



UNIVERSITY OF SOUTH CAROLINA

COLUMBIA, SOUTH CAROLINA

USC COKER SUITE 416 OFFICE MODIFICATIONS

State Project #H27-D249-FW

GMK Project #18003.01

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CONSTRUCTION DOCUMENTS

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ARCHITECTURAL

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A11.2 SPECIFICATIONS

MECHANICAL

M2.4 FOURTH FLOOR HVAC DEMOLITION & RENOVATION FLOOR PLANS, SPECIFICATIONS & SCHEDULES

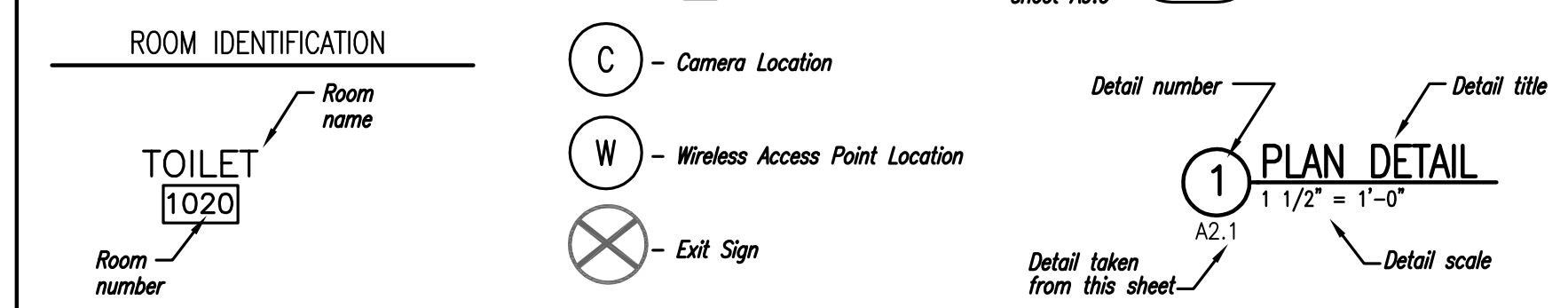
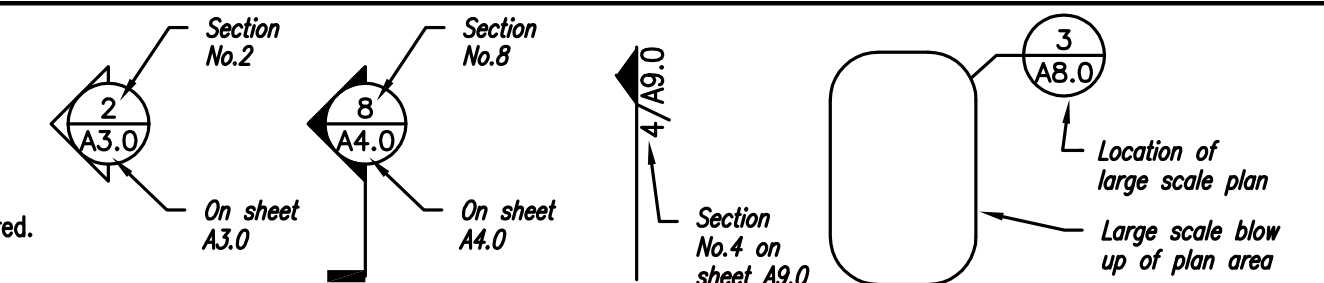
ELECTRICAL

E2.4 ELECTRICAL SPECIFICATIONS, DEMOLITION AND RENOVATION PLANS

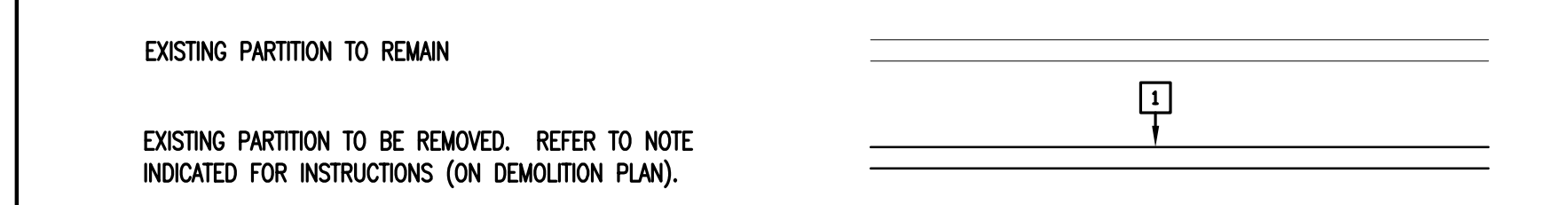
- NOTIFY THE ARCHITECT IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT ARE CONTRARY TO THOSE REPRESENTED WITHIN THE DRAWINGS
- ALL NEW VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUITS, ETC. (WHETHER SHOWN OR NOT) IN FINISHED ROOMS OR AREAS THROUGH OUT BUILDING, NOT ENCASED IN MASONRY, METAL OR WOOD CONSTRUCTION SHALL BE FURRED IN, THE FURRING FINISHED TO MATCH ROOM FINISH.
- ALL NEW PARTITIONS, UNLESS OTHERWISE SHOWN OR DETAILED, SHALL BE METAL STUDS OF THICKNESS TO ADEQUATELY COVER PIPING, CONDUITS, ETC.
- PROVIDE AN EDGE STRIP, AS DETAILED, UNDER ALL DOORS WHERE NEW OR EXISTING FINISHES AND ADJACENT FLOOR ARE AT DIFFERENT LEVELS AND WHERE ADJACENT FLOOR FINISHES ARE OF DIFFERENT MATERIALS. SEE DETAIL 6/A0.0.
- OFFSET ALL DOORS IN METAL STUD WALLS 6" FROM ADJACENT WALLS 8" IN CMU WALLS UNLESS OTHERWISE NOTED.
- PROVIDE ACCESS PANELS, 24" X 24", OR OF SIZES REQUIRED, WHERE PLUMBING AND HEATING VALVES, WATER SWITCHES, OXYGEN PRESSURE SWITCHES, VENTILATION SPILTER DAMPERS, ETC. ARE SHOWN ON PLUMBING, HEATING, AND VENTILATION DRAWINGS. SUCH ACCESS PANELS TO BE INSTALLED IN THE FOLLOWING:
 - SUSPENDED PLASTER OR GYPSUM WALLBOARD CEILINGS
 - METAL STUD OR MASONRY PARTITIONS
- WALL ASSEMBLIES SHALL BE MAINTAINED AT ALL RECESSED FIRE EXTINGUISHER CABINETS AND ALL RECESSED EQUIPMENT.
- SUPPLY BLOCKING AT ALL WALL HUNG EQUIPMENT (I.E., GRAB BARS, CASEWORK MEDICAL EQUIPMENT, ETC.)

1 GENERAL NOTES

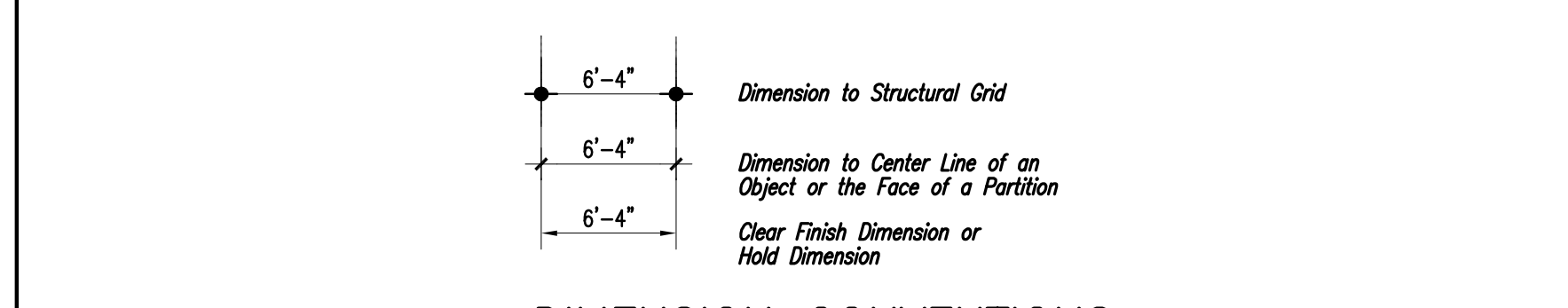
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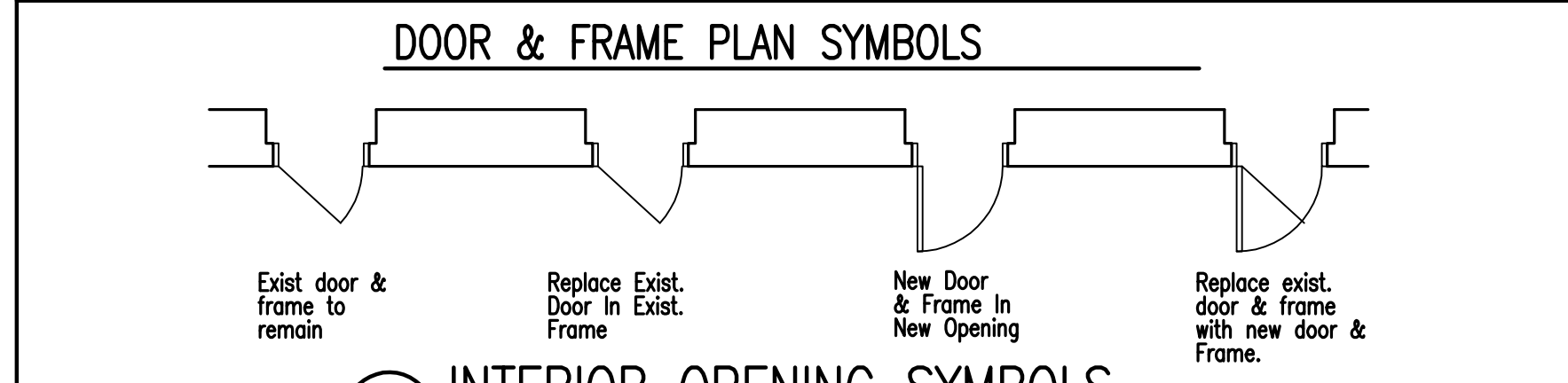
2 REFERENCE SYSTEM



