

GENERAL NOTES

A. GENERAL

1. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, A.I.A. STANDARD FORM A201 - CURRENT EDITION, ARE HEREBY INCORPORATED INTO THIS DOCUMENT EXCEPT AS SPECIFICALLY MODIFIED BELOW.

2. THE CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND OTHER PERMITS AND GOVERNMENTAL FEES, LICENSES AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK. SCHEDULING OF APPROVALS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION OVER THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

3. THE CONTRACT DOCUMENTS CONVEY DESIGN INTENT AND THE GENERAL TYPE OF CONSTRUCTION DESIRED ARE INTENDED TO APPLY TO THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.

4. THE idGROUP IS NOT RESPONSIBLE FOR ENGINEERING THESE DOCUMENTS. FOR CONSTRUCTION SETS WITHOUT ENGINEERING DOCUMENTS, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION AND AS BUILTS UPON COMPLETION FOR ELECTRICAL AND MECHANICAL TRADES TO THE LANDLORD.

5. PRIOR TO SUBMITTING A PROPOSAL OR COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO COMPARE THE SCOPE OF WORK AS OUTLINED IN THESE DOCUMENTS WITH EXISTING CONDITIONS. PROMPTLY REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES OR OTHER DETRIMENTAL CONDITIONS TO THE idGROUP. IF THE CONTRACTOR FAILS TO PERFORM THIS OBLIGATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS AND DAMAGES ASSOCIATED WITH ACTIONS REQUIRED TO CORRECT UNREPORTED CONDITIONS THAT OTHERWISE COULD HAVE BEEN AVOIDED.

6. IN THE EVENT THAT DISCREPANCIES ARE FOUND BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST A CLARIFICATION FROM THE idGROUP IN WRITING. THE idGROUP'S RESPONSE TO THE CONTRACTOR'S REQUEST FOR INFORMATION SHALL NOT BE CAUSE FOR A CHANGE IN THE CONTRACT AMOUNT UNLESS IT IS AGREED THAT THE ORIGINAL SCOPE OF WORK HAS BEEN ALTERED BY THE RESPONSE.

7. THE CONTRACTOR SHALL CONTACT THE BUILDING MANAGEMENT TO DETERMINE ANY SPECIAL REQUIREMENTS AND RULES / REGULATIONS GOVERNING ALL PHASES OF WORK ON THE PREMISES.

8. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF WORK, SCHEDULE OF VALUES, AND INSURANCE CERTIFICATE. THIS SCHEDULE SHALL INDICATE ORDERING LEAD TIMES, A BEGINNING AND END DATE FOR EACH PHASE AND A PROJECTED COMPLETION DATE FOR THE ENTIRE PROJECT.

9. THE CONTRACTOR IS WHOLLY RESPONSIBLE FOR THE COORDINATION AND SCHEDULING OF THE WORK EFFORTS FOR ALL ENGINEERS, SUBCONTRACTORS, CRAFTSMEN AND TRADESMEN REQUIRED TO COMPLETE THE JOB AND SHALL BE RESPONSIBLE FOR PROVIDING THEM WITH FULL SETS OF CURRENT DRAWINGS, ADDENDUM, AND OTHER SUPPLEMENTAL INFORMATION PERTINENT TO THE COMPLETION OF THE WORK.

10. THE CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING AND ELECTRICAL SERVICE FOR TRADES.

11. UNLESS OTHERWISE STIPULATED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, STORAGE AND PAYMENT OF LABOR, MATERIALS, TAXES, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY, TRANSPORTATION AND OTHER FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK WHETHER OR NOT IT IS SPECIFICALLY CALLED OUT OR DETAILED ON THE DRAWINGS.

12. THE CONTRACTOR WARRANTS TO THE OWNER THAT MATERIALS AND EQUIPMENT FURNISHED UNDER THE CONTRACT WILL MEET INDUSTRY STANDARDS AND BE NEW AND OF GOOD QUALITY UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS. THE WORK WILL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, FREE FROM DEFECTS AND WILL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER ACCEPTABLE TO THE OWNER.

13. THE CONTRACTOR SHALL PROMPTLY CORRECT IN A PROFESSIONAL MANNER, AT NO COST TO THE OWNER AND WITHOUT CHANGE IN CONTRACT TIME, ALL NON-CONFORMING OR DEFECTIVE WORK AND DAMAGES CAUSED BY HIS WORK OR WORKMEN WHETHER DISCOVERED BEFORE OR AFTER SUBSTANTIAL COMPLETION.

14. THE CONTRACTOR SHALL INSPECT ALL EQUIPMENT AND SYSTEMS FOR PROPER OPERATIONS UPON SUBSTANTIAL COMPLETION OF PROJECT.

15. THE CONTRACTOR SHALL THOROUGHLY CLEAN THE ENTIRE PROJECT SITE AND ADJACENT AFFECTED SPACES TO THE SATISFACTION OF THE OWNER.

B. DRAWING CONVENTIONS

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE ON THE CONSTRUCTION DRAWINGS. NOTIFY THE idGROUP OF DISCREPANCIES BETWEEN DRAWING DIMENSIONS AND FIELD CONDITIONS.

2. DIMENSIONS ARE GIVEN TO FACE OF FINISHED MATERIAL UNLESS OTHERWISE NOTED.

3. PARTITION THICKNESS IS DERIVED FROM DESCRIPTION OF THE PARTITION CONSTRUCTION AND/OR DESIGNATED DETAIL.

4. PARTITIONS THAT INTERSECT INTERIOR OR EXTERIOR GLAZED WALLS ARE TO BE CENTERED ON MULLIONS AND PERPENDICULAR TO EXTERIOR WALL UNLESS DETAILED OTHERWISE.

5. UNLESS OTHERWISE NOTED, PARTITIONS AND OTHER ELEMENTS ON THE DRAWING THAT ARE DRAWN AT AN OBLIQUE ANGLE ARE TO BE CONSTRUCTED AT A 45-DEGREE ANGLE TO THE MAIN GRID.

6. WALLS SHOWN ALIGNED WITH BASE BUILDING STRUCTURE SHALL BE FLUSH AND SMOOTH WITH BASE BUILDING STRUCTURE UNLESS OTHERWISE NOTED.

7. UNLESS DIMENSIONED OTHERWISE, DEPTH OF FURRING ON COLUMNS AND OTHER ELEMENTS IS TO BE HELD TO THE MINIMUM THICKNESS REQUIRED TO CONCEAL MECHANICAL, PLUMBING OR ELECTRICAL COMPONENTS.

8. UNLESS OTHERWISE INDICATED, POSITION DOOR JAMBS 6" OFF THE FACE OF ADJACENT INTERSECTING PARTITIONS OR CENTER ON PARTITION.

9. OUTLETS THAT OCCUR ON OPPOSITE SIDES OF THE SAME PARTITION ARE TO BE STAGGERED HORIZONTALLY A MINIMUM OF 12" TO MINIMIZE SOUND TRANSMISSION.

C. DEMOLITION, CUTTING, AND PATCHING

1. THE CONTRACTOR SHALL INSPECT THE SITE AND CALL ATTENTION TO ENVIRONMENTAL HAZARDS WITH BUILDING MANAGEMENT. SAID HAZARDS ARE TO BE REMOVED AT THE BUILDING'S EXPENSE. REMOVAL TO ADHERE TO THE ENVIRONMENTAL PROTECTION AGENCY'S GUIDELINES.

2. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION, CUTTING AND PATCHING REQUIRED TO FACILITATE COMPLETION OF THE WORK.

3. PRIOR TO STARTING WORK, ERECT TEMPORARY BARRIERS AROUND THE PERIMETER OF THE PROJECT AND BASE BUILDING TOILET FACILITIES TO PREVENT THE SPREAD OF DUST AND OTHER CONTAMINANTS TO ADJACENT AREAS OF THE BUILDING. MAINTAIN DUST PROOF AND SOUND BARRIERS THROUGHOUT THE COURSE OF CONSTRUCTION OR UNTIL NO LONGER REQUIRED. REMOVE BARRIERS AND REPAIR ANY DAMAGE CAUSED BY THEIR INSTALLATION TO MATCH ADJACENT SURFACES.

4. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER TO MINIMIZE DISRUPTION AND INCONVENIENCE TO OTHER TENANTS IN OCCUPIED BUILDINGS. MAINTAIN SAFE MEANS OF ACCESS AND EGRESS TO OCCUPIED TENANT SPACES.

5. UNLESS NOTED OTHERWISE, ALL DEMOLISHED DEBRIS, MATERIAL, EQUIPMENT AND FIXTURES BECOME THE PROPERTY OF THE CONTRACTOR WHO IS RESPONSIBLE FOR ITS SAFE REMOVAL FROM THE SITE. DISPOSAL OF DEMOLISHED MATERIAL SHALL BE IN ACCORDANCE WITH APPLICABLE RULES, REGULATIONS AND ORDINANCES OF AUTHORITIES HAVING JURISDICTION. COORDINATE WITH BUILDING MANAGEMENT.

6. THE CONTRACTOR SHALL FURNISH BUILDING MANAGEMENT WITH A COMPLETE INVENTORY LIST OF ITEMS THAT CAN BE REUSED AND/OR STORED IN BUILDING STOCK. CAREFULLY REMOVE MATERIAL, EQUIPMENT AND FIXTURES DESIGNATED TO BE SALVAGED AND DELIVER THEM TO BUILDING MANAGEMENT.

7. MAINTAIN THE FUNCTION AND INTEGRITY OF EXISTING FIRE, LIFE/SAFETY AND SECURITY SYSTEMS.

8. MAINTAIN THE INTEGRITY OF RATED PARTITIONS AND OTHER FIRE RATED ASSEMBLIES. REPAIR OR REPLACE DAMAGED PORTIONS WITH NEW CONSTRUCTION TO MATCH EXISTING AND HAVE REPAIR WORK APPROVED BY THE BUILDING INSPECTOR.

9. NEW PIPE, CONDUIT AND DUCT PENETRATIONS OF FIRE RATED ASSEMBLIES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AN UNDERWRITERS LABORATORY TESTED DESIGN.

10. IN BUILDINGS CONSTRUCTED WITH POST-TENSIONED CONCRETE, LOCATE P-T TENDONS BY X-RAY DETECTION PRIOR TO STARTING OF ANY CUTTING OR DRILLING. COORDINATE ALL SUCH ACTIVITIES WITH BUILDING MANAGEMENT.

11. PATCH ALL EXISTING OR NEWLY DAMAGED AREAS TO MATCH ADJACENT SURFACES IN QUALITY, TEXTURE AND COLOR.

12. EXISTING CIRCUITS NOT BEING USED ARE TO BE REMOVED TO THE PANEL. BREAKERS SHALL BE LABELED "SPARE" AND LEFT IN THE OPEN POSITION.

13. PLUMBING TO BE ABANDONED SHALL BE CAPPED BEHIND EXISTING FINISHED SURFACES. EXISTING SURFACES SHALL BE PATCHED TO MATCH EXISTING ADJACENT FINISHES.

D. GENERAL CONSTRUCTION

1. THE CONTRACTOR SHALL FIRMLY ANCHOR PARTITIONS PER JURISDICTION AND INDUSTRY STANDARDS AND USE METAL TRIM ACCESSORIES AT EXPOSED CORNERS, EDGES AND ENDS IN PLASTER AND DRYWALL PARTITIONS.

2. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS REQUIRED FOR MECHANICAL, ELECTRICAL AND PLUMBING INSTALLATIONS PER LOCAL BUILDING CODES. LOCATIONS SHALL BE COORDINATED WITH BUILDING MANAGEMENT PRIOR TO INSTALLATION.

3. CEILING JOINTS IN THE FIELD SHALL BE SQUARE, LEVEL AND PERFECTLY ALIGNED WITH EACH OTHER AND WITH THE RECESSED LIGHT FIXTURES. ALL RECESSED FIXTURES SHALL BE SET FLUSH INTO CEILING.

4. COMMUNICATION, DATA, SECURITY AND SIMILAR SYSTEMS WILL BE FURNISHED AND INSTALLED BY THE TENANT UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE TENANT'S VENDORS AND PROVIDE CONDUIT, BOXES AND OTHER ROUGH-IN REQUIREMENTS TO FACILITATE FINAL WIRING INSTALLATION.

5. COORDINATE AND FIELD VERIFY THE ROUGH-IN LOCATION OF ELECTRICAL, COMMUNICATION AND DATA CONNECTIONS TO TENANT SUPPLIED FURNITURE SYSTEM.

6. WIRING AND CONDUIT IS TO BE CONCEALED IN BOTH NEW AND EXISTING PARTITIONS WITH ALL OUTLETS, SWITCHES AND SIMILAR DEVICES MOUNTED IN RECESSED JUNCTION BOXES WITH FLUSH COVER PLATES. SURFACE MOUNTED CONDUIT, WIREMOLD, OUTLETS, ETC. WILL NOT BE PERMITTED UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR SHALL PROVIDE RETURN AIR OPENINGS IN PARTITIONS TO DECK AND ABOVE CEILINGS TO MATCH AREA CALCULATION REQUIREMENTS AS SHOWN ON ENGINEERING DRAWINGS. OPENINGS IN DEMISING AND SOUND ATTENUATED WALLS TO HAVE SOUND BOOTS. OPENINGS IN FIRE RATED WALLS SHALL HAVE FIRE OR SMOKE DAMPERS AS REQUIRED BY CODE. OPENINGS SHALL BE SUFFICIENTLY FRAMED FOR VIBRATION.

8. DUCTWORK SHALL BE INSULATED FOR THERMAL AND ACOUSTIC CONSIDERATIONS.

9. WOOD CASEWORK SHALL CONFORM TO ARCHITECTURAL WOODWORK INSTITUTE (AWI) "PREMIUM GRADE" QUALITY STANDARDS AND SHALL BE "FLUSH OVERLAY" CONSTRUCTION UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

10. PLASTIC LAMINATE CASEWORK SHALL CONFORM TO ARCHITECTURAL WOODWORK INSTITUTE (AWI) "CUSTOM GRADE" QUALITY STANDARDS AND SHALL BE "FLUSH OVERLAY" CONSTRUCTION UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

11. CASEWORK SHALL BE SCRIBED TO WALL OR CEILING. CONTRACTOR SHALL COORDINATE WITH OTHER INVOLVED TRADES.

12. LOCKSETS SHALL BE "KEYED" IN ACCORDANCE WITH BUILDING MANAGEMENT'S REQUIREMENTS. "KEYS" ARE TO BE PROPERLY TESTED AND DELIVERED TO BUILDING MANAGEMENT. THE NUMBER OF MASTER AND PASS KEYS SHALL BE COORDINATED WITH BUILDING MANAGEMENT.

13. WOOD SHELVING AND PAINTED DOORS SHALL RECEIVE PRIMING, SANDING AND (2) FULL COATS OF SEMI-GLOSS ENAMEL, FREE OF BRUSH STROKES.

14. GRIND, SAND, LEVEL OR FLOAT FLOOR AND WALL SURFACES AS NECESSARY TO ACHIEVE A LEVEL, SMOOTH SUBSTRATE ACCEPTABLE FOR INSTALLATION OF THE SPECIFIED FINISH MATERIAL.

15. PREPARE WALL AND FLOOR SURFACES TO MEET STANDARD SMOOTHNESS AND LEVELING MATERIAL REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER AND CONTRACT DOCUMENTS PRIOR TO INSTALLATION OF NEW BUILDING FINISHES.

D. GENERAL CONSTRUCTION (CONT.)

16. EXISTING APPURTENANCES NOT BEING REMOVED SHALL BE REFURBISHED, LOOSE ITEMS TIGHTENED AND MISSING OR BROKEN PARTS REPLACED TO ACHIEVE A FINISHED FIRST CLASS INSTALLATION AND "LIKE-NEW" APPEARANCE.

17. THE CONTRACTOR SHALL REMOVE SWITCH PLATES, OUTLET PLATES, SURFACE HARDWARE, ETC. PRIOR TO PAINTING. REPLACE SAME WHEN PAINTING HAS BEEN COMPLETED. REMOVE PAINT SPLATTERS FROM ADJACENT SURFACES - I.E. MULLIONS, CEILING GRID, ETC.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LOCAL V.O.C. REGULATIONS FOR MATERIALS USED IN CONSTRUCTION.

19. TILE SHALL BE LAID IN SQUARE PATTERN PARALLEL TO WALLS UNLESS OTHERWISE NOTED.

20. ALL VARYING FLOOR MATERIAL SHALL BE INSTALLED FLUSH TO EACH OTHER. TRANSITIONS SHALL BE CENTERED ON DOOR UNLESS OTHERWISE NOTED.

21. SPACES BEING SURFACED SHALL BE CLOSED TO TRAFFIC AND OTHER WORK DURING THE LAYING OF FLOORING, STONE, WOOD, OR OTHER MATERIAL. FINISHED FLOORS SHALL BE COVERED AFTER INSTALLATION FOR PROTECTION.

E. REQUIRED APPROVALS AND SUBMITTALS

1. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF BUILDING MANAGEMENT AND MUST BE SUBMITTED FOR APPROVAL PRIOR TO PURCHASE OR USE.

2. THE CONTRACTOR SHALL HAVE (10) WORKING DAYS FROM AWARD OF THE CONTRACT TO SUBMIT SUBSTITUTIONS OF SPECIFIED PRODUCTS OR WORK FOR REVIEW BY BUILDING MANAGEMENT AND SHALL INCLUDE CUT SHEETS WITH SPECIFICATIONS AND REASONS FOR SUBSTITUTION. NO SUBSTITUTIONS SHALL BE ACCEPTED AFTER THE INITIAL TIME LIMIT HAS EXPIRED.

3. WHERE REQUIRED BY BUILDING MANAGEMENT, THE CONTRACTOR SHALL REVIEW, SIGN, DATE AND SUBMIT A MINIMUM OF (3) SETS OF COMPLETE AND DETAILED SHOP DRAWINGS, FINISHES, FIXTURE AND EQUIPMENT CUT SHEETS TO idGROUP FOR REVIEW. THE idGROUP SHALL HAVE (10) WORKING DAYS TURNAROUND TIME FROM RECEIPT OF SUBMITTAL. ALL SHOP DRAWINGS AND CUT SHEETS SIGNED "REVIEWED" SHALL SUPERSEDE ORIGINAL DRAWINGS IN DESIGN APPEARANCE ONLY. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ERRORS IN THEIR DRAWINGS.

4. IN THE EVENT THAT THE FOREMENTIONED DRAWINGS, SPECIFICATIONS, ETC. ARE NOT SUBMITTED FOR REVIEW AND APPROVAL, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE REPLACEMENT, CORRECTION OR ACQUISITION OF PRODUCTS TO COMPLY WITH OWNER'S SPECIFICATION AND APPROVAL.

5. THE CONTRACTOR SHALL PROVIDE CHALK LINES ON THE SLAB OF PARTITIONS FOR APPROVAL PRIOR TO FRAMING AND SHALL NOTIFY idGROUP OF ANY DEVIATION FROM CONSTRUCTION DIMENSIONS OR CLEARANCES AS DESIGNATED ON THE DRAWINGS OR OF APPARENT CONSTRUCTION CONFLICTS.

6. BUILDING MECHANICAL AND ELECTRICAL SERVICE SHUT DOWN REQUIRED FOR THIS PROJECT SHALL BE SUBMITTED IN WRITING TO BUILDING MANAGEMENT BY THE CONTRACTOR A MINIMUM OF (72) HOURS IN ADVANCE OF THE SHUT DOWN. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION PRIOR TO SHUT DOWN AND SHALL NOT OVERLY INCONVENIENCE BUILDING OCCUPANTS.

7. UPON SUBSTANTIAL COMPLETION OF WORK, THE HVAC SYSTEM SHALL BE BALANCED BY A QUALIFIED ENGINEER AND A WRITTEN REPORT SHALL BE SUBMITTED TO BUILDING MANAGEMENT.

8. UPON SUBMISSION OF THE "FINAL APPLICATION FOR PAYMENT", THE CONTRACTOR SHALL PROVIDE BUILDING MANAGEMENT WITH (1) SET OF AS-BUILT DOCUMENTATION INCLUDING DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, PRODUCT DATA, EQUIPMENT WARRANTIES AND MANUALS, FINISH SAMPLES AND OTHER REQUIRED SUBMITTALS. THE CONTRACTOR SHALL PROVIDE BUILDING MANAGEMENT WITH A WRITTEN WARRANTY COVERING ALL WORK PERFORMED UNDER THE CONTRACT. WARRANTY SHALL BE FOR A PERIOD OF ONE YEAR COMMENCING ON THE DATE OF SUBSTANTIAL COMPLETION AND SHALL BE INCLUDED WITH THIS SUBMITTAL.

9. THE CONTRACTOR SHALL SUPPLY LIEN WAIVERS RELATING TO ALL WORK WITH THE "FINAL APPLICATION FOR PAYMENT" TO BE REVIEWED FOR "FINAL CERTIFICATE OF PAYMENT".

F. CHANGES IN WORK

1. THE TENANT WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK - THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY. SUCH WORK SHALL BE EXECUTED UNDER THE CONDITIONS OF THE ORIGINAL CONTRACT EXCEPT THAT ANY CLAIM FOR EXTENSIONS OF TIME CAUSED THEREBY SHALL BE INDICATED ON THE CHANGE ORDER.

2. CLAIMS FOR ADDITIONAL WORK WILL BE SUBMITTED IN WRITING FOR REVIEW BY BUILDING MANAGEMENT AND SHOULD INCLUDE A COMPLETE DESCRIPTION OF THE WORK, MATERIALS BEING USED, THE ROOM NUMBER OR AREA AFFECTED, AND THE AUTHORIZATION UNDER WHICH THE WORK IS BEING PERFORMED.

PROJECT NOTES

1. THE SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIAL REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED. idGROUP IS NOT COMMISSIONED TO VERIFY EVERY EXISTING CONDITION, VISIBLE OR OTHERWISE, THEREFORE IT IS THE GENERAL CONTRACTOR'S OBLIGATION TO ASSUME ALL RESPONSIBILITY FOR MODIFYING ANY AND ALL EXISTING CONDITIONS TO MEET THE DESIGN INTENT OF THESE DRAWINGS.

2. BULLETED NOTES ARE GENERAL CONDITIONS REQUIRED FOR THE PLAN. NUMBERED NOTATIONS REFERENCE SPECIFIC LOCATIONS ON THE DRAWINGS.

3. THE BUILDING ENVELOPE, MECHANICAL, ELECTRICAL, SERVICE-WATER HEATING AND ILLUMINATION SYSTEMS, AND EQUIPMENT SHALL COMPLY WITH THE MOST CURRENT APPLICABLE INTERNATIONAL ENERGY CONSERVATION CODE, AS RECOGNIZED BY THE MUNICIPALITY GOVERNING THIS PROJECT.

4. ITEMS NOTED TO BE "TOUCHED-UP" ARE TO BE BROUGHT TO AN ACCEPTABLE INDUSTRY STANDARD LEVEL OF REFURBISHMENT. IF AN ENTIRE WALL(S) REQUIRES REPAINTING IN ORDER TO ACHIEVE AN ACCEPTABLE FINISH, INCLUDE NECESSARY FEES IN BID TO DO SO.

5. RETURN REUSABLE MATERIALS TO BUILDING STOCK. VERIFY ACCEPTABILITY OF MATERIALS WITH BUILDING MANAGER.

6. REUSE AS MANY EXISTING MATERIALS FROM LEASE AS POSSIBLE, TOUCH UP. VERIFY AVAILABILITY OF MATERIALS TO BE USED FROM BUILDING STOCK WITH BUILDING MANAGER.

7. CONTRACTOR TO PROTECT PUBLIC CORRIDOR, ADJACENT SPACES, AND MATERIALS DURING CONSTRUCTION FROM DUST, DIRT, NOISE, AND HARM.

8. ALL CONSTRUCTION MATERIALS TO BE ASBESTOS FREE. idGROUP SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB), OR OTHER TOXIC SUBSTANCES.

9. EXISTING PUBLIC RESTROOMS ARE NOT INCLUDED IN THIS SCOPE OF WORK. IF APPLICABLE, COORDINATE WITH BUILDING MANAGEMENT FOR ANY NEW CONSTRUCTION REQUIRED IN RESTROOMS TO ENSURE ADA/TAS COMPLIANCE.

10. CONFIRM ALL BUILDING STANDARD SPECIFICATIONS WITH BUILDING MANAGER.

11. COORDINATE WITH BUILDING MANAGEMENT FOR ALL DEMOLISHED MATERIALS FOR PROPER STORAGE OR DISPOSAL.

12. REMOVE ALL DOORS SHOWN TO BE DEMOLISHED AND SALVAGE FOR POSSIBLE RE-USE IN NEW CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITY, QUALITY, AND CORRECT DOOR SWINGS OF EXISTING DOORS AVAILABLE TO RE-USE.

13. REMOVE NAILS AND SCREWS FROM EXISTING WALLS. REPAIR HOLES AND SCRATCHES. PREPARE ALL WALL SURFACES FOR NEW SCHEDULED FINISHES.

14. PROVIDE NEW BUILDING STANDARD DOOR STOPS AT ALL NEW DOOR LOCATIONS. REPLACE IF DAMAGED OR MISSING AT ALL EXISTING DOOR LOCATIONS.

15. IF NOT ALREADY EXISTING, PROVIDE MINIMUM REQUIRED GYPSUM BOARD FURRING AT FIRE RATED CORE WALLS FOR MILLWORK, MILLWORK STANDARDS, PLUMBING, LIGHT SWITCHES AND/OR ELECTRICAL/TELEPHONE OUTLETS. DO NOT PENETRATE FIRE-RATED PARTITIONS.

16. PATCH AND REPAIR WALLS WHERE DEMOLITION, DAMAGE, OR INCOMPLETE WORK HAS OCCURRED. PREPARE SURFACES FOR NEW SCHEDULED FINISHES AND TEXTURES.

17. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING WITHIN WALL TO SUPPORT MILLWORK, STANDARDS, AND WALL HUNG EQUIPMENT.

18. ALL NEW MILLWORK TO MEET ADA/TAS REQUIREMENTS.

19. PROVIDE FIRE EXTINGUISHERS IN TENANTS LEASE PER CODE. NOT TO EXCEED 75 FEET.

20. PROVIDE NEW SWITCH & OUTLETS COVER PLATES WHERE MISSING OR DAMAGED TO MATCH EXISTING.

21. CONTRACTOR TO UPDATE ALL PANEL SCHEDULES TO REFLECT CORRECT BREAKER ASSIGNMENTS. PROVIDE DIAGRAM TO BUILDING ENGINEER.

22. NEW OUTLETS TO BE MOUNTED AT 17" AF F. OUTLETS ABOVE STANDARD MILLWORK TO BE MOUNTED HORIZONTALLY AT 42" A.F.F., ON CENTER, U.N.O.

23. SECURITY, TELEPHONE, AND COMPUTER CABLING WORK TO BE COMPLETED BY TENANT'S PROVIDER. GC TO PROVIDE PATHWAY, RING, AND STRING ONLY AT INDICATED LOCATIONS.

24. REMOVE EXCESS WIRING RESULTING FROM DEMOLITION.

25. EXISTING ELECTRICAL OUTLETS LOCATED ON PARTITIONS TO BE DEMOLISHED ARE NOT SHOWN AND ARE TO BE REMOVED, INCLUDING CONDUIT AND WIRING, BACK TO THEIR RESPECTIVE ELECTRICAL PANELS.

26. VERIFY THE AVAILABILITY OF CIRCUITRY ON EXISTING ELECTRICAL PANELS. RECIRCUIT OUTLETS LEFT ON INCOMPLETE CIRCUITS INTO NEW CONSTRUCTION.

27. WHERE ELECTRICAL OUTLETS ARE REQUIRED WITHIN (3) FEET OF A SINK, PROVIDE GFI CIRCUITS AS REQUIRED BY CODE.

28. EXISTING SWITCHES NOT NOTED ON PLAN AND THAT ARE NOT LOCATED ADJACENT TO LATCH SIDE OF DOORS ARE TO BE REMOVED AND WALL PATCHED TO MATCH ADJACENT WALL CONSTRUCTION.

29. PROVIDE EITHER DUAL SWITCHING OR MOTION SENSORS AT ALL ROOMS SWITCHED WITH MORE THAN ONE LIGHT FIXTURE AND IN ROOMS THAT ARE 250 SQ. FT. OR MORE. PROVIDE WATTSTOPPER MOTION SENSORS AND/OR ULTRASONIC DEVICES FOR ROOMS THAT ARE 250 SQ. FT. OR MORE, IN ALL AREAS INCLUDED IN IECC CALCULATIONS.

30. SWITCHES INDICATE LOCATION ONLY. SUBSCRIPT LETTERS INDICATE DESIRED SWITCHING. GENERAL CONTRACTOR TO VERIFY QUANTITY OF LIGHT FIXTURES PER CIRCUIT AND QUANTITY OF SWITCHES REQUIRED. ALL NEW SWITCHES TO BE MOUNTED 48" A.F.F. TO CENTERLINE OF SWITCH.

31. CLEAN SUPPLY AND RETURN GRILLS THROUGHOUT, U.N.O.

32. SURFACE MOUNTED FIRE SAFETY DEVICES TO BE PLACED AWAY FROM CENTERS OF ALL WALLS. PLACEMENT TO COMPLY WITH ALL CODES. WHERE POSSIBLE, COORDINATE WITH TENANT FOR DESIRED LOCATIONS.

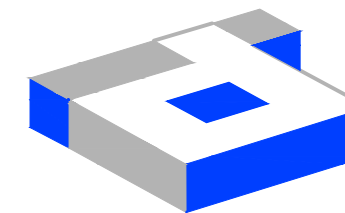
33. FIRE PROTECTION CONTRACTOR TO VERIFY REQUIREMENTS AND QUANTITY OF FIRE PROTECTION DEVICES. INCLUDE SMOKE DETECTORS, FIRE ALARMS, SPEAKERS, STROBES, ETC. INCLUDE COSTS TO THE SUCH DEVICES INTO BUILDING PANEL. LIFE SAFETY INSTALLATIONS TO MEET ADA/TAS REQUIREMENTS. SUBMIT CITY APPROVED FIRE PROTECTION PLAN FOR SPRINKLER LOCATIONS TO BUILDING MANAGER FOR APPROVAL.

34. ALL PAINTED WALLS SHALL RECEIVE TWO COATS OF LATEX PAINT IN BUILDING STANDARD FINISH.

35. TOUCH-UP OR REPAIR ALL WALLS AS NEEDED AFTER COMPLETION OF TENANT LEASE SPACE.

36. EXISTING WINDOW COVERINGS TO REMAIN, U.N.O. CLEAN AND REPAIR THROUGHOUT. REPLACE TO MATCH EXISTING, IF MISSING OR DAMAGED BEYOND REPAIR.

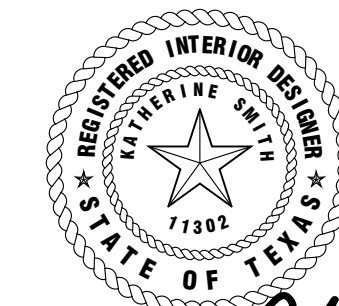
37. CLEAN ALL EXISTING LIGHT FIXTURES THROUGHOUT, U.N.O.



idGROUP

2641 IRVING BLVD.
DALLAS, TEXAS 75207

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Katherine Chutkan 04-28-20

PROJECT NO.: 580-009
DRAWN BY: RH
CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
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NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/20
BID ISSUE DATE: 04/28/20
CONSTRUCTION ISSUE DATE: 04/28/20

