

RENOVATION

UNLV Mendenhall Remodel

4505 South Maryland Parkway
Las Vegas, Nevada 89154
UNLV Project #: MDC-1802

UNLV Mendenhall Remodel

Renovation

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Las Vegas, Nevada, 89154

aptus

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GENERAL NOTES

- THE DRAWINGS AND THE SPECIFICATIONS ARE PREPARED TO SHOW THE ARCHITECT'S INTENT IN THE DESIGN AND CONSTRUCTION OF THE PROJECT. IN ALL MATTERS RELATED TO THE USE OR INTERPRETATION OF THESE VARIOUS DRAWINGS OR SPECIFICATIONS, THE ARCHITECT'S WRITTEN STATEMENT SHALL BE CONSIDERED FINAL.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE CODES.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES PRIOR TO COMMENCING THE WORK. CONSTRUCTION THAT PROCEEDS BEYOND CONFORMANCE WITH THESE REQUIREMENTS SHALL BE PERFORMED AT CONTRACTOR'S SOLE RISK.
- SHOULD UNFORESEEN CONDITIONS NECESSITATE CONSTRUCTION NOT IN ACCORDANCE WITH THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY AND SUBMIT TO THE ARCHITECT THE PROPOSED METHODS TO ACCOMPLISH THE DESIGN INTENT PRIOR TO PROCEEDING WITH THE CONSTRUCTION.
- THE CONTRACTOR SHALL CONFIRM CONNECTION LOCATIONS FOR UTILITIES SUCH AS SANITARY SEWERS, GAS LINES, ELECTRIC, WATER FOR THE BUILDING PRIOR TO COMMENCING CONSTRUCTION.
- SHOULD A DISCREPANCY APPEAR IN THE DRAWINGS OR THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION. CONSTRUCTION THAT PROCEEDS BEYOND CONFORMANCE WITH THESE REQUIREMENTS SHALL BE PERFORMED AT CONTRACTOR'S SOLE RISK.
- PROTECT FROM DAMAGE ALL STRUCTURES, FINISHES, UTILITIES, EQUIPMENT, VEGETATION, ETC. INDICATED TO REMAIN. WORK THAT EFFECTS THE STRUCTURAL INTEGRITY OF THE BUILDING SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. PROVIDE TEMPORARY PROTECTIVE DUST AND WEATHER TIGHT ENCLOSURES WHERE AND WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR SHALL ADEQUATELY BRACE AND PROTECT ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND MISALIGNMENTS IN ACCORDANCE TO THE APPLICABLE CODES, STANDARDS OF GOOD PRACTICE AND THE AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR SHALL COORDINATE WORKMEN'S PARKING AND DELIVERY LOCATIONS WITH THE OWNER.
- THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE SUPERVISION OF THE CONSTRUCTION.
- GENERAL CONTRACTOR SHALL PROVIDE A LIST OF ALL SUBCONTRACTORS TO THE OWNER PRIOR TO SIGNING OF CONTRACT AND FURNISH A WAIVER OF LIENS FOR ALL WORK AND MATERIALS UPON COMPLETION OF EACH TRADES WORK.
- THE WORK INCLUDES ALL CUTTING AND PATCHING AND RESTORATION OF AREAS DISTURBED DURING THE EXECUTION OF THIS CONTRACT. MATCH TYPE, COLOR, QUALITY, TEXTURE, PATTERN, COURSING, ETC. OF ALL ADJACENT SURFACES (NEW AND/OR EXISTING.)
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS. ALL FINAL APPROVAL AND CERTIFICATE OF OCCUPANCY (AT THE COMPLETION OF CONSTRUCTION) AS REQUIRED IN ACCORDANCE WITH APPLICABLE CODES AND THE AUTHORITY HAVING JURISDICTION.
- THE BUILDING AND GROUNDS SHALL BE KEPT CLEAN AT ALL TIMES. REMOVE ALL DEBRIS FROM THE SITE TO A POINT OF LEGAL DISPOSAL AS APPROVED BY THE AUTHORITY HAVING JURISDICTION. ONLY MATERIALS AND EQUIPMENT NECESSARY FOR THIS PROJECT ARE TO BE STORED ON SITE.
- THE CONTRACTOR SHALL STORE MATERIAL, DISPOSE OF DEBRIS, COORDINATE AND SCHEDULE THE WORK IN COOPERATION WITH THE OWNER FOR MINIMUM DISRUPTION; MAINTAIN CLEAR ACCESS TO THE BUILDING AND THE SITE AT ALL TIMES; PROVIDE AND MAINTAIN ALL SAFETY BARRICADES, SAFETY DEVICES, BARRIERS, ETC. TO PROTECT PERSONS AND PROPERTY IN ACCORDANCE WITH ALL LOCAL AND STATE REGULATIONS.
- CONTRACTOR SHALL SUBMIT IN WRITING PROPOSALS FOR ALL CHANGES TO THE CONTRACTED SCOPE OF WORK FOR REVIEW AND APPROVAL BY THE ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF ALL SUCH WORK. CONSTRUCTION THAT PROCEEDS BEYOND CONFORMANCE WITH THESE REQUIREMENTS SHALL BE PERFORMED AT CONTRACTOR'S SOLE RISK.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL MATERIALS DELIVERED TO THE SITE AND WILL ASSUME OWNERSHIP OF SAME UNTIL THEY HAVE BEEN PROPERLY INSTALLED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER, UNLESS OTHERWISE NOTED.
- FOR THE DURATION OF THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL DAMAGES CAUSED BY HIS FORCES OR SUBCONTRACTOR'S FORCES. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL BROKEN PARTS, INCLUDING GLASS, AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY FACILITIES, SUCH AS HEAT ELECTRICITY AND WATER, REQUIRED FOR THE SCOPE OF WORK PER THE CONTRACT. TEMPORARY WORK OF ANY NATURE, INCLUDING STAIRS, LADDERS, RUNWAYS AND SCAFFOLDING, SHALL MEET THE SAFETY REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- WORKMANSHIP: IT IS REQUIRED THAT ALL WORK SHALL BE PERFORMED BY PERSONS WHO ARE SKILLED AND EXPERIENCED IN THEIR RESPECTIVE TRADES. ALL INSTALLATIONS SHALL OPERATE PROPERLY IN A HIGHEST QUALITY MANNER. WORKMANSHIP SHALL CONFORM TO THE BEST TRADE PRACTICES. FINISH SURFACES SHALL BE PLUMB AND LEVEL, STRAIGHT AND FREE FROM IMPERFECTIONS AND SET FIRMLY TO ACCURATE MEASUREMENTS. FINISHED PRODUCTS SHALL BE TOTALLY FREE OF COVERING MATERIALS, LOOSE AND FOREIGN MATERIALS, ETC.
- CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH ADJACENT WORK AND COOPERATE WITH OTHER TRADES TO FACILITATE THE PROGRESS OF THE WORK. EACH TRADE SHALL AFFORD ALL OTHER TRADES EVERY REASONABLE OPPORTUNITY FOR INSTALLATION OF THEIR SCOPE OF WORK AND FOR THE TEMPORARY STORAGE OF THEIR TOOLS AND MATERIALS.
- GENERAL CLEANING: UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL AREAS, REMOVING ALL STAINS, DEBRIS, ETC. RESULTING FROM CONSTRUCTION. THE CONTRACTOR SHALL ALSO CLEAN ALL GLASS, INSIDE AND OUT, WITH FINAL APPROVAL OF ALL CLEANING WORK TO BE PROVIDED BY THE OWNER AND ARCHITECT.

IECC CALCULATIONS/SYNOPSIS

BUILDING WAS SUBMITTED UNDER SEPARATE PERMIT. NO CHANGES ARE BEING MADE TO THE ENVELOPE OR THE EXISTING BUILDING. FOR ELECTRICAL AND LIGHTING CALCULATIONS SEE ELECTRICAL PLANS. FOR MECHANICAL CALCULATIONS SEE MECHANICAL PLANS.

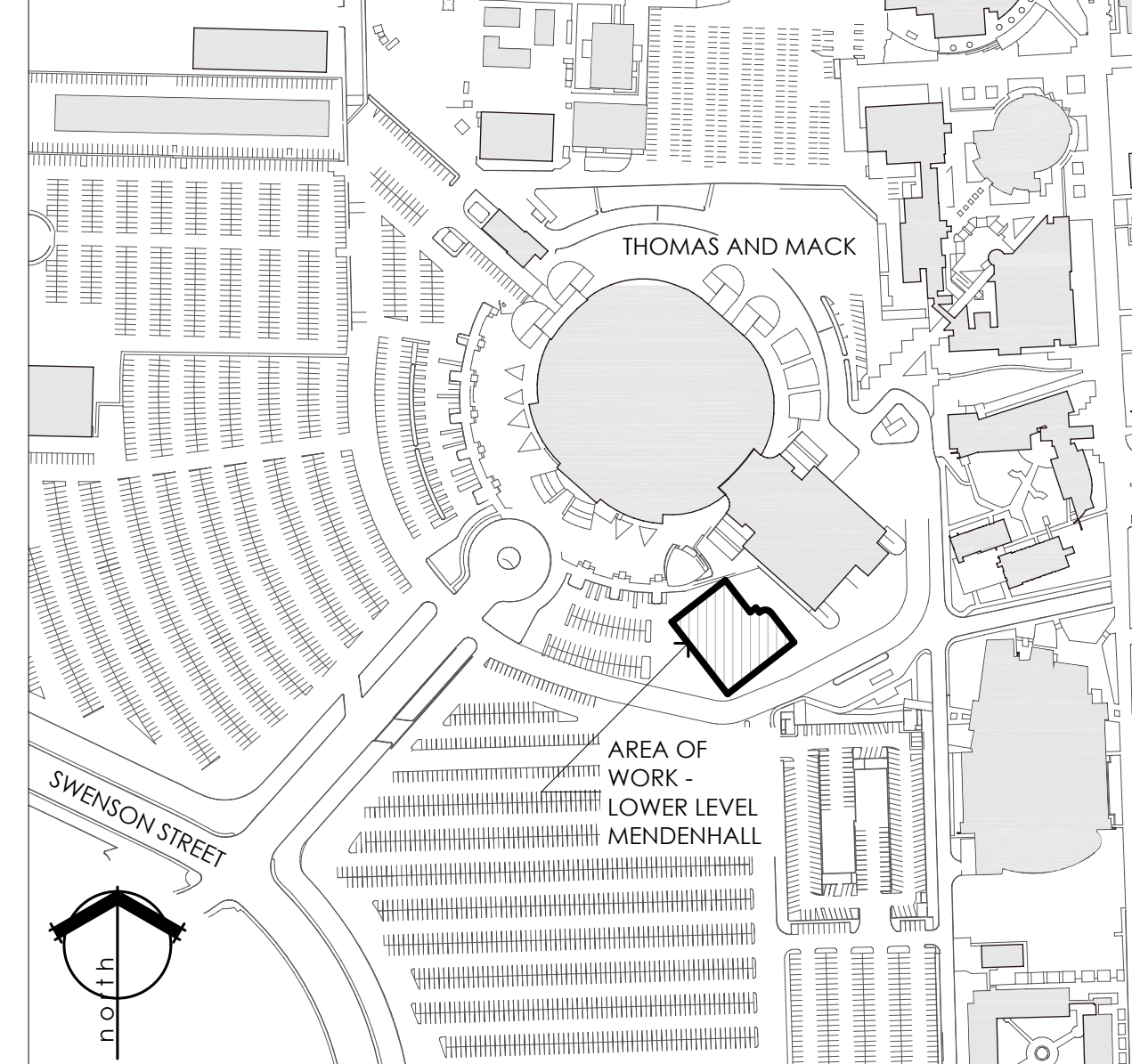
CODE ANALYSIS

JURISDICTION	NEVADA STATE PUBLIC WORKS DIVISION & NEVADA STATE FIRE MARSHALL
APN	162-22-701-003
1) CODE YEAR / TYPE	2012 IBC, 2012 IFC, 2012 IECC, 2011 NEC, 2012 UMC, 2012 UPC.
2) OCCUPANCY CLASSIFICATION (IBC chapter 3)	B (TI SCOPE)
3) TYPE OF CONSTRUCTION (IBC chapter 6)	II-B
4) FIRE SPRINKLERS (IBC 903, 903.3)	YES, EXISTING
5) FIRE ALARM (IBC 907)	YES, EXISTING
6) OCCUPANT LOAD (IBC 1004, 1004.6, Table 1004.1.1) PLAYERS LOUNGE/BREAKROOM ACADEMIC/TUTOR ROOM COACH LOCKER ROOM	622 SF @ 1:50 NET = 13 OCC 414 SF @ 1:50 NET = 9 OCC 267 SF @ 1:50 GROSS = 6 OCC TOTAL OCCUPANTS = 28 OCC
7) NUMBER OF EXITS (IBC 1015.1, 1021, and Tables 1015.1, 1021.1, 1021.2) EXITS REQUIRED AT EACH SPACE EXITS PROVIDED AT EACH SPACE	1 1
EXIT WIDTH REQUIRED AT PLAYERS LOUNGE (119) EXIT WIDTH PROVIDED AT PLAYERS LOUNGE (119)	48 OCC x 0.2 = 9.6' 32"
ALLOWABLE TRAVEL DISTANCE (IBC 1016.2) LONGEST TRAVEL DISTANCE:	300' MAXIMUM (SEE PLAN)
8) SPACES REQUIRING FIRE RESISTANCE RATED SEPARATION (IBC 420, 509, 706, 707, 708, 709, 711, 1009.9.3, 1018.1, 1022, 1023, 3006, Tables 509, 1018.1) NONE REQUIRED	
9) REQUIRED PLUMBING FIXTURES (IBC 2902 and Table 2902.1): RESTROOMS ARE EXISTING NO SQUARE FOOTAGE IS BEING ADDED AND OCCUPANCY IS NOT CHANGING.	

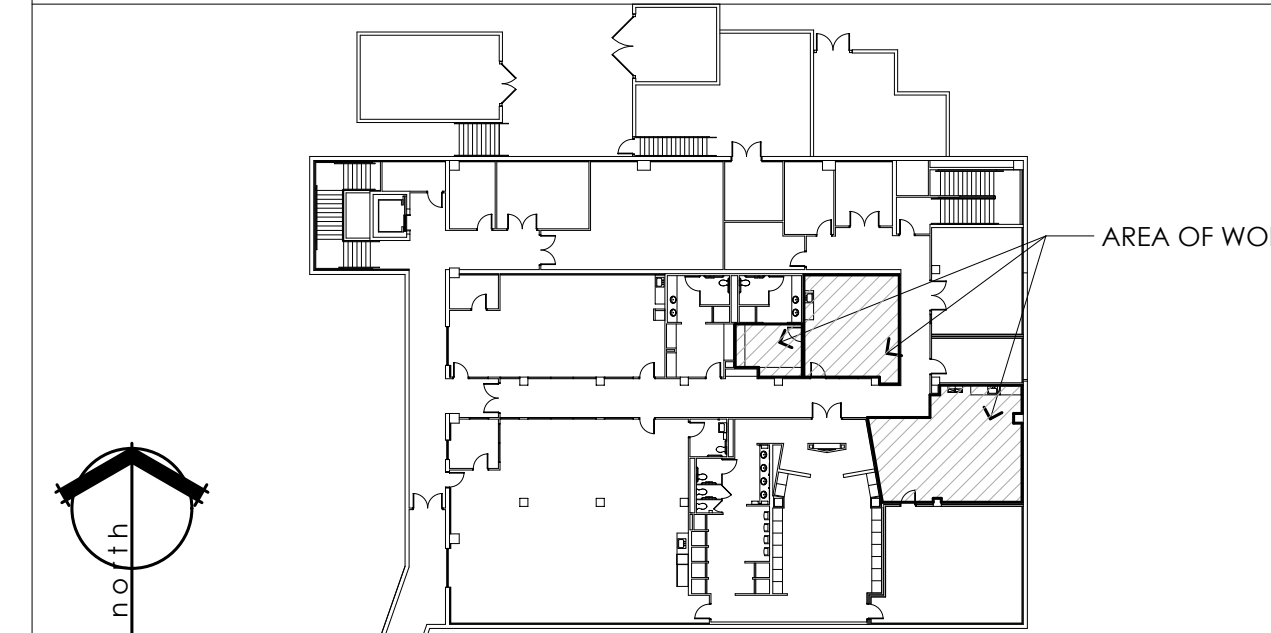
ALTERNATES

- REMODEL BREAK ROOM (119A), NEW CASEWORK, KITCHEN EQUIPMENT, AND FINISHES, SEE DRAWINGS ON A110.
- NEW LIGHTING FIXTURES (T-BAR LIGHTING) THROUGHOUT PLAYERS LOUNGE (119), SEE REFLECTED CEILING PLAN ON A110, ZONED WITH (2) TWO DIMMABLE SWITCHES.
- FULLY REPLACE RUBBER FLOORING IN BREAK ROOM (119A).
- FULLY REPLACE RUBBER FLOORING IN COACHES LOCKER ROOM (109).

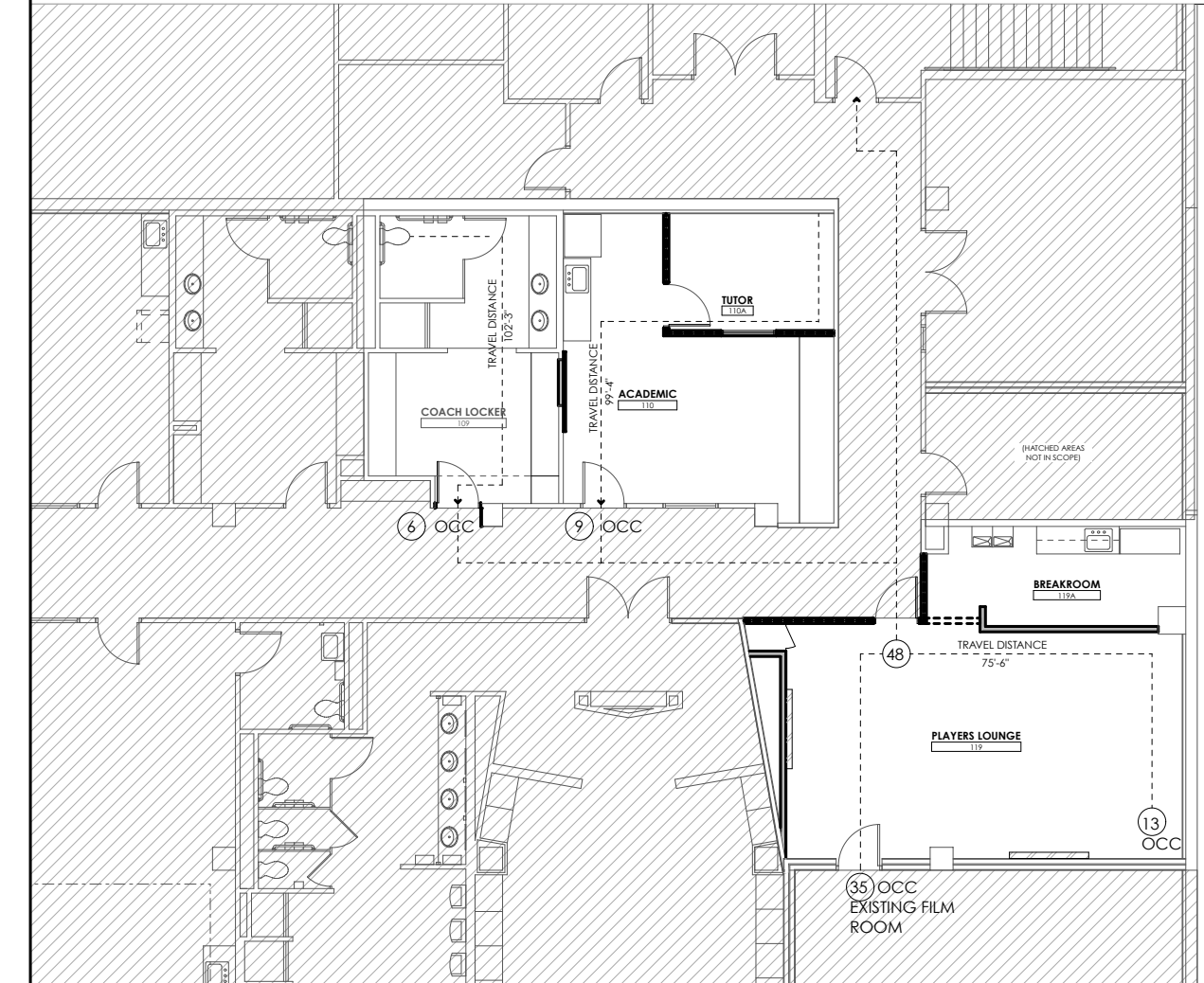
SITE PLAN



OVERALL PLAN



EXITING PLAN



DRAWING INDEX

	NO.	SHEET TITLE	4.6.18	4.6.18	4.6.18	4.6.18	4.6.18
GENERAL	HELLO	NOTES, SITE PLAN AND INDEX					
	G000	SPECIFICATIONS					
	G001	SPECIFICATIONS					
	G002	SPECIFICATIONS					
ARCHITECTURAL	A100	DEMOLITION PLAN					
	A101	FLOOR PLAN					
	A102	REFLECTED CEILING PLAN					
	A103	FINISH FLOOR PLAN & DETAILS					
	A104	DOOR SCHEDULE, WINDOW SCHEDULE & DETAILS					
	A110	ALTERNATES					
MECHANICAL	M000	MECHANICAL COVER SHEET					
	M101	MECHANICAL PLAN					
ELECTRICAL	E000	ELECTRICAL COVER SHEET					
	E001	ELECTRICAL SPECIFICATIONS					
	E201	LIGHTING CEILING PLAN					
	E301	POWER PLAN					
	E500	ELECTRICAL SINGLE LINE DIAGRAM AND SCHEDULES					

PROJECT TEAM

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4.6.18

SPM / SPWD Submittal

TITLE

NOTES, SITE
PLAN AND
INDEX

DRAWING NO.

HELLO

118.003 UNLV Mendenhall Remodel

ENERGY NOTES

- ALL EXTERIOR DOORS SHALL LIMIT AIR INFILTRATION AROUND THEIR PERIMETER IN A CLOSED POSITION.
- PROVIDE SEAL AT HEAD SILL AND JAMB.
- OPEN EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AT PENETRATIONS OF UTILITIES THROUGH THE ENVELOPE, SHALL BE SEALED, CAULKED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.

FIRE DEPARTMENT NOTES

- PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION'S FIRE DEPT. FIELD INSPECTOR.
- ALL EXIT DOORS SHALL SWING IN THE DIRECTION OF TRAVEL.
- ALL EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- PROVIDE EXIT SIGNS ABOVE EXITS WITHIN MIN. 3/4" X 6" LETTERS ON CONTRASTING BACKGROUND.
- PROVIDE ROOM CAPACITY SIGN AS REQUIRED BY FIRE DEPT.
- MAINTAIN A MIN. OF 44" AISLES TO EXIT OR PUBLIC WAY.
- ANY DECORATIONS USED SHALL BE NON-COMBUSTIBLE OR FLAME PROOFED IN AN APPROVED MANNER.
- SUBMIT PLANS FOR FIXED FIRE EXTINGUISHING SYSTEM FOR APPROVAL OF INSTALLATION AND OPERATION PRIOR TO INSTALLATION TO THE AUTHORITY HAVING JURISDICTION'S FIRE DEPT.
- PROVIDE OUTSIDE GAS SHUT OFF VALVE CONSPICUOUSLY MARKED.
- PROVIDE FIRE DAMPERS WHERE AIR DUCTS PENETRATE FIRE RATED WALLS OR CEILING.

ACCESSIBILITY NOTES

- ACCESS TO THESE FACILITIES SHALL BE PROVIDED AT PRIMARY ENTRANCES.
- THE SLOPE OF PUBLIC WALKS SHALL NOT EXCEED 5%.
- WALKING SURFACE SLOPING LESS THAN 6% SHALL BE SLIP RESISTANT.
- PROVIDE A 60" X 60" MIN. LANDING ON STRIKE SIDE OF DOOR W/ 44" MIN. LENGTH IN DIRECTION OF TRAVEL.
- WALKS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK.
- THE SLOPE OF RAMPS SHALL NOT EXCEED 8.33%.
- RAMPS SHALL HAVE A NON-SLIP SURFACE.
- RAMPS SHALL BE 48" WIDE MIN.
- EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 3 FT. WIDE BY NOT LESS THAN 6"-8" HIGH CAPABLE OF OPENING 90° AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT WAY IS 32" MIN.
- THRESHOLD SHOULD BE A MAX 1/2" ABOVE THE ADJACENT FLOOR OR MAX 1/2" WITHA 1/4" BEVEL AT 21.
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. FOR INTERIOR DOORS OR 8.5 LB. FOR EXTERIOR DOORS WHEN FIRE DOORS ARE REQUIRED THE MAXIMUM EFFORT CAN BE INCREASED BUT NOT TO EXCEED 15 LBS.
- THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
- PROVIDE LEVER TYPE HARDWARE PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. (30" TO 44" A.F.F.)
- ALL DOORWAYS LEADING TO SANITARY FACILITIES SHALL HAVE 32" CLEAR UNOBSTRUCTED OPENINGS.
- PROVIDE 1.1/4"Ø GRAB BARS AT 33" A.F.F. AT REAR AND SIDE OF W.C., GRAB BAR AT SIDE TO BE 42" LONG AND EXTEND 24" BEYOND FRONT OF TOILET. GRAB BAR TO BE 36" LONG AT BACK W/ 1.1/2" CLR. FROM WALL. BAR FASTENERS AND MOUNTING SUPPORTS TO WITHSTAND 250 LBS. PER FT. IN BENDING, SHEAR AND STRESS.
- WATER CLOSETS SHALL HAVE A SEAT HEIGHT OF 17" TO 19" FLUSH VALVES TO HAVE MAX. 5 LBS. OPERATING FORCE, AND 29" CLEAR FROM FLOOR TO BOTTOM OF APRON WITH KNEE, MTD. ON WIDE SIDE OF TOILET @ 44" A.F.F.
- URNINAL TO HAVE A CLEAR SPACE OF 30" X 48" IN FRONT. FLUSH VALVES TO HAVE MAX. 5 LBS. OPERATING FORCE.
- PROVIDE 30" X 48" CLEAR SPACE IN FRONT OF LAVATORY.
- PROVIDE CLEARANCE OF 29", 8" DEPTH AT THE TOP AND A TOE CLEARANCE OF 9" FROM THE FLOOR AND 17" DEEP FROM THE FRONT OF THE LAVATORY.
- INSULATE HOT WATER AND DRAIN PIPES.
- FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND NOT REQUIRED GRASPING, PINCHING, OR TWISTING. FAUCET TO HAVE MAX. 5 LBS. OPERATING FORCE.
- LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS WITHIN 40" FROM FLOOR.
- LOCATED TISSUE DISPENSERS ON THE WALL WITHIN 12" OF THE FRONT EDGE OF THE TOILET SEAT.
- SELF CLOSING VALVES TO REMAIN OPEN FOR MIN. 10 SEC.

DIVISION 1 - GENERAL DATA

- THE PROJECT CONSISTS OF A MINOR REMODEL FOR THE PLAYERS LOUNGE, STUDY ROOM, AND COACH'S LOCKER ROOM ON THE LOWER LEVEL OF THE MENDENHALL BUILDING. THE PROJECT IS LOCATED ON 4505 SOUTH MARYLAND PARKWAY LAS VEGAS, NEVADA 89154. AS SHOWN ON CONTRACT DOCUMENTS PREPARED BY:
APTUS
1200 S. 4TH STREET, SUITE 206
LAS VEGAS, NEVADA 89104
- DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL HAVE FULL USE OF THE PREMISES FOR CONSTRUCTION OPERATIONS, INCLUDING USE OF THE SITE. THE CONTRACTORS USE OF THE PREMISES IS LIMITED ONLY BY THE OWNERS RIGHT TO PERFORM CONSTRUCTION OPERATIONS WITH ITS OWN FORCES OR TO EMPLOY SEPARATE CONTRACTORS ON PORTIONS OF THE PROJECT. CONFINE OPERATIONS TO AREAS WITHIN THE CONTRACT LIMITS INDICATED. PORTIONS OF THE SITE BEYOND AREAS IN WHICH CONSTRUCTION OPERATIONS ARE INDICATED ARE NOT TO BE DISTURBED. KEEP DRIVENWAYS AND ENTRANCES SERVING THE PREMISES CLEAR AND AVAILABLE TO THE OWNER AND OWNER'S EMPLOYEES AT ALL TIMES. DO NOT USE THESE AREAS FOR PARKING OR STORAGE OF MATERIALS.
- THE OWNER RESERVES THE RIGHT TO OCCUPY AND TO PLACE AND INSTALL EQUIPMENT IN COMPLETED AREAS OF THE BUILDING, PRIOR TO SUBSTANTIAL COMPLETION PROVIDED THAT SUCH OCCUPANCY DOES NOT INTERFERE WITH COMPLETION OF THE WORK.
- COORDINATE CONSTRUCTION ACTIVITIES INCLUDED UNDER VARIOUS SECTIONS OF THESE CONSTRUCTION DOCUMENTS TO ASSURE EFFICIENT AND ORDERLY INSTALLATION OF EACH PART OF THE WORK. WHERE INSTALLATION OF ONE PART OF THE WORK IS DEPENDENT ON INSTALLATION OF OTHER COMPONENTS, EITHER BEFORE OR AFTER ITS OWN INSTALLATION, SCHEDULE CONSTRUCTION ACTIVITIES IN THE SEQUENCE REQUIRED TO OBTAIN BEST RESULTS. WHERE AVAILABILITY OF SPACE IS LIMITED, COORDINATE INSTALLATION OF DIFFERENT COMPONENTS TO ASSURE MAXIMUM ACCESSIBILITY FOR REQUIRED MAINTENANCE, SERVICE AND REPAIR. MAKE ADEQUATE PROVISIONS TO ACCOMMODATE ITEMS SCHEDULED FOR LATER INSTALLATION.
- COORDINATE SCHEDULING AND TIMING OF REQUIRED ADMINISTRATIVE PROCEDURES WITH OTHER CONSTRUCTION ACTIVITIES TO AVOID CONFLICTS AND ENSURE ORDERLY PROGRESS OF THE WORK. SUCH ADMINISTRATIVE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
PREPARATION OF SCHEDULES
INSTALLATION AND REMOVAL OF TEMPORARY FACILITIES.
DELIVERY AND PROCESSING OF SUBMITTALS.
PROGRESS MEETINGS.
PROJECT CLOSE-OUT ACTIVITIES.
- WITHIN 15 DAYS OF NOTICE TO PROCEED, SUBMIT A LIST OF THE CONTRACTOR'S PRINCIPLE STAFF ASSIGNMENTS, INCLUDING THE SUPERINTENDENT AND OTHER PERSONNEL IN ATTENDANCE AT THE SITE. IDENTIFY INDIVIDUALS, THEIR DUTIES AND RESPONSIBILITIES; LIST THEIR ADDRESSES AND TELEPHONE NUMBERS.
- REQUIRE THE INSTALLER OF EACH MAJOR COMPONENT TO INSPECT BOTH THE SUBSTRATE AND CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN AN ACCEPTABLE MANNER.
- COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS, TO THE EXTENT THAT THOSE INSTRUCTIONS AND RECOMMENDATIONS ARE MORE EXPLICIT OR STRINGENT THAN REQUIREMENTS CONTAINED IN THE CONTRACT DOCUMENTS.
- INSPECT MATERIALS OR EQUIPMENT IMMEDIATELY UPON DELIVERY AND AGAIN PRIOR TO INSTALLATION. REJECT DAMAGED AND DEFECTIVE ITEMS
- PROVIDE ATTACHMENT AND CONNECTION DEVICES AND METHODS NECESSARY FOR SECURING WORK. SECURE WORK TRUE TO LINE AND LEVEL. ALLOW FOR EXPANSION AND BUILDING MOVEMENT.
- PROVIDE UNIFORM JOINT WIDTHS IN EXPOSED WORK. ARRANGE JOINTS IN EXPOSED WORK TO OBTAIN THE BEST VISUAL EFFECT. REFER QUESTIONABLE CHOICES TO THE ARCHITECT FOR FINAL DECISION.
- RECHECK MEASUREMENTS AND DIMENSIONS, BEFORE STARTING EACH INSTALLATION.
- INSTALL EACH COMPONENT DURING WEATHER CONDITIONS AND PROJECT STATUS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. ISOLATE EACH PART OF THE COMPLETED CONSTRUCTION FROM INCOMPATIBLE MATERIAL AS NECESSARY TO PREVENT DETERIORATION.
- WHERE MOUNTING HEIGHTS ARE NOT INDICATED, INSTALL INDIVIDUAL COMPONENTS AT STANDARD MOUNTING HEIGHTS RECOGNIZED WITHIN THE INDUSTRY FOR THE PARTICULAR APPLICATION INDICATED. REFER QUESTIONABLE MOUNTING HEIGHT DECISIONS TO THE ARCHITECT FOR FINAL DECISION.
- COORDINATE PREPARATION AND PROCESSING OF SUBMITTALS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES. ALLOW SUFFICIENT REVIEW TIME SO THAT INSTALLATION WILL NOT BE DELAYED AS A RESULT OF THE TIME REQUIRED TO PROCESS SUBMITTALS, INCLUDING TIME FOR RESUBMITTALS.
- SHOP DRAWINGS: SUBMIT NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE. HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. SHOP DRAWINGS INCLUDE FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:
DIMENSIONS
IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.
COMPLIANCE WITH ALL APPLICABLE STANDARDS.
NOTATION OF COORDINATION REQUIREMENTS.
NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.
COPIES OF ARCHITECTS/ENGINEERS DRAWINGS WILL NOT BE ACCEPTED.
- SUBMIT FULL-SIZE, FULLY FABRICATED SAMPLES CURED AND FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH THE MATERIAL OR PRODUCT PROPOSED. SAMPLES INCLUDE PARTIAL SECTIONS OF MANUFACTURED OR FABRICATED COMPONENTS, CUTS OR CONTAINERS OF MATERIALS, COLOR RANGE SETS, AND SWATCHES SHOWING COLOR, TEXTURE AND PATTERN.
- USE SKILLED CRAFTSMEN. WORKMEN WHO DO NOT KNOW AND FOLLOW BASIC REQUIREMENTS FOR HIGH QUALITY WORK OF THE TYPE THEY ARE PERFORMING SHALL BE REMOVED FROM THE JOB. WHERE FINISH OPERATIONS DO NOT PRODUCE FINISH SURFACES AS SPECIFIED, THE WORK SHALL BE REMOVED AND CORRECTED AS DIRECTED.
- EMPLOY EXPERIENCED WORKERS OR PROFESSIONAL CLEANERS FOR FINAL CLEANING. CLEAN EACH SURFACE OR UNIT TO THE CONDITION EXPECTED IN A NORMAL, COMMERCIAL BUILDING CLEANING AND MAINTENANCE PROGRAM. COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
- COMPLETE THE FOLLOWING CLEANING OPERATIONS. REMOVE LABELS THAT ARE NOT PERMANENT. CLEAN MIRRORS INCLUDING MIRRORS AND GLASS IN DOORS AND WINDOWS. REMOVE GLAZING COMPOUND AND OTHER SUBSTANCES THAT ARE NOTICEABLE VISION-OBSCURING MATERIALS. REPLACE CHIPPED OR BROKEN GLASS AND OTHER DAMAGED TRANSPARENT MATERIALS. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DUST-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. RESTORE REFLECTIVE SURFACES TO THEIR ORIGINAL REFLECTIVE CONDITION. LEAVE CONCRETE FLOORS BROOM CLEAN, VACUUM CARPETED SURFACES. WIPE SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT. REMOVE EXCESS LUBRICATION AND OTHER SUBSTANCES. CLEAN LIGHT FIXTURES AND LAMPS. CLEAN THE SITE, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, LITTER AND OTHER FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN; REMOVE STAINS, SPILLS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PAVED NOR PLANTED, TO A SMOOTH EVEN-TEXTURED SURFACE.
- REFER TO THE GENERAL CONDITIONS FOR THE TERMS OF THE CONTRACTORS SPECIAL WARRANTY OF WORKMANSHIP AND MATERIALS. MANUFACTURER'S DISCLAIMERS AND LIMITATIONS ON PRODUCT WARRANTIES DO NOT RELIEVE THE CONTRACTOR OF THE WARRANTY ON THE WORK THAT INCORPORATES THE PRODUCTS, NOR DOES IT RELIEVE SUPPLIERS, MANUFACTURERS, AND SUBCONTRACTORS REQUIRED TO COUNTERSIGN SPECIAL WARRANTIES WITH THE CONTRACTOR.
- WHEN CORRECTING WARRANTED WORK THAT HAS FAILED, REMOVE AND REPLACE OTHER WORK THAT HAS BEEN DAMAGED AS A RESULT OF SUCH FAILURE OR THAT MUST BE REMOVED AND REPLACED TO PROVIDE ACCESS FOR CORRECTION OF WARRANTED WORK.
- WHEN WORK COVERED BY A WARRANTY HAS FAILED AND BEEN CORRECTED BY REPLACEMENT OR REBUILDING, REINSTATE THE WARRANTY BY WRITTEN ENDORSEMENT. THE REINSTATED WARRANTY SHALL BE EQUAL TO THE ORIGINAL WARRANTY WITH AN EQUITABLE ADJUSTMENT FOR DEPRECIATION.

DIVISION 1 - GENERAL DATA - (CONT'D)

- UPON DETERMINATION THAT THE WORK COVERED BY A WARRANTY HAS FAILED, REPLACE OR REBUILD THE WORK TO AN ACCEPTABLE CONDITION COMPLYING WITH REQUIREMENT OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPLACING OR REBUILDING DEFECTIVE WORK REGARDLESS OF WHETHER THE OWNER HAS BENEFITED FROM THE USE OF THE WORK THROUGH A PORTION OF ITS ANTICIPATED USEFUL SERVICE LIFE.
- THE OWNER RESERVES THE RIGHT TO REJECT WARRANTIES AND TO LIMIT SELECTIONS TO PRODUCTS WITH WARRANTIES NOT IN CONFLICT WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE OWNER RESERVES THE RIGHT TO REFUSE TO ACCEPT WORK FOR THE PROJECT WHERE A SPECIAL WARRANTY, CERTIFICATION, OR SIMILAR COMMITMENT IS REQUIRED ON SUCH WORK OR PART OF THE WORK, UNTIL EVIDENCE IS PRESENTED THAT ENTITIES REQUIRED TO COUNTERSIGN SUCH COMMITMENT ARE WILLING TO DO SO.