3 PARTITION SYMBOLS



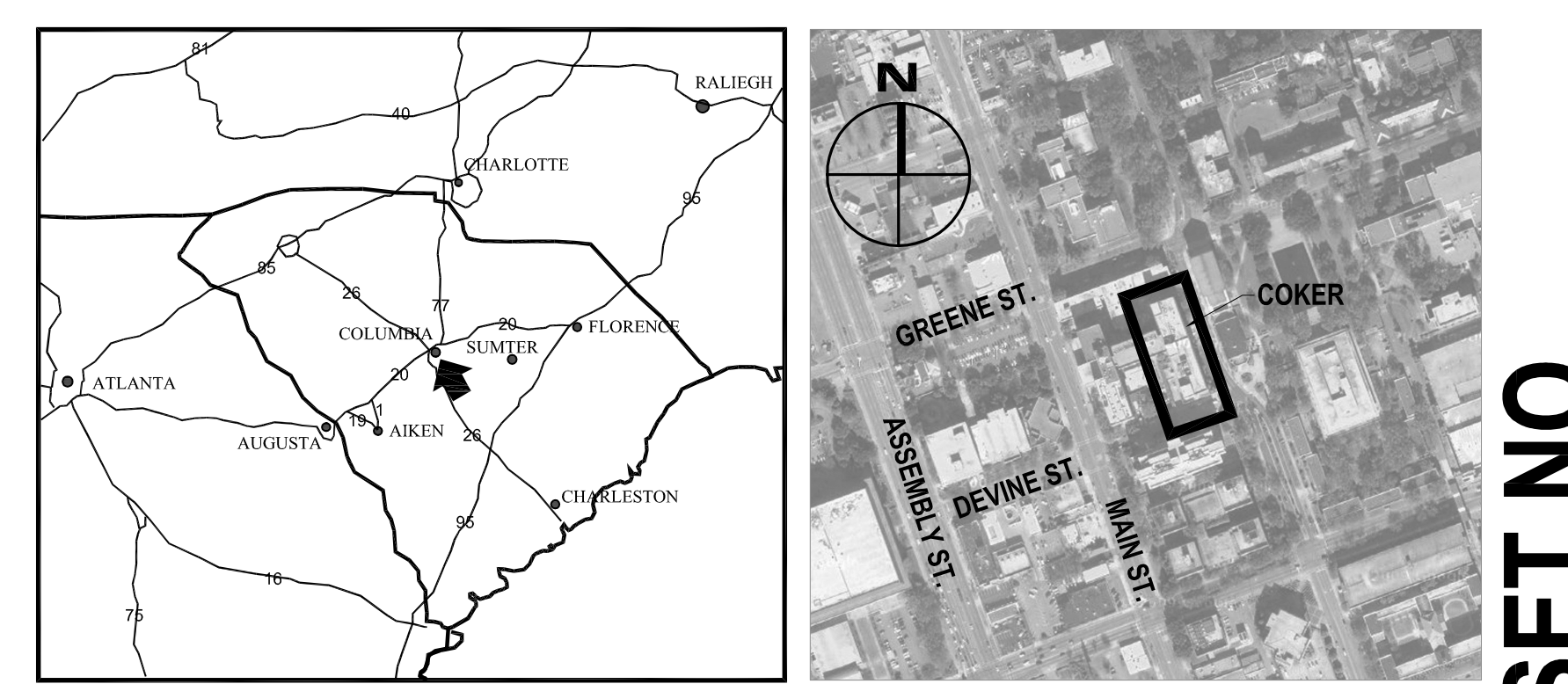
4 DIMENSION CONVENTIONS



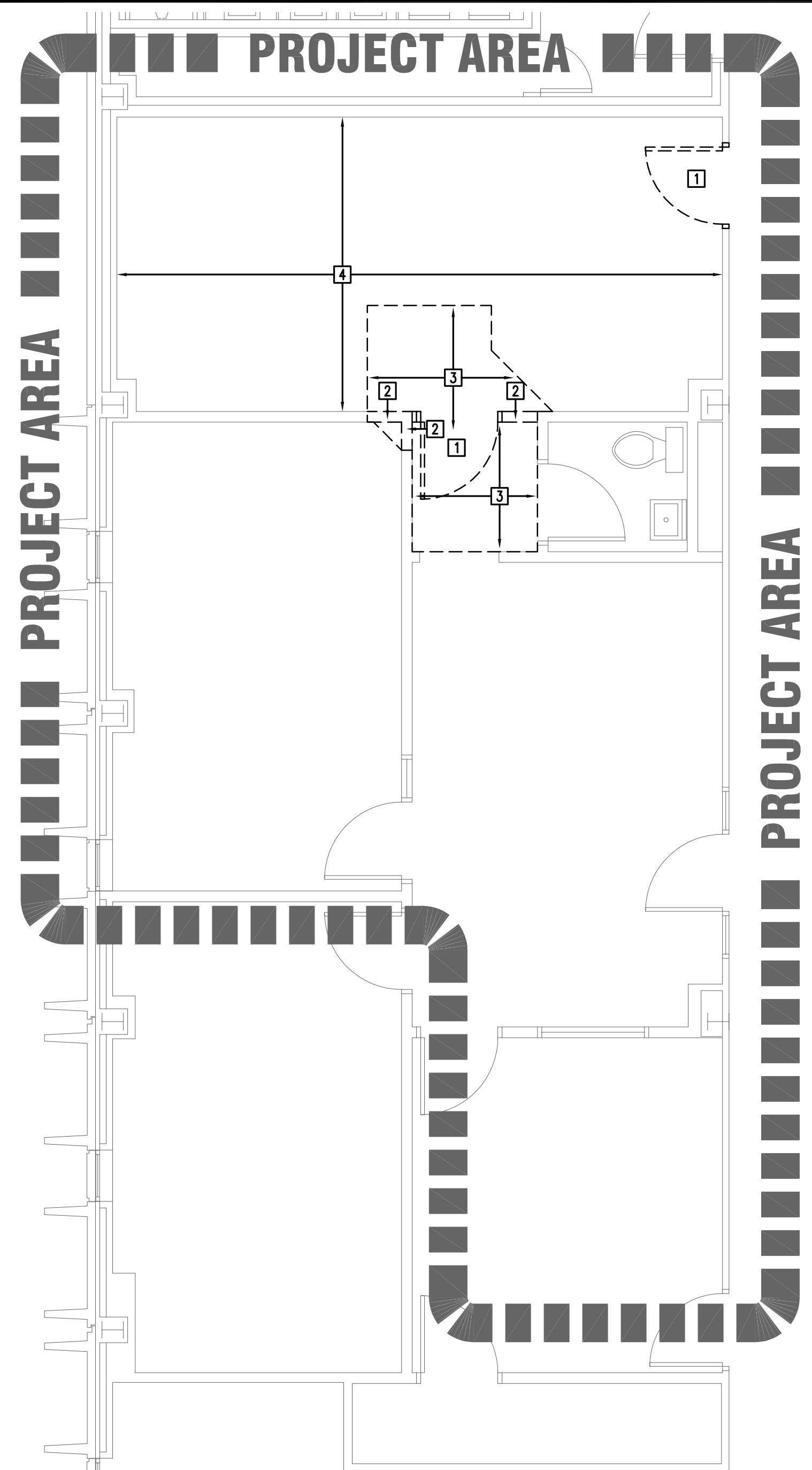
5 INTERIOR OPENING SYMBOLS

N.T.S.

KEY PLAN



SET NO. _____



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

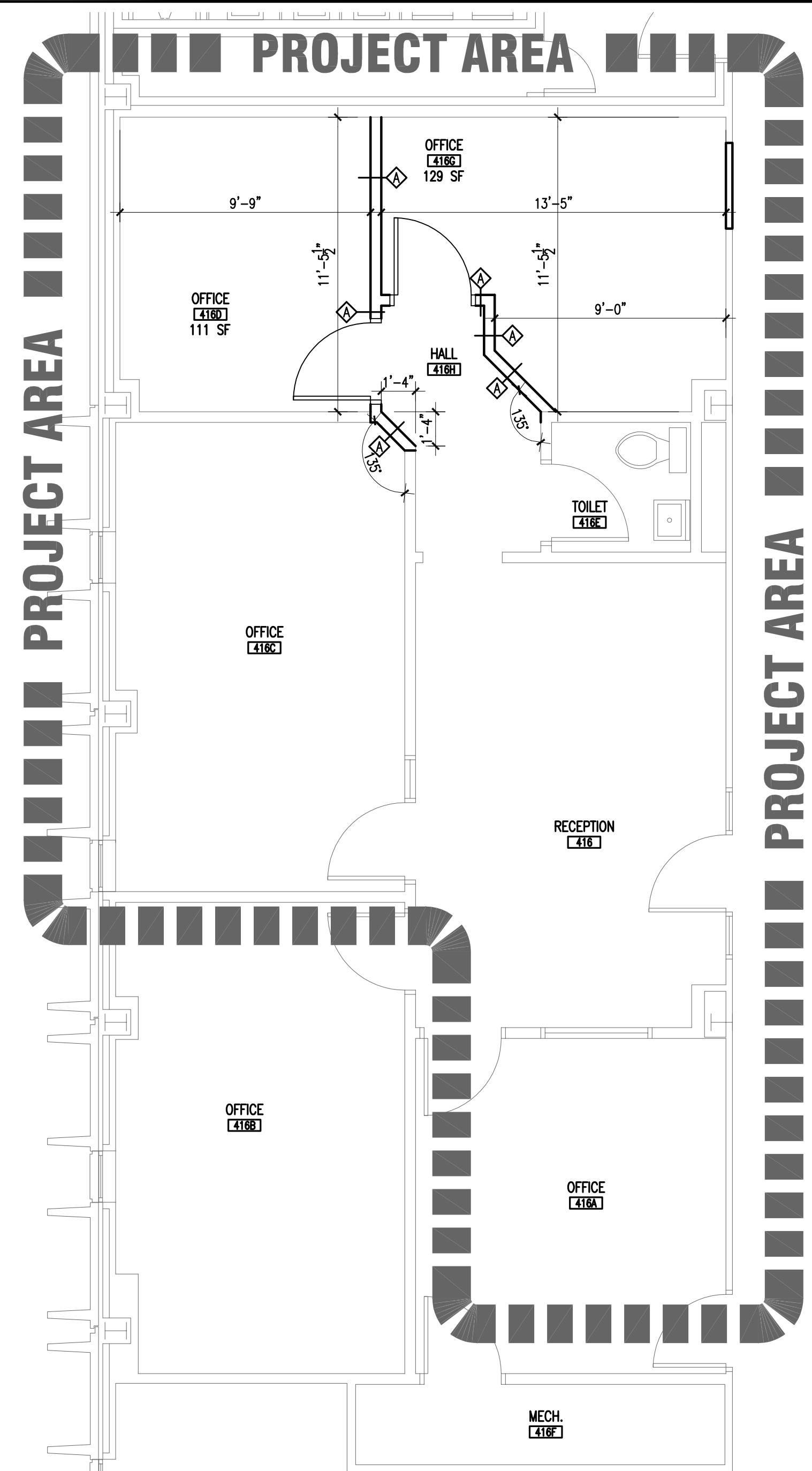
GENERAL DEMOLITION NOTES

1. NOTIFY THE ARCHITECT IF DISCREPANCIES ARE DISCOVERED IN THE FIELD BETWEEN WHAT IS EXISTING AND WHAT IS SHOWN ON THE DRAWINGS. DO NOT PROCEED WITH DEMOLITION UNTIL THE DISCREPANCY IS RESOLVED BY THE ARCHITECT.
2. WHERE A WALL IS INDICATED TO BE REMOVED, REMOVE ALL FINISHES, FURRING AND TRIM UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL CLOSELY COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLANS.
4. NOT ALL DEMOLITION REQUIRED BY THE INSTALLATION OF NEW MECHANICAL AND ELECTRICAL SYSTEMS IS NECESSARILY INDICATED ON THE ARCHITECTURAL PLANS. COORDINATE ADDITIONAL DEMOLITION WORK ON ELECTRICAL, PLUMBING AND MECHANICAL SHEETS.
5. WHENEVER DEMOLITION DAMAGES EXISTING CONSTRUCTION TO REMAIN, THE CONTRACTOR SHALL REPAIR THOSE SURFACES TO THE FINISH AND QUALITY OF ADJACENT SURFACES OF THE ORIGINAL CONDITION.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PROVISIONS TO PROTECT THE EXISTING CONSTRUCTION TO REMAIN. CONSTRUCT DUST PROOF BARRIERS AS REQUIRED TO PREVENT THE PASSAGE OF DUST INTO OCCUPIED AREAS.
7. CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT FLOOR IS GRIND SMOOTH AT AREAS OF DEMOLITION AND MADE SMOOTH AND PREPARED FOR NEW FLOOR FINISH. THESE AREAS MAY OR MAY NOT BE IDENTIFIED ON THE DEMOLITION AND RENOVATION PLANS. USE CAST UNDERLAYMENT AS NECESSARY FOR SMOOTH AND LEVEL FLOOR SLAB IN PREPARATION FOR FLOOR FINISHES.
8. FINISHES IN SPACES NOT DESIGNATED TO RECEIVE NEW FINISHES SHOULD BE PROTECTED IN PLACE. NEW PARTITIONS SHOULD BE PAINTED TO MATCH PAINT IN EXISTING SPACES.
9. SUSPENDED ACOUSTICAL CEILING GRID SYSTEMS SHOULD BE MODIFIED TO ALLOW FOR INSTALLATION OF NEW PARTITIONS. CONTRACTOR IS TO PROVIDE NEW EDGE TRIM HANGARS, SUPPORTS, ETC AS NECESSARY TO PROVIDE A FINISHED CEILING SYSTEM.
10. FLOOR FINISH SHOULD BE MODIFIED TO ALLOW FOR INSTALLATION OF NEW PARTITIONS. CONTRACTOR IS TO PROVIDE NEW BASE, TRANSITIONS, ETC. TO PROVIDE A FINISHED ROOM.
11. OPENINGS IN FIRE RATED WALLS AT REMOVED DUCTS, PIPES, CONDUIT, ETC. SHOULD BE PATCHED WITH APPROPRIATE FIRE RATED CONSTRUCTION AND/OR SEALED WITH FIRE SEALANT.

KEYED DEMOLITION NOTES

1. REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE COMPLETE.
2. REMOVE EXISTING METAL FRAMED PARTITION UP TO 1" BELOW EXISTING SUSPENDED ACOUSTICAL. INSTALL BOTTOM TRACK AND FINISH BULKHEAD.
3. REMOVE EXISTING CARPET FLOORING AND ADHESIVE COMPLETE. PREPARE SLAB TO RECEIVE NEW FLOOR FINISH.
4. EXISTING SUSPENDED ACOUSTICAL CEILING SYSTEM TO REMAIN. RELOCATED ELECTRICAL FIXTURES, MECHANICAL GRILLS AND OTHER DEVICES AS INDICATED IN MECHANICAL AND ELECTRICAL DRAWINGS. PROTECT CEILING GRID AS NECESSARY. SALVAGE CEILING TILE AND REINSTALL. REPLACE IN TILE DAMAGED DURING CONSTRUCTION ACTIVITIES.

----- DASHED LINES INDICATE ELEMENTS TO BE DEMOLISHED.