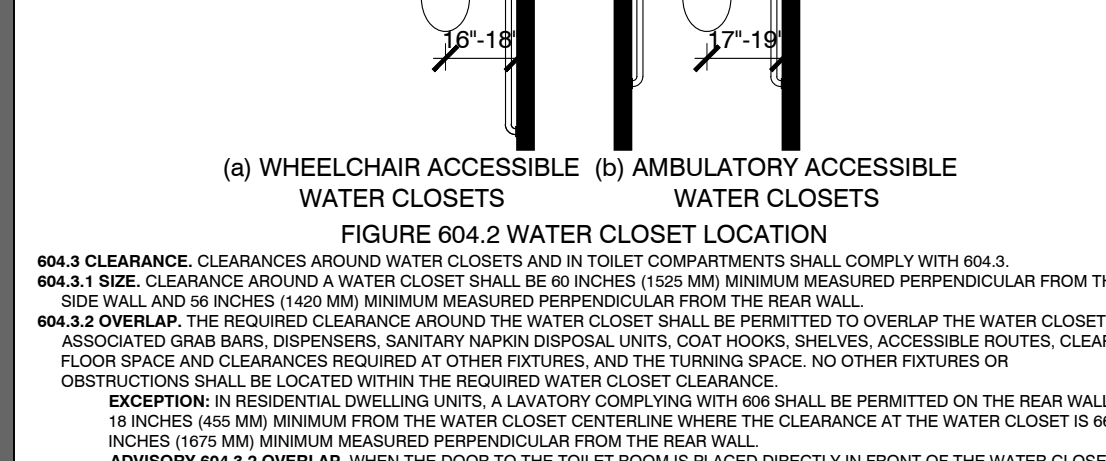
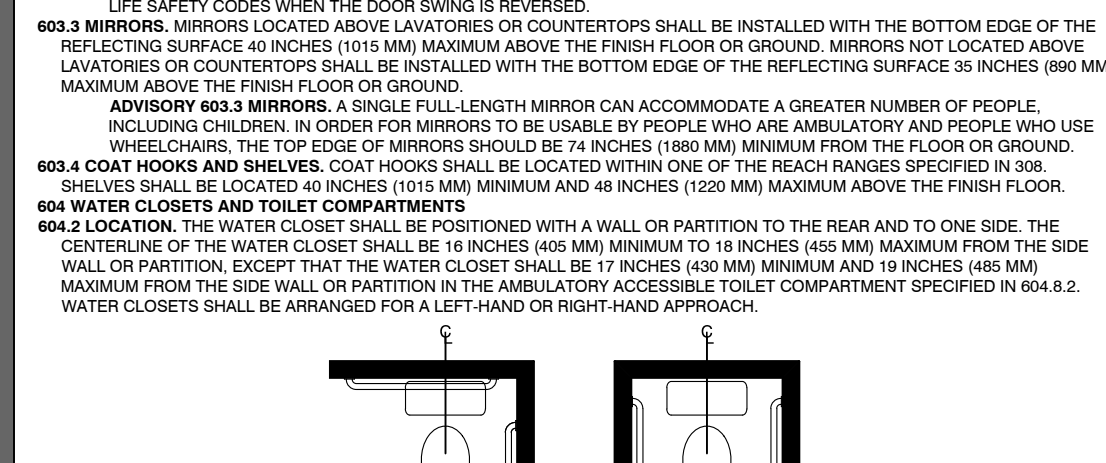
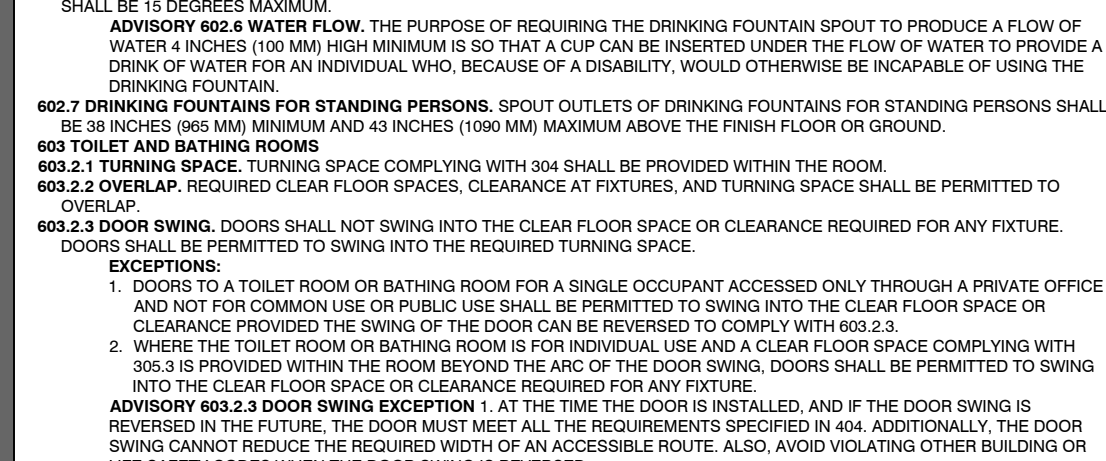
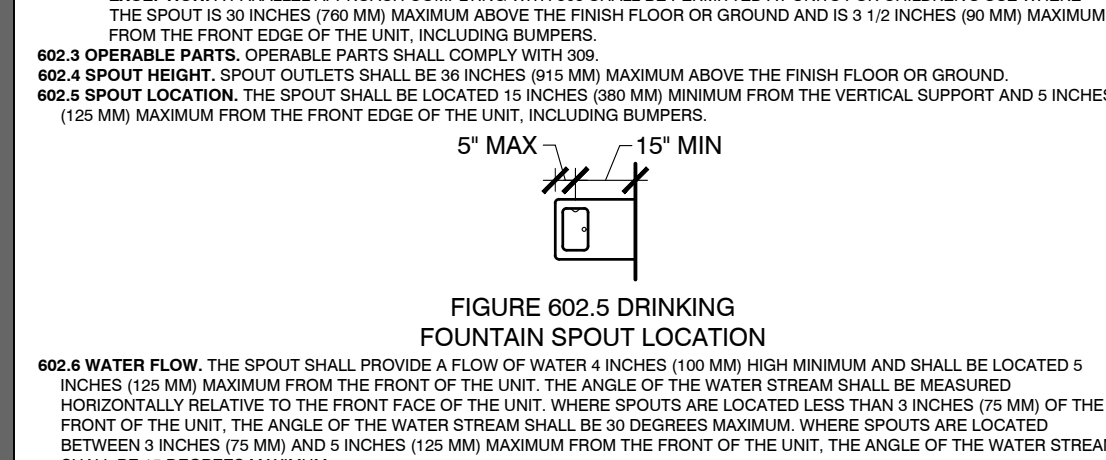
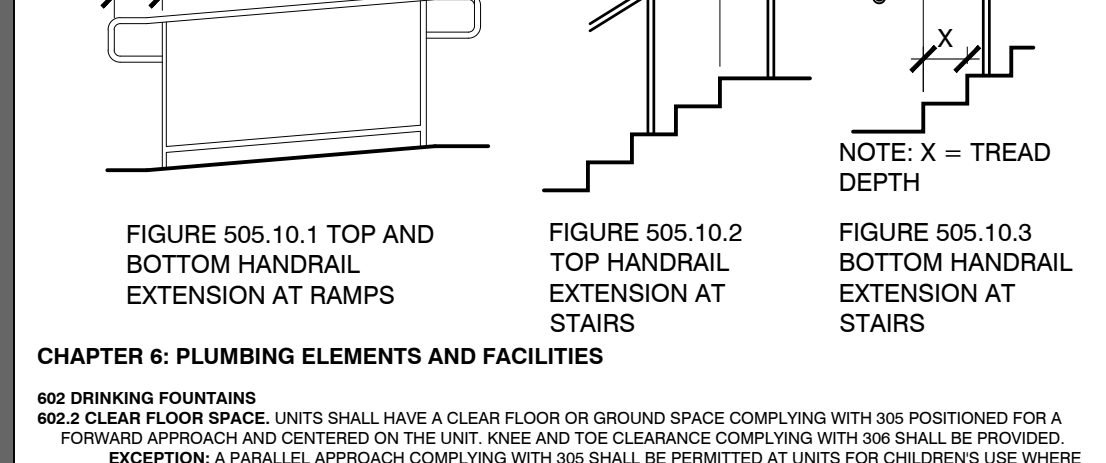
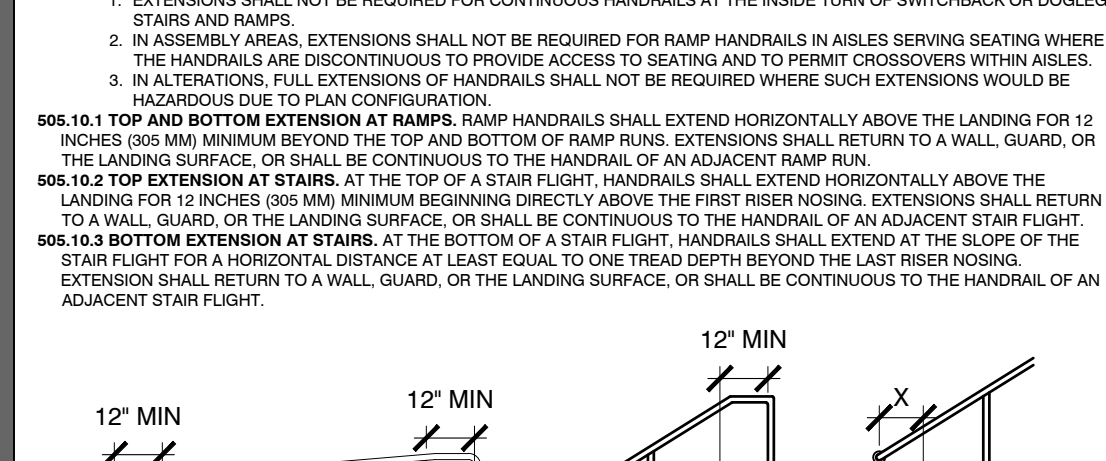
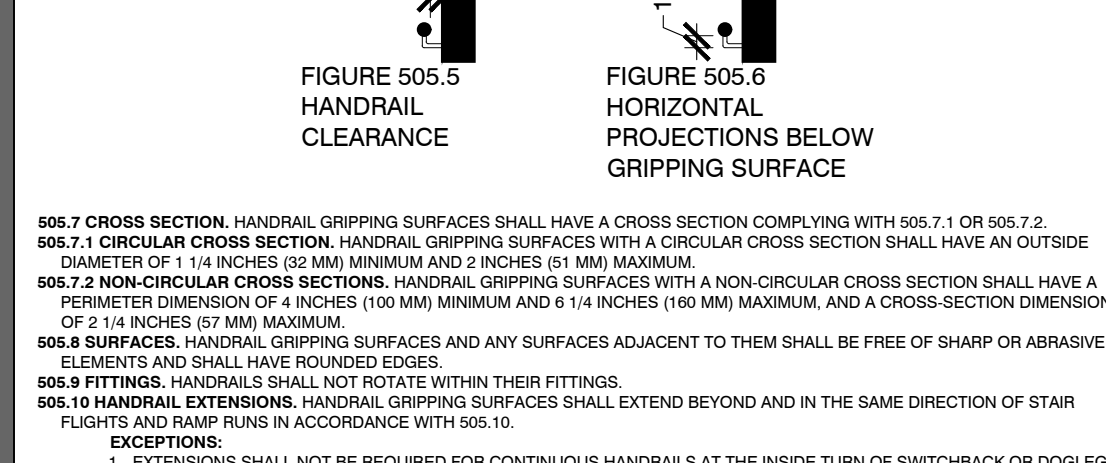
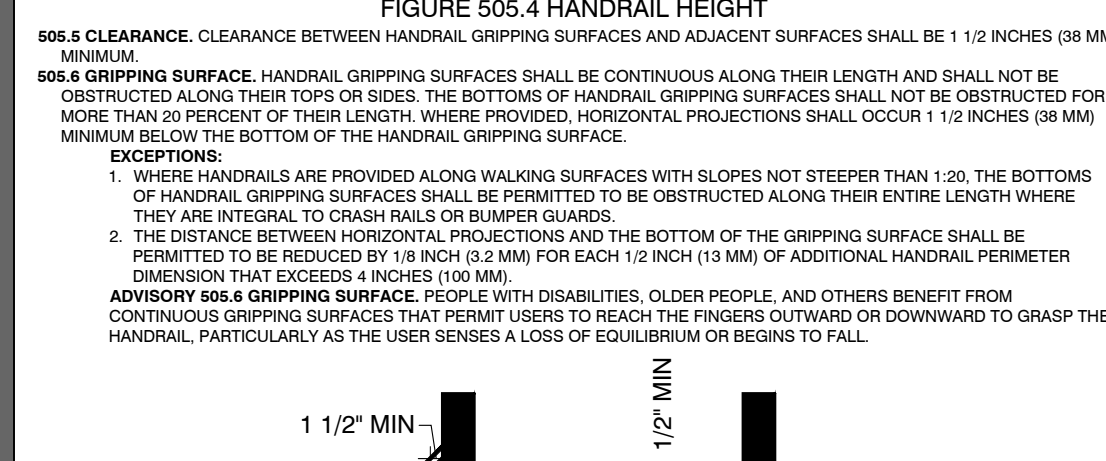
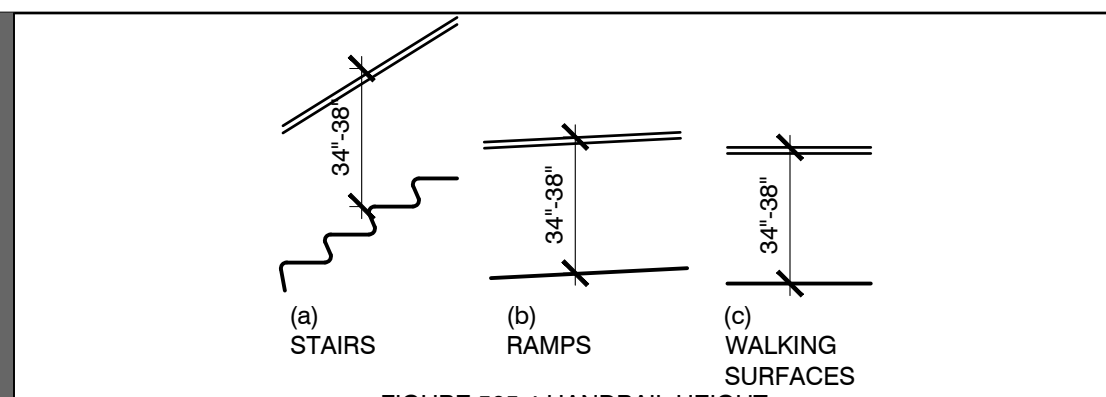
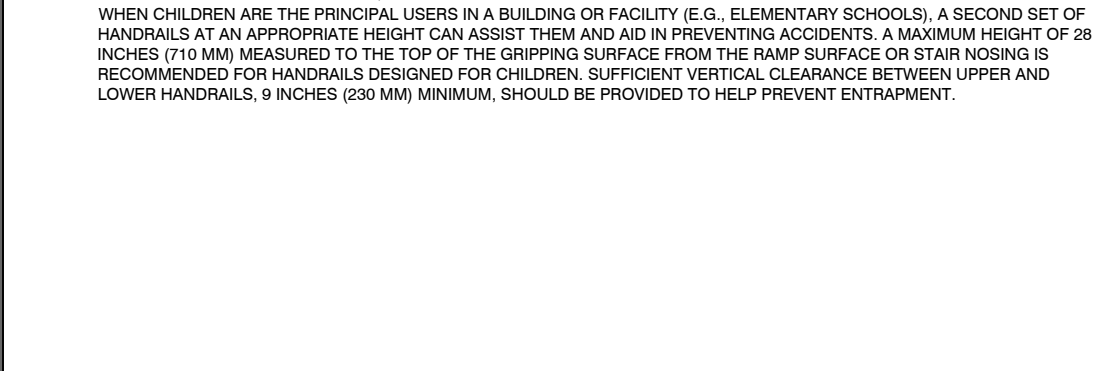
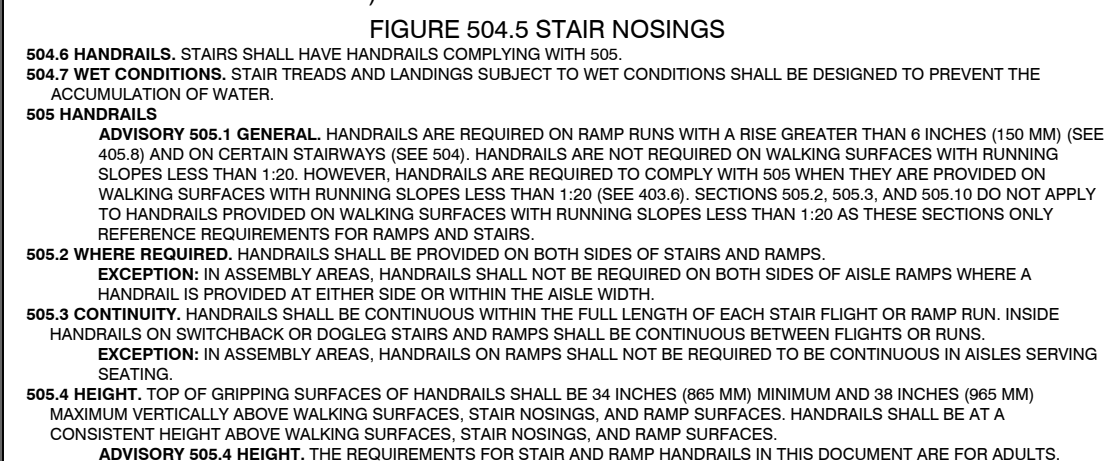
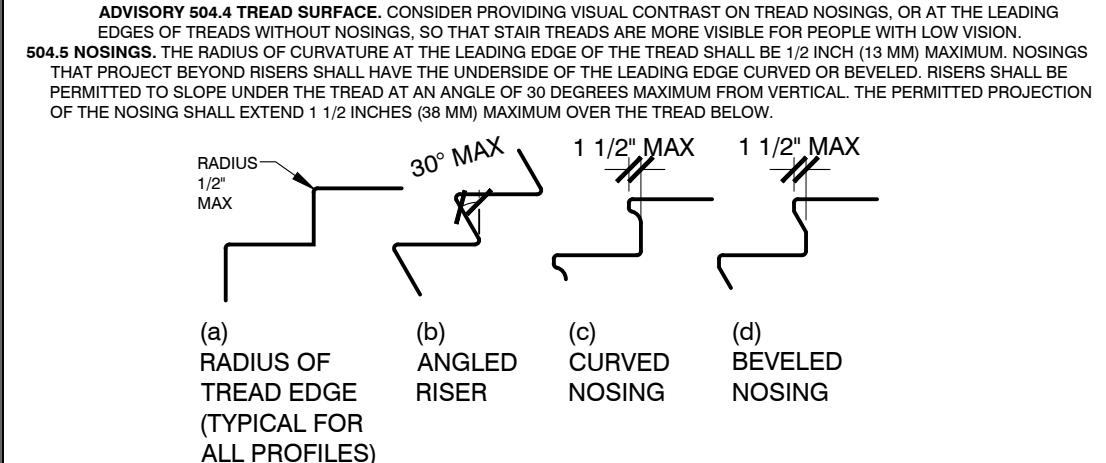
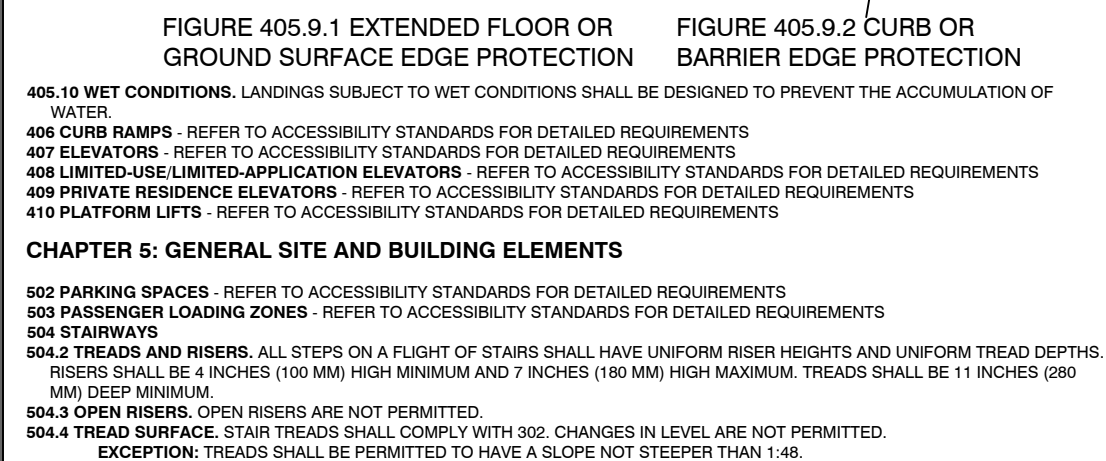
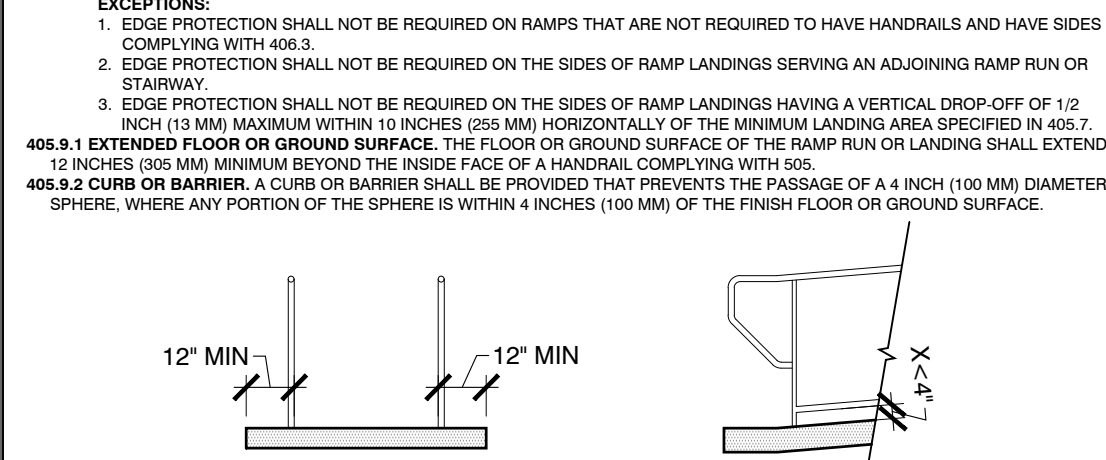
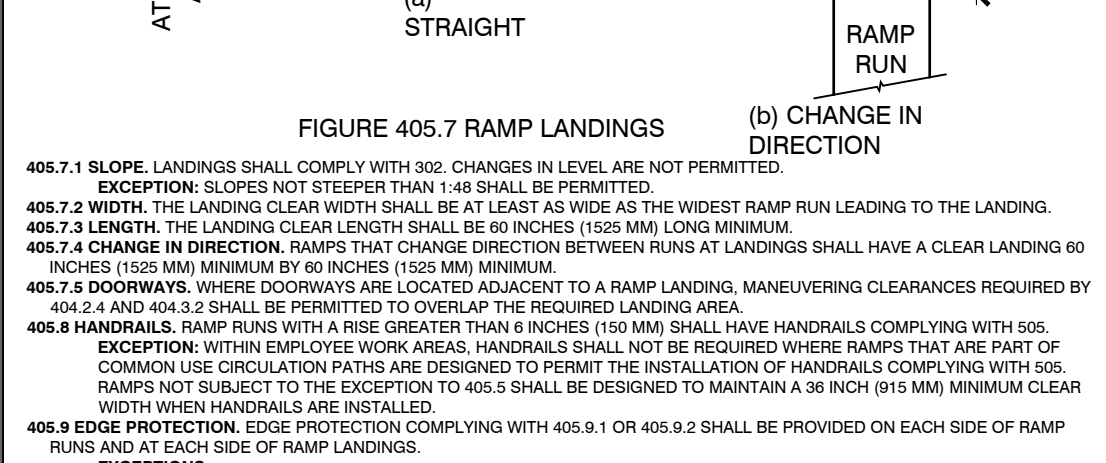
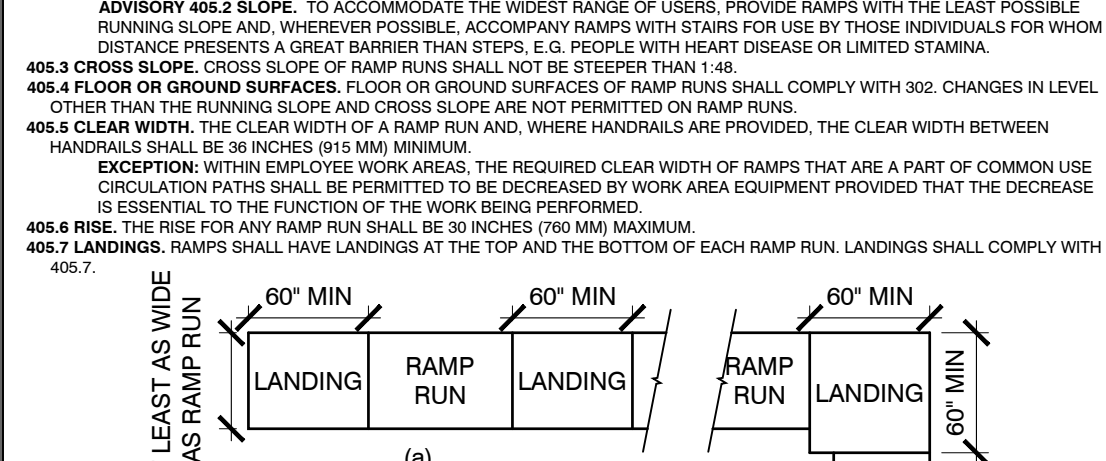
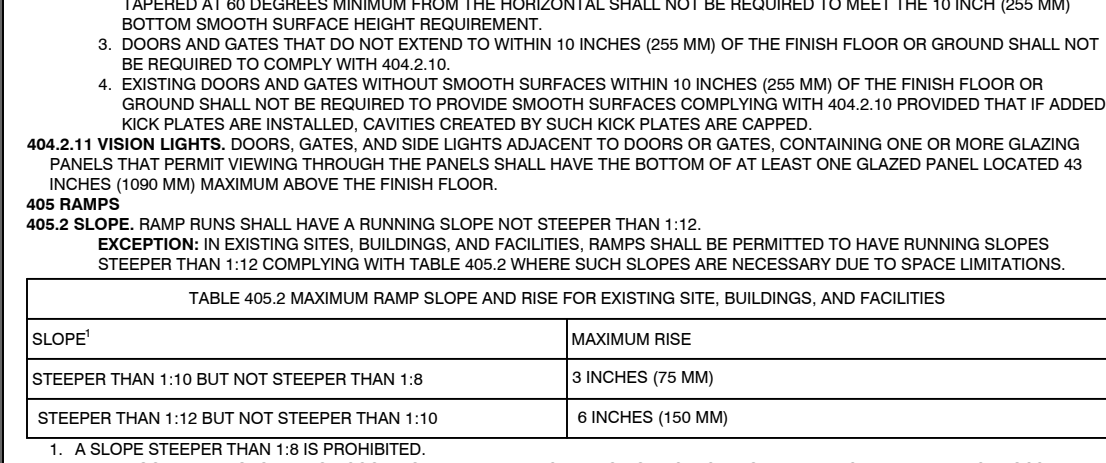
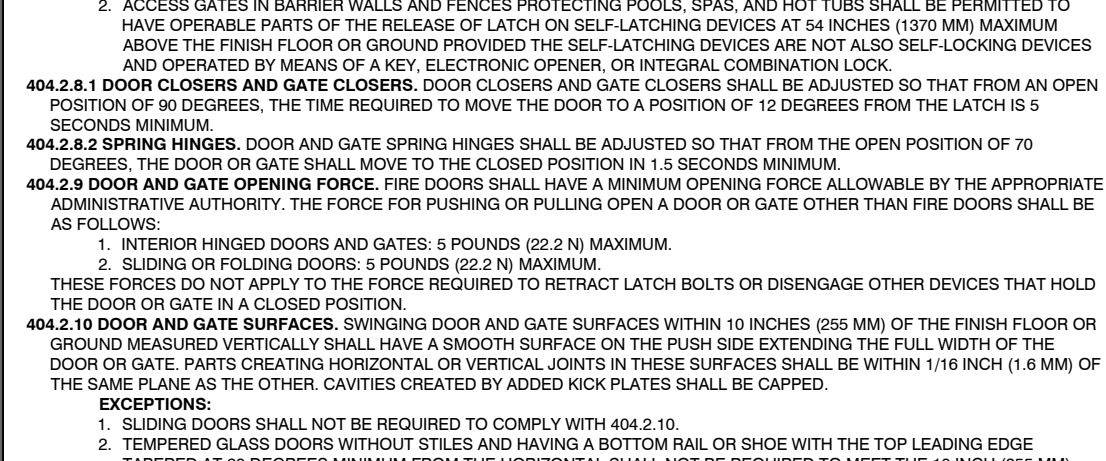
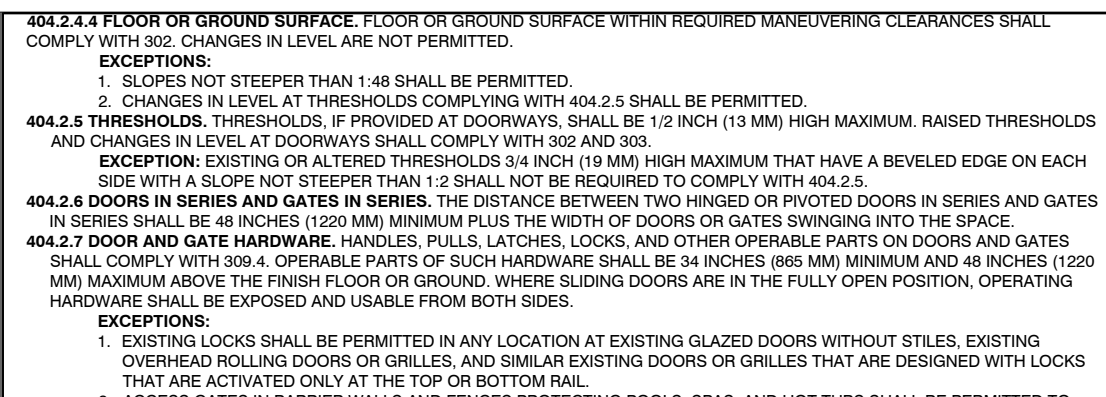
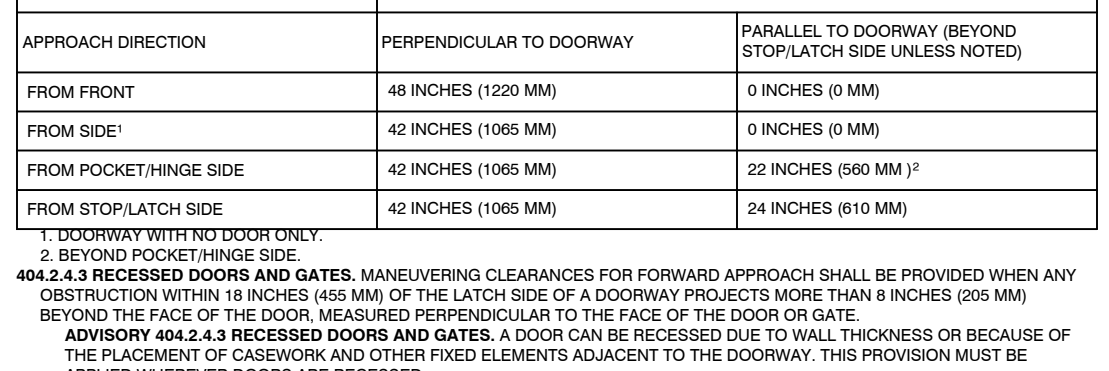
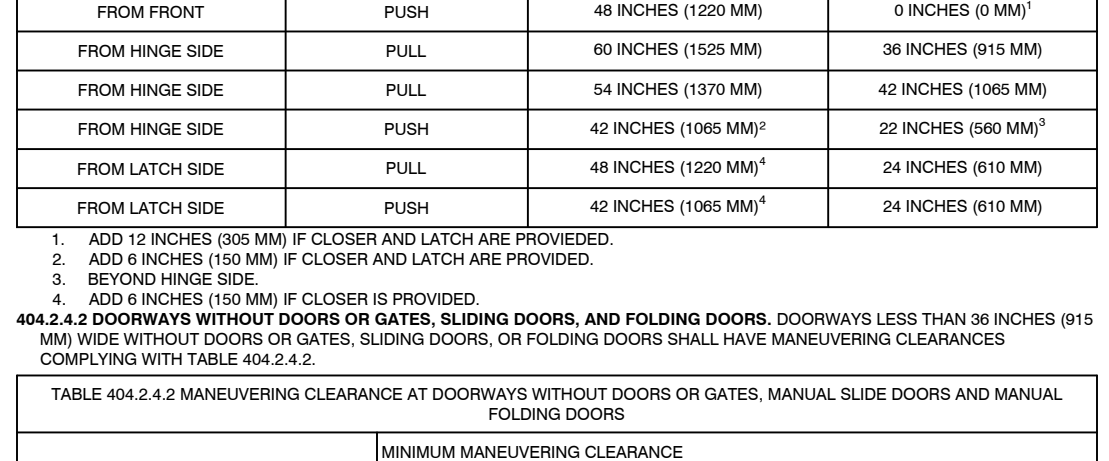
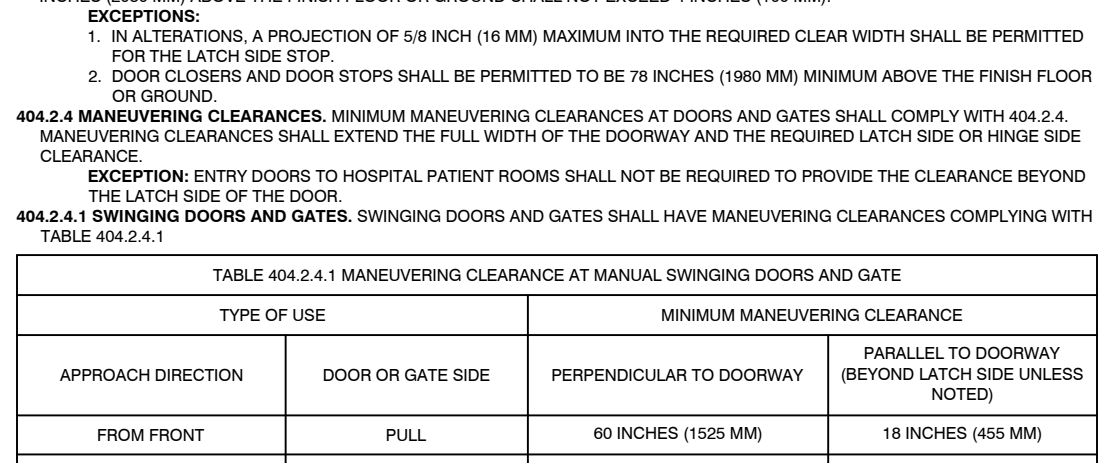
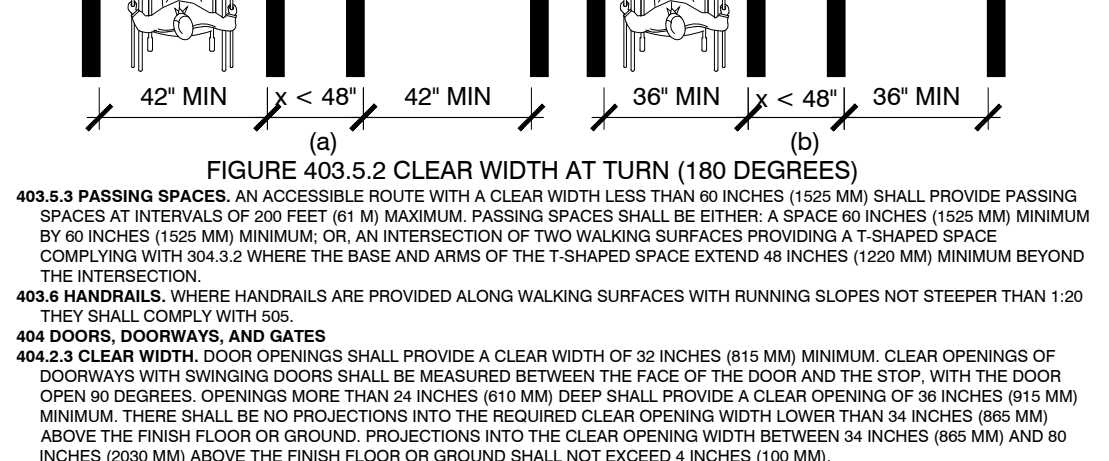
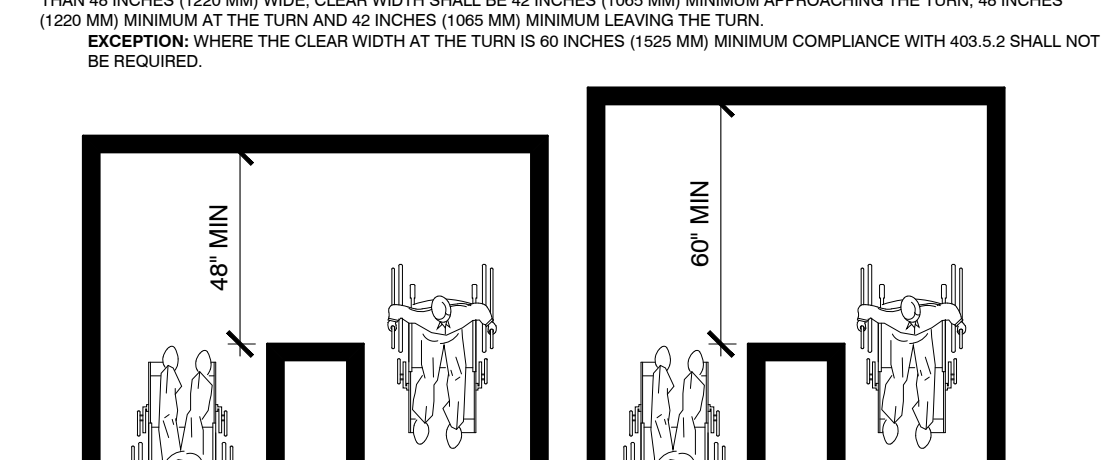
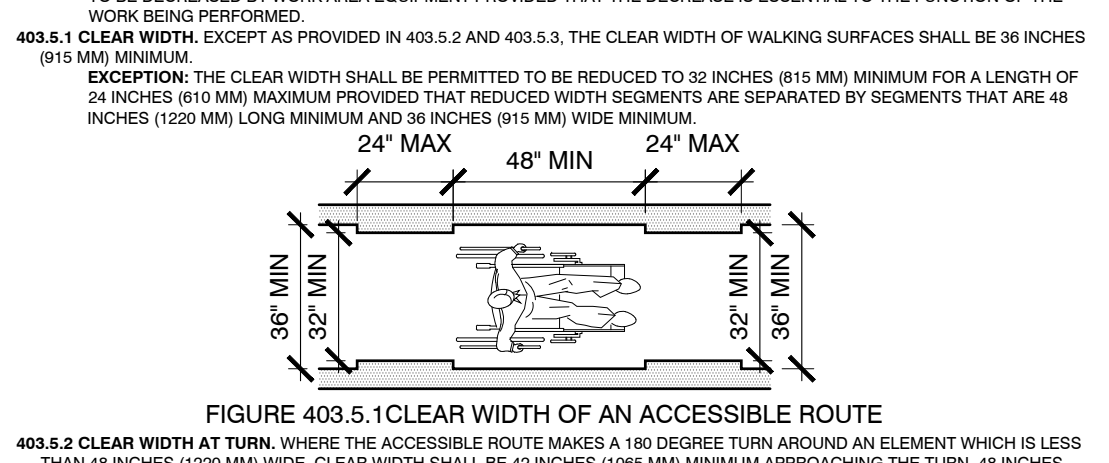
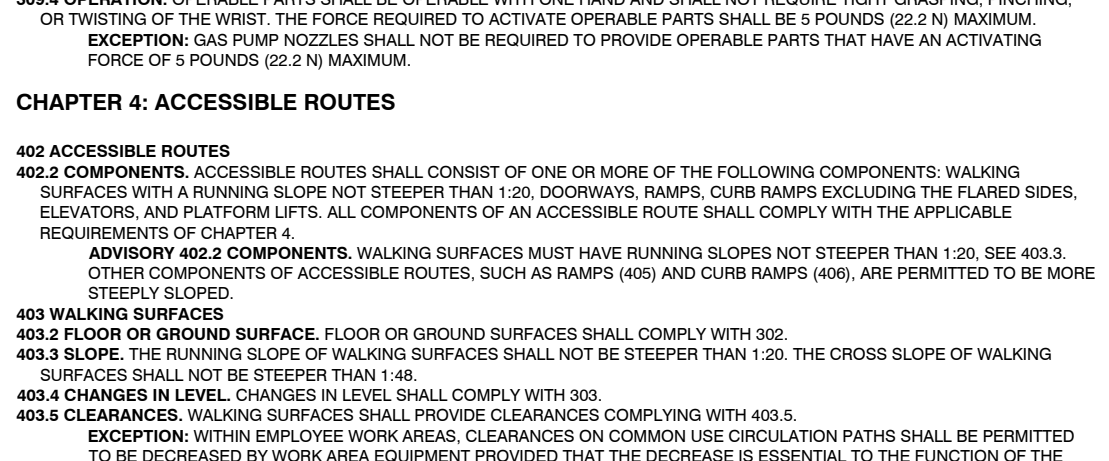
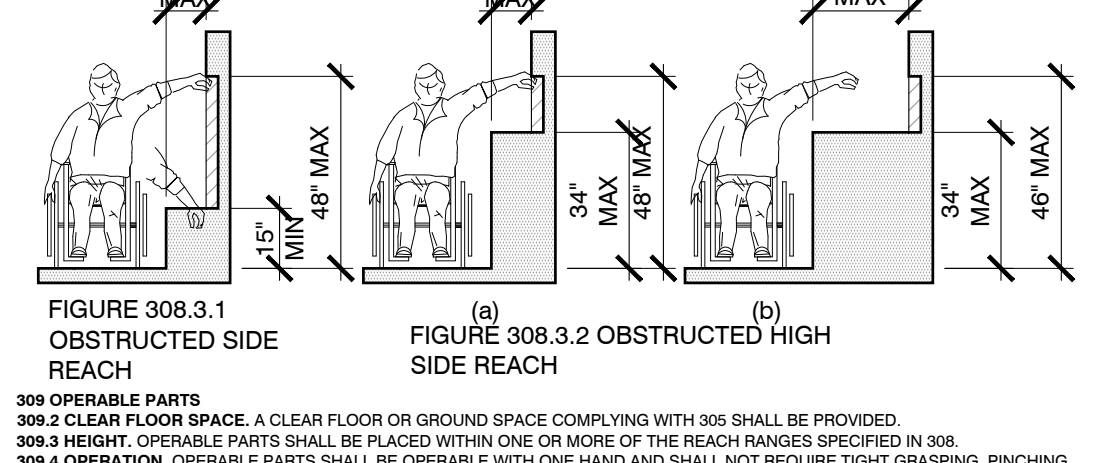
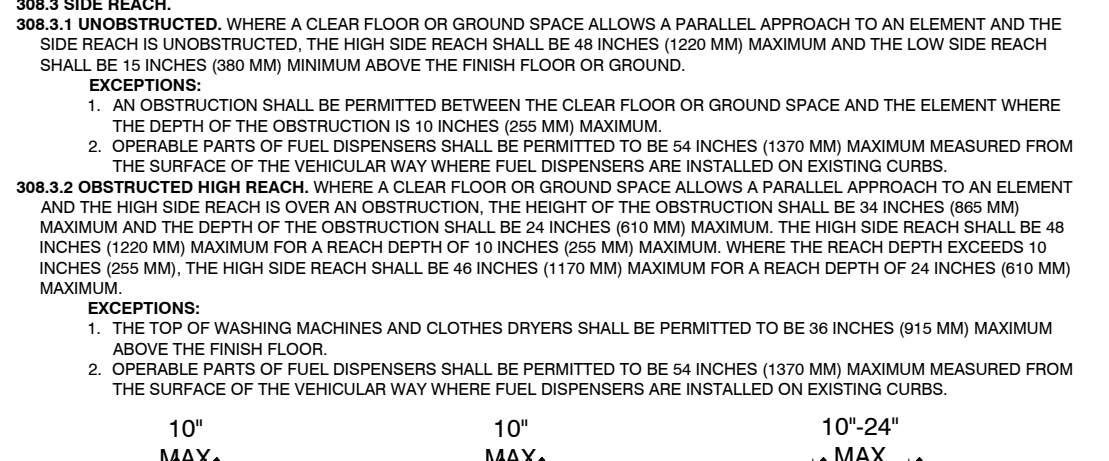
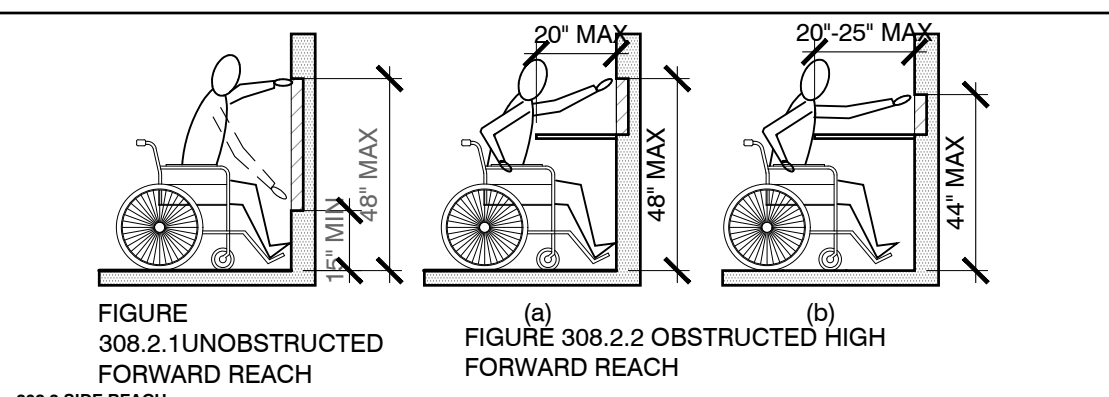
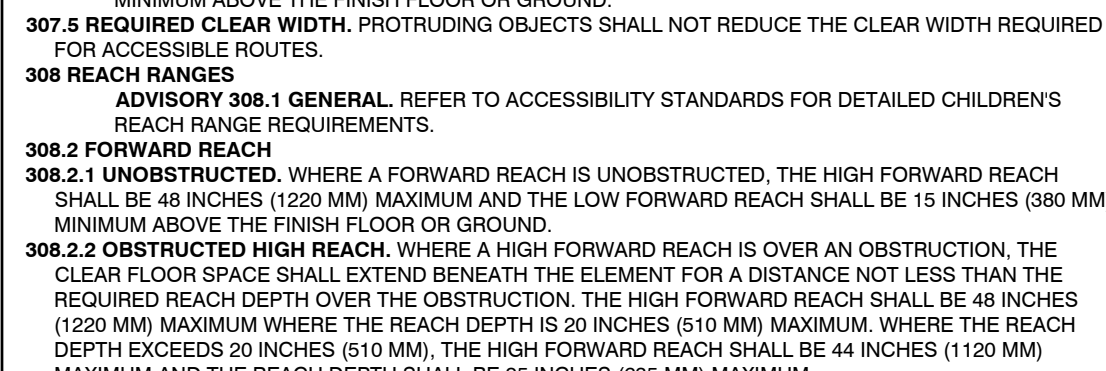
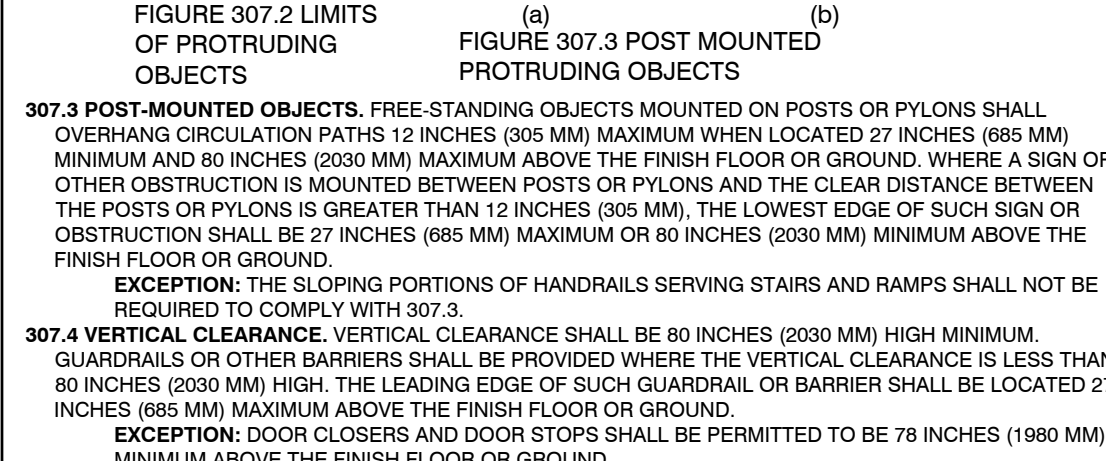
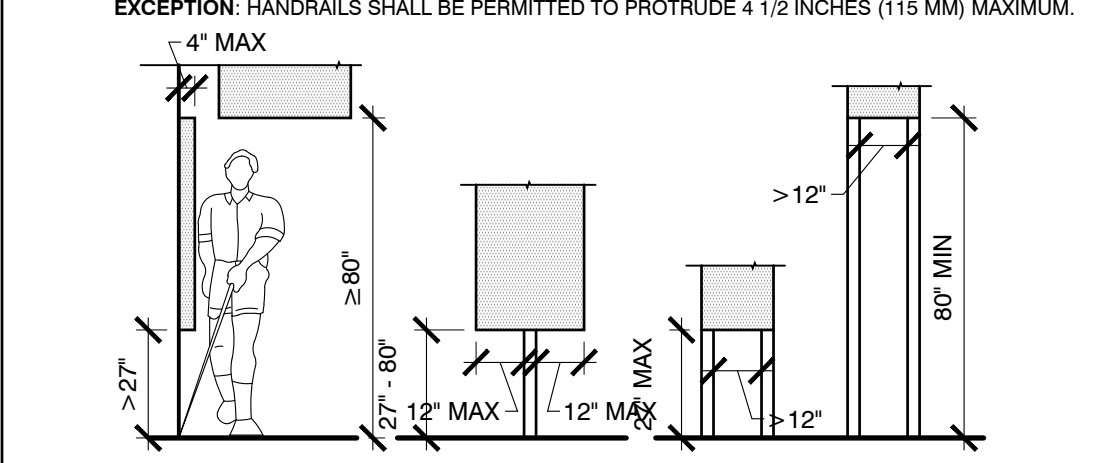
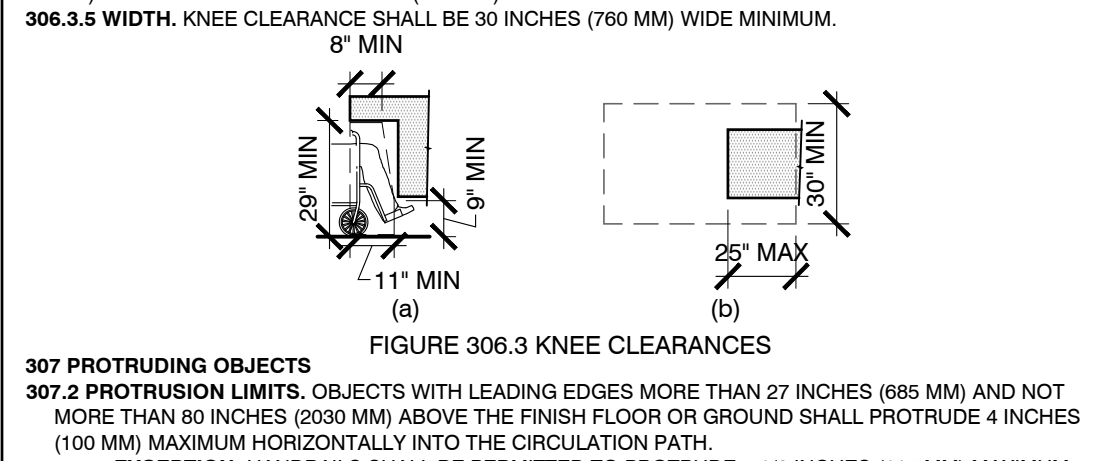
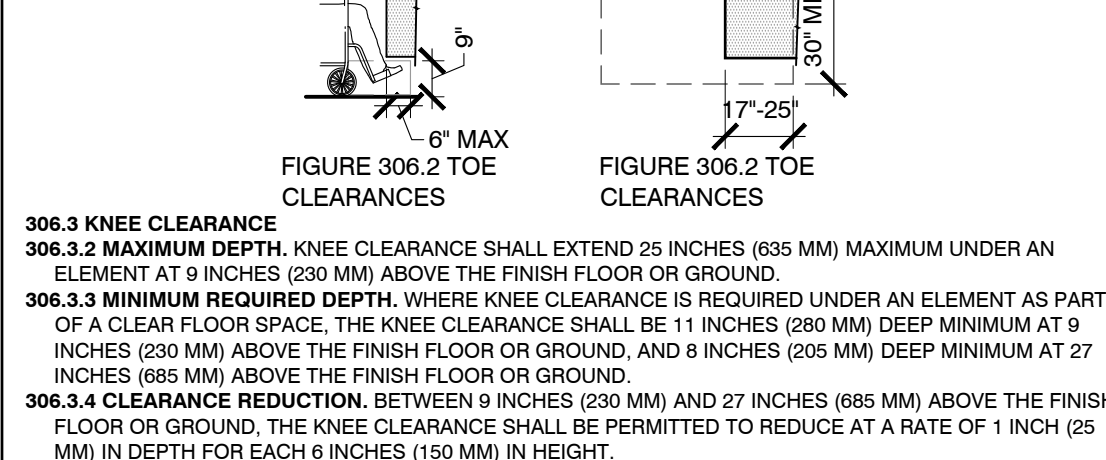
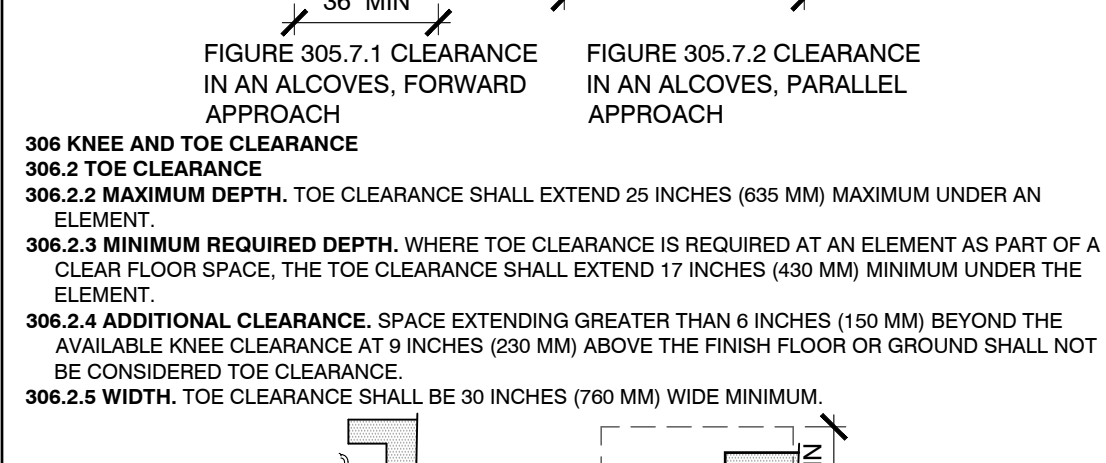
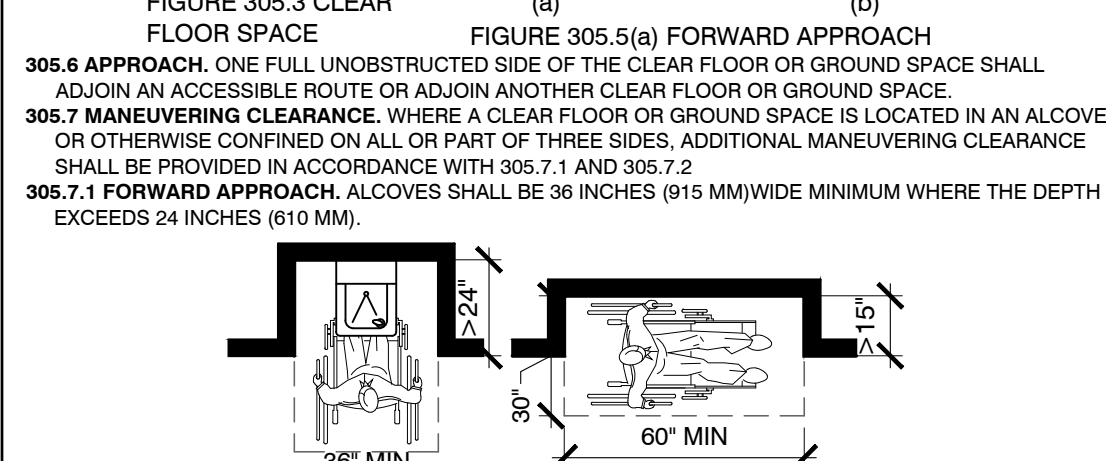
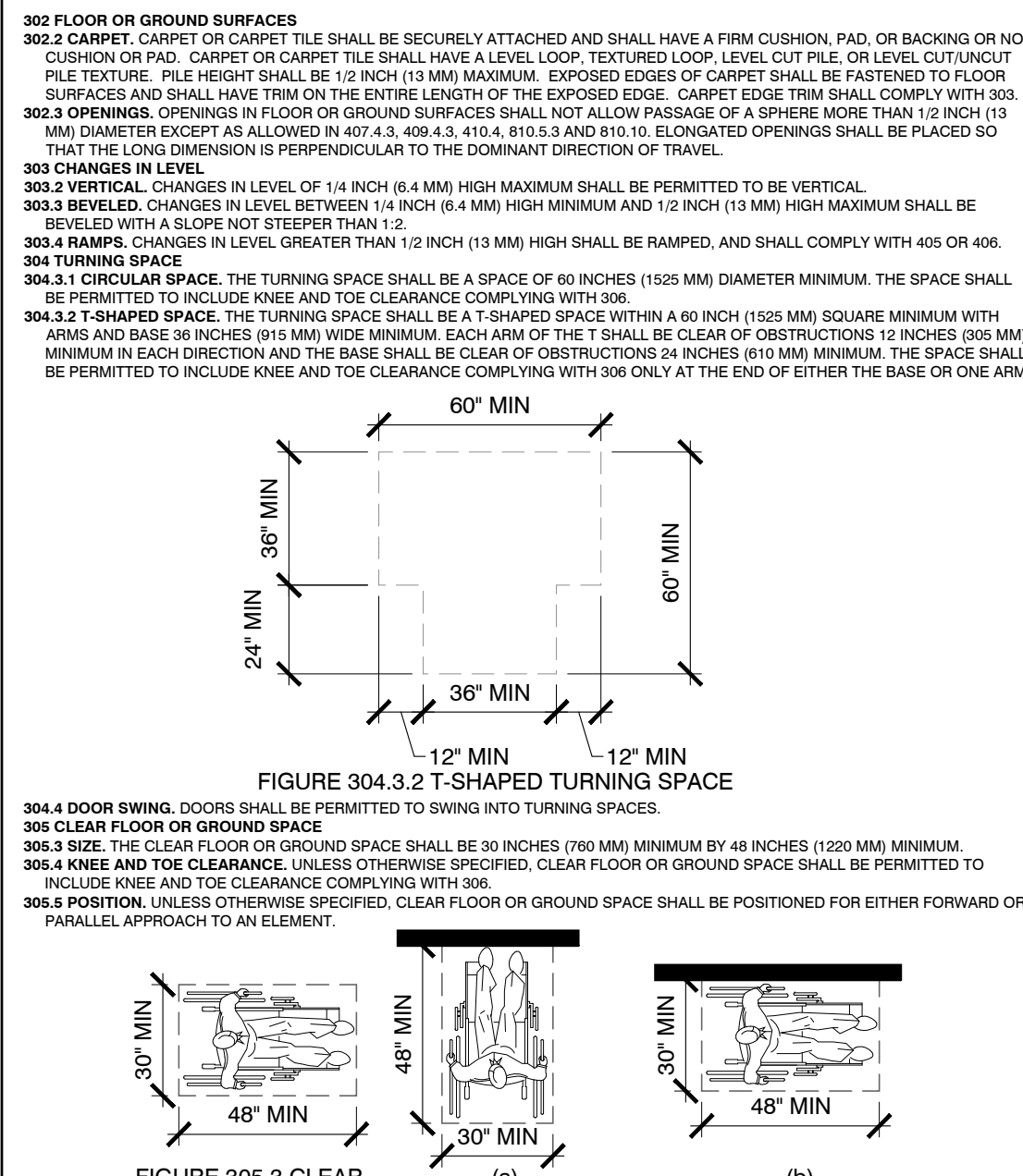
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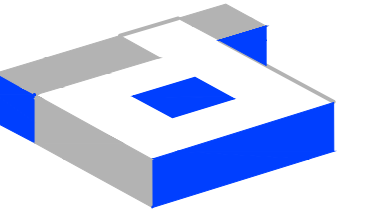
GENERAL NOTES

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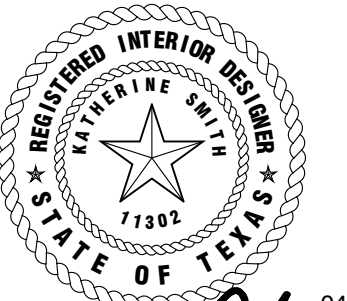
CHAPTER 3: BUILDING BLOCKS





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2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301



Katherine Austin 04-28-20

PROJECT NO.: 580-009
DRAWN BY: RH
CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

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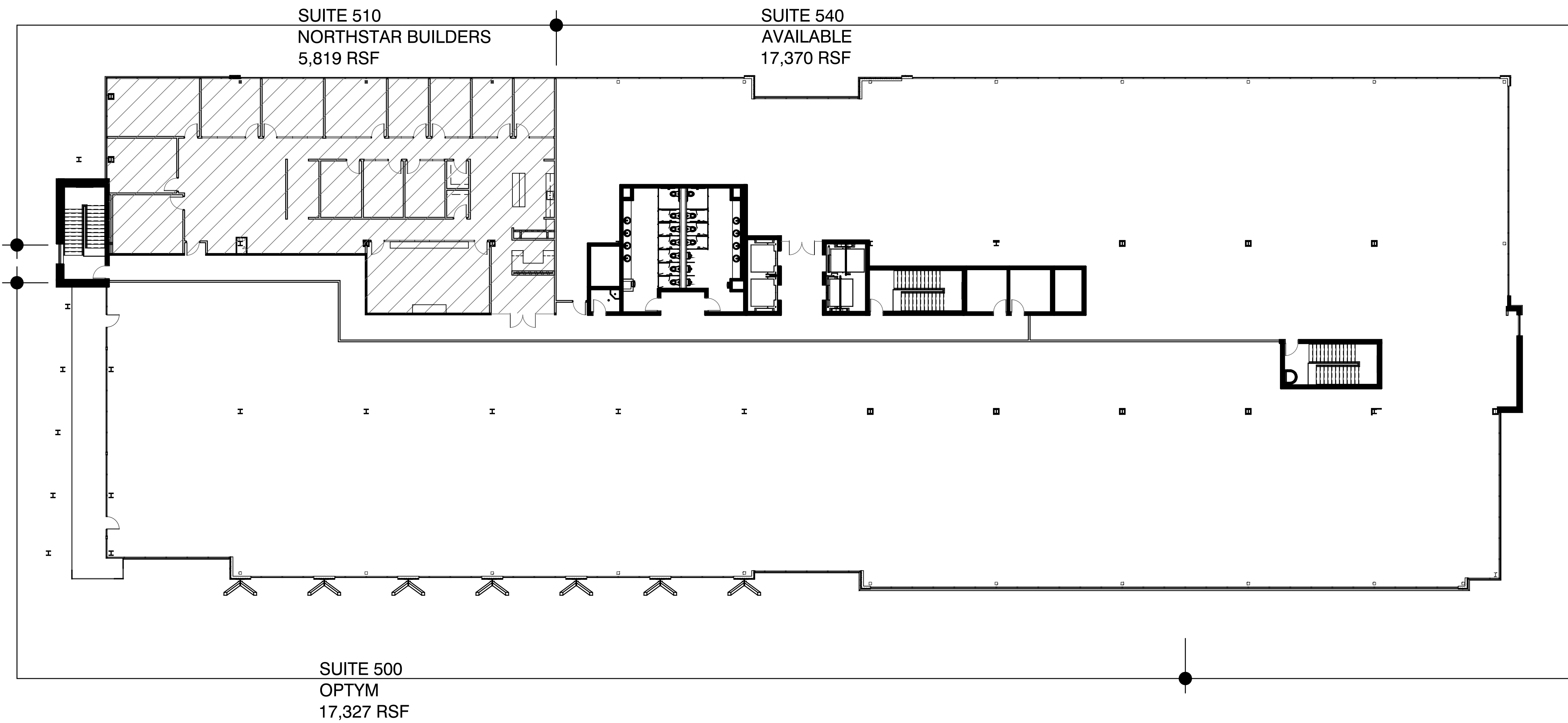
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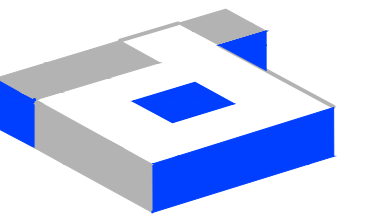
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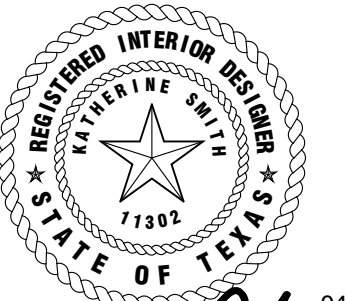


01 KEY PLAN
SCALE: 1/16" = 1'-0"



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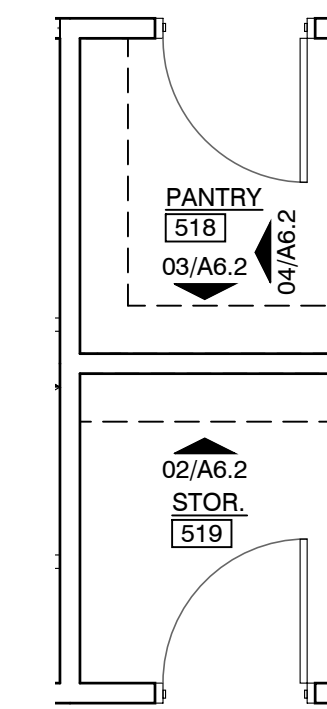
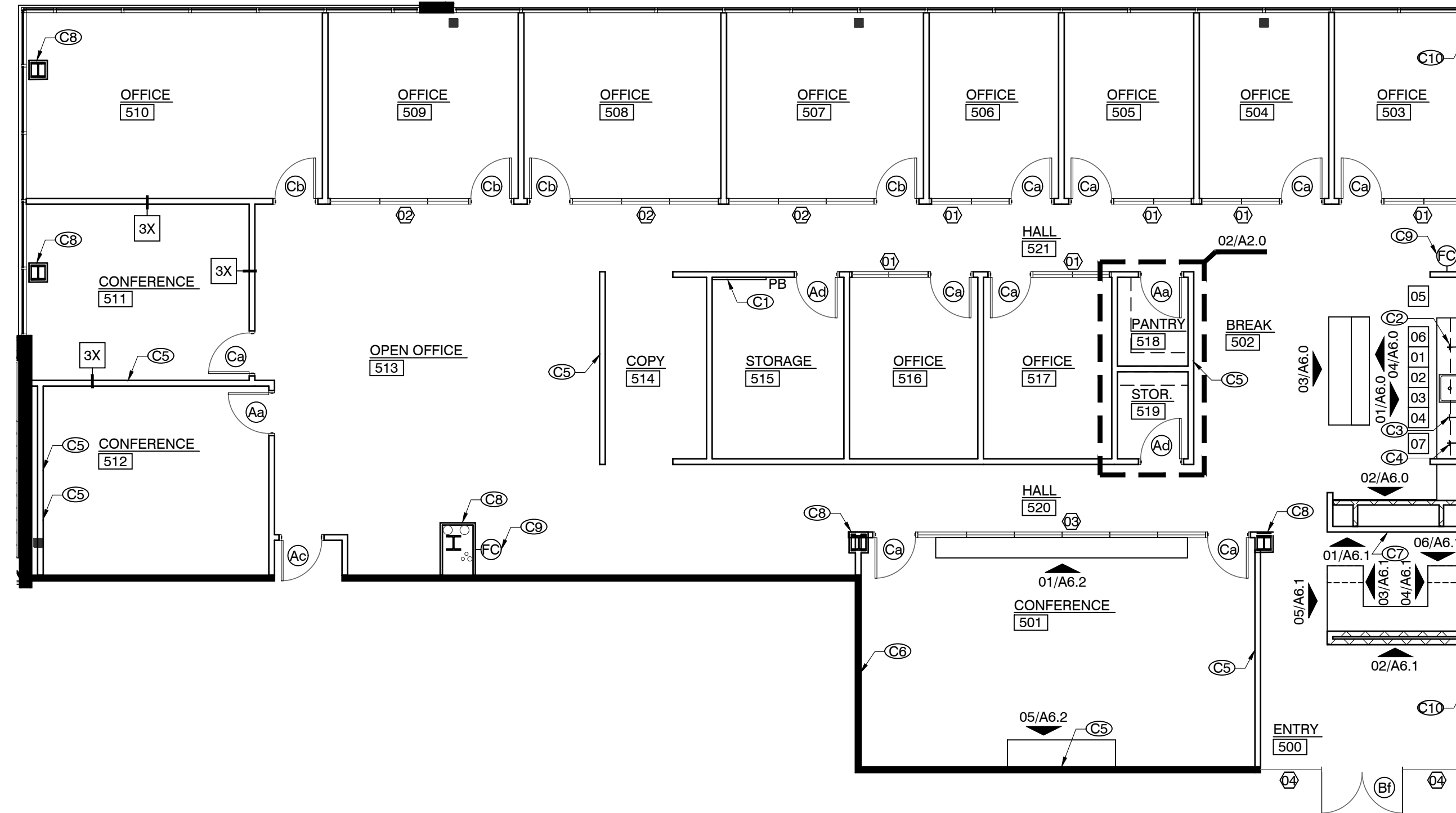
NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/20
BD ISSUE DATE: 04/28/20
CONSTRUCTION ISSUE DATE: 04/28/20

DRAWING TITLE:
CONSTRUCTION PLAN
DRAWING NUMBER:

A2.0

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01 CONSTRUCTION PLAN
SCALE: 1/8" = 1'-0"

02 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

BILLINGSLEY - CONSTRUCTION NOTES:

- KEYING UNDER GC CONTRACT BY A-1 LOCKSMITHS AT INTERNATIONAL BUSINESS PARK AND BY WAYFAIR LOCKSMITH AT CYPRESS WATERS.
- SPECIFICATIONS FOR DOORS AND FRAMES:
 - DOOR FRAMES: RACO "CLASSIC PRESTIGE," OR APPROVED EQUAL, BLACK.
 - DOORS: 3'-0" X 9'-0" X 1-3/4" FIVE PLY SOLID CORE, FLUSH SLAB STAINED VENEER, SLIP MATCHED STAINED FINISH TO MATCH EXISTING. VERIFY WITH LANDLORD FOR EXACT SPECIFICATIONS.
 - MORTISE SETS: SARGENT 8100 SERIES, LNH LEVER TRIM US26, BLACK.
 - KEY: YALE GC KEYWAY.
 - HINGES: HAGER, MCKINNEY, OR STANLEY 4-1/2" X 4-1/2", 5-KNUCKLE, NON REMOVABLE PIN AT CORRIDORS.
 - 4-1/2" X 4-1/2", 5-KNUCKLE, NON-RISING PIN AT CORRIDORS. US26, BLACK
 - CLOSER: YALE TO MATCH EXISTING.
 - STOPS: FLOOR MOUNTED STOPS IN BLACK.
- SPECIFICATION FOR BUILDING STANDARD PULLS: MCKETT, DR3B - 4" TAB DRAWER PULL. FINISH: MATTE BLACK (90).
- BCO TO PREFORM ASBESTOS REPORT.
- REFERENCE SEPARATE DRAWING SET FOR WALLS AT COMMON AREA CORRIDOR.

CONSTRUCTION NOTES:

- BULLETED NOTES ARE GENERAL CONDITIONS REQUIRED FOR THE PLAN. NUMBERED NOTATIONS REFERENCE SPECIFIC LOCATIONS ON THE DRAWINGS.
- REFERENCE SHEET A7.0 FOR PARTITION AND DOOR TYPE INFORMATION.
- PROVIDE 6" CLEAR DIMENSION AT ALL DOOR RETURN LOCATIONS, U.N.O. ALL DOORS TO BE UNDERCUT 3/8", U.N.O. ALL DOOR CLOSERS TO BE ADJUSTED TO MEET ADA/TAS REQUIREMENTS.
- CENTER NEW PARTITIONS AT EXTERIOR MULLIONS, U.N.O.
- PROVIDE AND INSTALL PLUMBING FIXTURES AND APPLIANCES AS INDICATED ON PLAN. REFERENCE PLUMBING AND APPLIANCE SCHEDULES.
- PROVIDE COPOLYMER STRIPS AT ALL BUTT-JOINT GLASS SEAMS.

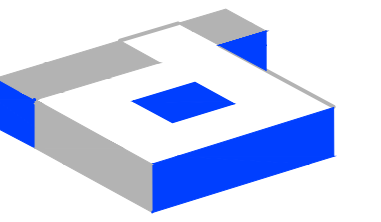
CONSTRUCTION KEYNOTES:

- C1. PROVIDE 4'-0" X 4'-0", 3/4" PLYWOOD PHONE BOARD MOUNTED HORIZONTALLY TIGHT TO CEILING. PAINT TO MATCH ADJACENT WALL.
- C2. PROVIDE 1/2" COLD WATER LINE FOR TENANT SUPPLIED ICE MAKER.
- C3. PROVIDE 1/2" COPPER WATER LINE FOR DISHWASHER.
- C4. PROVIDE 1/2" COPPER WATER LINE FOR TENANT SUPPLIED COFFEE SERVICE.
- C5. PROVIDE BLOCKING IN WALL FOR TENANT PROVIDED TELEVISION. VERIFY EXACT LOCATION WITH TENANT.
- C6. PROVIDE BLOCKING IN WALL FOR TENANT PROVIDED GLASS BOARD.
- C7. PROVIDE BLOCKING IN WALL FOR TENANT PROVIDED SIGNAGE. VERIFY EXACT LOCATION WITH TENANT.
- C8. PROVIDE MINIMUM FURRING AT EXPOSED COLUMN.
- C9. PROVIDE AND INSTALL NEW SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER. SPEC: LARSEN'S ARCHITECTURAL SERIES AL2409-R3 VERTICAL DUO ROUNDED TRIM, CLEAR ANODIZED ALUMINUM, OR APPROVED EQUAL REFERENCE 05/A6.0. EXACT LOCATION TO BE VERIFIED WITH FIRE MARSHALL PRIOR TO INSTALLATION.
- C10. PROVIDE NEW BUILDING STANDARD DEMISING PARTITION. REFERENCE WALL TYPE 3X ON SHEET A7.0 FOR MORE INFORMATION.

PLUMBING SCHEDULE					
KEY:	ITEM	MRF.	MODEL	COLOR/FIN.	DESCRIPTION
01	SINGLE SINK	ELKAY	ELUHAD211555 LUSTERSTONE	STAINLESS STEEL	UNDER MOUNT SINK WITH PERFECT DRAIN 23.5" X 18.25" X 5 3/8"
02	FAUCET	DELTA	TRINSIC 9159T-BL-DST	MATTE BLACK	SINGLE HANDLE PULL-DOWN KITCHEN FAUCET WITH TOUCH2O TECHNOLOGY
03	WATER HEATER	BUILDING STANDARD			INSTA-HOT. SIZED TO MATCH USE. 277V. MINIMUM 2 YEAR WARRANTY

APPLIANCE SCHEDULE					
KEY:	ITEM	MRF.	MODEL	COLOR/FIN.	DESCRIPTION
04	DISHWASHER	GENERAL ELECTRIC	GDT226SSLSS	STAINLESS STEEL	REQUIRES HOT WATER LINE W/EMERGENCY SHUT-OFF VALVE & DRAIN, 32.5"H X 24"D X 24"W
05	REFRIGERATOR	TENANT PROVIDED	TENANT PROVIDED	TENANT PROVIDED	TENANT PROVIDED, GC INSTALLED
06	ICEMAKER	TENANT PROVIDED	TENANT PROVIDED	TENANT PROVIDED	TENANT PROVIDED, GC INSTALLED
07	MICROWAVE	GENERAL ELECTRIC	PES7227SLSS	STAINLESS STEEL	24 1/8"W X 14"H X 19 3/4"D

CONSTRUCTION PLAN LEGEND	
SYMBOL	DESCRIPTION
NAME [000]	ROOM NAME/NUMBER
---	EXISTING PARTITION TO REMAIN
---	NEW DRYWALL PARTITION
---	EXISTING LOW PARTITION, U.N.O.
---	NEW LOW PARTITION, U.N.O.
---	FRAMED GLAZING, U.N.O.
---	FRAMELESS GLAZING, U.N.O.
[X]	DOOR AND FRAME WITH DOOR TYPE/HARDWARE SYMBOL
[X]	WALL TYPE SYMBOL
---	WATERLINE WITH SHUT OFF VALVE, U.N.O.
[PB]	EXISTING PHONE BOARD, U.N.O.
[FC]	SEMI RECESSED FIRE EXTINGUISHER CABINET, U.N.O.
[X]	NOTE REFERENCE
[XXX.X]	ELEVATION REFERENCE
[XXX.X]	DETAIL REFERENCE
[XXX.X]	SECTION REFERENCE
[ALIGN]	ALIGN TO FACE FINISH
[X:X']	DIMENSION TO INTERIOR FINISH FACE
[X:X'] CLR.	CLEAR DIMENSION TO BE MAINTAINED
ALL SYMBOLS NOT NECESSARILY USED	



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Katherine Austin 04-28-20

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CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

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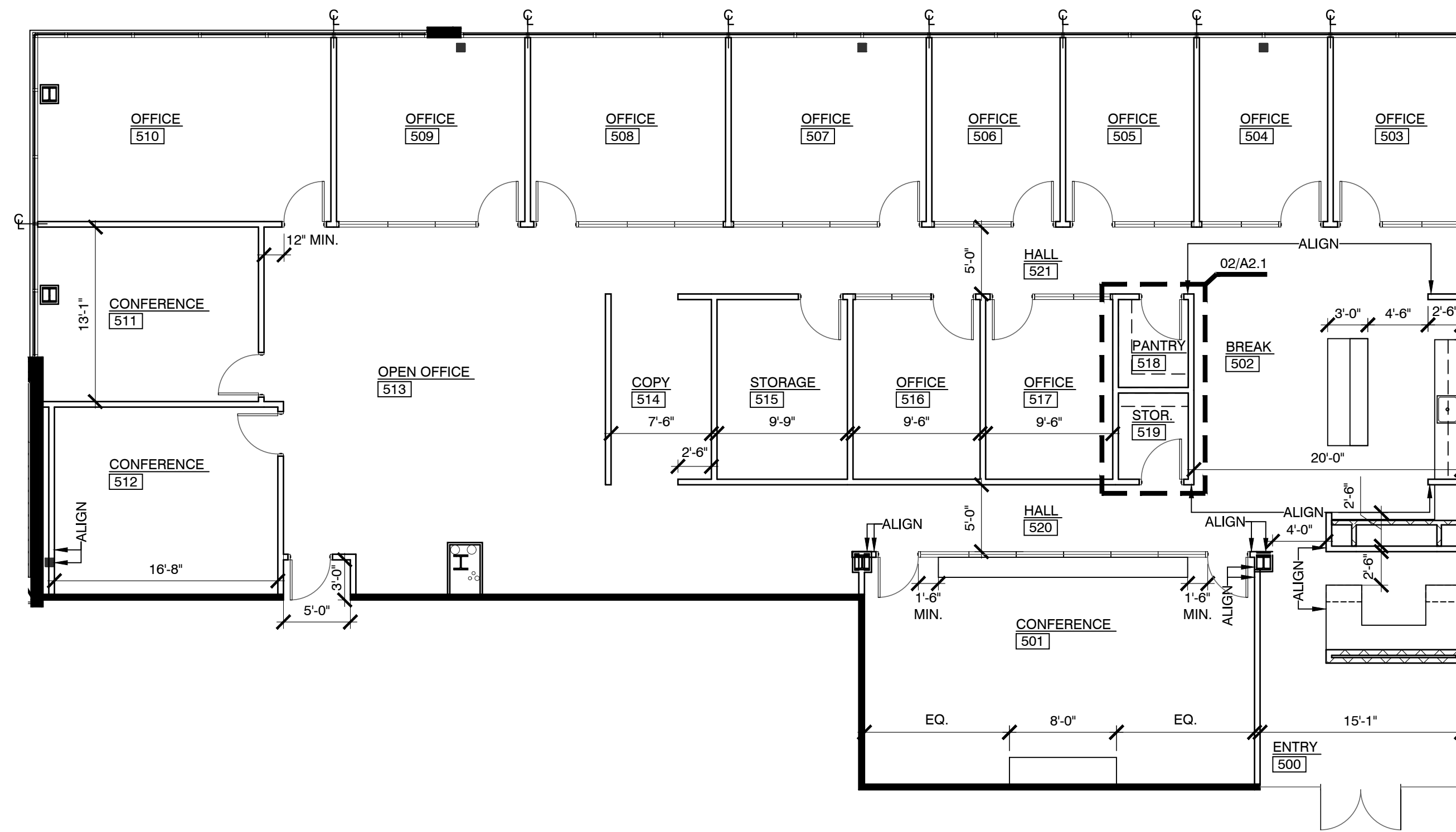
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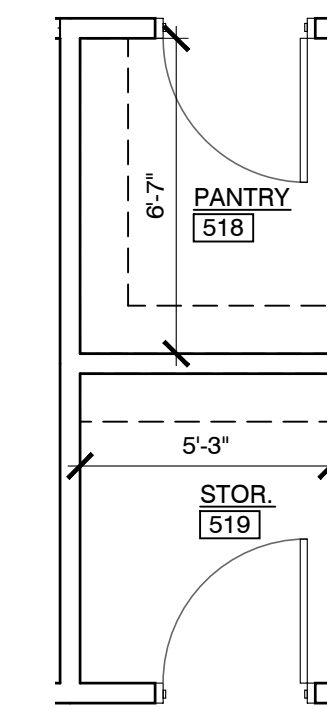
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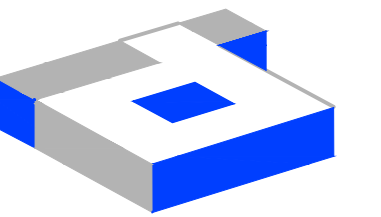


01 DIMENSION PLAN
SCALE: 1/8" = 1'-0"



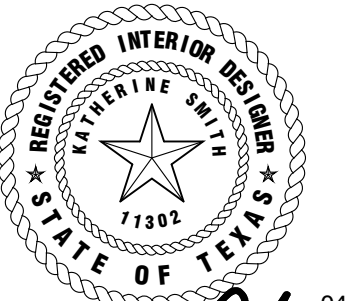
02 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

DIMENSION PLAN LEGEND	
SYMBOL	DESCRIPTION
NAME 000	ROOM NAME/NUMBER
	EXISTING PARTITION TO REMAIN
	NEW DRYWALL PARTITION
	EXISTING LOW PARTITION, U.N.O.
	NEW LOW PARTITION, U.N.O.
	ALIGN TO FACE FINISH
	DIMENSION TO INTERIOR FINISH FACE
	CLEAR DIMENSION TO BE MAINTAINED
	CENTER LINE



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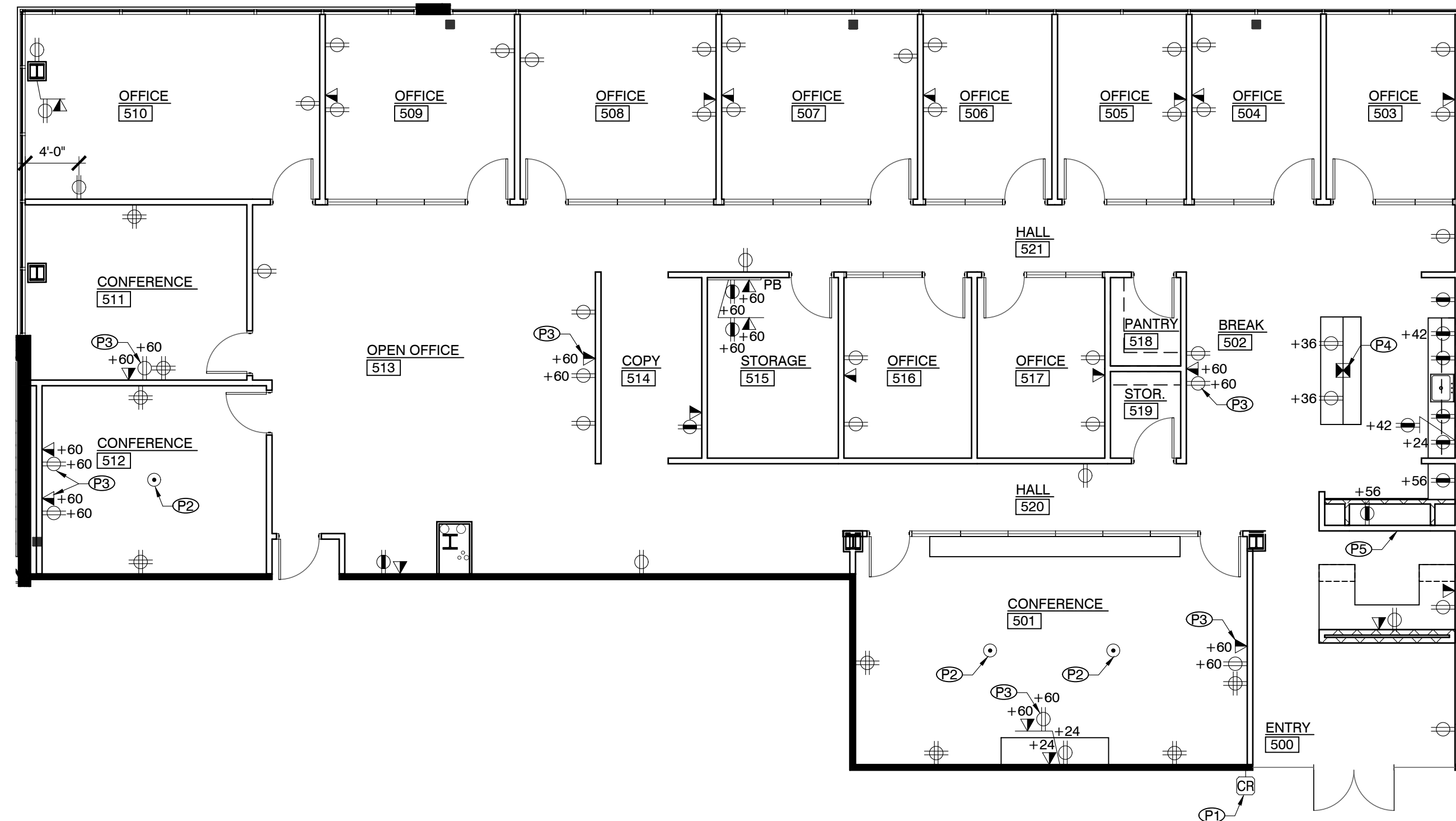
DRAWING TITLE:

POWER & COMMUNICATION PLAN

DRAWING NUMBER:

A2.2

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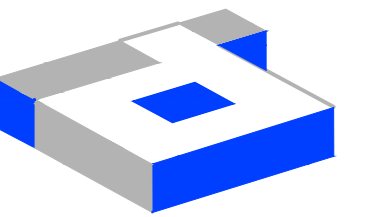
01 POWER & COMMUNICATION PLAN

SCALE: 1/8" = 1'-0"

- POWER / COMMUNICATION NOTES:**
- VERIFY ALL FLOOR CORING WITH THE TENANT, STRUCTURAL ENGINEER, FURNITURE VENDOR AND LANDLORD PRIOR TO INSTALLATION. ALL LOCATIONS TO BE IDENTIFIED AND APPROVED BY TENANT PRIOR TO INSTALLATION. ALL CORING TO BE SEALED PER APPLICABLE CODE.
 - IF REQUIRED, CONTRACTOR TO X-RAY SLAB TO DETECT LOCATIONS OF EXISTING STRUCTURAL AND ELECTRICAL SYSTEMS BEFORE ALL CORING WORK. VERIFY WITH BUILDING MANAGEMENT.
 - CONTRACTOR TO PROVIDE ELECTRICAL FOR ALL INSTALLED APPLIANCES.
 - ALL LOW VOLTAGE NETWORK/AV CABLING IS THE RESPONSIBILITY OF THE TENANT.
 - ALL OUTLETS ABOVE COUNTER TOP AT BREAK ARE FOR DEDICATED USE AND ARE NOT CONVENIENCE OUTLETS.
 - ALL ELECTRICAL OUTLETS AND VOICE DATA OUTLETS TO BE OFFSET WITHIN WALLS AND NOT TO BE INSTALLED BACK TO BACK.

