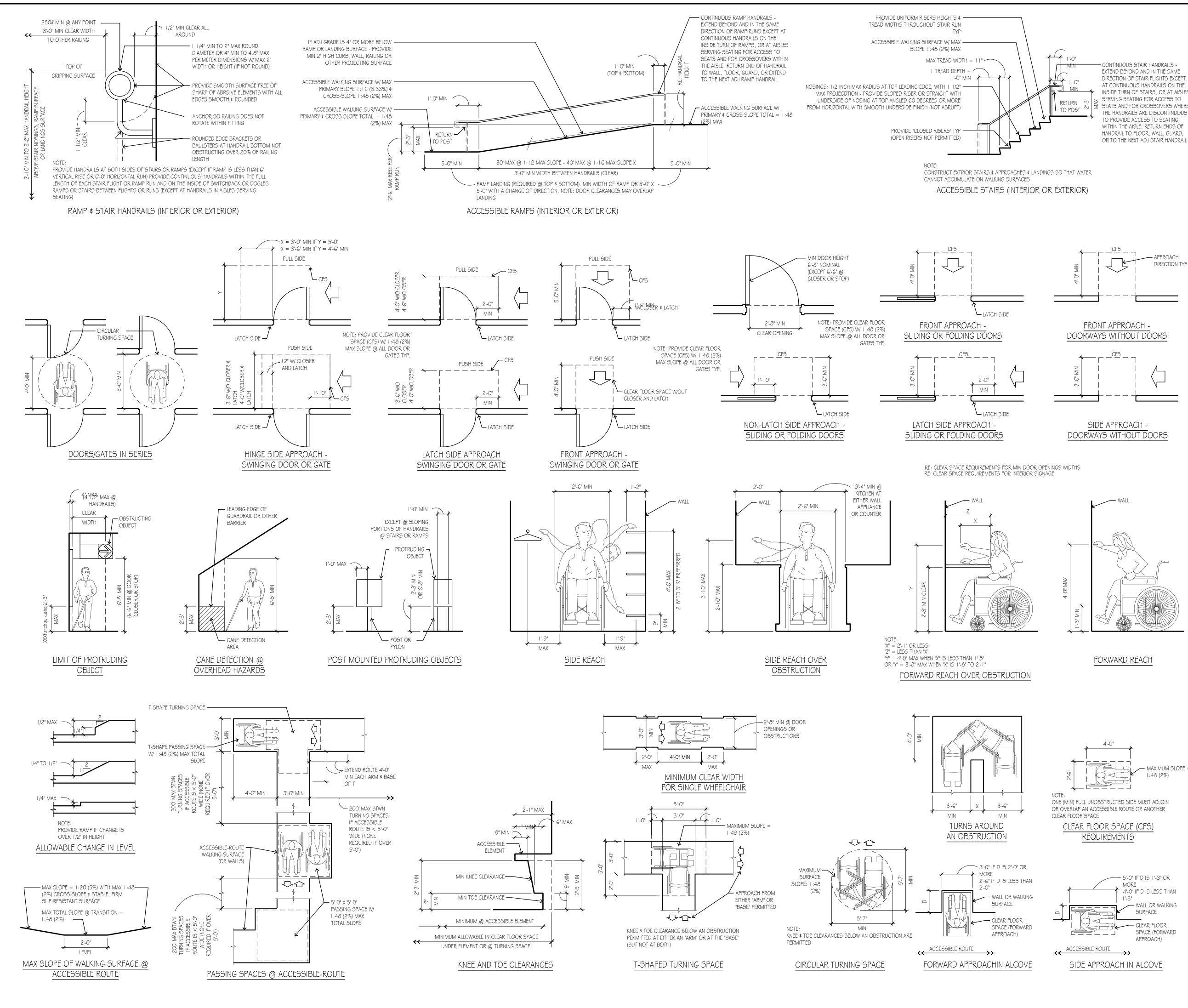
GENERAL NOTES:					
 ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL LOCAL LAWS, CODES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION. IN CASE OF CONFLICT BETWEEN REQUIREMENTS, THE MOST RESTRICTIVE SHALL APPLY. BIDDING CONTRACTORS SHALL VISIT THE JOBSITE AND VERIFY ALL FIELD CONDITIONS AS NECESSARY TO COMPLETE THE WORK AND COMPARE TO APPLICABLE CONSTRUCTION DOCUMENTS. REPORT DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS TO ARCHITECT PRIOR TO SUBMITTING BID. FAILURE TO REPORT DISCREPANCIES DOES NOT RELIEVE CONTRACTOR OF THE RESPONSIBILITY TO PROVIDE FINISHED PRODUCT TO THE INTENT OF THE CONSTRUCTION DOCUMENTS AND SHALL NOT RESULT IN ADDITIONAL TIME OP 		IN		STUDIOS	- TENANT INFILL
 PROVIDE FINISHED PRODUCT TO THE INTENT OF THE CONSTRUCTION DOCUMENTS AND SHALL NOT RESULT IN ADDITIONAL TIME OR COMPENSATION OVER AND ABOVE THE ESTABLISHED CONTRACT AMOUNTS. 3. THE CONTRACTOR SHALL ADHERE TO THE CONSTRUCTION DOCUMENTS. SHOULD ANY ERROR OR INCONSISTENCY APPEAR REGARDING THE MEANING OR INTENT OF THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL IMMEDIATELY REPORT SAME TO THE ARCHITECT WHO WILL 					
 MAKE ANY NECESSARY CLARIFICATION, OR REVISIONS AS REQUIRED. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL CONSTRUCTION AND DEVELOPMENT RELATED FEES, INCLUDING, BUT NOT LIMITED TO: CONSTRUCTION PERMIT FEES, HEALTH DEPARTMENT FEES, ETC. THE SELECTED QUALIFIED BIDDER WILL BE REQUIRED TO PROVIDE A COMPLETE LINE-ITEM LIST OF ALL FEES INCLUDED IN BID BASED ON APPROPRIATE SCHEDULES. 					MIT, MO 64086
5. CONTRACTOR AND HIS SUBCONTRACTORS AND AGENTS SHALL HOLD ALL APPLICABLE AND REQUIRED LICENSES FOR THE JURISDICTION WHERE THE WORK WILL BE PERFORMED.					
 CONTRACTOR SHALL AQUAINT HIMSELF WITH ALL LANDLORD/DEVELOPER REQUIREMENTS AND SHALL COMPLY FULLY WITH SUCH. TO ENSURE COORDINATION BETWEEN DISCIPLINES, CONTRACTOR SHALL SUPPLY EACH SUBCONTRACTOR OR AGENT WITH A FULL SET OF CONSTRUCTION DOCUMENTS FOR THEIR USE. 					
8. MAINTAIN SAFE EXITING AND APPROPRIATE FIRE PREVENTION PROCEDURES AT ALL TIMES DURING THE CONSTRUCTION PROCESS.		MATERI	ALS LEG	END:	CODE DATA:
9. ALL WORK LISTED, SHOWN OR IMPLIED IN THE CONSTRUCTION DOCUMENTS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR EXCEPT WHERE OTHERWISE NOTED. THE CONTRACTOR SHALL CLOSELY COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS AND VENDORS TO ASSURE THAT ALL SCHEDULES ARE MET AND THAT ALL WORK IS DONE IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS.					APPLICABLE CODES: ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS AND I SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNING BODIES INVOLVED. ALL PERMITS NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR INVOLVED.
10. CONTRACTOR SHALL PROTECT THE EXISTING CONSTRUCTION AND REPAIR ANY DAMAGE OCCURRING AS A RESULT OF THEIR OPERATIONS AT NO COST TO THE TENANT OR LANDLORD. CONTRACTOR SHALL ALSO ENSURE THAT THEIR OPERATIONS DO NOT INTERFERE WITH THE OPERATION OF THE REMAINDER OF THE DEVELOPMENT/MALL. BARRIERS TO NOISE, DUST AND SECURITY BETWEEN CONSTRUCTION AREAS AND PUBLIC AREAS SHALL BE ERECTED, MAINTAINED AND REMOVED PER THE DEVELOPMENT CRITERIA BY THE CONTRACTOR.	BRICK		CONCRETE BLOCK		INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: APPLICABLE CODES:
 CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION OF WORK, MATERIALS, FIXTURES, ETC. FROM LOSS, DAMAGE, FIRE, THEFT, ETC. ALL AREAS OF EXISTING LANDSCAPING DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION. 	CONCRETE		EARTH		BUILDING & STRUCTURAL: INTERNATIONAL BUILDING CODE 22 PLUMBING: INTERNATIONAL PLUMBING CODE 22 MECHANICAL: INTERNATIONAL MECHANICAL CODE 22
 CONTRACTOR SHALL VERIFY AND PROVIDE ALL UTILITY CONNECTIONS (PLUMBING, ELECTRICAL, GAS, ETC. IN THE FORM OF SUPPLY AND DRAIN PIPES, CONDUIT AND PULLING WIRES, ETC.) RELATED TO EQUIPMENT AND APPLIANCES. COORDINATE WITH KITCHEN SUPPLIER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FITTING NECESSARY TO ACHIEVE THE INTENT OF THE CONSTRUCTION 					ELECTRICAL: NATIONAL ELECTRICAL CODE 22 ENERGY: INTERNATIONAL ENERGY CODE 22 FUEL GAS: INTERNATIONAL FUEL GAS CODE 22 FIRE/LIFE SAFETY: INTERNATIONAL FIRE CODE 22
DOCUMENTS 15. NEW WORK AT EXISTING CONDITIONS SHALL ALIGN WITH AND MATCH EXISTING WORK EXCEPT WHERE OTHERWISE DIMENSIONED OR DETAILED.	GRAVEL	60 50 50 50 50 50 50 50 80 50 50 50 50 50 50 50 80 50 50 50 50 50 50 50 80 50 50 50 50 50 50 80 50 50 50 50 50 50 80 50 50 50 50 50 50 50 50 50 50 50 50 50	SAND		ACCESSIBILITY CODE: ICC/ANSI AT 17.1
 CONTRACTOR SHALL NEVER SCALE DRAWINGS. LOCATIONS FOR ALL PARTITIONS, WALLS, CEILINGS, ETC. WILL BE DETERMINED BY DIMENSIONS ON THE DRAWINGS. ANY AREA OF THE PLANS MISSING REQUIRED DIMENSIONS MUST BE REPORTED TO THE ARCHITECT IMMEDIATELY. DIMENSIONS ARE TO FACE OF FINISHED MATERIAL UNLESS NOTED OTHERWISE. 	WOOD BLOCKING		DIMENSIONAL LUMBER		
 CONTRACTOR SHALL COORDINATE THE DELIVERY AND STORAGE OF EQUIPMENT WITH EQUIPMENT SUPPLIER AND TAKE MEASURES TO ENSURE THE PROTECTION OF EQUIPMENT FROM DAMAGE DURING THE CONSTRUCTION PHASE PRIOR TO AND AFTER EQUIPMENT INSTALLATION. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES IN THE FIELD AND PROVIDE ADDITIONAL UTILITY SERVICE AS REQUIRED TO MEET THE SCOPE 					OCCUPANCY TYPE:(B) BUSINESSCONSTRUCTION TYPE:I IB (NON COMBUSTIBLE) - SPRINKLED PER NFPA 13TOTAL GROSS AREA =8,053 S.F. EXISTING
AND INTENT OF THE WORK. 20. VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION START. ANY AND ALL LOSSES OF BUSINESS TO THE LANDLORD, DEVELOPER OR OTHER PARTY RESULTING FROM DAMAGE CAUSED BY CONTRACTOR OPERATIONS SHALL BE THE RESPONSIBILITY OF THE	FINISH WOOD		BATT INSULATION		OCCUPANT LOAD: PER IBC 1004.5: 90 OCCUPANTS(2 PER SINGLE STUDIO, 4 PER DOUBLE STUDIO) EXIT CALCULATION:
CONTRACTOR. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT THE SOLE EXPENSE OF THE CONTRACTOR. 21. CONTRACTOR SHALL PROVIDE DRAFT/FIRE STOPS, AS REQ'D BY GOVERNING CODES AND JURISDICTIONS. NEW AND EXISTING PENETRATIONS IN FIRE-RATED PARTITIONS OR DRAFT STOPS SHALL BE PROTECTED BY A SYSTEM LISTED BY A RECOGNIZED TESTING AGENCY.	CEILING TILE		GYPSUM BOARD		OCC. LOAD = 2 REQUIRED EXIT PER IBC 402.4.2: COMMON PATH OF TRAVEL = 35'-9"
 PROVIDE FIRE EXTINGUISHERS PER APPLICABLE CODES. VERIFY FINAL LOCATION WITH A.H.J. CONTRACTOR SHALL COORDINATE ALL WORK THAT AFFECTS THE ROOF WITH THE LANDLORD AND, IF REQUIRED BY THE LANDLORD, HIRE THE SHELL ROOFING SUBCONTRACTOR TO PERFORM ALL WORK OF PENETRATING THE ROOF FOR ANY AND ALL ITEMS ADDED ON THE ROOF AND 	PLYWOOD		RIGID INSULATION		REQUIRED EGRESS WIDTH (90 X 0.15) = 13.5" 2 EXITS PROVIDED = 70" RESTROOM FIXTURE COUNT: 1 PER 25 FOR FIRST 50, 1 PER 50 AFTER LAVATORY FIXTURE COUNT: 1 PER 40 FOR FIRST 80
PATCHING/SEALING OF SUCH PENETRATIONS DURING AND AFTER EQUIPMENT INSTALLATION. 24. CONTRACTOR SHALL REVIEW THE DIMENSIONS OF ALL EQUIPMENT IN THE PROJECT REGARDLESS OF THE SOURCE AND COORDINATE ACCESS TO THE SPACE AND VERIFY CLEAR FLOOR SPACE IS PROVIDED AS REQUIRED TO ENSURE EASE OF INSTALLATION.	STEEL		METAL STUD WALL		IPC TABLE 403.1 WATER CLOSETS URINAL LAVATORY REQ'D PROVIDED REQ'D PROVIDED REQ'D PROVIDED REQ'D PROVIDED REQ'D
25. CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER CONTRACTORS AND VENDORS FURNISHING LABOR, MATERIALS, ETC. ON THE PROJECT TO ENSURE THE WORK AS A WHOLE SHALL BE EXECUTED AND COMPLETED WITHOUT CONFLICT OR DELAY.					UNISEX 3 3 0 0 2 3 * PER IBC 2902 2 SINGLE USER TOULET FACILITIES SHALL CONTRIBUTE TOWARD NOTE: FIRE ALARMS WILL BE A D
 CONTRACTOR SHALL COORDINATE THE REQUIREMENTS OF ANY AND ALL DRAWINGS INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ARCHITECT PRIOR TO EXECUTION OF WORK. CONTRACTOR TO VERIFY THAT EQUIPMENT HAS APPROPRIATE CLEARANCES DURING INSTALLATION INCLUDING MAINTENANCE CLEARANCES; 					THE TOTAL NUMBER OF REQUIRED PLUMBING FIXTURES AND SHALL BE IDENTIFIED SUBMITTAL FOR USE BY EITHER SEX.
 28. PROVIDE AND INSTALL ALL NECESSARY INWALL FRAMING REQUIRED TO CARRY SHELF, HANGING, AND VALANCE LOADS, RAILINGS, ETC. AS PER PLANS 	S1			ATIONS:	SHEET NUMBERING SYSTE
 PROVIDE SILICONE SEALANT AT ALL JOINTS AND INTERFACES OF ALL COUNTERTOPS, EQUIPMENT, BOOTHS, WALLS, ETC. ALL JOINTS AND OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED IN ACCORDANCE WITH THE BUILDING CODE AND ENERGY CODE. 	AFF	Above Finished FBO	Furnished by Others	PL Plate	NOTE: DETAIL NUMBERS ARE DETERMINED BY THE BOTTOM RIGHT HAND BOX, PLEASE SEE SAMPLES ABOVE FOR DETERMINING DETAIL NUMBERS
 ALL WOOD IN CONTACT WITH CONCRETE MASONRY SHALL BE PRESSURE TREATED, MOISTURE RESISTANT WOOD. ALL WOOD TRIM OR OTHER PREFINISHED TRIM ITEMS SHALL BE CUT TO FIT AND RAW, EXPOSED SURFACES SHALL BE FINISHED TO MATCH 	ACT ACOUST ADJ AHJ	Floor FD Acoustical Ceiling Tile FE Acoustical FEC Adjustable FFE Authority Having Jurisdiction	Floor Drain Fire Extinguisher Fire Extinguisher & Cabinet Furniture, Fixtures & Equipment	PLAM Plastic Laminate PLYWD Plywood PLUMB Plumbing PNL Panel PR Pair	
ADJACENT FINISH MATERIALS. 33. CONTRACTOR SHALL PROVIDE FIRE-RETARDANT WOOD BLOCKING, BRACING AND NAILERS AS REQ'D FOR MILLWORK, EQUIPMENT, SHELVING, ETC. COORDINATE WITH TENANT.	ALUM AMB ANC ANOD	Aluminum FIN Air-moisture barrier FLUOR Anchor FLR Anodized FRP	Finish' Fluorescent Floor Fiberglass Reinforced	PREP Preparation PREFIN Prefinished PTD Painted QT Quarry Tile	
 34. MILLWORK BY OTHERS, CONTRACTOR TO COORDINATE PLUMBING AND ELECTRICAL W/ MILLWORK SUPPLIER 35. ALL SURFACES WHICH ARE INDICATED TO BE FINISHED OR PAINTED SHALL BE PREPARED, SANDED, TREATED, AND PRIMED IN STRICT ACCORDANCE WITH COMMERCIAL QUALITY STANDARDS, AND IN STRICT ACCORDANCE WITH FINISH MATERIAL MANUFACTURER'S INSTRUCTIONS. 	ARCH ASS'Y BD BFG	Architect(ural) Assembly FRT Board FS Below Finished Grade FT	Plastic Fire Retardant Treated Floor Sink Food Service Equipment Feet	QTY Quantity RA Return Air RAD Radius RCP Reflected Ceiling Plan	
 36. ALL FINISH SURFACES PENETRATED SUCH AS CEILING TILES AND MILLWORK COUNTERS FOR ANY REASON MUST HAVE AN ASSOCIATED GROMMET APPROVED FOR THAT USE. 37. PROVIDE OCCUPANCY SIGN IN A CONSPICUOUS LOCATION IN ACCORDANCE WITH STATE & LOCAL CODES. DESIGN TO BE APPROVED BY 	BFF BLDG BLK'G BM	Below Finished Floor FV Building GA Blocking GALV Beam GC	Field Verify Gage Galvanized General Contractor	REF Reference RECPT Receptacle REFL Reflected, Reflecting REINF Reinforced, Reinforcing RELOC Relocate	
ARCHITECT. 38. APPLICATION OF MATERIAL OR EQUIPMENT INSTALLED BY OTHERS CONSTITUTES ACCEPTANCE OF THAT WORK, AND ASSUMPTION OF THE RESPONSIBILITY FOR SATISFACTORY INSTALLATION AND PERFORMANCE.	BOT BRG BS BTWN CAB	Bottom GL Bearing GYP BD Both Sides HC Between HM Cabinet HT	Glass Gypsum Board Hollow Core Hollow Metal	REQ'D Required REV Revision, Reversed RO Rough Opening RTU Roof Top Unit	
39. CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING TO STRUCTURE FOR INTERIOR PARTITIONS, SOFFITS, CEILINGS, PLATFORMS, ETC. WHETHER SHOWN ON THE DRAWINGS OR NOT.	CJ G CLG CLG CLO	Cabinet HT Control Joint HDWD Center Line HR Ceiling HVAC Closet	Height Hardwood Hour Heating, Ventilation and Air Conditioning	SC Solid Core SF Square Foot SHT Sheet SHTH Sheathing	EXAMPLE DETAIL # 4AXXX
	CLR CMU COL	Clear IN Concrete Masonry INSUL Unit INT Column JST	Inch Insulation, Insulate Interior Joist	SSStainless SteelSCHEDScheduleSIMSimilarSMSheet MetalSPEC'DSpecified	STANDARD DRAWING SYMB
	CONC CONT CONST CT	ConcreteLAMConstruction, ConstructLAVConstruction, ConstructLLHCeramic TileLLV	Laminated Lavatory Long Leg Horizontal Long Leg Vertical	STD Standard STL Steel STRUCT Structural SUSP Suspended	NORTH ARROW INDICATOR
	DBL DEMO DIA DN DR	DoubleMANUFDemolitionMAXDiameterMECHDownMEPDemonstrationMEP	Manufacturer Maximum Mechanical Mechanical, Electrical, and Plumbing	TBD To be determined TEMP Tempered T\$B Top and Bottom TYP Typical	X DRAWING KEYNOTE TAG X WALLTYPE TAG COLUMN
	DS DTL DWG EA	Door Downspout MILL Detail MIN Drawing MISC Each MLD	Millwork Minimum Miscellaneous Molding	VCT Vinyl Composition Tile VERT Vertical VWC Vinyl Wall Covering	X DOOR TAG
	EIFS EF EJ	Exterior Insulation and MO Finish System MTD Exhaust Fan MTL Expansion Joint MUL	Masonry Opening Mounted Metal Mullion	Covering UNO Unless Noted Otherwise W/ With W/O Without	X FINISH NOTE TAG X REVISION TAG
	EL ELEC ELEV EQ	Elevation NIC Electrical NOM Elevator NTS Equal OC	Not In Contract Nominal Not To Scale On Center Outside Diameter	WC Water Closet WD Wood WH Water Heater WDW Window	DETAIL B
	EQUIP EW EWC EXIST EXP	Equipment OD Each Way OFCI Electric Water Cooler Existing OPNG Expansion OPT	Outside Diameter Owner Furnished, Contractor Installed Opening Optional	WP Waterproofing or Waterproof WSCT Wainscot WT Weight WWE Welded Wire Fabric	DEMOLITION TAG
	EXT FBD	Expansion OTS Exterior OTS Fiber Board PBD	Open to Structure Particle Board	WWF Welded Wire Fabric	X CEILING MATERIAL AND HEIGHT TAG DETAIL C X SECTION CUT TAG X
					X X ROOM NAME AND X X ROOM NAME AND

	DRAWING INDEX: GENERAL:	
	A000 COVER SHEET A002 GENERAL ACCESSIBILITY	er.net
	A003 INTERIOR ACCESSIBILITY A004 RESPONSIBILITY SCHEDULE A005 LIFE SAFETY PLAN	Klov Klov
	SP100 SPECIFICATIONS SP101 SPECIFICATIONS	
	SPI02 SPECIFICATIONS	75
	ARCHITECTURAL: A I O FLOOR PLAN A I I O FIXTURE, FURNITURE, & MILLWORK PLAN	013.649.12
	A I 20 FINISH FLOOR PLAN A I 30 REFLECTED CEILING PLAN	ž ž
	A400DETAILSA500INTERIOR ELEVATIONSA501INTERIOR ELEVATIONS	3 PENROSE LANE
	A520ENLARGED RESTROOM PLANA530ENLARGED BREAK ROOM/LAUNDRY ROOM PLAN	
ND DRAWINGS, AND	A540ENLARGED UTILITY/IT ROOM PLANA600DOOR TYPES & SCHEDULESA610WALL TYPES & DETAILS	8813 ph: 9
RMITS AND LICENSES ED. APPLICABLE CODES	STRUCTURAL:	
<u>_</u>	5001 GENERAL NOTES & MEZZANINE FRAMING PLAN 5100 ROOF FRAMING PLAN	THIS DRAWING has been prepared by the Architect, or
2018 2018	MEP: PIOO WASTE & VENT PLAN - WEST	This Drawing has been prepared by the Architect, or prepared under his direct supervision as an instrument of service and is intended for use only on this project. All Drawings, Specifications, ideas and designs, including the overall layout, form, arrangement, and composition of spaces and elements portrayed, constitute the original, unpublished Work of the Architect. Any reproduction, use, or disclosure of the information contained herein without the written consent of the Architect is strictly prohibited.
2018 2017 2018	PIOI WATER ≰ VENT PLAN - EAST P2OO WATER PLAN - WEST P2OI WATER PLAN - EAST	Work of the Architect. Any reproduction, use, or disclosure of the information contained herein without the written consent of the Architect is strictly prohibited. © 2024 KLOVER ARCHITECTS, INC.
2018 2018	P300PLUMBING SCHEDULES & DETAILSP301PLUMBING RISER DIAGRAMS	THE ARCHITECT DISCLAIMS responsibility for the existing building structure, site conditions, existing construction elements, or any documents, drawings or other instruments used for any port of this Project which do not bear the Architect's seal. The Architect's services are undertaken only in the interest of the Project Owner. No obligation is assumed by the Architect for the benefit of any other entity.
2009	P302 SHAMPOO SINK DETAILS MPO0 MECH. / PLUMB. SPECIFICATION MI 00 MECHANICAL PLAN	services are undertaken only in the interest of the Project Owner. No obligation is assumed by the Architect for the benefit of any other entity. RELATED DOCUMENTS: This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary
	MIOIMECHANICAL PLAN - EASTM200MECHANICAL SCHEDULE & DETAILS	RELATED DOCUMENTS: This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary Conditions of the Contract, General Requirements, Specifications and other Drawings may affect the Work described. Failure to review and integrate the design intent of the whole of the Construction Documents does not relieve the Contractor from providing a complete Project.
	M201 MECHANICAL SCHEDULES M202 DOAS UNIT DETAILS E1 ELECTRICAL SPECIFICATION	COMPLY WITH all laws, codes, ordinances and regulations with authorities having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained. VERIFY ACTUAL CONDITIONS and dimensions prior to construction.
	E2.1 ELECTRICAL LIGHTING PLAN - WEST E2.2 ELECTRICAL LIGHTING PLAN - EAST	VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work, and assumption of responsibility for satisfactory installation.
	E3.1ELECTRICAL POWER PLAN - WESTE3.2ELECTRICAL POWER PLAN - EASTE4ELECTRICAL ROOF PLAN \$ TYPICAL STUDIO PLAN	DIMENSIONS SHOWN are to finish face of a material unless otherwise indicated. CALCULATE & WEASURE dimensions - DO NOT SCALE drawings unless otherwise directed. p r o j e c t t i t l e
	E5 ELECTRICAL SCHEDULES	
	PROJECT CONTACTS:	
5 DESIGN CTOR. ALL	OWNER: ARCHITECT: MEP:	
BY SEPARATE BMITTAL	LILY MANTYCHKLOVER ARCHITECTS, INC.BC ENGINEERS, INC.I 6836 GODDARD STREET,8813 PENROSE LANE, SUITE 400,5720 REEDEROVERLAND PARK, KS 66221LENEXA, KS 66219SHAWNEE, KS 66203	S
A DEFERRED	T:913.444.2201 T: 913.649.8181 T: 913.262.1772 POC: KARA BEADLESTON POC: BRIAN QUISSELL	000 4086
		FAIR MO 64
		IMAGE STUDIC SUMMIT FAIR 840-D NW BLUE PARKWAY LEE'S SUMMIT, MO 64086
EM:	LOCATION MAP:	
		840 B40
	PROJECT LOCATION	
		project number 23060.003
		drawing issuance
		PERMIT/BID 03.05.24 drawingrevisions
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		HENRY C. KLOVER
		A Start And
NL BOX TAG		Date Signed APR 1 8 2024
		drawing title
NL CIRCLE TAG		cover sheet drawing number

AND NUMBER TAG





THE INFORMATION ON THESE ACCESSIBILITY DRAWINGS IS PROVIDED AS A GUIDE TO THE CONTRACTOR AND TO ANY OTHER ENTITIES INSTALLING BUILDING EQUIPMENT OR FIXTURES. THESE DRAWINGS ARE ABBREVIATED AND DO NOT INDICATE ALL CONDITIONS THAT MAY BE ENCOUNTERED AND THEY DO NOT INCLUDE ALL REQUIREMENTS OF EITHER THE ADA OR ICC/ANSI A I 17.1 IN THEIR ENTIRITY.