DIVISION 2 - SITEWORK

NOT USED

DIVISION 3 - CONCRETE

NOT USED

DIVISION 4 - MASONRY

NOT USED

DIVISION 5 - METALS

NOT USED

DIVISION 6 - WOOD & PLASTICS

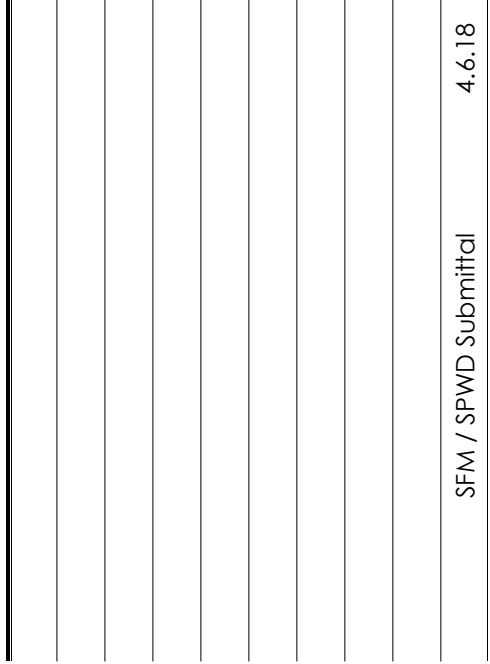
- ROUGH CARPENTRY:
 - PROVIDE AND INSTALL BLOCKING, BACKING, PLYWOOD SHEATHING, FURRING, AND MISCELLANEOUS LIGHT FRAMING REQUIRED FOR COMPLETION OF THE WORK, WHICH IS GENERALLY NOT EXPOSED; WHERE NOTED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
 - PROVIDE BLOCKING IN PARTITIONS FOR MOUNTING OF EQUIPMENT, SHELVING, PLUMBING FIXTURES, ETC.
 - SET ROUGH CARPENTRY ACCURATELY TO REQUIRED LEVELS AND LINES, WITH MEMBERS PLUMB AND TRUE AND ACCURATELY CUT AND FITTED. SECURELY ATTACH WORK TO SUBSTRATE.
 - PLACE WALL SHEATHING WITH END JOINTS STAGGERED. SECURE SHEETS OVER FIRM BEARING. MAINTAIN MINIMUM 1/16 INCH AND MAXIMUM 1/8 INCH SPACING BETWEEN JOINTS OF SHEETS ON WALLS. PLACE PERPENDICULAR TO FRAMING MEMBERS.

DIVISION 7 - THERMAL/MOISTURE PROTECTION

- INSULATION:**
 - COMPLY WITH INSULATION MANUFACTURER'S INSTRUCTIONS APPLICABLE TO PRODUCTS AND APPLICATION INDICATED. EXTEND INSULATION FULL THICKNESS AS INDICATED TO ENVELOP ENTIRE AREA TO BE INSULATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS, AND FILL VOIDS WITH INSULATION. REMOVE PROJECTIONS THAT INTERFERE WITH PLACEMENT. APPLY A SINGLE LAYER OF INSULATION OF REQUIRED THICKNESS, UNLESS OTHERWISE SHOWN OR REQUIRED TO MAKE UP TOTAL THICKNESS.
 - PROTECT INSTALLED INSULATION AND VAPOR RETARDERS FROM DAMAGE DUE TO HARMFUL WEATHER EXPOSURES, PHYSICAL ABUSE, AND OTHER CAUSES. PROVIDE TEMPORARY COVERINGS OR ENCLOSURES WHERE INSULATION WILL BE SUBJECT TO ABUSE AND CANNOT BE CONCEALED AND PROTECTED BY PERMANENT CONSTRUCTION IMMEDIATELY AFTER INSTALLATION.
- INTERIOR PARTITION ACOUSTICAL INSULATION:**
 - GENERAL PART 1 - SUMMARY
 - PROVIDE GLASS FIBER ACOUSTICAL INSULATION FOR INTERIOR PARTITIONS AS INDICATED IN BUILDING PLANS.
 - SUBMITTALS
 - PRODUCT DATA: SUBMIT OWENS-CORNING PRODUCT LITERATURE, SAMPLES AND INSTALLATION INSTRUCTIONS FOR SPECIFIED INSULATION.
 - DELIVERY, STORAGE AND HANDLING
 - PROTECT INSULATION FROM PHYSICAL DAMAGE AND FROM BECOMING WET, SOILED, OR COVERED WITH ICE OR SNOW. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR HANDLING, STORAGE AND PROTECTION DURING INSTALLATION.
 - LABEL INSULATION PACKAGES TO INCLUDE MATERIAL NAME, PRODUCTION DATE AND/OR PRODUCT CODE.
 - LIMITATIONS
 - DO NOT USE UNFACED INSULATION IN EXPOSED APPLICATIONS WHERE THERE IS POTENTIAL FOR SKIN CONTACT AND IRRITATION.
 - KRAFT AND STANDARD FACING'S WILL BURN AND MUST NOT BE LEFT EXPOSED, THE FACING MUST BE INSTALLED IN SUBSTANTIAL CONTACT WITH THE UNEXPOSED SURFACE OF THE CEILING, WALL OR FLOOR FINISH. PROTECT FACING FROM ANY OPEN FLAME OR HEAT SOURCE.
- PRODUCTS
 - MANUFACTURER
 - OWENS-CORNING (OR APPROVED EQUAL)
 - SOUND ATTENUATION
 - TYPE: UNFACED GLASS FIBER ACOUSTICAL INSULATION COMPLYING WITH ASTM C 665, TYPE I
 - SURFACE BURNING CHARACTERISTICS:
 - MAXIMUM FLAME SPREAD: 10
 - MAXIMUM SMOKE DEVELOPED: 10
 - COMBUSTION CHARACTERISTICS:
 - PASSES ASTM E 136
 - FIRE RESISTANCE RATINGS:
 - PASSES ASTM E 119 AS PART OF A COMPLETE FIRE TESTED WALL ASSEMBLY.
 - SOUND TRANSMISSION CLASS: STC 45
 - DIMENSIONAL STABILITY: LINEAR SHRINKAGE LESS THAN 0.1%
- EXECUTION
 - INSPECTION AND PREPARATION
 - EXAMINE SUBSTRATES AND CONDITIONS UNDER WHICH INSULATION WORK IS TO BE PERFORMED. A SATISFACTORY SUBSTRATE IS ONE THAT COMPLIES WITH REQUIREMENTS OF THE SECTION IN WHICH THE SUBSTRATE AND RELATED WORK IS SPECIFIED.
 - VERIFY MECHANICAL AND ELECTRICAL SERVICES WITHIN THE WALL HAVE BEEN TESTED AND INSPECTED.
 - OBTAIN INSTALLER'S WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF WORK IN THIS SECTION. DO NOT PROCEED WITH INSTALLATION OF INSULATION UNTIL SATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
 - CLEAN SUBSTRATES OF SUBSTANCES HARMFUL TO INSULATION.
 - INSTALLATION - GENERAL
 - COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR PARTICULAR CONDITIONS OF INSTALLATION IN EACH CASE.
 - BATTS MAY BE FRICTION-FIT IN PLACE UNTIL THE INTERIOR FINISH IS APPLIED. INSTALL Batts TO FILL ENTIRE STUD CAVITY. IF STUD CAVITY IS LESS THAN 9/8" IN HEIGHT, CUT LENGTHS TO FRICTION-FIT AGAINST FLOOR AND CEILING TRACKS. WALLS AND PENETRATIONS REQUIRE THAT INSULATION BE CAREFULLY CUT TO FIT AROUND OUTLETS, JUNCTION BOXES AND OTHER IRREGULARITIES.
 - WHERE WALLS ARE NOT FINISHED ON BOTH SIDES OR INSULATION DOES NOT FILL CAVITY DEPTH, SUPPLEMENTARY SUPPORT MUST BE PROVIDED TO HOLD PRODUCT IN PLACE.
 - WHERE INSULATION MUST EXTEND HIGHER THAN 8 FEET, TEMPORARY SUPPORT CAN BE PROVIDED TO HOLD PRODUCT IN PLACE UNTIL FINISH MATERIAL IS APPLIED.
- SEALANTS**
 - APPLY JOINT SEALANT AT ALL INTERIOR OCCURRENCES OF CONTROL AND EXPANSION JOINTS ON EXPOSED INTERIOR SURFACES OF EXTERIOR WALLS, PERIMETER JOINTS OF EXTERIOR OPENINGS WHERE INDICATED, PERIMETER JOINTS BETWEEN INTERIOR WALL SURFACES AND FRAMES OF INTERIOR DOORS, WINDOWS AND OTHER INTERSECTIONS OF DISSIMILAR MATERIAL.
 - PROVIDE JOINT SEALANTS THAT HAVE BEEN PRODUCED AND INSTALLED TO ESTABLISH AND MAINTAIN AIRTIGHT CONTINUOUS SEALS THAT ARE WATER RESISTANT, AND CAUSE NO STAINING OR DETERIORATION OF JOINT SUBSTRATES. PROVIDE COLOR OF EXPOSE SEALANTS AS SELECTED BY ARCHITECT FROM MANUFACTURERS FULL RANGE OF STANDARD COLORS. SEALANTS TO BE OF TYPE APPROPRIATE FOR INTENDED APPLICATION.
 - ALL SEALANTS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS APPLICABLE TO PRODUCTS AND APPLICATIONS UNLESS OTHERWISE INDICATED.

DIVISION 8 - DOORS & WINDOWS

- GLAZING**
FURNISH AND INSTALL GLAZING AS SHOWN ON DRAWINGS. COMPLY WITH RECOMMENDATIONS OF "FLAT GLASS MARKETING ASSOC.," (FGMA) AND "SEALANT MANUAL" FOR ALL GLAZING AND SEALANTS. CLEAR FLOAT GLASS SHALL BE TYPE 1 (TRANSPARENT GLASS, FLAT); TEMPERED GLASS SHALL BE CLEAR AS SHOWN ON THE DRAWINGS AND SHALL BE TYPE "TT" (FULLY TEMPERED). INSULATING GLASS SHALL BE PREASSEMBLED UNITS OF ORGANICALLY SEALED PANES OF GLASS ENCLOSED A HERMETICALLY SEALED DEHYDRATED AIR SPACE COMPLYING WITH ASTM E774 FOR GLASS, AIR SPACE, SEALING SYSTEM, SEALANT, SPACER MATERIAL, CORNER DESIGN AND DESICCANT. EXTERIOR PANES TO BE CLEAR AS INDICATED ABOVE; INTERIOR PANES TO BE CLEAR. GLAZING SEALANTS, TAPES, ETC., FOR INSTALLATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER. INSTALLATION SHALL BE IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS; ALL GLAZING SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE PROJECT. SCRATCHED, CHIPPED, BROKEN OR OTHERWISE DAMAGED GLASS UNITS SHALL BE REPLACED AT NO COST TO THE OWNER.
- HOLLOW METAL DOORS AND FRAMES**
 - SUBMITTALS
 - PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED, INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, CORE DESCRIPTIONS, HARDWARE REINFORCEMENTS, PROFILES, ANCHORS, FIRE-RESISTANCE RATING, AND FINISHES.
 - DOOR HARDWARE SUPPLIER IS TO FURNISH TEMPLATES, TEMPLATE REFERENCE NUMBER AND/OR PHYSICAL HARDWARE TO THE STEEL DOOR AND FRAME SUPPLIER IN ORDER TO PREPARE THE DOORS AND FRAMES TO RECEIVE THE FINISH HARDWARE ITEMS.
 - SHOP DRAWINGS: INCLUDE THE FOLLOWING:
 - ELEVATIONS OF EACH DOOR DESIGN.
 - DETAILS OF DOORS, INCLUDING VERTICAL AND HORIZONTAL EDGE DETAILS AND METAL THICKNESSES.
 - FRAME DETAILS FOR EACH FRAME TYPE, INCLUDING DIMENSIONED PROFILES AND METAL THICKNESSES.
 - LOCATIONS OF REINFORCEMENT AND PREPARATIONS FOR HARDWARE.
 - DETAILS OF ANCHORAGES, JOINTS, FIELD SPLICES, AND CONNECTIONS.
 - DETAILS OF ACCESSORIES.
 - DETAILS OF MOLDINGS, REMOVABLE STOPS, AND GLAZING.
 - DETAILS OF CONDUIT AND PREPARATIONS FOR POWER, SIGNAL, AND CONTROL SYSTEMS.
 - SAMPLES FOR VERIFICATION:
 - SAMPLES ARE ONLY REQUIRED BY REQUEST OF THE ARCHITECT AND FOR MANUFACTURES THAT ARE NOT CURRENT MEMBERS OF THE STEEL DOOR INSTITUTE.
 - INFORMATIONAL SUBMITTALS:
 - QUALITY ASSURANCE
 - SOURCE LIMITATIONS: OBTAIN HOLLOW METAL DOORS AND FRAMES THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER WHEREVER POSSIBLE.
 - QUALITY STANDARD: IN ADDITION TO REQUIREMENTS SPECIFIED, COMPLY WITH ANS/SDI A250.8, LATEST EDITION, "RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES".
 - PRE-SUBMITTAL CONFERENCE: CONDUCT CONFERENCE IN COMPLIANCE WITH REQUIREMENTS IN DIVISION 01 SECTION "PROJECT MEETINGS" WITH ATTENDANCE BY REPRESENTATIVES OF SUPPLIER, INSTALLER, AND CONTRACTOR TO REVIEW PROPER METHODS AND PROCEDURES FOR INSTALLING HOLLOW METAL DOORS AND FRAMES AND TO VERIFY INSTALLATION OF ELECTRICAL KNOCKOUT BOXES AND CONDUIT AT FRAMES WITH ELECTRIFIED OR ACCESS CONTROL HARDWARE.
 - DELIVERY, STORAGE, AND HANDLING
 - DELIVER HOLLOW METAL WORK PALLETIZED, WRAPPED, OR CRATED TO PROVIDE PROTECTION DURING TRANSIT AND PROJECT SITE STORAGE. DO NOT USE NON-VENTED PLASTIC.
 - DELIVER WELDED FRAMES WITH TWO REMOVABLE SPREADER BARS ACROSS BOTTOM OF FRAMES, TACK WELDED TO JAMBS AND MULLIONS.
 - STORE HOLLOW METAL WORK UNDER COVER AT PROJECT SITE. PLACE IN STACKS OF FIVE UNITS MAXIMUM IN A VERTICAL POSITION WITH HEADS UP, SPACED BY BLOCKING. ON MINIMUM 4-INCH HIGH WOOD BLOCKING. DO NOT STORE IN A MANNER THAT TRAPS EXCESS HUMIDITY.
 - PROVIDE MINIMUM 1/4-INCH SPACE BETWEEN EACH STACKED DOOR TO PERMIT AIR CIRCULATION. DOOR AND FRAMES TO BE STACKED IN A VERTICAL UPRIGHT POSITION.
 - PROJECT CONDITIONS
 - FIELD MEASUREMENTS: VERIFY ACTUAL DIMENSIONS OF OPENINGS BY FIELD MEASUREMENTS BEFORE FABRICATION.
 - COORDINATION
 - COORDINATE INSTALLATION OF ANCHORAGES FOR HOLLOW METAL FRAMES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.
 - SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE DOORS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
 - WARRANTY INCLUDES INSTALLATION AND FINISHING THAT MAY BE REQUIRED DUE TO REPAIR OR REPLACEMENT OF DEFECTIVE DOORS.
 - PRODUCTS
 - MANUFACTURERS
 - MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
 - CECO DOOR PRODUCTS.
 - CURRIES COMPANY.
 - SECURITY METAL PRODUCTS.
 - MATERIALS
 - COLD-ROLLED STEEL SHEET: ASTM A 1008/A 1008M, COMMERCIAL STEEL (CS), TYPE B; SUITABLE FOR EXPOSED APPLICATIONS.
 - PREFORMED METAL FRAMES FOR LIGHT OPENINGS: MANUFACTURER'S STANDARD FRAME FORMED OF 0.048-INCH-THICK, COLD ROLLED STEEL SHEET; WITH BAKED ENAMEL OR POWDER COATED FINISH; AND APPROVED FOR USE IN DOORS OF FIRE PROTECTION RATING INDICATED. MATCH PRE-FINISHED DOOR PAINT COLOR WHERE APPLICABLE.
 - GLAZING: COMPLY WITH REQUIREMENTS IN DIVISION 08 SECTION "GLAZING" AND WITH THE HOLLOW METAL DOOR MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - FACTORY GLAZING: FACTORY INSTALL GLAZING IN DOORS AS INDICATED. DOORS WITH FACTORY INSTALLED GLASS TO INCLUDE ALL OF THE REQUIRED GLAZING MATERIAL.
 - ACCESSORIES
 - MULLIONS AND TRANSOM BARS: JOIN TO ADJACENT MEMBERS BY WELDING OR RIGID MECHANICAL ANCHORS.
 - GROUT GUARDS: FORMED FROM SAME MATERIAL AS FRAMES, NOT LESS THAN 0.016 INCHES THICK.
 - FABRICATION
 - FABRICATE HOLLOW METAL WORK TO BE RIGID AND FREE OF DEFECTS, WARP, OR BUCKLE. ACCURATELY FORM METAL TO REQUIRED SIZES AND PROFILES, WITH MINIMUM RADIUS FOR THICKNESS OF METAL. WHERE PRACTICAL, FIT AND ASSEMBLE UNITS IN MANUFACTURER'S PLANT, WHEN SHIPPING LIMITATIONS SO DICTATE. FRAMES FOR LARGE OPENINGS ARE TO BE FABRICATED IN SECTIONS FOR SPlicing OR SPLINING IN THE FIELD BY OTHERS.
 - TOLERANCES: FABRICATE HOLLOW METAL WORK TO TOLERANCES INDICATED IN ANS/SDI A250.8.
 - HOLLOW METAL DOORS:
 - EXTERIOR DOORS: PROVIDE OPTIONAL WEEP-HOLE OPENINGS IN BOTTOM OF EXTERIOR DOORS TO PERMIT MOISTURE TO ESCAPE WHERE SPECIFIED.
 - GLAZED LITES: FACTORY CUT OPENINGS IN DOORS WITH APPLIED TRIM OR KITS TO FIT. FACTORY INSTALL GLAZING WHERE INDICATED.
 - LOUVERS: FACTORY CUT OPENINGS IN DOOR AND INSTALL LOUVERS INTO PREPARED OPENINGS WHERE INDICATED.
 - ASTRAGALS: PROVIDE OVERLAPPING ASTRAGALS AS NOTED IN DOOR HARDWARE SETS IN DIVISION 08 SECTION "DOOR HARDWARE" ON ONE LEAF OF PAIRS OF DOORS WHERE REQUIRED BY NFPA 80 FOR FIRE-PERFORMANCE RATING OR WHERE INDICATED. EXTEND MINIMUM 3/4 INCH BEYOND EDGE OF DOOR ON WHICH ASTRAGAL IS MOUNTED.
 - CONTINUOUS HINGE REINFORCEMENT: PROVIDE WELDED CONTINUOUS 12 GAUGE STRAP FOR CONTINUOUS HINGES SPECIFIED IN HARDWARE SETS IN DIVISION 08 SECTION "DOOR HARDWARE".
 - HOLLOW METAL FRAMES:
 - SHIPPING LIMITATIONS: WHERE FRAMES ARE FABRICATED IN SECTIONS DUE TO SHIPPING OR HANDLING LIMITATIONS, PROVIDE ALIGNMENT PLATES OR ANGLES AT EACH JOINT, FABRICATED OF SAME THICKNESS METAL AS FRAMES.
 - WELDED FRAMES: WELD FLUSH FACE JOINTS CONTINUOUSLY; GRIND, FILL, DRESS, AND MAKE SMOOTH, FLUSH, AND INVISIBLE.
 - WELDED FRAMES ARE TO BE PROVIDED WITH TWO STEEL SPREADERS TEMPORARILY ATTACHED TO THE BOTTOM OF BOTH JAMBS TO SERVE AS A BRACE DURING SHIPPING AND HANDLING. SPREADER BARS ARE FOR BRACING ONLY AND ARE NOT TO BE USED TO SIZE THE FRAME OPENING.
 - SIDE-LIGHT AND TRANSOM BAR FRAMES: PROVIDE CLOSED TUBULAR MEMBERS WITH NO VISIBLE FACE SEAMS OR JOINTS, FABRICATED FROM SAME MATERIAL AS DOOR FRAME. FASTEN MEMBERS AT CROSSINGS AND TO JAMBS BY BUTT WELDING.
 - EQUAL RABBIT FRAMES: PROVIDE FRAMES WITH EQUAL RABBIT DIMENSIONS UNLESS GLAZING AND REMOVABLE STOPS REQUIRE WIDER DIMENSIONS ON GLASS SIDE OF FRAME.



DIVISION 8 - (CONT'D)

- 5. HIGH FREQUENCY HINGE REINFORCEMENT: PROVIDE HIGH FREQUENCY HINGE REINFORCEMENTS AT DOOR OPENINGS 48-INCHES AND WIDER WITH MORTISE BUTT TYPE HINGES AT TOP HINGE LOCATIONS.
6. CONTINUOUS HINGE REINFORCEMENT: PROVIDE WELDED CONTINUOUS 12 GAUGE STRAPS FOR CONTINUOUS HINGES SPECIFIED IN HARDWARE SETS IN DIVISION 08 SECTION "DOOR HARDWARE".
7. PROVIDE COUNTERSUNK, FLAT- OR OVAL-HEAD EXPOSED SCREWS AND BOLTS FOR EXPOSED FASTENERS UNLESS OTHERWISE INDICATED FOR REMOVABLE STOPS. PROVIDE SECURITY SCREWS AT EXTERIOR LOCATIONS.
8. MORTAR GUARDS: PROVIDE GUARD BOXES AT BACK OF HARDWARE MORTISES IN FRAMES AT ALL HINGES AND STRIKE PREPS REGARDLESS OF GROUTING REQUIREMENTS.
9. FLOOR ANCHORS: WELD ANCHORS TO BOTTOM OF JAMBS AND MULLIONS WITH AT LEAST FOUR SPOT WELDS PER ANCHOR.
10. JAMB ANCHORS: PROVIDE NUMBER AND SPACING OF ANCHORS AS FOLLOWS:
A. MASONRY TYPE: LOCATE ANCHORS NOT MORE THAN 18 INCHES FROM TOP AND BOTTOM OF FRAME. SPACE ANCHORS NOT MORE THAN 32 INCHES O.C. AND AS FOLLOWS:
1) TWO ANCHORS PER JAMB UP TO 40 INCHES HIGH.
2) THREE ANCHORS PER JAMB FROM 40 TO 90 INCHES HIGH.
3) FOUR ANCHORS PER JAMB FROM 90 TO 120 INCHES HIGH.
4) FOUR ANCHORS PER JAMB PLUS 1 ADDITIONAL ANCHOR PER JAMB FOR EACH 24 INCHES OR FRACTION THEREOF ABOVE 120 INCHES HIGH.
D. DRILL AND TAP DOORS AND FRAMES TO RECEIVE NON-TEMPLATE, MORTISED, AND SURFACE-MOUNTED DOOR HARDWARE.
3.3 INSTALLATION:
A. GENERAL: INSTALL HOLLOW METAL WORK PLUMB, RIGID, PROPERLY ALIGNED, AND SECURELY FASTENED IN PLACE; COMPLY WITH DRAWINGS AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
B. HOLLOW METAL FRAMES: INSTALL HOLLOW METAL FRAMES OF SIZE AND PROFILE INDICATED. COMPLY WITH ANSI/SDI A250.11 AND NFPA 80 AT FIRE RATED OPENINGS.
1. SET FRAMES ACCURATELY IN POSITION, PLUMBED, ALIGNED, AND BRACED SECURELY UNTIL PERMANENT ANCHORS ARE SET. AFTER WALL CONSTRUCTION IS COMPLETE AND FRAMES PROPERLY SET AND SECURED, REMOVE TEMPORARY BRACES, LEAVING SURFACES SMOOTH AND UNDAMAGED. SHIM AS NECESSARY TO COMPLY WITH INSTALLATION TOLERANCES.
2. FLOOR ANCHORS: PROVIDE FLOOR ANCHORS FOR EACH JAMB AND MULLION THAT EXTENDS TO FLOOR, AND SECURE WITH POST-INSTALLED EXPANSION ANCHORS.
3. MASONRY WALLS: COORDINATE INSTALLATION OF FRAMES TO ALLOW FOR SOLIDLY FILLING SPACE BETWEEN FRAMES AND MASONRY WITH MORTAR.
4. GROUT REQUIREMENTS: DO NOT GROUT HEAD OF FRAMES UNLESS REINFORCING HAS BEEN INSTALLED IN HEAD OF FRAME. DO NOT GROUT VERTICAL OR HORIZONTAL CLOSED MULLION MEMBERS.
C. HOLLOW METAL DOORS: FIT HOLLOW METAL DOORS ACCURATELY IN FRAMES, WITHIN CLEARANCES SPECIFIED BELOW, SHIM AS NECESSARY.
1. NON-FIRE-RATED STANDARD STEEL DOORS:
A. JAMBS AND HEAD: 1/8-INCH PLUS OR MINUS 1/16 INCH.
B. BETWEEN EDGES OF PAIRS OF DOORS: 1/8-INCH PLUS OR MINUS 1/16 INCH.
C. BETWEEN BOTTOM OF DOOR AND TOP OF THRESHOLD: MAXIMUM 3/8 INCH.
D. BETWEEN BOTTOM OF DOOR AND TOP OF FINISH FLOOR (NO THRESHOLD): MAXIMUM 3/4 INCH.
2. FIRE-RATED DOORS: INSTALL DOORS WITH CLEARANCES ACCORDING TO NFPA 80.
D. FIELD GLAZING: COMPLY WITH INSTALLATION REQUIREMENTS IN DIVISION 08 SECTION "GLAZING" AND WITH HOLLOW METAL MANUFACTURER'S WRITTEN INSTRUCTIONS.
3.4 ADJUSTING AND CLEANING
A. FINAL ADJUSTMENTS: CHECK AND READJUST OPERATING HARDWARE ITEMS IMMEDIATELY BEFORE FINAL INSPECTION. LEAVE WORK IN COMPLETE AND PROPER OPERATING CONDITION. REMOVE AND REPLACE DEFECTIVE WORK, INCLUDING HOLLOW METAL WORK THAT IS WARPED, BOWED, OR OTHERWISE UNACCEPTABLE.
B. REMOVE GROUT AND OTHER BONDING MATERIAL FROM HOLLOW METAL WORK IMMEDIATELY AFTER INSTALLATION.
C. PRIME-COAT AND PAINTED FINISH TOUCHUP: IMMEDIATELY AFTER ERECTION, SAND SMOOTH RUSTED OR DAMAGED AREAS OF PRIME COAT, OR PAINTED FINISHES, AND APPLY TOUCHUP OF COMPATIBLE AIR DRYING, RUST-INHIBITIVE PRIMER, ZINC RICH PRIMER (EXTERIOR AND GALVANIZED OPENINGS) OR FINISH PAINT.
1.6 DELIVERY, STORAGE, AND HANDLING
A. COMPLY WITH REQUIREMENTS OF REFERENCED STANDARD AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
B. PACKAGE DOORS INDIVIDUALLY IN CARDBOARD CARTONS AND WRAP BUNDLES OF DOORS IN PLASTIC SHEETING.
C. MARK EACH DOOR ON TOP RAIL WITH OPENING NUMBER USED ON SHOP DRAWINGS.
1.7 PROJECT CONDITIONS
A. ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL DOORS UNTIL SPACES ARE ENCLOSED AND WEATHERTIGHT, WET WORK IN SPACES IS COMPLETE AND DRY, AND HVAC SYSTEM IS OPERATING AND MAINTAINING AMBIENT TEMPERATURE AND HUMIDITY CONDITIONS AT OCCUPANCY LEVELS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.
B. ENVIRONMENTAL LIMITATIONS: DO NOT DELIVER OR INSTALL DOORS UNTIL SPACES ARE ENCLOSED AND WEATHERTIGHT, WET WORK IN SPACES IS COMPLETE AND DRY, AND HVAC SYSTEM IS OPERATING AND MAINTAINING TEMPERATURE BETWEEN 40 AND 90 DEG F (16 AND 32 DEG C) AND RELATIVE HUMIDITY BETWEEN 17 AND 50 PERCENT DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.
1.8 WARRANTY
A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE DOORS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
a. WARPING (BOW, CUP, OR TWIST) MORE THAN 1/4 INCH (6.4 MM) IN A 42-BY-84-INCH (1067-2134 MM) DOOR.
b. TELEGRAPHING OF CORE CONSTRUCTION IN FACE VENEERS EXCEEDING 0.01 INCH IN A 3-INCH (0.25 MM) IN A 76.2-MM) SPAN.
2. WARRANTY SHALL ALSO INCLUDE INSTALLATION AND FINISHING THAT MAY BE REQUIRED DUE TO REPAIR OR REPLACEMENT OF DEFECTIVE DOORS.
3. WARRANTY PERIOD FOR SOLID-CORE EXTERIOR DOORS: ONE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
4. WARRANTY PERIOD FOR SOLID-CORE INTERIOR DOORS: LIFE OF INSTALLATION.
PART 2 - PRODUCTS
2.1 MANUFACTURERS
A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. GRAHAM; AN ASSA ABLOY GROUP COMPANY.
2. MAIMAN; AN ASSA ABLOY GROUP COMPANY.
2.2 DOOR CONSTRUCTION, GENERAL
A. CERTIFIED WOOD: FABRICATE DOORS WITH CORES NOT LESS THAN 70 PERCENT OF WOOD PRODUCTS PRODUCED FROM WOOD OBTAINED FROM FORESTS CERTIFIED BY AN FSC-ACCREDITED CERTIFICATION BODY TO COMPLY WITH FSC STD-01-001, "FSC PRINCIPLES AND CRITERIA FOR FOREST STEWARDSHIP."
B. LOW-EMITTING MATERIALS: FABRICATE DOORS WITH ADHESIVES AND COMPOSITE WOOD PRODUCTS THAT DO NOT CONTAINURE FORMALDEHYDE.
C. LOW-EMITTING MATERIALS: FABRICATE DOORS WITH ADHESIVES THAT COMPLY WITH THE TESTING AND PRODUCT REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES' STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL-SCALE ENVIRONMENTAL CHAMBERS."
D. WDMA I.S.1-A PERFORMANCE GRADE: EXTRA HEAVY DUTY.
E. WDMA I.S.1-A PERFORMANCE GRADE:
1. EXTRA HEAVY DUTY;
F. PARTICLEBOARD-CORE DOORS:
1. PARTICLEBOARD: ANSI A208.1, GRADE LD-2.
2. PARTICLEBOARD: STRAW-BASED PARTICLEBOARD COMPLYING WITH ANSI A208.1, GRADE LD-2 OR M-2, EXCEPT FOR DENSITY.
3. BLOCKING: PROVIDE WOOD BLOCKING IN PARTICLEBOARD-CORE DOORS AS FOLLOWS:
a. 5-INCH (125-MM) TOP-RAIL BLOCKING, IN DOORS INDICATED TO HAVE CLOSERS.
b. 5-INCH (125-MM) BOTTOM-RAIL BLOCKING, IN EXTERIOR DOORS AND DOORS INDICATED TO HAVE KICK, MOP, OR ARMOR PLATES.
c. 5-INCH (125-MM) MIDRAIL BLOCKING, IN DOORS INDICATED TO HAVE EXIT DEVICES.
4. PROVIDE DOORS WITH EITHER GLUED-WOOD-STAVE OR STRUCTURAL-COMPOSITE-LUMBER CORES INSTEAD OF PARTICLEBOARD CORES FOR DOORS INDICATED TO RECEIVE EXIT DEVICES.

DIVISION 8 - (CONT'D)

- 2.3 DOORS FOR OPAQUE FINISH
A. INTERIOR SOLID-CORE DOORS:
1. GRADE: CUSTOM.
2. FACED: CLOSED-GRAIN HARDWOOD OF MILL OPTION, HARDBOARD OR MDF.
a. HARDBOARD FACES: AHA A135.4 CLASS 1 (TEMPERED) OR CLASS 2 (STANDARD).
b. MDF FACES: ANSI A208.2, GRADE 150 OR 140.
3. EXPOSED VERTICAL AND TOP EDGES: ANY CLOSED-GRAIN HARDWOOD.
4. CORE: PARTICLEBOARD TYPE LD-2.
5. CONSTRUCTION: FIVE PLYS. STILES AND RAILS ARE BONDED TO CORE, THEN ENTIRE UNIT ABRASIVE PLANED BEFORE VENEERING.
2.4 PLASTIC-LAMINATE-FACED DOORS
A. INTERIOR SOLID-CORE DOORS:
1. LOW PRESSURE LAMINATE FACES THERMALLY FUSED TO CORES UNDER HEAT AND PRESSURE, COMPLYING WITH LAMINATING MATERIALS ASSOCIATION'S PRODUCT STANDARD AND TYPICAL PHYSICAL PROPERTIES OF DECORATIVE OVERLAYS, LMA.2003.
2. COLOR OR WOOD GRAIN PATTERN <INSERT COLOR OR WOOD GRAIN PATTERN>.
3. EXPOSED VERTICAL, TOP AND BOTTOM EDGES: IMPACT-RESISTANT POLYMER EDGING, MINIMUM .040" THICK, APPLIED AFTER FACES.
a. POLYMER EDGING COLOR: SAME COLOR AS FACES.
4. CORE: PARTICLEBOARD TYPE M-2.
2.5 FABRICATION
A. FACTORY FIT DOORS TO SUIT FRAME-OPENING SIZES INDICATED. COMPLY WITH CLEARANCE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING UNLESS OTHERWISE INDICATED.
B. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED. LOCATE HARDWARE TO COMPLY WITH DHI-WDHS-3. COMPLY WITH FINAL HARDWARE SCHEDULES, DOOR FRAME SHOP DRAWINGS, DHI A115-W SERIES STANDARDS, AND HARDWARE TEMPLATES.
1. COORDINATE WITH HARDWARE MORTISES IN METAL FRAMES TO VERIFY DIMENSIONS AND ALIGNMENT BEFORE FACTORY MACHINING.
2. METAL ASTRAGALS: FACTORY MACHINE ASTRAGALS AND FORMED-STEEL EDGES FOR HARDWARE FOR PAIRS OF FIRE-RATED DOORS.
C. TRANSOM AND SIDE PANELS: FABRICATE MATCHING PANELS WITH SAME CONSTRUCTION, EXPOSED SURFACES, AND FINISH AS SPECIFIED FOR ASSOCIATED DOORS. FINISH BOTTOM EDGES OF TRANSOMS AND TOP EDGES OF RABBETED DOORS SAME AS DOOR STILES.
1. FABRICATE DOOR AND TRANSOM PANELS WITH FULL-WIDTH, SOLID-LUMBER[, RABBETED,] MEETING RAILS. PROVIDE FACTORY-INSTALLED SPRING BOLTS FOR CONCEALED ATTACHMENT INTO JAMBS OF METAL DOOR FRAMES.
D. OPENINGS: CUT AND TRIM OPENINGS THROUGH DOORS IN FACTORY.
1. LIGHT OPENINGS: TRIM OPENINGS WITH MOLDINGS OF MATERIAL AND PROFILE INDICATED.
2. GLAZING: FACTORY INSTALL GLAZING IN DOORS INDICATED TO BE FACTORY FINISHED. COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 08 SECTION "GLAZING."
3. LOUVERS: FACTORY INSTALL LOUVERS IN PREPARED OPENINGS.
2.6 SHOP PRIMING
A. DOORS FOR OPAQUE FINISH: SHOP PRIME DOORS WITH ONE COAT OF WOOD PRIMER SPECIFIED IN DIVISION 09 SECTION "INTERIOR PAINTING". SEAL ALL FOUR EDGES, EDGES OF CUTOUTS, AND MORTISES WITH PRIMER.
B. DOORS FOR TRANSPARENT FINISH: SHOP PRIME DOORS WITH STAIN (IF REQUIRED), OTHER REQUIRED PRETREATMENTS, AND FIRST COAT OF FINISH AS SPECIFIED IN DIVISION 09 SECTION "INTERIOR PAINTING OR STAINING AND TRANSPARENT FINISHING." SEAL ALL FOUR EDGES, EDGES OF CUTOUTS, AND MORTISES WITH FIRST COAT OF FINISH.
2.7 FACTORY FINISHING
A. GENERAL: COMPLY WITH REFERENCED QUALITY STANDARD FOR FACTORY FINISHING. COMPLETE FABRICATION, INCLUDING FITTING DOORS FOR OPENINGS AND MACHINING FOR HARDWARE THAT IS NOT SURFACE APPLIED, BEFORE FINISHING.
1. FINISH FACES, ALL FOUR EDGES, EDGES OF CUTOUTS, AND MORTISES. STAINS AND FILLERS MAY BE OMITTED ON TOP AND BOTTOM EDGES, EDGES OF CUTOUTS, AND MORTISES.
B. FINISH DOORS AT FACTORY.
C. FINISH DOORS AT FACTORY THAT ARE INDICATED TO RECEIVE TRANSPARENT FINISH. FIELD FINISH DOORS INDICATED TO RECEIVE OPAQUE FINISH.
D. FINISH DOORS AT FACTORY WHERE INDICATED IN SCHEDULES OR ON DRAWINGS AS FACTORY FINISHED.
E. USE ONLY PAINTS AND COATINGS THAT COMPLY WITH THE TESTING AND PRODUCT REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES' STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL-SCALE ENVIRONMENTAL CHAMBERS."
F. TRANSPARENT FINISH:
1. GRADE: PREMIUM.
2. FINISH: WDMA TR-6 CATALYZED POLYURETHANE <INSERT FINISH DESIGNATION>.
3. STAINING: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
4. EFFECT: SEMIFILLED FINISH, PRODUCED BY APPLYING AN ADDITIONAL FINISH COAT TO PARTIALLY FILL THE WOOD PORES.
5. SHEEN: SATIN.
PART 3 - EXECUTION
3.1 EXAMINATION
A. EXAMINE DOORS AND INSTALLED DOOR FRAMES BEFORE HANGING DOORS.
1. VERIFY THAT FRAMES COMPLY WITH INDICATED REQUIREMENTS FOR TYPE, SIZE, LOCATION, AND SWING CHARACTERISTICS AND HAVE BEEN INSTALLED WITH LEVEL HEADS AND PLUMB JAMBS.
2. REJECT DOORS WITH DEFECTS.
B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
3.2 INSTALLATION
A. HARDWARE: FOR INSTALLATION, SEE DIVISION 08 SECTION "DOOR HARDWARE."
B. INSTALLATION INSTRUCTIONS: INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE REFERENCED QUALITY STANDARD, AND AS INDICATED.
C. SETTING MATERIALS: ARCHITECTURALLY ENGINEERED MORTAR SYSTEMS, THIN-SET MORTARS, MEDIUM BED MORTARS, RAPID SETTING MORTARS, CHEMICAL RESISTANT MORTARS, CERAMIC TILE ADHESIVES.
D. JOB-FITTED DOORS: ALIGN AND FIT DOORS IN FRAMES WITH UNIFORM CLEARANCES AND BEVELS AS INDICATED BELOW; DO NOT TRIM STILES AND RAILS IN EXCESS OF LIMITS SET BY MANUFACTURER OR PERMITTED FOR FIRE-RATED DOORS, MACHINE DOORS FOR HARDWARE. SEAL EDGES OF DOORS, EDGES OF CUTOUTS, AND MORTISES AFTER FITTING AND MACHINING.
1. CLEARANCES: PROVIDE 1/8 INCH (3.2 MM) AT HEADS, JAMBS, AND BETWEEN PAIRS OF DOORS. PROVIDE 1/8 INCH (3.2 MM) FROM BOTTOM OF DOOR TO TOP OF DECORATIVE FLOOR FINISH OR COVERING UNLESS OTHERWISE INDICATED. WHERE THRESHOLD IS SHOWN OR SCHEDULED, PROVIDE 1/4 INCH (6.4 MM) FROM BOTTOM OF DOOR TO TOP OF THRESHOLD UNLESS OTHERWISE INDICATED.
a. COXY WITH NFPA 80 FOR FIRE-RATED DOORS.
2. BEVEL NON-FIRE-RATED DOORS 1/8 INCH IN 2 INCHES (3-1/2 DEGREES) AT LOCK AND HINGE EDGES.
3. BEVEL FIRE-RATED DOORS 1/8 INCH IN 2 INCHES (3-1/2 DEGREES) AT LOCK EDGE; TRIM STILES AND RAILS ONLY TO EXTENT PERMITTED BY LABELING AGENCY.
D. FACTORY-FITTED DOORS: ALIGN IN FRAMES FOR UNIFORM CLEARANCE AT EACH EDGE.
E. FACTORY-FINISHED DOORS: RESTORE FINISH BEFORE INSTALLATION IF FITTING OR MACHINING IS REQUIRED AT PROJECT SITE.
3.3 ADJUSTING
A. OPERATION: RE-HANG OR REPLACE DOORS THAT DO NOT SWING OR OPERATE FREELY.
B. FINISH DOORS: RE-PAINT DOORS THAT ARE DAMAGED OR FINISH THAT DOES NOT COMPLY WITH REQUIREMENTS. DOORS MAY BE REPAIRED OR REFINISHED IF WORK COMPLIES WITH REQUIREMENTS AND SHOWS NO EVIDENCE OF REPAIR OR REFINISHING.
C. OPAQUE FINISH: FIELD APPLIED SOLID PAINTED COLORS OVER SPECIFIED PAINT GRADE VENEER.
1.10 EXAMINATION
A. EXAMINE DOORS AND INSTALLED DOOR FRAMES BEFORE HANGING DOORS.
1. VERIFY THAT FRAMES COMPLY WITH INDICATED REQUIREMENTS FOR TYPE, SIZE, LOCATION, AND SWING CHARACTERISTICS AND HAVE BEEN INSTALLED WITH LEVEL HEADS AND PLUMB JAMBS.
2. REJECT DOORS WITH DEFECTS.
B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
1.11 INSTALLATION
A. HARDWARE: FOR INSTALLATION, SEE DIVISION 8 SECTION "DOOR HARDWARE."
B. INSTALLATION INSTRUCTIONS: INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE REFERENCED QUALITY STANDARD, AND AS INDICATED.
1. INSTALL FIRE RATED DOORS IN CORRESPONDING FIRE RATED FRAMES ACCORDING TO NFPA 80.
C. FACTORY FITTED DOORS: ALIGN IN FRAMES FOR UNIFORM CLEARANCE AT EACH EDGE.
D. FACTORY FINISHED DOORS: RESTORE FINISH BEFORE INSTALLATION IF FITTING OR MACHINING IS REQUIRED AT PROJECT SITE.
1.12 ADJUSTING
A. OPERATION: RE-HANG OR REPLACE DOORS THAT DO NOT SWING OR OPERATE FREELY.
B. FINISH DOORS: RE-PAINT DOORS THAT DO NOT COMPLY WITH REQUIREMENTS. DOORS MAY BE REPAIRED OR REFINISHED IF WORK COMPLIES WITH REQUIREMENTS AND SHOWS NO EVIDENCE OF REPAIR OR REFINISHING.