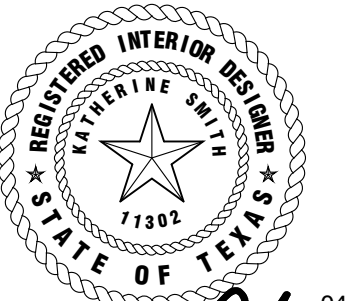
- POWER / COMMUNICATION KEYNOTES:**
- P1. PROVIDE POWER FOR TENANT CARD READER ACCESS SYSTEM. VERIFY EXACT LOCATION WITH TENANT. COORDINATE WITH TENANT'S SECURITY VENDOR.
- P2. PROVIDE RECESSED CORE DRILL AT CONFERENCE ROOMS 501 & 512. FLOOR CORE TO CONTAIN (1) DUPLEX OUTLET AND (1) VOICE/DATA OUTLET. COORDINATE EXACT LOCATIONS WITH TENANT AND BUILDING ENGINEER. PROVIDE ADDITIONAL CORE IN SLAB AT PHONE BOARD LOCATION AS REQUIRED.
- P3. PROVIDE ELECTRICAL OUTLET, DATA OUTLET AND CONDUIT FOR HDMI CONNECTION TO TELEVISION FOR TENANT PROVIDED TELEVISION. COORDINATE WITH TENANT FOR EXACT LOCATIONS. RECEPTACLES TO BE RECESSED.
- P4. PROVIDE RECESSED POKE THRU DEVICE FOR ELECTRICAL AT ISLAND. COORDINATE CORE DRILLING LOCATIONS WITH NEW ISLAND LOCATION AND EXISTING SLAB BEAMS.
- P5. PROVIDE POWER IN WALL FOR LED BACKLIGHTING AT TENANT PROVIDED SIGNAGE. COORDINATE EXACT SPECIFICATION AND LOCATION WITH TENANT.

POWER & COMMUNICATION LEGEND	
SYMB.	DESCRIPTION
NAME 0001	ROOM NAME/NUMBER
E D	EXISTING TO REMAIN EXISTING ITEM TO BE REMOVED OR RELOCATED ALL OTHERS ARE NEW
⊕	WALL MOUNTED DUPLEX ELECTRICAL CIRCUIT
⊕	WALL MOUNTED QUADRADUPLEX ELECTRICAL CIRCUIT
⊕	WALL MOUNTED DEDICATED DUPLEX ELECTRICAL CIRCUIT
⊕	WALL MOUNTED DEDICATED QUADRADUPLEX ELECTRICAL CIRCUIT
⊕	208/220 VOLT ELECTRICAL OUTLET
⊕	BLANK PLATE
⊕	WALL-MOUNTED VOICE/DATA OUTLET
⊕	WALL-MOUNTED DATA OUTLET
⊕	WALL-MOUNTED VOICE OUTLET
⊕	KEYPAD
⊕	CABLE OUTLET
⊕	TENANT-PROVIDED CARD READER TO BE TIED INTO BUILDING FIRE ALARM SYSTEM
⊕	PUSH BUTTON DOOR RELEASE
⊕	CEILING-MOUNTED JUNCTION BOX FOR TELEPHONE, DATA, ELECTRICAL - HARDWIRED TO TENANT PROVIDED POWER POLE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
⊕	RECESSED POKE-THRU DEVICE FOR ELECTRICAL
⊕	WALL-MOUNTED FURNITURE FEED FOR ELECTRICAL - HARDWIRED TO TENANT PROVIDED FURNITURE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
⊕	WALL-MOUNTED FURNITURE FEED FOR VOICE/DATA - HARDWIRED TO TENANT PROVIDED FURNITURE. SUBSCRIPT INDICATES NUMBER OF STATIONS SERVED.
⊕	RECESSED FLOOR-MOUNTED ELECTRICAL, VOICE/DATA OUTLET
+XX	INDICATES MOUNTING HEIGHT IN INCHES
GFI	INDICATES GROUND FAULT INTERRUPTOR
IG	ISOLATED GROUND OUTLET
⊕	NOTE REFERENCE
ALL SYMBOLS NOT NECESSARILY USED	



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2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301



Katherine Austin 04-28-20

PROJECT NO.: 580-009
DRAWN BY: RH
CHECKED BY: MM/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

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BD ISSUE DATE: 04/28/20
CONSTRUCTION ISSUE DATE: 04/28/20

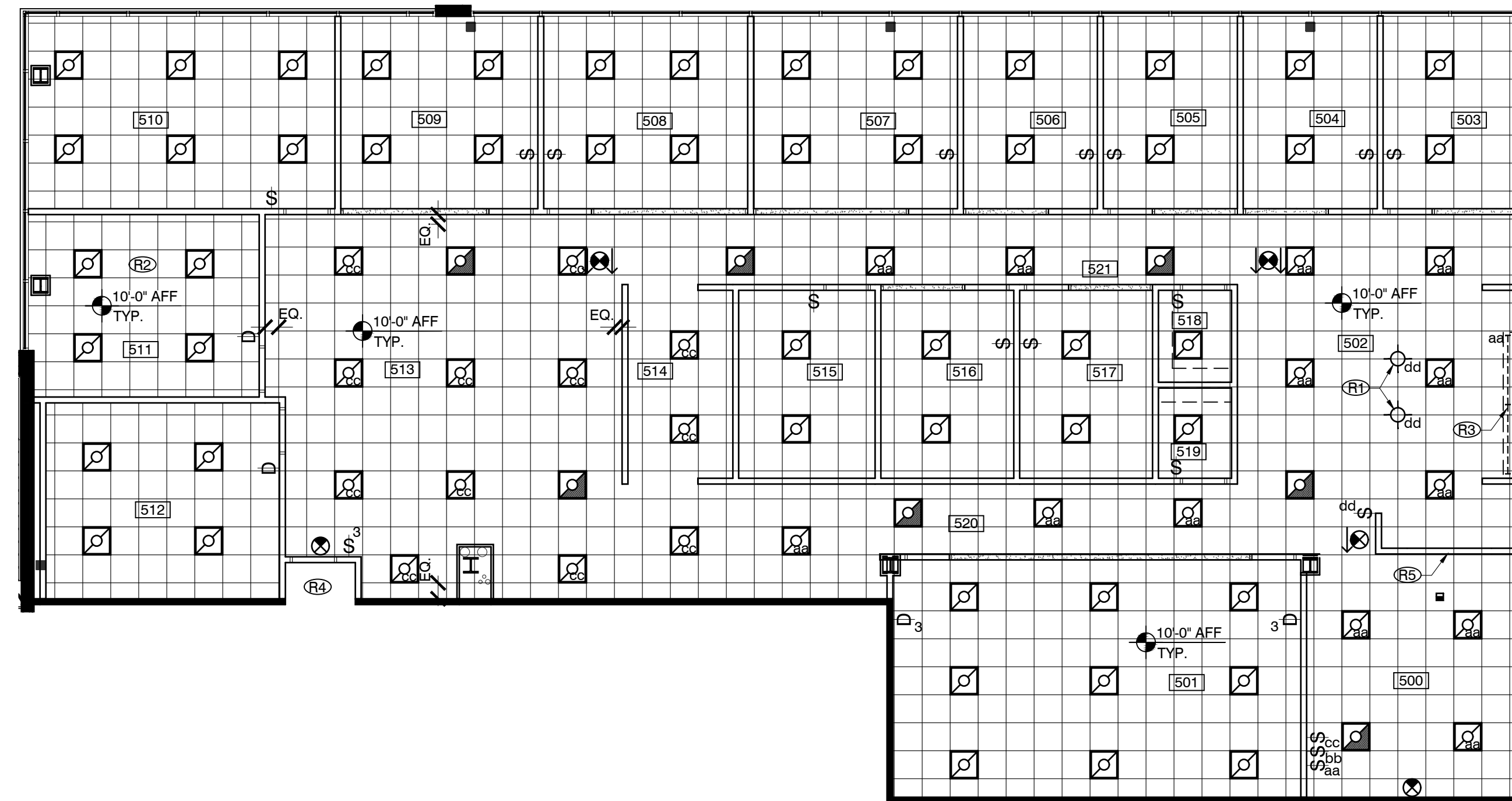
DRAWING TITLE:

REFLECTED CEILING PLAN

DRAWING NUMBER:

A2.3

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01 REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

REFLECTED CEILING NOTES:

- PROVIDE NEW BUILDING STANDARD 2X2 CEILING GRID AND TILE THROUGHOUT.
GRID SPECIFICATION: ARMSTRONG 15/16" WHITE TILE SPECIFICATION: ARMSTRONG, 1774 DUNE, REGULAR 15/16"
VERIFY EXACT SPECIFICATIONS WITH BUILDING MANAGEMENT.
- MATCH ALL MATERIALS INCLUDING SWITCHES, SWITCH PLATES, LIGHT FIXTURES, ETC. WITH BUILDING STANDARD SPECIFICATIONS, U.O.N.
- PROVIDE NEW BUILDING STANDARD FIXTURES THROUGHOUT. REFERENCE LIGHTING SCHEDULE FOR EXACT SPECIFICATIONS.
- THERMOSTATS TO BE PLACED AWAY FROM CENTERS OF ALL WALLS. PLACEMENT TO COMPLY WITH ALL CODES. WHERE POSSIBLE, COORDINATE WITH TENANT FOR DESIRED LOCATIONS.
- ALL LIGHTING RECONFIGURATIONS TO MEET MOST CURRENT INTERNATIONAL ENERGY CONSERVATION CODE AND ANY OF ITS AMENDMENTS. SQUARE FOOTAGE USED FOR ENERGY CALCULATIONS IS 5,056.
- PROVIDE EXIT SIGNS AND 24 HOUR LIGHTS ON EMERGENCY CIRCUITS. CONTRACTOR TO VERIFY QUANTITY AND LOCATIONS REQUIRED BY CODE. RELOCATE EXISTING TO MEET CODE. SPECIFICATION: EXIT SIGN CLEAR LUCITE, GREEN LETTERS INTERNALLY LIT
- VERIFY ALL LISTED SUSPENDED PENDANT FIXTURE MOUNTING HEIGHTS WITH TENANT.
- CONTRACTOR TO VERIFY ALL SWITCH LOCATIONS DO NOT FALL BEHIND DOOR SWINGS.
- 24 HOUR LIGHT FIXTURES MUST BE ON EMERGENCY CIRCUITS.
- REWORK SPRINKLER HEADS AS REQUIRED. EXACT SPRINKLER LOCATIONS SHALL BE DETERMINED BY A STATE LICENSED SPRINKLER CONTRACTOR TO COMPLY WITH LOCAL BUILDING AND FIRE CODES. IF REQUIRED, CONTRACTOR TO REVISE EXISTING LAYOUT TO CONFORM TO NFPA.
- LIGHT SWITCH LOCATIONS ARE FOR DESIGN INTENT ONLY. ALL SWITCH LOCATIONS AND LOAD TO BE VERIFIED BY ENGINEER AND ELECTRICIAN.

REFLECTED CEILING KEYNOTES:

- R1. PENDANT LIGHT FIXTURES TO BE CENTERED OVER MILLWORK PIECE AT BREAK 502. VERIFY EXACT LOCATIONS IN FIELD.
- R2. CEILING GRID AND LIGHT FIXTURES TO BE CENTERED IN ROOM INDICATED.
- R3. UNDER CABINET LIGHTING TO BE SWITCHED WITH GENERAL LIGHTING.
- R4. EXTEND EXISTING CORRIDOR CEILING GRID, TILE AND LIGHTING CONFIGURATION INTO NEW CORRIDOR EXTENSION. SPECIFICATIONS TO MATCH EXISTING. RELOCATE LIGHT FIXTURES IF NECESSARY. ENSURE SEAMLESS TRANSITION BETWEEN EXISTING AND NEW GRID AND TILE.
- R5. PROVIDE POWER IN WALL FOR LED BACKLIGHTING AT TENANT PROVIDED SIGNAGE. COORDINATE EXACT SPECIFICATION AND LOCATION WITH TENANT.

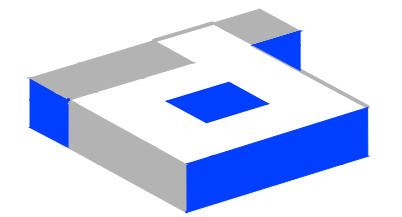
LIGHTING SCHEDULE

SYMBOL	DESCRIPTION
	BLDG. STD. 2' X 2' LED LIGHT FIXTURE, LOWER CASE LETTER INDICATES CIRCUIT SPECIFICATION: LITHONIA LIGHTING, BLT SERIES LED 2X2 LED, 2BLT2-40L-ADP-EZ1-LP835
	BLDG. STD. 2' X 2' LED LIGHT FIXTURE ON BUILDING EMERGENCY SYSTEM SPECIFICATION: LITHONIA LIGHTING, BLT SERIES LED 2X2 LED, 2BLT2-40L-ADP-EZ1-LP835
	WALLWASHER, CENTERED IN TILE, U.N.O. SPECIFICATION: GOTHAM EVO 4" SQUARE LENSED WALLWASH, EVOSQLW-40-30-AR-LSS-MVOLT VERIFY EXACT LOCATION WITH TENANT.
	PENDANT FIXTURE, CENTERED IN TILE, U.N.O. SPECIFICATION: LUMENS - CASTLE PENDANT BY SEED DESIGN, MEDIUM, 72W, 120V, PRODUCT ID#: SEDP97192 VERIFY MOUNTING HEIGHT WITH TENANT
	UNDER CABINET LED LIGHT FIXTURE SPECIFICATION: WAC LIGHTING, INVISLED PRO, 24V LED TAPE LIGHT, LED-T24-35-1-WT VERIFY EXACT LENGTH IN FIELD

REFLECTED CEILING PLAN LEGEND

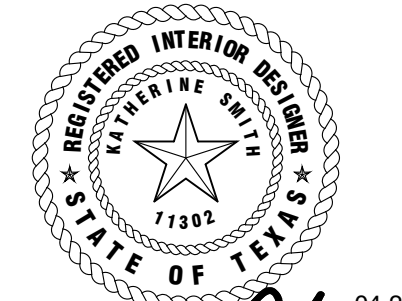
SYMBOL	DESCRIPTION
	ROOM NUMBER
E	EXISTING ITEM TO REMAIN
D	EXISTING TO BE REMOVED OR RELOCATED
	ALL OTHERS ARE NEW
	NEW 2' X 2' CEILING GRID, U.N.O.
	5/8" GYPSUM BOARD CEILING/SOFFIT
	EXPOSED CEILING/OPEN TO DECK
	2' X 4' FLUORESCENT LIGHT FIXTURE TO BE REMOVED, RELOCATED OR RETURNED TO BUILDING STOCK
	2' X 2' FLUORESCENT LIGHT FIXTURE TO BE REMOVED, RELOCATED OR RETURNED TO BUILDING STOCK.
	LIGHT SWITCH R INDICATES REMOVE AND PATCH WALL
	DIMMER SWITCH, LOWER CASE LETTER INDICATES CIRCUIT
	3-WAY SWITCH, LOWER CASE LETTER INDICATES CIRCUIT
	BLDG. STANDARD EXIT SIGN
	CEILING TRANSITION
	BLDG. STANDARD EXHAUST FAN WITH SWITCH AS REQUIRED BY CODE - WHITE
	CEILING HEIGHT INDICATOR
	NOTE REFERENCE

ALL SYMBOLS NOT NECESSARILY USED



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DALLAS, TEXAS 75207
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Katherine Austin 04-28-20

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CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

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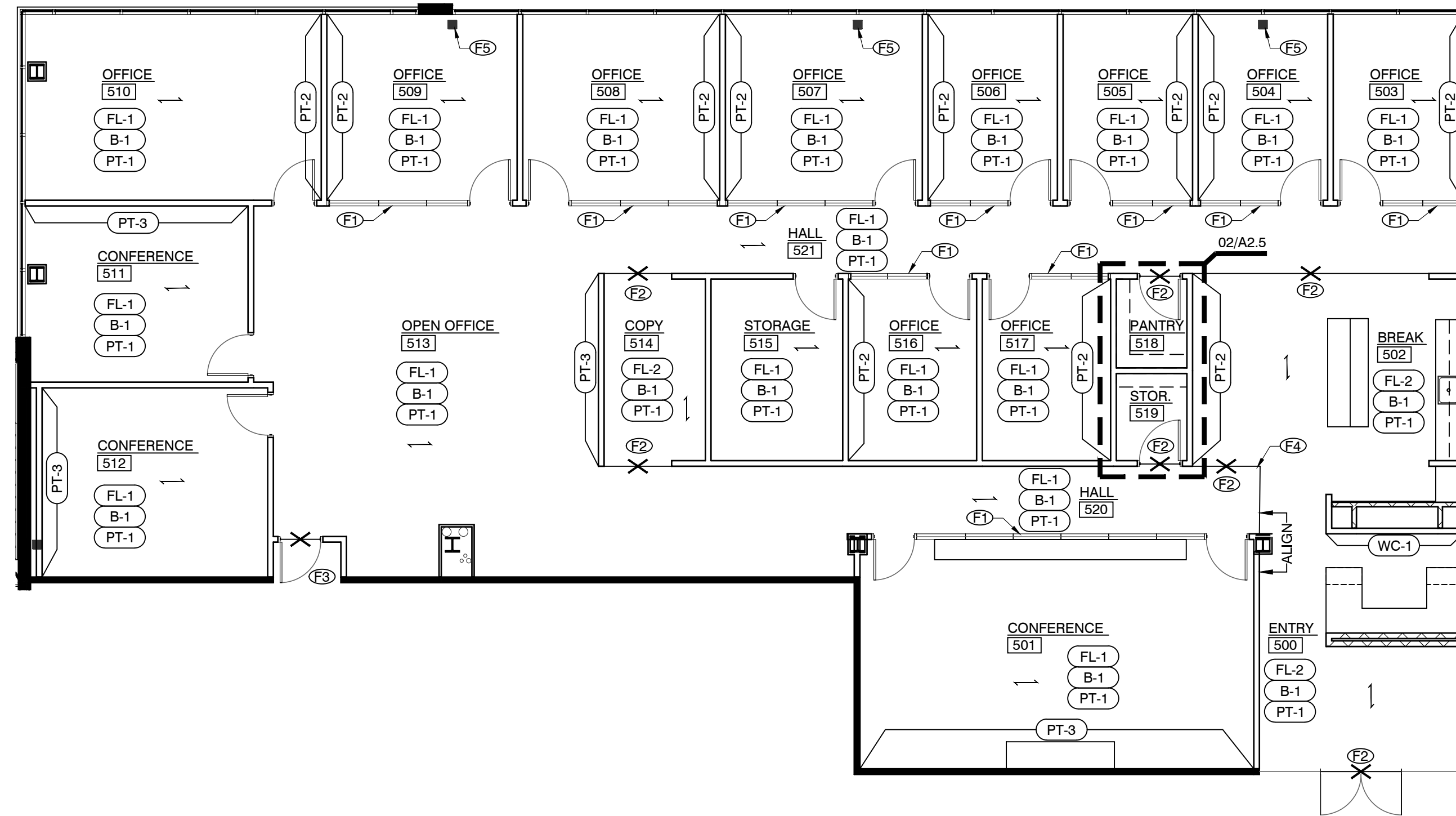
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FINISH PLAN

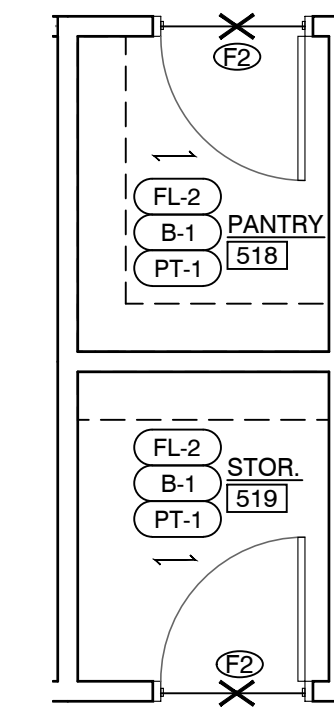
DRAWING NUMBER:

A2.5

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01 FINISH PLAN
SCALE: 1/8" = 1'-0"



02 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

FINISH NOTES:

- WHERE REQUIRED AT AREAS OF CONSTRUCTION, FURNISH AND INSTALL BUILDING STANDARD FINISHES IN COMMON AREAS. COORDINATE WITH LANDLORD FOR SPECIFICATIONS.
- FLOAT AND SCRAPE FLOOR TO BE LEVEL AND PREPARE FOR NEW SCHEDULED FINISH.
- CONTRACTOR TO RESERVE SPECIFIED FLOORING AND BASE UPON BEING AWARDED THE JOB TO ENSURE AVAILABILITY AND TIMELY INSTALLATION. SUBSTITUTIONS ARE NOT PERMITTED UNLESS APPROVED BY TENANT, AND/OR LANDLORD.
- PROVIDE BUILDING STANDARD TEXTURE AND PAINT THROUGHOUT, U.N.O.
- ALL PAINTED WALLS SHALL RECEIVE TWO COATS OF LATEX PAINT IN BUILDING STANDARD FINISH. TOUCH-UP OR RE-PAINT ALL WALLS AS NEEDED AFTER COMPLETION OF TENANT LEASE SPACE.
- TOUCH UP DOORS AT COMMON AREAS AS REQUIRED. ENSURE LIKE NEW CONDITION.
- REFLOAT ALL EXISTING WALLS DUE TO DEMOLITION AS REQUIRED FOR NEW SCHEDULED FINISH.
- EXTERIOR WINDOW TREATMENTS: MECHOSHADE, MANUAL ROLLER BY SOL. COORDINATE WITH LANDLORD.

FINISH KEYNOTES:

- F1. PAINT GYPSUM BOARD HEADER AT CEILING TO MATCH ADJACENT WALL.
- F2. PROVIDE TRANSITION STRIPS AT ALL CARPET TO VINYL TRANSITIONS. ENSURE ALL CARPET THREADS ARE TRIMMED CLOSELY. SPECIFICATION: SCHLUTER, SCHIENE-E (STAINLESS STEEL).
- F3. EXTEND EXISTING CORRIDOR FINISHES INTO CORRIDOR EXTENSION, TO MATCH EXISTING. COORDINATE WITH LANDLORD FOR BUILDING STANDARD FINISHES.
- F4. FINISH TRANSITION TO ALIGN WITH FACE OF WALL.
- F5. PREPARE SURFACE TO RECEIVE PAINT PER MANUFACTURER'S RECOMMENDATION. PAINT BLACK TO MATCH EXTERIOR MULLION, ENAMEL FINISH.

FINISH SCHEDULE

FLOORING SCHEDULE					
FL-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
FL-1	CARPET TILE (12X48)	SHAW CONTRACT	CONVENE TILE ST269	CLEAR SYSTEM 67508	THROUGHOUT, U.N.O. INSTALLATION: STAGGER FOR PREFERRED PRICING CONTACT: KATHLEEN GRIEF, SHAW CONTRACT 972.207.3818; kathleen.grief@shawinc.com
FL-2	LVT PLANK	SHAW CONTRACT	SOUNDSCAPE 4063V	INK 63549	INSTALLATION: ASHLAR FOR PREFERRED PRICING CONTACT: KATHLEEN GRIEF, SHAW CONTRACT 972.207.3818; kathleen.grief@shawinc.com

BASE SCHEDULE

B-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
B-1	RUBBER	JOHNSONITE	MILLWORK REVEAL BASE	63 BURNT UMBER	4" COVE BASE AT LVT / 4" STRAIGHT BASE AT CARPET CONTINUOUS ROLL. CUTS AT CORNERS ONLY. ENSURE SEAMLESS TRANSITION. FOR PREFERRED PRICING CONTACT: MORGAN MARTINDALE, TARKETT USA INC. 440.903.4302; morgan.martindale@tarkett.com

PAINT SCHEDULE

PT-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
PT-1	LATEX	SHERWIN WILLIAMS	SW6252	ICE CUBE	GENERAL PAINT THROUGHOUT, U.N.O. BUILDING STANDARD FINISH
PT-2	LATEX	SHERWIN WILLIAMS	SW7073	NETWORK GRAY	ACCENT PAINT, BUILDING STANDARD FINISH VERIFY EXACT LOCATION WITH TENANT PRIOR TO INSTALLATION
PT-3	LATEX ENAMEL	SHERWIN WILLIAMS	SW6524	COMMODORE	ACCENT PAINT, BUILDING STANDARD FINISH VERIFY EXACT LOCATION WITH TENANT PRIOR TO INSTALLATION

PLASTIC LAMINATE SCHEDULE

PL-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
PL-1	PLASTIC LAMINATE	FORMICA	8907-58	FOX TEAKWOOD	AT BASE AND UPPER CABINETS FOR PREFERRED PRICING CONTACT: CARRIE WHEELLESS, FORMICA GROUP 214.542.5645; carrie.wheelless@formica.com
PL-2	PLASTIC LAMINATE	FORMICA	961-58	FOG	AT RECEPTION DESK WORK SURFACE FOR PREFERRED PRICING CONTACT: CARRIE WHEELLESS, FORMICA GROUP 214.542.5645; carrie.wheelless@formica.com

SPECIALTY FINISH SCHEDULE

SF-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
SF-1	QUARTZ	CAESARSTONE	6141	OCEAN FOAM	AT COUNTERTOP AND BACKSPLASH THROUGHOUT, U.N.O. FOR PREFERRED PRICING CONTACT: JACKIE HOOD, CAESARSTONE 972.249.5077; jackie.hood@caesarstone.com

FABRIC SCHEDULE

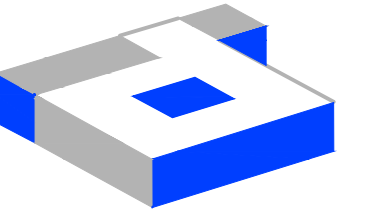
F-#	MATERIAL	MRF.	MFR. #	COLOR	REMARKS
F-1	FABRIC	MAHARAM	METRIC 466014	033 DOWNPOUR	BACK AT CONFERENCE 501 BENCH FOR PREFERRED PRICING CONTACT: TERI RYBA, MAHARAM 214.205.5284; tryba@maharam.com
F-2	FABRIC	MAHARAM	BLUFF 466489	028 LUMOS	SEAT AT CONFERENCE 501 BENCH FOR PREFERRED PRICING CONTACT: TERI RYBA, MAHARAM 214.205.5284; tryba@maharam.com

WALLCOVERING SCHEDULE

WC-#	MATERIAL	MRF.	PATTERN/#	COLOR	REMARKS
WC-1	VINYL	T.B.S.	T.B.S.	T.B.S.	AT ENTRY 500. ALLOW \$25/SF MATERIALS

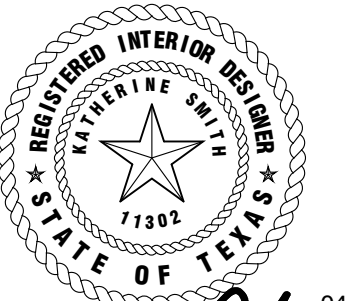
FINISH PLAN LEGEND

SYMBOL	DESCRIPTION
NAME 000	ROOM NAME/NUMBER
XXX	FINISH SPECIFICATION
WC-X	WALL FINISH SPECIFICATION
*	FLOOR FINISH TRANSITION, 'E' INDICATES EXISTING TO REMAIN
↔	FLOORING DIRECTION
⊗	NOTE REFERENCE
ALL SYMBOLS NOT NECESSARILY USED	



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Katherine Austin 04-28-20

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CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

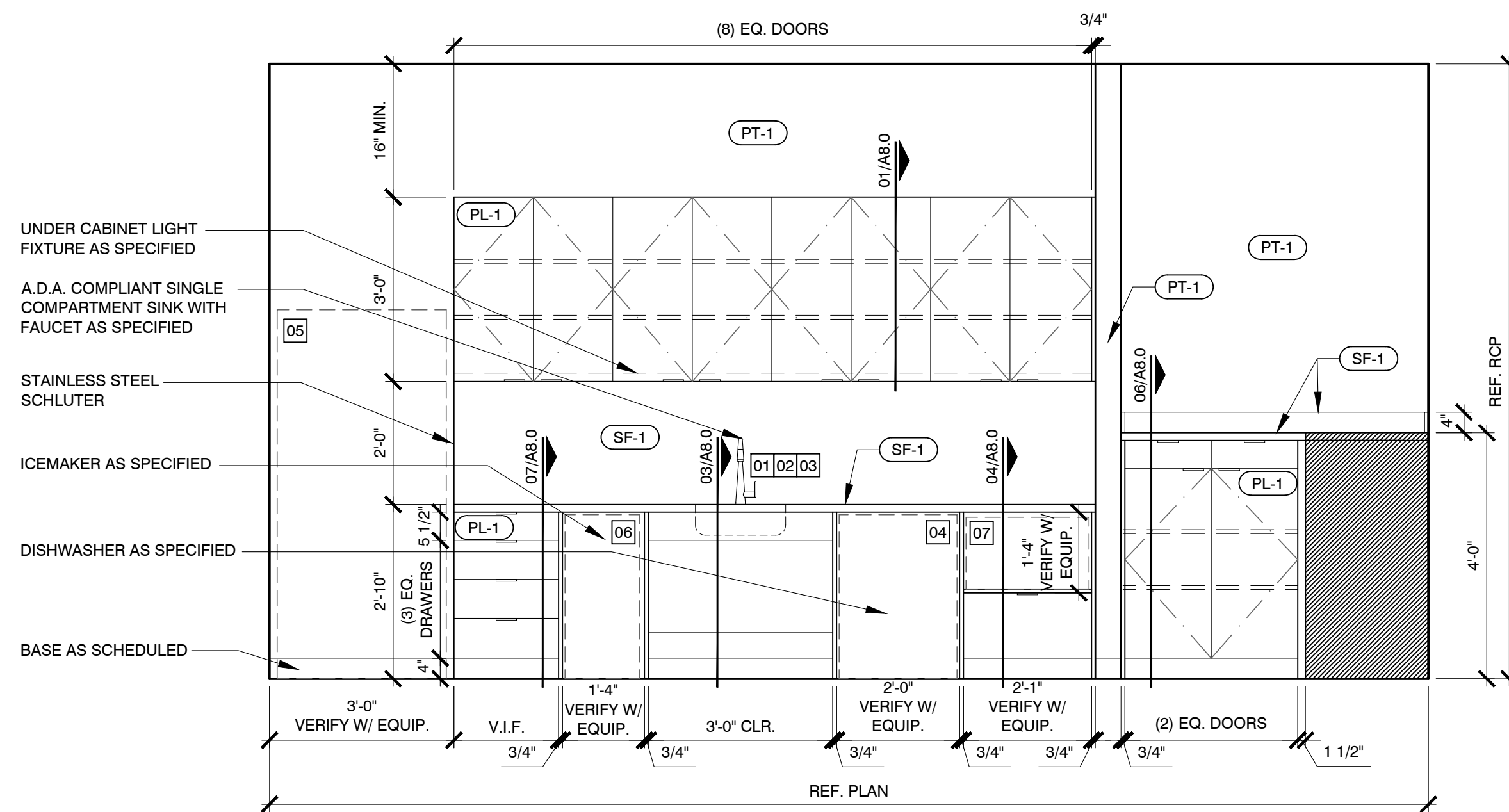
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BID ISSUE DATE: 04/28/20
CONSTRUCTION ISSUE DATE: 04/28/20

DRAWING TITLE:
INTERIOR ELEVATIONS

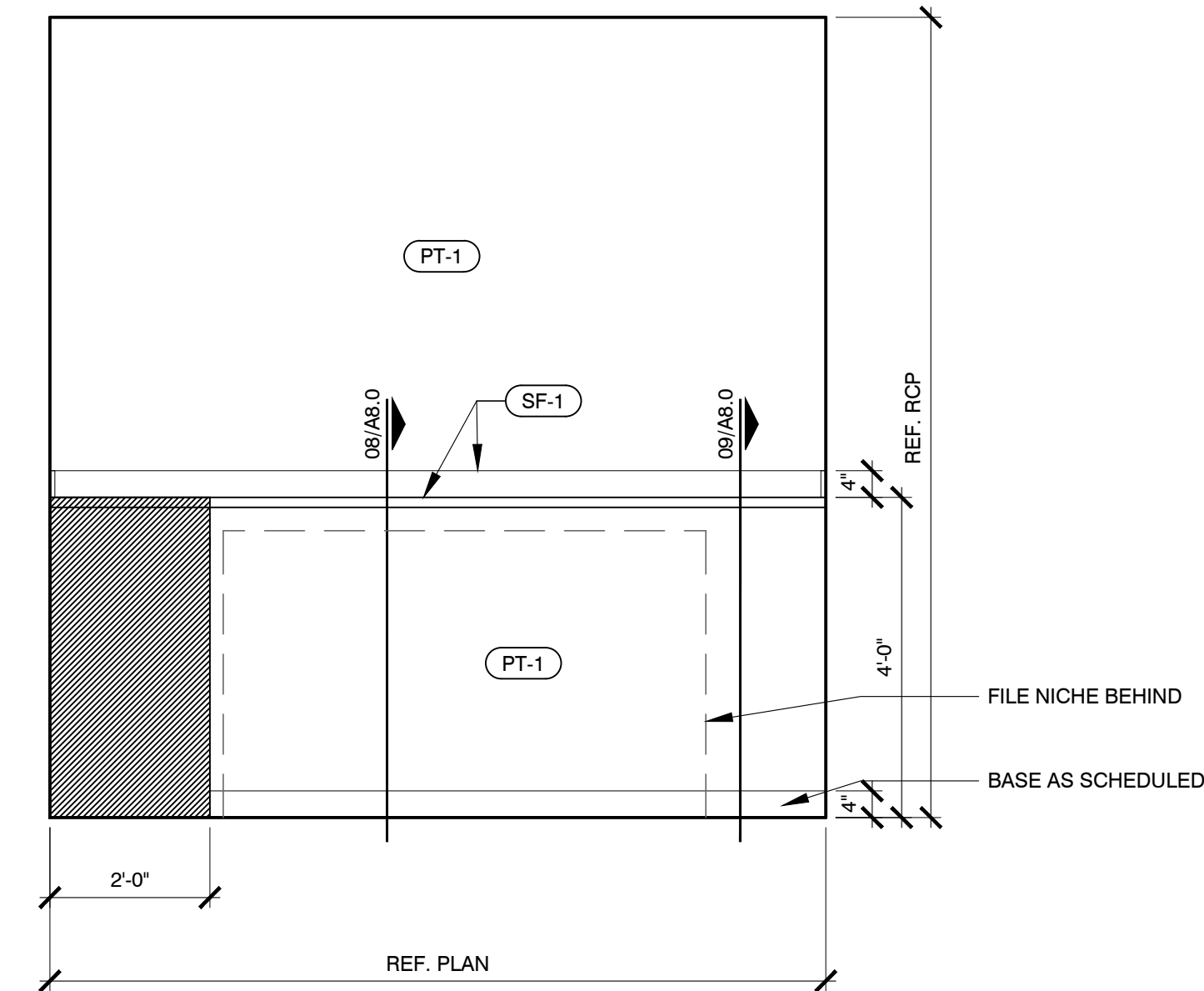
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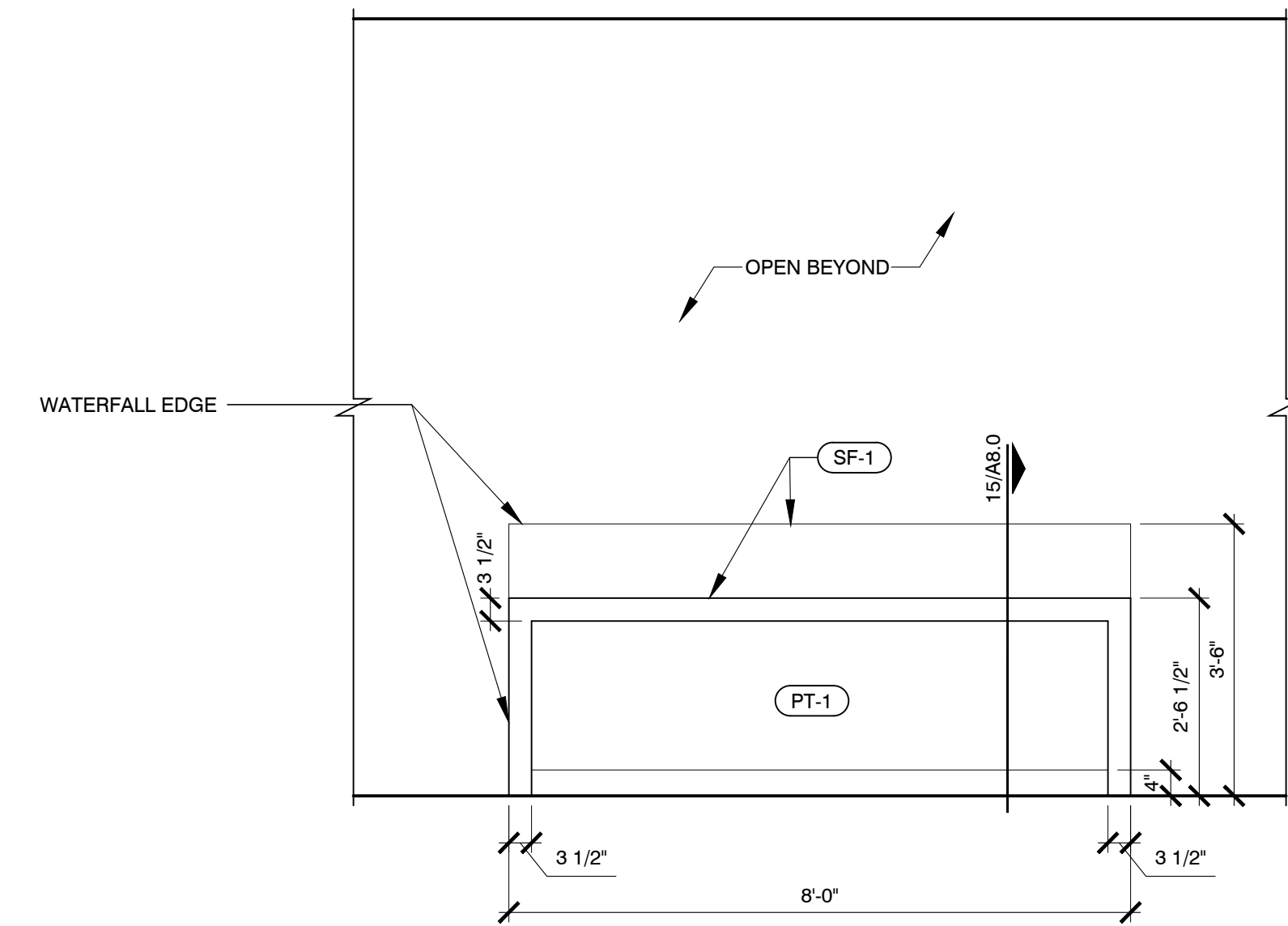
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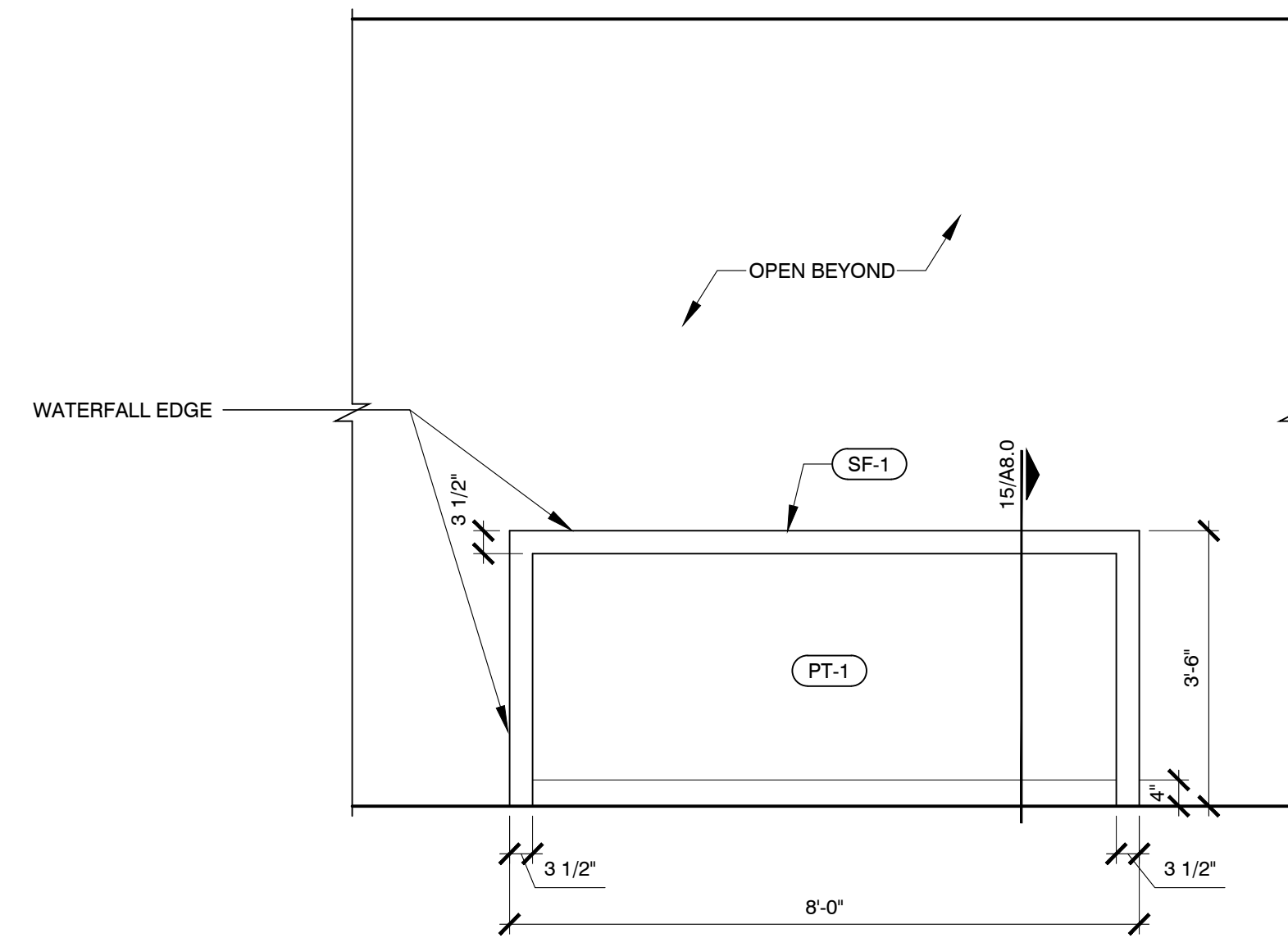
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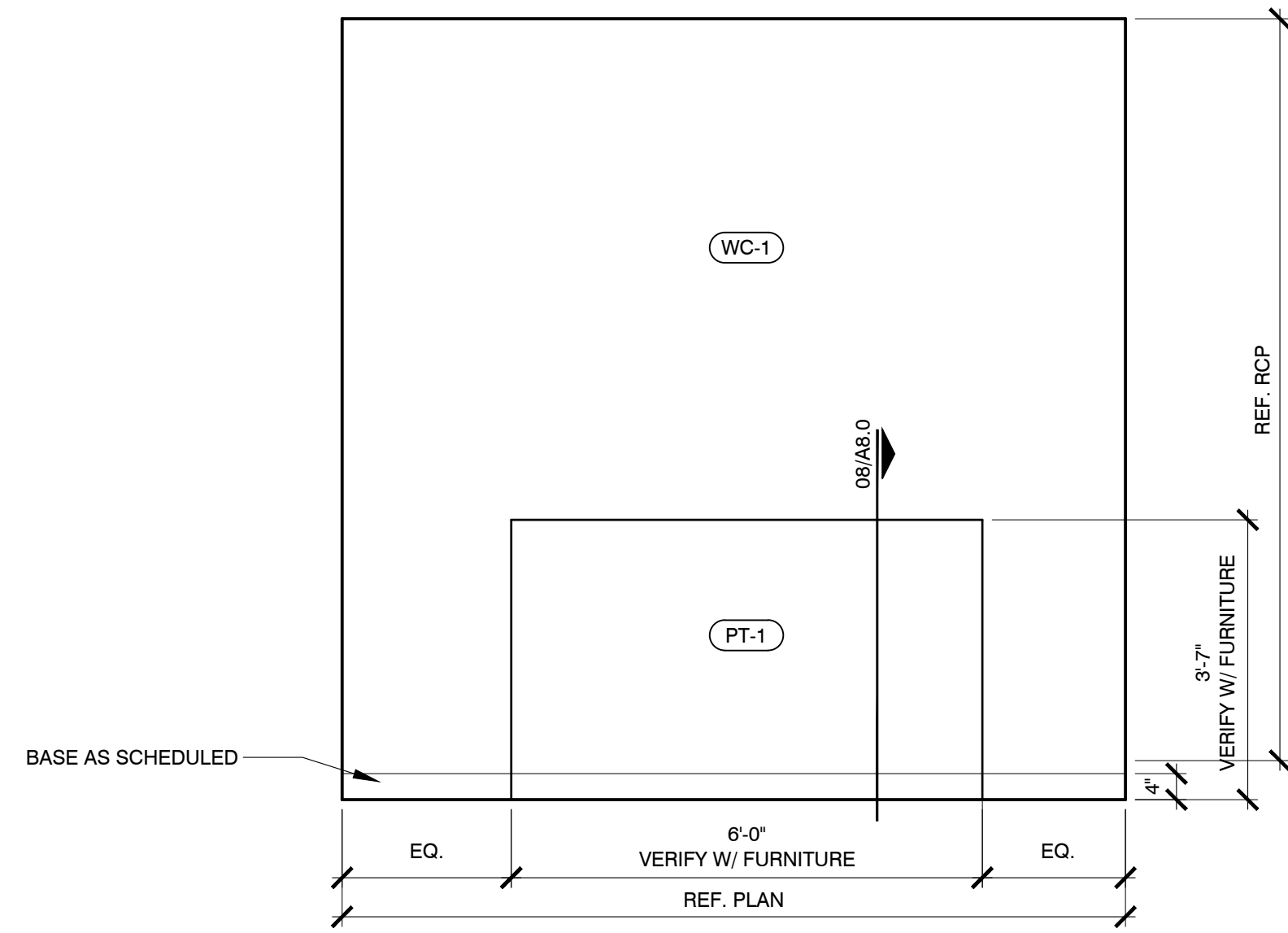
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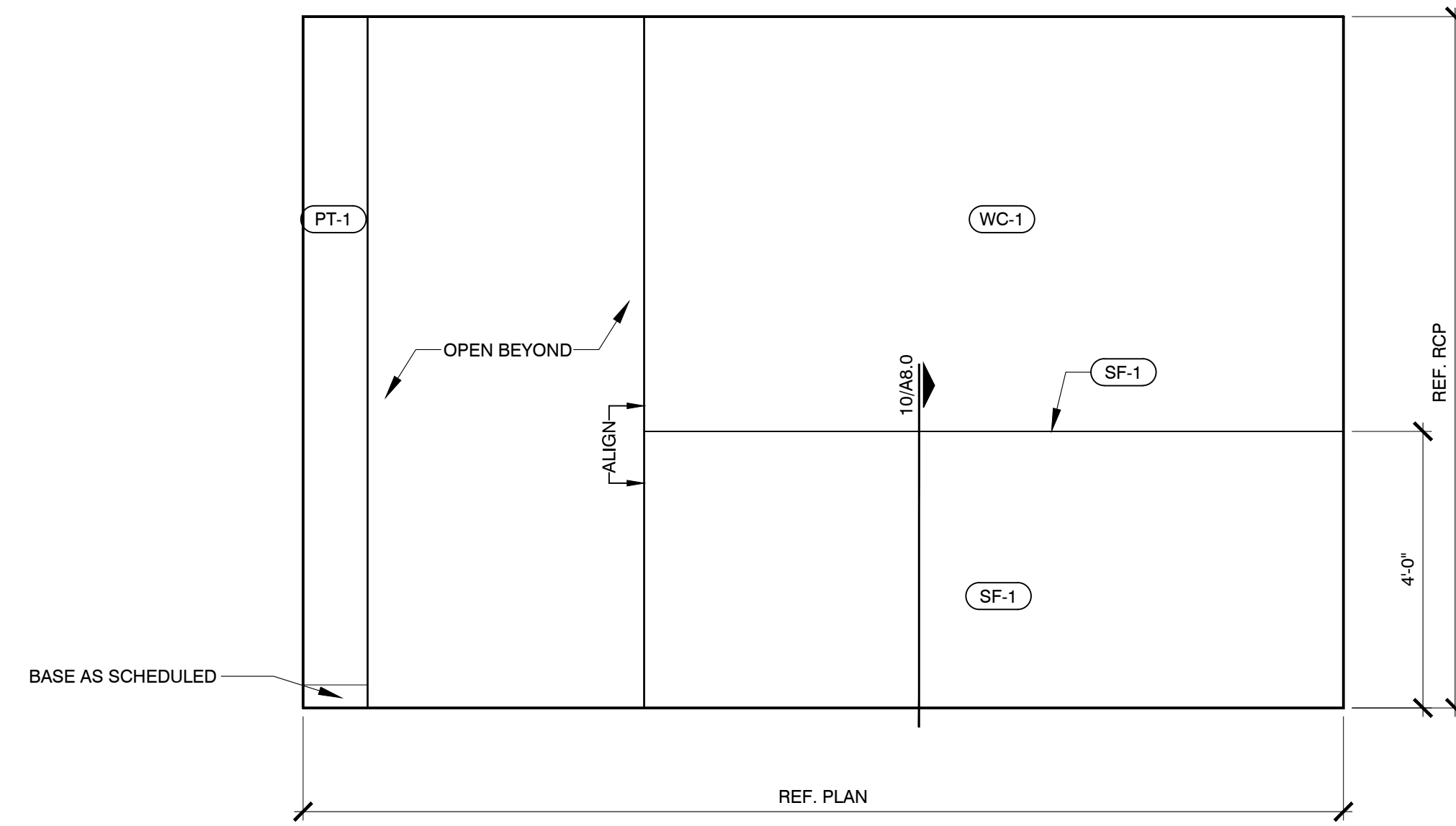
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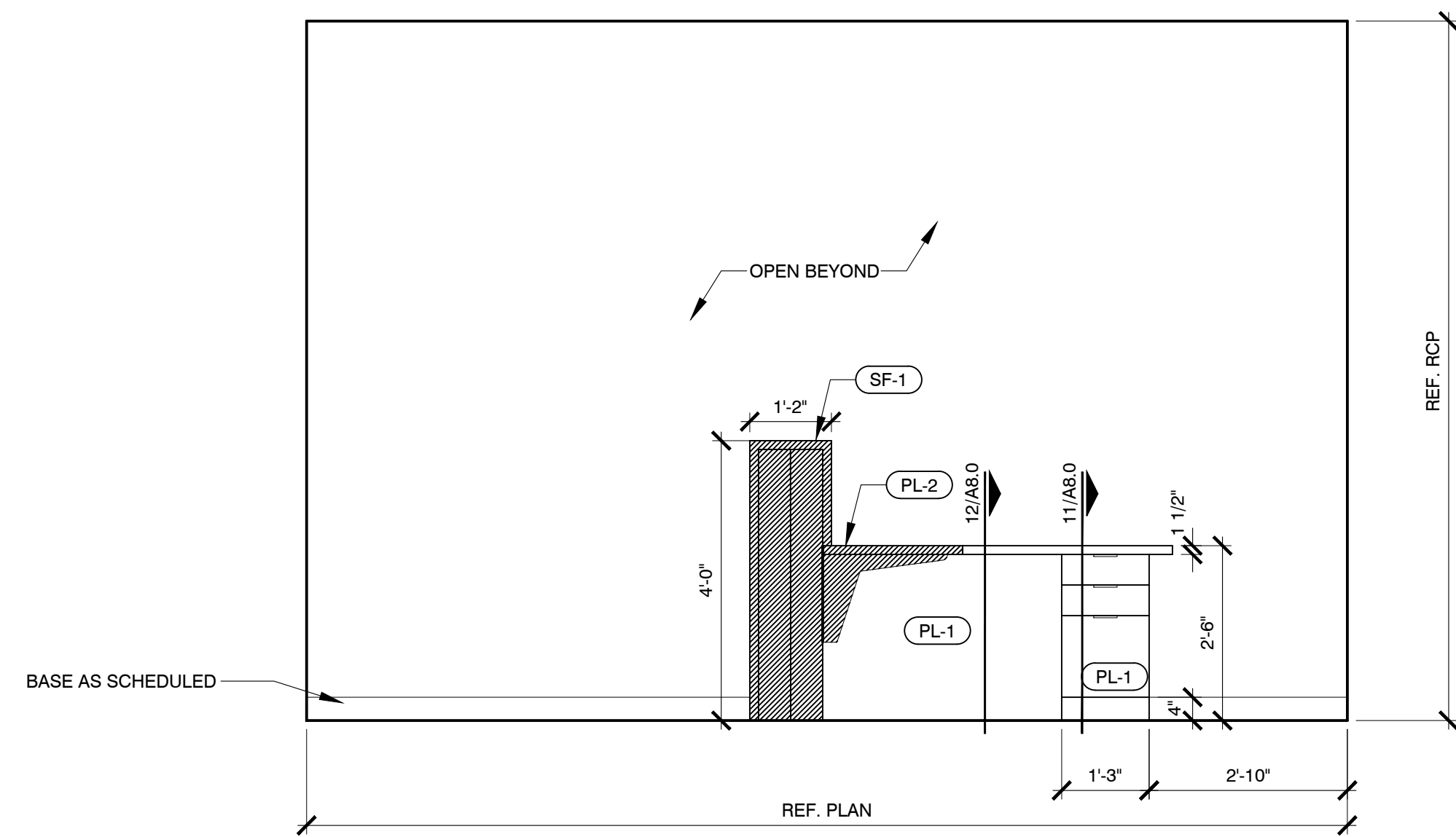
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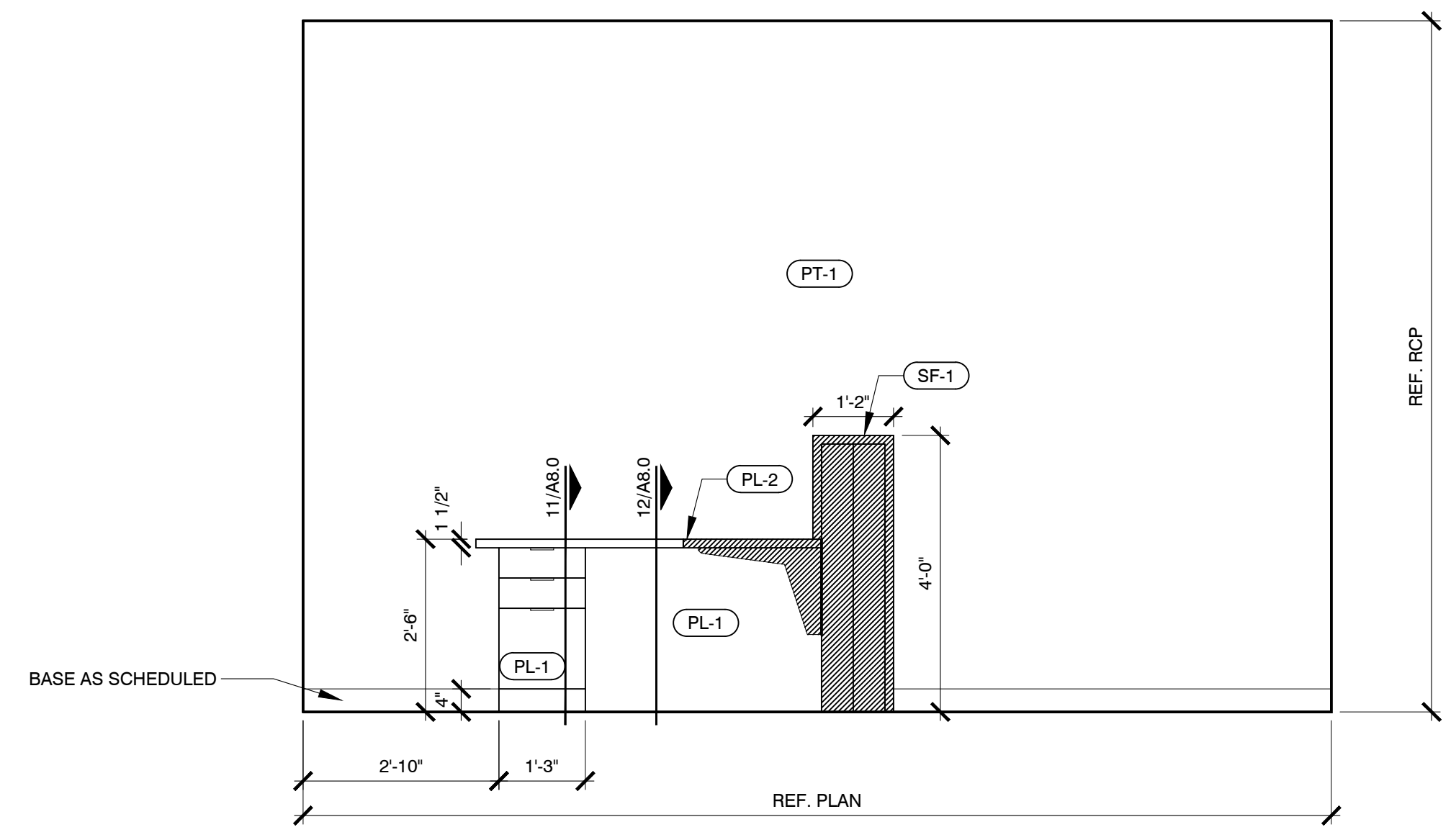
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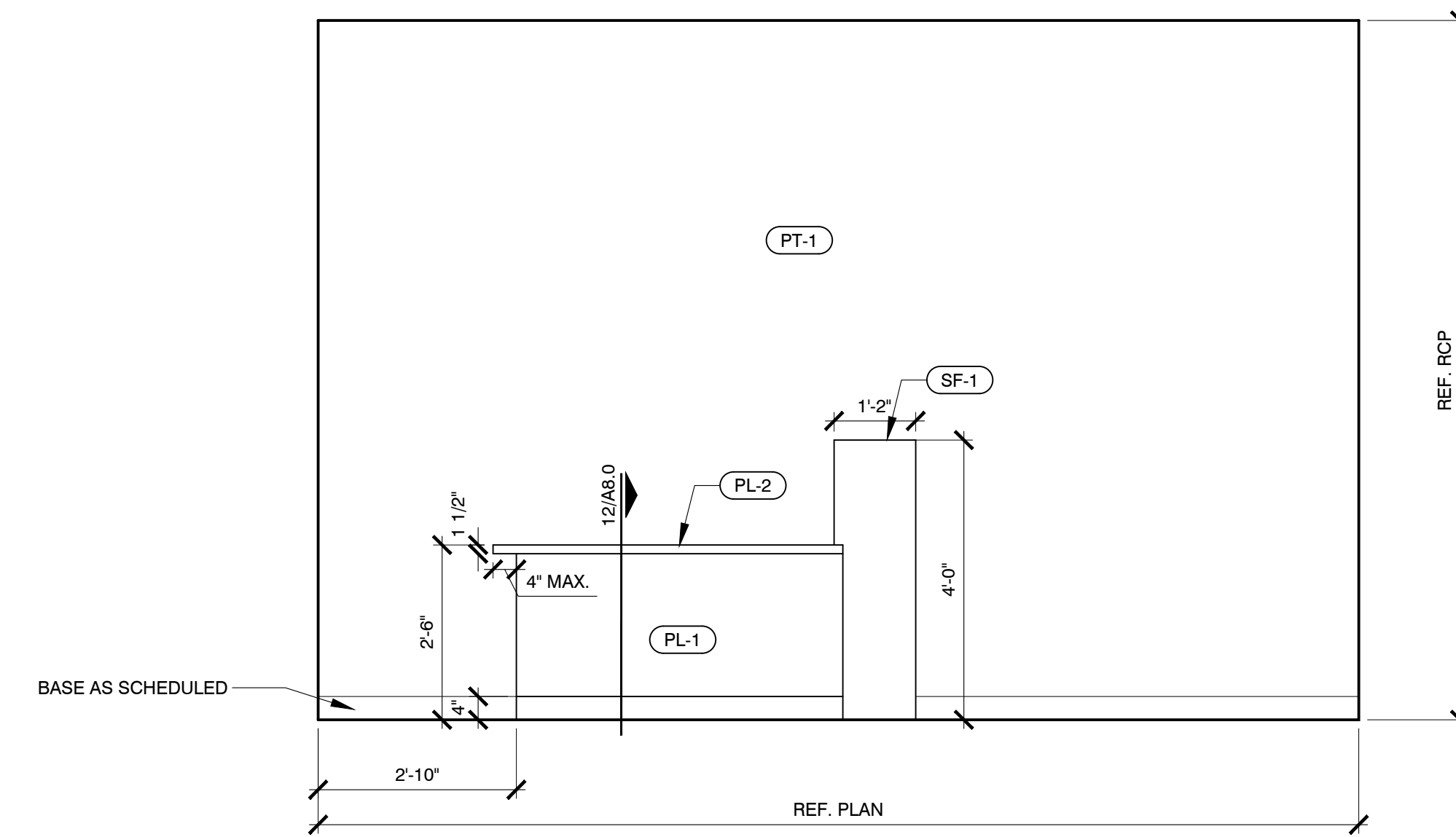
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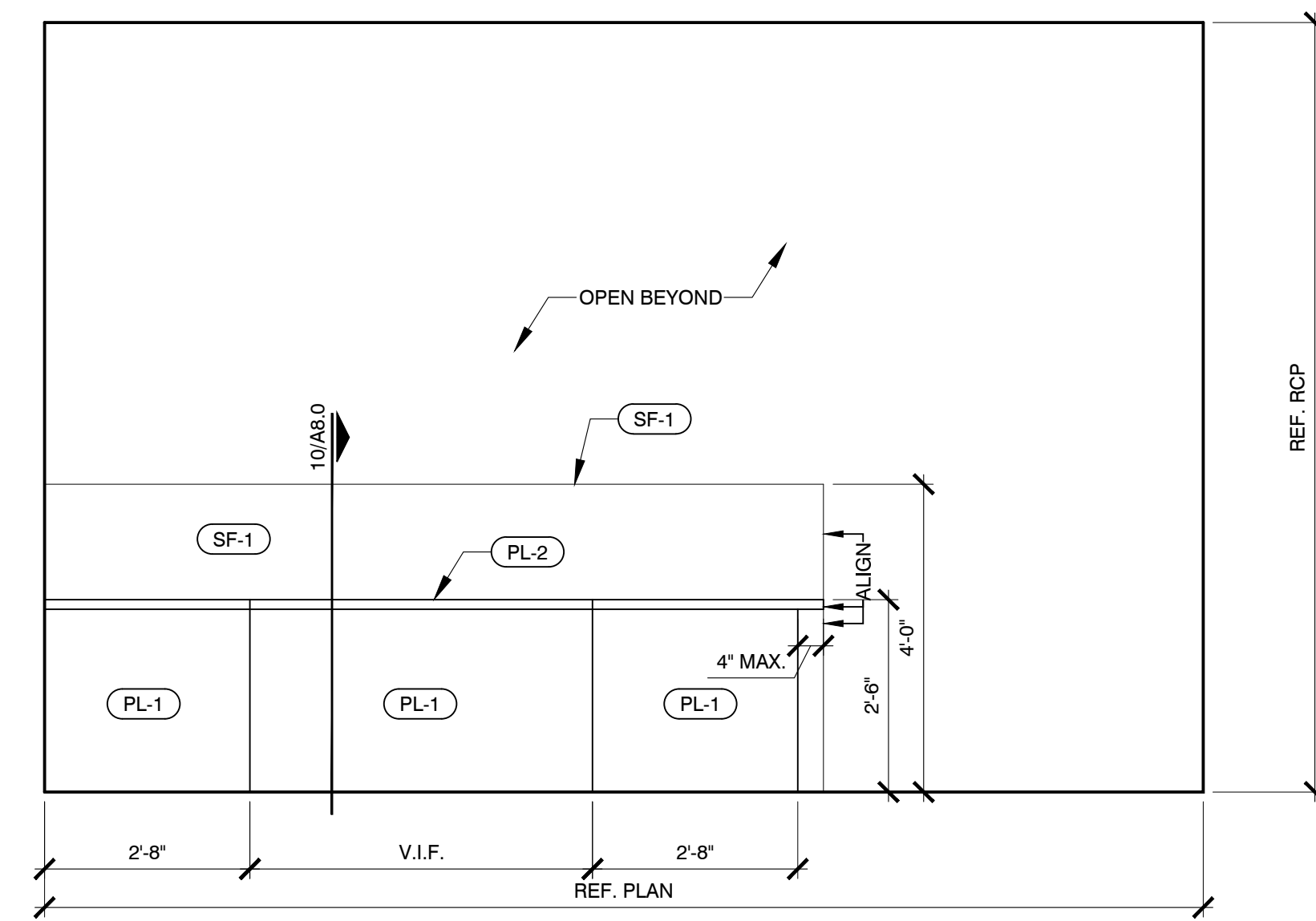
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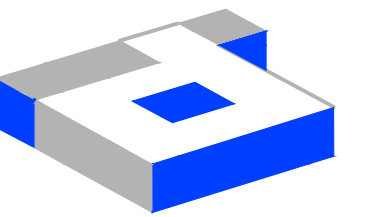
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05 ELEVATION @ ENTRY 500
SCALE: 1/2" = 1'-0"