THE AMERICANS WITH DISABILITIES ACT (ADA) IS A CIVIL-RIGHTS LAW (NOT A BUILDING CODE) AND IS THEREFORE NOT NECESSARILY ENFORCABLE BY AUTHORITIES HAVING JURISDICTION. EXCEPT IN CERTAIN STATES WITH DIRECTION OF STAIR FLIGHTS EXCEPT THEIR OWN ACCESSIBILITY REQUIREMENTS (INCLUDING BUT NOT LIMITED AT CONTINUOUS HANDRAILS ON THE TO CALIFORNIA, TEXAS \$ ILLINOIS), THE ACCESSIBILITY REQUIREMENTS OF INSIDE TURN OF STAIRS, OR AT AISLES CC/ANSI AT 17.1 ARE TYPICALLY REQUIRED THROUGH THE BUILDING CODE.

SEATS AND FOR CROSSOVERS WHERE COMPLY WITH REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT THE HANDRAILS ARE DISCONTINUOUS (ADA) EVEN IF NOT REQUIRED BY BUILDING CODES, REGULATIONS OR ORDINANCES (ADA IS A FEDERAL LAW), AND AS INDICATED ON THESE DRAWINGS

CCESSIBLE ROUTE:

PROVIDE AN ACCESSIBLE ROUTE CONNECTING ALL ACCESSIBLE SPACES AND ELEMENTS. INCLUDING WALKING SURFACES. RAMPS & CURB-RAMPS (EXCLUDING THE FLARED SIDES), DOORS & DOORWAYS, AND/OR ELEVATORS & PLATFORM LIFTS. AN ACCESSIBLE ROUTE MAY BE LOCATED AT EXTERIOR WALKS, AISLES, HALLS, CORRIDORS, SKYWALKS OR TUNNELS

ACCESSIBLE WALKING SURFACES: PROVIDE STABLE, FIRM, \$ SLIP-RESISTANT SURFACE FINISHES W/ SURFACE OPENINGS (GRATINGS) NOT TO PERMIT PASSAGE OF A 1/2" DIAMETER SPHERE - WITH LONGEST DIMENSION PERPENDICULAR TO DIRECTION OF TRAVEL

MINIMUM WHEELCHAIR TURNING SPACE CAN INCLUDE ALLOWABLE FIXTURE KNEE & TOE CLEARANCES UNO. DOOR SWINGS ARE PERMITTED TO OVERLAP TURNING SPACE UNO.

ACCESSIBLE BUILDING ENTRANCES:

PROVIDE 60% (MIN) OF ALL PUBLIC BUILDING ENTRANCES (EXCLUDING THOSE FOR LOADING OR SERVICE USE) ACCESSIBLE FROM: ACCESSIBLE PARKING, A PUBLIC TRANSPORTATION STOP, OR FROM A PASSENGER LOADING ZONE (AS APPLICABLE) WITHOUT STEPS OR ABRUPT CHANGES IN

PROVIDE ONE (1 - MIN) ACCESSIBLE BUILDING ENTRANCE AT THE GROUND FLOOR LEVEL AND ONE (1 - MIN) ACCESSIBLE ENTRANCE TO EACH PROPOSED TENANT SPACE IN A MULTIPLE-TENANT BUILDING.

PROVIDE ACCESSIBLE ENTRANCE AT SERVICE OR LOADING ENTRIES (NOT INTENDED FOR ENTRANCE BY THE PUBLIC) IF THAT IS THE ONLY ENTRANCE TO A SPACE OR BUILDING.

MULTI-LEVEL BUILDINGS: PROVIDE ONE (I - MIN) ACCESSIBLE ROUTE (INCLUDING AN ELEVATOR TO CONNECT EACH BUILDING LEVEL ABOVE OR BELOW ACCESSIBLE LEVELS INCLUDING MEZZANINES) UNLESS THE FLOOR-AREA IS LESS THAN 3,000 SF AND DOES NOT INCLUDE FIVE (5) OR MORE MULTIPLE MERCANTILE (GROUP M) TENANTS, OR THE OFFICES OF HEALTH CARE PROVIDERS.

OPERABLE PARTS:

CCESSIBLE OPERABLE PARTS INCLUDE CONTROLS AND OPERATING MECHANISMS (DOOR HARDWARE, WINDOW OPERATORS, DISPENSERS, LIGHT SWITCHES, CONVENIENCE OUTLETS, THERMOSTATS, ALARM CONTROLS, AND SIMILAR ELEMENTS).

PROVIDE AN ACCESSIBLE CLEAR-FLOOR SPACE AT ALL OPERATIONAL PARTS

OPERATION: BY USE OF ONE (1) HAND WITH A SINGLE EFFORT WITHOUT TIGHT GRASPING. PINCHING. OR TWISTING OF THE WRIST - WITH FIVE (5.0) POUNDS MAXIMUM OPERATIONAL FORCE. COMPLY WITH ALLOWABLE REACH RANGES FOR HEIGHT OF OPERABLE PARTS.

ACCESSIBLE DOOR & GATE REQUIREMENTS:

REVOLVING DOORS OR GATES ARE NOT ACCESSIBLE.

SECURITY & MAINTENANCE DOORS (INCLUDING SERVICE-ACCESS DOORS) DO NOT NEED TO COMPLY WITH ACCESSIBILITY REQUIREMENTS.

DOUBLE-LEAF DOORS OR GATES: ONLY ONE LEAF (MIN) MUST COMPLY WITH ACCESSIBILITY REQUIREMENTS

RECESSED DOORS: PROVIDE FORWARD APPROACH CLEARANCE WITH ANY OBSTRUCTION WITHIN 18 INCH OF LATCH SIDE OF DOORWAY PROJECTING MORE THAN 8 INCHES BEYOND THE FACE OF DOOR MEASURED PERPENDICULAR TO FACE OF DOOR

DOOR SURFACES: PROVIDE SMOOTH SURFACE WITHIN TEN (10) INCH AFF ON PUSH-SIDE EXTENDING FULL WIDTH WITH MAX 1/16 INCH BETWEEN SURFACE PLANE AND ANY PARTS (KICKPLATE). CAP CAVITIES FORMED BY KICKPLATES EXCEPT AT SLIDING DOORS, TEMPERED GLASS DOORS MITHOUT SIDE STILES WITH A BOTTOM RAIL WITH ITS TOP EDGE SLOPED SO DEGREES FROM HORIZONTAL OR MORE, OR AT DOORS NOT EXTENDING O I O INCHES AFF

SIDELITES OR VISION LITES: AT DOORS AND SIDELITES ADJACENT TO DOORS WITH ONE OR MORE GLAZING PANELS PERMITTING VIEWING, PROVIDE BOTTOM EDGE OF AT LEAST ONE PANEL ON EITHER THE DOOR OR THE ADJACENT SIDELITE AT 43 INCHES MAXIMUM AFF, EXCEPT AT VISION LITES (ONLY) WITH THE LOWEST PART MORE THAN 66 INCHES AFF.

ACCESSIBLE DOOR & GATE HARDWARE:

PROVIDE ACCESSIBLE HARDWARE WITH AN EASY-TO-GRASP SHAPE COMPLYING WITH OPERABLE PARTS REQUIREMENTS (LEVERS PUSH/PULLS, OR PANIC DEVICES ARE ACCEPTABLE), MOUNTED BETWEEN 2'- I O" AND 4'-0" AFF, WITH MAX PROJECTION (INTO REQUIRED MIN CLEARANCES) OF 4 INCH BTWN 34 - 80 INCH AFF

SLIDING DOOR/GATE HARDWARE: OPERABLE PARTS MUST BE EXPOSED AND USABLE FROM BOTH SIDES WHEN DOOR IS FULLY OPEN

DOOR/GATE CLOSERS: ADJUST UNITS TO PROVIDE FIVE (5) SECOND (MIN) TIME TO MOVE DOOR/GATE FROM 90-DEGREE OPEN-POSITION TO 2-DEGREE OPEN-POSITION.

DOOR/GATE SPRING-HINGES: ADJUST TO PROVIDE 1-1/2 SECOND MINIMUM TIME TO MOVE DOOR/GATE FROM 70-DEGREE OPEN-POSITION TO CLOSED-POSITION

OPENING-FORCE OF CLOSERS OR SPRING-HINGES: 5.0 LBS MAX @ NTERIOR HINGED, SLIDING OR FOLDING DOORS OR GATES (NOT APPLICABLE TO LATCH-BOLT RETRACTION FORCE AND NOT APPLICABLE TO OPENING FORCE AT FIRE-DOORS - TO BE AS REQD BY AJH)

AUTOMATIC DOORS OR GATES: REFERENCED STANDARDS: COMPLY WITH ANSI/BHMA A | 56. I O. AND FOR POWER-ASSIST AND LOW-ENERGY DOORS, COMPLY WITH ANSI/BHMA

A I 56. I 9 (UNLESS DOORS OR GATES ARE DESIGNED TO BE OPERATED ONLY BY SECURITY PERSONNEL)

COMPLY WITH ACCESSIBLE CLEAR-FLOOR SPACE, THRESHOLD / LOOR-SURFACE, AND DOORS-IN- SERIES REQUIREMENTS.

MANUAL CONTROLS: COMPLY WITH "OPERABLE PARTS" REQMTS WITH THE CLEAR FLOOR SPACE ADJACENT TO THE CONTROL SWITCH LOCATED BEYOND THE DOOR/GATE SWING.

ACCESSIBLE WINDOWS:

PROVIDE OPERATIONAL PARTS LOCATED PER "OPERABLE PARTS" REQMTS *N*/ MIN ACCESSIBLE CLEAR-FLOOR SPACE ADJACENT TO THE WINDOW.

SPECIAL ACCESS (PLATFORM) LIFTS (INTERIOR OR EXTERIOR) COMPLY WITH ASME A 17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS, SECTION XX (WITH ACCESSIBLE KEY-CONTROLS IF LIFT TRAVEL AREA IS NOT ENCLOSED) AND AS FOLLOWS: MAXIMUM TRAVEL HEIGHT: 60 INCHES MINIMUM CAPACITY: 400 POUNDS

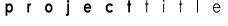
MINIMUM PLATFORM SIZE: 30 X 48 INCH MAXIMUM SPEED: 20 FPM



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DIMENSIONS SHOWN are to finish face of a material unless otherwise indicated. CALCULATE & MEASURE dimensions - DO NOT SCALE drawings unless otherwise directed.





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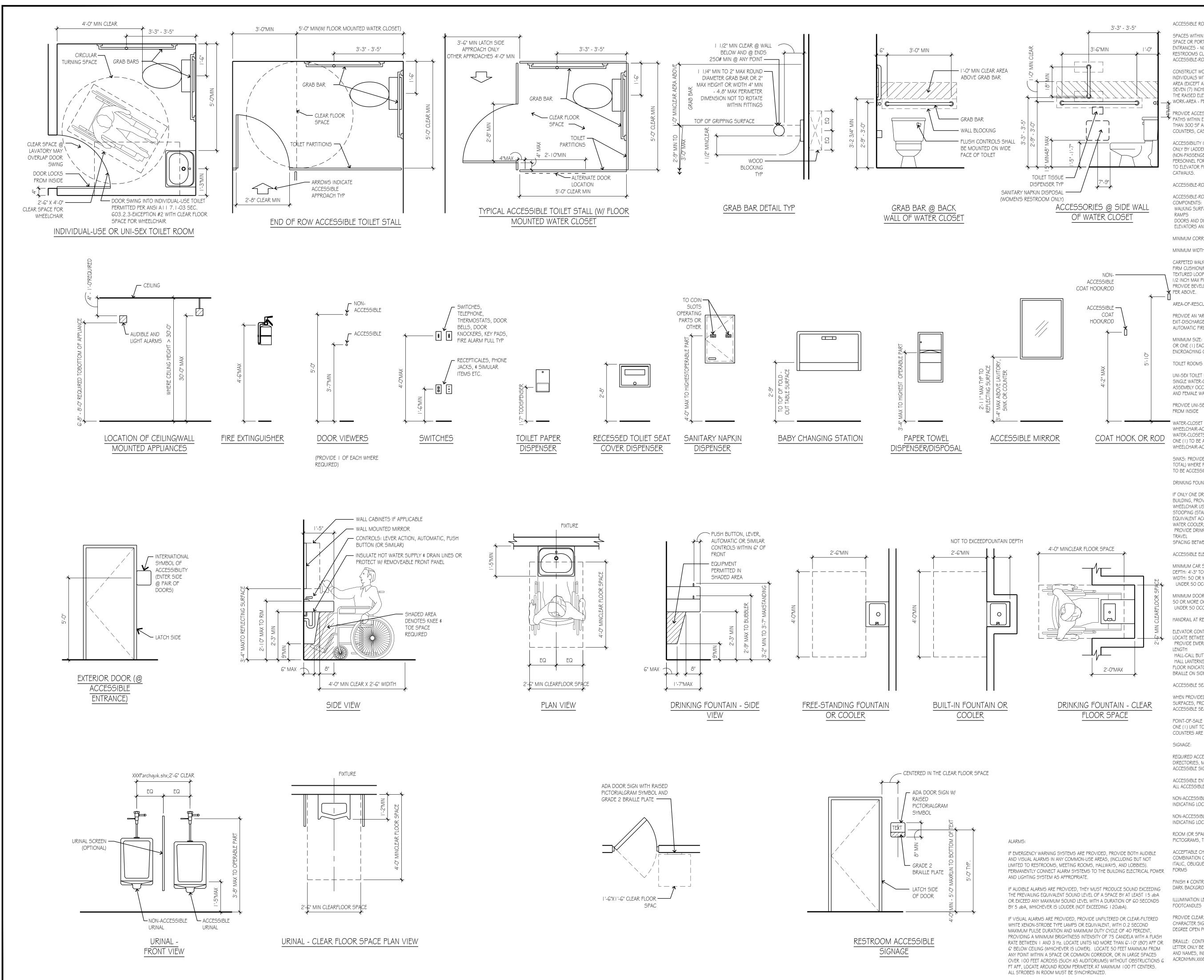
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ACCESSIBLE ROUTE WITHIN BUILDING:

SPACES WITHIN BUILDINGS: PROVIDE AN ACCESSIBLE ROUTE TO EACH SPACE OR PORTION WITHIN A BUILDING, TO ACCESSIBLE BUILDING ENTRANCES - NOT PASSING THROUGH KITCHENS, STORAGE ROOMS, RESTROOMS CLOSETS OR SIMILAR SPACES (IF ONLY ONE ACCESSIBLE-ROUTE IS PROVIDED).

CONSTRUCT WORK AREAS USED ONLY BY EMPLOYEES SO THAT INDIVIDUALS WITH DISABILITIES CAN APPROACH, ENTER, AND EXIT THE AREA (EXCEPT AT WORK-AREAS LESS THAN 150 SF AND ELEVATED SEVEN (7) INCHES OR MORE ABOVE GROUND OR FINISH FLOOR - WHEN THE RAISED ELEVATION IS ESSENTIAL TO THE FUNCTION OF THE WORK-AREA - PER IBC).

PROVIDE ACCESSIBLE ROUTES AT ALL COMMON-USE CIRCULATION ▶ PATHS WITHIN EMPLOYEE WORK AREAS UNLESS WORK AREA IS LESS THAN 300 SF AND DEFINED BY PERMANENTLY INSTALLED PARTITIONS. COUNTERS, CASEWORK OR FURNISHINGS

ACCESSIBILITY IS NOT REQUIRED TO NON-OCCUPIED SPACES ACCESSED ONLY BY LADDERS, CATWALKS, CRAWL SPACES OR FREIGHT (NON-PASSENGER) ELEVATORS THAT ARE FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE PURPOSES, INCLUDING BUT NO LIMITED TO ELEVATOR PITS, ELEVATOR PENTHOUSES, AND PIPING OR EQUIPMENT CATWALKS.

ACCESSIBLE-ROUTE WITHIN BUILDING:

ACCESSIBLE-ROUTES MAY CONSIST OF ONE OR MORE OF THESE COMPONENTS: WALKING SURFACES

RAMPS

DOORS AND DOORWAYS ELEVATORS AND PLATFORM LIFTS

MINIMUM CORRIDOR WIDTH: 3'8"

MINIMUM WIDTH OF ACCESS AISLES: 3'-0"

CARPETED WALKING SURFACES: BROADLOOM OR CARPET-TILE WITH FIRM CUSHION/PAD (OR WITHOUT CUSHION & PAD) WITH LEVEL LOOP, TEXTURED LOOP, LEVEL CUT, OR LEVEL CUT/UNCUT PILE TEXTURE WITH 1/2 INCH MAX PILE-HEIGHT. SECURELY ATTACH TO SUBSTRATE AND PROVIDE BEVELED EDGE-TRIM ALONG ENTIRE LENGTH OF EXPOSED EDGE PER ABOVE.

AREA-OF-RESCUE ASSISTANCE

PROVIDE AN "AREA-OF-RESCUE-ASSISTANCE" AT NON-ACCESSIBLE EXIT-DISCHARGE DOORS - EXCEPT IN BUILDINGS WITH A SUPERVISED AUTOMATIC FIRE-SUPPRESSION SYSTEM.

MINIMUM SIZE: PROVIDE MINIMUM OF TWO (2) EA 2'-6" X 4'-0" AREAS OR ONE (1) EACH PER 200 OCCUPANTS PER STORY SERVED NOT ENCROACHING ON ANY REQUIRED EXIT WIDTH

TOILET ROOMS OR COMPARTMENTS:

UNI-SEX TOILET ROOM: PROVIDE AN ACCESSIBLE FACILITY WITH A SINGLE WATER-CLOSET AND LAVATORY IN ANY MERCANTILE OR ASSEMBLY OCCUPANCIES WHERE A TOTAL OF SIX (6) OR MORE MALE AND FEMALE WATER-CLOSETS ARE REQUIRED (PER IBC)

PROVIDE UNI-SEX AND SINGLE-USE TOILET ROOMS WITH DOOR LOCKING FROM INSIDE

WATER-CLOSET COMPARTMENTS: PROVIDE A MINIMUM OF ONE (1) WHEELCHAIR-ACCESSIBLE COMPARTMENT AND WHEN OVER SIX (6) WATER-CLOSETS + URINALS ARE PROVIDED IN A TOILET ROOM, PROVIDE ONE (1) TO BE AMBULATORY-ACCESSIBLE IN ADDITION TO THE WHEELCHAIR-ACCESSIBLE UNIT.

SINKS: PROVIDE NO LESS THAN ONE (1) ACCESSIBLE SINK (OR 5% OF TOTAL) WHERE PROVIDED (MOP OR SERVICE-SINKS ARE NOT REQUIRED TO BE ACCESSIBLE)

DRINKING FOUNTAINS:

IF ONLY ONE DRINKING FOUNTAIN IS PROVIDED IN A SPACE OR BUILDING. PROVIDE A "DUAL HI-LOW" TYPE UNIT ACCESSIBLE TO BOTH WHEELCHAIR USERS AND TO PERSONS WITH DIFFICULTY BENDING OR OPINIC (STANDARD HEICHT LINIT) OR OTHER M EQUIVALENT ACCESSIBILITY FOR BOTH (PROVIDING AN ACCESSIBLE WATER COOLER, FOR EXAMPLE). PROVIDE DRINKING FOUNTAINS IN ALCOVE OUT OF COMMON PATH OF

TRAVEL SPACING BETWEEN DRINKING FOUNTAINS: 2'-3" (27") MINIMUM

ACCESSIBLE ELEVATORS:

MINIMUM CAR SIZE:

DEPTH: 4'-3" TO FRONT WALL - 4'-6" TO DOOR WIDTH: 50 OR MORE OCCUPANTS: 6'-8" MIN (STRETCHER TYPE) UNDER 50 OCCUPANTS: 4'-6" MIN

MINIMUM DOOR WIDTH: 50 OR MORE OCCUPANTS: 3'-6" MIN UNDER 50 OCCUPANTS: 2'-10" MIN

HANDRAIL AT REAR: LOCATE BETWEEN 2'-6" TO 2'-10" AFF

ELEVATOR CONTROLS: LOCATE BETWEEN 2'- I I " MIN AND 4'-6" AFF MAXW PROVIDE EMERGENCY PHONE @ 4'-0" AFF MAX WITH 2'-5" MIN CORD

HALL-CALL BUTTONS: CENTER AT 3'-6" AFF HALL LANTERNS: 6'-0" (72 INCH) AFF - VISUAL AND AUDIBLE FLOOR INDICATOR SIGNS: 2" HIGH CONTRASTING LETTER SIGN WITH BRAILLE ON SIDE OF DOOR JAMB AT 60" AFF

ACCESSIBLE SEATING:

WHEN PROVIDED AT FIXED OR BUILT-IN TABLES, COUNTERS OR WORK SURFACES, PROVIDE 5% MINIMUM BUT NOT LESS THAN ONE (1) ACCESSIBLE SEATING, DISTRIBUTED THROUGHOUT.

POINT-OF-SALE (POS) OR SERVICE COUNTERS: PROVIDE NOT LESS THAN ONE (I) UNIT TO BE ACCESSIBLE DISPERSED THROUGHOUT IF COUNTERS ARE DISPERSED.

REQUIRED ACCESSIBLE SIGNS (MINIMUM) EXCEPT AT BUILDING DIRECTORIES, MENU BOARDS, OR TEMPORARY SIGNS PROVIDE ACCESSIBLE SIGNS AS FOLLOWS:

ACCESSIBLE ENTRANCES: PROVIDE A 4 X 4" ACCESSIBILITY DECAL AT ALL ACCESSIBLE PUBLIC ENTRANCE DOORS CENTERED AT 60" AFF.

NON-ACCESSIBLE PUBLIC ENTRANCES: PROVIDE DIRECTIONAL SIGNS INDICATING LOCATION OF NEAREST ACCESSIBLE ENTRANCE.

NON-ACCESSIBLE TOILET ROOMS: PROVIDE DIRECTIONAL SIGNS INDICATING LOCATION OF NEAREST ACCESSIBLE UNITS.

ROOM (OR SPACE) SIGNS (INCLUDING TOILET ROOMS): PROVIDE RAISED PICTOGRAMS, TACTILE CHARACTERS AND BRAILLE TEXT.