DIVISION 9 - FINISHES

- 1. GYPSUM DRYWALL SYSTEMS: SHALL CONSIST OF METAL FRAMING SUPPORT MEMBERS (STUDS AND/OR FURRING CHANNELS) AND SHALL INCLUDE INSTALLATION OF SYSTEMS, ANCHORING, TAPING, BEDDING, AND TEXTURING. ALL MEMBERS SHALL COMPLY WITH THICKNESSES AND SPACINGS AS SHOWN ON THE DRAWINGS. FURNISH ALL MATERIALS REQUIRED FOR COMPLETE INSTALLATION. FURNISH AND INSTALL METAL CORNER BEADS AT ALL EXTERIOR CORNERS AND JAMBLINGS AT ALL LOCATIONS WHERE GYPSUM BOARD ABUTS A DISSIMILAR MATERIAL. FURNISH AND INSTALL WATERPROOF DRYWALL WHERE SHOWN ON THE DRAWINGS AND, SPECIFICALLY, ON ALL WALLS OF TOILET ROOMS. ATTACH ALL WALLBOARD WITH DRYWALL SCREWS SPECIFICALLY DESIGNED AND SIZED FOR THE PURPOSE OF THE INSTALLATION. ISOLATE STEEL FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENTS; PROVIDE SLIP JOINTS WHERE PARTITIONS AND WALL FRAMING ABUTS OVERHEAD STRUCTURE. FINISH ALL DRYWALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, BUT IN NO CASE SHALL FINISH TREATMENT BE LESS THAN 3 COAT FINISH WORK. TEXTURE OF DRYWALL TO BE LIGHT "ORANGE PEEL" TEXTURE.
2. RESILIENT BASE: FURNISH AND INSTALL RESILIENT BASE. SEE SCHEDULE FOR COLORS. ALL ADHESIVES SHALL BE WATERPROOF. USE ONLY PRODUCTS ACCEPTABLE TO AND/OR RECOMMENDED BY MANUFACTURER OF BASE MATERIALS. ALL JOINTS SHALL BE TIGHT AND CAREFULLY ALIGNED; ALL BASE SHALL BE NEATLY LEVELED. REPLACE ANY MATERIALS DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. USE PREMOULDED INSIDE AND OUTSIDE CORNERS.
3. PAINTING: INCLUDES FIELD PAINTING OF ALL EXPOSED BARE DUCTWORK, PIPES, HANGERS, EXPOSED STEEL AND IRON WORK, AS WELL AS PRIMED METAL SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT, GYPSUM DRYWALL, FERROUS METALS, WOOD DOORS (WHERE SCHEDULED), IN GENERAL, ALL MATERIALS EXPOSED TO VIEW AND NOT FACTORY PREFINISHED SHALL BE PREPARED AND PAINTED. ALL PAINT MATERIALS SHALL BE NEW, DELIVERED TO PROJECT SITE IN UN-OPENED CONTAINERS. DO NOT APPLY PAINT TO DAMP OR WET SURFACES. RE-PRIME SURFACES PRIOR TO PAINTING IF FACTORY PRIME IS SCRATCHED OR MARRED DURING DELIVERY OR INSTALLATION. CLEAN ALL SURFACES THOROUGHLY PRIOR TO PAINTING, INCLUDING THE REMOVAL OF OIL OR GREASE. SCHEDULE PAINTING SO THAT DUST AND OTHER CONTAMINANTS FROM THE CLEANING PROCESS WILL NOT FALL ON NEWLY PAINTED SURFACES. PROVIDE BARRIER COATS OVER INCOMPATIBLE PRIMERS OR REMOVE AND RE-PRIME. USE NON-PETROLEUM BASED SOLVENTS TO CLEAN GALVANIZED SURFACES PRIOR TO PAINTING. DO NOT PAINT OVER DIRT, RUST, SCALE, GREASE, MOISTURE, SCUFFED SURFACES OR OTHER CONDITIONS DETRIMENTAL TO FORMATION OF A HARD, DURABLE, SMOOTH PAINT FILM. SEE DRAWINGS FOR PAINT COLORS.

EXTERIOR & INTERIOR PAINT SCHEDULE - "LOW VOC"

THE FOLLOWING PRODUCTS ARE BASED ON FRAZEE PAINT. OTHER PRODUCTS ARE ACCEPTABLE UPON APPROVAL BY THE ARCHITECT.

- INTERIOR SURFACES
GYPSUM DRYWALL SYSTEMS
1st COAT: C152 ULTRA TECH PRIMER/SEALER
2nd COAT: ENDURABLE SHEEN AS SELECTED BY OWNER
3rd COAT: ENDURABLE SHEEN AS SELECTED BY OWNER
WOOD - PAINTED
1ST COAT: C312 ULTRA TECH INT/EXT ACRYLIC WOOD PRIMER
2nd COAT: 124 MIRRO GLIDE SG
3rd COAT: 124 MIRRO GLIDE SG
WOOD - CLEAR FINISH -WATER BASED POLYURETHANE
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- WOOD - PAINTED
1ST COAT: C312 ULTRA TECH INT/EXT ACRYLIC WOOD PRIMER
2nd COAT: 124 MIRRO GLIDE SG
3rd COAT: 124 MIRRO GLIDE SG
WOOD - CLEAR FINISH -WATER BASED POLYURETHANE
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- WOOD - PAINTED
1ST COAT: C312 ULTRA TECH INT/EXT ACRYLIC WOOD PRIMER
2nd COAT: 124 MIRRO GLIDE SG
3rd COAT: 124 MIRRO GLIDE SG
WOOD - CLEAR FINISH -WATER BASED POLYURETHANE
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- WOOD - PAINTED
1ST COAT: C312 ULTRA TECH INT/EXT ACRYLIC WOOD PRIMER
2nd COAT: 124 MIRRO GLIDE SG
3rd COAT: 124 MIRRO GLIDE SG
WOOD - CLEAR FINISH -WATER BASED POLYURETHANE
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- WOOD - SEMI-TRANSPARENT STAIN FINISH
1st COAT: OLD MASTERS SEMI-TRANSPARENT STAIN
3 COATS: VARATHANE DIAMOND POLYURETHANE SATIN OR SEMIGLOSS FINISH
FERROUS METAL
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- METAL - GALVANIZED / ALUMINUM (ENAMEL FINISH)
PRETREATMENT: KRUD KUTTER METAL ETCH
1st COAT: C309 ULTRA TECH UNIVERSAL PRIMER
2nd COAT: 520 ACRYLIC DIM SG
3rd COAT: 520 ACRYLIC DIM SG

- ENAMEL FINISHES:
GLOSS: 144 ENDURABLE ACRYLIC LATEX ENAMEL
143 MIRRO GLIDE 100% ACRYLIC ENAMEL
SEMIGLOSS: 124 MIRRO GLIDE 100% ACRYLIC ENAMEL
EGGSHELL: 126 MIRRO GLIDE 100% ACRYLIC ENAMEL
LOW SHEEN: 022 LJO GLO ACRYLIC LOW SHEEN
FLAT FINISH: 015 MAJESTIC FLAT FINISH

4. TILE SETTING MATERIALS AND ACCESSORIES

- PART 1 GENERAL
1.1 SECTION INCLUDES
A. SURFACE PREPARATION PRODUCTS: BACKERBOARDS, SELF-LEVELING UNDERLAYMENTS, WATERPROOFING, UNCOUPLING AND CRACK ISOLATION MEMBRANES, PRE-FORMED SHOWER PAN, SOUND REDUCTION MAT UNDERLAYMENTS.
B. SETTING MATERIALS: ARCHITECTURALLY ENGINEERED MORTAR SYSTEMS, THIN-SET MORTARS, MEDIUM BED MORTARS, RAPID SETTING MORTARS, CHEMICAL RESISTANT MORTARS, CERAMIC TILE ADHESIVES.
C. COLORED TILE GROUTS: SANDED, NON-SANDED, SINGLE COMPONENT AND EPOXY GROUTS..
D. EDGE PROTECTION AND FINISH PROFILES.
E. TILE AND STONE CARE AND MAINTENANCE PRODUCTS.
1.2 SUBMITTALS
A. SUBMIT UNDER PROVISIONS OF SECTION 01300.
B. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
1. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
2. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
3. INSTALLATION METHODS.
C. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS OF COLOR CHIPS REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND PATTERNS.
D. VERIFICATION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO SAMPLES, MINIMUM SIZE 6 INCHES (150 MM) SQUARE, REPRESENTING ACTUAL PRODUCT, COLOR, AND PATTERNS.
1.3 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS OF THIS SECTION WITH MINIMUM TEN YEARS DOCUMENTED EXPERIENCE.
B. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH MINIMUM FIVE YEARS DOCUMENTED EXPERIENCE.
C. MOCK-UP: PROVIDE A MOCK-UP FOR EVALUATION OF SURFACE PREPARATION TECHNIQUES AND APPLICATION WORKMANSHIP.
1. LOCATE MOCK-UPS ON SITE IN LOCATIONS AND SIZE DIRECTED BY ARCHITECT.
2. FINISH AREAS DESIGNATED BY ARCHITECT.

DIVISION 9 - FINISHES (CONT'D)

- 3. DO NOT PROCEED WITH REMAINING WORK UNTIL WORKMANSHIP, COLOR, AND SHEEN ARE APPROVED BY ARCHITECT.
4. REFINISH MOCK-UP AREA AS REQUIRED TO PRODUCE ACCEPTABLE WORK.
5. RETAIN THE MANITAIN A MOCK-UPS DURING CONSTRUCTION IN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING COMPLETED UNIT OF WORK.
6. OBTAIN ARCHITECT'S ACCEPTANCE OF MOCK-UPS BEFORE START OF FINAL UNIT OF WORK.
D. CONDUCT CONFERENCE AT PROJECT SITE TO COMPLY WITH REQUIREMENTS OF DIVISION 1 SECTION "PROJECT MEETINGS."
1.4 DELIVERY, STORAGE, AND HANDLING
A. DELIVER AND STORE PACKAGED MATERIALS IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT UNTIL TIME OF USE. COMPLY WITH REQUIREMENTS OF ANSI A137.1 FOR LABELING SEALED TILE PACKAGES.
B. PREVENT DAMAGE OR CONTAMINATION TO MATERIALS BY WATER, FREEZING, FOREIGN MATTER AND OTHER CAUSES.
C. STORE AND DISPOSE OF SOLVENT-BASED MATERIALS, AND MATERIALS USED WITH SOLVENT-BASED MATERIALS, IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
1.5 PROJECT CONDITIONS
A. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY, AND VENTILATION) WITHIN LIMITS RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
B. ENVIRONMENTAL: INSTALL MORTAR, SET AND GROUT TILE WHEN SURFACES AND AMBIENT TEMPERATURE IS MINIMUM 50 DEGREES F (10 DEGREES C) AND MAXIMUM 90 DEGREES F (32 DEGREES C). CONSULT WITH MANUFACTURER FOR SPECIFIC REQUIREMENTS.
C. DO NOT INSTALL MORTAR, SET OR GROUT TILE EXTERIOR WHEN INCLEMENT WEATHER CONDITIONS ARE EXPECTED WITHIN 48 HOURS AFTER WORK IS COMPLETED UNLESS PROPERLY PROTECTED.
D. PROTECTION: PROTECT ADJACENT WORK SURFACES DURING TILE WORK. CLOSE ROOMS OR SPACES TO TRAFFIC OF ALL TYPES UNTIL MORTAR AND GROUT HAS SET.
E. SAFETY: OBSERVE THE MANUFACTURER'S SAFETY INSTRUCTIONS INCLUDING THOSE PERTAINING TO VENTILATION.
1.6 WARRANTY
A. PRODUCTS SHALL BE PROVIDED WITH THE MANUFACTURERS STANDARD WARRANTY AS FOLLOWS:
1. INSTALLATION SYSTEMS LIMITED WARRANTY:
a. 5 YEARS.
PART 2 PRODUCTS
2.1 MANUFACTURERS
A. ACCEPTABLE MANUFACTURER: CUSTOM@BUILDING PRODUCTS, WHICH IS LOCATED AT: 13001 SEAL BEACH BLVD.; SEAL BEACH, CA 90740; TOLL FREE TEL: 800-282-8786; FAX: 800-200-7765; EMAIL:REQUEST INFO {JACKIE@CBPMAIL.NET}; WEB:WWW.CUSTOMBUILDINGPRODUCTS.COM/ARCHITECTS.ASPX
B. MAPEI.
C. OR APPROVED EQUAL.
2.2 MATERIALS
A. ANTI-FRACTURE MEMBRANE/CLEAVAGE MEMBRANE: WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR ISOLATING THE INSTALLATION FROM CRACKING DUE TO MINOR SUBSTRATE MOVEMENT AND NORMAL STRUCTURAL DEFLECTIONS AS SPECIFIED IN ANSI A108.17 AND COMPLYING WITH ANSI A118.12.
1. CUSTOM BUILDING PRODUCTS CRACK BUSTER PRO CRACK PREVENTION MAT UNDERLAYMENT; SHEET APPLIED PEEL N STICK MEMBRANE.
B. WATERPROOFING AND ANTI-FRACTURE MEMBRANE: WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR THIN-SET TILE INSTALLATIONS AND COMPLYING WITH ANSI 118.10 FOR WATERPROOFING MEMBRANES.
1. CUSTOM BUILDING PRODUCTS REDGARD WATERPROOFING AND CRACK PREVENTION MEMBRANE.
C. MOISTURE BARRIER SYSTEM: WHERE INDICATED ON THE DRAWINGS AND ELSEWHERE AS REQUIRED FOR THIN-SET TILE INSTALLATIONS.
1. REDGARD WATERPROOFING AND CRACK PREVENTION MEMBRANE. SEE MOISTURE BARRIER INSTALLATION INSTRUCTIONS FOR REDGARD. REDUCES MVT FROM 12 LBS/24 HR/1000 SQ FT TO LESS THAN 3 LBS/24 HR/ 1000 SQ FT.
D. SELF-LEVELING UNDERLAYMENT: WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED TO PROVIDE A FLAT, LEVEL SURFACE FOR DIRECT RECEIPT OF TILE AND OTHER FLOOR COVERINGS ON DRY, INTERIOR INSTALLATIONS.
1. CUSTOM BUILDING PRODUCTS LEVELITE SELF-LEVELING UNDERLAYMENT FOR FILLS UP TO 2 INCHES (51 MM) THICK, WEIGHT IS 3 LBS / SQ FT AT 1/2 INCH THICK.
E. CEMENTITIOUS BACKER UNITS: COMPLYING WITH ANSI A 118.9. WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR FLOORS AND WALLS, INTERIOR AND/OR EXTERIOR, WET AREAS, AND DRY AS RECOMMENDED SUBSTRATE FOR TILE, FIRE RATED WALL INSTALLATIONS, HEAT SHIELD WITH UL LISTING FOR FLOORS AND WALLS; INSTALLATION TO COMPLY WITH ANSI A108.11 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
1. 1/2 INCH (12 MM) WONDERBOARD BACKERBOARD (EXTERIOR OR INTERIOR FLOORS, WALLS, CEILING, COUNTERTOPS).
F. CEMENTITIOUS TILE ADHESIVES:
1. ANSI A118.4 POLYMER-ENHANCED MORTARS: WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR SETTING TILE AS SPECIFIED BY ANSI A108.5, DRY-SET PORTLAND CEMENT MORTAR OR LATEX PORTLAND CEMENT MORTAR, OVER SUBSTRATES PREPARED ACCORDINGLY.
a. FOR INSTALLING LARGE FORMAT CERAMIC OR NATURAL STONE TILE (TILE WITH ONE EDGE GREATER THAN 15 INCHES), UTILIZING A MEDIUM BED MORTAR SYSTEM.
1) CUSTOM BUILDING PRODUCTS MEGALITE CRACK PREVENTION MORTAR, WITH SHEAR BOND STRENGTHS GREATER THAN 650 PSI, PER ANSI A118.4 SEC. 5.2.4, FOR WALL AND FLOOR ASSEMBLIES WHERE MAXIMUM STRENGTH IS DESIRED.
G. TILE GROUT: WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR FILLING THE JOINTS BETWEEN TILES, COMPLIES WITH ANSI A108.10 INSTALLATION OF GROUT IN TILE WORK.
1. CHEMICAL RESISTANT, WATER-CLEANABLE TILE SETTING AND GROUTING EPOXY: ANSI A118.3:
a. CUSTOM BUILDING PRODUCTS FUSION PRO SINGLE COMPONENT, HIGH PERFORMANCE GROUT, MEETING THE PERFORMANCE REQUIREMENT OF ANSI A118.3 AND A118.7.
H. ELASTOMERIC JOINT CAULK: PROVIDE WHERE INDICATED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED AT ALL JOINTS BETWEEN FLOORS AND WALLS AND AT JOINTS BETWEEN TILE AND DISSIMILAR MATERIALS.
1. CUSTOM BUILDING PRODUCTS COMMERCIAL 100 PERCENT SILICONE CAULK, CONFORMS TO ASTM C 720 FOR MOVEMENT JOINTS IN HEAVY TRAFFIC AREAS AND ASTM C 794.
I. CERAMIC AND NATURAL STONE TILE CARE AND MAINTENANCE: REQUIRED FOR PROPER MAINTENANCE OF THE COMPLETED TILE ASSEMBLY.
1. AQUA MIX SEALER'S CHOICE GOLD; WATER-BASED, PENETRATING SEALER TO PROVIDE MAXIMUM STAIN PROTECTION.
PART 3 EXECUTION
3.1 EXAMINATION
A. EXAMINE SURFACES, WHICH ARE TO RECEIVE TILE.
B. DO NOT PROCEED WITH WORK UNTIL DEFECTS OR CONDITIONS WHICH WOULD ADVERSELY AFFECT QUALITY, EXECUTION AND PERMANENCE OF FINISHED TILE WORK ARE CORRECTED (ANSI A108.3).
C. IF SUBSTRATE PREPARATION IS THE RESPONSIBILITY OF ANOTHER INSTALLER, NOTIFY ARCHITECT OF UNSATISFACTORY PREPARATION BEFORE PROCEEDING.
3.2 PREPARATION
A. CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION.
B. PREPARE SURFACES USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULT FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS.
C. CONDITION OF SURFACE TO RECEIVE TILE.
1. ASSURE THAT SURFACES TO RECEIVE TILE ARE STABLE, FLAT, FIRM, DRY, CLEAN AND FREE OF OIL, WAXES AND CURING COMPOUNDS.
2. DEFLECTIONS OF SUBSTRATE NOT TO EXCEED 1/360TH OF THE SPAN 1/2 INCH (12 MM) IN 15 FEET (4.6 M) IN ACCORDANCE WITH ANSI A108.01.2.3. ALLOW FOR LIVE AND IMPACT LOAD AS WELL AS DEAD LOAD WEIGHT OF TILE AND SETTING BED.
3. PROTECT ADJACENT SURFACES PRIOR TO BEGINNING TILE WORK.
3.3 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. SURFACE PREPARATION FOR TILE AND STONE WORK.
1. GENERAL:
a. ALL SUPPORTING SURFACES SHALL BE STRUCTURALLY SOUND, SOLID, STABLE, LEVEL, PLUMB, AND TRUE TO A TOLERANCE IN PLANE OF 1/4 INCH (6 MM) IN 10 FEET 0 INCH (3 M) FOR WALLS, 1/4 INCH (6 MM) IN 10 FEET (3 M) FOR FLOORS WHEN SPECIFIED FOR THIN-SET METHOD, AND IN ACCORDANCE WITH ANSI A108.01.2.3. WHEN ONE SIDE IS GREATER THAN 15 INCHES OR 38 CM, THE TOLERANCE IS REDUCED TO 1/8 INCH IN 10 FEET (3 MM IN 3 M). ANSI A108.01 SECTION 2.6.2

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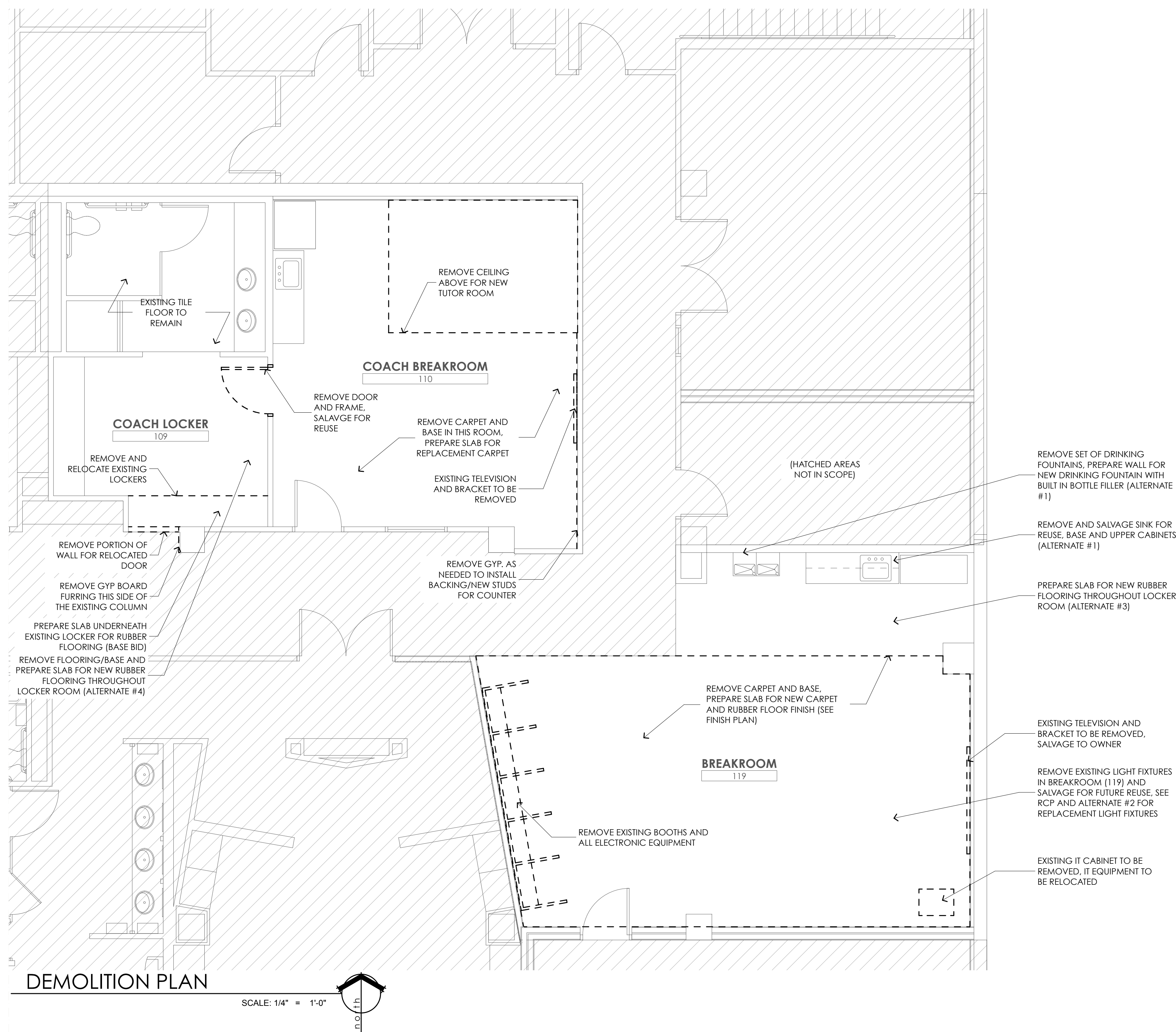
1200 South 4th Street Suite 206 Las Vegas, Nevada 89104 P 702-859-1200 F 702-859-1213

Table with 10 columns and 10 rows, likely a grid for drawing details.

TITLE SPECIFICATIONS

DRAWING NO. G001

BM Server: bmservers@aptnv.com - BM Server: 21/18003 UNLV Mendenhall Remodel - 4/18/18 - 12:17 PM - Edick Fenwick



DEMOLITION GENERAL CONDITIONS

- THESE DRAWINGS ARE INDICATIONS OF EXISTING CONSTRUCTION AND ARE DIAGRAMMATIC. EXACT LOCATIONS, SIZES, EXTENT AND CONDITIONS OF EXISTING CONSTRUCTION TO BE REMOVED, RELOCATED, OR TO REMAIN SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR.
- COORDINATE ALL WORK WITH THAT SHOWN IN STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- PROTECT EXISTING FLOOR, STRUCTURE, AND FINISHES SCHEDULED TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCY ON THE DRAWINGS OR THE UNCOVERING OF ANY HIDDEN CONDITIONS THAT AFFECT THE NEW CONSTRUCTION.
- THE CONTRACTOR SHALL CONFORM TO ALL PROCEDURES AS ESTABLISHED BY THE APPLICABLE BUILDING CODES AND MUNICIPAL REQUIRED.
- CONSTRUCTION, EQUIPMENT, AND MATERIALS INDICATED TO BE REMOVED SHALL BE REMOVED COMPLETE FOR THAT ITEM, INCLUDING FRAMING, SUPPORTS, ANCHORS, FASTENERS, AND FINISHES FOR A MAKE-READY CONDITION FOR NEW CONSTRUCTION, EXCEPT AS OTHERWISE NOTED.
- DEMOLITION SHALL BE SUFFICIENT TO COMPLETE THE NEW WORK SHOWN IN THE DOCUMENTS. CONTRACTOR SHALL NEATLY CUT AND REMOVE FINISHES AS REQUIRED TO A NATURAL POINT OF DIVISION TO ENABLE INSTALLATION OF BLOCKING, BACKING, FRAMING, SHEATHING, UTILITIES, OR OTHER CONCEALED WORK, WHETHER SPECIFICALLY SHOWN OR INFERRED FOR NEW WORK. REFER TO OTHER DRAWINGS FOR CONCEALED WORK.
- REMOVE ALL WALL FINISHES TO STUD UNLESS OTHERWISE NOTED. REMOVE ALL PROTRUDING SCREWS, NAILS, ETC. AS REQUIRED FOR NEW WORK.
- REMOVE ALL EXPOSED CONDUIT, BOXES, AND FIRE ALARM COMPONENTS. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND NEW WORK.
- REMOVE ALL FIXTURES, DEVICES, PLUMBING AND MECHANICAL DEVICES COMPLETELY, UNLESS NOTED OTHERWISE.
- DO NOT CUT, REMOVE, OR ALTER ANY EXISTING STRUCTURAL MEMBER OR PORTION OF THE FLOOR SYSTEM UNLESS SPECIFICALLY NOTED OR SHOWN. NOTIFY ARCHITECT IMMEDIATELY OF ANY UNSTABLE OR UN-RECORDED STRUCTURAL MEMBER. DO NOT PROCEED WITH WORK IN THE AREA UNTIL DIRECTED TO DO SO BY THE ARCHITECT.
- INSPECT EXPOSED STRUCTURE FOR DAMAGE AND ADVISE ARCHITECT.
- WHERE SLAB CUTTING OCCURS, COORDINATE AND MINIMIZE ALL SLAB CUTTING TO THAT NECESSARY TO COMPLETE THE WORK SHOWN IN THE STRUCTURAL, ELECTRICAL, PLUMBING, AND MECHANICAL DRAWINGS.
- THE CONTRACTOR SHALL NOT CAUSE OR IMPOSE ANY IMPACT LOADS OR EXCESSIVE VIBRATIONS DURING DEMOLITION. MATERIALS SHALL NOT BE PILED, STACKED, OR ALLOWED TO ACCUMULATE IN A MANNER THAT WOULD EXCEED THE SAFE LOAD LIMITS OF THE EXISTING STRUCTURE.
- SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- DUST CONTROL SHALL BE IMPLEMENTED DURING DEMOLITION.
- KEEP JOBSITE WEATHER TIGHT DURING DEMOLITION.
- PATCH AND PREPARE SURFACES OF EXISTING FINISHES ON WALLS AND CEILINGS SCHEDULED TO REMAIN.
- REMOVE ALL MATERIALS RESULTING FROM DEMOLITION. ALL AREAS SHALL BE BROOM CLEANED UPON COMPLETION OF THE DEMOLITION WORK.
- ALL HAZARDOUS MATERIAL RELATED ISSUES SHOULD BE REVIEWED WITH OWNER AND HAZARDOUS MATERIALS ABATEMENT CONSULTANT PRIOR TO COMMENCEMENT OF DEMOLITION.
- ALL HAZARDOUS MATERIALS TO BE REMOVED BY OTHERS PRIOR TO THE START OF THE PROJECT.
- HAZARDOUS MATERIAL ABATEMENT WILL NOT START UNTIL APPROVAL FROM THE AHJ.
- ALL PLUMBING STACKS ABANDONED TO REMAIN AND TO BE CAPPED.
- ITEMS TO BE SALVAGED SHALL BE REMOVED BY CONTRACTOR AND SAFELY STORED FOR REUSE. COORDINATE WITH OWNER AND ARCHITECT.

WALL TYPE LEGEND

- EXISTING WALLS TO REMAIN
- - - EXISTING WALLS TO BE REMOVED

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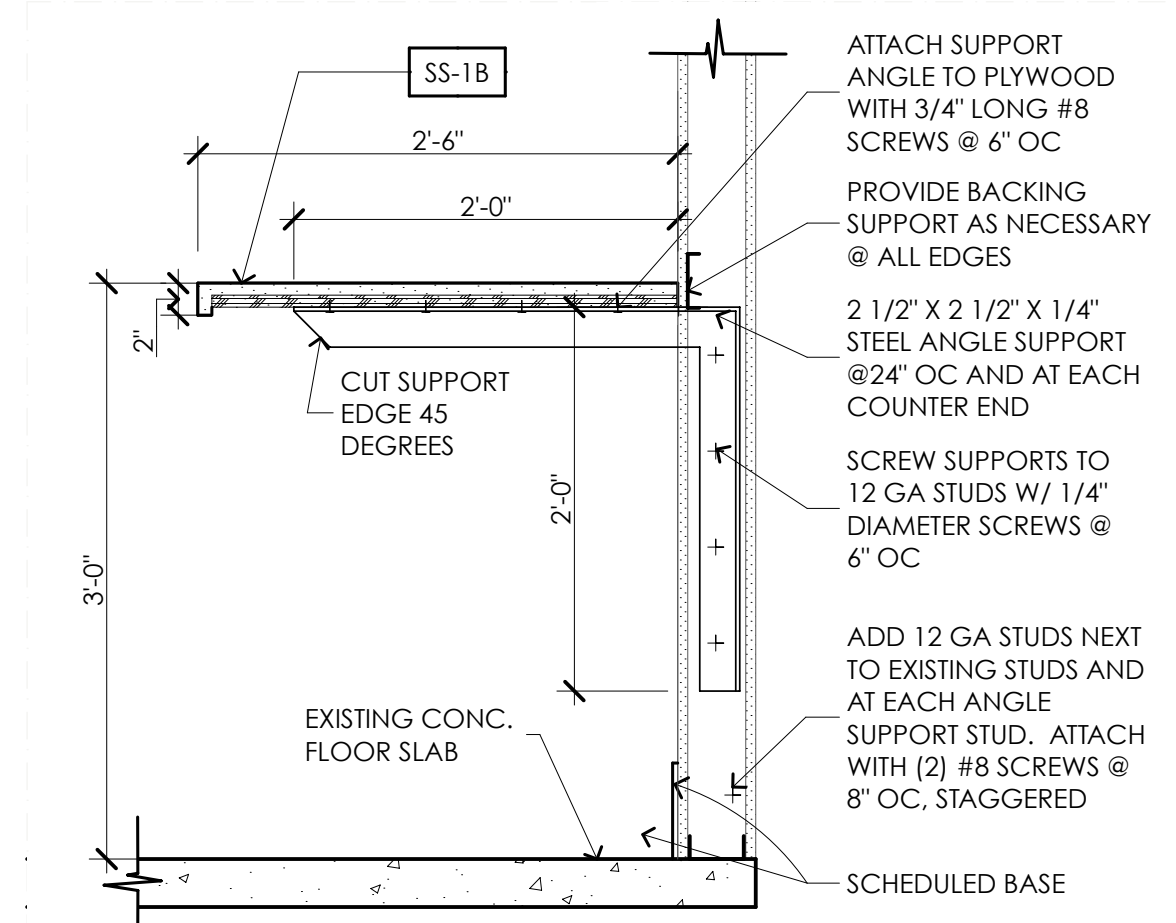
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TITLE
DEMOLITION
PLAN