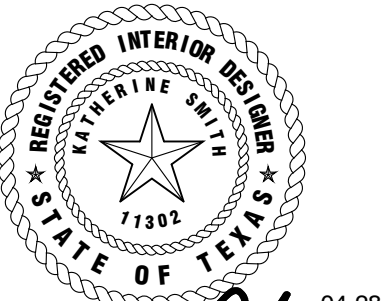


06 ELEVATION @ ENTRY 500
SCALE: 1/2" = 1'-0"



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DALLAS, TEXAS 75207
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R.S.F.: 5,819

BILLINGSLEY
COMPANY

**3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS**

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

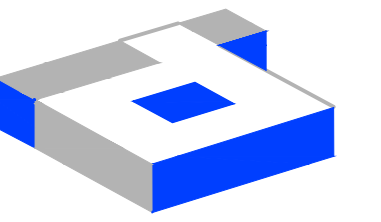
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 CONSTRUCTION ISSUE DATE: 04/28/20

DRAWING TITLE:
INTERIOR ELEVATIONS

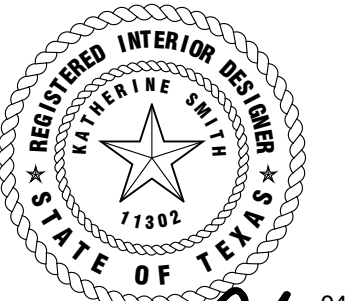
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A6.1



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3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

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DALLAS, TX 75019

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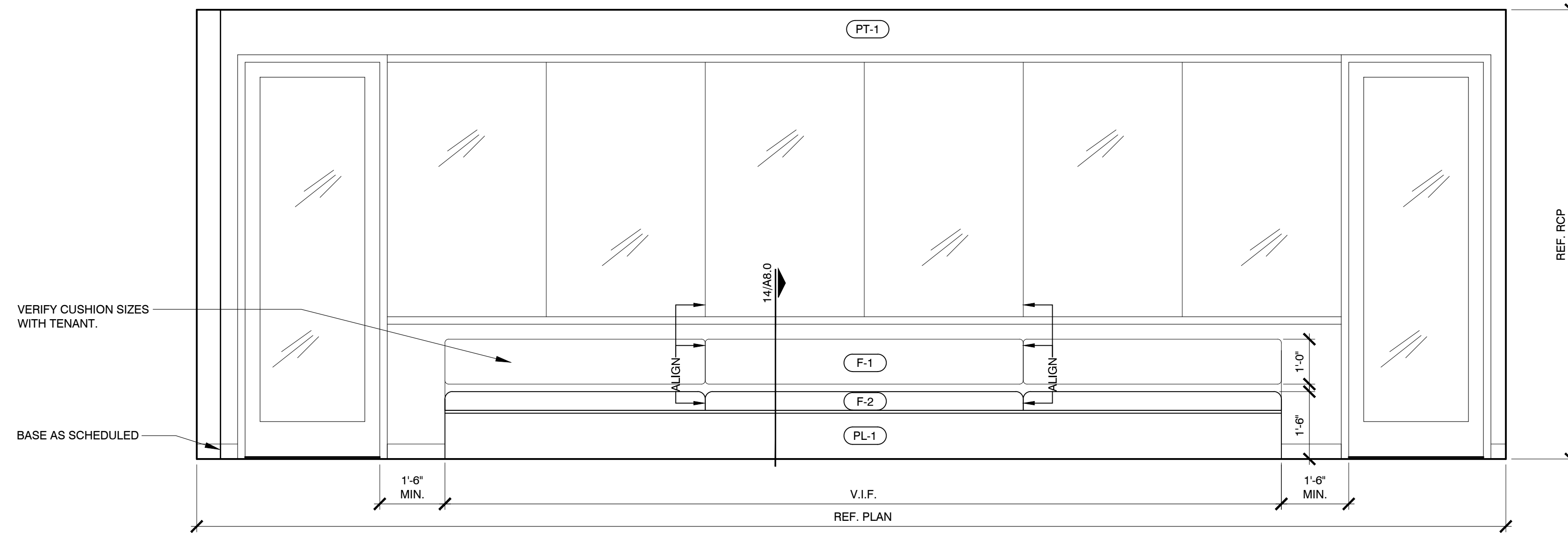
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INTERIOR ELEVATIONS

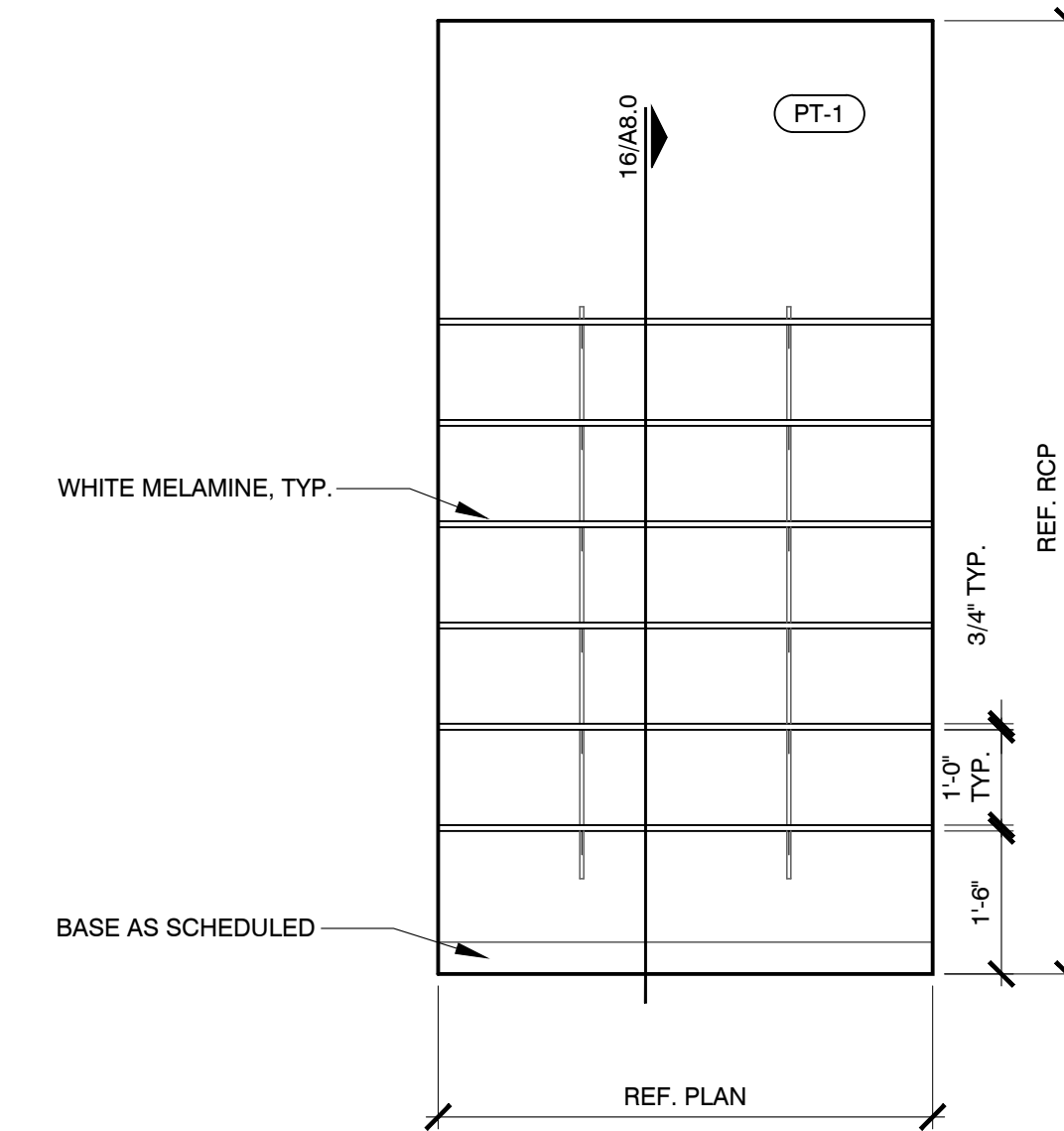
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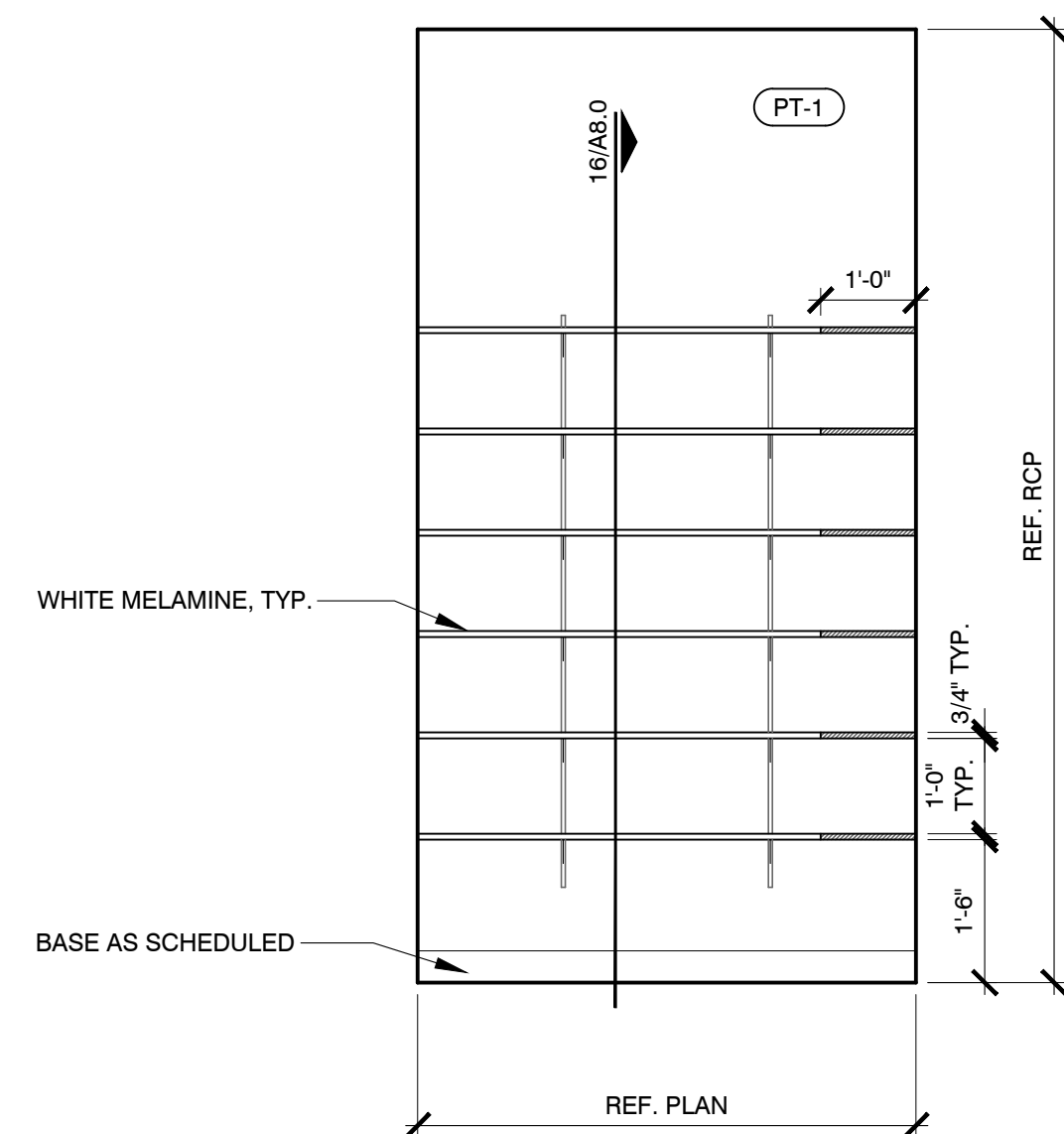
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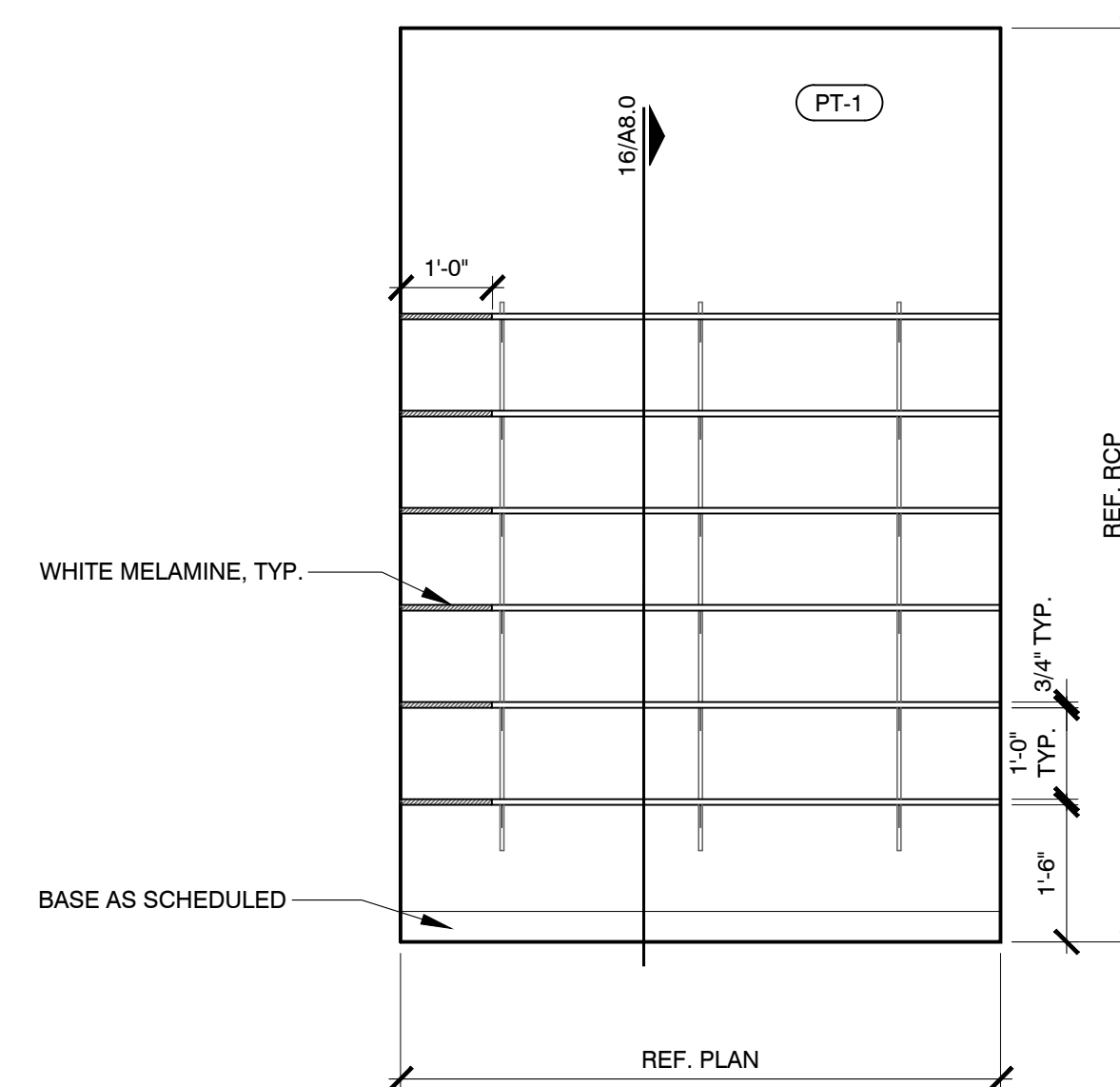
01 ELEVATION @ CONFERENCE 501
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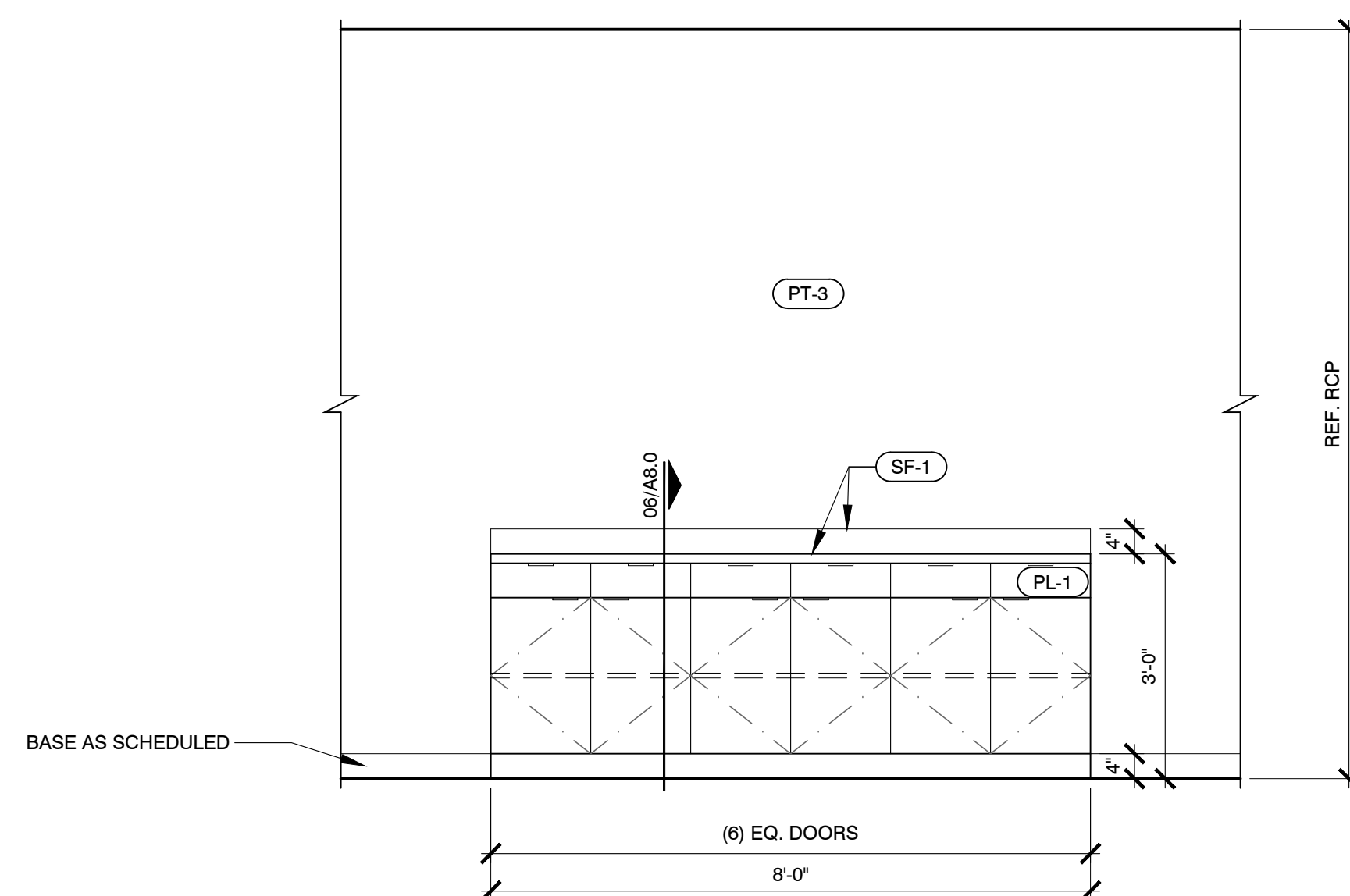
02 ELEVATION @ STOR. 519
SCALE: 1/2" = 1'-0"



03 ELEVATION @ PANTRY 518
SCALE: 1/2" = 1'-0"

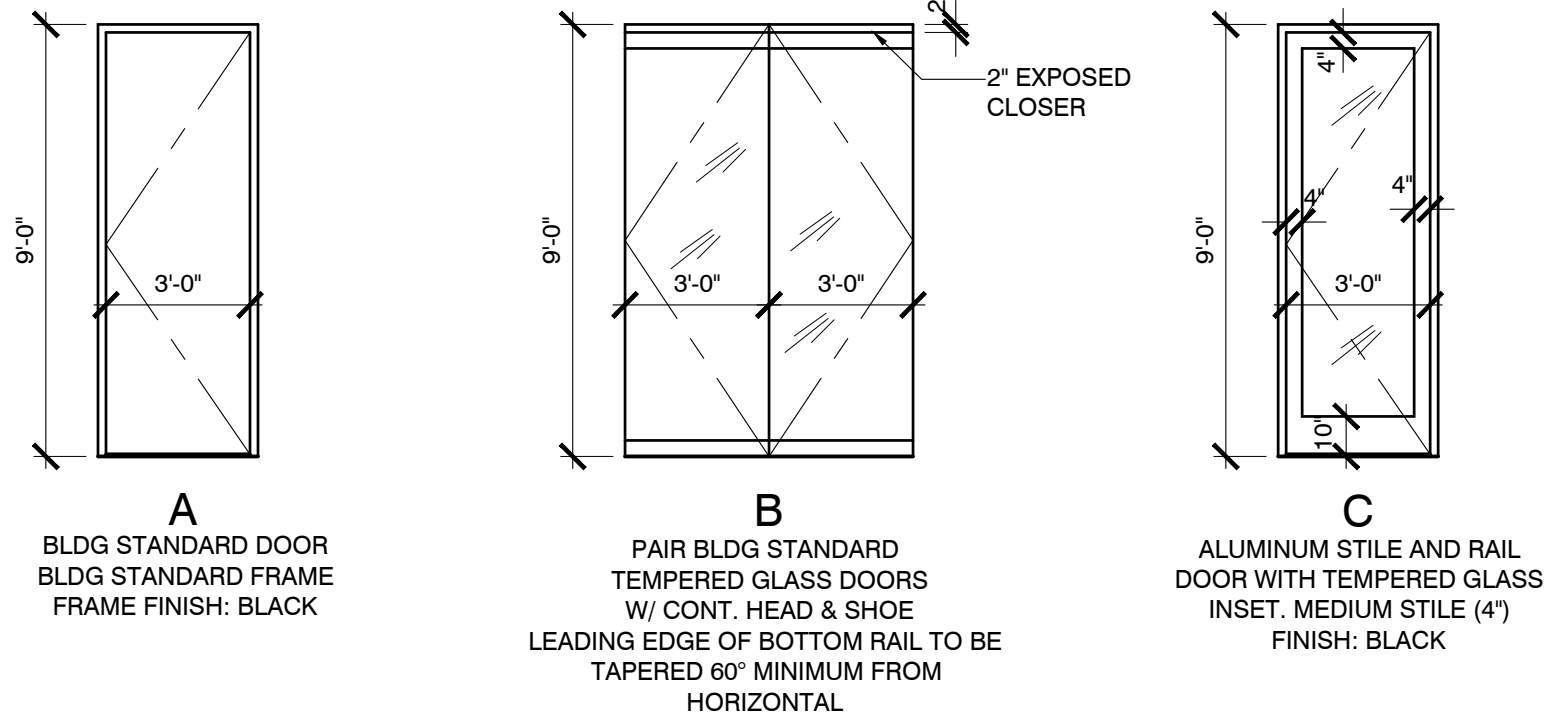


04 ELEVATION @ PANTRY 518
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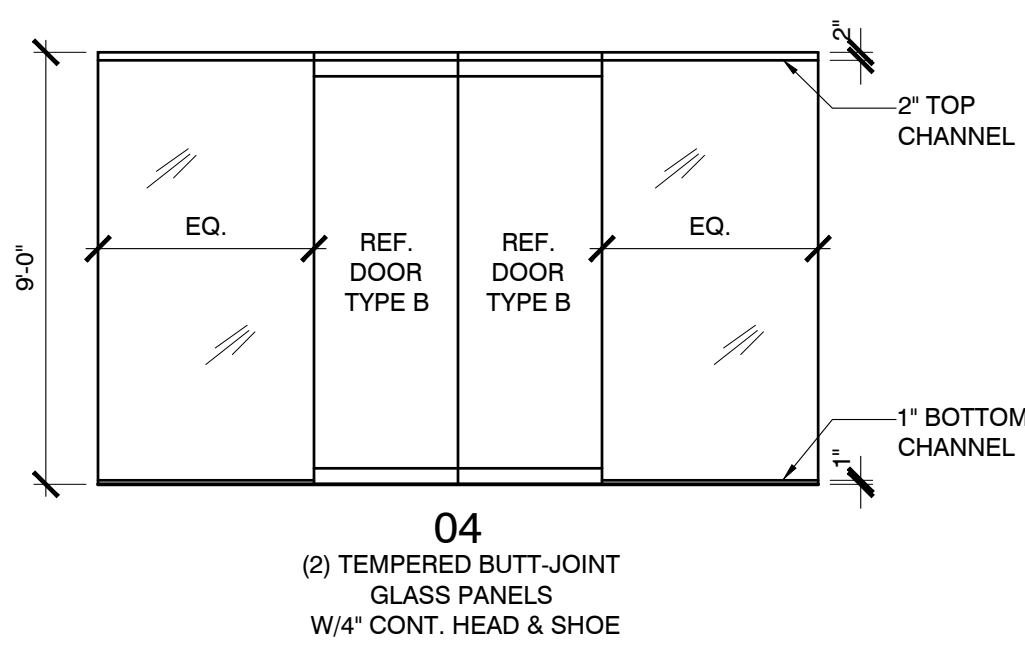
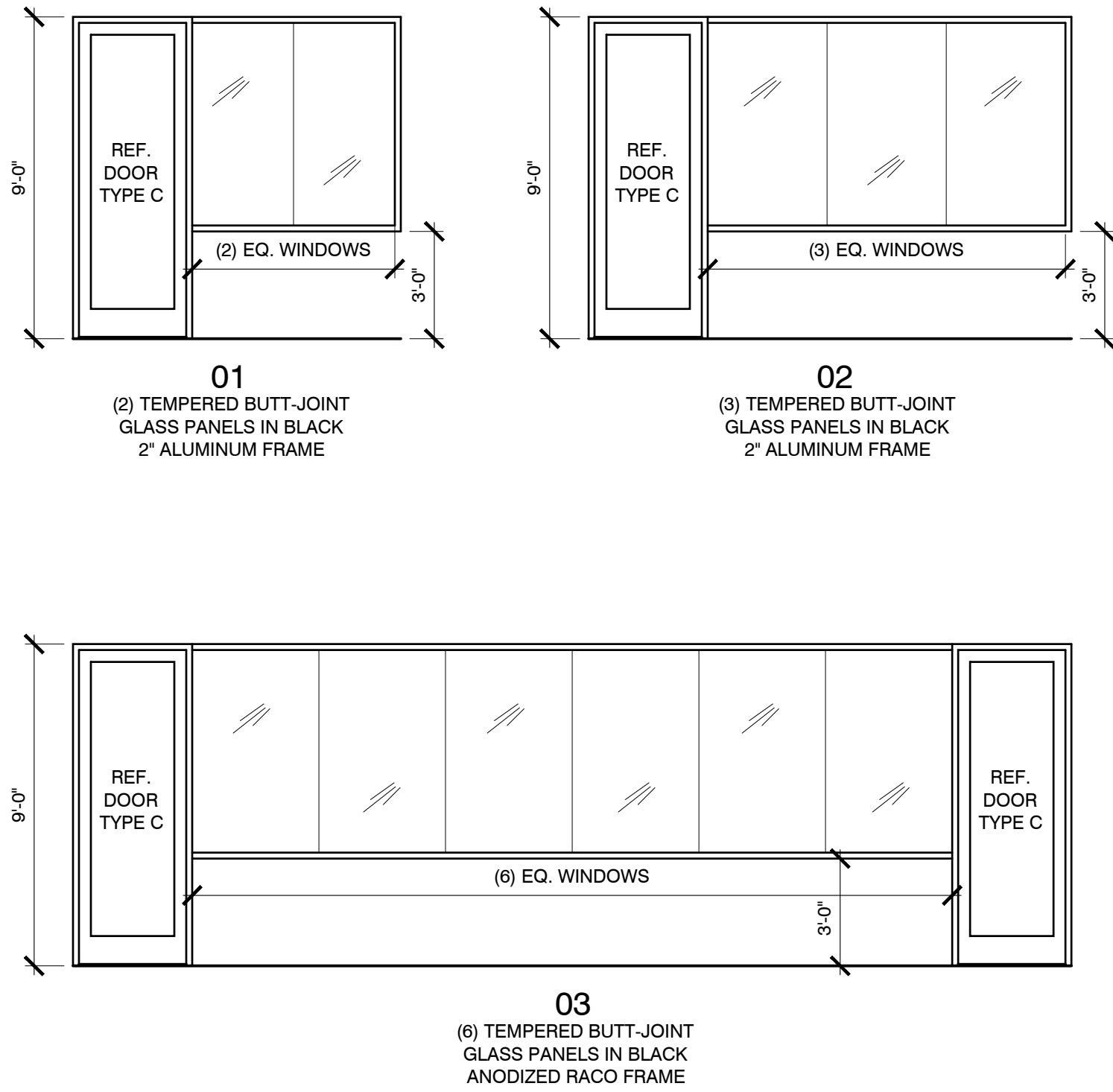


05 ELEVATION @ CONFERENCE 501
SCALE: 1/2" = 1'-0"

DOOR TYPES:



WINDOW TYPES:



DOOR HARDWARE SCHEDULE

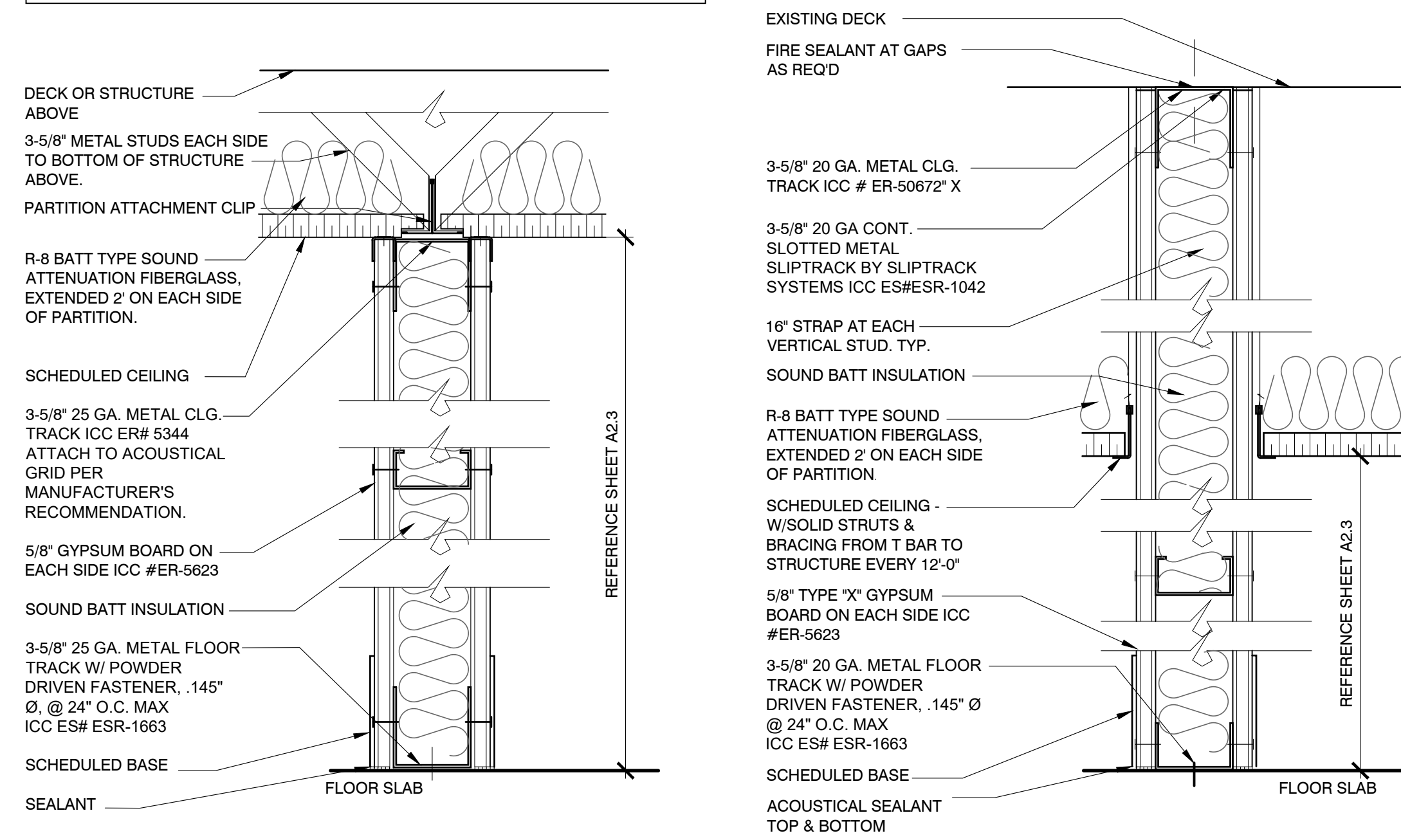
a	PASSAGE SET
b	OFFICE LOCKSET
c	OFFICE LOCKSET WITH CLOSER
d	STOREROOM LOCKSET
f	MAG LOCK W/ EXPOSED CLOSER, PUSH BUTTON RELEASE & POWER SOURCE FOR TENANT-PROVIDED SECURITY SYSTEM. 36" LADDER PULL (EACH SIDE)

GENERAL DOOR/HARDWARE NOTES:

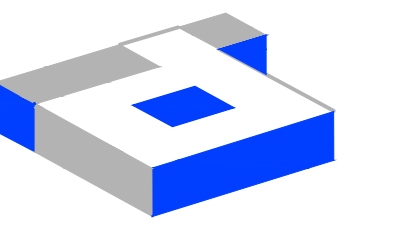
- HARDWARE TO BE BUILDING STANDARD "LEVER" TYPE ADA/TAS COMPLIANT, U.O.N. COORDINATE WITH BUILDING MANAGEMENT.
- CLOSERS TO BE ADJUSTED TO MEET ADA/TAS STANDARDS. DOORS SHALL CLOSE FROM AN OPEN POSITION OF 70 DEGREES TO A POINT 3" FROM LATCH IN A MINIMUM OF (3) THREE SECONDS AND SHALL REQUIRE A MAXIMUM OF (5) POUNDS OF FORCE (lb) TO OPEN.
- KEYS: LOCKSETS TO ALL ROOMS TO BE KEYED TO MASTER. CONTRACTOR TO COORDINATE WITH BLDG. MGMT. FOR QUANTITY OF MASTER SETS TO BE PROVIDED.
- KEYWAY: COORDINATE WITH BUILDING MANAGEMENT FOR MASTER KEY AND GRANDMASTER KEY SYSTEM COMPLIANCE.
- ALL ELECTRICAL DOOR HARDWARE AND ACCESSORIES FOR INFORMATION ONLY. COORDINATE WITH SECURITY CONSULTANT AND BLDG. MGMT. FOR FINAL SELECTION.
- ALL DOOR HARDWARE AND ACCESSORIES TO MATCH BUILDING STANDARDS, U.O.N.
- PROVIDE DOOR FINISH SAMPLE TO BLDG. MGMT. FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
- ALL GLASS THICKNESS TO BE TO CODE AND DETERMINED BY GLASS VENDOR
- REFERENCE PLAN FOR DOOR SWING DIRECTIONS. DOOR TYPES ARE FOR VISUAL PURPOSES ONLY.

GENERAL PARTITION TYPE NOTES

- TYPICAL PARTITION TO BE TYPE '2X', UNLESS NOTED OTHERWISE ON CONSTRUCTION PLAN.
- CONTRACTOR TO VERIFY STUD GAUGE REQUIRED.
- CONTRACTOR TO VERIFY BUILDING STANDARD STUD WIDTH WITH BUILDING MANAGEMENT.

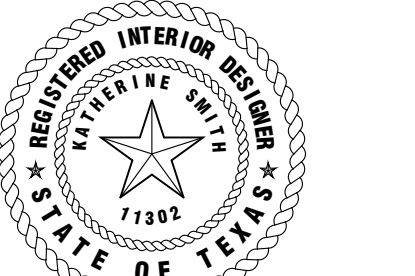


- 2** 3-5/8" x 25 GA. METAL STUD @ 24" O.C., BUILDING STANDARD, U.O.N., PARTITION FROM SLAB TO UNDERSIDE OF CEILING. FACE WITH 5/8" GYPSUM BOARD, EACH SIDE, TO CEILING. FINISH AS SCHEDULED.
- 2X** AT WALL TYPE 2, PROVIDE SOUND BATT INSULATION WHERE INDICATED WITH AN 'X'.
- 3** 3-5/8" x 20 GA. METAL STUD @ 24" O.C., U.O.N., PARTITION FROM SLAB TO DECK. FACE WITH 5/8" TYPE 'X' GYPSUM BOARD. FINISH AS SCHEDULED.
- 3X** AT WALL TYPE 3 WHERE INDICATED WITH AN 'X', PROVIDE SOUND BATT INSULATION.
- 3F** 1 HOUR FIRE RATED AT WALL TYPE 3, WHERE INDICATED WITH AN 'F', PROVIDE SOUND BATT INSULATION AND FIRE SEALANT AT GAPS (UL419).
- 3P** SAME AS WALL TYPE '3X' WITH 6" STUDS.



idGROUP

2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301



Katherine Chilton 04-28-20

PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

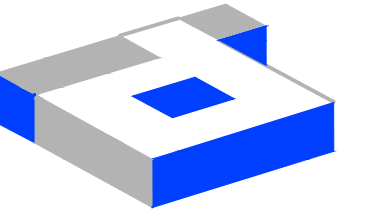
NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/20
 BID ISSUE DATE: 04/28/20
 CONSTRUCTION ISSUE DATE: 04/28/20

DRAWING TITLE:
PARTITION & DOOR TYPES

DRAWING NUMBER:

A7.0



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2641 IRVING BLVD.
DALLAS, TEXAS 75207
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Katherine Austin 04-28-20

PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MM/KS
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/20
BD ISSUE DATE: 04/28/20
CONSTRUCTION ISSUE DATE: 04/28/20

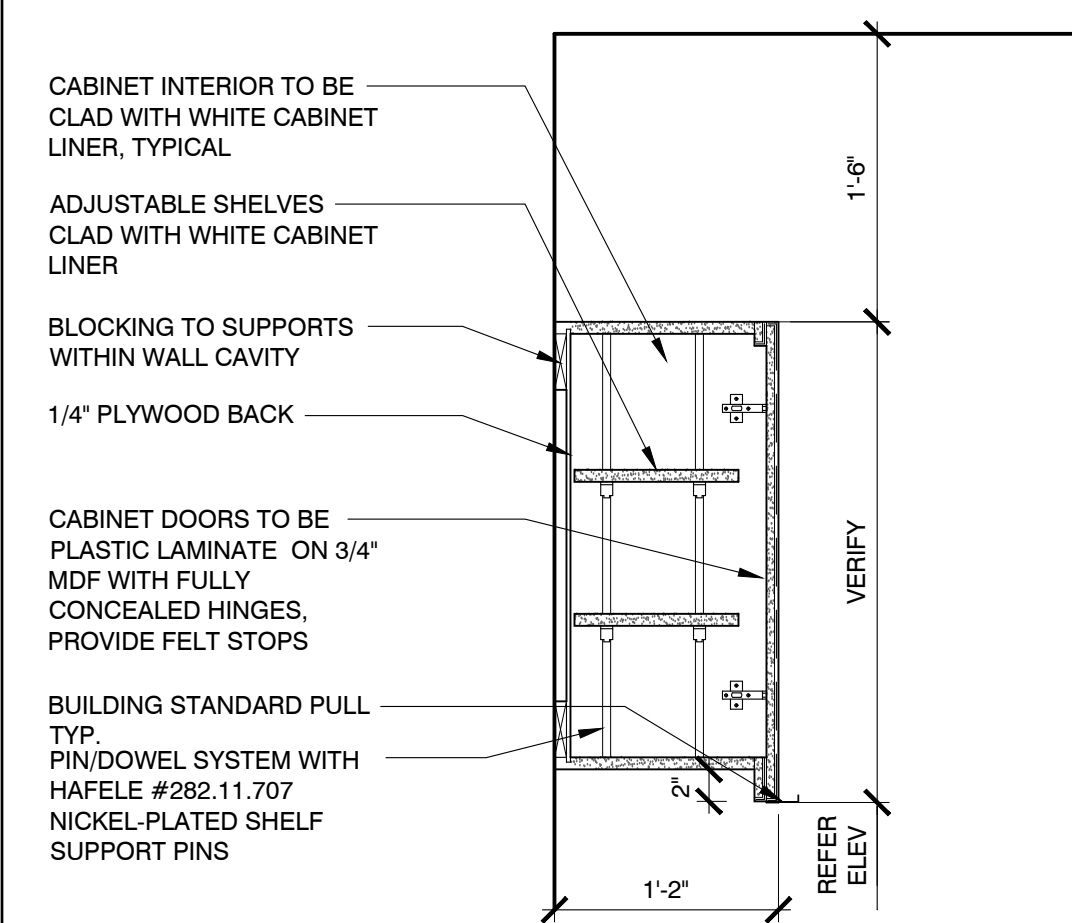
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SECTIONS & DETAILS

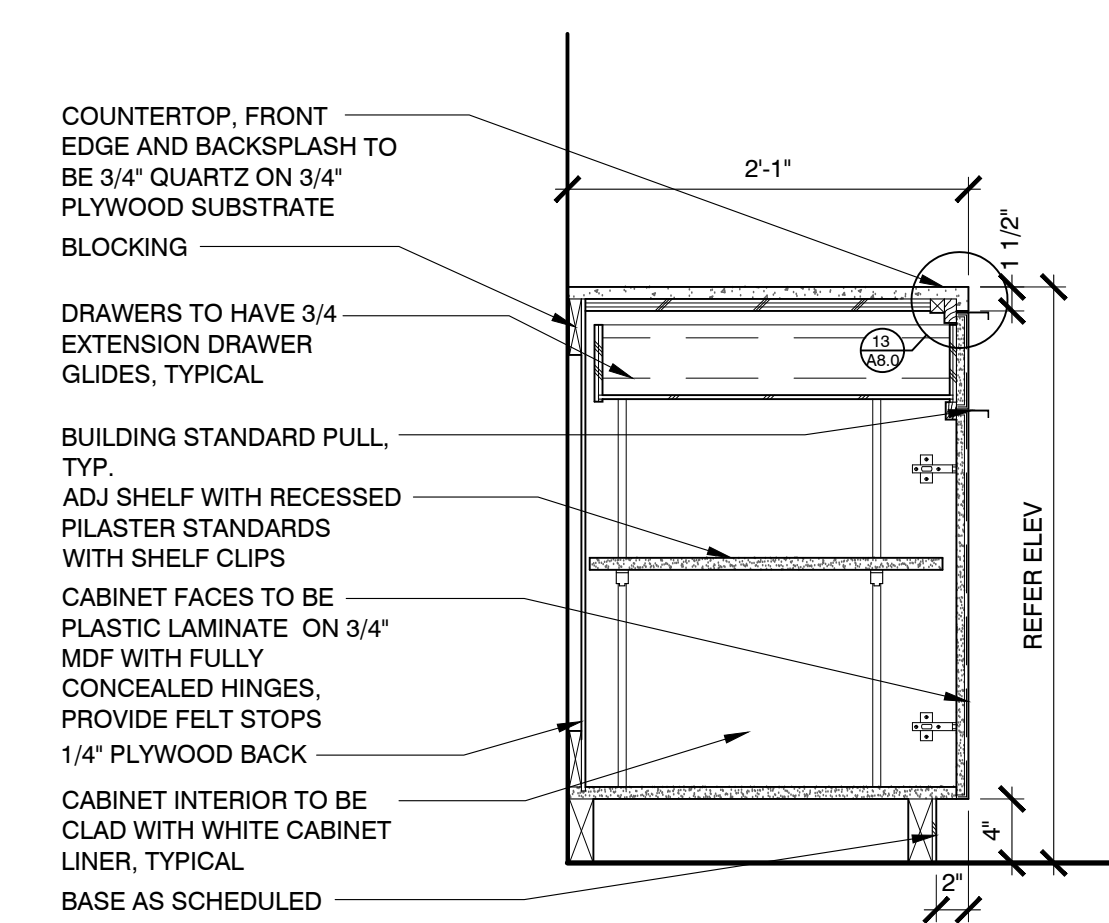
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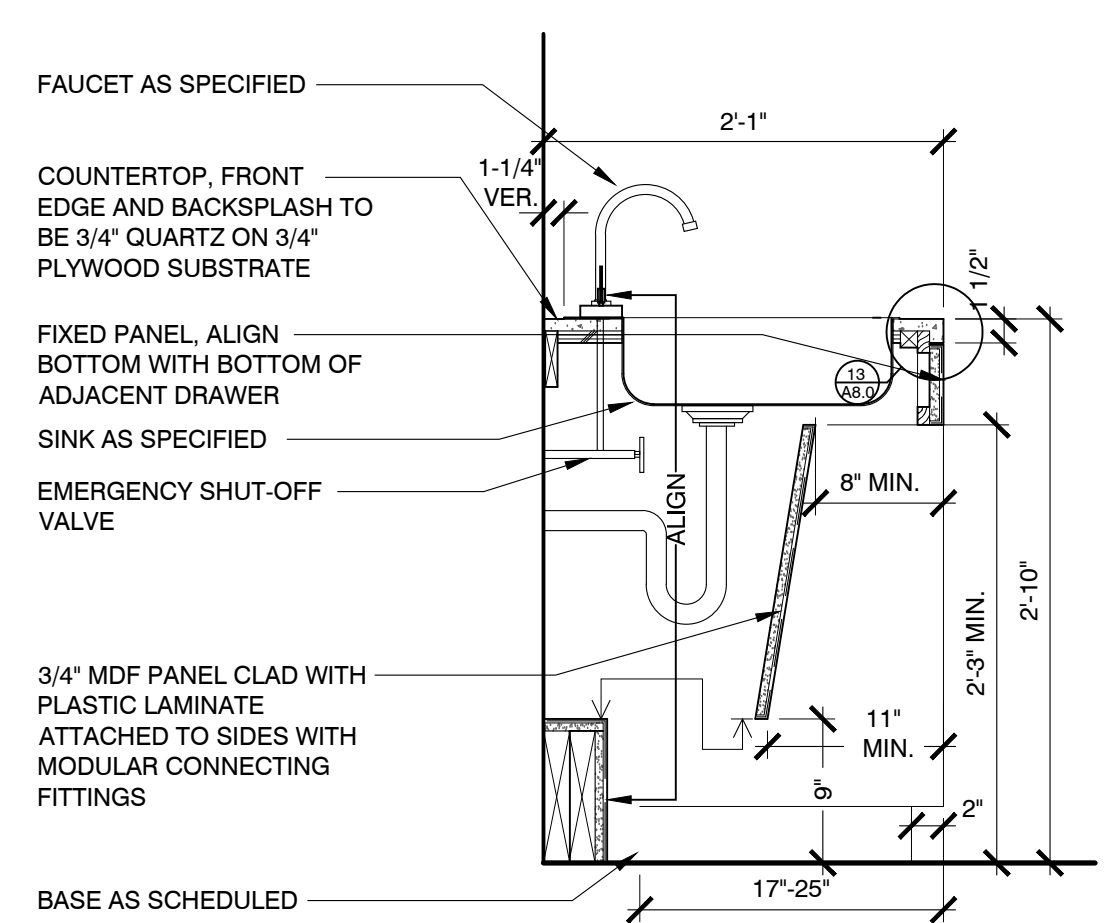
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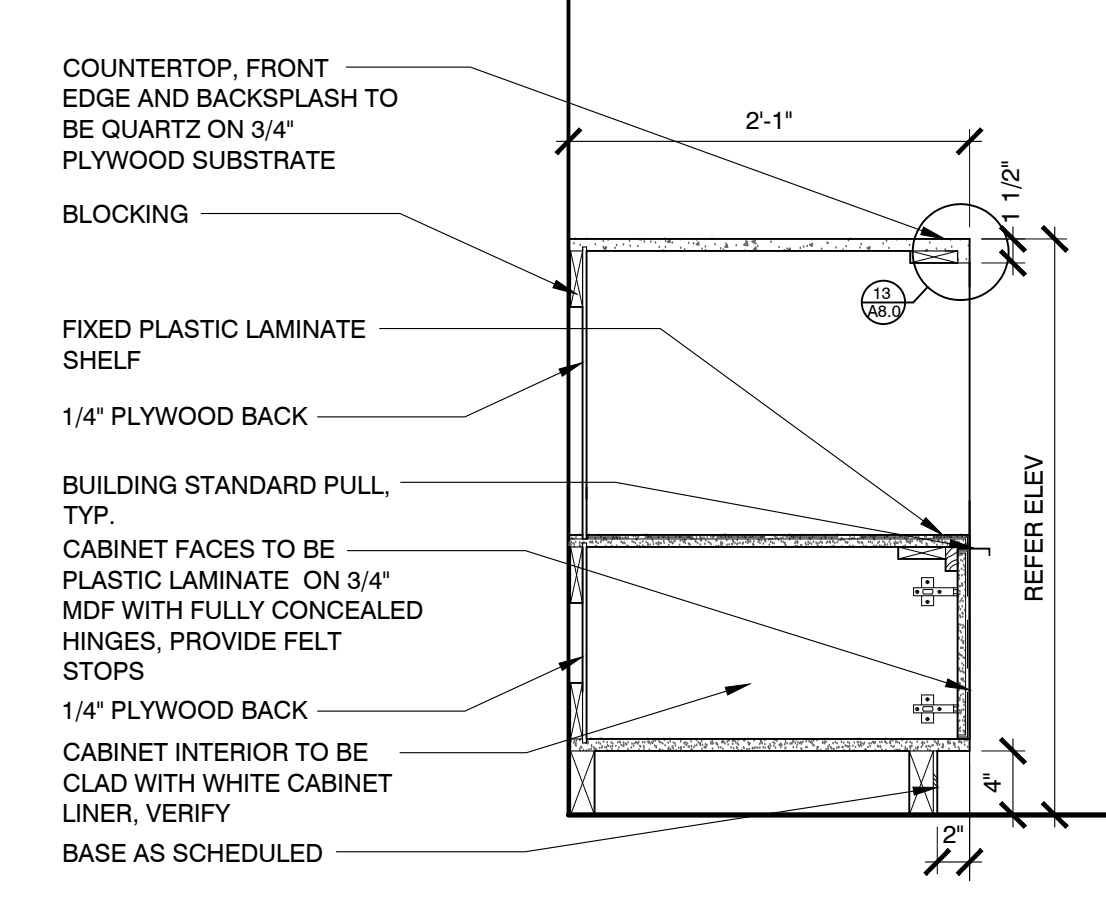
01 UPPER CAB. SECTION
SCALE: 1" = 1'-0"



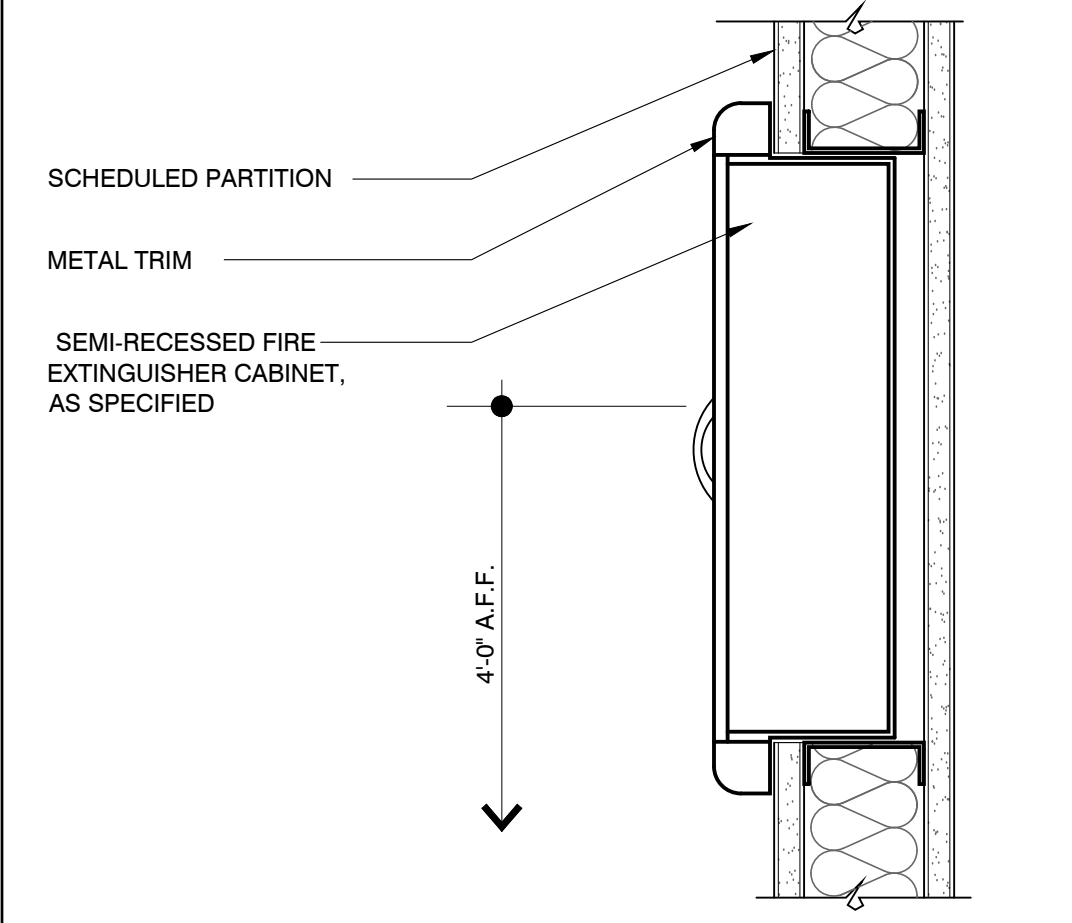
02 BASE CAB. SECTION
SCALE: 1" = 1'-0"