ACCEPTABLE CHARACTERS: UPPER-CASE, LOWER-CASE, OR A COMBINATION OF BOTH IN A SANS-SERIF CONVENTIONAL STYLE - NO ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE OR OTHER UNUSUAL

FINISH & CONTRAST: NON-GLARE WITH EITHER LIGHT CHARACTERS ON DARK BACKGROUND OR DARK CHARACTERS ON LIGHT BACKGROUND ILLUMINATION LEVEL AT ACCESSIBLE SIGNS: MINIMUM 10

PROVIDE CLEAR FLOOR AREA OF 18 X 18 INCHES CENTERED ON TACTILE CHARACTER SIGNS BEYOND ARC OF DOOR SWING FROM CLOSED TO 45 DEGREE OPEN POSITION

BRAILLE: CONTRACTED (GRADE 2) WITH INDICATION OF AN UPPERCASE LETTER ONLY BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS, AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, OR ACRONYMN.XXXP



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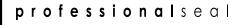
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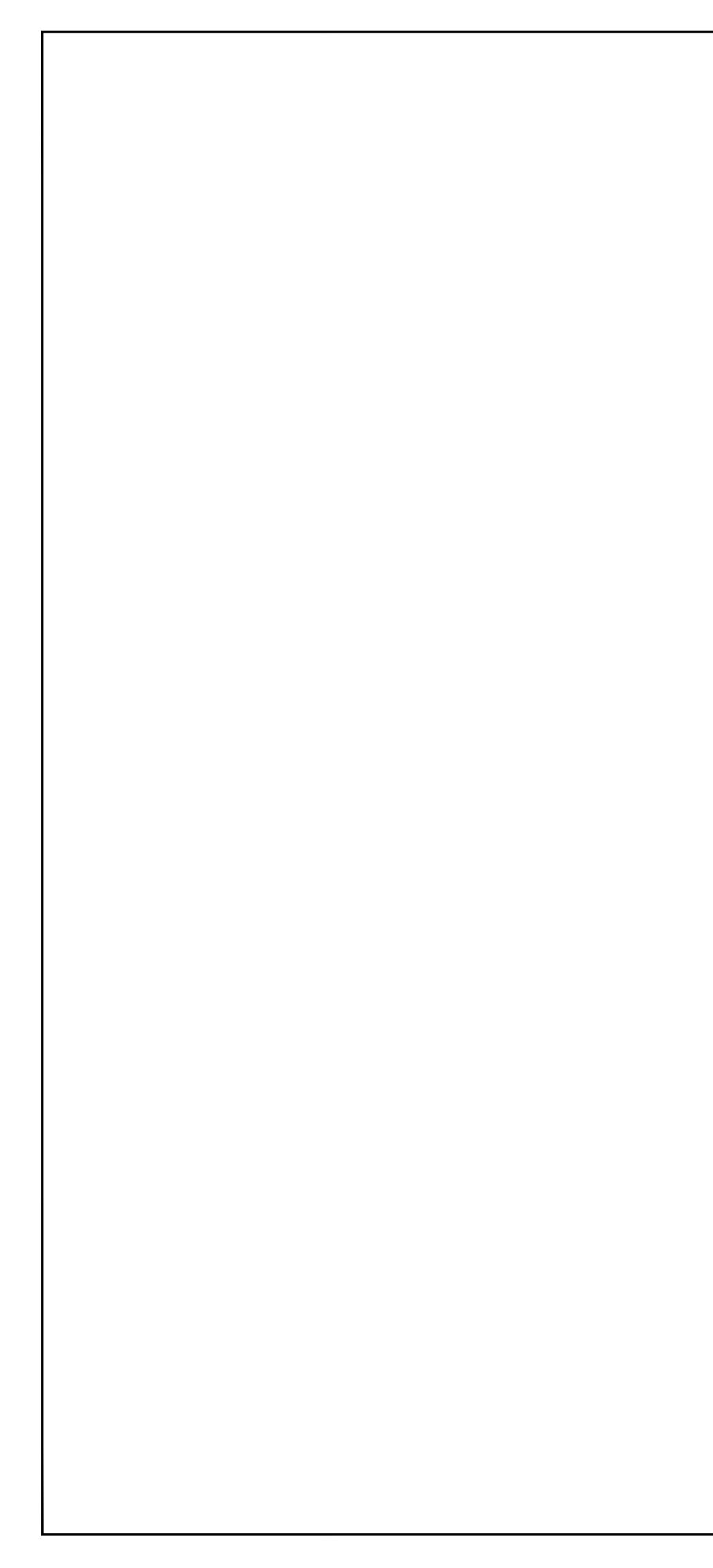
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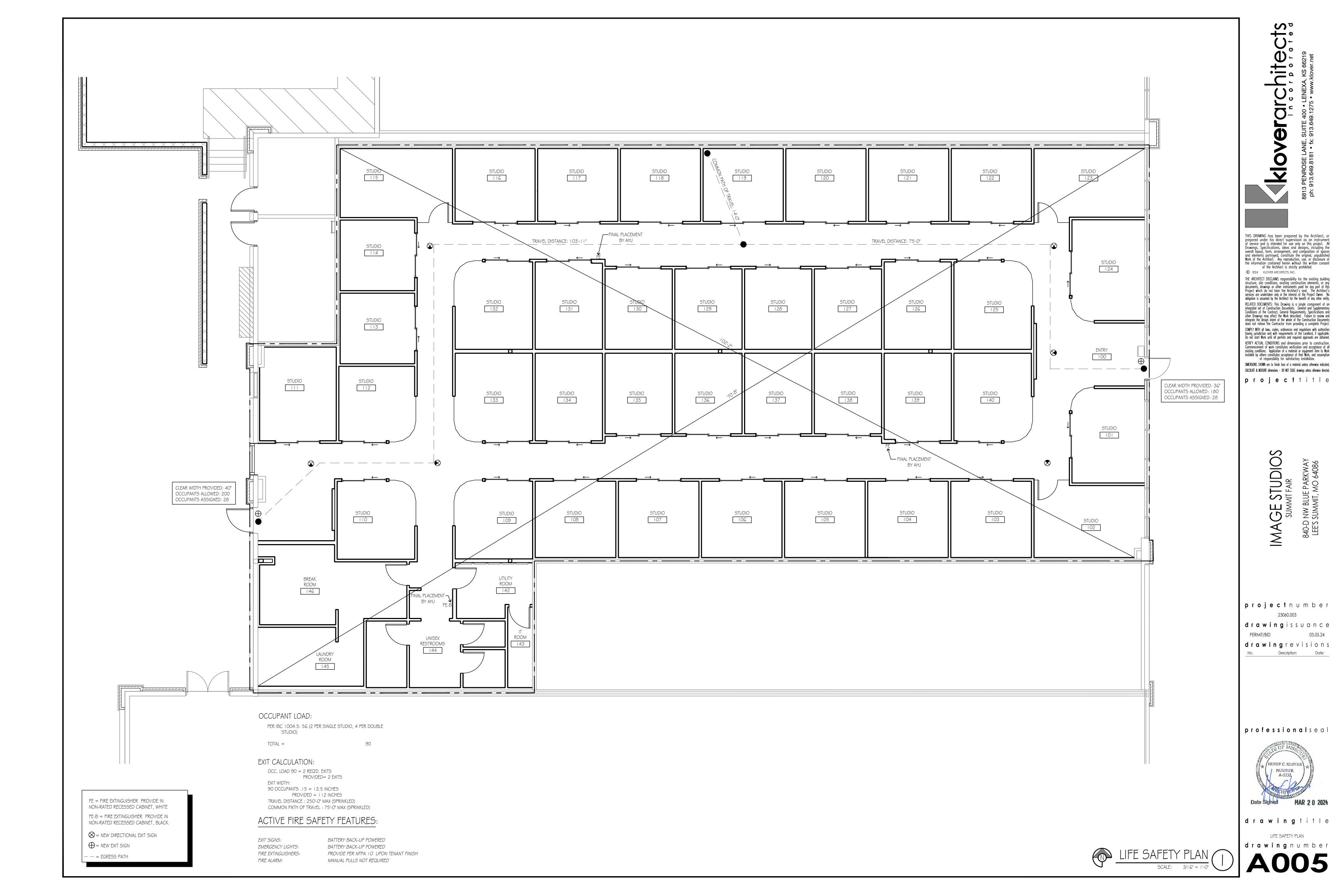
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GENERAL NOTES TO SCHEDULE:

I. ITEMS NOT COVERED IN RESPONSIBILITY SCHEDULE WILL BE CONSIDERED G.C. PROVIDED AND INSTALLED. 2. G.C. SHALL NOTIFY ARCHITECT AND OWNER IF THERE ARE ANY CONFLICTS BETWEEN THE CONSTRUCTION DOCUMENTS AND THE RESPONSIBILITY SCHEDULE. IF NO CLARIFICATION IS REQUESTED THE G.C. SHALL PRICE PROVIDING AND INSTALLING IN THEIR BID.



SECTION 00 22 13 - SUP. INSTRUCTIONS TO <u>BIDDERS:</u>

AIA DOCUMENT A701-1997 "INSTRUCTIONS TO BIDDERS" is included as a part of these documents by this reference. Copies are available from The American Institute of Architects, 1735 New York Avenue N. W., Washington, D. C. 20006, or the local AIA office. Note that Paragraph 2.1.3 requires that each bidder visit the site prior to submitting a bid/proposal.

THE FOLLOWING PARAGRAPHS modify, delete from, and/or add to the above referenced Instructions to Bidders, as if originally written therein. Where any Article of the Instructions is modified, or where any Paragraph, Subparagraph or clause thereof is modified or deleted by the following Supplementary Instructions, the unaltered provisions shall remain in effect.

ADD the following paragraph to Article 1 -Definitions:

"1.10 STIPULATED SUM amounts shall include all costs to the Contractor for materials, labor, equipment, testing and any and all items of expense (including phone calls), fees, taxes, overhead and profit for the Contractor's full and complete performance of the Work as set forth in the Contract Documents."

REPLACE Paragraph 2.1.4 to read as follows: "Any deviations from or exceptions to the Specifications, Drawings, Terms and Conditions and/or any other Bid Document must be clearly defined and set forth in the Bidder's Proposal. If no exceptions are shown in the proposal, none will be considered at the time of Contract Award."

REPLACE Paragraph 3.3.2 to read as follows: "3.3.2 Substitutions proposed by a Bidder are not to be included in the Base Bid, but may be appropriately itemized on the Bid Form or as an attachment thereto as a "Contractor's Voluntary Alternate" with the corresponding add or deduct amount included."

ADD New Paragraph: 4.1.8 as follows: "4.1.8 Bids shall remain in effect for a period of no less than THIRTY (30) days after submittal. The proposed price(s) shall include all costs to the Contractor for materials, labor, equipment, testing and any and all items of expense (including phone calls), fees, taxes, overhead and profit for the Contractor's full and complete performance of the work as set forth in the Contract Documents."

ADD New Paragraph: 4.1.9 as follows: "4.1.9 Provide a complete line-item breakdown of all development or construction related fees included within the proposed Contract Sum, either on the Bid Form, or as a separate attachment if necessary.

DELETE Paragraph 4.2 in its entirety — no bid security will be required.

ADD Paragraph: 5.3.3 as follows: "5.3.3 Bidders are hereby advised that Proposals

for this Work are being invited from other bidders." DELETE subparagraph 7.1.1 and ADD the

ollowina: "7.1.1 Costs for Performance and Labor and Material Payment Bonds shall be indicated as an alternate cost on the Bid Form, and shall not be included within the Base Bid amount. The Owner reserves the right to require such bonds to be furnished upon execution of the Contract (or subsequent to contract execution as a change order) in the amount specified on the Bid Form.

SECTION 00 73 00 - SUPPLEMENTARY CONDITIONS

GENERAL CONDITIONS: AIA Document A 201-1997 Edition: "General Conditions of the Contract for Construction" is included as a part of the Contract Documents by reference. Copies are available from the American Institute of Architects (1-800-242-3837). Participation in the Work of this Project is considered acknowledgement of the participants understanding of, and agreement with, all requirements of the Contract for Construction.

THE FOLLOWING "SUPPLEMENTARY CONDITIONS" modify the "General Conditions" as if originally written therein. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in full effect. The General Conditions may also be modified elsewhere in the Contract Documents by provisions located in other Sections of the Specifications.

ARTICLE 1 – CONTRACT DOCUMENTS

ADD to paragraph 1.1, DEFINITIONS, the following:

"1.1.8 'FURNISH': Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

1.1.9 'INDICATED': Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including 'shown', 'noted', 'scheduled', and 'specified' have the same meaning as 'indicated'.

1.1.10 'INSTALL': Operations at the Project Site including but not limited to unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

1.1.11 'LANDLORD' (LL): The entity possessing legal title of the Project Site, including designated management representatives including 'Developer', o 'Shopping Center Manager' and their agents legally authorized to act in their behalf.

1.1.12 'PROJECT SITE' (or SITE): The designated interior space or property upon which construction activities will be performed. The extent of the Project Site is indicated on the Drawings and may or may not be identical with the description of the land on which Project is to be built.

.1.13 'PROVIDE': Furnish and install, complete and ready for the intended use.

.1.14 OWNER (and/or TENANT): The entity financially responsible for procurement of construction. If a "tenant", that entity has negotiated a "lease" of the Project Site for a limited period of time from the property owner or Landlord - but while leasing, that entity is considered to be a "Tenant" and not an "agent" of the Property Owner.

ADD to paragraph 1.2, CORRELATION AND INTENT . . . the following:

1.2.4 Notes written in the imperative mood refer to action(s) to be performed by the Contractor, the words 'the Contractor shall' are always implied, unless otherwise noted within the Construction Documents.

.2.5 Figured dimensions and marked data shall take precedence over scaled measurements, and details shall take precedence over smaller scale general drawings."

1.2.6 In case of conflict in or between contract requirements (General and Supplementary Conditions), General Requirements (Division-1 Specification Sections), Drawings, Specifications or manufacturer's product requirements, the Contractor will be deemed to have estimated on, and agreed to provide, the greater quantity and better quality of materials and Work."

1.2.7 If Work is required in conditions making it mpossible to execute in an reasonably acceptable manner considering normal industry trade-practices, request an interpretation and clarifications from the Owner before proceeding. If no request is made, no excuses will be subsequently entertained for performance of unacceptable Work."

REPLACE Paragraph 1.5.2 with the following: "1.5.2 Execution of the Contract for Construction by the Contractor is a representation that (1) the Contractor has carefully examined and understands the intent of the Contract Documents (including the Agreement Form, the General Conditions, the Supplementary Conditions, the Specifications and the Drawings); (2) that the Contractor has visited the project site and has reviewed the conditions under which the Work will be performed (including but not necessarily limited to labor availability, codes and regulations, hazards, procedures, construction means and methods necessary and weather conditions), (3) that the Contractor has correlated personal observations with the equirements of the Contract Documents; and (4) that the Contractor will comply with all requirements of the Construction Documents. No claims will be approved for additional time or costs resulting from the Contractor's lack of familiarization of the requirements of the Construction Contract."

ADD to Paragraph 1.6 the following:

"1.6.2 Electronic media files are considered "Instruments of Service" by the Architect, who retains all common law, statutory law and other rights, including the copyright. No representation is made regarding the accuracy or completeness of electronic media data. If obtained electronic media are transferred from the Architect to the ontractor, the Contractor will not use the Electronic Media data for any purpose other than preparation of shop drawings, coordination drawings, or Record Drawings for this Project.

1.6.3 The Contractor agrees not to transfer the electronic media data to any entity not involved in the construction Work without the prior written consent of the Architect. The Contractor further agrees to waive all claims against the Owner and the Architect, resulting in any way from any use of the use of the electronic media data. Use of electronic media data does not reduce or minimize in any way the Contractor's responsibility to take field measurements, check dimensions, and to coordinate with other construction work at the Project Site.

ARTICLE 3 - CONTRACTOR

ADD to Paragraph 3.1 - GENERAL, the

following: "3.1.4 DUTY OF COOPERATION: Issuance of the Construction Documents to the Contractor implies and anticipates ongoing communication between the Contractor and the Owner. The Contractor will be responsible for repair or correction costs if Work is executed with knowledge that the Work involves an error, inconsistency or omission without prior notice being made to the Owner.

ADD to Paragraph 3.4.2 the following: "3.4.2.1 After the Contract has been executed, the Owner will consider written requests for substitution of products in place of those specified only under the conditions set in the General Requirements (Division 1 of these Specifications).

3.4.2.2. By making requests for substitutions based on Subparagraph 3.4.3 above, the Contractor: (.1) represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified, (.2) represents that the Contractor will provide the same warranty for the substitution that the Contractor would have provided for the specified product, (.3) certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and (.4) will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects."

ADD to Paragraph 3.5 the following: "3.5.2 CONTRACTOR'S WARRANTIES FOR SINGLE SOURCE PRODUCTS: The Contractor's usual warranties (express and implied) shall remain in full force and effect even if a material or equipment item is required by the Owner to be manufactured by a specific entity, and no other acceptable equivalent product manufactured by any other entity is acceptable."

ADD to subparagraph 3.7.1 the following: '3.7.1.1The Contractor shall pay for all hook-up charges, 'tap-in' fees, permits and other related expenses related to the construction and full connection or hook-up of all utilities."

ADD to Paragraph 3.10 the following: "3.10.4 In the event that the Contractor fails to adhere to the schedule, the Contractor will furnish such additional labor and/or services, or work sufficient overtime as may be necessary to make progress conform to the schedule. Failure to adhere to the schedule, or failure to take steps to regain the schedule, shall constitute default within the terms of the Contract."

ARTICLE 4 – ADMINISTRATION OF THE CONTRACT

OWNER ADMINISTRATION OF CONSTRUCTION CONTRACT: REVISE Article 4 from Paragraph 4.2, hrough Paragraph 4.6 inclusive, by substituting the word "Owner", wherever the word "Architect" used, as the Owner will administer the Constructior Contract.

ARTICLE 5 – SUBCONTRACTORS

ADD the following new Subparagraphs: "5.2.5 LANDLORD REQUIRED SUBCONTRACTORS: When indicated to be required by written construction requirements of the Landlord, sub-contract specific Work to entities approved, recommended or otherwise required to be used by the Landlord, to coordinate with existing building svstems.

5.2.6 ROOFING SUB-CONTRACTOR: Sub-contract all roofing work, including penetrations for new HVAC units to an entity approved for use by the roofing system manufacturer, to maintain the Landlord's existing roofing warranty."

ARTICLE 7 – CHANGES IN THE WORK

ADD the following new Subparagraph: "7.1.4 WRITTEN APPROVAL of the Owner is required for any additional construction Work prior to its execution. Work performed without the written approval of the Owner will be considered as being originally included in the required scope of Work, without any obligation or responsibility for subsequent approval as an approved change by the Owner.'

ARTICLE 9 – PAYMENT AND COMPLETION

ADD to Subparagraph 9.3.1, the following: "9.3.1.3 Unless otherwise indicated in the Owner -Contractor Agreement Form, The Owner will retain ten percent (10%) of the amount of each progress payment application until final payment.

ARTICLE 11 – INSURANCE & BONDS

ADD to Subparagraph 11.1.1 the following: 11.1.4 Liability insurance shall include all major divisions of coverage and shall be on a comprehensive basis with specified limits listed below maintained specifically for this project. Coverages shall include: Personal Injury Liability with Employment Exclusion deleted, Contractual, including specified provisions for Contractor's obligation under Paragraph 3.18, Owned, on-owned and hired motor vehicles, and Broc Form Property Damage coverage. Premises-Operations, Independent Contractor's Protective, Products and Completed Operations, Owner's & Designers Protective Liability, and Broad Form Property Damage coverage. Property Damage Liability coverage shall provide X, C, and U coverages, with Completed Operations and Products Liability coverage maintained for two (2) years after final payment. The following minimum limits are applicable to each incident occurrence as well as for the total annual aggregates — which shall be dedicated specifically for this project only. Minimum coverage amounts shall be as listed below, or as required by law, whichever is greater: Worker's Compensation: Statutory General Employer's Liability: \$ 1,000,000.00 Comprehensive General Liability, Contractual Liability Owners & Contractor's Protective Liability, and dependent Contractors Protective Liabil

independent Contractors Prot	ective	Liadility:
Property damage:	\$ 1	,000,000.00
Bodily injury:	\$ 1	,000,000.00
Contractual Liability:		
Property Damage:	\$ 1	,000,000.00
Bodily injury:	\$ 1	,000,000.00
Comprehensive Automobile Li	ability:	
Property Damage:	\$ 1	,000,000.00
Bodily injury:	\$ 1	,000,000.00
Umbrella Excess Liability	Insurar	nce: \$
2,000,000.00		

11.1.5 Any person engaged in construction Work a the site must be covered under applicable Workmen's Compensation insurance, either through the General Contractor's own policy, or that of appropriate sub-contractors. Workmen's Compensation Insurance policies must include an endorsement waiving all rights of subrogation against the Owner, the Landlord (when applicable), and the Architect."

ADD to Subparagraph 11.1.3, the following: '11.1.3.1 All certificates of insurance required herein shall name the Owner, the Landlord (as applicable) and the Architect as additional insured."

DELETE Paragraph 11.3 - Project Management Protective Liability Insurance, in its entirety.

DELETE from Paragraph 11.4 – Property Insurance, Subparagraph 11.4.1: the word "Owner" and substitute the word "Contractor", as the Contractor is hereby responsible to provide (Builder's Risk) Property Insurance. DELETE Subparagraph 11.4.1.2 in its entirety.

DELETE Subparagraph 11.5.1 from Paragraph 11.5 - Performance Bond and Payment Bond, and ADD the following: "11.5.1 PERFORMANCE AND PAYMENT BONDS MAY

BE REQUIRED by the Landlord. When applicable, review the Landlord's requirements and provide bonds complying therewith. Submit notarized bond forms to the Owner and Landlord prior to start of construction."

SECTION 01 00 00 - GENERAL REQUIREMENTS

SUMMARY OF WORK

THE WORK consists of limited demolition and new construction as indicated in the Construction Documents, and as indicated within the Responsibility Schedule on the Drawings

PROVIDE SERVICE CONNECTIONS of HVAC, plumbing, gas or electric to casework, fixtures, signage, or equipment units indicated — whether installed as a part of this Work or by the Owner's separate ontractors or suppliers.

CAREFULLY STUDY AND COMPARE ALL DRAWINGS (including but not limited to Architectural, Structural, Mechanical or Electrical) and other Contract Documents with the existing conditions at the project-site. Report errors, inconsistencies or omissions discovered for clarification. The Contractor will be responsible for repair or correction costs if work is executed with knowledge that it involves an error, inconsistency or omission — without the above notice.

THE INTENT OF THE CONSTRUCTION DOCUMENTS is to include all items necessary for the proper execution and completion of the Work - and to provide all products, materials, equipment or accessories required for proper operation, in accordance with their manufacturer's requirements. The Contract Documents are complementary what is required by one shall be as binding as if required by all. While prepared with due care and diligence, perfection is not possible. Design and construction are complex — every possible condition or contingency cannot be anticipated or fully indicated.

SCHEDULE AND COORDINATE the Work of the complete Project, including Work performed by others at the project-site, to assure an efficient and orderly sequence of installation of all elements with provisions for accommodating items to be nstalled later. Prepare general coordination drawings, schedules as appropriate, and control site-utilization, from the beginning of construction activities through project close-out. The Contractor s solely responsible for construction means, methods, techniques, sequences and procedures.

PERFORM ALL WORK required for completion of the Project, except as otherwise indicated in the Responsibility Schedule included in the Drawings.

CODES, ORDINANCES & CONTRACTOR ACTIONS: All Work for this project shall conform to applicable local, state, and national codes and ordinances and with applicable requirements of the National Fire Protection Association's "Life Safety Code" as administered by applicable authorities having jurisdiction (AHJ). Obtain all licenses (business, technical or otherwise) and permits required to perform the Work. Provide all required notices for inspections and approvals of the work by the AHJ the most restrictive code requirements as interpreted by the AHJ will apply.

OBTAIN THE LANDLORD'S TENANT CRITERIA, Tenant Construction Manual, and other written construction requirements of the Landlord applicable to the Work of this Project, and acknowledge receipt to the Owner. Become familiar with all construction ules and regulations of the Landlord maintain (printed copy at the Project Site, and comply with all requirements of the Landlord. No additional costs will be allowed for the Contractors neglect of these requirements.

A REFUNDABLE CONSTRUCTION DAMAGE DEPOSIT may be required of the Contractor by the Landlord prior to start of construction activities. This deposit is refundable to the Contractor upon successful completion — unless there is damage to the Landlord's facilities. The amount of the deposit will be considered an overhead expense of the Contractor, and is not considered as a cost of the Work.

OWNER'S SEPARATE CONTRACTORS OR SUPPLIERS:

COORDINATE WITH the Owner's separate contractor(s) or suppliers for Work indicated as being Not-In-Contract (NIC) - cooperating with them so that their work can be performed smoothly, without interfering with or delaying the Work of this Contract.

REVIEW SHOP DRAWINGS prepared by separate contractor(s) or suppliers for general conformance with the intent of the Construction Documents, and for service-connections and clearances if required. Verify that required rough-ins, connections and clearances will be provided, and report any discrepancies.

PROVIDE SCHEDULED DATES for delivery and installation to Separate Contractors or suppliers, and notify them when construction is ready for their delivery and installation. Provide openings, delivery access, and staging space for installation. Contact the Owner if scheduling or communication problems arise regarding separate contractor(s).