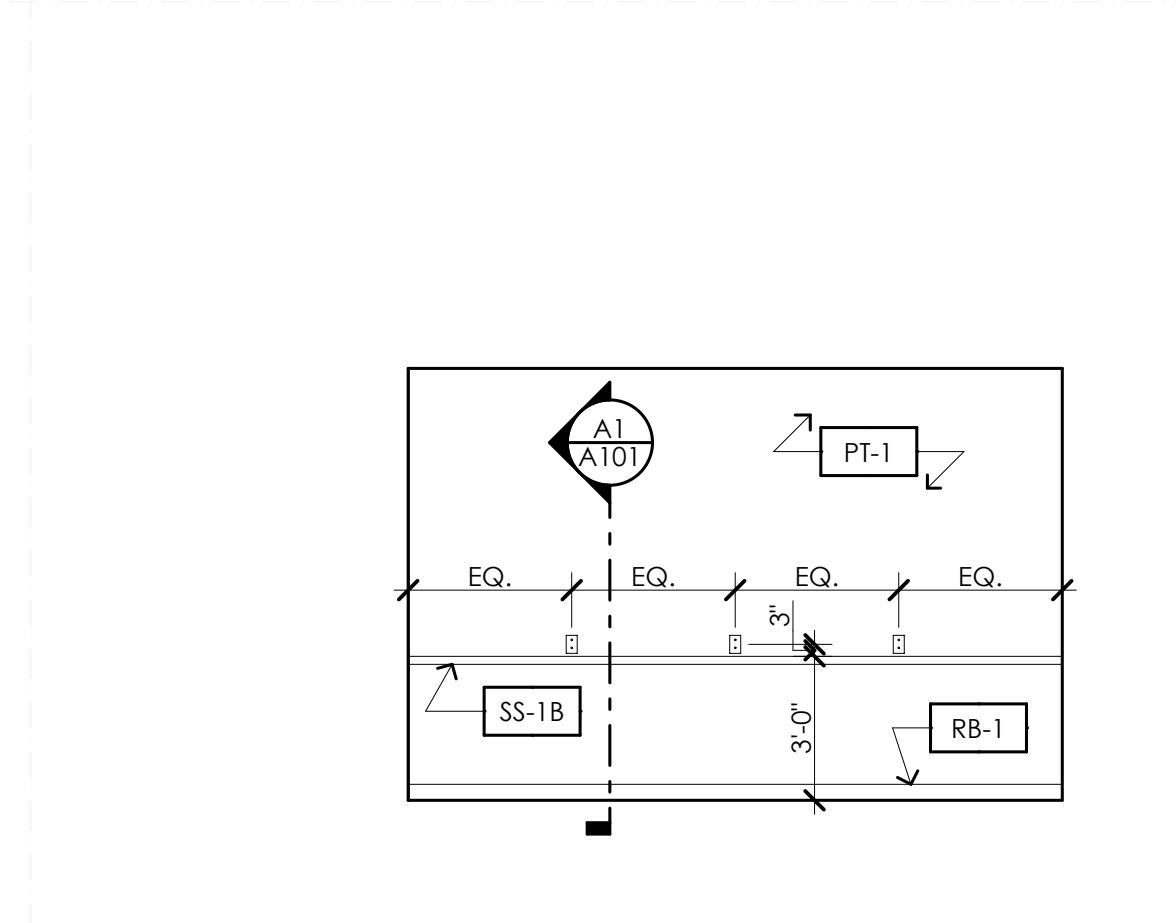
DRAWING NO.
A 100

118.003 UNLV Mendenhall Remodel

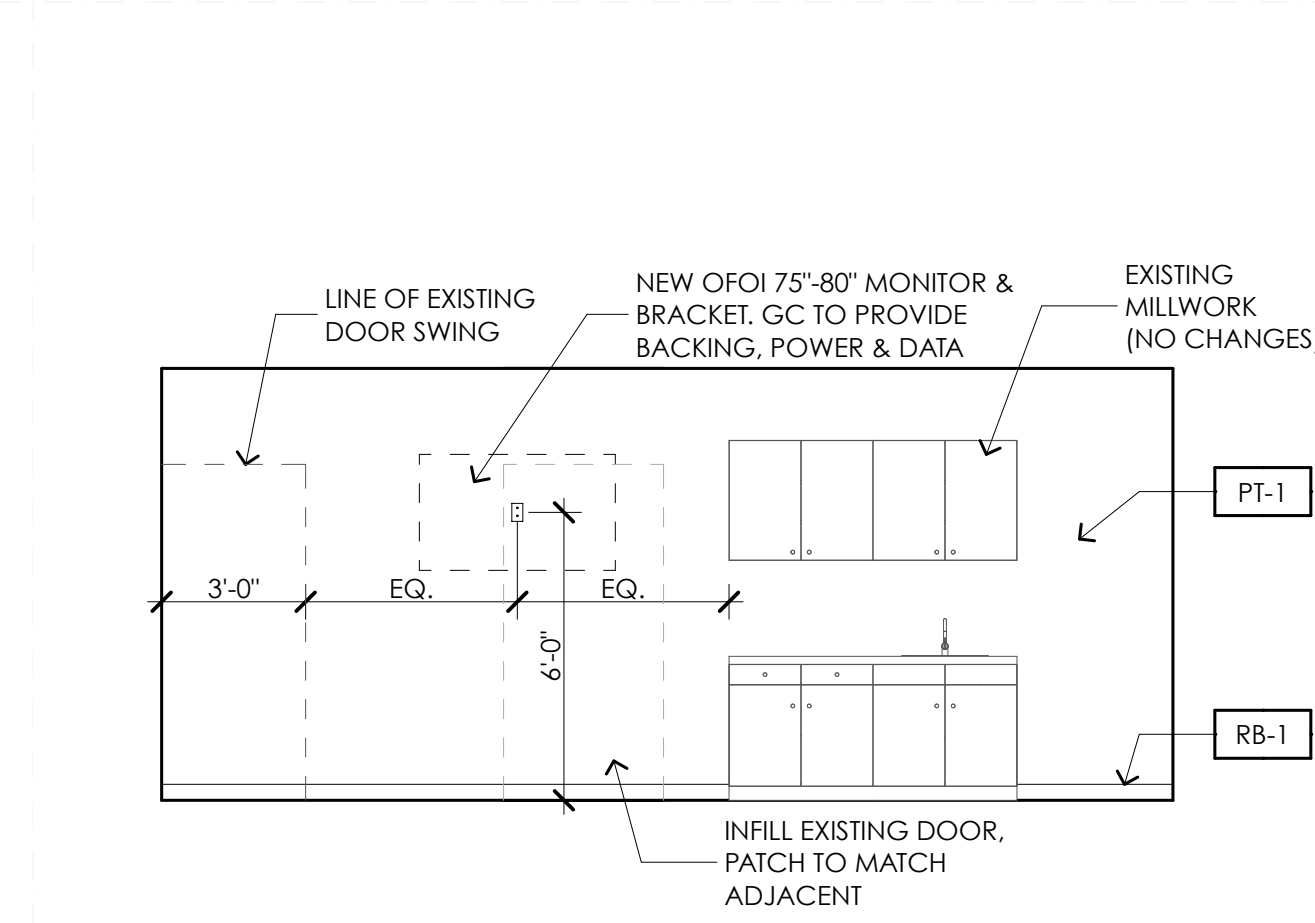
SPM / SPWD Submittal 4.6.18



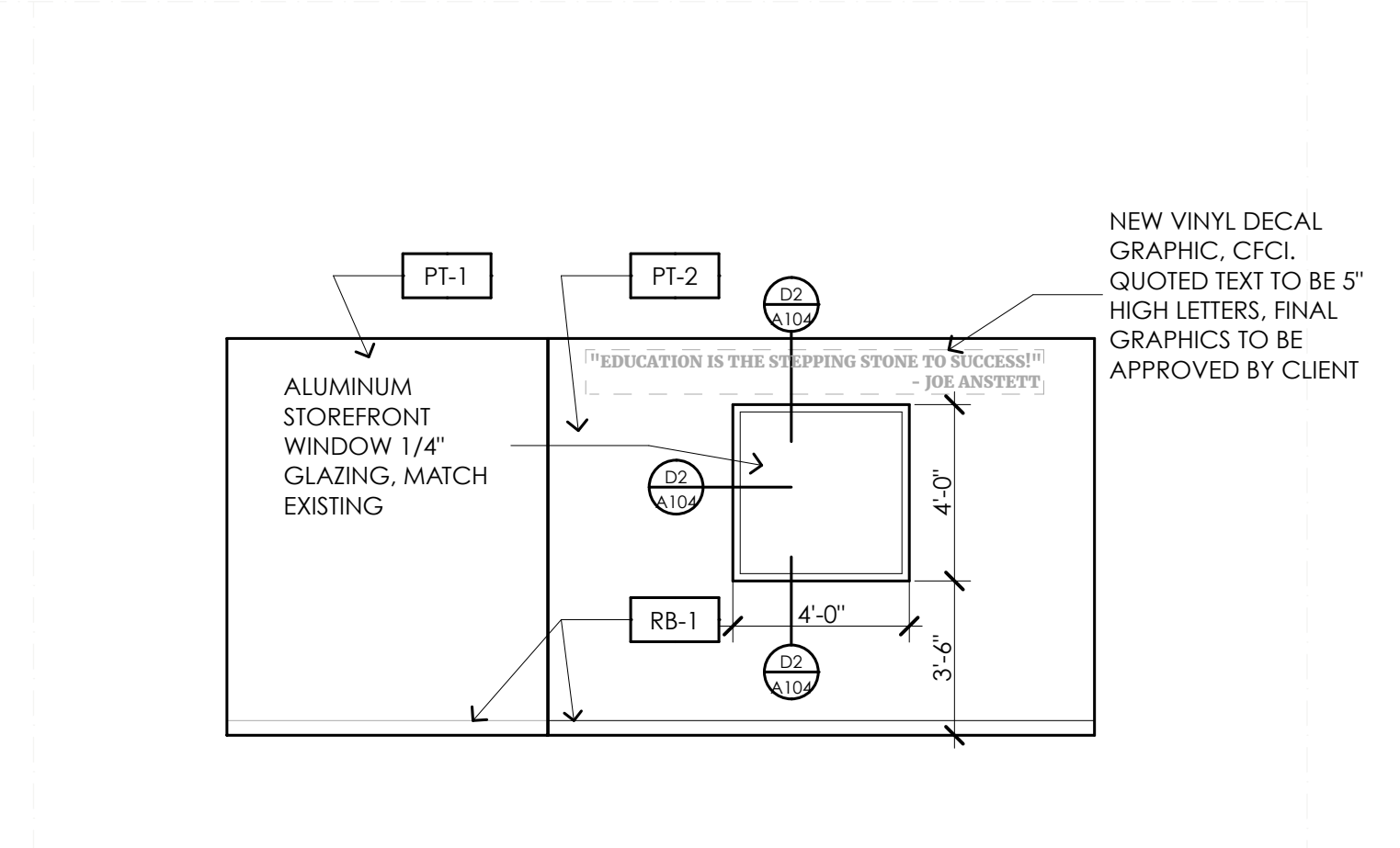
A1 BUILT-IN COUNTER DETAIL
SCALE: 1" = 1'-0"



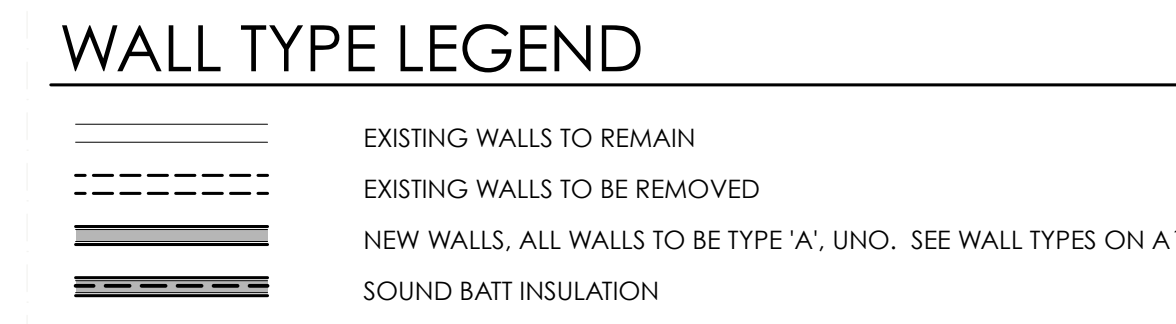
A2 ACADEMIC ROOM - EAST
SCALE: 1/4" = 1'-0"



A3 ACADEMIC ROOM - WEST
SCALE: 1/4" = 1'-0"

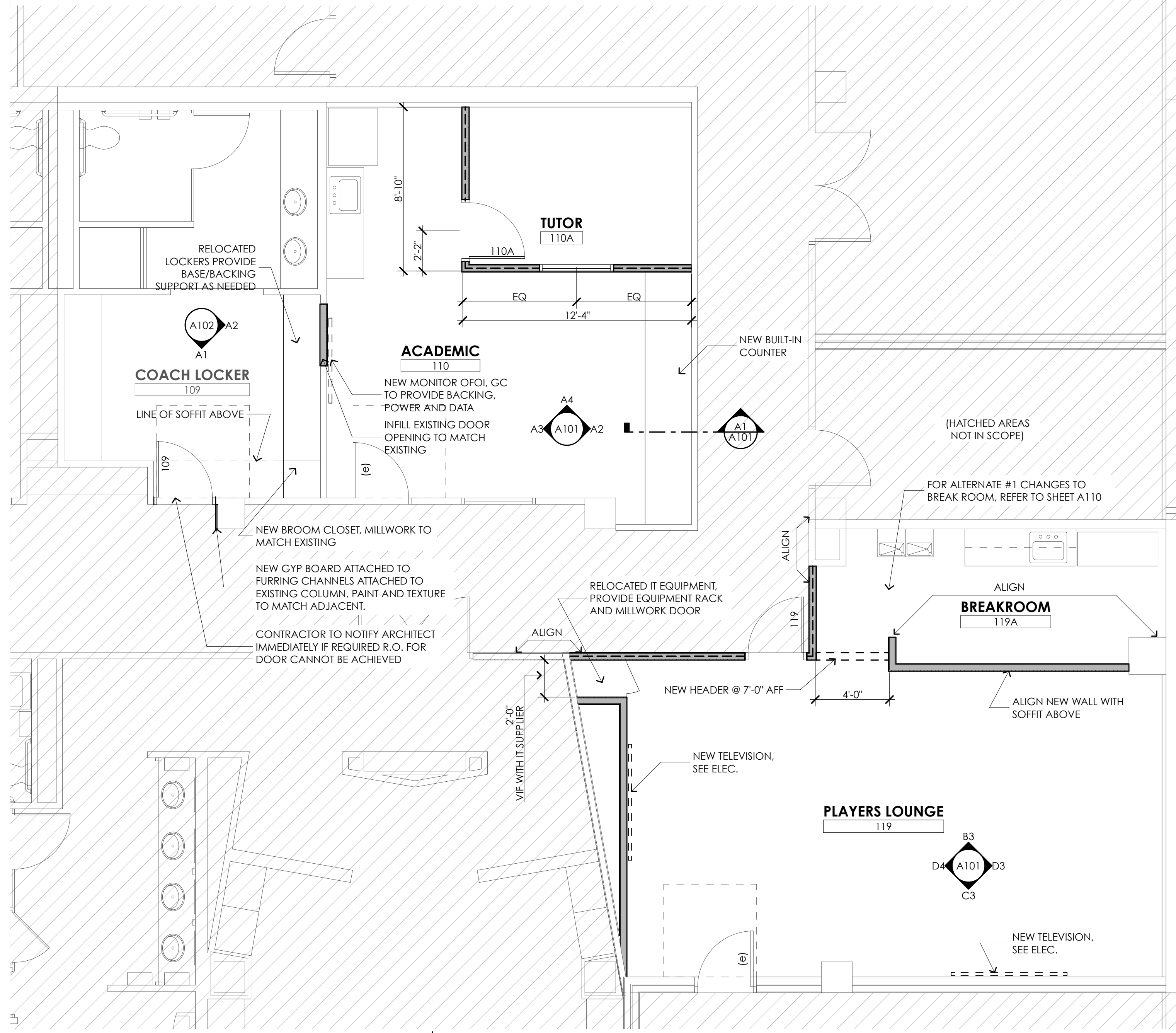


A4 ACADEMIC ROOM - NORTH
SCALE: 1/4" = 1'-0"

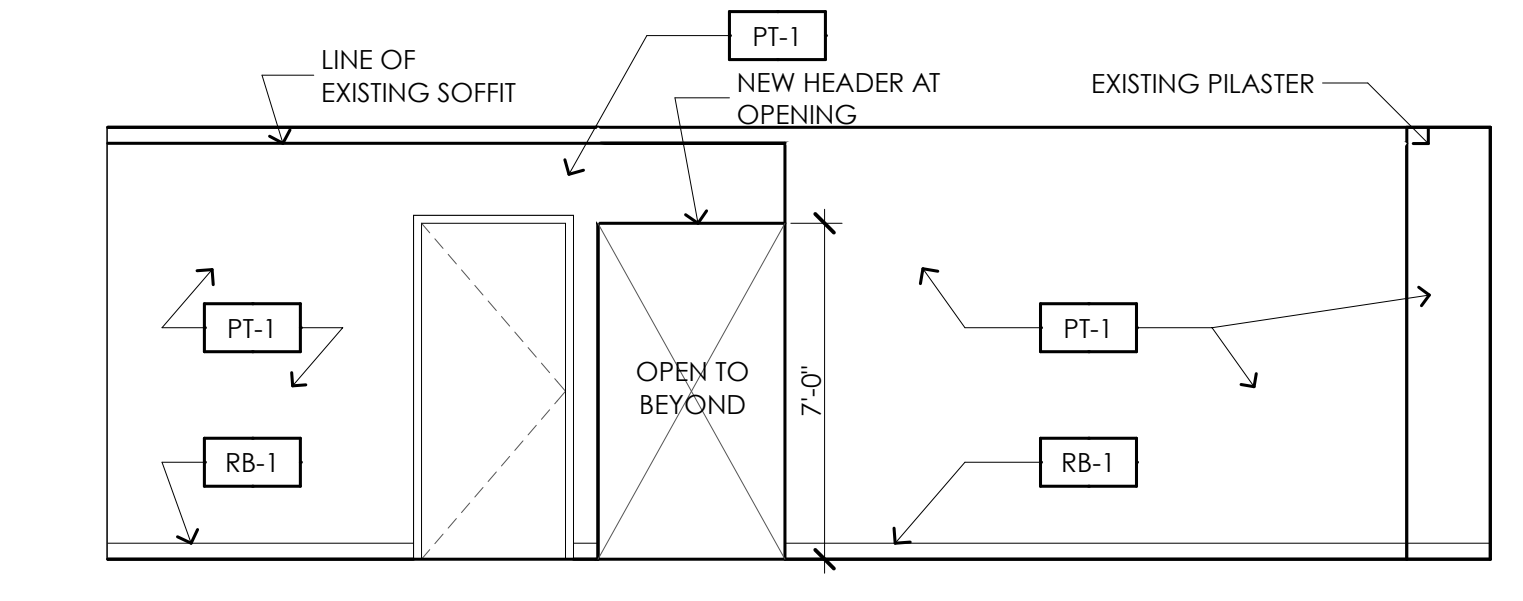


GENERAL NOTES

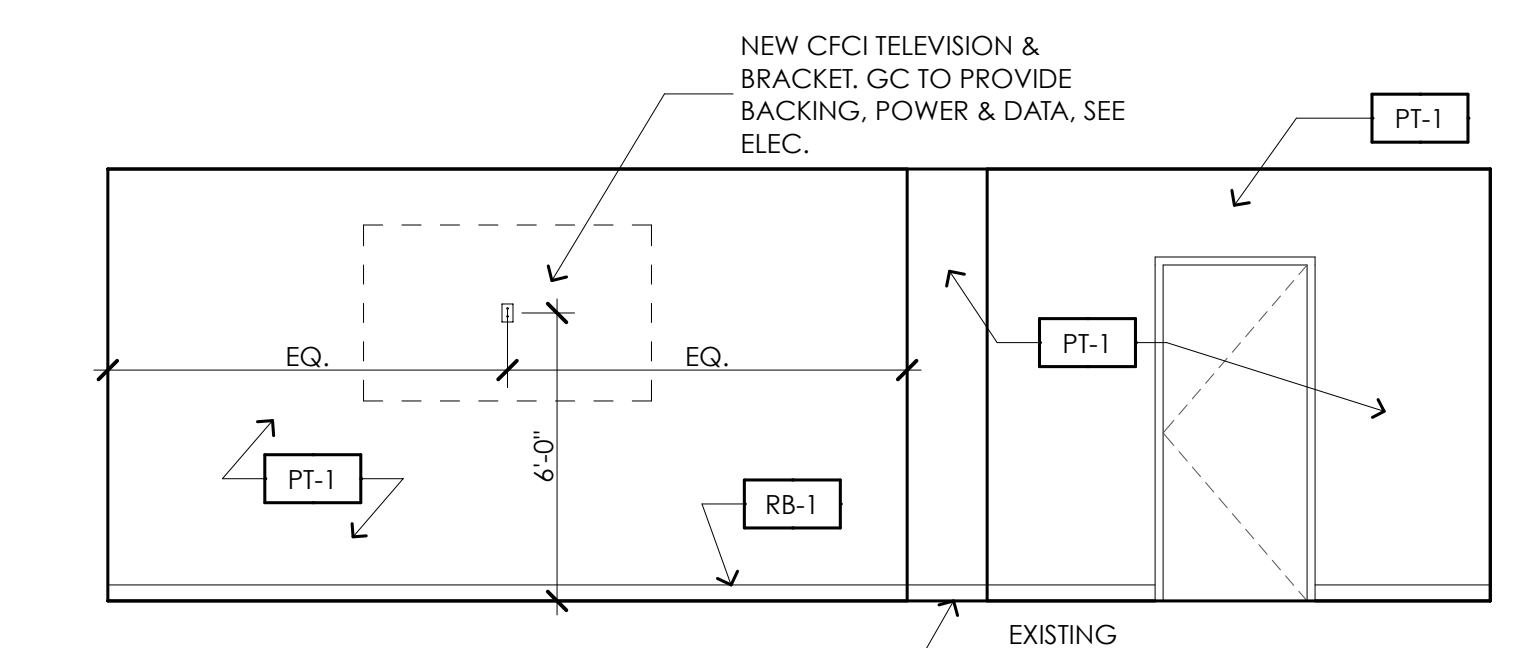
A. PATCH/REPAIR ALL GYP WHERE BACKING/BLOCKING AND UTILITIES ARE ADDED/RELOCATED.



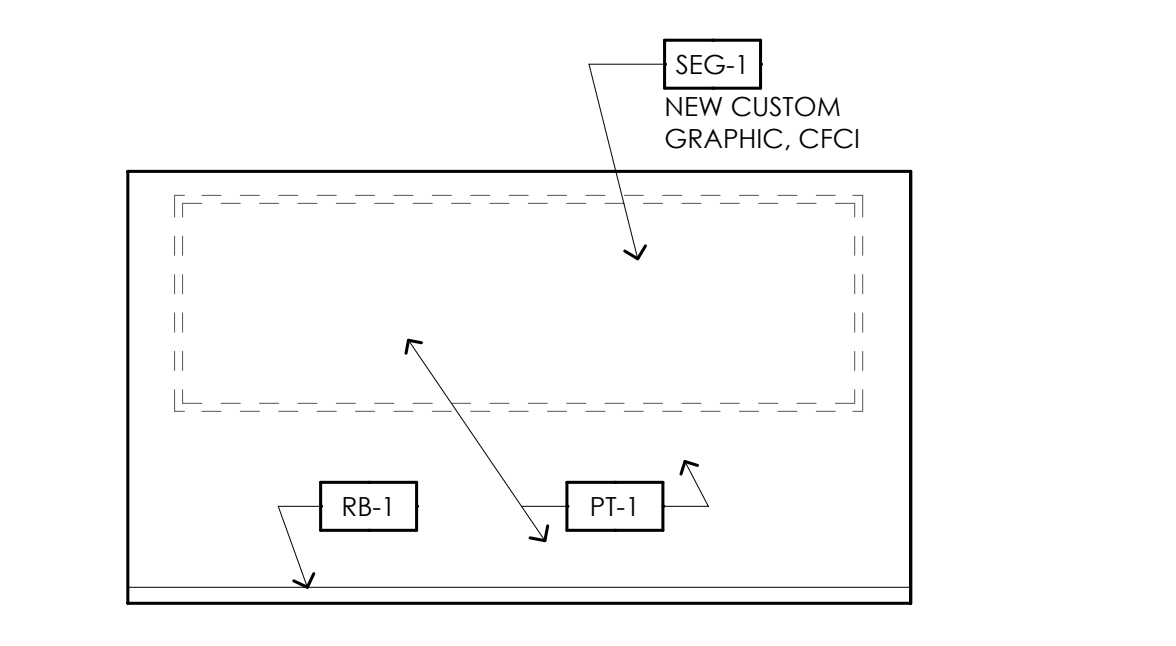
FLOOR PLAN
SCALE: 1/4" = 1'-0"



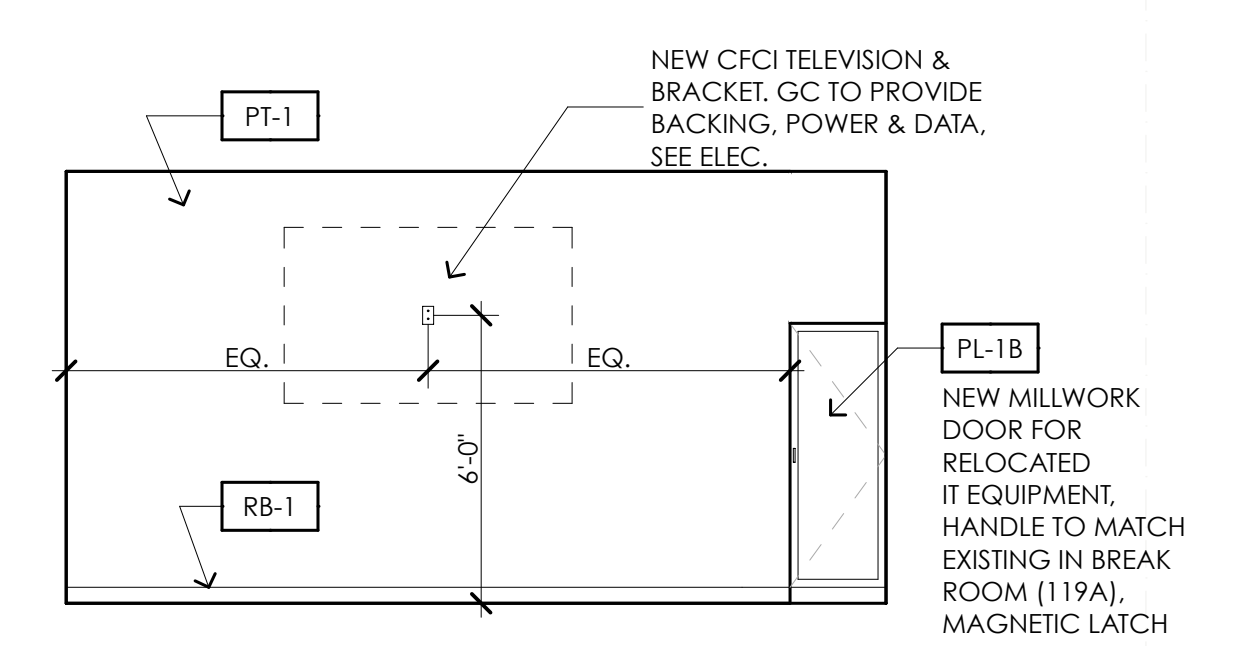
B3 LOUNGE - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



C3 LOUNGE - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



D3 LOUNGE - EAST ELEVATION
SCALE: 1/4" = 1'-0"



D4 LOUNGE - WEST ELEVATION
SCALE: 1/4" = 1'-0"

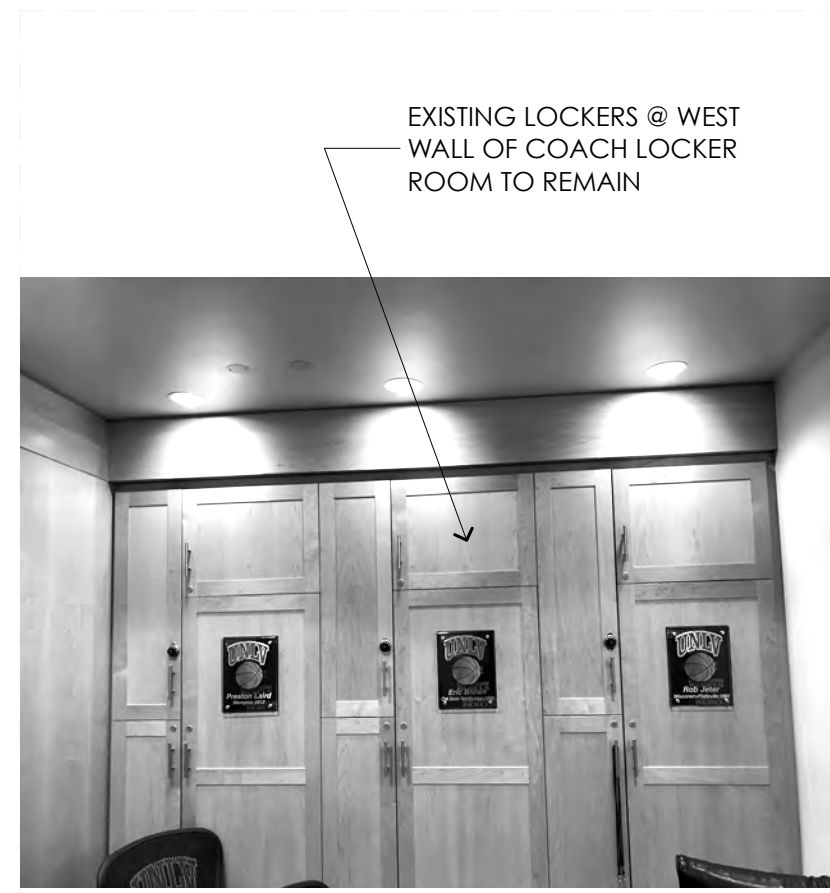
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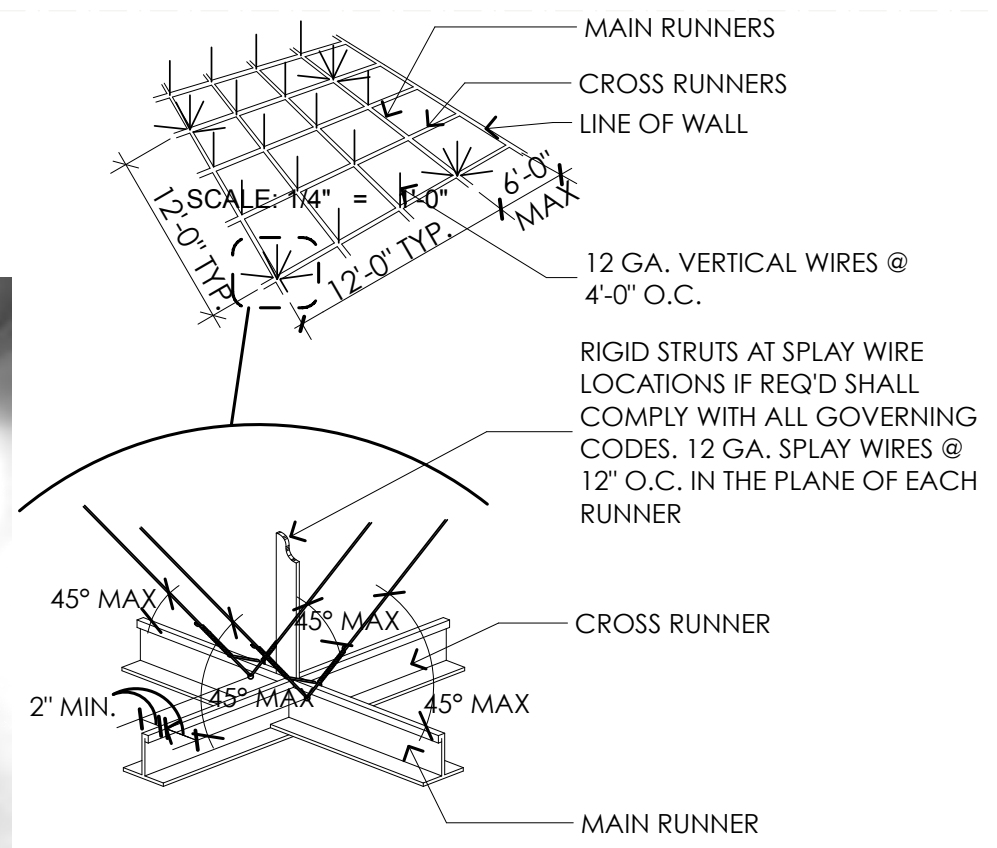
TITLE
FLOOR PLAN

DRAWING NO.
A 101

BIM Server: bhmservarcdp\group.com - BIM Server: 2/1/2023 UNLV Mendenhall Remodel: 4/1/18 10:54 AM: Edick_Ferencs



A1 PHOTO @ COACH LOCKER LOCKER ROOM

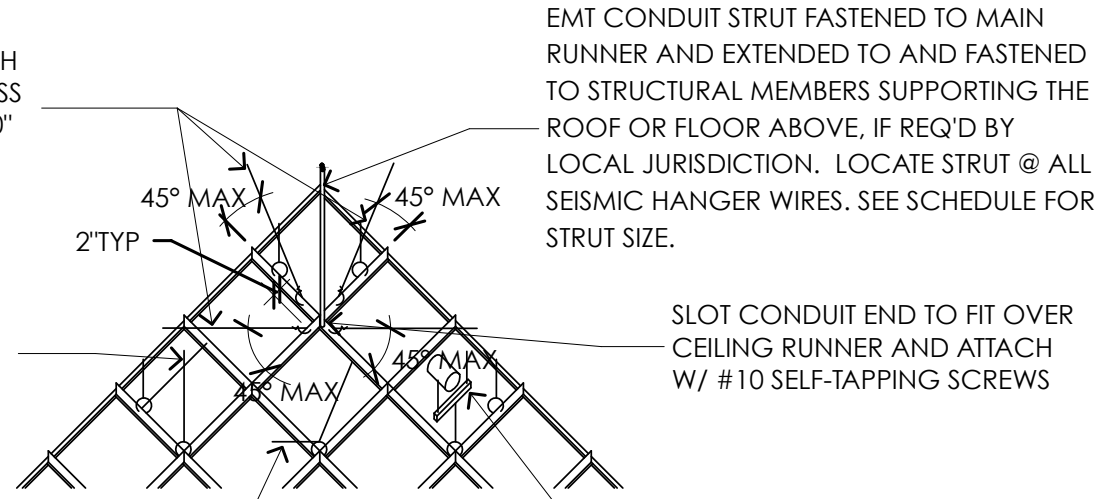


SEISMIC HANGER WIRES SPLAYED 45D FROM MAIN RUNNER IN EACH DIRECTION AND 45D FROM CROSS RUNNER IN EACH DIRECTION 12'-0\"/>

VERTICAL HANGER WIRES @ 4'-0\"/>

STRUT SCHEDULE	
EMT SIZE (NOMINAL)	LENGTH (L/T < 200)
1/2"	< 3'-10"
3/4"	< 5'-0"
1"	< 6'-6"
1 1/4"	< 8'-6"
1 1/2"	< 9'-10"

EMT - ELECTRICAL METALLIC TUBING



IF HANGERS MUST BE SPLAYED MORE THAN 1-IN-6 OUT OF PLUMB, PROVIDE COUNTER SLOPED HANGER

NOTES:
1. PROVIDE HEAVY DUTY GRID SYSTEM AS REQUIRED PER SEISMIC ZONE 'D'

- HANGER WIRES MUST BE NO. 12 GA. MIN. SOFT-ANNEALED, MILD STEEL WIRE. WIRES SHALL BE WRAPPED TIGHTLY AT RUNNERS AND SUPPORTS AND TIED WITH A MIN. OF 3 TURNS.
- CLIPS SHALL HOLD RUNNERS TIGHTLY TOGETHER. SPLICE CLIPS SHALL BE CAPABLE OF RESISTING AT LEAST 50 LBS. IN TENSION OR COMPRESSION.
- FOR MANUFACTURED SYSTEMS, SUBMIT SUBSTANTIATION IN ACCORDANCE WITH THE GOVERNING CODE.
- RUNNERS SHALL BE CAPABLE OF SUPPORTING CEILING SYSTEM WITH DEFLECTIONS LESS THAN 0.133 INCH.
- LOCAL KINKS AND BENDS SHALL NOT BE MADE IN HANGER WIRES FOR LEVELING.
- SHALL COMPLY WITH ALL GOVERNING CODES, ASTM C 635 & ASTM C 636, AS WELL AS CISCA REQUIREMENTS.

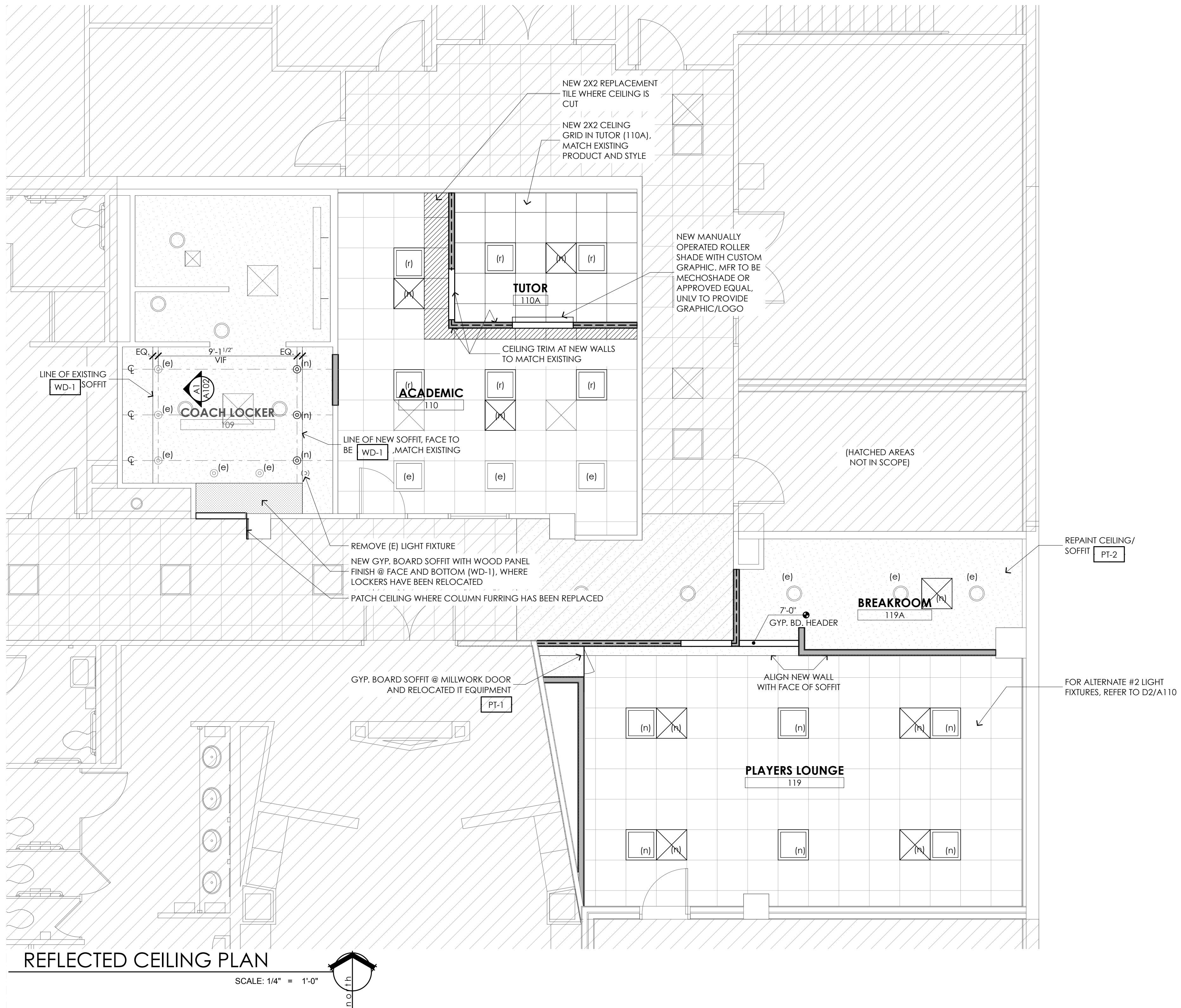
REFLECTED CEILING PLAN GENERAL NOTES

- CENTER ALL GRIDS IN ROOM U.N.O.
- CENTER ALL LIGHTS IN CEILING TILES U.N.O.
- CENTER ALL FIRE SPRINKLERS IN CEILING TILES U.N.O.
- PAINT ALL EXPOSED DUCTWORK, STRUCTURE, CONDUIT, AND DEVICES.
- PAINT ALL MECHANICAL DEVICES IN GYP. BD. CEILING TO MATCH CEILING.
- CONTRACTOR TO VERIFY / CONFIRM (E) LOCATIONS OF (E) AUTOMATIC FIRE SPRINKLER SYSTEM PIPING AND (E) HVAC PIPES OR DUCTS PRIOR TO START CONSTRUCTION. IF ANY CONFLICTS / DISCREPANCIES BETWEEN THE DRAWINGS AND THE ACTUAL EXISTING CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND REQUEST A CLARIFICATION.
- SEE ELECTRICAL DRAWINGS FOR HORNS, SPEAKERS, PULL STATIONS, LIGHT FIXTURES AND OTHER FEATURES NOT OTHERWISE SHOWN.
- SEE ELECTRICAL DRAWINGS FOR EXIT SIGNS & EMERGENCY LIGHTING CONDITIONS.
- SEE MECHANICAL DRAWINGS FOR PIPING, REGISTERS, AND VENTS NOT OTHERWISE SHOWN. MECHANICAL DUCT LOCATION DIMENSIONS ARE NOMINAL. VERIFY IN FIELD TO MAINTAIN CLEARANCES TO FIXED ELEMENTS.