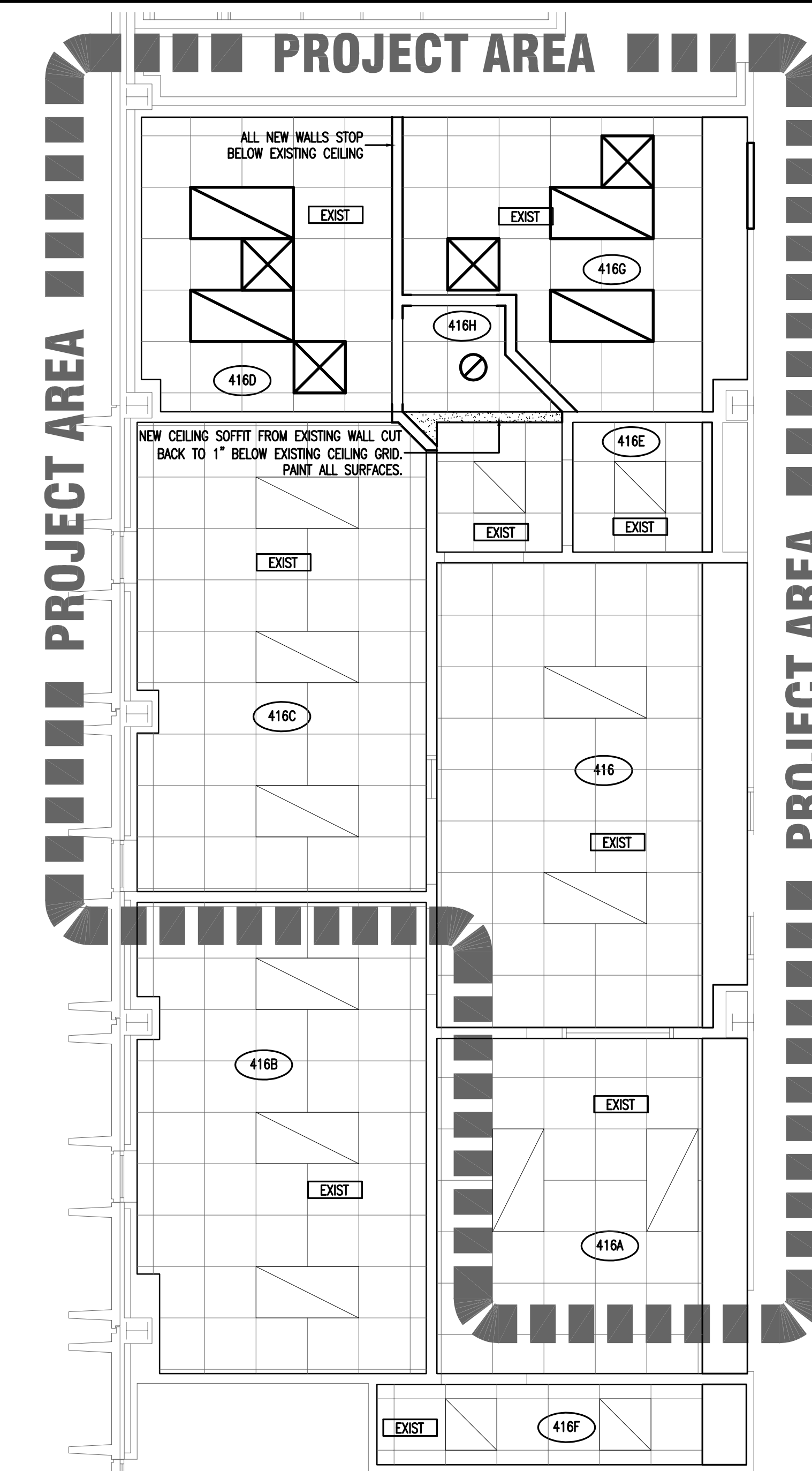
PARTIAL 4TH FLOOR RENOVATION PLAN
SCALE: 1/4"=1'-0"

GENERAL RENOVATION NOTES

1. REFER TO DETAIL 6/A2.4 FOR PARTITION DETAIL.
2. PATCH OPENING IN EXISTING WALL AT REMOVED DOOR TO MATCH EXISTING ADJACENT MATERIALS.
3. PAINT EXISTING WALL FROM CORNER TO CORNER IN ROOMS NOT CALLED TO BE PAINTED (EX. MAIN CORRIDOR).

REFLECTED CEILING PLAN NOTES

1. EXISTING CEILING GRID TO REMAIN. REMOVE AND REINSTALL GRID AS NECESSARY TO INSTALL MECHANICAL AND ELECTRICAL DEVICES.
2. RELOCATE LIGHTS AND MECHANICAL GRILLS AS INDICATED AND AS DIRECTED IN MECHANICAL AND ELECTRICAL DRAWINGS.
3. SALVAGE CEILING TILE AND REINSTALL WHEREVER POSSIBLE. REPLACE CONTRACTOR DAMAGED TILES.



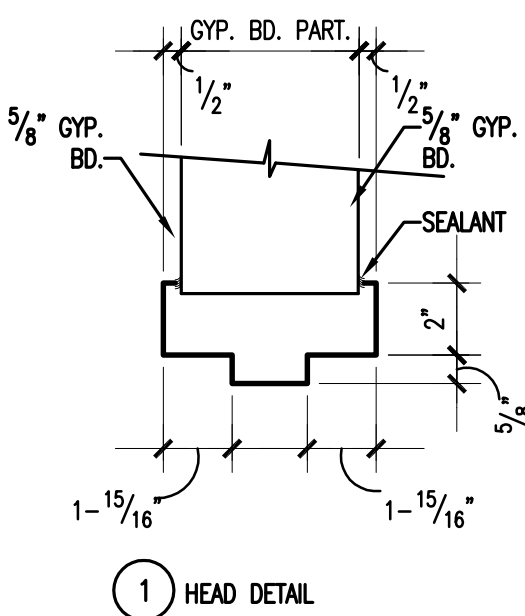
PARTIAL 4TH FLOOR REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

1 DOOR TYPES

- NOTES:
1. ALL DOORS ARE 7'-0" HIGH UNLESS OTHERWISE NOTED

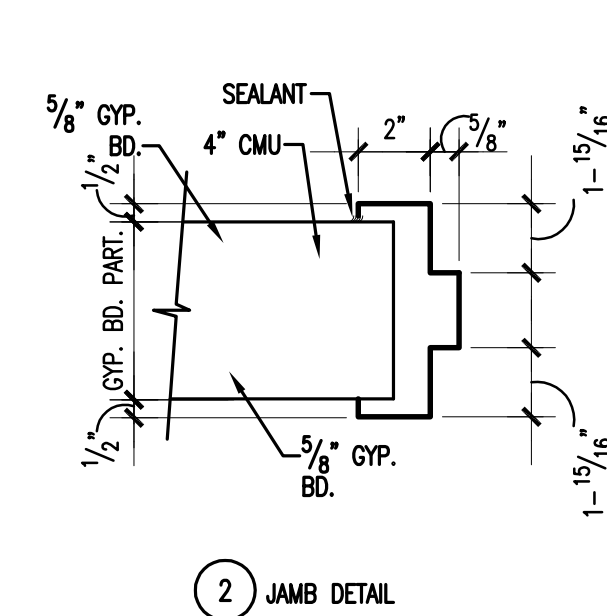
2 FRAME TYPES

- NOTES: LABELED DOORS REQUIRE LABELED FRAMES

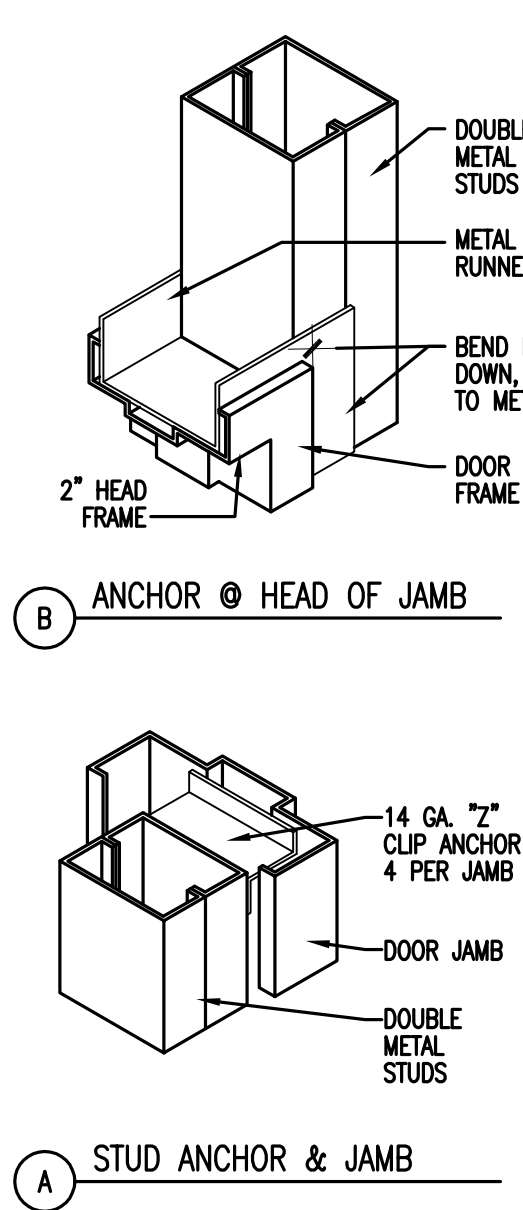
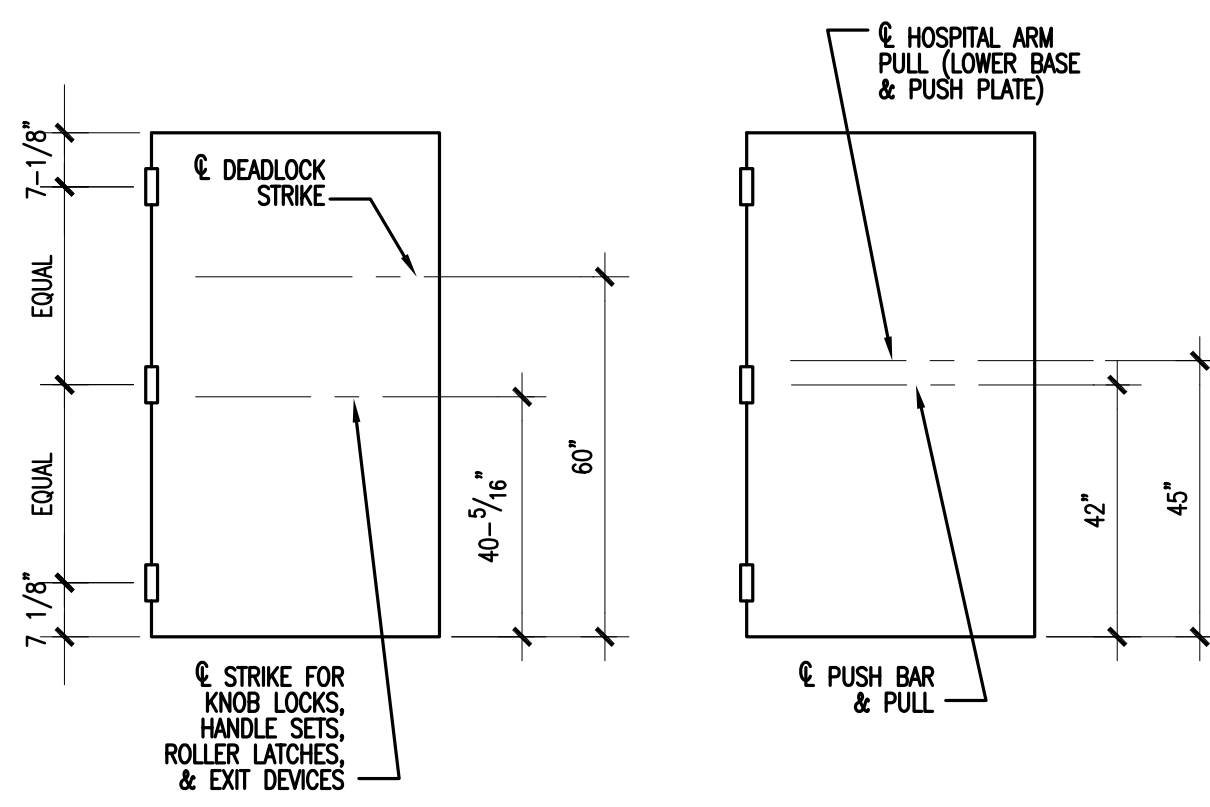


5 HEAD/JAMB DETAILS

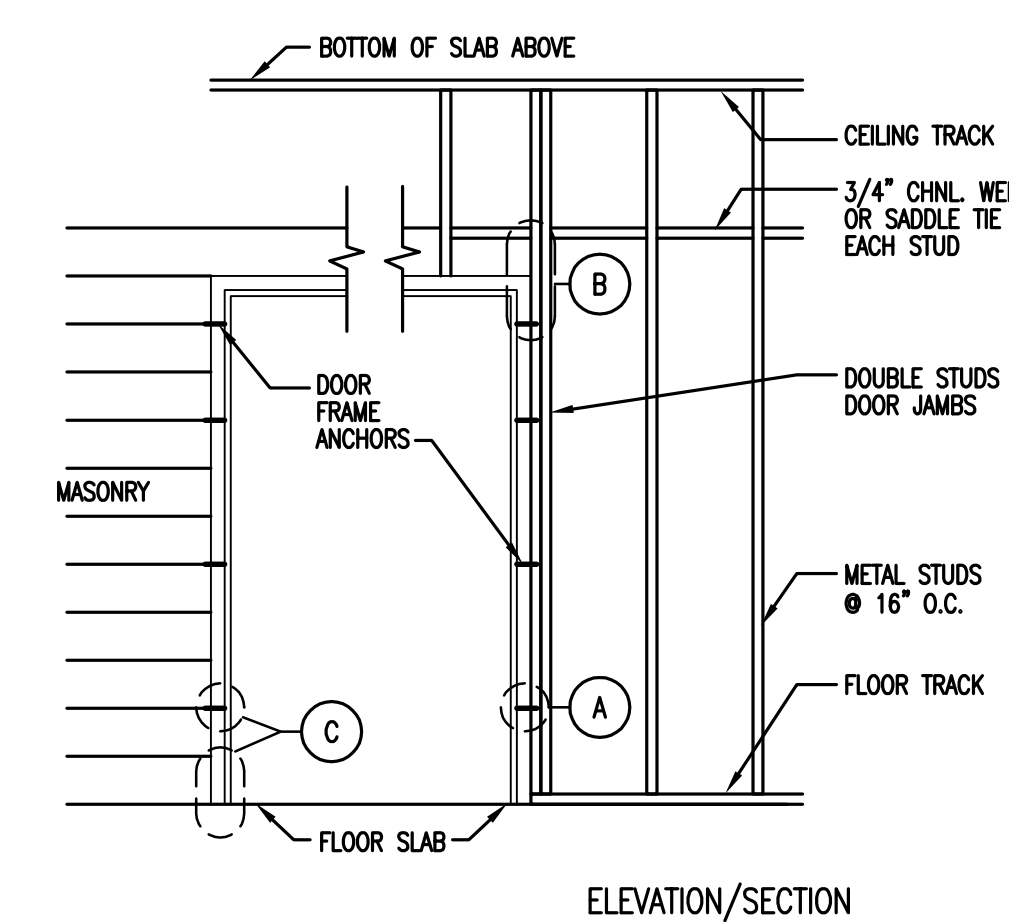
NOTE: GROUT ALL FRAMES SOLID.