OWNER FURNISHED - CONTRACTOR INSTALLED (OFCI) PRODUCTS:

COORDINATE WITH AND INSTALL all Owner-Furnished products, including but not limted to providing scheduling, receiving at site, verifying receipt, handling, storage on-site, and

mechanical/electrical/plumbing service connections, as applicable. The Owner will pay directly for the product costs including delivery to the Project Site. Provide all OFCI suppliers with an accurate address with accurate delivery directions and instructions.

AT DELIVERY, INSPECT PRODUCTS FOR DAMAGE at the Project Site. If items are damaged, defective or missing, mark the bill of lading as necessary. Contact the freight line and request a damage nspection of the items and submit a damage claim. Notify the owner within five (5) days of receipt of any missing, damaged or otherwise defective products — or replace/repair items at no cost to the Owner.

PROTECT PRODUCTS from damage, including damage from exposure to the elements. Replace or repair items damaged as a result of onstruction operations. Damage resulting from nappropriate storage or handling, including but not limited to environmental conditions, will be the responsibility of the Contractor. No claim for additional costs due to damage to stored products or equipment will be considered. Repair damage to Owner-furnished products caused by construction operations to the Owner's satisfaction.

CONTRACTOR'S USE OF PREMISES:

DJACENT EXISTING FACILITIES MAY BE OCCUPIED or n use by the Landlord or separate Tenants during the entire period of construction of this Work. Perform the Work so that it will not interfere with adjacent facilities or operations, and to facilitate ongoing use and existing occupancy, as applicable. Coordinate this Work of the Project with other contractors at separate construction projects withir the same development, so that this construction Work will not interfere with or delay their construction operations.

USE OF EXISTING BUILDING: Limit construction activities to occur within the Project Site, or within other areas designated or approved for use by the Owner or Landlord. If not within the project site, make connections to existing utilities in the most expeditious manner possible, with minimal disturbance of existing construction elements.

MAINTAIN THE EXISTING CONSTRUCTION in a safe and weather tight condition throughout the construction period. Access to existing public areas s subject to control by the Landlord for purposes of protecting the existing finishes from damage nd for security. Maintain public areas such as nallways, stairs, and existing toilet rooms free from accumulation of waste material, rubbish or construction debris. Take all precautions necessary to protect the building and its occupants during the construction period. Maintain existing means of egress and exits during construction per requirements of the AHJ. Repair all damage to the existing building caused by construction operations.

MAINTAIN EXISTING SERVICES, including electrical, phone, water, HVAC, fire-protection, alarms or control systems in full and unrestricted operation to the greatest extent feasible. Make all disconnects of existing services only during non-business hours and only with the Landlord's ipproval.

PROHIBITED ACTIVITIES IN EXISTING BUILDINGS: Do not impose any load, temporary or permanent, on any part of the Landlord's existing roof or structure without their written approval. Do not cut any hole in existing floors, walls or the roof without the Landlord's approval and compliance with requirements herein. Attachments to the roof deck are not permitted, and do not attach to plumbing or sprinkler piping, or to electrical conduit. Do not install combustible materials above finished ceilings or in any other concealed spaces. Jse of common area electricity is not be permitted. All carts and dollies shall have rubber tires. Do not transport wet concrete through existing finished spaces without prior approval of the Landlord and without extensive protection of the existing floor finish.

XISTING ROOFING COORDINATION: Use the Landlord's designated roofing contractor for any penetrations or other modifications to the existing roof membrane. Existing roof access may be restricted to the Landlord's personnel or their designated sub-contractors only. Obtain the Landlord's written approval for other workers to be on the existing roof, if applicable. Existing public areas of the Landlord may not be used by construction personnel for lounging, eating or work-breaks.

PARTIAL OWNER OCCUPANCY: The Owner reserves the right to occupy and place and install quipment in completed areas prior to Substantial Completion provided such occupancy does not nterfere with completion of the Work. Placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

PROJECT COORDINATION & ADMINISTRATION:

SCHEDULE AND COORDINATE THE WORK of the complete Project to assure an efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later. Prepare general coordination drawings, schedules, and control site utilization, from beginning of construction throughout project close-out.

VERIFY AND UPDATE applicable Construction Documents and other required information and directives from the Owner's Electronic Project Management Program (Buzzsaw) at not less than weekly intervals, and provide hard-copy paper documents to the Project Site for field use and reference.

VERIFY LOCATIONS OF EXISTING UTILITY SERVICES serving the project before starting Work. Locations of existing utilities noted on the Drawings are approximate, and may be based on unverified nformation. Provide all connections required at the existing utility connection points at no additional cost to the Owner.

ROUGH-IN REQUIREMENTS: Verify final locations for mechanical, electrical and plumbing rough-ins with field measurements and with the requirements of the actual equipment to be connected, prior to start of installation.

COORDINATE SPACE REQUIREMENTS and installation f mechanical and electrical Work which are indicated diagrammatically on the Drawings. Follow routing shown for pipes, ducts, and conduits, as closely as practical; make runs parallel with lines of the building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, equipment operation and for repairs. Conceal pipes, conduits and similar elements whenever possible within the new construction, in finished areas.

MAINTAIN A RECORD-SET of Construction Documents indicating differences between Construction Documents and the actual installed Work. Mark revisions made during construction with colored pencil – do not conceal any Work before revisions have been recorded. Note actual routing of under-slab plumbing and utility lines, if different from design drawings. In addition, maintain copies of the following related drawings or documents prepared by others: Construction Requirements of the Landlord Casework shop drawings prepared by the Casework abricator Signage shop drawings prepared by the Signage Contractor, and Sprinkler shop drawings

DO NOT construct or install any portion of the Work related to these drawings at any time without such drawings being available at the site.

TEMPORARY FACILITIES & CONTROLS

PROVIDE ALL TEMPORARY utilities, temporary facilities and temporary controls required for completion of the construction Work. Provide protection of construction materials from loss, damage, fire or theft. Connect to existing systems at the project site to provide for temporary water, electrical power, lighting and heat for construction operations, unless otherwise indicated.

PROVIDE TEMPORARY ELECTRICAL POWER including a grounded power distribution system with overload protection. Size system to accommodate use of power tools, electrical heating, lighting, and start-up testing of permanent electric-powered equipment prior to its permanent connection. Locate multiple outlets (minimum of 4-gang) spaced so that the construction area can be reached by power tools on a single extension cord of 50' maximum length.

PROVIDE TEMPORARY LIGHTING fixtures in areas where ceilings and existing fixtures are removed. Re-use existing lighting fixtures when possible and suspend from the existing structure. Remove temporary lighting fixtures when permanent fixtures are operational.

PROVIDE SANITARY FACILITIES including temporary toilets, wash facilities and drinking water dispensers for the use of all workers. Existing public toilet facilities cannot be used by construction personnel. Provide separate facilities for male and female personnel when both sexes are working. Comply with all applicable codes and egulations and health department requirements for the type, number, location, operation and maintenance of fixtures and facilities. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility.

PROVIDE TEMPORARY HEAT AND VENTILATION to naintain adequate environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and proper curing of materials, to protect materials and finishes from damage due to temperature or humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases. Once new systems are operational, they may be used for temporary heating and cooling only if: (1) all registers diffusers and filters are cleaned before substantial completion, and (2) warranty periods remain unchanged, starting from the date of Substantial Completion.

PROVIDE TEMPORARY FIRE-PREVENTION MEASURES and procedures, including Type ABC fire-extinguishers at locations reasonably effective in extinguishing fires and as acceptable to the local AHJ. Comply with NFPA No. 10. Post warning and quick-instructions at each extinguisher, and instruct personnel on proper use. Post fire department call number on each telephone at project site.

PROVIDE TEMPORARY COMMUNICATION SERVICE including local phone service (wired or wireless -1 line minimum) with a phone handset. Provide either a separate "fax" phone line with fax machine or broadband internet service with a computer configured for internet communications. Allow use of communications equipment for the Owner, Architect and for sub-contractors, with long—distance costs to be paid for by the party making the calls.

PROVIDE TEMPORARY BARRIERS, fences and other controls required to prevent public entry to construction areas and to protect construction workers and the public from the hazards of construction operations. Provide secure, temporary enclosures between work areas and existing occupied spaces to limit any objectionable noise, vibration, odors or dust, that could cause affect use of facilities or loss of the Landlord's or their existing tenant's business.

PROVIDE TEMPORARY ENCLOSURE SCREEN (when applicable) separating the leased space from "Mall' or other common-use areas, in compliance with Landlord requirements. The enclosure screen is to completely enclose the store opening from the mall floor to the ceiling, allow construction work to proceed without interfering adjacent operations, and to act as a dust and noise barrier. Do not install more than four (4) feet into the mall from the existing lease line, or from the new lease line of a "pop-out" store, unless written approval is obtained from the Landlord. No signs or graphics are allowed other than that indicated within the rawings and as approved by the Landlord. Relocate temporary enclosure screen as required to facilitate construction operations. Completely remove screen at completion of the Work and arrange for legal disposal.

PROTECT EXISTING CONSTRUCTION and adjacent properties from damage by construction operations and repair any existing work that is damaged by construction operations. Where wet concrete or other large equipment or materials will pass through existing finished spaces, protect existing walls and floor surfaces with a minimum of 6 mil poly and all floors with 1/2" plywood or particle board panels.

SCAFFOLDING: Provide all scaffolding and construction aids required, including guard rails, lights and platforms necessary for the completion of the Work, and for the protection of the workmen and the public.

ACCESS TO WORK: Utilize the existing service corridors for access to the project site when possible. Repair all damage to existing property, corridors, roads and parking areas by job related vehicles or personnel at no cost to the Owner. Limit parking for construction personnel to existing spaces approved for and/or designated for use by the Landlord.

PROGRESS CLEANING: At all times, keep the project site free from accumulation of waste materials or rubbish caused by construction operations. Provide suitable waste receptacles for trash and construction debris, and arrange for transportation and legal disposal of materials off site.

PROVIDE DUMPSTERS AND COLLECT WASTE from construction operations daily. Comply with Landlord requirements for size and location of waste receptacle. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner. Do not use the Landlord's or other tenant's waste receptacles.

FIELD OFFICE: Maintain an area within the leased space for the management of the Work. Provide space to review project drawings, for project meetings, and storage of documents.

FIELD ENGINEERING

SURVEY THE EXISTING BUILDING prior to the start of construction, to document any existing conditions such as cracks, sags, loose materials or other defects of the existing construction. This record shall serve as a basis for determination of subsequent damage resulting from the Contractor's operations at the site.

FIELD-VERIFY EXISTING DIMENSIONS of the Project Site after selective demolition is completed, and forward a drawing with verified dimensions to the Owner. Note size and locations of columns, chases, pipes, conduits, doors and storefront or window openings and other objects that affect layout of the Work. Report inconsistencies to the Owner for resolution before commencing Work.

WORK LAYOUT: Establish and maintain chalk-lines and other markers necessary to locate all elements of the project, including partitions, casework, electrical and plumbing connections and 'fixed" casework or fixtures. Calculate and measure required dimensions.

CASEWORK FIXTURE TEMPLATES of each type of unit will be furnished by the manufacturer to the Project Site. Layout and permanently mark with spray-paint on the floor all casework prior to the start of construction operations.

ESTABLISH & MAINTAIN new benchmarks and other markers to set lines and levels for the Work as needed to properly locate all elements of the Project. Calculate and measure required dimensions by instrumentation or other appropriate means. Do not scale the drawings to determine dimensions, unless directed by the Owner.

TAKE FIELD MEASUREMENTS as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

GENERAL PRODUCT REQUIREMENTS

NO SUBSTITUTIONS are allowed when products or equipment items are indicated by manufacturer, unless approved in advance by the Owner.

PRODUCTS IN QUANTITIES shall be alike and interchangeable. Where additional amounts of a product are likely to be needed by the Owner at a later date for maintenance and repair, provide standard, domestically produced products which are likely to be available to the Owner at such later

SUPPLY PRODUCTS COMPLETE with all standard patched in a visually unsatisfactory manner. devices, trim finish, and all accessories indicated in the latest edition of the manufacturer's catalog USE MATERIALS that are identical to existing or brochure published at the date of the award of materials. If identical materials are not available o the Contract. Furnish such items complete with cannot be used where exposed surfaces are component parts necessary for the obvious and involved, use materials that match existing intended use and installation, whether or not adjacent surfaces to the fullest extent possible descriptions or catalog numbers contain all with regard to visual effect. Use materials whose supplemental information and/or numbers of such installed performance will equal or surpass that of components. existing materials.

EQUIPMENT NAMEPLATES: Provide permanent nameplates on each item of service connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, rating, and similar essential operating data. Locate nameplates on an easily accessible surface.

LABELS: Locate required labels and stamps on an accessible surface which, in occupied spaces, is not conspicuous.

MANUFACTURER'S INSTRUCTIONS: Whenever products are required to be installed and/or perform in accordance with a specified manufacturer's instruction or procedure, procure, distribute and maintain at the site copies of such information. No allowance or consideration will be made for claimed ignorance as to what a cited standard contains, as each tradesman is considered to be experienced and familiar with the published standards of quality and workmanship for his own trade.

STORE PRODUCTS in accordance with manufacturer's instructions, maintaining sensitive materials within temperatures and humidity ranges required by the manufacturer. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; with ventilation to avoid condensation. Arrange storage

to provide access for inspection.

EXTRA STOCK: After completion of the Work, furnish replacement finishes (including paints) of at least 5% of the quantity installed of each type, color and material provided, exclusive of accessory components. Deliver extra stock to Owner's designated space, properly packaged (paper wrapped) and identified.

GENERAL EXECUTION REQUIREMENTS

INSTALLERS INSPECTION OF SUBSTRATE CONDITIONS: Before installation, inspect substrate material and the conditions under which the Work will be performed. Do not proceed with installation until unsatisfactory conditions have been corrected. Application of a material or equipment item to work installed by others constitutes acceptance of that Work and assumption of responsibility for satisfactory installation. Inspect each item of material or equipment immediately prior to installation. Reject damaged and defective items.

PERFORM INSTALLATION WORK by persons qualified o produce workmanship of specified quality, in accordance with manufacturer's printed installation recommendations and requirements. Install Work during conditions of temperature, humidity, exposure, forecasted weather, and status of the project completion which will ensure the best possible results for each unit of work.

PROVIDE ATTACHMENT AND CONNECTION devices and methods for securing the work properly as it is installed, true to line and level. Isolate each unit of work from non-compatible work, as required to prevent deterioration. Make allowance for expansion, contraction, and building movements. Coordinate closing-in of work with required inspections and tests, so as to minimize the necessity of uncovering completed work.

BRACE PARTITIONS, suspend ceilings or soffits, and brace platforms, suspended items or similar construction only to structural elements — even if not specifically noted. Do not brace elements to the roof deck, plumbing / sprinkler pipes, ductwork, electrical conduit or similar elements.

AT PROJECTIONS OF FINISHED SURFACES, including pilasters or thickened walls, return all exposed surface finishes back to the primary surface even if not specifically noted.

ALIGN SURFACES of new finishes with existing finishes and match existing finish-surface conditions except as otherwise indicated. Patch existing surfaces and refinish to match adjacent existing surfaces, as applicable.

VISUAL EFFECT Provide uniform joint widths in exposed work, organized for the best possible visual effect. . Recheck measurements and dimensions of the work, as an integral step of starting each installation. Refer questionable visual-effect choices to Owner for final decision of acceptability.

MOUNTING HEIGHTS: Where mounting heights are not indicated within the Drawinas, mount at industry-recognized standard mounting heights for applications indicated. Refer guestionable mounting height choices to Owner's representative for final decision.

AFTER INSTALLATION, provide coverings to protect nstalled products from damage from traffic and construction operations, remove when no longer required. Repair and replace damaged items, at no additional cost to the Owner. Additional time required to secure replacements and to make repairs will not be considered as justification for an extension of time to complete the Work.

CUTTING & PATCHING

DO NOT cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio. Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety. Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Owner's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and

TAKE ALL PRECAUTIONS necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them. Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

CUT existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition. Cut existing construction using methods least likely to damage elements to be retained or adjoining construction.

PATCH with durable seams that are as invisible as possible. Comply with specified tolerances. Where feasible, inspect and test patched areas to demonstrate integrity of the installation. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

FINAL CLEANING:

PRIOR TO OWNER OCCUPANCY, clean all surfaces including fixtures and equipment, for use by the Owner. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of work to the condition expected from a normal, commercial building cleaning and maintenance program. Comply with the manufacturer's instructions for operations.

CLEAN EXPOSED SURFACES to a dust-free ondition, free of dust, stains, films and similar noticeable distracting substances. Restore reflective surfaces to their original reflective condition. Vacuum carpeted surfaces. Damp wipe walls, fixtures and equipment to be dust-free without stains, films and other distracting substances.

CLEAN TRANSPARENT MATERIALS, including mirrors and glass in doors and windows and plumbing fixtures to a polished condition without noticeable streaks. Remove putty and other substances which are noticeable as vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

MECHANICAL AND ELECTRICAL EQUIPMENT shall be wiped clean. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

CLEAN THE PROJECT SITE, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas to a broom clean condition; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

SUBSTANTIAL COMPLETION PROCEDURES:

SET ALL TIME CLOCKS, thermostats and similar devices to the current local time. Provide a printed list of names, addresses and phone numbers of all sub-contractors and material suppliers used.

AFTER final cleaning operations have been completed, and when the Project is ready for owner occupancy, obtain an occupancy permit on behalf of the Owner, and approval by any other governmental authorities having jurisdiction over the Project.

SUBMIT a written request for inspection, stating that the Work is Substantially Complete and ready for the Owner's beneficial use and occupancy. Accompany notice with a listing of all items to be completed or corrected.

OWNER'S ACTION: Following observation of the Work, the Owner will either prepare the certificate of substantial completion, or will advise the Contractor of work which must be performed before the certificate will be issued. Results of the observation report will form the initial "punch-list" for final acceptance.

PREREQUISITES TO FINAL COMPLETION:

COMPLETE ALL WORK ITEMS as expeditiously as possible, providing labor at times when the facility is not in operation, if necessary. Coordinate with the Owner's representative and perform the Work so that it will not interfere with the Owner's operations.

COMPLETE FINAL TESTING of systems, and instruct Owner's personnel in the operation, adjustment, maintenance of all mechanical, plumbing, fire protection, monitoring and electrical systems.

REMOVE TEMPORARY FACILITIES and controls, and temporary utility services from the project site, along with construction tools, field office, mock-ups and similar elements.

TOUCH-UP AND REPAIR or restore marred exposed finishes. Deliver spare parts, tools, extra stock of materials and similar physical items.

INSTRUCTION OF OWNER'S PERSONNEL: Arrange for each installer of operating equipment and other work that requires regular or continuing maintenance, to meet at the site with the Owner's personnel to provide necessary basic instructions in the proper operation and maintenance of the entire Work. Where installers are not experienced in the required procedures, include instruction by the manufacturer's representatives.

OPERATION AND MAINTENANCE DATA: Include the following types of information in operation and maintenance manuals: emergency instructions, spare parts listings, copies of warranties, wiring diagrams, inspection procedures, shop drawings and product data.

FINAL CLOSEOUT SUBMITTALS:

ELECTRONIC CLOSEOUT SUBMITTALS: In addition to 1 set of paper originals of the documents indicated below, provide Operation and Maintenance Data, Warranties, and the list of sub-contractors and material suppliers, in electronic media (CD) at close-out. Provide jewel-case covers and label each CD and cover with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents, as appropriate. Provide two (2) sets of electronic documents to the Owner.

SUBMIT FINAL OCCUPANCY PERMIT, and other legal releases necessary for the Owner' complete and unrestricted use.

SUBMIT WARRANTIES, guarantees, maintenance bonds, maintenance agreements, final product certifications and similar documents.

SUBMIT MARKED-UP RECORD DRAWINGS, operations and maintenance manuals, damage or settlement survey, extra copies of drawings and specifications, and similar final record information. Provide one-set of half-size drawings at the Project Site for the Owner's use.

SUBMIT A FINAL LISTING of all sub-contractors and material suppliers used on the project.



THIS DRAWING has been prepared by the Architect, or prepared under his direct supervision as an instrumer of service and is intended for use only on this project. All Drawings, Specifications, ideas and designs, including the overall layout, form, arrangement, and composition of spaces and elements portrayed, constitute the original, unpublished Work of the Architect. Any reproduction, use, or disclosure of the information contained herein without the written consent of the Architect is strictly prohibited. © 2024 KLOVER ARCHITECTS, INC.

THE ARCHITECT DISCLAIMS responsibility for the existing building structure, site conditions, existing construction elements, or any documents, drawings or other instruments used for any part of this Project which do not bear the Architect's seal. The Architect services are undertaken only in the interest of the Project Owner. obligation is assumed by the Architect for the benefit of any other entity. RELATED DOCUMENTS: This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary Conditions of the Contract, General Requirements, Specifications and other Drawings may affect the Work described. Failure to review and integrate the design intent of the whole of the Construction Documents does not relieve the Contractor from providing a complete Project. COMPLY WITH all laws, codes, ordinances and regulations with authorities having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained. VERIEY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of existing conditions. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work, and assumption of responsibility for satisfactory inst

DIMENSIONS SHOWN are to finish face of a material unless otherwise indicated. CALCULATE & MEASURE dimensions - DO NOT SCALE drawings unless otherwise directed. project title





projectnumber drawing issuance 03.05.24 PERMIT/BID

drawingrevisions Description: Date:

professional seal



drawing title SPECIFICATIONS



SUBMIT AN UPDATED FINAL STATEMENT accounting for additional changes (additions and deductions) the Contract Sum. Identify amounts for change orders, liquidated damages (addition or deduction), deductions for uncorrected work, deductions for re-inspection payments, and previous payments.

SUBMIT FINAL PAYMENT REQUEST with final unconditional lien releases from all sub-contractor and material suppliers, and other supporting documentation not previously submitted or accepted

SUBMIT FINAL LIEN RELEASE, contingent only upon receipt and bank clearance of final payment amount.

SUBMIT THE PUNCH-LIST(s) with the Contractor's signed statement indicating that all items have been completed or otherwise resolved for acceptance.

SUBMIT EVIDENCE OF CONTINUING INSURANCE COVERAGE complying with requirement of the Contract Documents. Include certificates of insurance for products and completed operations when required.

SUBMIT WRITTEN CERTIFICATION that: (1) the Contract Documents have been reviewed, (2) the Work has been inspected for compliance with the Contract Documents, (3) the Work has been completed in accordance with the Contract Documents, (4) equipment and systems have been tested in the presence of the Owner's representative and are operational, and (5) the Work is completed and ready for final inspection.

OWNER'S ACTION: Following final inspection, the Owner will either prepare the certificate of final acceptance, or will advise the Contractor of work which must be performed before the certificate wil be issued.

REINSPECTION FEES: Should the Owner or Architect perform re-inspections (for either Substantial Completion or for Final Completion) due to the failure of the Work to comply with the claims of status of completion made by the Contractor, the Owner will compensate the Architect for such additional services and will deduct the amount of such compensation and the Owner's direct costs from the final payment to the Contractor.

SECTION 02 22 00 - EXIST. CONDITIONS ASSESSMENT

REVIEW EXISTING FLOOR SUBSTRATE elevations and conditions to verify if any of the following exist: Variation of over 1/2 inch or more over entire floor area

Slopes of over 1/8th inch in 10 feet in any area Rough or un-stable flooring substrates

requiring extensive repair

REVIEW CONDITIONS of other existing construction elements to be reused in the new construction, an verify that they will provide an acceptable substrat for new materials and finishes indicated.

REPORT all un-acceptable substrate or existing materials to the Owner in writing before proceeding with new construction Work.

SECTION 02 41 19 - SELECTIVE DEMOLITION

WORK INCLUDES removal and legal disposal of existing construction items specified to be removed herein, noted to be removed within the Drawings, or as otherwise required to be removed to facilitate construction activities. The Work includes all items indicated on the drawings to be removed or not intended to be reused, and the following, as applicable: Storefront and sign façade

Existing ceilings, carpeting and raised platforms Existing casework and countertops HVAC, plumbing & electrical systems not utilized in remodeled building

EXISTING CONDITIONS: The Owner assumes no responsibility for the actual condition of items or structures to be demolished.

SALVAGEABLE ITEMS of value must be removed from the site as work progresses — storage or sale of removed items on site is not permitted. The Owner reserves the right to retain any salvageable item.

PROTECTION: Provide temporary barricades and other forms of protection to assure safe passage of persons around area of demolition work, and to

INSPECT areas in which work will be performed prior to commencement of demolition work.

protect people from injury.

LOCATE, IDENTIFY, STUB OFF, AND DISCONNECT existing utility and service lines that are not to remain. Provide by pass connections as required to maintain continuity of service to other areas of the building, if necessary.

PERFORM demolition work in a systematic manner. Use such methods as required to complete the work required in accordance with requirements of governing regulations. Provide shoring, bracing, or support to prevent movement, settlement or collapse of adjacent construction to remain. Conduct operations by means and methods to prevent injury to persons or damage to adjacent buildings, structures, other facilities. Repair damage caused to adjacent construction at no cost to the Owner.

