIN	SERVICE FAUCET W/VACUUM BREAKER	INTEGRAL	CAST IRON	FLOOR	1/2"	1/2"	3"	
P7	SHOWER	CHICAGO FAUCETS	SH-TP1-01-000	-	-	INTEGRAL	-	WALL	1/2"	1/2"	2"	PROVIDE WITH THERMOSTATIC MIXING VALVE. SHOWER HEAD SHALL BE MOUNTED AT APPROXIMATLY 80" AFF.
P8	SHOWER - ADA	CHICAGO FAUCETS	SH-TP1-01-000	24" WALL MOUNT SLIDE BAR	SH-TP1-00-021 (2.5GPM HAND SPRAY)	INTEGRAL	-	WALL	1/2"	1/2"	2"	SHALL BE ADA COMPLIANT. PROVIDE WITH THERMOSTATIC MIXING VALVE. SHOWER HEAD SHALL BE MOUNTED AT APPROXIMATLY 80" AFF.
RH	ROOF HYDRANT	ZURN	Z1388	VACUUM BREAKER	-	-	-	ROOF	3/4"		1/2"	PROVIDE 1/2" DRAIN LINE DISCHARGING LOW ON EXTERIOR WALL.
WB	MINI-ICE MAKER WALL BOX - QTR TURN	GUY GRAY	MIB2HAAB	HAMMER ARRESTER	1/4 TURN VALVE	-	-	WALL	1/2"			

- ALL FIXTURES SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING FAUCET SPACING AND STYLE WITH MOUNTING HOLES IN FIXTURE.
- ALL FIXTURES WITH HOT WATER FEEDS SHALL BE PROVIDED WITH THERMOSTATIC MIXING VALVE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. HANDWASH FIXTURES SHALL HAVE TMVs SET TO 110°F.
- CONTRACTOR SHALL INSTALL ALL PLUMBING FIXTURES IN COMPLIANCE WITH ALL APPLICABLE CODES AND ALL AUTHORITIES HAVING JURISDICTION.

PLUMBING WATER HEATER SCHEDULE															
						TANK	BRANCH CONN	IECTIONS		SYSTEM TEMPERATURES		ELEC	CTRICAL DATA	A	
TAG	MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	VOLUME	DCW	DHW	DESIGN EWT	TANK STORAGE SETPOINT	DESIGN LWT	VOLTAGE (V)	PHASE	WATTAGE	REMARKS
WH	1	COMMERCIAL ELECTRIC WATER HEATER	A.O. SMITH	DRE-80	FLOOR STAND	80 gal	3/4"	3/4"	50 °F	140 °F	120 °F	208 V	3	12.3 kW	PROVIDE WITH DIGITAL MIXING VALVE, REFER TO WATER HEATER DETAIL.
1 PROVIDI	1 PROVIDE WATER HEATER WITH EXPANSION TANK FOLIAL TO WATTS PLT SIZED FOR TOTAL SYSTEM VOLUME OF 60gal SUPPORT TANK FROM MOLINTING BRACKET FOLIAL TO HOLD-RITE 'OLUCKSTRAP'														

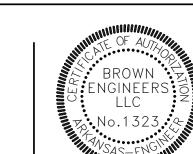
PROVIDE WATER HEATER WITH EXPANSION TANK EQUAL TO WATTS PLT, SIZED FOR TOTAL SYSTEM VOLUME OF 60gal. SUPPORT TANK FROM MOUNTING BRACKET EQUAL TO HOLD-RITE QUICKSTRAP

PROVIDE PRE-PIPED DIGITAL THERMOSTATIC MASTER MIXING VALVE EQUAL TO LEONARD PROTON SERIES. MIXING VALVE SHALL BE SIZED FOR PRESSURE DROP OF 5psi, 7.5gpm PEAK FLOW. SET SYSTEM TEMPERATURES PER WATER HEATER SCHEDULE. PROVIDE WATER HEATER WITH 16" FLOOR STAND EQUAL TO HOLD-RITE; STAND SHALL BE RATED FOR WATER HEATER WEIGHT WHEN FULL. PROVIDE GALVANIZED STEEL SEISMIC STRAP EQUAL TO HOLD-RITE QUICK STRAP. SECURE STRAP TO STRUCTURE.

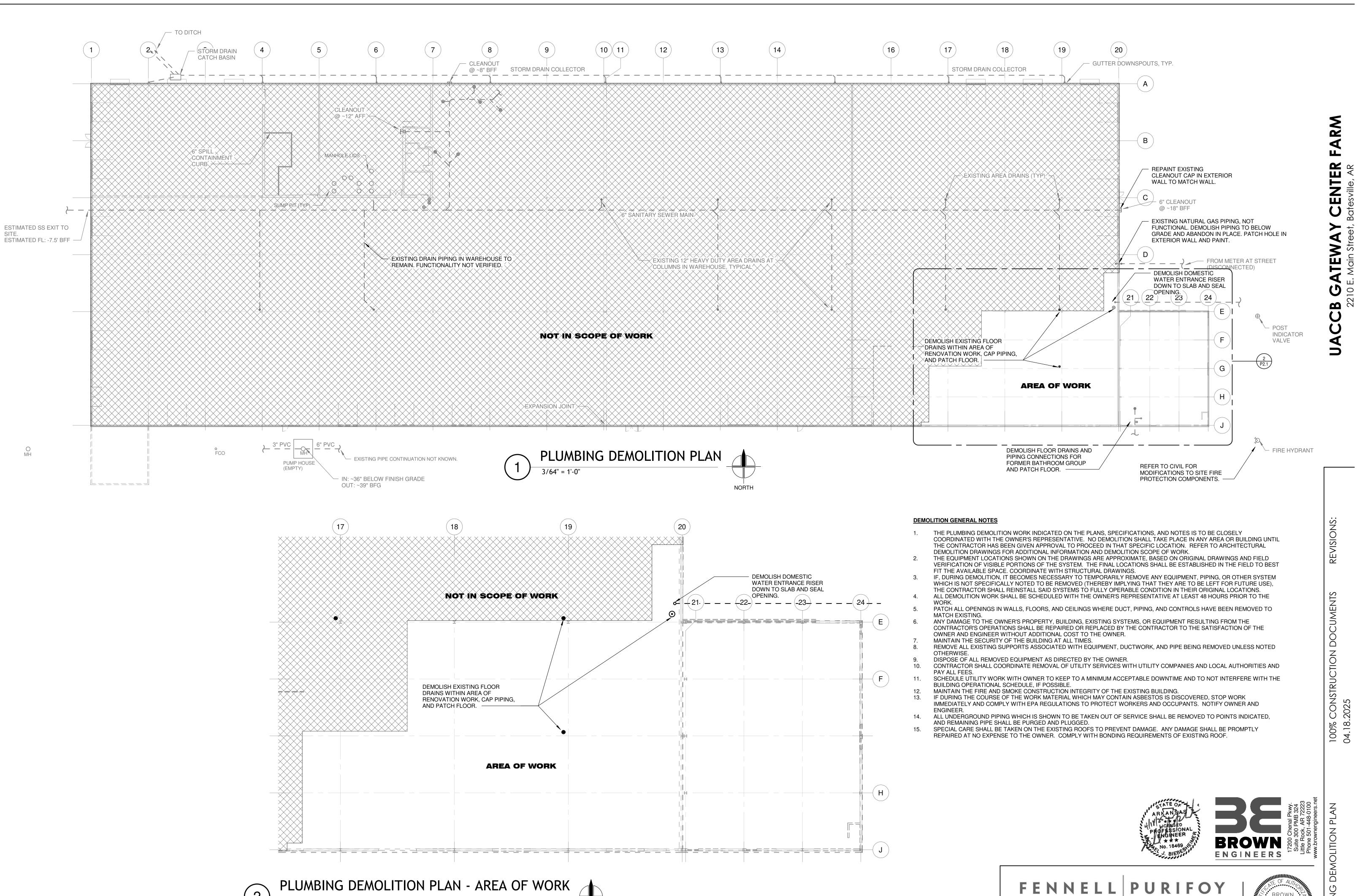
PLUMBING PUMP SCHEDULE										
DESIGNA	ATION									
		MANUFACTURER	MODEL	FLOW	TOTAL HEAD	MOTOR RPM	VOLTAGE	PHASE	POWER	REMARKS
RP	1	BELL AND GOSSETT	NBF12U	2 GPM	11.0 ftH2O	2800	115 V	1	55 W	CHECK-TROL FLOW CONTROL FLANGE, AQUASTAT, AND TIMER.







