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# ITAP - LEE'S SUMMIT

228 SW MAIN ST.  
LEE'S SUMMIT, MO 64063

## PERMIT DOCUMENTS

27 FEB 2023

COLLINS WEBB #: 22066

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### OWNER

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### ARCHITECT

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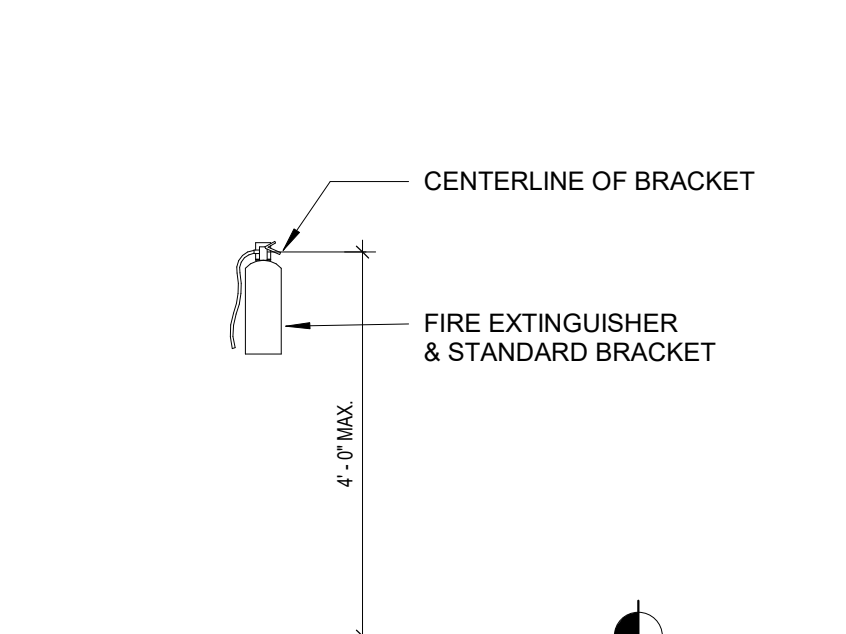




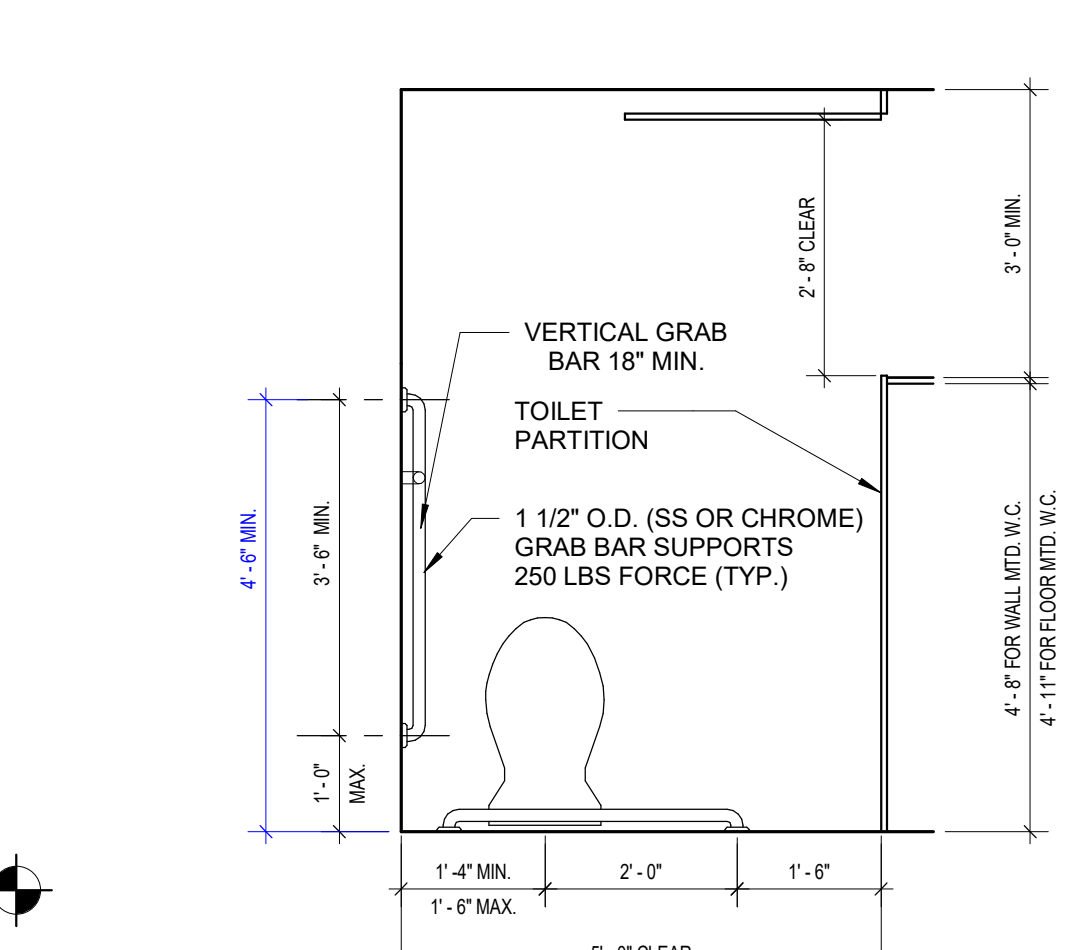
## GENERAL NOTES ACCESSIBILITY GUIDELINES:

- NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
- ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- ELEVATORS: STANDARD CALL BUTTONS: 36" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP.) & 48" MAX. (3/4" SMALLEST DIM.). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM.). TACTILE SIGNAL ON HOSTWAY: 60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH CHARACTERS.
- DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD MOUNTING HEIGHTS: PUSH PLATES = 42"; PULL HANDLES = 42"; KNOBS/LEVERS = 40"; PANIC EXIT = 42"; CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2"; CENTER HEIGHT = 18" FROM B.O. DOOR THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX. ADA HARDWARE = 34" MIN. TO 48" MAX. DRINKING FOUNTAINS & SPOUTS (TO SPOUT): STANDARD = 40" TYP. 42" MAX. ADA = 38" MAX. (27" MIN. CLEAR KNEE SPACE).
- COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 34" MAX.
- WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15" ADA (TO TOP OF SEAT) = 17" TO 19" ADA FLUSH CONTROLS = 44" MAX.
- URINALS (TO RIM): STANDARD = 24" MAX. ADA = 17" MAX. ADA FLUSH CONTROL S = 44" MAX.
- LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 38" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE).
- MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD VARIES. ADA = 40" MAX.
- GRAB BARS: ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 38" MAX. SHOWERS = 33" MIN. TO 38" MAX. FROM B.O. SHOWER). BATHUBS: TOP BAR = 33" MIN. TO 38" MAX. BOT. BAR = 8" ABOVE T.O. TUB.
- SHOWER HEADS (FROM FLOOR TO HEAD): STANDARD = 72" TO 84" ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF.
- SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP). ADA = 38" MIN. TO 48" MAX.
- SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX.
- TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 60" TO TOP. URINALS = 18" TO BOT. & 60" TO TOP.
- TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD = 24" ADA = 19" MIN. TO 24" MAX.
- WALL MOUNTED SOAP DISPENSERS (TO C.L. OF PUSH BUTTON): STANDARD = 40" ADA = VARIES. RE-OBSTRUCTED AND UNOBSTRUCTED REACH RANGES: ADA SIDE REACH = 48" MAX. ABOVE SINK IN COUNTER. PAPER TOWEL DISPENSER/WASTE RECEPTACLE (TO TOWEL SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- WARM AIR HAND DRYER (TO PUSH SWITCH): STANDARD = 44" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- TOILET SEAT COVER DISPENSERS (TO OPNG.): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- SHELVES: ADA = 48" MAX.
- COAT HOOKS: STANDARD = 68" ADA = 48" MAX.
- CHALKBOARDS, TACKBOARDS & MARKERBOARDS: STANDARD = 32" TO 36" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED TO T.O. BOARD).
- THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX.
- CONVENIENCE RECEPTACLES - ELECTRICAL/ TELEPHONE/ DATA (TO C.L.): STANDARD = 18" ADA = 15" MIN.
- EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN. ABOVE DOOR FRAME. EQUAL SPACE FROM CEILING TO TOP OF FRAME.
- FIRE EXTINGUISHERS (TO TOP, U.N.O.): GROSS WT. 40 LBS. OR LESS = 60" MAX. GROSS WT. MORE THAN 40 LBS. = 42" MAX. ADA = 40" MAX. (B.O. CABINET).
- FIRE ALARM PULL STATIONS (TO LEVER): STANDARD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX. SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING HEIGHT.
- HORN/ SPEAKER VISUAL SIGNALS: STANDARD = 80" AFF. OR BELOW CEILING - WHICHEVER IS LOWER.
- ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OF LATCH SIDE OF DOOR.

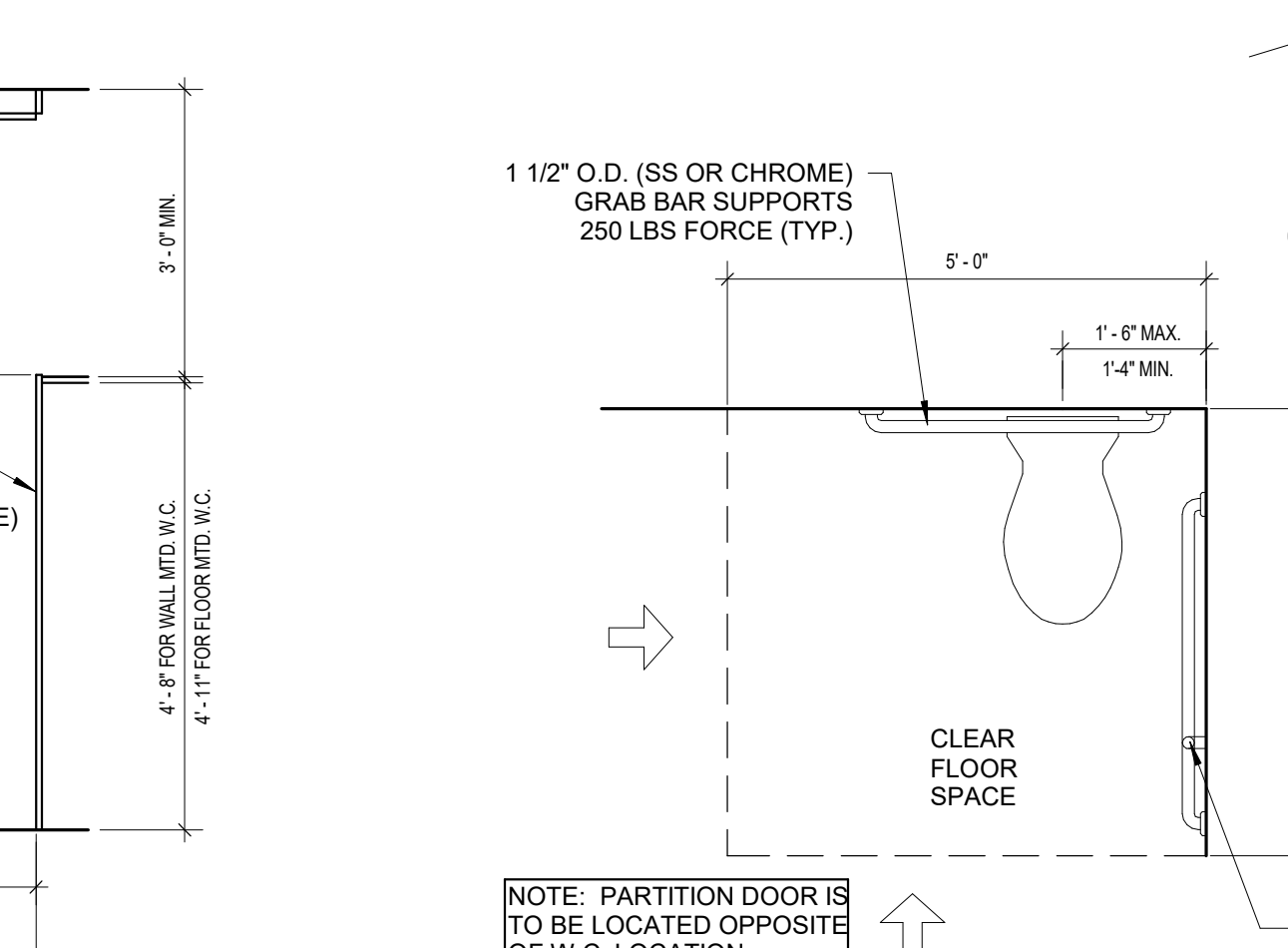
J10 FE CABINET  
1/2" = 1'-0"



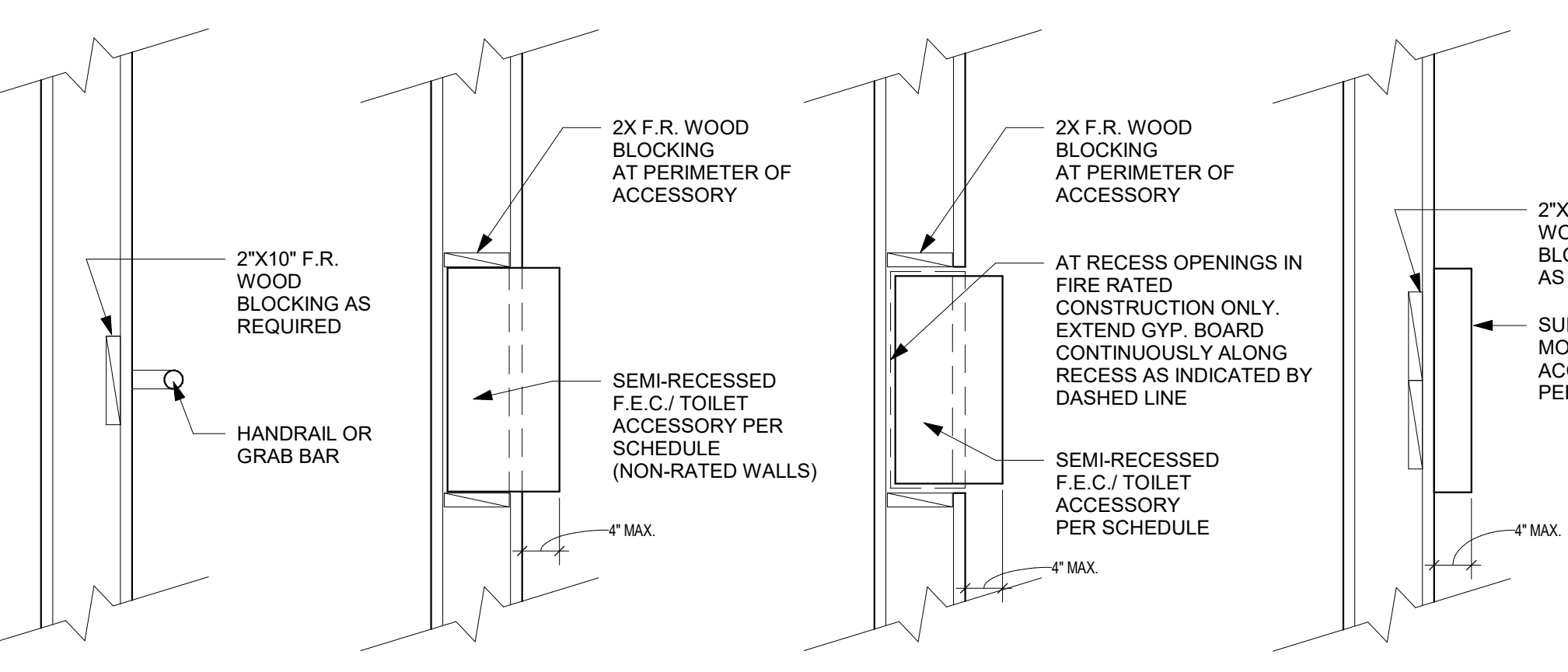
G10 FIRE EXTINGUISHER  
1/2" = 1'-0"



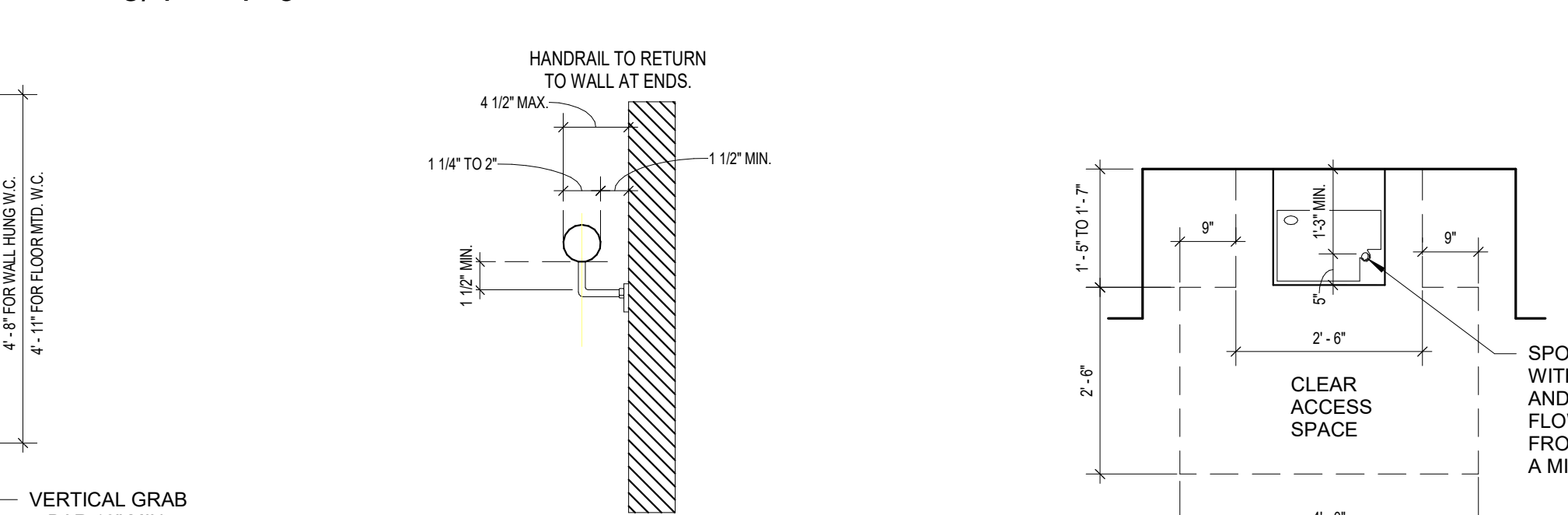
G9 HANDRAIL @ STAIRS AND RAMPS  
3/4" = 1'-0"



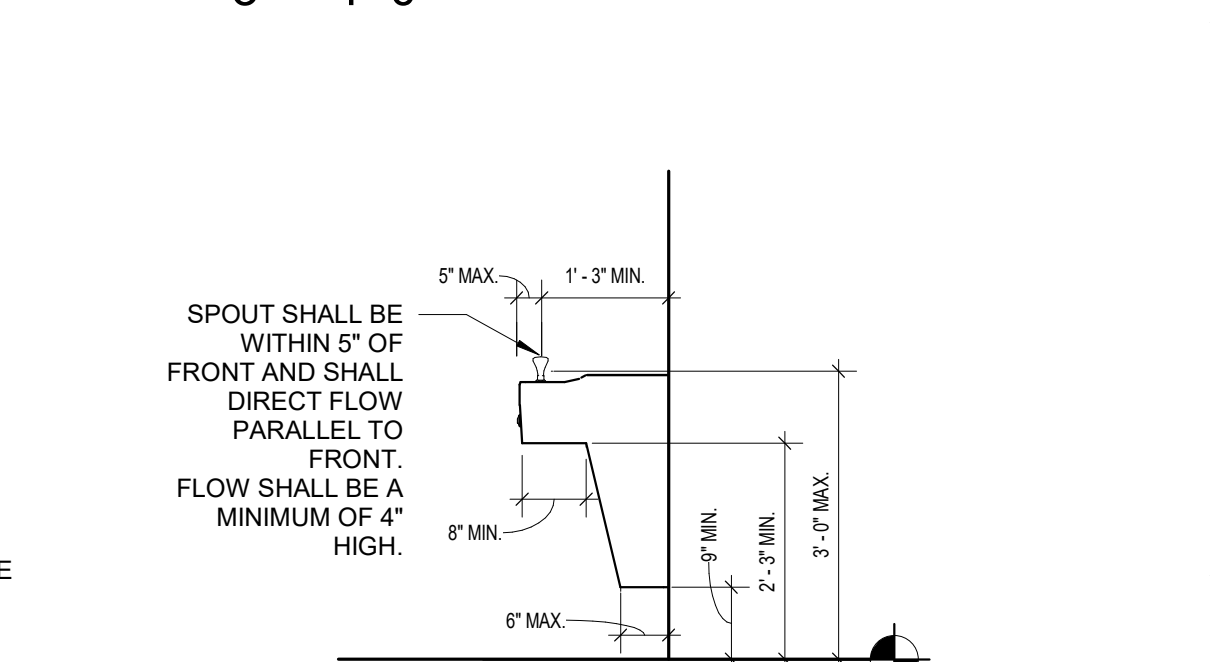
J7 TYP. DOOR APPROACH CLEARANCES  
1/2" = 1'-0"



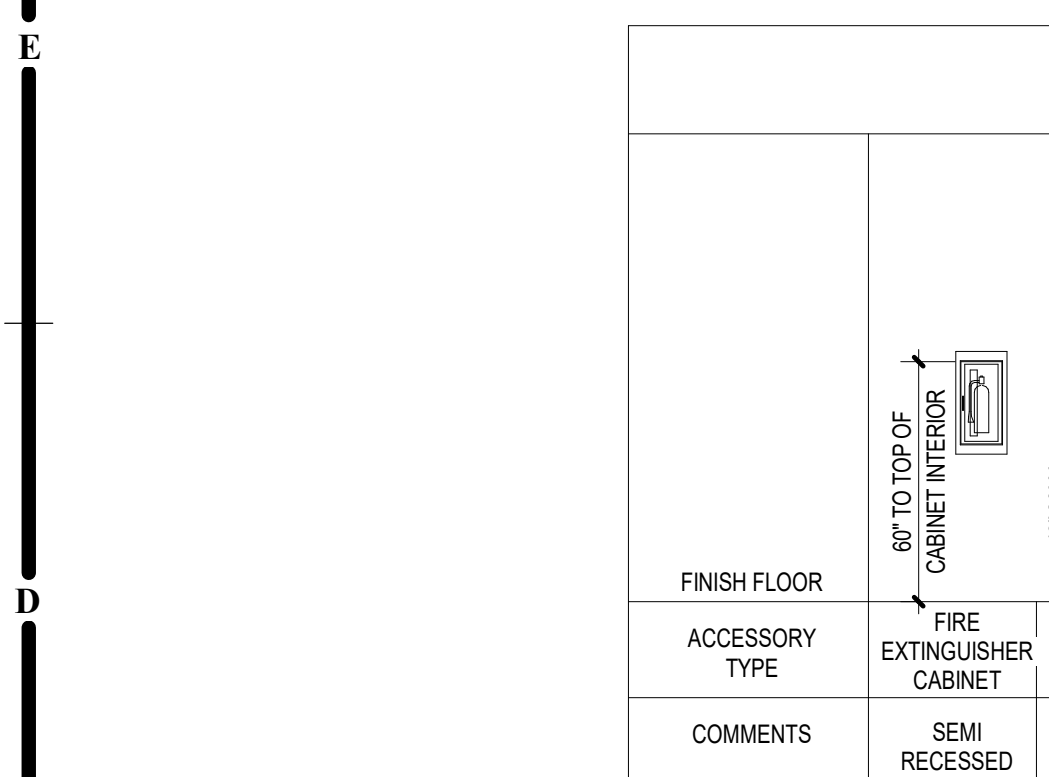
G7 TYPICAL BLOCKING DETAILS  
3/4" = 1'-0"



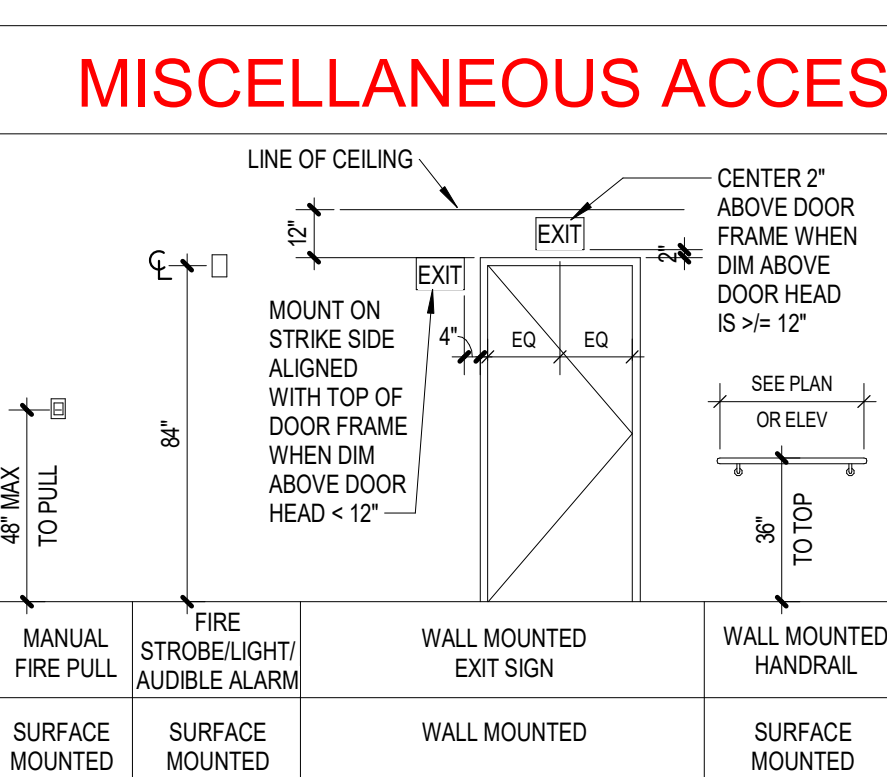
G2 BLOCKING SECTION  
3" = 1'-0"



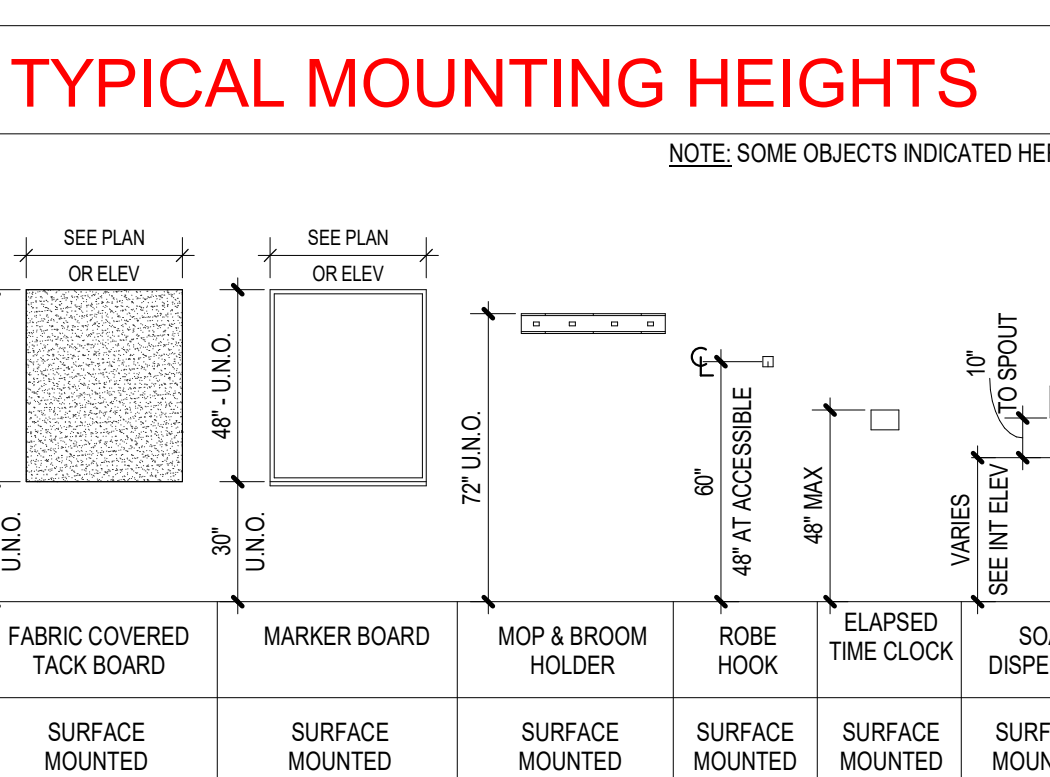
E12 SINK IN COUNTER CLEARANCES  
1/2" = 1'-0"



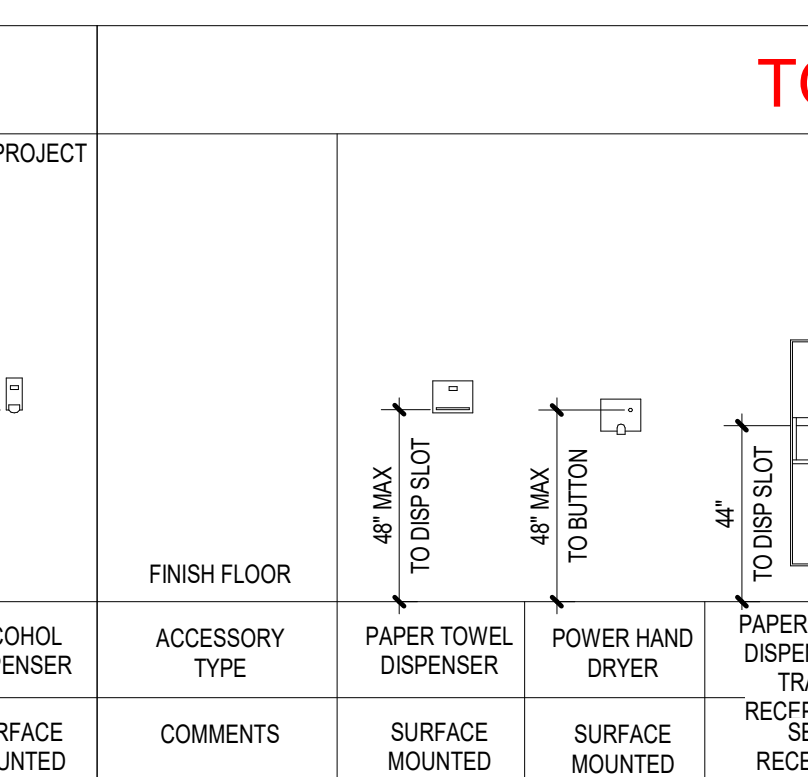
E10 ACCESSIBLE TOILET STALL  
1/2" = 1'-0"



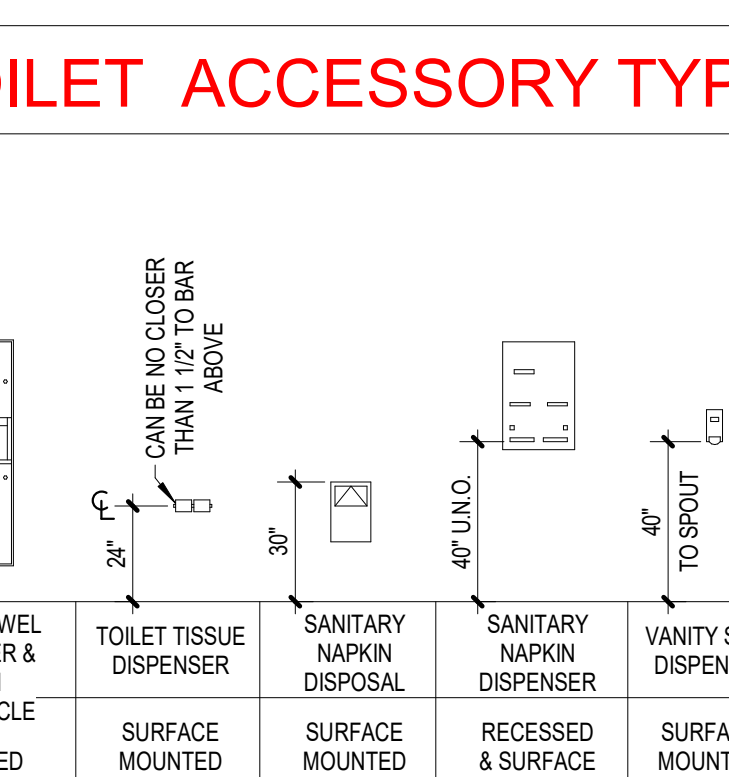
E8 ACCESSIBLE CLEAR FLOOR SPACE  
1/2" = 1'-0"



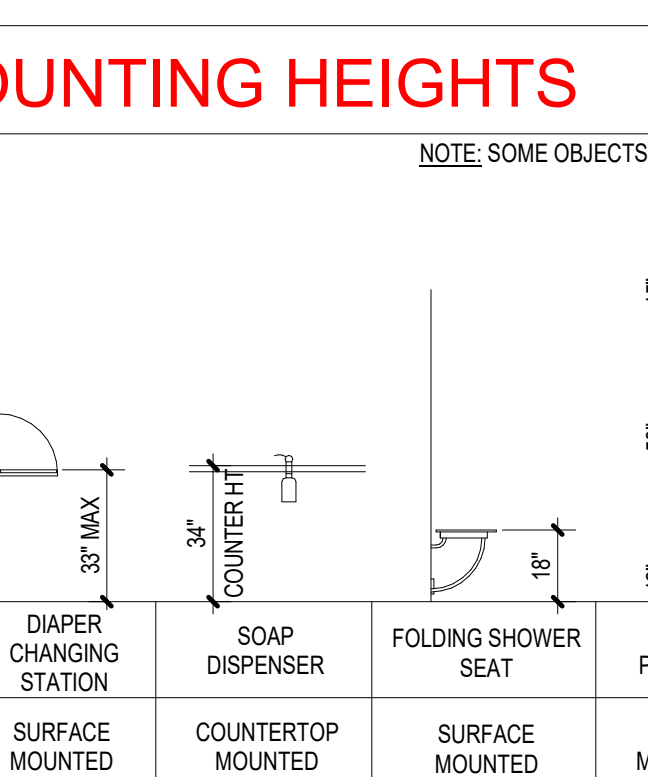
E6 HANDRAIL CLEARANCES  
1 1/2" = 1'-0"



E4 E.W.C. - CLEAR SPACE  
1/2" = 1'-0"



E2 E.W.C. - SECTION  
1/2" = 1'-0"



MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS														
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT														
FINISH FLOOR	ACCESSORY TYPE	HEIGHT	FINISH FLOOR	ACCESSORY TYPE	HEIGHT	FINISH FLOOR	ACCESSORY TYPE	HEIGHT	FINISH FLOOR	ACCESSORY TYPE	HEIGHT	FINISH FLOOR	ACCESSORY TYPE	HEIGHT
	FIRE EXTINGUISHER CABINET	48" MAX. TO TOP OF CABINET INTERIOR		MANUAL FIRE PULL	48" MAX. TO PULL		FIRE STROBE/LIGHT/ AUDIBLE ALARM	84"		WALL MOUNTED EXIT SIGN	48" MAX. TO TOP OF DOOR FRAME WHEN DIM ABOVE DOOR HEAD IS >= 12"		WALL MOUNTED HANDRAIL	48" MAX. TO TOP OF DOOR FRAME WHEN DIM ABOVE DOOR HEAD IS >= 12"
	SEMI RECESSED	48" MAX. TO TOP OF CABINET INTERIOR		SURFACE MOUNTED	48" MAX. TO PULL		SURFACE MOUNTED	84"		SURFACE MOUNTED	48" MAX. TO TOP OF DOOR FRAME WHEN DIM ABOVE DOOR HEAD IS >= 12"		SURFACE MOUNTED	48" MAX. TO TOP OF DOOR FRAME WHEN DIM ABOVE DOOR HEAD IS >= 12"
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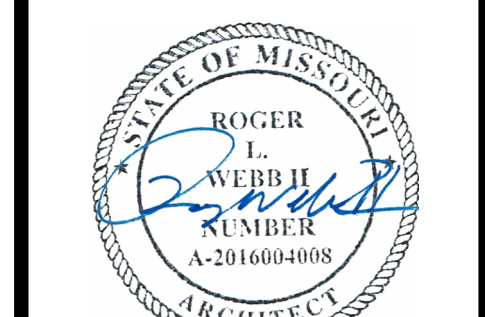


PERMIT DOCUMENTS

ITALY - LEE'S SUMMIT  
228 SW MAIN ST.  
LEE'S SUMMIT, MO 64063

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REVISION DATES:



PROFESSIONAL SEAL  
G500

ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22068

GENERAL PROJECT  
SPECIFICATIONS

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

GENERAL REQUIREMENTS APPLICABLE TO ALL MATERIALS FOR THE PROJECT:

1. NO SUBSTITUTIONS OF MATERIALS WITHOUT COMPLETION OF A SUBSTITUTION REQUEST FORM AND APPROVAL OF SUBSTITUTION BY BOTH ARCHITECT & OWNER PROJECT MANAGER. FORM CAN BE REQUESTED FROM ARCHITECT. 2. A CONDENSED SET OF SPECIFICATIONS ARE PROVIDED FOR THE PROJECT. STRICT ADHERANCE TO MANUFACTURER REQUIREMENTS AND INSTALLATION ARE REQUIRED TO BE FOLLOWED WITH SECTIONS PROVIDED WITHIN. IF REQUIRED THE ARCHITECT WILL ISSUE ADDITIONAL SECTIONS TO PROVIDE CLARITY TO PRODUCTS OR INSTALLATION REQUIREMENTS.

DIVISION 1 - GENERAL REQUIREMENTS

1.1. SEE ADMINISTRATIVE SPECIFICATION FOR GENERAL REQUIREMENTS RELATED TO ADMINISTRATION OF THIS CONTRACT.

A. CONTRACTOR LICENSES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN THE PROJECT SHALL BE REQUIRED TO OBTAIN AND PAY FOR ALL NECESSARY LICENSES AS REQUIRED BY ANY LAW OR AGENCIES HAVING JURISDICTION (AHJ) OVER THE PROJECT.

B. BUILDING PERMITS

1. THE GENERAL CONTRACTOR WILL PAY FOR ALL PERMITS REQUIRED BY ANY AGENCY HAVING JURISDICTION (AHJ) OVER THE PROJECT FOR ALL WORK TO BE PERFORMED BY THE GENERAL CONTRACTOR.

C. UTILITY FEES

1. THE CONTRACTOR SHALL PAY THE NECESSARY FEES TO CONNECT TO EXISTING UTILITIES AT THE PROPERTY LINE OR IN ADJACENT STREETS AND RIGHT OF WAY AS SPECIFIED, NECESSARY, AND/OR INCLUDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PAY ALL UTILITY COSTS (BILLS) DURING CONSTRUCTION UNTIL OWNER TAKES POSSESSION OF THE FACILITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION.

D. PROTECTION OF EXISTING WORK

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT FINISHED SURFACES. PROTECTION FOR FINISHES SUCH AS DOORS, WALLS AND FLOORS SHOULD BE PROVIDED AS REQUIRED. ANY DAMAGES TO THESE AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.

E. GENERAL CONDITIONS

1. ANY DISCREPANCY OR CONFLICT WITHIN OR BETWEEN DRAWINGS AND ANY DISCREPANCY OR CONFLICT BETWEEN ANY DRAWING AND ANY SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. NOTWITHSTANDING, DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ARCHITECT'S AND OWNERS ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN DO OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION. 2. THE GENERAL CONTRACTOR SHALL KEEP A COMPLETE PROTOTYPE SET OF DOCUMENTS ON THE PROJECT SITE AT ALL TIMES FOR REFERENCE DURING CONSTRUCTION. 3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILLS AND ATTENTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVE AND CONTROL OVER CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT. 4. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVE AND CONTROL OVER ALL JOB SITE SAFETY PROCEDURES AND POLICES. THE GENERAL CONTRACTOR SHALL HAVE A SAFETY COORDINATOR AND BE RESPONSIBLE TO HOLD REGULARLY SCHEDULED SAFETY TRAINING WITH ALL JOB SITE PERSONNEL, INCLUDING ALL SUB CONTRACTOR PERSONNEL. 5. NEITHER THE ARCHITECTS OR THE OWNERS INSPECTOR NOR FAILURE TO INSPECT SHALL RELIEVE THE CONTRACTOR OF ANY OBLIGATION HEREUNDER. IF ANY WORK FAILS TO CONFORM TO THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY REMEDY AND/OR REPLACE THE SAME AT THE CONTRACTOR'S OWNERS RISK AND ACCEPTANCE OR PAYMENT BY THE OWNER OR ARCHITECT SHALL CONSTITUTE A WAIVER OF THE FOREGOING AND NOTHING HEREIN SHALL EXCLUDE OR LIMIT ANY WARRANTIES IMPLIED BY LAW. 6. THE GENERAL CONTRACTOR SHALL CONDUCT ITS OPERATIONS AS NOT TO UNREASONABLY INTERFERE WITH TRAFFIC ON PUBLIC THORFARES ADJACENT OR NEAR TO THE PROJECT SITE. 7. DO NOT SCALE DRAWINGS.

F. PROJECT REQUIREMENTS

1. THE GENERAL CONTRACTOR REPRESENTS THAT IT POSSESSES THE SKILLS REQUIRED FOR THE WORK, ASSUMES THE RESPONSIBILITIES OF AN EMPLOYER FOR PERFORMANCE OF THE WORK, AND ACTS AS AN EMPLOYER OF ONE OR MORE EMPLOYEES BY PAYING WAGES, DIRECTING ACTIVITIES AND PERFORMING OTHER SIMILAR FUNCTIONS. THE GENERAL CONTRACTOR IS AN INDEPENDENT CONTRACTOR, FREE TO DETERMINE THE MANNER IN WHICH THE WORK IS PERFORMED. 2. THE GENERAL CONTRACTOR SHALL PROVIDE, AND MAINTAIN IN GOOD WORKING ORDER, THE FOLLOWING ITEMS FOR USE BY THE PROJECT SUPERINTENDENT DAILY DURING THE ENTIRE DURATION OF THE PROJECT: A. LAPTOP WITH INTERNET ACCESS. B. DIGITAL CAMERA WITH DATE STAMP CAPABILITY AND WITH PROPER CABLES TO ATTACH TO LAPTOP. C. EMAIL ACCESS THROUGH THE LAPTOP. D. CELL PHONE. E. PORTABLE SCANNER/FAX MACHINE WITH PROPER CABLES TO ATTACH TO LAPTOP. 3. THE GENERAL CONTRACTOR SHALL HAVE A CONSTRUCTION SUPERINTENDENT ASSIGNED TO THIS PROJECT, AND THIS SUPERINTENDENT SHALL BE ON SITE EVERY DAY THERE IS ANY CONSTRUCTION ON THE PROJECT. 4. THE SUPERINTENDENT SHALL BE REACHABLE BY PHONE DURING NORMAL BUSINESS HOURS, ONCE ASSIGNED, THE SUPERINTENDENT SHALL NOT BE REMOVED OR REPLACED WITHOUT WRITTEN APPROVAL FROM OWNER & ARCHITECT, UNLESS SPECIFICALLY REQUESTED TO BE REMOVED OR REPLACED BY OWNER. 5. THE SUPERINTENDENT WILL BE REQUIRED TO PROVIDE PHOTOGRAPHS (VIA EMAIL USING A DIGITAL CAMERA) TO THE OWNER & ARCHITECT EACH FRIDAY BY NOON CST, SHOWING THE PROGRESS OF CONSTRUCTION. THE GENERAL CONTRACTOR IS ENCOURAGED TO TAKE PHOTOS RELEVANT TO EACH WEEK TO HELP MAINTAIN PROGRESS. RECORD CONSTRUCTION PROGRESS, RECORD UNCOVERED CONDITIONS, RECORD CONDITION AND AMOUNTS OF VENDOR GOODS UPON RECEIPT, AND RECORD CONSTRUCTION THAT VARIES FROM THE CDS (AS PART OF THE AS-BUILTS). ALL PHOTOS MUST HAVE A DATE STAMP.