CUT EXISTING CONCRETE SLABS only with masonry or concrete saws (pneumatic jacks-hammers are not permitted to be used unless written permission is obtained from Landlord).

IF UNANTICIPATED utilities, structural elements, or hazardous materials are encountered, investigate and measure both nature and extent of the conflict. Submit report to the Owner in written, accurate detail. Pending receipt of directive from the Owner, rearrange selective demolition schedule as necessary to continue overall job progress without delay.

EXISTING RESILIENT FLOOR COVERINGS: Comply with "Recommended Work Practices for the Removal o Resilient Floor Coverings", as published by the Resilient Floor Covering Institute. Existing resilient floor covering materials may contain asbestos fiber that are not redily identifiable. Do not sand, dry scrape, beadblast or mechanically pulverize existing resilient flooring, backing, or lining felts.

CLEAN UP: Upon completion of demolition work, remove tools, equipment and demolished materials from the site.

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PROVIDE concrete for new floor slabs (where required), for patching existing floor slabs, where installation of new plumbing and electrical lines require removal of existing concrete materials, and for concrete curbs when shown on the drawings.

CONCRETE MATERIALS: ASTM C-150, Type 1, Portland cement, with ASTM C-33 sand and crushed stone aggregates, mixed to provide 3000 PSI minimum compressive strength at 28 days.

WELDED WIRE FABRIC: ASTM A-185 welded steel wire fabric, min. 6 x 6 - W1.4/W1.4

MOISTURE BARRIER: 10 mil thick sheet meeting ASTM E 1745 - Class A.

SELF-LEVELING FLOOR TOPPING: Provide "Ardex" SD-L topping at all floor surfaces too rough or too un-even to finish with the indicated materials. Install topping in accordance with manufacturer's directions.

INSTALLATION: Comply with ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete", and as herein specified. Install concrete Work to match and meet existing adjoining surfaces.

TROWEL FINISH: Apply trowel finish to slab surfaces that are to be exposed to view and to slab surfaces that are to be covered with resilient flooring, carpet, ceramic or quarry tile, wood flooring or other floor finishes. Provide finished—surface plane tolerance not exceeding I/8" in ten (10) feet, in two different angles.

PROTECT the freshly placed concrete from premature drying from wind, excessive cold and hot temperature, and maintain for a period of time necessary for hydration of cement and proper hardening.

CURBS: Where concrete curbs are indicated on the Drawings, strip forms while concrete is still green and steel-trowel surfaces to a hard, dense finish with corners, intersections and terminations slightly rounded.

<u>SECTION 05 40 00 - COLD-FORMED MTL FRAMING</u>

WORK INCLUDED: Provide cold-formed metal framing as shown on the drawings, as specified herein, and as needed to meet the requirements of the construction shown in the Contract Documents.

SYSTEM COMPONENTS: Provide standard steel runner racks, blocking, lintels, clip angles, shoes, reinforcements, fasteners, and accessories as recommended by manufacturer for applications indicated, and as needed to provide a complete metal framing system.

STEEL FOR 0.042 INCH THICK (18 GAGE) AND LIGHTER UNITS: commercial quality steel sheet with a minimum yield point of 33,000 psi; per ASTM A-446, A-570, or A-611.

PUNCHED "C" - SHAPE STUDS: standard load-bearing steel studs of size indicated, with 1.625" flange and flange return lip. Provide minimum 0.032 inch thick (20 gage) units, or as noted on drawings.

PROVIDE PRIME COAT FINISH: one coat of shop-applied red-oxide, zinc-chromate, or other similar rust-inhibitive primer, unless otherwise noted.

INSTALL in accordance with manufacturer's printed or written instructions and recommendations. Install runner tracks sized to match studs. Align accurately to layout at base and top. Secure track as recommended by manufacturer for type of construction involved, except do not exceed 24" o.c. spacing for nail or powder-driven fasteners, or 16" o.c. for other types of attachment. Provide fasteners at corners and ends of tracks. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements. Anchor ends of stiffeners to supporting structure, where stud system abuts structural columns or walls.

INSTALL SUPPLEMENTARY FRAMING, blocking and bracing in metal framing system wherever indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer's recommendations and industry standards in each case, considering weight or loading resulting from item supported.

INSTALLATION OF WALL STUDS: Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges.

FRAME OPENINGS larger than 2'-0" square with double studs at each jamb of frame except where more than 2 are either shown or indicated in manufacturer's instructions. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall. Secure stud system wall opening frame in manner indicated.

INSTALL HORIZONTAL STIFFENERS in stud system, spaced no more than 4'-6'' in vertical distance. Weld at each intersection.

TOUCH-UP PAINTING in field using compatible primer for prime coated surfaces.

SECTION 05 50 00 - METAL FABRICATIONS

PROVIDE metal fabrications where shown on the drawings and as specified herein.

FIELD MEASUREMENTS: Check actual locations of walls and other construction to which metal fabrications must fit, by accurate field measurements before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of Work.

MATERIALS: Provide steel plate, shapes and bars meeting ASTM A36, steel pipe meeting ASTM A53 grade A schedule 40, and steel tube meeting ASTM A500. For materials that will be exposed to view, provide materials that are free from surface blemished, pitting, rolled trade names, and roughness.

FASTENERS shall be zinc-coated fasteners for exterior use or when built into exterior walls as

Bolts and Nuts: Regular hexagon head type, ASTM A-307, Grade A.

Lag Bolts: Square Heat type, FS FF-B-561. Machine Screws: Cadmium plated steel, FS FF-S-S Plain Washers: Round Carbon Steel FS FF-W-92. Toggle Bolts: Tumble wing type, FS FF-B-588, Ty class and style as required. Lock Washers: Helical spring type carbon Steel, FS

FF--W-84. Drilled-In Expansion Anchors: Expansion anchors complying with FS FF-S-325, Group VIII (anchors, expansion, [nondrilling]), Type I (internally threaded tubular expansion anchor); and machine bolts complying with FS FF-B-575, Grade 5.

SECURITY MESH (at all drywall demising partitions around store up to 10 ft AFF): Flattened expandec carbon-steel mesh constructed of .042 inch (18 gage) carbon steel with 1/2" spacing of perforated openings — in 10 foot tall units: "Ametco" Flattened eaual.

WIRE MESH ABOVE 10 FT: ASTM A-185 welded steel wire sheet (not rolled), min. 6 x 6 - W2.9 x 2.9

BURGLAR BARS: 3/8" diameter steel bars framed with an opening no greater than 8" x 8" to span any building opening larger than 12" x 12" or 12 in diameter, including openings for ductwork at al roof-top HVAC units, securely attached to building structure.

SHOP PRIMER: Manufacturer's standard rustinhibiting primer; compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Division 9.

FABRICATION and installation shall conform to the latest AICS Specifications, and perform all shop-welding by an AISC-Certified steel fabricator. Form Work true to line and level with accurate angles and surfaces. Ease exposed edges to a radius of approx. 1/4" unless otherwise shown. Weld corners and seams continuously, coping connections, unless otherwise indicated. Grind exposed welds smooth and flush to match and blend with adjoini surfaces. Provide shop coat of red oxide primer and GRAIN MATCHING OF NATURAL FINISHED WOODS: ouch-up at project site as required. Form exposed Vehen argin character or color variations are connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown or, if not shown, Phillips flat-headed (countersunk) screws or bolts.

ROUGH HARDWARE: Furnish bent or otherwise custo fabricated bolts, plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing, supporting or anchoring.

PROTECT finishes of metalwork during construction period by use of temporary protective coverings. Remove protective covering at time of Substantial Completion. Restore finishes damaged during installation and construction period so that no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

ISOLATE non-load bearing metal framing to structur with double, deep-leg U-shaped nested steel tracks typically.

SECTION 06 10 00 - ROUGH CARPENTRY

PROVIDE wood nailers, blocking, backing, and plywood required for completion of the Work, which is generally not exposed; where noted on the Drawings, and as specified herein.

LUMBER: Comply with PS 20 of "American Softwoo Lumber Standard" and with applicable grading rules of inspection agencies certified by the ALSC board of Review. Provide dressed lumber, S4S typically, seasoned with 19% moisture content for sizes 2"

FIRE-RETARDANT TREATED WOOD: Provide fire-labeled wood with minimum flame spread rating of 25, at the following locations: (1) blocking concealed within metal framed drywall partitions in non-combustible construction; (2) framing & blocking located above finished ceilings; and (3) blocking within fire-rated demising walls.

PLYWOOD BACKING PANELS: For mounting electrical or telephone equipment, provide fire- retardant treated plywood, APA C-D PLUGGED INT with exterior glue, 3/4" thick. Provide minimum 3/4" plywood, o 2 x lumber material as a minimum for backing at grab bars.

FASTENERS AND ANCHORS: Provide size, type material and finish as recommended by applicable standards. Provide fasteners and anchorages with c hot-dip zinc coating meeting ASTM A-153.

PRESERVATIVE TREATMENT: Water borne preservatives complying with AWPB LP-2, kiln-dried to 19% maximum moisture content for lumber and 15% foi plywood. Treat wood cants, nailers, curbs, blocking, stripping and similar members in connection with roofing, flashing, vapor barriers and waterproofing. Treat wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.

DISCARD UNITS of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.

SET rough carpentry Work accurately to required evels and lines, with members plumb and true and accurately cut and fitted. Securely attach carpentry Work to substrate by anchoring and fastening as required. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will ot penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; predrill as required. Anchor and nail as shown, and to comply with Table 2304.9.1 - Fastening Schedule of the International Building Code.

SECTION 06 20 01 - FINISH CARPENTRY <u>INSTALLATION</u>

NSTALL finish carpentry and casework where noted on the Drawings and as specified herein. Typically, finish carpentry items will be furnished un-assembled.

QUALITY STANDARDS: Comply with "custom grade" requirements of applicable provisions of the Architectural Woodwork Institute (AWI) "Quality | Standards".

FASTENERS AND ANCHORAGES: Provide nails, screws and other anchoring devices of the type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable auality standards.

CONDITION wood materials to average prevailing numidity conditions in installation areas. Discard units of material which are unsound, warped, powed, twisted, improperly treated, not adequately seasoned or too small to fabricate work with minimum of joints or optimum jointing irrangements, or which are of defective manufacturer with respect to surfaces, sizes or patterns.

3ACKPRIME all woodwork with a single sealer coat of lacquer or varnish, complying with applicable inishing requirements in Division – 9 Sections of these Specifications for primers and application.

INSTALL the Work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level, with 1/16" maximum offset in flush adjoining surfaces and 1/8" maximum offsets in revealed adjoining surfaces. Scribe and cut to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.

INSTALL STANDING AND RUNNING TRIM with minimum number of joints possible, using full- length pieces to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners, and use scarf joints for end-to-end joints (butt-joints are not permitted), to provide tight fitting joints with full surface contact throughout length of joint.

oticeable, select and arrange woodwork components on each wall for the best visual matching of adjacent units. Install with uniform tight joints between members.

ANCHOR to blocking or directly to substrate with countersunk, concealed fasteners and blind nailing where possible. Anchor to metal studs (where blocking does not exist) using adhesive and pre-drilled countersunk trim-head screws. Fill recess with wood putty to match surface finish of wood.

INSTALL CASEWORK without distortion so that cabinet doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors in openings and to provide free operation. Complete installation of hardware and accessory items indicated. Install tops securely to pase units and other support systems.

ANCHORAGE TO GLASS: Where woodwork is indicate to be mounted to glass, provide 3M's "VHB Double Backed Clear Tape". Clean glass with alcohol and remove all dust from wood trim with tack-cloth prior to installation.

REPAIR DAMAGED and defective finish carpentry work wherever possible to eliminate defects functionally and visually, where not possible to repair properly, replace woodwork. Adjust joinery or uniform appearance.

CLEAN UP exposed and semi-exposed surfaces. Touch-up shop applied finishes to restore damaged or soiled areas.

ADJUST joinery for uniform appearance. Clean, ubricate and adjust hardware for smooth operation. Re-hang or replace doors which do not swing or operate freely. Clean casework on exposed and semi-exposed surfaces. Touch-up shop applied finishes to restore damaged or soiled areas.

SECTION 07 92 00 - JOINT SEALANTS

PROVIDE sealants complying with requirements included herein, in order to establish and maintain airtight, vermin proof, and waterproof continuous seals on a permanent basis. Failures of installed sealants to comply with this requirement will be recognized as failures of materials and workmanship.

PROVIDE SEALANTS where noted on the drawings and at the following locations: Control joints in ceilings, soffits and other

overhead surfaces Joints at Ceramic Tile Work

Joints between plumbing fixtures and walls, oors, and counters.

Pipes, sleeves, conduits, duct and other wall penetrations

ACRYLIC – LATEX SEALANT (metal door frames to drywall, & other interior joints): permanently flexible emulsion type, nonstaining and nonbleeding; recommended by manufacturer for general interior exposure.

SANITARY SILICONE SEALANT (interior ceramic tile joints & at plumbing fixtures to wall surface): Comply with ASTM C 920 Type S single-component) and Grade NS (nonsag), Class 5. white colored (unless otherwise indicated) nildew-resistant, acid-curing silicone sealant. Available Products include: Dow Corning Corporation; 786 Mildew

esistant GE Silicones; Sanitary SCS1700

Tremco; Tremsil 200 JOINT BACKER: Use only those back-up materials

which are specifically recommended for this installation by the manufacturer or the sealant used, and which are non-absorbent and non-staining.

INSTALLATION: Clean joint surfaces immediately before installation. Prime or seal joint surfaces as ecommended by manufacturer. Comply with manufacturer's instructions. Fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and vertical surface, fill joint to form a minimum 1/4" radius convex cove, so that joint will not trap moisture and dirt.

CLEAN UP: Do not allow sealants to overflow joints or to spill onto adjoining Work, or to migrate into voids of exposed finishes. Clean adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

CURE AND PROTECT: Cure sealants in compliance with manufacturer's instructions and ecommendations, to obtain high early bond trength, internal cohesive strength and surface urability. Replace or restore sealants which are lamaged or deteriorated during construction period Protect installed sealants from damage from construction operations until owner occupancy.

SECTION 08 11 00 - METAL DOORS & FRAMES

PROVIDE metal door frames and hollow metal doors, where noted on the Drawings and as ecified herein. Comply with applicable equirements of the Steel Door Institute Recommended Specifications: Standard Steel Doors and Frames."

EXTERIOR DOORS: 1-3/4" thick insulating assembly, with 0.053 inch thick (16 gage) cold-rolled hot-dipped galvanized sheet steel faces both sides, flush type with top, bottom and all edges fully welded and ground smooth. Provide weep holes at bottom, to allow escape of entrapped moisture. Door panel shall provide thermal insulating resistance factor of not less than R−11.

EXTERIOR FRAMES: 0.053 inch thick (16 gage) hot-dipped galvanized cold-rolled steel, fully welded. Provide minimum of 4 galv. wire type, corrugated sheet metal, or expansion type anchors per jamb.

INTERIOR METAL DOORS: 1-3/4 in. thick, with minimum 0.042 inch thick (18 gage) cold-rolled sheet steel faces, flush type with visible edge seams.

DRYWALL KNOCK-DOWN FRAMES: Minimum 0.053 (16 gage) cold-rolled steel, with 3 resilient oumpers on each strike jamb, units to be reinforced with integral tabs for secure locking of jamb to head, complying with SDI-100. Provide .043" (18 gage) drywall frame anchors welded to frame, 4 anchors per jamb minimum.

GENERAL FABRICATION: Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Where possible, fit and assemble units in manufacturer's plant. Shop prime all hollow metal doors and frames.

HARDWARE PREPARATION: Unless otherwise indicated all doors and frames shall be mortised and reinforced for hardware in the factory.

PREFIT doors at factory with clearance of 1/8" at vertical edges and at top, 1/8" in 2" bevel at lock edge, bottom clearance : 3/8" without threshold, 3/4" with threshold.

INSTALL hollow metal doors and frames in accordance with manufacturer's recommendations. Set frames accurately in position, plumbed, aligned, and braced securely. Fit doors accurately within frames, in accordance with clearances indicated herein. Sand smooth all rust or damaged areas of prime coat and apply touch—up coat of compatible primer.

SECTION 08 14 00 - WOOD DOORS

PROVIDE wood doors where noted on the Drawings, as specified herein and in compliance with applicable requirements of AWI "Architectural Woodwork Quality Standards".

LABELS: Where noted in the Drawings, or where required by the Building Code to be constructed of fire-resistive construction, provide "UL" or "Warnock-Hersey" tested and labeled products that are acceptable to local authorities having iurisdiction.

SOLID-CORE FLUSH WOOD DOORS: AWI Custom Grade 5 Ply hardwood face veneer solid core units, as manufactured by VT Industries or equivalent, with species of face veneer as indicated on the Drawings

NSTALL doors to comply with manufacturer's nstructions. Fit doors to frames with uniform clearances and bevels. Machine doors for hardware f required. Seal cut surfaces of door edges after fitting and machining. Refer to Division-9 section Painting" for finishing requirements.

ADJUSTING: Rehang or replace doors which do not swing or operate freely. Refinish or replace doors damaged during installation.

PROTECT doors as recommended by door manufacturer to ensure that wood doors will be without damage or deterioration at time of Substantial Completion.

FIELD-FINISHED DOORS: Refer to Division-9 section Painting" for finishing requirements.

SECTION 08 31 00 - ACCESS DOORS & PANELS

PROVIDE access doors for access to valves, controls, signage, and other concealed items requiring maintenance.

ACCESS DOORS AND FRAMES: 0.032 inch (20 gage) flush face panel door with 0.053 inch (16 gage) concealed flange frame for flush drywall installation, baked enamel finish inside and prime finished outside for field painting. Provide 10 x 10 inch minimum size unless otherwise indicated, as manufactured by Milcor, JL Industries or equivalent. rovide concealed spring—type hinge opening to 75 degrees minimum, with flush screw driver perated lock with metal cam.

INSTALL plumb, level and square, in accordance with manufacturer's installation instructions. Coordinate installation and filed finishing with work of other trades. Adjust hardware and operation. Repair or replace damaged units.

SECTION 08 42 26 - ALUMN. FRAMED STOREFRONT

INSTALL framing members with accessory parts and hardware as furnished by the Owner, and provide all glazing for aluminum—framed storefront, where indicated on the Drawings, and as specified herein.

SAFETY GLASS STANDARD: Provide tempered glass components that comply with ANSI Z 97.1 and testing requirements of CPSC 16 CRF Part 1201 or Category II materials.

INSPECT COMPONENTS for damage upon delivery. Unless minor defects in metal components can be repaired to the Owner's satisfaction, remove and replace damaged components.

FIELD MEASUREMENTS: Check opening dimensions by accurate field measurement before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of the work. Where necessary, proceed with fabrication without measurements, and coordinate fabrication tolerances to ensure proper fit.

FASTENERS: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be noncorrosive and compatible with aluminum components. Exposed fasteners shall match finish of members and hardware being astened.

EXAMINE SUBSTRATES AND SUPPORTS for compliance with requirements indicated, installation olerances, and other conditions that affect nstallation of all glass entrance. Correct unsatisfactory conditions before proceeding with the installation.

INSTALL components in accordance with manufacturer's printed instructions and recommendations. Set units level, plumb, and true o line, without warp or rack of framing members, loors, or trim. Install all required blocking and bracing, whether specifically indicated on the Drawings or not.

CLEAN surfaces promptly after installation, exercising care to avoid damage to glass and metal surfaces. Remove excess glazing and sealant ompounds, dirt, and other substances.

SECTION 08 71 00 - DOOR HARDWARE

WORK INCLUDED: Provide finish hardware throughout the Work as indicated in the Drawings, as specified herein and as required for a complete installation.

PROVIDE finish hardware throughout the Work as needed for a complete installation and as specified

FIRE-RATED OPENINGS: Comply with NFPA Standard No. 80 and local codes for installation of hardware in fire-rated assemblies. Provide only hardware which has been tested and listed by UL or FM in compliance with requirements of door and door frame labels.

FASTENERS: Provide necessary screws, bolts and other fasteners of suitable size and type to anchor hardware in position for long life under hard use. Provide concealed fasteners for hardware units which are exposed when door is closed.

KEYING: Provide all locksets keyed alike, masterkeyed to Landlord's system. Provide 6 total change-keys to Owner.

AT FIRE-RATED DOORS provide UL-listed surface mounted closers and UL-listed head/jamb gasketing in addition to hardware indicated in Schedule below.

CLOSERS: Provide units only with high-strength, cast-iron bodies, tamper resistant regulating screws for speed, back-check and latch speed, and with "all-temperature" fluid.

STOPS: if a wall stop is not possible to install, provide a floor stop equal to "Ives" # 438 x 626 or equal where scheduled below.

INSTALL hardware items at heights as recommended by the Door and Hardware Institute and as required by ADA, except as specifically required to comply with local codes. Install nardware in compliance with the manufacturer's instructions and recommendations. Set units level, plumb and true. Consult with owner as to keying instructions.

ADJUST and check operation of every unit. Replace units which cannot be adjusted to operate freely and smoothly.

<u>SECTION 08 80 00 - GLAZING</u>

WORK INCLUDED: Provide glass and glazing as shown on the drawings, as specified herein, and as needed to meet the requirements of the construction.

GLAZING STANDARDS: Comply with recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual" and "Sealant Manual" except where more strinaent reauirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this section or other referenced standards.

NTERIOR SINGLE-PANE SECURITY/SAFETY GLAZING: Provide in all "framed" glass doors, windows and storefront systems, consisting of 1 pane of inated safety glass with a .030 inch thick clear polyvinyl butyl interplay layer (tempered glass units are not acceptable). Minimize glazing unit sizes and provide heat strengthened units only where required by code.

EXTERIOR DOUBLE-PANE SECURITY/SAFETY GLAZING: Provide in all exterior doors, windows or storefront systems, consisting of 1-inch thick dual-sealed insulated glass assembly constructed of two (2) each layers of laminated safety glass (each pane) with a .030 inch thick clear polyvinyl butyl interplay layer (tempered glass units are not acceptable). Provide a pyrolitic low-E coating on the # 2 surface of the assembly, providing a minimum 0.70 Solar Heat Gain Coefficient. Minimize glazing unit sizes and provide heat strengthened units only where required by code. Provide a 10-year minimum warranty on all insulating glass units.

GLAZING TAPE: Preformed, butyl-based elastomeric tape with solids content of 100%, complying with ASTM C 1281 and AAMA 800.

MISCELLANEOUS GLAZING MATERIALS: Provide cleaners, primers and sealers, setting blocks, spacers and edge blocks of size and shape complying with referenced glazing standards, and with requirements of glass manufacturer for application indicated.

WATERTIGHT AND AIRTIGHT INSTALLATION of each glass product is required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors), without failure including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the work.

COMPLY with FGMA "Glazing Manual" and manufacturers instructions and recommendations. Use manufacturer's recommended spacers, blocks, primers, sealers, gaskets and accessories.

CLEAN GLAZING CHANNEL and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly ponded to substrate. Remove lacquer from metal surfaces where elastomeric sealants are used.

INSTALL glass with uniformity of pattern, draw, bow and roller marks. Install sealants to provide complete wetting and bond and to create a substantial wash away from glass. Install pressurized tapes and gaskets to protrude slightly out of channel, so as to eliminate dirt and moisture pockets.

INSTALL INSULATING GLASS UNITS to comply with recommendations by Sealed Insulating Glass Manufacturers Association, except as otherwise specifically indicated or recommended by glass and sealant manufacturers

PROTECT GLASS FROM BREAKAGE immediately upon nstallation, by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces. Cure sealants for high early strength and durability.

REMOVE and replace damaged glass and glazing. Wash and polish glass on both faces not more than 4 days prior to date scheduled for nspections intended to establish date of substantial completion. Comply with glass product manufacturer's recommendations for final cleaning.

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PROVIDE screw-type gypsum drywall with metal framing system(s) where indicated on the drawings, as specified herein, and as needed to meet the requirements of the construction shown in the Contract Documents.

METAL STUD FRAMING: Provide ASTM C 645 studs of 0.018 inch (25 gage) x 3-5/8" depth unless otherwise noted. Provide runners matching studs, of type recommended by stud manufacturer for floor and ceiling support of studs, and for vertical abutment of drywall work at other work. Provide 0.032 inch (20 gage) hat-shaped furring members per ASTM C 645. Provide stud manufacturer's standard clips, shoes, ties, reinforcements, asteners and other accessories as needed for a complete stud system.

SUSPENDED STEEL FRAMING - GENERAL: Comply with ASTM C 754

WIRE HANGERS: ASTM A 641 Class 1 zinc coating, soft temper, 0.162 (8 gage) diameter wire at 4'-0" oc max typically or as otherwise indicated.

CONCRETE FASTENERS: Post-installed, expansion type anchors fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining a load equal to 5 times that imposed by construction per ASTM E 488 testing

COLD-ROLLED CHANNELS: 0.053-inch (16 gage) bare steel thickness, with minimum 1/2-inchwide flange, 1-1/2 inch deep typically.

HAT-SHAPPED FURRING CHANNELS: 7/8 inch minimum deep ASTM C-645 rigid units of 0.0312 inch (20 gage) minimum commercial steel sheet with manufacturer's standard corrosion-resistant zinc coating.