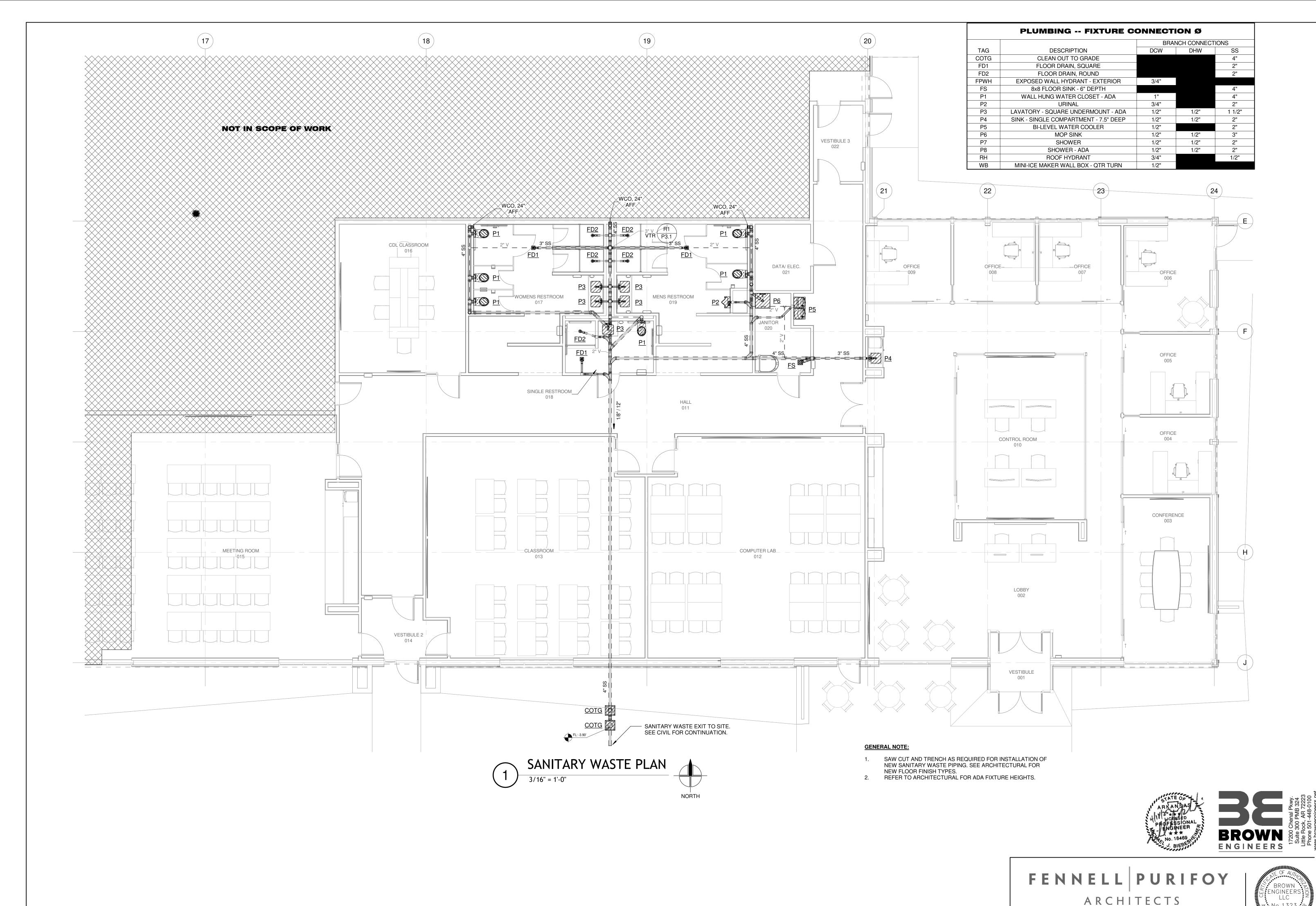




PLUMBING I

A R C H I T E C T S

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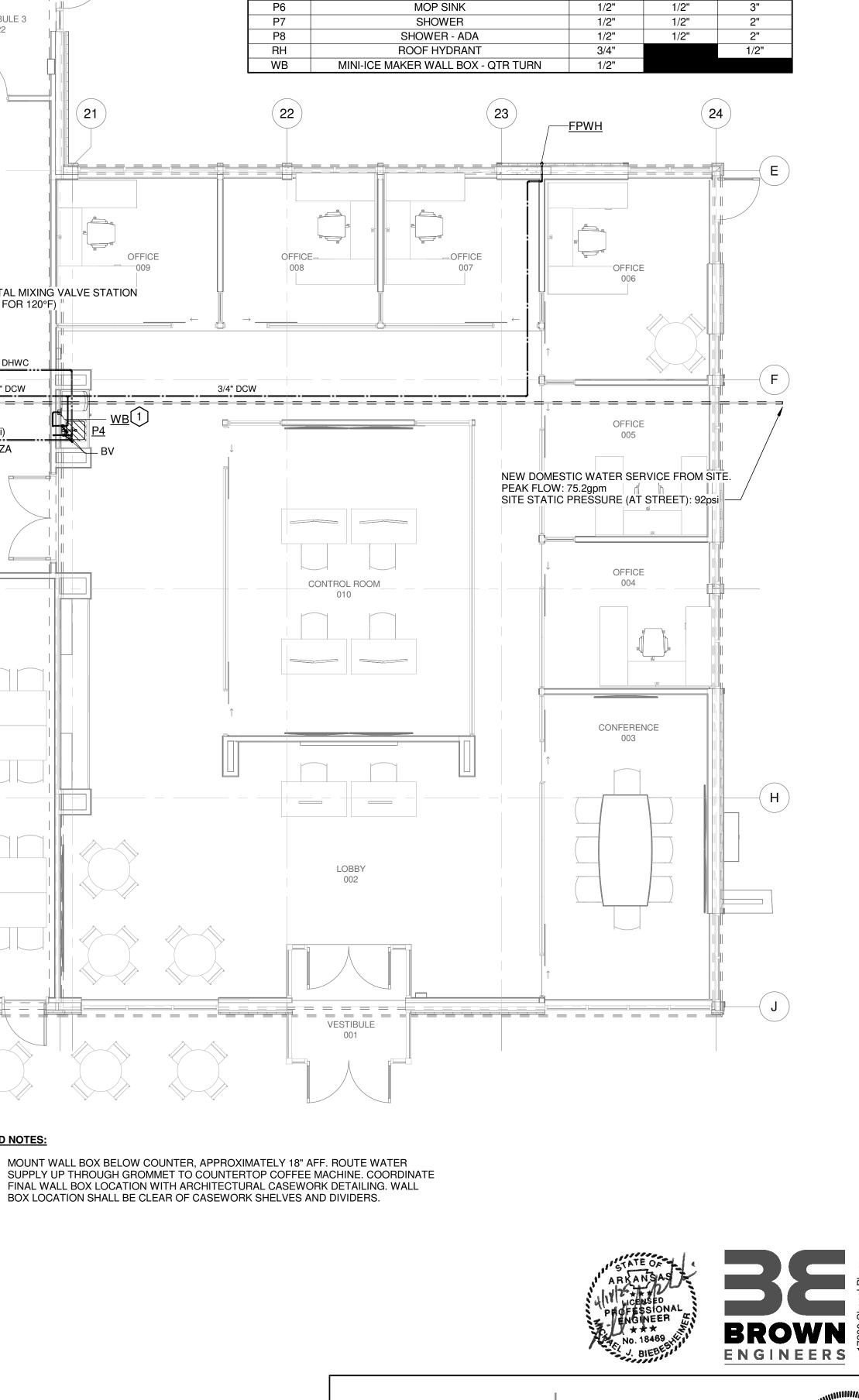
CENTER FARM Batesville, AR











PLUMBING -- FIXTURE CONNECTION Ø

DESCRIPTION

CLEAN OUT TO GRADE

FLOOR DRAIN, SQUARE

FLOOR DRAIN, ROUND

EXPOSED WALL HYDRANT - EXTERIOR

8x8 FLOOR SINK - 6" DEPTH

WALL HUNG WATER CLOSET - ADA

LAVATORY - SQUARE UNDERMOUNT - ADA

SINK - SINGLE COMPARTMENT - 7.5" DEEP

BI-LEVEL WATER COOLER

TAG

COTG

FD1

FD2

FPWH

FS

P2

P3

P4

P5

VESTIBULE 3

- DIGITAL MIXING VALVE STATION

(SET FOR 120°F)

3/4" DCW

(60psi) 2.0" RPZA

# KEYED NOTES:

COMPUTER LAB\_

012

<u>P1</u>

<u>P1</u>

□ 2" DCW

3/4" DCW - UP TO ROOF HYDRANT

HALL

DATA/ ELEC.

021

BRANCH CONNECTIONS

1/2"

1/2"

1 1/2"

DCW DHW

3/4"

3/4"

1/2"

1/2"

1/2"



**DOMESTIC WATER GENERAL NOTES:** PROVIDE LEAD-FREE ISOLATION VALVE FOR EACH RESTROOM MAIN AND EACH BRANCH MAIN SERVING A BATTERY OF FIXTURES.

\_MEETING ROOM\_

- PERMANENTLY LABEL ALL VALVES TO INDICATED AREA THAT VALVE SERVES. PROVIDE WATER HAMMER ARRESTOR AT END OF ALL DCW AND DHW BRANCH LINES BEFORE LAST FIXTURE. REFER TO DETAILS FOR WATER HAMMER ARRESTOR SCHEDULE. PROVIDE ACCESS TO WATER
- HAMMER ARRESTORS WHEN REQUIRED BY THE MANUFACTURER. ROUTE ALL DOMESTIC WATER LINES CONCEALED ABOVE CEILING. WHERE DOMESTIC WATER LINES MUST
- BE ROUTED EXPOSED, PAINT EXPOSED PIPE AND COORDINATE WITH ARCHITECT FOR COLOR. REFER TO ARCHITECTURAL FOR ADA FIXTURE HEIGHTS.