G. INSPECTIONS/OBSERVATIONS

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OVERSEE CONSTRUCTION OF THE PROJECT, CONTINUALLY INSPECTING THE WORK, MATERIALS, AND WORKMANSHIP PROVIDED BY ALL OF HIS TRADESMEN, SUBCONTRACTORS, AND SUPPLIERS. EXCELLENCE IN QUALITY OF CONSTRUCTION CAN ONLY BE ACHIEVED IF THE CONTRACTOR EMPHOSIS HIGH STANDARDS OF ACCEPTABILITY. THE GENERAL CONTRACTOR CANNOT DELEGATE RESPONSIBILITY TO THE SUBCONTRACTORS, BUT MUST CONTINUALLY MONITOR THE WORK OF EACH TRADE OR COMPANY. 2. IF THE CONTRACTOR OBSERVES AND/OR RECEIVES COMPLAINTS FROM AGENCIES HAVING JURISDICTION (AHJ) INSPECTIONS NECESSARY TO OBTAIN THE CERTIFICATE OF OCCUPANCY (CERTIFICATE OF COMPLIANCE), PRIOR TO THE DATE OF THE AGENCY INSPECTION, THE GENERAL CONTRACTOR SHOULD INSPECT THE PROJECT TO INSURE THAT CONSTRUCTION COMPLY WITH ALL CODES, MONTHLY REVIEW WILL BE CAUSE TO SUSPEND FOLLOWING CHANGES TO THE CONTRACTOR, ALONG WITH THE PUNCH LIST, THE ARCHITECT SHALL PREPARE THE CERTIFICATE OF SUBSTANTIAL COMPLETION. 3. IMMEDIATELY AFTER RECEIPT OF THE PUNCH LIST, THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO BEGIN CORRECTION OF THE OUTSTANDING ITEMS. AFTER COMPLETION OF PUNCHLIST, THE CONTRACTOR SHALL NOTIFY OWNER & ARCHITECT IN WRITING THAT FULL LIST OF ITEMS TO BE COMPLETED AND OR CORRECT IS FINALIZED.

H. RECORD CLOSE-OUT DOCUMENTS

1. THE OWNER REQUESTS THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO MAINTAIN AN ACCURATE, CURRENT SET OF RECORD DOCUMENTS (AS-BUILTS) AS CONSTRUCTION PROGRESSES, ALL PERTINENT INFORMATION RELATING TO THE PROJECT MUST BE TIMELY MAINTAINED ON THE AS-BUILTS. THE AS-BUILTS MUST BE MAINTAINED ON SITE IN THE GENERAL CONTRACTOR'S OFFICE AND WILL NOT BE USED FOR ANY OTHER PURPOSE, SINCE THE OWNER WILL OWN AND OPERATE THE FACILITY, IT IS IMPERATIVE THAT ALL PARTIES MAINTAIN ACCURATE INFORMATION REGARDING THE ACTUAL CONSTRUCTION OF THE PROJECT. 2. ALL DEVIATIONS FROM THE CONTRACT SET OF DRAWINGS MUST BE NOTED ON THE AS-BUILTS IN RED WITH CLOUDS FOR CLEAR IDENTIFICATION. THE OWNER WILL REVIEW THE AS-BUILTS FOR ACCURACY AND COMPLETENESS MONTHLY, DURING THE PAYMENT APPLICATION REVIEW PROCESS. FAILURE TO POST CHANGES TO THE PROJECT ON THE AS-BUILTS AS IDENTIFIED THROUGH THE ON-SITE MONTHLY REVIEW WILL BE CAUSE TO SUSPEND FOLLOWING CHANGES TO THE PROJECT. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENFORCE THE TIMELY POSTING OF AS-BUILT CHANGES WITH THE SUBCONTRACTORS.

I. FINAL CLOSE-OUT OF THE PROJECT

1. WITHIN TRIRY (30) CALENDAR DAYS AFTER THE FINAL PROJECT SUBSTANTIAL COMPLETION, THE GENERAL CONTRACTOR SHALL COMPLETE ALL CLOSE-OUT DOCUMENTS AND SUBMIT THEM TO THE OWNER FOR REVIEW. IF THE CONTRACTOR FAILS TO COMPLETE ITS REQUIREMENTS WITHIN THIS TIMELINE ABOVE, THE CONTRACTOR SHALL BE SUBJECT TO ADDITIONAL ADMINISTRATION FEES.

J. CLOSE-OUT DOCUMENTS

1. THE CATEGORIES LISTED BELOW SHOULD BE SUBMITTED AT THE SAME TIME. A. A DISK WITH ALL PHOTOS TAKEN DURING CONSTRUCTION. B. CHANGE ORDERS AND ALL ADDENDAS ATTACHED AND POSTED TO THE AS-BUILT DRAWINGS. C. AS-BUILT DRAWINGS: ONE HARD COPY TO REMAIN ON SITE AND IN PLAIN TYPE, ONE ELECTRONIC COPY TO BE SENT WITH CLOSE-OUT PAPERWORK. D. MATERIALS SELLING DATA - PROVIDE ALL APPROPRIATE SELLING DATA. E. OPERATION AND MAINTENANCE MANUALS (OMM) - PROVIDE OMM MANUALS BOXED AND BOUND. THIS ITEM IS OF SIGNIFICANT IMPORTANCE TO FACILITATE MAINTENANCE ACTIVITIES. F. ALL HVAC TEST AND BALANCE REPORTS. G. RELEASE OF LIEN (IAA FORM 700A), PAYMENT OF DEBT (IAA FORM 700B). H. WARRANTIES, CERTIFICATES, AFFIDAVITS. I. ALL INFORMATION INCLUDED IN THIS CATEGORY WILL BE FURNISHED IN ONE (1) COPY AND BOUND IN A STURDY THREE-RING BINDER WITH A LABEL ON THE OUTSIDE READING "GENERAL CLOSE-OUT DOCUMENTS" TO INCLUDE AN INDEX OF THE CONTENTS. ALL AIA DOCUMENTS WILL BE ORIGINAL (WITH RED LETTERING ON THE BOTTOM OF THE FORM) AND NOTARIZED. IF THE ELECTRONIC VERSION IS USED A COPY WITH ORIGINAL SIGNATURES WILL BE SUBMITTED. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR WILL HAVE SEPARATE TABS IDENTIFYING EACH BY NAME. THE GENERAL CONTRACTOR WILL LIST EACH SUBCONTRACTOR ALPHABETICALLY AND WILL CHECK TO INSURE THAT A "RELEASE OF LIEN" - IAA FORM 670A AND A "PAYMENT OF DEBT-IAA FORM 670B IS IDENTIFIED FOR HIMSELF AND EACH SUBCONTRACTOR. THE GENERAL CONTRACTOR WILL INCLUDE A "CONSENT OF SURVEY" - IAA FORM 6701. IN ADDITION, THE CONTRACTOR WILL INCLUDE BEHIND THE FOLLOWING INFORMATION: A. A LIST OF NAMES, BUSINESS ADDRESSES, PHONE NUMBERS AND EMAIL ADDRESSES FOR THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR. B. AN ANNOTATED COPY OF THE SUBSTANTIAL COMPLETION PUNCH LIST INDICATING ACTION TAKEN ON EACH ITEM. C. WARRANTIES, CERTIFICATES AND AFFIDAVITS SHALL BE INCLUDED FOR ANY EQUIPMENT, MATERIALS OR SYSTEMS COMBINED WITH ALL OF THE ABOVE INFORMATION AND PLACED BEHIND THE TAB OF THE CONTRACTOR THAT ISSUED IT.

DIVISION 4 - MASONRY

04 0500 - MASONRY RESTORATION & TUCKPOINTING

A. REFERENCES

1. AMERICAN CONCRETE INSTITUTE (ACI). A. ACI 503.1-02 - SPECIFICATION FOR MASONRY STRUCTURES. B. ASTM INTERNATIONAL (ASTM). A. ASTM C 144 - STANDARD SPECIFICATION FOR AGGREGATE FOR MASONRY MORTAR. B. ASTM C 150 - STANDARD SPECIFICATION FOR PORTLAND CEMENT. C. ASTM C 1314 - STANDARD SPECIFICATION FOR HYDRATED LIME FOR MASONRY PURPOSES. D. ASTM C 260 - STANDARD SPECIFICATION FOR AIR-ENTRANING ADMIXTURES FOR CONCRETE. E. ASTM C 270 - STANDARD SPECIFICATION FOR MASONRY MORTAR MIX FOR JOINT MASONRY. F. ASTM C 595 - STANDARD SPECIFICATION FOR BLENDED HYDRAULIC CEMENTS. G. ASTM C 760 - STANDARD TEST METHOD FOR PRECONSTRUCTION AND CONSTRUCTION EVALUATION OF MORTARS FOR PLAN AND NEW MASONRY CONSTRUCTION. H. ASTM C 979 - STANDARD SPECIFICATION FOR PIGMENTS FOR INTEGRALLY COLORED CONCRETE. I. ASTM C 1093 - STANDARD PRACTICE FOR ACCREDITATION OF TESTING AGENCIES FOR JOINT MASONRY. J. ASTM C 1157 - STANDARD PERFORMANCE SPECIFICATION FOR PORTLAND GEMT. K. ASTM C 1314 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF MASONRY PRISMS. L. ASTM C 1598 - STANDARD GUIDE FOR QUALITY ASSURANCE OF MORTARS. M. ASTM C 1714 - STANDARD SPECIFICATION FOR MASONRY MORTAR MIX FOR JOINT MASONRY. N. ASTM C 328 - SPECIFICATION FOR MINIMUM REQUIREMENTS FOR AGGREGES ENGAGED IN THE TESTING AND/OR INSPECTION OF MATERIALS USED IN CONSTRUCTION. O. ASTM C 514 - STANDARD TEST METHOD FOR WATER PENETRATION AND LEAKAGE THROUGH MASONRY. P. INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC). 1. IMAC - INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC); RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR COLD WEATHER MASONRY CONSTRUCTION. 2. IMAC - INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC); RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR HOT WEATHER MASONRY CONSTRUCTION. 3. THE BRICK AND MASONRY ASSOCIATION (BMA). 1. BIA TECHNICAL NOTE 20 - CLEANING BRICK.

B. SUBMITTALS

1. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA. 2. QUALITY ASSURANCE/CONTROL SUBMITTALS. A. SUBMIT MANUFACTURER'S CERTIFICATE FOR PORTLAND CEMENT. B. SUBMIT TEST RESULTS PREPARED BY A QUALIFIED INDEPENDENT TESTING LABORATORY. 3. QUALITY ASSURANCE. 1. MANUFACTURER QUALIFICATIONS: FIRM SPECIALIZING IN MANUFACTURE OF MASONRY INSTALLATION MATERIALS, INCLUDING MORTARS, WITH MINIMUM 10 YEARS EXPERIENCE. 2. QUALITY ASSURANCE/CONTROL: SUBMIT MANUFACTURER'S CERTIFICATE FOR PORTLAND CEMENT. 3. PRE-INSTALLATION MEETING: AT LEAST ONE WEEKS PRIOR TO COMMENCING MASONRY WORK CONDUCT A MEETING AT THE PROJECT SITE TO DISCUSS CONTRACT REQUIREMENTS AND JOINT CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY RAILING MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT TIME OF SUBSTANTIAL COMPLETION.

C. PROJECT CONDITIONS

1. MAINTAIN ENVIRONMENTAL CONDITIONS AND PROTECT WORK DURING AND AFTER INSTALLATION TO COMPLY WITH REFERENCED STANDARDS AND MANUFACTURER'S PRINTED RECOMMENDATIONS. 2. DO NOT BUILD OR APPLY MORTAR PRODUCTS ON FROZEN SUBSTRATES. 3. REMOVE AND REPLACE MORTAR DAMAGED BY FROST OR BY FREEZING CONDITIONS. 3. TEMPORARY HEATERS TO EXTERIOR TO PREVENT DAMAGE TO MASONRY WORK FROM CARBON DIOXIDE BUILD-UP IN THE STATE OF THE PROJECT.

D. PRODUCTS

1. BASIS OF DESIGN: SPEC. M08X, INC. WEB: WWW.SPECMIX.COM WWW.SPECMIX.COM 2. REQUESTS FOR SUBSTITUTION SHALL BE CONSIDERED IN ACCORDANCE WITH PROVISIONS OF SUBSTITUTION PROCEDURES. 3. OBTAIN PRODUCTS FROM A SINGLE MANUFACTURER. 4. DESIGN AND PERFORMANCE REQUIREMENTS: PROVIDE MORTAR MIXES THAT HAVE BEEN SELECTED, MANUFACTURED, MIXED AND INSTALLED TO COMPLY WITH THE FOLLOWING: A. ASTM C 270. B. ASTM C 1714. C. MORTAR. D. TUCKPOINTING MORTAR, SPEC. MIX TUCKPOINTING MORTAR, APPLICABLE STANDARDS: ASTM C 144, ASTM C 150, ASTM C 207. E. ASTM C 270 FOR TUCKPOINTING MORTAR, ASTM C 595, ASTM C 760, ASTM C 1093, ASTM C 1157, ASTM C 1314, ASTM C 1598, ASTM C 1714, ACI 503.1, IMAC.

E. EXECUTION

1. EXAMINE SURFACES TO RECEIVE MASONRY WORK AND CONDITIONS UNDER WHICH MASONRY WILL BE INSTALLED. DO NOT PROCEED WITH MASONRY WORK UNTIL SURFACES AND CONDITIONS COMPLY WITH REQUIREMENTS INDICATED IN REFERENCED MASONRY INSTALLATION STANDARD AND MANUFACTURER'S PRINTED INSTRUCTIONS. 2. REMOVAL OF EXISTING MORTAR. A. REMOVAL OF EXISTING MORTAR: CUT OUT EXISTING MORTAR JOINTS (BOTH BED AND HEAD JOINTS) AND REMOVE BY MEANS OF A TOOTHING CHISEL OR A SPECIAL POINTERS GRINDER, TO A UNIFORM DEPTH OF TO 3/4-INCH (19 MM), OR UNLESS SPECIFICALLY REQUESTED TO BE REMOVED OR REPLACED BY OWNER. 1. TAKE CARE TO NOT DAMAGE EDGES OF EXISTING MASONRY UNITS TO REMAIN. 2. REMOVE DUST AND DEBRIS FROM THE JOINTS BY BRUSHING, BLOWING WITH AIR OR RINSING WITH WATER, DO NOT RINSE WHEN TEMPERATURE IS BELOW FREEZING. 3. REMOVAL OF EXISTING MORTAR. A. REMOVE DAMAGED, SPALLED, LOOSE OR DETERIORATED MASONRY UNITS, CAREFULLY REMOVE ENTIRE UNITS FROM JOINT TO JOINT, WITHOUT DAMAGING SURROUNDING MASONRY, IN A MANNER THAT PERMITS REPLACEMENT WITH FULL SIZE UNITS. B. SUPPORT AND PROTECT REMAINING MASONRY THAT SURROUNDS REMOVAL AREA, MAINTAIN FLASHING, REINFORCEMENT, LINTELS, AND ADDING CONSTRUCTION IN AN UNDAUNTED CONDITION. C. CLEAN MASONRY UNITS SURROUNDING REMOVAL AREAS BY REMOVING MORTAR, DUST, AND LOOSE PARTICLES IN PREPARATION FOR REPLACEMENT. 4. REPLACE REMOVED UNITS WITH SALVAGED OR NEW UNITS THAT MATCH EXISTING SIZE AND TEXTURE. DO NOT USE BROKEN UNITS UNLESS THEY CAN BE CUT TO USABLE SIZE. 5. INSTALL REPLACEMENT UNITS INTO BONDING AND COURSEING PATTERN OF EXISTING UNITS. IF CUTTING IS REQUIRED, USE A MOTOR-DRIVEN SAW DESIGNED TO CUT MASONRY WITH CLEAN, SHARP UNCHIPPED EDGES. MORTAR MUST BE TOOTHED IN OR COURSEING SHALL MATCH SURROUNDING IN PLACE WORK. 6. MAINTAIN JOINT WIDTHS FOR REPLACEMENT UNITS TO MATCH EXISTING JOINTS. 7. LAY REPLACEMENT UNITS WITH COMPLETELY FILLED BED, HEAD, AND COLLAR JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. 8. MORTAR. A. AS RECOMMENDED BY MANUFACTURER. 9. RETEMPERING. RETEMPER MORTAR AS RECOMMENDED BY MANUFACTURER.

G. INSTALLATION OF TUCK POINTING MORTAR

1. INSTALL MORTAR IN ACCORDANCE WITH ADHESIVE 530.1. 2. IMMEDIATELY PRIOR TO APPLICATION OF MORTAR, DAMPEN JOINTS TO BE TUCK POINTED, PRIOR TO APPLICATION OF TUCKPOINTING MORTAR, ALLOW MASONRY UNITS TO ABSORB SURFACE WATER. 3. FINISHLY PACK MORTAR INTO JOINTS IN THIN LAYERS, APPROXIMATELY 1/4-INCH (6 MM) THICK MAXIMUM. 4. ALLOW LAYER TO BECOME "THUMBPRINT HARD" BEFORE APPLYING NEXT LAYER. 5. PACK FINAL LAYER FLUSH WITH SURFACES OF MASONRY UNITS, WHEN MORTAR BECOMES "THUMBPRINT HARD", TOOL JOINTS. 6. MARLINE CRACKING WITH THE MORTAR OR MORTAR SEPARATION AT EDGE OF A JOINT IS UNACCEPTABLE. COMPLETELY REMOVE SUCH MORTAR AND REPOINT. 7. TOOL JOINTS IN PATCH WORK WITH A JOINTING TOOL, TO MATCH THE EXISTING SURROUNDING JOINTS. 8. CLEANING. A. COMPLY WITH CLEANING PROCEDURES AND RECOMMENDATIONS OF THE MANUFACTURERS OF BOTH THE LIME AND MORTAR. B. REMOVE EXCESS MORTAR FROM MASONRY WALL EXPOSED IN THE FINISHED WORK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, NMA TC BULLETIN #B-3A AND BIA TECHNICAL NOTE 20 - CLEANING BRICK. C. REMOVE DIRT OR STAINS FROM MASONRY WALLS EXPOSED IN THE FINISHED WORK IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, NMA TC BULLETIN #B-2A AND BIA TECHNICAL NOTE 20 - CLEANING BRICK. D. COMPLY WITH APPLICABLE ENVIRONMENTAL LAWS AND RESTRICTIONS. 9. AFTER MORTAR HAS FULLY HARDENED, THOROUGHLY CLEAN EXPOSED MASONRY SURFACES OF EXCESS MORTAR AND FOREIGN MATTER, USE WOOD SCRAPERS, STIFF-NON-OR -FIBER BRUSHES, AND CLEAN WATER, SPRAY APPLIED AT LOW PRESSURE. 1. DO NOT USE METAL SCRAPERS OR BRUSHES. 2. DO NOT USE ACIDIC OR ALKALINE CLEANERS.

H. PROTECTION

1. PROTECT WORK FROM THE CONTRACT SET OF DRAWINGS MUST BE NOTED ON THE AS-BUILTS IN RED WITH CLOUDS FOR CLEAR IDENTIFICATION. THE OWNER WILL REVIEW THE AS-BUILTS FOR ACCURACY AND COMPLETENESS MONTHLY, DURING THE PAYMENT APPLICATION REVIEW PROCESS. FAILURE TO POST CHANGES TO THE PROJECT ON THE AS-BUILTS AS IDENTIFIED THROUGH THE ON-SITE MONTHLY REVIEW WILL BE CAUSE TO SUSPEND FOLLOWING CHANGES TO THE PROJECT. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENFORCE THE TIMELY POSTING OF AS-BUILT CHANGES WITH THE SUBCONTRACTORS.

DIVISION 5 - METALS

05 5213 - PIPE AND TUBE RAILINGS

A. SUBMITTALS

1. DELAEGED DESIGN: PROVIDE FOR HANDRAIL AND GUARDRAIL SYSTEMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION. 2. MATERIALS: PROVIDE FOR HANDRAIL AND GUARDRAIL SYSTEMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION. 3. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 2. PERFORMANCE REQUIREMENTS. 1. A. DELEGATED DESIGN: ENGAGE A QUALIFIED PROFESSIONAL ENGINEER TO DESIGN RAILINGS, INCLUDING ATTACHMENT TO BUILDING CONSTRUCTION. 2. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 3. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 4. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 5. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 6. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 7. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 8. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 9. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 10. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 11. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 12. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 13. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 14. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 15. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 16. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 17. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 18. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 19. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 20. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 21. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 22. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 23. FIELD CONDITIONS. 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS TO LINE FABRICATION. 24. FIELD CONDITIONS. 1. FIELD

G. FABRICATION

1. GENERAL: FABRICATE RAILINGS TO COMPLY WITH REQUIREMENTS INDICATED FOR DESIGN, DIMENSIONS, MEMBER SIZES AND SPACING, DETAILS, FINISH, AND ANCHORAGE, BUT NOT LESS THAN THAT REQUIRED TO SUPPORT STRUCTURAL LOADS. 2. CUT, DRILL, AND PLUNCH ANCHUM CLEANLY AND ACCURATELY. REMOVE BURRS AND EDGE AREAS TO A RADIUS OF APPROXIMATELY 1/32 INCH (1 MM), UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES. 3. FABRICATE CONNECTIONS THAT ARE EXPOSED TO WEATHER IN A MANNER THAT EXCLUDES WATER. PROVIDE ACCESS TO ALL JOINTS WHERE REQUIRED. 4. PROVIDE ACCESS TO ALL JOINTS WHERE REQUIRED. 5. WELDED CONNECTIONS: USE FULLY WELDED JOINTS FOR PERMANENTLY CONNECTING RAILING COMPONENTS. COMPLY WITH REQUIREMENTS FOR WELDED CONNECTIONS IN "FABRICATION" ARTICLE WHETHER WELDING IS PERFORMED IN THE SHOP OR IN THE FIELD. 6. FINISH. 1. USE ANONVALANIZED STEEL RAILINGS. PROVIDE ANONVALANIZED FERROUS/METAL FITTINGS, BRACKETS, FASTENERS, AND SLEEVES. HOWEVER, GALVANIZE ANCHORS TO BE EMBEDDED IN EXTERIOR CONCRETE OR MASONRY. 2. PREPARATION FOR SHOP PRIMING: PREPARE UNCOATED FERROUS/METAL SURFACES TO COMPLY WITH SSPC-SP 3 "POWER TOOL CLEANING". 3. PRIMER APPLICATION: APPLY SHOP PRIMER TO PREPARED SURFACES OF RAILINGS UNLESS OTHERWISE INDICATED. CATIONIC POLYURETHANE REQUIREMENTS IN SECTION 21 "SHOP FIELD, AND MAINTENANCE PAINTING OF STEEL" FOR SHOP PAINTING. PRIMER NEED NOT BE APPLIED TO SURFACES TO BE EMBEDDED IN CONCRETE OR MASONRY.

I. INSTALLATION

1. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE: FABRICATED FROM SAME MATERIAL AND FINISH AS FABRICATION UNLESS NOTED OTHERWISE. SHIM AND LEVEL FABRICATIONS AS NECESSARY. COAT CONCEALED SURFACES OF FABRICATIONS IN CONTACT WITH CONCRETE, GROUT, MASONRY, WOOD, OR DISSIMILAR METALS WITH BITUMINOUS PAINT. 2. FIT EXPOSED CONNECTIONS TOGETHER TO FORM TIGHT, MARLINE JOINTS. 3. PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING RAILINGS. SET RAILINGS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION, MEASURED FROM ESTABLISHED LINES AND LEVELS OF FREE RACK. DO NOT WELD, CUT, OR ABRADE SURFACES OF RAILING COMPONENTS THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. 4. FABRICATE AND THAT ARE INTENDED FOR FIELD CONNECTION BY MECHANICAL OR OTHER MEANS WITHOUT FURTHER CUTTING OR FITTING. 5. SET POSTS PLUMB WITH A TOLERANCE OF 1/16 INCH IN 3 FEET. 6. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS. 7. ADJUST RAILINGS BEFORE ANCHORING TO ENSURE MATCHING ALIGNMENT AT ABUTTING JOINTS. 8. FASTENING TO IN-PLACE CONSTRUCTION: USE ANCHORAGE DEVICES AND FASTENERS WHERE NECESSARY FOR SECURING RAILINGS AND FOR PROPERLY TRANSFERRING LOADS TO IN-PLACE CONSTRUCTION. 9. PROTECT FINISHING: PROTECT FINISHING FROM DAMAGE DURING CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY RAILING MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT TIME OF SUBSTANTIAL COMPLETION.

05 6000 - STRUCTURAL METAL STUDS AND TRACK

THIS SECTION IS A DELEGATED DESIGN SUBMITTAL. CONTRACTOR SHALL ENGAGE A STRUCTURAL ENGINEER DESIGNED IN THE JURISDICTION WHERE THIS PROJECT IS LOCATED. ALL FEES SUBJECT OF THIS SERVICE WILL BE PART OF BASE CONTRACT.

A. SUBMITTALS

1. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING: 1. SHOWING PLANS, SECTIONS, ELEVATIONS, LAYOUTS, PROFILES, AND PRODUCT COMPOSITION, LOCATIONS, AND FINISHES. 2. INDICATE COMPONENT DETAILS, FRAMED OPENINGS, BEARING, ANCHORAGE, LOADING, WELDS, TIES, AND LOCATION OF FASTENERS, AND ACCESSORIES. 3. INDICATE METHOD FOR SECURING STUDS AND OTHER COMPONENTS TO TRACKS AND FOR FRAMING CONNECTIONS. 4. SUBMIT CALCULATIONS FOR LOADINGS AND STRESSES UNDER PROFESSIONAL ENGINEER'S SEAL, REGISTERED IN THE STATE OF THE PROJECT.

B. QUALITY STANDARD

1. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM FIVE YEARS' DOCUMENTED EXPERIENCE. 2. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING WORK OF THIS SECTION WITH MINIMUM 3 YEARS' DOCUMENTED EXPERIENCE. 3. DESIGN STRUCTURAL ELEMENTS UNDER DIRECT SUPERVISION OF PROFESSIONAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND REGISTERED IN THE STATE OF THE PROJECT.

F. INSTALLATION

1. FOLLOW MANUFACTURER INSTALLATION GUIDELINES. INSTALLATION SHALL BE COMPLIANT WITH APPLICABLE BUILDING CODES.

DIVISION 6 - WOOD AND PLASTICS

10 0600 - ROUGH CARPENTRY

1. PROVIDE SUFFICIENT FIRE RETARDANT TREATED WOOD BLOCKING AT ALL STUDS FOR SECURING OF WALL & CEILING FINISHES, WHETHER FINISHED BY OWNER OR CONTRACTOR. 2. CONCEALED WOOD IS TO BE FIRE RETARDANT TREATED UNLESS NOTED OTHERWISE. 3. PRESERVATIVE TREATED LUMBER IS REQUIRED FOR ALL ITEMS TO REMAIN IN CONTACT WITH CONCRETE OR MASONRY TO CONFORM TO AFWPA STANDARD. 4. PLYWOOD SHALL BE CD GRADE APA PR OR YELLOW PINE. ALL PLY-WOOD TO BE FIRE RATED WHERE WALLS ARE ADJACENT TO RATED CONSTRUCTION. 5. BLOCKING SHALL BE CLOSELY FASTENED TO ALL REQUIRED WALLS & LEVELS. SECURELY CONNECTED & RIGIDLY FIXED IN PLACE. USING NAILS, SCREWS, & BOLTS AS INDICATED OR REQUIRED BY GOOD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

06 2000 - FINISH CARPENTRY

1. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONS, PLANS, ELEVATIONS, AND SECTIONS. 2. QUALITY STANDARD: ARCHITECTURAL WOODWORK INSTITUTE'S "ARCHITECTURAL WOODWORK QUALITY STANDARD".

C. MATERIALS

1. NOT WOOD: MAXIMUM MOISTURE CONTENT OF 6 PERCENT, WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH. 2. HARDWOOD LUMBER MAXIMUM MOISTURE CONTENT OF 6 PERCENT, WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH. 3. SHEET MATERIALS: SOFTWOOD PLYWOOD, EXPOSED TO VIEW: FACE SPECIES AS INDICATED, PLAN SAWN, MEDIUM DENSITY FIBERBOARD CLASS 1, GRADE A-B, GUE TYPE AS RECOMMENDED FOR APPLICATION.

D. INTERIOR WORK/WORK

1. COMPLETE FABRICATION BEFORE SHIPPING TO PROJECT SITE TO MAXIMUM EXTENT FEASIBLE. DISASSEMBLE ONLY AS NEEDED FOR SHIPPING AND INSTALATION. WHEN NECESSARY FOR FITTING AT PROJECT SITE, PROVIDE FOR SCORING AND TRIMMING. 2. BACKOUT AND GROOVE CABS OF FLAT MEMBERS, KEIR BACKS OF OTHER WIDE FLAT MEMBERS, WHERE ENDS WILL BE EXPOSED IN FINISHED WORK.

F. INSTALLATION

1. DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETED, HVAC IS OPERATING, AND WOODWORK IS CONDITIONED TO PREVAILING CONDITIONS OF SPACE WHERE INSTALLED. 2. MAINTAIN TEMPERATURE BETWEEN 55°F AND 75°F FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR DURATION OF PROJECT. 3. INSTALL WOODWORK LEVEL AND PLUMB WITH SCAS AS REQUIRED WITH CONCEALED SHIMS TO 3 TOLERANCE OF 1/16" AND TO CONFORM WITH REFERENCED QUALITY STANDARD FOR GRADE 1. 4. CORSE AND CUT WOODWORK TO FIT ADJOINING WORK, SEAL CUT SURFACES, AND REPAIR DAMAGED FINISH AT JOINTS. 5. INSTALL TRIM WITH MINIMUM JOINTS POSSIBLE USING FULL-LENGTH PIECES TO GREATEST EXTENT POSSIBLE. STAGGER JOINTS IN ADJACENT AND RELATED MEMBERS. 6. LUMBER FOR TRANSPARENT FINISH (STAINED OR CLEAR): USE PIECES MADE OF SOLID LUMBER STOCK. 7. LUMBER FOR PAINTED FINISH: AT CONTRACTOR'S OPTION, USE PIECES WHICH ARE EITHER GROUND OR MADE OF SOLID LUMBER STOCK. 8. MATCH JOINTS OF MATERIAL WHICH ARE UNSOUND, WARPED, BOWED, TWISTED, IMPROPERLY TREATED, NOT ADEQUATELY SEASONED, OR TOO SMALL TO FABRICATE WITH MINIMUM OF JOINTS OR JOINTING JOINTS ARRANGEMENTS, OR WHICH ARE DEFACTIVELY MANUFACTURED WITH RESPECT TO SURFACES, SIZES OR PATTERNS. 9. INSTALL THE WORK PLUMB, LEVEL, AND TRUE STRAIGHT WITH NO DISTORTIONS. SHIMS AS REQUIRED USING CONCEALED SHIMS. 10. SCORSE AND CUT WORK TO FIT ADJOINING WORK, AND REFINISH CUT SURFACES OR REPAIR DAMAGED FINISH AT JOINTS. 11. SAND WORK SMOOTH AND SET EXPOSED WALLS AND SCREWS. 12. APPLY WOOD FILLER TO FILL AND SCREW IDENTIFICATIONS. 13. FINISH WORK SHALL BE SMOOTH, FREE FROM ABRASION, TOOL MARKS, RAISED GRAIN MARKINGS, OR SIMILAR DEFECTS ON EXPOSED SURFACES.

06 4010 - ARCHITECTURAL WOOD CASEWORK

1. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONS, PLANS, ELEVATIONS, AND SECTIONS. IND

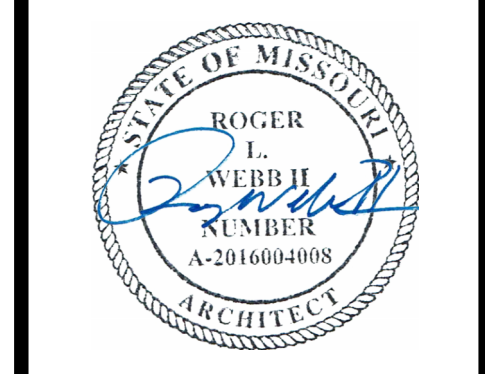




PERMIT DOCUMENTS

ITAP - LEE'S SUMMIT  
228 SW MAIN ST.  
LEE'S SUMMIT, MO 64063

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COLLINS WEBB  
ARCHITECTURE, LLC  
REVISION DATES:



PROFESSIONAL SEAL  
G501  
ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066

GENERAL PROJECT  
SPECIFICATIONS

1. Remove Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by the use of a keyless cylinder, which is self-locking when installed.

2. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.

3. Provide egress options as scheduled.

4. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.5 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A.

2.6 OPERATING TRIM

A. Operating Trim: BHMA A156.6, brass, unless otherwise indicated.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:  
1. IJES Hardware, an Allegion company.  
2. Rockwood Manufacturing Company.  
c. Trimco.

2.7 SURFACE CLOSERS

A. Surface Closures: BHMA A156.4, rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves, cast aluminum body, and forged steel main pin.

B. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

C. Closer cylinders, arms, adjust plates, and metal covers shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117.

D. Closers with pressure relief valves will not be acceptable.

E. Supplier to provide any brackets or plates required for proper installation of door closers.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:  
1. LCN Closers, 4040XP Series, an Allegion company.  
2. Corbin Russwin Closers, DC2000 Series.  
c. Sargent Closets, 281 Series.

2.8 METAL PROTECTIVE TRIM UNITS

A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch (1.3-mm)-thick stainless steel, with manufacturer's standard machine or self-tapping screw fasteners.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:  
1. IJES Hardware, an Allegion company.  
2. Rockwood Manufacturing Company.  
c. Trimco.

2.9 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

a. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Provide base hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metal of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

C. Fasteners: Provide door hardware manufactured to comply with published technicals prepared for machine, wood, and steel metal species. Provide screws that comply with commercially recognized industry standards for application indicated, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

a. Concealed Fasteners: For doors that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where both head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on outside door and frame construction, provide sleeves for each through bolt.

b. Fire-Rated Applications:  
1. Wood or Machine Screws: For the following:  
1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.  
2. Steel plates to frames.  
3. Closers to doors and frames.  
4. Steel Through Bolts: For the following unless door blocking is provided:  
1) Surface hinges to doors.  
2. Closers to doors and frames.  
3. Surface-mounted exit devices.  
c. Spacers or Set Bolts: For through bolting of hollow-metal doors.  
d. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2; Recommended Fasteners for Wood Doors.  
e. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.10 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a stripable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of adjoining or adjacent pieces are acceptable if they are within one-half of the range of approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

D. Typical Door Face Sheets: FLUSH.

E. GLAZING TYPES: NON-REMOVABLE STOPS ON NON-SURE SIDE; SIZES AND CONFIGURATIONS AS INDICATED ON DRAWINGS. STYLE: MANUFACTURER'S STANDARD.

F. HARDWARE PREPARATIONS, SELECTIONS AND LOCATIONS: COMPLY WITH NAAMM HMM4.830 AND NAAMM HMM4.831 OR BHMA A156.115 AND ANSI/SDI A250.1 (SD-100) IN ACCORDANCE WITH SPECIFIED REQUIREMENTS.

G. ZINC COATING FOR TYPICAL INTERIOR AND/OR EXTERIOR LOCATIONS: PROVIDE METAL COMPONENTS ZINC-COATED (GALVANIZED) AND/OR ZINC-IRON ALLOY-COATED (GALVANNEAL) BY THE HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A653/A653M, WITH MANUFACTURER'S STANDARD COATING THICKNESS, UNLESS NOTED OTHERWISE FOR SPECIFIC HOLLOW METAL DOORS AND FRAMES.

H. HOLLOW METAL PANELS: SAME CONSTRUCTION, PERFORMANCE, AND FINISH AS DOORS.

I. COMBINED REQUIREMENTS: IF A PARTICULAR DOOR AND FRAME UNIT IS INDICATED TO COMPLY WITH MORE THAN ONE TYPE OF REQUIREMENT, COMPLY WITH THE SPECIFIED REQUIREMENTS FOR EACH TYPE. FOR INSTANCE, AN EXTERIOR DOOR THAT IS ALSO INDICATED AS BEING SOUND-RATED MUST COMPLY WITH THE REQUIREMENTS SPECIFIC FOR EXTERIOR DOORS AND TWO-ON-TWO FLUSH-RATED DOORS, WHERE TWO REQUIREMENTS CONFLICT, COMPLY WITH THE MOST STRINGENT.

2.11 DEMONSTRATION

A. Contractor to instruct owner's personnel to adjust, operate, and maintain door hardware and door hardware finishes.

3.7 DOOR HARDWARE SCHEDULE

A. The hardware sets listed below represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware, and missing items should be brought to the attention of the architect with corrections made prior to the bidding process.

Hardware Group No. 4  
For use on Door #s(s):  
T105  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
3EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA WALL STOP WS040607CVX 626 IVE  
1EA SILENCER SR64 GRAY  
1EA OH STOP 1005 GRY  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA MOUNTING PLATE 4040XP-18 SRT 689 LCN  
1EA CUSH SHOE SUPPORT 4040XP-35SRT 689 LCN  
1EA BLADE STOP SPACER 4040XP-61 SRT 689 LCN  
1EA RANDRP 142AA ZER  
1EA WEATHER STRIPPING BY DOOR AND FRAME MANUFACTURER  
1EA THRESHOLD 65A-223 A ZER

Hardware Group No. 5  
For use on Door #s(s):  
T101  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA WALL STOP WS040607CVX 626 IVE  
1EA SILENCER SR64 GRAY  
1EA OH STOP 1005 GRY  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA MOUNTING PLATE 4040XP-18 SRT 689 LCN  
1EA CUSH SHOE SUPPORT 4040XP-35SRT 689 LCN  
1EA BLADE STOP SPACER 4040XP-61 SRT 689 LCN  
1EA RANDRP 142AA ZER  
1EA WEATHER STRIPPING BY DOOR AND FRAME MANUFACTURER  
1EA THRESHOLD 65A-223 A ZER

Hardware Group No. 6  
For use on Door #s(s):  
T103  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP SCUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 7  
For use on Door #s(s):  
T107  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 8  
For use on Door #s(s):  
T108B, 108C, 108D  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
3EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP SCUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 9  
For use on Door #s(s):  
T109  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 10  
For use on Door #s(s):  
T102  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
3EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 11  
For use on Door #s(s):  
T106  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 12  
For use on Door #s(s):  
T104  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 13  
For use on Door #s(s):  
T108A, T109  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 14  
For use on Door #s(s):  
T107  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 15  
For use on Door #s(s):  
T103  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP SCUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 16  
For use on Door #s(s):  
T107  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 17  
For use on Door #s(s):  
T108B, 108C, 108D  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
3EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP SCUSH 689 LCN  
1EA KICKPLATE 8400 8" X 2" LDW B-CS 630 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 18  
For use on Door #s(s):  
T109  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 19  
For use on Door #s(s):  
T102  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
3EA HINGE 58BHW 4.5 X 4.5 652 IVE  
1EA PRIVACY LOCK 1504 17A 09-544 1283-722 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

Hardware Group No. 20  
For use on Door #s(s):  
T104  
PROVIDE EACH SGL. DOOR(S) WITH THE FOLLOWING:  
QTY DESCRIPTION CATALOG NUMBER FINISH MFR  
1EA CONT. HINGE 112X1 626 IVE  
1EA CLASSROOM LOCK N070PD SPA 626 SCH  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA SURFACE CLOSER 4040XP CUSH 689 LCN  
1EA WALL STOP WS040607CVX 626 IVE  
1EA GASKETING 428BBK PSA BK ZER

4.0 FABRICATION AND FINISHING

1. FASTEN IT WITH WDMA'S HOW TO STORE, HANDLE, FINISH, INSTALL, AND MAINTAIN WOOD DOORS? ALIGNED AND FITTED IN FRAMES WITH UNIFORM CLEARANCES.

2. SET IN TWO PIECE W/P. SPLIT JAMB PANELS WITH 1X4 WOOD CASING.

4.0 ACCESS DOORS AND PANELS

A. SUBMITTALS: PRODUCT DATA.

B. PRODUCTS: PRIME-PANDED FLUSH, UNSULATED ACCESS DOORS FOR WALLS AND CEILINGS WITH TRIMLESS FRAME AND SCREWDRIVER OPERATED LOCK FLUSH WITH FINISHED SURFACE. FIRE-RATED, SELF-LATCHING, AUTOMATIC CLOSING AT FIRE-RATED WALLS OR CEILINGS.

C. INSTALLATION: INSTALL FLUSH TO FINISHED DRYWALL AND FINISH WITH FRAME TAPED AND SANDED FLUSH WITH WALL OR CEILING SURFACE AND FLUSH TO MATCH ADJACENT SURFACE.

4.0 ACCESS DOORS AND PANELS

A. SUBMITTALS: PRODUCT DATA. PROVIDE COMPONENT DIMENSIONS, DESCRIBE COMPONENTS WITHIN ASSEMBLY, ANCHORAGE AND FASTENING, GLASS AND INT'L. DOOR HARDWARE, INTERNAL DRAINAGE DETAILS.

1. HARDWARE SCHEDULE: COMPLETE IDENTIFICATION OF EACH ITEM OF HARDWARE TO BE PROVIDED FOR EACH DOOR. CROSS-REFERENCED TO DOOR IDENTIFICATION NUMBERS IN CONTRACT DOCUMENTS.

2. SHOP DRAWINGS: INDICATE SYSTEM OPERATING REQUIREMENTS AND TOLERANCES. AFFECTED RELATED WORK, EXPANSION AND CONTRACTION JOINT LOCATION AND DETAILS, AND FIELD WELDING REQUIRED.