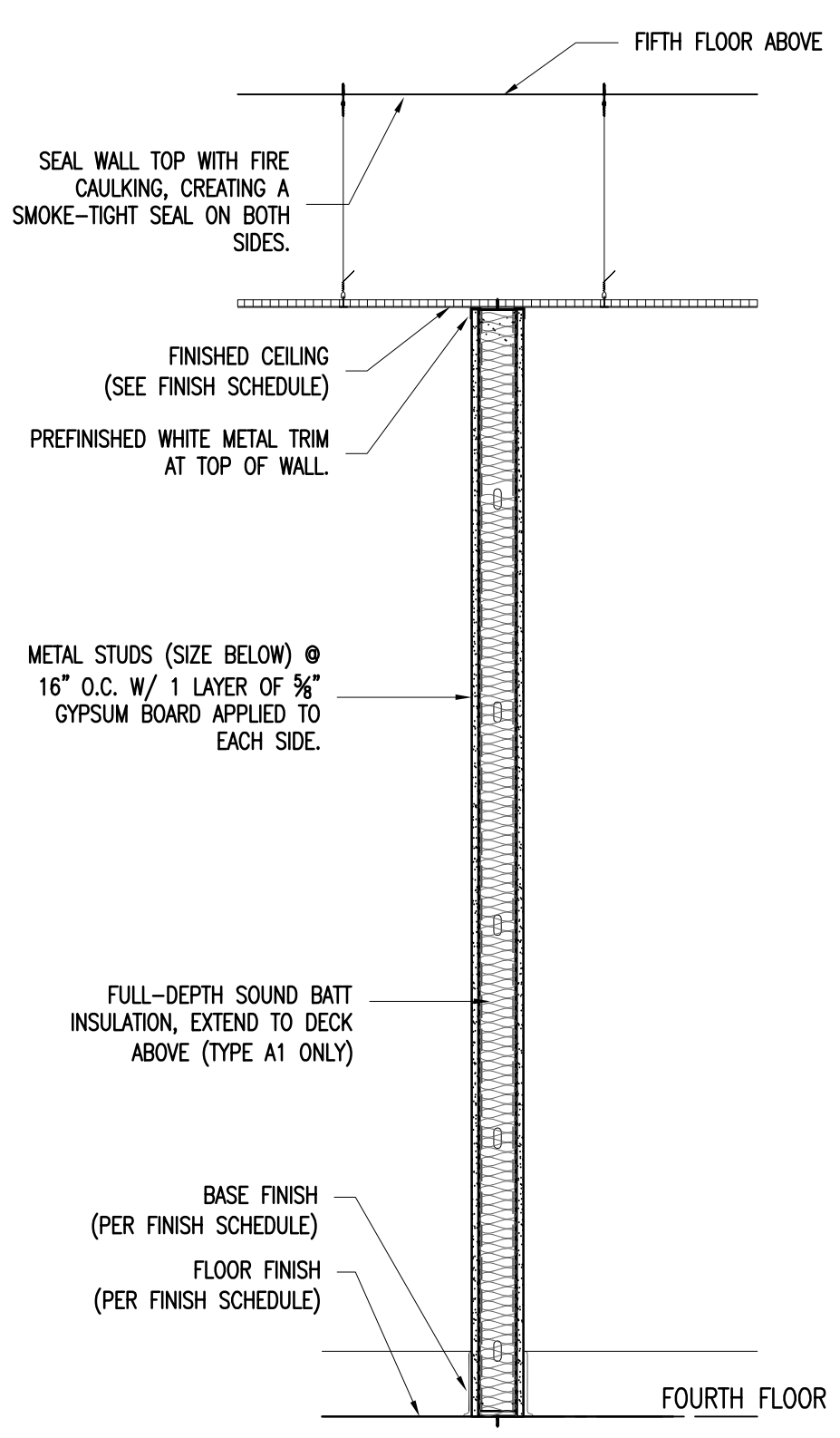
3 DOOR HARDWARE LOCATIONS



4 TYPICAL FRAMING AT H.M. DOOR FRAMES



NOTE:
LOCATE JAMB ANCHORS ABOVE HINGE REINF. AND JUST BELOW TOP REINF. CLIPS ON STRIKE SIDE OCCUR DIRECTLY OPPOSITE OF THOSE ON THE HINGE SIDE.



6 NON-RATED INTERIOR WALL DETAIL
3/4" = 1'-0"
A - 3/8" METAL STUDS

DOOR SCHEDULE

ROOM NAME	DOOR NUMBER	DOOR ELEV	DOOR SIZE	FRAME ELEV	HWDR SET
OFFICE	416D	A	3'-0" X 7'-0"	a	OFFICE FUNCTION
OFFICE	416E	A	3'-0" X 7'-0"	a	OFFICE FUNCTION

- DOOR HARDWARE:**
1. ALL HARDWARE TO BE BHM OPERATIONAL GRADE 1 - HEAVY DUTY COMMERCIAL.
 2. ALL HARDWARE SHALL MEET ANSI 117.1 AND ADA AS APPLICABLE.
 3. FINISH SHALL BE SATIN NICKEL, OR MATCH EXISTING FINISH IF DIFFERENT.
 4. TESTING SHALL BE COORDINATED WITH OWNER AND KEYS PROVIDED.
 5. HARDWARE SUPPLIER SHALL COORDINATE WITH DOOR AND FRAME SUPPLIER ON PREPARATION FOR HARDWARE.
 6. MINIMUM 7 YEAR WARRANTY.
 7. SUBMIT SCHEDULE, SPECS, PRODUCT DATA TO THE ARCHITECT FOR APPROVAL AS PER SECTION 01 3000.

- OFFICE FUNCTION:**
- A. 3 MORTISE HINGES EACH DOOR LEAF FOR DOORS UP TO 3'-6" WIDE. FOR DOORS OVER 3'-6" WIDE PROVIDE 4 HINGES.
 - B. 1 MORTISE LOCKSET (LEVER), OFFICE FUNCTION.
 - C. DOOR SILENCERS IN FRAME OR SMOKE SEALS IN RATED DOORS.
 - D. OVERHEAD STOP OR WALL BUMPER AS REQUIRED.

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	SURFACE	FLOOR			WALLS		CEILING		REMARKS
			MATERIAL	ACCENT	BASE	MATERIAL/FINISH	ACCENT	MATERIAL	ACCENT	
416	RECEPTION		PNT		RB	PNT		ACT		
416A	OFFICE		EXIST		EXIST	EXIST		EXIST		
416B	OFFICE		EXIST		EXIST	EXIST		EXIST		
416C	OFFICE		EXIST		EXIST	EXIST		EXIST		
416D	OFFICE		EXIST		RB	PNT		EXIST		NOTE 2
416E	TOILET		EXIST		EXIST	EXIST		EXIST		
416F	MECH		EXIST		EXIST	EXIST		EXIST		
416G	OFFICE		EXIST		RB	PNT		EXIST		NOTE 2
416H	HALL		CPT		RB	PNT		EXIST		NOTE 2

LEGEND:
CPT - CARPET
PNT - PAINT
RB - RUBBER BASE
ACT - ACOUSTICAL TILE CEILING

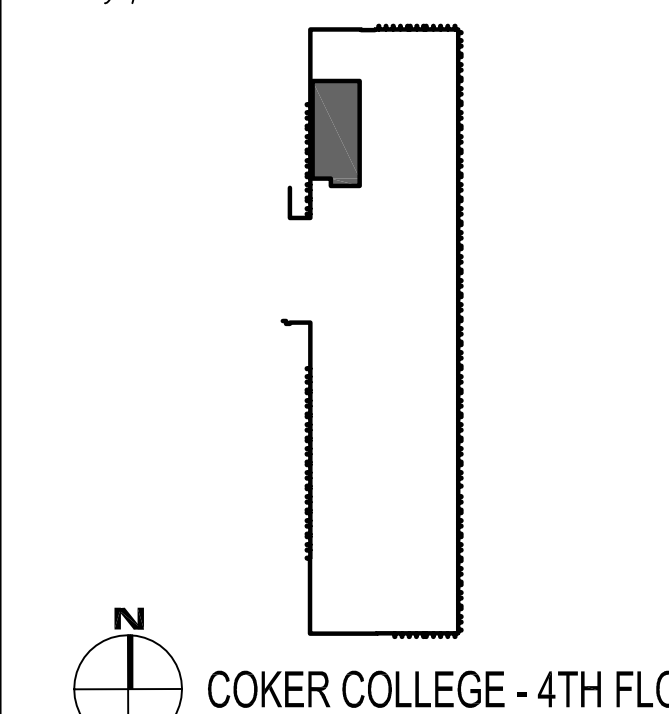
- GENERAL NOTES:**
1. WHERE PAINT IS CALLED FOR, PAINT ALL WALLS OF THE ROOM WHETHER NEW OR EXISTING. REFER TO NOTES ON FLOOR PLANS.
 2. RUBBER BASE TO BE APPLIED TO ALL WALLS WHETHER NEW OR EXISTING AND TO BASE OF ALL MILLWORK INDICATED.

issued for
CONSTRUCTION DOCUMENTS

date
FEBRUARY 19, 2018

number	item	date

key plan



COKER COLLEGE - 4TH FLOOR

sheet title
PARTIAL 4TH FLOOR DEMOLITION, RENOVATION AND CEILING PLANS, DOOR AND FINISH SCHEDULES AND MISCELLANEOUS DETAILS

sheet number

A2.4

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project name
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number	item	date

key plan
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COKER COLLEGE - 4TH FLOOR