**17**)

NOT IN SCOPE OF WORK

18

CDL CLASSROOM

VESTIBULE 2 014

P1

WOMENS RESTROOM 017

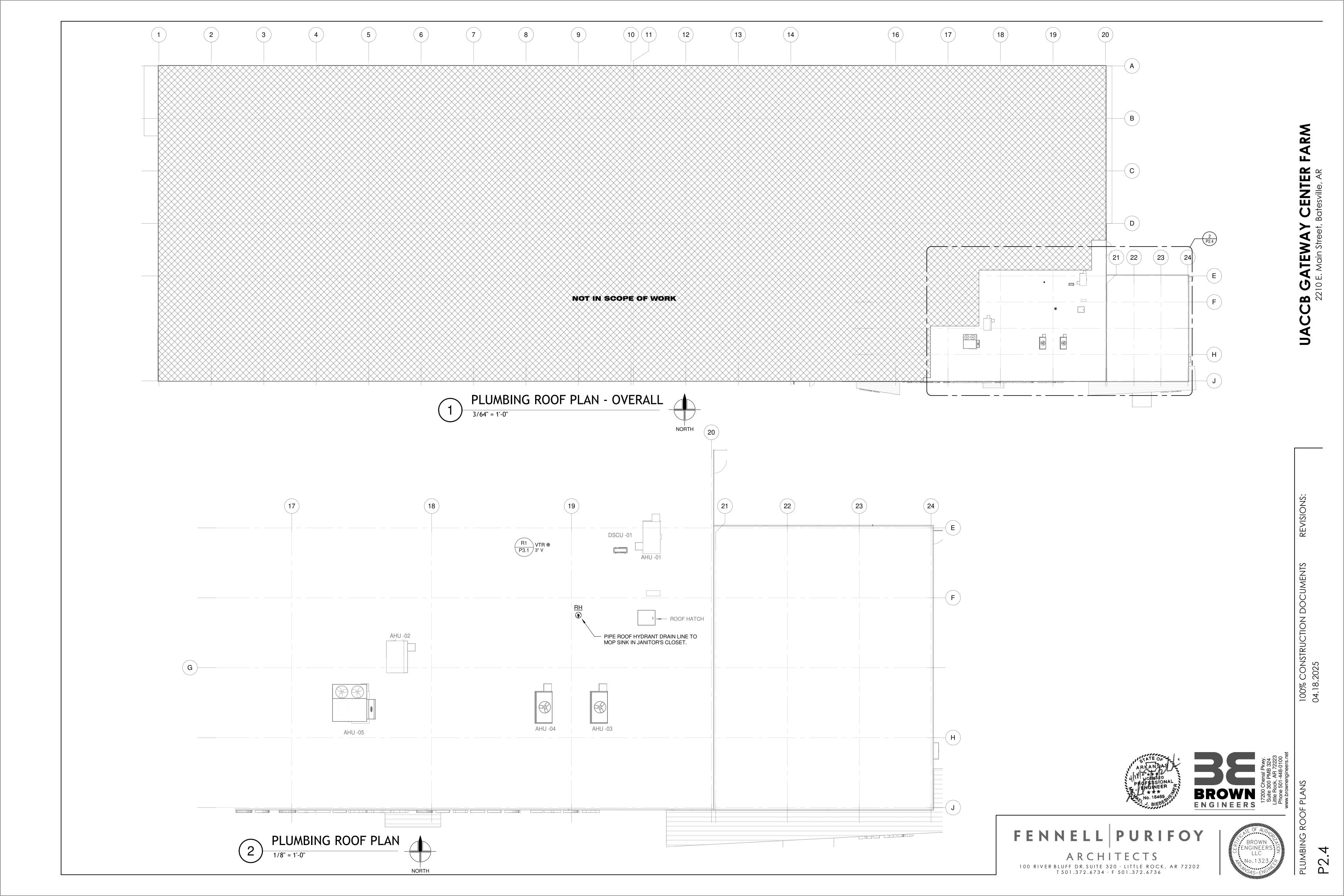
SINGLE RESTROOM

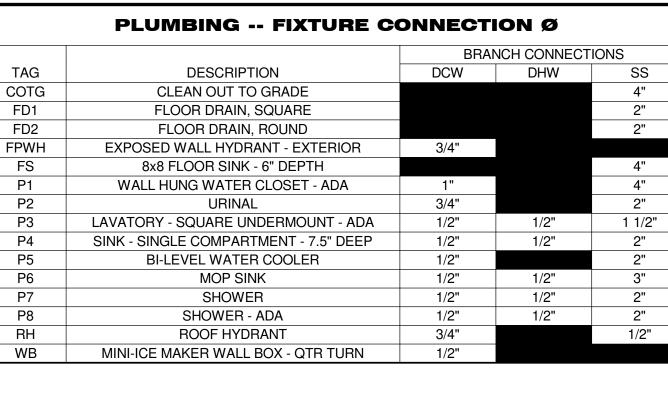
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19