END

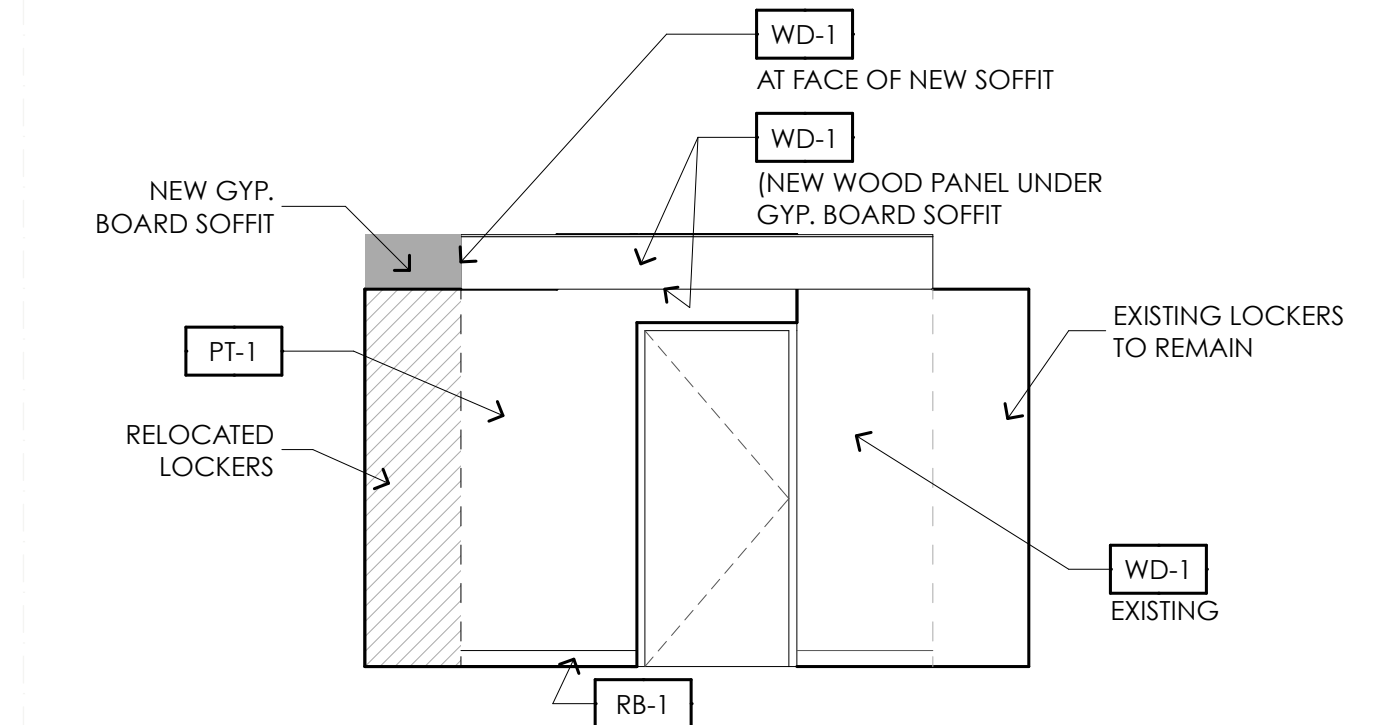
CEILING LEGEND

- EXISTING SUSPENDED ACOUSTIC TILES TO REMAIN
- EXISTING SUSPENDED GYPSUM BOARD CEILING, PAINTED. SUSPEND WITH ARMSTRONG DRYWALL/STUCCO/PLASTER GRID SYSTEM
- EXISTING 2' x 2' LIGHT FIXTURES TO BE RELOCATED
- NEW SUPPLY, SEE MECH. DWGS.
- NEW 15/16" DIFFUSING LENS T-BAR LED LIGHT FIXTURE BY JLC-TECH (FOR ALTERNATE #2 LIGHT FIXTURES, REFER TO D3/A110)
- NEW 2' x 2' SKYTRIM LIGHT FIXTURE IN EXISTING FIXTURE LOCATION
- RELOCATED
- NEW
- EXISTING
- NOT A PART



C4 COACH LOCKER - EAST

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



D4 COACH LOCKER - SOUTH

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



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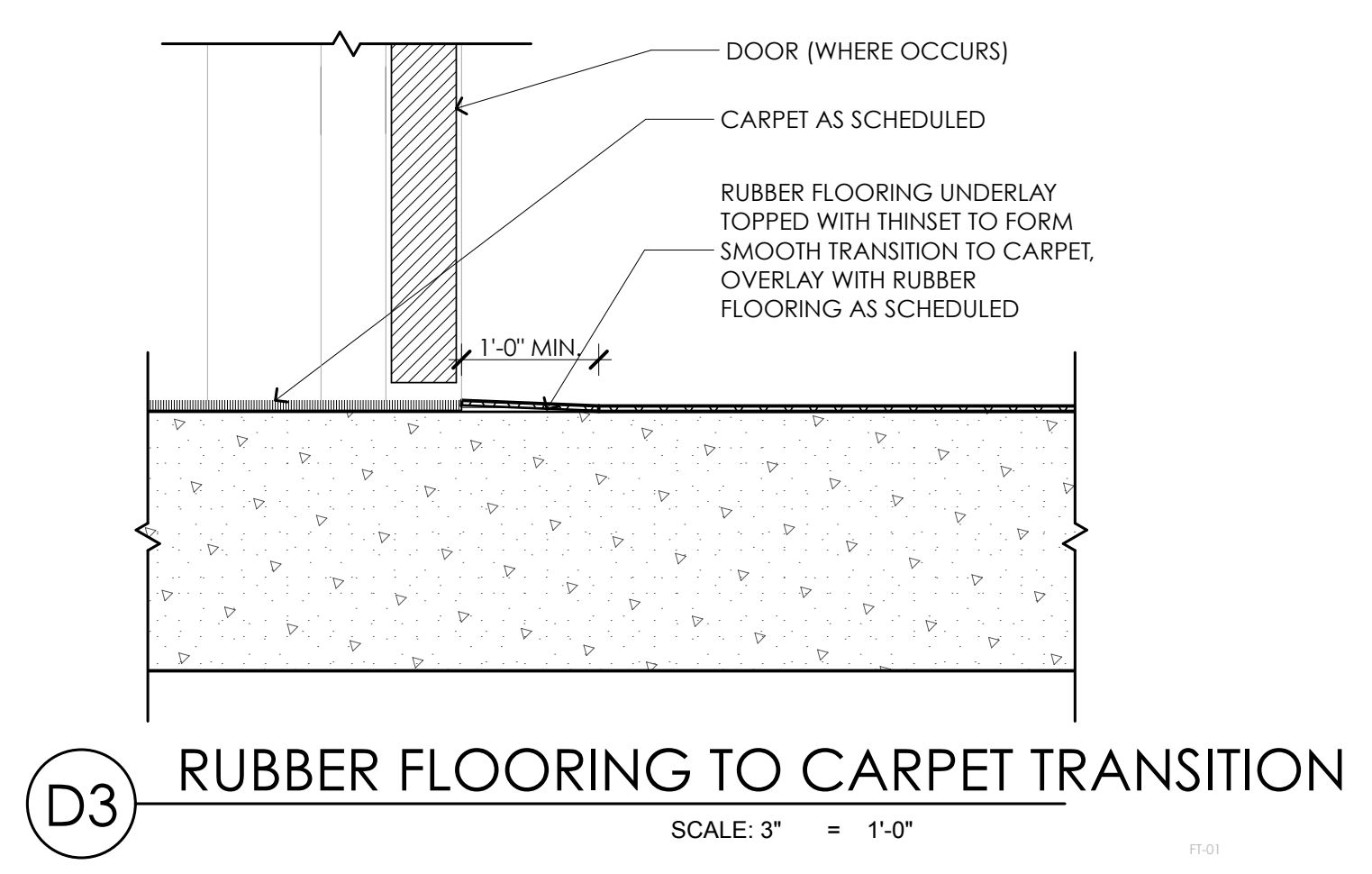
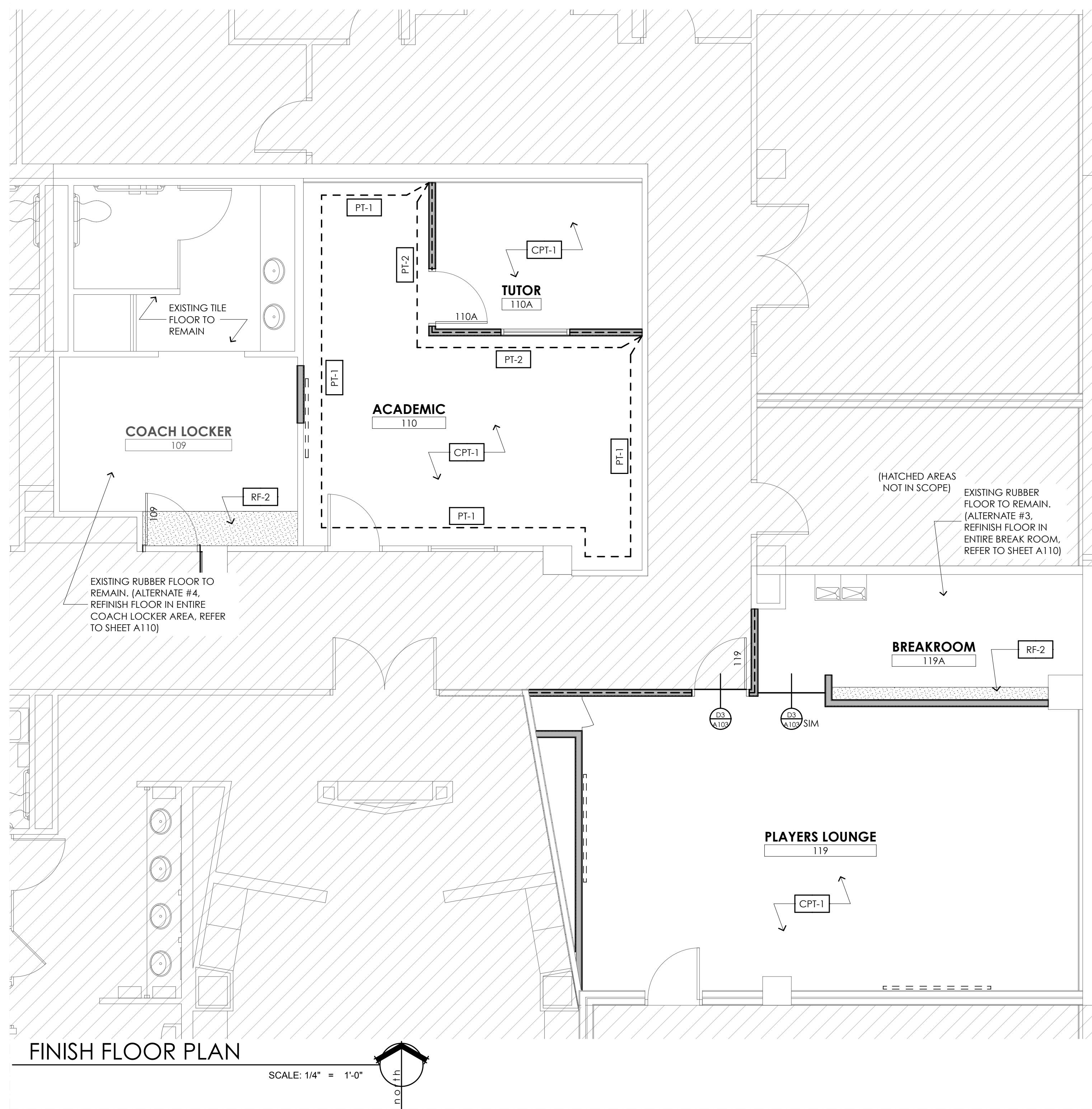
TITLE
REFLECTED CEILING PLAN
 DRAWING NO.
A 102
 118.003 UNLV Mendenhall Remodel
 SPW / SPWD Submittal 4.6.18

BIM Server: bimserveraptusgroup.com - BIM Server 21/18003 UNLV Mendenhall Remodel - 4/18/18 - 12:17 PM - Edlich_Ferencs

NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	COMMENTS
				NORTH	EAST	SOUTH	WEST		
109	COACH LOCKER	---	RB-1	---	---	---	-	PT-1	PT-1 WALL FINISH AT ALL EXPOSED GYPSUM BOARD. PATCH WITH NEW "RF-2" RUBBER FLOORING ACCENT WHERE LOCKERS ARE REMOVED (BASE BID). PROVIDE NEW "RF-1" RUBBER FLOORING THROUGHOUT LOCKER AREA, (ALTERNATE #4).
110	ACADEMIC	CPT-1	RB-1	---	---	---	---	EXISTING	SEE PLAN FOR PAINT FINISH
110A	TUTOR	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXISTING	---
119	PLAYERS LOUNGE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXISTING	---
119A	BREAKROOM	---	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2	PATCH WITH NEW "RF-2" RUBBER FLOORING ACCENT WHERE CARPET IS REMOVED (BASE BID). PROVIDE NEW FINISHES THROUGHOUT (ALTERNATE #1). PROVIDE NEW "RF-1" RUBBER FLOORING THROUGHOUT BREAKROOM, (ALTERNATE #3).

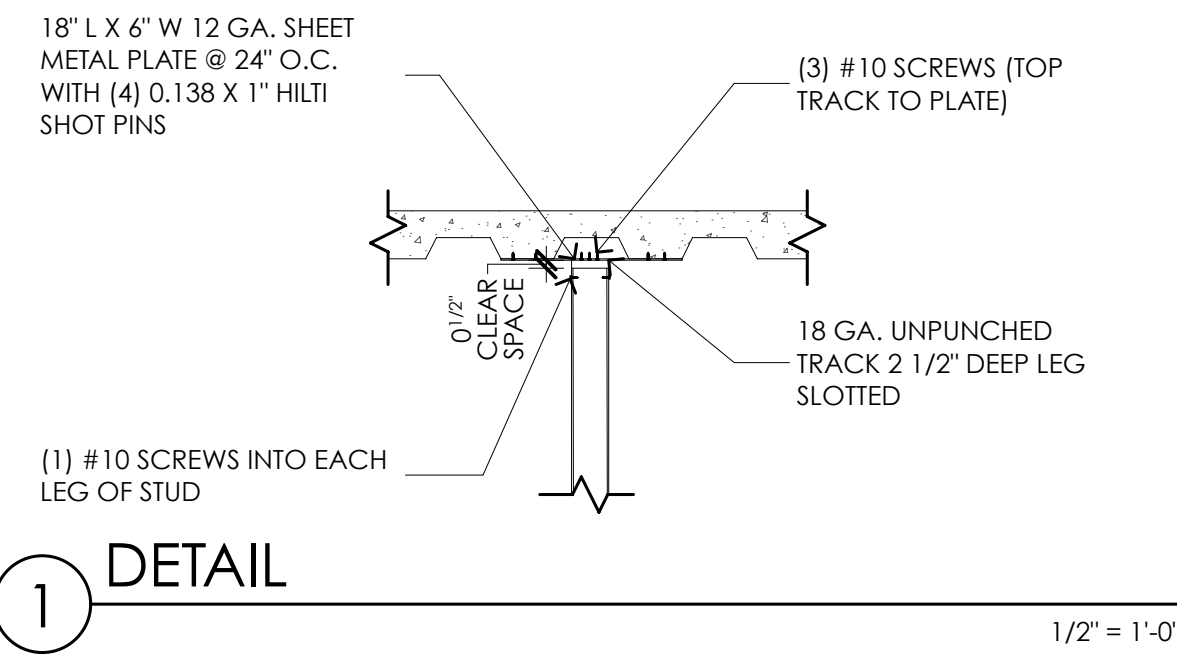
ID	MATERIAL TYPE	MANUFACTURER	STYLE NAME/#	COLOR NAME/#/PATTERN	COMMENTS
CPT-1	CARPET	INTERFACE	DETOURS	ONYX/104717	TYPICAL BUILDING STANDARD CARPET
LVT-1B	LUXURY VINYL TILE	SHAW CONTRACT	UNVEIL/0601V	TARNISH/01585/ASHLAR	9"X36" TILE, ALTERNATE #1 - SEE NOTE BELOW
PL-1B	LAMINATE	FORMICA	---	FOLKSTONE HEX/6473/---	ALTERNATE #1
PT-1	PAINT	DUNN EDWARDS	---	COLD MORNING/DE6365/---	MATCH EXISTING
PT-2	PAINT	DUNN EDWARDS	---	COVERED IN PLATINUM/DE6367/---	---
RB-1	RUBBER BASE	MANNINGTON	---	IRON/908 /---	MATCH EXISTING COLOR, USE STRAIGHT BASE
RF-1	RUBBER FLOORING	MONDO	GRAY	MEDIUM GRAY/W69/PUNTI-3MM	ALTERNATE #3 & #4, SEE NOTE BELOW
RF-2	RUBBER FLOORING	MONDO	RED	RED/H70/HARMONI-3MM	SEE NOTE BELOW
SEG-1	SILICONE EDGE GRAPHIC	TECHTONICS	---	---	14'-0" X 4'-5" CUSTOM FRAME, GRAPHIC TO BE PROVIDED BY OWNER
SS-1A	SOLID SURFACE	SAMSUNG	STARON	SANDED BIRCH/SB412/---	ALTERNATE #1
SS-1B	SOLID SURFACE	SAMSUNG	STARON	UNIVERS/SU053/---	NEW COUNTER IN ACADEMIC (110), BASE BUILD
WD-1	WOOD	---	---	---	MATCH EXISTING WOOD FINISH ON LOCKERS & SOFFIT
WT-1B	WALL TILE	CERAMIC TECHNICS	---	STONEWORKS INDUSTRIAL REFLECTIONS - WHITE	4'X8" TILE WITH 1/8" MAPEI AVALANCHE GROUT, ALTERNATE #1

GENERAL MATERIAL NOTES:
 PREPARE AND CLEAN CONCRETE SLAB SURFACE AND INSTALL AS REQUIRED BY MFR INSTRUCTION. INSTALLER TO BE A COMPANY SPECIALIZING IN PERFORMING THIS WORK WITH A MINIMUM OF 5 YEARS DOCUMENTED EXPERIENCE. PROVIDE PRODUCT DATA AND (2) VERIFICATION SAMPLES, MIN. 6' SQUARES OF ACTUAL PRODUCT COLOR & PATTERNS.



TITLE
 FINISH FLOOR
 PLAN & DETAILS

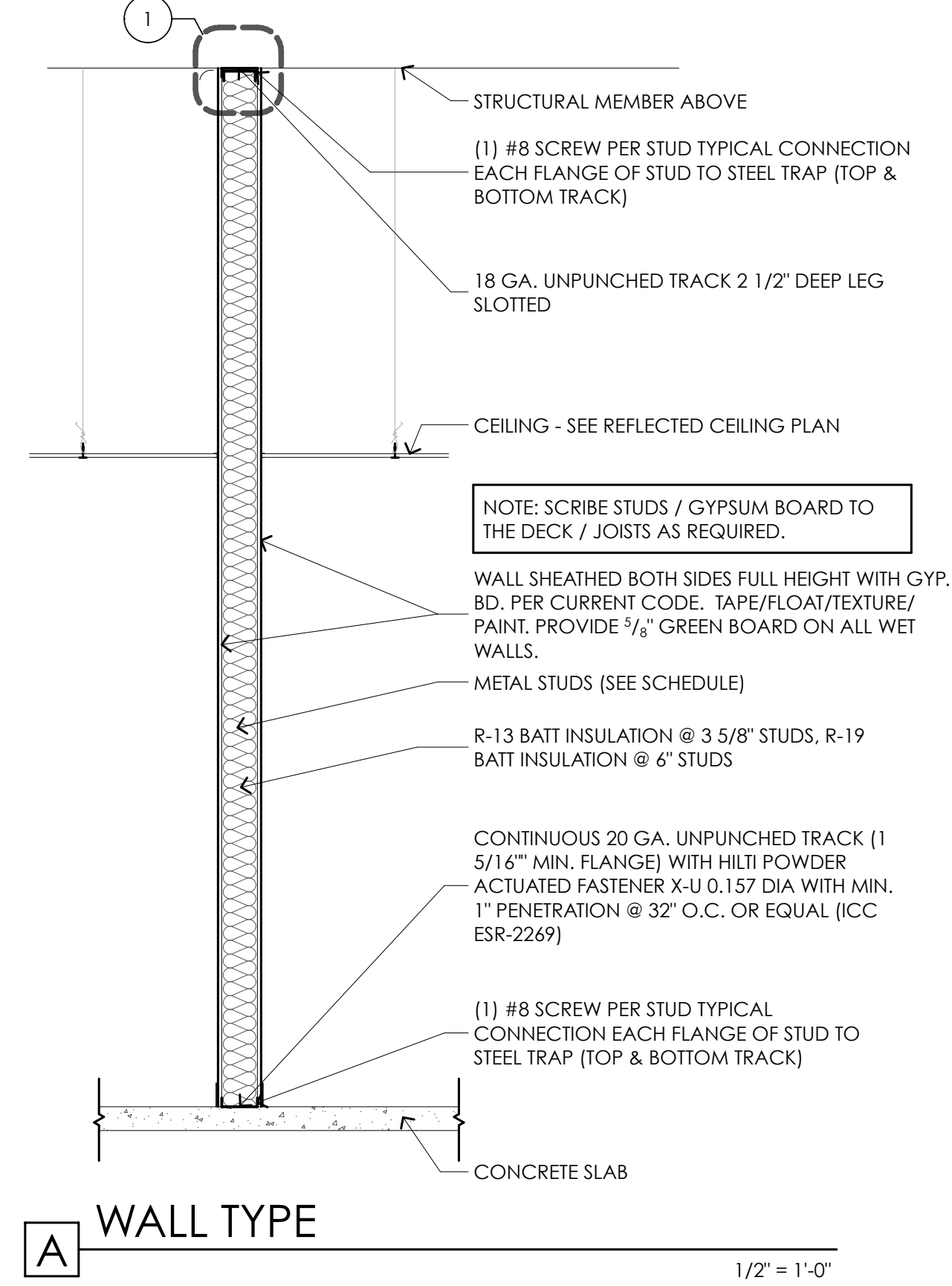
DRAWING NO.
A 103



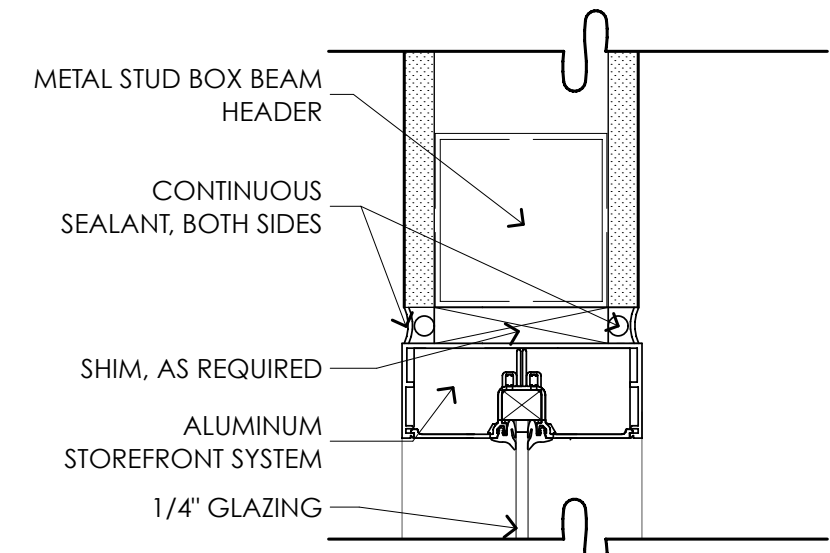
1 DETAIL
1/2" = 1'-0"

HEIGHT	METAL STUD SIZE AND SPACING
UP TO 12'-0"	362S125-18 @ 24" O.C.
UP TO 18'-0"	362S125-33 @ 24" O.C.
BRACE LENGTH	BRACE SIZE
6'-0" OR UNDER	362S125-18
6'-1" TO 8'-0"	362S137-33

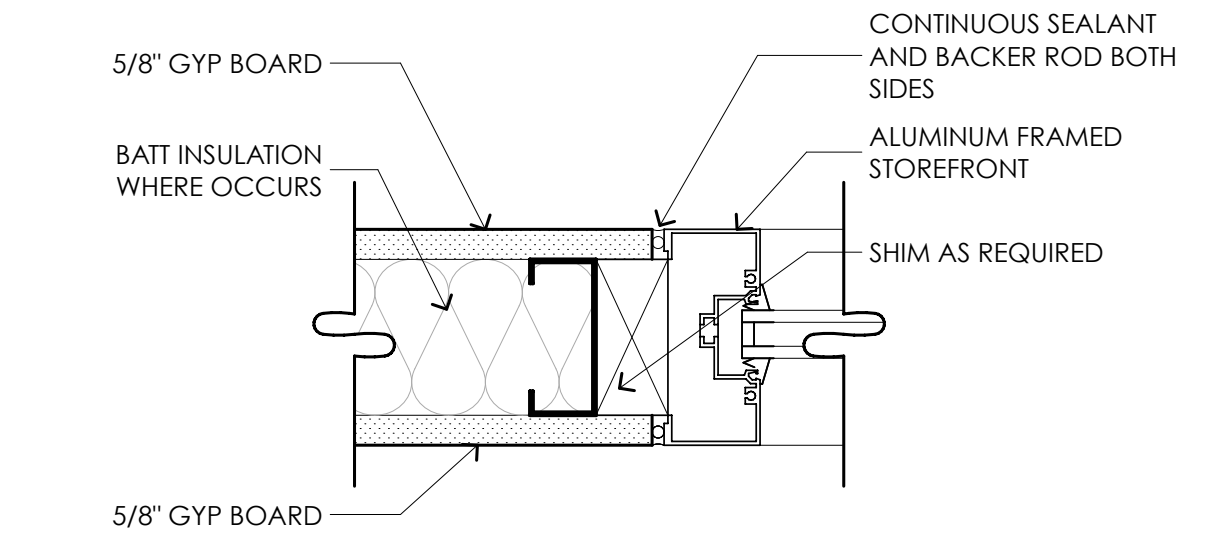
- NOTES:
- STUDS BRACED BY GYPSUM WALL BOARD EACH SIDE. MAXIMUM SCREW SPACING SHALL NOT EXCEED 12" O.C.
 - 5 PSF MAX. LATERAL LOAD
 - F_y (MIN.) = 33 KSI
 - L/120 DEFLECTION LIMIT
 - SEE FINISH SCHEDULE AND/OR INTERIOR ELEVATIONS FOR ALL FINISHES
 - NOT APPLICABLE TO SHEAR WALLS.
 - SEE ARCHITECTURAL REQUIREMENTS FOR RATED WALLS.



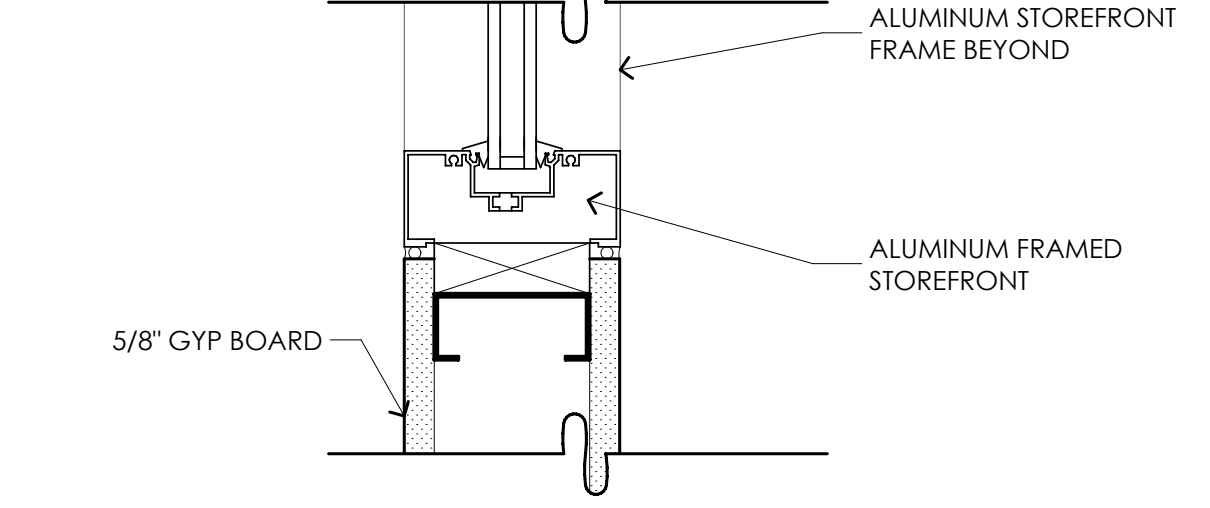
A WALL TYPE
1/2" = 1'-0"



A HEAD

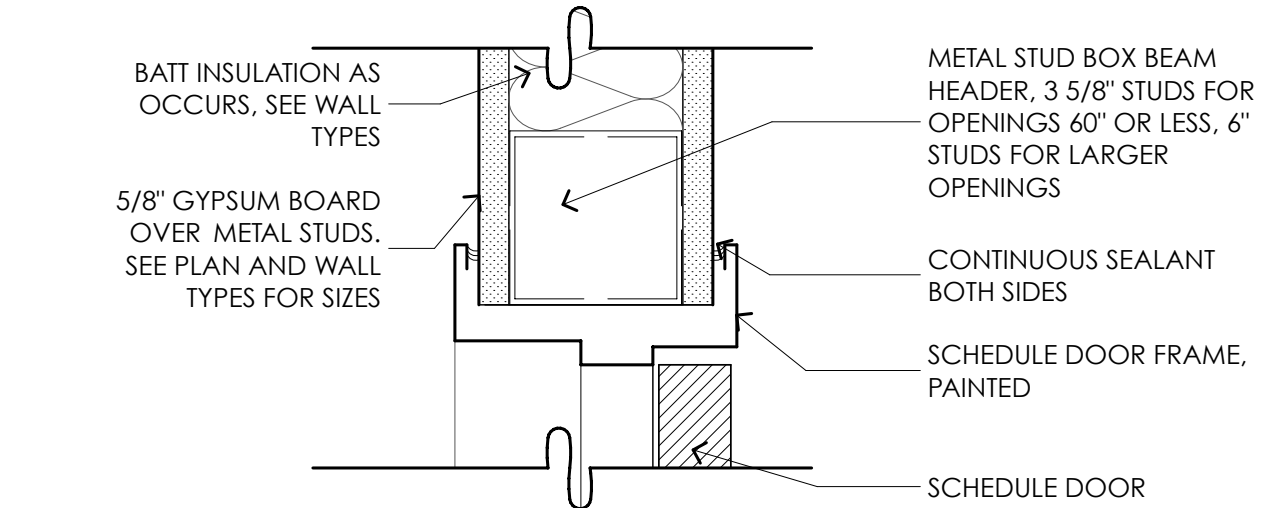


B JAMB

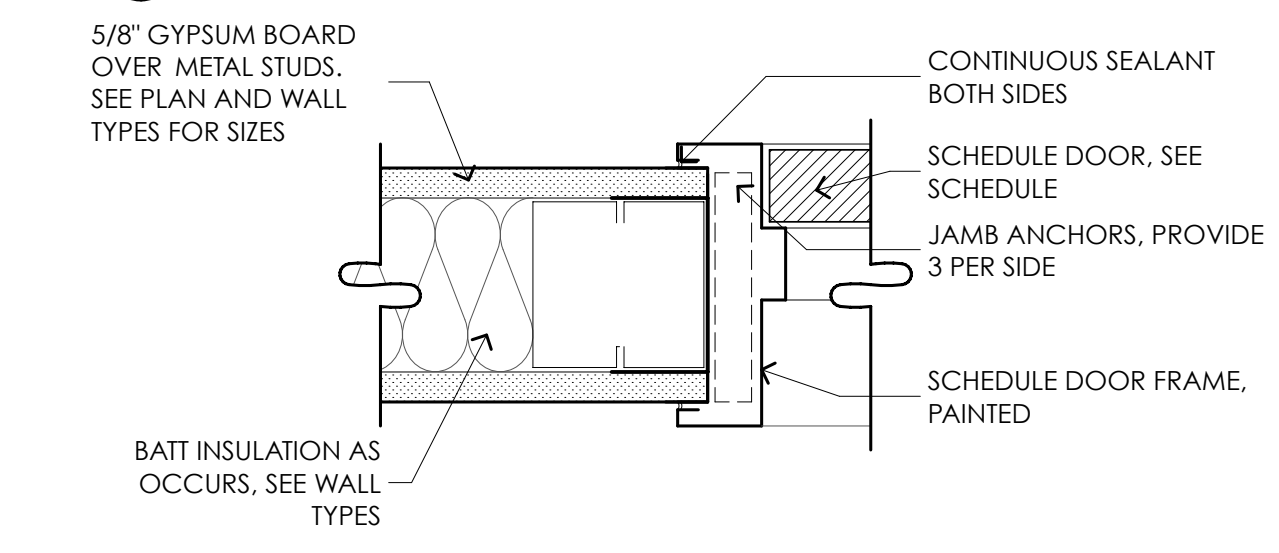


C SILL

D2 INT. STOREFRONT WINDOW (MTL STUD)
SCALE: 3" = 1'-0"



A HEAD



B JAMB

D2 INTERIOR HM DOOR (MTL STUD)
SCALE: 3" = 1'-0"

DOOR NO.	LOCATION	W	H	DOOR		HARDWARE	FRAME			U.L. RATING	REMARKS
				TYPE	FINISH		TYPE	MATERIAL	FINISH		
109	COACH LOCKER	3'-0"	7'-0"	A	---	1	---	---	---	---	RELOCATED DOOR
110A	TUTOR	3'-0"	7'-0"	B	---	2	---	---	---	---	---
119	PLAYERS LOUNGE	3'-0"	7'-0"	B	---	3	---	---	---	---	---

- GENERAL NOTES:
- CONTRACTOR TO USE THE ARCHITECT'S DOOR TYPE PLAN DESIGNATION NUMBER IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SCHEDULE SUBMITTALS.
 - ALL DOORS IN MEANS OF EGRESS SYSTEM TO BE OPERABLE FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.
 - THE MAXIMUM EFFORT TO OPERATE DOORS CANNOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS, AND 5.0 POUNDS FOR INTERIOR DOORS.
 - THE BOTTOM 10" ON THE PUSH SIDE OF THE DOOR SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE THAT ALLOWS THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
 - COORDINATE ALL KEYING REQUIREMENTS WITH OWNER.
 - DOOR THICKNESS SHALL BE 1 3/4" - U.N.O.
 - DOORS SHALL MATCH EXISTING, COLOR TO MATCH EXISTING ADJACENT DOORS.
 - ALL DOOR FRAMES SHALL BE "TIMELY" HOLLOW METAL FRAMES - PAINTED U.N.O.
 - PROVIDE BLOCKING FOR ANY IN-WALL ACCESSORIES, SUCH AS WALL-MOUNTED DOOR STOPS.

- NOTES:
- DOOR NUMBER: THE DOOR NUMBER IN THE SCHEDULE CORRESPONDS WITH THE NUMBER OF THE ROOM OF WHICH THE DOOR IS LOCATED, PLUS THE LETTER SUFFIX INDICATED ON THE PLAN FOR THAT DOOR, REFER ALSO TO THE FLOOR PLAN AND THE INTERIOR AND EXTERIOR ELEVATIONS.
 - OPENING SIZE IS EQUAL TO NET OPENING. ROUGH OPENING IS EQUAL TO OPENING SIZE AND FRAME DIMENSION.
 - ALL EXTERIOR DOOR SHALL BE WEATHER STRIPPED.
 - ALL DOORS SHALL BE PROVIDED WITH A LEVEL FLOOR OR LANDING. ALL THRESHOLD PROVIDED SHALL HAVE A MAXIMUM OF 1/2" ABOVE THE FLOOR OR LANDING PER CODE.
 - EXCEPT FOR SLIDING DOORS, THE LOWER 12" OF ALL DOORS SHALL COMPLY WITH CODE AND SHALL BE SMOOTH AND UNINTERRUPTED, TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOT REST, WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
 - THE MAXIMUM EFFORT TO OPERATE DOORS, APPLIED AT RIGHT ANGLES TO HINGED DOORS OR AT THE CENTER PLANE SLIDING DOORS SHALL COMPLY WITH THE LATEST CODE REQUIREMENTS.
 - UNLESS NOTED OTHERWISE, DOOR OPENING IN RATED WALLS SHALL BE PROTECTED BY A TIGHT FITTING SMOKE AND DRAFT CONTROL ASSEMBLY HAVING A FIRE PROTECTION RATING IF NOT LESS THAN (20) MINUTES, THE LABELED ASSEMBLY SHALL BE SELF CLOSING OR AUTOMATIC CLOSING ACTUATION OF A SMOKE DETECTOR AND SHALL BE PROVIDED WITH A CONTINUOUS GASKET ALONG THE STOP AT THE DOOR JAMB AND HEAD.
 - ALL INTERIOR WOOD DOORS SHALL BE FINISHED AS SCHEDULED.
 - CONTRACTOR TO VERIFY DOOR FRAME WIDTH REQUIRED AT EXISTING WALLS, WHICH VARY IN THICKNESS.

DOOR HARDWARE NOTES:
ALL HARDWARE TO BE LEVER TYPE PER IBC AND ICC/ANSI REQUIREMENTS. FINISH EQ. TO BRUSHED ALUMINUM. HARDWARE TO MEET REQUIREMENTS OF IBC SECTION 1008.18.2 AND ICC/ANSI A 117.1-2009 SECTION 404.2.7. MOUNTING HEIGHT SHALL BE BETWEEN 34" AND 48". LEVER STYLE TO BE SPA - VIF, MATCH EXISTING ADJACENT DOORS

HARDWARE SET OPTIONS:

HW SET 01 - RELOCATED DOOR - VERIFY SPECIFIED LOCK WILL FIT IN EXISTING PREP
For use on mark/door # (s):

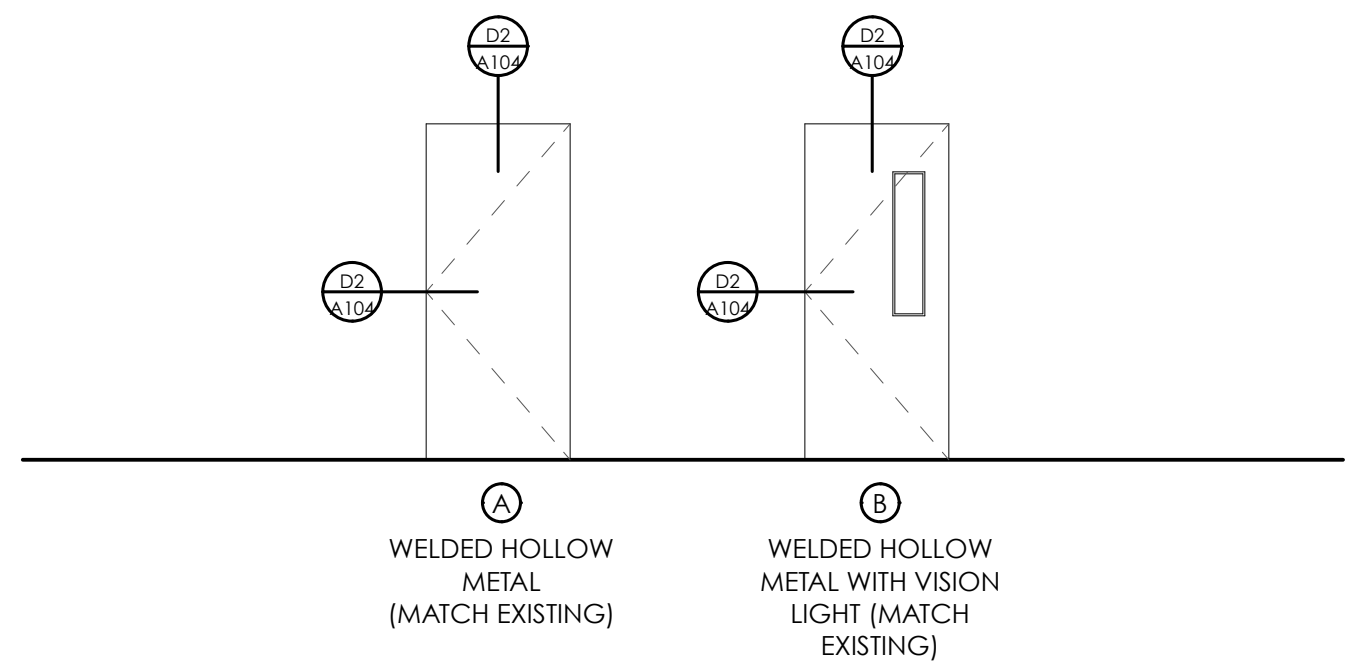
Qty	EA	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	58B1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND708D SPA	626	SCH
1	EA	SFIC PERM CORE	KEYMARK-BY UNLV LOCK SHOP	626	MED
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET 02
For use on mark/door # (s):

Qty	EA	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	58B1 4.5 X 4.5	652	IVE
1	EA	ENTRANCE LOCK	ND538D SPA	626	SCH
1	EA	SFIC PERM CORE	KEYMARK-BY UNLV LOCK SHOP	626	MED
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET 03
For use on mark/door # (s):

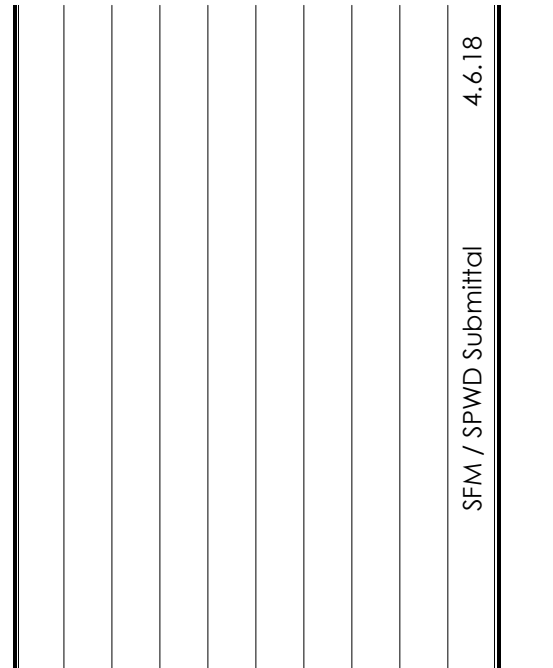
Qty	EA	Description	Catalog Number	Finish	Mfr
3	EA	HINGE	58B1 4.5 X 4.5	652	IVE
1	EA	PUSH PLATE	8200 4" X 16"	626	IVE
1	EA	PULL PLATE	8303 10" 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4040XP HEDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE



DOOR TYPES

NOT TO SCALE

aptus
 UNLV Mendenhall Remodel
 Renovation
 4505 South Maryland Parkway
 Las Vegas, Nevada, 89154
 1200 South 4th Street Suite 206
 Las Vegas, Nevada 89104
 P 702.839.1200
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TITLE
DOOR SCHEDULE, WINDOW SCHEDULE & DETAILS
 DRAWING NO.
A 104

MECHANICAL & PLUMBING SPECIFICATIONS

CONDITIONS

A. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS, AND OTHER RELATED PORTIONS OF DIVISION 1 APPLY TO THIS SECTION.