B. WARRANTY: WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.

1. CORRECT DEFECTIVE WORK WITHIN 4 FIVE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION.

2. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST FAILURE OF GLASS SEAL ON INSULATING GLASS UNITS, INCLUDING INTERFACIAL DUSTING OR MISSING, INCLUDING PROVISION FOR REPLACEMENT OF FAILED UNITS.

3. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST EXCESSIVE DRIFTING OF EXTERIOR FINISH, INCLUDING PROVISION FOR REPLACEMENT OF UNITS WITH EXCESSIVE FADING, CHALKING, OR FLAKING.

C. BASIS OF DESIGN: KAWNEER, ENCORE-MEDIUM STYLE, ANODIZED VERIFY FINISH WITH OWNER.

1. OTHER MANUFACTURERS: PROVIDE EITHER THE PRODUCT IDENTIFIED AS "BASIS OF DESIGN" OR AN EQUIVALENT PRODUCT.

D. MATERIALS:

1. ALUMINUM-FRAMED STOREFRONT: FACTORY FABRICATED, FACTORY FINISHED ALUMINUM FRAMING MEMBERS WITH INT'L. AND RELATED PLASTIC GLASS AND INT'L. DOOR HARDWARE, INTERNAL DRAINAGE DETAILS.

2. ALUMINUM FRAMING MEMBERS: TUBULAR ALUMINUM SECTIONS<1>, DRAINAGE HOLES AND INTERNAL WEEP DRAINAGE SYSTEM.

3. EXTRUDED ALUMINUM: ASTM B221 (ASTM B221M).

4. STRUCTURAL STEEL SECTIONS: ASTM A36/A36M, SHOP PRIMED.

5. FASTENERS: STAINLESS STEEL.

6. CONCEALED FLASHINGS: STAINLESS STEEL, 26 GAUGE, 0.0187 INCH MINIMUM THICKNESS.

7. SEALANT FOR SETTING THRESHOLDS: NON-CURING BUTYL, TYPE.

8. GLAZING GASKETS: ITYPE TO SUIT APPLICATION TO ACHIEVE WEATHER, MOISTURE, AND AIR INfiltration REQUIREMENTS.

E. FINISHES:

1. GLASS COLOR AND ANODIZED FINISH: ANMA 611 AA-M122244A ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING NOT LESS THAN 0.7 MILS THICK, COLOR AS SELECTED BY OWNER & ARCHITECT.

F. HARDWARE:

1. FOR EACH DOOR, INCLUDE WEATHERSTRIPPING, SLIP SWEEP STRIP, AND THRESHOLD.

2. OTHER DOOR HARDWARE: STOREFRONT MANUFACTURER'S STANDARD TYPE TO SUIT APPLICATION.

3. FINISH ON HAND-CONTACTED ITEMS: TURN UP EDGES AND EDGES, SMOOTH AFTER EACH COAT.

4. FOR EACH DOOR, INCLUDE BUTT HINGES, PIVOTS, PUSH HANDLE, PULL HANDLE, EXIT DEVICE, NARROW STEEL HANDLE LATCH, AND CLOSER. COORDINATE AAT PERMETER OF ASSEMBLY TO MAINTAIN CUTOFF OF THERMAL BARRIER.

5. SET THRESHOLDS IN BED OF SEALANT AND SECURE.

6. INSTALL HARDWARE USING TEMPLATES PROVIDED. ADJUST OPERATING HARDWARE AND SASH FOR SMOOTH OPERATION.

7. WASH DOWN SURFACES WITH A SOLUTION OF MILD DETERGENT IN WARM WATER, APPLIED WITH SOFT, CLEAN WIPING CLOTHS, AND TAKE CARE TO REMOVE DIRT FROM CORNERS AND TO Wipe SURFACES CLEAN.

8. PROTECT INSTALLED PRODUCTS FROM DAMAGE UNTIL DATE OF SUBSTANTIAL COMPLETION.

4.0 GLAZING

A. SUBMITTALS: PRODUCT DATA ON INSULATING GLASS UNIT, GLAZING UNIT, AND (IF APPLICABLE) GLAZING TYPES. PROVIDE STRUCTURAL, FINISHING AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING AND CHARACTERISTICS. REFER TO SECTION 08100 FOR GLAZING TYPES.

1. PRODUCT DATA ON GLAZING COMPOUNDS AND ACCESSORIES: PROVIDE MECHANICAL, FUNCTIONAL, AND ENVIRONMENTAL CHARACTERISTICS, LIMITATIONS, SPECIAL APPLICATION REQUIREMENTS, AND IDENTIFY AVAILABLE COLORS.

2. SAMPLES: SUBMIT TWO SAMPLES [12] BY [12] INCH IN SIZE OF GLASS UNITS.

B. WARRANTY: WARRANTY DOCUMENT: SUBMIT MANUFACTURER WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.

1. INSULATING GLASS UNITS: PROVIDE A FIVE (5) YEAR MANUFACTURER WARRANTY TO INCLUDE COVERAGE FOR SEAL FAILURE, INTERFACIAL DUSTING OR MISSING, INCLUDING PROVIDING PRODUCTS TO REPLACE FAILED UNITS.

2. SIGMA PUBLICATIONS: SIGMA 1300, "VERTICAL GLAZING GUIDELINES".

C. GLASS:

1. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY Q.

2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY Q, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION.

3. MIRROR GLASS: ASTM C 1036, TYPE I, CLASS I, QUALITY Q, SILVER COATED PER FS DM4M1C, 6mm THICK, WITH EDGES FLAT POLISHED.

D. FABRICATED GLASS PRODUCTS:

1. SEALED INSULATING GLASS UNITS: PREASSEMBLED UNITS COMPLYING WITH ASTM E 774 FOR GLASS GLAZING UNITS WITH TWO SHEETS OF GLASS SEPARATED BY A 1/2-INCH DEPERATED SPACE FILLED WITH AIR. EXTERIOR GLASS COLOR TO MATCH EXISTING. INTERIOR GLASS SHALL BE CLEAR.

E. INSTALLATION:

1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS AND FOLLOW THE MOST STRINGENT REQUIREMENTS ARE CONTAINED IN GLASS'S "GLAZING MANUAL".

2. SET GLAZING UNITS IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.

3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALK-THROUGH.

F. QUALITY ASSURANCE:

1. SAFETY GLASS CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1.

2. GLAZING PUBLICATIONS: AS INDICATED ON DOOR SCHEDULE, TESTED IN ACCORDANCE WITH UL 10C AND NFPA 252 ("POSITIVE PRESSURE FIRE TESTING").

3. TEMPERATURE RISE RATE (TIR) ACROSS DOOR THICKNESS: IN ACCORDANCE WITH LOCAL BUILDING CODE AND AUTHORITIES HAVING JURISDICTION.

4. HIDE UNITS: UNITS Labeled AND Labeled BY (DR) OR (DIR) ATTACH FIRE RATING LABEL TO EACH FIRE RATED UNIT.

5. SMOKE AND DRAFT CONTROL DOORS, INDICATED WITH LETTER "S" ON DRAWINGS AND/OR DOOR SCHEDULE): SELF-CLOSING OR AUTOMATIC CLOSING DEVICES IN ACCORDANCE WITH NFPA 80 AND NFPA 101, WITH FIRE-RESISTANCE-RATED WALL CONSTRUCTION RATED THE SAME OR GREATER THAN THE FIRE-RATED DOORS, AND THE FOLLOWING:

1. MAXIMUM AIR LEAKAGE: 3.0 CFM40 AT 20 DOOR OPENING AT 10 INCH W.G. PRESSURE, WHEN TESTED IN ACCORDANCE WITH UL 1784 AT BOTH AMBIENT AND ELEVATED TEMPERATURES.

2. GASKETING: PROVIDE GASKETING TO EDGE SEALING IS NECESSARY TO ACHIEVE LEAKAGE LIMIT.

3. LABEL: INCLUDE THE "S" LABEL ON FIRE-RATING LABEL, OF DOOR.

4. DOOR CORE MATERIAL: MANUFACTURER'S STANDARD CORE MATERIAL/CONSTRUCTION IN COMPLIANCE WITH REQUIREMENTS.

5. DOOR THICKNESS: 1-3/4 INCH, NOMINAL.

6. DOOR FINISH: FACTORY PRIMED AND FIELD FINISHED.

F. HOLLOW METAL FRAMES:

1. COMPLY WITH STANDARDS AND/OR CUSTOM GUIDELINES AS INDICATED FOR CORRESPONDING DOOR IN ACCORDANCE WITH APPLICABLE DOOR FRAME REQUIREMENTS.

2. INTERIOR DOOR FRAMES, NON-FIRE RATED: FIELD WELDED TYPE. FRAME FINISH: FACTORY FINISHED.

3. FRAME LENGTH/STOPS: 18 GAUGE, 0.042 INCH, MINIMUM.

4. FRAME METAL THICKNESS: 18 GAUGE, 0.042 INCH, MINIMUM.

5. SOUND-RATED DOOR FRAMES: FULL PROFILE CONTINUOUSLY WELDED TYPE.

6. FRAME METAL THICKNESS: 18 GAUGE, 0.042 INCH, MINIMUM.

7. FRAMES FOR WOOD DOORS: COMPLY WITH FRAME REQUIREMENTS IN ACCORDANCE WITH CORRESPONDING DOOR.

8. BORED/VOID LITES GLAZING FRAMES: CONSTRUCTION AND FACE DIMENSIONS TO MATCH DOOR FRAMES, AND AS INDICATED ON DRAWINGS.

9. FRAMES IN MASONRY WALLS: SIZE TO SUIT MASONRY COURSE, FITTED TIGHTLY AND HANG HIGH TO FULL OPENING WITHOUT CUTTING MASONRY ON THE CASE AND ADJACENT WITH DOOR FRAME HANGING.

10. FRAMES WIDER THAN 48 INCHES: REINFORCE WITH STEEL CHANNEL, FITTED TIGHTLY INTO FRAME HEAD, FLUSH WITH TOP.

G. FINISHES:

1. PRIMER: RUBBER-TO-BEWHITING, COMPLYING WITH ANSII/SDI A250.10, DOOR MANUFACTURER'S STANDARD.

H. ACCESSORIES:

1. GLAZING: AS INDICATED IN DRAWINGS OR AS SPECIFIED.

2. REMOVABLE STOPS: FORMED SHEET STEEL, SHAPE AS INDICATED ON DRAWINGS, MITERED OR BUTTED CORNERS, PREPARED FOR COUNTERSINK STYLE TAMPER PROOF SCREWS.

3. SILENCERS: RESILIENT RUBBER, FITTED INTO DRILLED HOLE: PROVIDE THREE OR STRIKE SIDE OF SINGLE DOOR, THREE OR CENTER SIDE OF DOUBLE DOOR. PROVIDE TWO OR HEAD OF PARS WITH CENTER MULLIONS.

4. TEMPORARY FRAME PREDRILLERS: PROVIDED FOR FACTORY-OR SHOP-ASSEMBLED FRAMES.

E. INSTALLATION:

1. INSTALL DOORS AND FRAMES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RELATED REQUIREMENTS OF SPECIFIED DOOR AND FRAME STANDARDS OR CUSTOM GUIDELINES INDICATED.

2. INSTALL PREPARED FRAMES AFTER PAINTING AND WALL FINISHES ARE COMPLETE.

3. INSTALL FIRE RATED UNITS IN ACCORDANCE WITH NFPA 80.

4. COORDINATE FRAME ANCHOR PLACEMENT WITH WALL CONSTRUCTION.

4.0 FLUSH WOOD DOORS

A. SUBMITTALS: PRODUCT DATA. PREPARED DOOR SKIN SAMPLES, AND DOOR SCHEDULE INDICATING DOOR FRAME SIZES, TYPES, ELVATION SIZES, DETAILS, AND HARDWARE WITH DOOR AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.

B. BASIS OF DESIGN: EQUINOX PARK, MASONITE, LE CHATEAU COLLECTION: HOLLOW CORE DOORS OR APPROVED EQUIVALENT.

C. DOORS: 1-3/8" THICK PREHUNG, SIZES, SPECIES, AND DESIGNS AS INDICATED COMPLYING WITH WDMA 1.5-1.1 GRADE, PREMIUM.

2. VENEER MATCHING: DOOR AND RUNNING.

3. FASTENERS: HORIZONTAL OR VERTICAL, FABRICATED OF SAME BASIC METAL AND ALLOY AS FASTENED METAL AND MATCHING IT IN FINISHED COLOR AND TEXTURE WHERE FASTENERS ARE EXPOSED.

4. CONSTRUCTION:

1. INTERIOR VENEER: FIVE OR SEVEN PLY, STRUCTURAL COMPOSITE LUMBER CORES.

2. SIZES AS INDICATED IN DRAWINGS.

4.0 PAINTING AND COATING

A. SUBMITTALS: PRODUCT DATA AND THREE (3) DRAW-DOWN SAMPLES OF EACH COLOR AND SHEEN SPECIFIED.

B. ATTIC STOP: FURNISH ONE (1) GALLON OF EACH PAINT COLOR AND SHEEN, IN CONTAINERS, PROPERLY LABELED AND SEALED.

C. PRODUCTS: PROVIDE MANUFACTURER'S BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.

D. PAINT SYSTEMS:

1. ALL PAINT, PRIMER, AND VARNISH SHALL BE PRODUCTS OF DEVCO, KVAL, SHERWIN WILLIAMS, PPG INDUSTRIES, PRATT & LAMBERT OR APPROVED EQUAL.

2. ALL MATERIAL SHALL BE OF THE STANDARD RESIDENTIAL GRADE OF THE TYPES DESIGNATED.

3. ALL MATERIAL SHALL BE DELIVERED TO THE JOB SITE IN THE ORIGINAL, UNOPENED, LABELED CONTAINERS. COLORS NOT SPECIFICALLY CALLED FOR IN THE PAINT SCHEDULE WILL BE SELECTED BY THE ARCHITECT.

E. APPLICATION / INSTALLATION:

1. EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS.

2. ACCORDING TO COATING MANUFACTURER'S WRITTEN INSTRUCTIONS, WHEN SPRAYING, APPLY EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS.

3. PRIME COAT: APPLY PRIMER TO ALL EXPOSED SURFACES TO PROVIDE A SMOOTH, OPAQUE SURFACE OF UNIFORM APPEARANCE. PROVIDE A FINISH FREE OF CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS.

3. APPLY PRODUCTS PER MANUFACTURER RECOMMENDED GUIDELINES. PRODUCT COVERAGE MINIMUM ONE COAT OF PRIMER AND TWO FINAL COATS ON MATERIALS APPLIED TO MATERIALS APPROVED BY MANUFACTURER PRODUCT DATA SHEETS.

A. Exterior Work:

1. ALL EXTERIOR GALVANIZED METAL FLASHINGS, CONNECTORS, ETC. ONE COAT EXTERIOR METAL ETC. ONE COAT EXTERIOR METAL PRIMER. TWO COATS EXTERIOR SEMI-GLOSS PAINT.

2. ALL EXPOSED STEEL FRAMES, ANGLES, ETC. TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT CHANNELS, POSTS, RAILINGS, BEAMS, ETC. SURFACES THAT ARE NOT PRIMED).

3. ALL EXPOSED MISC. FERROUS METAL ITEMS INCLUDING RAILS, PLATES, ANGLES, BOLTS, GRATES, CONDUTS, POSTS, PIPING, ETC. TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT CHANNELS, POSTS, RAILINGS, BEAMS, ETC. SURFACES THAT ARE NOT PRIMED).

4. ALL UNPRIMED EXTERIOR MILLWORK, TRIM, SMOOTH WOOD MATERIALS, ETC. PRIME AND BACK LATER PRIMER. TWO COATS OF EXTERIOR LATEX SATIN OR SEMI-GLOSS PAINT.

5. PRIMED MILLWORK AND TRIM: TOUCH-UP PRIME. TWO COATS OF EXTERIOR 100% SATIN OR SEMI-GLOSS ACRYLIC LATEX PAINT.

6. ROUGH SAWN TRIM, BEAMS, COLUMNS, ETC. ONE COAT PRIMER. TWO COATS EXTERIOR HEAVY BODY STAIN.

7. PRIMED METAL ENTRY DOORS, FRENCH DOORS AND METAL FRAMES, GARAGE DOORS. PATCH DECKS, TOUCH UP PRIMER. TWO COATS OF EXTERIOR 100% SATIN OR SEMI-GLOSS ACRYLIC LATEX PAINT. TWO COATS TO MATCH ADJACENT SURFACES.

8. ANY OTHER PAINTING REQUIRED BY THE DRAWINGS. TWO COATS TO MATCH ADJACENT SURFACES.

B. INTERIOR WORK:

1. GYPSUM BOARD WALLS EXCEPT IN KITCHENS, BATHROOMS, LAUNDRIES AND COMMON AREA CORRIDORS, UNLESS SCHEDULED FOR WALLCOVERING OR TILE. ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF EPOXY GOSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE).

2. GYPSUM BOARD WALLS IN KITCHENS, BATHROOMS AND LAUNDRIES UNLESS SCHEDULED FOR WALLCOVERING OR TILE. ONE COAT OF EPOXY COMPTABLE PRIMER PAINT AND ONE FINISH COAT OF EPOXY GOSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE).

3. GYPSUM BOARD WALLS IN COMMON AREA CORRIDORS. ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF SCRUBABLE LATEX PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE).

4. GYPSUM BOARD CEILINGS. TWO COATS OF LATEX PAINT. TWO COATS OF CLASS I VAPOR RETARDER PAINT AT CEILING ADJACENT TO ATTICS.

5. DOOR CASINGS, BASE, WOOD MILLWORK, E





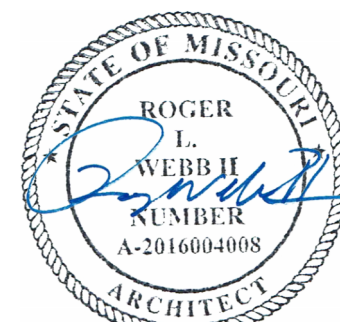
## PERMIT DOCUMENTS

# ITAP - LEE'S SUMMIT

2228 SW MAIN ST.  
LEE'S SUMMIT, MO 64063

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### REVISION DATES



PROFESSIONAL SEAL

# G502

ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066

## GENERAL PROJECT SPECIFICATIONS

**DIVISION 10 - SPECIALTIES**

## 10 2800 TOILET AND BATH ACCESSORIES

A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH ACCESSORIES.

### B. SUBMITTALS

1. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
2. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
3. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
4. INSTALLATION METHODS.

## B. INSTALLATION

1. INSTALLER MUST EXAMINE SUBSTRATES, PREVIOUSLY INSTALLED INSERTS AND ANCHORAGES NECESSARY FOR MOUNTING OF TOILET ACCESSORIES, AND OTHER CONDITIONS UNDER WHICH INSTALLATION IS TO OCCUR, AND MUST NOTIFY CONTRACTOR IN WRITING OF CONDITIONS DETRIMENTAL TO PROPER AND TIMELY COMPLETION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER.

2. INSTALL ACCESSORIES ACCORDING TO RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS, USING FASTENERS APPROPRIATE TO SUBSTRATE INDICATED AND RECOMMENDED BY UNIT MANUFACTURER.
3. INSTALL AT ITS LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS AND AT HEIGHTS INDICATED.
- ADHESIVE INSTALLATIONS ARE NOT PERMITTED.
3. MOUNTING HEIGHTS SHALL BE AS RECOMMENDED BY THE ACCESSORY MANUFACTURER AND AT HEIGHTS RECOMMENDED BY USER FOR PHYSICALLY HANDICAPPED TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT.
4. ALL FASTENERS INSTALL TO WITHSTAND A DOWNWARD LOAD OF AT LEAST 250 LBF, WHEN TESTED ACCORDING TO ASTM F 446.
5. ADJUST ACCESSORIES FOR PROPER OPERATION AND VERIFY THAT MECHANISMS FUNCTION SMOOTHLY.
6. CLEAN AND POLISH ALL EXPOSED SURFACES AFTER REMOVING PROTECTIVE COATINGS.

**10 3000 SOLID PLASTIC TOILET COMPARTMENTS**

A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH ACCESSORIES.

## B. PRODUCTS

**BASIS OF DESIGN: ECLIPSE TOILET PARTITIONS AS MANUFACTURED BY AND SUPPLIED BY SCRANTON**

1. STYLE: FLOOR MOUNTED OVERHEAD-BRACED TIE-UP COMPARTMENTS.  
2. DOORS AND PANELS: HIGH DENSITY POLYETHYLENE (HDPE), FABRICATED FROM SEQ  
CHAPTER 1 EXTRUDED POLYMER RESINS, FORMING SINGLE THICKNESS PANEL.  
A. WATERPROOF AND NONABSORBENT, WITH SELF-LUBRICATING SURFACE, RESISTANT TO MARKS  
BY PENS, PENCILS, MARKERS, AND OTHER WRITING INSTRUMENTS.  
B. THICKNESS: 1 INCH (25 MM).  
C. EDGES: SHIMPLAP.  
3. PANEL COLOR: TRADITIONAL, SERIES 1: SHALE - ORANGE PEEL.  
4. DOORS AND PANELS: HIGH PRIORITY: HEIGHT: 62 INCHES (1575 MM) HIGH AND MOUNTED AT 8 TO 14  
INCHES (203 TO 356 MM) ABOVE THE FINISHED FLOOR.

### C. SUBMITTALS

1. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
2. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
3. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
4. INSTALLATION METHODS.
5. SHOP DRAWINGS: PROVIDE LAYOUT DRAWINGS AND INSTALLATION DETAILS WITH LOCATION AND TYPE OF HARDWARE REQUIRED.
6. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS OF COLOR CHIPS REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND PATTERNS.

#### D. POSTS, RAILS AND HARDWARE

- METAL POTS: 82.5 INCHES (210 CM) HIGH, HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, FASTENED TO FLOOR WITH STAINLESS STEEL, TURN RESISTANT SCREW.
- HEADERS: 10 INCHES (25 CM) HIGH, HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, SECURED TO METAL POST WITH STAINLESS STEEL, TURN RESISTANT SCREW.
- HEADERS AND CORNER CAP: ONE-PIECE MOLDED POLYETHYLENE SECURED TO METAL POST WITH STAINLESS STEEL, TURN RESISTANT SCREW. CORNER CAPS: 10 INCHES (25 CM) FINISHED FLOOR.
- WALL BRACKETS: CONTINUOUS HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, INSERTED INTO WALL WITH STAINLESS STEEL, TURN RESISTANT SCREW.
- HEADRAL: HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, SECURED TO WALL WITH STAINLESS STEEL, TURN RESISTANT SCREW.
- DOOR HARDWARE:
- A. HINGES: EDGE-MOUNTED HELIX STAINLESS STEEL, CONTINUOUS HINGE CLOSING DEGREE: 5 DEGREES, CAPABLE TO A FULL CLOSE ON ITS OWN WEIGHT.
- B. LOCKS: 10 INCHES (25 CM) HIGH, HEAVY DUTY EXTRUDED ALUMINUM, STAINLESS STEEL, OCCUPANCY INDICATORS: GREEN FOR OCCUPIED AND RED NOT OCCUPIED, SLIDE, BUTTON AND BUTTON.
- C. COAT HOOK AND DOOR BUMPER COMBINATION: MATERIAL: CHROME PLATED ZAMAK, HANDICAP DOOR.
- D. DOOR PULLS: CHROME PLATED ZAMAK.

### E. INSTALLATION

1. CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION.
2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS.
3. INSTALL PARTITIONS RIGID, STRAIGHT, PLUMB, AND LEVEL.
4. LOCATE BOTTOM EDGE OF DOORS AND PANELS \_\_\_\_\_ INCHES ABOVE FINISHED FLOOR.
5. CLEARANCE AT BOTTOM EDGES OF DOORS SHALL BE UNIFORM TOP TO BOTTOM AND SHALL NOT EXCEED \_\_\_\_\_ INCHES.
6. NO BURNING, CUTTING, DRILLING, AND/OR PATCHING SHALL BE VISIBLE ON THE FINISHED WORK.
7. FINISHED SURFACES SHALL BE CLEANED AFTER INSTALLATION AND BE LEFT FREE OF IMPERFECTIONS.
8. ADJUST DOORS AND LATCHES TO OPERATE CORRECTLY.
9. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.
10. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

DIVISION 11 - EQUIPMENT

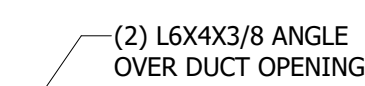
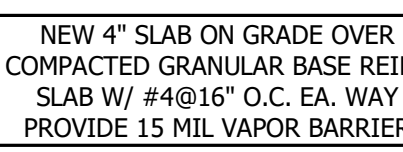
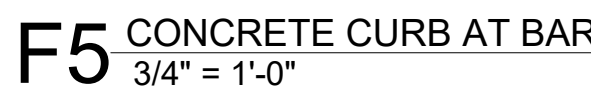
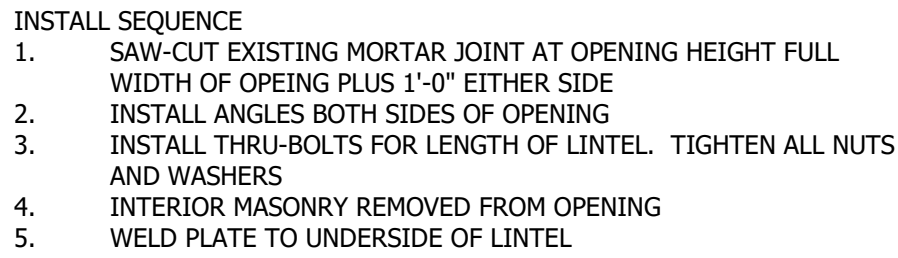
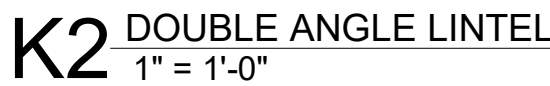
## 11 3000 - APPLIANCES

A. REFERENCE CONSTRUCTION DRAWINGS FOR QUANTITY, AND LOCATION OF APPLIANCES TO BE FURNISHED BY OWNER.

## 10 4400 - FIRE PROTECTION SPECIALTIES

A. REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, SIZE AND LOCATIONS OF FIRE EXTINGUISHERS AND CABINETS.





**A5** LEVEL 1 FLOOR PLAN  
1/8" = 1'-0"



## GENERAL NOTES: FLOOR PLANS

1. RE. GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0".
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD WALL (FG), FACE OF MASONRY (FM), FACE OF CONCRETE WALLS (FC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS AND PER WALL TYPES. SEE GENERAL SHEETS.
5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 1" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL OR OTHER PROTRUDING OBJECTS.
6. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. PROVIDE FINISH LEVELS AS DESCRIBED:  
LEVEL 4:  
- ALL WALLS TO BE BROUGHT UP TO LEVEL 4 FINISH.  
- AREAS FOR BACK OF HOUSE EMPLOYEE OPERATIONS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.  
CONCESSION AND CIRCULATION CORRIDORS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.
8. STAIR ENCLOSURES, SHAFT WALLS, EXIT PASSAGE WALLS AND EXTERIOR WALLS TO BE COORDINATED FOR PHASE OF WORK PER MATRIX AND PROJECT SCOPING.
9. MAINTAIN AND PROTECT EXISTING EXPANSION JOINTS DURING CONSTRUCTION. PATCH/REPAIR/REPLACE TO MATCH EXISTING RATINGS AS REQUIRED ON THE SHELL PORTION OF PROJECT.
10. CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES, LOCAL RULES, AND REGULATIONS, AND ALL OTHER CODES, REGULATIONS AND GOVERNING AGENCIES HAVING JURISDICTION WITH ALL APPLICABLE AMENDMENTS UNLESS ALTERED OR CHANGED THROUGH VARIANCES OF OTHER LEGAL PROCEDURES.

## FLOOR PLAN KEYED NOTES

MARK	DESCRIPTION
1	SIGNAGE BY OTHERS
2	CARPENTER TO MODIFY EXISTING DOOR AND JAMB TO SWING OUT PER IBC, NOTIFY ARCHITECT OF ANY ISSUES
3	BUILT-IN WOOD HIGHTOP, 42" H, COORD. TOP FINISH W/ OWNER, RE. DB/A502.
4	TELEVISIONS BY OWNER, COORD. MOUNTING HT W/ OWNER, OUTLETS IN CEILING ABOVE TVS TYP. RE. ELECTRICAL
5	ALL DINING AND BAR FURNITURE BY OWNER
6	PROVIDE BENDS AND SWEEPS PER EQUIPMENT SUPPLIERS RECOMMENDATIONS, ENDPOINTS, BENDS/TURNS PER EQUIPMENT SUPPLIER RECOMMENDATIONS
7	EQUIPMENT SUPPLIER TO VERIFY FINAL OPENING DIMENSIONS PRIOR TO FABRICATION
8	BASIS OF DESIGN: QUIKSERV SC-4844 MANUAL SELF CLOSING SLIDER, 1/4" TEMPERED GLAZING, RE. A12/A504 AND A8/A504
9	FUTURE COOLER
10	ALIGN F.F.
11	12" DRINK RAIL, COORD. MATERIAL AND FINISH W/ OWNER, CONTRACTOR INSTALLED, CENTERLINE BRACKETS - COUNTERTOP SUPPORT BRACKET FRONT MOUNTING PLUS-10X8 BLACK, 4" MAX OFF CENTER
12	INFILL TO MATCH EXISTING
13	GLAZINGS TO BE BLACKED OUT
14	COORDINATE HARDWARE REQUIREMENTS W/ OWNER
15	NEW STOREFRONT DOOR, BASIS OF DESIGN: KAWNEER AA-425 THERMAL ENTRANCE SINGLE DOOR, FINISH TO MATCH EXISTING STREET STOREFRONT
16	NEW WALL TO GO TO ROOF DECK
17	EXTEND EXISTING WALL, ALIGN F.F.
18	BASIS OF DESIGN: ALL NEW GYP WALLS TO RECEIVE DALLTILE, PORTFOLIO 6"X12" P-36C9TB COVE BASE - IRON GREY
19	ALL EXISTING DOOR AND WINDOW TRIM TO BE PAINTED SW 6992 INK WELL - EGG SHELL FINISH
20	COORD. BRICK FINISH W/ OWNER
21	BASIS OF DESIGN: RESTROOM WET WALLS TO RECEIVE DALLTILE - BEVELLED 3"X8" 0100 ARTIC WHITE SUBWAY TILE, FULL HT. HORIZONTAL RUNNING BOND INSTALLATION
22	12"D COUNTER, FLOOR MOUNTED, 3"X3" SQUARE SOCKET AND FLANGE, PAINTED TO MATCH STOREFRONT, COORD. COUNTER MATERIAL AND FINISH W/ OWNER, RE. A8/A504
23	COORD. UTILITY STUB-INS FOR FUTURE TENANT W/ OWNER PRIOR TO INSTALLATION OF NEW SLAB
24	FUTURE FOOD SERVICE COUNTER
25	
26	

## GLASS LITE SCHED.

GLAZING TYPE	DESCRIPTION
G1	1/4" TEMPERED CLEAR GLAZING
G2	1/4" CLEAR GLAZING
G3	1/2" TEMPERED INSULATED CLEAR GLAZING

## DOOR SCHED. GENERAL NOTES

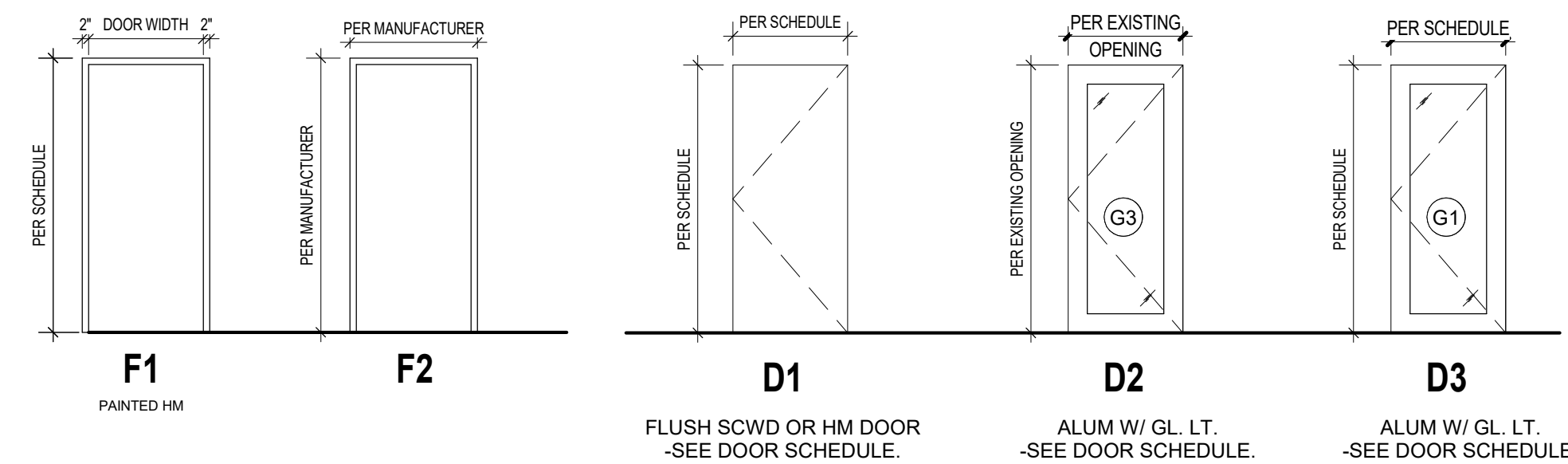
1. HM REFERS TO HOLLOW METAL.
2. AL REFERS TO ALUMINUM
3. WD REFERS TO WOOD
4. SCWD REFERS TO SOLID CORE WOOD
5. ALL EXTERIOR ALUMINUM DOORS & FRAMES ARE TO BE FINISHED TO MATCH ADJACENT ALUMINUM WINDOW FRAME, U.N.O.
6. REFER TO SPECIFICATION FOR DOOR HARDWARE SET DESIGNATIONS.
7. PROTECT ALL DOORS & FRAMES FROM DAMAGE THROUGHOUT CONSTRUCTION PHASES.

## FLOOR PLANS, ENLARGED PLANS, AND DETAILS

DOOR SCHEDULE									
DOOR #	WIDTH	HEIGHT	ROOM NAME	TYPE	DOOR		FRAME		REMARKS
					MATERIAL	FINISH	MATERIAL	FINISH	
T100	EXIST	EXIST	BAR/DINING	EXIST	EXIST	COORD. W/ OWNER	EXIST	COORD. W/ OWNER	1, 2, 3, 5, 8
T101	3'-2"	7'-0"	DELI	D3	ALUM/GLASS	MATCH EXISTING STOREFRONT	WD		1, 3, 6, 7
T103	3'-0"	7'-0"	ADA UNISEX RR	D1	SCWD				1, 3, 4
T104	PER EXISTING OPENING	PER EXISTING OPENING	POOL ROOM	D2	ALUM/GLASS	MATCH EXISTING STOREFRONT			3, 4, 5, 7
T105	3'-0"	7'-0"	MEP/ITAP STORAGE	D1	SCWD		HM	PAINT	1, 3, 4, 8
T108A	3'-0"	7'-0"	UTILITY	D1	SCWD		HM	PAINT	1, 3, 6, 8
T108B	2'-10"	7'-0"	RESTROOM	D1	SCWD		HM	PAINT	1, 3, 8
T108C	2'-10"	7'-0"	RESTROOM	D1	SCWD		HM	PAINT	1, 3, 8
T108D	3'-0"	7'-0"	RESTROOM	D1	SCWD		HM	PAINT	1, 3, 4, 8
T109	3'-0"	7'-0"	RESTROOM	D1	SCWD		HM	PAINT	1, 3, 8

### DOOR SCHEDULE REMARKS:

1. MATCH EXISTING MASTER KEYING SYSTEM. COORDINATE WITH BUILDING OWNER.
2. MAINTAIN EXISTING HARDWARE.
3. PROTECT DOOR AND FRAME FROM DAMAGE THROUGHOUT CONSTRUCTION. ANY DAMAGE TO BE REPAIRED/REPLACED PER OWNER DISCRETION.
4. DOOR FRAME 2" OFF FINISHED FACE ON HINGE SIDE, U.N.O.
5. PROVIDE PANIC HARDWARE.
6. MANUALLY LOCKABLE FROM INSIDE OF ROOM. MASTER KEY LOCK ON OUTSIDE OF ROOM.
7. COORDINATE HARDWARE WITH MANUFACTURER.
8. COORDINATE PAINT FINISH WITH OWNER



### FRAME TYPES

1/4" = 1'-0"

### NOTE:

1. DOORS TO BE 1 3/4" THICK, UNLESS NOTED OTHERWISE ON DOOR SCHEDULE.

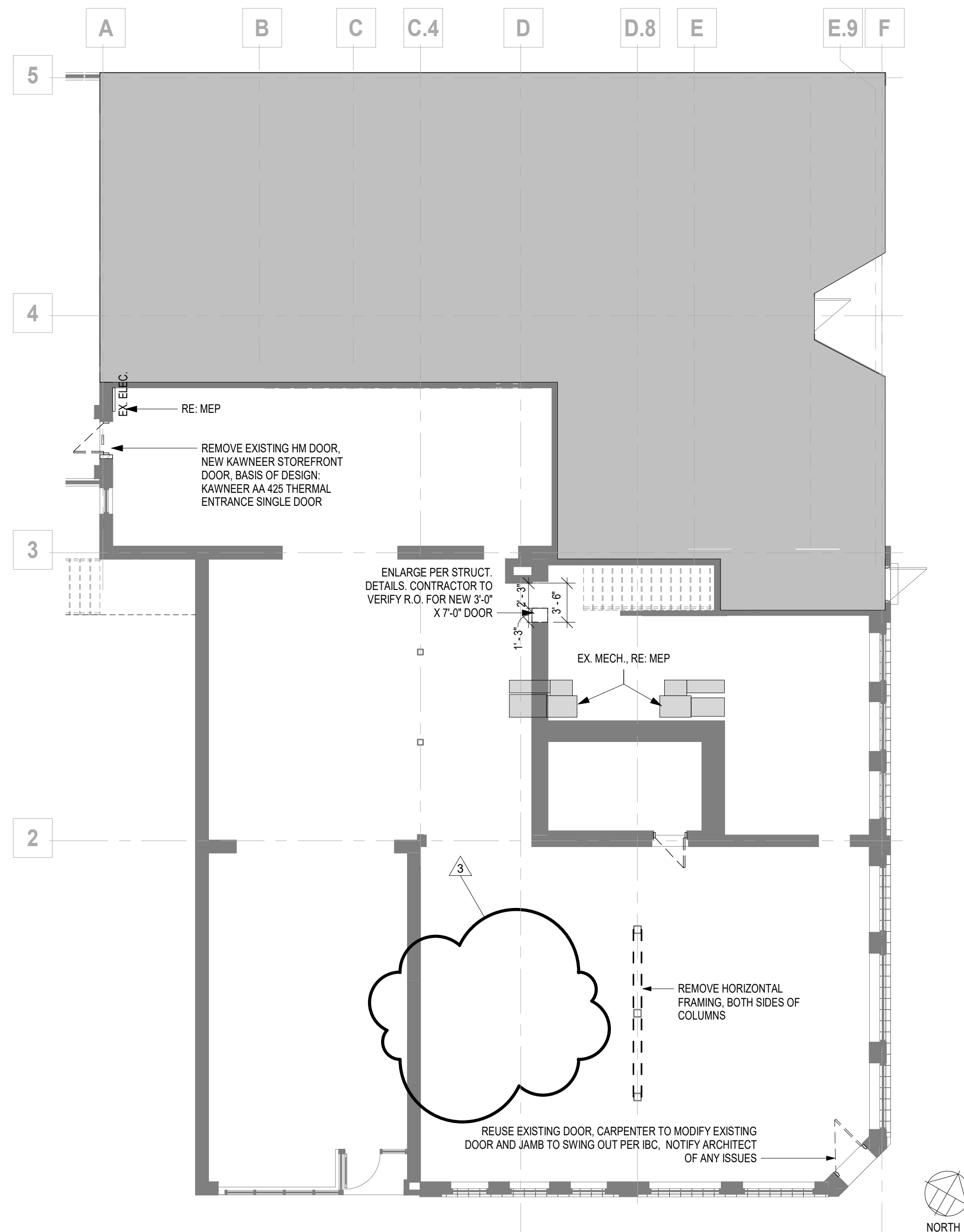
ACCESSORY SCHEDULE						
TYPE MARK	MANUFACTURER	DESCRIPTION	MODEL	WxHxD	FINISH	REMARKS
1	BOBRICK WASHROOM EQUIPMENT, INC.	SOAP DISPENSER - SURFACE MOUNTED	B-2012	4-3/16", 10-17/32", 4-7/32"	SATIN	
2	BOBRICK WASHROOM EQUIPMENT, INC.	SURFACE MOUNTED PAPER TOWEL DISPENSER	B-262	10-3/4", 14", 4"	SATIN	
3	BOBRICK WASHROOM EQUIPMENT, INC.	VERTICAL GRAB BAR, 1-1/2" DIA., SS, 18"	B-6806-18	1-1/2" DIA X 18"	SATIN, WITH PEENED GRIP	
4	BOBRICK WASHROOM EQUIPMENT, INC.	GRAB BAR, 1-1/4" DIA., SS, 42"	B-5806-42	1-1/2" DIA X 42"	SATIN	
5	BOBRICK WASHROOM EQUIPMENT, INC.	DOUBLE ROLL TOILET TISSUE DISPENSER	B-6909	12-3/8", 4-3/4", 6-3/16"	STAINLESS STEEL	
6	BOBRICK WASHROOM EQUIPMENT, INC.	GRAB BAR, 1-1/2" DIA., SS, 36"	B-5806-36	1-1/2" DIA X 36"	SATIN	
7		MIRROR		24"X48"	SATIN	1