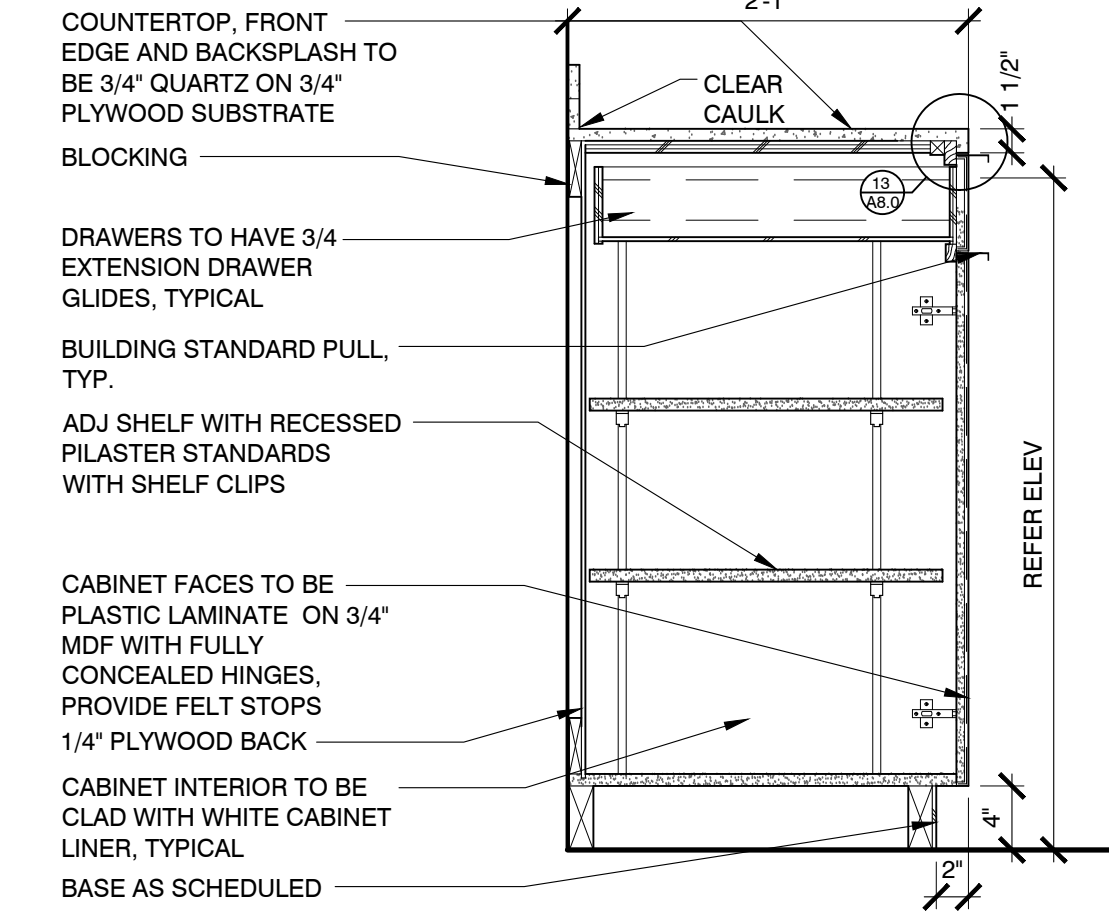
03 SINK SECTION
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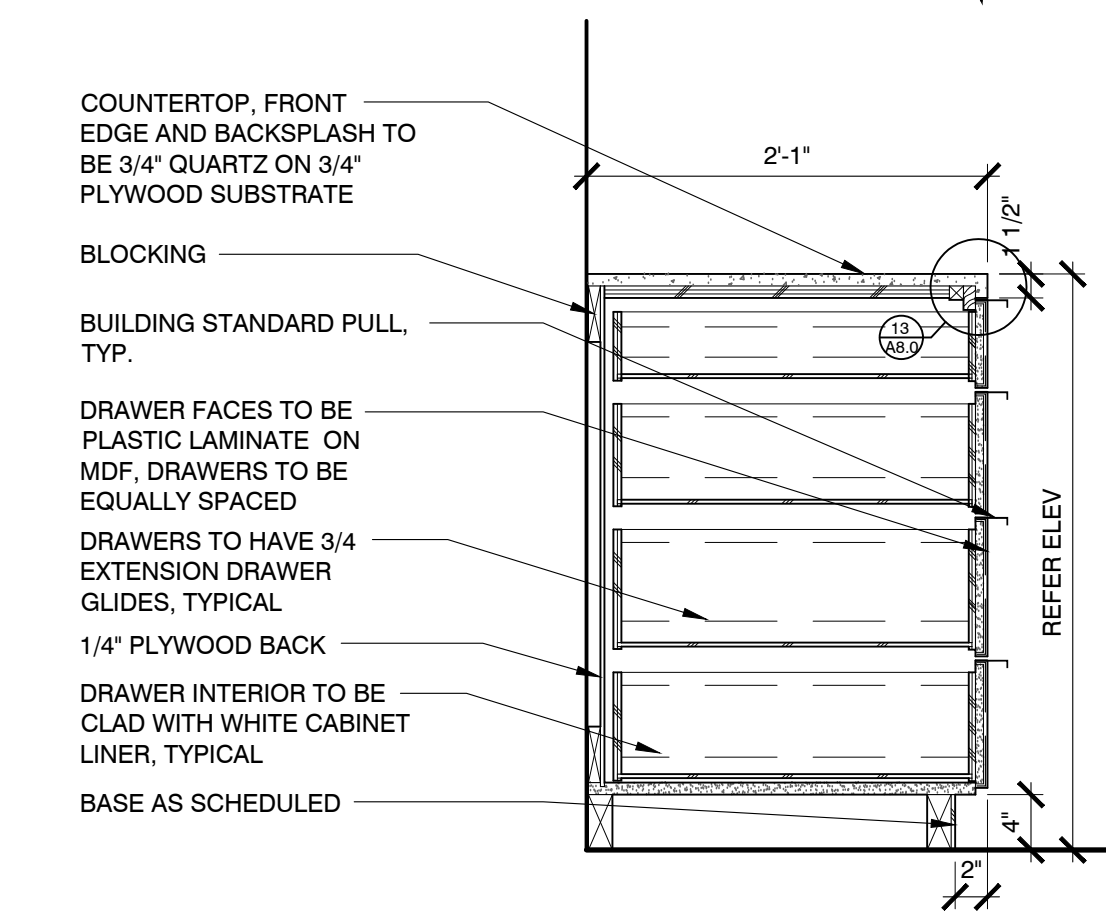
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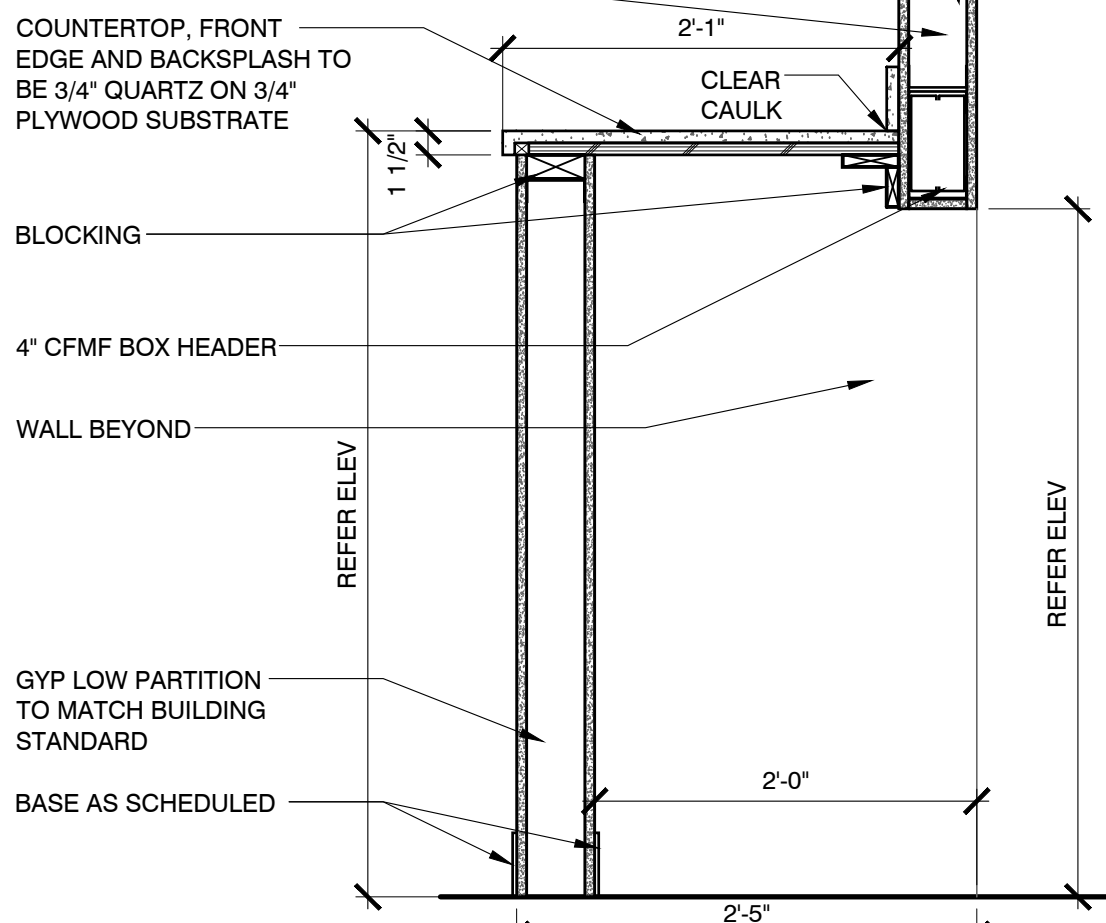
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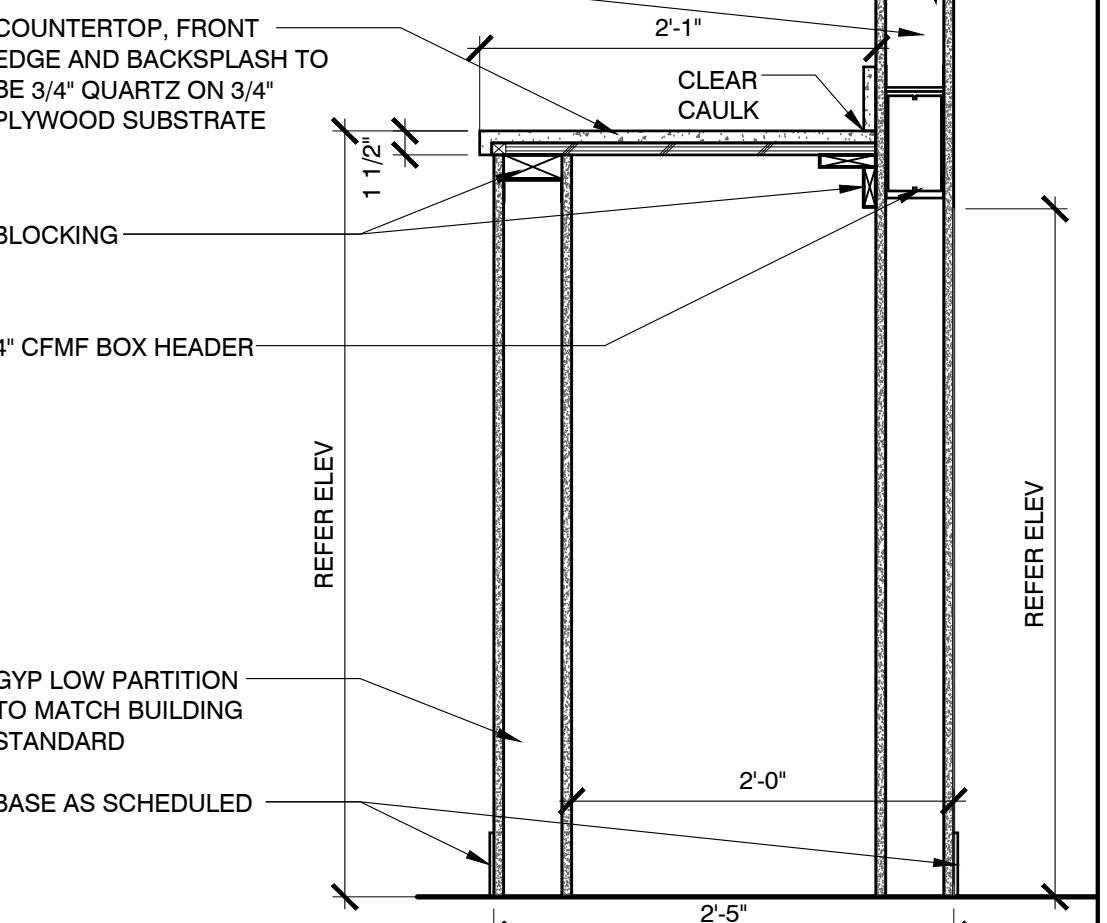
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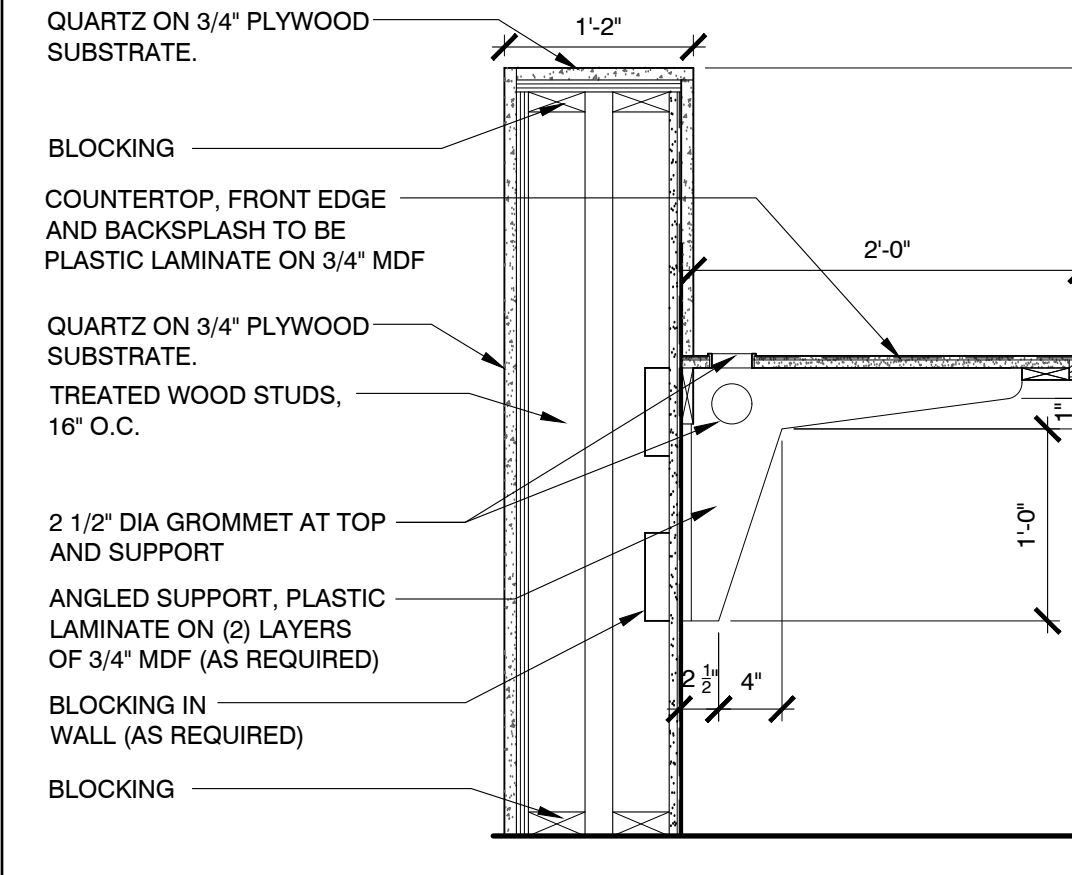
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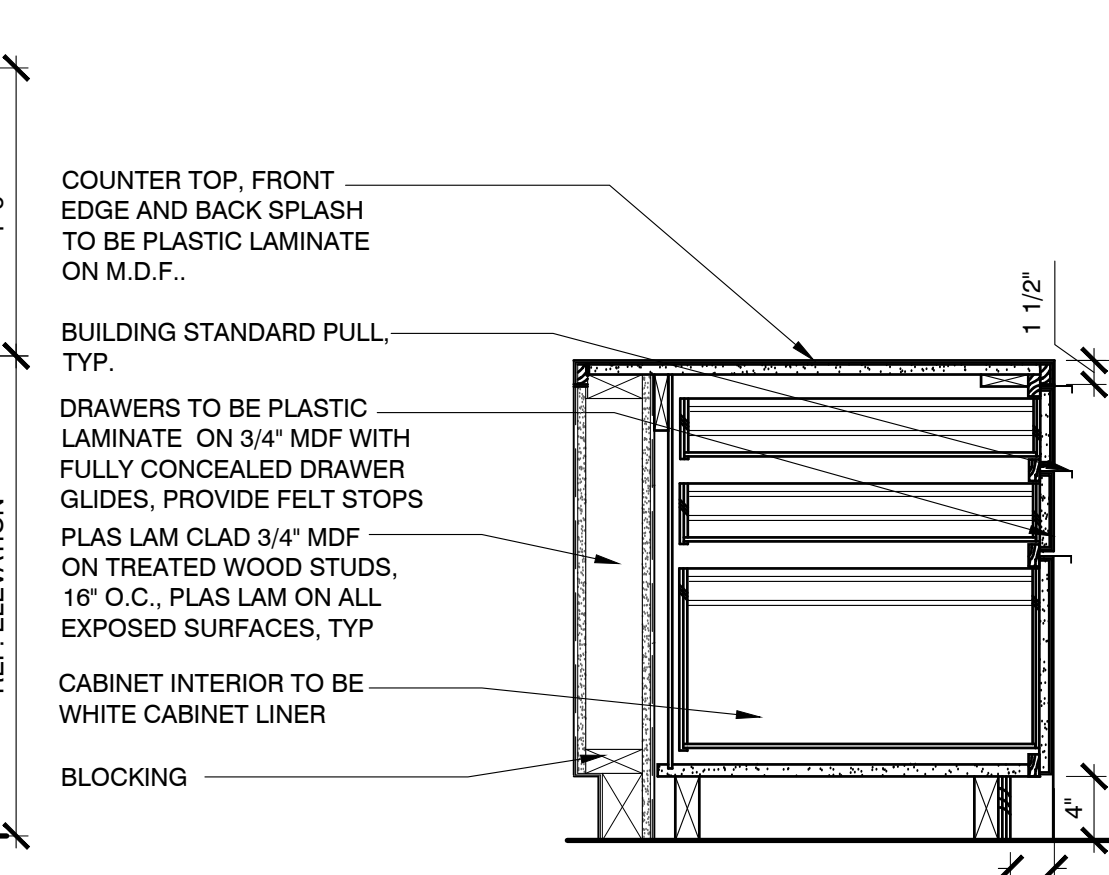
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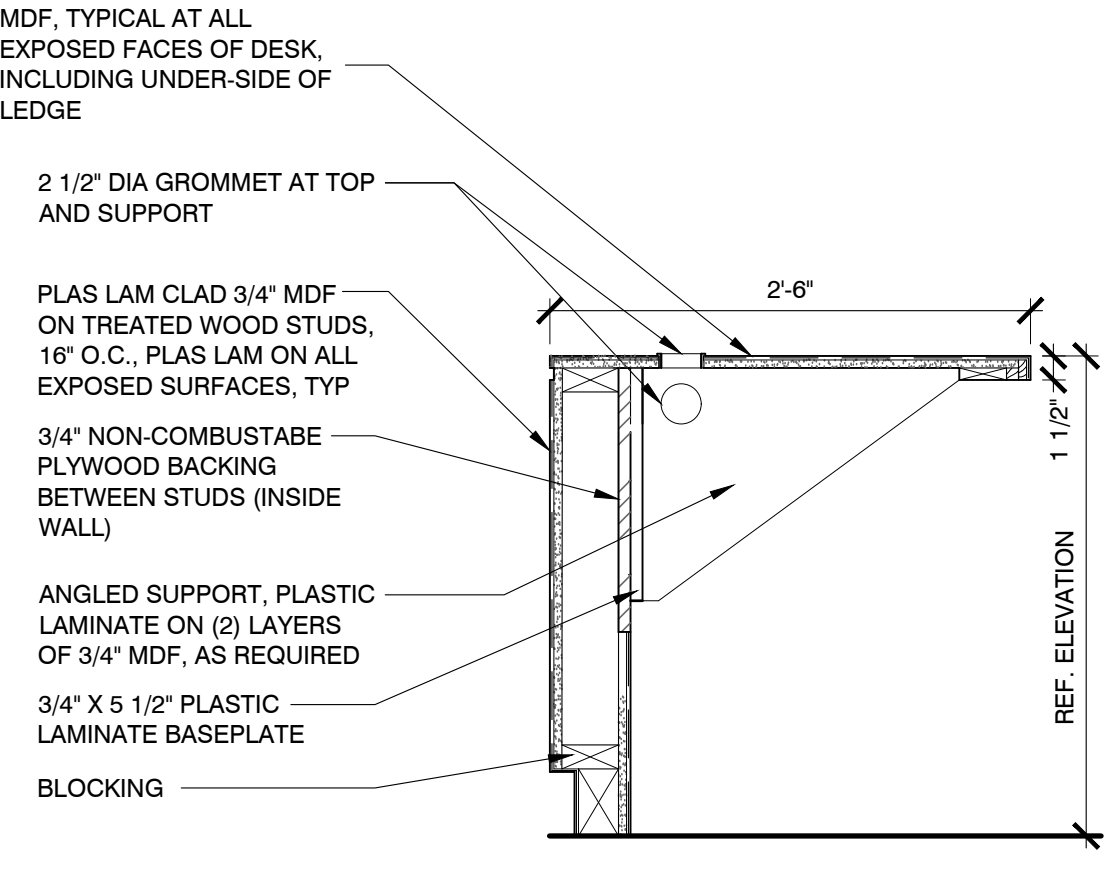
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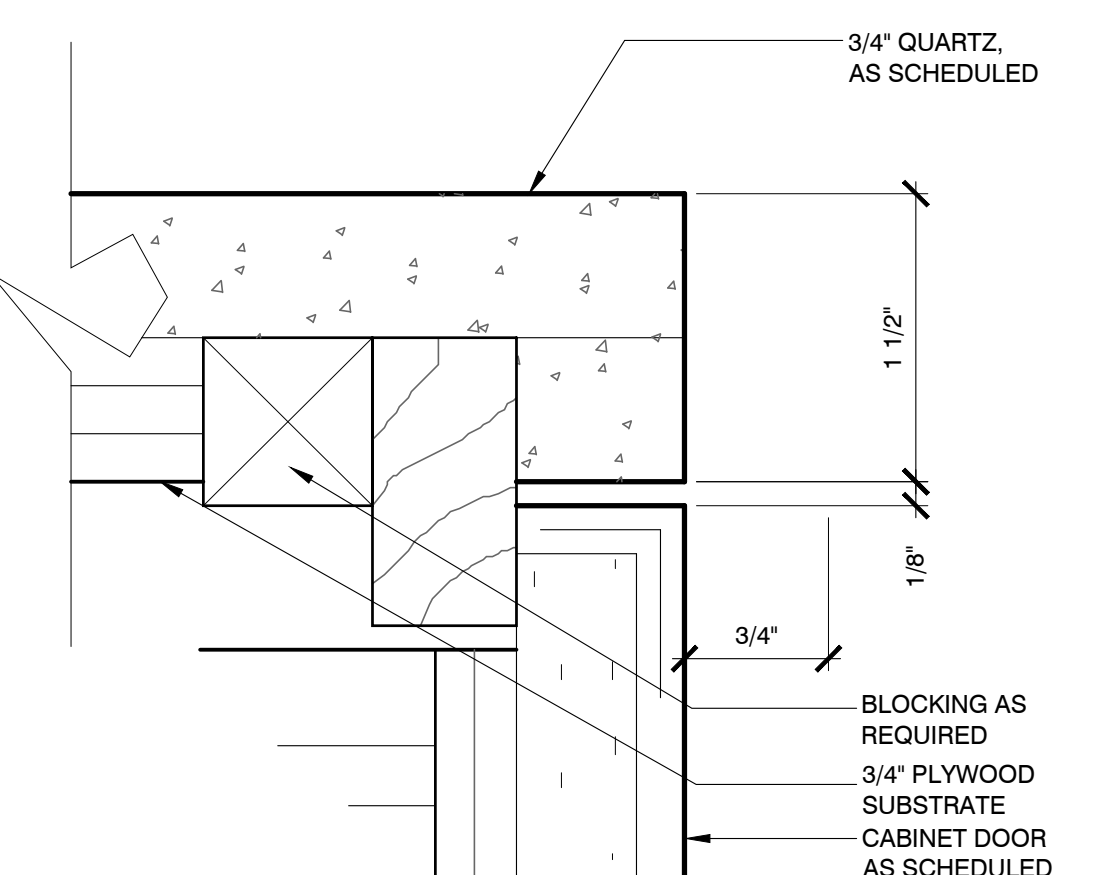
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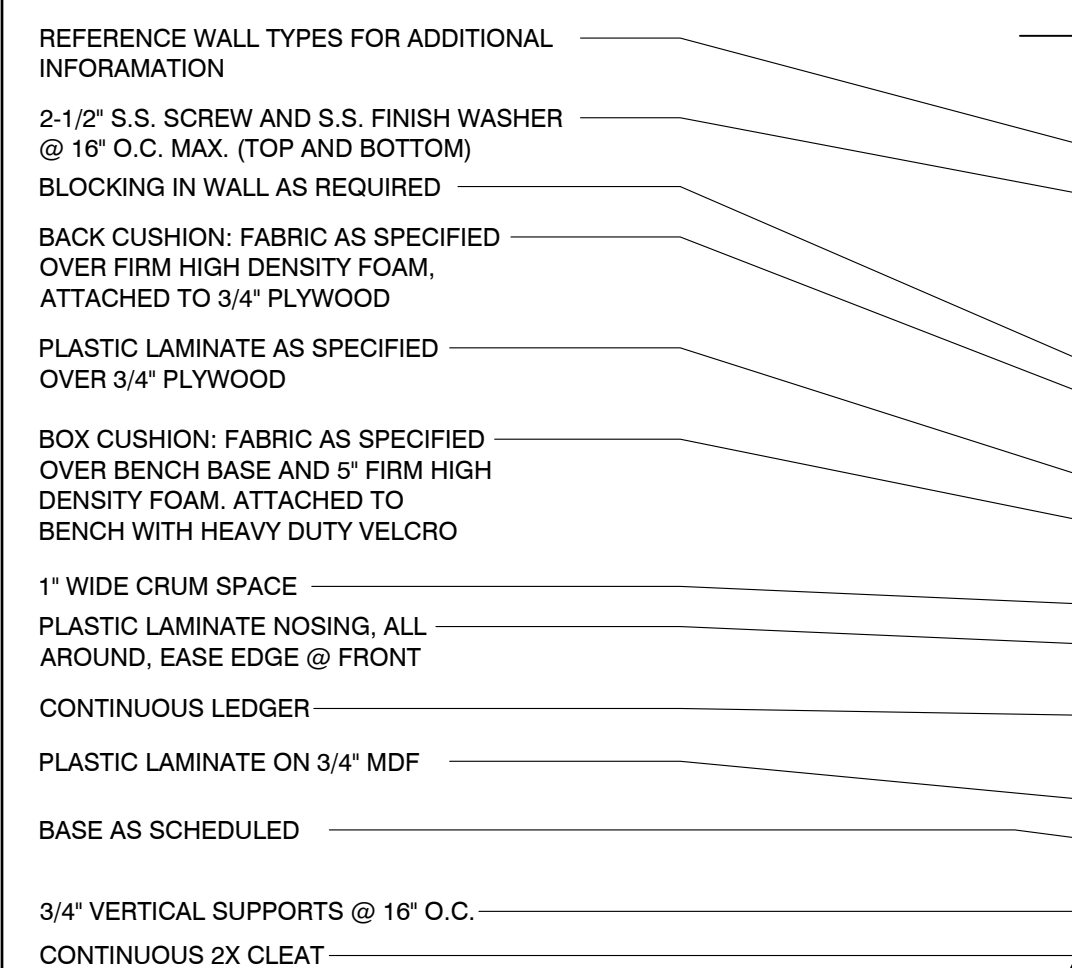
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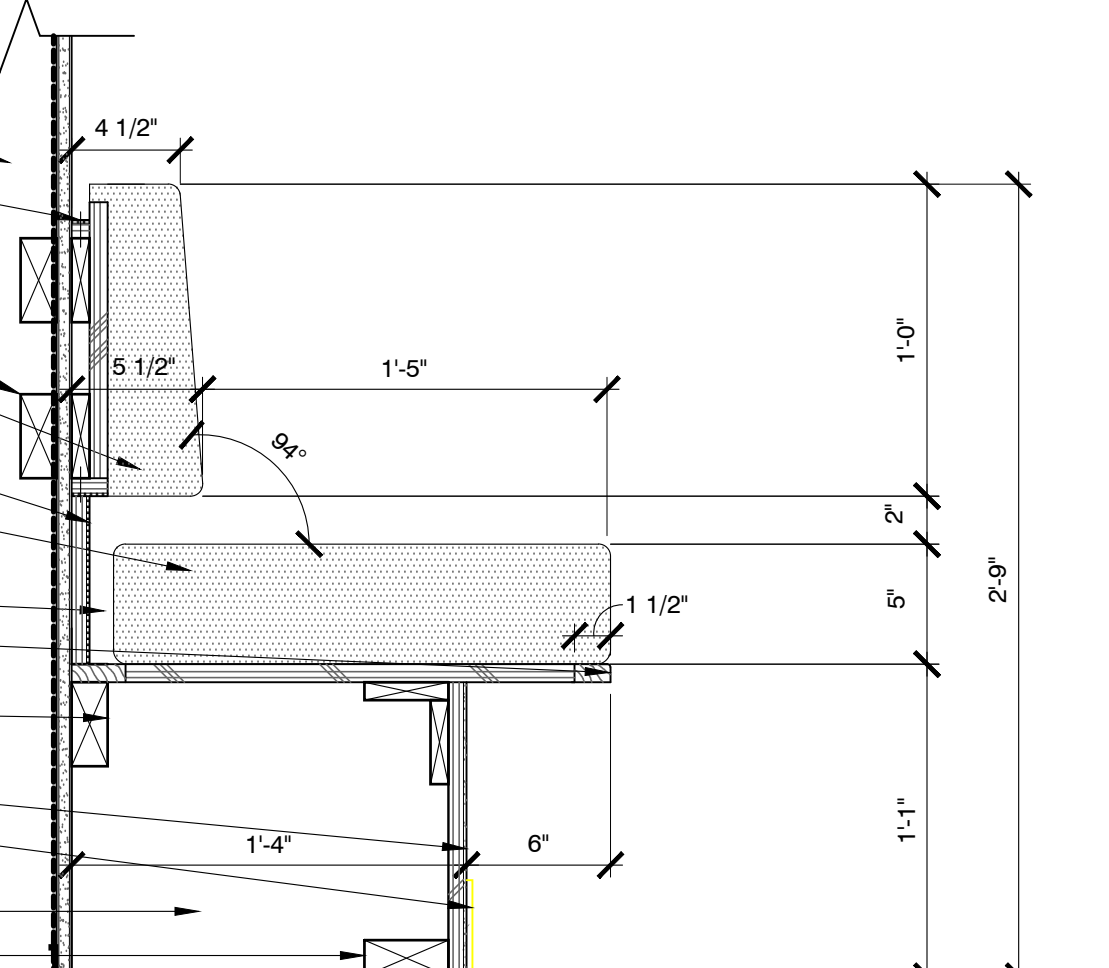
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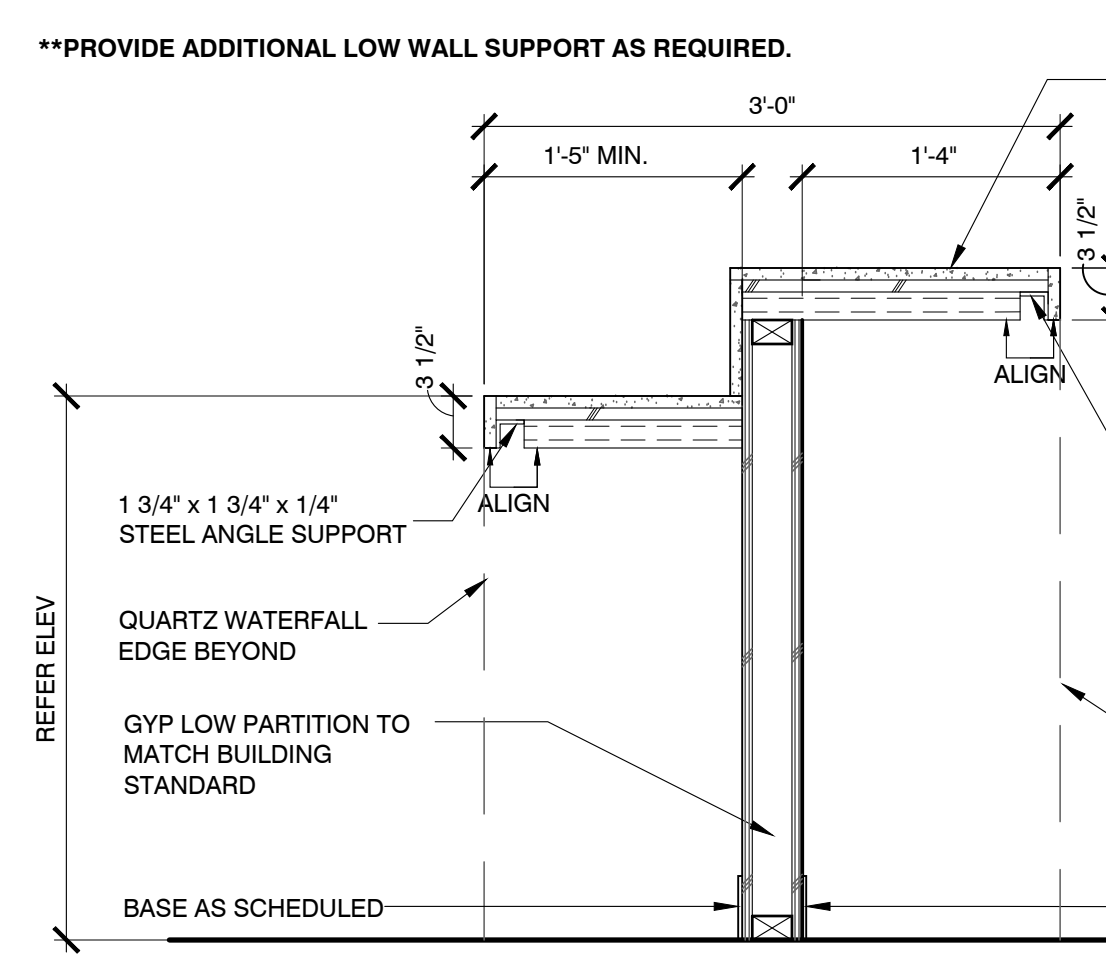
13 QUARTZ DETAIL
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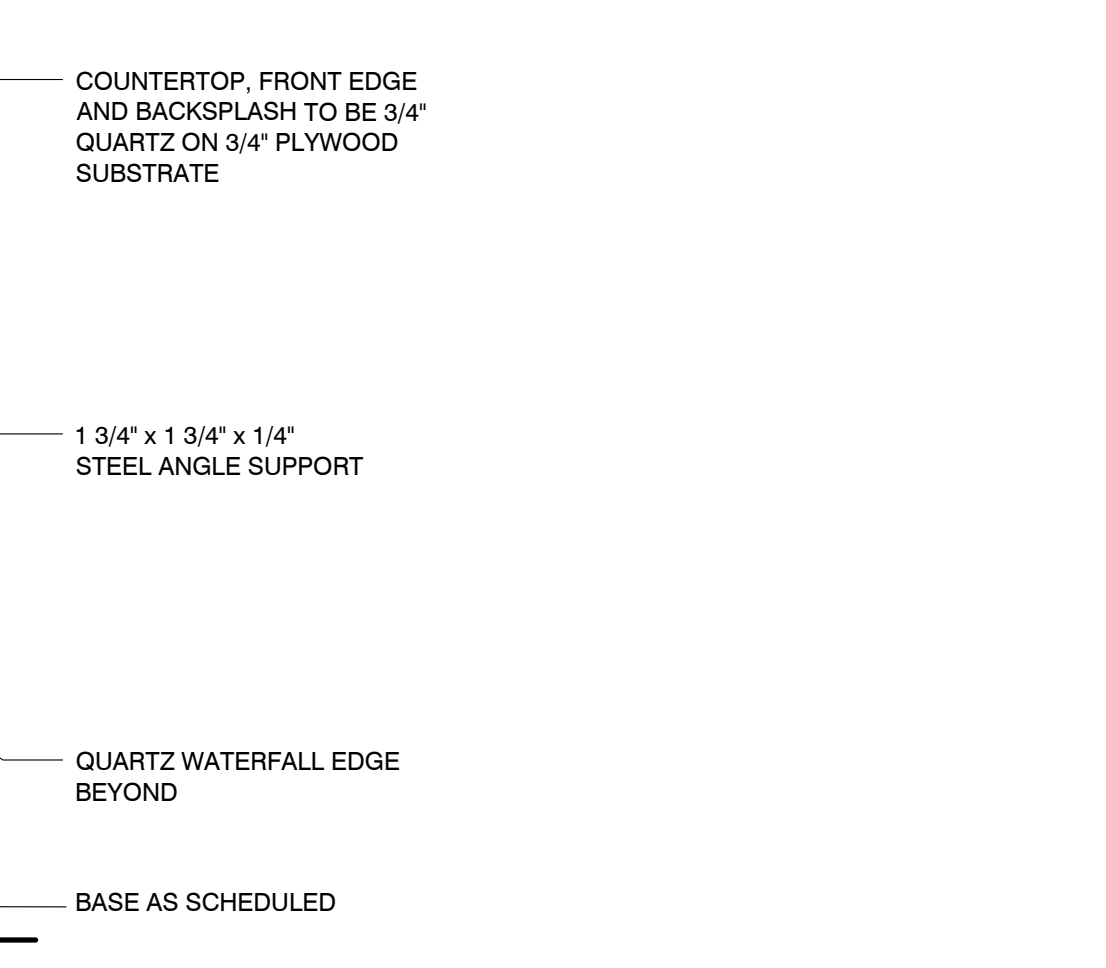
14 SECTION @ BENCH
SCALE: 1-1/2" = 1'-0"



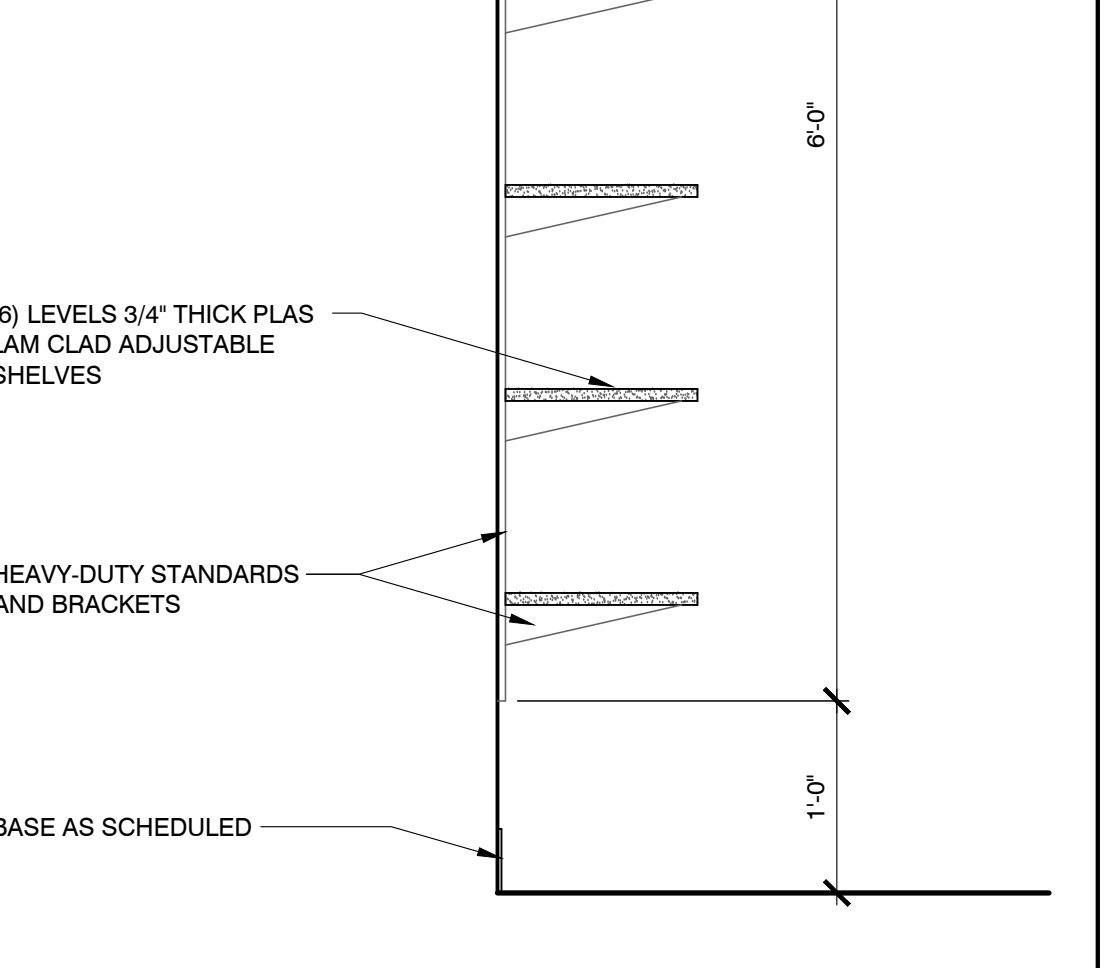
15 SECTION @ ISLAND
SCALE: 1" = 1'-0"



16 SECTION @ ISLAND
SCALE: 1" = 1'-0"



17 SECTION @ ISLAND
SCALE: 1" = 1'-0"



18 SECTION @ ISLAND
SCALE: 1" = 1'-0"

14 SECTION @ BENCH
SCALE: 1-1/2" = 1'-0"

15 SECTION @ ISLAND
SCALE: 1" = 1'-0"

15 SECTION @ ISLAND
SCALE: 1" = 1'-0"

16 SECTION @ ISLAND
SCALE: 1" = 1'-0"

16 SECTION @ ISLAND
SCALE: 1" = 1'-0"

16 SECTION @ ISLAND
SCALE: 1" = 1'-0"

DALLAS GREEN BUILDING RQMTS.

SECTION 802.1 SCOPE. TO FACILITATE THE OPERATION AND MAINTENANCE OF THE COMPLETED BUILDING, THE BUILDING AND ITS SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS 802.2 AND 802.3.

802.2 AIR HANDLING SYSTEM ACCESS: THE ARRANGEMENT AND LOCATION OF AIR HANDLING SYSTEM COMPONENTS, INCLUDING, BUT NOT LIMITED TO, DUCTS, AIR HANDLING UNITS, FANS, COILS, AND CONDENSATE PANS, SHALL ALLOW ACCESS FOR CLEANING AND REPAIR OF AIR HANDLING SURFACES OF SUCH COMPONENTS ACCESS PORTS SHALL BE INSTALLED IN THE AIR HANDLING SYSTEM TO PERMIT SUCH CLEANING AND REPAIRS. PIPING, CONDUITS, AND OTHER BUILDING COMPONENTS SHALL NOT BE LOCATED SO AS TO OBSTRUCT THE REQUIRED ACCESS PORTS.

802.3 AIR HANDLING SYSTEM FILTRATION AND BYPASS PATHWAYS: AIR HANDLING EQUIPMENT AND HVAC EQUIPMENT SHALL BE DESIGNED AND INSTALLED TO LIMIT THE AMOUNT OF AIRFLOW THAT BY PASSES THE AIR FILTERS AND SHALL COMPLY WITH THE FOLLOWING:
1. CHANNELS, RACKS AND OTHER FILTER-RETAINING CONSTRUCTIONS THAT DO NOT SEAL TIGHTLY TO THE FILTER FRAME BY MEANS OF FRICTION FIT SHALL BE PROVIDED WITH A MEANS TO SEAL THE FILTER FRAME TO THE FILTER-HOLDING CONSTRUCTION.
2. WHERE STANDARD SIZE FILTERS ARE INSTALLED IN BANKS OF MULTIPLE FILTERS, GASKETS SHALL SEAL THE GAP BETWEEN THE FRAMES OF ADJACENT FILTERS.
3. AS AN ALTERNATIVE TO GASKETS, THE FRAMES OF ADJACENT FILTERS SHALL BE COMPRESSED TIGHTLY TOGETHER BY MEANS OF SPRING ELEMENTS THAT ARE BUILT INTO THE FILTER RETAINING CONSTRUCTION.
4. CHANNELS, RACKS AND OTHER FILTER-RETAINING CONSTRUCTIONS SHALL BE SEALED TO THE DUCT OR HOUSING OF THE HVAC EQUIPMENT SERVED BY THE FILTERS.
5. FILTER ACCESS DOORS IN DUCTS AND HVAC EQUIPMENT SHALL BE DESIGNED TO LIMIT THE AMOUNT OF AIRFLOW THAT BYPASSES THE FILTERS.
6. FIELD OR SHOP-FABRICATED SPACERS SHALL NOT BE INSTALLED FOR THE PURPOSE OF REPLACING THE INTENDED SIZE FILTER WITH A SMALLER SIZE FILTER.
7. GASKETS AND SEALS SHALL BE ACCESSIBLE FOR REPAIR, MAINTENANCE AND REPLACEMENT.

803.1 CONSTRUCTION PHASE REQUIREMENTS. THE VENTILATION OF BUILDINGS DURING THE CONSTRUCTION PHASE SHALL BE IN ACCORDANCE WITH SECTIONS 803.1.1 THROUGH 803.1.3.

803.1.1 DUCT OPENINGS. DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL, OR SHALL BE CLOSED BY AN APPROVED METHOD TO REDUCE THE AMOUNT OF DUST AND DEBRIS THAT COLLECTS IN THE SYSTEM FROM THE TIME OF ROUGH-IN INSTALLATION AND UNTIL STARTUP OF THE HEATING AND COOLING EQUIPMENT. DUST AND DEBRIS SHALL BE CLEANED FROM DUCT OPENINGS PRIOR TO SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.

803.1.2 INDOOR AIR QUALITY DURING CONSTRUCTION. TEMPORARY VENTILATION DURING CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 803.1.2.1 THROUGH 803.1.2.3.

803.1.2.1 VENTILATION. VENTILATION DURING CONSTRUCTION SHALL BE ACHIEVED THROUGH OPENINGS IN THE BUILDING ENVELOPE USING ONE OR MORE OF THE FOLLOWING METHODS:
1. NATURAL VENTILATION IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE OR THE INTERNATIONAL MECHANICAL CODE.
2. FANS THAT PRODUCE A MINIMUM OF THREE AIR CHANGES PER HOUR.
3. EXHAUST IN THE WORK AREA AT A RATE OF NOT LESS THAN 0.05 CFM/FT² (0.24 L/S/M²) AND NOT LESS THAN 10 PERCENT GREATER THAN THE SUPPLY AIR RATE SO AS TO MAINTAIN NEGATIVE PRESSURIZATION OF THE SPACE.

803.1.2.2 PROTECTION OF HVAC SYSTEM OPENINGS. HVAC SUPPLY AND RETURN DUCT AND EQUIPMENT OPENINGS SHALL BE PROTECTED DURING DUCT-PRODUCING OPERATIONS.

803.1.2.3 RETURN AIR FILTERS. WHERE A FORCED AIR HVAC SYSTEM IS USED DURING CONSTRUCTION, NEW RETURN AIR FILTERS SHALL BE INSTALLED PRIOR TO SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.

803.1.3 CONSTRUCTION PHASE DUCTLESS SYSTEM OR FILTER. WHERE SPACES ARE CONDITIONED DURING THE CONSTRUCTION PHASE, SPACE CONDITIONING SYSTEMS SHALL BE OF THE DUCTLESS VARIETY, OR FILTERS FOR THE DUCTED SYSTEMS SHALL BE RATED AT MERV 8 OR HIGHER IN ACCORDANCE WITH ASHRAE 52.2, AND SYSTEM EQUIPMENT SHALL BE DESIGNED TO BE COMPATIBLE, DUCT SYSTEM DESIGN SHALL ACCOUNT FOR PRESSURE DROP ACROSS THE FILTER.

803.2 THERMAL ENVIRONMENTAL CONDITIONS FOR HUMAN OCCUPANCY. BUILDING SHALL BE DESIGNED IN COMPLIANCE WITH ASHRAE 55, SECTIONS 6.1, "DESIGN" AND 6.2, "DOCUMENTATION."

EXCEPTION: SPACES WITH SPECIAL REQUIREMENTS FOR PROCESSES, ACTIVITIES, OR CONTENTS THAT REQUIRE A THERMAL ENVIRONMENT OUTSIDE OF THAT WHICH HUMANS FIND THERMALLY ACCEPTABLE, SUCH AS FOOD STORAGE, NATATORIUMS, SHOWER ROOMS, SAUNAS AND DRYING ROOMS.

803.3 ISOLATION OF POLLUTANT SOURCES. THE ISOLATION OF POLLUTANT SOURCES RELATED TO PRINT, COPY AND JANITORIAL ROOMS, GARAGES AND HANGERS SHALL BE IN ACCORDANCE WITH SECTION 803.3.1.

803.3.1 PRINTER, COPIER AND JANITORIAL ROOMS. ENCLOSED ROOMS OR SPACES THAT ARE OVER 100 SQUARE FEET (9.3 M²) IN AREA AND THAT ARE USED PRIMARILY AS A PRINT OR COPY FACILITY CONTAINING FIVE OR MORE PRINTERS, COPY MACHINES, SCANNERS, FACSIMILE MACHINES OR SIMILAR MACHINES IN ANY COMBINATION, AND ROOMS USED PRIMARILY AS JANITORIAL ROOMS OR CLOSETS WHERE THE USE OR STORAGE OF CHEMICALS OCCURS, SHALL COMPLY WITH ALL OF THE FOLLOWING:

1. THE ENCLOSING WALLS SHALL EXTEND FROM THE FLOOR SURFACE TO THE UNDERSIDE OF THE FLOOR, ROOF DECK OR SOLID CEILING ABOVE AND SHALL BE CONSTRUCTED TO RESIST THE PASSAGE OF AIRBORNE CHEMICAL POLLUTANTS AND SHALL BE CONSTRUCTED AND SEALED AS REQUIRED FOR 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION ASSEMBLIES. ALTERNATIVELY, FOR JANITORIAL ROOMS AND CLOSETS, ALL CHEMICALS SHALL BE STORED IN APPROVED CHEMICAL SAFETY STORAGE CABINETS.
2. DOORS IN THE ENCLOSING WALLS SHALL BE AUTOMATIC OR SELF-CLOSING.
3. AN HVAC SYSTEM SHALL BE PROVIDED THAT: PROVIDES SEPARATE EXHAUST AIRFLOW TO THE OUTDOORS AT A RATE OF NOT LESS THAN 0.50 CFM PER SQUARE FOOT (2.4 L/S/M²); THAT MAINTAINS A NEGATIVE PRESSURE OF NOT LESS THAN 7 PA WITHIN THE ROOM; AND THAT PROHIBITS THE RE-CIRCULATION OF AIR FROM THE ROOM TO OTHER PORTIONS OF THE BUILDINGS.

803.4 FILTERS. FILTERS FOR AIR CONDITIONING SYSTEMS THAT SERVE OCCUPIED SPACES SHALL BE RATED AT MERV 11 OR HIGHER, IN ACCORDANCE WITH ASHRAE STANDARD 52.2, AND SYSTEM EQUIPMENT SHALL BE DESIGNED TO BE COMPATIBLE. THE AIR HANDLING SYSTEM DESIGN SHALL ACCOUNT FOR PRESSURE DROP ACROSS THE FILTER. THE PRESSURE DROP ACROSS CLEAN MERV 11 FILTERS SHALL BE NOT GREATER THAN 0.45 IN. W.C. AT 500 FPM (412 PA AT 2.54 M/S) FILTER FACE VELOCITY. FILTER PERFORMANCE SHALL BE SHOWN ON THE FILTER MANUFACTURER'S DATA SHEET.

EXCEPTION: FILTERS FOR AIR CONDITIONING SYSTEMS THAT SERVE OCCUPIED SPACES IN MULTI-FAMILY RESIDENTIAL UNITS OR LIGHT COMMERCIAL SPACES SHALL BE RATED AT MERV 6 FOR SYSTEMS RATED AT 30,000 BTU/H OR LESS AND MERV 8 FOR SYSTEMS RATED OVER 30,000 BTU/H BUT NO GREATER THAN 60,000 BTU/H.

GRILLES - REGISTERS - DIFFUSERS										
DESIG.	DUTY	TYPE	MOUNTING LOCATION	MATERIAL	VOLUME CONTROL	FINISH	AIR PATTERN CONTROL	METHOD OF SUPPORT	EQUAL TO MANUFACTURER AND MODEL NO.	REMARKS
A	SUPPLY	SQUARE PLAQUE	LAY-IN CLG	STEEL	NO	OFF WHITE	YES	T-BAR	TITUS OMNI	SEE NOTE 1.2
B	RETURN	PERFORATED	LAY-IN CLG	STEEL	NO	OFF WHITE	NO	T-BAR	TITUS PAR 24X24 FACE	SEE NOTE 2
C	SUPPLY	SLOT	LAY-IN CLG	STEEL	NO	BLACK	YES	T-BAR	TITUS TBD80 (3)1" SLOTS	SEE NOTE 1,2,3,4

NOTES:
1) NECK SIZES AS FOLLOWS:

DESIGNATION "A"	NECK SIZE	DESIGNATION "C"	NECK SIZE	LENGTH
000-300	8"RD	000-195	8"RD	2'-0"
305-435	10"RD	200-280	8"RD	4'-0"
440-600	12"RD	000-220	10"RD	2'-0"
600-745	14"RD	225-320	10"RD	4'-0"

2) NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN NEW MODEL NUMBER AND EXISTING NUMBER PRIOR TO PURCHASE.
3) COORDINATE NEW INACTIVE SECTIONS NEXT TO SLOT DIFFUSER WITH ARCHITECT PRIOR TO BIDDING.
4) INACTIVE SECTIONS OF SLOT DIFFUSERS SHALL HAVE SHEET METAL LIGHT-PROOF SIGHT GUARDS AND SHALL BE USED FOR RETURN AIR.
5) APPROVED MANUFACTURERS: PRICE, TITUS, NAILOR, & KRUEGER.

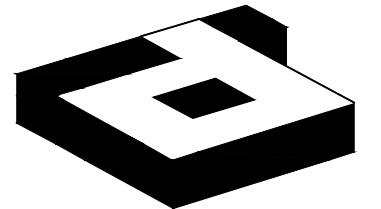
VAV BOXES WITH ELECTRIC HEAT											
DESIG.	SERVES	DESIGN COOLING CFM	OUTSIDE AIR CFM	NOMINAL COOLING CAPACITY	NOMINAL HEATING CAPACITY	VOLTPH	HERTZ	MCA	MOCF	EQUAL TO MANUFACTURER	MODEL NO
FCU-5-3	CONFERENCE 512	260	120	60000	67000	208/1	60	1.05	15	MITSUBISHI	TPEFY-P008NMA143A
FCU-5-4	CONFERENCE 511	430	120	12000	13500	208/1	60	1.20	15	MITSUBISHI	TPEFY-P012NMA143A
FCU-5-5	OFFICE 510	705	20	18000	20000	208/1	60	1.56	15	MITSUBISHI	TPEFY-P018NMA143A
FCU-5-6	OFFICES 507-509	810	60	18000	20000	208/1	60	1.56	15	MITSUBISHI	TPEFY-P024NMA143A
FCU-5-7	OFFICES 503-506	780	80	18000	20000	208/1	60	1.56	15	MITSUBISHI	TPEFY-P024NMA143A
FCU-5-8	ENTRY 500; BREAK 502	680	180	15000	17000	208/1	60	1.45	15	MITSUBISHI	TPEFY-P030NMA143A
FCU-5-9	ROOM 515-519	490	40	15000	1700	208/1	60	1.45	15	MITSUBISHI	TPEFY-P012NMA143A
FCU-5-10	CONFERENCE 501	700	240	18000	20000	208/1	60	2.73	15	MITSUBISHI	TPEFY-P024NMA143A
FCU-5-11	OPEN OFFICE 513; COPY 514	920	80	24000	27000	208/1	60	2.73	15	MITSUBISHI	TPEFY-P024NMA143A

NOTES: (APPLICABLE TO ALL BOXES)
1) NOMINAL COOLING ARE BASED ON INDOOR COIL EAT OF 80/67 (DBWB), OUTDOOR OF 95 DEGREES F (DB).
2) NOMINAL HEATING ARE BASED ON INDOOR COIL EAT OF 70 DEGREES F (DB), OUTDOOR OF 43 DEGREES F (WB).
3) VERIFY OUTDOOR UNIT FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITIES, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES.
4) FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT FOR ASSOCIATED SYSTEM PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE.
5) CONTROLS TO BE CLIMATEC DDC CONTROLS. REFER TO SEQUENCE OF OPERATION FOR VRF CONTROLS AND CONNECTION TO BMS.
6) APPROVED MANUFACTURERS ARE: MITSUBISHI, SAMSUNG, CARRIER, DAKIN, TRANE AND LG.

HVAC SYMBOLS	
SYMBOL	DESCRIPTION
150	REDISTRIBUTE AIR TO EXISTING DIFFUSER AS INDICATED ON PLAN
TOX10 100A	INDICATES SIZE, CFM, AND DIFFUSER TYPE
	NEW CEILING SUPPLY DIFFUSER
	NEW RETURN AIR/EXHAUST GRILLE
	EXISTING RETURN AIR/EXHAUST GRILLE
	NEW SLOT DIFFUSER
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	EXISTING TO REMAIN
----	REMOVE EXISTING AS INDICATED
	CAP EXISTING DUCT
	MANUAL VOLUME CONTROL DAMPER
	DUCT TRANSITION
FD	FIRE (SMOKE) DAMPER (24V ACTUATOR)
	NEW OR RELOCATED THERMOSTAT
	EXISTING THERMOSTAT
	FLEXIBLE DUCT CONNECTION
	INDICATES A WALL TO DECK (FOR COORDINATION PURPOSE ONLY-REFER TO ARCHITECTS PLANS FOR REQUIREMENTS)

GENERAL NOTES:

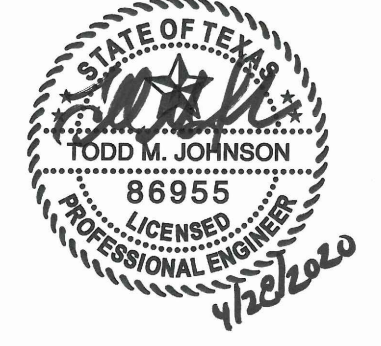
- ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE BUILDING TENANT CONSTRUCTION GUIDE. COORDINATE WITH BUILDING MANAGEMENT/OWNER FOR ACCESS TO ANY TENANT LEASE SPACES THAT MIGHT BE REQUIRED FOR THE INSTALLATION. UNLESS DIRECTED BY LANDLORD ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR 1 YEAR.
- EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY SITE SURVEY AND PREVIOUS RECORD DRAWINGS. HOWEVER, IT IS NOT INTENDED TO BE A TRUE REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BID.
- CONTRACTOR SHALL ENGAGE AN INDEPENDENT AIR BALANCING COMPANY TO OBTAIN AIR QUANTITIES SHOWN ON DRAWING. AT COMPLETION OF AIR BALANCE, BALANCING DAMPER SHALL BE TIGHTENED AND PROPERLY SEALED WITH FOIL TAPE.
- ALL MEDIUM AND LOW PRESSURE DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED, INSTALL AND SEAL MEDIUM PRESSURE DUCTWORK FOR 3"W.G. AND LOW PRESSURE DUCTWORK FOR 1"W.G. IN ACCORDANCE WITH SMACNA STANDARD. DUCTWORK SHALL BE INSULATED WITH FIBERGLASS BLANKET WITH FOIL FACED VAPOR BARRIER TO MEET IECC REQUIREMENT (MIN R5 VALUE).
- ALL SUPPLY AND RETURN DUCT SIZES ARE FREE AREAS.
- INDIVIDUAL DUCT RUN-OUTS TO EACH DIFFUSER SHALL BE SIZED IN ACCORDANCE TO THE DIFFUSER NECK SIZE FOUND IN THE GRILLES-REGISTERS-DIFFUSERS SCHEDULE UNLESS NOTED OTHERWISE.
- OFFSET DUCTS INTO JOIST SPACE FOR CLEARANCE WHERE SPACE ABOVE CEILING IS NOT SUFFICIENT FOR DUCTS TO CROSS OTHER DUCTS OR WORK OF OTHER TRADES.
- INSULATED FLEX DUCT IN THE LOW PRESSURE SYSTEM SHALL BE LIMITED TO AN OVERALL LENGTH OF SIX (6) FEET WITH A MAXIMUM OF A 90 DEGREE CHANGE IN DIRECTION. SUPPORTS SHALL BE SADDLE BANDED TO STRUCTURE. SUPPORTING FROM FIRE PROTECTION PIPING, ELECTRICAL CONDUIT OR CEILING SUPPORT WIRES IS NOT ACCEPTABLE.
- ENSURE NEC CLEARANCES ARE MAINTAINED INCLUDING 36" IN FRONT OF 0-208V POWER AND 42" IN FRONT OF 277/480V POWER.
- ALL ENCLOSED ROOMS (INTERIOR AND PERIMETER) SHALL HAVE RETURN AIR PATH. ROOMS WITH ALL WALLS TO DECK SHALL HAVE LINED SHEET METAL RETURN AIR BOOTS PLACED IN WALL ABOVE CEILING SIZED FOR 500 FPM MAXIMUM. FIRE RATED WALLS SHALL HAVE FIRE DAMPERS WITHIN THE DUCT PER LOCAL CODE REQUIREMENTS. FIRE DAMPERS AND FIRE-SMOKE DAMPERS SHALL BE FREE AREA/OUT OF AIRSTREAM TYPE. ALL MOTORIZED DAMPERS SHALL BE FREE AREA/OUT OF AIRSTREAM TYPE.
- PIPES AND DUCTS TO BE COORDINATED ON JOB WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS. ROUTE AS HIGH AS PHYSICALLY POSSIBLE.
- COORDINATE CEILING DIFFUSERS AND GRILLES WITH LIGHTING FIXTURES. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- THERMOSTATS TO BE MOUNTED 48" ABOVE FINISHED FLOOR LEVEL UNLESS NOTED OTHERWISE ON THE PLANS. CONTRACTOR SHALL COORDINATE LOCATION OF THERMOSTATS WITH ARCHITECT IN FIELD.
- REPAIR AND PATCH CONSTRUCTION DAMAGED DUE TO THE DEMOLITION OF THIS PROJECT, USING SAME METHODS AND MATERIALS TO MATCH EXISTING.
- EVAPORATORS SHALL HAVE A PRIMARY INSULATED CONDENSATE DRAIN LINE SLOPED 1/8"/FT, EXTENDED TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM OR MOP SINK. GALVANIZED SHEET METAL SECONDARY DRAIN PANS SHALL HAVE LEAK DETECTION TAPE IN PAN AND ROUTE THE PAN'S INSULATED CONDENSATE DRAIN LINE SLOPED 1/8"/FT NEXT TO BUT INDEPENDENT OF PRIMARY DRAIN LINES.
- PROVIDE TEMPORARY HIGH EFFICIENCY FILTER MEDIA ON MAIN RETURN AIR AND EXHAUST FROM FLOOR AT BEGINNING OF PROJECT AND REPLACED AT TWO (2) WEEK INTERVALS UNTIL PROJECT COMPLETION AT WHICH TIME THE FILTER MEDIA SHALL BE REMOVED.
- FLEXIBLE DUCTS SHALL BE SIMILAR AND EQUAL TO THERMOFLEX: TYPE M-KE. FLEXIBLE DUCTS SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF UL-181, NFPA 90-A AND OTHER GOVERNING AUTHORITIES.
- FLEXIBLE DUCT BETWEEN DUCT AND AC UNITS AND EXHAUST FANS SHALL BE EQUAL TO VENTIFABRICS "VENTGLAS".
- AIR CONDITIONING COOLING CONDENSATE PIPING TO BE ONE-HALF INCH THICK ARMAFLEX. FITTINGS SHALL BE PRE-MOLDED OF THE SAME MATERIAL. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- DUCTLINER SHALL BE 1-INCH ACOUSTICAL DUCT LINING IN ACCORDANCE WITH SMACNA STANDARDS. DUCT LINING SHALL BE OWENS-CORNING FIBERGLAS "AEROFLEX" NO. 200 OR EQUAL.
- ALL EXISTING DUCTWORK SHALL BE FIELD VERIFIED TO BE INSULATED AND IN GOOD CONDITION, ANY TORN, DAMAGED OR MISSING INSULATION WILL BE REPLACED. EXISTING CONTROLS SHALL BE CONFIRMED TO BE IN WORKING CONDITION.