FENNELL PURIFOY

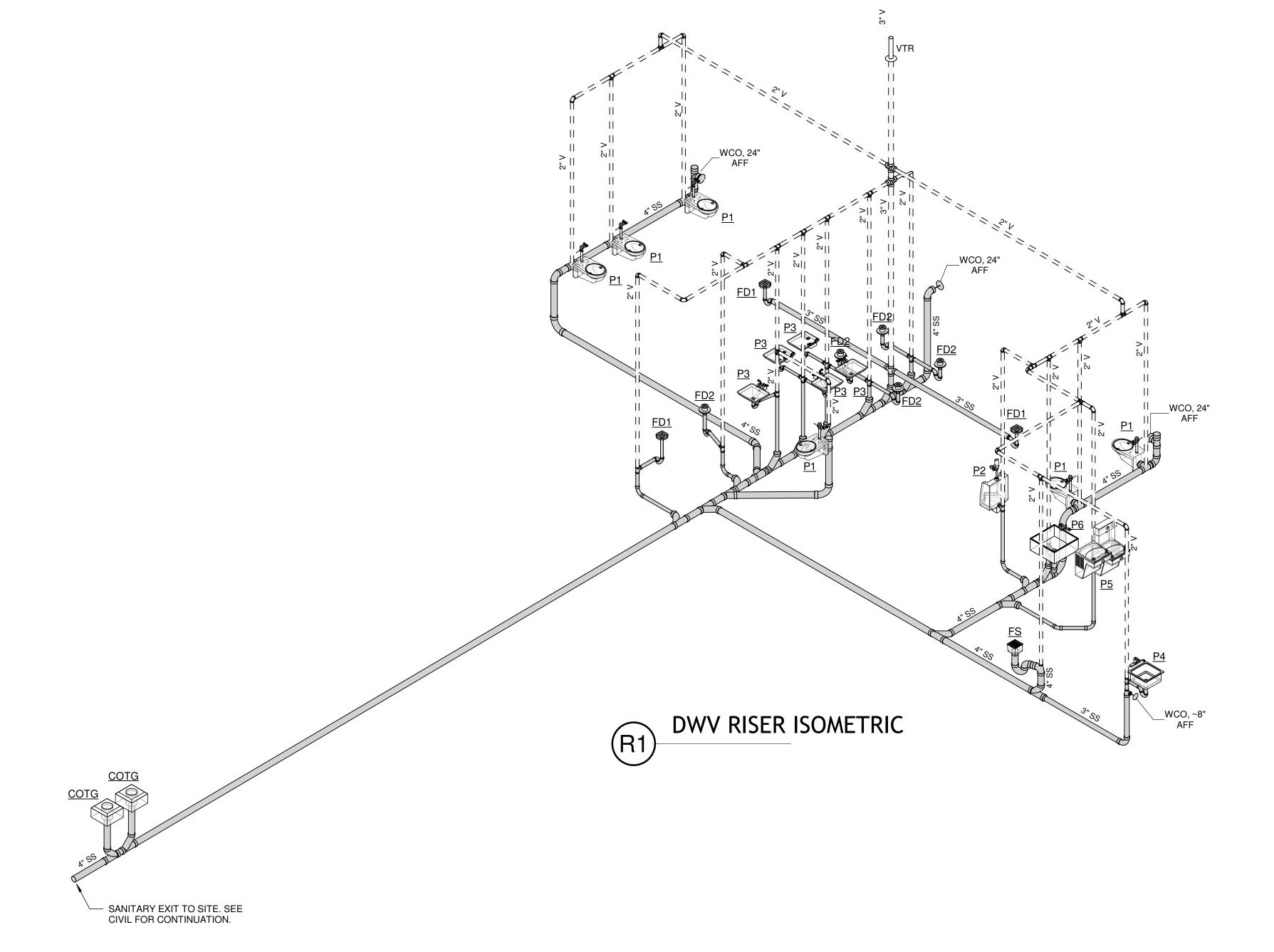




## **SANITARY WASTE AND VENT RISER GENERAL NOTES:**

- SANITARY RISERS ARE DIAGRAMMATIC. RISERS INDICATE GENERAL PIPE ROUTES AND SIZES FOR SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS TO PROVIDE A FULLY FUNCTIONING SYSTEM. SOME P-TRAPS FOR FIXTURES MAY NOT BE SHOWN FOR CLARITY OF RISER. ALL PLUMBING FIXTURES
- WITH SANITARY CONNECTIONS SHALL BE PROVIDED WITH EITHER INTEGRAL OR ANCILLARY P-TRAPS.
  CONTRACTOR SHALL INSTALL ALL PLUMBING FIXTURES IN ACCORDANCE WITH ALL APPLICABLE CODES
- AND AUTHORITIES HAVING JURISDICTION. CLOSELY COORDINATE ALL <u>VTR</u> ROOF PENETRATIONS WITH ABOVE CEILING DUCTWORK AND STRUCTURE. COORDINATE WITH ARCHITECT FOR FINAL LOCATION.
  REFER TO ARCHITECTURAL FOR ADA FIXTURE HEIGHTS.