YPICAL EXPOSED GYPSUM BOARD: Type X (fire resistant) with tapered long edges, 5/8" thickness, except where otherwise indicated, in maximum length available which will minimize end joints.

TILE BACKER BOARD (behind all wall tile and tile base): 5/8" thick "DenShield Firequard" by Georgia-Pacific in 4 foot wide panels by maximum length possible, complying with ASTM C 1177 with alass mats both sides and long edges, with water-resistant treated core. Provide Type S-12, pugle head, self-tapping, rust-resistant, fine thread panel anchors.

IOINT TREATMENT AT TILE BACKER: "Dow Corninc 795, "Pecora" 895, "GE" Silicone Silpruf Sealant, or "Tremco" Dymonic joint sealer with 2" wide 10 x 10 glass mesh quick tape or equivalent, and finish with "G-P" Gypsum setting-type joint compound

TRIM ACCESSORIES: Provide manufacturer's standard trim accessories of types indicated for drywall work, formed of galvanized steel unless otherwise indicated, with either knurled and perforated or expanded flanges for nailing and beaded for concealment of flanges in joint compound. Provide corner beads, L—type edge trim—beads, U—type edge trim-beads, special L-kerf-type edge trim-beads. Stapling of trim accessories will not be permitted.

CONTROL JOINTS: Provide 2 - standard L-type edge trim beads, in lieu of manufacturer's standard one-piece control joint beads.

JOINT COMPOUND: ASTM C 475; On interior work provide single, multi-purpose grade, ready-mixed vinyl-type, with perforated type paper joint tape.

GYPSUM BOARD FASTENERS: Gypsum Board Screws: ASTM C 1002.

MISCELLANEOUS MATERIALS: Provide auxiliary materials for gypsum drywall work of the type and grade recommended by the manufacturer gypsum boards.

NSTALLATION

PREPARATION FOR METAL SUPPORT SYSTEMS: Coordinate work with structural ceiling work to ensure that inserts and other structural anchorage provisions have been installed to receive ceiling nangers. Furnish steel deck hanger clips and similar devices to other trades for installation well n advance of time needed for coordination with other work.

INSTALLATION OF WALL/PARTITION SUPPORT SYSTEMS: Install supplementary framing, blocking and bracing to support fixtures, equipment, services, heavy trim, furnishings and similar work which cannot be adequately supported on gypsum poard alone.

SOLATE STUD SYSTEM from transfer of structural oading to system, both horizontally and vertically. Provide slip or cushioned type joints to attain lateral support and avoid axial loading. Install runner tracks at floors, ceilings and structural walls and columns where gypsum drywall stud system abuts other work, except as otherwise indicated. Terminate partition stud system at ceilings, except where indicated to be extended to structural support or substrate above.

SPACE STUDS 16" O.C., except as otherwise indicated. Provide runner tracks of same material thickness as jamb studs. Space jack studs same as partition studs.

T DOOR OPENINGS, frame with 2 each 0.032 inch (20 gage) studs extending to structural support above at both jambs, securely attached by screws either directly to door frames or to jamb anchor clips on door frame. Install runner track sections (for jack studs) at head and secure to jamb studs.

RAME OPENINGS OTHER THAN DOOR OPENINGS in same manner as required for door openings; and install framing below sills of openings to match framing required above door heads.

INSTALL SUPPLEMENTARY FRAMING, runners, furring, blocking and bracing at opening and terminations in the work, and at locations required to support fixtures, equipment, services, heavy trim, furnishings and similar work which cannot be adequately supported directly on gypsum board alone.

GENERAL GYPSUM BOARD INSTALLATION REQUIREMENTS:

INSTALL insulation where indicated, prior to gypsum board unless readily installed after board has been installed. Locate exposed end-butt joints as far from center of walls and ceilings as

possible, and stagger not less than 1'-0'' in alternate courses of board. Install ceiling boards in the direction and manner which will minimize the number of end-butt joints, and which will avoid end joints in the central area of each ceiling. Stagger end joints at least 1'-0".

INSTALL WALL/PARTITION BOARDS vertically to avoid end-butt joints wherever possible. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs.

INSTALL EXPOSED GYPSUM BOARD with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16" open space between boards. Do not force into place.

LOCATE either edge or end joints over supports, except in horizontal applications or where intermediate supports or gypsum board black-blocking is provided behind end joints. Position boards so that both tapered edge joints abut, and mill-cut or field-cut end joints abut. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.

ATTACH gypsum board to framing and blocking as required for additional support at openings and cutouts. Form control joints and expansion joints with space between edges of boards, prepared to receive trim accessories. Cover both faces of steel stud partition framing with gypsum board in concealed spaces (above ceilings, etc.), except in chase walls which are properly braced internally.

ISOLATE perimeter of non-load-bearing drywall partitions at structural abutments. Provide 1/4" to $\frac{1}{2}$ " space and trim edge with J-type semi-finishing edge trim. Seal joints with acoustical sealant. Do not fasten drywall directly to stud system runner tracks.

SPACE FASTENERS in gypsum boards in accordance with referenced standards and manufacturer's recommendations. On partitions/walls apply gypsum board vertically (parallel), unless otherwise indicated, and provide sheet lengths which will minimize end joints. Fasten gypsum board supports with screws.

DIRECT-BONDING TO SUBSTRATE: Where necessary to install gypsum board adhered directly to a substrate (other than studs, joints, furring members or base layer of gypsum board), comply with gypsum board manufacturers recommendations, and temporarily brace or fasten gypsum board until fastening adhesive has set.

INSTALLATION OF DRYWALL TRIM ACCESSORIES: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, fasten flanges y nailing in accordance with manufacturer's instructions and recommendations. Install metal corner beads at external corners of drywall work.

INSTALL METAL EDGE TRIM whenever edge of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound. Install L-type trim where work is tightly abutted to other work, and install special kerf-type where other work is kerfed to receive long leg of L- type trim. Install U-type where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints).

INSTALL METAL CONTROL JOINTS above both sides of all door frames, and as otherwise required not to exceed a 30'-0''maximum uninterrupted surface.

INSTALLATION OF DRYWALL FINISHING: Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fasteners heads, surface defects and elsewhere as required to prepare work for decoration. Prefill open joints and rounded or beveled edges, using type of compound recommended by manufacturer. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated. Apply joint compound in three (3) coats (not including prefill of openings in base), and sand between last two (2) coats and after last coat apply an additional thin skim coat of joint compound or similar product to the entire surface to achieve a Level 5 finish at all locations. All prepared surfaces should be coated with a drywall primer prior to the application of final finishes, see painting specification for additional requirements. At water-resistant gypsum board base for ceramic tile, tape and finish joints with two (2) coats water-resistant joint material.

PARTIAL FINISHING: Omit third coat (if specified) and sanding on concealed drywall work which is indicated for drywall finishing or which requires finishing to achieve fire resistance rating, sound rating or to act as air or smoke barrier. Refer to sections on painting, coating and wall-coverings in Division 9 for decorative finishes to be applied to drywall work.

PROTECTION OF WORK: Installer shall advise Contractor of required procedures for protecting gypsum drywall work from damage and deterioration during remainder of construction period.



THIS DRAWING has been prepared by the Architect, o prepared under his direct supervision as an instrumer of service and is intended for use only on this project. All Drawings, Specifications, ideas and designs, including the overall layout, form, arrangement, and composition of spaces and elements portrayed, constitute the original, unpublished Work of the Architect. Any reproduction, use, or disclosure of the information contained herein without the written consent of the Architect is strictly prohibited. © 2024 KLOVER ARCHITECTS, INC

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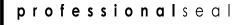
of responsibility for satisfactory insta DIMENSIONS SHOWN are to finish face of a material unless otherwise indicated. CALCULATE & MEASURE dimensions - DO NOT SCALE drawings unless otherwise directed.

project title



projectnumber

drawing issuance 03.05.24 PERMIT/BID drawingrevisions Description: Date:





drawingtitle SPECIFICATIONS

drawing number

SECTION 09 65 00 - RESILIENT FLOORING AND BASE

PROVIDE vinyl composition tile flooring and resilient base, where noted on the drawings and as specified herein.

FIRE PREFORMANCE CHARACTERISTICS: Provide resilient flooring materials meeting the following requirements as tested by UL or other testing agency acceptable to authorities having jurisdiction, in accordance with the following ASTM requirements: CRITICAL RADIANT FLUX: 0.45 watts per square CM or more per ASTM E 648. SMOKE DENSITY: less than 450 per ASTM E 662.

MAINTENANCE INSTRUCTIONS: Submit manufacturer's recommended maintenance practices for each type of resilient flooring and accessory required.

EXTRA STOCK: Deliver minimum of one (1) carton of resilient tile and twelve (12) lineal feet of base material, of each type and color of material installed.

VINYL COMPOSITION FLOOR TILE: 12" x 12" x 1/8" thick products complying with ASTM F 1066, Composition 1 (non-asbestos formulated). Manufacturer(s) and product type as indicated on the Drawings.

RESILIENT BASE: 4" high rubber, with integral coves, topset, type as required for compatibility with flooring material. If not indicated, base color will be selected by the Owner from manufacturer's standard color range, as manufactured by one of the following manufacturers: Burke Flooring Products Division, Flexco Division., Textile Rubber Co.

Johnson Rubber Co., Inc. R. C. Musson Rubber Co., Inc. Roppe Rubber Corp.

CONCRETE SLAB PRIMER: Nonstaining type as recommended by flooring manufacturer.

TROWELABLE UNDERLAYMENTS AND PATCHING COMPOUNDS: Latex modified, portland cement based formulation provided or approved by tile manufacturer for applications indicated.

ADHESIVES (Cements): Latex water resistant type recommended by tile manufacturer to suit resilient floor tile products and substrate conditions indicated

METAL EDGE STRIPS: Extruded aluminum with mill finish, of height required to protect exposed edge of tiles, and in maximum available lengths to minimize running joints

INSTALLATION:

EXAMINE AREAS where installation of tiles will occur, with Installer present, to verify that substrates and conditions are satisfactory for tile installation and comply with tile manufacturer's requirements and those specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

PREPARATION: Level and patch subfloor using compounds recommended by flooring manufacturer. Remove coatings from subfloor surfaces that would prevent adhesive bond, including curing compounds, adhesives, paint, oils, waxes and sealers. Broom clean or vacuum subfloor surfaces and apply primer if recommended by flooring manufacturer, prior to application of adhesive.

DO NOT DRY SCRAPE OR SAND existing flooring materials, and do not dry scrape or dry sweep residual backing or felt lining materials. Such materials may contain asbestos fibers that are not readily identifiable.

VERIFY that concrete slabs comply with ASTM F 710 and that slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials whose presence would interfere with bonding of adhesive. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by tile manufacturer. Verify that subfloors are free of cracks, ridges, depressions, scale, and foreign deposits of any kind.

GENERAL INSTALLATION: Comply with manufacturer's printed installation instructions, and as specified herein. Extend resilient flooring into toe spaces, door reveals, and into closets and similar openings. Scribe, cut and fit resilient flooring to permanent fixtures, built in furniture and cabinets, pipes, outlets and permanent columns, walls and partitions.

ADHESIVE: Adhere flooring to substrates using full spread of waterproof, stabilized mastic recommended for use by flooring manufacturer to suit material and substrate conditions.

INSTALLATION OF TILE FLOORS: Lay tile from center marks established with principal walls, discounting minor offsets, so that tile at opposite edges of room area of equal width. Adjust as necessary to avoid use of cut widths less than I/2 tile at room perimeters. Lay tile square to room axis, unless otherwise shown. Match tiles for color and pattern by using tile from cartons in same sequence as manufactured and packaged if so numbered. Cut tile neatly around all fixtures. Broken, cracked, chipped, or deformed tiles are not acceptable.

ADHERE tiles to flooring substrates without producing open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections in completed tile installation. Hand roll tiles where required.

INSTALLATION OF ACCESSORIES: Apply wall base to walls, columns, pilasters, casework and other permanent fixtures in rooms or areas where base is required. Install base in lengths as long as practicable, with preformed corner units, or fabricated from base materials with mitered or coped inside corners. Tightly bond base to substrate throughout length of each piece. INITIAL CLEANING: Immediately after completing tile installation remove visible adhesive and other surface blemishes using cleaner recommended by tile manufacturers. Sweep or vacuum floor thoroughly. Do not wash floor until time period recommended by resilient flooring manufacturer has elapsed to allow resilient flooring to become well sealed in adhesive. Damp mop floor being careful to remove black marks and excessive soil. Remove any excess adhesive or other surface blemishes, using appropriate cleaner recommended by resilient flooring manufacturers.

STRIP EXISTING FACTORY FLOOR FINISH by scrubbing with a single disk automatic scrubbing machine and by washing with a commercial stripping solution and warm water. Do not flood floor with z

stripping solution or rinse water. Remove stripping solution by mopping. Rinse with clean water and wet vacuum or mop dry.

SECTION 09 91 00 - PAINTING

WORK INCLUDES surface preparation and painting or finishing of surfaces exposed to view, throughout the Project and in accordance with requirements herein. Except where a natural finish or a material is specifically noted as a surface not to be painted, paint or finish all exposed surfaces whether or not painting is designated in the Drawings. Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas.

PAINTING NOT REQUIRED: Unless otherwise indicated, painting is not required on plastic laminate, prefinished sheet metal, plumbing fixtures, electrical equipment (excluding exposed distribution cabinet(s) or electrical devices. Painting is not required on surfaces such as walls or ceilings in concealed or inaccessible areas. Metal surfaces of anodized aluminum, stainless steel, chromium plate and similar finished materials will not require finish painting, except as otherwise indicated in the finish hardware schedule. Do not paint over code-required labels or equipment identification labels.

PROVIDE PRIMERS and undercoat paints produced by the same manufacturer as the finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.

PREPARE surfaces and apply coatings in strict accordance with the coating manufacturer's recommendations.

USE ONLY SKILLED painters for mixing and applying paint. Quality workmanship is required. In the acceptance or rejection of finish painting, no allowance will be made for the painters' lack of skill or in adequate lighting during painting operations.

DELIVER MATERIALS to job site in original, new and unopened packages and containers bearing manufacturer's name and label. Store materials not in actual use in tightly covered containers. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue. Keep storage area neat and orderly. Remove rags and water daily. Take all precautions to ensure that workmen and Work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.

JOB CONDITIONS: Apply paints only when temperature of surfaces to be painted and surrounding air temperatures are within recommended range permitted by the paint manufacturer's printed instructions. Do not apply paint when relative humidity exceeds 85%, or to damp or wet surfaces.

MATERIAL QUALITY: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturers identification as a standard, best-grade product will not be acceptable.

SURFACE PREPARATION: Clean surfaces of dirt, rust, scale, grease, moisture, or other conditions otherwise detrimental to formation of a durable paint film. Perform preparation and cleaning procedures in accordance with paint manufacturer's printed instructions for each particular substrate condition.

REMOVE hardware, accessories, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.

CLEAN WOOD SURFACES of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.

PRIME, STAIN, OR SEAL WOOD to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling. When transparent finish is required, backprime with spar varnish. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on backside. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately upon delivery or after installation, if unit is cut in the field.

CLEAN NONGALVANIZED FERROUS-METAL SURFACES that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council. TOUCH UP SHOP-APPLIED PRIME COATS that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.

MATERIALS PREPARATION: Carefully mix and prepare paint materials in accordance with manufacturer's directions. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, i necessary, strain material before using. Use only thinners approved by the paint manufacturer, and only within recommended limits.

APPLICATION: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied. Use applicators and techniques best suited for substrate and type of material being applied. Do not paint over dirt, rust scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

SCHEDULING: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

APPLY PAINT to completely cover previously painte surfaces, to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, lap marks, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.

THE NUMBER OF COATS and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.

APPLY ADDITIONAL PAINT coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

PAINT INTERIOR SURFACES of ducts, where visible through registers or grilles with a flat, nonspecular black paint. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.

MINIMUM COATING THICKNESS: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.

PRIME COATS: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.

FIELD QUALITY CONTROL: The Owner reserves the right to engage the services of an independent testing laboratory to sample the paint material being used. Samples of material delivered to the project may be taken, identified, sealed, and certified in the presence of the Contractor. The testing laboratory will perform appropriate tests as required by the Owner. If test results show material being used does not comply with specified requirements, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing, repaint surfaces coated with rejected paint and remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are noncompatible.

CLEAN-UP: During the progress of the Work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day. Upon completion of painting Work, clean window glass and other paint-spattered surfaces. Remove spattered paint or otherwise damage finish surfaces. Touchup and restore all damaged or defaced painted surfaces after completion of Work of other trades.

PROTECT work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing and repainting, as acceptable to Owner. Provide "wet paint" signs to protect newly painted finishes Remove temporary protective wrappings provided b others for protection of their work after completio of painting operations. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces

PAINT MATERIALS SCHEDULE: (RE: www.paintinfo.com for MPI's "Approved Product List") INTERIOR DRYWALL: SATIN LATEX ENAMEL (Class A: 5-5-0) Primer Coat: MPI # 50 - Interior Latex

Primer Sealer 2 Finish Coats: MPI # 52 - Interior Latex "Eggshell-like" sheen Apply finish coats with roller, unless otherwise indicated

INTERIOR METAL: SATIN ALKYD ENAMEL (Class A: 5–5–0)

First Coat: MPI # 79 - Alkyd Anti-Corrosive Metal Primer Note: Primer not required to be applied in

field on pre-primed items 2nd & 3rd Coats: MPI # 51 - Interior Alkyd, Eggshell

Brush apply finish coats unless otherwise indicated

INTERIOR PAINTED WOOD & MDF: SATIN ALKYD (Class A: 5-5-0) Prime Coat: MPI # 45 - Interior Alkyd

Primer Sealer 2nd & 3rd Coats: MPI # 51 - Interior

Alkyd, Eggshell Brush apply finish coats unless otherwise indicated

SECTION 10 00 00 - MISC. SPECIALTIES

PROVIDE the following specialties where noted on the Drawings and as specified herein. Install specialty items furnished by others, as indicated on the drawings.

TOILET ACCESSORIES (where required): Provide units as indicated in the Drawings.

FIRE EXTINGUISHERS (FE): Provide manufacturer's standard 10 lb, 4A-60BC rated units at location(s) indicated on the Drawings, and as approved or as otherwise directed by authorities having jurisdiction.

COORDINATION: Coordinate with other Sections to assure that the locations of miscellaneous specialties does not conflict with other related items. Examine and inspect installation of floor or wall finishes, and other conditions that affect installation of miscellaneous specialties. Do not proceed until unsatisfactory conditions have been corrected.

INSTALL the work of this Section according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.

SET EACH ITEM securely in place, leveled and adjusted to the correct working height. Anchor to supporting substrate where indicted and where required for sustained operation and use without shifting or dislocation. Conceal anchorages where possible.

SECURE MIRRORS TO WALLS in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, according to manufacturer's instructions for type of substrate involved.

INSTALL GRAB BARS to withstand a downward load of at least 250 lbf, complying with ASTM F 446.

ADJUST units for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

SECTION 10 14 00 - SIGNAGE

PROVIDE signage indicated herein as required for a complete and proper installation.

SEPARATE CONTRACT: The Owner will arrange for other signage to be provided by a separate contractor. Coordinate with that entity regarding field dimensions, shop drawings, site access, scheduling, power requirements, and other items necessary for timely installation of all project signs.

ADA SIGNAGE: 8 x 8 x 1/8 inch minimum radius cornered Pictorial Symbol Signs, with 1/32" raised pictogram symbols, 1/32" x 5/8" high upper case raised letter text, and with 1/32" Grade II Braille text. Text and pictogram to be white on dark colored sign panel with matte finish. Provide double sided 1/32" thick Scotchmount tape for attaching at 60" above floor to center of sign on the wall adjacent to the latch side of a door: 1 each RESTROOM (at Employee Restroom) 1 ea: MEN or WOMEN (as applicable at multiple toilet rooms)

PRESSURE SENSITIVE VINYL (PSV): "220 Scotchcal" by 3M or equal 2 mil minimum thickness, opaque, non-reflecting, cast PVC film with pressure sensitive adhesive backing, suitable for exterior as well as interior applications, colors as noted in material-color schedule. Die-cut copy characters from PSV, and mount on paper backing sheet.

BUILDING NUMBERS: 8" high white reverse-mount to interior side of glass facing main street (comply with local code and regulations)

REAR SERVICE ENTRANCE DOOR: Provide PSV signage indicating Company Name, Suite/Space Number, and receiving hours (verify exact text with Owner's representative. Coordinate Service Entrance Door signage with Landlord requirements, when applicable. INSTALL signage in accordance with the approved shop drawings, to be level, plumb, and at height indicated, free from distortion or other defects of appearance. Remove and reinstall signage materials that do not comply with these requirements.

MOUNT plastic laminate signs directly to face of door. Use double-sided foam tape to mount to smooth non-porous surfaces. Install ADA signs centered at 60 inches above finished floor on strike side of door frame.

CLEAN soiled sign surfaces and protect units from damage unitl acceptance by the Owner.

SECTION 12 32 00 - MANUFACTURED CASEWORK

PROVIDE prefinished, manufactured casework and countertops where indicated on the Drawings, as specified herein, and as necessary for complete installation. The intent of this Section is to provide readily available "stock" prefinished units from loca retail home-supply stores, or through the Contractors other normal sources.

COMPLY WITH the Kitchen Cabinet Manufacturing Association (KCMA) Quality Standard A161.1 for cabinets, and KCMA A161.2 for plastic-laminate countertops.

COORDINATE layout and installation of blocking and reinforcement in partitions for support of casework.

CASEWORK MATERIALS: Do not use adhesives or other materials that contain urea formaldehyde, and as follows:

PARTICLEBOARD: ANSI A208.1, Grade M-2-Exterior Glue MEDIUM-DENSITY FIBERBOARD: ANSI A208.2, Grade

MD HARDBOARD: AHA A135.4, Class 1 Tempered

PLASTIC LAMINATE: High-pressure decorative laminate complying with NEMA LD 3 – Post-formed Grade HGP – in medium blue color with a decorative pattern to obscure staining. THERMOSET DECORATIVE PANELS: Particleboard or medium-density fiberboard finished both sides with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1 – in "white" color typically

EDGE BANDING: PVC or polyester edge banding complying with LMA EDG-1 - color to match exposed panels.

CABINET HARDWARE: Provide Manufacturer's standard units complying with BHMA A156.9, including back-mounted decorative wire pulls or plastic knobs, and decorative semi-concealed (wraparound) butt hinges or pivot (knife) hinges (at Contractor's option). Provide epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers.