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PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5,819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
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NO.	ISSUED FOR:	DATE:

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PROJECT MGR. TODD JOHNSON

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DRAWING TITLE:
MECHANICAL
NOTES & SYMBOLS

DRAWING NUMBER:

M0.01

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DIVISION 23 - HEATING VENTILATING AND AIR CONDITIONING

SECTION 230500 - COMMON WORK RESULTS

PART 1 - GENERAL

- 1.1 GENERAL NOTES AND SCOPE OF WORK
A. REFER TO SECTION 220500 FOR INFORMATION RELATED TO HVAC GENERAL CONDITIONS, MISCELLANEOUS EQUIPMENT AND MATERIALS, AND CONSTRUCTION REQUIREMENTS.
1.2 RELATED SECTIONS
A. SECTIONS 230523, 230529, 230553 AND 230700 ARE APPLICABLE BUT THEY DO NOT APPEAR IN THESE DIVISION 23 SPECIFICATIONS. REFER TO GENERAL NOTES.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 230548 - VIBRATION CONTROLS

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 230500.

PART 2 - PRODUCTS

- 2.1 EQUIPMENT PADS
A. PADS SHALL BE 3/4 INCH WATER RESISTANT NEOPRENE WITH WAFFLE PATTERN, MASON TYPE WSW, OR EQUAL.
2.2 ELASTOMERIC HANGERS
A. HANGER SHALL CONSIST OF RODS WITH STEEL BOX HOUSING NEOPRENE ISOLATION ELEMENT AND SPRING, MASON SERIES 30N, OR EQUAL.
2.3 RESTRAINED SPRING ISOLATORS
A. ISOLATORS SHALL UTILIZE A STEEL BASE WITH WAFFLED NEOPRENE PAD, WELDED STEEL ENCLOSURE WITH SPRING AND RESTRAINING BOLTS, MASON TYPE SLR, OR EQUAL.
2.4 ROOF CURB ISOLATORS
A. AS PART OF THE ROOF CURB, PROVIDE SPRING ISOLATORS WITH WATER-TIGHT DESIGN, RETRAINED SPRINGS AND NEOPRENE PADS, MASON TYPE RSC, OR EQUAL.
2.5 INERTIA BASES
A. PROVIDE STEEL POURING FORM FOR REINFORCED CONCRETE BLOCKS WITH FLOOR MOUNTED SPRINGS, MASON KSL, OR EQUAL.

PART 3 - EXECUTION

- 3.1 SCHEDULE
A. EQUIPMENT PADS - SMALL FLOOR MOUNTED EQUIPMENT OR PACKAGED EQUIPMENT WITH INTERNAL ISOLATION.
B. ELASTOMERIC HANGERS - SUSPENDED AIR HANDLING UNITS, EXHAUST FANS, TERMINAL UNITS, HEAT PUMPS, PUMPS, ETC.
C. RESTRAINED SPRING ISOLATORS - FLOOR MOUNTED FANS GREATER THAN 1/4 HP.
D. ROOF CURB ISOLATORS - FACTORY FABRICATED ROOFTOP UNITS.
E. INERTIA BASES - FLOOR MOUNTED PUMPS GREATER THAN 1/4 HP.
3.2 INSTALLATION
A. INSTALL VIBRATION CONTROLS PER THE MANUFACTURER'S INSTRUCTIONS.

END OF SECTION

SECTION 230553 - IDENTIFICATION

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 230500.
B. LABEL ALL NEW EQUIPMENT AND PIPING SYSTEMS.

PART 2 - PRODUCTS

- 2.1 PIPE LABELS
A. PRETENSION PIPE LABELS OF SEMI-RIGID PLASTIC FORMED TO COVER THE FULL CIRCUMFERENCE OF PIPE.
B. IDENTIFY THE SERVICE AND DIRECTION OF FLOW. LABELS SHALL CONTAIN AT LEAST 1/2 INCH HIGH LETTERING AND BE PLACED SO THEY ARE EASY TO READ.
2.2 VALVE TAGS
A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND CHAIN FOR ATTACHMENT TO VALVE.
2.3 EQUIPMENT LABELS
A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND HOLES FOR ATTACHMENT TO EQUIPMENT.

PART 3 - EXECUTION

- 3.1 PIPE LABELS
A. INSTALL PIPE LABELS WHERE PIPING IS EXPOSED OR ABOVE AN ACCESSIBLE CEILING AT MAXIMUM 20 FT. CENTERS.
3.2 VALVE TAGS
A. ATTACH TAGS TO VALVES USING CHAIN. PROVIDE A VALVE SCHEDULE FOR MOUNTING IN THE MECHANICAL ROOM.
3.3 EQUIPMENT LABELS
A. PERMANENTLY ATTACH LABELS TO EQUIPMENT. LOCATE WHERE LABEL CAN BE EASILY SEEN AND READ.

END OF SECTION

SECTION 230593 - TESTING ADJUSTING AND BALANCING

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. THE WORK INCLUDED IN THIS SECTION CONSISTS OF FURNISHING ALL LABOR, MATERIALS, INSTRUMENTS, TOOLS, AND SERVICES REQUIRED IN CONNECTION WITH THE TESTING, ADJUSTING AND BALANCING (TAB) OF THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS AS DESCRIBED IN THE MECHANICAL SPECIFICATIONS AND/OR SHOWN ON THE MECHANICAL PLANS, OR REASONABLY IMPLIED THERE FROM.
B. THE TAB FIRM SHALL HAVE A LICENSED PROFESSIONAL ENGINEER SUPERVISING ALL WORK AND THE FIRM SHALL HOLD A CURRENT AA BC OR NEHB CERTIFICATION.
C. REFER TO SECTION 230500.
1.2 START-UP, TEST AND ADJUST
A. PROVIDE ALL TESTS OF EQUIPMENT AND SYSTEMS REQUIRED TO PROVE COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. OWNER SHALL BE MADE COMPLETELY FAMILIAR WITH THE COMPLETE WORKING OF ALL THE MECHANICAL SYSTEMS.
B. THE TESTS SHALL DEMONSTRATE THE SPECIFIED CAPACITIES AND OPERATION OF ALL EQUIPMENT AND MATERIALS COMPRISING THE SYSTEMS. ALL DATA REQUIRED BY THESE SPECIFICATIONS SHALL BE PREPARED ON TYPED FORMS AND SUBMITTED TO THE ENGINEER FOR APPROVAL. COMPLETE APPROVAL WILL BE NECESSARY BEFORE FINAL PAYMENT CAN BE MADE. THE CONTRACTOR SHALL THEN MAKE AVAILABLE SUCH INSTRUMENTS NECESSARY FOR SPOT CHECKS ON THE SYSTEM.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 3.1 HVAC SYSTEM
A. THE HVAC CONTRACTOR SHALL WORK IN CONJUNCTION WITH THE TAB CONTRACTOR TO START-UP AND OPERATE ALL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE AIR AND WATER TEST AND BALANCE REPORT.
B. TAB CONTRACTOR SHALL MEASURE CFM AT ALL DIFFUSERS, REGISTERS AND GRILLES, AND HVAC UNITS, AS WELL AS WATER FLOWS AT COILS AND PUMPS, TO ASSURE THAT THEY MATCH THE QUANTITIES SHOWN ON THE PLANS (PLUS OR MINUS 5 PERCENT). CONFIRM ALL SEQUENCES OF OPERATION ARE PERFORMING CORRECTLY.
C. TAB CONTRACTOR SHALL CALIBRATE ALL EQUIPMENT AND SENSORS TO WORK PROPERLY AND GIVE CORRECT INFORMATION TO THE BMS SYSTEM.

END OF SECTION

SECTION 230900 - CONTROLS

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 230500.

PART 2 - PRODUCTS

- 2.1 CONTROLS SYSTEM
A. PROVIDE NEW, MODIFY OR EXTEND AUTOMATIC TEMPERATURE CONTROLS TO ALL NEW EQUIPMENT SHOWN ON THE DRAWINGS.
B. REFER TO THE DRAWINGS FOR ANY SPECIAL SEQUENCES OF CONTROL AND LOCATION OF EQUIPMENT.
C. REMODEL PROJECTS SHALL UTILIZE EQUIPMENT BY THE SAME MANUFACTURER AS CURRENTLY EXISTS.

PART 3 - EXECUTION

- 3.1 DESIGN AND LAYOUT
A. THE CONTROL SYSTEM DESIGN AND LAYOUT SHALL BE PERFORMED BY A FACTORY AUTHORIZED AGENT OF THE MANUFACTURER USED.
3.2 SYSTEM OPERATION
A. AT THE CONCLUSION OF WORK, ALL EQUIPMENT AND SYSTEMS SHALL BE PROVIDED TO THE ENGINEER TO OPERATE IN ACCORDANCE WITH THE NEW OR EXISTING MAIN CONTROL PANEL AND NEW/EXISTING SEQUENCES OF OPERATION ON THE DRAWINGS.
B. PROVIDE ALL WIRING REQUIRED TO CONNECT INPUT/OUTPUT DEVICES TO CONTROL PANELS.
C. TEST AND ADJUST ALL DEVICES AND DOCUMENT CALIBRATION.
D. PROVIDE NECESSARY INSTRUCTION TO THE OWNER'S PERSONNEL.

END OF SECTION

SECTION 232300 - REFRIGERANT PIPING

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 230500.

PART 2 - PRODUCTS

- 2.1 COPPER PIPE
A. PIPING SHALL BE COPPER TYPE ACR WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS.

PART 3 - EXECUTION

- 3.1 INSTALLATION
A. REFER TO SECTION 230529 FOR METHODS OF SUPPORTING ALL PIPING.

END OF SECTION

SECTION 233113 - DUCTWORK

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 230500.

PART 2 - PRODUCTS

- 2.1 GENERAL
A. CONCEALED DUCTWORK SHALL BE CONSTRUCTED OF NEW, PRIME GRADE, CONTINUOUS HOT-DIP MILL GALVANIZED, LOCK-FORMING, QUALITY STEEL. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
B. WHERE DUCTS EXPOSED TO VIEW PASS THROUGH WALLS, FLOORS OR CEILINGS, PROVIDE SHEET METAL COLLARS TO COVER VOIDS AROUND THE DUCTS.
C. SQUARE AND ROUND ELBOWS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SMACNA STANDARDS. ELBOWS NOT CONSTRUCTED WITH A CENTERLINE RADIUS OF AT LEAST 50 PERCENT OF THE DUCT WIDTH OR DIAMETER SHALL BE PROVIDED WITH TURNING VANES IN ACCORDANCE WITH SMACNA STANDARDS.
D. "FIBERBOARD" DUCTWORK WILL NOT BE ACCEPTED ON THIS PROJECT.
2.2 MEDIUM PRESSURE DUCT CONSTRUCTION
A. UNLESS NOTED OTHERWISE, MEDIUM PRESSURE DUCTS SHALL BE CONSTRUCTED TO A PRESSURIZATION CLASSIFICATION OF THREE (3) INCHES WG POSITIVE.
B. ALL ROUND MEDIUM PRESSURE DUCTS SHALL BE SPIRAL TYPE.
2.3 LOW PRESSURE DUCT CONSTRUCTION
A. LOW PRESSURE DUCTS CONNECTING SMALL AIR HANDLING EQUIPMENT, SHALL BE CONSTRUCTED TO A PRESSURIZATION CLASSIFICATION OF TWO (2) INCHES WG, POSITIVE OR NEGATIVE AS APPROPRIATE. THESE LOW PRESSURE ROUND DUCTS SHALL BE SPIRAL TYPE.
B. DUCTWORK DOWN STREAM OF AIR TERMINAL UNITS SHALL BE CONSTRUCTED TO A PRESSURE CLASSIFICATION OF ONE (1) INCHES WG POSITIVE. THESE LOW PRESSURE ROUND DUCTS MAY BE SPIRAL OR SNAP-LOCK TYPE.
C. SHOP FABRICATED DUCTS SHALL BE CONSTRUCTED, BRACED AND REINFORCED IN ACCORDANCE WITH SMACNA STANDARDS.
2.4 DUCT SEALING
A. SEAL ALL DUCTWORK ON THE PROJECT TO SMACNA CLASSIFICATION A.
2.5 FLEXIBLE DUCTS
A. FLEXIBLE DUCTS SHALL BE SIMILAR AND EQUAL TO THERMOFLEX TYPE M-KE AND SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF UL-181, NFPA 90-A AND OTHER GOVERNING AUTHORITIES.
B. FLEXIBLE DUCTS SHALL BE FACTORY INSULATED WITH A NOMINAL 1 INCH THICKNESS OF FIBERGLASS INSULATION, PRODUCING A THERMAL CONDUCTANCE (C") OF 0.23. DUCTS SHALL HAVE A POSITIVE INTERIOR AIR SEAL PERMANENTLY BONDED TO A COATED HIGH CARBON SPRING STEEL HELIX, ALL SHEATHED IN AN OUTER VAPOR BARRIER OF FIBERGLASS REINFORCED FILM LAMINATE.
C. FLEXIBLE DUCTS SHALL BE RATED FOR OPERATING PRESSURE OF PLUS 6 INCHES WG THROUGH 10 INCH DIAMETER, PLUS 4 INCHES WG THROUGH 16 INCH DIAMETER AND - 2 INCHES WG FOR ALL SIZES.
A. FLEXIBLE DUCTS TO DIFFUSERS AND GRILLES SHALL BE LIMITED TO 6 FOOT LENGTHS AND A MAXIMUM OF ONE (1) 90 DEGREE CHANGE IN DIRECTION. MEDIUM PRESSURE DUCTS SERVING TERMINAL UNITS SHALL BE LIMITED TO 2 FOOT LENGTHS WITH NO ELBOWS.
2.6 FLEXIBLE DUCT FABRIC
A. PROVIDE VENTFABRICS "VENTGLAS", OR EQUAL, 30 OZ PER SQ YD, BETWEEN SHEET METAL DUCTS AND AIR HANDLING EQUIPMENT, INCLUDING ALL FANS, AND POWER TYPE VENTILATORS.
2.7 DAMPERS
A. DAMPER AND SPLITTER HARDWARE FOR LOW PRESSURE DUCTS SHALL BE:
END BEARINGS - VENTLOK #607
REGULATOR FINISHED AREAS - VENTLOK #666, PLAIN COVER
REGULATOR UNFINISHED AREAS - VENTLOK #640, 3/8 INCH.
B. VOLUME DAMPERS SHALL BE LOCATED AT BRANCH TAKE-OFFS AT MAIN TRUNK DUCT. NO DAMPERS (SPLITTER DAMPERS) SHALL BE LOCATED IN THE CENTER OF DUCTS.

PART 3 - EXECUTION

3.1 FABRICATION

- A. DUCTWORK SHOWN ON THE DRAWINGS, SPECIFIED, OR REQUIRED FOR HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS SHALL BE CONSTRUCTED AND ERECTED IN A FIRST CLASS MANNER.
B. DUCTS SHALL BE REINFORCED IN ACCORDANCE WITH THE APPROPRIATE SMACNA STANDARDS TO PREVENT BUCKLING, BREATHING, VIBRATION AND UNNECESSARY NOISE.
C. PROVIDE MANUALLY OPERATED VOLUME CONTROL DAMPERS IN DUCT BRANCHES, FOR PROPER BALANCING OF AIR DISTRIBUTION. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE SMACNA STANDARDS.
D. PROVIDE HINGED ACCESS DOORS IN DUCTWORK FOR ACCESS TO ALL SMOKE DETECTORS, SENSORS, AND OTHER CONTROL DEVICES, MANUAL DAMPERS, AND FOR CLEANING OPERATIONS. FACTORY FABRICATED DOORS SIMILAR AND EQUAL TO MILCOR AND MEETING THESE SPECIFICATIONS SHALL BE ACCEPTABLE.
E. WHERE DUCTS CONNECT TO FANS, INCLUDING ROOF EXHAUSTERS PROVIDE FLEXIBLE DUCT FABRIC CONNECTIONS. PROVIDE A MINIMUM OF 1/2 INCH SLACK IN THE CONNECTIONS, AND A MINIMUM OF 2-1/2 INCH DISTANCE BETWEEN THE EDGES OF THE DUCTS, PLUS AN ADDITIONAL MINIMUM OF 1 INCH OF SLACK FOR EACH INCH OF STATIC PRESSURE ON THE FAN SYSTEM.
F. PROVIDE SCREENS ON DUCTS, FANS AND OPENINGS WHICH LEAD TO, OR ARE OUTDOORS. SCREENS SHALL BE 16 GAUGE, 1/2 INCH MESH, IN REMOVABLE GALVANIZED STEEL FRAMES.
G. FURNISH TEST OPENINGS WITH COVERS IN EACH DUCT FOR TAKING READINGS OF AIR VELOCITIES AND PRESSURES IN DUCTS. REFER TO THE APPROPRIATE SMACNA STANDARD FOR COVER CONSTRUCTION.
3.2 DUCT SUPPORTS
A. HORIZONTAL AND VERTICAL SHEET METAL DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH THE APPROPRIATE SMACNA STANDARDS.
B. HANGER DESIGN AND METHODS OF HANGING AND SUPPORTING SHALL BE COMPATIBLE WITH THE STRUCTURE.

END OF SECTION

SECTION 233713 - DIFFUSERS, REGISTERS AND GRILLES

PART 1 - GENERAL

- 1.1 GENERAL NOTES
A. REFER TO SECTION 230500

PART 2 - PRODUCTS

- 2.1 AIR INLETS AND OUTLETS
A. GRILLES, REGISTERS, CEILING OUTLETS, AND CEILING INLETS SHALL BE AS INDICATED ON THE DRAWING, AND SHALL BE PROVIDED WITH HEAVY DUTY SPONGE, OR SOFT FELT GASKETS. THE THROW SHALL BE SUCH THAT THE VELOCITY AT THE END OF THE THROW IN THE FIVE (5) FOOT OCCUPANCY ZONE WILL NOT BE MORE THAN 50 FPM NOT LESS THAN 25 FPM. NOISE LEVELS (NC CURVE) SHALL NOT EXCEED 40.
B. IF PRODUCTS OF A MANUFACTURER OTHER THAN THE ONES INDICATED ON THE DRAWINGS ARE USED, THE SIZES SHOWN ON THE DRAWING SHALL BE CHECKED FOR PERFORMANCE, NOISE LEVEL, FACE VELOCITY, THROW AND PRESSURE DROP BEFORE THE SUBMITTAL IS MADE. SELECTIONS SHALL MEET THE MANUFACTURER'S OWN PUBLISHED DATA FOR THE ABOVE PERFORMANCE CRITERIA. SHOULD DEVICES OTHER THAN THOSE SCHEDULED BY NAME BE FURNISHED, THE MANUFACTURER SHALL DEMONSTRATE COMPLIANCE WITH NOISE CRITERIA, ON REQUEST, TO THE ARCHITECT'S SATISFACTION.
C. WHERE CALLED FOR IN SCHEDULES, THE GRILLES, REGISTERS, CEILING OUTLETS, AND CEILING INLETS SHALL BE PROVIDED WITH DEFLECTING DEVICES AND MANUAL DAMPERS. THESE SHALL BE STANDARD PRODUCTS OF THE MANUFACTURER, SUBJECT TO REVIEW BY THE ARCHITECT, AND SHALL BE SIMILAR AND EQUAL TO THOSE SCHEDULED.

PART 3 - EXECUTION

3.1 INSTALLATION

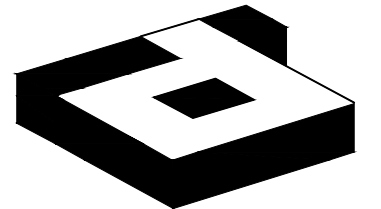
- A. LOCATIONS OF OUTLETS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE THE EXACT LOCATION WITH REFLECTED CEILING PLAN AND OTHER TRADES.
B. VERIFY THE TYPE OF CEILING SYSTEM AND MATERIAL INTO EACH OF THE AIR INLETS AND OUTLETS IS TO BE INSTALLED, AND PROVIDE EQUIPMENT, WHICH PROPERLY "FITS" WHETHER SPECIFICALLY, SO INDICATED OR NOT ON THE DRAWINGS.

END OF SECTION

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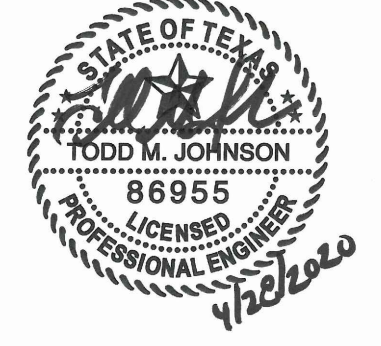
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PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5,819

BILLINGSLEY
COMPANY

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NORTHSTAR BUILDERS

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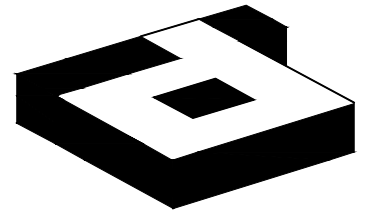
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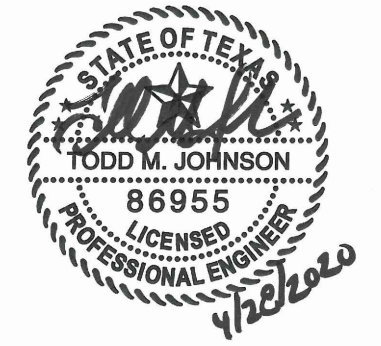
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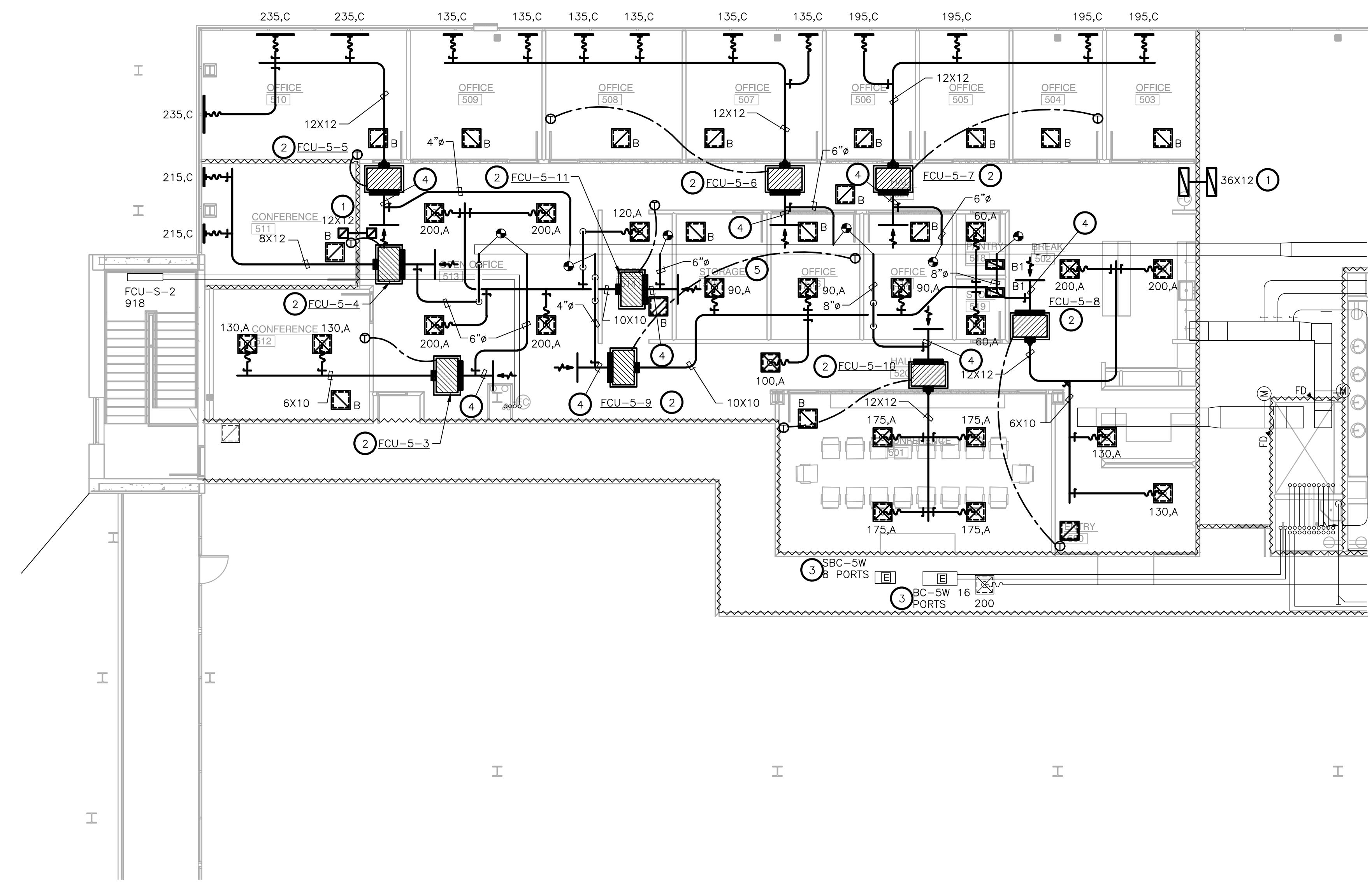
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NOTES BY SYMBOL (X) :

1. PROVIDE ACOUSTICALLY LINED RETURN AIR BOOT THRU WALL TO DECK AS HIGH AS POSSIBLE ABOVE CEILING WITH INLET ELBOW AND OUTLET 90° ELBOW FACING UPWARD. SIZE PER PLANS. REFER TO DETAIL Q1/M0.Q1 FOR MORE INFORMATION.
2. FC UNIT TO BE SUSPENDED FROM STRUCTURE. PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTEND UNDER THE CONDENSATE PUMPS. EXTEND FULL SIZED RETURN AIR PLENUM AS INDICATED ON DRAWINGS. PROVIDE MANUAL DAMPER AT OUTSIDE AIR DUCT CONNECTION TO PLENUM.
3. EXISTING BRANCH CONTROLLER SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS.
4. EXTEND FULL SIZED RETURN PLENUM FROM FAN COIL UNIT AS SHOWN. PROVIDE WIRE MESH AT RETURN AIR OPENING IN PLENUM. CONNECT OUTSIDE AIR DUCT WITH BALANCING DAMPER AS SHOWN ON DETAIL LOCATED ON SHEET M3.01.
5. NO ADDITIONAL HVAC IS PROVIDED FOR THIS ROOM DUE TO NO HVAC LOAD OR CRITERIA PROVIDED FOR DESIGN. COORDINATE WITH IT VENDOR IF ANY ADDITIONAL CFM OR HVAC IS REQUIRED PRIOR TO INSTALLATION.

REFER TO SHEET M0.01
FOR GENERAL NOTES,
SCHEDULES AND SYMBOLS.



① LEVEL 05 MECHANICAL PLAN
SCALE: 1/8"=1'-0"

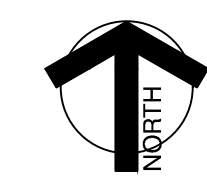
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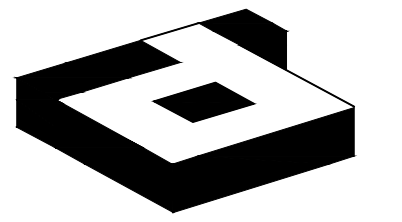
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DRAWING TITLE:
LEVEL 05 MECHANICAL PLAN

DRAWING NUMBER:

M2.05



idGROUP

2641 IRVING BLVD.
DALLAS, TEXAS 75207
TEL: 214-638-6800 FAX: 214-689-0301



PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5.819

BILLINGSLEY
COMPANY

**3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS**

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

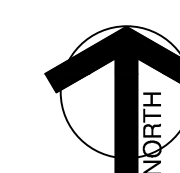
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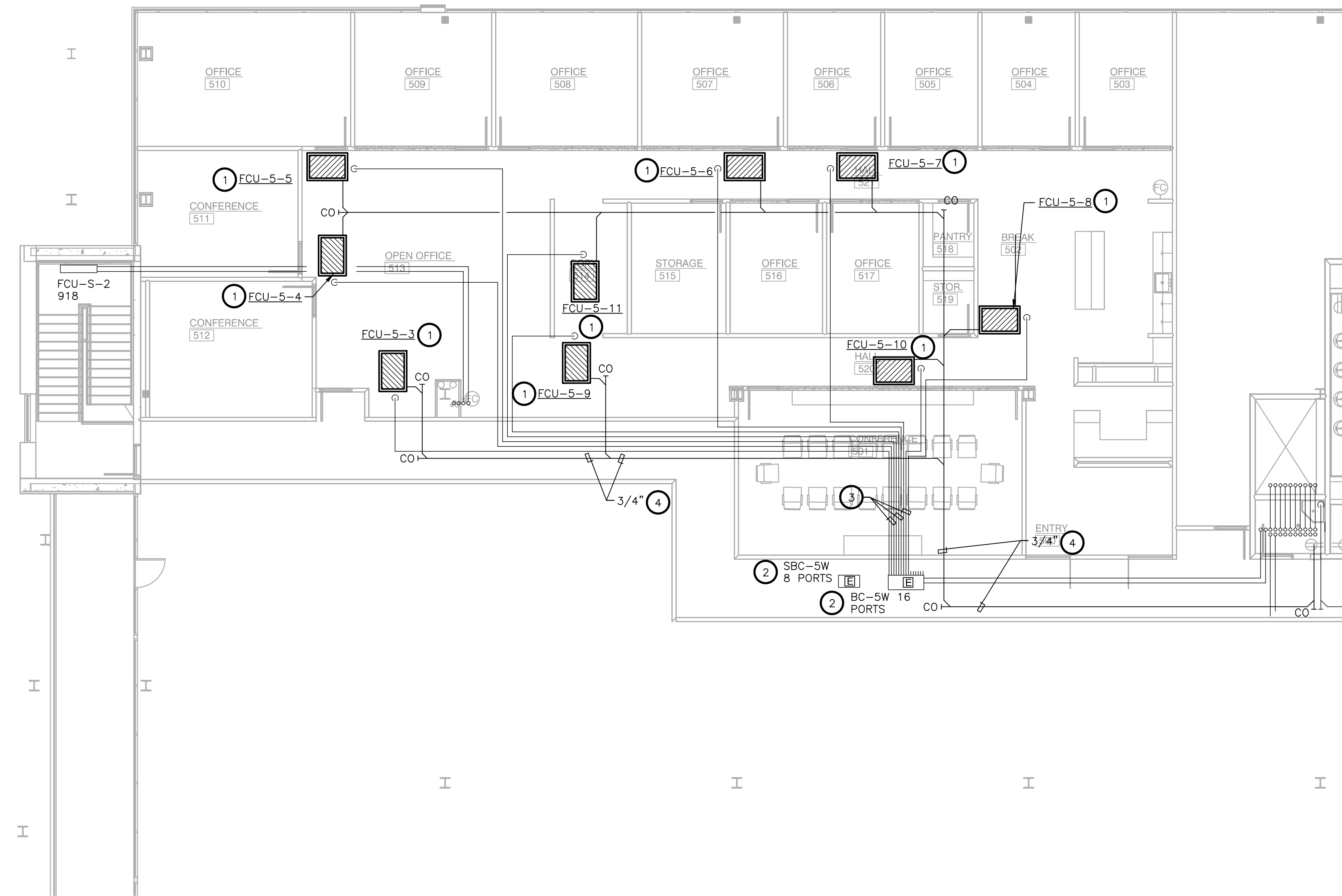
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NOTES BY SYMBOL (X) :

1. FC UNIT TO BE SUSPENDED FROM STRUCTURE. PROVIDE A GALVANIZED SHEET METAL SECONDARY DRAIN PAN THAT IS A MINIMUM OF 3" LARGER (ON EACH SIDE) THAN ANY DIMENSION OF THE UNIT AND MUST EXTEND UNDER THE CONDENSATE PUMPS.
2. EXISTING BRANCH CONTROLLER SUSPENDED FROM STRUCTURE WITH ISOLATION SPRINGS.
3. COORDINATE WITH MANUFACTURER'S SPECIFICATIONS FOR REFRIGERANT REQUIREMENTS. COORDINATE ROUTING FROM FC UNIT TO BRANCH CONTROLLER. LOCATION OF FCU SHALL NOT EXCEED 150' OF PIPING BETWEEN UNITS.
4. PROVIDE A 3/4" INSULATED CONDENSATE DRAIN AND OVERFLOW PIPING ABOVE CEILING. EXTEND AND DISCHARGE TO NEAREST JANITORS MOP SINK. ALL PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE, AND SLOPED AT 1/8" PER FOOT TOWARDS FLOOR DRAIN. PROVIDE CONDENSATE PUMP CAPABLE OF A MINIMUM OF 10' OF HEAD PRESSURE WITH UNIT IF REQUIRED SLOPE IS UNATTAINABLE.

REFER TO SHEET M0.01
FOR GENERAL NOTES,
SCHEDULES AND SYMBOLS.

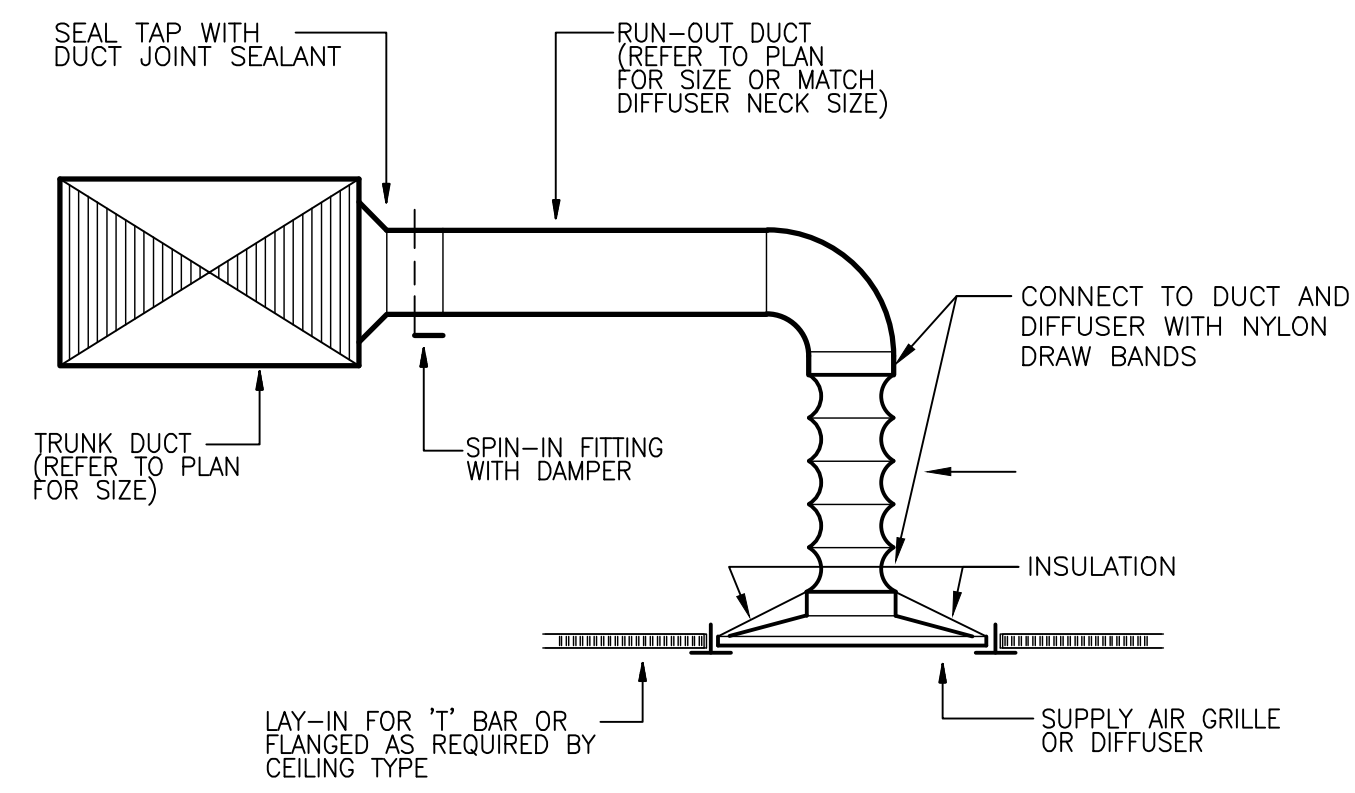


1 LEVEL 05 MECHANICAL PLAN
SCALE: 1/8"=1'-0"

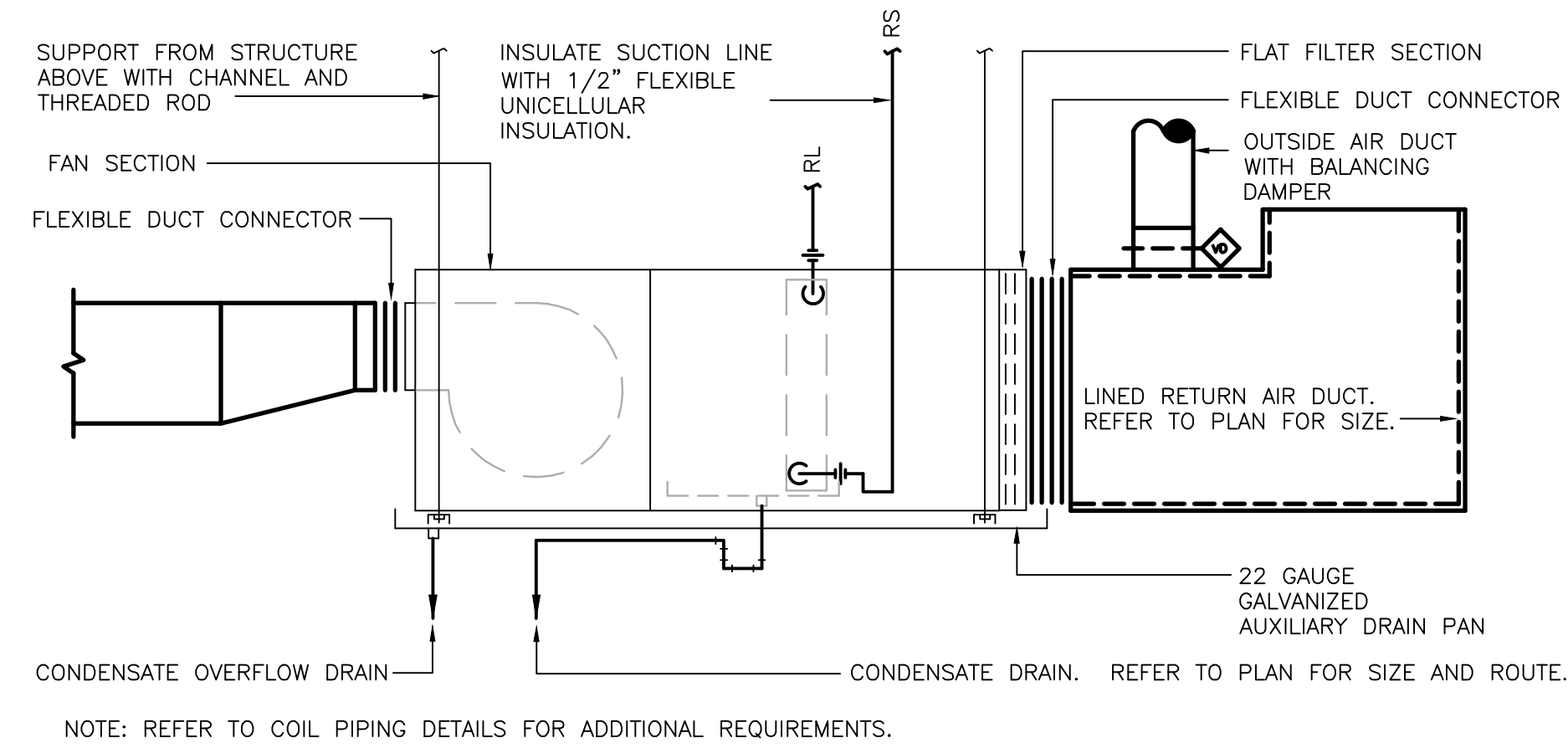
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**LEVEL 05 MECHANICAL
PLAN-REFRIGERANT PIPING**

DRAWING NUMBER:

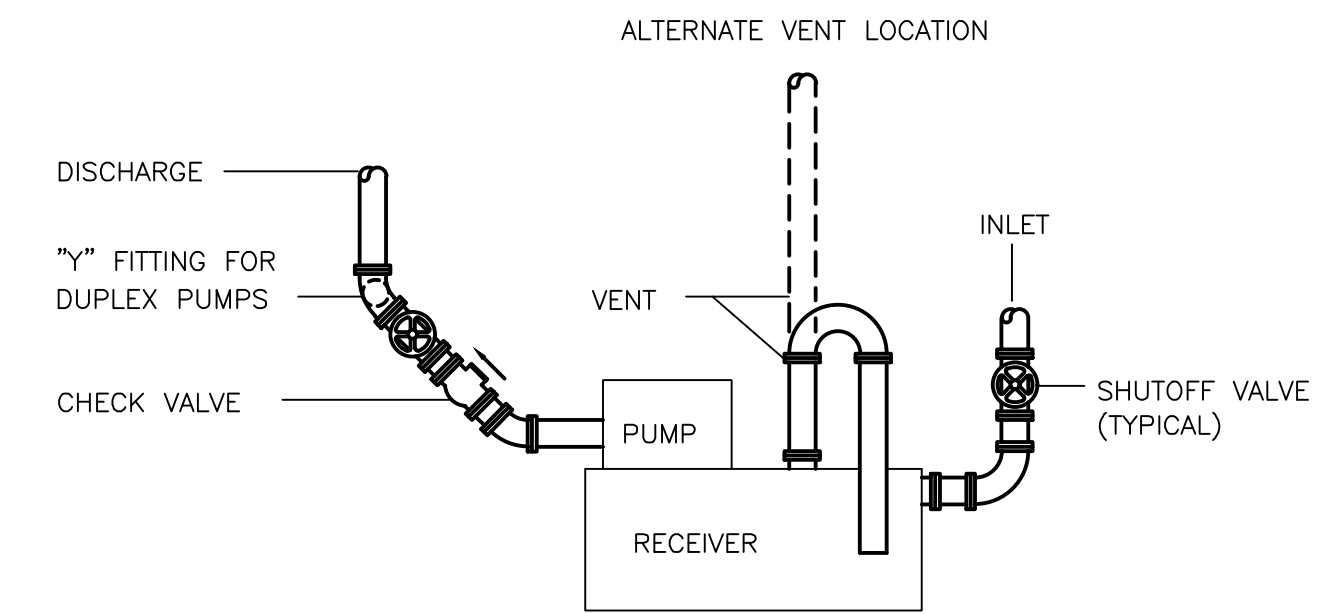
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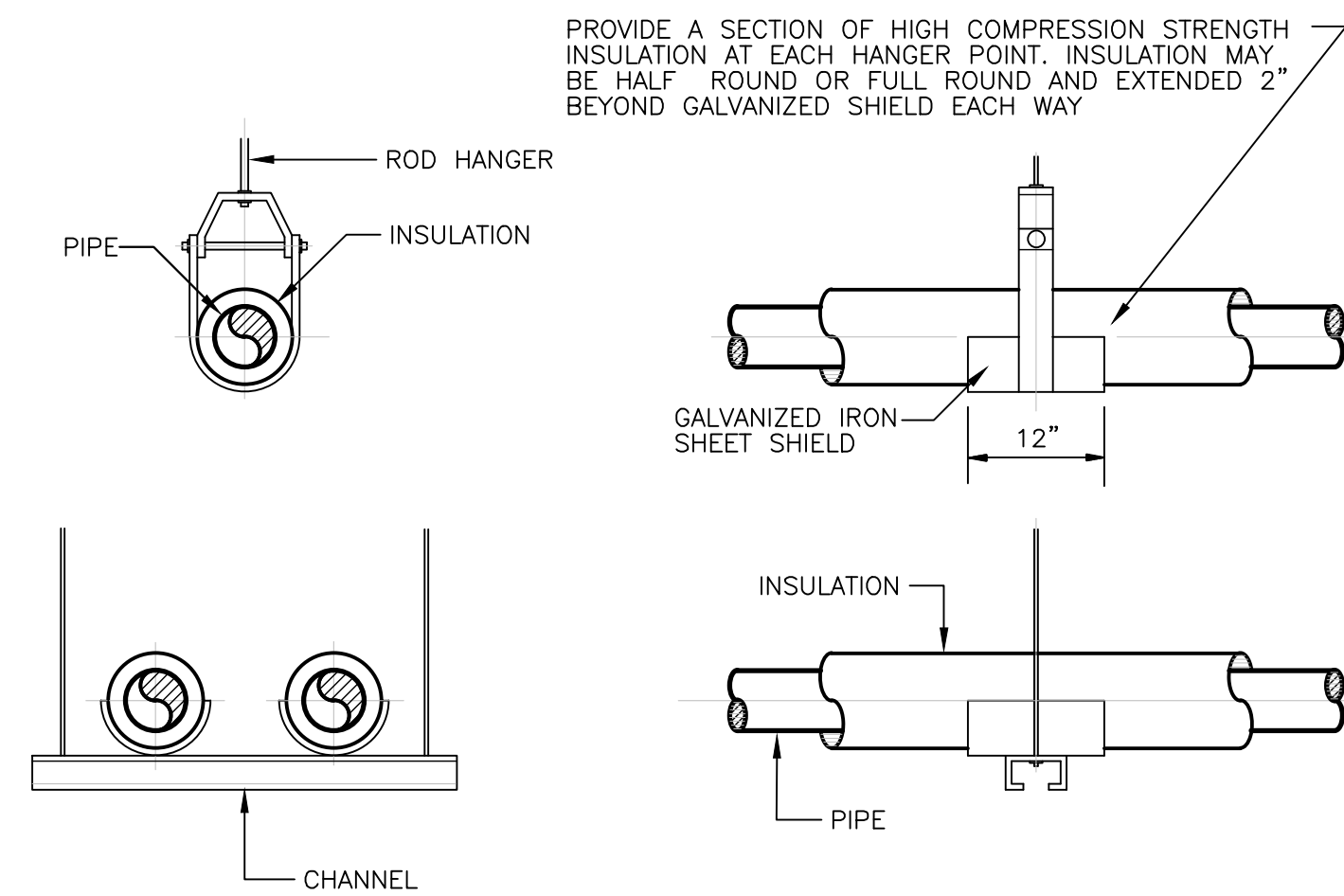
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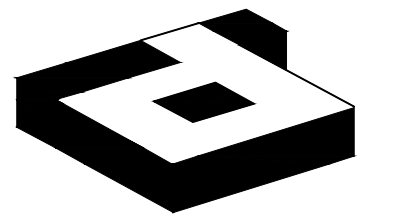
2 VFR UNIT INSTALLATION DETAILS
SCALE: NOT TO SCALE



3 CONDENSATE PUMP DETAIL
SCALE: NOT TO SCALE

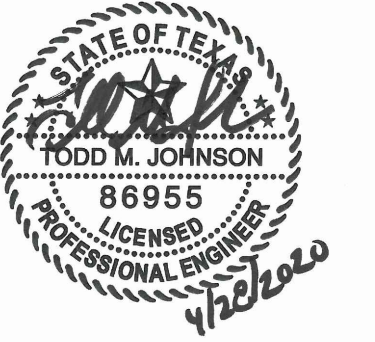


4 PIPE HANGING SUPPORT DETAILS
SCALE: NOT TO SCALE



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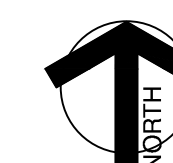
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DRAWING TITLE:
**MECHANICAL
DETAILS**

DRAWING NUMBER:

M3.01

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POWER GENERAL NOTES:

- A. ALL CIRCUITS SHALL BE 120V, 20A CIRCUITS WITH 2#12, #12G, IN 3/4" UNLESS NOTED OTHERWISE.
- B. ALL CONDUCTORS GREATER THAN 60' IN LENGTH SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% OVER THE TOTAL LENGTH OF THE CIRCUIT CALCULATED AT 80% OF FULL LOAD OF THE OVERCURRENT DEVICE PROTECTING THE CONDUCTOR. CONTRACTOR SHALL PROVIDE PIG-TAIL OR ENCLOSED TERMINATION BLOCKS AS REQUIRED TO LAND CIRCUITS ON THE DEVICES OR EQUIPMENT.
- C. CONTRACTOR MAY COMBINE THREE (3) CIRCUITS PER NEUTRAL AND GROUND WIRE EXCEPT AS OTHERWISE NOTED. COMBINED NEUTRAL CIRCUITS SHALL MEET NEC REQUIREMENTS WITH TIE HANDLES AND COMPLIANCE LABELING.
- D. ALL EXISTING CIRCUITS WITHIN THE SCOPE OF WORK AREA THAT ARE NOT REUSED FOR THIS REMODEL SHALL BE REMOVED BACK TO THE PANELS AND THE PLACARDS SHALL INDICATE THE BREAKERS AS SPARES.
- E. PANELBOARD DIRECTORIES SHALL BE COMPLETELY FILLED OUT TO ACCURATELY IDENTIFY EACH CIRCUIT (EXISTING AND NEW CIRCUITS) IN ALL PANELS WITHIN SCOPE OF WORK. OBTAIN BUILDING MANAGEMENT/OWNER'S APPROVAL OF IDENTIFICATION. DIRECTORIES SHALL BE TYPEWRITTEN.
- F. JUNCTION BOXES AND/OR DEVICE BOXES SHALL NOT BE MOUNTED BACK TO BACK WHEN FLUSH MOUNTED IN A WALL. JUNCTION BOXES AND/OR DEVICE BOXES FLUSH MOUNTED ON OPPOSITE SIDES OF A WALL SHALL NOT BE INSTALLED IN THE SAME STUD SPACE.
- G. ALL RECEPTACLES MOUNTED ABOVE OR BELOW KITCHEN/BREAK ROOM COUNTERS OR COUNTERS WITH A SINK OR ANY OTHER WATER DISPENSING MECHANISM SHALL BE GFCI PROTECTED. ALL RECEPTACLES INSTALLED IN AN OUTDOOR LOCATION OR INTENDED TO PROVIDE POWER FOR VENDING MACHINES SHALL BE GFCI TYPE DEVICES. IN LOCATIONS WHERE THE RECEPTACLES ARE BEHIND APPLIANCES, IF THE AUTHORITY HAVING JURISDICTION REQUIRES REMOTE RESET BUTTONS, CONTRACTOR SHALL COORDINATE THE BUTTON LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN, OR PROVIDE GFCI CIRCUIT BREAKERS WHEN POSSIBLE.
- H. ALL DEDICATED CIRCUITS (CIRCUITS SERVING A SINGLE DEVICE) SHALL HAVE SEPARATE NEUTRAL AND GROUND WIRES. THIS REQUIREMENT DOES NOT APPLY TO APPLIANCE CIRCUITS.
- I. PROVIDE 3/4" CONDUIT AND PULLSTRING, FROM EACH WALL MOUNTED TELEPHONE/DATA OUTLET, ROUTE TO +4" ABOVE SUSPENDED CEILING. AT SYSTEMS FURNITURE FEEDS, CONDUIT SHALL BE 1-1/4".
- J. ELECTRICAL CONTRACTOR SHALL PROVIDE A 4"x4"x2-5/8" STEEL JUNCTION BOX IN WALL WITH A SINGLE GANG MUD RING AND 3/4" METAL CONDUIT TO A MINIMUM OF 4" ABOVE FINISHED ACCESSIBLE CEILING FOR ALL THERMOSTATS AND HVAC SENSORS. COORDINATE EXACT LOCATIONS WITH MECHANICAL CONTRACTOR AND ARCHITECT. PROVIDE A PULL STRING INSTALLED FOR FUTURE USE. PULL STRING SHALL BE SECURED AT EACH END TO PREVENT ACCIDENTAL REMOVAL.
- K. PROVIDE 3/4" CONDUIT AND PULLSTRING, FROM EACH FLOOR MOUNTED TELEPHONE/DATA OUTLET TO THE NEAREST WALL THEN ROUTE TO +4" ABOVE SUSPENDED CEILING. AT SYSTEMS FURNITURE FEEDS, CONDUIT SHALL BE 1-1/4".
- L. LOW VOLTAGE CABLES (TELEPHONE, DATA, ETC.) INSTALLED IN CEILING SPACE USED FOR RETURN AIR PURPOSES SHALL BE PLENUM RATED CABLES OR INSTALLED IN CONDUIT.
- M. ELECTRIC CONNECTIONS TO PANELBOARDS AND BUS DUCTS SHALL BE MADE ONLY WHEN PANELBOARD OR BUS DUCT HAS BEEN DE-ENERGIZED. SCHEDULE DOWN TIME WITH BUILDING MANAGEMENT/OWNER.
- N. UNDERLINED CIRCUIT NUMBERS ARE FOR COMPUTER USE AND SHALL EACH HAVE AN INDEPENDENT NEUTRAL.
- O. ALL NEW ELECTRICAL PANELS AND TRANSFORMERS SHALL HAVE PERMANENT ENGRAVED LABELS ON COVER INDICATING PANEL OR TRANSFORMER DESIGNATION.
- P. CONTRACTOR SHALL RELOCATE ELECTRICAL CONNECTIONS ASSOCIATED WITH ALL RELOCATED MECHANICAL EQUIPMENT. REFER TO HVAC AND PLUMBING PLANS AND COORDINATE FINAL LOCATIONS WITH MECHANICAL CONTRACTOR IN THE FIELD.
- Q. ELECTRICAL CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING. COORDINATE WITH BUILDING MANAGEMENT FOR AFTER-HOURS ACCESS TO SPACE.
- R. WHERE A CIRCUIT IS SHOWN TO ORIGINATE FROM AN EXISTING PANELBOARD, CONTRACTOR SHALL FIELD VERIFY WHETHER THE CIRCUIT BREAKER EXISTS AND, IF NOT, SHALL PROVIDE A NEW BREAKER AS PART OF THE BASE BID.

POWER SYMBOLS

SYMBOL	DESCRIPTION
	WALL MOUNTED DUPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED QUADRAPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED DEDICATED DUPLEX RECEPTACLE (NEMA 5-20R)
	WALL MOUNTED COMMUNICATIONS OUTLET
	FLUSH FLOOR POKE-THRU WITH DUPLEX POWER PLUS COMMUNICATIONS, WIREMOLD #RC3ATCBK ± COM75.
	CARD READER
	WALL MOUNTED GROUND BUS - SEE PLAN FOR NOTES

LIGHTING GENERAL NOTES:

- A. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF CONFLICTS OCCUR BETWEEN LIGHTING AND ANY OTHER TRADE. DO NOT PROCEED WITH INSTALLATION IN THAT AREA UNTIL CONFLICT HAS BEEN RESOLVED TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING INSTRUCTIONS FOR ALL LIGHT FIXTURES. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ARCHITECTURAL PLANS RELATING TO QUANTITY, TYPE AND LOCATION OF DEVICES AND/OR FIXTURES.
- C. WHEN SPECIFIC LIGHT FIXTURE TYPE HAS BEEN SPECIFIED IN THE FIXTURE INFORMATION, ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ASSEMBLY INCLUSIVE OF ALL PARTS AND HARDWARE.
- D. ALL CIRCUITS SHOWN SHALL BE 277V, 20A CIRCUITS UNLESS NOTED OTHERWISE.
- E. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG AND 277V RUNS LONGER THAN 150' SHALL BE #10 AWG UNLESS NOTED OTHERWISE ON PLANS.
- F. MOUNT LIGHT SWITCHES AS INDICATED ON ARCHITECTURAL DRAWINGS (48" AFF UNLESS NOTED OTHERWISE).
- G. ALL GANGED SWITCHES SHALL HAVE A COMMON SEAMLESS FACEPLATE. EACH MULTI-GANG BOX SHALL BE NO MORE THAN SIX (6) SWITCHES WIDE. WHERE MORE THAN SIX (6) SWITCHES ARE SHOWN AT ONE (1) LOCATION, ADDITIONAL MULTI-GANG BOXES SHALL BE STACKED VERTICALLY AND THE WIDTH OF THE MULTI-GANGS SHALL BE AS EVEN AS POSSIBLE.
- H. EACH DIMMER SWITCH SHALL BE COMPATIBLE WITH THE FIXTURES BEING DIMMED (INCANDESCENT, FLUORESCENT, LED, LOW VOLTAGE, ETC.). DIMMERS SHALL BE OF THE APPROPRIATE RATING PER THE MANUFACTURER BASED ON TOTAL FIXTURE LOAD AND ANY NECESSARY DERATING WHERE DIMMERS ARE GANGED TOGETHER. WHERE SWITCHES AND DIMMERS ARE SIDE-BY-SIDE, THEY SHALL BE GANGED TOGETHER.
- I. ALL EMERGENCY LIGHT FIXTURES SHALL HAVE 90-MINUTE BATTERY BACK-UP UNLESS NOTED OTHERWISE.
- J. ALL EXIT SIGNS SHALL HAVE 90-MINUTE BATTERY BACK-UP EXCEPT AS OTHERWISE NOTED.
- K. LIGHTING CONTROL SENSORS AND SWITCHES SHALL BE WIRED DEVICES. NO WIRELESS DEVICES SHALL BE SUBMITTED WITHOUT PRIOR WRITTEN APPROVAL BY OWNER/BUILDING MANAGEMENT.

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
	INDICATES FIXTURE SHALL BE AN EMERGENCY/NIGHT LIGHT
	SINGLE FACE EXIT SIGNS - REFER TO PLAN FOR DIRECTIONAL ARROWS AND WALL OR CEILING MOUNTING
	DOUBLE FACE EXIT SIGNS - REFER TO PLAN FOR DIRECTIONAL ARROWS AND WALL OR CEILING MOUNTING
	LOW VOLTAGE SWITCH ASSOCIATED WITH CEILING MOUNTED SENSORS
	DIMMER SWITCH
	CEILING MOUNTED 360-DEGREE DUAL TECHNOLOGY OCCUPANCY SENSOR (AUTOMATIC ON AND OFF). PROVIDE ALL POWER PACKS AND ACCESSORIES AS REQUIRED TO CONTROL ALL LIGHTS IN ROOM. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED SENSOR SPACING.
	CEILING MOUNTED 360-DEGREE DUAL TECHNOLOGY VACANCY SENSOR (MANUAL ON AND AUTOMATIC OFF). PROVIDE ALL POWER PACKS AND ACCESSORIES AS REQUIRED TO CONTROL ALL LIGHTS IN ROOM. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED SENSOR SPACING.
	DUAL TECHNOLOGY VACANCY SENSOR SWITCH (MANUAL ON AND AUTOMATIC OFF)
	CEILING MOUNTED DAYLIGHT SENSOR FOR CONTINUOUS DAYLIGHT RESPONSIVE DIMMING OF LIGHTING IN THE DAYLIGHT ZONE. PROVIDE ALL REQUIRED POWER PACKS, TRANSFORMERS, ACCESSORIES AND LOW VOLTAGE CABLING. REFER TO PLANS FOR THE ZONES THAT SHALL BE CONTROLLED VIA THIS SENSOR

LEGEND NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ACCESSORIES FOR PROPER MOUNTING OF FIXTURES IN SPECIFIC CEILING PER LOCATION OF FIXTURES.
2. CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF ALL LIGHTING FIXTURES, (NEW OR SUBSTITUTES).