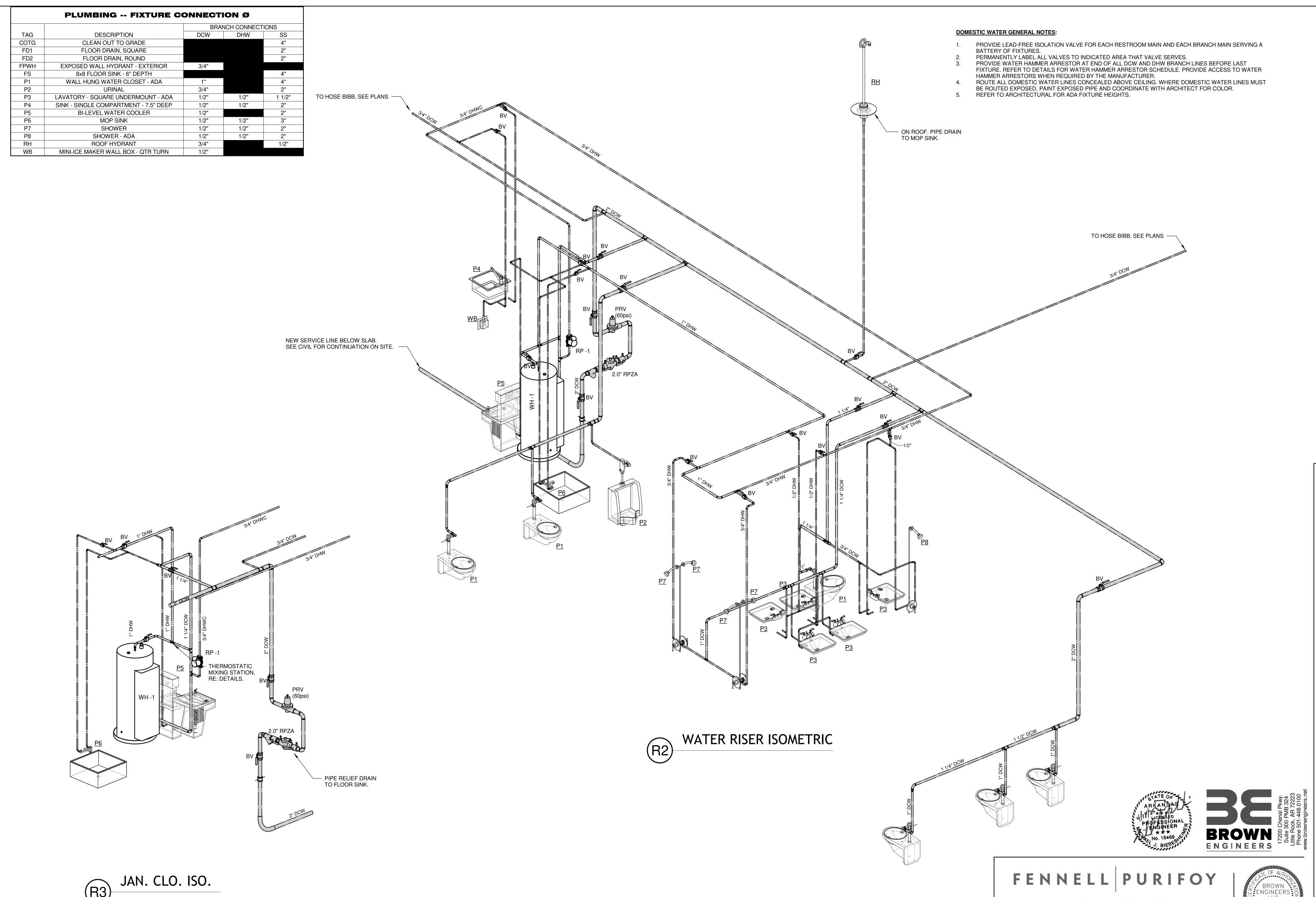


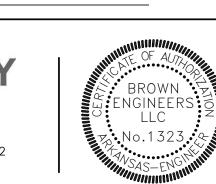


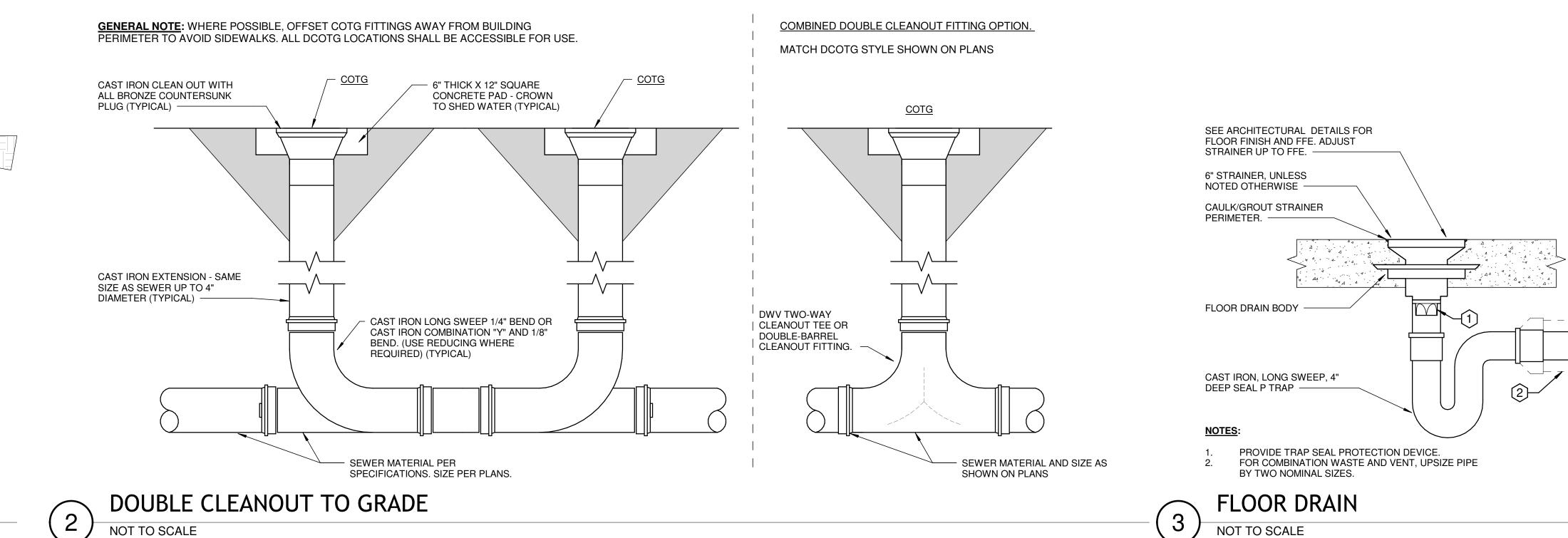


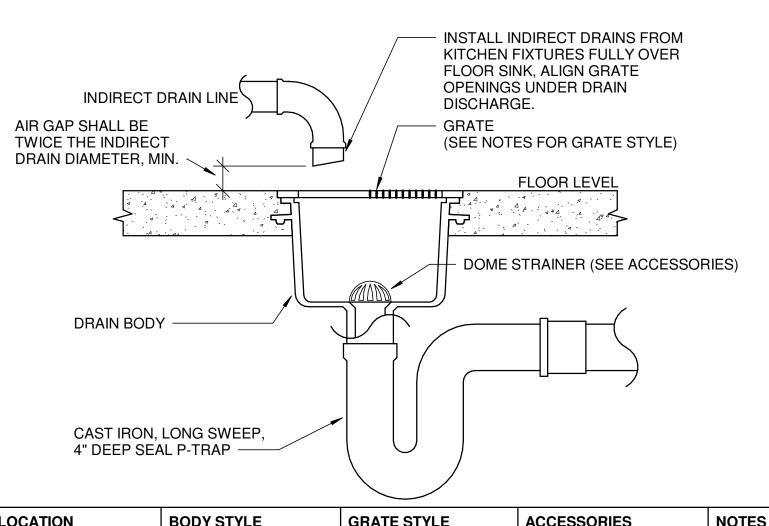












FINISH GRADE OR

- FOR END OF LINE

COTG, PLUG WYE.

PAVING -

└─ 6" CONCRETE UNDER FITTING TO

UNDISTURBED EARTH

LOCATION	BODY STYLE	GRATE STYLE	ACCESSORIES	NOTES		
KITCHEN	CAST IRON WITH ACID RESISTANT EPOXY COATING EQUAL TO ZURN Z1900	LOOSE; GRATES IN WALKING PATHS SHALL BE HEELPROOF	WHITE A.R.C. DOME STRAINER; TRAP GUARD	FOR FLOOR SINKS RECEIVING DISCHARGE FROM 1 DRAIN LINE PROVIDE 3/4 GRATE; 2 OR MORE DRAINS PROVIDE 1/2 GRATE.		
JANITOR'S CLOSET	CAST IRON WITH ACID RESISTANT EPOXY COATING EQUAL TO ZURN Z1910	HEAVY DUTY, LOOSE	ALUMINUM DOME STRAINER; TRAP GUARD			