sheet title
FOURTH FLOOR
HVAC DEMOLITION & RENOVATION FLOOR PLANS, SPECIFICATIONS & SCHEDULES

sheet number

M2.4

drawn by JMB
checked by JDR

SECTION 23.3100 - DUCTS

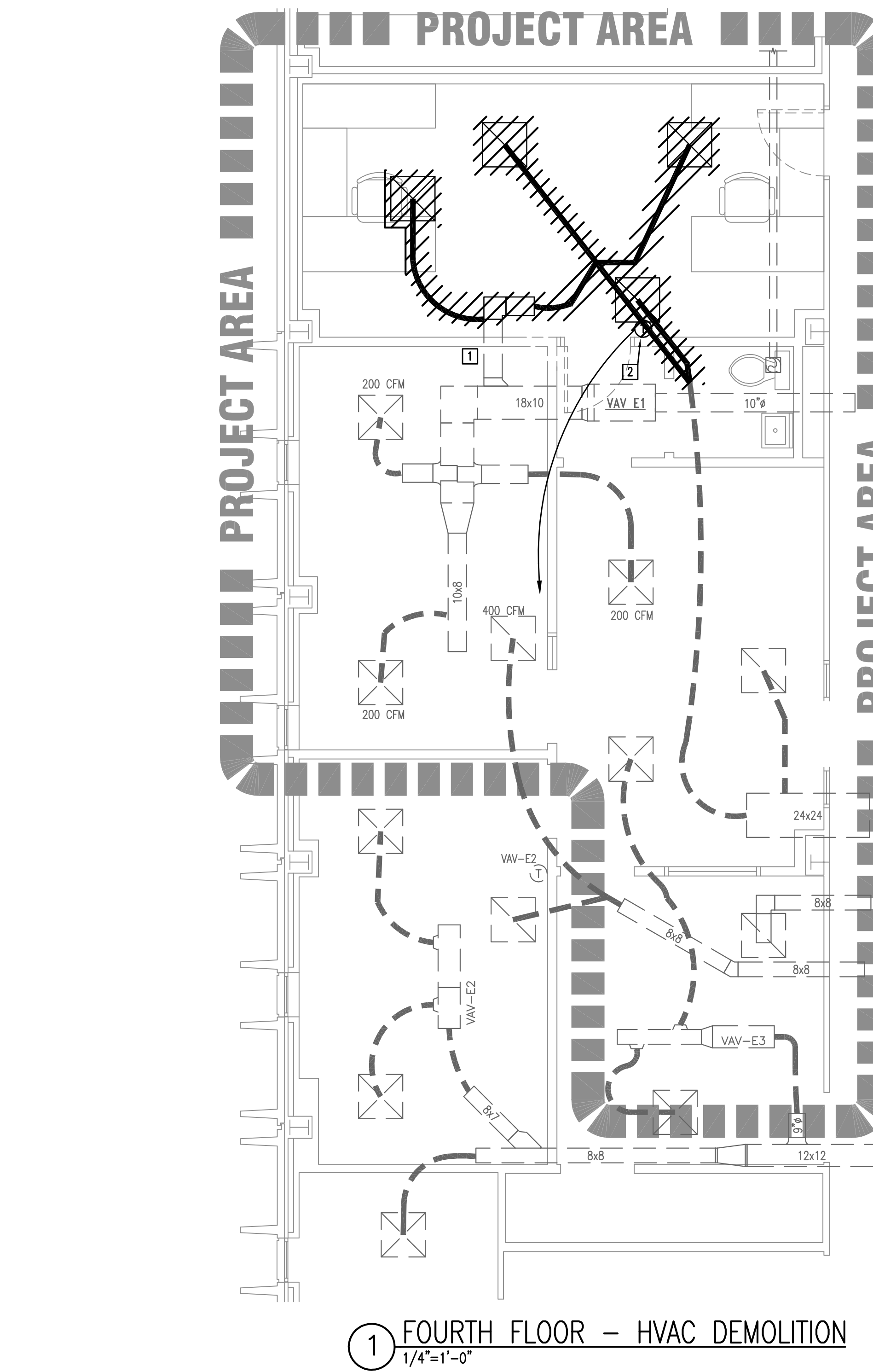
PART 1 GENERAL
1.01 SECTION INCLUDES
A. METAL DUCTWORK
B. FLEXIBLE DUCTS
1.02 RELATED SECTIONS
A. SECTION 23.0713 - MECHANICAL INSULATION
B. SECTION 23.3300 - DUCT ACCESSORIES
C. SECTION 23.3700 - AIR OUTLETS AND INLETS
1.03 REFERENCES
A. ASTM A 36/A 36M - STANDARD SPECIFICATION FOR CARBON STRUCTURAL STEEL; 2005.
B. ASTM A 653/A 653M - STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (ALUMINIZED); BY THE HOT-DIP PROCESS; 2005A.
C. ASTM A 661 - STANDARD SPECIFICATION FOR ANNEALED OR COLD-WORKED AUSTENITIC STAINLESS STEEL SHEET, STRIP, PLATE, AND FLAT BAR; 2003.
D. ASTM A 1011/A 1011M - STANDARD SPECIFICATION FOR STEEL SHEET AND STRIP, HOT-ROLLED, CARBON, STRUCTURAL, HIGH-STRENGTH LOW-ALLOY AND HIGH-STRENGTH LOW-ALLOY WITH IMPROVED FORMABILITY; 2005A.
E. NFPA 90A - STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS, NATIONAL FIRE PROTECTION ASSOCIATION; 2002.
F. SMACNA (LEAK) - HVAC AIR DUCT LEAKAGE TEST MANUAL; SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION; 1985, FIRST EDITION.
G. SMACNA (DCS) - HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE; SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION; 2005.
1.04 SUBMITTALS
A. PRODUCT DATA: PROVIDE DATA FOR DUCT MATERIALS.
B. TEST REPORTS: INDICATE PRESSURE TESTS PERFORMED. INCLUDE DATE, SECTION TESTED, TEST PRESSURE, AND LEAKAGE RATE, FOLLOWING SMACNA (LEAK) - HVAC AIR DUCT LEAKAGE TEST MANUAL.
C. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF DUCTS AND DUCT FITTINGS. RECORD CHANGES IN FITTING LOCATION AND TYPE. SHOW ADDITIONAL FITTINGS USED.
D. OPERATION AND MAINTENANCE MANUALS: INCLUDE IN MANUALS THE INFORMATION LISTED BELOW.
E. SHOP DRAWINGS AND PRODUCT DATA
1.05 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE TYPE OF PRODUCTS SPECIFIED IN THIS SECTION, WITH MINIMUM THREE YEARS OF DOCUMENTED EXPERIENCE.
1.06 REGULATORY REQUIREMENTS
A. CONSTRUCT DUCTWORK TO NFPA 90A STANDARDS.
1.07 FIELD CONDITIONS
A. DO NOT INSTALL DUCT SEALANTS WHEN TEMPERATURES ARE LESS THAN THOSE RECOMMENDED BY SEALANT MANUFACTURER'S PRODUCT INFORMATION.
B. MAINTAIN TEMPERATURES WITHIN ACCEPTABLE RANGE DURING AND AFTER INSTALLATION OF DUCT SEALANTS.
PART 2 PRODUCTS
2.01 MATERIALS
A. GALVANIZED STEEL DUCTS: HOT-DIPPED GALVANIZED STEEL SHEET, ASTM A 653/A 653M FS TYPE B, WITH G90/Z275 COATING.
B. INSULATED FLEXIBLE DUCTS
1. TWO PLY VINYL FILM SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE; FIBERGLASS INSULATION; POLYETHYLENE VAPOR BARRIER FILM.
a. PRESSURE RATING: 10 INCHES WG POSITIVE AND 1.0 INCHES WG NEGATIVE.
b. MAXIMUM VELOCITY: 4000 FPM.
c. TEMPERATURE RANGE: -10 DEGREES F TO 160 DEGREES F.
C. HANGER ROD: ASTM A 36/A 36M, STEEL, GALVANIZED; THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUSLY THREADED.
2.02 DUCTWORK FABRICATION
A. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED. PROVIDE DUCT MATERIAL, GAGES, REINFORCING, AND SEALING FOR OPERATING PRESSURES INDICATED.
B. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE AIR FOL TURNING VANES.
C. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE WHEREVER POSSIBLE, MAXIMUM 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
D. PROVIDE COMBINATION BOOT TYPE (LO-LOSS) TAKEOFFS ON ALL BRANCH TAKEOFFS.
E. CLEAN SHOP FABRICATED DUCTWORK OF DEBRIS, OIL AND GREASE. COVER ENDS OF DUCTWORK WITH TEMPORARY CLOSURE MATERIAL AND TAPE. PROTECT DUCTWORK FROM ENTRY OF DUST AND DEBRIS DURING SHOP DEMOLITION, SHIPMENT AND TEMPORARY STORAGE AT THE JOB SITE.
F. WIPE THE INSIDE OF ALL DUCTWORK TO REMOVE THE DEBRIS, OIL, GREASE, ETC. ONCE DUCTWORK IS CLEAN, COVER WITH PLASTIC OR METAL TEMPORARY CLOSURE MATERIAL. SEAL TIGHT SO THAT NO WATER, MOISTURE OR DEBRIS CAN ENTER THE DUCTWORK. PROTECT DUCTWORK FROM ENTRY OF DUST AND DEBRIS DURING SHOP STORAGE, SHIPMENT AND TEMPORARY STORAGE AT THE JOB SITE.
2.03 DUCT MANUFACTURERS
A. METAL-FAB, INC.: WWW.METALFAB.COM
B. SEMCO INCORPORATED: WWW.SEMCOINC.COM
C. UNITED MCILL CORPORATION: WWW.UNITEDMCILL.COM
D. SUBSTITUTIONS: SEE SECTION 01600 - PRODUCT REQUIREMENTS.
2.04 MANUFACTURED METAL DUCTWORK AND FITTINGS
A. MANUFACTURE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE, AND AS INDICATED. PROVIDE DUCT MATERIAL, GAGES, REINFORCING, AND SEALING FOR OPERATING PRESSURES INDICATED.
PART 3 EXECUTION
3.01 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. FOR LINED DUCTS, MAINTAIN SIZES INSIDE LINING.
C. INSTALL AND SEAL METAL AND FLEXIBLE DUCTS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
D. PROVIDE OPENINGS IN DUCTWORK WHERE REQUIRED TO ACCOMMODATE THERMOMETERS AND CONTROLLERS. PROVIDE PILOT TUBE OPENINGS WHERE REQUIRED FOR TESTING OF SYSTEMS. COMPLETE WITH METAL CAN WITH SPRING DEVICE OR SCREW TO ENSURE AGAINST AIR LEAKAGE. WHERE OPENINGS ARE PROVIDED IN INSULATED DUCTWORK, INSTALL INSULATION MATERIAL INSIDE A METAL RING.
E. LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES.
F. USE CRIMP JOINTS WITH OR WITHOUT BEAD FOR JOINING ROUND DUCT SIZES 8 INCH AND SMALLER WITH CRIMP IN DIRECTION OF AIR FLOW.
G. USE DOUBLE NUTS AND LOCK WASHERS ON THREADED ROD SUPPORTS.
H. CONNECT DIFFUSERS TO LOW PRESSURE DUCTS DIRECTLY OR WITH 6 FEET MAXIMUM LENGTH OF FLEXIBLE DUCT HELD IN PLACE WITH STRAP OR CLAMP.
I. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH ADHESIVE.
J. SET PLENUM DOORS 6 TO 12 INCHES ABOVE FLOOR. ARRANGE DOOR SWINGS SO THAT FAN STATIC PRESSURE HOLDS DOOR IN CLOSED POSITION.
K. DURING CONSTRUCTION PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM.
L. LEAVE TEMPORARY CLOSURES IN PLACE UNTIL READY FOR INSTALLATION. AT NO TIME DURING THE INSTALLATION OF THE DUCTWORK SHALL THERE BE ANY OPENINGS THAT ARE NOT PROTECTED BY TEMPORARY CLOSURES EXCEPT FOR THE SECTION THAT IS BEING INSTALLED AT THAT TIME.
M. PROVIDE TEMPORARY CLOSURES ON THE FACE OF ALL GRILLES, REGISTERS AND DIFFUSERS.
N. SEAL ALL JOINTS WITH SEALANT.
3.02 SCHEDULES
A. DUCTWORK MATERIAL:
1. LOW PRESSURE SUPPLY (HEATING SYSTEMS): STEEL.
2. RETURN AND RELIEF: STEEL.
B. DUCTWORK PRESSURE CLASS:
1. LOW PRESSURE SUPPLY: 1 INCH.
2. RETURN AND RELIEF: -2 INCH.
C. DUCTWORK SEAL CLASS:
1. SUPPLY: CLASS A
2. RETURN: CLASS A