### ACCESSORY SCHEDULE GENERAL NOTES:

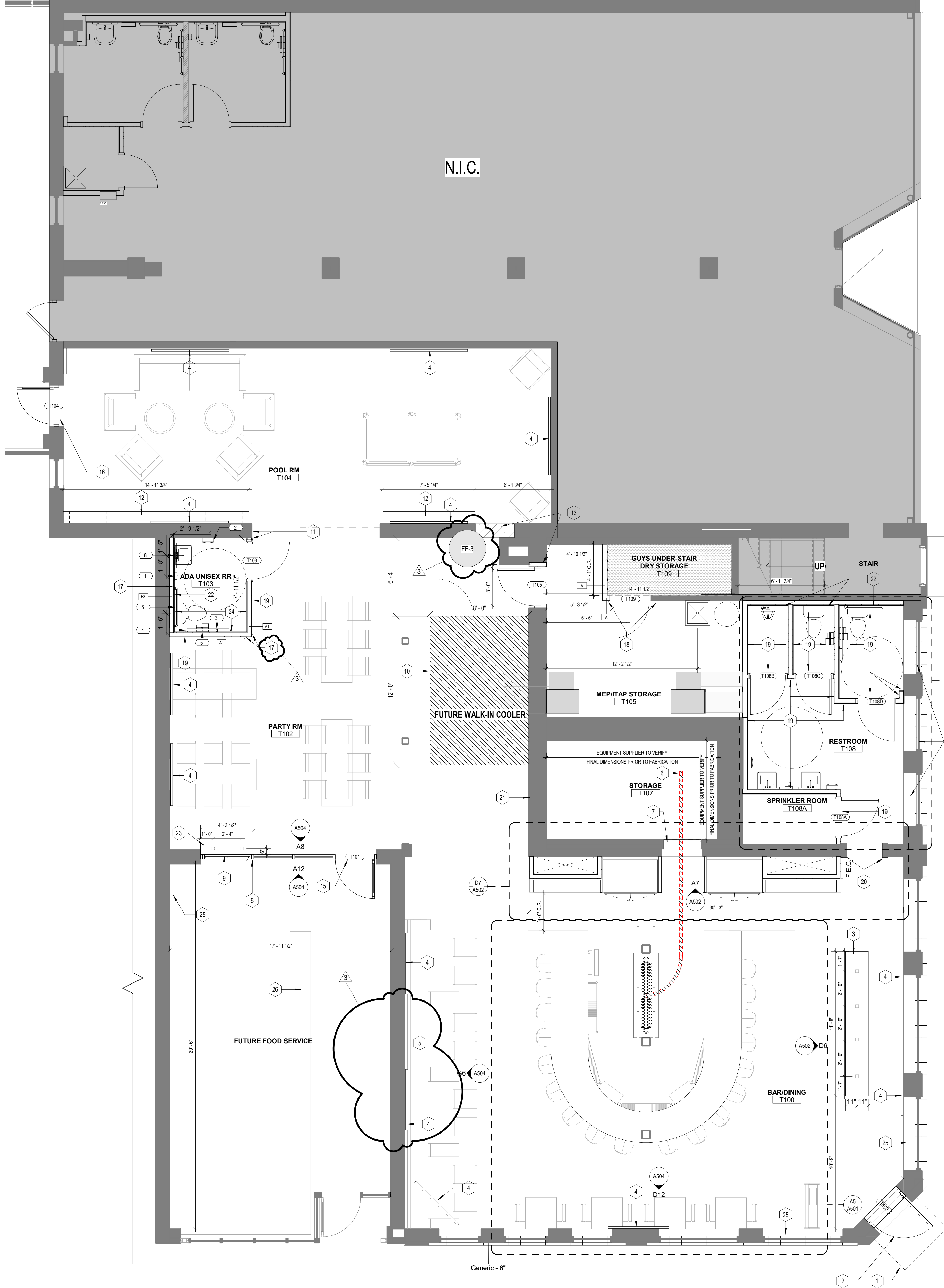
- A. ACCESSORIES SCHEDULE BASIS OF DESIGN, COORDINATE FINAL SELECTION WITH OWNER

### ACCESSORY SCHEDULE REMARKS:

1. MIRRORS TO BE CENTERED AT SINKS TYP.



1 1ST FLOOR DEMO PLAN - ITAP  
1/8" = 1'-0"



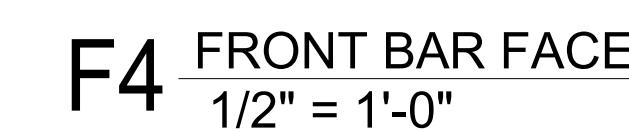
A8 1ST FLOOR PLAN - ITAP  
1/4" = 1'-0"





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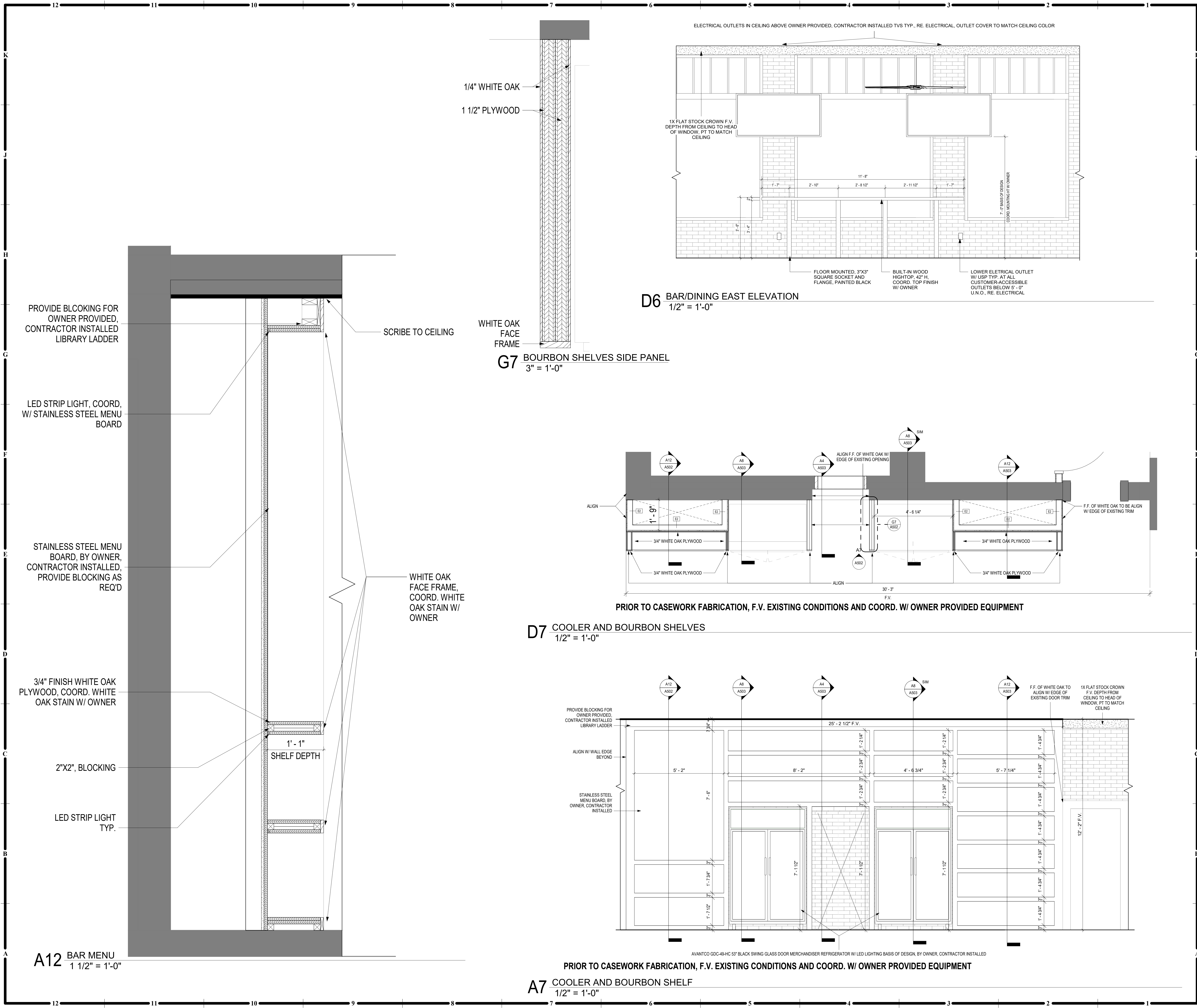
MARK	DESCRIPTION
<b>K</b>	
1	HOSTESS STAND
2	TELEVISIONS ABOVE, PROVIDE POWER AND DATA AS REQ'D, MOUNTED ON EXISTING POSTS, COORD. MOUNTING HT W/ OWNER, MOUNTING MIN. 6" - 8" CLR. FROM F.F., RE. HES/ASO2
3	4" METAL STUD BAR DIE WALL
4	ICE MACHINE
5	WHISKEY SHELF
6	GLASSWARE SHELF
<b>J</b>	
7	POS STATION, PROVIDE POWER AND DATA AS REQ'D
8	BEER TAPS EQUIPMENT AND SHELVEY BY OTHERS, CONTRACTOR INSTALLED
9	HAND SINK
10	DISHWASH SINK
11	PROVIDE BENDS AND SWEEPS PER EQUIPMENT SUPPLIERS RECOMMENDATIONS, ENDPOINTS, BENDS/TURNS PER EQUIPMENT SUPPLIERS RECOMMENDATIONS
<b>H</b>	
12	INSIDE OF BAR DIE WALL TO RECEIVE BLACK FRP, FROM TOP OF CUP CURBS TO BOTTOM OF COUNTERTOP
13	COORD. BAR TOP MATERIAL AND FINISH W/ OWNER, CONTRACTOR INSTALLED
14	BAR FACE BASIS OF DESIGN: 4"W, 1/4" WHITE OAK PANELS W/ 3" WIDE WHITE OAK FRAME, TYP.
15	PROVIDE SOLID BLOCKING IN WALL FOR BRACKET LAGS
16	CENTERLINE BRACKETS - COUNTERTOP SUPPORT BRACKET FRONT MOUNTING PLUS - 1" RE. BLACK - MOUNT 4"X4" CLEARANCES



ENLARGED BAR PLAN, INTERIOR  
ELEVATIONS + DETAILS



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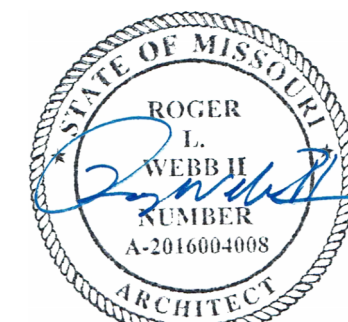


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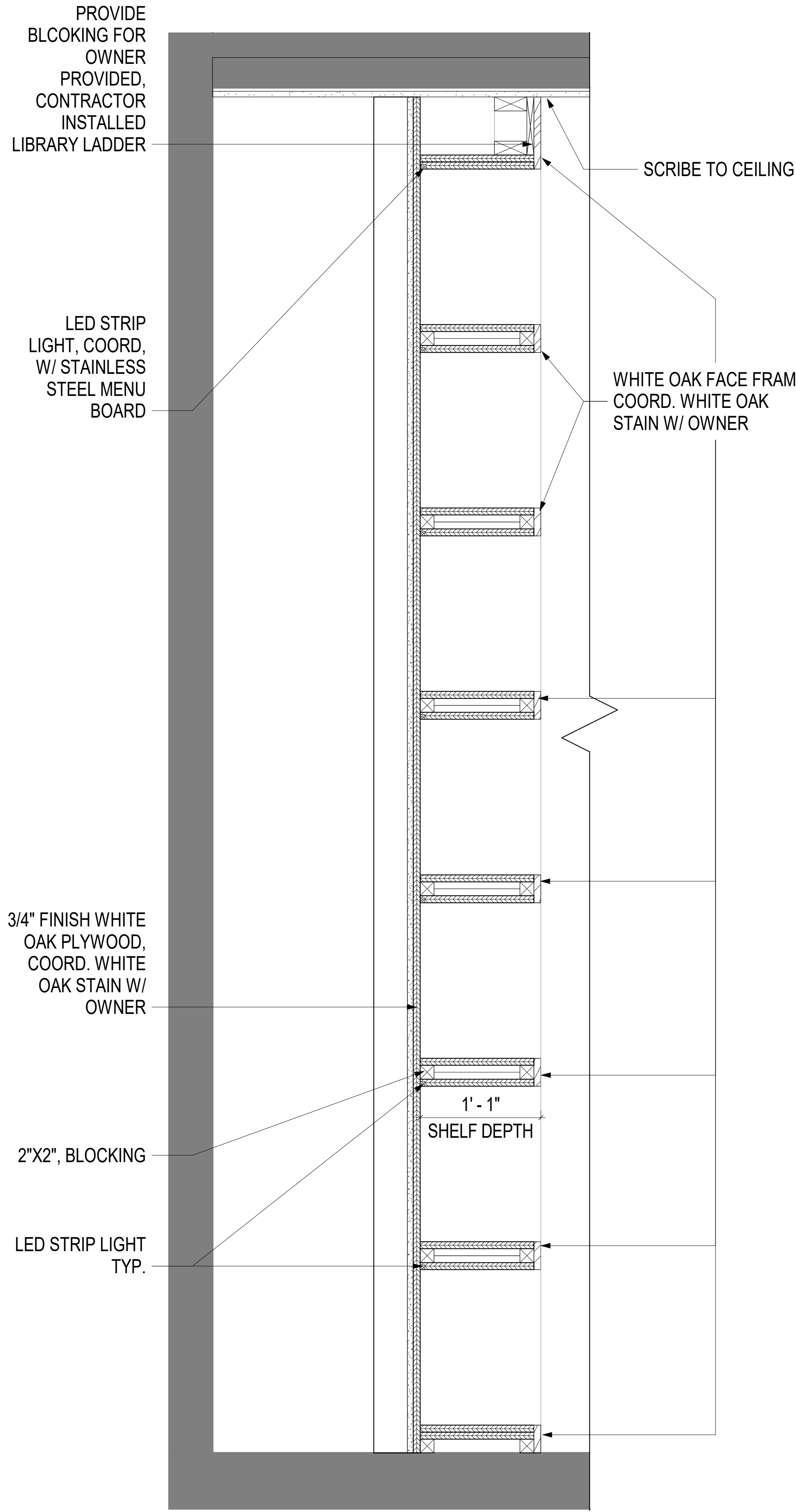


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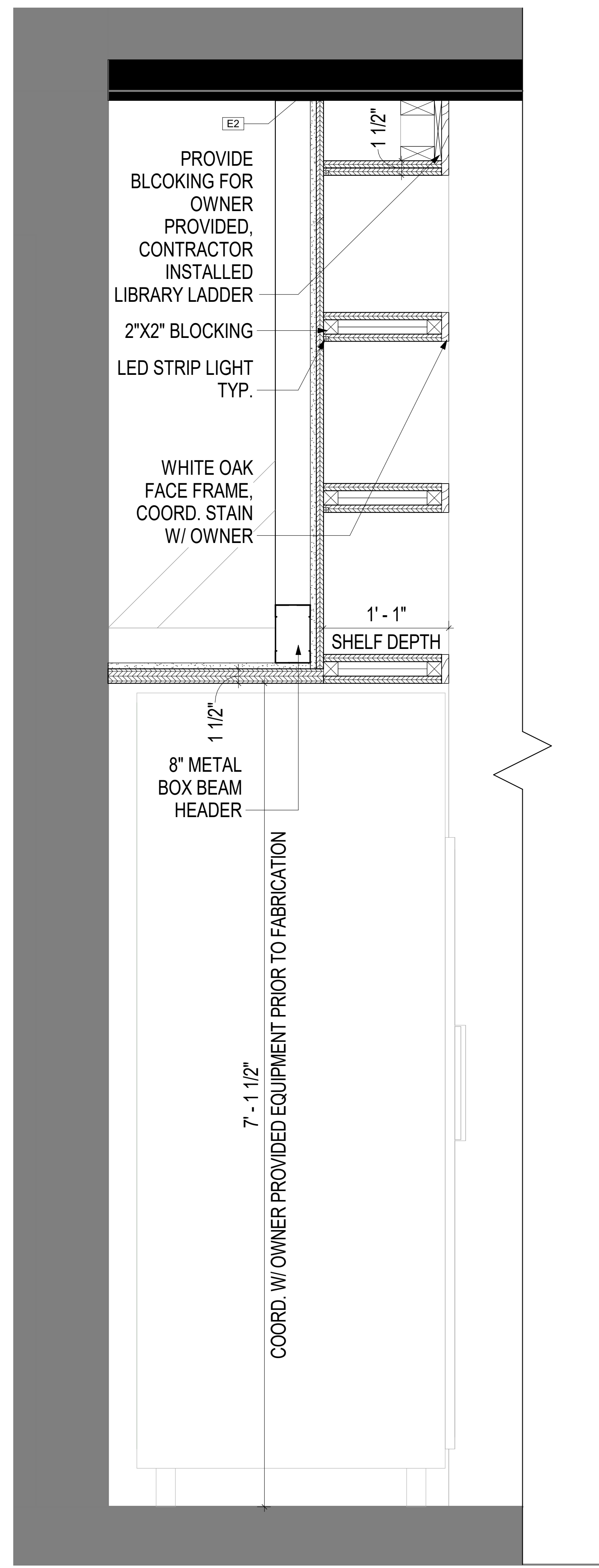
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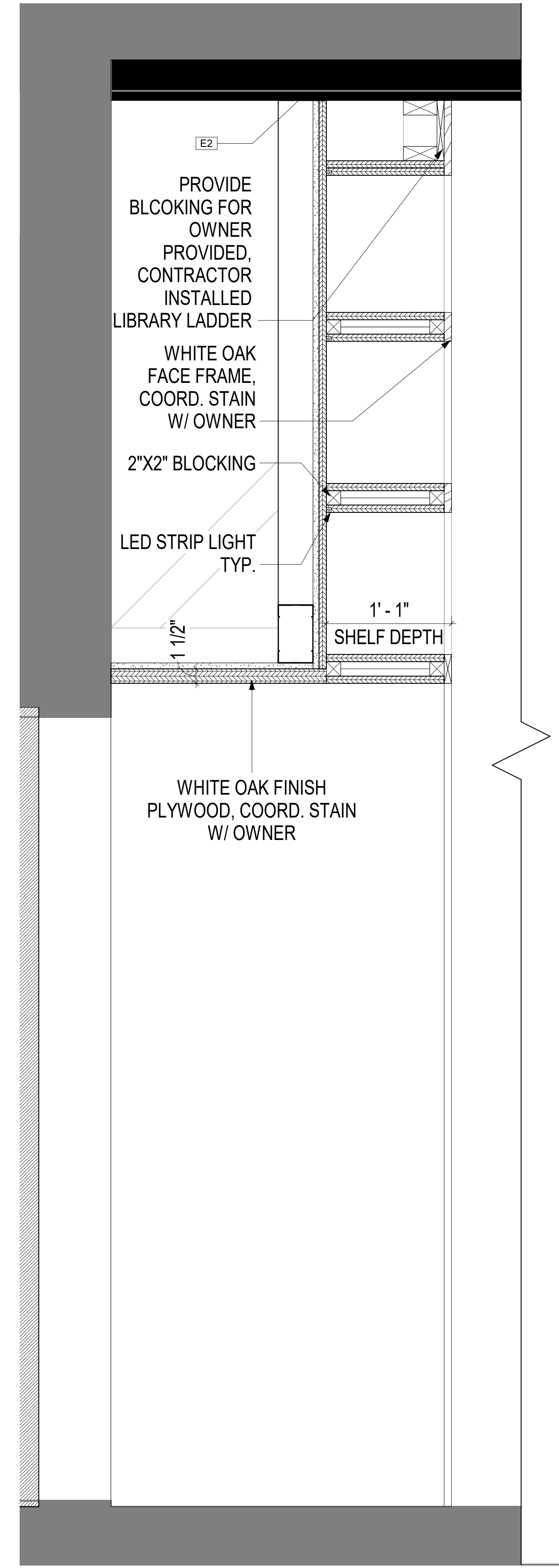
INTERIOR DETAILS



A12 Section 43  
1 1/2" = 1'-0"



A8 REACH-IN COOLER W/ SHELVES ABOVE  
1 1/2" = 1'-0"



A4 WALK-IN COOLOR OPENING AND SHELVES  
1 1/2" = 1'-0"









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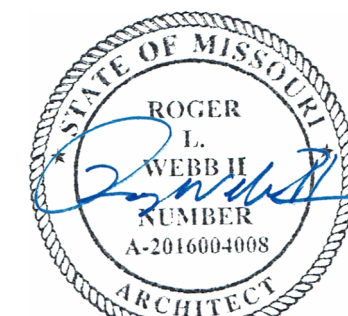
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## GENERAL NOTES - REFLECTED CEILING PLANS:

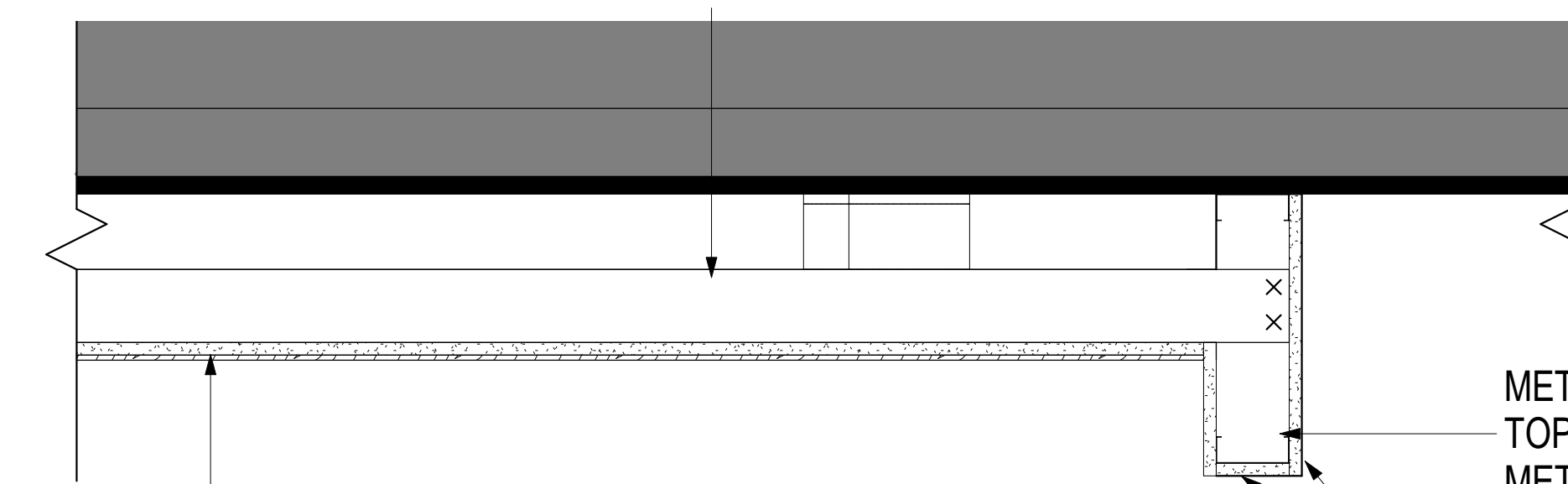
- RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
- DIMENSIONS SHOWN ON THE REFLECTED CEILING PLANS ARE TO THE FACE OF GYP. BOARD (FOS), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
- ALL CEILINGS TO BE 9'-0" A.F.F., UNLESS NOTED OTHERWISE.
- ALL CEILING HEIGHTS AS SHOWN ON PLANS AND DETAILS ARE FROM SLAB OR TILE FLOOR (FINISHED FLOOR) TO FINISH CEILING.
- AT ALL GYP. BD. SOFFITS: EXTEND GYP. BD. UP 6 INCHES ABOVE ADJACENT CEILING.
- RE: DETAILS FOR ADDITIONAL CONDITIONS AND CEILING HEIGHT INFORMATION.
- RE: FINISH LEGEND AND FINISH SCHEDULE FOR ROOM CEILING FINISHES.
- CEILING TILES/GRID TO BE CENTERED IN THE ROOM, UNLESS NOTED OTHERWISE.
- RECESSED LIGHTING, SPEAKERS, SMOKE DETECTORS, ETC. AND PENDANT LIGHT FIXTURES - SHALL BE CENTERED IN CEILING TILE OR GYP. BD. CEILING, UNLESS NOTED OTHERWISE.
- RE: INTERIOR ELEVATIONS FOR LOCATION OF WALL MOUNTED LIGHT FIXTURES.
- RE: ELECTRICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON LIGHT FIXTURE SCHEDULE.
- RE: MECHANICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON DIFFUSERS.
- COORDINATE ALL PENDANT MOUNTED LIGHT FIXTURES IN EQUIPMENT AREAS WITH EXPOSED STRUCTURE.
- COORDINATE ALL CEILING MOUNTED EQUIPMENT WITH CASEWORK BELOW.
- IF THERE IS A CONFLICT BETWEEN ANY ABOVE-CEILING MECHANICAL / ELECTRICAL / PLUMBING WORK & THE SCHEDULED OR SHOWN CEILING HEIGHT, CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
- REF. MECH DWGS FOR LOCATIONS OF SOUND ISOLATION BELOW AND OR AROUND MECH. EQUIPMENT.
- PROVIDE OVERALL CEILING COORDINATION DRAWING SHOWING ALL DEVICES DURING SHOP SUBMITTAL PROCESS.

### CEILING PLAN LEGEND

\*SOME SYMBOLS MAY NOT BE USED IN THIS PROJECT.

WOOD VISUAL	WC-5A OR WC-5B / PRICE BOTH MATERIALS FOR CLIENT APPROVAL
	5/8" GYPSUM BOARD BULKHEAD, CEILING OR SOFFIT. SEE APPLICABLE DETAILS AND SECTIONS.
	RECESSED CAN LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS FOR TYPE.
	BASIS OF DESIGN: CSL ENTITY - 25W LED CYLINDER, MATTE BLACK, SURFACE MOUNTED, CENTERED ON JOIST TYP. U.N.O., FINAL FIXTURE SELECTION BY OWNER, RE. ELECTRICAL FOR TYP.
	SUSPENDED OR MOUNTED SIGNIFY DAY-BRITE CFI LINEAR 4" SDS SELECTABLE STRIP LIGHT SEE ELECTRICAL DRAWINGS FOR TYPE.
	LIGHT BAR WALL SCONCE, BASIS OF DESIGN: KUZCO - 30" L INTERLUX 20 LINEAR SURFACE, MODEL #WG-20LDL-SM, BLACK, FINAL FIXTURE SELECTION BY OWNER, MOUNTED HORIZONTALLY, CENTER ABOVE MIRROR AND SINKS
	BASIS OF DESIGN: NEMO ZIRKOL-C, HOME 58" BLACK, BOTTOM OF FIXTURE @ 9'-0", FINAL FIXTURE SELECTION BY OWNER, RE. ELECTRICAL FOR TYP.
	BASIS OF DESIGN: NEMO ZIRKOL-C, HOME 39 1/2" BLACK, BOTTOM OF FIXTURE @ 9'-0", FINAL FIXTURE SELECTION BY OWNER, RE. ELECTRICAL FOR TYP.
	BASIS OF DESIGN: RP LIGHTING 7006 6" BLACK TRACK W/ 7554 BLACK LED TRACK HEADS, MOUNTED, FINAL FIXTURE SELECTION BY OWNER, RE. ELECTRICAL FOR TYP.
	EMERGENCY WALL MOUNTED LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS FOR TYPE.
	EMERGENCY EXIT LIGHT FIXTURE (CEILING MOUNTED). SEE ELECTRICAL DRAWINGS FOR TYPE.
	EMERGENCY EXIT LIGHT FIXTURE (WALL MOUNTED). SEE ELECTRICAL DRAWINGS FOR TYPE.
	CEILING MOUNTED RETURN AIR GRILLE. SEE MECHANICAL DRAWINGS FOR TYPE.
	CEILING MOUNTED SUPPLY DIFFUSER. SEE MECHANICAL DRAWINGS FOR TYPE.
	EXHAUST DUCT. SEE MECHANICAL DRAWINGS FOR TYPE.
	CEILING MOUNTED SPEAKER GRILLE. SEE ELECTRICAL DRAWINGS FOR TYPE.
	SPRINKLER HEAD. SEE PLUMBING DRAWINGS FOR TYPE.

MTL. C-JOIST TO MATCH STUD LAYOUT AT 16" O.C.



BASIS OF DESIGN: 1/4" WHITE OAK, COORD. STAIN W/ OWNER

METAL RUNNER TOP AND BTM METAL STUD

BASIS OF DESIGN: GYP TO BE PAINTED TO MATCH CEILING

GENERAL NOTE: ALL EXPOSED CEILING CONDUIT TO BE PAINTED TO MATCH CEILING

A12 BAR CANOPY  
1 1/2" = 1'-0"

A8 OVERALL RCP - UPPER LEVEL  
1/4" = 1'-0"



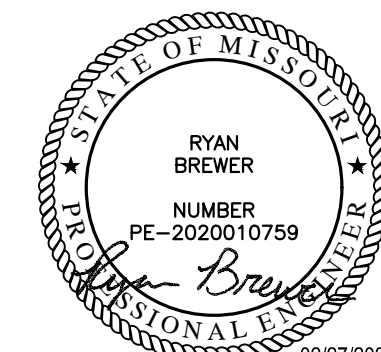


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ELECTRICAL NOTES,  
SYMBOLS & ABBREVIATIONS

ELECTRICAL ABBREVIATIONS

AC	ALTERNATING CURRENT
AHU	AIR HANDLING UNIT
A OR AMPS	AMPERES
AFC	ABOVE FINISH COUNTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFB	ABOVE FINISHED FLOOR
ANC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BTC	BRANCH TO CONNECTION POINT AND CONNECT EQUIPMENT
C	CONDUIT (E.G. IS EMPTY CONDUIT)
CF	CEILING FAN
CM	COFFEE MAKER
CT	COOKTOP
D	DEDICATED CIRCUIT
DCO	DUPLEX CONVENIENCE OUTLET
DP	DISPOSAL
DW	DISHWASHER
DY	DRYER
EMT	ELECTRICAL METALLIC TUBING
EF	EXHAUST FAN
EW	ELECTRIC WATER COOLER (WATER-COOLED DRINKING FOUNTAIN)
EX	EXISTING
FCU	FAN COIL UNIT
GFICFI	GROUND FAULT CIRCUIT INTERRUPTER
GFIP	GROUND FAULT INTERRUPTER PROTECTED
GRD	GROUND
HT	HORIZONTAL MOUNT (RECEPTACLE)
HO	VENTILATION HOOD
HP	HORSEPOWER
HT	HEAT TRACE POWER (PROVIDE W/ 20A/1P GFI BREAKER)
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND (DUPLEX RECEPTS. - NEMA 5-20RIG)
KCM	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT-AMPERES (1000 VOLT-AMPERES)
KW	KILOWATTS (1000 WATTS)
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
MW	MICROWAVE (COORD MTG HT W/ ARCHITECT)
N/C	NOT IN CONTRACT
NEC	NATIONAL ELECTRICAL CODE
NF	NOT FUSED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PNL	PANEL
PH OR Ø	PHASE
P	POLE
PVC	POLYVINYL CHLORIDE
RF	REFRIGERATOR
RG	RANGE
SPD	SURGE PROTECTIVE DEVICE
T	TAMPERPROOF RECEPTACLE
TB	TELEPHONE TERMINAL BOARD
TV	TELEVISION RECEPTACLE
UC	UNDERCOUNTER REFRIGERATOR (OR ICE MACHINE)
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERES
VD	VENDING MACHINE (24" AFF)
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WA	WASHER
WD	WARMING DRAWER
WO	WALL OVEN
WP	WEATHERPROOF
WPWR	WEATHERPROOF/WEATHER RESISTANT
W/UNT	DISCONNECT IS SUPPLIED WITH THE UNIT

GENERAL ELECTRICAL NOTES

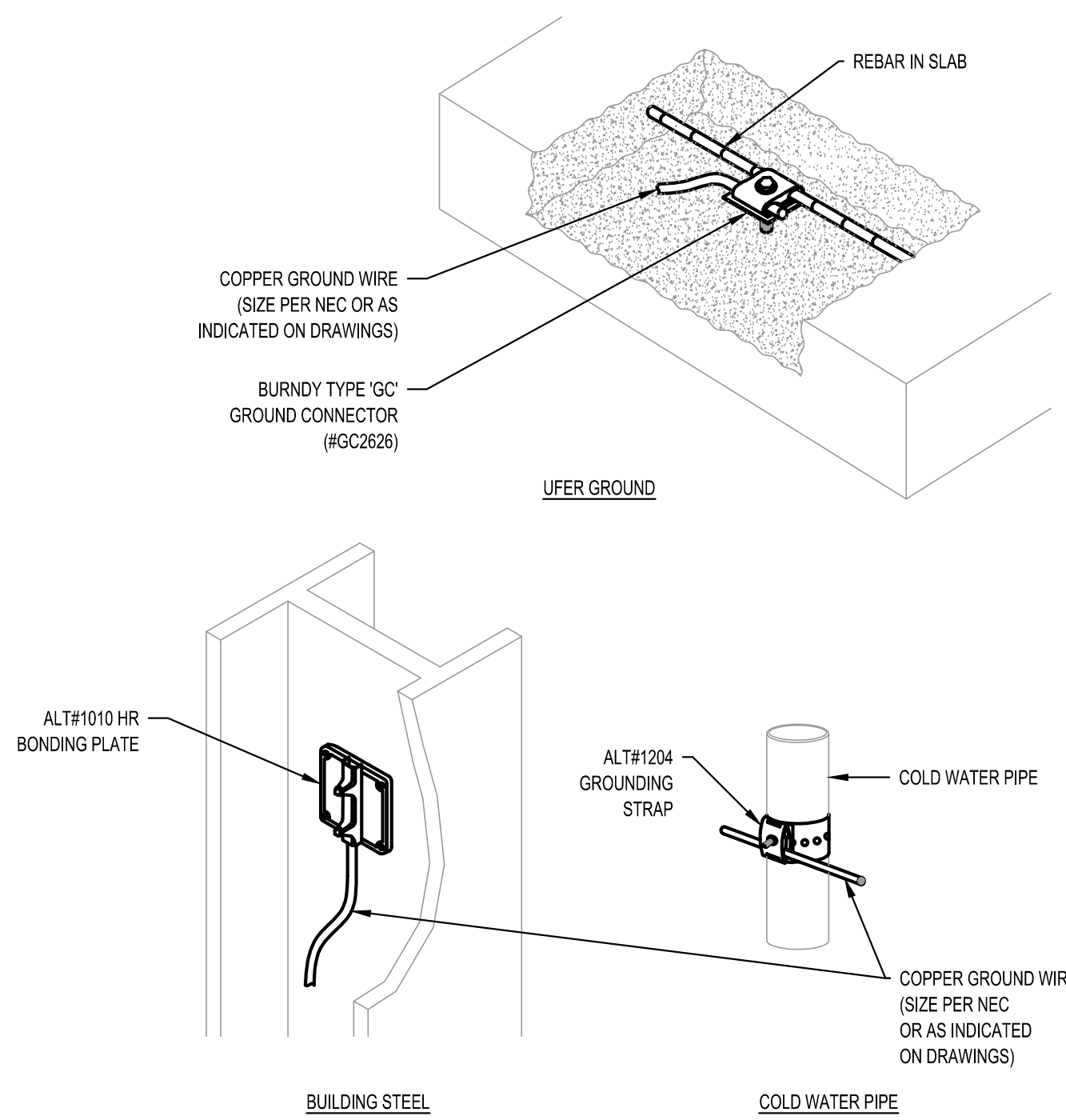
1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE AHJ AND ALL LOCAL & STATE CODES.
2. DO NOT SCALE FROM THESE DRAWINGS.
3. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS.
5. ALL JUNCTION BOXES SHALL HAVE A COVER.
6. COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED.
7. ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 20/12, 10/25, 3/4"C.
8. ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT BE SMALLER THAN 3/4"C. UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.
10. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT GROUND.
11. ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER, INDEPENDENT OF THE SUSPENDED CEILING, WITH 10 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES.
12. ELECTRICAL DEVICE MOUNTING HEIGHTS: UNO:
  - PANELBOARDS 18" AFF TO TOP OF PANEL
  - SWITCHES 48" AFF TO CENTER OF SWITCH
  - RECEPTACLES 18" AFF TO CENTER OF RECEPTACLE
  - TELEDATA OUTLETS 48" AFF TO CENTER OF RECEPTACLE
  - APARTMENT LOADCENTERS PER ANSI A117.1 REQUIREMENTS (VERIFY WITH LOCAL INSPECTOR)
13. ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO SCALE ON THE FLOOR PLANS.
14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.
15. ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION. RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF ADHESIVE LABEL.
16. PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABEL (BLACK W/ WHITE LETTERING).
17. PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

ELECTRICAL SYMBOLS

LIGHTING FIXTURES/DEVICES			POWER EQUIPMENT/DEVICES		
SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING
	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		SWITCHBOARD OR DISTRIBUTION PANEL REFER TO PANEL SCHEDULES	
	DIRECTIONAL DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		DRY-TYPE TRANSFORMER REFER TO PLANS FOR KVA RATING	
	WALL MOUNTED LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL		120/208V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
	LINEAR LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING OR SUSPENDED		277/480V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		JUNCTION BOX	WALL OR CEILING
	2X2 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		FUSED SAFETY SWITCH (E.G. 3Ø/200/3 INDICATES A 3ØA, 3-POLE SWITCH WITH 20A FUSES)	
	HATCHING ON FIXTURE INDICATES FIXTURE TO HAVE EMERGENCY BACK-UP			NON-FUSED SAFETY SWITCH (E.G. 3Ø/NE/3 INDICATES A 3ØA, 3-POLE SWITCH WITHOUT FUSES)	
	TWO HEAD EMERGENCY LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING		MOTOR RATED SWITCH	
	EMERGENCY EXIT SIGN (PROVIDE ARROWS) AS INDICATED. SHADING INDICATES FACE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING		MOTOR	
	SINGLE POLE SWITCH 20A (120/277V)	WALL - 48" AFF		NEMA 5-20R SIMPLEX RECEPTACLE	WALL - 18" AFF
	THREE WAY SWITCH 20A (120/277V)	WALL - 48" AFF		NEMA 5-20R DUPLEX RECEPTACLE	WALL - 18" AFF
	FOUR WAY SWITCH 20A (120/277V)	WALL - 48" AFF		NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER	WALL - 6" ABOVE FINISHED COUNTER U.N.O.
	WALL BOX DIMMER SWITCH	WALL - 48" AFF		NEMA 5-20R QUAD-PLEX RECEPTACLE	WALL - 18" AFF
	CEILING OR WALL MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL OR CEILING		NEMA 5-20R SPLIT RECEPTACLE. TOP OUTLET WIRED HOT. BOTTOM OUTLET SWITCHED.	WALL - 18" AFF OR CEILING
	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES CONTROL STATION TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL - 48" AFF		SPECIAL PURPOSE RECEPTACLE REFER TO PLANS FOR NEMA CONFIGURATION	WALL - 18" AFF OR CEILING
	PHOTOCELL SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	FIELD VERIFY		NEMA 5-20R - DUPLEX RECEPTACLE WITH USB PORTS SIMILAR TO HUBBELL FUSEBOX35W	WALL - 18" AFF
	POWERPACK (LETTER INDICATES POWERPACK TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	ACCESSIBLE CEILING		NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ON CEILING	CEILING - FLUSH
COMMUNICATION/LOW-VOLTAGE DEVICES				HUBBELL CFB4 SERIES FLOOR BOX (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
	CARD READER (VERIFY EXACT REQUIREMENTS)			HUBBELL B24 SERIES FLOOR BOX (OR EQUAL) WITH (1) DUPLEX RECEPTACLE AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
	DATA, TELEPHONE, OR COMBO TELE/ATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	WALL - 18" AFF		HUBBELL B24 SERIES FLOOR BOX (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
	DATA, TELEPHONE, OR COMBO TELE/ATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	FLOOR OR CEILING		HUBBELL S1PT SERIES 4" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
	TELEVISION OUTLET	WALL OR CEILING		HUBBELL S1PTFF SERIES 4" POKE-THRU (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
	SPEAKER OUTLET	FIELD VERIFY		HUBBELL S1R6 SERIES 6" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION AND AV CONNECTION CAPABILITY	FLOOR - FLUSH
	TELEPHONE TERMINAL BOARD	WALL		CONDUIT IN OR UNDER FLOOR/GRADE	
	SECURITY CAMERA OUTLET	FIELD VERIFY		CONDUCTOR HOME RUN - (H) HOT, (N) NEUTRAL, (E) EQUIPMENT GROUND, & (I) ISOLATED GROUND	
	PUSH BUTTON			EQUIPMENT CONNECTION	
				CONDUIT IN CEILING OR WALL	

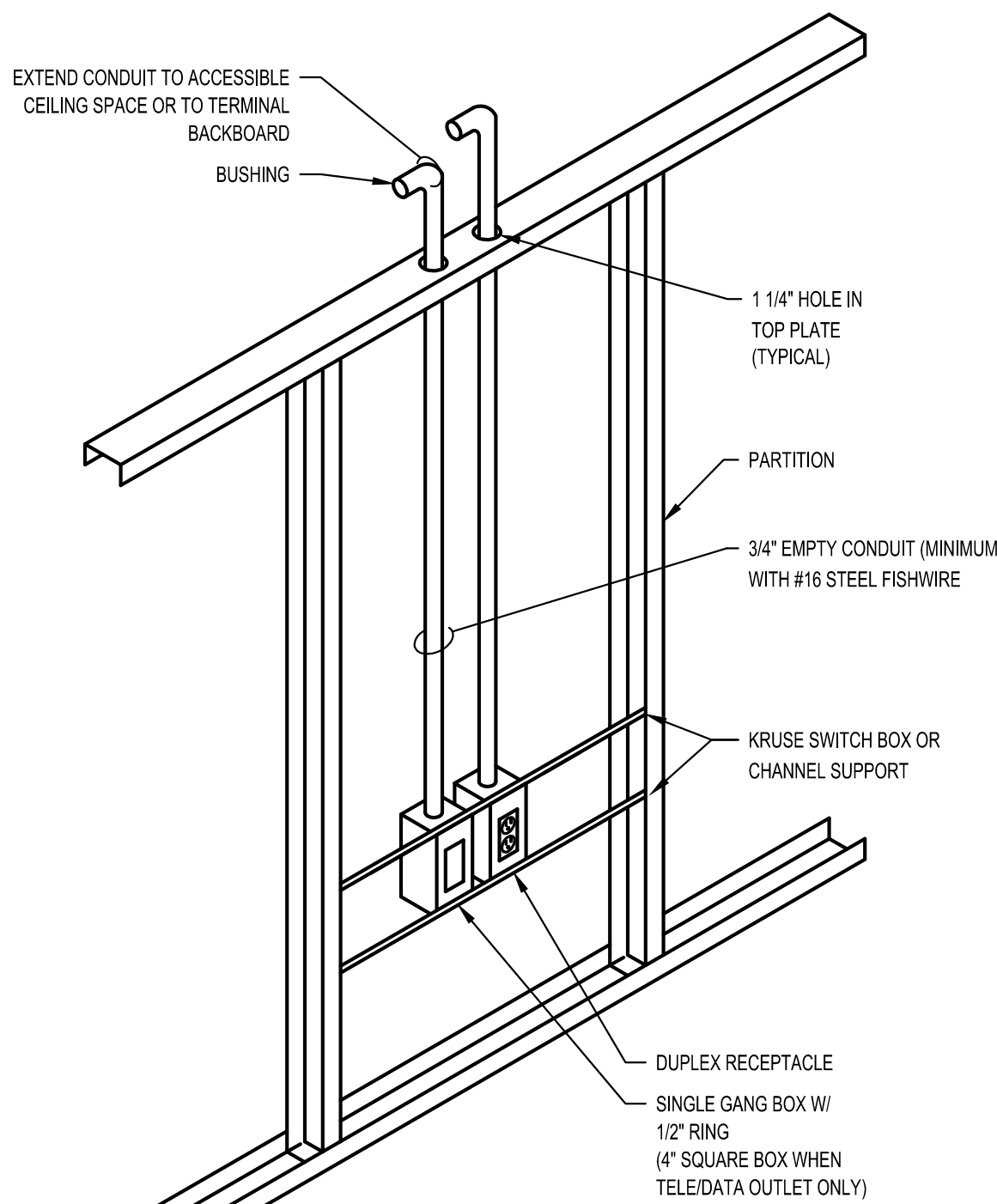
NOTE: NOT ALL SYMBOLS MAY BE USED.