KITCHEN FLOOR SINKS SHALL BE INSTALLED SO THAT GRATES ARE REMOVABLE FOR EMPTYING DEBRIS WITHIN FLOOR SINK. FINAL GRATE STYLE FOR KITCHEN FLOOR SINKS SHALL BE PER KITCHEN EQUIPMENT VENDOR PLANS, WHERE AVAILABLE.



NOTES:

CAST IRON CLEAN OUT WITH ALL BRONZE

CLEANOUT TO GRADE

COUNTERSUNK PLUG - SEE PLUMBING

FIXTURE SCHEDULE -

12"x12"x6" CONCRETE PAD,

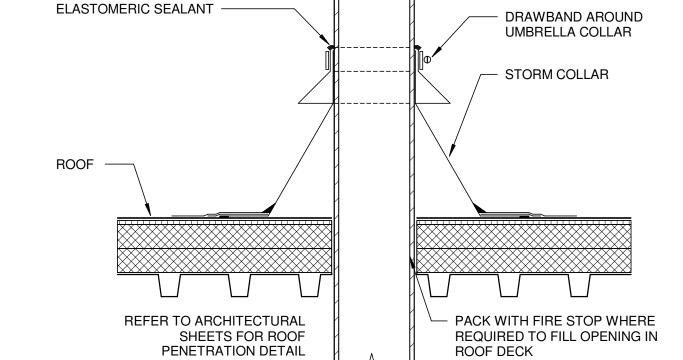
CROWN TO SHED WATER.

#3 REINFORCED RING

PIPE MATERIAL PER SPECIFICATIONS

FLOW

NOT TO SCALE



NOTES:

VENT ABOVE ROOF SHALL BE PAINTED TO MATCH

REQUIRED TO FILL OPENING IN

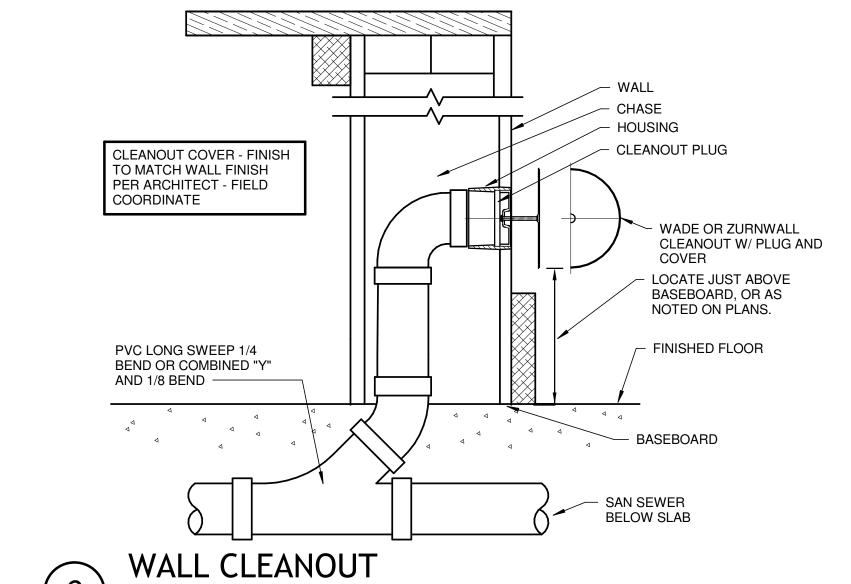
**ROOF DECK** 

IF ARCHITECTURAL PIPE PENETRATION DETAIL IS AVAILABLE, IT SHALL SUPERCEDE THIS DETAIL.