SECTION 23.3300 - DUCT ACCESSORIES

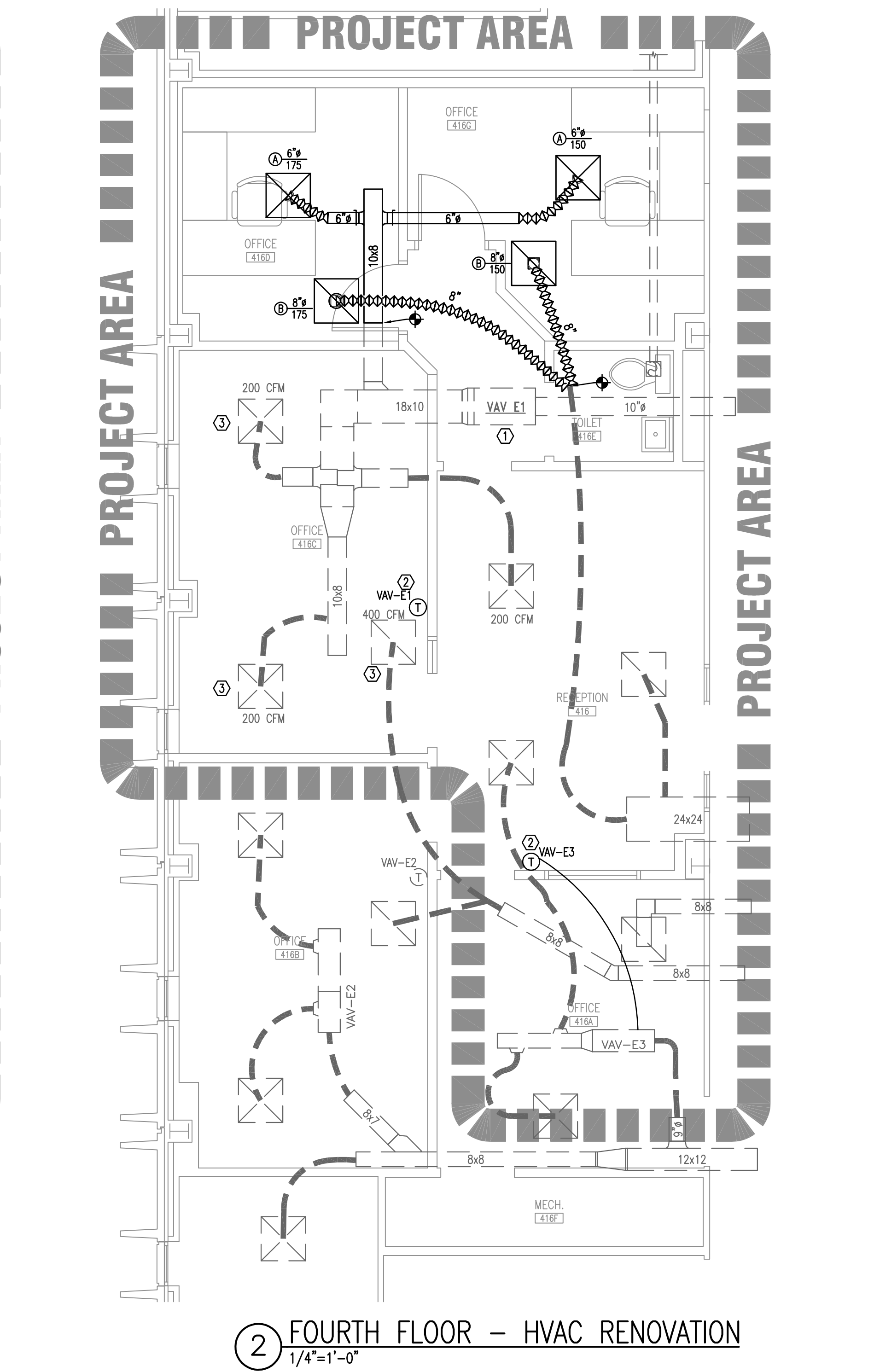
PART 1 GENERAL
1.01 SECTION INCLUDES
A. FLEXIBLE DUCT CONNECTIONS.
B. VOLUME CONTROL DAMPERS.
1.02 RELATED SECTIONS
A. SECTION 23.3100 - DUCTS.
1.03 REFERENCES
A. NFPA 90A - STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS; NATIONAL FIRE PROTECTION ASSOCIATION; 2002.
B. NFPA 652 - STANDARD ON SMOKE-CONTROL SYSTEMS; NATIONAL FIRE PROTECTION ASSOCIATION; 2006.
C. SMACNA (DCS) - HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE; SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION; 2005.
1.04 SUBMITTALS
A. PRODUCT DATA: PROVIDE FOR SHOP FABRICATED ASSEMBLIES INCLUDING VOLUME CONTROL DAMPERS AND DUCT ACCESS DOORS. INCLUDE ELECTRICAL CHARACTERISTICS AND CONNECTION REQUIREMENTS.
B. SHOP DRAWINGS: INDICATE FOR SHOP FABRICATED ASSEMBLIES INCLUDING VOLUME CONTROL DAMPERS AND DUCT ACCESS DOORS.
C. MANUFACTURER'S INSTALLATION INSTRUCTIONS: PROVIDE INSTRUCTIONS FOR FIRE DAMPERS AND COMBINATION FIRE AND SMOKE DAMPERS.
D. OPERATION AND MAINTENANCE MANUALS: INCLUDE IN MANUALS THE INFORMATION LISTED BELOW.
1. SPARE PARTS LISTS
2. OPERATING INSTRUCTIONS
3. MAINTENANCE INSTRUCTIONS, INCLUDING PREVENTATIVE AND CORRECTIVE MAINTENANCE.
4. COPIES OF WARRANTIES
5. WIRING DIAGRAMS
6. SHOP DRAWINGS AND PRODUCT DATA
1.05 PROJECT RECORD DOCUMENTS
A. RECORD ACTUAL LOCATIONS OF ACCESS DOORS AND TEST HOLES.
1.06 QUALITY ASSURANCE
A. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.
1.07 DELIVERY, STORAGE, AND HANDLING
A. PROTECT DAMPERS FROM DAMAGE TO OPERATING LINKAGES AND BLADES.
PART 2 PRODUCTS
2.01 FLEXIBLE DUCT CONNECTIONS
A. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
B. FLEXIBLE DUCT CONNECTIONS: FABRIC CRIMPED INTO METAL EDGING STRIP.
1. FABRIC: UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90A, MINIMUM DENSITY 30 OZ PER SQ YD.
2. METAL: 3 INCHES WIDE, 24 GAGE THICK GALVANIZED STEEL.
2.02 VOLUME CONTROL DAMPERS
A. MANUFACTURERS:
1. LOUVERS & DAMPERS, INC.: WWW.LOUVERS-DAMPERS.COM
2. MAJOR INDUSTRIES, INC.: WWW.MAJOR.COM
3. RUSKIN COMPANY: WWW.RUSKIN.COM
4. POTTORFF
B. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
C. SINGLE BLADE DAMPERS: FABRICATE FOR DUCT SIZES UP TO 8 X 30 INCH.
D. END BEARINGS: EXCEPT IN ROUND DUCTS 12 INCHES AND SMALLER, PROVIDE END BEARINGS. ON MULTIPLE BLADE DAMPERS, PROVIDE OIL-IMPREGNATED NYLON OR SINTERED BRONZE BEARINGS.
E. QUADRANTS
1. PROVIDE LOCKING, INDICATING QUADRANT REGULATORS ON SINGLE AND MULTI-BLADE DAMPERS.
2. ON INSULATED DUCTS MOUNT QUADRANT REGULATORS ON STAND-OFF MOUNTING BRACKET, BASES, OR ADAPTERS.
3. WIRE ROOD LENGTHS EXCEED 30 INCHES PROVIDE REGULATOR AT BOTH ENDS.
PART 3 EXECUTION
3.01 PREPARATION
A. VERIFY THAT ELECTRIC POWER IS AVAILABLE AND OF THE CORRECT CHARACTERISTICS.
3.02 INSTALLATION
A. INSTALL ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, NFPA 90A, AND FOLLOW SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. REFER TO SECTION 15810 FOR DUCT CONSTRUCTION AND PRESSURE CLASS.
B. PROVIDE DUCT TEST HOLES WHERE INDICATED AND REQUIRED FOR TESTING AND BALANCING PURPOSES.
C. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF.
D. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, GRILLE, OR REGISTER ASSEMBLY.
END OF SECTION

SECTION 23.0713 - MECHANICAL INSULATION

PART 1 GENERAL
1.01 SECTION INCLUDES
A. DUCT INSULATION.
1.02 SCOPE OF WORK
A. PROVIDE INSULATION AS SPECIFIED FOR MAKE-UP WATER, CHILLED WATER, AND EXTERIOR AND CONDENSATE DRAIN PIPING SYSTEMS, INCLUDING VALVES, FITTINGS, FLANGES, STRAINERS, AND MECHANICAL COUPLINGS.
1.03 REFERENCES
A. ASTM C 518 - STANDARD TEST METHOD FOR STEADY-STATE HEAT FLUX MEASUREMENTS AND THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER APPARATUS; 1991.
B. ASTM C 553 - STANDARD SPECIFICATION FOR MINERAL FIBER BLANKET THERMAL INSULATION FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS; 1920.
C. ASTM E 96 - STANDARD TEST METHODS FOR WATER VAPOR TRANSMISSION OF MATERIALS; 1995.
D. SMACNA (DCS) - HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE; 1995.
1.04 SUBMITTALS
A. PRODUCT DATA: PROVIDE PRODUCT DESCRIPTION, THERMAL CHARACTERISTICS, LIST OF MATERIALS AND THICKNESS FOR EACH SERVICE AND LOCATION.
B. OPERATION AND MAINTENANCE MANUALS: INCLUDE IN MANUALS THE INFORMATION LISTED BELOW.
C. SHOP DRAWINGS AND PRODUCT DATA
1.05 REGULATORY REQUIREMENTS
A. MATERIALS: CONFORM TO MAXIMUM FLAME SPREAD/SMOKE DEVELOPED RATING OF 25/50 IN ACCORDANCE WITH ASTM E 84.
1.06 DELIVERY, STORAGE, AND PROTECTION
A. ACCEPT MATERIALS ON SITE IN ORIGINAL FACTORY PACKAGING, LABELLED WITH MANUFACTURER'S IDENTIFICATION, INCLUDING PRODUCT DENSITY AND THICKNESS.
B. PROTECT INSULATION FROM WEATHER AND CONSTRUCTION TRAFFIC, DIRT, WATER, CHEMICAL, AND MECHANICAL DAMAGE, BY STORING IN ORIGINAL WRAPPING.
1.07 ENVIRONMENTAL REQUIREMENTS
A. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURERS OF ADHESIVES, MASTICS, AND INSULATION CEMENTS.
B. MAINTAIN TEMPERATURE DURING AND AFTER INSTALLATION FOR MINIMUM PERIOD OF 24 HOURS.
PART 2 PRODUCTS
2.01 DUCT INSULATION
A. GLASS FIBER, FLEXIBLE
1. MANUFACTURERS:
a. PROVIDE PRODUCTS COMPLYING WITH THE SPECIFICATIONS BY ONE OF THE FOLLOWING MANUFACTURERS.
1) GERMAN TEED CORPORATION.
2) JOHNS MANVILLE.
3) KNAUF FIBERGLASS GMBH.
4) OWENS-CORNING FIBERGLASS CORPORATION.
b. INSULATION: ASTM C 553; FLEXIBLE, NONCOMBUSTIBLE BLANKET.
a. "K" VALUE: ASTM C 518, 0.31 AT 75 DEGREES F.
b. MAXIMUM SERVICE TEMPERATURE: 250 DEGREES F.
c. MAXIMUM MOISTURE ABSORPTION: 0.20 PERCENT BY VOLUME.
2. VAPOR BARRIER TAPE:
a. KRAFT PAPER WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM.
b. MOISTURE VAPOR TRANSMISSION: ASTM E 96; 0.02 PERM.
c. SECURE WITH PRESSURE SENSITIVE TAPE.
3. VAPOR BARRIER TAPE:
a. KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM, WITH PRESSURE SENSITIVE RUBBER BASED ADHESIVE.
PART 3 EXECUTION
3.01 INSTALLATION
C. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
D. INSULATE IN ACCORDANCE WITH NFMA NATIONAL INSULATION STANDARDS.
E. DUCT INSULATION
1. INSULATED DUCTS CONVEYING AIR BELOW AMBIENT TEMPERATURE:
a. PROVIDE INSULATION WITH VAPOR BARRIER JACKETS.
b. FINISH WITH TAPE AND VAPOR BARRIER JACKET.
c. CONTINUE INSULATION THROUGH WALLS, SLEEVES, HANGERS, AND OTHER DUCT PENETRATIONS.
d. INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, JOINTS, FLANGES, FIRE DAMPERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.
3.02 SCHEDULES
A. DUCTWORK INSULATION
1. SUPPLY DUCTS:
a. FLEXIBLE GLASS FIBER DUCT INSULATION: 2 INCH THICK.
2. RETURN DUCTS AND OUTSIDE AIR DUCTS CONCEALED:
a. FLEXIBLE GLASS FIBER DUCT INSULATION: 2 INCH THICK.



1 FOURTH FLOOR - HVAC DEMOLITION
1/4"=1'-0"



2 FOURTH FLOOR - HVAC RENOVATION
1/4"=1'-0"

DEMOLITION KEYNOTES:
1 REMOVE AIR DISTRIBUTION AND DUCTWORK SHOWN AND CAP EXISTING DUCT.
2 RELOCATE EXISTING PNEUMATIC THERMOSTAT.

RENOVATION KEYNOTES:
1 SET BOX TO 900 CFM MAX
2 RELOCATE EXISTING PNEUMATIC THERMOSTAT.
3 RE-BALANCE TO NEW AIRFLOW.

AIR DISTRIBUTION SCHEDULE

TAG	DESCRIPTION	NECK	MOBILE SIZE	MOUNT	CONSTR.	MFOR	MODEL	NOTES
A	SQUARE PLAZUE CEILING SUPPLY	AS SHOWN	24x24	LAY-IN	ALUMINUM	PRICE	SERIES APD	1,2,3
B	PERFORATED CEILING RETURN/EXHAUST	AS SHOWN	24x24	LAY-IN	ALUMINUM	PRICE	SERIES APDOR	1,2,3

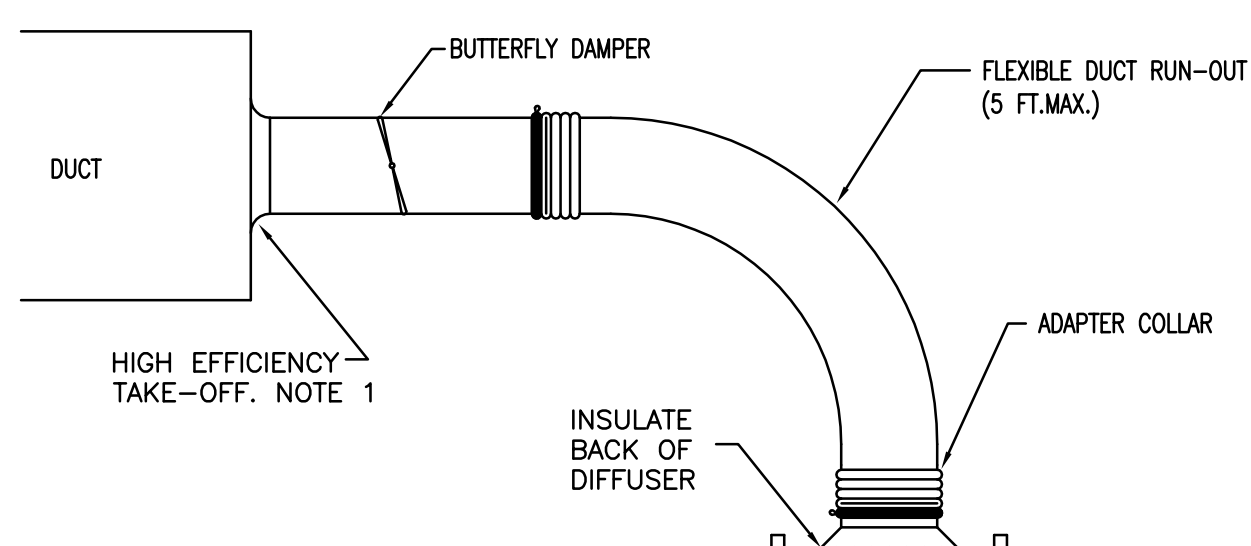
1. FURNISH WITH OPPOSED BLADE DAMPER 3. BAKED EMAMEL OFF-WHITE FINISH
2. 4-WAY DEFLECTION UNLESS NOTED OTHERWISE 4. PROVIDE RADIATION DAMPER AT FIRE RATED CEILING