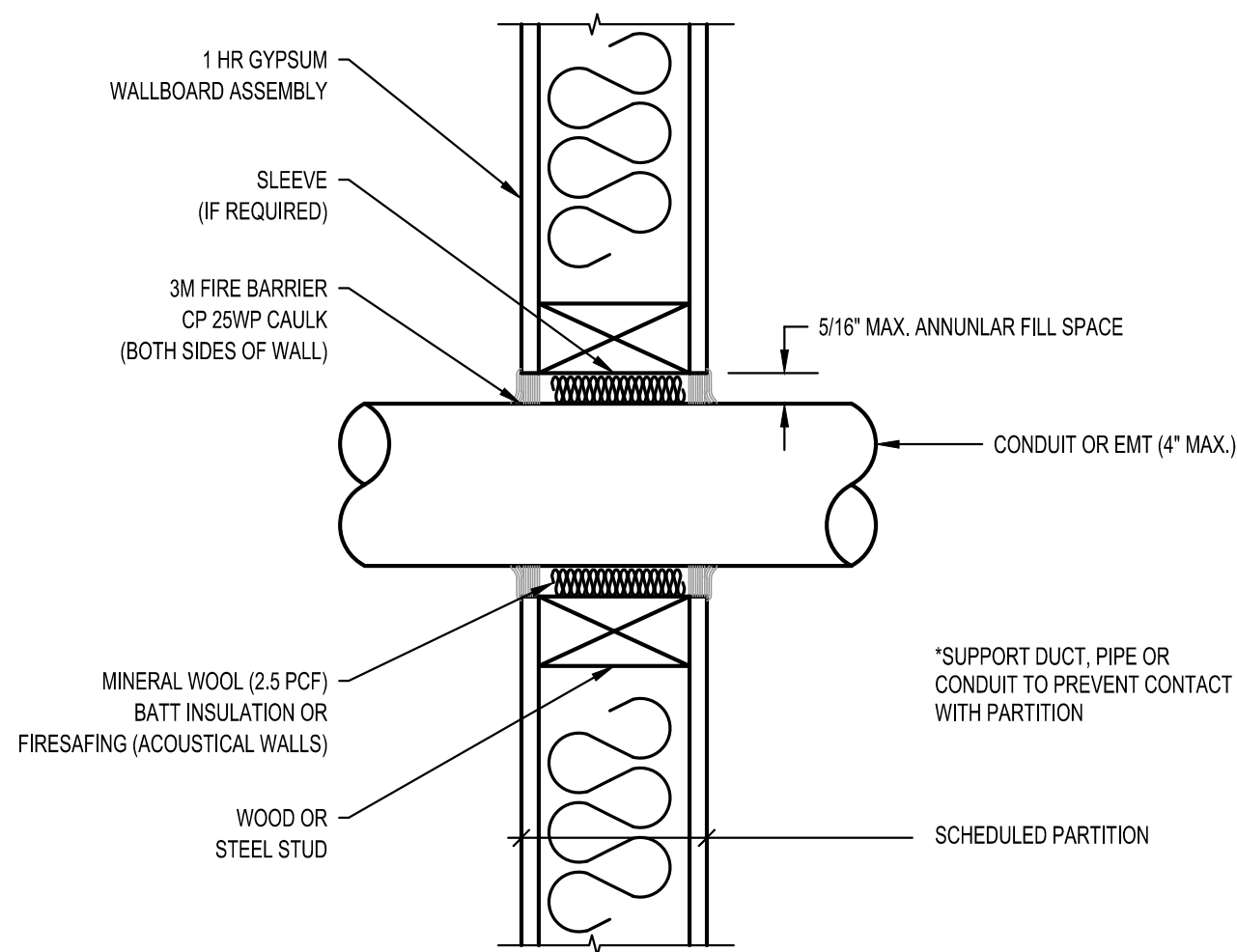
### 1 TYPICAL GROUND CONNECTION DETAILS

SCALE: NOT TO SCALE



### 2 OUTLET IN HOLLOW PARTITION

SCALE: NOT TO SCALE



### 3 TYPICAL FIRE RATED PENETRATION THROUGH A GYP WALL ASSEMBLY

SCALE: NOT TO SCALE

#### FIRE RATED PENETRATION NOTES:

- FOR UL WALL SYSTEM NO. WL101 (FORMERLY NO. 147)  
F-RATINGS - 1,2,3 & 4 HR. (SEE ITEMS #2 & #3)  
T-RATINGS - 0,1,2,3 (SEE ITEM #3)  
L-RATING @ 400' - LESS THAN 1' (7' MAX). FT. (SEE ITEM #3)
- WALL ASSEMBLY - THE 1,2,3 OR 4 HR FIRE RATED GYPSUM WALL BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL ULDO OR ULHO SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
    - STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2X4 IN. LUMBER SPACED 16 IN. O.C. WITH NOM 2X4 IN. LUMBER AND PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3/8 IN. WIDE BY 13/8 IN. DEEP. CHANGES SPACED MAX 24 IN. O.C.
    - WALLBOARD - GYPSUM - NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD RYPS. THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE SPECIFIED IN THE INDIVIDUAL ULDO OR ULHO SERIES DESIGN IN THE UL FIRE R RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.
  - PIPE OR CONDUIT - NOM 1/2 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER), STEEL PIPE NOM 1/4 IN. DIAM (OR SMALLER) STEEL CONDUIT NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR (OR HEAVIER) COPPER TUBING NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAX F-RATING OF FIRESTOP SYSTEM (ITEM CONSTRUCTED USING STEEL CHANNEL STUDS, A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIDGELY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
  - FILL VOID OR CAVITY MATERIAL - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIAM BOARD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS GRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F-RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY F-RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. AS SHOWN IN THE FOLLOWING TABLE, THE HOURLY T-RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY F-RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. AS TABULATED BELOW.

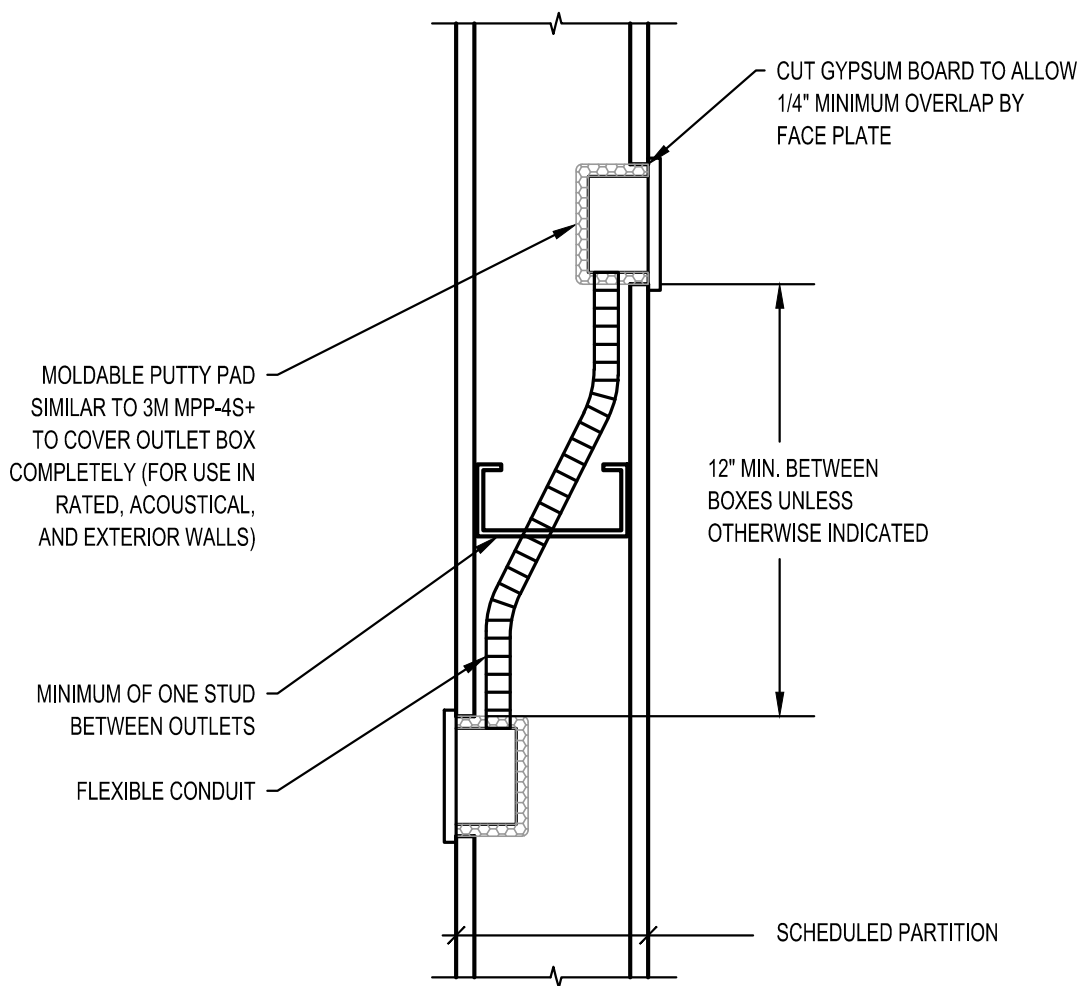
MAX PIPE OR CONDUIT DIAM (IN) ANULAR SPACE (IN) F-RATING (HR) T-RATING (HR)

1	0 TO 3/16	1 OR 2	0 + 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	1/2 TO 1	1 OR 2	0

\*WHEN COPPER PIPE IS USED, T-RATING IS 0 NOM.  
MINNESOTA WINING & MFG. CO. TYPES CP-25 SL, CP-25 NB, CP-25 WS, CP-25 WS+ (NOTE: L-RATINGS APPLY WHEN TYPE CP-25 WS+ CAULK IS USED).

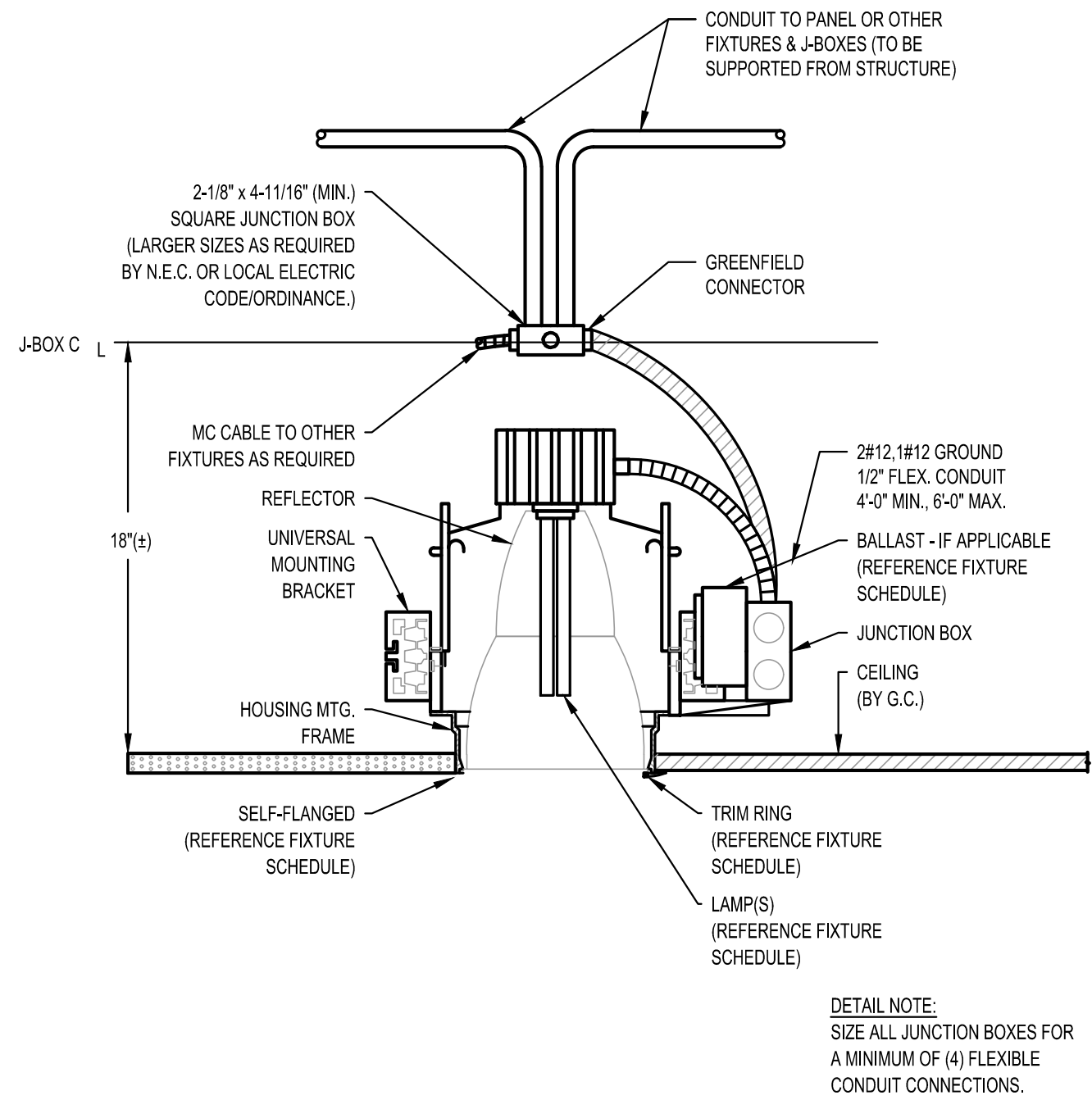
### 4 FIRE RATED PENETRATION NOTES

SCALE: NOT TO SCALE



### 5 BACK-TO-BACK BOX ARRANGEMENT FOR NOISE CONTROL

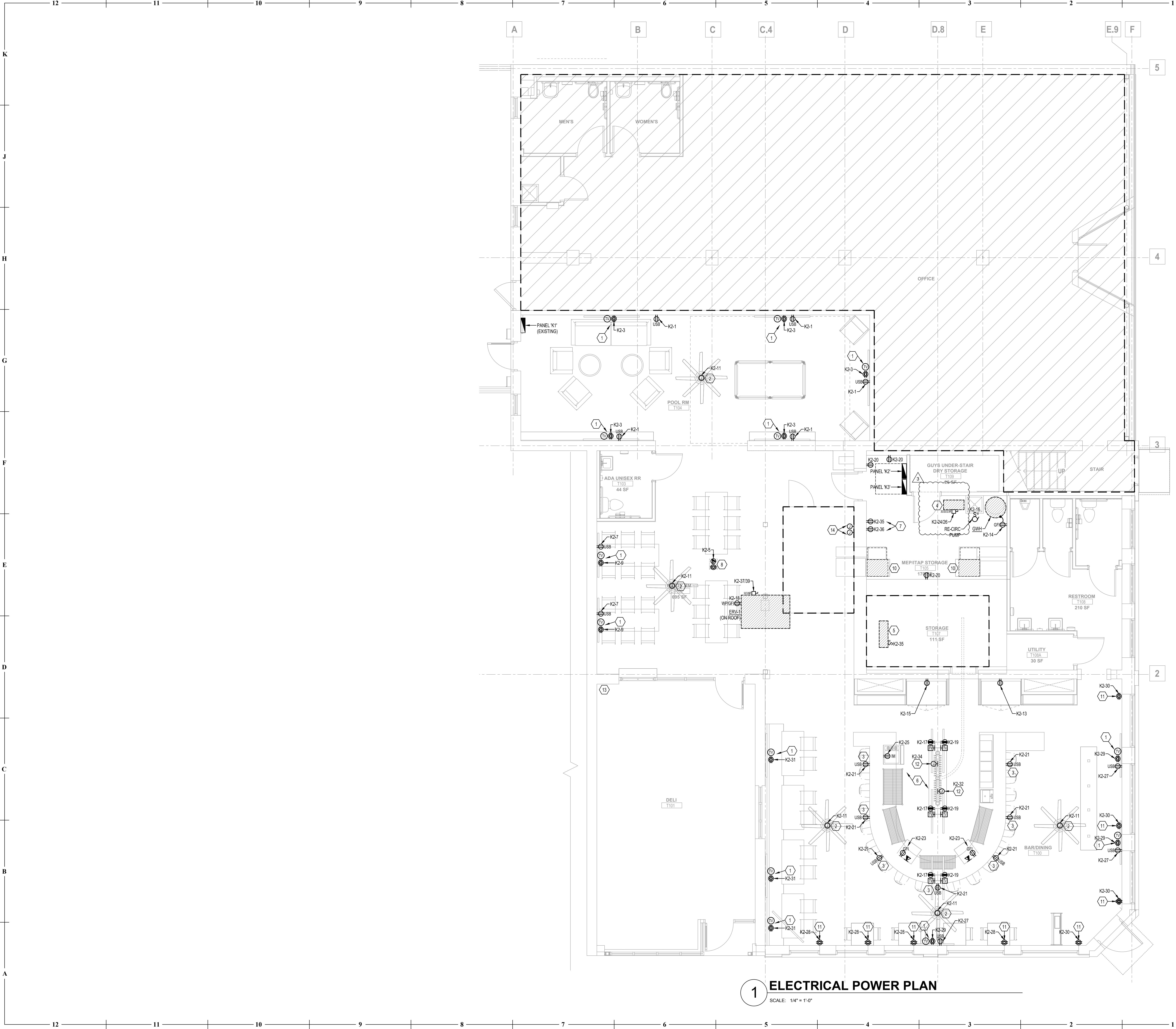
SCALE: NOT TO SCALE



### 6 TYPICAL RECESSED DOWNLIGHT FIXTURE DETAIL

SCALE: NOT TO SCALE





# GENERAL NOTES

- (NOT ALL NOTES APPLY)
1. REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
  2. REFERENCE SHEET E102 FOR ELECTRICAL DETAILS.
  3. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.

## KEYED NOTES:

1. OVERHEAD POWER AND DATA FOR TV. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
2. POWER FOR OVERHEAD FANS. VERIFY EXACT LOCATION AND EXACT CONTROL REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
3. RECEPTACLES TO BE MOUNTED ON FACE OF BAR BELOW COUNTER. COORDINATE EXACT LOCATION WITH BAR SUPPLIER AND OWNER PRIOR TO ROUGH-IN. RECEPTACLES TO BE SILVER COLOR WITH STAINLESS STEEL COVER PLATE.
4. CONDENSING UNIT FOR WALK-IN COOLER. FIELD VERIFY EXACT LOCATION AND ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
5. EVAPORATOR FOR WALK-IN COOLER. FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
6. FIELD VERIFY EXACT CONNECTION REQUIREMENTS OF ALL BAR EQUIPMENT WITH OWNER PRIOR TO ROUGH-IN.
7. POWER FOR GLYCOL SYSTEM AND CO2/NITROGEN BLENDER. FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.
8. POWER AND DATA FOR OVERHEAD PROJECTOR. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
9. FIELD VERIFY EXACT CONNECTION REQUIREMENTS OF ALL KITCHEN EQUIPMENT WITH OWNER PRIOR TO ROUGH-IN.
10. EXISTING FURNACE AND ASSOCIATED CONDENSING UNIT TO REMAIN.
11. PROVIDE CEILING MOUNTED SHOW WINDOW RECEPTACLE WITHIN 18" OF THE TOP OF THE WINDOW AS REQUIRED PER NEC 210.62. FIELD COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN. RECEPTACLES SHALL BE CONTROLLED ON A TIME-OF-DAY SCHEDULE. REFER TO DETAIL 2 ON SHEET E301 FOR ADDITIONAL INFORMATION.
12. POWER FOR UNDER COUNTER GLASS WASHER. FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.
13. STUB (20) 3/4" EMPTY CONDUITS WITH PULL STRINGS FROM PANEL K3' LOCATION INTO THIS SPACE FOR FUTURE TENANT BRANCH CIRCUITING.
14. PROVIDE JUNCTION BOX ON BRICK WALL WITH 3/4" CONDUITS AND PULL STRINGS STUBBED INTO THE MECHANICAL ROOM FOR WALK-IN COOLER CIRCUITS FOR FUTURE TENANT.



## GENERAL NOTES

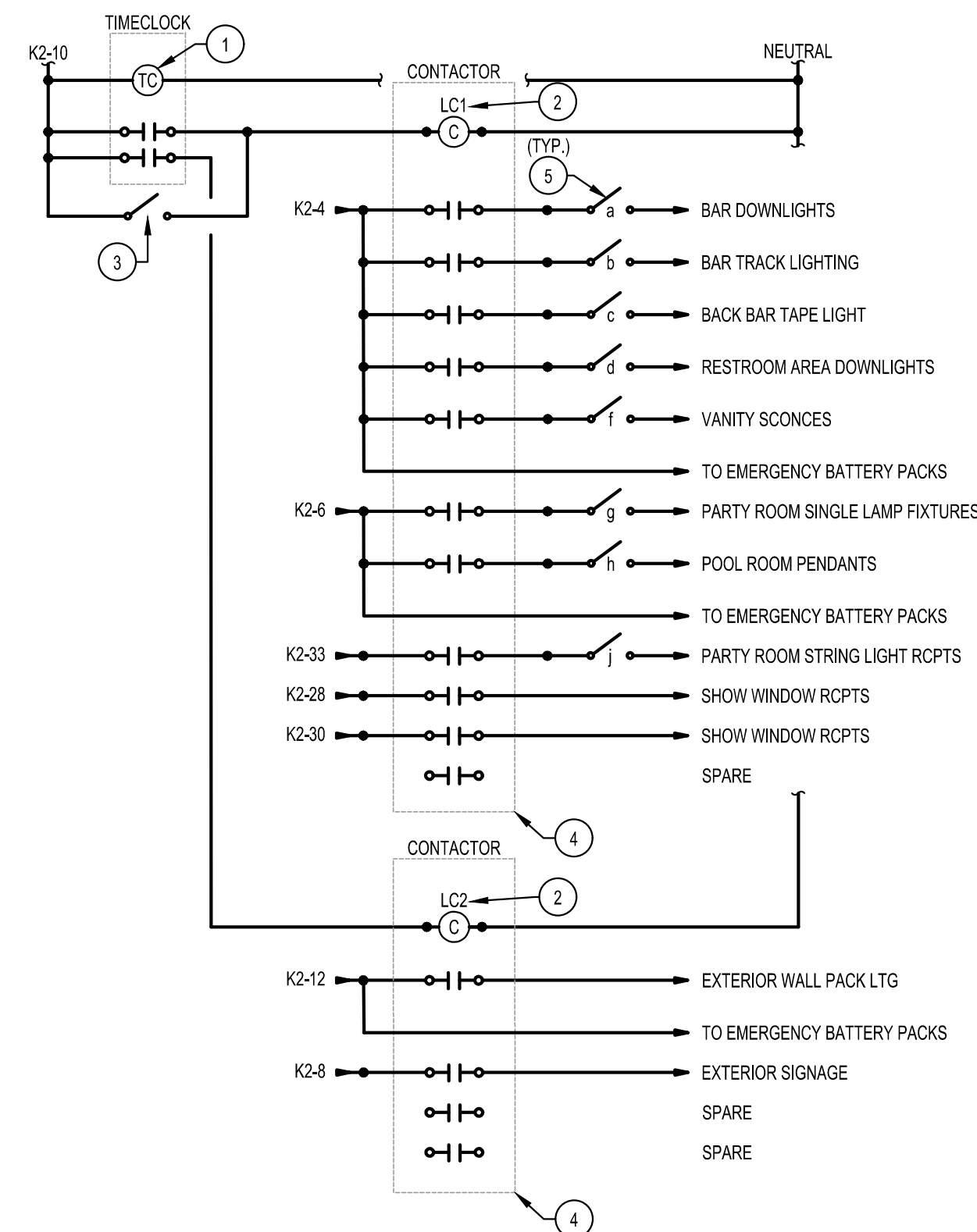
- (NOT ALL NOTES APPLY)
- REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
  - REFERENCE SHEET E102 FOR ELECTRICAL DETAILS.
  - COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
  - CIRCUIT ALL EXT SIGNS TO NEAREST EMERGENCY LIGHTING CIRCUIT (OR NEAREST LIGHTING CIRCUIT IF NO GENERATOR).
  - VERIFY ALL EXISTING BRANCH CIRCUITING. CONTRACTOR SHALL WIRE FIXTURES IN ACCORDANCE WITH SWITCHING INDICATED. CONNECTED LOAD ON 277V-208A CIRCUITS SHALL NOT EXCEED 400W, 120V-208A CIRCUITS SHALL NOT EXCEED 1800W.
  - CIRCUIT NUMBERS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
  - EXISTING, RELOCATED, AND EXISTING TO REMAIN FIXTURES SHALL BE REFURBISHED AND CLEANED. REPLACE BAD BALLASTS/DRIVERS AS WELL AS DIM. OR BURNED OUT LAMPS. LAMP COLOR AND WATTAGE TO MATCH EXISTING.
  - FIXTURES LABELED 'EX' ARE EXISTING FIXTURES TO REMAIN.

## KEYED NOTES:

- LIGHTING IN THIS AREA IS INTEGRAL TO WALK-IN COOLER UNIT.
- LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE MANUAL 'ON/AUTO 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE AVAILABLE VIA THE LOW-VOLTAGE CONTROL STATION.
- LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE AUTO 'ON/AUTO 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE AVAILABLE VIA THE OCCUPANCY SENSOR SWITCH.
- LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE MANUAL 'ON/AUTO 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE AVAILABLE VIA THE OCCUPANCY SENSOR SWITCH.
- LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE 'ON/OFF' VIA TIME-OF-DAY SCHEDULE WITH MANUAL OVERRIDE AVAILABLE VIA THE WALL BOX DIMMER SWITCH.
- PROVIDE NEMA 3R LOCKABLE DISCONNECT SWITCH FOR EXTERIOR SIGNAGE. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. CONTROL INTENT IS FOR SIGNAGE TO BE 'ON/OFF' VIA TIME-OF-DAY SCHEDULE THRU TIMECLOCK. REFER TO DETAIL 2 (THIS SHEET) FOR ADDITIONAL INFORMATION.
- PROVIDE 1P-20A CIRCUIT CAPPED IN JUNCTION BOX FOR FUTURE TENANT LIGHTING.
- MANUAL OVERRIDE LIGHTING CONTROL SWITCHBANK. FIELD VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. REFER TO DETAIL 3 (THIS SHEET) FOR ADDITIONAL INFORMATION.
- PROVIDE ISOLITE #E3MINI-250VA-LC-MB (OR EQUAL) FOR EMERGENCY BACKUP OF BAR AREA TRACK LIGHTING (SWITCHES 'B'). CONTROL INTENT IS FOR FIXTURES TO ENERGIZE 'ON/OFF' VIA TIME-OF-DAY SCHEDULE WITH MANUAL CONTROL FROM THE WALL BOX DIMMER. DURING LOSS OF NORMAL POWER, FIXTURES SHALL ENERGIZE FULL 'ON'.
- EXTERIOR LIGHTING TO BE 'ON/OFF' VIA TIME-OF-DAY SCHEDULE.
- SWITCHED RECEPTACLE FOR STRING LIGHTING. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. CONTROL INTENT IS FOR THE RECEPTACLES TO ENERGIZE 'ON/OFF' VIA TIME-OF-DAY SCHEDULE WITH MANUAL CONTROL FROM THE WALL SWITCH.
- PROVIDE WALLBOX DIMMER SIMILAR TO LUTRON DIVA SERIES (OR EQUAL). FIELD VERIFY COMPATIBILITY OF FIXTURES WITH WALLBOX DIMMER PRIOR TO ORDERING.
- PROVIDE STANDARD TOGGLE SWITCH.
- TIME SWITCH AND LIGHTING CONTRACTORS FOR LIGHTING CONTROLS. REFER TO LIGHTING CONTROLS DETAIL (THIS SHEET) FOR ADDITIONAL INFORMATION.

## LIGHTING CONTROL KEYED NOTES:

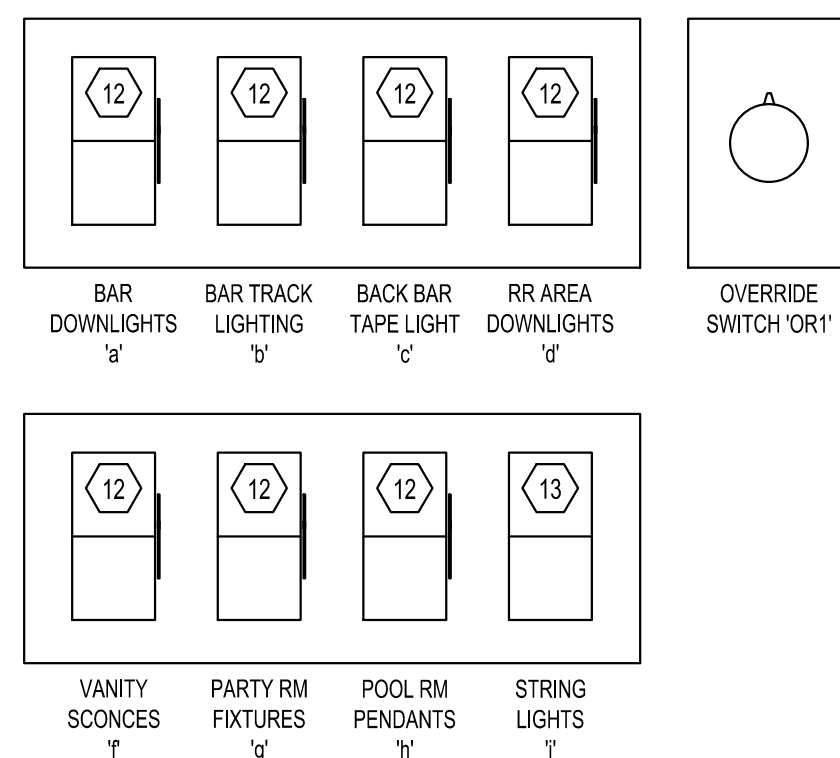
- PROVIDE TORK DIGITAL SERIES, MODEL DGLC200A-NC (2-CHANNEL) TIMECLOCK (OR EQUAL). COORDINATE TIME-OF-DAY SCHEDULES WITH OWNER.
- PROVIDE SQUARE D MODEL 9803 ELECTRICALLY HELD LIGHTING CONTRACTORS (LC1 & LC2) WITH POLE QUANTITY AS REQUIRED.
- PROVIDE PARAGON #SWP2H 2-HOUR SPRING WOUND OVERRIDE SWITCH (OR EQUAL).
- PROVIDE NEMA 1 ENCLOSURE TO HOUSE ALL CONTACTORS INDICATED.
- REMOTE MANUAL SWITCH(ES), REFER TO LIGHTING PLAN FOR ADDITIONAL INFORMATION.



NOTE:  
THIS DETAIL IS SCHEMATIC IN NATURE. PROVIDE ALL WIRING, COMPONENTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERATIONAL LIGHTING CONTROL SYSTEM.

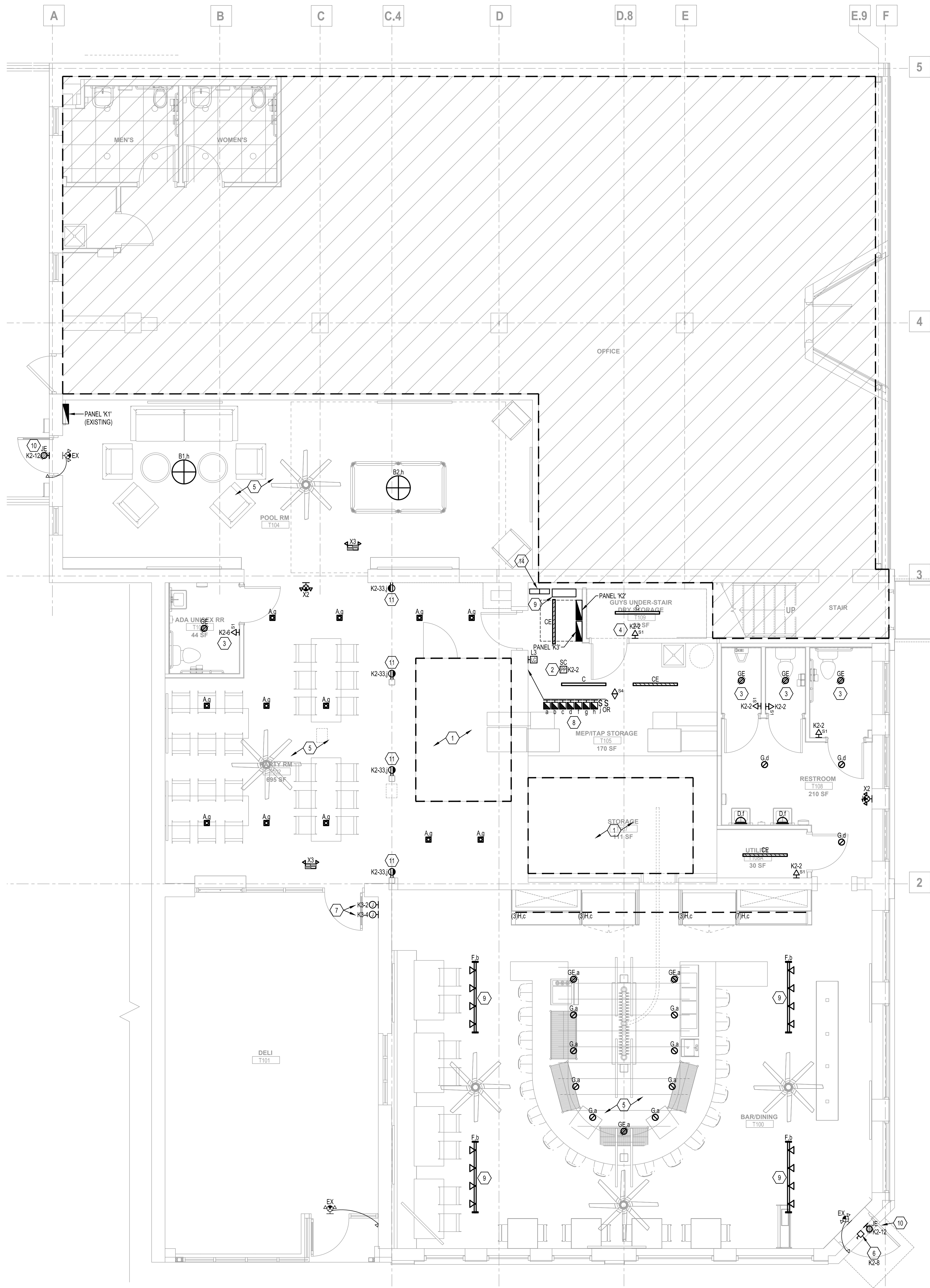
## 2 LIGHTING CONTROLS DETAIL

SCALE: NO SCALE



## 3 OVERRIDE SWITCHBANK DETAIL

SCALE: NO SCALE



## 1 ELECTRICAL LIGHTING PLAN

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



[illegible]

**NOTES:**

1. COORDINATE ALL MODEL NUMBERS WITH MANUFACTURER PRIOR TO ORDERING. PROVIDE DEVICE LOCATION, INTENT INDICATED ON THE DRAWINGS.
2. PROVIDE ONE (1) OF EACH CONTROL, WIRING CABLED AND TIED BETWEEN CEILING MOUNTED OCCUPANCY SENSORS AND CORRESPONDING LOAD CONTROLLER.
3. MODIFY LOCATIONS OF CEILING MOUNTED OCCUPANCY SENSORS AS REQUIRED SO THAT NO OCCUPANT SENSORS IS WITHIN A 4' OF AN HVAC SUPPLY DIFFUSER.
4. LOCATE DEVICES ABOVE CEILING OR AT STRUCTURE IN ACCESSIBLE LOCATION. LOCATIONS SHOWN ON DRAWINGS ARE SCHEMATIC. ADD ACCESS PANEL, WITH CEILING CUTOUT, FOR EACH CONTROL. PROVIDE CLEAR ACCESS TO EACH SENSOR DIRECTLY FROM THE STAIRWELL.
5. LOCATION SHOWN ON PLAN FOR REFERENCE ONLY. CONTRACTOR MAY RELOCATE BRACKET PLUGS FOR A MORE ECONOMICAL LAYOUT IF DESIRED.
6. PROVIDE DEVICES WITH DEFAULT MANUFACTURER WARNINGS ON BUTTON.
7. PROVIDE CLEAR ACCESS TO EACH CONTROL. INSTALL "NO OPEN FLAME" AND "NO OVERHEATING" THROUGH PLUG-LOAD CONTROLLER FOR AUTOMATIC SHUT OFF.
8. MA OCCUPANCY SENSOR: ONE CONTROLLER CIRCUIT PER PLUG CONTROLLER.
9. PROVIDE RETAILER INSTALLED BATTERY BACKUPS FOR EACH CONTROL. PROVIDE SCHEDULES WITH OWNERS FOR ZONES TO BE ON/STAYING/GOVERNANCE.
10. PENDING MOUNT DEVICE TO 1/2" KNOCKOUT ON JUNCTION BOX AS REQUIRED.





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ELECTRICAL  
SPECIFICATIONS

## 18000 - ELECTRICAL

### GENERAL

#### DESCRIPTION

DIVISION 16 OF THE SPECIFICATIONS COVERS ALL ELECTRICAL WORK FOR THE PROJECT. WORK SHALL INCLUDE LABOR, MATERIAL AND ACCESSORIES NECESSARY TO ACCOMPLISH THE WORK AS SPECIFIED AND SHOWN ON THE DRAWINGS, INCLUDING CONNECTION AND CHECKOUTS OF EQUIPMENT FURNISHED BY OTHERS (OTHER TRADES, THE OWNER AND OTHER CONTRACTORS), AND TO ALL EQUIPMENT ITEMS AND AS INDICATED ON DRAWINGS OR AS REQUIRED.

THE ARCHITECTURAL SPECIFICATIONS AND DRAWINGS INCLUDING THE GENERAL - CONDITIONS, INCLUDING ALL SUPPLEMENTS ISSUED THERETO, INSTRUCTIONS TO BIDDERS, AND OTHERS PERTINENT DOCUMENTS ISSUED BY THE ARCHITECT ARE A PART OF THESE SPECIFICATIONS AND ELECTRICAL DRAWINGS. THIS TRADE SHALL CONSULT THEM FOR INSTRUCTIONS WHICH APPLY. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL LAYOUT AND WORK INCLUDED. ELECTRICIAN SHALL FOLLOW DRAWINGS IN LAYOUT THE ELECTRICAL WORK AND CONSULT THE DRAWINGS AND LAYOUTS OF OTHER TRADES TO VERIFY LOCATION AND SPACES IN WHICH WORK WILL BE INSTALLED.

#### CODES, PERMITS, INSPECTION AND COMMISSIONING

INSTALLATION SHALL COMPLY WITH ALL LAWS PERTAINING TO ELECTRICAL WORK IN EFFECT, INCLUDING THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), THE NATIONAL ELECTRICAL SAFETY CODE, ALL LOCAL GOVERNING CODES AND ORDINANCES, WITH THE REGULATIONS OF THE SERVING ELECTRICAL UTILITY COMPANY. PROVIDE ALL REQUIRED PERMITS AND INCLUDE THE COST OF SAME IN THE COST OF THE PROJECT. OBTAIN AND PAY FOR (WITHOUT ADDITIONAL EXPENSE TO THE OWNER) ALL REQUIRED INSPECTIONS AND REVIEWS. PROVIDER FOR AND PAY ALL EXPENSES (WITHOUT ADDITIONAL EXPENSE TO THE OWNER) ASSOCIATED WITH LIGHTING AND LIGHTING CONTROLS COMMISSIONING. ALL COMMISSIONING DOCUMENTATION SHALL BE CERTIFIED AND GIVEN TO OWNER AND DESIGN PROFESSIONAL.

#### QUALITY ASSURANCE

THE FOLLOWING INDUSTRY STANDARDS AS APPLICABLE TO ELECTRICAL WORK SHALL APPLY TO THE WORK OF THIS DIVISION EXCEPT THAT, WHERE THE REQUIREMENTS OF THESE SPECIFICATIONS ARE MORE THAN THE LISTED STANDARD, THESE SPECIFICATIONS SHALL TAKE PRECEDENCE:

#### UL - UNDERWRITERS' LABORATORIES

NEMA - NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION  
NECA - NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION  
ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE  
ASTM - AMERICAN SOCIETY OF TESTING MATERIALS.

ALL MATERIALS SHALL BE NEW, UL LISTED AND LABELED WHERE LABELED MATERIALS ARE AVAILABLE, UNDAMAGED AND FREE OF DEFECTS AT TIME OF INSTALLATION. MATERIALS OR EQUIPMENT DAMAGED IN SHIPMENT OR OTHERWISE DAMAGED PRIOR TO OR DURING INSTALLATION SHALL NOT BE REPAIRED AT THE JOB SITE, BUT SHALL BE REPLACED WITH NEW MATERIALS. WHEN THE MANUFACTURER'S NAME APPEARS IN THESE SPECIFICATIONS AND DRAWINGS, IT SHALL BE CONSTRUED THAT THE MANUFACTURER HAS TO MEET THE FULL REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.

#### SUBMITTALS

SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT TO THE ARCHITECT FOR ENGINEER'S REVIEW ELECTRONICALLY OR HARD COPIES. INCLUDE SUFFICIENT INFORMATION TO INDICATE COMPLETE COMPLIANCE WITH SPECIFICATIONS. PROVIDE SUBMITTALS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT SCHEDULE. ALLOW ONE WEEK FOR ENGINEER REVIEW TIME. THE ENGINEER'S SUBMITTAL REVIEWS WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, IN DIMENSIONS, DETAILS, SIZE OF MEMBERS, OR QUANTITIES, OR FOR OMITTING COMPONENTS OR FITTINGS, OR FOR NOT COORDINATING ITEMS WITH ACTUAL BUILDING CONDITIONS AND/OR OTHER TRADES.

#### OWNER RECORDS

ACCUMULATE DURING THE PROGRESS OF THE JOB, THE FOLLOWING DATA IN DUPLICATE, AND PREPARE IN A NEAT BROCHURE OR PACKET FOLDER TO BE TURNED OVER TO THE OWNER AT SUBSTANTIAL COMPLETION. RECORD DRAWINGS PER ABOVE.

ALL WARRANTIES, GUARANTEES, AND MANUFACTURERS' DIRECTION ON EQUIPMENT & MATERIAL FURNISHED.