FIRE ALARM DEVICES

A FIRE ALARM CONTRACTOR LICENSED BY THE TEXAS DEPARTMENT OF INSURANCE SHALL MODIFY THE EXISTING FIRE ALARM DEVICE LAYOUT AS REQUIRED FOR THE NEW TENANT LAYOUT. SCOPE OF WORK SHALL BE FOR A COMPLETE TURN-KEY INSTALLATION INCLUDING, BUT NOT LIMITED TO, RELOCATION OF EXISTING DEVICES, REMOVAL OF EXISTING DEVICES, ADDITION OF NEW DEVICES, UTILIZATION OF EXISTING DEVICES IN PLACE AND UPGRADES/ADDITIONS TO PANELS/POWER SUPPLIES TO SUPPORT THE DEVICES. THE FIRE ALARM DESIGN SHALL BE APPROVED BY THE CITY AND STATE FIRE MARSHALS ON SHOP DRAWING CONSTRUCTION SET AND SHALL MEET ALL A.D.A., N.F.P.A., STATE AND LOCAL REQUIREMENTS. SYSTEMS SHALL INCLUDE DETECTION AND NOTIFICATION DEVICE COVERAGE IN ALL SPACES BY UTILIZING BUILDING STANDARD, WHITE CEILING MOUNTED AUDIBLE DEVICES, STROBES, AND COMBINATION AUDIBLE/STROBE DEVICES. PLANS MUST BE SUBMITTED TO THE FIRE DEPARTMENT FOR REVIEW, FINAL APPROVAL AND PERMIT PRIOR TO INSTALLATION, UNDER SEPARATE INSTRUMENT AND COVER. DEVICES SHALL BE WHITE UNLESS REQUIRED TO MATCH EXISTING TO REMAIN.

AVAILABLE CIRCUITS

CIRCUITS SHOWN ARE BASED ON BEST KNOWLEDGE OF EXISTING PANEL PLACARDS AND PREVIOUS CONTRACT DOCUMENTS AND DO NOT NECESSARILY INDICATE THE ACTUAL PANEL CIRCUIT NUMBERS FOR USE. IT IS INTENDED TO FIRST REUSE EXISTING LIGHTING CIRCUITS THAT ARE AVAILABLE IN THE SAME PANEL(S) AFTER DEMOLITION OF WALLS AND EQUIPMENT AND THEN USE AVAILABLE SPARES/SPACES FROM THE SAME PANEL(S) AS NEEDED, MAXIMUM OF 16 AMP LOAD PER 20A CIRCUIT. CONTRACTOR SHALL VERIFY ACTUAL CIRCUIT AVAILABILITY AFTER DEMOLITION AND NOTIFY ARCHITECT IMMEDIATELY IF THE QUANTITY OF AVAILABLE CIRCUITS IS INADEQUATE OR OBTAIN APPROVAL FOR ADD ALTERNATE SOLUTION. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM PURDY-MCGUIRE PRIOR TO USING CIRCUITS FROM A DIFFERENT PANEL.

DALLAS GREEN BUILDING REQUIREMENTS:

506.1 MERCURY CONTENT IN FLUORESCENT LAMPS. THE MERCURY CONTENT IN STRAIGHT FLUORESCENT LAMPS SHALL COMPLY WITH SECTION 506.1.1 AND THE MERCURY CONTENT IN COMPACT FLUORESCENT LAMPS SHALL COMPLY WITH SECTION 506.1.2 AS APPLICABLE. EXCEPTION: MERCURY CONTENT IS NOT LIMITED FOR LIGHTING INTEGRAL TO EQUIPMENT OR INSTRUMENTATION AND INSTALLED BY THE MANUFACTURER, OR FOR LAMPS WITH A HIGH COLOR RENDERING INDEX THAT IS GREATER THAN OR EQUAL TO 87.

506.1.1 STRAIGHT FLUORESCENT LAMPS. NON-PREHEAT STRAIGHT, DOUBLE-ENDED FLUORESCENT LAMPS LESS THAN 70 INCHES (1800 MM) AND GREATER THAN 21 INCHES (550 MM) IN LENGTH AND CONTAINING A MEDIUM BI-PIN BASE OR MINIATURE BI-PIN BASE SHALL COMPLY WITH THE FOLLOWING:

1. T-5 LAMPS WITH A RATED LIFETIME OF LESS THAN 25,000 HOURS AT 3 HOURS PER START SHALL CONTAIN NOT MORE THAN AN AVERAGE OF 3 MILLIGRAMS OF MERCURY PER LAMP.
2. T-8 LAMPS WITH A RATED LIFETIME LESS THAN 25,000 HOURS AT 3 HOURS PER START ON AN INSTANT START BALLAST SHALL CONTAIN NOT MORE THAN AN AVERAGE OF 4 MILLIGRAMS OF MERCURY PER LAMP.
3. ALL OTHER T5 OR T8 LAMPS SHALL CONTAIN NOT MORE THAN AN AVERAGE OF 5 MILLIGRAMS OF MERCURY PER LAMP.

506.1.2 COMPACT FLUORESCENT LAMPS. SINGLE-ENDED PIN-BASE AND SCREW-BASE COMPACT FLUORESCENT LAMPS SHALL CONTAIN NOT MORE THAN 5 MILLIGRAMS OF MERCURY PER LAMP, AND SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 1993.

LIGHTING FIXTURES

TYPE	DESCRIPTION	MFR. & CAT. NO.	LAMPS	VOLT	INPUT WATTS	REMARKS
	2x2 LED TROFFER	LITHONIA BLT SERIES #2BLT2-40L-ADP-EZ1-LP835	LED	MMVOLT	34	
	2x2 LED TROFFER - EMERGENCY WITH BATTERY PACK	LITHONIA BLT SERIES #2BLT2-40L-ADP-EZ1-LP835-EL14L	LED	MMVOLT	34	
	LED WALL WASHER	GOTHAM EVOSQLW40-30-AR-LSS-MMVOLT	LED	MMVOLT	31.2	
	DECORATIVE PENDANT	CASTLE PENDANT BY SEED DESIGN, MEDIUM, 72W, PRODUCT ID# SEDP97192	(1) E28 72W HALOGEN	120	72	VERIFY FIXTURE SPECIFICATION WITH BLDG. MANAGEMENT
	LED TAPE LIGHT - UNDER CABINET	WAC LIGHTING INVISLED PRO, 24V LED TAPE, LED-T24-35-1-WT	LED	120	3WFT	VERIFY EXACT LENGTH IN FIELD
	EXIT SIGN	MATCH BUILDING STANDARD	INCLUDED	120/277	5	REFER TO DRAWINGS FOR EXIT SIGN DIRECTIONAL ARROWS AND FOR SINGLE OR DOUBLE FACE QUANTITIES.

NOTES:

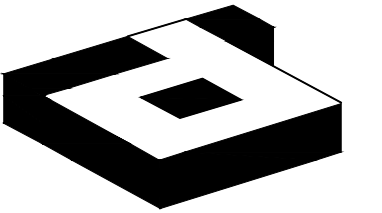
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2. CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER OF ALL LIGHTING FIXTURES (NEW OR SUBSTITUTES).

MECHANICAL EQUIPMENT POWER SCHEDULE

EQUIPMENT DESIGNATION	LOAD			VOLTAGE/PHASE	CIRCUIT NUMBER	CIRCUIT BREAKER A/MS/POLES	DISCONNECT A/MS/POLES/FUSE	WIRE SIZING	REMARKS
	KW	HP	FLA						
WH5-1	8.31	-	-	277/1	5HA-2	30/1	1P30A ENCL. C/B	2#10, 1#10G, 3/4" C.	SEE NOTE 1.5
FCU-5-3	-	-	1.05	208/1	5LA1-29/31	20/2	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.2, 4.5
FCU-5-4	-	-	1.20	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.2, 4.5
FCU-5-5	-	-	1.56	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.2, 4.5
FCU-5-6	-	-	1.56	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.2, 4.5
FCU-5-7	-	-	1.56	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.2, 4.5
FCU-5-8	-	-	1.45	208/1	5LA1-33/35	20/2	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.3, 4.5
FCU-5-9	-	-	1.45	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.3, 4.5
FCU-5-10	-	-	2.73	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.3, 4.5
FCU-5-11	-	-	2.73	208/1	-	-	BY MECHANICAL	2#12, 1#12G, 3/4" C.	SEE NOTE 1.3, 4.5

NOTES:

1. REFER TO HVAC AND PLUMBING PLANS FOR LOCATIONS OF EQUIPMENT. COORDINATE FINAL LOCATIONS IN FIELD.
2. PROVIDE 120V CIRCUIT TO LEAK DETECTION UNITS AND CONDENSATE PUMPS FROM CIRCUIT 5LA1-32.
3. PROVIDE 120V CIRCUIT TO LEAK DETECTION UNITS AND CONDENSATE PUMPS FROM CIRCUIT 5LA1-34.
4. PROVIDE CONTROLS CIRCUIT INDICATED TO EACH 120V/24V CONTROLS TRANSFORMER (TRANSFORMER BY MECHANICAL). EACH TRANSFORMER SHALL FEED UP TO FIVE (5) CONTROL MODULES. DO NOT EXCEED 1500VA PER 120V CONTROLS CIRCUIT. CABLE BETWEEN THE TRANSFORMERS AND THE CONTROLS SHALL BE BY MECHANICAL.
5. PROVIDE NEW CIRCUIT BREAKER.



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ELECTRICAL
NOTES & SYMBOLS

DRAWING NUMBER:

E0.01

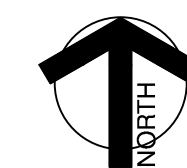
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PMI JOB NO. 20039.004
PROJECT MGR. TODD JOHNSON

THIS DRAWING SHALL NOT BE REPRODUCED FOR ANY PROJECT OTHER THAN THE PROJECT NOTED IN THE TITLE BLOCK, WITHOUT THE WRITTEN CONSENT OF PURDY-MCGUIRE, INC. DALLAS, TX



DIVISION 26 - ELECTRICAL

SECTION 260500 - COMMON WORK RESULTS

PART 1 - GENERAL

1.1 GENERAL NOTES

- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS, AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 26.
- B. THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO OBTAIN A COMPLETE SET OF BID DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND FULLY REVIEW THEM. COORDINATE DIVISION 26 WORK WITH THAT OF ALL OTHER DIVISIONS OF WORK.
- C. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. ANY LABOR OR MATERIAL CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY LABOR OR MATERIAL WHICH IS NEITHER SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY REQUIRED TO COMPLETE THE WORK, AND WHICH IS NORMALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT.
- D. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF THIS WORK TO COMPLY WITH THE OWNER'S SCHEDULE AND PROJECT COMPLETION DATE.

1.2 SCOPE OF WORK

- A. THE DESCRIPTION OF GENERAL CONDITION WORK IN THIS DIVISION SHALL ALSO APPLY TO DIVISION 28.
- B. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE ELECTRICAL AND FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. WORK IS TO BE COMPLETE IN EVERY RESPECT, WHETHER SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS OR NOT.
- C. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OWNER, (BUILDING OWNER, LANDLORD OR TENANT), SHALL BE PROVIDED BY THIS CONTRACTOR.
- D. THIS WORK, MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:
 - a. A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM INCLUDING THE INSTALLATION OF ELECTRICAL PANELBOARDS, TRANSFORMERS, SAFETY AND DISCONNECT SWITCHES, MOTOR STARTERS, VFD'S AND LIGHTING. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS BID FOR PROVIDING SERVICE EQUIPMENT NECESSARY FOR TIE-IN TO OWNER'S DISTRIBUTION EQUIPMENT. REFER TO ELECTRICAL RISER DIAGRAM FOR ADDITIONAL INFORMATION.
 - b. CONTRACTOR MUST ALSO INCLUDE IN BID ALL NECESSARY MATERIALS REQUIRED TO COMPLETE THE SYSTEM INCLUDING, BUT NOT LIMITED TO, FEEDERS, BRANCH CIRCUITS, JUNCTION BOXES, OUTLET BOXES, WIRING DEVICES, COVER PLATES, CONDUITS, ETC.
 - c. METERING REQUIRED PER DRAWING AND/OR OWNER.
 - d. THE WIRING OF MECHANICAL EQUIPMENT SHALL BE AS OUTLINED ON THE BID SET DRAWINGS AND IN THE SPECIFICATIONS. WORK SHALL INCLUDE WIRING OF ALL STARTERS, DISCONNECTS, VFD'S, AND POWER WIRING OF MECHANICAL EQUIPMENT EXCEPT AS SPECIFICALLY NOTED OTHERWISE. ALL LOW VOLTAGE (24 VOLT) EMS TEMPERATURE CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR UNLESS NOTED SPECIFICALLY ON DRAWING.
 - e. INSTALLATION OF LIGHT FIXTURES AND LAMPS AS SHOWN ON THE DRAWINGS INCLUDING ALL DEVICES, EQUIPMENT, ETC. REQUIRED FOR MOUNTING.
 - f. A COMPLETE CONDUIT SYSTEM FOR TELEPHONE/DATA INCLUDING BRANCH CONDUITS, OUTLET BOXES, PULL WIRES, GROUND CONDUCTORS, COVER PLATES, ETC. OR AS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
 - g. A COMPLETE EMERGENCY AND EXIT LIGHTING SYSTEM AS SHOWN ON THE DRAWINGS.
 - h. TEMPORARY SERVICE AS REQUIRED FOR CONSTRUCTION, INCLUDING ITS REMOVAL.
 - i. SMOKE/FIRE ALARM WIRING, DEVICES AND CONDUIT, AS DESCRIBED ON DRAWINGS OR AS NECESSARY TO MEET OWNER, STATE, LOCAL, INSURANCE AND FIRE DEPARTMENT REQUIREMENTS.
 - j. INSTALLATION OF CONDUITS STUBBED TO ABOVE CEILING FOR HVAC CONTROLS AND FUTURE LOADS.

E. WORK NOT INCLUDED - THE FOLLOWING ITEMS OF ELECTRICAL CONSTRUCTION ARE NOT INCLUDED IN THIS CONTRACT:

- a. TELEPHONE INSTRUMENTS AND WIRING UNLESS NOTED OTHERWISE.
- b. DATA CABLE WIRING UNLESS NOTED OTHERWISE.

1.3 CODES

- A. ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS AWARDED, CHANGE ORDERS FOR INCREASED COSTS DUE TO CODE ISSUES WILL NOT BE ACCEPTED UNLESS ALLOWANCES HAVE BEEN PREVIOUSLY AGREED UPON.
- B. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODE OR THE OWNER'S CRITERIA, THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS.

1.4 LICENSES, PERMITS, INSPECTION AND FEES

- A. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO THIS WORK. ALL COSTS ASSOCIATED WITH THESE SHALL BE PAID FOR BY THE CONTRACTOR AND INCLUDED AS PART OF THE BID.
- B. FURNISH TO THE OWNER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT THE COMPLETION OF THE PROJECT.

1.5 GUARANTEE

- A. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE (OFFICIAL DATE IN WRITING) OF THE PROJECT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- B. WHERE SPECIFIC EQUIPMENT IS NOTED TO HAVE EXTENDED WARRANTIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REGISTRATION SO THE OWNER CAN MAKE ALL APPROPRIATE CLAIMS.

1.6 RECORD DRAWINGS

- A. THIS CONTRACTOR SHALL MAINTAIN ONE SET OF DRAWINGS ON THE JOBSITE, UPDATED WEEKLY, TO RECORD ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS SUCH AS:
 - a. LOCATIONS OF CONCEALED CONDUITS
 - b. PANEL DESCRIPTIONS, CIRCUIT DIRECTORIES AND LABELS
 - c. REVISIONS, ADDENDUMS AND CHANGE ORDERS
 - d. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.
- B. DELIVER RECORD DRAWINGS TO THE OWNER AT PROJECT COMPLETION.

1.7 DEMOLITION

- A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY THE GENERAL CONTRACTOR. COORDINATE WITH THE GENERAL CONTRACTOR ALL EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
- B. THIS CONTRACTOR SHALL INCLUDE, AND WILL BE RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING CONDUIT, FIRE ALARM SYSTEM, SWITCH GEAR, AND EQUIPMENT, ETC. UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR MUST VERIFY WITH THE OWNER ALL PRESUMED ABANDONED EQUIPMENT, CONDUIT AND SWITCH GEAR PRIOR TO REMOVAL. EXISTING ABANDONED CONDUIT OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE, ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL. WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT, IF REQUIRED BY OWNER OR CODES, ABANDONED CONDUIT MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE PROPOSAL.

1.8 TEMPORARY LIGHT AND POWER

- A. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY WIRING AND RELATED GROUND FAULT INTERRUPTION PROTECTION FOR LIGHT AND POWER FOR ALL CONTRACTORS DURING CONSTRUCTION AND IS RESPONSIBLE FOR ITS REMOVAL.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CARRY ALL UL LABELS WHERE APPLICABLE, UNLESS APPROVED BY THE OWNER.
- B. ANY USED EQUIPMENT OR MATERIALS USED SHALL STILL CARRY THE SPECIFIED 1 YEAR GUARANTEE AND APPROVAL OF THE USE OF THIS EQUIPMENT OR MATERIALS DOES NOT RELIEVE THE CONTRACTOR FROM ENSURING EVERYTHING IS OPERATIONAL.

2.2 MANUFACTURERS

- A. WHERE TRADE NAMES OR MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE CONSIDERED THE BASIS OF DESIGN AND USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED, WILL BE SUBJECT TO APPROVAL IN WRITING BY THE ENGINEER THROUGH THE SHOP DRAWING SUBMITTAL PROCESS. FOR ACCEPTANCE PRIOR TO INSTALLATION, THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

2.3 SLEEVES

- A. PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2 INCHES ABOVE THE FLOOR.
- B. CONTRACTOR SHALL COORDINATE THROUGH THE GENERAL CONTRACTOR AND OWNER ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY WALLS OR CONCRETE FLOORS.
- C. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE SEALED. REFER TO "FIRE STOPPING".
- D. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE MINIMUM NO. 22 USG GALVANIZED STEEL.

2.4 FLAME SPREAD PROPERTIES OF MATERIALS

- A. MATERIALS USED ON THIS PROJECT SHALL EACH HAVE A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE DEVELOPED RATING OF 50 OR LESS, AS DETERMINED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH NFPA-255.

2.5 FIRE STOPPING

- A. PROVIDE FIRE STOPPING IN SEALING OF PENETRATIONS IN FIRE-RATED CONSTRUCTION, HORIZONTAL AND VERTICAL, INCLUDING THE FOLLOWING MATERIALS:
 - a. FOAM: DOW CORNING FIRESTOP SILICONE RTV FOAM, CAT #2001 LIQUID COMPONENT PART A (BLACK) AND LIQUID COMPONENT PART B (OFF-WHITE).
 - b. SEALANT: 3M 1000 NS AND 1003 SI. SILICONE ADHESIVE SEALANT.
 - c. DAMMING MATERIALS: MINERAL FIBERBOARD, AS SELECTED BY THE APPLICATOR.
- B. MIXES SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS.

2.6 FLOOR, CEILING AND WALL PLATES

- A. PROVIDE CHROME-PLATED, ONE-PIECE, ESCUTCHEONS ON CONDUITS AND HANGER RODS PENETRATING THE WALLS, FLOORS, AND CEILINGS IN FINISHED AREAS OF THE BUILDING. SPLIT RING ESCUTCHEONS ARE NOT ACCEPTABLE.

2.7 EQUIPMENT FOUNDATIONS AND SUPPORTS

- A. PROVIDE FOUNDATIONS AND SUPPORTS FOR ELECTRICAL EQUIPMENT AS REQUIRED. THESE SHALL INCLUDE REINFORCED CONCRETE HOUSEKEEPING PADS FOR ANY DISTRIBUTION EQUIPMENT INSTALLED INDOORS ON THE FLOOR. PADS SHALL EXTEND A MINIMUM OF 3 INCHES BEYOND EQUIPMENT IN ALL DIRECTIONS.

PART 3 - EXECUTION

- 3.1 SPACE AND EQUIPMENT ARRANGEMENT
 - A. EACH CONTRACTOR SHALL BE RESPONSIBLE TO SEE THAT THEIR PURCHASED EQUIPMENT WILL FIT THE SPACES AVAILABLE. IN CERTAIN INSTANCES HE WILL NOTE THAT THE EQUIPMENT IS MENTIONED BY NAME IN THE EQUIPMENT SCHEDULES. IN THESE CASES IT IS THAT EQUIPMENT WHOSE DIMENSIONS AND CONNECTION ARRANGEMENTS HAVE BEEN USED FOR THE PREPARATION OF THE LAYOUTS SHOWN ON THE WORKING DRAWINGS. SHOULD THE USE OF EQUIPMENT BY OTHER APPROVED MANUFACTURERS OR OF OTHER PHYSICAL SHAPE THAN THOSE SHOWN ON THE DRAWINGS BE PROPOSED, THE CONTRACTOR SHALL CONFIRM THE EQUIPMENT WILL FIT WITHIN THE ALLOTTED SPACE WITHOUT ARCHITECTURAL MODIFICATIONS OR IMPACT ON OTHER TRADES.
 - B. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. PROVIDE SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.
 - C. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, MECHANICAL, AND PLUMBING PLANS, SHOP DRAWINGS, AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE ELECTRICAL SYSTEM TO AVOID INTERFERENCES AND CONFLICTS.
- 3.2 MANUFACTURER'S DIRECTIONS
 - A. THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION, AND WIRING OF ALL EQUIPMENT AND MATERIAL. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER IN WRITING OF ANY CONFLICT BETWEEN THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S DIRECTIONS, AND SHALL OBTAIN INSTRUCTIONS BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PERFORM ANY WORK BEFORE RECEIVING SUCH INSTRUCTIONS, HE SHALL BEAR ALL COSTS ARISING IN CONNECTIONS WITH THE DEFICIENCIES.

3.3 CONSTRUCTION REQUIREMENTS

- A. THE DRAWINGS AND SPECIFICATIONS SHOW EQUIPMENT CONNECTIONS, CONDUIT, AND WIRE SIZE, GENERAL ROUTING AND LOCATION, AND DESCRIBE THE VARIOUS SYSTEMS. THESE DOCUMENTS DESCRIBE AND SIZE EQUIPMENT, ITS GENERAL LOCATION, USAGE, SUPPORT, AND AUXILIARY REQUIREMENTS, THEY DESCRIBE MOST, BUT NOT ALL OF THE MATERIALS AND THEIR USAGE FOR THIS PROJECT.
- B. CONTRACT DOCUMENTS DO NOT DETAIL ALL JOB REQUIREMENTS, THEY DO NOT SHOW LAYOUTS, LOCATIONS, OR ELEVATIONS OF CONDUITS, HANGERS, SLEEVES, HANGERS, JUNCTION BOXES, OR ACCESS DOORS. THEY DO NOT SHOW FINAL PRECISE LOCATIONS OF EQUIPMENT BY DIMENSIONS IN ALL INSTANCES.
- C. THE EXACT LOCATION OF EACH ITEM SHALL BE DETERMINED BY REFERENCE TO THE PROJECT CONTRACT DRAWINGS, AND TO DETAILS, EQUIPMENT DRAWINGS, AND ROUGH-IN DRAWINGS, BY MEASUREMENTS AT THE BUILDING, AND IN COOPERATION WITH THE VARIOUS TRADES. MINOR RELOCATION NECESSITATED BY THE CONDITIONS AT THE SITE OR DIRECTED BY THE OWNER SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER, WHERE CONFLICTS OCCUR. WORK IN THE AREA INVOLVED.

3.4 EQUIPMENT FOUNDATIONS, HANGERS AND SUPPORTS

- A. FOR FLOOR MOUNTED ELECTRICAL EQUIPMENT, PROVIDE CONCRETE HOUSEKEEPING PADS NOT LESS THAN 3-1/2 INCHES THICK REINFORCED WITH NO. 3 DOWELS AND NO. 3 BARS, 2 FEET-0 INCHES ON CENTER EACH WAY.
- B. SUSPENDED EQUIPMENT SHALL HAVE SUPPORTS CONSISTING OF MANUFACTURED METAL FRAMING OR HANGERS CONFORMING TO SECTION 260529.

3.5 INSTRUCTIONS TO OWNER'S PERSONNEL

- A. PROVIDE THE SERVICES OF COMPETENT ENGINEERS OR TECHNICIANS TO INSTRUCT REPRESENTATIVES OF THE OWNER IN COMPLETE AND DETAILED OPERATION AND MAINTENANCE OF EACH ITEM OF EQUIPMENT AND EACH SYSTEM.
- B. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER MAINTENANCE OF EQUIPMENT AND SYSTEMS UNTIL THE INSTRUCTIONS HAVE BEEN GIVEN TO THE OWNER'S PERSONNEL AND THE LETTER OF RELEASE ACKNOWLEDGED.
- C. PROVIDE OPERATION & MAINTENANCE MANUALS (3 COPIES), ALONG WITH AS-BUILT SET OF PRINTS PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.

3.6 ELECTRICAL WIRING OF MOTORS

- A. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL DISCONNECT SWITCHES AND MOTOR CONTROLS AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT, UNLESS SUCH EQUIPMENT IS SPECIFIED TO BE PROVIDED WITH FACTORY MOUNTED DISCONNECT SWITCHES, STARTERS, OR VFD'S. THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
- B. THE MECHANICAL AND PLUMBING DESIGN AND DRAWINGS ARE BASED ON THE EQUIPMENT SCHEDULED AND SHOWN ON THE DRAWINGS, SHOULD ANY CONTRACTOR SUBMIT FOR APPROVAL EQUIPMENT REQUIRING CHANGES TO THE MECHANICAL AND PLUMBING DESIGN FOR WHICH THE MECHANICAL OR PLUMBING CONTRACTOR WILL REQUEST AN EXTRA, THIS EXTRA SHALL BE PAID BY THE CONTRACTOR PROVIDING THE ALTERNATE EQUIPMENT REQUIRING THE CHANGE.
- C. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL ELECTRICAL WORK TO BE INCLUDED IN HIS BID.
- D. ELECTRICAL CONTRACTOR SHALL DO ALL POWER WIRING, LINE VOLTAGE WIRING, AND LINE VOLTAGE CONTROL WIRING INDICATED UNDER THE HEATING, VENTILATION AND AIR CONDITIONING, PLUMBING, AND FIRE PROTECTION SPECIFICATIONS AND DRAWINGS. THIS CONTRACTOR SHALL ALSO DO ALL INTERCONNECTING LINE VOLTAGE WIRING BETWEEN RELAYS AND SWITCHES AS REQUIRED.
- E. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING CONDUIT FOR HVAC CONTROL WIRING WHERE REQUIRED BY CODE OR SHOWN ON PRINTS TO BE IN CONDUIT. REFER TO PLANS FOR REQUIREMENTS AND SIZES.
- F. FIRE DAMPERS SHALL BE WIRED BY ELECTRICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR POWER REQUIREMENTS.

3.7 QUIET OPERATION

- A. THIS WORK SHALL BE INSTALLED IN SUCH A MANNER THAT UNDER ALL CONDITIONS OF LOAD IT SHALL OPERATE WITHOUT SOUND OR VIBRATION, WHICH IS OBJECTIONABLE IN THE OCCUPIED SPACES IN THE OPINION OF THE OWNER. IN THE CASE OF MOVING MACHINERY, SOUND OR VIBRATION ANNOYINGLY NOTICEABLE INSIDE ITS OWN ROOM CAN BE CONSIDERED AS OBJECTIONABLE. IN ANY CASE, THE SITUATION SHALL BE REMEDIATED AT NO COST TO THE OWNER.

3.8 CUTTING AND PATCHING

- A. PROVIDE ALL CUTTING, CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL FROM ARCHITECT AND OWNER.
- B. ALL PATCHING SHALL BE BY THE GENERAL CONTRACTOR AND SHALL MATCH THE SURROUNDING SURFACES.

3.9 TESTS

- A. THE CONTRACTOR INSTALLING THE ELECTRICAL SYSTEMS SHALL FOLLOW ALL TESTS AS REQUIRED TO PROVE COMPLIANCE WITH ALL LOCAL CODES.

END OF SECTION.

SECTION 260519 - CONDUCTORS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 SINGLE CONDUCTORS

- A. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS. MINIMUM WIRE SIZE #12 UNLESS NOTED OTHERWISE ON PLAN OR IN GENERAL NOTES FOR VOLTAGE DROP. THE CONDUCTORS SHALL BE 600 VOLT INSULATION, TYPE THW, THWN OR THHN.
- B. CONDUCTORS MAY BE STRANDED FOR SIZES #10 AWG AND LARGER. CONDUCTOR SIZE #12 SHALL BE SOLID (NOT STRANDED).
- C. ALUMINUM CONDUCTORS ARE NOT PERMITTED. CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM GENERAL CONTRACTOR AND ENGINEER WHEN USED.

2.2 MULTICONDUCTOR CABLES

- A. PROVIDE TYPE MC MULTICONDUCTOR CABLE IN COMPLIANCE WITH NEMA WC 70, WITH METAL CLAD AND GROUND WIRE.
- 2.3 CONNECTORS
 - A. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER. USE "TAB" "LOCKTIGHT" FOR #6 AWG WIRE AND LARGER.

PART 3 - EXECUTION

3.1 APPLICATIONS AND INSTALLATION

- A. ALL WIRING SHALL BE IN CONDUIT UNLESS NOTED OTHERWISE (IE-LOW VOLTAGE PLENUM RATED WIRE).
- B. THE USE OF SHARED NEUTRALS IS REQUIRED FOR LIGHTING CIRCUITS AND ALLOWED PER DRAWING NOTES, IT

SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND LOCAL CODES.

- C. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.
- D. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

- 120/208 VOLT SYSTEM
 - NEUTRAL - WHITE
 - PHASE A OR L1 - BLACK
 - PHASE B OR L2 - RED
 - PHASE C OR L3 - BLUE
 - GROUND - GREEN
 - ISOLATED GROUND - GREEN WITH YELLOW TRACER
- 277/480 VOLT SYSTEM
 - NEUTRAL - GRAY
 - PHASE A OR L1 - BROWN
 - PHASE B OR L2 - ORANGE
 - PHASE C OR L3 - YELLOW
 - GROUND - GREEN WITH YELLOW TRACER

E. UNLESS NOTED OTHERWISE, MC CABLE IS ONLY ALLOWED WITHIN PARTITIONS OR MILL WORK AND LOCATIONS DESCRIBED IN SECTION 260533.

END OF SECTION.

SECTION 260526 - GROUNDING

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

- 2.1 CONDUCTORS AND JUMPERS
 - A. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH A GREEN COPPER GROUNDING CONDUCTOR.
 - B. GROUNDING CONNECTIONS MADE TO THE WATER PIPING SYSTEM SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR AND A BONDING JUMPERS INSTALLED AROUND WATER METER PER CODES AND AS INDICATED ON DRAWING.
 - C. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES, AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM.

PART 3 - EXECUTION

- 3.1 INSTALLATION
 - A. RUN A SEPARATE ISOLATED GROUNDING CONDUCTOR, #12 AWG MINIMUM, IN EACH CONDUIT FEEDING ISOLATED GROUND RECEPTACLES AND OTHER COMPUTERIZED EQUIPMENT AS SHOWN ON DRAWINGS.
 - B. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO BE GROUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS. ALL LOCKNUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON CONDUIT SYSTEM. USE BONDING JUMPERS WITH APPROVED CLAMPS. ALL GROUND CLAMPS SHALL BE "PENN-UNION" OR EQUAL, SIMILAR TO "GPL" TYPE.

END OF SECTION.

SECTION 260529 - HANGERS AND SUPPORTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

- 2.1 STEEL SLOTTED SUPPORTS
 - A. HOT-DIP GALVANIZED AFTER FABRICATION OF DIMENSIONS REQUIRED FOR THE SIZE OF SUPPORTED ITEMS AND ANTICIPATED LOAD.
 - B. RACEWAY AND CABLE SUPPORTS AS DESCRIBED IN NECA 1 AND 101.
 - C. USE STEEL HANGERS, CLAMPS AND ASSOCIATED FITTINGS, DESIGNED FOR TYPES AND SIZES OF RACEWAYS TO BE SUPPORTED.

PART 3 - EXECUTION

- 3.1 INSTALLATION
 - A. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
 - B. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING, HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT CONDUIT, THE CONTRACTOR MUST INSTALL TRAPEZIE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO OTHER SYSTEMS AND EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO OWNER CRITERIA.
 - C. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

END OF SECTION.

SECTION 260529 - HANGERS AND SUPPORTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

- 2.1 STEEL SLOTTED SUPPORTS
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 - B. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING, HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT CONDUIT, THE CONTRACTOR MUST INSTALL TRAPEZIE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO OTHER SYSTEMS AND EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO OWNER CRITERIA.
 - C. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

END OF SECTION.

SECTION 260519 - CONDUCTORS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

- 2.1 SINGLE CONDUCTORS
 - A. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS. MINIMUM WIRE SIZE #12 UNLESS NOTED OTHERWISE ON PLAN OR IN GENERAL NOTES FOR VOLTAGE DROP. THE CONDUCTORS SHALL BE 600 VOLT INSULATION, TYPE THW, THWN OR THHN.
 - B. CONDUCTORS MAY BE STRANDED FOR SIZES #10 AWG AND LARGER. CONDUCTOR SIZE #12 SHALL BE SOLID (NOT STRANDED).
 - C. ALUMINUM CONDUCTORS ARE NOT PERMITTED. CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM GENERAL CONTRACTOR AND ENGINEER WHEN USED.

2.2 MULTICONDUCTOR CABLES

- A. PROVIDE TYPE MC MULTICONDUCTOR CABLE IN COMPLIANCE WITH NEMA WC 70, WITH METAL CLAD AND GROUND WIRE.
- 2.3 CONNECTORS
 - A. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER. USE "TAB" "LOCKTIGHT" FOR #6 AWG WIRE AND LARGER.

PART 3 - EXECUTION

- 3.1 APPLICATIONS AND INSTALLATION
 - A. ALL WIRING SHALL BE IN CONDUIT UNLESS NOTED OTHERWISE (IE-LOW VOLTAGE PLENUM RATED WIRE).
 - B. THE USE OF SHARED NEUTRALS IS REQUIRED FOR LIGHTING CIRCUITS AND ALLOWED PER DRAWING NOTES, IT

SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND LOCAL CODES.

- C. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.
- D. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

- 120/208 VOLT SYSTEM
 - NEUTRAL - WHITE
 - PHASE A OR L1 - BLACK
 - PHASE B OR L2 - RED
 - PHASE C OR L3 - BLUE
 - GROUND - GREEN
 - ISOLATED GROUND - GREEN WITH YELLOW TRACER
- 277/480 VOLT SYSTEM
 - NEUTRAL - GRAY
 - PHASE A OR L1 - BROWN
 - PHASE B OR L2 - ORANGE
 - PHASE C OR L3 - YELLOW
 - GROUND - GREEN WITH YELLOW TRACER

E. UNLESS NOTED OTHERWISE, MC CABLE IS ONLY ALLOWED WITHIN PARTITIONS OR MILL WORK AND LOCATIONS DESCRIBED IN SECTION 260533.

END OF SECTION.

SECTION 260526 - GROUNDING

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

- 2.1 CONDUCTORS AND JUMPERS
 - A. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH A GREEN COPPER GROUNDING CONDUCTOR.
 - B. GROUNDING CONNECTIONS MADE TO THE WATER PIPING SYSTEM SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR AND A BONDING JUMPERS INSTALLED AROUND WATER METER PER CODES AND AS INDICATED ON DRAWING.
 - C. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES, AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM.

PART 3

SECTION 260533 - RACEWAYS AND BOXES

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.
B. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONING, PLUMBING EQUIPMENT, TELEPHONE, DATA, AUDIO/VISUAL, SECURITY, AND ELECTRICAL EQUIPMENT.

PART 2 - PRODUCTS

2.1 RACEWAYS

- A. ALL CONDUITS SHALL BE GALVANIZED IMC, EMT OR MC TYPE UNLESS OTHERWISE SPECIFIED IN SPECIFICATIONS OR ON DRAWINGS. ALL CONDUIT IS TO BE UL LABELED.
a. EMT CONNECTORS SHALL BE STEEL COMPRESSION TYPE.
b. CONDUIT UNDER SLAB ON GRADE SHALL BE RIGID STEEL, OR SCHEDULE 40 PVC WITH RIGID STEEL ELLS WHERE PERMITTED BY OWNER OR CODE.
B. MINIMUM SIZE OF CONDUIT SHALL BE:
a. 3/4 INCH FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES AND 3/4 INCH FOR ALL OTHER LIGHTING AND POWER CIRCUITING.
b. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A MINIMUM OF 3/4 INCH, UNLESS NOTED OTHERWISE ON DRAWINGS.
C. ALL UNDER FLOOR CONDUIT SHALL BE OF MINIMUM 1 INCH SIZE.
2.2 OUTLET BOXES
A. ALL OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL OF THE STANDARD KNOCKOUT TYPE. NO ROUND OUTLET BOXES SHALL BE PERMITTED UNLESS INDICATED AND FOR LIGHTING THAT REQUIRE SUCH CONFIGURATION. CONCEALED BOXES SHALL NOT BE LESS THAN 4 INCH SQUARE AND 1-1/2 INCH DEEP, WITH PLASTER RINGS.
B. ALL KNOCKOUT BOXES, UPON WHICH LIGHTING FIXTURES ARE TO BE INSTALLED, SHALL BE EQUIPPED WITH 3/8 INCH FIXTURE STUDS.
2.3 JUNCTION AND PULL BOXES
A. BOXES AND COVERS SHALL BE GALVANIZED STEEL OF CODE GAUGE AND SIZE.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. SUPPORT ALL CONDUIT IN ACCORDANCE WITH THE NEC AND LOCAL CODES.
B. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY TENANT'S PROJECT MANAGER. PAINTING OF CONDUITS, NOTED ON DRAWINGS OR SPECIFICATIONS WILL BE BY GENERAL CONTRACTOR.
C. FLEXIBLE METAL CONDUIT OR MC TYPE CABLE FLEXIBLE CONDUIT OR MC TYPE CABLE SHALL ONLY BE USED FOR THE FOLLOWING APPLICATIONS:
a. FINAL CONNECTIONS TO MOTORS
b. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER
c. FINAL CONNECTIONS TO VIBRATING EQUIPMENT
d. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES
e. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.
f. IN WALLS FOR LIGHT SWITCHES AND 120 VOLT POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
D. FLEXIBLE METAL CONDUIT MUST BE THE SAME SIZE AS THE IMC OR EMT CONDUIT TO WHICH IT IS CONNECTED. THE FLEXIBLE METAL CONDUIT AND ITS FITTINGS ARE TO BE LISTED FOR GROUNDING. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED. ALL CONNECTORS ARE TO BE OF A NEMA APPROVED TYPE.
E. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.
F. PROVIDE PULL-WIRE IN ALL EMPTY CONDUITS EXCEPT AS NOTED OTHERWISE ON DRAWINGS.
G. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER SERVICE ACCESS AND OTHER TRADES WORK. CONDUIT MUST BE TRAPEZED TO ALLOW 3 FEET MINIMUM CLEARANCE ABOVE CEILING.
H. ALL CONDUITS MUST BE SIZED PER NEC AND LOCAL CODES.
I. INSTALL BOXES RIGIDLY FROM BUILDING STRUCTURE AND SUPPORT INDEPENDENTLY OF THE CONDUIT SYSTEM. ALSO PROVIDE SUITABLE BOX EXTENSIONS TO EXTEND BOXES TO FINISHED FACES OF FLOORS, CEILINGS, WALLS, ETC. ALL OUTLET BOXES TO BE PROVIDED WITH CADDY "QUICK-MOUNT BOX SUPPORT" TO MINIMIZE THE DEFLECTION THAT OCCURS WHEN PLUGGING/UNPLUGGING INTO THESE DEVICES.
J. UNLESS OTHERWISE NOTED ON DRAWINGS OR OTHERWISE REQUIRED BY THE NATIONAL ELECTRIC CODE, HANDICAP CODES OR LOCAL CODES, OUTLET HEIGHTS SHALL BE AS FOLLOWS:
a. SWITCH HEIGHT 48 INCHES FROM FINISHED FLOOR TO CENTERLINE OF OUTLET
b. CONVENIENCE OUTLETS: 18 INCHES FROM FINISHED FLOOR TO CENTERLINE OF OUTLET
c. TELEPHONE OUTLETS SHALL BE LOCATED AS NOTED ON DRAWINGS
K. ARRANGE CIRCUITS TO AVOID THE USE OF JUNCTION BOXES IN INACCESSIBLE LOCATIONS. THE USE OF JUNCTION BOXES ABOVE DRYWALL CEILINGS SHOULD BE LIMITED TO LOCATIONS NEAR ACCESS FRAMES USED FOR DIFFUSERS AND RETURN AIR GRILLES OR ACCESS PANELS AS LOCATED ON PLANS.
L. JUNCTION AND PULL BOXES MUST BE LABELED WITH CIRCUIT NUMBER IDENTIFICATION AND SYSTEM TYPE ON COVER.
M. JUNCTION AND PULL BOXES MUST BE ACCESSIBLE ACCORDING TO NEC 314.29. REFER TO ARCHITECTURAL SPECIFICATIONS FOR ACCESS PANEL SPECIFICATION IF NEEDED.
3.2 TELEPHONE DATA AND COMPUTER SYSTEM
A. FURNISH AND INSTALL A SYSTEM OF CONDUIT RACEWAYS, OUTLET BOXES AND PULL WIRES AS SHOWN ON THE DRAWINGS UNLESS OTHERWISE NOTED ON PLANS. TELEPHONE SWITCHING APPARATUS, CONDUCTORS, INSTRUMENTS, MISCELLANEOUS EQUIPMENT AND APPURTENANCES ARE NOT PART OF THIS CONTRACT
B. OUTLET BOXES ARE TO BE 4 INCH SQUARE MINIMUM WITH SINGLE DEVICE COVER AND TELEPHONE PLATE
C. ALL PULL WIRES ARE TO BE LABELED FOR PURPOSE DESIGNATED.

END OF SECTION.

DIVISION 26 - ELECTRICAL

SECTION 260553 - IDENTIFICATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 EQUIPMENT LABELS

- A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING, FOR ATTACHMENT TO EQUIPMENT.

2.2 CONDUCTORS

- A. REFER TO SECTION 260519
B. PROVIDE SELF-ADHESIVE VINYL LABELS THAT ARE PREPRINTED.

PART 3 - EXECUTION

3.1 LABELING

- A. ALL EQUIPMENT (INCLUDING BUT NOT LIMITED TO PANELBOARDS, SWITCHBOARDS, DISTRIBUTION BOARDS, UPS'S, PDUS, MOTORS, TRANSFORMERS, DISCONNECT SWITCHES) SHALL BE LABELED INDICATING EQUIPMENT NAME AND FEEDER SIZE.
B. ALL BRANCH CIRCUIT WIRING DEVICES SHALL BE LABELED WITH CIRCUIT NUMBER.
C. ALL JUNCTION BOXES ABOVE CEILING AND BELOW RAISED FLOOR SHALL BE LABELED WITH CIRCUIT NUMBER.

END OF SECTION.

SECTION 260573 - OVERCURRENT PROTECTION DEVICE COORDINATION STUDY

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.
B. UTILIZING A COMPUTER-BASED SOFTWARE PROGRAM, MODEL THE PROPOSED DISTRIBUTION SYSTEM, CALCULATE THE MAXIMUM AVAILABLE SHORT CIRCUIT THROUGHOUT AND COORDINATE THE SELECTION OF OVERCURRENT PROTECTION DEVICES TO MEET IEEE.
C. SUBMIT A FULL REPORT FOR REVIEW AND APPROVAL.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION.

SECTION 262200 - TRANSFORMERS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 DRY TYPE TRANSFORMERS

- A. PROVIDE TRANSFORMERS OF K RATINGS SHOWN ON THE DRAWINGS, WITH COPPER WINDINGS, VENTILATED ENCLOSURE, AND ELECTROSTATIC SHIELDING.
B. PROVIDE TWO, 2.5 PERCENT TAPS ABOVE AND TWO, 2.5 PERCENT TAPS BELOW FULL CAPACITY.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. TRANSFORMER SHALL BE PAD MOUNTED OR SHALL BE SECURELY MOUNTED FROM THE BUILDING STRUCTURE.

REINFORCED WALLS OR AS NOTED ON DRAWINGS. USE ADDITIONAL VIBRATION ISOLATORS AT POINTS OF MOUNTING TO CUT VIBRATION NOISES. USE FLEXIBLE METALLIC CONDUIT WITH GROUNDING BUSHING FOR PRIMARY AND SECONDARY CONNECTIONS TO TRANSFORMER. TRANSFORMERS SHALL BE LOCATED, SET, MOUNTED AND CONNECTED IN SUCH A MANNER AS TO KEEP NOISE LEVELS WITHIN THE SURROUNDING AMBIENT NOISE LEVELS AND MAINTAIN ALL CODE REQUIRED CLEARANCES.

END OF SECTION.

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 PANELBOARDS

- A. ALL PANELBOARDS SHALL BE FACTORY ASSEMBLED OF THE BOLTED CIRCUIT BREAKER TYPE WITH SOLID COPPER BUSSING, FULL SIZED COPPER NEUTRAL, 100 PERCENT GROUND BUSSING, AND OVERALL HINGED/LOCKABLE DOOR. ALL CIRCUIT BREAKERS SHALL BE OF THE QUICK-MAKE AND QUICK-BREAK DESIGN, THERMAL-MAGNETIC TYPE, TRIP FREE AND TRIP-INDICATING. ALL PANELS SHALL BE DEAD FRONT AND FLUSH OR SURFACE MOUNTED AS SHOWN.
B. PANELBOARDS SHALL HAVE A MINIMUM SHORT CIRCUIT CURRENT RATING AND LUG CONNECTIONS AS REQUIRED BY A SHORT CIRCUIT STUDY.
C. ALL LUG CONNECTIONS TO BE 75 DEGREE C RATED.
D. PROVIDE ISOLATED GROUND BUS AND DOUBLE NEUTRAL BUS WHERE INDICATED ON THE DRAWINGS.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. REFER TO DRAWINGS FOR FLUSH OR SURFACE MOUNTING.

END OF SECTION.

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 SWITCHES AND RECEPTACLES

- A. FURNISH AND INSTALL SWITCHES AND RECEPTACLES, UNLESS NOTED OTHERWISE, AS NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES AND PLATES SHALL BE SELECTED BY THE ARCHITECT.
B. THE DEVICES SHALL BE OF THE TYPES AND RATINGS LISTED, OR EQUALS BY PASS & SEYMOR, HUBBELL, OR LEVITON.
a. SINGLE POLE SWITCHES: 20AMP - 120-277V: LEVITON 'DECORA' #5621-X
b. THREE WAY SWITCHES: 20AMP - 120-277V: LEVITON 'DECORA' #5623-X
c. DUPLEX RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #16352-X
d. ISOLATED GROUND RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #16352-IG
e. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLES: 20AMP - 125V: LEVITON 'DECORA' #8899
C. ALL DEVICE COVER PLATES SHALL BE LEVITON 'DECORA' NYLON STYLE.
2.2 WALL-BOX DIMMERS
A. DIMMERS SHALL BE LEVITON 'MONET' OR LUTRON "NOVA-T-STAR".
2.3 OCCUPANCY CONTROLS
A. WALL-SWITCH SENSORS SHALL BE OF THE PASSIVE INFARED TYPE DESCRIBED ON THE DRAWINGS WITH ADJUSTABLE TIME DELAY AND FIELD OF VIEW AND COVERAGE REQUIRED FOR THE INSTALLATION.
B. REFER TO THE DRAWINGS FOR PASSIVE INFARED, ULTRASONIC AND DUAL TECHNOLOGY OCCUPANCY SENSORS REQUIRED FOR LARGER SPACES. PROVIDE A COMPLETE SYSTEM INCLUDING SENSORS, POWER PACKS/RELAYS AND WALL OVERRIDE SWITCHES.
2.4 FLOOR BOXES
A. REFER TO THE DRAWINGS FOR DESCRIPTION OF REQUIRED FLOOR BOXES IN SLAB ON GRADE OR POKE-THRU INSTALLATIONS.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. INSTALL DEVICES PER THE MANUFACTURER'S RECOMMENDATIONS.
B. LABEL ALL RECEPTACLES INDICATING PANELBOARD AND CIRCUIT NUMBER. INSTALL CLEAR LABEL WITH BLACK TEXT ON THE FACE OF WALL PLATE.

END OF SECTION.

SECTION 262816 - ENCLOSED SWITCHES

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 SAFETY SWITCHES

- A. SAFETY AND DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, QUICK-MAKE, QUICK-BREAK FUSED OR NON-FUSIBLE WITH RATINGS AND SIZES AS NOTED ON PLANS AND REQUIRED BY CODES.
B. SWITCHES SHALL BE WEATHERPROOF IN OUTDOOR LOCATION OR AS REQUIRED BY LOCAL CODES.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. COORDINATE ALL CONTROL DEVICES WITH MECHANICAL CONTRACTOR. COMBINATION STARTER/DISCONNECT SWITCHES SHALL CONTAIN FUSIBLE SWITCHES AND ONLY USED WHERE INDICATED ON DRAWINGS.

END OF SECTION.

SECTION 264313 - SURGE SUPPRESSION DEVICE

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.
B. ALL SPD'S MUST COMPLY WITH UL 1449 3RD ADDITION.

PART 2 - PRODUCTS

2.1 SERVICE ENTRANCES

- A. PROVIDE CURRENT TECHNOLOGY "TRANSGUARD", OR EQUAL, WITH L-N, L-G, N-G, AND L-L PROTECTION. UNIT SHALL HAVE A SINGLE SURGE CURRENT CAPACITY PER MODE OF 200,000 AMPS, 400,000 AMPS PER PHASE, AND HAVE REPETITIVE SURGE CURRENT CAPACITY PER MODE OF 6,500 IMPULSES.
B. PROVIDE SEPARATE NEMA 1 ENCLOSURES FOR SURFACE MOUNTING NEXT TO MAIN SERVICE EQUIPMENT.
2.2 PANELBOARD PROTECTION
A. PROVIDE CURRENT TECHNOLOGY "TRANSGUARD", OR EQUAL, WITH L-N, L-G, N-G, AND L-L PROTECTION. UNIT SHALL HAVE A SINGLE SURGE CURRENT CAPACITY PER MODE OF 100,000 AMPS, 200,000 AMPS PER PHASE, AND HAVE REPETITIVE SURGE CURRENT CAPACITY PER MODE OF 4,500 IMPULSES.
B. PROVIDE SEPARATE NEMA 1 ENCLOSURES FOR SURFACE OR FLUSH MOUNTING NEXT TO MAIN SERVICE EQUIPMENT.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. INSTALL TVSS PER THE MANUFACTURER'S RECOMMENDATIONS USING LEADS AS SHORT AS POSSIBLE.

END OF SECTION.

SECTION 265100 - LIGHTING

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. REFER TO SECTION 260500.

PART 2 - PRODUCTS

2.1 LIGHT FIXTURES

- A. PROVIDE LIGHT FIXTURES, LAMPS AND BALLASTS AS SHOWN IN THE FIXTURE SCHEDULE ON THE DRAWINGS.
B. ALL INCANDESCENT FIXTURES SHALL BE EQUIPPED WITH APPLICABLE THERMAL PROTECTION.
C. FIXTURES SHALL BE PAINTED AFTER FABRICATION.
2.2 BALLASTS
A. BALLASTS FOR FLUORESCENT LAMPS SHALL BE ELECTRONIC, PROGRAMMABLE START, UL LISTED, CBM CERTIFIED AND ETL APPROVED.
B. THE MINIMUM SOUND RATING SHALL BE "A" AND BALLASTS SHALL HAVE A TOTAL HARMONIC DISTORTION OF LESS THAN 10 PERCENT.
C. PROVIDE DIMMABLE BALLASTS OF THE SAME CRITERIA FOR INSTANCES WHERE DIMMING IS INDICATED ON THE DRAWINGS.

D. BALLASTS FOR HID LAMPS SHALL ALSO CARRY AN "A" SOUND RATING AND HAVE A TOTAL HARMONIC DISTORTION OF LESS THAN 15 PERCENT.

2.3 EMERGENCY BATTERY PACKS

- A. UNITS SHALL BE SELF-CONTAINED MODULAR TYPE, INSTALLED IN THE BALLAST COMPARTMENT, CAPABLE OF OPERATING ONE (1) LAMP TO 1100 LUMENS.
B. PROVIDE TEST PUSH BUTTON AND INDICATOR LIGHT.

2.4 LAMPS

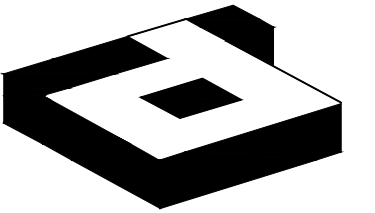
- A. REFER TO LIGHT FIXTURE SCHEDULE FOR REQUIRED LAMPS. PROVIDE LAMPS SUITABLE FOR USE WITH DIMMABLE BALLASTS WHERE INDICATED.

PART 3 - EXECUTION

3.1 INSTALLATION

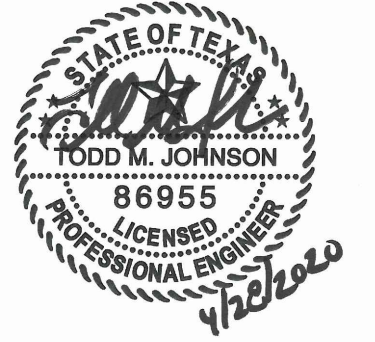
- A. THIS CONTRACTOR SHALL FURNISH ADDITIONAL AUXILIARY SUPPORT STEEL HANGER WIRES ADEQUATELY SIZED TO SUPPORT THE WEIGHT OF THE FIXTURE FASTENED TO THE BUILDING STRUCTURE (MINIMUM TWO PER FIXTURE) FOR ALL FIXTURES IN LAY-IN CEILINGS AND OTHER FIXTURES AS REQUIRED BY THE OWNER AND LOCAL CODE OFFICIALS.
B. FURNISH AND INSTALL APPLICABLE FIRE RATED DRYWALL BOXES OVER RECESSED FIXTURES IN FIRE RATED CEILINGS AS REQUIRED BY CODES. FIELD COORDINATE AS REQUIRED TO AVOID CONFLICTS.

END OF SECTION.



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2641 IRVING BLVD. DALLAS, TEXAS 75207 TEL: 214-638-6800 FAX: 214-689-0301



PROJECT NO.: 580-009 DRAWN BY: RH CHECKED BY: MW R.S.F.: 5,819

BILLINGSLEY COMPANY

3401 OLYMPUS BLVD. NORTHSTAR BUILDERS

3401 OLYMPUS BLVD. SUITE #510 DALLAS, TX 75019

Table with 3 columns: NO., ISSUED FOR, DATE. Contains 10 rows of empty cells.

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/2020 BID ISSUE DATE: 04/28/2020 CONSTRUCTION ISSUE DATE: 04/28/2020

Purdy - McGuire Mechanical - Electrical Engineers 17300 North Dallas Parkway Suite 3000 Dallas, Texas 75248-1147 Firm Registration # F-1511 Tel: 972/239-5357 Fax: 972/239-5231 www.purdy-mcguire.com

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PMI JOB NO. 20039.004 PROJECT MGR. TODD JOHNSON

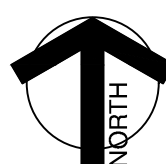
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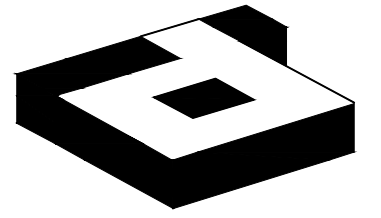
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DRAWING NUMBER:

E1.02

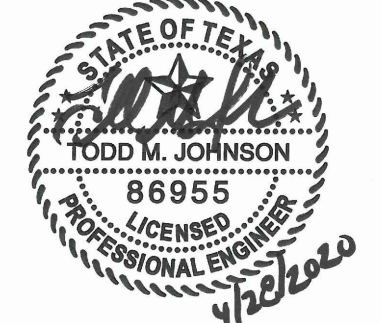
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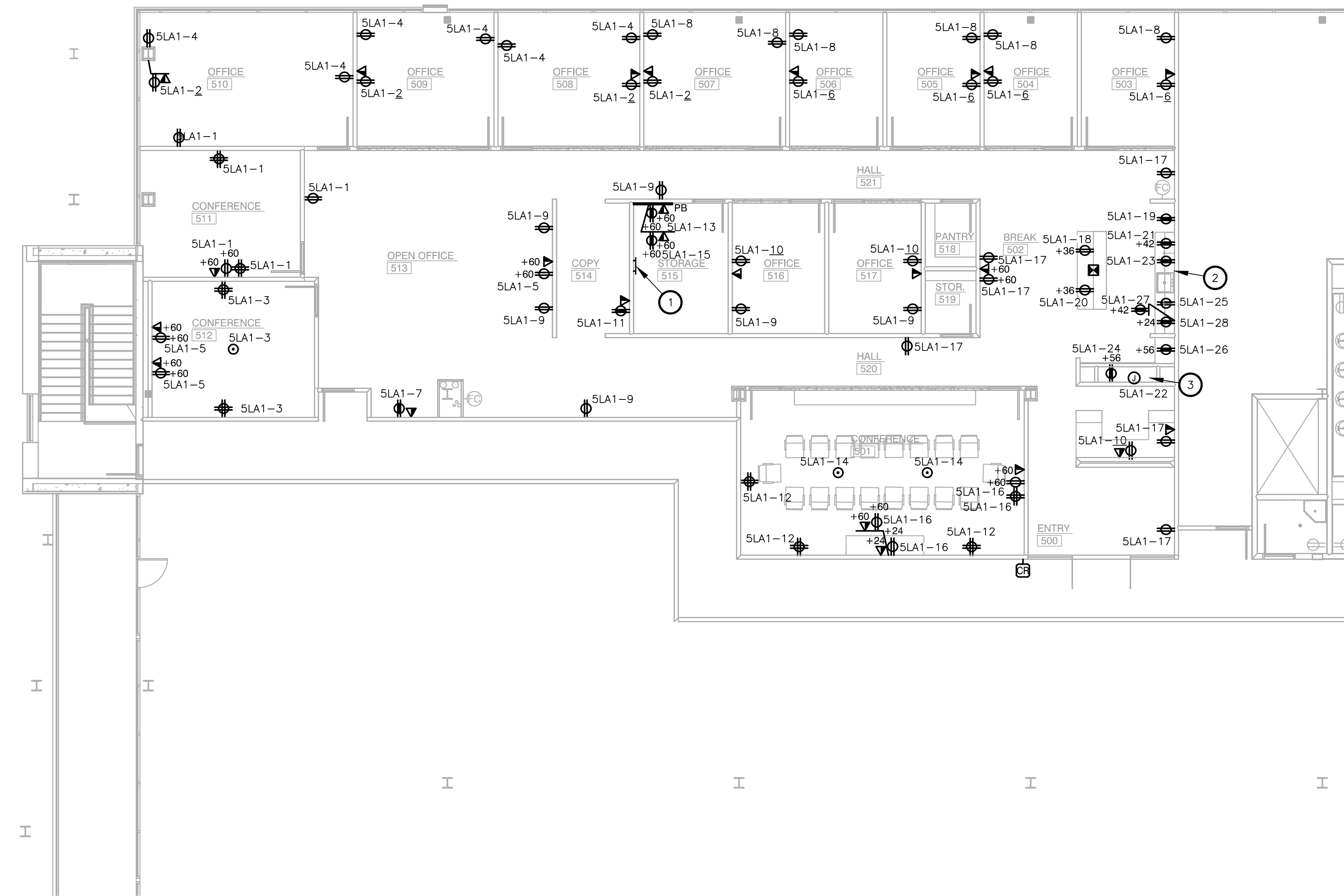


PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5.819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019



NOTES BY SYMBOL :

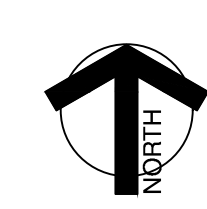
1. PROVIDE 12"x2"x1/4" COPPER GROUND BUS WALL MOUNTED WITH INSULATING STANDOFFS AT 48" AFF. EXTEND 1#6AWG IN 3/4" C FROM GROUND BUS TO BUILDING GROUND.
2. REFER TO MECHANICAL EQUIPMENT POWER SCHEDULE ON SHEET E0.01 FOR POWER TO WATER HEATER.
3. COORDINATE POWER AND CONTROLS FOR SIGNAGE WITH ARCHITECT.