MECHANICAL GENERAL NOTES

- DO NOT SCALE DRAWINGS; SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- LOCATE ALL THERMOSTATS, HUMIDISTATS AND SWITCHES 4'-0" ABOVE FINISH FLOOR; ALIGN WITH LIGHT SWITCHES.
- ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH THE WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE.
- CORRECT SETTINGS ON ALL BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.
- RUNOUTS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF 1" IN 30 FEET.
- AIR DISTRIBUTION SYSTEMS WITH MORE THAN ONE BRANCH, OR MULTIPLE OUTLETS ON A BRANCH, SHALL HAVE VOLUME DAMPERS TO BALANCE AIR FLOWS. SPIN-IN FITTINGS ARE PERMITTED FOR CONNECTING FLEX DUCT TO BRANCH OR TRUNK DUCTS WHERE FLEX DUCTS ARE INDICATED. IF FLEX DUCT CANNOT BE CONNECTED WITH A SPIN-IN, A HARD DUCTED TAKEOFF MUST BE PROVIDED.
- 45 DEGREE TAKEOFFS SHALL BE USED ON ALL HARD DUCTED SUPPLY BRANCHES.
- ALL PIPING, DUCTS, VENTS, ETC. EXTENDING THRU EXTERIOR WALLS AND ROOFS SHALL BE FLASHED AND COUNTERSIGNED.
- PROVIDE ALL TRANSITIONS REQUIRED FOR INSTALLATION OF DUCT, DUCT HEATERS, AIR VOLUME CONTROLLERS, FAN COIL UNITS, EXHAUST FANS, SUPPLY FANS, AND ALL OTHER EQUIPMENT AND APPURTENANCES.
- ALL DUCT IS GALVANIZED SHEET METAL EXCEPT AS NOTED.
- DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- AIR DISTRIBUTION UNITS SHALL HAVE TRIM REQUIRED FOR FINISHED SERVICE.
- PROVIDE DIELECTRIC FITTINGS AT ALL LOCATIONS WHERE DISSIMILAR METALS ARE JOINED IN PIPING AND DUCT SYSTEMS.

MECHANICAL DEMOLITION NOTES

- DRAWINGS SHOW GENERAL INTENT OF DEMOLITION. QUANTITIES, LOCATIONS, SIZES AND EQUIPMENT ARE SHOWN TO INDICATE TYPE OF SYSTEM INSTALLED AND DOES NOT NECESSARILY REPRESENT EXACT CONDITIONS. CONTRACTOR SHALL FIELD VERIFY BEFORE BIDDING.
- DEMOLITION OF EQUIPMENT, SYSTEMS, AND COMPONENTS SHALL INCLUDE ALL SUPPORTS, PADS, HANGERS, INSULATION, CONTROLS, STARTERS, ACCESSORIES, AND APPURTENANCES NOT REQUIRED FOR THE INSTALLATION OF THE NEW SYSTEM.
- WHEN PARTIAL DEMOLITION OF A SYSTEM IS INDICATED, THE PART OF THE SYSTEM SHOWN TO REMOVED SHALL BE REMOVED TO THE ACTIVE MAIN OR BRANCH IF NOT REQUIRED FOR THE INSTALLATION OF THE NEW SYSTEM. THE ACTIVE MAIN OR BRANCH SHALL BE REPAIRED TO MATCH NEW INSTALLATION AS MUCH AS PRACTICAL. IF SYSTEM IS INSULATED, INSULATION SHALL BE PATCHED AND FINISHED REPAIR (E: VAPOR BARRIER, COATING, ETC.)
- PATCHING OF BUILDING STRUCTURES AND FINISHES SHALL PERTAIN TO ALL WALLS, FLOORS, SLABS, ROOFS, STRUCTURES, AND FINISHES. PATCHES SHALL MATCH EXISTING STRUCTURE, FIRE RATING AND FINISH.
- ALL OPENINGS CREATED BY THE ABANDONMENT OR REMOVAL OF EXISTING SYSTEMS SHALL BE PATCHED.
- ALL WALLS, ROOFS, SLABS, STRUCTURES, AND FINISHES WHOSE FINISH IS IRREGULAR DUE TO THE REMOVAL OF SYSTEMS, SUPPORTS, PADS, ACCESSORIES, AND APPURTENANCES SHALL BE PATCHED.
- ALL FINISHES SHALL MATCH EXISTING FINISH. WHEN FINISH OBVIOUSLY DOES NOT MATCH EXISTING FINISH SUCH AS SHADE OF PAINT, AGE OF FINISH, ETC. THE FINISH SHALL BE APPLIED TO THE PATCH AND THE SURFACE IN ALL DIRECTIONS UNTIL A SURFACE CHANGE OF A MINIMUM OF 45 DEGREES.
- REMOVAL OF SYSTEMS SHALL INCLUDE COMPLETE SYSTEM WHENEVER PRACTICAL. IF NOT, SYSTEM (E: PIPE, CONDUIT, ETC) SHALL BE REMOVED TO 1 INCH BELOW SURFACE.



NOTES:
1. HIGH EFFICIENCY TAKE-OFF SHALL BE DESIGNED WITH A RECTANGULAR OPENING AND AN APPROXIMATE 45° SLOPE ON THE BODY. A FLANGE IS TURNED OUT ON ALL FOUR SIDES WITH EACH CORNER BEING FILLED. THE FLANGE ALSO HAS PRE-PUNCHED HOLES FOR EASY INSTALLATION. THERE IS A CLOSED CELL NEOPRENE GASKET APPLIED TO THE FLANGE TO ASSURE A TIGHT SEAL. PROVIDE INTEGRAL BALANCING DAMPER IN TAKE-OFF.
2. PROVIDE MIN OF 3 DUCT DIAMETERS BETWEEN TAPS OR AFTER ELBOWS.

3 FLEX DUCT RUNOUT DETAIL
N/S

END OF SECTION

END OF SECTION

GENERAL NOTES:

- 1. DO NOT SCALE DRAWINGS. LOCATE OUTLETS, EQUIPMENT AND OTHER ELECTRICAL DEVICES AS INDICATED AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.

GENERAL DEMOLITION NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTION AND REMOVAL OF ANY ELECTRICAL DEVICES OR SYSTEMS AS REQUIRED FOR BUILDING ADDITION WORK.

WHERE DEVICES OR FIXTURES ARE REMOVED OR OTHERWISE MODIFIED TO ACCOMMODATE NEW CONSTRUCTION...

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING STYLES AND FINISHES OF EXISTING DEVICES, COVER PLATES, AND FIXTURES.

WHERE DEVICES OR EQUIPMENT ARE ABANDONED OR DEMOLISHED AS PART OF THE SCOPE OF WORK...

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PATCHING, PAINTING, ETC AS REQUIRED TO CLOSELY MATCH ADJACENT BUILDING FINISHES...

WHERE DEVICES OR FIXTURES ARE DEMOLISHED OR OTHERWISE ABANDONED AS PART OF THIS WORK...

CONTRACTOR SHALL PROVIDE REVISED CIRCUIT DIRECTORIES IN ALL PANELBOARDS ASSOCIATED WITH AREA OF RENOVATION...

REMOVE ALL CEILING MOUNTED DEVICES FROM CEILINGS BEING DEMOLISHED OR REWORKED AND REINSTALL AT SAME LOCATION...

CAREFULLY REVIEW ARCHITECTURAL, MECHANICAL, AND PLUMBING DEMOLITION PLANS. EXAMINE WORK TO BE DONE AND PROVIDE ALL ELECTRICAL WORK...

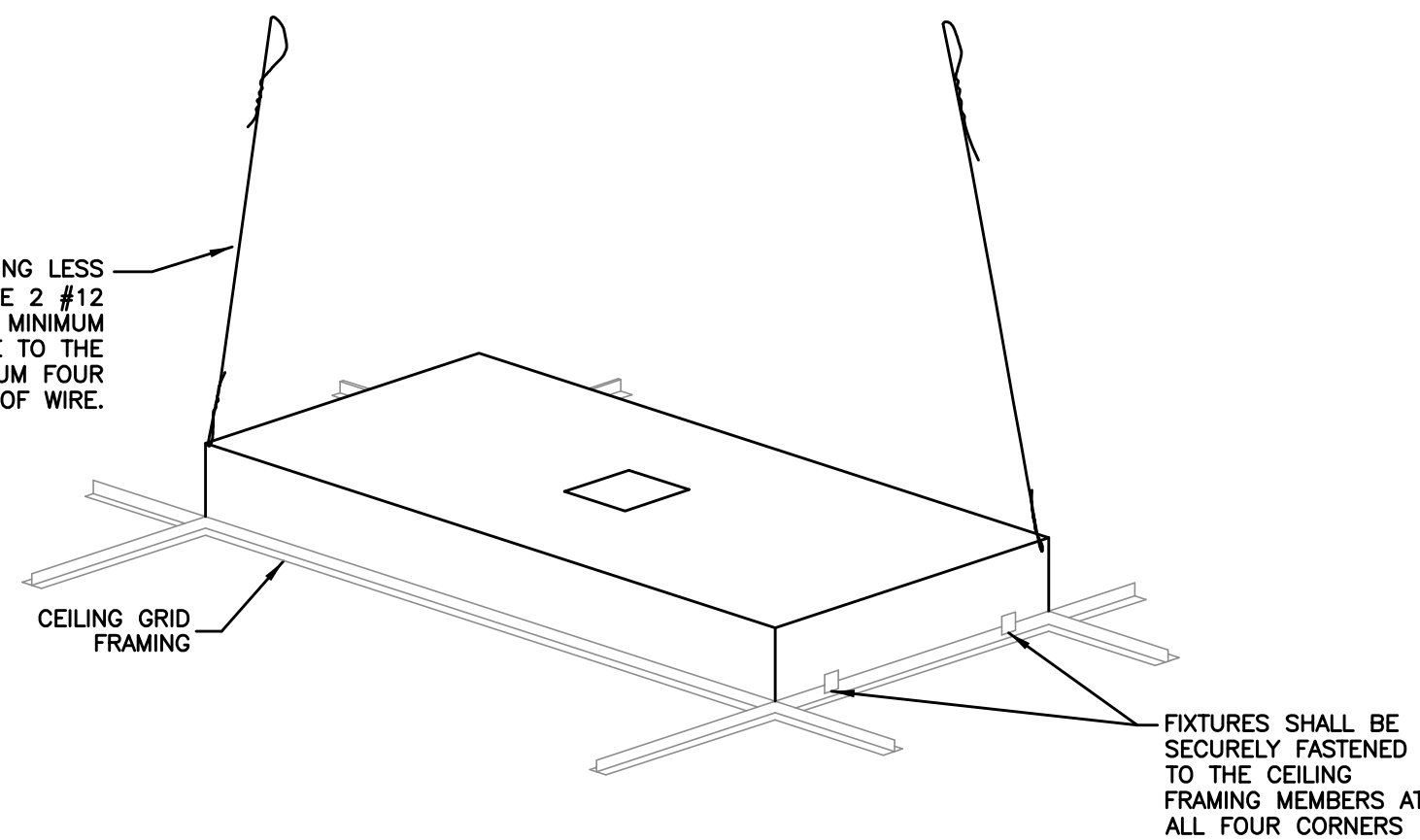
THE SCOPE OF WORK REQUIRES PARTIAL ELECTRICAL DEMOLITION IN AN AREA OF THE FACILITY WHICH WILL BE IN-USE DURING THE RENOVATION...

THE DEMOLITION NOTES INCLUDED IN THESE DRAWINGS ARE INTENDED TO REPRESENT A GENERAL DIRECTIVE FOR DISCONNECTION AND REMOVAL...

DEMOLITION NOTES (DN):

- DN1 RELOCATE EXISTING LIGHT FIXTURE AND RECONFIGURE CIRCUITING AS SHOWN ON ELECTRICAL RENOVATION PLANS.

LIGHTING FIXTURES WEIGHING LESS THAN 50 LBS SHALL HAVE 2 #12 AWG GALVANIZED HANGERS...