COMPLETE PLAIN ENGLISH STEP-BY-STEP OPERATING INSTRUCTIONS FOR THE ELECTRICAL SYSTEM, ONE COPY OF THESE INSTRUCTIONS SHALL BE FRAMED AND POSTED AS DIRECTED ON THE PREMISES.

CERTIFIED LIGHTING AND LIGHTING CONTROLS COMMISSIONING AS REQUIRED BY CURRENTLY ADOPTED ENERGY CODE REQUIREMENTS.

#### MANUFACTURERS' NAMES AND CATALOG NUMBERS

IN SOME INSTANCES, SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAME AND MODEL OR CATALOG NUMBERS. USE OF NAMES AND CATALOG NUMBERS DOES NOT INDICATE THAT THE EQUIPMENT SPECIFIED IS NECESSARILY AN "OFF THE SHELF" ITEM. VARIANCES MAY BE DUE TO REQUIREMENT OF DESIRED FINISH, MATERIAL OR OTHER MODIFICATION.

IN THE CASE OF PANELBOARDS, SAFETY SWITCHES AND OTHER EQUIPMENT REQUIRING WIRE AND CABLE TERMINATIONS, ASCERTAIN THAT LUG SIZES AND WIRING OUTLETS OR WIRING SPACE ALLOWED IS PROPER FOR THE WIRES AND CABLES CONTAINED THEREIN.

WHEN APPROVAL IS GIVEN FOR THE USE OF EQUIPMENT DIFFERING FROM THAT SHOWN ON DRAWINGS IN REGARD TO FOUNDATIONS, SPACE FOR PIPING, DUCTWORK, WIRING, INSULATION, ETC., CHANGES REQUIRED TO ACCOMPLISH SUCH DIFFERENCES SHALL BE ACCOMPLISHED AT NO COST TO THE OWNER.

PROTECTION OF EQUIPMENT  
ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM THE WEATHER, IN PARTICULAR, DRIPPING OR SPLASHING WATER, AT ALL TIMES DURING SHIPMENT, STORAGE AND CONSTRUCTION. MANUFACTURER'S RECOMMENDATIONS WITH REGARD TO STORAGE, PROTECTION, AND HANDLING SHALL BE FOLLOWED.

SHOULD ANY APPARATUS BE SUBJECTED TO POSSIBLE INJURY DUE TO WATER, IT SHALL BE THOROUGHLY DRIED AND PUT THROUGH A DIELECTRIC TEST, AT THE EXPENSE OF THE CONTRACTOR, TO ASCERTAIN THE SUITABILITY OF THE APPARATUS OR IT SHALL BE REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

DAMAGED OR DEFECTIVE EQUIPMENT: INSPECT ALL ELECTRICAL EQUIPMENT AND MATERIALS PRIOR TO INSTALLATION. INSTALLATION OR PLACEMENT INTO SERVICE OF DAMAGED MATERIALS WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER IS PROHIBITED. REPLACE OR REPAIR TO NEW CONDITION, AS CERTIFIED BY THE MANUFACTURER, AND TEST DAMAGED EQUIPMENT IN COMPLIANCE WITH INDUSTRY STANDARDS AT NO ADDITIONAL COST TO THE OWNER. EQUIPMENT REQUIRED FOR THE TESTING SHALL BE PROVIDED BY THE CONTRACTOR.

#### WORKING CLEARANCE

THE SIZE OF ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS IS BASED ON DIMENSIONS OF A PARTICULAR MANUFACTURER, (GENERALLY THE FIRST NAMED), WHILE OTHER MANUFACTURERS MAY BE ACCEPTABLE, IT IS THE RESPONSIBILITY OF THE TRADE TO DETERMINE IF THE EQUIPMENT PROPOSED WILL FIT IN THE ALLOCATED SPACE.

INSTALL ALL EQUIPMENT IN A MANNER TO PERMIT ACCESS TO ALL SURFACES, MAINTAIN PROPER CLEARANCE TO MEET ALL SAFETY AND OPERATING CODES, PARTICULARLY N.E.C. INCLUDE ALL REQUIREMENTS DICTATED BY OPERATION, CONTRACTUAL INDICATION, MAINTENANCE AND POSSIBLE REPLACEMENT OF EQUIPMENT IN DETERMINING CLEARANCE.

SHOULD THERE BE APPARENT VIOLATIONS OF N.E.C. CLEARANCE, NOTIFY THE ARCHITECT-ENGINEER BEFORE PROCEEDING WITH CONNECTION OR PLACEMENT OF EQUIPMENT.

#### COORDINATION

INSTALLATION STUDIES ARE REQUIRED TO COORDINATE THE ELECTRICAL WORK WITH THE WORK OF OTHER TRADES. PREPARE COORDINATION DRAWINGS AT ACCURATE SCALE WHERE SEVERAL ELEMENTS OF ELECTRICAL OR COMBINED MECHANICAL/STRUCTURAL/ELECTRICAL WORK MUST BE SEQUENCED AND POSITIONED WITH PRECISION IN ORDER TO FIT INTO THE AVAILABLE SPACE.

SHOW THE ACTUAL PHYSICAL DIMENSIONS REQUIRED FOR PROPER INTEGRATION OF EQUIPMENT WITH BUILDING SYSTEMS.

PROVIDE APPROVED SHOP DRAWINGS TO ALL REQUIRED DISCIPLINES AND VERIFY FINAL ELECTRICAL CHARACTERISTICS BEFORE ROUGHING POWER FEEDS TO ANY EQUIPMENT. WHEN ELECTRICAL WORK ON APPROVED SHOP DRAWINGS DIFFERS FROM CONTEMPLATED DESIGN, MAKE NECESSARY ADJUSTMENTS TO THE WIRING, DISCONNECTS, AND BRANCH-CIRCUIT PROTECTION FOR THE EQUIPMENT ACTUALLY INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

DAMAGE FROM INTERFERENCE CAUSED BY INADEQUATE COORDINATION SHALL BE RECTIFIED AT NO ADDITIONAL COST TO THE OWNER.

#### WORKMANSHIP

ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

ANY MATERIAL ITEMS OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THESE SPECIFICATIONS OR VISA-VERSA, OR ANY ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE OWNER.

THIS TRADE SHALL DO OR HAVE DONE BY COMPETENT TRADESMEN ALL CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THIS WORK. NO CUTTING IN CONSTRUCTIVE PARTS OF THE BUILDING LIKELY TO IMPAIR ITS STRENGTH SHALL BE DONE WITHOUT THE ARCHITECT-ENGINEERS WRITTEN APPROVAL.

#### EXCAVATION AND BACKFILL

EXCAVATION, TRENCHING AND BACKFILLING ARE SPECIFIED IN SECTION EXCAVATION. TRENCHING AND BACKFILLING FOR UTILITIES. CONDUIT SHALL BE INSTALLED AS SPECIFIED FOR PIPELINES. CONDUIT INSTALLED BENEATH FLOOR SLAB SHALL BE A MINIMUM OF 6" BELOW SLAB. BACKFILL OVER CONDUIT SHALL BE COMPACTED AS FOR SLAB BEDDING MATERIAL. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF CONDUIT (PIPE) PENETRATION OF EXTERIOR FOOTINGS. COMPLETE INSTALLATION SHALL CONFORM TO N.E.C.

#### PENETRATIONS

COORDINATE SLEEVE SELECTION AND APPLICATION WITH SELECTION AND APPLICATION OF FIRE-STOPPING SPECIFIED IN ARCHITECTURAL SPECIFICATIONS.

ROOFS: COORDINATE ALL ROOF PENETRATIONS WITH ENGINEER, OWNER, AND AS APPLICABLE, THE ROOFING CONTRACTOR PROVIDING A ROOF WARRANTY. KEEP ALL RACEWAY PENETRATIONS WITHIN MECHANICAL EQUIPMENT CURBS WHEREVER POSSIBLE. COORDINATE WITH DIVISION 15, FLASH AND COUNTERFLASH ALL OPENINGS THROUGH ROOF, AND/OR PROVIDE PRE-FABRICATED MOLDED SEALS COMPATIBLE WITH THE ROOF CONSTRUCTION INSTALLED, OR AS REQUIRED BY THE ENGINEER, OWNER, OR ROOFING CONTRACTOR. ALL ROOF PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATION OF THE WORK AND SHALL NOT VOID ANY NEW OR EXISTING ROOF WARRANTIES.

WALLS AND FLOORS - SLEEVES FOR RACEWAYS AND CABLES  
STEEL PIPE SLEEVES: ASTM A 334-33M, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED STEEL, PLAIN ENDS AND DRIP RINGS.

CAST IRON PIPE SLEEVES: CAST OR FABRICATED "WALL PIPE," EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL SATERTOP, UNLESS OTHERWISE INDICATED.

FIRESTOPPING: FIRE RESISTANT THROUGH PENETRATION SEALANTS - TWO PART, FOAMED-IN-PLACE, SILICONE SEALANT FORMULATED FOR USE IN THROUGH-PENETRATION FIRE-STOPPING AROUND CABLES, RACEWAYS, AND CABLE TRAY PENETRAIONS THROUGH FIRE-RATED WALLS AND FLOORS. SEALANTS AND ACCESSORIES SHALL HAVE FIRE-RESISTANCE RATINGS INDICATED, AS ESTABLISHED BY TESTING IDENTICAL ASSEMBLIES IN ACCORDANCE WITH ASTM E 814, BY UNDERWRITERS' LABORATORIES, INC., OR OTHER NRTL ACCEPTABLE TO AHJ.

#### ACCEPTABLE MANUFACTURERS - HLTI, INC., 3M CORP., RECTORS&AL, SPECIFY TECHNOLOGY INC., UNITED STATES GYPSUM COMPANY.

#### ELECTRICAL SERVICE

SERVICE SHALL BE AS SHOWN ON DRAWINGS.

PROVIDE SECONDARY SERVICE INTO THE BUILDING WITH CONDUIT AND WIRING AS SHOWN ON THE PLANS, INCLUDING, BUT NOT LIMITED TO, UNDERGROUND RACEWAYS AND CABLES AND SECONDARY CONNECTIONS TO UTILITY TRANSFORMERS AS REQUIRED BY SERVING ELECTRICAL UTILITY COMPANY. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BID.

PROVIDE ALL REQUIRED GROUNDING FOR A COMPLETE SERVICE ENTRANCE GROUNDING SYSTEM. PERMANENTLY AND EFFECTIVELY GROUND AND BOND THE ELECTRICAL INSTALLATION IN A THOROUGH AND EFFICIENT MANNER, AND IN CONFORMANCE (AT A MINIMUM) WITH N.E.C. OR THESE DOCUMENTS, WHERE THEY EXCEED CODE REQUIREMENTS. USE BARE OR INSULATED CONDUCTORS, AS SPECIFIED HEREIN, AND OTHER MATERIALS INDICATED ON THE DRAWINGS.

PROVIDE ALL NECESSARY ENCLOSURES REQUIRED BY THE OWNER FOR THE UTILITY COMPANY METERING. REFER TO DRAWINGS FOR MINIMUM REQUIREMENTS. COORDINATE WITH UTILITY COMPANY PRIOR TO BID FOR ALL REQUIREMENTS.

#### PRODUCTS

##### GENERAL

ALL EQUIPMENT OF A PARTICULAR KIND, SUCH AS WIRING DEVICES AND PANELBOARDS AND LIGHTING FIXTURES OF THE SAME TYPE, SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.

PROVIDE ACCESS PANELS FOR ALL EQUIPMENT AND DEVICES REQUIRING SUCH PANELS. SIZE AS REQUIRED FOR PROPER ACCESS AND MAINTENANCE. MINIMUM ACCEPTABLE IS 12 IN BY 12 IN CLEAR OPENING WHERE HAND ACCESS ONLY IS REQUIRED.

PROVIDE LABELS FOR EACH MOTOR CONTROLLER, SAFETY SWITCH, RELAY, PANELBOARD, CONTACTOR, TIMER, CONTROL DEVICE, METER AND CIRCUIT BREAKER. LABELS SHALL BE LAMINATED, PHENOLIC STRIPS 1/16" THICK, AND ENGRAVED TO SHOW BLACK LETTERS ON A WHITE BACKGROUND NOT LESS THAN 1/4" HIGH. SIZE STRIPS TO PROPERLY FIT MANUFACTURER'S BRACKETS AND BE LEGIBLE. WHERE MANUFACTURER'S BRACKETS ARE NOT PROVIDED, MOUNT LABELS WITH PROPER SCREWS, OR AN APPROVED ADHESIVE.

#### RACEWAYS

CONDUIT, RIGID STEEL, GALVANIZED OR SHERADIZED AND MANUFACTURED IN ACCORDANCE WITH ANSI STANDARD C80.1. FITTINGS SHALL BE PIPE THREADED, MALLEABLE IRON. CONNECTORS SHALL BE INSULATED THROAT TYPE.

CONDUIT, P.V.C. POLYVINYLCHLORIDE SCHEDULE 40 PIPE SPECIFICALLY MANUFACTURED AND LABELED (UL STANDARD 651) FOR USE AS ELECTRICAL CONDUIT. FITTINGS SHALL BE EITHER SOCKET WELDED TYPE OR PIPE THREADED WITH INSULATED THROAT.

CONDUIT, FLEXIBLE METALLIC: GALVANIZED, INTERLOCKED SPIRALLY WOUND STEEL STRIP WITH GALVANIZED OR SHERADIZED FITTINGS. LISTED PER U.L. FITTINGS SHALL BE OF THE SQUEEZE TYPE WITH INSULATED THROATS.

CONDUIT, LIQUIDTIGHT FLEXIBLE METALLIC: GALVANIZED, INTERLOCKED SPIRALLY WOUND STEEL STRIP WITH OVERALL JACKET OF LIQUID TIGHT PVC, UL LISTED. FITTINGS SHALL BE STEEL OR MALLEABLE IRON INSULATED THROAT, WATERTIGHT.

ELECTRIC METALLIC TUBING: GALVANIZED OR SHERADIZED AND MANUFACTURED IN ACCORDANCE WITH ANSI STANDARD C80.3. FITTINGS 1/2 INCH THROUGH 2 INCH TRADE SIZE SHALL BE COMPRESSION TYPE, MANUFACTURED FROM MALLEABLE IRON OR STEEL, AND RAIN AND/OR CONCRETE-TIGHT AS REQUIRED BY INSTALLATION. POT METAL OR DIE CAST TYPE FITTINGS ARE PROHIBITED. CONNECTORS SHALL BE INSULATED THROAT TYPE.

#### CONDUCTORS AND CABLES

GENERAL: SERVICE LATERALS AND PANELBOARD FEEDERS SHALL BE OF ANNEALED (SOFT) COPPER COMPLYING WITH ICSA S-95-658/NEMA WC70; SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER, CONCENTRIC, COMPRESSED STRANDED FOR NO. 8 AWG AND LARGER. ALL BRANCH CIRCUIT CONDUCTORS NO. 8 AWG AND LARGER, STRANDED, TYPE THWN-2 OR XHHW-2 INSULATION. ALL CONDUCTORS, NO. 10 AWG AND SMALLER, USED FOR POWER AND LIGHTING CIRCUITS; SOLID COPPER, TYPE THWN-2 INSULATION (WET OR DAMP LOCATIONS, OR IN CONDUIT BELOW GRADE OR SLAB), TYPE THHN INSULATION (DRY LOCATIONS ONLY ABOVE GRADE), OR DUAL RATED TYPE THHN/THWN-1. ALL BRANCH CIRCUIT WIRING SHALL NOT BE SMALLER THAN NO. 12 AWG. IF NO CONDUCTOR SIZE IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER NFPA 70 AND BASED ON THE INDICATED BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE RATING AND NUMBER OF CIRCUITS.

CONDUCTOR INSULATION TYPES: 90-DEGREE CRATED, TYPE THHN/THWN-2 OR XHHW-2 COMPLYING WITH ICSA S-95-658/NEMA WC70.  
COLORS FOR 208/120V CONDUCTORS  
PHASE A: BLACK  
PHASE B: RED  
PHASE C: BLUE  
NEUTRAL: WHITE  
EQUIPMENT GROUND: GREEN  
ISOLATED GROUND: GREEN WITH YELLOW STRIPE  
COLORS FOR 480/277V CONDUCTORS  
PHASE A: BROWN  
PHASE B: ORANGE  
PHASE C: YELLOW  
NEUTRAL: WHITE  
EQUIPMENT GROUND: GREEN  
UNLESS NOTED OTHERWISE, SPECIAL PURPOSE CONDUCTORS AND CABLES, SUCH AS LOW VOLTAGE CONTROL AND SHIELDED INSTRUMENT WIRING, SHALL BE AS RECOMMENDED BY THE SYSTEM EQUIPMENT MANUFACTURER.

CONTROL WIRING: STRANDED COPPER CONDUCTORS, 600V INSULATION, OF THE PROPER TYPE, SIZE AND NUMBER AS REQUIRED TO ACCOMPLISH SPECIFIED FUNCTION. MINIMUM SIZE: NO. 14 AWG UNLESS NOTED OTHERWISE.

MC TYPE CABLE CAN BE USED IF ACCEPTED BY LOCAL AUTHORITY AND GOVERNING CODES FOR WHIPS FROM JUNCTION BOX TO LIGHT FIXTURES ONLY. TYPE MC CABLE 600V, UNJACKETED, ANSI E119 AND E84, UL STANDARDS 44 OR 83 (AS APPLICABLE), AND 1589. NFPA 70 ARTICLE 330, ALUMINUM OR GALVANIZED STEEL, INTERLOCKED ARMOR, THIN-OR XHHW-INSULATED CONDUCTORS, COLOR CODE: ICSA METHOD 1, WITH GREEN INSULATED GROUNDING CONDUCTOR.

PROVIDE A DEDICATED EQUIPMENT-GROUNDING CONDUCTOR, OR BONDING JUMPER, AS APPLICABLE, IN ALL BRANCH CIRCUITS AND FEEDERS, SIZED IN ACCORDANCE WITH NFPA 70, UNLESS INDICATED AS LARGER ON THE DRAWINGS.

PROVIDE A DEDICATED NEUTRAL (WHERE REQUIRED) AND DEDICATED GROUNDING CONDUCTOR FOR EACH BRANCH CIRCUIT.

VOLTAGE DROP IN BRANCH CIRCUITS SHALL NOT EXCEED 2%.

GFCI CIRCUITS: DO NOT USE MULTI-CONDUCTOR CIRCUITS, WITH A SHARED NEUTRAL, FOR ANY GFCI CIRCUIT BREAKER OR RECEPTACLE CIRCUIT. BRANCH CIRCUITS FED FROM GFCI CIRCUIT BREAKERS, LIMIT THE ONE-WAY CONDUCTOR LENGTH TO 100 FEET BETWEEN THE PANELBOARD AND THE MOST REMOTE RECEPTACLE OR LOAD ON THE GFCI CIRCUIT.

BOXES  
OUTLET BOXES: GALVANIZED PRESSED STEEL WITH GALVANIZED STEEL EXTENSION RINGS OR PLASTER RINGS OR TILE RINGS TO PROVIDE EXPOSED SURFACE FLUSH WITH WALL OR CEILING FINISH. PROVIDE ALL CEILING OUTLET BOXES WITH "NO-BOLT" OR THROUGH AND LOCKMOUNTED TYPE FIXTURE STUDS.

JUNCTION AND PULL BOXES: FABRICATE IN ACCORDANCE WITH NEMA AND N.E.C. STANDARDS AND REQUIREMENTS INCSOFA AS MATERIAL, GAUGES, DIMENSIONS, AND FABRICATION METHODS. BOXES SHALL BEAR THE UL LABEL. WHERE BOXES ARE NOT SIZED ON THE DRAWINGS, THEY SHALL BE SIZED IN ACCORDANCE WITH

N.E.C. REQUIREMENTS. FINISH IN STANDARD GRAY ENAMEL, WITH SIDES AND BACK SPOT-WELDED IN POSITION AND THE REMOVABLE SCREW COVER MOUNTED WITH BRASS MACHINE SCREWS.

#### WIRING DEVICES

SWITCHES: HEAVY DUTY AC, RATED 20 AMPERES, 120/277 VOLTS, SINGLE-POLE, DOUBLE-POLE, THREE-POLE, OR FOUR-WAY AS NOTED ON DRAWINGS OR AS REQUIRED FOR THE SWITCHING ARRANGEMENTS IN EACH SPACE. HUBBELL #HBL122" OR EQUAL. COORDINATE SWITCH COLORS WITH COVERPLATES AS DESCRIBED BELOW UNDER "PLATES".

SWITCHES, SPECIAL PURPOSE: KEY OPERATED, HEAVY-DUTY AC, RATED 20 AMPERES, 120/277 VOLTS, SINGLE OR MULTI-POLE AS NOTED OR AS REQUIRED, HUBBELL #HBL122" OR EQUAL.

RECEPTACLES: THREE WIRE GROUNDING TYPE, 120 VOLT RATED, SPECIFICATION GRADE, 20 AMPERES DUPLEX UNLESS NOTED OTHERWISE ON DRAWINGS. HUBBELL #R32 OR EQUAL. COORDINATE RECEPTACLE COLOR WITH COVERPLATE AS DESCRIBED BELOW UNDER "PLATES". SINGLE RECEPTACLE, 20 AMPERE, 120 VOLT, SPECIFICATION GRADE, HUBBELL #R361 OR EQUAL.

DUST AND MOISTURE RESISTANT, MELAMINE BODY, GRAY NYLON FACE BACKED BY FABRIC REINFORCED NEOPRENE GASKET SLIT TO PROVIDE WIPING ACTION ON CAP BLADES. PASS & SEYMOUR #R307 OR APPROVED EQUAL. GROUND FAULT CIRCUIT INTERRUPTER, NYLON FACE CLASS A, NEMA 5-20R, SPECIFICATION GRADE, HUBBELL #GF-5362" OR EQUAL.

CORROSION RESISTANT, SIMILAR AND APPROVED EQUAL TO STANDARD RECEPTACLE, EXCEPT FABRICATED FROM YELLOW MELAMINE PLASTIC WITH YELLOW NYLON FACE AND EXPOSED METAL PARTS FINISHED TO RESIST CORROSION. (NEMA 5-15R - HUBBELL #R20M61).

ISOLATED GROUND, DUPLEX OR SIMPLEX THREE WIRE GROUNDING TYPE, SPECIFICATION GRADE, ORANGE FACE, GROUND CONTACT FULLY ISOLATED FROM STRAP AND EQUIPPED WITH SCREW TERMINAL. HUBBELL #IG-5362" OR EQUAL.

RECEPTABLES, SPECIAL PURPOSE: SPECIAL PURPOSE OUTLETS SHALL BE AS SCHEDULED ON DRAWINGS.

PLATES: PROVIDE PLATES FOR ALL OUTLET BOXES. PLATES SHALL BE OF SUITABLE CONFIGURATION FOR THE NUMBER AND TYPE OF DEVICES SERVED, SHALL BE ONE PIECE, SHALL OVERLAP OUTLET BOX EDGE AND ROOM SURFACES, AND SHALL BE SMOOTH FINISH NYLON TYPE OF SAME MANUFACTURER AS THE WIRING DEVICES. VERIFY DESIRED MATERIALS AND COLORS WITH ARCHITECT PRIOR TO INSTALLATION.

STANDARD INTERIOR: IVORY FINISHED ON LIGHT COLORED WALLS - COORDINATE ALL COLORS WITH ARCHITECT

INTERIOR DAMP LOCATIONS: STAINLESS STEEL.

EXTERIOR LOCATIONS: FOR UNATTENDED WET LOCATIONS, PROVIDE IN-USE NEMA 3R, UL LABELED PLATES MOLDED FROM A CLEAR HIGH IMPACT ULTRAVIOLET LABELED POLYCARBONATE MATERIAL FOR EASY VERIFICATION THAT CORDS ARE PLUGGED IN AND THAT THE GFCI IS FUNCTIONING. COVER PLATES SHALL BE BY THE SAME MANUFACTURER AS THE WIRING DEVICES. COMPLYING WITH NEMA 70-406.8 (A) OR (B) REQUIREMENTS FOR ATTENDED OR UNATTENDED USE AS APPLICABLE.

ACCEPTABLE MANUFACTURERS: HUBBELL, PASS & SEYMOUR, LEVITON AND COOPER.

#### CABINETS AND ENCLOSURES

FURNISH AND INSTALL FLUSH CABINETS AND ENCLOSURES AS SHOWN ON THE PLANS AND AS HEREIN SPECIFIED. UNIT SHALL BE PROVIDED WITH DED FRONT SUB PANEL, RECESSED AS REQUIRED, TO HOUSE CONTROLS. DOOR SHALL BE PROVIDED WITH CONCEALED HINGES AND FLUSH KEY OPERATED LOCK. DOOR AND TRIM SHALL BE PRIME PAINTED FOR FIELD PAINTING TO MATCH WALL FINISHES. PROVIDE KNOCK-OUTS, LOUVERS AND IDENTIFICATION ENGRAVINGS AS REQUIRED TO MEET FIELD CONDITIONS. EXACT BACKBOX SIZE TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

#### CIRCUIT DISCONNECTS

SAFETY SWITCHES: SAFETY SWITCHES SHALL CONSIST OF A BOX, FRONT COVER, AND CIRCUIT PROTECTOR DEVICE ALL MANUFACTURED AND ASSEMBLED IN ACCORDANCE WITH NEMA STANDARDS

THE BOX SHALL BE FABRICATED FROM CODE GAUGE GALVANIZED SHEET STEEL IN ACCORDANCE WITH U.L. LISTING AND LABEL. THE CIRCUIT PROTECTOR DEVICE SHALL BE HEAVY DUTY, QUICK-MAKE, QUICK-BREAK FUSED OR UNFUSED SWITCH RATED FOR MOTOR CIRCUITS AND/OR SERVICE ENTRANCE DUTY. IF REQUIRED, UNITS SHALL BE FURNISHED FOR SURFACE OR FLUSH MOUNTING WITH EITHER GENERAL PURPOSE OR RAIN/TIGHT ENCLOSURES, AS REQUIRED. FUSED UNITS SHALL BE FURNISHED COMPLETE WITH PROPER FUSES.

#### PANELBOARDS

SHALL CONSIST OF BOX, INTERIOR, FRONT, AND CIRCUIT PROTECTIVE DEVICES. THE ASSEMBLY SHALL BE UL LABELLED AND BE LISTED FOR SERVICE. THE ASSEMBLY SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NEMA STANDARD PB-1. THE LATEST UL STANDARD (UL-85) AND SHALL HAVE A TURNED EDGE AROUND THE FRONT FOR RIGIDITY AND FOR CLAMPING ON FRONT. PROVIDE STANDARD KNOCKOUTS ON REMOVABLE BOX ENDS. FABRICATE FROM SHEET STEEL AND FINISH WITH BAKED ON GRAY ENAMEL OVER RUST INHIBITOR. EACH FRONT SHALL HAVE A DOOR MOUNTED ON SEMI-CONCEALED HINGES WITH A CYLINDER LOCK, INDEX CARD CIRCUIT DIRECTORY MOUNTED BEHIND CLEAR PLASTIC AND HELD IN A METAL FRAME, AND CONCEALED TRIM CLAMPS FOR MOUNTING TO THE BOX. ALL LOCKS SHALL BE MASTER KEYED AND ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

ALL INTERIORS SHALL BE COMPLETELY FACTORY ASSEMBLED. THE DESIGN OF THE INTERIOR SHALL PERMIT REPLACEMENT OF INDIVIDUAL BRANCH BREAKERS WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT MACHINE DRILLING OR TAPPING. BUS BARS FOR PANELS RATED 600 AMPERES OR MORE SHALL BE TIN PLATED 98% CONDUCTIVITY COPPER OR TIN FINISH ALUMINUM (5% CONDUCTIVITY) OF RECTANGULAR CROSS-SECTION. BUS BARS FOR PANELS RATED LESS THAN 600 AMPERES SHALL BE TIN PLATED 98% CONDUCTIVITY COPPER OR RECTANGULAR CROSS-SECTION. BUS BAR CONNECTIONS TO BRANOH CIRCUIT BREAKERS SHALL BE THE PHASE SEQUENCE TYPE AND ACCEPT BRANCH CIRCUIT BREAKERS ONLY. PANELBOARD BUS STRUCTURE AND MAIN BREAKER OR MAIN LUGS SHALL BE RATED AS SCHEDULED ON DRAWING. SUCH RATINGS SHALL BE ESTABLISHED BASED ON HEAT RISE TESTS IN ACCORDANCE WITH UL STANDARDS. GROUP INCOMING CABLE LUGS AT ONE END FOR SEPARATION FROM LOW VOLTAGE CABLES. EQUIPMENT NEUTRAL BUSING WITH A LUG FOR EACH BRANCH BREAKER POSITION. INTERIOR SHALL MOUNT TO BOX WITHOUT TOOLS.

BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, BOLT-ON THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKERS ONE, TWO OR THREE POLE WITH INTEGRAL CROSSBAR FOR MULTI-POLE UNITS, EQUIPPED WITH AN OVERCENTER, TRIP-FREE, TOGGLE-TYPE OPERATING ACTION AND POSITIVE HANDLE INDICATION OF BREAKER STATUS. CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE WITH UL STANDARDS.

EACH PANELBOARD, AS A COMPLETE UNIT, SHALL HAVE A SHORT CIRCUIT RATING EQUAL TO OR GREATER THAN THE INTEGRATED EQUIPMENT RATING SHOWN ON DRAWINGS. THE RATING SHALL BE ESTABLISHED BY TESTING WITH THE OVERCURRENT DEVICES MOUNTED IN THE PANELBOARD, THE SHORT CIRCUIT TESTS ON THE OVERCURRENT DEVICES ON THE STRUCTURE SHALL BE MADE SIMULTANEOUSLY BY CONNECTING THE FAULT TO EACH OVERCURRENT DEVICE WITH THE PANELBOARD CONNECTED TO ITS RATED SUPPLY VOLTAGE.

REFER TO PANELBOARD SCHEDULES FOR FULLY RATED OR SERIES-RATED REQUIREMENTS. SERIES-RATED SYSTEMS ARE NOT ALLOWED UNLESS SPECIFICALLY INDICATED ON PANELBOARD SCHEDULES. WHERE ALLOWED, SERIES-RATED SYSTEMS SHALL BE PROPERLY LABELLED BY NEC REQUIREMENTS.

METHOD OF TESTING SHALL BE PER UL STANDARDS. PANELBOARDS SHALL BE MARKED WITH THEIR MAXIMUM SHORT CIRCUIT CURRENT RATINGS AT THE SUPPLY VOLTAGE.

APPROVED MANUFACTURERS: SQUARE-D CO. OR EQUAL BY GE, SIEMENS AND/OR Eaton.

OVERCURRENT PROTECTIVE DEVICES  
FUSES OF THE PROPER SIZE, RATING AND ELECTRICAL CHARACTERISTICS SHALL BE PROVIDED IN EACH FUSIBLE DEVICE. FUSES OF 800 VOLTS AND BELOW SHALL BE UL CLASS RK-1, CURRENT-LIMITING, TIME-DELAY, DUAL-ELEMENT, 200,000 AMPERE RMS SYMMETRICAL INTERRUPTING CAPACITY ON NON-MOTOR CIRCUITS AND UL CLASS RK-5, TIME-DELAY, DUAL-ELEMENT, 200,000 AMPERES RMS SYMMETRICAL INTERRUPTING CAPACITY ON MOTOR CIRCUITS.

APPROVED MANUFACTURERS: BUSSMANN, LITTELFUSE OR FERRAZ-SHAWMUT (ALL FUSES SHALL BE OF SAME MANUFACTURER TO ENSURE SERRAZE COORDINATION).

CIRCUIT BREAKERS: CIRCUIT BREAKERS OF THE PROPER SIZE, RATING, AND ELECTRICAL CHARACTERISTICS SHALL BE PROVIDED WHERE CALLED FOR ON DRAWINGS. BREAKERS SHALL BE THERMAL MAGNETIC MOLDED-CASE WITH QUICK-MAKE, QUICK-BREAK, OVER CENTER TOGGLE TYPE MECHANISM AND TRIP-FREE HANDLE MECHANISM. THE BREAKER SHALL BE ENCLOSED IN A SUITABLE NEMA RATED ENCLOSURE. BREAKERS SHALL BE OF SAME MANUFACTURER AS THOSE IN THE PANELBOARDS.

TIME SWITCHES  
ELECTRONIC TIME SWITCHES: ELECTRONIC, SOLID STATE PROGRAMMABLE UNITS WITH ALPHANUMERIC DISPLAY, COMPLYING WITH UL917. SPST, 30 AMPERE INDUCTIVE OR RESISTIVE, 240VAC, CONTACT RATING, 2 PROGRAMMABLE ON-OFF SET POINTS ON A 24-HOUR SCHEDULE, ALLOWING DIFFERENT SET POINTS FOR EACH DAY OF THE WEEK. ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF A PROGRAM. ASTRONOMIC TIME ON ALL CHANNELS. BATTERY BACKUP FOR SCHEDULES AND TIME CLOCK.

OUTDOOR PHOTOELECTRIC SWITCHES  
SOLID STATE, WITH SPST DRY CONTACT RATED FOR 1800-VA TUNGSTEN OR 1000-VA INDUCTIVE, TO OPERATE CONNECTED RELAY, CONTACTOR COILS OR MICROPROCESSOR INPUT, COMPLYING WITH UL 773A.

#### TELEPHONE AND DATA SYSTEMS

FURNISH AND INSTALL A SYSTEM OF PROPERLY SIZED AND PROPERLY LOCATED OUTLETS WITH ASSOCIATED CONNECTING CONDUIT RUNS, EXTENDING TO PULL BOXES AND TELEPHONE BACKBOARD. FURNISH AND INSTALL RACEWAYS, FOR INCONVENIENT SERVICE WHERE INDICATED.  
OUTLET BOXES: UNLESS OTHERWISE INDICATED, ALL TELEPHONE OUTLETS AND JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO ACCOMMODATE INTERNAL TERMINAL STRIPS BY TELEPHONE CO.

OUTLET COVER PLATES: TELEPHONE OUTLET COVER PLATES SHALL MATCH THOSE SPECIFIED FOR ADJACENT WIRING DEVICES, INCLUDING THOSE WITH SPECIAL FINISHES.

RACEWAYS: MATERIALS FOR TELEPHONE RACEWAY SYSTEM WORK SHALL BE IN ACCORDANCE WITH CORRESPONDING RACEWAYS SPECIFIED HEREIN AND IN OTHER SECTIONS.

VERIFY LOCATION OF WALL OUTLETS BEFORE ROUGHING IN TO ENSURE COORDINATION WITH OWNER'S FINAL INTENDED FURNITURE LAYOUT. PLAN INDICATIONS SHALL NOT BE SCALED UNLESS DIRECTED. OUTLETS SHALL BE RELOCATED WITHIN ROOMS BEFORE ROUGH-IN WHERE DIRECTED BY ARCHITECT-ENGINEER WITHOUT ADDITIONAL COST TO OWNER.

TELEPHONE SERVICE CONDUIT LAYOUT SHALL HAVE THE JOB SITE APPROVAL OF AN AUTHORIZED REPRESENTATIVE OF THE TELEPHONE CO. COORDINATE WORK SO THAT BOTH TELEPHONE CO. AND OWNERS REPRESENTATIVES ARE PRESENT AT THE SAME TIME FOR APPROVAL OR CHANGES IN AMPLI TIME FOR ANY REQUIRED CORRECTIONS BEFORE COMPLETION OF PROJECT.

FROM EACH TELEPHONE OUTLET, PROVIDE 3/4" EMT CONDUIT CONCEALED IN WALL TO 6" ABOVE ACCESSIBLE CEILING OR UP TO STRUCTURE WHERE NO CEILING EXISTS, UNLESS SHOWN OTHERWISE ON DRAWINGS.

TELEPHONE TERMINAL BOARD: PRIOR TO INSTALLATION OF TELEPHONE TERMINAL BOARD, THE EXACT LOCATION SHALL BE VERIFIED WITH THE TELEPHONE CO. THE TELEPHONE TERMINAL BOARD SHALL BE PROVIDED WITH A DOUBLE DUPLEX RECEPTACLE LOCATED WHERE INDICATED ON THE DRAWINGS. THE TERMINAL BOARD SHALL BE CONSTRUCTED OF 4" X 8" X 3/4" PLYWOOD WITH TWO (2) COATS OF FLAME RETARDANT PAINT UNLESS NOTED OTHERWISE ON DRAWINGS.

#### LIGHTING

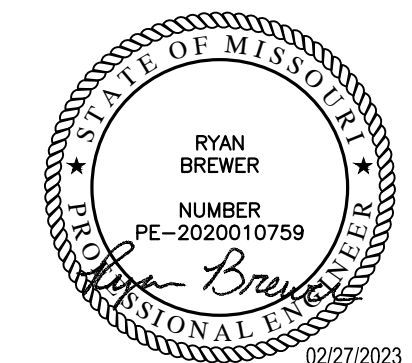
FIXTURES ARE SPECIFIED IN THE SCHEDULE BY MANUFACTURER'S NAME AND CATALOG NUMBER.

ALL RECESSED LIGHT FIXTURES SHALL BE PROVIDED WITH FACTORY INSTALLED THERMAL PRO



END OF SECTION 16000





PROFESSIONAL SEAL

M101

ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066

MECHANICAL NOTES,  
SYMBOLS & ABBREVIATIONS

MECHANICAL GENERAL NOTES	
1.	PRIOR TO SUBMITTING BID, VISIT THE SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2.	COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. DUCTWORK AND PIPING SHALL BE ROUTED TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
3.	TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION DURING WORK. REPAIR ANY DAMAGE CAUSED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4.	ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
5.	NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING IS SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND SHALL MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. FIELD VERIFY FINAL LOCATIONS TO INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
6.	REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASES AND PENETRATIONS INTENDED FOR DUCTWORK AND PIPING SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
7.	COORDINATE LOCATION OF ROOF PENETRATIONS WITH THE EXISTING CONDITIONS AND ARCHITECTURAL DRAWINGS.
8.	SEAL ALL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. FIREPROOF ALL PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
9.	COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
10.	LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE FINAL CEILING AND LIGHTING LOCATIONS.
11.	DUCTWORK CROSSING FIRE RATED WALL OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
12.	PROVIDE FIRE AND/OR FIRE/SMOKE DAMPERS IN DUCTWORK AT CEILINGS AND WALLS AS REQUIRED BY BUILDING CODE AUTHORITY HAVING JURISDICTION. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE.
13.	PROVIDE WALL AND/OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO ALL FIRE AND/OR FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 6"6" AND SHALL BE INSTALLED WITH 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR 4"6" ACCESS DOOR.
14.	THERMOSTATS AND HUMIDISTATS SHALL BE LOCATED AND SET BY MECHANICAL CONTRACTOR AND WIRED IN CONDUIT BY ELECTRICAL CONTRACTOR. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHTS SHALL BE 48" AFF TO MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS.
15.	COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH ANY WALL MOUNTED ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF ANY WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
16.	ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS, AND GRILLES SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR AROUND BRANCH DUCT TAKE-OFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT.
17.	BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
18.	RIGID DUCTWORK INSULATION: PROVIDE R-4 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-6 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED DUCTWORK. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE DIMENSIONS. SHEET METAL SIZES SHALL INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL DUCTWORK INSTALLED IN UNCONDITIONED SPACES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
19.	FLEXIBLE DUCT WORK SHALL BE THERMAX FLEX TYPE MKE, FLEXMASTER TYPE BM, OR APPROVED EQUAL. SHALL BE LISTED UNDER 181 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL R-4 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORT TO AVOID SHARP BENDS AND SAGGING.
20.	WALL MOUNTED DIFFUSERS AND GRILLES SHALL BE PROVIDED WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.

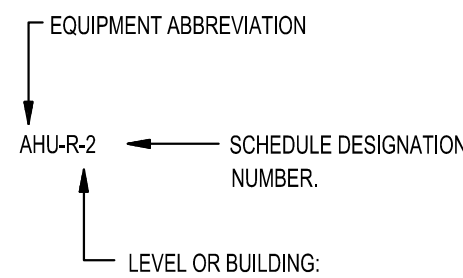
GENERAL MECHANICAL NOTES:

- REFER TO ARCHITECTURAL PLANS FOR RATED WALLS AND PARTITIONS. VERIFY FIRE AND/OR SMOKE DAMPER LOCATIONS AT DUCTS OR OPENINGS PENETRATING THESE WALLS.
- REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- VERIFY LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- VERIFY LOCATIONS OF EXPOSED DUCTS WITH ARCHITECT PRIOR TO INSTALLATION.
- DUCT DIMENSIONS INDICATED ON PLANS ARE FREE AREA DIMENSIONS.
- SUPPLY AND RETURN AIR DUCT SHALL BE INTERNALLY LINED WHERE SPECIFIED.
- ALL COVER SIZES ON MECHANICAL PLANS ARE GIVEN IN FREE AREA REQUIRED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS. 9. COORDINATE TERMINAL BOX AND BALANCING DAMPER LOCATIONS CAREFULLY TO INSURE PROPER AND ADEQUATE ACCESS TO FILTERS, MOTORS, CONTROL VALVES, CONTROL PANELS, ETC. PROVIDE ACCESS PANELS AS SPECIFIED WHERE REQUIRED TO ASSURE THIS ACCESS. 10. CEILING PLENUM SPACE IS VERY TIGHT. WHERE REQUIRED, DUCTS OR PIPES SHALL BE ROUTED BETWEEN LIGHT FIXTURES AND UP AND OVER OTHER DUCTS OR PIPES USING THE SPACES BETWEEN STRUCTURAL JOISTS OR BEAMS WHERE APPLICABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFULLY COORDINATING ALL TRADES. EXISTING UNKNOWN CONDITIONS MAY AFFECT EXACT DUCT OR PIPE ROUTING, OR EXISTING CONDITIONS MAY NEED TO BE MODIFIED TO ACCOMMODATE DUCTS AND PIPES.