CABINET FABRICATION:

REVEAL OVERLAY DESIGN (door and drawer faces partially covering cabinet fronts), of either face-frame or frameless style (at Contractor's

option), and as follows: DOOR AND DRAWER FRONTS: 1/2-inch-thick thermoset decorative panels

CABINET ENDS: 5/8-inch thick Thermoset decorative panels BACK, TOP, AND BOTTOM RAILS:

3/4-by-2-1/2-inch solid wood, interlocking with end panels and rabbeted to receive top and bottom panels. Back rails secured under pressure with glue and with mechanical fasteners. WALL-HUNG-UNIT BACK PANELS: 3/16-inch-thick plywood fastened to rear edge of end panels and to top and bottom rails. DRAWERS: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body, with 1/2 inch thick thermoset decorative panel subfronts, backs and sides, and 1/4-inch-thick prefinished hardboard drawer

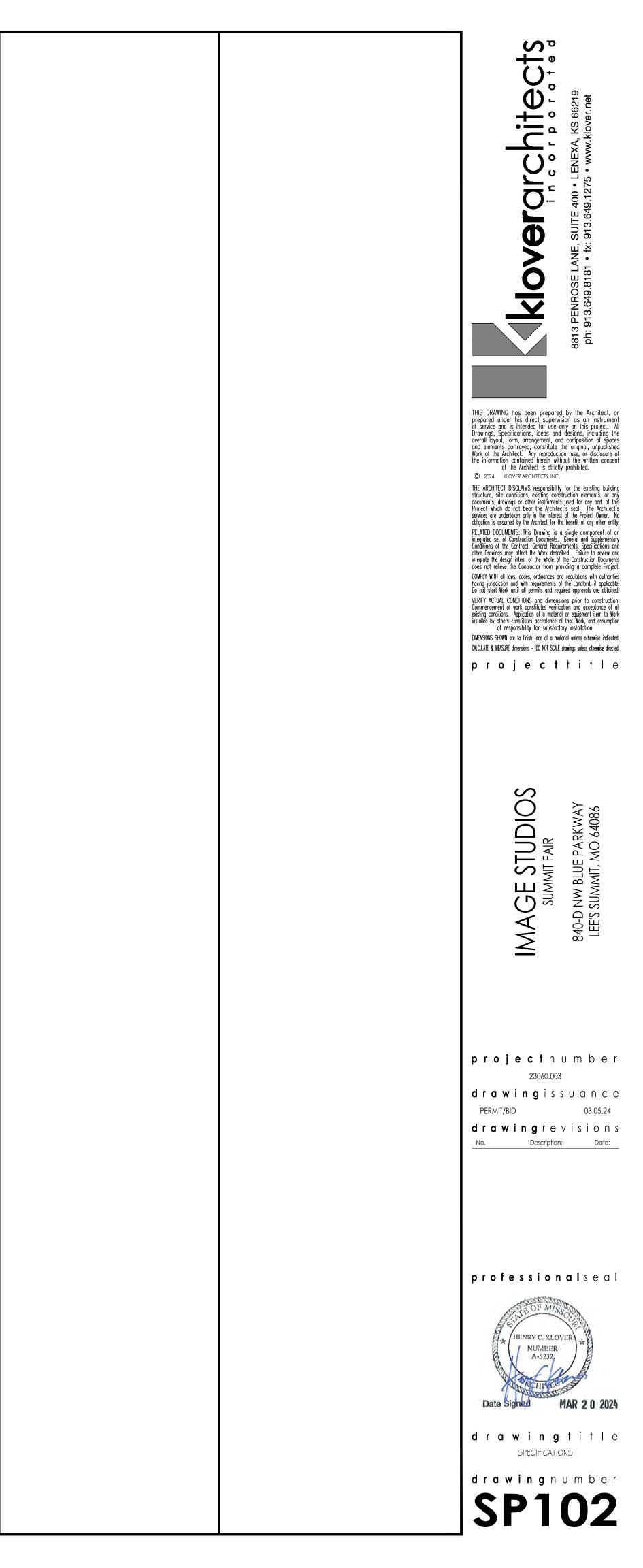
bottoms. SHELVES: 5/8-inch thick thermoset decorative panel

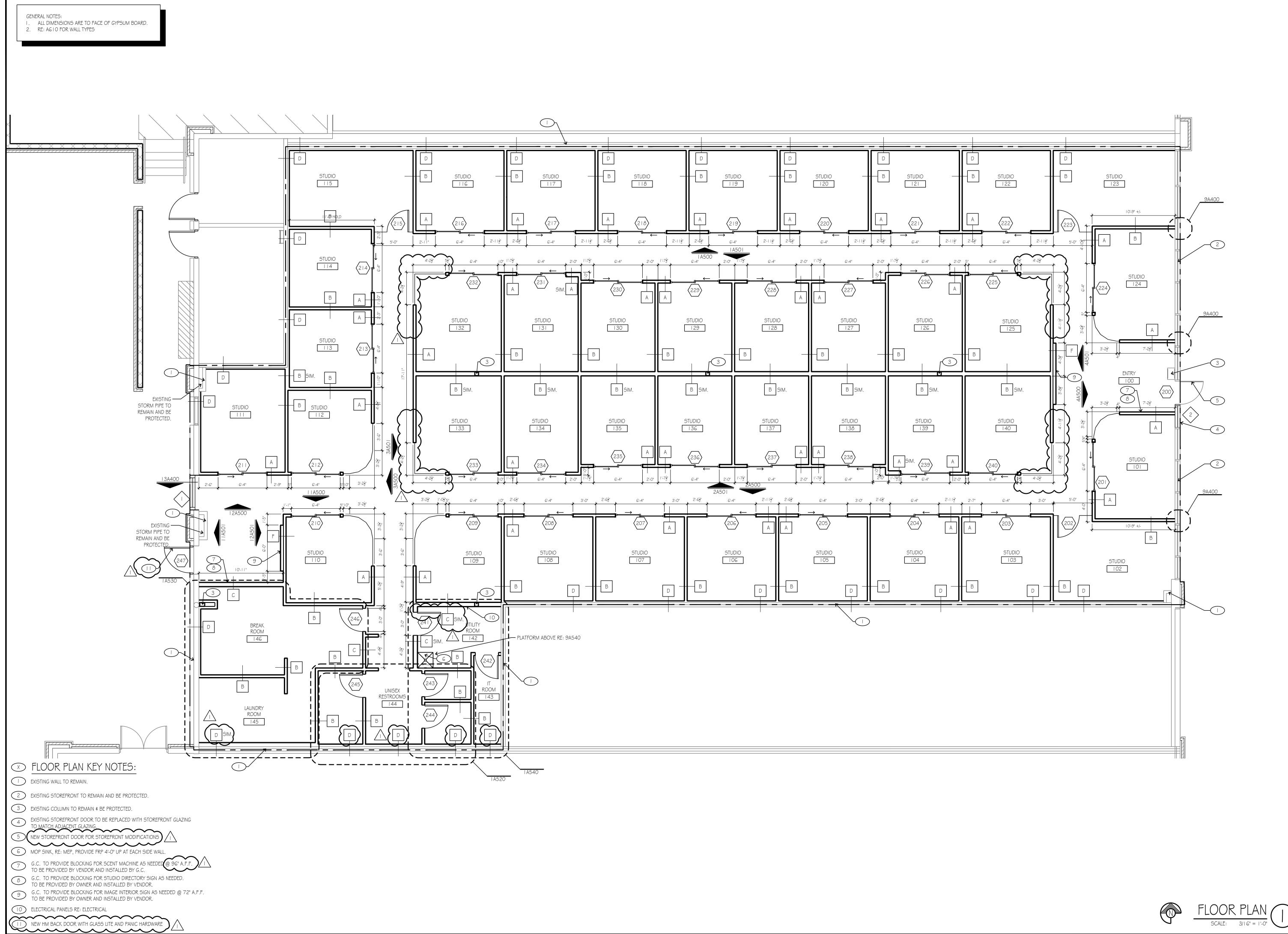
PLASTIC-LAMINATE COUNTERTOPS: Rolled, self-edged or raised marine edge with rolled front (Contractor's option) on 3/4-inch thick particleboard substrate with integral one-piece curved-top post-formed back-splash. Cover exposed edge of backsplash with plastic-laminate finish.

INSTALL CABINETS with no variations in flushness of adjoining surfaces; use concealed shims. Install without distortion so doors and drawers fit openings and are aligned. Install cabinets and countertop level and plumb to a tolerance of 1/8 inch in 8 feet. Fasten cabinets to adjacent units and to backing. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches OC with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop.

ADJUST CABINETS AND HARDWARE so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

CLEAN CASEWORK on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.







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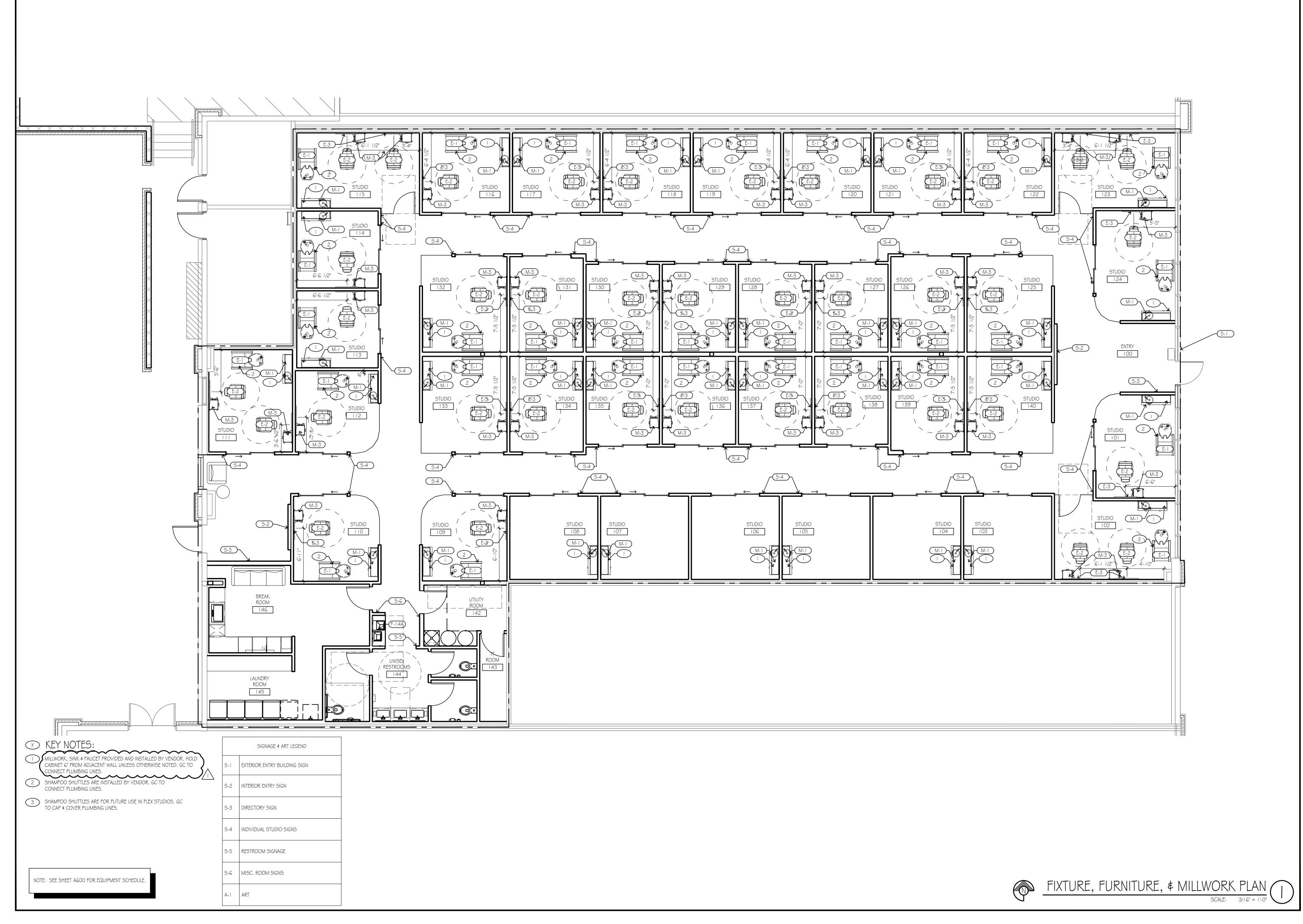
projectnumber 23060.003 drawingissuance 03.05.24 PERMIT/BID drawingrevisions Description: Date: No. CITY/OWNER COMMENTS 04.16.24

professional seal



drawingtitle







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projectnumber 23060.003 drawingissuance PERMIT/BID 03.05.24 drawingrevisions No. Description: Date: Mo. Description: Date:

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d r a w i n g † i † | e FIXTURE, FURNITURE, ≰ MILLWORK PLAN



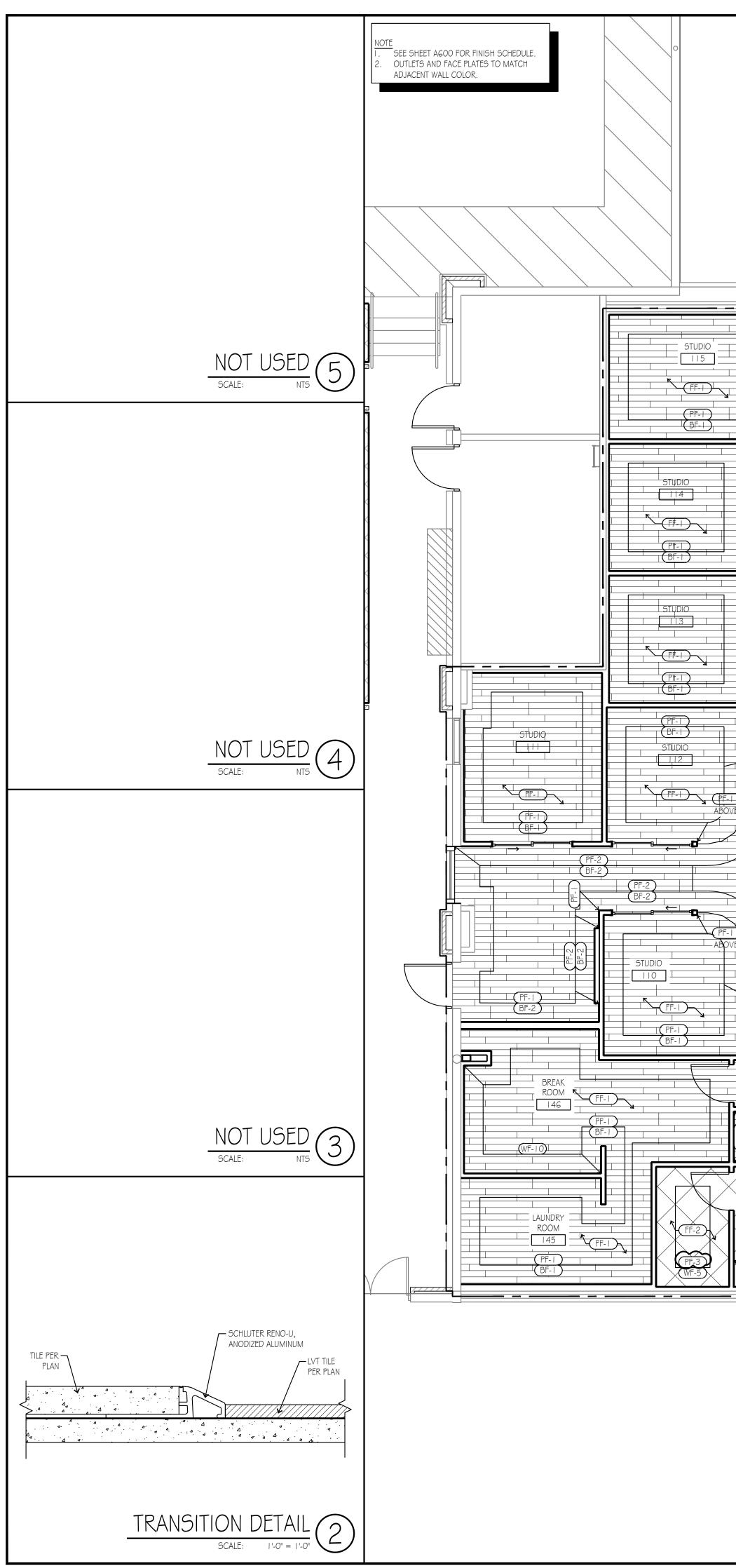
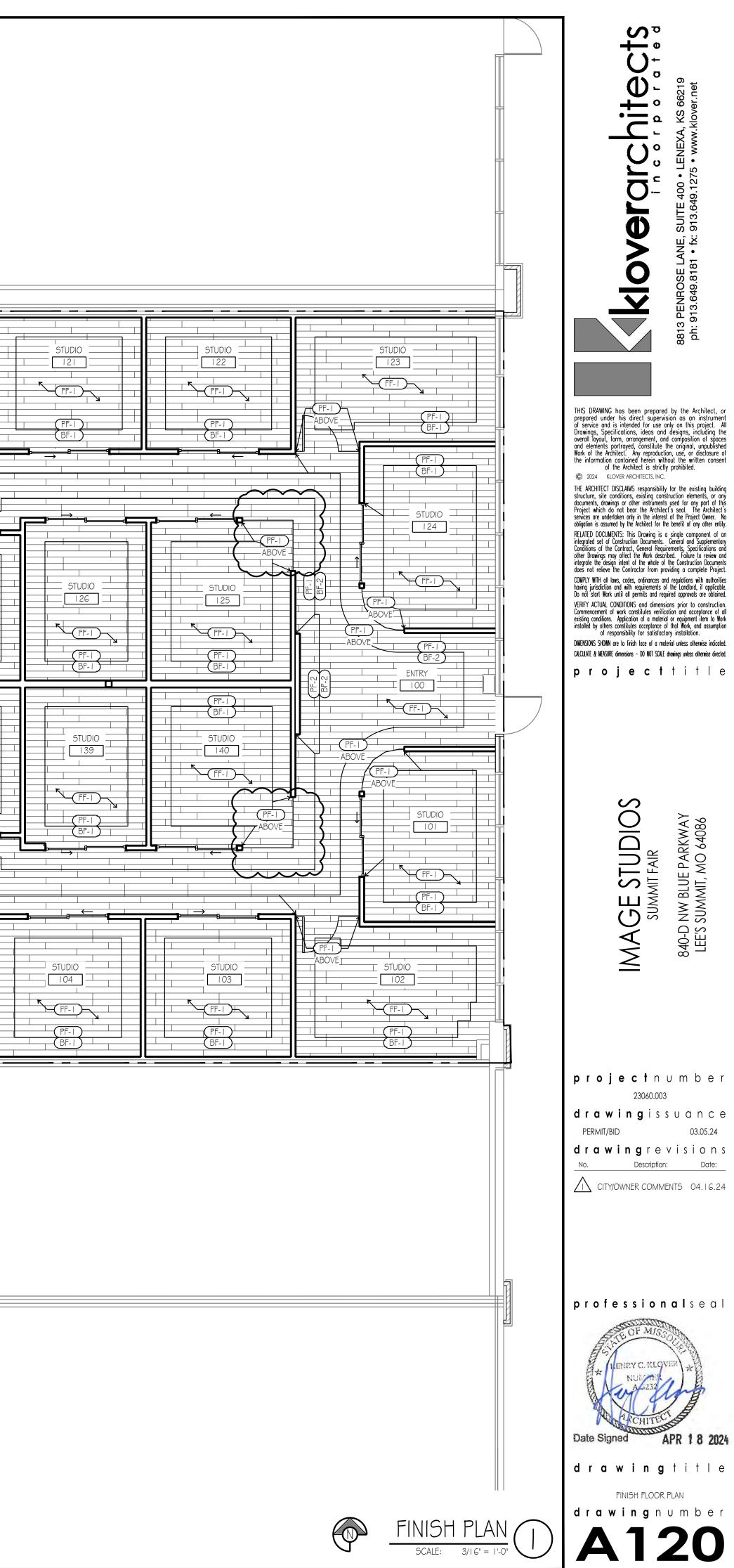


Image: second				STUDIO STUDIO I 20 I 7 FF-1 BF-1 BF-1 FF-
			PF-2 BF-2 PF-1 BF-2 BF-1 BF-1 <th></th>	
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PF-1 PF-1				
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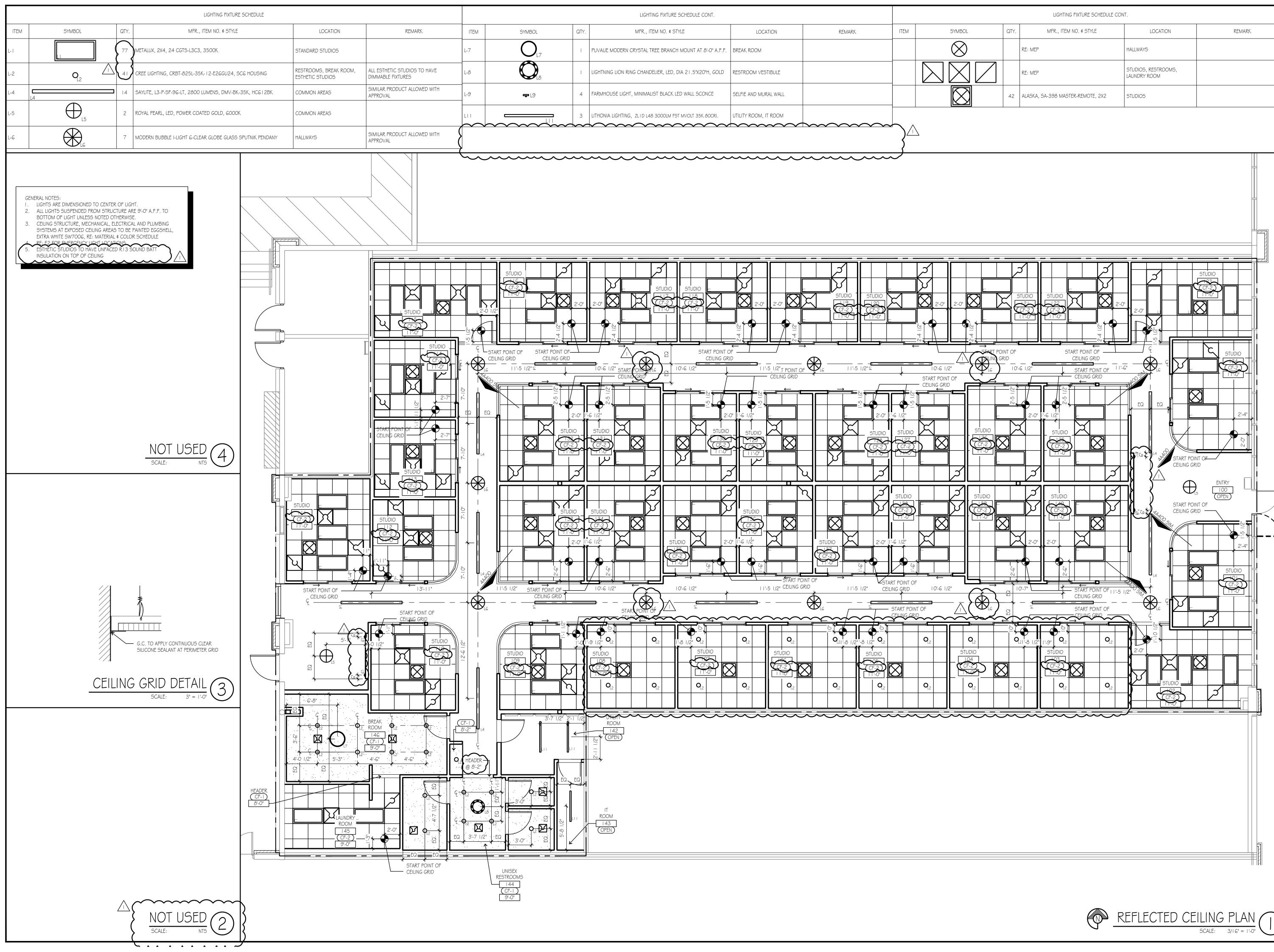
ANE, fx:

8813 PENROSE LA

AY 86

840-D NW BLUE PARKW LEE'S SUMMIT, MO 640

03.05.24



	LIGHTING FIXTURE SCHEDULE CONT.						
SYMBOL	QTY.	MFR., ITEM NO. & STYLE	LOCATION	REMARK			
\otimes		RE: MEP	HALLWAYS				
		RE: MEP	STUDIOS, RESTROOMS, LAUNDRY ROOM				
\bigotimes	42	ALASKA, SA-398 MASTER-REMOTE, 2X2	STUDIOS				



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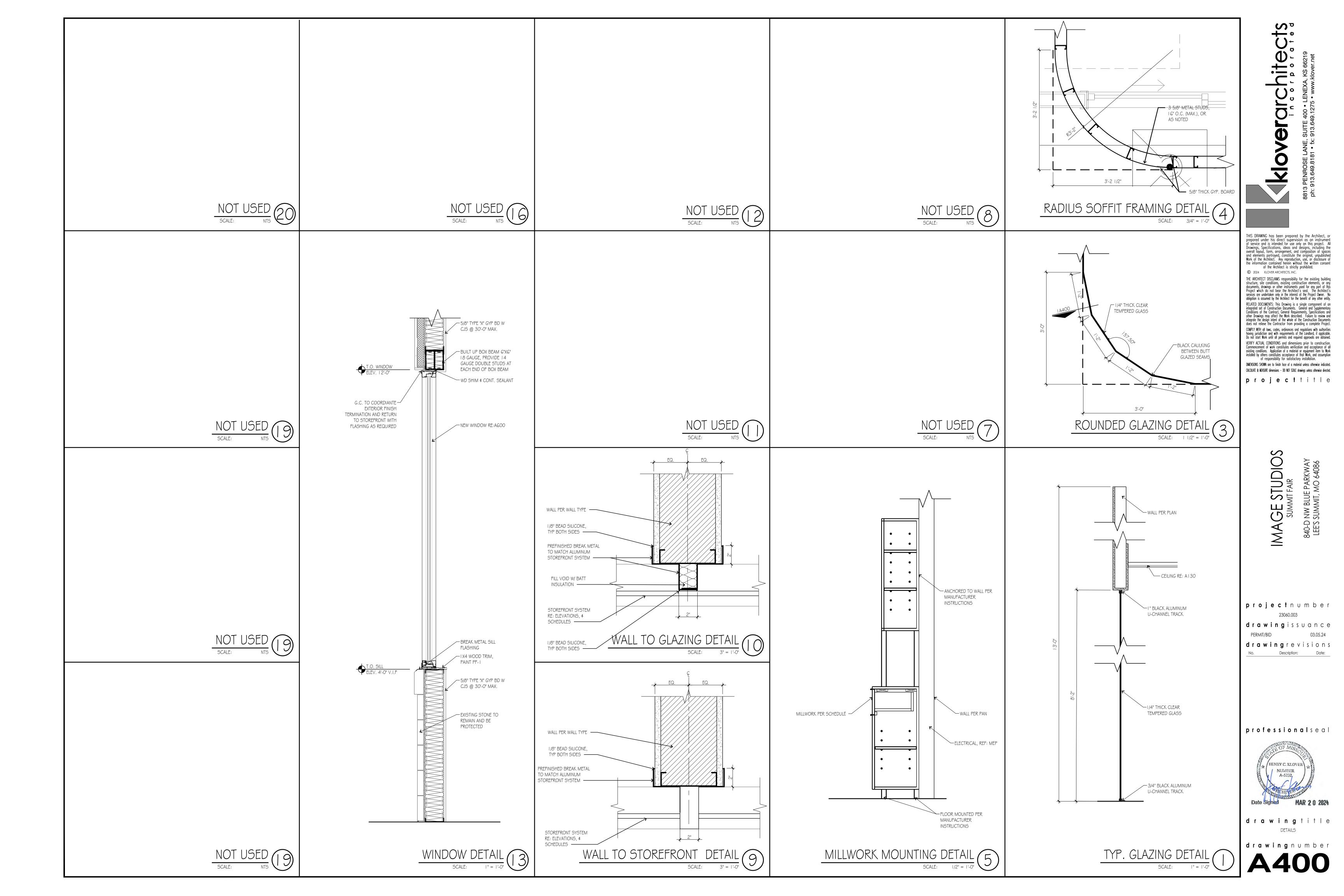
> \sim \bigcirc IMAGE STUDIC SUMMIT FAIR 840-D NW BLUE PARKW LEE'S SUMMIT, MO 640

projectnumber 23060.003 drawingissuance 03.05.24 PERMIT/BID drawingrevisions Description: Date: No. CITY/OWNER COMMENTS 04.16.24