ROOF. COORDINATE WITH ARCHITECT.



TEMPERATURE APPROPRIATE



NOT TO SCALE

NOT TO SCALE

COORDINATE WITH ELECTRICAL

FOR GFCI OUTLET WITHIN 3' OF

AND CLEAR OF WATER PIPING.

SUPPORT PUMP WITH SEPARATE BRACKET.

DO NOT SUPPORT FROM PIPING ONLY.

FENNELL PURIFOY

ARCHITECTS

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PUMP. MOUNT GFCI ABOVE PUMP

PIPE - SEE PLANS FOR CAULK WATERTIGHT FINISHED FLOOR MIN. 3" A.F.F. STEEL CONC. STOP FRAMING

FLOOR ON GRADE PENETRATION

- BACK-UP MATERIAL SEALANT -**METAL JACKET ESCUTCHEON** SLEEVE

PIPE SLEEVE THROUGH WALL

PIPE HANGER, REFER - ALL THREAD, REFER TO SPECIFICATIONS TO SPECIFICATIONS STANDARD INSULATION PIPE, REFER TO **SPECIFICATIONS** 1 PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH 16 GAUGE GALVANIZED INSULATION AT EACH HANGER POINT; INSULATION SHALL SHEET SADDLE EXTEND 2' BEYOND GALVANIZED SHIELD EACH WAY ALL THREAD, REFER TO SPECIFICATIONS STANDARD INSULATION PIPE, REFER TO **SPECIFICATIONS** U-BOLT OR CLAMP TRAPEZE, REFER TO SPECIFICATIONS 16 GAUGE GALVANIZED SHEET SHIELD FULLY WRAPPED INSULATION

INSULATED PIPE HANGER

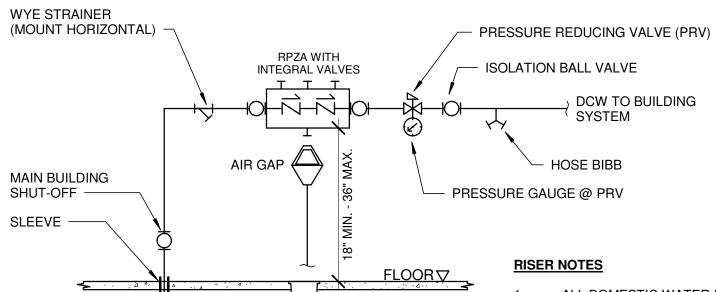
RPZ SIZE | MAKE | MODEL

1/4" - 3/4" | WATTS | U-LF009QT-S

2 1/2" - 3" | WATTS | LF009QT-FDA

WATTS U-LF009M2-QT-S

WATTS | LF909-OSY-S-FDA



OR JANITOR'S SINK

	<b>RISER NOTES</b>					
}	1.	ALL DOME				

- ESTIC WATER RISER COMPONENTS SHALL BE LEAD-FREE. INSTALL REDUCED PRESSURE ZONE ASSEMBLY (RPZA) BACKFLOW PREVENTER WITH MANUFACTURER'S AIR GAP AND ROUTE FULL-SIZE TO SANITARY. RPZ SHALL HAVE INTEGRAL STRAINER UNLESS SPATIAL CONSTRAINTS REQUIRE DRAIN TO FLOOR SINK 3. STRAINER TO BE INSTALLED SEPARATELY.
  - INSTALL PIPE STANDS TO SUPPORT THE COMPONENTS. DO NOT SUPPORT ASSEMBLIES FROM PIPING. INSTALL BEARING PLATES ON CONCRETE FLOOR UNDER COORDINATE FINAL LOCATION OF DOMESTIC RISER WITH ALL OTHER SYSTEMS AND

EQUIPMENT IN ASSOCIATED ROOM. RISER SHALL NOT INTERFERE WITH OR IMPEDE

- OPERATIONS OF OTHER SYSTEMS OR FACILITY PERSONNEL INSTALL ALL VALVES SO THAT VALVE HANDLES ARE NOT IMPEDED IN ANY MANNER AND ARE EASILY OPERATED FROM INTERIOR OF ROOM. WHEN MOUNTED NEXT TO A WALL, RPZA SHALL HAVE 12" CLEARANCE BETWEEN
- TEST PORTS AND WALL, MINIMUM.

#### HAMMER ARRESTOR SCHEDULE **COMMON PUBLIC FIXTURE GROUPS FIXTURE** PDI HAMMER PLUMBING GROUP **BRANCH** FLUSH FLUSH ARRESTOR SIZE UNITS **FIXTURES** SIZE TANK VALVE 1/2" - 1" 1 TLT, 1 LAV 11.5 1-11 6.5 2 TLT, 2 LAV 1-1/4" 12-32 13.5 23 1-1/2" 33-60 1 TLT, 1 UR, 1 LAV 13 18 3 TLT, 3 LAV 19.5 61-113 2 TLT, 1 UR, 3 LAV 2-1/2" 114-154 19.5 4 TLT, 4 LAV 155-330 26 46

- ALL BATHROOM GROUPS SHALL INCLUDE A MINIMUM OF ONE DCW ARRESTOR AND ONE DHW ARRESTOR SIZED PER HAMMER ARRESTOR SCHEDULE. ADDITIONAL ARRESTORS SHALL BE INSTALLED WHERE INDICATED.
- ARRESTORS SHALL BE P.D.I.-WH201 APPROVED AND CERTIFIED. ARRESTORS SHALL HAVE WROUGHT COPPER SHELL WITH THREADED CONNECTIONS AND HYDRO-PNEUMATIC AIR CUSHION.
- PROVIDE ACCESS TO ARRESTORS FURNISH AND INSTALL WITH ISOLATION VALVES INDEPENDENT OF ASSEMBLY.

#### BALANCE VALVE PRESSURE 34.5 **GAUGE WITH** - CHECK VALVE 29.5 COCK **DIRECTION OF FLOW** DHW RECIRCULATION PUMP WATER HAMMER ARRESTOR SCHEDULE

NOT TO SCALE

3' POWER CORD HARDWIRED TO PUMP

(BY ELEC. CONTR.)

SHUT-OFF VALVE

# RPZ DOMESTIC WATER RISER

EQUAL TO WATTS LFN223B FOR 3".

BUILDING IS 150PSI OR GREATER.

ON DISTRIBUTION PIPE SIZE.