STANDARD MECHANICAL SYMBOLS	
SYMBOL	DESCRIPTION
	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	ANGLE VALVE
	CHECK VALVE
	AUTOMATIC CONTROL VALVE (3-WAY)
	AUTOMATIC CONTROL VALVE (ANGLE)
	AUTOMATIC CONTROL VALVE (STRAIGHT THROUGH)
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	THERMOMETER WELL
	TEST PLUG
	FLOW METER
	TEMPERATURE SENSOR
	PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SWITCH
	IMMERSION THERMOSTAT
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	FLOW SWITCH
	ORIFICE
	PIPE SLEEVE THRU WALL OR FLOOR
	EXPANSION JOINT
	FLEXIBLE PIPE JOINT
	PIPE GUIDE
	ANCHOR
	STRAINER (Y-TYPE)
	STRAINER (BASKET TYPE)
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	DIRECTION OF FLOW
	DIRECTION OF SLOPE
	THERMOSTAT
	HUMIDISTAT
	FAN SPEED CONTROLLER
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	CONDENSATE DRAIN
NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT	

OTHER SYMBOLS	
SYMBOL	DESCRIPTION
	INDICATES CONNECTION TO EXISTING DUCT OR PIPE

GENERAL EQUIPMENT  
DESIGNATION KEY:



DUCTWORK LEGEND		
(REFER TO SPECIFICATIONS SECTIONS 15B15 AND 15B20 FOR ADDITIONAL INFORMATION)		
SINGLE LINE	DESCRIPTION	DOUBLE LINE
	ROUND ELBOW DOWN	
	ROUND ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30" WHEN POSSIBLE. ARROW SLOPES DN, UN.O.)	
	ROUND RADIUS ELBOW	
	90° STRAIGHT TEE	
	90° CONICAL TEE	
	45° LATERAL TAP	
	45° LATERAL CONICAL TEE	
	SIZE OR SHAPE TRANSITION	
	ROUND FLEXIBLE DUCT	
	RECTANGULAR ELBOW DOWN	
	RECTANGULAR ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30" WHERE POSSIBLE. ARROW SLOPES DN, UN.O.)	
	RECTANGULAR RADIUS ELBOW	
	RECTANGULAR ELBOW WITH TURNING VANES	
	SPLIT BRANCH TAKE-OFF WITH SQUARE ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF WITH RADIUS ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF WITH STATIONARY SPLITTER DAMPER	
	BRANCH TAKE-OFF WITH 45° LEAD IN TAP	
	INSULATED LINED DUCTWORK (U.N.O.)	
	SQUARE FACED CEILING DIFFUSER 4-WAY DIRECTIONAL THROW (U.N.O.)	
	ROUND FACED CEILING DIFFUSER	
	CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER	
	SIDEALL SUPPLY GRILLE OR REGISTER	
	SUPPLY DUCT RISER	
	RETURN, EXHAUST OR OUTSIDE AIR DUCT RISER	
	MANUAL BALANCING DAMPER	
	AUTOMATIC (MOTOR-OPERATED) DAMPER	
	FIRE DAMPER	
	GRAVITY BACKDRAFT DAMPER	
	COMBINATION FIRE AND SMOKE DAMPER WITH SMOKE DETECTOR	
	SMOKE DAMPER (AUTOMATIC) WITH SMOKE DETECTOR	
	DUCT MOUNTED SMOKE DETECTOR	
NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT		

MECHANICAL ABBREVIATIONS CONT.	
(ALPHABETICAL BY ABBREVIATION)	
ABBREVIATION	LONG FORM
PF	PRE-FILTER
PLNM	PLENUM
RA	RETURN AIR
RAF	RETURN AIR FAN
RAG OR RG	RETURN AIR GRILLE
RAR OR RR	RETURN AIR REGISTER
RAS	RETURN AIR SILENCER
RE	IN REFERENCE TO
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SAF OR SF	SUPPLY AIR FAN
SAG OR SG	SUPPLY AIR GRILLE
SAR OR SR	SUPPLY AIR REGISTER
SAS	SUPPLY AIR SILENCER
SCHP	SECONDARY CHILLED WATER PUMP
SD	SMOKE DAMPER OR DETECTOR
SPCHP	SPECIAL PROCESS CHILLED WATER PUMP
TA	THROW AWAY (FILTER TYPE)
TDEF	TRUCK DOCK EXHAUST FAN
TEF	TOILET EXHAUST FAN
TRANS	TRANSITION OR TRANSFER
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE
V V	VARIABLE VOLUME TERMINAL BOX
W	WITH
XFMR OR TFM	TRANSFORMER
XT OR EX	EXPANSION TANK

NOT ALL ABBREVIATIONS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

MECHANICAL ABBREVIATIONS	
(ALPHABETICAL BY ABBREVIATION)	
ABBREVIATION	LONG FORM
ABV	ABOVE
AC OR ACU	AIR-CONDITIONING UNIT
AHAP	AS HIGH AS POSSIBLE
AHU	AIR-HANDLING UNIT
AUTO	AUTOMATIC
BLW	BELOW
C	CHILLER
CD	CONDENSATE
CF	CABINET FAN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CHP	CHILLED WATER PUMP
CLNG OR CLG	CEILING
CONC	CONCRETE
CP OR CWP	CONDENSER WATER PUMP
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
CRAC OR CACU	COMPUTER ROOM AIR-CONDITIONING UNIT
CHFF	CHILLER ROOM EXHAUST FAN
CRV	CONDENSATE (STEAM) RETURN UNIT
CT	CODING TOWER CELL
CTU	CONDENSATE (STEAM) TRANSFER UNIT
CU	CONDENSING UNIT
DV	CONSTANT VOLUME TERMINAL BOX
DEF	DISHWASER EXHAUST FAN
DMPR	DAMPER
DN	DOWN
EA	EACH
EBH	ELECTRIC BASEBOARD HEATER
EDH	ELECTRIC DUCT-MOUNTED HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
FD	FIRE DAMPER
FCU	FAN-COIL UNIT
FF	FINAL FILTER
FFCH	FORCED-FLOW CABINET HEATER
FFU	FAN FILTER UNIT
FP	FAN POWERED TERMINAL BOX
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HUM	HUMIDIFIER
HWP OR HP	HEATING WATER PUMP
HX	HEAT EXCHANGER
KEF	KITCHEN (GREASE HOOD) EXHAUST FAN
KW	KILOWATTS
LD	LINEAR SUPPLY DIFFUSER
MOT	MOTORIZED
MTD	MOUNTED
MJAF	MAKE-UP AIR FAN
MJAHU	MAKE-UP AIR-HANDLING UNIT
OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OPG OR OPNG	OPENING
NOT ALL ABBREVIATIONS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT	

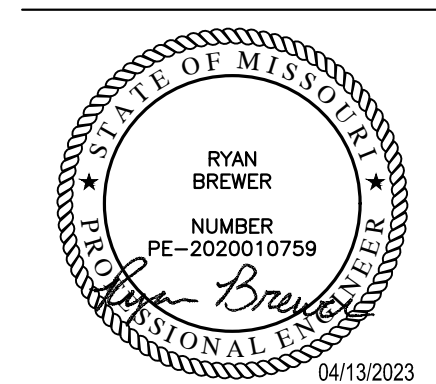




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LL COMMENTS 04/13/23



PROFESSIONAL SEAL  
**M201**  
ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066

GENERAL NOTES

(NOT ALL NOTES APPLY)

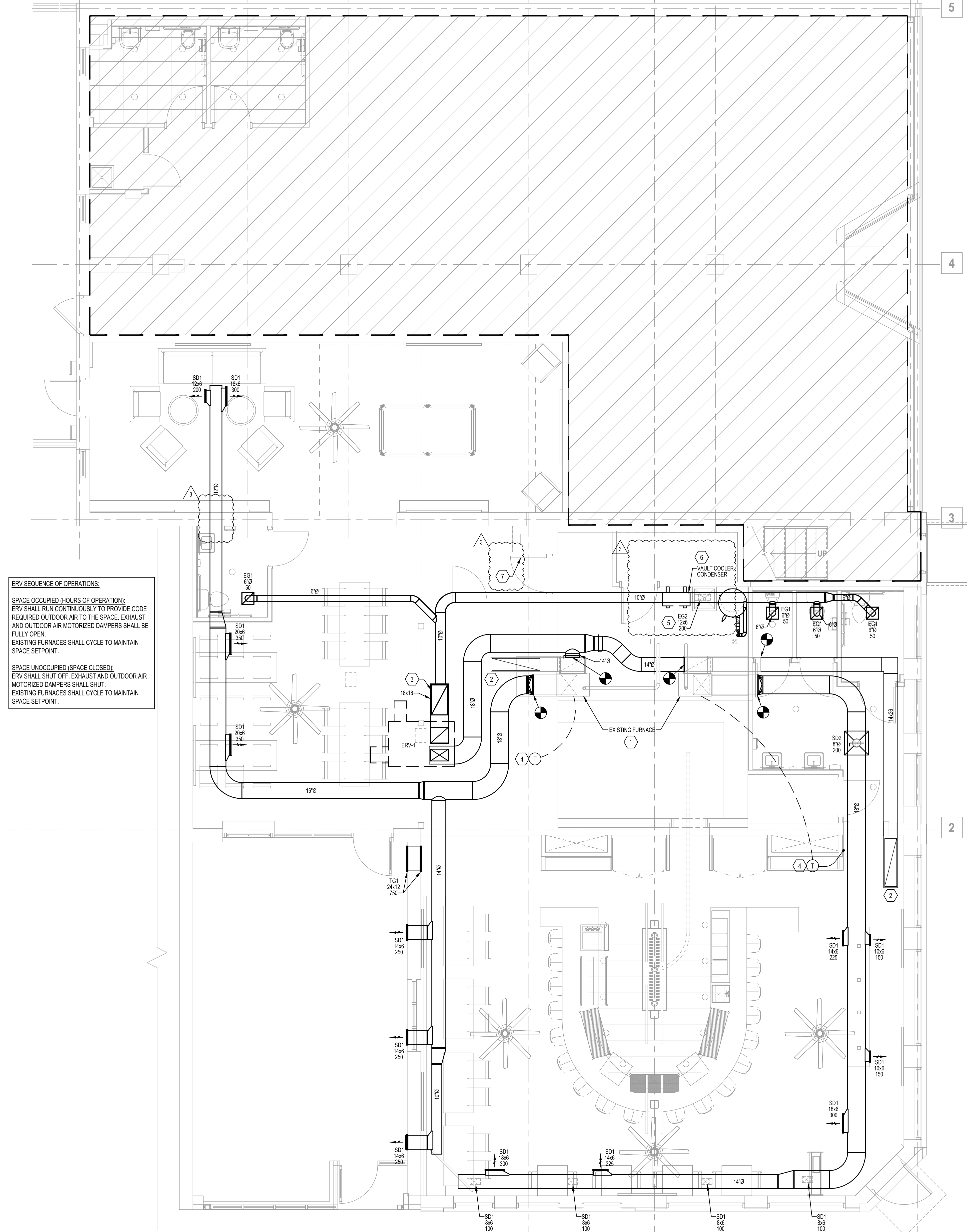
1. REFERENCE SHEET M101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.

KEYED NOTES:

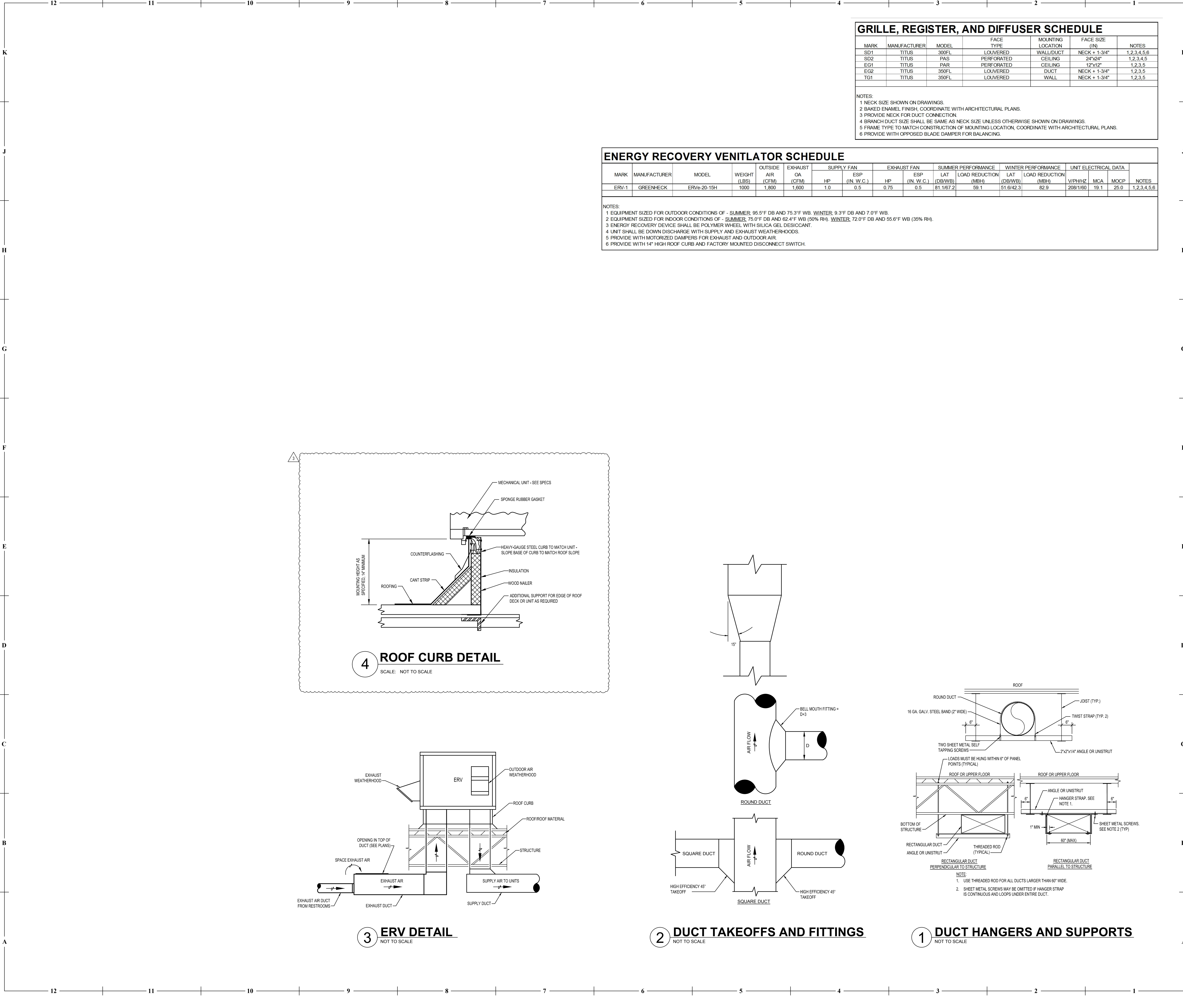
- EXISTING FURNACE AND ASSOCIATED CONDENSING UNIT ON ROOF TO REMAIN. BALANCE SUPPLY AIR TO 1950 CFM.
- PROVIDE 48"x12" OPENING IN TOP OF RETURN AIR DUCT. COVER OPENING WITH 1/2"x1/2" GALVANIZED HARDWARE CLOTH. MAINTAIN MINIMUM 5" UNOBSTRUCTED FREE AREA ABOVE OPENING FOR AIRFLOW.
- PROVIDE 16"x30" OPENING IN TOP OF RETURN/EXHAUST DUCT FOR ERV-1. MAINTAIN MINIMUM 5" UNOBSTRUCTED FREE AREA ABOVE OPENING FOR AIRFLOW.
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO-CHANGEOVER BETWEEN HEATING AND COOLING. MOUNT THERMOSTAT AT 48" AFF. VERIFY FINAL THERMOSTAT LOCATION WITH OWNER.
- MOUNT EXHAUST GRILLE ON BOTTOM OF DUCT.
- PROVIDE VAULT COOLER CONDENSER WITH WALL BRACKETS. MAINTAIN ALL MANUFACTURER REQUIRED CLEARANCES FOR OPERATION, SERVICE, AND AIRFLOW.
- PROVIDE LOUVERED GRILLE IN DOOR WITH MINIMUM FREE AREA OF 0.35 FT<sup>2</sup>.

ERV SEQUENCE OF OPERATIONS:  
SPACE OCCUPIED (HOURS OF OPERATION):  
ERV SHALL RUN CONTINUOUSLY TO PROVIDE CODE REQUIRED OUTDOOR AIR TO THE SPACE. EXHAUST AND OUTDOOR AIR MOTORIZED DAMPERS SHALL BE FULLY OPEN.  
EXISTING FURNACES SHALL CYCLE TO MAINTAIN SPACE SETPOINT.  
SPACE UNOCCUPIED (SPACE CLOSED):  
ERV SHALL SHUT OFF. EXHAUST AND OUTDOOR AIR MOTORIZED DAMPERS SHALL SHUT.  
EXISTING FURNACES SHALL CYCLE TO MAINTAIN SPACE SETPOINT.

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







GRILLE, REGISTER, AND DIFFUSER SCHEDULE

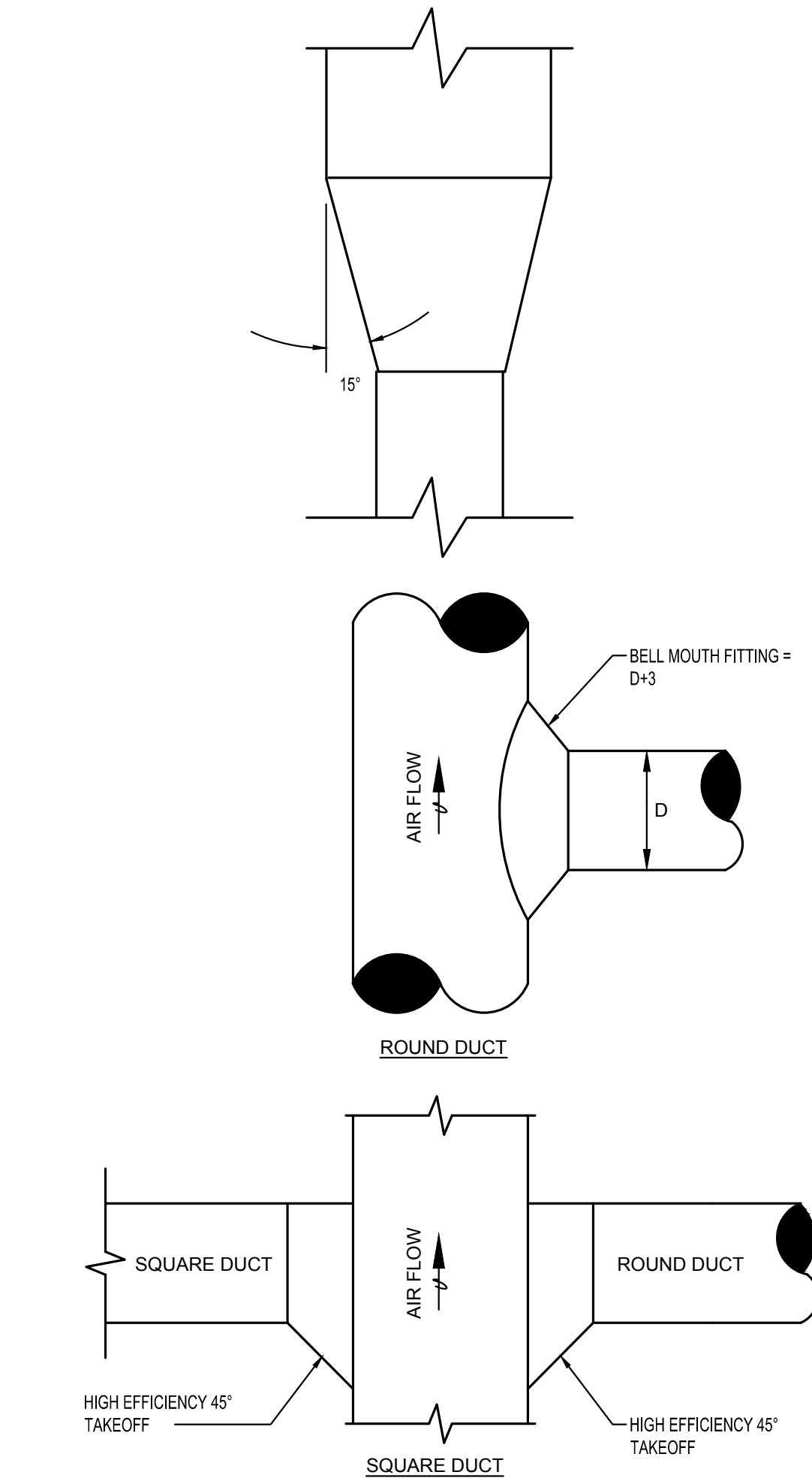
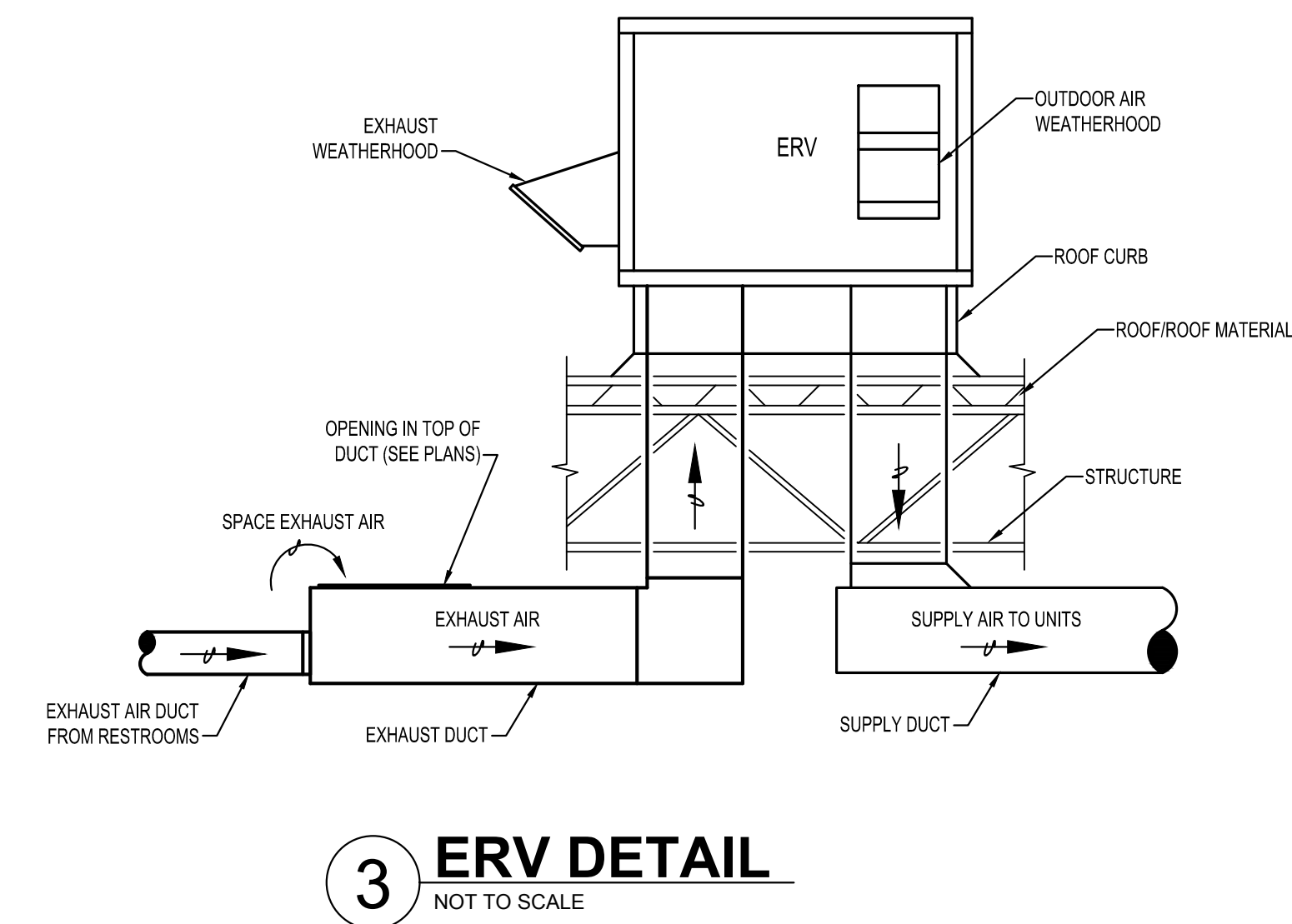
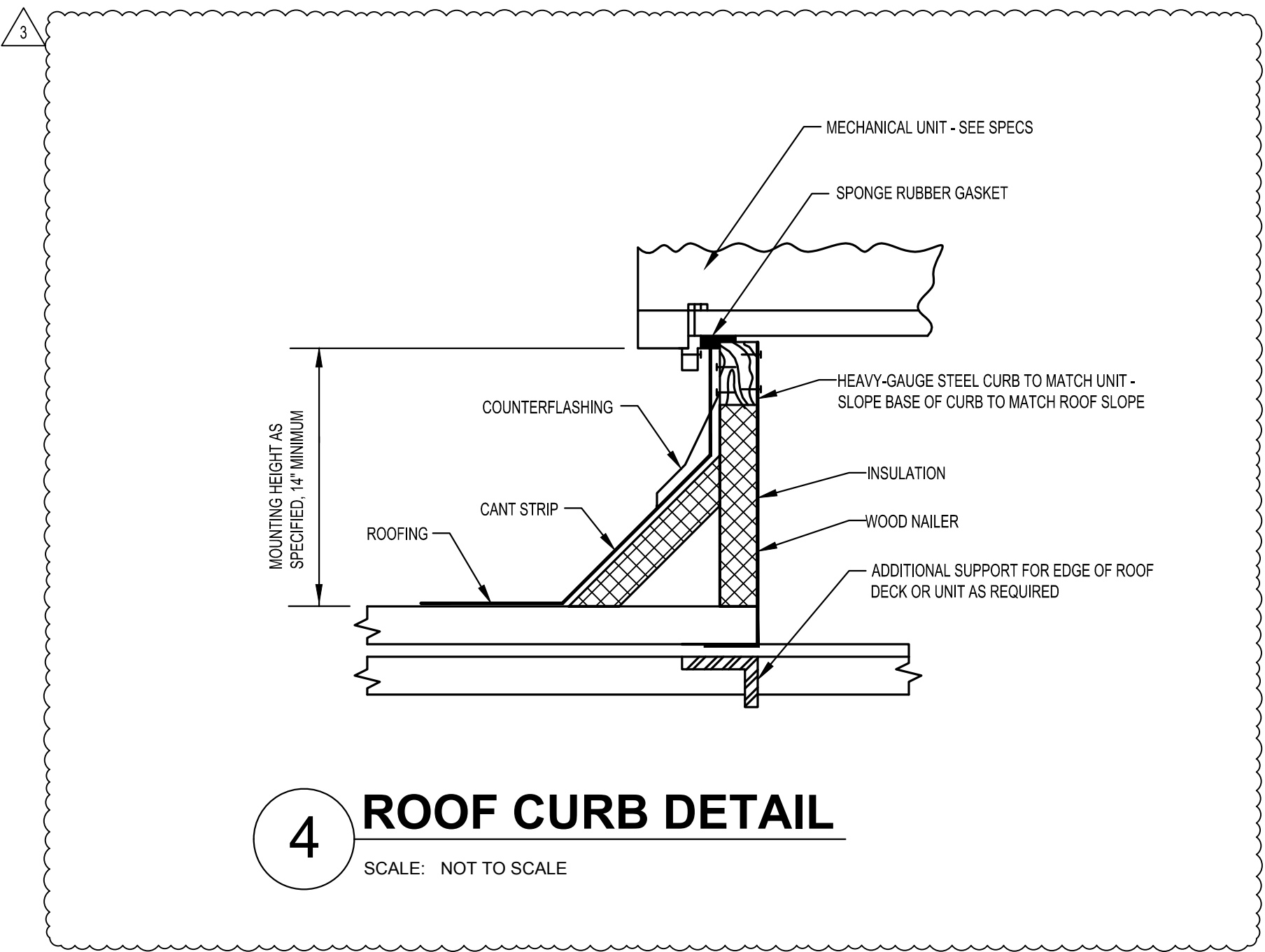
MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN)	NOTES
SD1	TITUS	300FL	LOUVERED	WALL/DUCT	NECK + 1-3/4"	1,2,3,4,5,6
SD2	TITUS	PAS	PERFORATED	CEILING	24"x24"	1,2,3,4,5
EG1	TITUS	PAR	PERFORATED	CEILING	12"x12"	1,2,3,5
EG2	TITUS	350FL	LOUVERED	DUCT	NECK + 1-3/4"	1,2,3,5
TG1	TITUS	350FL	LOUVERED	WALL	NECK + 1-3/4"	1,2,3,5

- NOTES:
- 1 NECK SIZE SHOWN ON DRAWINGS.
  - 2 BAKED ENAMEL FINISH. COORDINATE WITH ARCHITECTURAL PLANS.
  - 3 PROVIDE NECK FOR DUCT CONNECTION.
  - 4 BRANCH DUCT SIZE SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
  - 5 FRAME TYPE TO MATCH CONSTRUCTION OF MOUNTING LOCATION, COORDINATE WITH ARCHITECTURAL PLANS.
  - 6 PROVIDE WITH OPPOSED BLADE DAMPER FOR BALANCING.

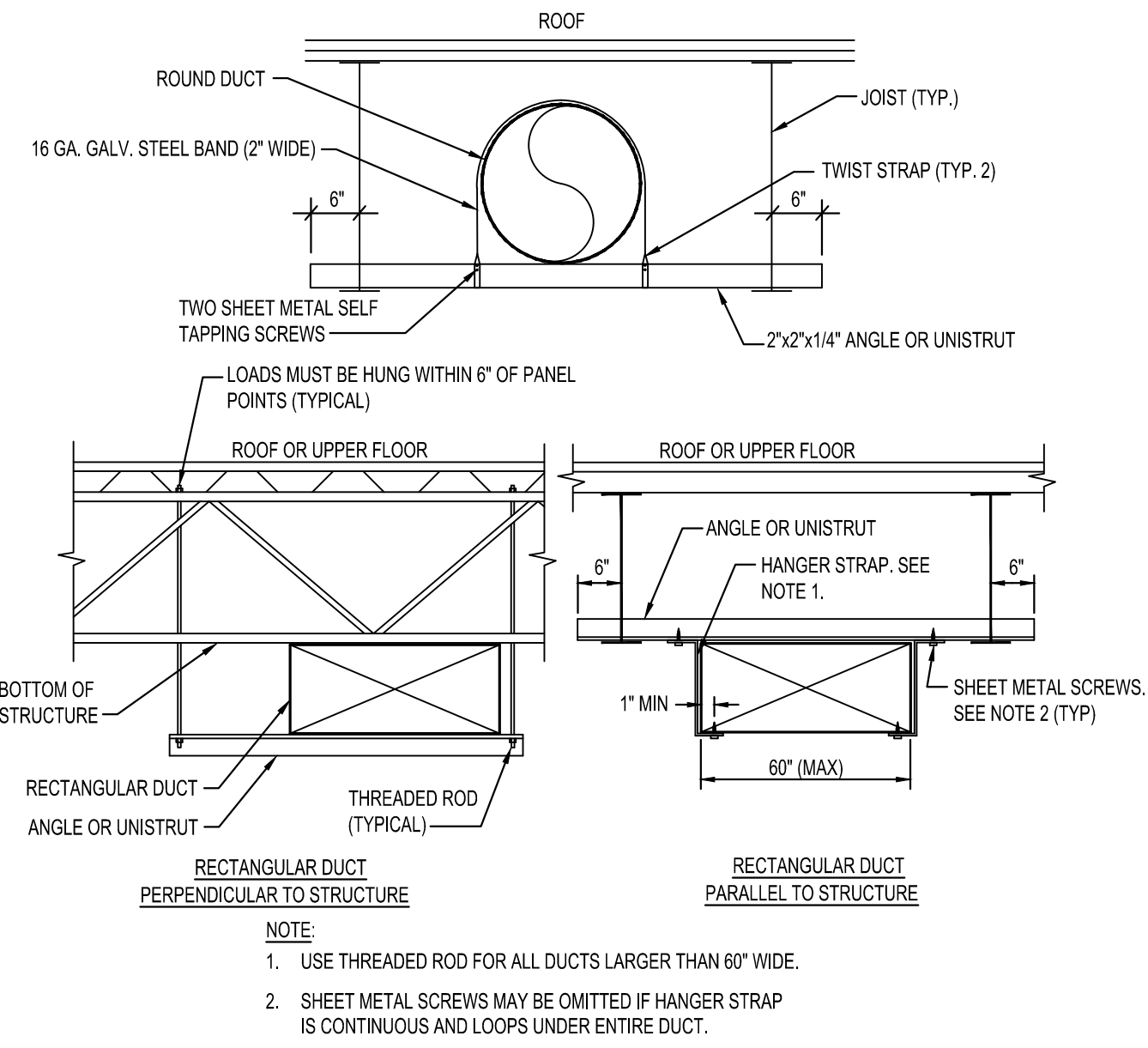
ENERGY RECOVERY VENITLATOR SCHEDULE

MARK	MANUFACTURER	MODEL	WEIGHT (LBS)	OUTSIDE AIR (CFM)	EXHAUST OA (CFM)	SUPPLY FAN HP	ESP (IN. W.C.)	EXHAUST FAN HP	ESP (IN. W.C.)	SUMMER PERFORMANCE LAT (DB/WB)	LOAD REDUCTION (MBH)	WINTER PERFORMANCE LAT (DB/WB)	LOAD REDUCTION (MBH)	UNIT ELECTRICAL DATA V/PH/Hz	MCA	MCCP	NOTES
ERV-1	GREENHECK	ERVe-20-15H	1000	1,800	1,600	1.0	0.5	0.75	0.5	81.1/67.2	59.1	51.6/42.3	82.9	208/1/60	19.1	25.0	1,2,3,4,5,6

- NOTES:
- 1 EQUIPMENT SIZED FOR OUTDOOR CONDITIONS OF - SUMMER: 95.5°F DB AND 75.3°F WB. WINTER: 9.3°F DB AND 7.0°F WB.
  - 2 EQUIPMENT SIZED FOR INDOOR CONDITIONS OF - SUMMER: 75.0°F DB AND 62.4°F WB (50% RH). WINTER: 72.0°F DB AND 55.6°F WB (35% RH).
  - 3 ENERGY RECOVERY DEVICE SHALL BE POLYMER WHEEL WITH SILICA GEL DESICCANT.
  - 4 UNIT SHALL BE DOWN DISCHARGE WITH SUPPLY AND EXHAUST WEATHERHOODS.
  - 5 PROVIDE WITH MOTORIZED DAMPERS FOR EXHAUST AND OUTDOOR AIR.
  - 6 PROVIDE WITH 14" HIGH ROOF CURB AND FACTORY MOUNTED DISCONNECT SWITCH.



2 DUCT TAKEOFFS AND FITTINGS  
NOT TO SCALE

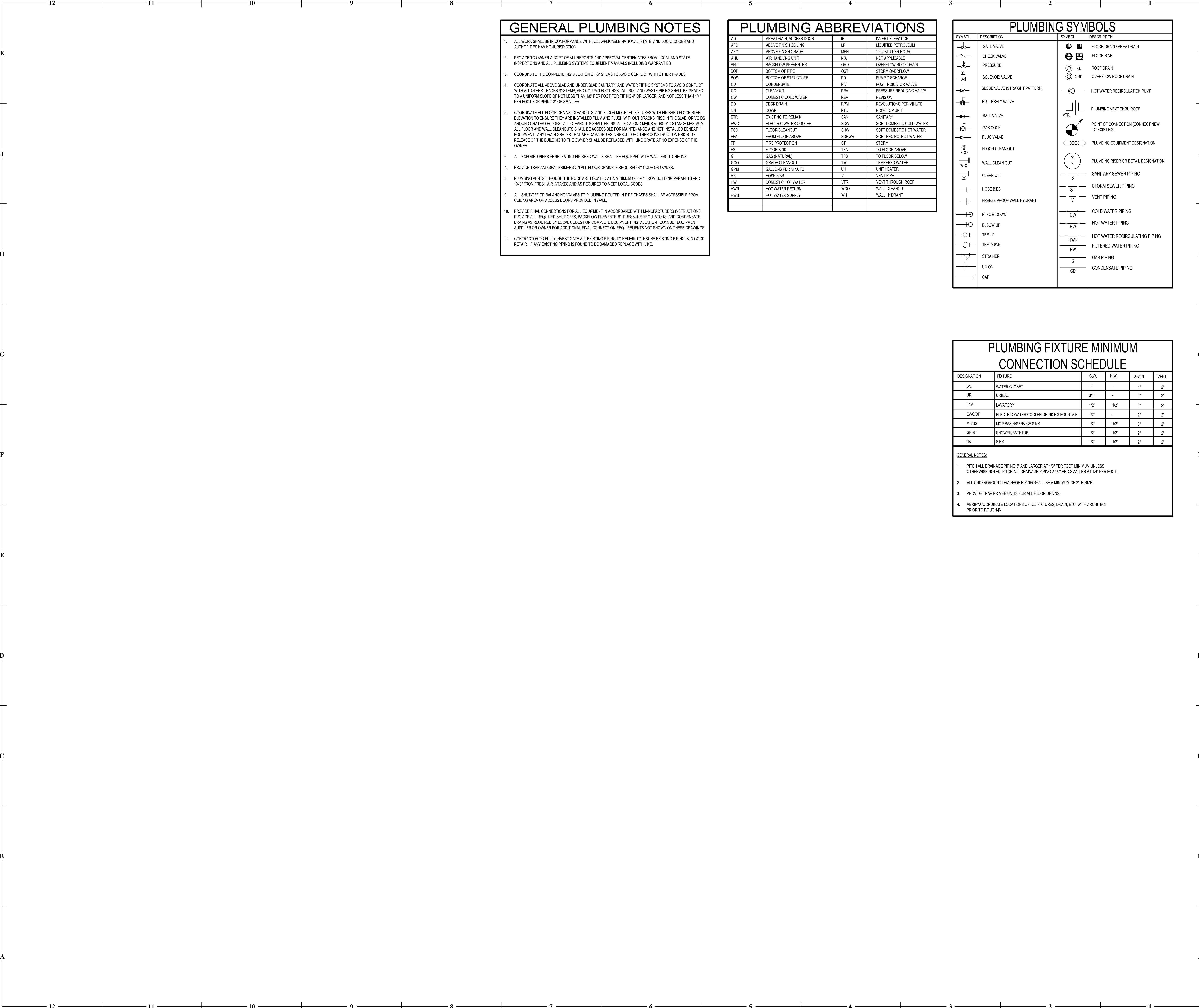


1 DUCT HANGERS AND SUPPORTS  
NOT TO SCALE









GENERAL PLUMBING NOTES

- 1. ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
- 2. PROVIDE TO OWNER A COPY OF ALL REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS AND ALL PLUMBING SYSTEMS EQUIPMENT MANUALS INCLUDING WARRANTIES.
- 3. COORDINATE THE COMPLETE INSTALLATION OF SYSTEMS TO AVOID CONFLICT WITH OTHER TRADES.
- 4. COORDINATE ALL ABOVE SLAB AND UNDER SLAB SANITARY, AND WATER PIPING SYSTEMS TO AVOID CONFLICT WITH ALL OTHER TRADES SYSTEMS, AND COLUMN FOOTINGS. ALL SOIL AND WASTE PIPING SHALL BE GRADED TO A UNIFORM SLOPE OF NOT LESS THAN 1/8" PER FOOT FOR PIPING 4" OR LARGER, AND NOT LESS THAN 1/4" PER FOOT FOR PIPING 3" OR SMALLER.
- 5. COORDINATE ALL FLOOR DRAINS, CLEANOUTS, AND FLOOR MOUNTED FIXTURES WITH FINISHED FLOOR SLAB ELEVATION TO ENSURE THEY ARE INSTALLED PLUM AND FLUSH WITHOUT CRACKS, RISE IN THE SLAB, OR VOIDS AROUND GRATES OR TOPS. ALL CLEANOUTS SHALL BE INSTALLED ALONG MANS AT 5'-0" DISTANCE MAXIMUM. ALL FLOOR AND WALL CLEANOUTS SHALL BE ACCESSIBLE FOR MAINTENANCE AND NOT INSTALLED BENEATH EQUIPMENT. ANY DRAIN GRATES THAT ARE DAMAGED AS A RESULT OF OTHER CONSTRUCTION PRIOR TO RELEASE OF THE BUILDING TO THE OWNER SHALL BE REPLACED WITH LIKE GRATE AT NO EXPENSE OF THE OWNER.
- 6. ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
- 7. PROVIDE TRAP AND SEAL PRIMERS ON ALL FLOOR DRAINS IF REQUIRED BY CODE OR OWNER.
- 8. PLUMBING VENTS THROUGH THE ROOF ARE LOCATED AT A MINIMUM OF 5'-0" FROM BUILDING PARAPETS AND 10'-0" FROM FRESH AIR INTAKES AND AS REQUIRED TO MEET LOCAL CODES.
- 9. ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
- 10. PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.
- 11. CONTRACTOR TO FULLY INVESTIGATE ALL EXISTING PIPING TO REMAIN TO INSURE EXISTING PIPING IS IN GOOD REPAIR. IF ANY EXISTING PIPING IS FOUND TO BE DAMAGED REPLACE WITH LIKE.

PLUMBING ABBREVIATIONS

AD	AREA DRAIN, ACCESS DOOR	IE	INVERT ELEVATION
APG	ABOVE FINISH CEILING	LP	LIQUIDED PETROLEUM
AFG	ABOVE FINISH GRADE	MBH	1000 BTU PER HOUR
AHU	AIR HANDLING UNIT	NA	NOT APPLICABLE
BFP	BACKFLOW PREVENTER	ORD	OVERFLOW ROOF DRAIN
BOP	BOTTOM OF PIPE	OST	STORM OVERFLOW
BOS	BOTTOM OF STRUCTURE	PD	PUMP DISCHARGE
CD	CONDENSATE	PIV	PIST INDICATOR VALVE
CO	CLEANOUT	PRV	PRESSURE REDUCING VALVE
CW	DOMESTIC COLD WATER	REV	REVISION
DD	DECK DRAIN	RPM	REVOLUTIONS PER MINUTE
DN	DOWN	RTU	ROOF TOP UNIT
ETR	EXISTING TO REMAIN	SAN	SANITARY
EWCD	ELECTRIC WATER COOLER	SCW	SOFT DOMESTIC COLD WATER
FCD	FLOOR CLEANOUT	SHW	SOFT DOMESTIC HOT WATER
FFA	FROM FLOOR ABOVE	SDHWR	SOFT RECIRC. HOT WATER
FP	FIRE PROTECTION	ST	STORM
FS	FLOOR SINK	TFA	TO FLOOR ABOVE
GCO	GRADE CLEANOUT	TW	TEMPERED WATER
GPM	GALLONS PER MINUTE	UH	UNIT HEATER
HB	HOSE BIBB	V	VENT PIPE
HW	DOMESTIC HOT WATER	VTR	VENT THROUGH ROOF
HWR	HOT WATER RETURN	WCO	WALL CLEANOUT
HWS	HOT WATER SUPPLY	WH	WALL HYDRANT

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GATE VALVE		FLOOR DRAIN / AREA DRAIN
	CHECK VALVE		FLOOR SINK
	PRESSURE		ROOF DRAIN
	SOLENOID VALVE		OVERFLOW ROOF DRAIN
	GLOBE VALVE (STRAIGHT PATTERN)		HOT WATER RECIRCULATION PUMP
	BUTTERFLY VALVE		PLUMBING VENT THRU ROOF
	BALL VALVE		POINT OF CONNECTION (CONNECT NEW TO EXISTING)
	GAS COCK		PLUMBING EQUIPMENT DESIGNATION
	PLUG VALVE		PLUMBING RISER OR DETAIL DESIGNATION
	FLOOR CLEAN OUT		SANITARY SEWER PIPING
	WALL CLEAN OUT		STORM SEWER PIPING
	CLEAN OUT		VENT PIPING
	HOSE BIBB		COLD WATER PIPING
	FREEZE PROOF WALL HYDRANT		HOT WATER PIPING
	ELBOW DOWN		HOT WATER RECIRCULATING PIPING
	ELBOW UP		FILTERED WATER PIPING
	TEE UP		GAS PIPING
	TEE DOWN		CONDENSATE PIPING
	STRAINER		
	UNION		
	CAP		

PLUMBING FIXTURE MINIMUM CONNECTION SCHEDULE

DESIGNATION	FIXTURE	C.W.	H.W.	DRAIN	VENT
WC	WATER CLOSET	1"	-	4"	2"
UR	URNAL	3/4"	-	2"	2"
LAV.	LAVATORY	1/2"	1/2"	2"	2"
EWCD	ELECTRIC WATER COOLER, DRINKING FOUNTAIN	1/2"	-	2"	2"
MBSS	MOP BASIN, SERVICE SINK	1/2"	1/2"	3"	2"
SHBT	SHOWER, BATHTUB	1/2"	1/2"	2"	2"
SK	SINK	1/2"	1/2"	2"	2"

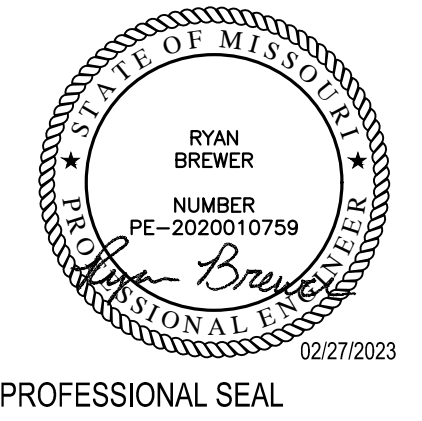
GENERAL NOTES:

- 1. PITCH ALL DRAINAGE PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM UNLESS OTHERWISE NOTED. PITCH ALL DRAINAGE PIPING 2-1/2" AND SMALLER AT 1/4" PER FOOT.
- 2. ALL UNDERGROUND DRAINAGE PIPING SHALL BE A MINIMUM OF 2" IN SIZE.
- 3. PROVIDE TRAP PRIMER UNITS FOR ALL FLOOR DRAINS.
- 4. VERIFY COORDINATE LOCATIONS OF ALL FIXTURES, DRAIN, ETC. WITH ARCHITECT PRIOR TO ROUGH-IN.