1 LEVEL 05 ELECTRICAL PLAN
SCALE: 1/8"=1'-0"

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/2020
BID ISSUE DATE: 04/28/2020
CONSTRUCTION ISSUE DATE: 04/28/2020

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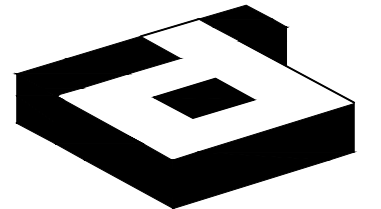


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LEVEL 05 ELECTRICAL PLAN

DRAWING NUMBER:

E2.05



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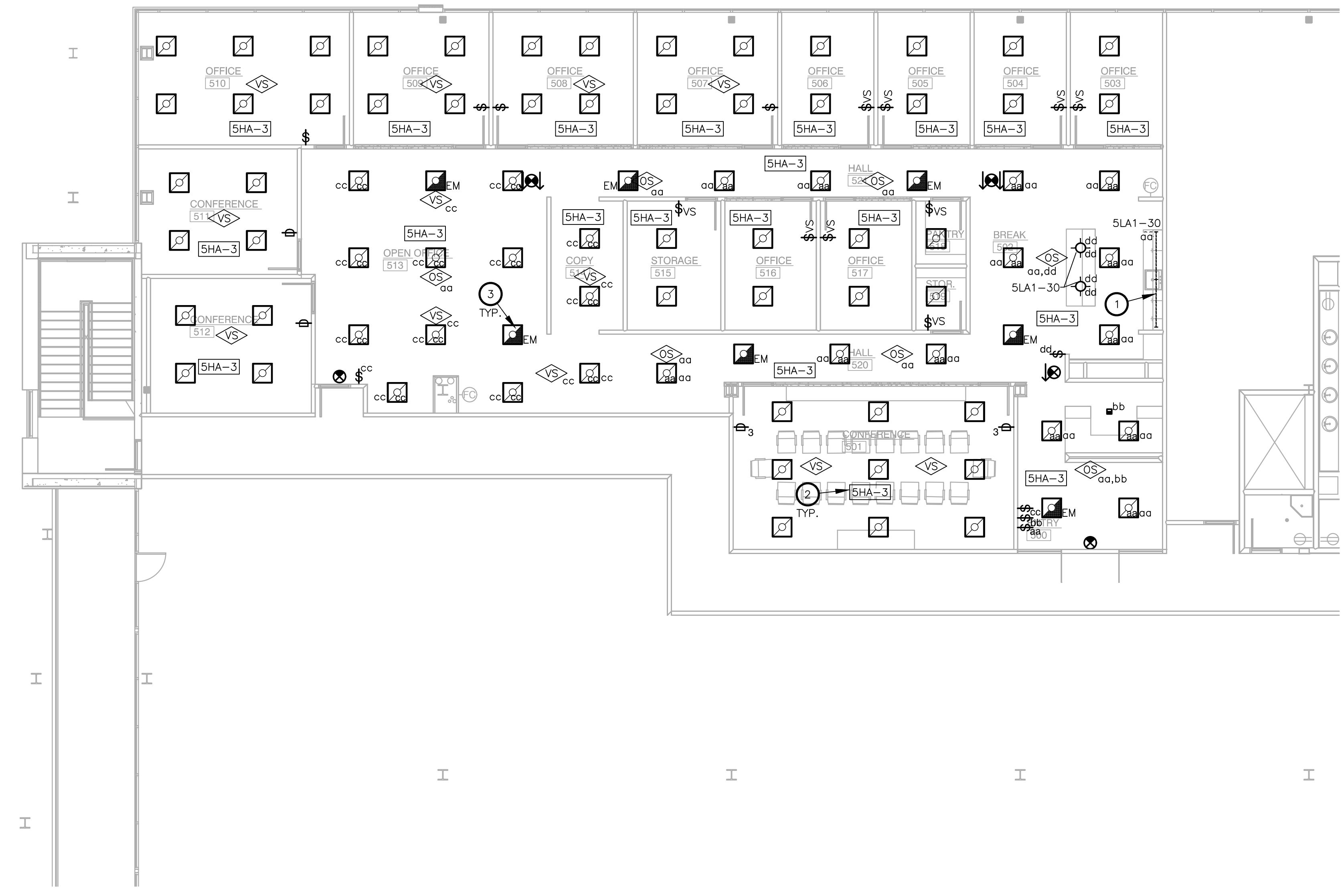


PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5.819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
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NOTES BY SYMBOL (X) :

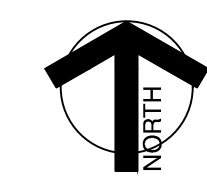
1. PROVIDE CONTACTOR AS REQUIRED TO CONTROL UNDERCABINET LIGHTS WITH CEILING LIGHTS.
2. INDICATES ALL LIGHTING IN THE ROOM/AREA SHALL BE ON THIS CIRCUIT EXCEPT FOR EMERGENCY LIGHTS OR AS NOTED OTHERWISE.
3. EMERGENCY/NIGHT LIGHTS SHALL BE ON UNSWITCHED LEG OF CIRCUIT TO ADJACENT LIGHT FIXTURES.

1 LEVEL 05 LIGHTING PLAN
SCALE: 1/8"=1'-0"

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/2020
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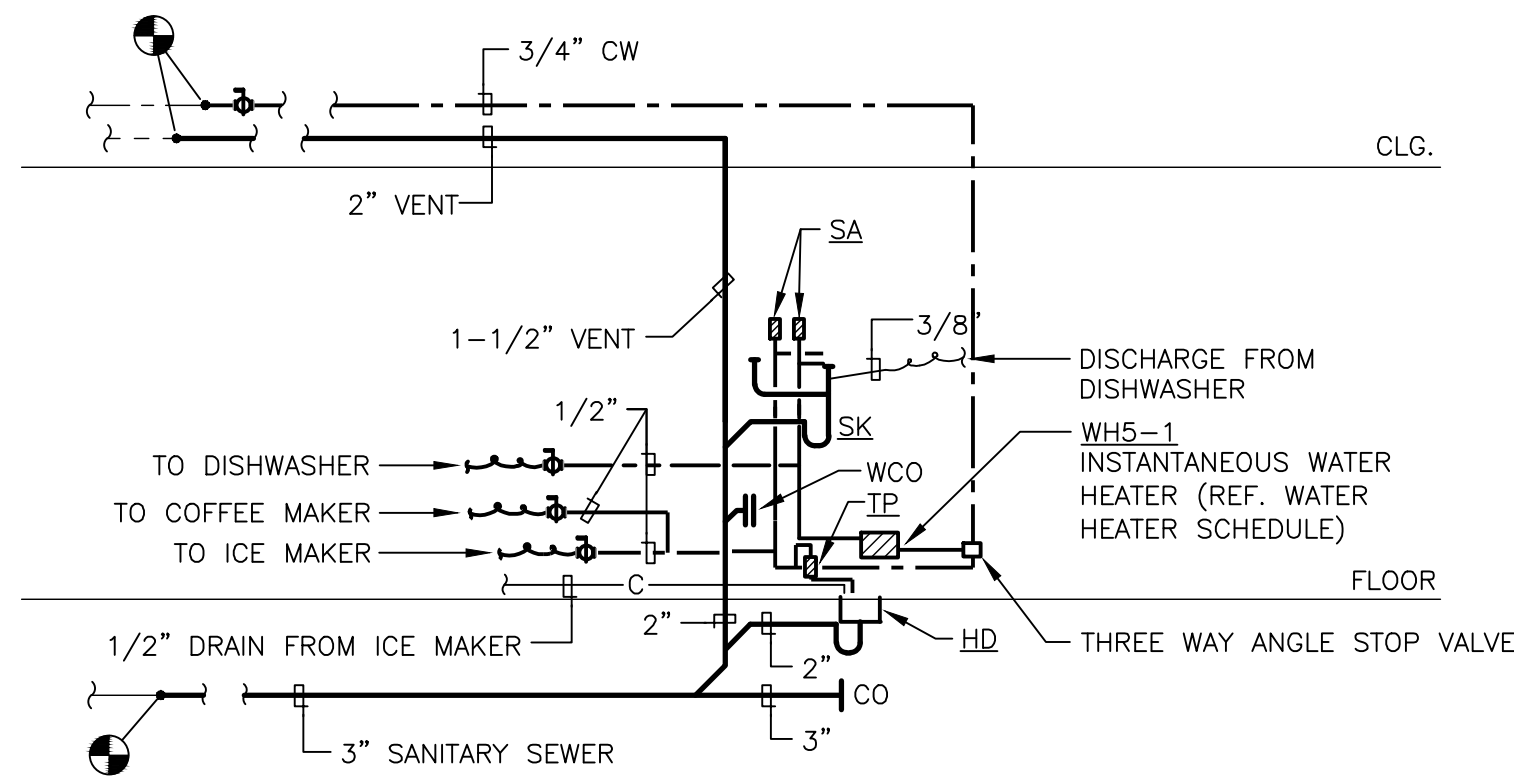
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PMI JOB NO. 20039.004
PROJECT MGR. TODD JOHNSON

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DRAWING TITLE:
LEVEL 05 LIGHTING PLAN

DRAWING NUMBER:

E3.05



1 PLUMBING RISER DIAGRAM
SCALE: NOT TO SCALE

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
	SANITARY SEWER
	VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DRAIN PIPING
	CLEAN OUT
	PIPING DOWN
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	DIRECTION OF FLOW
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	BALL VALVE
	UNION
	CONNECTION TO EXISTING

DALLAS GREEN BUILDING REQUIREMENTS:

702.7 HOT AND TEMPERED WATER DISTRIBUTION. WATER SUPPLY PIPING SHALL BE IN ACCORDANCE WITH SECTION 702.7 OR SECTION 702.7.2. THE FLOW RATE THROUGH 1/4-INCH (6.4 MM) TUBING SHALL NOT EXCEED 0.5 GPM (1.9 LPM). THE FLOW RATE THROUGH 5/16-INCH (7.9 MM) TUBING SHALL NOT EXCEED 1 GPM (3.8 LPM). THE FLOW RATE THROUGH 3/8-INCH (9.5 MM) TUBING SHALL NOT EXCEED 1.5 GPM (5.7 LPM).

702.7.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD. THE MAXIMUM ALLOWABLE PIPE LENGTH FROM THE SOURCE OF HOT OR TEMPERED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE IN ACCORDANCE WITH THE MAXIMUM PIPE LENGTH COLUMNS IN TABLES 702.7.2(2) THROUGH 702.7.2(10), AS APPROPRIATE FOR THE TYPE OF PIPE TO BE INSTALLED. WHERE THE TYPE OF PIPE TO BE INSTALLED IS UNKNOWN OR THE TYPE OF PIPE IS NOT COVERED BY TABLES 702.7.2(2) THROUGH 702.7.2(10), TABLE 702.7.2(1) SHALL BE USED FOR DESIGN PURPOSES. WHERE THE LENGTH CONTAINS MORE THAN ONE SIZE OF PIPE, THE LARGEST SIZE SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH OF THE PIPE IN THE TABLES.

702.7.2 MAXIMUM ALLOWABLE PIPE VOLUME METHOD. THE WATER VOLUME IN THE PIPING SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 702.7.2.1. THE MAXIMUM VOLUME OF HOT OR TEMPERED WATER IN THE PIPING TO PUBLIC LAVATORY FAUCETS, METERING OR NONMETERING, SHALL BE 2 OUNCES (0.06 L). FOR FIXTURES OTHER THAN PUBLIC LAVATORY FAUCETS, THE MAXIMUM VOLUME SHALL BE 64 OUNCES (1.89 L) FOR HOT OR TEMPERED WATER FROM A WATER HEATER OR BOILER; AND 24 OUNCES (0.7 L) FOR HOT OR TEMPERED WATER FROM A CIRCULATION LOOP PIPE OR AN ELECTRICAL HEAT-TRACED PIPE. THE WATER VOLUME IN THE PIPING SHALL BE CALCULATED IN ACCORDANCE WITH SECTION 702.7.2.1.

702.7.2.1 WATER VOLUME DETERMINATION. THE VOLUME SHALL BE THE SUM OF THE INTERNAL VOLUMES OF PIPE, FITTINGS, VALVES, METERS AND MANIFOLDS BETWEEN THE SOURCE OF HOT WATER AND THE TERMINATION OF THE FIXTURE SUPPLY PIPE. THE VOLUME SHALL BE DETERMINED FROM THE LIQUID OUNCES PER FOOT COLUMN OF TABLES 702.7.2(2) THROUGH 702.7.2(10) AS APPROPRIATE FOR THE TYPE OF PIPE. WHERE THE TYPE OF PIPE IS UNKNOWN OR THE TYPE OF PIPE IS NOT COVERED BY TABLES 702.7.2(2) THROUGH 702.7.2(10), TABLE 702.7.2(1) SHALL BE USED TO DETERMINE THE VOLUME. THE VOLUME CONTAINED WITHIN FIXTURE SHUTOFF VALVES, FLEXIBLE WATER SUPPLY CONNECTORS TO A FIXTURE FITTING, OR WITHIN A FIXTURE FITTING SHALL NOT BE INCLUDED IN THE WATER VOLUME DETERMINATION. WHERE HOT OR TEMPERED WATER IS SUPPLIED BY A CIRCULATION LOOP PIPE OR AN ELECTRICALLY HEAT-TRACED PIPE, THE VOLUME SHALL INCLUDE THE PORTION OF THE FITTING ON THE SOURCE PIPE THAT SUPPLIES WATER TO THE FIXTURE.

ELECTRICAL WATER HEATER SCHEDULE

WATER HEATER DESIGNATION	SERVES	INPUT	ELECTRICAL			STORAGE GALLONS	RECOVERY GPH/GPM	DEGREE °F RISE	WATER TEMP AVG °F	EQUAL TO MANUFACTURER	NOTES
			VOLTAGE	PHASE	FLA						
WH5-1	BREAK	8310 WATTS	277	1	30.0	NA	1 GPM	57	---	CHRONOMTE INSTA-FLOW/MICRO M-30L	NOTE 1

PLUMBING NOTES:

1. SUPPLY SET POINT TEMPERATURE SHALL BE 110°F WHICH SHALL BE PRESET AT FACTORY.

PLUMBING FIXTURE SCHEDULE

DESIGNATION	FIXTURE	MANUFACTURER AND MODEL NO.	DESCRIPTION, TRIM AND NOTES
SK	SINK	ELKAY LUSTERTONE ELUH4D211556PD WITH DELTA TRINISC 9159T-BL-DST FAUCET	SINGLE COMPARTMENT UNDERMOUNT, 18 GAUGE TYPE 304 STAINLESS STEEL, 5-3/8" DEEP SINK WITH DRAIN AND CUP STRAINER. PROVIDE SINGLE HANDLE SWMEL PULL DOWN SPRAYER FAUCET PROVIDING 1.5 GPM. PROVIDE CHROME PLATED CAST P-TRAP WITH CLEANOUT, CHROME PLATED FLEX SUPPLIES, WALL STOPS AND WALL ESCUTCHEONS. PROVIDE TRUEBRO INSULATION KIT FOR ADA COMPLIANCE.
HD	HUB DRAIN	JOSAM SERIES 88600	OPEN CAST IRON DRAINAGE HUB.
SA	SHOCK ARRESTOR	WATTS DRAINAGE SG SERIES	WROUGHT COPPER SHELL SIZE AND LOCATE IN ACCORDANCE WITH P.D.I. STANDARDS.
TP	TRAP PRIMER	PRECISION PLUMBING PRODUCTS	ALL BRASS WITH DISTRIBUTION UNIT WHERE REQUIRED.

GENERAL NOTES:

- ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE BUILDING TENANT CONSTRUCTION GUIDE. COORDINATE WITH BUILDING MANAGEMENT/OWNER FOR ACCESS TO ANY TENANT LEASE SPACES THAT MIGHT BE REQUIRED FOR THE INSTALLATION. UNLESS DIRECTED BY LANDLORD ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR 1 YEAR.
- EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY PREVIOUS RECORD DRAWINGS DATED 1/18/2019 HOWEVER, IT IS NOT INTENDED TO BE A TRUE REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BID.
- PIPING LAYOUT IS SCHEMATIC, EXACT LOCATION OF PIPES TO BE COORDINATED WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS.
- CONTRACTOR SHALL COORDINATE PLUMBING ROUGH-IN WITH ARCHITECTURAL DRAWINGS TO PROVIDE EXACT PLUMBING LOCATION FOR FIXTURES.
- COORDINATE EXACT LOCATION OF ALL WATER AND DRAIN CONNECTIONS FOR EQUIPMENT PROVIDED BY OTHERS.
- COPPER COLD, HOT AND HOT WATER LINES SHALL BE INSULATED WITH RIGID FIBERGLASS WITH WHITE ALL-SERVICE JACKET AND VAPOR BARRIER. FITTINGS SHALL BE PRE-MOLDED OF THE SAME MATERIAL. REFER TO PLUMBING INSULATION SCHEDULE.
- RUN ALL WATER LINES LEVEL.
- THIS CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
- SUPPORT CAST IRON SANITARY PIPING NOT IN EARTH, ON 5'-0" CENTERS, ALL STEEL PIPING ON 10'-0" CENTERS AND COPPER PIPING ON 8'-0" CENTERS.
- THIS CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL PLUMBING RELATED PENETRATIONS OF FIRE AND SMOKE RATED STRUCTURES, FLOORS AND PARTITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATIONS OF ALL RATED STRUCTURES.
- ALL FIXTURES TO BE EQUIPPED WITH STOP VALVES IN ACCESSIBLE LOCATION.
- CONTRACTOR SHALL PROVIDE SHUT-OFF VALVE AT EACH BRANCH LINE CONNECTING TO THE MAIN. PROVIDE BRASS VALVE TAGS WITH DOCUMENTATION IN CLOSEOUT DOCUMENTS.
- MAIN WATER SHUT-OFFS SHALL BE ACCESSIBLE.
- PROVIDE ACCESSIBLE CLEANOUTS AT NOT MORE THAN 50 FEET APART IN HORIZONTAL SANITARY DRAINAGE LINES 4" SIZE OR LESS, AND NOT MORE THAN 100 FEET APART FOR LARGER PIPES.
- PROVIDE ACCESSIBLE CLEANOUTS AT BASE OF ALL SANITARY STACKS AND OTHER PLACES AS REQUIRED BY CODE.
- WATER HEATER SHALL HAVE BOTH WATER AND ELECTRICAL SHUT-OFFS AT EASILY ACCESSIBLE LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL ABANDONED PLUMBING LINES.
- ALL DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD DRAWN SEAMLESS COPPER WATER TUBE CONFORMING TO ASTM B88. JOINED WITH WROUGHT COPPER SWEAT TYPE FITTINGS SHALL CONFORM TO ANSI B16.22. WHERE SOLDERED COPPER PIPING IS CONNECTED TO THREADED BRASS PIPING, A CAST BRASS ADAPTER SHALL BE USED. SOLDERED COPPER JOINTS SHALL BE SOLDERED WITH LEAD FREE ASTM B32 GRADE 95% TIN-ANTIMONY SOLDER. EXPOSED PIPING CONNECTED TO FIXTURES AND EQUIPMENT SHALL BE MADE WITH RED BRASS, GRADE "A". NO FERROUS PIPING OR MATERIALS WILL BE ALLOWED.
- ALL SOIL WASTE AND VENT SANITARY DRAINAGE LINES SHALL BE CAST IRON SOIL PIPE AND FITTINGS. COATED INSIDE AND OUTSIDE. MANUFACTURED IN ACCORDANCE WITH ASTM A-74, AND SHALL BE LABELED WITH CAST IRON SOIL PIPE INSTITUTES "MARK OF QUALITY AND PERMANENCE." JOINTS SHALL BE FABRICATED BY THE USE OF "PUSH-ON" TYPE GASKETED JOINTS BELOW GRADE AND "NO-HUB" MECHANICAL JOINTS ABOVE GRADE. PIPING MAY BE PVC ONLY IF ALLOWED PER CODE. (WEIGHT OF PIPE SHALL BE AS REQUIRED BY CODE FOR LOCATION AND DUTY).
- CONDENSATE DRAIN AND INDIRECT DRAIN PIPING SHALL BE TYPE "DWV" HARD DRAWN COPPER PIPE, WITH CAST OR WROUGHT COPPER DRAINAGE PATTERN FITTINGS. PIPING SHALL BE EXTENDED FROM UNIT OR FIXTURE TO DRAIN. ALL PIPING IN CEILING PLENUM SHALL BE INSULATED WITH 1/2" ARMAFLEX OR 1/2" FIBERGLASS WITH ALL SERVICE JACKET.
- PLUMBING CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING. COORDINATE WITH BUILDING MANAGEMENT FOR AFTER-HOURS ACCESS TO SPACE.
- REFER TO PLUMBING RISER DIAGRAMS FOR PIPING SIZES NOT SHOWN ON PLAN.

FIRE PROTECTION SPECIFICATION:

MODIFY THE EXISTING WET PIPE FIRE SPRINKLER SYSTEM AS REQUIRED FOR THE NEW TENANT LAYOUT INCLUDING RELOCATING PIPING TO CLEAR NEW DUCTWORK, ADDING NEW HEADS, RELOCATING EXISTING HEADS, AND LEAVING CERTAIN EXISTING HEADS IN PLACE. THE SPRINKLER DESIGN SHALL COMPLY WITH NFPA 13, THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION AND THE REQUIREMENTS OF THE OWNER'S INSURANCE COMPANY. EXISTING SPRINKLER HEADS TO BE RELOCATED MAY BE REUSED. EXISTING PIPING WHICH IS REMOVED IN THE MODIFICATION WORK SHALL NOT BE REUSED. NEW SPRINKLER PIPING SHALL BE ROUTED AS REQUIRED TO CLEAR NEW DUCTWORK, EXISTING DUCTWORK TO REMAIN, LIGHT FIXTURES, STRUCTURAL INTERFERENCES, ETC. THE NEW SPRINKLER HEADS SHALL MATCH EXISTING SPRINKLER HEADS. ALL PIPING SHALL BE SCHEDULE 40 WITH USA FITTINGS.

IN ALL GYP. BOARD CEILING AREA, PROVIDE CONCEALED SPRINKLER HEADS WITH CAPS TO BE FACTORY PAINTED TO MATCH CEILING. ALL SPRINKLER HEADS IN LAY-IN CEILING SHALL BE LOCATED IN CENTER OF TILE AND ALIGNED WITH LIGHT FIXTURES.

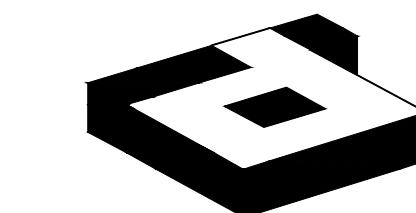
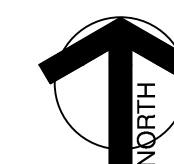
SPRINKLER CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF CALCULATIONS AND SPRINKLER HEAD LOCATIONS FOR ARCHITECT TO REVIEW PRIOR TO ANY INSTALLATION. NO EXCEPTION TAKEN.

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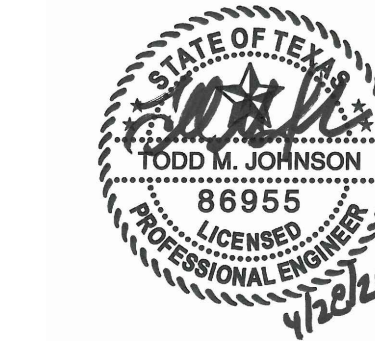
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PROJECT NO: 580-009
DRAWN BY: RH
CHECKED BY: MW
R.S.F.: 5.819

BILLINGSLEY
COMPANY

3401 OLYMPUS BLVD.
NORTHSTAR BUILDERS

3401 OLYMPUS BLVD.
SUITE #510
DALLAS, TX 75019

NO.	ISSUED FOR:	DATE:

LANDLORD/CLIENT REVIEW ISSUE DATE: 04/23/2020
BID ISSUE DATE: 04/28/2020
CONSTRUCTION ISSUE DATE: 04/28/2020

DRAWING TITLE:
PLUMBING
NOTES & SYMBOLS

DRAWING NUMBER:

P0.01

DIVISION 22 - PLUMBING

SECTION 220500 - COMMON WORK RESULTS

PART 1 - GENERAL

1.1 GENERAL NOTES

- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 22.
B. THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO OBTAIN A COMPLETE SET OF BID DOCUMENTS (DRAWINGS AND SPECIFICATIONS) AND FULLY REVIEW THEM. COORDINATE DIVISION 22 WORK WITH THAT OF ALL OTHER DIVISIONS OF WORK.
C. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. ANY LABOR OR MATERIAL CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY LABOR OR MATERIAL WHICH IS NEITHER SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY REQUIRED TO COMPLETE THE WORK, AND WHICH IS NORMALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT.
D. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF THIS WORK TO COMPLY WITH THE OWNER'S SCHEDULE AND PROJECT COMPLETION DATE.

1.2 SCOPE OF WORK

- A. THE DESCRIPTION OF GENERAL CONDITION WORK IN THIS DIVISION SHALL ALSO APPLY TO DIVISIONS 21 AND 23.
B. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE FIRE PROTECTION, PLUMBING AND HVAC SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. WORK IS TO BE COMPLETE IN EVERY RESPECT, WHETHER SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS OR NOT.
C. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OWNER (BUILDING OWNER, LANDLORD OR TENANT), SHALL BE PROVIDED BY THIS CONTRACTOR.
D. THIS WORK, MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:
a. FIRE PROTECTION MODIFICATIONS AND ADDITIONS INCLUDING, BUT NOT LIMITED TO PIPING, SPRINKLER HEADS AND CONTROL VALVES.
b. PLUMBING WORK INCLUDING, BUT NOT LIMITED TO WASTE AND VENT PIPING, DOMESTIC WATER SERVICE AND DISTRIBUTION, PLUMBING FIXTURES, WATER HEATERS AND ROUGH-IN CONNECTION TO EQUIPMENT FURNISHED BY THE OWNER OR OTHER SECTIONS OF THE SPECIFICATIONS.
c. HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS INCLUDING, BUT NOT LIMITED TO HEATING AND COOLING UNITS, VENTILATING SYSTEMS, COMPLETE DUCT SYSTEMS, GRILLES REGISTERS AND DIFFUSERS, INSULATION, ACCESSORIES AND TEMPERATURE CONTROL SYSTEMS.

1.3 CODES

- A. ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS AWARDED, CHANGE ORDERS FOR INCREASED COSTS DUE TO CODE ISSUES WILL NOT BE ACCEPTED UNLESS ALLOWANCES HAVE BEEN PREVIOUSLY AGREED UPON.
B. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODE OR THE OWNER'S CRITERIA, THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS.

1.4 LICENSES, PERMITS, INSPECTIONS AND FEES

- A. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO THIS WORK. ALL COSTS ASSOCIATED WITH THESE SHALL BE PAID FOR BY THE CONTRACTOR AND INCLUDED AS PART OF THE BID.
B. FURNISH TO THE OWNER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT THE COMPLETION OF THE PROJECT.

1.5 GUARANTEE

- A. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE (OFFICIAL DATE IN WRITING) OF THIS PROJECT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
B. WHERE SPECIFIC EQUIPMENT IS NOTED TO HAVE EXTENDED WARRANTIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REGISTRATION SO THE OWNER CAN MAKE ALL APPROPRIATE CLAIMS.

1.6 RECORD DRAWINGS

- A. THIS CONTRACTOR SHALL MAINTAIN ONE SET OF DRAWINGS ON THE JOBSITE, UPDATED WEEKLY, TO RECORD ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS SUCH AS:
a. LOCATIONS OF CONCEALED PIPING AND DUCTS
b. REVISIONS, ADDENDUMS AND CHANGE ORDERS
c. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.
B. DELIVER RECORD DRAWINGS TO THE OWNER AT PROJECT COMPLETION.

1.7 DEMOLITION

- A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY THE GENERAL CONTRACTOR. COORDINATE WITH THE GENERAL CONTRACTOR ALL EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
B. THIS CONTRACTOR SHALL INCLUDE AND BE RESPONSIBLE FOR THE REMOVAL OF ALL FIRE PROTECTION, PLUMBING AND HVAC SYSTEMS NOTED ON THE DRAWINGS OR REQUIRED TO ACCOMPLISH THE STATED WORK.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CARRY UL LABELS WHERE APPLICABLE, UNLESS APPROVED BY THE OWNER.
B. ANY USED EQUIPMENT OR MATERIALS USED SHALL STILL CARRY THE SPECIFIED 1 YEAR GUARANTEE AND APPROVAL OF THE USE OF THIS EQUIPMENT OR MATERIALS DOES NOT RELIEVE THE CONTRACTOR FROM ENSURING EVERYTHING IS OPERATIONAL.
2.2 MANUFACTURERS
A. WHERE TRADE NAMES OR MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE CONSIDERED THE BASIS OF DESIGN AND USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED, WILL BE SUBJECT TO APPROVAL IN WRITING BY THE ENGINEER THROUGH THE SHOP DRAWING SUBMITTAL PROCESS, FOR ACCEPTANCE PRIOR TO INSTALLATION. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2.3 SLEEVES
A. PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2 INCHES ABOVE THE FLOOR.
B. CONTRACTOR SHALL COORDINATE THROUGH THE GENERAL CONTRACTOR AND OWNER ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY WALLS OR CONCRETE FLOORS.
C. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRED SEALED. REFER TO "FIRE STOPPING"
D. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE MINIMUM NO. 22 USG GALVANIZED STEEL.

2.4 FLAME SPREAD PROPERTIES OF MATERIALS

- A. MATERIALS USED ON THIS PROJECT SHALL EACH HAVE A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE DEVELOPED RATING OF 50 OR LESS, AS DETERMINED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH NFPA-255.

2.5 FIRE STOPPING

- A. PROVIDE FIRE STOPPING IN SEALING OF PENETRATIONS IN FIRE-RATED CONSTRUCTION, HORIZONTAL AND VERTICAL, INCLUDING THE FOLLOWING MATERIALS:
a. FOAM: DOW CORNING FIRESTOP SILICONE RTV FOAM, CAT #2001 LIQUID COMPONENT PART A (BLACK) AND LIQUID COMPONENT PART B (OFF-WHITE).
b. SEALANT: 3M 1000 NS AND 1003 SL SILICONE ADHESIVE SEALANT.
c. DAMMING MATERIALS: MINERAL FIBERBOARD, MINERAL FIBER MATTING, MINERAL FIBER PUTTY, PLYWOOD OR PARTICLE BOARD, AS SELECTED BY THE APPLICATOR.
B. MIXES SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS.
2.6 FLOOR, CEILING AND WALL PLATES
A. PROVIDE CHROME-PLATED, ONE-PIECE, ESCUTCHEONS ON PIPES AND HANGER RODS PENETRATING WALLS, FLOORS AND CEILINGS IN FINISHED AREAS OF THE BUILDING. SPLIT RING ESCUTCHEONS ARE NOT ACCEPTABLE.
2.7 DIELECTRIC CONNECTIONS
A. CONNECTIONS BETWEEN FERROUS AND NON-FERROUS PIPING SYSTEMS, AND BETWEEN FERROUS PIPING SYSTEMS AND NON-FERROUS CONNECTIONS TO EQUIPMENT SHALL BE MADE BY THE USE OF DIELECTRIC UNIONS, COUPLINGS OR FLANGES.
2.8 EQUIPMENT FOUNDATIONS AND SUPPORTS
A. PROVIDE FOUNDATIONS AND SUPPORTS FOR MECHANICAL EQUIPMENT AS REQUIRED. THESE SHALL INCLUDE REINFORCED CONCRETE HOUSEKEEPING PADS FOR ANY PUMPS OR AIR HANDLING UNITS INSTALLED INDOORS ON THE FLOOR. PADS SHALL EXTEND A MINIMUM OF 3 INCHES BEYOND EQUIPMENT IN ALL DIRECTIONS.

PART 3 - EXECUTION

3.1 SPACE AND EQUIPMENT ARRANGEMENT

- A. EACH CONTRACTOR SHALL BE RESPONSIBLE TO SEE THAT THEIR PURCHASED EQUIPMENT WILL FIT THE SPACES AVAILABLE. IN CERTAIN INSTANCES NOTE THAT THE EQUIPMENT IS MENTIONED BY NAME IN THE EQUIPMENT SCHEDULES. IN THESE CASES IT IS THAT EQUIPMENT WHOSE DIMENSIONS AND CONNECTION ARRANGEMENTS HAVE BEEN USED FOR THE PREPARATION OF THE LAYOUTS SHOWN ON THE WORKING DRAWINGS. SHOULD THE USE OF EQUIPMENT BY OTHER APPROVED MANUFACTURERS OR OF OTHER PHYSICAL SHAPE THAN THOSE SHOWN ON THE DRAWINGS BE PROPOSED, THE CONTRACTOR SHALL CONFIRM THE EQUIPMENT WILL FIT WITHIN THE ALLOTTED SPACE WITHOUT ARCHITECTURAL MODIFICATIONS OR IMPACT ON OTHER TRADES.
B. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. PROVIDE SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.
C. BEFORE STARTING WORK THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, POWER, LIGHTING AND FIRE ALARM PLANS, SHOP DRAWINGS AND SPECIFICATIONS TO SEQUENCE, COORDINATE AND INTEGRATE THE VARIOUS ELEMENTS OF THE MECHANICAL SYSTEMS TO AVOID INTERFERENCES AND CONFLICTS.

3.2 MANUFACTURER'S DIRECTIONS

- A. THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION, PIPING AND WIRING OF ALL EQUIPMENT AND MATERIAL. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER IN WRITING OF ANY CONFLICT BETWEEN THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S DIRECTIONS, AND SHALL OBTAIN INSTRUCTIONS BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PERFORM ANY WORK BEFORE RECEIVING SUCH INSTRUCTIONS, HE SHALL BEAR ALL COSTS ARISING IN CONNECTION WITH THE DEFICIENCIES.
3.3 CONSTRUCTION REQUIREMENTS
A. THE DRAWINGS AND SPECIFICATIONS SHOW PIPE AND DUCT SIZES, GENERAL ROUTING AND LOCATION, AND DESCRIBE THE VARIOUS SYSTEMS. THESE DOCUMENTS DESCRIBE AND SIZE EQUIPMENT, ITS GENERAL LOCATION, USAGE, SUPPORT AND AUXILIARY REQUIREMENTS. THEY DESCRIBE MOST, BUT NOT ALL OF THE MATERIALS AND THEIR USAGE FOR THIS PROJECT.
B. CONTRACT DOCUMENTS DO NOT DETAIL ALL JOB REQUIREMENTS. THEY DO NOT SHOW LAYOUTS, LOCATIONS OR ELEVATIONS OF DUCTS, ANCHORS, SLEEVES, HANGERS, UNDERFLOOR DRAINS, OR ACCESS DOORS. THEY DO NOT SHOW FINAL PRECISE LOCATIONS OF EQUIPMENT BY DIMENSIONS IN ALL INSTANCES.
C. THE EXACT LOCATION OF EACH ITEM SHALL BE DETERMINED BY REFERENCE TO THE PROJECT CONTRACT DRAWINGS, AND TO DETAILS, SCHEDULES, SHOP DRAWINGS, AND ROUGH-IN DRAWINGS, BY MEASUREMENTS AT THE BUILDING, AND IN COOPERATION WITH THE VARIOUS TRADES. MINOR RELOCATION NECESSITATED BY THE CONDITIONS AT THE SITE OR DIRECTED BY THE OWNER SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. WHERE CONFLICTS OCCUR, WORK WITH ALL INVOLVED TRADES AND RESOLVE THE CONFLICT PRIOR TO ERECTION OF ANY WORK IN THE AREA INVOLVED.

3.4 FABRICATION OF PIPE

- A. PIPING SHALL FOLLOW AS CLOSELY AS POSSIBLE THE ROUTES SHOWN ON THE DRAWINGS, TAKING INTO CONSIDERATION CONDITIONS TO BE MET AT THE SITE.
B. SHOULD ANY UNFORESEEN CONDITIONS ARISE, PIPING SHALL BE CHANGED OR REROUTED AS REQUIRED AFTER PROPER APPROVAL HAS BEEN OBTAINED BY OWNER.
C. PIPING SHALL BE CLEANED WHEN IT IS INSTALLED. BEFORE INSTALLATION IT SHALL BE CHECKED, UP ENDED, SWABBED IF NECESSARY, AND ANY RUST AND DIRT REMOVED.
3.5 EQUIPMENT FOUNDATIONS, HANGERS AND SUPPORTS
A. FOR FLOOR MOUNTED MECHANICAL EQUIPMENT, PROVIDE CONCRETE HOUSEKEEPING PADS NOT LESS THAN 3-1/2 INCH THICK REINFORCED WITH NO. 3 DOWELS AND NO. 3 BARS, 2 FEET-0 INCHES ON CENTER EACH WAY.
B. SUSPENDED EQUIPMENT SHALL HAVE SUPPORTS CONSISTING OF MANUFACTURED METAL FRAMING OR HANGERS CONFORMING TO SECTION 220529.
3.6 INSTRUCTIONS OF OWNER'S PERSONNEL
A. PROVIDE THE SERVICES OF COMPETENT ENGINEERS OR TECHNICIANS TO INSTRUCT REPRESENTATIVES OF THE OWNER IN COMPLETE AND DETAILED OPERATION AND MAINTENANCE OF EACH ITEM OF EQUIPMENT AND EACH SYSTEM.
B. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER MAINTENANCE OF EQUIPMENT AND SYSTEMS UNTIL THE INSTRUCTIONS HAVE BEEN GIVEN TO THE OWNER'S PERSONNEL AND THE LETTER OF RELEASE ACKNOWLEDGED.
C. PROVIDE OPERATION & MAINTENANCE MANUALS (3 COPIES), ALONG WITH AS-BUILT SET OF PRINTS PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.

3.7 ELECTRIC WIRING OF MOTORS AND EQUIPMENT

- A. LOW VOLTAGE HVAC CONTROL WIRING WILL BE INSTALLED BY THE HVAC CONTRACTOR WITH FINAL CONNECTION TO THE HVAC EQUIPMENT BY THE HVAC CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL DISCONNECT SWITCHES AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT UNLESS SUCH EQUIPMENT IS SPECIFIED TO BE PROVIDED WITH FACTORY MOUNTED DISCONNECT SWITCHES.
B. THE ELECTRICAL DESIGN AND DRAWINGS ARE BASED ON THE EQUIPMENT SCHEDULED AND SHOWN ON THE DRAWINGS, SHOULD ANY CONTRACTOR SUBMIT FOR APPROVAL EQUIPMENT REQUIRING CHANGES TO THE ELECTRICAL DESIGN FOR WHICH THE ELECTRICAL CONTRACTOR WILL REQUEST AN EXTRA, THIS EXTRA SHALL BE PAID BY THE CONTRACTOR PROVIDING THE ALTERNATE EQUIPMENT REQUIRING THE CHANGE.
3.8 QUIET OPERATION
A. THIS WORK SHALL BE INSTALLED IN SUCH A MANNER THAT UNDER ALL CONDITIONS OF LOAD IT SHALL OPERATE WITHOUT SOUND OR VIBRATION, WHICH IS OBJECTIONABLE IN THE OCCUPIED SPACES IN THE OPINION OF THE OWNER. IN THE CASE OF MOVING MACHINERY, SOUND OR VIBRATION ANNOYINGLY NOTICEABLE INSIDE ITS OWN ROOM CAN BE CONSIDERED AS OBJECTIONABLE. IN ANY CASE, SITUATION SHALL BE REMEDIED AT NOT COST TO THE OWNER.

3.9 CUTTING AND PATCHING

- A. PROVIDE ALL CUTTING, CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL FROM ARCHITECT AND OWNER.
B. ALL PATCHING SHALL BE BY GENERAL CONTRACTOR AND SHALL MATCH THE SURROUNDING SURFACES.
3.10 TESTS
A. THE CONTRACTOR INSTALLING THE PLUMBING SYSTEMS SHALL FOLLOW ALL TESTS AS REQUIRED TO PROVE COMPLIANCE WITH ALL LOCAL CODES. TESTS PERFORMED SHALL BE EQUAL TO OR EXCEED THAT HEREINAFTER SPECIFIED. ALL PIPING SYSTEMS SHALL BE TESTED BEFORE THEY ARE COVERED OR MADE UNAVAILABLE FOR THE COMPLETE INSPECTION OF ALL JOINTS. IN ADDITION TO THE ABOVE, EACH AND EVERY SYSTEM TO BE INSULATED SHALL BE THOROUGHLY TESTED BEFORE THE INSTALLATION IS APPLIED.
B. DOMESTIC WATER PIPING SYSTEM: UPON COMPLETION OF A SECTION OF THE ENTIRE WATER SUPPLY SYSTEM, IT SHALL BE TESTED AND PROVED TIGHT UNDER A WATER PRESSURE OF 125 PSIG, BUT NOT LESS THAN 10 PERCENT IN EXCESS OF THE WORKING PRESSURE UNDER WHICH IT IS TO BE USED. THE WATER USED FOR TESTS SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY.
C. SANITARY SYSTEMS: ALL SANITARY SEWER SYSTEMS SHALL BE TESTED EITHER IN SECTIONS OR IN THEIR ENTIRETY IN ACCORDANCE WITH ALL THE REQUIREMENTS OF THE LOCAL PLUMBING CODE AND TO THE SATISFACTION OF THE LOCAL PLUMBING INSPECTOR. THESE TESTS SHALL BE EXAMINED IF DESIRED BY THE ARCHITECT OR HIS REPRESENTATIVE DURING THE TEST PERIOD AND AMPLE NOTICE OF PERFORMANCE OF THESE TESTS SHALL BE GIVEN.

END OF SECTION.

SECTION 220523 - GENERAL DUTY VALVES

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 220500.
PART 2 - PRODUCTS
2.1 WATER SYSTEM VALVES
A. DOMESTIC, CHILLED, HOT, AND CONDENSER WATER SYSTEMS: PROVIDE VALVES, WHERE SHOWN ON THE DRAWINGS AND ELSEWHERE AS SPECIFIED OR REQUIRED, TO PROVIDE ISOLATION OF EQUIPMENT AND FIXTURES AND TO PROVIDE DRAINAGE OF LOW POINTS IN WATER LINES. VALVES SHALL BE IN ACCORDANCE WITH THE FOLLOWING DETAILED SPECIFICATIONS:
a. SIZES 2 INCH AND SMALLER: BALL VALVE: NIBCO S85-70 FULL PORT, BRONZE BODY WITH STAINLESS STEEL TRIM.
b. SIZES 2 INCH AND SMALLER: CHECK VALVE: NIBCO S-433 CLASS 150, BRONZE.
c. SIZES 2-1/2 INCH AND LARGER: BUTTERFLY VALVE: NIBCO LC2000 LUG STYLE, CAST IRON, 200 PSIG WITH STAINLESS STEEL TRIM AND EPDM SEAT.
d. SIZES 2-1/2 INCH AND LARGER: CHECK VALVE: NIBCO F-918-B CAST IRON, FLANGED, 200 PSIG WITH BRONZE TRIM.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. VALVES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND IN SUCH MANNER AS TO PERMIT DISASSEMBLY, REMOVAL, REASSEMBLY AND REPLACEMENT.
END OF SECTION.
SECTION 220529 - HANGERS AND SUPPORTS
PART 1 - GENERAL
1.1 SCOPE OF WORK
A. REFER TO SECTION 220500.
PART 2 - PRODUCTS
2.1 GENERAL
A. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE RECOMMENDATIONS OF ASHRAE, ASPE, ANSI AND MSS.
B. PROVIDE FACTORY-FABRICATED PIPE HANGERS AND SUPPORTS IN WHICH MATERIALS, DESIGN AND MANUFACTURE COMPLY WITH ANS/MSS SP-58. SELECT AND APPLY PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-69, AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION. FABRICATE AND INSTALL PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-89.
C. USE ONLY ONE TYPE OF HANGER AND SUPPORT, BY ONE MANUFACTURER, FOR EACH PIPING SERVICE.
D. PROVIDE COPPER-PLATED HANGERS AND SUPPORTS FOR COPPER PIPING SYSTEMS WHERE HANGERS ARE IN CONTACT WITH BARE PIPE.
E. PROVIDE PROTECTIVE COATINGS ON HANGERS AND SUPPORTS WHEN LOCATED IN OUTDOOR AND/OR CORROSIVE ENVIRONMENTS. PROTECTIVE COATINGS SHALL BE AS RECOMMENDED BY THE COATING MANUFACTURER'S REQUIREMENTS.
2.2 HORIZONTAL PIPING HANGERS AND SUPPORTS
A. SELECT SIZE OF HANGERS AND SUPPORTS TO EXACTLY FIT PIPE SIZE FOR BARE PIPING, AND AROUND PIPING INSULATION WITH SADDLE OR SHIELD FOR INSULATED PIPING.
2.3 HANGER ROD ATTACHMENTS
A. SELECT SIZE OF HANGER ROD ATTACHMENTS TO SUIT HANGER RODS.
2.4 BUILDING ATTACHMENTS
A. SELECT SIZE AND TYPE OF BUILDING ATTACHMENTS TO SUIT HANGER RODS AND STRUCTURE.
2.5 PIPE INSULATION HANGER SHIELD INSERTS AND SHIELDS
A. THERMAL HANGER INSERTS SHALL BE DESIGNED TO PREVENT INSULATION FROM BEING CRUSHED BY THE WEIGHT OF THE PIPING AND CONTENTS.
B. SHIELDS SHALL BE FIELD OR FACTORY FABRICATED OF GALVANIZED SHEET METAL.

PART 3 - EXECUTION

3.1 PREPARATION

- A. PROCEED WITH INSTALLATION OF HANGERS, SUPPORTS AND ANCHORS ONLY AFTER REQUIRED BUILDING STRUCTURAL WORK HAS BEEN COMPLETED IN AREAS WHERE THE WORK IS TO BE INSTALLED.
3.2 INSTALLATION OF BUILDING ATTACHMENTS
A. INSTALL BUILDING ATTACHMENTS AT REQUIRED LOCATIONS, ON STRUCTURE FOR PROPER SUPPORT. SPACE ATTACHMENTS WITHIN MAXIMUM PIPING SPAN LENGTH SPECIFIED IN THIS SECTION. INSTALL ADDITIONAL BUILDING ATTACHMENTS WHERE SUPPORT IS REQUIRED FOR ADDITIONAL CONCENTRATED LOADS, INCLUDING VALVES, FLANGES, GUIDES, STRAINERS AND EXPANSION JOINTS. ALSO PROVIDE ATTACHMENTS AT CHANGES IN DIRECTION OF PIPING AND WHERE REQUIRED BY A LIMITED CARRYING CAPACITY OF THE STRUCTURE.
3.3 INSTALLATION OF HANGERS AND SUPPORTS
A. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE IN COMPLIANCE WITH MSS SP-69. ARRANGE THE GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING TO BE SUPPORTED TOGETHER IN TRAPEZE-TYPE HANGERS WHERE POSSIBLE. WHERE PIPING OF VARIOUS SIZES ARE TO BE SUPPORTED TOGETHER BY TRAPEZE HANGERS, SPACE HANGERS FOR SMALLEST PIPE SIZE OR INSTALL INTERMEDIATE SUPPORTS FOR SMALL DIAMETER PIPE. DO NOT USE WIRE OR PERFORATED METAL TO SUPPORT PIPING, AND DO NOT SUPPORT PIPING FROM OTHER PIPING.
B. INSTALL HANGER AND SUPPORTS COMPLETE WITH NECESSARY BOLTS, RODS, NUT WASHERS AND OTHER ACCESSORIES. EXCEPT AS OTHERWISE INDICATED FOR EXPOSED CONTINUOUS PIPE RUNS, INSTALL HANGERS AND SUPPORTS OF SAME TYPE AND STYLE AS INSTALLED FOR ADJACENT SIMILAR PIPING.
C. SUPPORT FIRE PROTECTION WATER PIPING INDEPENDENTLY OF OTHER PIPING.
3.4 PROVISIONS FOR MOVEMENT
A. INSTALL HANGERS AND SUPPORTS TO ALLOW MOVEMENT OF PIPING SYSTEMS AND TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, OFFSETS, EXPANSION BENDS AND SIMILAR UNITS.
B. INSTALL HANGERS AND SUPPORTS SO THAT PIPING, LOADING, AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT
3.5 INSULATED PIPING REQUIREMENTS
A. HANGERS FOR INSULATED COLD PIPING SHALL BE PLACED AROUND THE OUTSIDE OF THE INSULATION AND VAPOR BARRIER.
a. PROVIDE A 180 DEGREE THERMAL INSERT ON THE BOTTOM OF THE PIPE. EXTEND VAPOR BARRIER ON TOP OF INSERT AND INSULATION AND PROVIDE INSULATION SHIELD BETWEEN INSERT AND HANGER.
B. HANGERS FOR OTHER INSULATED PIPING MAY BE PLACED DIRECTLY AGAINST THE PIPING WITH INSULATION CARRIED COMPLETELY OVER AND AROUND HANGER AND ROD.
3.6 HANGER SPACING AND ROD SIZES
A. HANGERS SHALL BE SPACED SO AS TO SUPPORT PIPING PROPERLY. CAST IRON SOIL PIPES SHALL BE SUPPORTED ON HANGERS SPACED NOT MORE THAN PIPE LENGTH BEING EMPLOYED. HANGERS FOR ALL OTHER COPPER OR STEEL PIPING SHALL BE SPACED ACCORDING TO THE FOLLOWING SCHEDULE:
PIPE SIZE MAXIMUM HANGER SPACING MINIMUM ROD SIZE
1/2 INCH 5 FEET 3/8 INCH
3/4 INCH 5 FEET 3/8 INCH
1 INCH 6 FEET 3/8 INCH
1-1/4 INCH 6 FEET 3/8 INCH
1-1/2 INCH 8 FEET 3/8 INCH
2 INCH AND LARGER 8 FEET 1/2 INCH
C. AT NO TIME SHALL ANY SECTION OF PIPE HAVE LESS THAN TWO SUPPORTS.

END OF SECTION.

SECTION 220553 - IDENTIFICATION

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 220500.
B. LABEL ALL NEW EQUIPMENT AND PIPING SYSTEMS.
PART 2 - PRODUCTS
2.1 PIPE LABELS
A. PRETENSION PIPE LABELS OF SEMI-RIGID PLASTIC FORMED TO COVER THE FULL CIRCUMFERENCE OF PIPE.
B. IDENTIFY THE SERVICE AND DIRECTION OF FLOW. LABELS SHALL CONTAIN AT LEAST 1/2 INCH HIGH LETTERING AND BE PLACED SO THEY ARE EASY TO READ.
2.2 VALVE TAGS
A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND CHAIN FOR ATTACHMENT TO VALVE.
2.3 EQUIPMENT LABELS
A. MULTILAYER, MULTICOLOR PLASTIC LABELS WITH MECHANICAL ENGRAVING AND HOLES FOR ATTACHMENT TO EQUIPMENT.

PART 3 - EXECUTION

3.1 PIPE LABELS

- A. INSTALL PIPE LABELS WHERE PIPING IS EXPOSED OR ABOVE AN ACCESSIBLE CEILING AT MAXIMUM 20 FT. CENTERS.
3.2 VALVE TAGS
A. ATTACH TAGS TO VALVES USING CHAIN. PROVIDE A VALVE SCHEDULE FOR MOUNTING IN THE MECHANICAL ROOM.
3.3 EQUIPMENT LABELS
A. PERMANENTLY ATTACH LABELS TO EQUIPMENT. LOCATE WHERE LABEL CAN BE EASILY SEEN AND READ.
END OF SECTION.

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

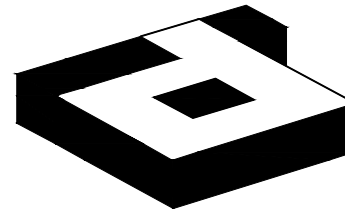
- 1.1 SCOPE OF WORK
A. REFER TO SECTION 220500
PART 2 - PRODUCTS
2.1 COPPER PIPING
A. PROVIDE SOFT COPPER TUBE, TYPE "K", WITH SOLDER-JOINT FITTINGS FOR UNDER SLAP INSTALLATIONS.
B. PROVIDE HARD COPPER TUBE, TYPE "L", WITH SOLDER JOINT FITTINGS FOR ALL ABOVE GRADE INSTALLATIONS.
PART 3 - EXECUTION
3.1 INSTALLATION
A. CLEAN AND DISINFECT ALL NEW PIPING WITH WATER/CHLORINE SOLUTION.
B. INSTALL WATER PIPING LEVEL AND PLUMB. PROVIDE DRAIN VALVES AT ALL LOW POINTS.
C. PIPING BELOW SLAB SHALL BE INSTALLED WITHOUT JOINTS.

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

- 1.1 SCOPE OF WORK
A. REFER TO SECTION 220500
PART 2 - PRODUCTS
2.1 GENERAL
A. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE RECOMMENDATIONS OF ASHRAE, ASPE, ANSI AND MSS.
B. PROVIDE FACTORY-FABRICATED PIPE HANGERS AND SUPPORTS IN WHICH MATERIALS, DESIGN AND MANUFACTURE COMPLY WITH ANS/MSS SP-58. SELECT AND APPLY PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-69, AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION. FABRICATE AND INSTALL PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH MSS SP-89.
C. USE ONLY ONE TYPE OF HANGER AND SUPPORT, BY ONE MANUFACTURER, FOR EACH PIPING SERVICE.
D. PROVIDE COPPER-PLATED HANGERS AND SUPPORTS FOR COPPER PIPING SYSTEMS WHERE HANGERS ARE IN CONTACT WITH BARE PIPE.
E. PROVIDE PROTECTIVE COATINGS ON HANGERS AND SUPPORTS WHEN LOCATED IN OUTDOOR AND/OR CORROSIVE ENVIRONMENTS. PROTECTIVE COATINGS SHALL BE AS RECOMMENDED BY THE COATING MANUFACTURER'S REQUIREMENTS.
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A. SELECT SIZE OF HANGERS AND SUPPORTS TO EXACTLY FIT PIPE SIZE FOR BARE PIPING, AND AROUND PIPING INSULATION WITH SADDLE OR SHIELD FOR INSULATED PIPING.
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A. SELECT SIZE OF HANGER ROD ATTACHMENTS TO SUIT HANGER RODS.
2.4 BUILDING ATTACHMENTS
A. SELECT SIZE AND TYPE OF BUILDING ATTACHMENTS TO SUIT HANGER RODS AND STRUCTURE.
2.5 PIPE INSULATION HANGER SHIELD INSERTS AND SHIELDS
A. THERMAL HANGER INSERTS SHALL BE DESIGNED TO PREVENT INSULATION FROM BEING CRUSHED BY THE WEIGHT OF THE PIPING AND CONTENTS.
B. SHIELDS SHALL BE FIELD OR FACTORY FABRICATED OF GALVANIZED SHEET METAL.

END OF SECTION.



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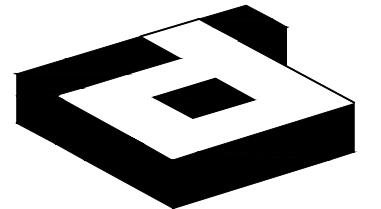
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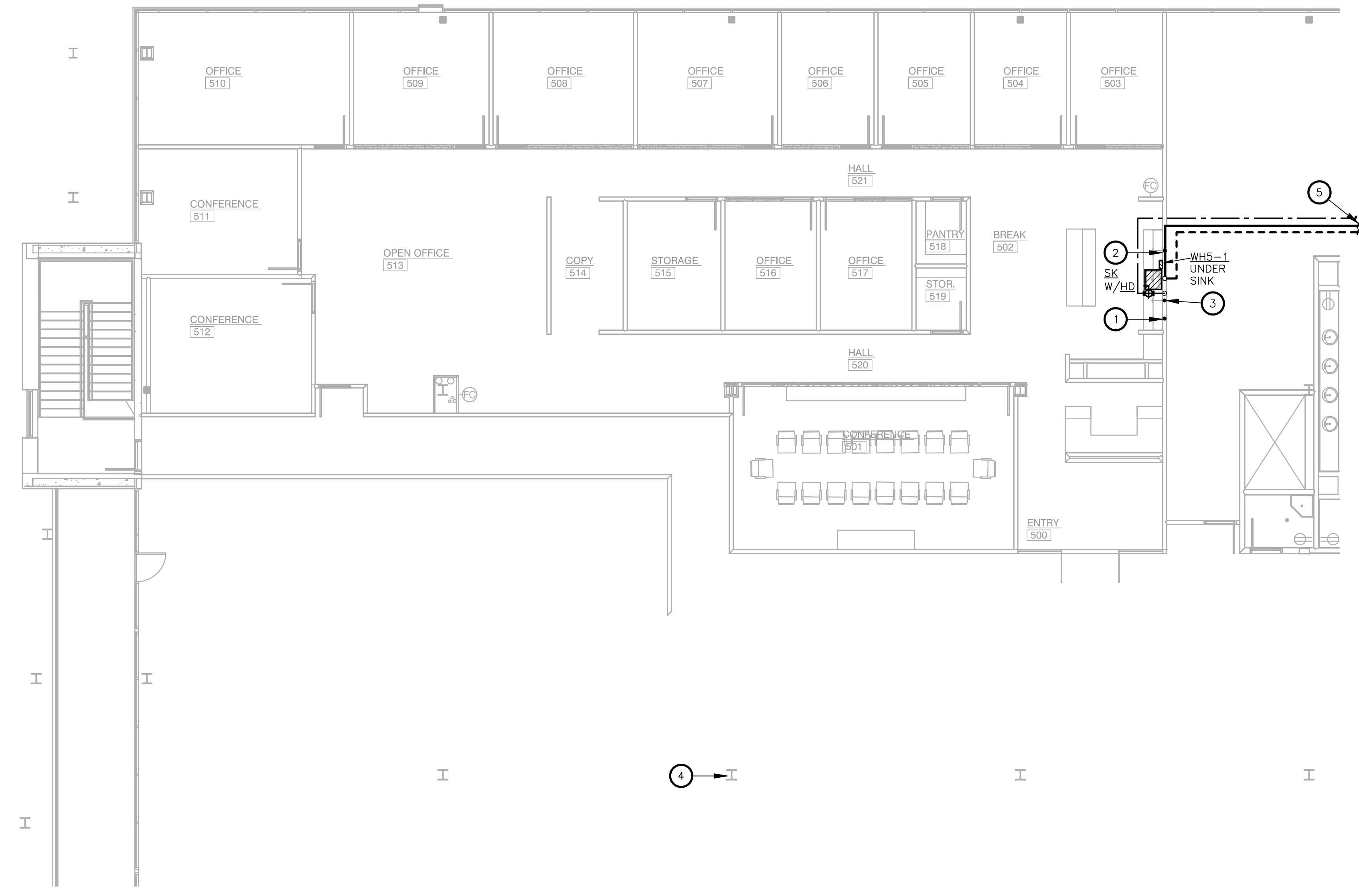


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NOTES BY SYMBOL (X):

1. PROVIDE COLD WATER WITH VALVE TO ASSE 1022 COMPLIANT BACKFLOW PREVENTER AND EXTEND 1/4" COPPER TUBING UP THRU COUNTER TOP TO COFFEE MAKER. VERIFY WITH ARCHITECT EXACT LOCATION OF COFFEE MAKER ON COUNTER.
2. PROVIDE COLD WATER WITH VALVE TO ASSE 1022 COMPLIANT BACKFLOW PREVENTER AND EXTEND 1/4" COPPER TUBING TO ICE MAKER. EXTEND CONDENSATE DRAIN LINE FROM ICE MAKER TO HUB DRAIN. PROVIDE PUMP AS REQUIRED.
3. PROVIDE HOT WATER WITH VALVE TO ASSE 1022 COMPLIANT BACKFLOW PREVENTER THEN TO DISHWASHER. EXTEND DISHWASHER DRAIN LINE AND CONNECT TO P-TRAP FITTING IN SINK WASTE.
4. LOCATION OF BUILDING WET STACK STUB-OUTS.
5. EXTEND PIPING TO EXISTING WET STACK LOCATED AT EXISTING CORE RESTROOM. VERIFY LOCATION, SIZES, SANITARY INVERT, ROUTING, AND FIELD CONDITIONS FOR PROPER CONNECTION PRIOR TO ANY INSTALLATION. PROVIDE SHUT-OFF VALVE IN THE NEW DOMESTIC WATER LINE FOR FUTURE CONNECTION.

1 LEVEL 05 PLUMBING PLAN
SCALE: 1/8"=1'-0"

NO.	ISSUED FOR:	DATE:

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LEVEL 05 PLUMBING PLAN

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