IF INCOMING PRESSURE IS 70PSI OR GREATER, PROVIDE PRV

EQUAL TO WATTS LF223 FOR 2 1/2" AND BELOW. PRV SHALL BE

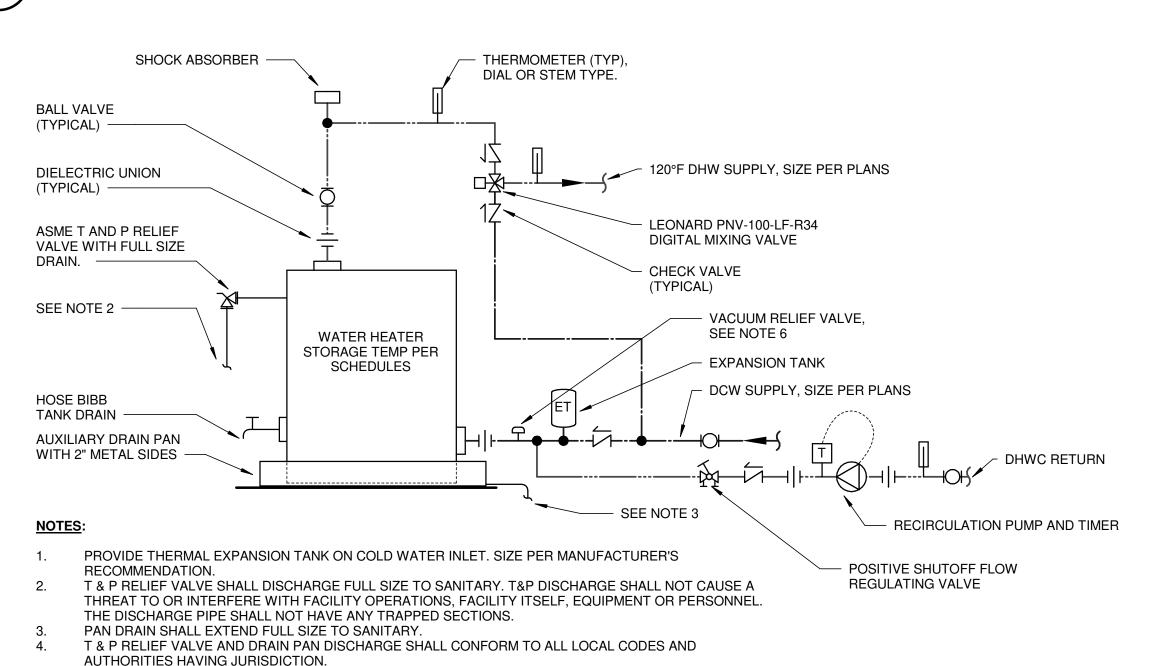
SIZE PRV PER PLANS OR MATCH RPZ SIZE, DO NOT SIZE BASED

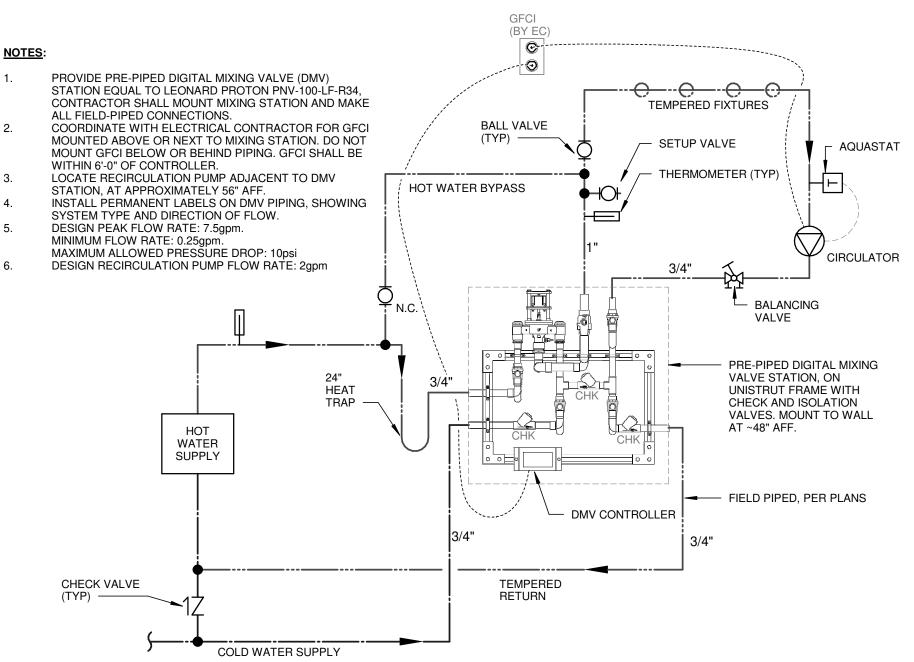
ENGINEER SHALL BE INFORMED IF INCOMING PRESSURE AT

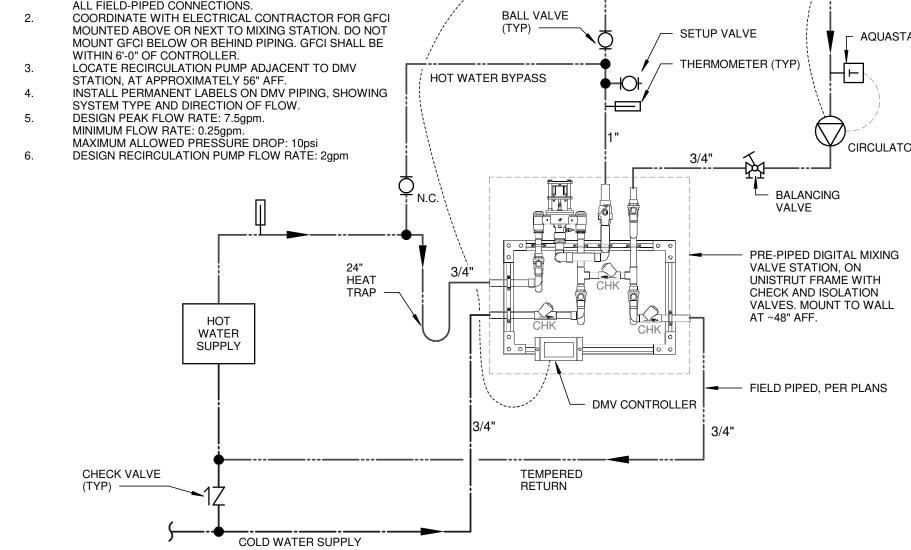
NOT TO SCALE

DCW FROM SITE ├

PRV NOTES









NOT TO SCALE

6

NOT TO SCALE

WATER HEATER - MASTER TMV W/ RECIRC.

FOR SUSPENDED WATER HEATERS, PROVIDE PRE-MANUFACTURED PLATFORM EQUAL TO 'HOLD-RITE' PLATFORM SHALL BE RATED FOR FULL WEIGHT OF WATER HEATER AND ACCESSORIES WHEN FILLED.

PROVIDE SECONDARY SEISMIC STRAP AROUND WATER HEATER AND SECURED TO STRUCTURE. PROVIDE BOTTOM FED WATER HEATERS WITH VACUUM RELIEF VALVE WHICH MEETS ANSI Z21.22. SET PUMP TIMER SO THAT RECIRCULATION PUMP OPERATES ONLY DURING OCCUPIED HOURS.

NOT TO SCALE