ITAP - LEE'S SUMMIT  
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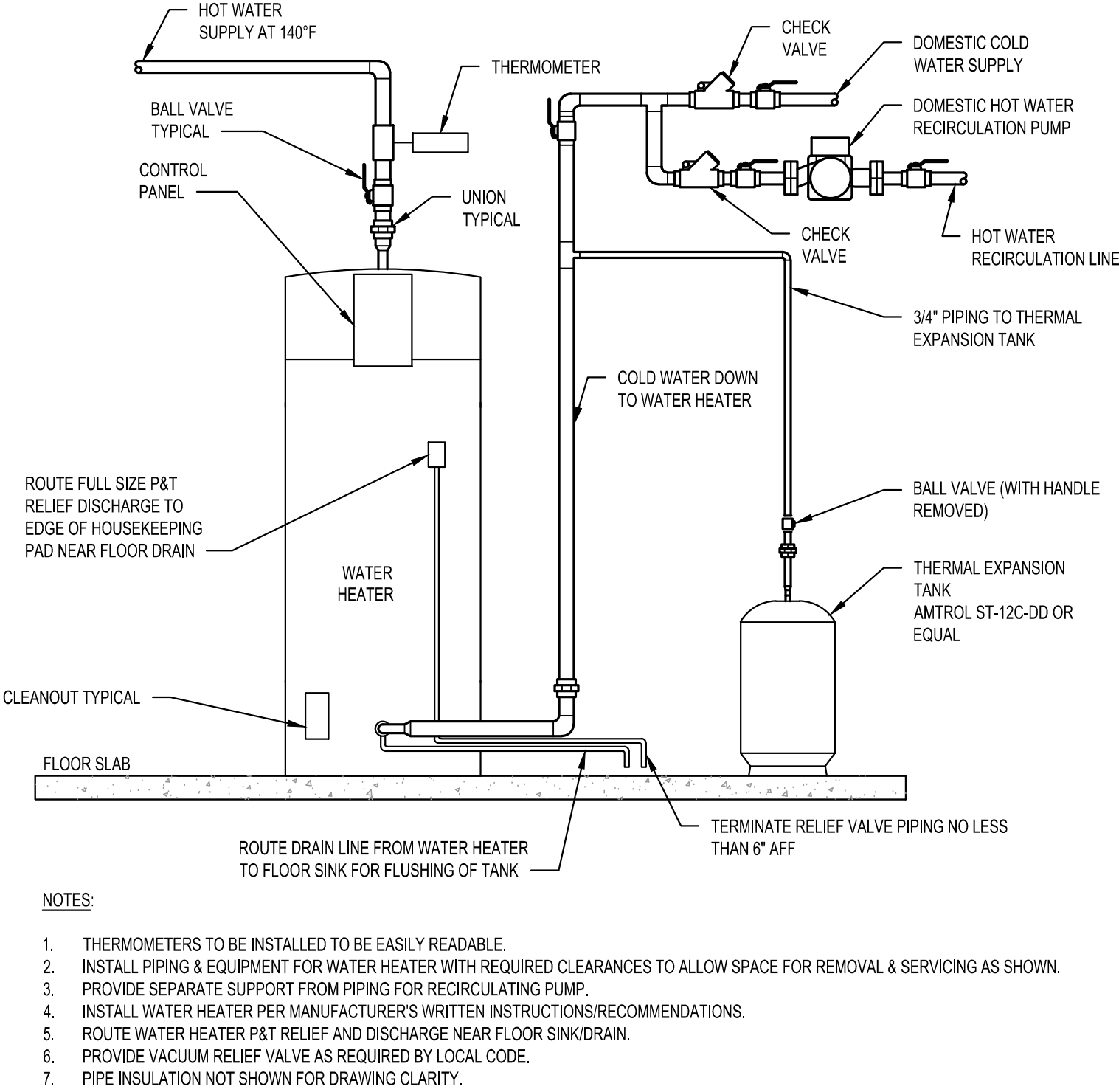
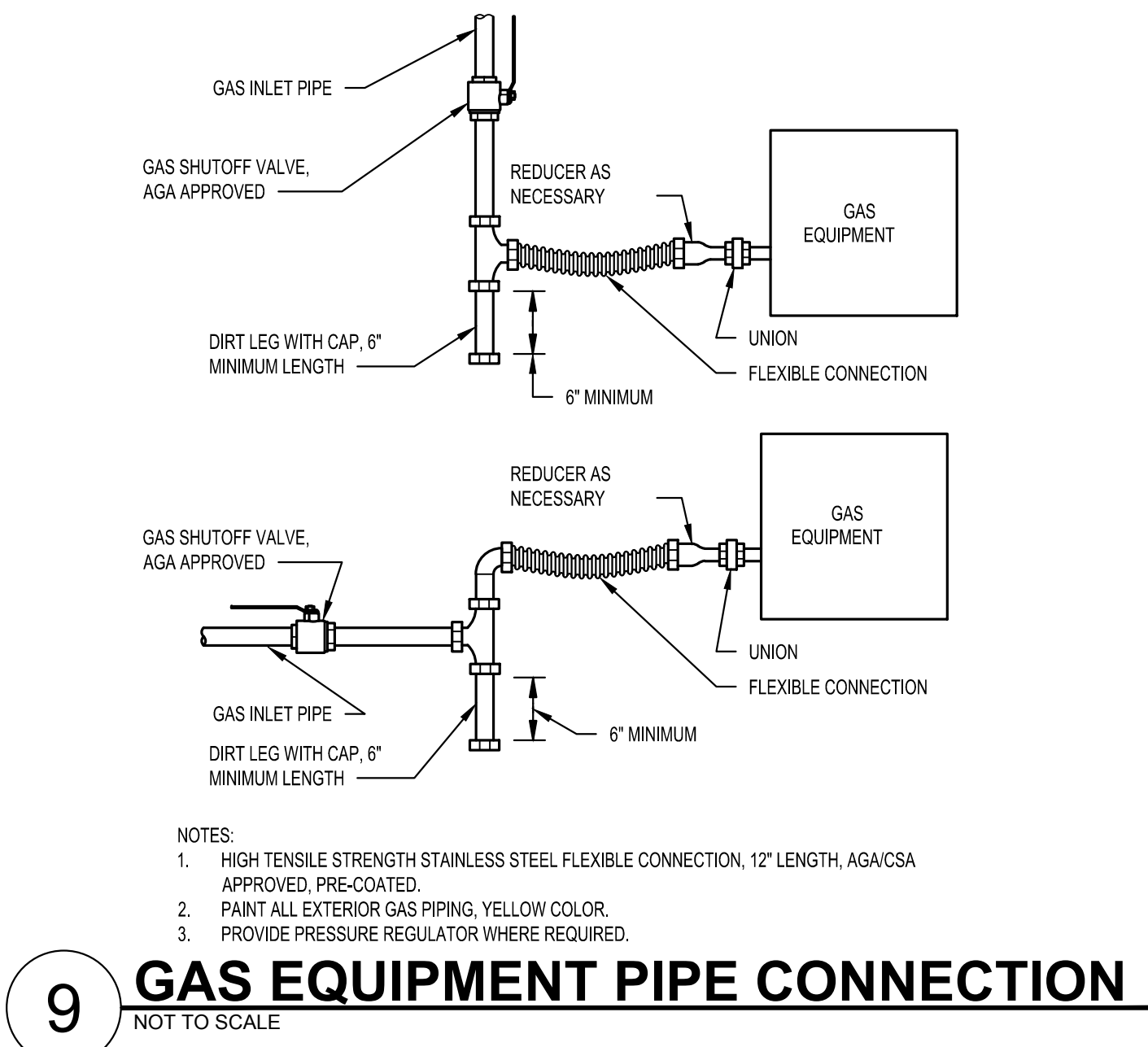
P101  
ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066



PLUMBING FIXTURE SCHEDULE									
TAG	MANUFACTURER	MODEL	DRAIN	VENT	COLD WATER	HOT WATER	ELECTRICAL REQUIREMENTS	DESCRIPTION	
FCO	SIoux CHIEF	834-4ANR	4"	---	---	---		FLOOR CLEANOUT ABS BODY AND NICKEL-BRONZE COVER	
FD	SIoux CHIEF	832-35ANR	2"	2"	---	---		ADJUSTABLE FLOOR DRAIN WITH GRAY ABS BODY AND ROUND NICKEL-BRONZE STRAINER AND TRAP PRIMER CONNECTION.	
FS	SIoux CHIEF	861-3PNJ2	3"	2"	---	---	---	SQUAREMAX PVC FLOOR SINK WITH 3" SCHEDULE 40 HUB CONNECTION AND HALF-OPEN NICKEL-BRONZE RING/STRAINER	
LAV	AMERICAN STANDARD	9024.001EC	2"	1-1/2"	1/2"	1/2"		WALL HUNG LAVATORY WITH SELECTRONIC BATTERY-POWERED CENTERSET SINGLE HOLE FAUCET 6055.105. PROVIDE WITH ASSE 1070 COMPLIANT MIXING VALVE AND TRUEBRO LAV GUARD PIPE WRAPS.	
RP	TACO	007-BF5	---	---	---	3/4"	115V 0.76 AMPS	IN-LINE CARTRIDGE STYLE CIRCULATOR PUMP. CAPABLE OF 10 FEET OF HEAD AT 3 GPM.	
UR	AMERICAN STANDARD	6002.001	2"	1-1/2"	3/4"	---	---	PINTBROOK URINAL 0.125 GPF WITH SELECTRONIC 6063.051.002 SENSOR OPERATED DC POWER FLUSH VALVE.	
WC1	AMERICAN STANDARD	2462.016	3"	2"	3/4"	---		1.6 GPF, FLUSH TANK WATER CLOSET PRESSURE-ASSISTED SIPHON JET. ELONGATED BOWL WITH CHURCH 9500C WHITE, SOLID PLASTIC, OPEN-FRONT SEAT.	
WC2	AMERICAN STANDARD	2467.016	3"	2"	3/4"	---		ADA-COMPLIANT, 1.6 GPF, FLUSH TANK WATER CLOSET PRESSURE-ASSISTED SIPHON JET, ELONGATED BOWL WITH CHURCH 9500C WHITE, SOLID PLASTIC, OPEN-FRONT SEAT.	
WCO	JAY R. SMITH	4531S	PER PLAN	---	---	---		CAST IRON CLEANOUT TEE AND COUNTERSUNK PLUG	
GWH	BRADFORD WHITE	EF60T-125E-3N			1"	1"	120V 15A SUPPLY	NATURAL GAS FIRED WATER HEATER 60 GALLON 145 GALLON RECOVERY AT 100 %WDF RISE. 95% EFFICIENT PROVIDE WITH AMTROL ST-12 THERMAL EXPANSION TANK.	

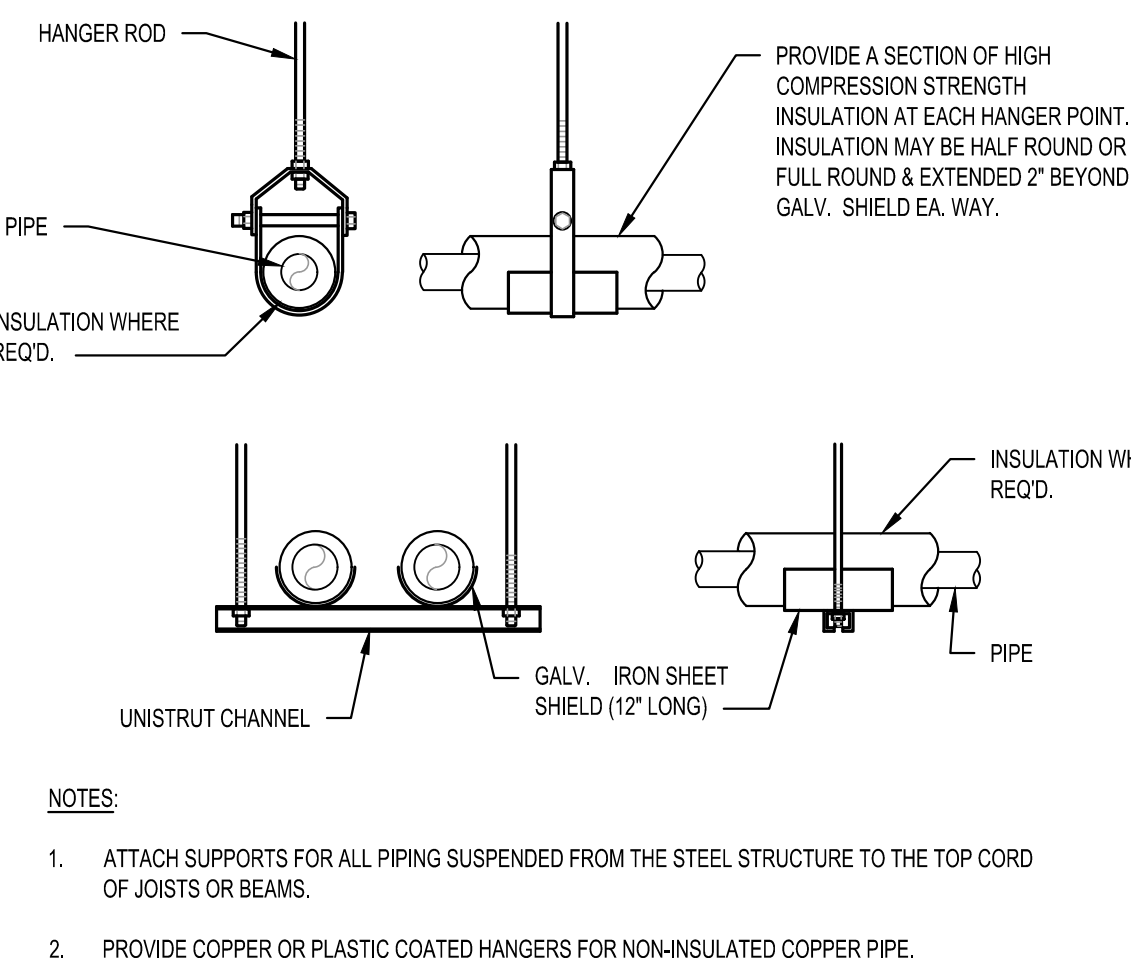
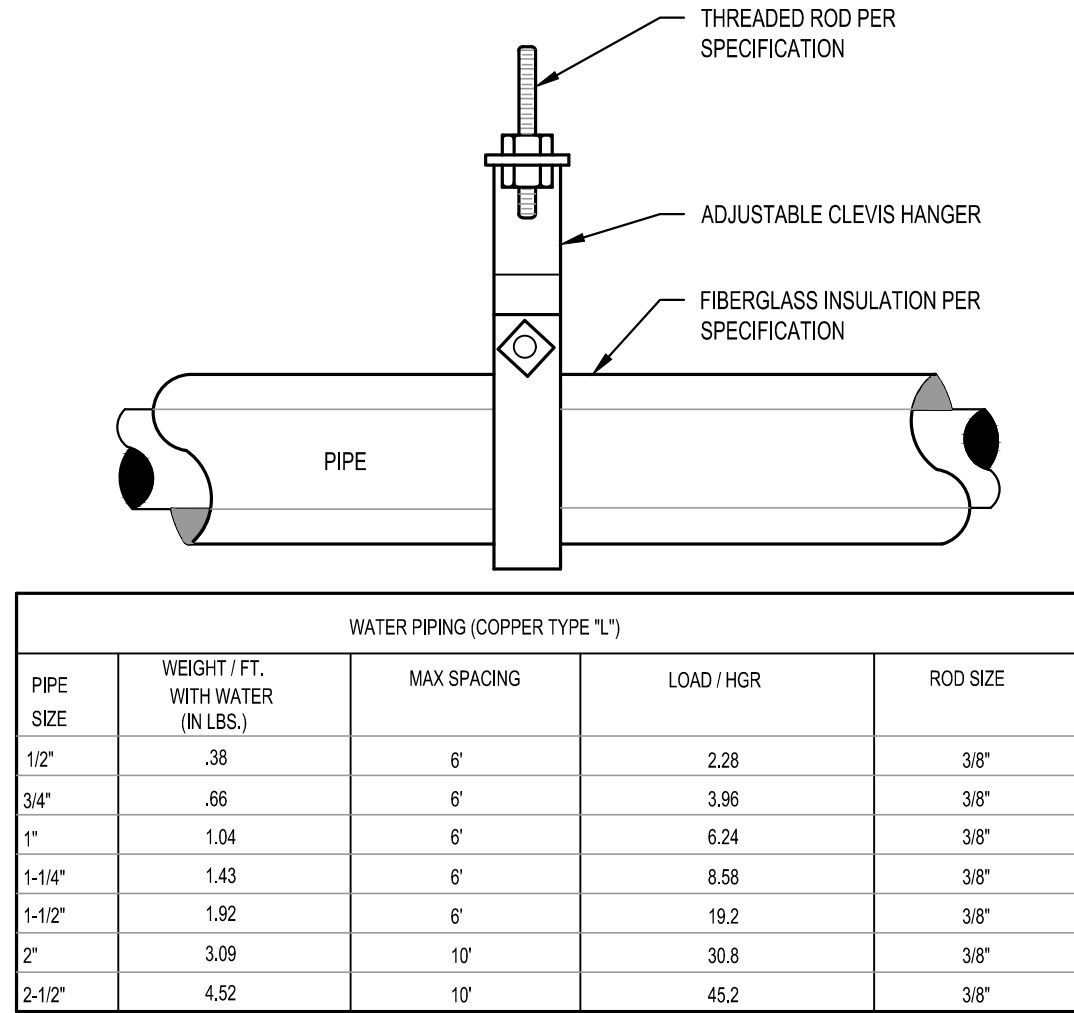
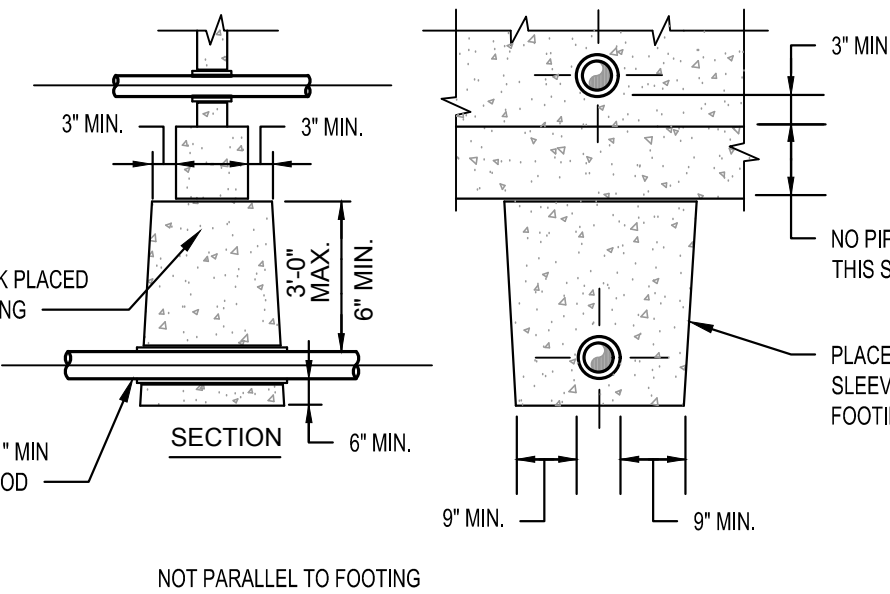
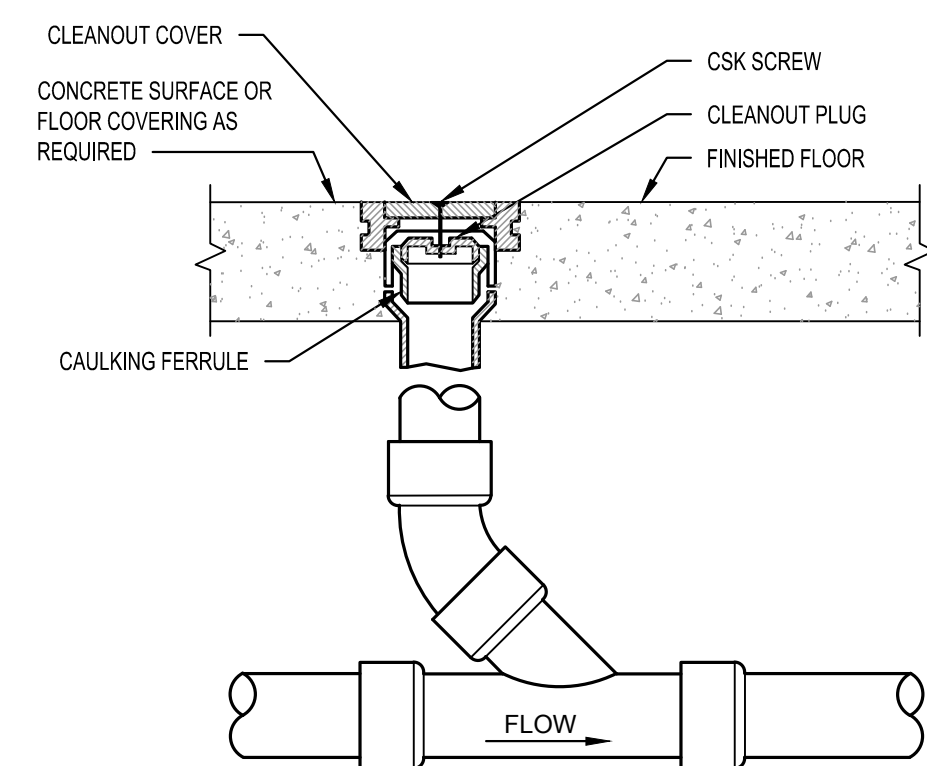
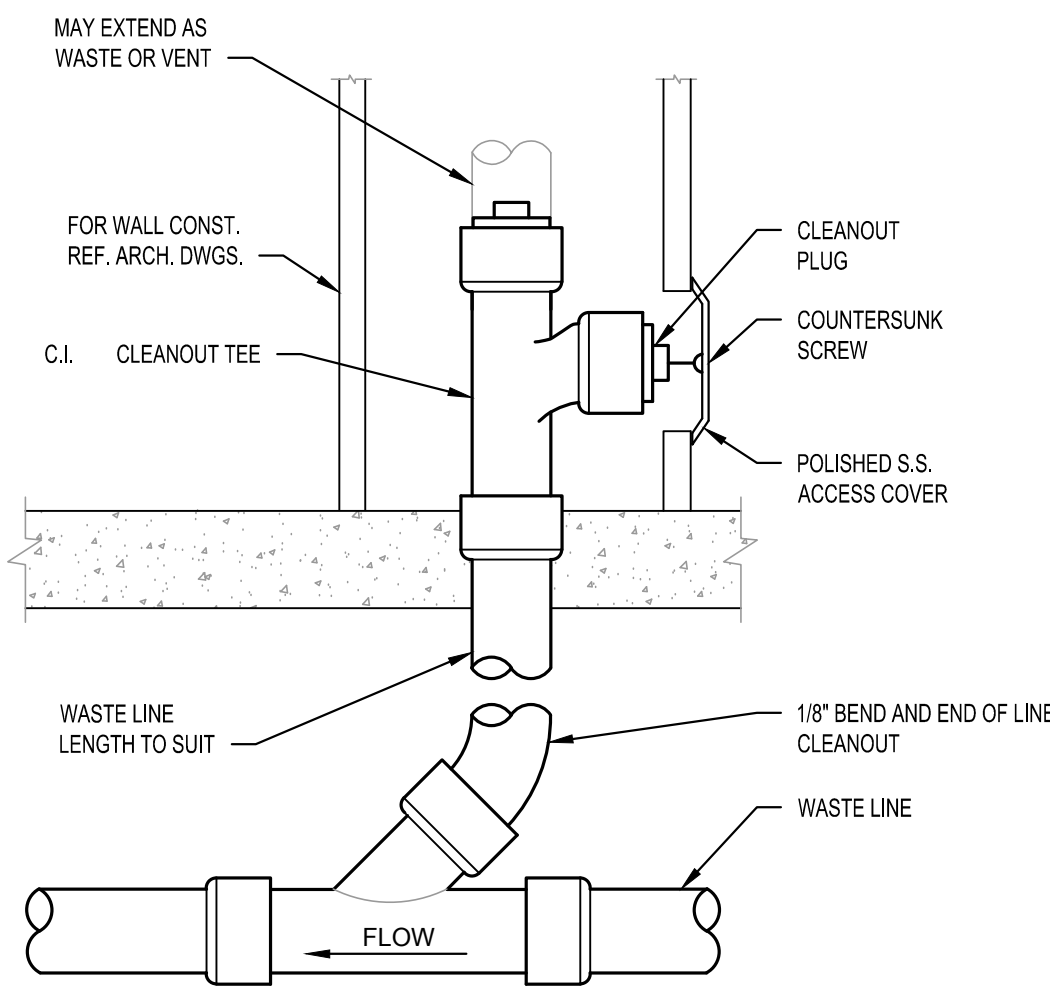
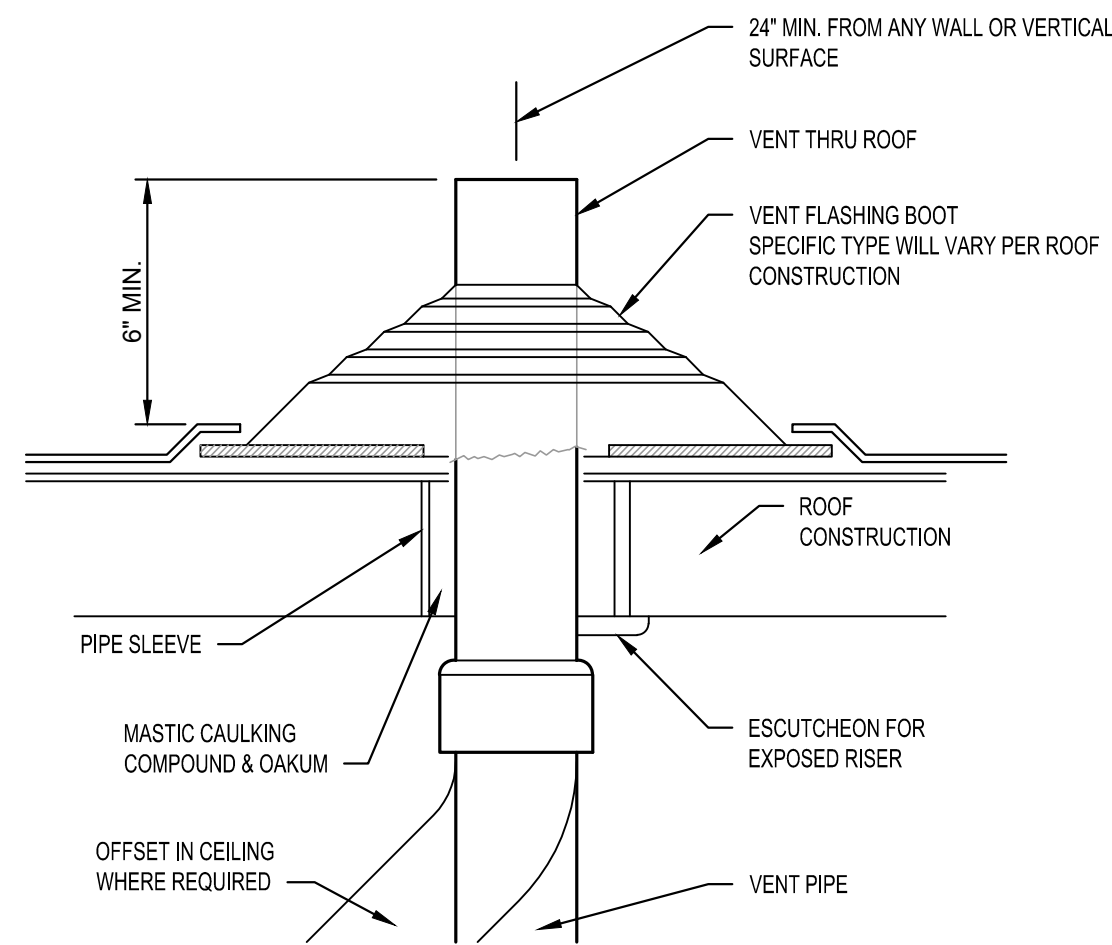
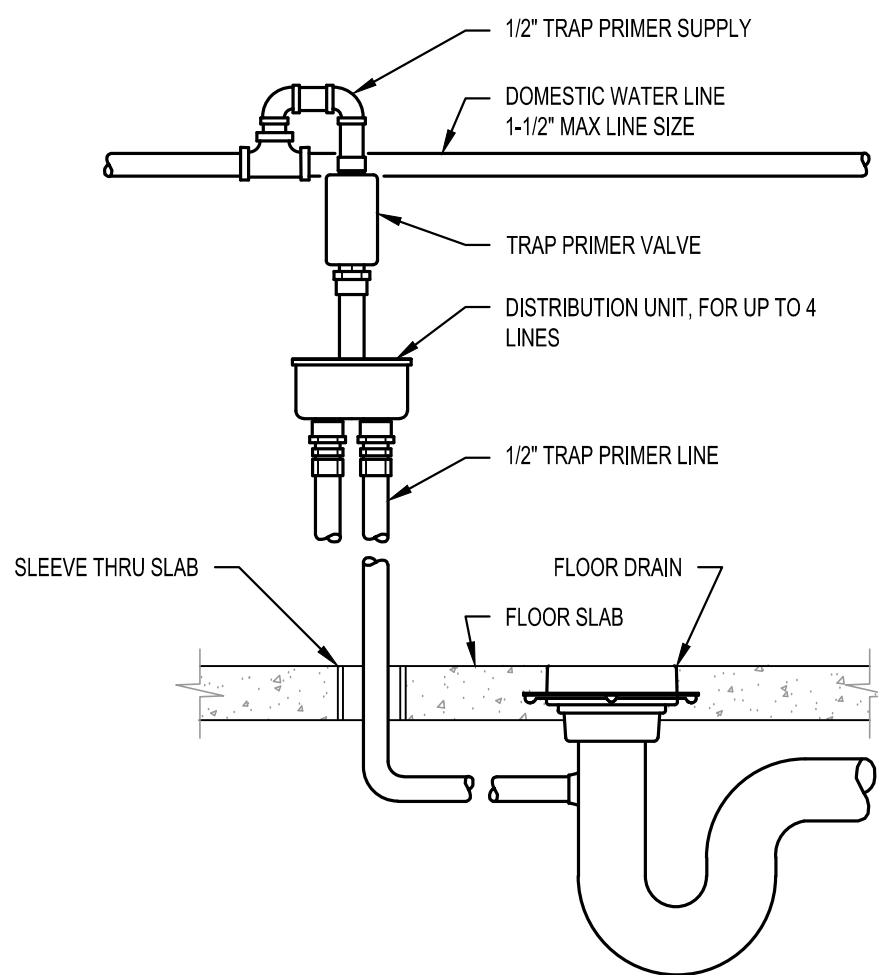
NOTES:

1. MODELS IN SCHEDULE ARE A BASIS OF DESIGN CONFIRM FINAL FIXTURE MODELS WITH OWNER PRIOR TO PURCHASING.
2. ALL LAVATORIES SHALL BE PROVIDED WITH ANTI-SCALD ASSE 1070 COMPLIANT VALVE.
3. PROVIDE LOOSE KEY STOPS AND FLEXIBLE RISERS.
4. ON LAVATORY INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS WITH TRU-BRO INSULATION KIT.
5. PROVIDE FLUSH VALVE HANDLE ON WIDE SIDE OF ROOM.
6. PROVIDE HANDLE STOPS AND FLEXIBLE RISERS.



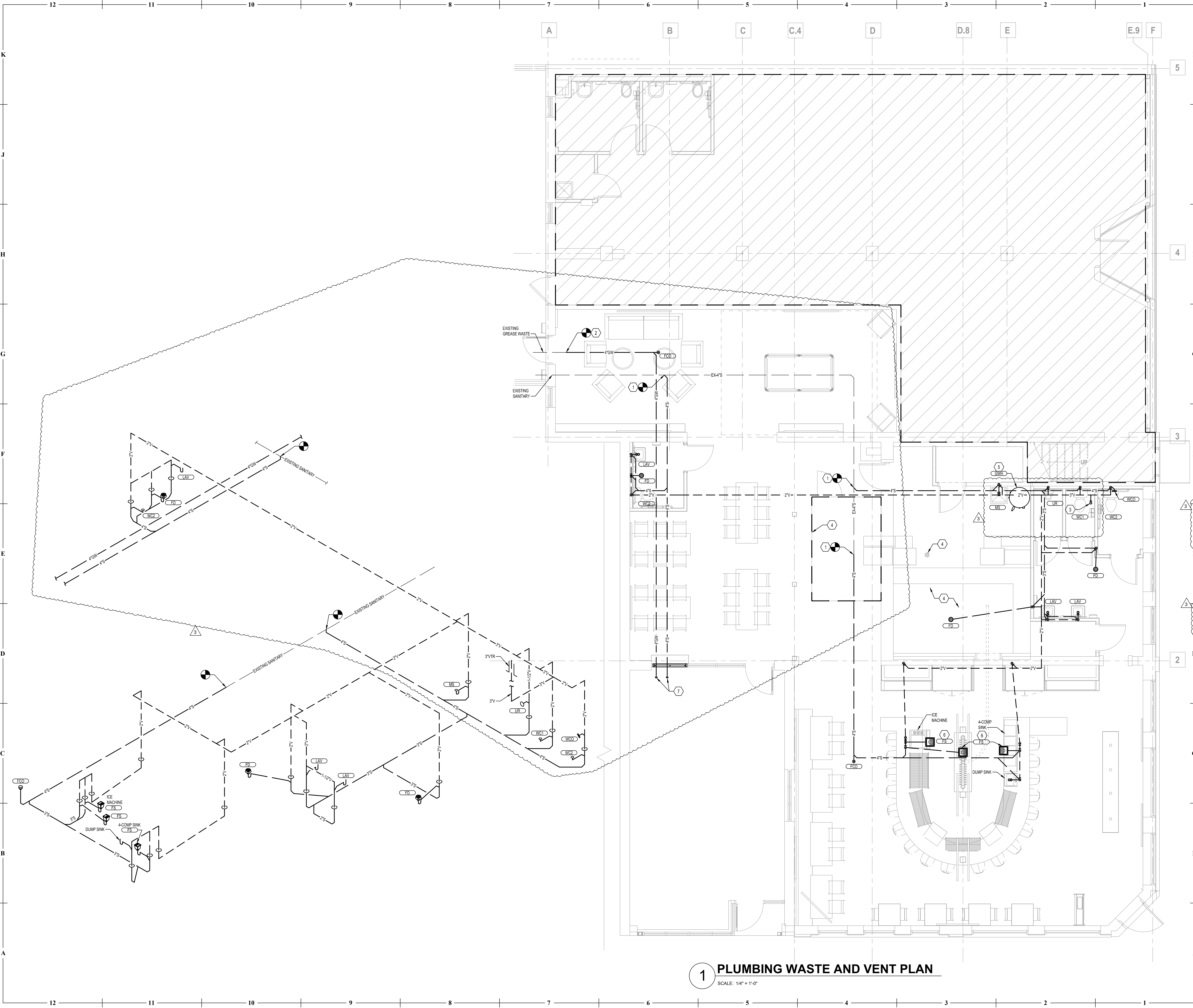
SINGLE FIXTURE			MULTIPLE FIXTURES		
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD	FIXTURE	COLD	HOT
A	1/2"	1-11	VALVE WATER CLOSET	10	---
B	3/4"	12-32	TANK WATER CLOSET	5	---
C	1"	33-60	URINAL	5	---
D	1-1/4"	61-113	LAVATORY/SINK	1.5	1.5
E	1-1/2"	114-154	JANITOR'S SINK	3	3
F	2"	154-330	SHOWER/BATHTUB	2	2

PROVIDE WATER HAMMER ARRESTERS ON ALL QUICK CLOSING VALVES. INSTALLED AS CLOSE TO THE FIXTURES AS POSSIBLE TO CONTROL THE EFFECTS OF WATER HAMMER INSTALLATION SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES. DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND DRING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.28.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE.



- NOTES:
1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS.
  2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.





**GENERAL NOTES**  
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
3. ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
4. PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT SPECIFIED IN PLUMBING FIXTURES AND EQUIPMENT SCHEDULES ON THESE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS INDICATED ON PLUMBING SCHEDULES AND AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

**KEYED NOTES:**

1. ROUTE NEW 4" SANITARY LINE TO EXISTING SANITARY LINE IN THIS AREA. FIELD COORDINATE EXACT CONNECTION POINT, LINE SIZE, MATERIAL AND AVAILABLE INVERT.
2. ROUTE NEW 4" GREASE WASTE LINE TO EXISTING GREASE WASTE LINE IN THIS AREA. FIELD COORDINATE EXACT CONNECTION POINT, LINE SIZE, MATERIAL AND AVAILABLE INVERT.
3. 3" UP THROUGH MECHANICAL ROOM ABOVE OFFSETTING AS REQUIRED FOR EXISTING CONDITIONS TO NEW 3" VTR. COORDINATE FINAL PLACEMENT AND ROUTING THROUGH FLOOR ABOVE WITH ALL EXISTING EQUIPMENT, ROOF TOP EQUIPMENT, AND EXISTING STRUCTURE. MAINTAIN A MINIMUM 10' FROM ALL FRESH AIR INTAKES AND 1' FROM ALL VERTICAL SURFACES. ALL VENT PIPING PENETRATIONS ARE TO BE PERFORMED BY THE LANDLORD'S ROOFING CONTRACTOR. INSTALL COOLER/FREEZER CONDENSATE DRAIN LINES ALONG COOLER WALLS AS HIGH AS POSSIBLE WHILE MAINTAINING A MINIMUM 1/4" PER FOOT FALL. ROUTE PIPING TO EXISTING FLOOR DRAIN AND TERMINATE OVER FLOOR DRAIN WITH AIR GAP PER CODE.
4. ROUTE WATER HEATER TAP DRAIN LINE TO FLOOR DRAIN AND TERMINATE OVER FLOOR DRAIN WITH AIR GAP PER CODE.
5. COORDINATE FINAL LOCATION OF FLOOR SINKS AT BAR WITH OWNER.
6. CAP 4" GW AND 4" S LINE FOR CONTINUATION BY FUTURE TENANT.

**1 PLUMBING WASTE AND VENT PLAN**  
SCALE: 1/4" = 1'-0"

RELEASED FOR CONSTRUCTION  
As Noted on Plans Review

Development Services Department  
Lee's Summit, Missouri  
03/24/2023

collins|webb ARCHITECTURE  
307B SW Market St., Lee's Summit, Missouri 64063  
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ISSUE DATE: 27 FEB 2023  
COLLINS WEBB #: 22066

PLUMBING WASTE AND VENT PLAN



GENERAL NOTES  
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
3. ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
4. PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT SPECIFIED IN PLUMBING FIXTURES AND EQUIPMENT SCHEDULES ON THESE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS INDICATED ON PLUMBING SCHEDULES AND AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

KEYED NOTES:

1. ROUTE NEW 1-1/2" COLD WATER LINE TO EXISTING COLD WATER LINE IN THIS AREA. FIELD COORDINATE EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
2. 3/4" CW UP THROUGH FLOOR TO ICE MACHINE. INSTALL ALL BACKFLOW PREVENTION, VALVING AND FILTERS AS PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODES.
3. ROUTE NEW 2" G LINE BACK TO EXISTING GAS METER. FIELD VERIFY EXACT ROUTING WITH LANDLORD AND EXISTING CONDITIONS. ENSURE EXISTING METER IS LARGE ENOUGH FOR NEW TOTAL GAS LOAD. IF EXISTING METER IS FOUND TO NOT BE LARGE ENOUGH COORDINATE WITH UTILITY FOR INSTALLATION OF NEW. NEW PIPING LOAD OF 402 MBH SIZED FOR A DEVELOPED LENGTH OF 150' AT A PRESSURE OF 7" WATER COLUMN.
4. ROUTE 1/2" COLD WATER LINE DOWN TO GLASS WASH COORDINATE WITH OWNER FOR EXACT LOCATION AND REQUIREMENTS.
5. ROUTE 1" CW DOWN IN WALL. STUB 1" CW INTO BEER COOLER FOR CONNECTION TO EQUIPMENT. TERMINATE WITH ALL VALVING AND BACKFLOW PROTECTION AS PER MANUFACTURER'S RECOMMENDATIONS. CONTINUE 3/4" CW BELOW GRADE TO BAR EQUIPMENT.
6. CAP LINES FOR CONTINUATION BY FUTURE TENANT.

2 PLUMBING WATER RISER

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

1 PLUMBING WATER AND GAS PLAN

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