REGULATIONS, CODES, PERMITS AND INSPECTIONS

A. COMPLY WITH ALL NATIONAL, STATE, COUNTY, AND CITY CODES, ORDINANCES, ETC., HAVING JURISDICTION, INCLUDING RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.

B. INCORPORATE ALL CODES, ORDINANCES, ETC., INTO THE BASE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENT AND/OR TO OBTAIN APPROVAL OF WORK.

C. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES. PRIOR TO FINAL APPROVAL, FURNISH ARCHITECT WITH CERTIFICATES OF INSPECTION AND APPROVALS BY LOCAL AUTHORITIES.

D. IN ADDITION, THE LATEST EDITION OF THE FOLLOWING PUBLISHED STANDARDS SHALL BE ADHERED TO:

- 2012 INTERNATIONAL BUILDING CODE.
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE.
- 2012 UNIFORM PLUMBING CODE.
- 2012 UNIFORM MECHANICAL CODE.
- APPLICABLE NFPA STANDARDS.
- ASHRAE GUIDES.
- SMACNA DUCT CONSTRUCTION STANDARDS.
- 2011 NATIONAL ELECTRIC CODE.
- HEALTH CODES.
- 2012 CLARK COUNTY FIRE CODE AMENDMENTS.

DESIGN DRAWINGS

A. DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE ONLY INTENDED TO DEFINE THE BASIC FUNCTIONS REQUIRED. PROVIDE ALL WORK MATERIAL, ETC., NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND ARE A PART OF THE WORK INCLUDED; HOWEVER, NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DRAWINGS.

B. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.

SUBMITTALS

A. SHOP DRAWINGS:

PRIOR TO FABRICATION OR DELIVERY OF ANY MATERIAL AND/OR EQUIPMENT TO THE JOB-SITE, SUBMIT SIX (6) HARD BOUND AND INDEXED COPIES OF A BROCHURE COMPLETELY DESCRIBING ALL MAJOR SYSTEMS, MATERIAL AND EQUIPMENT PROPOSED TO BE USED. ANY PIECE OF EQUIPMENT PLACED ON THE JOB WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL.

B. RECORD DRAWINGS:

MAINTAIN ACCURATE CONTINUOUS RECORDS OF ANY AND ALL CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER, ONE (1) SET OF LEGIBLE AND REPRODUCIBLE COPIES OF THESE RECORD DRAWINGS.

C. WARRANTY:

UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A ONE (1) YEAR WARRANTY OF THE SYSTEM, MATERIAL AND WORK PERFORMED. WARRANTY THE ENTIRE COST, INCLUDING MATERIALS AND/OR LABOR, OF ALL WORK REQUIRED AND NECESSITATED BY DEFECT OF MATERIALS AND/OR WORKMANSHIP.

D. MANUAL AND OPERATING INSTRUCTIONS:

1. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER, A HARD BOUND "OWNER'S MANUAL". INCLUDE IN THE MANUAL INSTRUCTIONS PREPARED SPECIFICALLY FOR THE SYSTEMS PROVIDED, ALONG WITH ALL PAPERS, DESCRIPTIONS, PARTS LISTS, INSTRUCTIONS, WARRANTIES, ETC., WHICH WERE DELIVERED WITH THE MATERIALS AND EQUIPMENT UTILIZED IN THE PROJECT. IDENTIFY EACH ITEM BY DESIGNATION APPEARING ON THE DRAWINGS.

2. AT THE TIME DESIGNATED, PROVIDE A SUITABLE OPERATOR, MECHANIC OR ENGINEER TO REVIEW THE SYSTEM WITH OWNER'S REPRESENTATIVE TO THOROUGHLY FAMILIARIZE HIM WITH THE OPERATIONS AND MAINTENANCE OF THE SYSTEM.

HEATING, VENTILATING, AND AIR CONDITIONING SPECIFICATIONS

GENERAL PRODUCTS

A. FURNISH AND INSTALL NEW PRODUCTS. ITEMS OF EQUIPMENT USED FOR THE SAME PURPOSE SHALL BE BY THE SAME MANUFACTURER. MAKE NO EQUIPMENT SUBSTITUTIONS WHICH WOULD LEAVE INADEQUATE OPERATING AND/OR SERVICING SPACE. DRAWINGS TO FIRE DEPARTMENT.

B. ANY ACCESSORIES REQUIRED FOR PROPER OPERATION OF THE SYSTEMS, EVEN THOUGH NOT SPECIFICALLY INDICATED, SHALL BE INCLUDED AND INSTALLED. SUCH ACCESSORIES MAY INCLUDE, BUT NOT LIMITED TO, FILTERS, CONDENSATE DRAINS, RELIEF VALVES, SERVICE VALVES, THERMOSTATS, VIBRATION ISOLATORS, ACCESS PANELS, ETC. MOTOR STARTERS ARE PRE-WIRED EQUIPMENT (AND OTHER PROTECTION AND CONTROL DEVICES) ARE ALSO INCLUDED IN THIS SPECIFICATION. STARTERS FOR NON-PRE-WIRED EQUIPMENT, I.E., FANS, PUMPS, ETC., ARE SPECIFIED IN DIVISION 16.

C. SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE PLANS AND ELSEWHERE IN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.

DUCTWORK

A. PROVIDE A COMPLETE SYSTEM OF DUCTWORK FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE ASHRAE GUIDES AND WITH SMACNA DUCT CONSTRUCTION STANDARDS. THE DUCT SYSTEM SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS. CHANGES IN DUCT ARRANGEMENT OR IN DUCT SIZES SHALL BE MADE ONLY AFTER WRITTEN ACCEPTANCE IS OBTAINED FROM THE CONSULTING ENGINEER.

B. DUCTWORK SHALL BE RECTANGULAR OR ROUND AND SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL. DUCT SIZES SHOWN ON THE DRAWINGS ARE NET OPENINGS AND SHALL BE INCREASED TO ACCOMMODATE DUCT LINING WHERE APPLICABLE. USE OF FLEXIBLE DUCT IS ACCEPTABLE AT FINAL CONNECTION OF DIFFUSER.

DUCT LINER INSULATION

A. LINER (INTERNAL):

1. LINE ALL RECTANGULAR SUPPLY DUCTWORK AND RETURN AIR DUCTWORK WITH 1" THICK, THREE POUND DENSITY COATED FIBERGLASS DUCT LINER.

2. ALL DUCT DIMENSIONS ARE INSIDE TO INSIDE OF THE LINER.

INSULATION (EXTERNAL):

- ALL CONCEALED SUPPLY DUCTWORK AND RETURN DUCTWORK ABOVE CEILING OR IN FURRED SPACES SHALL BE THERMALLY INSULATED UNLESS LINED AS PREVIOUSLY DESCRIBED.
- THERMAL INSULATION SHALL BE FLEXIBLE BLANKET GLASS FIBER INSULATION. MAXIMUM "K" OF 0.30 AT 75 DEGREES FAHRENHEIT MEAN TEMPERATURE, MINIMUM 3/4 POUND DENSITY. INSULATION SHALL BE 1.5" THICK.

GENERAL EXECUTION

A. INSTALL MATERIALS AND EQUIPMENT IN AN ARRANGEMENT WHICH WILL GIVE THE GREATEST PRACTICAL EASE OF OPERATION AND SERVICE TO THE OWNER.

B. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.

C. PERFORM ALL WORK IN ACCORDANCE WITH THE BEST TRADE PRACTICES. INSTALL ALL MATERIALS AND EQUIPMENT SQUARELY WITH THE BUILDING LINES. PROVIDE RIGID PERMANENT BASES AND SUPPORTS FOR ALL WORK. CONSTRUCT AND BRACE EQUIPMENT, DUCTWORK, PIPING, ETC., SO THAT THERE WILL BE NO VIBRATION AND/OR RATTLING WHEN THE SYSTEM IS IN OPERATION.

D. COVER AND PROTECT ALL EQUIPMENT AND MATERIALS FROM WEATHER, THEFT, ETC., UNTIL DATE OF COMPLETION. PLUG AND/OR CAP ALL OPEN ENDS OF INSTALLED PIPING AND DUCTWORK.

DUCTWORK INSTALLATION

A. CONSTRUCT DUCTWORK WITH MATERIAL, GAUGES, JOINTS, BRACING AND SUPPORTS IN ACCORDANCE WITH APPLICABLE RECOMMENDATIONS OF ASHRAE AND SMACNA WITH ADDITIONAL BRACING AS REQUIRED.

B. DUCTWORK SHALL BE RIGIDLY CONSTRUCTED AND AIR TIGHT. JOINTS SHALL BE TIGHTLY FITTED WITH NO VOIDS. ALL DUCTWORK SEALING PRODUCTS SHALL CONFORM TO THE UMC AND UL-181 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

AUTOMATIC TEMPERATURE CONTROLS

A. THIS CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM OF AUTOMATIC TEMPERATURE CONTROL, INTEGRATED WITH THE EXISTING SYSTEM WHICH CONTROLS SHALL INCLUDE 24 VOLT HEAT/COOL, ON/OFF/AUTO THERMOSTAT, TRANSFORMERS AND RELAYS REQUIRED.

B. THIS CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WIRING IN CONNECTION WITH ANY AUTOMATIC TEMPERATURE CONTROL EQUIPMENT. WIRING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.

TESTING AND BALANCING

A. THE TESTS SHALL INCLUDE ALL FANS, VOLUME DAMPERS, AIR DEVICES, ETC., NORMALLY INCLUDED AS A PART OF THE AIR DISTRIBUTION AND TRANSMISSION SYSTEM.

B. A COMPLETE BALANCING REPORT SHALL BE DONE BY INDEPENDENT BALANCING COMPANY AND SHALL BE SUBMITTED TO THE CONSULTING ENGINEER UPON COMPLETION. THE BALANCING REPORT SHALL INCLUDE DESIGN QUANTITIES AND ACTUAL QUANTITIES FOLLOWING BALANCING. BALANCING SHALL BE COMPLETED TO THE SATISFACTION OF THE CONSULTING ENGINEER.

C. ANY ADDITIONAL BALANCING DAMPERS OR ORIFICE PLATES REQUIRED FOR BALANCING SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.

D. THE FOLLOWING DATA SHALL BE INCLUDED IN THE TESTING AND BALANCING REPORT FOR EACH SYSTEM:

- TEST AND ADJUST SYSTEM FOR DESIGN CFM.
- TEST AND RECORD ENTERING AIR TEMPERATURES (D.B. HEATING AND COOLING).
- TEST AND RECORD ENTERING AIR TEMPERATURES (W.B. COOLING).
- TEST AND RECORD LEAVING AIR TEMPERATURES (D.B. HEATING).
- TEST AND RECORD LEAVING AIR TEMPERATURES (W.B. COOLING).
- TEST AND RECORD SYSTEM SUCTION PRESSURE, HEAD PRESSURE, COMPRESSOR AMPS, AND AMBIENT TEMPERATURE DURING COOLING OPERATION.
- TEST AND ADJUST EACH AIR OUTLET/INLET TO WITHIN PLUS OR MINUS 5% OF DESIGN REQUIREMENTS.

PLUMBING AND PIPING SPECIFICATIONS

GENERAL PRODUCTS

A. FURNISH AND INSTALL NEW EQUIPMENT AND MATERIALS. ITEMS OF EQUIPMENT USED FOR THE SAME PURPOSE SHALL BE BY THE SAME MANUFACTURER.

B. SYSTEMS SHALL BE COMPLETE AND OPERABLE. ANY ACCESSORIES REQUIRED FOR OPERATION OF THE SYSTEMS SHALL BE INCLUDED AS ITEM OF EQUIPMENT. ALL VALVES SHALL BE CONCEALED WITHIN FIXTURE OR EQUIPMENT WHERE POSSIBLE.

C. SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE PLANS AND ELSEWHERE IN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.

PIPING MATERIALS

A. SOIL, WASTE, AND STORM DRAIN PIPING AND FITTINGS SHALL BE HUBLESS SERVICE WEIGHT CAST IRON. JOISTS BURIED BELOW GRADE SHALL BE MC NO-HUB CAST-IRON COUPLING OR CLAMP-ALL STAINLESS STEEL COUPLING; ABOVE GRADE SHALL BE STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES. WHERE SOIL CONDITIONS REQUIRE AND AS ALLOWED BY LOCAL AUTHORITY FOR BUILDING CONSTRUCTION & HVAC SYSTEMS, PVC DWV PIPING SYSTEMS MAY BE USED.

B. WATER PIPING BURIED BELOW GRADE SHALL BE TYPE "K" COPPER TUBING WITH WROUGHT COPPER FITTINGS WITH SILVER SOLDER.

C. DOMESTIC AND CHILLED WATER PIPING ABOVE GRADE SHALL BE TYPE "L", HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS AND NO-LEAD 95/5 SOLDER.

D. CONDENSATE DRAIN PIPING SHALL BE TYPE "M" HARD COPPER WITH WROUGHT COPPER FITTINGS AND NO LEAD 95/5.

GENERAL EXECUTION

A. INSTALL MATERIALS AND EQUIPMENT IN AN ARRANGEMENT WHICH WILL GIVE THE GREATEST PRACTICAL EASE OF OPERATION AND SERVICE TO THE OWNER.

B. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.

C. PERFORM ALL WORK IN ACCORDANCE WITH THE BEST TRADE PRACTICES. INSTALL ALL MATERIALS AND EQUIPMENT SQUARELY WITH THE BUILDING LINES. PROVIDE RIGID PERMANENT BASES AND SUPPORTS FOR ALL WORK. CONSTRUCT AND BRACE EQUIPMENT, PIPING, ETC., SO THAT THERE WILL BE NO VIBRATION AND/OR RATTLING WHEN THE SYSTEM IS IN OPERATION.

D. COVER AND PROTECT ALL EQUIPMENT AND MATERIALS FROM WEATHER, THEFT, ETC., UNTIL DATE OF COMPLETION. PLUG AND/OR CAP ALL OPEN ENDS OF INSTALLED PIPING.

INSTALLATION

A. CONCEAL ALL PIPING IN WALLS, FURRED SPACES, PIPE SPACES, OR ABOVE SUSPENDED CEILING, AS SHOWN ON THE DRAWINGS. GROUP PIPING WHEREVER PRACTICAL AND INSTALL UNIFORMLY IN STRAIGHT PARALLEL LINES, SQUARELY WITH BUILDING LINES.

B. SUPPORT HORIZONTAL PIPING WITH PIPE HANGERS. DO NOT USE PERFORATED METAL STRAP. ARRANGE PIPING SO THAT THERMAL EXPANSION DOES NOT CAUSE STRESS. INSTALL AND SECURE PIPING SO THAT HOT AND COLD LINES, AND LINES OF DISSIMILAR METALS ARE NOT IN CONTACT. ALLOW FOR THERMAL EXPANSION, AS REQUIRED.

C. VERIFY ALL EQUIPMENT DIMENSIONS AND REQUIREMENTS FOR ROUGH-IN WORK.

D. SANITARY: INSTALL PIPING AT A UNIFORM GRADE. MAKE ALL JOINTS CLOSE AND SQUARE. USE FITTINGS FOR ALL TURNS AND OFFSETS. UNIFORMLY GRADE AND COMPACT TRENCHES PRIOR TO LAYING PIPING. PROVIDE CONTINUOUS SUPPORT FOR ALL PIPING.

TESTING REQUIREMENTS

A. TEST ALL SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, ORDINANCES, ETC., IN PARTICULAR THE UNIFORM PLUMBING CODE, 2012 EDITION, AND AS FOLLOWS:

- SANITARY: STATIC WATER PRESSURE FOR FOUR (4) HOURS.
- POTABLE WATER: AVAILABLE PRESSURE BUT NOT LESS THAN 100 PSI FOR ONE (1) HOUR.
- IF ANY TEST SHOWS THE WORK TO BE DEFECTIVE IN ANY WAY OR AT VARIANCE WITH SPECIFICATION REQUIREMENTS, MAKE ALL NECESSARY CHANGES AND REMEDY ALL DEFECTS.
- TEST PIPING SYSTEMS AFTER INSTALLATION AND PRIOR TO BEING PUT INTO USE, COVERED OR CONCEALED BY INSULATION, BACKFILLING, OR BUILDING CONSTRUCTION.

DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. DISINFECT WATER PIPING IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF NEVADA WATER SUPPLY REGULATIONS, SECTION 3, AND LOCAL REQUIREMENTS.

FIRE SPRINKLER NOTES

- SPRINKLER CONTRACTOR SHALL PROVIDE SYSTEM DESIGN, LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR THE COMPLETE FIRE SPRINKLER SYSTEM.
- THE DESIGN AND INSTALLATION SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 13) AND THE GENERAL REQUIREMENTS OF APPLICABLE SECTIONS OF THE UNIFORM BUILDING CODE, THE SPECIFIC REQUIREMENTS OF THE LOCAL FIRE PREVENTION BUREAU, AND THE OWNER'S INSURANCE UNDERWRITER.
- THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLER HEADS, VALVES, ESCUTCHEONS, PIPING, FITTINGS, HANGERS, DRAINS, WET TEST CONNECTIONS, SIGNS AND OTHER IDENTIFICATION MARKINGS AS REQUIRED.
- ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF FIRE PROTECTION SYSTEMS SHALL BE LISTED AS APPROVED BY UNDERWRITERS LABORATORIES, INC., "LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS," OR APPROVED BY OTHER APPROPRIATE, NATIONALLY RECOGNIZED TESTING LABORATORIES FOR USE IN SPRINKLER SYSTEMS, AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER.
- SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.
- PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.

7. INSTALL HEADS AT FINISHED HEIGHT WITH ESCUTCHEON, OR DIRECTLY IN REDUCER OF EXTRA LENGTH DROPS RATHER THAN PLUGGING. IF EXTRA LENGTH DROPS ARE INSTALLED, CUT BACK HEADS AFTER CEILING INSTALLATION IN THE CUSTOMARY MANNER.

8. SPRINKLER DROPS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF CEILING SYSTEM THEN REMOVED AND REINSTALLED AFTER INSTALLATION OF CEILING SYSTEM, WITH DROPS MODIFIED, AS REQUIRED. PROVIDE ESCUTCHEONS AT EACH SPRINKLER HEAD.

9. COORDINATE WITH OTHER WORK, INCLUDING DUCTWORK, DIFFUSERS, GRILLES, ELECTRICAL AND PLUMBING PIPING, AS NECESSARY TO INTERFACE COMPONENTS OF FIRE SPRINKLER PIPING SEPARATELY.

10. AFTER SYSTEM IS COMPLETELY INSTALLED, IT SHALL BE FILLED AND TESTED IN ACCORDANCE WITH LOCAL REQUIREMENTS, AND THE REQUIREMENTS OF THE APPLICABLE NFPA BULLETINS.

11. FINAL SHOP DRAWINGS SHALL FIRST BE SUBMITTED TO THE BUILDING DEPARTMENT OR STATE FIRE MARSHALL. FOLLOWING THEIR REVIEW AND APPROVAL, SUBMIT TO THE OWNER'S INSURANCE COMPANY. FOLLOWING THEIR SIGNED APPROVAL, THE SHOP DRAWINGS SHALL BE SENT TO THE PRIME CONSULTANT'S OFFICE FOR REVIEW. IF REQUIRED BY ANY REVIEWING AGENT, OR IF REVIEW COMMENTS REQUIRE EXTENSIVE REVISIONS, THE SUBMITTAL SHALL BE REVISED AS REQUIRED AND RESUBMITTED FOR APPROVAL BEFORE SUBMISSION TO THE PRIME CONSULTANT'S OFFICE.

12. THE CONTRACTOR WARRANTS THAT ALL WORK INSTALLED SHALL BE FREE OF ALL DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATION OF COMPLETION AND ACCEPTANCE OF THE WORK.

13. ADDITIONAL SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.

14. ADDITIONAL PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.

15. ACTIVATE THE SPRINKLER SYSTEM FOR PROTECTION PURPOSES AS SOON AS DROPS HAVE BEEN COMPLETE IN ANY ONE SECTION OF THE SPRINKLER.

16. ALL SPRINKLER HEADS AND ESCUTCHEONS SHALL HAVE PAINTED FINISH, COLOR AS SELECTED BY ARCHITECT.

17. ALL SPRINKLERS SHALL BE CENTERED WITHIN THE CEILING GRID, COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO SUBMITTAL OF DRAWINGS TO FIRE DEPARTMENT.

GENERAL NOTES

- RESOLVE ALL QUESTIONS OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
- COORDINATE THE INSTALLATION OF MECHANICAL AND PLUMBING SYSTEMS WITH OTHER TRADES.
- COORDINATE ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS WITH THE GENERAL CONTRACTOR.
- COORDINATE AND VERIFY THAT ALL OPENINGS IN WALLS ABOVE CEILING / DOOR LOUVERS / DOOR UNDERCUTS ARE PROVIDED AS INDICATED ON THESE DRAWINGS.
- INSTALL FULL SIZE CONDENSATE DRAIN WITH TRAP SEAL DEPTH EQUAL TO 1.5 X UNIT TOTAL STATIC PRESSURE FOR EACH COOLING COIL. DISCHARGE DRAIN TO (LOCATION) FOR (UNIT TYPE) AND (OTHER UNITS) UNLESS OTHERWISE NOTED ON PLANS.
- PROVIDE 20x20 ACCESS PANELS IN "HARD" CEILINGS FOR ACCESS TO ALL MOTORS / CONTROLS / BALANCING DAMPERS AND FIRE DAMPERS.
- PROVIDE OFFSETS AS NECESSARY TO ACCOMMODATE STRUCTURE AND OTHER TRADES.
- PROVIDE ADEQUATE ACCESS TO ALL MECHANICAL EQUIPMENT PER MANUFACTURERS REQUIREMENTS OR CODE MINIMUM CLEARANCES.
- PROVIDE THERMOSTAT TRANSMITTERS / SENSORS FOR ALL VAV BOXES AT ALL FRONT OF HOUSE LOCATIONS.
- PROVIDE THERMOSTAT FOR ALL VAV BOXES AT ALL BACK OF HOUSE LOCATIONS.

DRAWING INDEX

DATE	DELTA	REVISION DESCRIPTION
04/06/2018		SFM / SPWD Submittal
	SHEET NUMBER	SHEET NAME
	MP000	MECHANICAL COVER SHEET
	MP101	MECHANICAL ENLARGED PLANS

LEGEND

ABBREVIATION	SYMBOL	DESCRIPTION
D		DRAIN PIPING
CW		COLD AND HOT WATER PIPING
HWC		HOT WATER RECIRCULATION PIPING
		110° F HOT WATER PIPING
		140° F HOT WATER PIPING
SS		SANITARY SEWER PIPING
V		VENT PIPING
HWS		HOT WATER SUPPLY AND RETURN PIPING
CHS		CHILLED WATER SUPPLY AND RETURN PIPING
		GATE OR BALL VALVE
		SUPPLY, RETURN / EXHAUST AIR DUCT
		DUCTWORK UNLINED AND DUCTWORK LINED
		FLEXIBLE AND RIGID DUCT
		ITEM TO BE REMOVED
		FIRE, MOTOR OPERATED AND MANUAL DAMPER
		FIRE/SMOKE DAMPER, FIRE DAMPER, SMOKE DAMPER
T, H		THERMOSTAT AND HUMIDISTAT
AP		ACCESS PANEL
SA,RA,EA,OA,CA		SUPPLY, RETURN, EXHAUST, OUTSIDE AND COMBUSTION AIR
NC, NO		NORMALLY CLOSED, NORMALLY OPEN
S, Sp, Sv		SWITCH, SWITCH W/PILOT AND SWITCH, VARIABLE SPEED
RE:		REFERENCE
		SECTION A ON SHEET M-1 DETAIL A ON SHEET M-1 RISER R-1 ON SHEET M-1
		WORK NOTE 1, REVISION NOTE 1, DEMOLITION NOTE 1, POINT OF CONNECTION
E, R, N	(E), (R), (N)	EXISTING, RELOCATED AND NEW

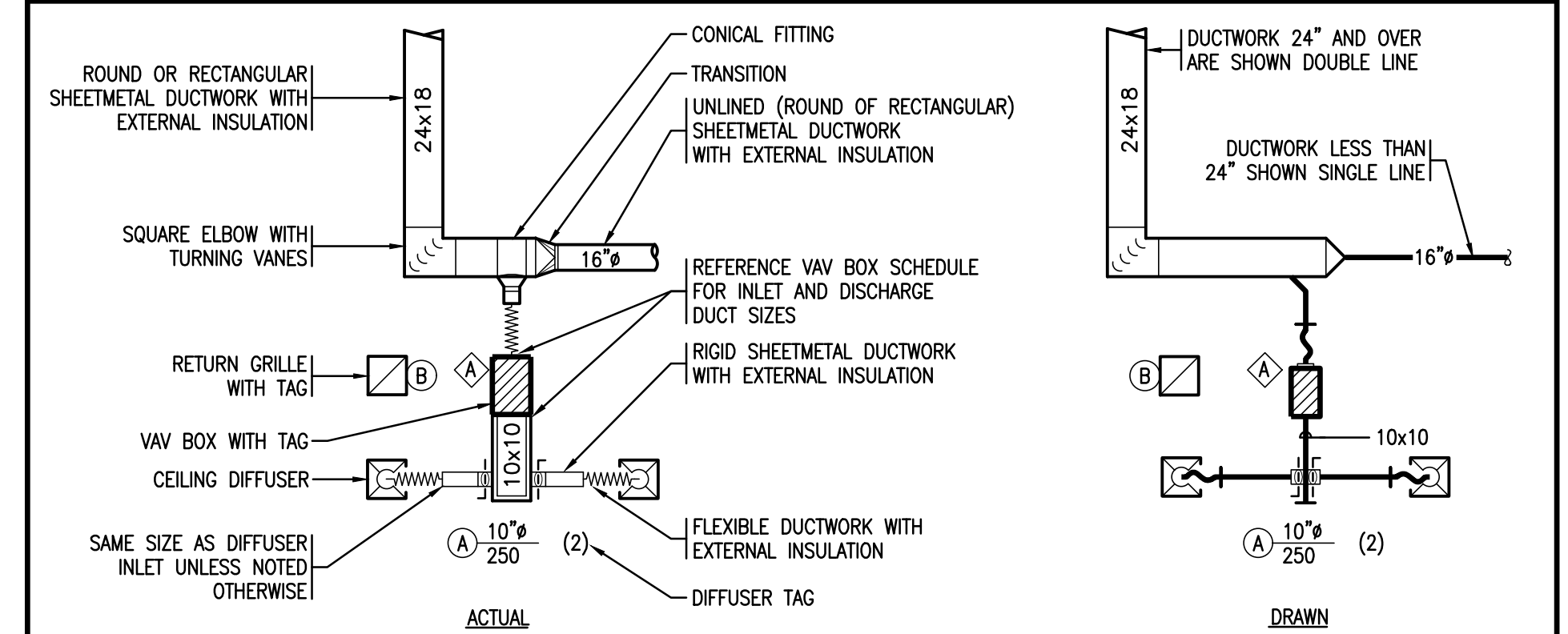
DIFFUSER, GRILLE, AND REGISTER SCHEDULE

FINISHES: 1) FACTORY PAINTED WHITE. 2) FACTORY PAINTED FLAT BLACK. 3) PAINT TO MATCH CEILING. REFER TO ARCHITECTURAL AND ID DRAWINGS.

NOTES: A) SEE DRAWING FOR NECK SIZE AND AIR QUANTITY B) PROVIDE FRAME COMPATIBLE WITH WALL OR CEILING TYPE C) REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. D) REMOTE VOLUME DAMPER ACTUATOR, MODEL: YOUNG REGULATOR, BOWDEN CABLE, ACCESSIBLE THRU FACE OF GRILLE.

TAG	MANUFACTURER	MODEL	DESCRIPTION	FINISH	NOTES
(A)	TITUS	TMS-AA	SUPPLY DIFFUSER, 24x24, LOUVERED FACE, ALUMINUM CONSTRUCTION	1	A, B, C, D

DUCTWORK LEGEND - VAV SYSTEMS



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UNLV Mendenhall Remodel
Renovation
4505 South Maryland Parkway
Las Vegas, Nevada, 89154

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TITLE
MECHANICAL
COVER SHEET

DRAWING NO.
MP000

4.6.18
SFM / SPWD Submittal

CONTRACTOR SHALL REVIEW COMPLETE SETS OF DRAWINGS FOR ALL TRADES PRIOR TO SUBMITTING BID. INCLUDE IN BID PROVISIONS FOR ALL ITEMS REQUIRING ELECTRICAL POWER WHETHER SPECIFICALLY SHOWN ON THE ELECTRICAL DRAWINGS OR NOT. ADDITIONAL ITEMS REQUIRING ELECTRICAL POWER CONNECTION MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. COMPLETE ELECTRICAL CONNECTION TO ALL MECHANICAL AND PLUMBING EQUIPMENT AS REQUIRED BY MECHANICAL/PLUMBING CONSULTANT.
2. COMPLETE ELECTRICAL CONNECTION TO ALL KITCHEN EQUIPMENT AS REQUIRED BY KITCHEN CONSULTANT.
3. ADDITIONAL DECORATIVE, TASK AND AMBIENT LIGHT FIXTURES (INTERIOR AND EXTERIOR) AS SHOWN ON INTERIOR DESIGN, LIGHTING CONSULTANT AND/OR ARCHITECTURAL DRAWINGS.
4. ADDITIONAL INTERIOR DESIGN FEATURES REQUIRING POWER.
5. COMPLETE ELECTRICAL CONNECTION TO ALL LANDSCAPE LIGHTING AND FEATURES AS REQUIRED BY LANDSCAPE ARCHITECT.
6. A COMPLETE AND OPERABLE DIMMING SYSTEM OF PUBLIC SPACES AS REQUIRED BY INTERIOR DESIGNER AND/OR ARCHITECT.
7. SECURITY AND SURVEILLANCE CAMERA, CONDUIT, CABLES AND POWER TO ALL ASSOCIATED EQUIPMENT AS REQUIRED BY SURVEILLANCE DESIGN AND OWNER.
8. AUDIO/VIDEO DEVICES, CONDUIT, CABLES AND POWER TO ALL ASSOCIATED EQUIPMENT AS REQUIRED BY AUDIO/VIDEO DESIGN AND OWNER.
9. TELEPHONE/DATA DEVICES, CONDUIT, CABLES AND POWER TO ALL ASSOCIATED EQUIPMENT AS REQUIRED BY TELEPHONE/DATA DESIGN AND OWNER.
10. A COMPLETE AND OPERABLE CODE-COMPLIANT FIRE ALARM SYSTEM IN ACCORDANCE WITH APPLICABLE LOCAL CODES AS REQUIRED BY LICENSED FIRE ALARM DESIGNER/INSTALLER.

CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL REDUNDANT ITEMS BETWEEN TRADES AND INCLUDE IN BASE BID ALL COSTS REQUIRED FOR INSTALLATION OF COMPLETE AND OPERABLE SYSTEMS REQUIRING ELECTRICAL CONNECTIONS. IF CONFLICTS EXIST BETWEEN ELECTRICAL DRAWINGS/SPECIFICATIONS AND OTHER TRADES, THE CONTRACTOR SHALL BID THE HIGHER QUANTITY OR GREATER QUALITY ITEMS.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
CW	COLD WATER
DEMO	DEMOLITION/DEMOLISH
DISC	DISCONNECT
EC	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
FBO	FURNISHED BY OTHERS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HP	HORSEPOWER
IMC	INTERMEDIATE METALLIC CONDUIT
ISC	SHORT CIRCUIT AMPERES, KA
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
kcmil	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NECA	NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFC	NATIONAL FIRE CODE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PF	POWER FACTOR
∅, PH	PHASE
RGC	RIGID GALVANIZED CONDUIT
SW	SWITCH
TEL	TELEPHONE
T-STAT	THERMOSTAT
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT OR VOLTAGE
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WP	WEATHERPROOF
XFMR	TRANSFORMER

DRAWING INDEX

DATE	DELTA	REVISION DESCRIPTION
04/06/2018		SFM / SPWD SUBMITTAL

SHEET NUMBER	SHEET DESCRIPTION
E000	ELECTRICAL COVER SHEET
E001	ELECTRICAL SPECIFICATIONS
E201	LIGHTING CEILING PLANS
E301	POWER PLANS
E500	SINGLE LINE DIAGRAM AND SCHEDULES

LEGEND (NOT ALL SYMBOLS WILL BE USED)

LUMINAIRE SYMBOLS

- UPPER CASE LETTER DENOTES FIXTURE TYPE
LOWER CASE LETTER DENOTES CONTROL DESIGNATION
NUMBER DENOTES CIRCUIT NUMBER
'NL' DENOTES UNSWITCHED NIGHT LIGHT
- LED STRIP LUMINAIRE (LENGTH AS INDICATED)
 - LED 2X4 LUMINAIRE (SIZE AS INDICATED)
 - EMERGENCY LUMINAIRE (SIZE AS INDICATED)
 - CEILING OR GRADE MOUNTED LUMINAIRE (AS SCHEDULED)
 - WALL MOUNTED LUMINAIRE
 - EXIT SIGN - SHADED AREAS INDICATE ILLUMINATED FACES - PROVIDE DIRECTIONAL ARROWS AS INDICATED (VERIFY MOUNTING)

CONTROL DEVICE SYMBOLS

- LOWER CASE LETTER DENOTES CONTROL DESIGNATION
(SWITCHES FLUSH MOUNTED @+18" AFF, UNO)
- S SINGLE POLE SWITCH
 - S₃ 3-WAY SWITCH
 - S_D DIMMER SWITCH
 - S_{OS} SWITCH WITH INTEGRAL OCCUPANCY SENSOR
 - OS OCCUPANCY SENSOR
 - TC TIMECLOCK

RECEPTACLE SYMBOLS

- (FLUSH MOUNTED @+18" AFF, UNO)
(RECEPTACLES WITH A "C" MOUNTED ABOVE COUNTER)
- Φ DUPLEX RECEPTACLE
 - Φ^U DUPLEX RECEPTACLE - FLOOR MOUNTED
 - Φ^U DUPLEX RECEPTACLE WITH (2) USB PORTS
 - Φ^D DOUBLE DUPLEX RECEPTACLE
 - SPECIAL PURPOSE RECEPTACLE (TYPE AS NOTED)
 - Φ GFCI DUPLEX RECEPTACLE

RACEWAY SYMBOLS

- 1/2" CONCEALED CONDUIT WITH (3) #12 WIRES, UNO
- CONDUIT UNDERGROUND OR BELOW GRADE
- CONDUIT HOMERUN
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT STUBBED AND CAPPED
- GROUND CONNECTION

ANNOTATIONS

- ⓧ KEY NOTE
- △ REVISION SYMBOL
- ⓧ X.X DIAGRAM CALLOUT
- ⓧ X.X.X MECHANICAL EQUIPMENT CALLOUT

POWER DISTRIBUTION SYSTEM SYMBOLS

- SWITCHBOARD OR DISTRIBUTION BOARD
- PANELBOARD - SURFACE MOUNTED
- PANELBOARD - FLUSH MOUNTED
- TRANSFORMER
- ENCLOSED MOTOR CONTROLLER/STARTER
- COMBINATION ENCLOSED MOTOR CONTROLLER/STARTER AND FUSED DISCONNECT SWITCH
- NON-FUSED DISCONNECT SWITCH (3-POLE, UNO)
- FUSED DISCONNECT SWITCH (3-POLE, UNO)
- VENDOR FURNISHED COMBINATION ENCLOSED MOTOR CONTROLLER/STARTER AND FUSED DISCONNECT SWITCH
- VENDOR FURNISHED VARIABLE FREQUENCY DRIVE
- CONTACTOR
- ENCLOSED CIRCUIT BREAKER
- RELAY
- JUNCTION BOX

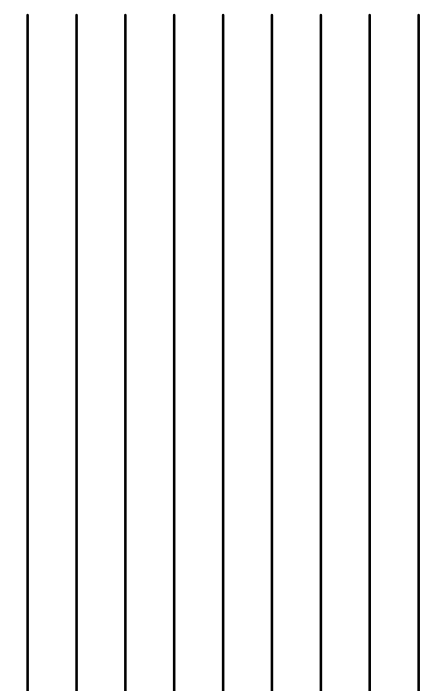
SINGLE LINE DIAGRAM SYMBOLS

- CIRCUIT BREAKER
- FUSIBLE SWITCH
- METERING - PER LOCAL UTILITY REQUIREMENTS
- FEEDER SCHEDULE CALLOUT
- DIGITAL METER
- GROUND FAULT INTERRUPTER

LOW VOLTAGE SYMBOLS

- DATA OUTLET WITH 1" UNO, FLUSH WALL MOUNTED @+18" AFF
- FLOOR MOUNTED DATA OUTLET WITH 1" UNO
- TELEVISION OUTLET WITH 1" MOUNTED AT TV HEIGHT, UNO
- POE CAMERA WITH 1" UNO
- SPEAKER WITH 3/4" PER ZONE, UNO
- CARD READER WITH 1" UNO

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TITLE
ELECTRICAL
COVER SHEET