RECESSED LAY-IN FIXTURE DETAIL NO SCALE

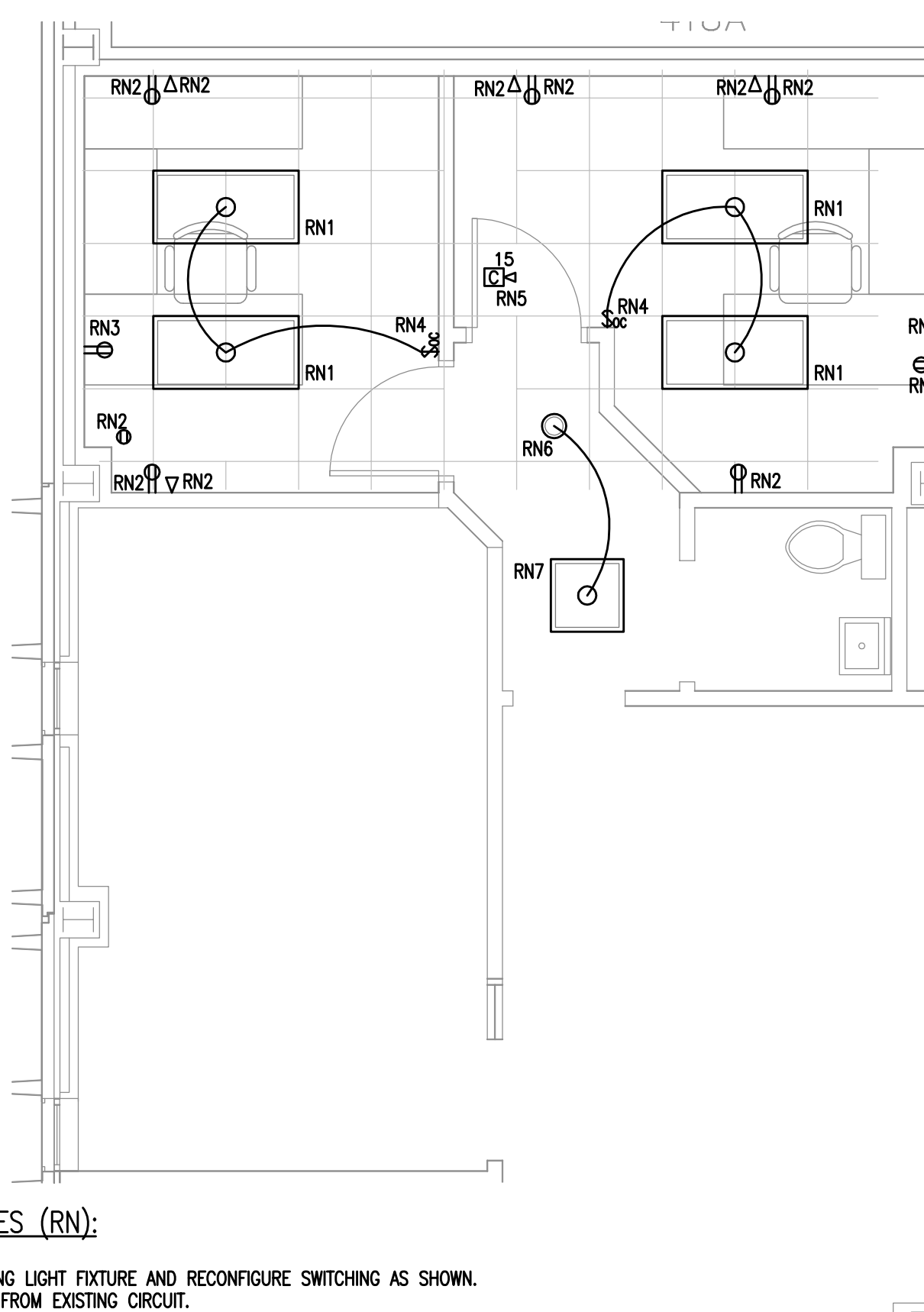
ELECTRICAL SYMBOL SCHEDULE

Table with columns for SYMBOL, DESCRIPTION, and ABBREVIATIONS. Includes symbols for branch circuit raceway, ceiling mounted light fixture, and fire alarm devices.

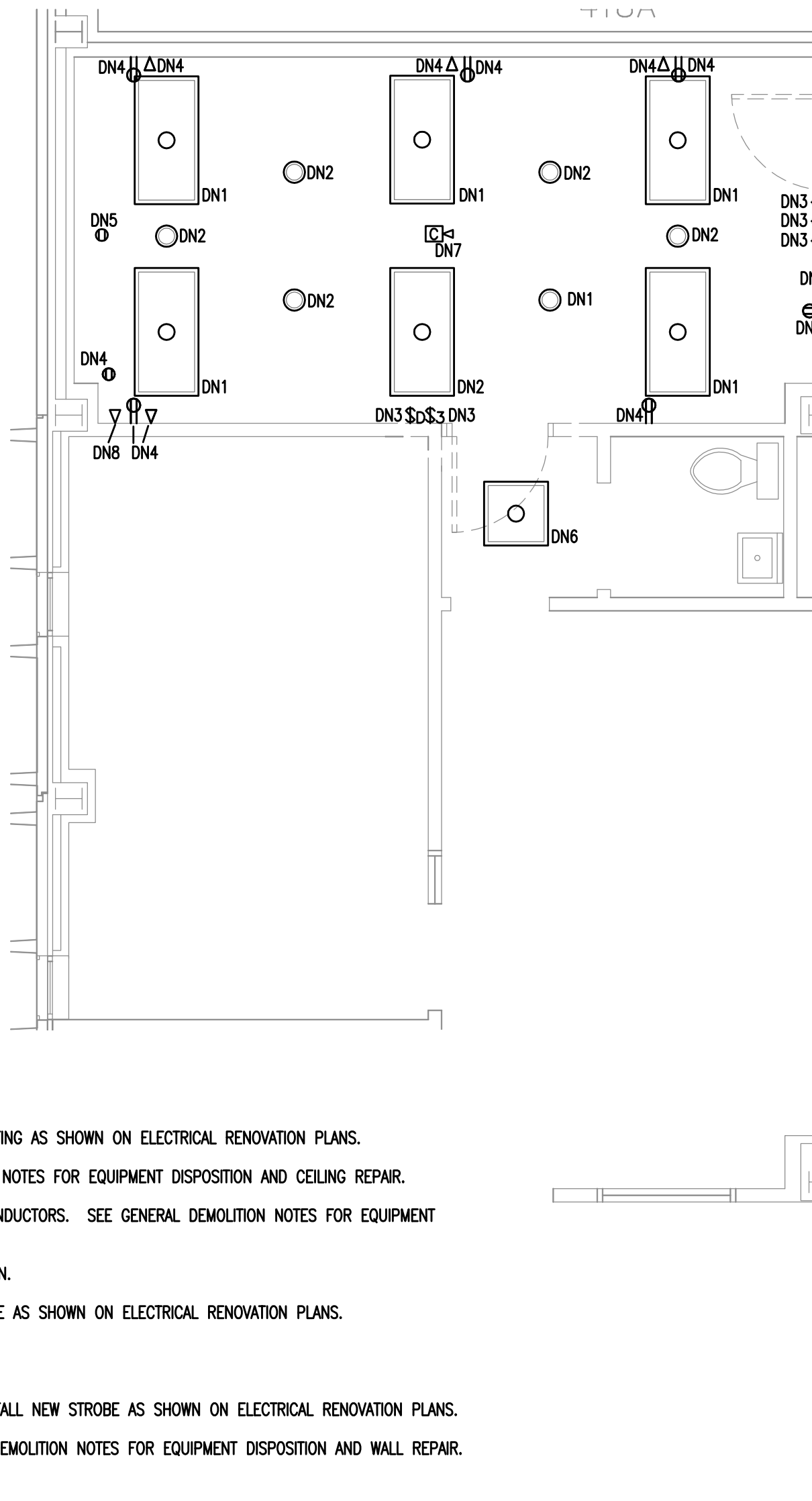
RENOVATION NOTES (RN):

- RN1 RELOCATE EXISTING LIGHT FIXTURE AND RECONFIGURE SWITCHING AS SHOWN. PROVIDE POWER FROM EXISTING CIRCUIT.

PARTIAL FOURTH FLOOR RENOVATION PLAN



PARTIAL FOURTH FLOOR DEMOLITION PLAN



ELECTRICAL SPECIFICATIONS

1. GENERAL PROVISIONS

- A. Work included in these specifications and included on the drawings shall include furnishing all labor, materials, supplies, and equipment to perform all work required including cutting, channeling, and chasing...

- H. Electrical Subcontractor shall submit for review by the Engineer detailed shop drawings of all material listed below. All submittal data shall be submitted at one time.

Review of shop drawings in no way relieves the Contractor of his responsibility of quantity, dimensions, weights, means and methods, safety, or coordination with others.

Failure of the Contractor to submit shop drawings to the Engineer with reasonable time for review shall not entitle the Contractor to an extension of contract time.

- I. Requests for Substitution Submit requests for substitution to Engineer through the Architect by US Mail or Courier no fewer than ten (10) working days prior to bid time.

Substituted items will not result in an increase in cost to the Owner.

- K. Catalog numbers and names that appear in the specifications or on the plans may be incomplete or obsolete and are for descriptive purposes only.

A. The work shall include the requirement to install fire spread prevention material wherever the electrical contractor installs or penetrates a material (wall, etc.) to install electrical equipment or materials.

B. Fire Resistance Rating: Whenever a fire rated wall, floor, floor-ceiling or roof-ceiling assembly is shown with through-penetrations, provide materials and application procedures which have been tested and classified by UL and approved by FM for the assembly.

C. Installation shall be in accordance with the printed instructions as supplied by the manufacturer.

A. The work shall include all raceways, conduits, fittings, and all other equipment required to install a raceway system. This shall include, but not be limited to the following:

- 1. Rigid metal conduit and fittings. 2. Electrical metallic tubing and fittings. 3. Flexible metal conduit and fittings.

D. Specified products and their areas of use shall be as described on drawings.

E. Fittings shall be steel compression type, concrete tight for all EMT raceways. For rigid galvanized steel and IMC, fittings shall be threaded galvanized iron, heavy steel, concrete tight.

F. Size conduit for conductor type installed; 1/2 inch minimum size.

G. For all empty raceways, furnish and install a nylon pull cord. The nylon pull cord shall be rated for a 200 pound force pull strength.

4. WIRE AND CABLE - 600 VOLTS AND LESS A. Work shall include the furnishing and installing of all required wire and cable to complete the wiring and electrical system.

D. Each wire or cable in a feeder at its terminal points, and in each pull-box, junction box, and panel gutter through which it passes shall be identified to show the circuit number of the breaker that it connects to.

E. All installation shall be in accordance with the NEC. All splices shall be in junction boxes and shall be electrically and mechanically secure.

A. The shell include the furnishing and installing of any and all wiring devices required to make a complete and functioning wiring system.

B. Duplex receptacle shall be 20 ampere, 120 volt, 2-Pole, 3-Wire, NEMA 5-20R. Unit shall be HBL #5362.

D. Light switches other than snap switches and low voltage button stations shall be 20 ampere, 120-277 volt. Unit shall be HBL #1221 for SPST, HBL #1223 for three-way, and HBL #1224 for Four-Way.

E. Installation shall be per NEC include ground wire and connection with all receptacle circuits. Quadruplex receptacles shall be two duplex receptacles installed in a two gang box.



Design/Planning/Construction 1201 Main Street, Suite 2100 Columbia, S.C. 29201

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USC CAMPUS PLANNING AND CONSTRUCTION

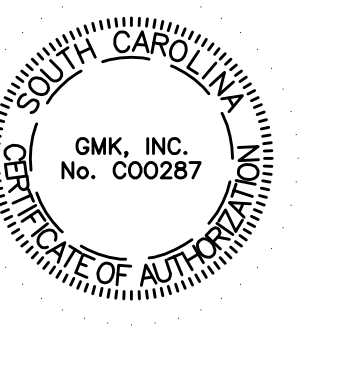
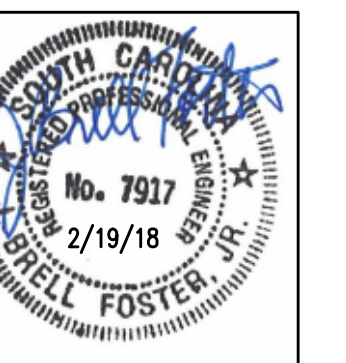
1300 PICKENS STREET COLUMBIA, SOUTH CAROLINA 29208

project name USC COKER SUITE 416 OFFICE MODIFICATIONS

State project number H27-D249-FW

project number 18003.01

seals/signature



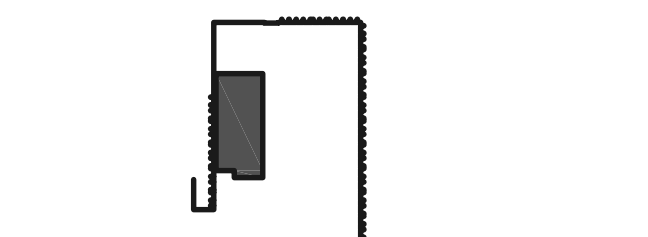
CONSTRUCTION DOCUMENTS

FEBRUARY 19, 2018

number item date

Table with columns for number, item, and date. Contains a key plan diagram of the building layout.

key plan



COKER COLLEGE - 4TH FLOOR

ELECTRICAL SPECIFICATIONS, DEMOLITION AND RENOVATION PLANS

sheet number

E2.4

drawn by CSE checked by JEF