DRAWING NO.
E000

ELECTRICAL SPECIFICATIONS

CONDITIONS

- A. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS AND OTHER RELATED PORTIONS OF DIVISION 1 APPLY TO THIS SECTION.
- B. COORDINATE ALL MATERIAL DELIVERIES AND STORAGE DURING CONSTRUCTION. PROTECT ALL MATERIAL AND EQUIPMENT FROM WEATHER, THEFT OR DAMAGE. CONTRACTOR SHALL REPLACE ANY DAMAGED OR STOLEN MATERIALS WITHOUT COST TO THE OWNER.
- C. COORDINATE WITH OWNER ALLOWABLE WORKING HOURS, LOCATION FOR PARKING, ETC. PRIOR TO BID AND INCLUDE ALL COSTS IN BASE BID.
- D. REMOVE ALL TRASH AND CONSTRUCTION DEBRIS GENERATED AS A RESULT OF THE ELECTRICAL PORTION OF WORK. KEEP PROJECT SITE CLEAR OF ALL DEBRIS THROUGHOUT CONSTRUCTION PERIOD.
- E. VISIT THE PROJECT SITE AND THOROUGHLY INVESTIGATE EXISTING CONDITIONS, INCLUDING EXISTING UNDERGROUND UTILITIES, PRIOR TO SUBMITTING BID. CAREFULLY EVALUATE ALL EXISTING MATERIAL, EQUIPMENT, ETC. WHICH IS TO BE REMOVED, REINSTALLED, ALTERED OR MODIFIED, AND INCLUDE ALL THESE COSTS IN THE BASE BID. DETERMINE EXISTING INSTALLATION WORK WHICH IS TO REMAIN TO SERVE AREAS OUTSIDE THE LIMITS OF WORK AND INCLUDE ALL COST IN BASE BID FOR WORK WHICH MAY BE REQUIRED TO MAINTAIN EXISTING SERVICES. NO ADDITIONAL CHARGES WILL BE ALLOWED FOR FAILURE TO INCLUDE ALL LABOR AND MATERIAL THAT IS REQUIRED FOR RELOCATION OR MODIFICATION NECESSARY TO MAINTAIN THE EXISTING ELECTRICAL, COMMUNICATION, FIRE ALARM SYSTEM, ETC. INSTALLATIONS BEYOND THE LIMITS OF CONSTRUCTION.
- F. WHERE WORK IS INDICATED OR REQUIRED IN AN AREA NOT DEFINED AS BEING RENOVATED, INCLUDED IN THIS BASE BID ALL COSTS REQUIRED TO REMOVE, RELOCATE, REINSTALL, REPAIR AND/OR REPLACE EXISTING CONSTRUCTION AS MAY BE NECESSARY TO COMPLETE THE REQUIRED WORK. ALL AFFECTED AREAS SHALL BE RESTORED TO THE ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER, ARCHITECT AND OWNER. NO ADDITIONAL CHARGES WILL BE ALLOWED FOR FAILURE TO INCLUDE ALL LABOR AND MATERIAL THAT IS REQUIRED FOR THE WORK. WORK REQUIRED IN EXISTING FINISHED AREAS MUST BE COORDINATED WITH THE ARCHITECT AND OWNER TO ASSURE MINIMAL DISRUPTION OF NORMAL ACTIVITIES.
- G. PLAN THE SEQUENCE OF DEMOLITION AND CONSTRUCTION SO THAT THE ENTIRE PROJECT IS CARRIED OUT WITH MINIMUM INTERRUPTIONS. AT LEAST TWO WEEKS PRIOR TO DEMOLITION, THE CONTRACTOR SHALL SUBMIT HIS PLANS TO THE WORK, AND THE WORK SHALL NOT START WITHOUT THE OWNER'S APPROVAL.
- H. CONFER WITH THE MANUFACTURER'S OF EXISTING EQUIPMENT AND SYSTEMS THAT ARE TO BE REWORKED OR EXTENDED, PRIOR TO ANY MODIFICATIONS TO INSURE THE INTEGRITY OF THE ORIGINAL EQUIPMENT WILL NOT BE REDUCED AND TO CONFIRM THAT SUCH MODIFICATIONS ARE FEASIBLE.
- I. WHERE EXISTING ELECTRICAL WORK AND EQUIPMENT PREVENT PROPER CONSTRUCTION OF NEW WORK AS INDICATED, REMOVE, RELOCATE OR IN OTHER WAYS ALTER EXISTING WORK IN ORDER TO ACCOMMODATE NEW WORK REQUIREMENTS. PROVIDE TEMPORARY WIRING AND APPARATUS AS REQUIRED TO FACILITATE PHASING OF THE WORK.
- J. ALL WIRING FOR ALL NEW AND REPLACEMENT ITEMS WHICH ARE BEING PROVIDED AS PART OF THIS PROJECT SHALL BE NEW AND OF THE TYPES INDICATED IN THE CONTRACT DOCUMENTS. UNDER NO CIRCUMSTANCES WILL EXISTING WIRING BE PERMITTED TO BE REUSED. THIS INCLUDES WIRING FOR REPLACEMENT LIGHTING FIXTURES AND WIRING DEVICES FROM THE SOURCE OF POWER SUPPLY (PANELBOARDS) TO THE LAST FIXTURE OR DEVICE ON EACH CIRCUIT. EXISTING WIRING FOR LIGHTING FIXTURES AND WIRING DEVICES RENDERED OBSOLETE OR BEING REPLACED SHALL BE DISCONNECTED AND REMOVED IN THEIR ENTIRETY. THE EXISTING RACEWAYS MAY BE REUSED IF FEASIBLE AND NOT DAMAGED. OTHERWISE, NEW RACEWAYS SHALL BE PROVIDED AS PART OF THIS PROJECT.
- K. WHERE THE PROJECT ENCOMPASSES DEMOLITION OF WALLS AND RELOCATION OR REPLACEMENT OF EXISTING ELECTRICAL EQUIPMENT, FEEDERS, BRANCH WIRING SIGNAL CABLES, ETC. WITH NEW WORK, REMOVE, REINSTALL OR RELOCATE THAT PORTION OF THE EXISTING EQUIPMENT SYSTEM WIRING, FIXTURES AND DEVICES, ETC. WHICH APPLIES TO THE ELECTRICAL TRADE IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS.
- L. IN AREA WHERE NEW CEILINGS, PARTITION WALLS OR DOORS ARE ADDED, ANY EXISTING SYSTEMS, SUCH AS FIXTURES, POWER, COMMUNICATIONS FEEDERS AND DEVICES ARE DESIGNATED TO REMAIN, RELOCATE AND REWORK THE EXISTING CIRCUITRY AND PROVIDE AND EXTEND ADDITIONAL MATERIAL AS REQUIRED TO INSURE PROPER OPERATION IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS.
- M. REPLACE CEILING TILES DAMAGED DURING THE WORK WITH NEW TILES TO MATCH THE EXISTING IN EVERY RESPECT.
- N. ALL CODE VIOLATIONS ENCOUNTERED RELATING TO EXISTING CONDITIONS WHICH IS OR MAY BE AFFECTED BY THIS PROJECT SHALL BE IDENTIFIED AS TO TYPE OF VIOLATION, LOCATION, DESCRIPTION AND CODE SECTION AS PART OF THIS PROJECT. THIS INFORMATION SHALL BE IN TYPEWRITTEN FORM AND GIVEN TO THE OWNER AND ENGINEER.
- O. RETURN ALL EQUIPMENT AND DEVICES REMOVED AND NOT RE-USED TO THE OWNER PER THEIR INSTRUCTIONS.
- P. ALL RACEWAYS ABANDONED SHALL HAVE ALL WIRING REMOVED BACK TO NEXT ACTIVE SOURCE. ALL RACEWAYS ABANDONED SHALL BE REMOVED UNLESS NOTED OTHERWISE.
- Q. FIRE PROTECTION AND FIRE ALARM SYSTEMS SHALL NOT BE DISCONNECTED OR TAKEN OUT OF SERVICE WITHOUT FIRST OBTAINING APPROVAL FROM THE OWNER AND FIRE DEPARTMENT. COMPLY WITH THE FIRE DEPARTMENTS REQUIREMENTS. PROVIDE ON SITE FIRE TRAINED WATCHMAN AS REQUIRED.
- R. CONTRACTOR SHALL VERIFY AVAILABLE SPACE AND AMPERAGE OF EXISTING SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS AFFECTED BY THE ADDITION OF NEW LOADS. PROVIDE WRITTEN DOCUMENTATION TO THE ARCHITECT/ENGINEER DOCUMENTATION SHALL INCLUDE A MINIMUM 30-DAY RECORDING (THREE PHASE AMPERES, KILOWATTS AND POWER FACTOR).
- S. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL.
- REGULATIONS, CODES, PERMITS AND INSPECTIONS**
- A. COMPLY WITH ALL NATIONAL, STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION, INCLUDING RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.
- B. INCORPORATE ALL CODES AND ORDINANCES INTO THE BASE BID AND INSTALLATION OF WORK. NO ADDITIONAL COSTS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENT AND/OR TO OBTAIN APPROVAL OF WORK.
- C. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES.

DESIGN DRAWINGS

- A. DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE ONLY INTENDED TO DEFINE THE BASIC FUNCTIONS REQUIRED. PROVIDE ALL MATERIAL, ETC. NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND ARE A PART OF THE WORK INCLUDED. HOWEVER, NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DRAWINGS.
- B. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, THE GREATER QUANTITY AND/OR QUANTITY.

SHOP DRAWINGS

1. PRIOR TO ORDERING OR INSTALLATION OF THE MATERIAL AND/OR EQUIPMENT
2. TO THE JOB-SITE, SUBMIT SIX (6) HARD BOUND AND INDEXED COPIES OF A BROCHURE COMPLETELY DESCRIBING ALL SYSTEMS, COMPONENTS, MATERIAL AND EQUIPMENT PROPOSED TO USED. ANY PIECE OF EQUIPMENT PLACED ON THE JOB WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL.
3. PROVIDE SHOP DRAWING LAYOUT OF ALL ROOMS WITH ELECTRICAL DISTRIBUTION EQUIPMENT LAYOUT SHALL SHOW LOCATIONS OF ELECTRICAL EQUIPMENT AND SHALL BE DRAWN TO SCALE.

RECORD DRAWINGS

- MAINTAIN ACCURATE CONTINUOUS RECORDS OF ANY AND ALL CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER, ONE(1) SET OF LEGIBLE AND REPRODUCIBLE COPIES OF THESE RECORDS DRAWINGS.

WARRANTY

- ALL LABOR MATERIAL SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED FOR ONE (1) YEAR FROM PROJECT COMPLETION. GUARANTEE THE ENTIRE COST, INCLUDING MATERIALS AND/OR LABOR, OF ALL WORK REQUIRED AND NECESSITATED BY DEFECT OF MATERIALS AND/OR WORKMANSHIP. AS A CONDITION OF SUPPLIERS AGREE TO AND HOLD HARMLESS AS TO INDEMNIFY OWNER, ENGINEER, ARCHITECT AND ALL RELATED SUBSIDIARIES AGAINST ANY LIABILITY ARISING OUT OF PROJECT FAILURE OR MANUFACTURING DEFECT OF THE EQUIPMENT PROVIDED.

MANUAL AND OPERATING INSTRUCTIONS

1. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER, A HARD BOUND "OWNER'S MANUAL". INCLUDE IN THE MANUAL INSTRUCTIONS PREPARED SPECIFICALLY FOR THE SYSTEM PROVIDED, ALONG WITH ALL PAPERS, DESCRIPTIONS, PARTS LISTS, INSTRUCTIONS, WARRANTIES, ETC. WHICH WERE DELIVERED WITH THE MATERIALS AND EQUIPMENT UTILIZED IN THE PROJECT. IDENTIFY EACH ITEM BY DESIGNATION APPEARING ON THE DRAWINGS.
2. AT THE TIME DESIGNATED, PROVIDE A SUITABLE OPERATOR, ELECTRICIAN OR ENGINEER, TO REVIEW THE SYSTEM WITH OWNER'S REPRESENTATIVE TO THOROUGHLY FAMILIARIZE HIM WITH THE OPERATIONS AND MAINTENANCE OF THE SYSTEM.

GENERAL PRODUCTS

- A. RACEWAYS
- MINIMUM RACEWAY SIZE IS 1/2" UNLESS NOTED OTHERWISE.
 - CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METALLIC CONDUIT (IMC) OR RIGID GALVANIZED STEEL CONDUIT (RGS).
 - FLEXIBLE METAL CONDUIT MAY BE USED FOR FINAL CONNECTION TO LIGHT FIXTURES AND FOR FINAL CONNECTION TO MOTORS.
 - METAL CLAD CABLES (TYPE MC) MAYBE USED BETWEEN WIRING DEVICES WHERE ALLOWED BY CODE AND LOCAL AUTHORITY HAVING JURISDICTION AND INSTALLED PER NEC ARTICLE 534. ALL HOMERUNS SHALL BE IN CONDUIT. CONDUIT INSTALLED CONCEALED MAY BE EMT OR IMC, UNLESS NOTED OTHERWISE.
 - CONDUIT SUBJECT TO PHYSICAL DAMAGE SHALL BE RGS, UNLESS NOTED OTHERWISE.
 - UNDERGROUND OR IN-SLAB CONDUIT SHALL BE SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE.
- B. CONDUIT FITTINGS
- IMC AND RGS: NON-SPLIT THREADED STEEL, ZINC DIE CAST IS NOT ACCEPTABLE.
 - EMT: COMPRESSION OR DOUBLE SET SCREW TYPE.
 - BUSHINGS SHALL BE METALLIC INSULATED TYPE.
 - FACTORY BENDS SHALL BE USED FOR ANY CONDUIT SIZE 2" OR LARGER.
- C. OUTLET/JUNCTION/PULL BOXES
- OUTLET BOXES SHALL BE PROVIDED AS SHOWN OR REQUIRED BY CODE.
 - OUTLET BOX SHALL BE CODE GAUGE GALVANIZED STEEL, 4" SQUARE AND 2-1/8" DEEP WITH PLASTER RING.
 - PROVIDE RAISED COVERS AND FIXTURE STUDS FOR OUTLET BOXES WHERE REQUIRED.
 - PROVIDE BLANK COVERS FOR OUTLET BOXES WITH DEVICES.
 - PROVIDE 6" SEPARATION BETWEEN BACK-TO-BACK OUTLET BOXES.
 - BOXES FOR OUTDOOR USE AND DAMP LOCATIONS SHALL BE WEATHERPROOF GASKETED CAST METAL TYPE.
 - BOXES IN HAZARDOUS LOCATIONS SHALL BE CAST FREE ALUMINUM OR AS REQUIRED TO SUIT INTENDED APPLICATION.
 - ALL BOXES SHALL BE SIZED PER NEC REQUIREMENTS FOR NUMBER AND SIZE CONDUCTORS AND CONDUIT ENTRIES TO SUIT INTENDED APPLICATION.
 - COVERS SHALL BE FULLY ENCLOSED AND SECURED AT ALL CORNERS.
 - GRADE MOUNTED PULL BOXES SHALL BE MADE OF CONCRETE CONSTRUCTION WITH BOLT DOWN CONCRETE COVERS. PROVIDE A MINIMUM 4" CONCRETE COLLAR AROUND PULLBOX.
 - FLOOR BOXES SHALL BE GALVANIZED CAST IRON TYPE WITH BRASS COVERS AND FLANGES SUITABLE FOR CONDUIT AND DEVICES INDICATED. FLOOR BOXES SHALL BE MANUFACTURED BY STEEL CITY OR APPROVED EQUAL.

WIRE AND CABLE

1. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS LARGER THAN #10 AWG SHALL BE STRANDED.
2. ALL CONDUCTORS SHALL BE MINIMUM 75 DEGREE C COPPER UNLESS NOTED OTHERWISE.
3. POWER AND LIGHTING CONDUCTOR SIZE SHALL BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE.
4. CONDUCTOR INSULATION TYPE SHALL BE THHN/THWN #12 AWG UNLESS NOTED OTHERWISE.
5. ALL TERMINATIONS AND DEVICES SHALL BE LISTED FOR 75 DEGREES C UNLESS NOTED OTHERWISE.
6. ALL WIRING SHALL BE IDENTIFIED WITH MAKERS TO REFLECT CIRCUIT DESIGNATIONS AT ALL POINTS WHERE WIRING IS ACCESSIBLE.
7. ALUMINUM CONDUCTORS SHALL NOT BE USED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
8. THE FOLLOWING CONDUCTORS SIZES SHALL BE PROVIDED FOR 20A, 10 BRANCH CIRCUITS AND 2, 4KVM DIMMED AND NON-DIMMED CIRCUITS (HOT, NEUTRAL, & GROUND) BASED ON ACTUAL CIRCUIT LENGTH, UPSIZE RACEWAYS ACCORDINGLY.

CONDUCTOR SIZE	120V	208V	277V	480V
#12 AWG	0-70FT.	0-135FT.	0-160FT.	0-310FT.
#10 AWG	71-120FT.	136-220FT.	161-250FT.	311-500FT.
#8 AWG	121-180FT.	221-325FT.	251-375FT.	501-760FT.
#6 AWG	181-310FT.	326-510FT.	376-585FT.	-
#4 AWG	311-465FT.	-	-	-

CONDUCTOR COLOR

VOLTAGE SYSTEM	PHASE A	PHASE B	PHASE C	NEUTRAL	GROUND
120/240V, 3ϕ, 4W	BLACK	RED	ORANGE	WHITE	GREEN (HIGH LEG)
208/120V, 3ϕ, 4W	BLACK	RED	BLUE	WHITE	GREEN
480V, 3ϕ, 3W	BROWN	ORANGE	YELLOW		GREEN
480/277V, 3ϕ, 4W	BROWN	ORANGE	YELLOW	GRAY	GREEN

DEVICES

- WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE AS FOLLOWS:
- WALL SWITCHES: 20A RATED, 120/277V, SINGLE POLE, SILENT TYPE.
 - DIMMER SWITCHES: LUTRON NOVAT SERIES RATED FOR LOAD SERVED.
 - RECEPTACLES: 20A RATED, 125V DUPLEX GROUNDED TYPE. GFI TYPE: 20A RATED GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE.
 - SPECIAL PURPOSE RECEPTACLES SHALL BE TYPE AND RATING PER PLANS AND VERIFIED WITH EQUIPMENT SUPPLIER.
 - DEVICES AND COVER PLATES SHALL BE WHITE IN COLOR, UNLESS NOTED OTHERWISE OR INSTRUCTED BY THE ARCHITECT OR INTERIOR DESIGNER.
 - MOUNTING HEIGHTS SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY ADA OR AUTHORITY HAVING JURISDICTION.

FUSES AND CIRCUIT BREAKERS

- FUSES PROTECTING MOTORS SHALL BE BUSSMAN DUAL ELEMENT TIME DELAY CLASS RK-5.
- CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER AS THE SWITCHBOARD, DISTRIBUTION PANEL OR PANELBOARDS WITH THE RATING AND NUMBER OF POLES AS INDICATED OR SCHEDULED.
- CIRCUIT BREAKERS SERVING HVAC TYPE EQUIPMENT SHALL BE HACR TYPE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- CIRCUIT BREAKERS USED FOR SWITCHING SHALL BE SWD TYPE RATED FOR SWITCHING USE.
- SERIES RATED CIRCUIT BREAKERS AND EQUIPMENT IS NOT ACCEPTABLE.

MOTOR STARTERS AND DISCONNECTS

- MOTOR CONTROLLERS: 600V AC HEAVY DUTY RATED, SINGLE OR MULTI-POLE TO SUIT APPLICATION AND MOUNTED IN SUITABLE NEMA ENCLOSURE.
- ALL MOTOR CONTROLLERS SHALL BE HORSEPOWER RATED TO SUIT MOTOR BEING CONTROLLED.
- PROVIDE H-0-A OR START/STOP OPERATION AS NEEDED FOR APPLICATION.
- PROVIDE MINIMUM TWO (2) NORMALLY OPEN AND TWO (2) NORMALLY CLOSED AUXILIARY CONTACTS FOR MOTOR CONTROLLERS.
- DISCONNECTS: 600V AC HEAVY DUTY RATED, FUSED OR NON-FUSED AS INDICATED, SINGLE OR MULTI-POLE TO SUIT APPLICATION AND MOUNTED IN SUITABLE NEMA ENCLOSURE.

SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS

- ACCEPTABLE EQUIPMENT MANUFACTURERS SHALL BE GENERAL ELECTRIC, SQUARE D, CUTLER-HAMMER OR APPROVED EQUAL.
- SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS SHALL MEET THE SEISMIC QUALIFICATIONS OF THE ADOPTED BUILDING CODE.
- GROUNDING CONNECTIONS SHALL BE MADE WITH APPROVED CONNECTORS AND METHODS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
- ALL PANELBOARDS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- WIRE TERMINATIONS SHALL BE U.L. LISTED FOR 7C.
- FLUSH MOUNTED PANELBOARDS SHALL HAVE A MINIMUM OF TWO (2) 1" AND FOUR (4) 3/4" EMPTY CONDUITS STUBBED UP FROM PANEL TO ABOVE ACCESSIBLE CEILING SPACE FOR FUTURE BRANCH CIRCUIT WIRING.
- ALL SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS SHALL HAVE A SEPARATE GROUND BUS ISOLATED FROM THE NEUTRAL BUS.
- ALL SWITCHBOARD SHALL BE FRONT AND REAR ALIGNED.
- ALL SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS SHALL BE U.L. LISTED AND FULLY RATED FOR THE AC RATING INDICATED ON THE DRAWINGS. SERIES RATED EQUIPMENT IS NOT ACCEPTABLE.
- METERING CTS AND PTS SHALL BE PROVIDED IN THE SERVICE ENTRANCE SWITCHBOARD WHERE METERING IS INDICATED ON THE DRAWINGS.
- METER DEVICE SHALL BE INSTALLED IN THE MAIN SWITCHBOARD OR AT A REMOTE LOCATION AS INDICATED ON THE DRAWINGS. METER DEVICE AND REQUIREMENTS SHALL BE VERIFIED BY THE CONTRACTOR WITH THE SERVING UTILITY COMPANY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE TO CONFORM SUBMITTED EQUIPMENT WILL FIT WITHIN ALLOTTED SPACE SHOWN AND COMPLY WITH ALL NEC CLEARANCE REQUIREMENTS.

TRANSFORMERS

- ACCEPTABLE EQUIPMENT MANUFACTURERS SHALL BE GENERAL ELECTRIC, SQUARE D, CUTLER-HAMMER OR APPROVED EQUAL.
- TRANSFORMERS SHALL MEET THE SEISMIC QUALIFICATIONS OF THE ADOPTED BUILDING CODE.
- TRANSFORMERS SHALL BE 115 DEGREES C RISE, UNLESS NOTE OTHERWISE.
- TRANSFORMERS SHALL BE U.L. LISTED AND MEET ANSI OVERLOAD STANDARDS.
- TRANSFORMERS SHALL MEET NEMA ST-20 SOUND LEVEL REQUIREMENTS.
- TRANSFORMERS SHALL HAVE COPPER WINDINGS.
- TRANSFORMERS SHALL HAVE APPROPRIATE NEMA RATING FOR LOCATION BEING INSTALLED.

8. TRANSFORMERS SHALL HAVE K-FACTOR RATING AS INDICATED ON THE DRAWINGS.
9. TRANSFORMERS SHALL HAVE CLASS 155 INSULATION, UNLESS NOTED OTHERWISE.

LIGHTING FIXTURES

- ALL LIGHTING FIXTURES SHALL BE U.L. LISTED.
- ALL FLUORESCENT FIXTURES SHALL BE PROVIDED WITH ENERGY SAVING LAMPS AND ELECTRONIC BALLASTS. PROVIDE ZERO DEGREE BALLASTS FOR EXTERIOR LIGHTING FIXTURES.
- ALL LAMPS SHALL BE BY THE SAME MANUFACTURER AND FURNISHED BY THE CONTRACTOR UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL BALLASTS SHALL BE LOW HARMONIC TYPE, THD <10%.
- LAMPS SHALL BE PROVIDED FOR ALL LUMINAIRES, INCLUDING OWNER PROVIDED.
- EXISTING LUMINAIRES, OR RELOCATED LUMINAIRES SHALL BE IN PROPER WORKING ORDER, RELAMPED AND ANY MISSING OR DAMAGED COMPONENTS REPLACED, AND MADE COMPATIBLE WITH ANY CHANGES TO THE CONTROLS SYSTEM.
- WHEN AVAILABLE PROVIDE INTEGRAL LED MODULES FOR ALL LUMINAIRES.
- ALL INTEGRAL LED OR AFTER MARKET LAMPING SHALL HAVE A CRI ABOVE 90 AND R9 ABOVE 90.
- ALL LUMINAIRES SHALL BE DIMMABLE VIA A LIGHTING CONTROL PANEL. 0-10V DIMMING IS PREFERRED ON ALL INTEGRAL LED LUMINAIRES.
- ALL REMOTE DRIVERS/POWER SUPPLIES/TRANSFORMER SHALL BE HIDDEN FROM VIEW IN A VENTILATED ACCESSIBLE LOCATION, PER MANUFACTURERS RECOMMENDATIONS.
- LINEAR LOW VOLTAGE LED PRODUCT, GENERALLY LOCATED IN MILLWORK AND COVES, SHOULD FOLLOW MANUFACTURERS RUN LENGTH RECOMMENDATIONS, AND ADDITIONAL HOMERUN PROVIDED AS REQUIRED FOR EACH SEGMENT OF PRODUCT RUN.
- ALL DOWNLIGHT STYLE LUMINAIRES IN FRONT OF HOUSE SHOULD HOLD TWO ACCESSORIES.
- ALL LUMINAIRES IN FOOD PREP AREAS SHALL BE LED, OR BE LENSED PER HEALTH CODE REQUIREMENTS.

FIRE ALARM/LIFE SAFETY SYSTEM

- CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF A COMPLETE AND OPERABLE FIRE ALARM SYSTEM FULLY APPROVED FOR USE BY AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL PROVIDE COMPLETE SYSTEM WIRING DIAGRAMS INCLUDING BUILDING FLOOR PLANS, SYSTEM COMPONENT SPECIFICATIONS, DEVICE LOCATIONS, ETC. FOR REVIEW AND APPROVAL BY AUTHORITY HAVING JURISDICTION.
- FIRE ALARM DRAWINGS AND SPECIFICATIONS ARE SHOWN FOR DESIGN INTENT ONLY AND ESTABLISH A PERFORMANCE SPECIFICATION.
- CONTRACTOR SHALL ENGAGE THE SERVICES OF A STATE LICENSED FIRE ALARM CONTRACTOR AND/OR MANUFACTURER TO PROVIDE A COMPLETE AND OPERABLE FIRE ALARM SYSTEM APPROVED BY THE AUTHORITY HAVING JURISDICTION UNDER THE BASE BID. CONTRACTOR SHALL BE RESPONSIBLE FOR AND INCLUDE IN BID ALL PLAN REVIEW AND PERMIT FEES, WHICH MAY BE APPLICABLE.
- FIRE ALARMS REQUIRED BUT NOT SHOWN ON THE DRAWINGS TO OBTAIN APPROVAL FROM AUTHORITY HAVING JURISDICTION SHALL BE INCLUDED IN THE BASE BID.
- CONTRACTOR SHALL INCLUDE IN BASE BID ALL FACTORY START UP AND TESTING OF THE FIRE ALARM SYSTEM.
- PRELIMINARY SYSTEM TESTING SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO FINAL TESTING WITH INSPECTION AUTHORITIES.
- FIRE ALARM SYSTEM SHALL INCLUDE ALL NECESSARY COMPONENTS, DEVICES, RACEWAYS, WIRING, ETC. TO MAKE A COMPLETE AND APPROVED FIRE ALARM SYSTEM UNDER THE BASE BID.

TV, TELEPHONE AND DATA SYSTEMS

- PROVIDE A COMPLETE CONDUIT SYSTEM FOR TV, TELEPHONE, DATA AND COMBINATION OUTLETS SHOWN.
- TV, TELEPHONE, DATA AND COMBINATION OUTLETS INDICATED SHALL TERMINATE AT THE TERMINAL BOARD OR CABINET INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE.
- TERMINAL BOARD SHALL BE A 4"x8"x3/4" FIRE RATED SHEET OF PLYWOOD, UNLESS NOTED OTHERWISE.
- TERMINAL CABINETS SHALL BE SIZED AS INDICATED ON THE DRAWINGS OR SUITABLE FOR INSTALLATION IF NOT INDICATED WITH NEMA ENCLOSURE RATING FOR APPLICATION.
- TELEPHONE SERVICE AND CABLE TV SERVICE DEMARK CONDUITS AND REQUIREMENTS SHALL BE COORDINATED AND VERIFIED WITH THE SERVING UTILITIES AND OWNER PRIOR TO BID.

GENERAL EXECUTION

- A. THOROUGHLY CLEAN ALL ITEMS BEFORE INSTALLATION.
- B. ALL WORK SHALL BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.
- C. ALL EQUIPMENT SHALL BE FASTENED TO BUILDING CONSTRUCTION WITH APPROVED SUPPORTS.
- D. COORDINATE ELECTRICAL WORK OTHER TRADES PRIOR TO SUBMITTING BID.
- E. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ELECTRICAL DEVICES, INCLUDING RECEPTACLES, SWITCHES, DATA AND TELEPHONE OUTLETS. IF LOCATIONS ARE NOT DEPICTED ON ARCHITECTURAL DRAWINGS, OBTAIN APPROVAL OF ARCHITECT PRIOR TO ROUGH-IN.
- F. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND COMPLETE REPAIR OF EXISTING BUILDING WALLS, CEILING, ETC. AS REQUIRED FOR INSTALLATION OF ELECTRICAL SYSTEM.
- G. PROVIDE ENGRAVED NAME PLATED WITH SHEET METAL SCREWS FOR EACH PIECE OF EQUIPMENT, INCLUDING: PANELBOARDS, TRANSFORMERS, DISTRIBUTION PANELS, SWITCHBOARDS, DISCONNECTS, TRANSFORMERS, DISTRIBUTION AS-BUILT DRAWINGS.
- H. ALL ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE OF THE SAME MANUFACTURER, INCLUDING: PANELBOARDS, TRANSFORMERS, DISTRIBUTION PANELS, SWITCHBOARDS, DISCONNECTS, MOTOR STARTERS, ETC. LABELED PER AS-BUILT.

INSTALLATION

A. RACEWAYS

- RACEWAYS SHALL BE INSTALLED CONCEALED, UNLESS NOTED OTHERWISE.
- ALL RACEWAYS REQUIRED TO BE EXPOSED SHALL BE PAINTED TO MATCH THE ADJACENT BUILDING SURFACE.
- SUPPORT RACEWAYS WITH TOGGLE BOLTS ON HOLLOW MASONRY, MACHINE SCREWS ON METAL SURFACES, BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD.
- RACEWAYS SHOULD BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING SURFACE AND AT RIGHT ANGLES.
- PROVIDE 200LB PULL STRING IN ALL EMPTY RACEWAYS.
- RACEWAYS PASSING THROUGH FIRE RATED CONSTRUCTION SHALL BE SEALED WITH U.L. LISTED FIRE RATED SEALANT, WHERE ELECTRICAL RACEWAYS ARE INSTALLED THROUGH RATED FLOORS OR WALLS, THE CONTRACTOR SHALL PROVIDE APPROPRIATE FITTINGS APPROVED BY ALL REQUIRED LOCAL AUTHORITIES FOR THE INTENDED APPLICATION.

B. LIGHTING FIXTURES

- PROVIDE ALL NECESSARY SUPPORTS FOR LIGHTING FIXTURES REQUIRED.

- OBTAIN FINAL APPROVAL FROM THE ARCHITECT PRIOR TO THE INSTALLATION OF RACEWAYS THROUGH RATED WALLS OR FLOORS.
- DO NOT COMBINE HOMERUNS, UNLESS NOTED OTHERWISE.
- INSTALL ALL RACEWAY SYSTEM PER THE NEC. DEVIATIONS FROM THE WIRING METHODS INDICATED SHALL NOT BE ALLOWED WITHOUT SPECIFIC WRITTEN APPROVAL PRIOR TO PLACING BID AND INSTALLATION.
- INCLUDE ALL COSTS FOR RACEWAY SYSTEMS AS SPECIFIED UNLESS WRITTEN APPROVAL FOR AN ALTERNATE WIRING METHOD IS OBTAINED FROM THE ARCHITECT, ENGINEER AND OWNER PRIOR TO SUBMITTING BID.
- PROVIDE EQUIPMENT GROUNDING CONDUCTOR PER NEC 250 IN ALL RACEWAYS.
- PROVIDE SEPARATE RACEWAYS FOR EMERGENCY SYSTEM WIRING AND NORMAL SYSTEM WIRING.
- ALL RACEWAYS AND CONDUCTORS SIZES SHOWN ARE TO BE INSTALLED WITHIN THE BUILDING STRUCTURE NOT EXPOSED TO AMBIENT CONDITIONS. IF RACEWAYS AND CONDUCTORS ARE ROUTED EXPOSED TO AMBIENT CONDITIONS, CONTRACTOR SHALL DERATE CONDUCTORS AND UPSIZE RACEWAYS ACCORDINGLY.
- RACEWAYS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK AND SLEEVE. INSTALLATION SHALL BE WATER TIGHT.
- ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC ARTICLE 230.8.
- ALL EMERGENCY FEEDERS SHALL BE ROUTED IN COMPLIANCE WITH NEC 700.9.
- ALL UNDERGROUND OR BELOW GRADE RACEWAYS SHALL BE INSTALLED IN COMPLIANCE WITH NEC TABLE 300.5.

C. FITTINGS AND ACCESSORIES

- PROVIDE EXPANSION AND DEFLECTION FITTINGS FOR CONDUITS CROSSING EXPANSION JOINTS. PROVIDE BONDING JUMPERS FOR ALL EXPANSION FITTINGS UNDER DIRECTIONS OF LIGHTING DESIGNER.
- FITTINGS SHALL BE SUITABLE FOR CONDITIONS OF INSTALLATION. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

D. OUTLET, JUNCTION AND PULL BOXES

- OUTLET BOXES SHALL BE METALLIC WITH GROUND CONNECTION AND EQUIPMENT GROUNDING CONDUIT CONNECTION.
- PROVIDE INSULATED SUPPORTS FOR CABLES.
- PROVIDE SEPARATE BOXES FOR DIFFERENT VOLTAGE SYSTEM.
- PROVIDE SEPARATE BOXES FOR EMERGENCY SYSTEM WIRING AND FOR NORMAL SYSTEM WIRING.
- COORDINATE FLOOR BOX LOCATIONS WITH ARCHITECT, STRUCTURAL ENGINEER, FURNITURE CONSULTANT AND INTERIOR DESIGNER PRIOR TO ROUGH-IN. SEE THOSE DRAWINGS FOR ADDITIONAL INFORMATION.

E. WIRE AND CABLE

- DO NOT COMBINE HOMERUNS, UNLESS NOTED OTHERWISE.
- DO NOT COMBINE NEUTRALS, SHARED NEUTRALS ARE NOT PERMITTED.
- PROVIDE INSULATION TESTING DOCUMENTATION OF ALL FEEDER AND DISTRIBUTION WIRING. REMOVE AND REPLACE WIRING NOT MEETING DISTRIBUTION WIRING. REMOVE AND REPLACE WIRING NOT MEETING MANUFACTURER'S RECOMMENDED INSULATION RESISTANCE.
- PROVIDE TESTING DOCUMENTATION SHOWING GROUNDING SYSTEM FOR THIS PROJECT WITH RESISTANCE OF LESS THAN 5 OHMS.

F. DEVICES

- INSTALL SWITCHES #48" AFF TO CENTER OF SWITCH, UNLESS NOTED OTHERWISE.
- INSTALL RECEPTACLES #18" AFF TO CENTER OF DEVICE, UNLESS NOTED OTHERWISE.
- RECEPTACLES LOCATED FOR COUNTERTOP USE SHALL BE 6" TO THE CENTER OF DEVICE ABOVE THE COUNTERTOP, UNLESS NOTED OTHERWISE.

G. FUSES AND CIRCUIT BREAKERS

- PROVIDE ALL FUSES FOR DEVICES SHOWN.
- PROVIDE OWNER TWO (2) SPARE SETS OF FUSES OF EACH TYPE AND RATING INSTALLED.
- PROVIDE FUSE PULLER FOR EACH TYPE OF FUSE.
- PROVIDE SPARE FUSE CABINET WHERE INDICATED ON THE DRAWINGS.
- VERIFY FUSES WITH MANUFACTURER OF EQUIPMENT PRIOR TO INSTALLATION.
- WHERE NEW OVERCURRENT DEVICES ARE ADDED TO EXISTING SWITCHBOARD, DISTRIBUTION PANELS AND PANELBOARDS, UTILIZE SPARES AND/OR PROVIDE ADDITIONAL BREAKERS OR SWITCHES AS REQUIRED TO EXISTING SPARES OR PROVIDE A NEW PANELBOARD OR SECTION SUBMITTED FROM THE EXISTING SYSTEM. SHORT CIRCUIT INTERRUPTING RATING OF NEW OVERCURRENT DEVICES SHALL MATCH THE RATING OF THE EXISTING EQUIPMENT.

H. MOTOR STARTERS AND DISCONNECTS

- INSTALL MOTOR STARTERS AND DISCONNECTS AS REQUIRED PER THE NEC.
- WALL MOUNTED MOTOR STARTERS AND DISCONNECTS SHALL BE INSTALLED #54" TO BOTTOM OF DEVICE, UNLESS NOTED OTHERWISE.

I. SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS

- CONTRACTOR SHALL BALANCE THE LOADS IN ALL PANELBOARDS TO LESS THAN 10% IMBALANCE BETWEEN THE PHASES.
- PROVIDE TYPEWRITTEN PANELBOARD SCHEDULES IN PANELBOARD DOORS DEPICTING THE FINAL AS-BUILT CONDITIONS AT PROJECT COMPLETION.
- ALL ELECTRICAL SYSTEMS, EQUIPMENT AND COMPONENTS SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 250.
- ALL FLOOR MOUNTED SWITCHBOARDS AND DISTRIBUTION PANELS SHALL HAVE A 4" HIGH HOUSEKEEPING PAD EXTENDING 4" OUTSIDE THE EQUIPMENT FOOTPRINT IN ALL DIRECTIONS.
- ALL SWITCHBOARDS, DISTRIBUTION PANELS AND PANELBOARDS SHALL BE INSTALLED TO MEET THE NEC 110-26 CLEARANCE REQUIREMENTS.
- ALL UTILITY METERING DEVICES SHALL BE INSTALLED PER THE SERVING UTILITY COMPANY'S REQUIREMENTS.
- ANY CUSTOMER OWNED METERING DEVICES SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS.
- PROVIDE ALL REQUIRED DEVICES AND EQUIPMENT FOR A COMPLETE AND OPERABLE METER INSTALLATION.

J. TRANSFORMERS

- INSPECT TRANSFORMERS FOR PHYSICAL DAMAGE, MECHANICAL AND ELECTRICAL CONNECTIONS.
- PROVIDE GROUNDING CONNECTION TO GROUNDING ELECTRODE SYSTEM PER THE NEC AND LOCAL CODE REQUIREMENTS FOR ALL SEPARATELY DERIVED SYSTEMS.
- ALL FLOOR MOUNTED TRANSFORMERS SHALL HAVE A 4" HIGH HOUSEKEEPING PAD EXTENDING 4" OUTSIDE THE EQUIPMENT FOOTPRINT IN ALL DIRECTIONS.
- VERIFY WITH PROJECT STRUCTURAL ENGINEER OR RETURN THE SERVICES OF LICENSED STRUCTURAL ENGINEER TO PROVIDE, ANY MOUNTING DIAGRAMS OR CALCULATIONS REQUIRED FOR MOUNTING OF ANY WALL OR TRAPEZOID MOUNTED TRANSFORMERS PRIOR TO ROUGH-IN. ALL COSTS TO BE INCLUDED IN BASE BID.
- PROVIDE ISOLATION VIBRATION SPRINGS TYPE AS RECOMMENDED BY MANUFACTURER.

K. LIGHTING FIXTURES

- PROVIDE ALL NECESSARY SUPPORTS FOR LIGHTING FIXTURES REQUIRED.

- WHERE FIXTURES ARE INSTALLED ON OR IN SUSPENDED CEILING SYSTEMS, SECURE FIXTURES TO CEILING FRAME SYSTEM AND PROVIDE FIXTURE SUPPORTS INDEPENDENT OF CEILING SUSPENSION SYSTEM AS REQUIRED PER APPLICABLE CODE.
- INCLUDE IN BASE BID ALL LABOR AND MATERIAL TO INSTALL FIXTURES, INCLUDING THOSE PROVIDED BY THE OWNER.
- PROVIDE CEILING MOUNTED PENDANT FIXTURE WITH APPROVED SUPPORTS FOR WEIGHT TO BE SUPPORTED AND FOR SEISMIC COMPLIANCE.
- RECESSED FIXTURES IN FIRE RATED CEILING AND RETURN AIR PLENUMS SHALL BE APPROVED FOR THE FIRE RATING OF THE CEILING OR SHALL BE FULLY ENCLOSED IN A FIRE RATED HOUSING ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
- SEAL ALL OPENING AS REQUIRED TO ELIMINATE AIR LEAKS.
- VERIFY TYPE OF MOUNTING REQUIRED FOR ALL LIGHTING FIXTURES AND PROVIDE ALL MOUNTING HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
- ALL ADJUSTABLE FIXTURES SHALL BE LOCATED AND PROPERLY AIMED, ACCESSORIES OR HEIGHT ADJUSTMENTS MADE AS DIRECTED BY THE ARCHITECT OR LIGHTING DESIGNER. AMING MAY REQUIRE DARKTIME HOURS. ALL EQUIPMENT, AND LIGHTING SYSTEM QUALIFIED STAFF FOR AMING AND ADJUSTING LUMINAIRES, PROVIDED BY CONTRACTOR. ALLOW FOR A PRELIMINARY AMING AFTER INITIAL COMMISSIONING IS COMPLETE, AND A FINAL AMING AND ADJUSTMENT AFTER PROPERTY REVIEW AND COMMENTS AS DIRECTED BY ARCHITECT OR LIGHTING DESIGNER.
- CONTRACTOR TO PROVIDE COMMISSIONING OF LIGHT SYSTEM, BY EC OR SYSTEM INTEGRATOR, TO INCLUDE PROGRAMMING OF LIGHTING SYSTEM IN THREE PARTS: AN INITIAL PROGRAMMING PER THE SEQUENCE OF OPERATIONS PROVIDED BY THE LIGHTING DESIGNER, WHICH INCLUDES TESTING OF ALL CONTROLS ZONE DIMMING AND NAMING OF EACH ZONE. A SECONDARY SCENE SETTING SCENARIO, AFTER FINAL AMING UNDER SUPERVISION OF LIGHTING DESIGNER FOR PROPERTY AND OPERATOR. FINAL SCENE ADJUSTMENT UNDER TO INCORPORATE PROPERTY/OPERATOR COMMENTS, UNDER DIRECTIONS OF LIGHTING DESIGNER.
- OWNER/FACILITIES TRAINING FROM MANUFACTURER OR SYSTEMS INTEGRATOR FOR LIGHTING SYSTEM SHALL BE PROVIDED AND SCHEDULED THROUGH EC.

L. LIFE SAFETY SYSTEM

- DESIGN AND INSTALLATION SHALL BE PERFORMED BY A STATE LICENSED FIRE ALARM CONTRACTOR. INSTALLATION SHALL BE PERFORMED BY LICENSED AND EXPERIENCED INSTALLERS.
- MINIMUM RACEWAY IS 3/4", UNLESS NOTED OTHERWISE.
- PROVIDE ALL DEVICES REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- ALL WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUCTORS SHALL BE LABELED AT EACH DEVICE AND JUNCTION BOX.
- ALL OUTLET, PULL AND JUNCTION BOXES SHALL BE PAINTED RED ON THE EXTERIOR AND MARKED FOR FIRE ALARM.
- INSTALL END OF LINE RESISTORS WHERE REQUIRED IN A JUNCTION BOX ADJACENT TO THE LAST DEVICE SERVED.

M. TV, TELEPHONE AND DATA SYSTEM

- MINIMUM RACE SIZE IS 3/4", UNLESS NOTED OTHERWISE.
- PROVIDE #6 WAG GROUND WIRE FROM SERVICE ENTRANCE GROUNDING ELECTRODE TO TELEPHONE SYSTEM LOCATION AND ALL TELEPHONE TERMINAL BOARDS, UNLESS NOTE OTHERWISE.

- N. CONDUIT IDENTIFICATION: USE ADHESIVE MARKING TAPE LABELS TO IDENTIFY ALL CONDUITS AND MC CABLES. CONDUITS LOCATED ABOVE NON-ACCESSIBLE CEILING OR IN FLOORS AND WALLS SHALL BE LABELED WITHIN 3 FEET OF BECOMING ACCESSIBLE. LABELS FOR MULTIPLE CONDUITS SHALL ALIGNED AND READ THE SAME DIRECTION. USE THE FOLLOWING COLORS:
- ABOVE 250 VOLTS: BLACK LETTERS ON ORANGE BACKGROUND INDICATING SOURCE EQUIPMENT DESIGNATION, CIRCUIT NUMBER (IF APPLICABLE), AND VOLTAGE.
 - 250 VOLTAGE AND BELOW NORMAL: WHITE LETTERS ON BLACK BACKGROUND INDICATING SOURCE EQUIPMENT DESIGNATION, CIRCUIT NUMBER(S), AND VOLTAGE.
 - 600 VOLT AND BELOW EMERGENCY: BLACK LETTERS ON RED BACKGROUND INDICATING SOURCE EQUIPMENT DESIGNATION, CIRCUIT NUMBER(S), AND VOLTAGE.
 - FIRE ALARM: RED LETTERS ON WHITE BACKGROUND INDICATING "FIRE ALARM".
 - TEMPERATURE CONTROL: BLACK LETTER ON BLUE BACKGROUND INDICATING "TEMP. CONTROL".
 - LIGHTING CONTROL AND DMX: BLACK LETTERS ON GREEN BACKGROUND INDICATING "GROUND AND EQUIPMENT DESIGNATION".
 - SECURITY AND CARD ACCESS: BLACK LETTERS ON YELLOW BACKGROUND INDICATING "NETWORK FIBER/DATA".
 - NETWORK FIBER AND DATA: BLACK LETTERS ON WHITE BACKGROUND INDICATING "NETWORK FIBER/DATA".
 - GROUND: BLACK LETTERS ON GREEN BACKGROUND INDICATING "GROUND" AND EQUIPMENT DESIGNATION.
 - WHERE CONDUITS ENTER OR EXIT A PANELBOARD, PULL OR JUNCTION BOX, SWITCHBOARD, OR OTHER DISTRIBUTION EQUIPMENT, CONDUIT LABELS SHALL INCLUDE CIRCUIT NUMBER IN ADDITION TO FEEDER IDENTIFICATION AND VOLTAGE. (SEE SAMPLE BELOW)

- PANEL L2A LEVEL 2 ELECTRICAL ROOM
225A 480Y/277V 3PHASE
FED FROM DBL1A LEVEL 1 ELECTRICAL ROOM

- N. IDENTIFY JUNCTION PULL AND CONNECTION BOXES. IDENTIFICATION OF SYSTEMS AND CIRCUITS SHALL INDICATE SYSTEM VOLTAGE AND IDENTITY OF CONTAINED CIRCUITS ON OUTSIDE OF BOX COVER. COLOR CODE SHALL BE SAME AS CONDUITS FOR PRESSURE SENSITIVE LABELS. USE SELF ADHESIVE BRADY MARKING LABELS AT EXPOSED LOCATIONS. ALL FIRE ALARM BOXES SHALL HAVE COVERS PAINTED RED. ALL TEM

DEMOLITION GENERAL NOTES (THIS SHEET ONLY)

- SCOPE OF WORK FOR THIS PERMIT IS TO DEMO EXISTING LIGHTING, POWER AND AUXILIARY DEVICES AND ITEMS WITHIN AREA INDICATED FOR FUTURE REMODEL.
- CONTRACTOR SHALL DEMO EXISTING BRANCH CIRCUITS, FIXTURES, OUTLETS AND DEVICES AS REQUIRED. REMOVE CONDUIT AND CONDUCTORS BACK TO NEXT ACTIVE SOURCE. COORDINATE WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES EXACT AREAS AND REQUIREMENTS FOR DEMOLITION. CONTRACTOR SHALL FIELD VERIFY REQUIRED DEMO PRIOR TO BID. INCLUDE ALL COSTS FOR DEMOLITION IN BASE BID.
- CONTRACTOR SHALL DEMO EXISTING AUXILIARY CONDUIT, CABLING, OUTLETS AND DEVICES REQUIRED. REMOVE CONDUIT AND CABLING BACK TO POINT OF SERVICE. COORDINATE WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES EXACT AREAS AND REQUIREMENTS FOR DEMOLITION. CONTRACTOR SHALL FIELD VERIFY REQUIRED DEMO PRIOR TO BID. INCLUDE ALL COSTS FOR DEMOLITION IN BASE BID.
- FIRE ALARM, SECURITY, ACCESS CONTROL, SURVEILLANCE AND A/V SYSTEMS ARE NOT A PART OF THE SCOPE OF WORK FOR THESE DRAWINGS. COORDINATE WITH OWNER AND OWNER'S PREFERRED LOW VOLTAGE CONTRACTORS PRIOR TO BID. INCLUDE ALL COSTS IN BASE BID FOR REQUIRED DEMO.
- EXISTING ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT AND PLUMBING EQUIPMENT TO REMAIN UNCHANGED, UNO. SEE MECHANICAL AND PLUMBING DEMO DRAWINGS FOR ADDITIONAL INFORMATION. WHERE MECHANICAL AND PLUMBING DEMO DRAWINGS SHOW EQUIPMENT AND DEVICES TO BE DEMOED, REMOVED ELECTRICAL CONNECTIONS BACK TO NEXT ACTIVE SOURCE.
- SEE PANEL SCHEDULES ON EXISTING RECORD DRAWINGS FOR ADDITIONAL INFORMATION.
- IN AREAS WHERE EXISTING BRANCH CIRCUITS, AUXILIARY CONDUITS, AND CABLING ARE TO REMAIN UNCHANGED, EXTEND CONDUIT AND PROVIDE NEW CONDUCTORS/CABLING AS REQUIRED FOR CONTINUITY OF POWER CIRCUITS AND AUXILIARY DEVICES. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITING AND DEVICES TO REMAIN AND CONNECT TO EXISTING CIRCUITS OR CONNECT TO NEW CIRCUITS AS REQUIRED. ALL CIRCUITING SHALL BE IN COMPLIANCE WITH ALL NEC REQUIREMENTS. RECORD ACTUAL CONDITIONS AND INSTALLATION ON RECORD DRAWINGS. CONTRACTOR SHALL FULLY INVESTIGATE EXISTING CONDITIONS PRIOR TO BID AND CONSTRUCTION. INCLUDE ALL COSTS FOR INSTALLATION TO COMPLY WITH EXISTING CONDITIONS IN BASE BID.
- COORDINATE WORKING HOURS AND ALLOWABLE OUTAGE TIMES WITH OWNER'S REPRESENTATIVE PRIOR TO BID. INCLUDE ANY COSTS FOR 'OFF-HOUR' TIMES OR REQUIRED OVERTIME IN BASE BID. COORDINATE AND SCHEDULE OUTAGE TIMES WITH OWNER AT LEAST (14) DAYS PRIOR TO OUTAGE, NO EXCEPTIONS.
- ALL EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT IS TO REMAIN UNCHANGED, UNO.
- EXISTING CIRCUITS AND FEEDERS SERVING ADJACENT AREAS ARE TO REMAIN UNCHANGED, UNO.
- EXISTING ELECTRICAL DEVICES ARE SHOWN FOR REFERENCE ONLY AND DO NOT DEPICT ALL ELECTRICAL DEVICES REQUIRED FOR DEMOLITION. CONTRACTOR SHALL VISIT TO DETERMINE EXACT SCOPE OF DEMOLITION WORK PRIOR TO SUBMITTING BID. INCLUDE ALL COSTS FOR DEMOLITION BASED ON ACTUAL FIELD CONDITIONS IN BASE BID.

DEMOLITION WORK NOTES (THIS SHEET ONLY)

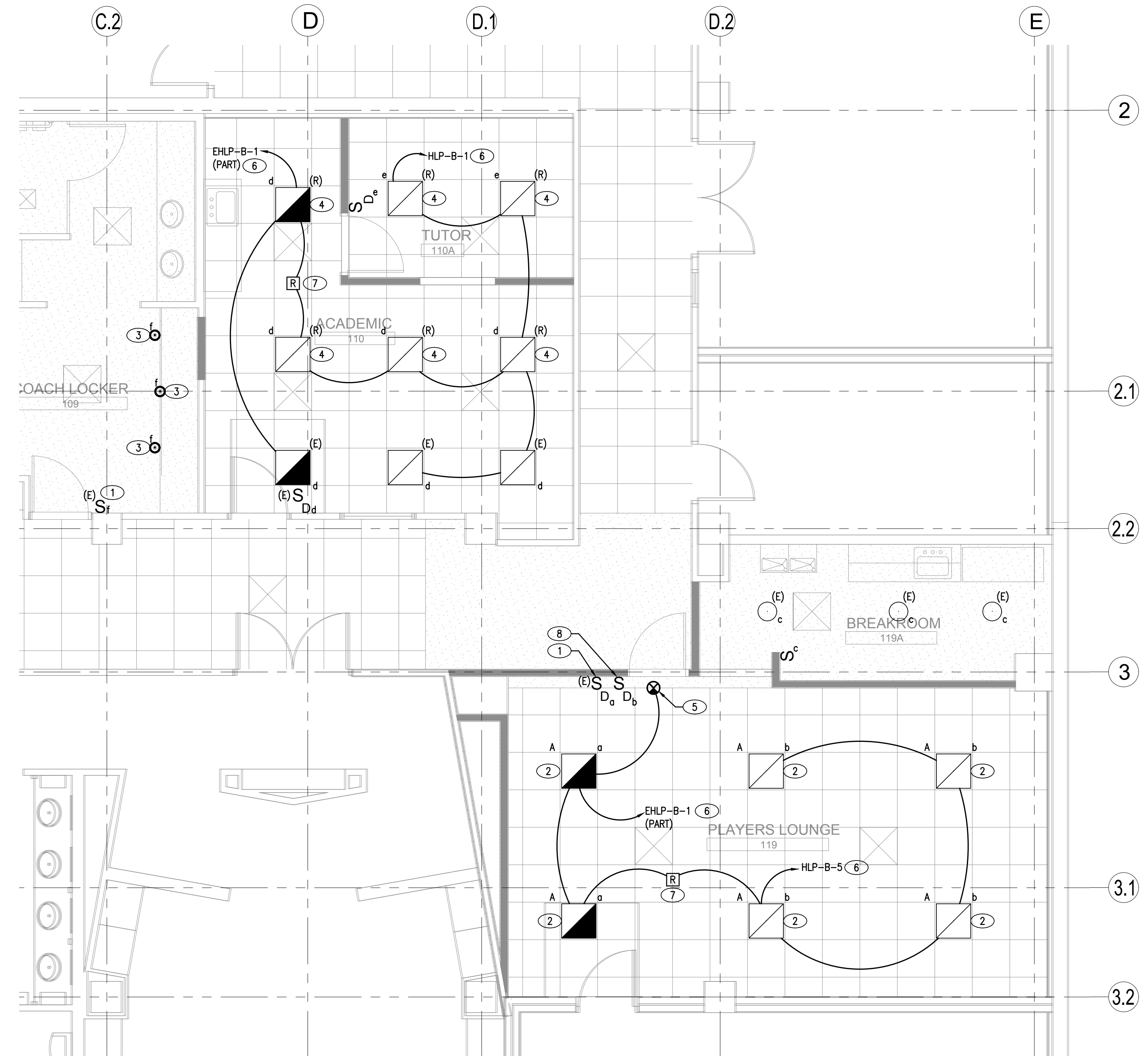
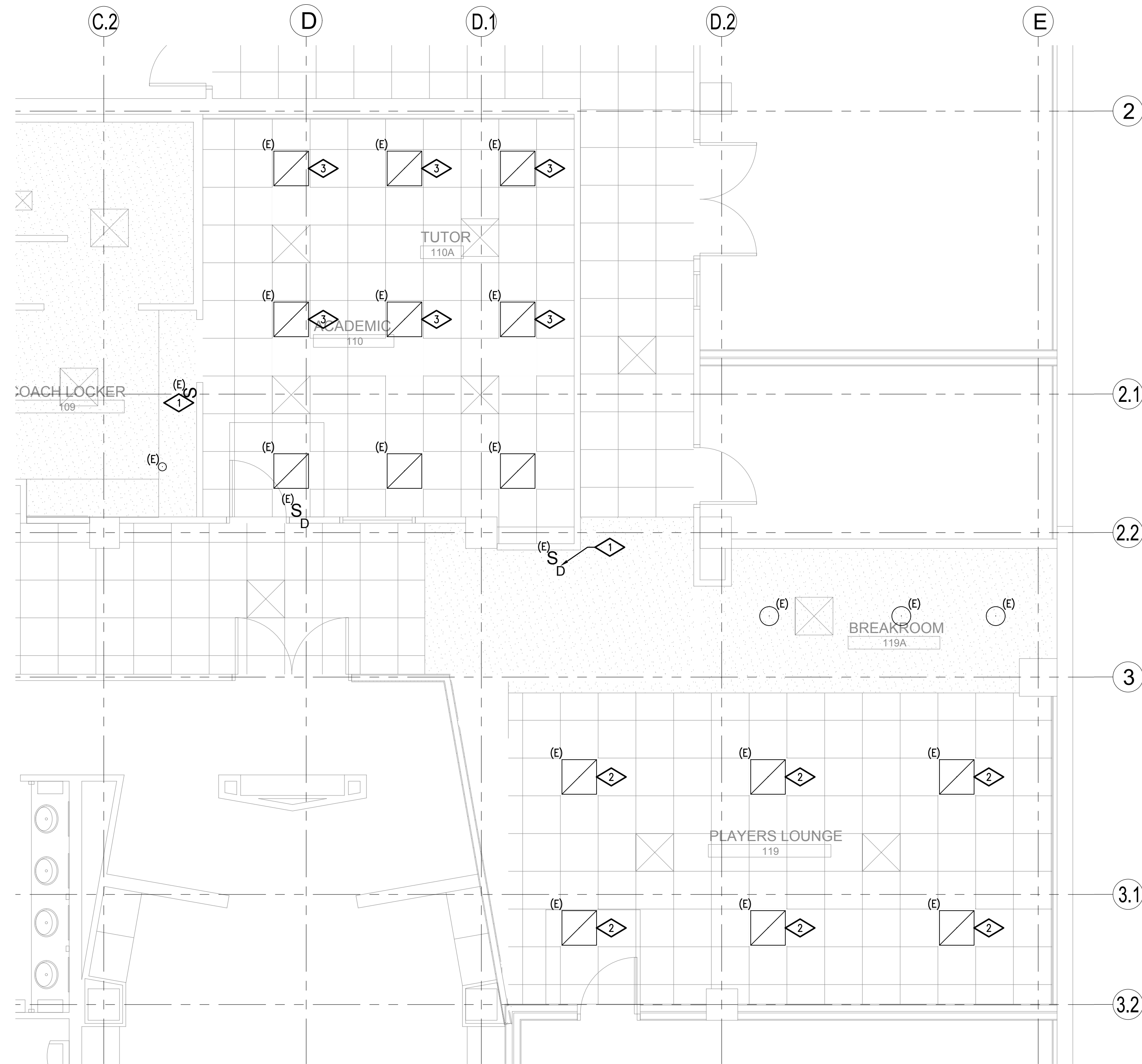
- ◇ EXISTING ELECTRICAL DEVICE TO BE RELOCATED TO NEW LOCATION. RE-USE EXISTING CIRCUIT. EXTEND WIRE AND CONDUIT AS NECESSARY. REFER TO 2/E201 FOR NEW LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT.
- ◇ EXISTING LUMINAIRE TO BE REMOVED AND RETURNED TO OWNER, UNO. CIRCUIT TO REMAIN FOR NEW LIGHT FIXTURES.
- ◇ EXISTING LUMINAIRE TO BE DISCONNECTED AND RELOCATED. EXTEND WIRE AND CONDUIT AS NECESSARY. REFER TO 2/E201 FOR NEW LOCATION.

GENERAL NOTES (THIS SHEET ONLY)

- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF LIGHTING FIXTURES.
- REFER TO POWER PLANS FOR LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT.
- REFER TO GENERAL NOTES ON SHEET E0.00 FOR CONDUIT AND WIRE SIZES REQUIRED FOR VOLTAGE DROP.
- PROVIDE REQUIRED LIGHTING TRANSFORMERS AND COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE ACCESS PANELS AND OVERCURRENT PROTECTION AS REQUIRED.
- VERIFY EGRESS PATHS WITH FINAL ARCHITECTURAL EXITING PLANS. PROVIDE ANY ADDITIONAL EXIT SIGNS REQUIRED BY THE AUTHORITY HAVING JURISDICTION FOR APPROVAL. RECORD LOCATIONS OF ADDITIONAL EXIT SIGNS ON RECORD DRAWINGS.
- COORDINATE AND OBTAIN APPROVAL FROM STRUCTURAL ENGINEER ROUTING OF ANY CONDUIT OR RACEWAY IN SLAB PRIOR TO ROUGH-IN.
- TICK MARKS NOT SHOWN FOR CLARITY. CONTRACTOR SHALL PROVIDE ALL REQUIRED PHASE, NEUTRAL, SWITCHED AND GROUND CONDUCTORS REQUIRED FOR CONTROLS INDICATED.
- PROVIDE ADDITIONAL CONTROL WIRES FOR ALL 0-10V LUMINAIRES AND DRIVERS IN ADDITION TO THE NORMAL CONDUCTORS. COORDINATION WITH SPECIALTY LIGHTING DESIGNER DRAWINGS, CUTSHEETS AND SPECIFICATIONS FOR EXACT LUMINAIRES THAT REQUIRE 0-10V WIRING. COORDINATE WITH LIGHTING CONTROL MANUFACTURER TO PROVIDE SHOP DRAWING INDICATING EXACT MODULES REQUIRED FOR A COMPLETE AND OPERABLE LIGHTING SYSTEM OF ALL 0-10V LIGHTING AND OTHER LIGHTING TYPES PRIOR TO PROCUREMENT AND INSTALLATION. INCLUDE ALL COST WITH BASE BID.

WORK NOTES (THIS SHEET ONLY)

- NEW LOCATION OF ELECTRICAL DEVICE. COORDINATE EXACT LOCATION AND ADDITIONAL INFORMATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- NEW LUMINAIRE TO BE CONNECTED TO EXISTING CIRCUIT.
- PROVIDE LED DOWN LIGHT. MATCH EXISTING LIGHT TYPE AND COLOR TEMPERATURE USED IN ROOM. PROVIDE MATCHING LIGHT FIXTURE SPECIFICATION AND COLOR TEMPERATURE FOR THE OTHER DOWNLIGHTS IN THIS ROOM.
- NEW LOCATION OF EXISTING LUMINAIRE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- MATCH EXISTING IN THIS AREA.
- RE-USE EXISTING CIRCUIT MADE AVAILABLE DURING DEMOLITION.
- PROVIDE LEGRAND ELCU-200 LIGHTING RELAY OR EQUAL. CONNECT NORMAL AND EMERGENCY LIGHTING LOADS PER MANUFACTURER'S RECOMMENDATIONS FOR A COMPLETE AND OPERABLE SYSTEM.
- PROVIDE DIMMER SWITCH TO MATCH EXISTING. COORDINATE WITH OWNER PRIOR TO PROCUREMENT.



1 LIGHTING DEMOLITION PLAN - BASEMENT LEVEL
E201 SCALE: 1/4" = 1'-0"

2 LIGHTING PLAN - BASEMENT LEVEL
E201 SCALE: 1/4" = 1'-0"

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SFM / SPWD Submittal
4.6.18

TITLE
LIGHTING
CEILING PLAN

DRAWING NO.
E201

(E)PANELBOARD 'PP-B' SECTION 1 SCHEDULE

CKT NO	BREAKER CODE	TRIP	LOAD POLE	DESCRIPTION	LOAD VA	PHASE			LOAD VA	DESCRIPTION	BREAKER TRIP	POLE	CKT CODE	NO
						A	B	C						
1	2	20	1	(E) LOAD	696	3600	---	---	2904	(E) LOAD	30		2	2
3	2	20	1	(E) LOAD	696	---	3600	---	2904	(E) LOAD			2	4
5	2	20	1	(E) LOAD	864	---	---	3768	2904	(E) LOAD		3	2	6
7	2	20	1	(E) LOAD	696	3600	---	---	2904	(E) LOAD	30		2	8
9	2	20	1	(E) LOAD	696	---	3600	---	2904	(E) LOAD			2	10
11	2	20	1	(E) LOAD	1176	---	---	4080	2904	(E) LOAD		3	2	12
13	2	20	1	(E) LOAD	240	1176	---	---	936	(E) LOAD	30		2	14
15	2	20	1	(E) LOAD	240	---	1176	---	936	(E) LOAD			2	16
17	2	20	1	(E) LOAD	696	---	---	1632	936	(E) LOAD		3	2	18
19	2	20	1	(E) LOAD	600	1436	---	---	936	(E) LOAD	30		2	20
21	2	20	1	(E) LOAD	600	---	1436	---	936	(E) LOAD			2	22
23	1	20	1	(E) LOAD	244	---	---	1180	936	(E) LOAD		3	2	24
25	1	20	1	(E) LOAD	280	640	---	---	360	(E) LOAD	20	1	2	26
27	2	20	1	(E) LOAD	180	---	540	---	360	(E) LOAD	20	1	2	28
29	2	20	1	(E) LOAD	180	---	---	180	SPARE		20	1	2	30
31	2	20	1	(E) LOAD	360	720	---	---	360	(E) LOAD	20	1	3	32
33	3	20	1	(E) LOAD	1080	---	2160	---	1080	(E) LOAD	20	1	3	34
35	3	20	1	(E) LOAD	1080	---	---	1800	720	(E) LOAD	20	1	3	36
37	3	20	1	(E) LOAD	1080	1080	---	---	---	SPARE	20	1		38
39	3	20	1	(E) LOAD	1080	---	1080	---	---	SPARE	20	1		40
41	3	20	1	(E) LOAD	1080	---	---	1080	---	SPARE	20	1		42
NEW LOADS SHOWN IN BOLD					12282	13692	13720	CONNECTED KVA		38.6				
NOTES:					EXISTING DEMAND LOAD =	40.2 KVA	CODE 1 KVA		0.5					
					REMOVED DEMAND LOAD =	1.6 KVA	CODE 2 KVA		31.5					
					ADDED DEMAND LOAD =	1.1 KVA	CODE 3 KVA		7.6					
					REVISED DEMAND LOAD =	39.7 KVA	CODE 4 KVA		0.0					
						110.3 A	CODE 5 KVA		0.0					
					DATE:	4/9/2018	DEMAND LOAD (KVA)		39.7					
							DEMAND LOAD (A)		110.2					

(E)PANELBOARD 'PP-B' SECTION 3 SCHEDULE

CKT NO	BREAKER CODE	TRIP	LOAD POLE	DESCRIPTION	LOAD VA	PHASE			LOAD VA	DESCRIPTION	BREAKER TRIP	POLE	CKT CODE	NO
						A	B	C						
85	2	20	1	(E) LOAD	100	100	---	---	SPARE	20	1		86	
87	2	20	1	(E) LOAD	100	---	100	---	SPARE	20	1		88	
89	2	20	1	(E) LOAD	100	---	---	100	SPARE	20	1		90	
91	2	20	1	(E) LOAD	100	100	---	---	SPARE	20	1		92	
93	2	20	1	(E) LOAD	150	---	150	---	SPARE	20	1		94	
95	3	20	1	TUTOR RECEPT	540	---	---	540	SPARE	20	1		96	
97	3	20	1	ACADEMIC RECEPT	540	540	---	---	SPARE	20	1		98	
99	3	20	1	LOUNG RECEPT	360	---	360	---	SPARE	20	1		100	
101	20	1		SPARE		---	---	0	SPARE	20	1		102	
103	20	1		SPARE	0	---	---	0	SPARE	20	1		104	
105	20	1		SPARE	---	0	---	0	SPARE	20	1		106	
107	20	1		SPARE	---	---	0	---	SPARE	20	1		108	
109	20	1		SPARE	0	---	---	0	SPARE	20	1		110	
111	20	1		SPARE	---	0	---	0	SPARE	20	1		112	
113	20	1		SPARE	---	---	0	---	SPARE	20	1		114	
115	20	1		SPARE	0	---	---	0	SPARE	20	1		116	
117	20	1		SPARE	---	0	---	0	SPARE	20	1		118	
119	20	1		SPARE	---	---	0	---	SPARE	20	1		120	
121	20	1		SPARE	0	---	---	0	SPARE	20	1		122	
123	20	1		SPARE	---	0	---	0	SPARE	20	1		124	
125	20	1		SPARE	---	---	0	---	SPARE	20	1		126	
NEW LOADS SHOWN IN BOLD					740	610	640	CONNECTED KVA		2.0				
NOTES:					EXISTING DEMAND LOAD =	0.6 KVA	CODE 1 KVA		0.0					
					REMOVED DEMAND LOAD =	0.0 KVA	CODE 2 KVA		0.6					
					ADDED DEMAND LOAD =	1.4 KVA	CODE 3 KVA		1.4					
					REVISED DEMAND LOAD =	2.0 KVA	CODE 4 KVA		0.0					
						5.6 A	CODE 5 KVA		0.0					
					DATE:	4/9/2018	DEMAND LOAD (KVA)		2.0					
							DEMAND LOAD (A)		5.5					

LUMINAIRE SCHEDULE - FEA BOH

LUMINAIRE TAG	LUMINAIRE DESCRIPTION	MANUFACTURER/ MODEL NUMBER	LUMINAIRE VOLTAGE	LUMINAIRE WATTAGE	REMARKS AND MOUNTING
A	2'X2' TROFFER FIXTURE	EATON SKYTRIM 22SR-LD2-29-C-UNV-L835-CD1-SVPD1-U	120/277	28	INCLUDE COLOR STRIP. COLOR TO BE VERIFIED BY OWNER.

NOTES:

- ALL LAMPS/LED MODULES SHALL BE PROVIDED BY THE CONTRACTOR AND BE OF THE SAME MANUFACTURER, UNO.
- INCLUDE IN BASE BID ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION OF ALL FIXTURES INDICATED ON DRAWINGS.
- PROVIDE ALL REQUIRED JUNCTION BOXES FOR LIGHTING INSTALLATION.
- CONTRACTOR IS RESPONSIBLE TO VERIFY TYPE OF CONSTRUCTION AT EACH FIXTURE LOCATION AND PROVIDE THE REQUIRED TRIMS AND MOUNTING ACCESSORIES/KITS FOR APPLICATION.
- PROVIDE ALL NECESSARY SUPPORTS INDEPENDENT OF CEILING SYSTEM AS REQUIRED PER CODES AND ORDINANCES.
- RECESSED FIXTURES IN FIRE RATED CEILINGS AND AIR PLENUMS SHALL BE APPROVED FOR THE FIRE RATINGS OF THE CEILING OR SHALL BE FULLY ENCLOSED IN A FIRE RATED HOUSING OR STRUCTURE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
- COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS IN ADDITION TO OTHER TRADES PRIOR TO ROUGH-IN.
- COORDINATE ALL FIXTURES SPECIFIED BY ARCHITECT PRIOR TO BID. ALL FIXTURES SPECIFIED IN SCHEDULE BY OTHERS SHALL COMPLY WITH THE VOLTAGE AND WATTAGE LISTED IN SCHEDULE.
- VERIFY ALL FIXTURE COLORS AND FINISHES WITH ARCHITECT, INTERIOR DESIGNER AND LIGHTING DESIGNER PRIOR TO SUBMITTING BID.
- PROVIDE SEPARATE NEUTRAL CONDUCTORS TO EACH DIMMED CIRCUIT SWITCH LEG. DO NOT SHARE NEUTRAL CONDUCTORS IN DIMMED CIRCUITS.
- PROVIDE AN UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS AND EMERGENCY BATTERY BALLASTS.
- LED FIXTURES TO COMPLY WITH UL 1598, ANSI C82, NFPA 70. TEST ACCORDING TO IES LM-79 AND LM-80. COMPLY WITH IESNA TM-16-05 AND RP-16.
- MINIMUM CRI GREATER THAN 80 AND HAVE A MAX 3-STEP MACADAM ELLIPSE.
- LED DRIVERS TO COMPLY WITH UL "RECOGNIZED COMPONENT" STATUS AND TYPE TL PROGRAM. COMPLY WITH ANSW C82.SS11, C82.77. UL CLASS 2 DRIVERS TO COMPLY WITH UL 1310.
- PROVIDE ADDITIONAL CONTROL WIRES FOR ALL 0-10V LUMINAIRES AND DRIVERS IN ADDITION TO THE NORMAL CONDUCTORS. COORDINATION WITH SPECIALTY LIGHTING DESIGNER DRAWINGS, CUTSHEETS, AND SPECIFICATIONS FOR EXACT LUMINAIRES THAT REQUIRE 0-10V WIRING. COORDINATE WITH LIGHTING CONTROL MANUFACTURER TO PROVIDE SHOP DRAWING INDICATING EXACT MODULES REQUIRED FOR A COMPLETE AND OPERABLE LIGHTING SYSTEM OF ALL 0-10V LIGHTING AND OTHER LIGHTING TYPES PRIOR TO PROCUREMENT AND INSTALLATION. INCLUDE ALL COST WITH BASE BID.
- CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS, CONNECTORS, MOUNTING HARDWARE, AND COMPONENTS NECESSARY TO CREATE AN OPERABLE SYSTEM AS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS.
- ALL LIGHTING FIXTURES SHALL BE U.L. LISTED OR LISTED BY RECOGNIZED TESTING AGENCY.

DATE: 4/9/2018

(E)PANELBOARD 'PP-B' SECTION 2 SCHEDULE

CKT NO	BREAKER CODE	TRIP	LOAD POLE	DESCRIPTION	LOAD VA	PHASE			LOAD VA	DESCRIPTION	BREAKER TRIP	POLE	CKT CODE	NO
						A	B	C						
43	3	20	1	(E) LOAD	720	1584	---	---	864	(E) LOAD	20	1	2	44
45	3	20	1	(E) LOAD	720	---	900	---	180	(E) LOAD	20	1	3	46
47	3	20	1	(E) LOAD	960	---	---	1140	180	(E) LOAD	20	1	3	48
49	3	20	1	(E) LOAD	960	1500	---	---	540	LOUNGE RECEPT	20	1	3	50
51	3	20	1	(E) LOAD	540	---	720	---	180	(E) LOAD	20	1	3	52
53	2	20	1	(E) LOAD	696	---	---	876	180	(E) LOAD	20	1	3	54
55	2	20	1	(E) LOAD	1380	1740	---	---	360	(E) LOAD	20	1	3	56
57	3	20	1	(E) LOAD	900	---	1980	---	1080	(E) LOAD	20	1	3	58
59	3	20	1	(E) LOAD	360	---	---	1440	1080	(E) LOAD	20	1	3	60
61	3	20	1	(E) LOAD	1250	2510	---	---	1260	(E) LOAD	20	1	3	62
63	3	20	1	(E) LOAD	360	---	1440	---	1080	(E) LOAD	20	1	3	64
65	3	20	1	(E) LOAD	540	---	---	1740	1200	(E) LOAD	20	1	2	66
67	3	20	1	(E) LOAD	900	2100	---	---	1200	(E) LOAD	20	1	2	68
69	3	20	1	(E) LOAD	1080	---	1580	---	500	(E) LOAD	20	1	3	70
71	3	20	1	(E) LOAD	360	---	720	360	(E) LOAD	20	1	3	72	
73	3	20	1	(E) LOAD	360	360	---	---	SPARE	20	1		74	
75	3	20	1	(E) LOAD	360	---	540	---	180	(E) LOAD	20	1	3	76
77	3	20	1	(E) LOAD	180	---	---	680	500	(E) LOAD	20	1	3	78
79	3	20	1	(E) LOAD	180	180	---	---	SPARE	20	1		80	
81	3	20	1	(E) LOAD	180	---	180	---	SPARE	20	1		82	
83	3	20	1	(E) LOAD	500	---	---	500	SPARE	20	1		84	
NEW LOADS SHOWN IN BOLD					5974	7340	7096	CONNECTED KVA		24.4				
NOTES:					EXISTING DEMAND LOAD =	19.7 KVA	CODE 1 KVA		0.0					
					REMOVED DEMAND LOAD =	0.4 KVA	CODE 2 KVA		5.3					
					ADDED DEMAND LOAD =	0.3 KVA	CODE 3 KVA		19.1					
					REVISED DEMAND LOAD =	19.9 KVA	CODE 4 KVA		0.0					
						55.3 A	CODE 5 KVA		0.0					
					DATE:	4/9/2018	DEMAND LOAD (KVA)		19.9					
							DEMAND LOAD (A)		55.2					

(E)PANELBOARD 'AVPP-B' SCHEDULE

CKT NO	BREAKER CODE	TRIP	LOAD POLE	DESCRIPTION	LOAD VA	PHASE			LOAD VA	DESCRIPTION	BREAKER TRIP	POLE	CKT CODE	NO
						A	B	C						
1	3	20	1	(E) LOAD	1920	2280	---	---	360	(E) LOAD	20	1	3	2
3	3	20	1	(E) LOAD	360	---	900	---	540	(E) LOAD	20	1	3	4
5	3	20	1	(E) LOAD	360	---	---	720	360	(E) LOAD	20	1	3	6
7	3	20	1	(E) LOAD	360	720	---	---	360	(E) LOAD	20	1	3	8
9	3	20	1	(E) LOAD	180	---	540	---	360	(E) LOAD	20	1	3	10
11	3	20	1	(E) LOAD	180	---	---	360	180	(E) LOAD	20	1	3	12
13	3	20	1	(E) LOAD	180	180	---	---	SPARE	20	1		14	
15	3	20	1	(E) LOAD	180	---	1380	---	1200	(E) LOAD	20	1	3	16
17	3	20	1	(E) LOAD	180	---	---	360	180	(E) LOAD	20	1	3	18
19	3	20	1	(E) LOAD	180	2100	---	---	1920	(E) LOAD	20	1	3	20
21	3	20	1	(E) LOAD	180	---	2100	---	1920	(E) LOAD	20	1	3	22
23	3	20	1	(E) LOAD	360	---	---	2280	1920	(E) LOAD	20	1	3	24
25	3	20	1	(E) LOAD	360	2280	---	---	1920	(E) LOAD	20	1	3	26
27	3	20	1	(E) LOAD	180	---	2100	---	1920	(E) LOAD	20	1	3	28
29	3	20	1	(E) LOAD	360	---	---	2280	1920	(E) LOAD	20	1	3	30
31	3	20	1	(E) LOAD	360	540	---	---	180	TV RECEPT	20	1	3	32
33	3	20	1	(E) LOAD	360	---	360	---	SPARE	20	1		34	
35	3	20	1	(E) LOAD	360	---	---	360	SPARE	20	1		36	
37	3	20	1	(E) LOAD	180	18								