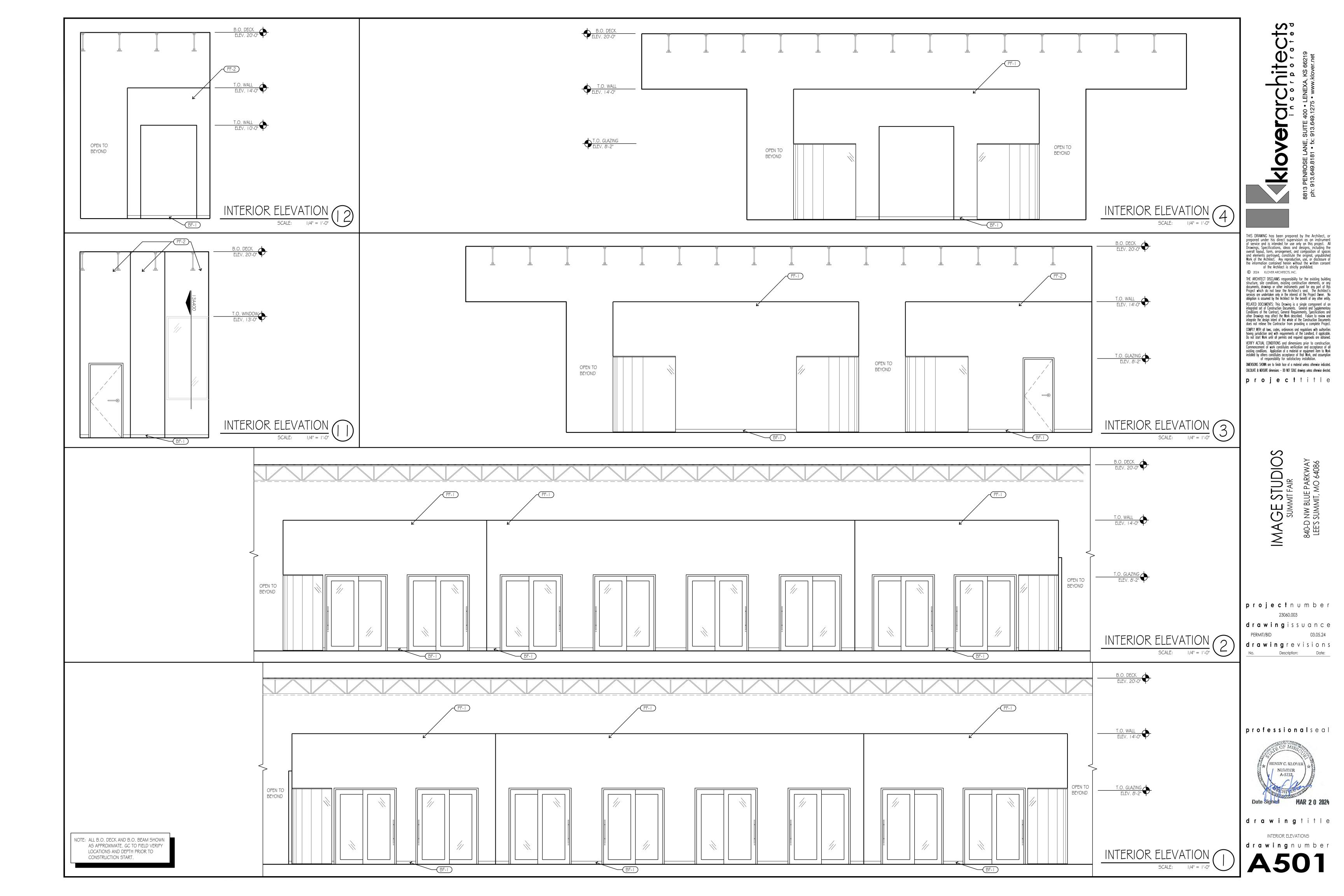
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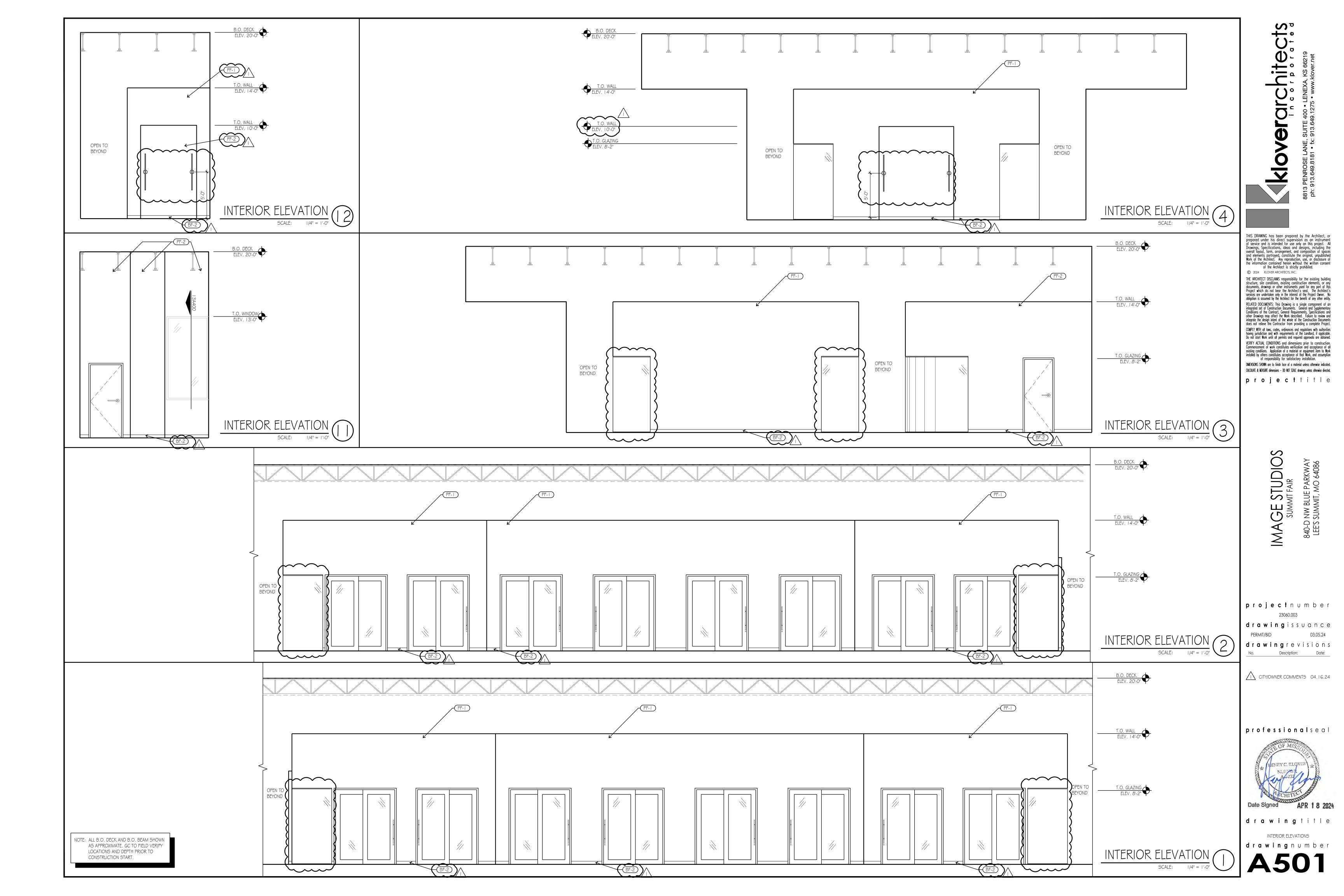
drawingtitle REFLECTED CEILING PLAN drawingnumber





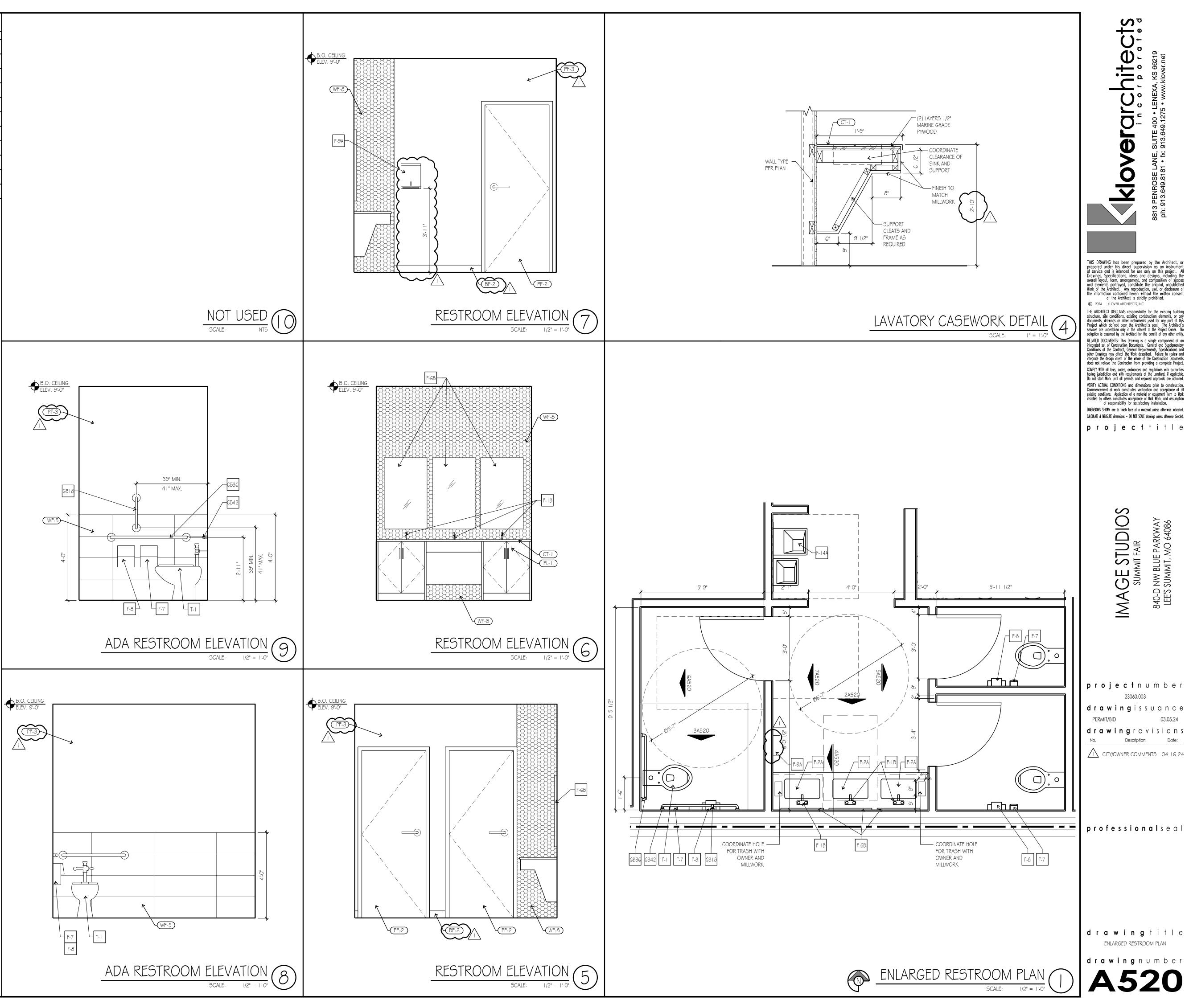






RES	STROOM ACCESSORY SCHEDULE
NO	DESCRIPTION
GB36	GRAB BAR, 36" LONG, PROVIDE BLOCKING
GB42	GRAB BAR, 42" LONG, PROVIDE BLOCKING
GB18	GRAB BAR, I 8" LONG, PROVIDE BLOCKING
F-GB	TETOTE 24X40 BACKLIT VANITY MIRROR, MOUNT 40" A.F.F. ANCHOR TO WALL, CENTERED OVER LAVATORIES, HARDWIRE OR PLUG IN OPTION.
F-IB	SLOAN, EAF-275-SOL-ISM-PB-0.5GPM-AER-IR-IQ-FCT
F-2A	TOTO LT I 535G OR SIMILAR
F-7	TOILET TISSUE DISPENSER - BOBRICK B-4288, STAINLESS
F-8	SANITARY NAPKIN DISPOSAL. BOBRICK B-35 39, STAINLESS
F-9A	TOWEL DISPENSER: VANNSOO, WALL MOUNT, GOLD
F- 4A	ELKAY EZ H20 BOTTLE FILLING STATION & VERSATILE BI-LEVEL ADA COOLER, OR SIMILAR.
T-	TOILET
2. I 3. I	S: DIMENSIONS ARE TO FACE OF FINISH INSTALL BLOCKING IN WALLS FOR GRAB BARS, PARTITIONS, ACCESSORIES AS REQUIRED FOR SUPPORT. REFER TO SHEET A003 FOR CLEAR FLOOR SPACE INFORMATION AND FIXTURE MOUNTING HEIGHTS, E.G. GRAB BARS, TOILET FIXTURES, AND ACCESSORIES.

REFER TO AGIO FOR WALL AND DOOR TYPES INSULATE PIPES BENEATH LAVATORY

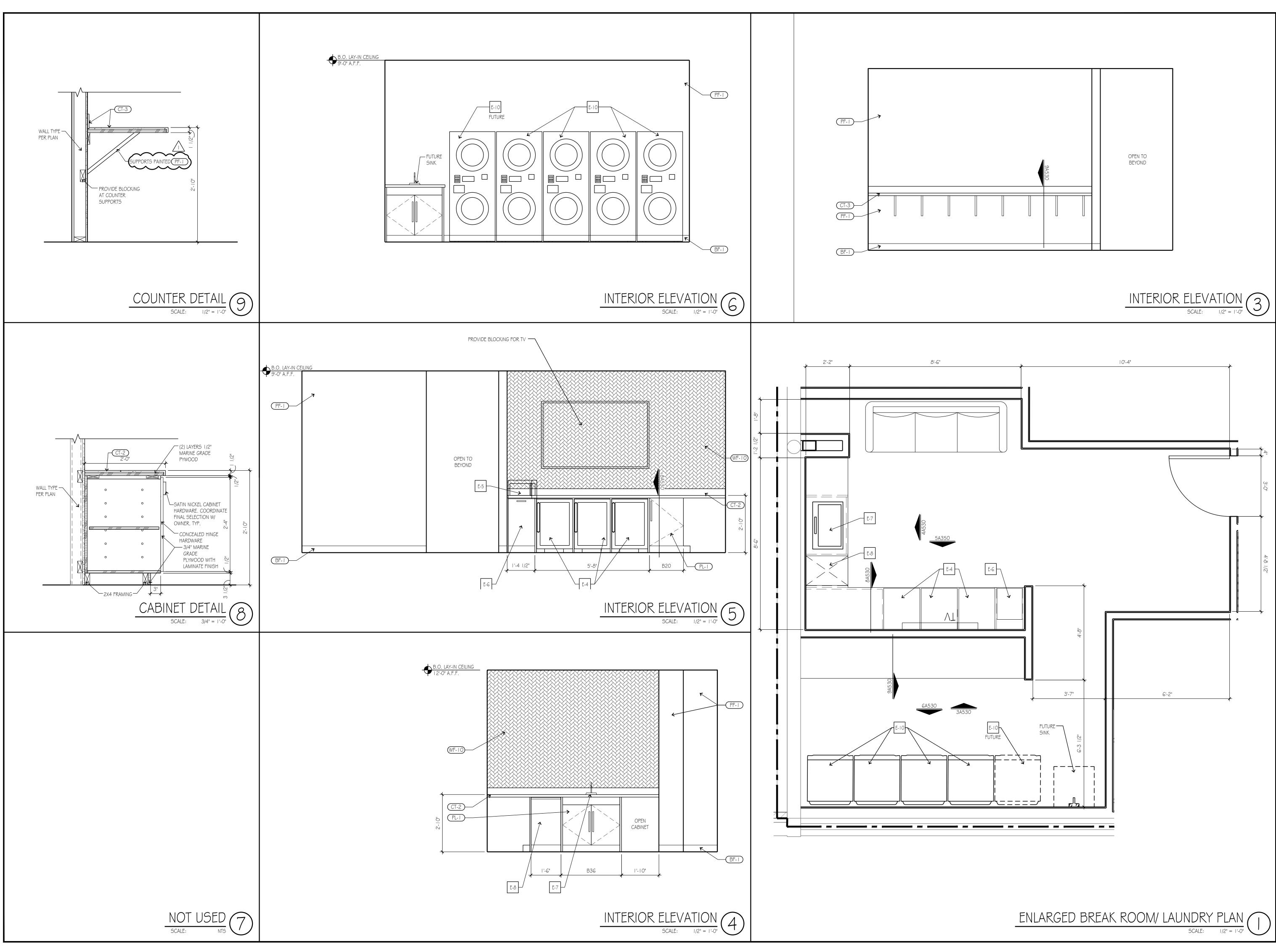


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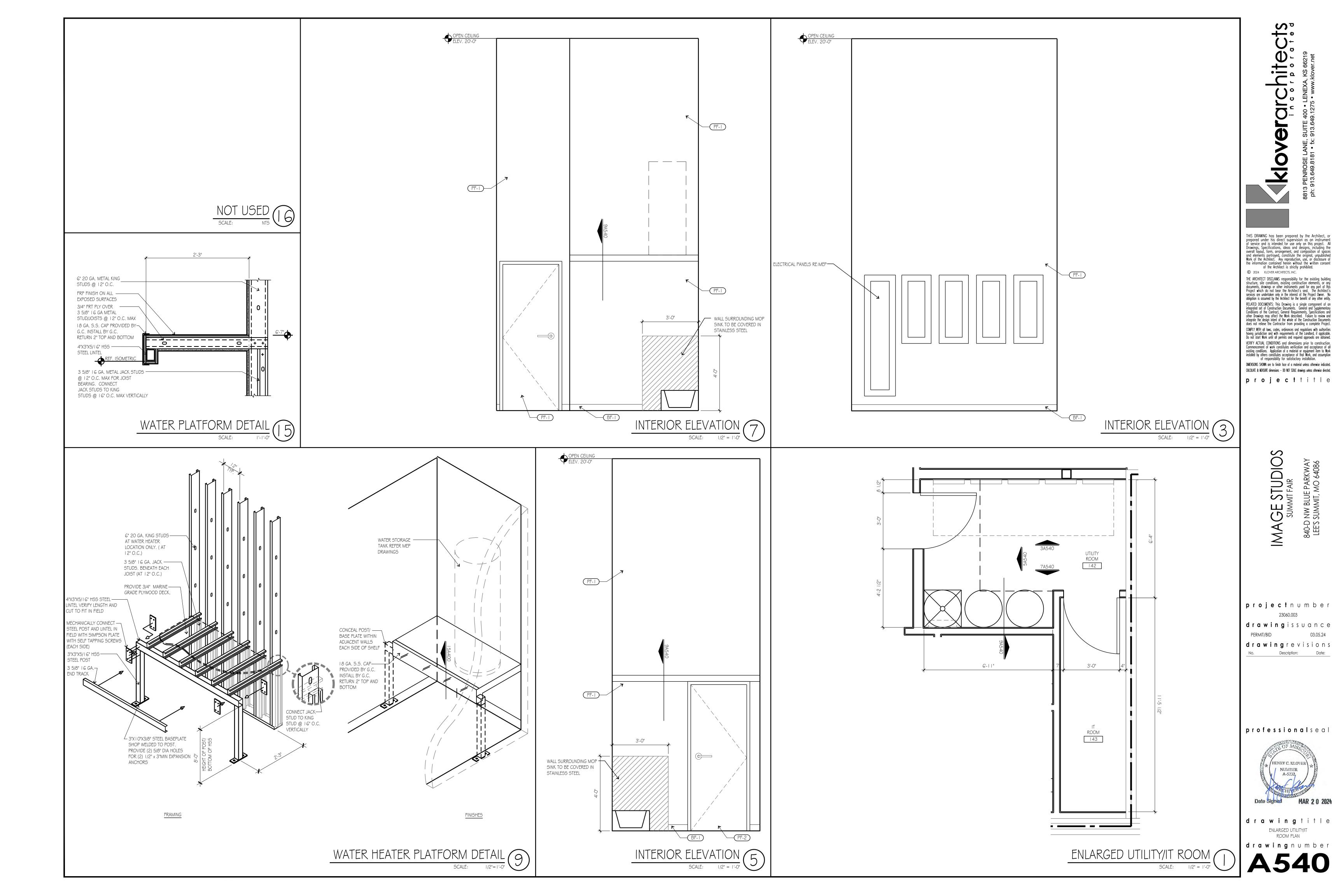
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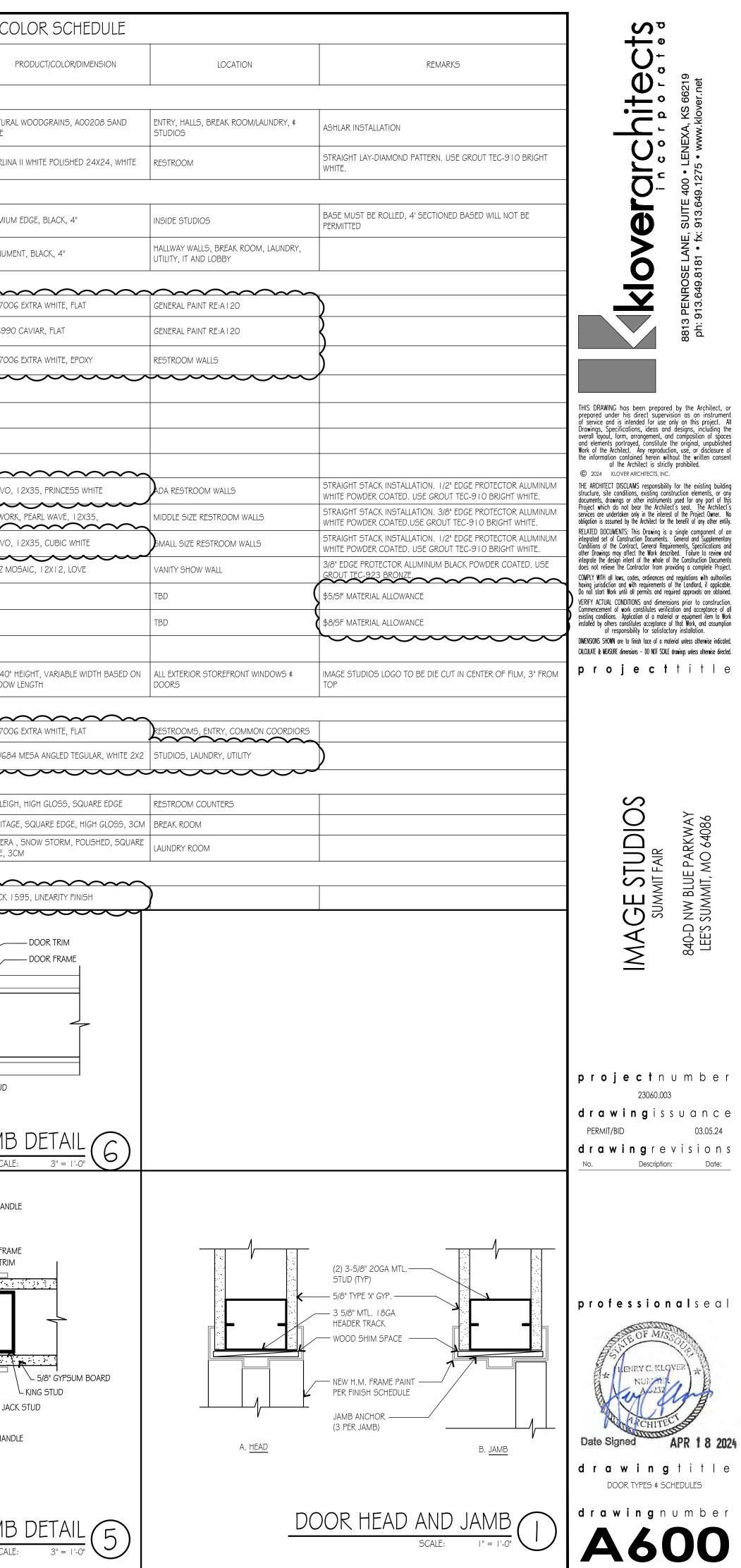


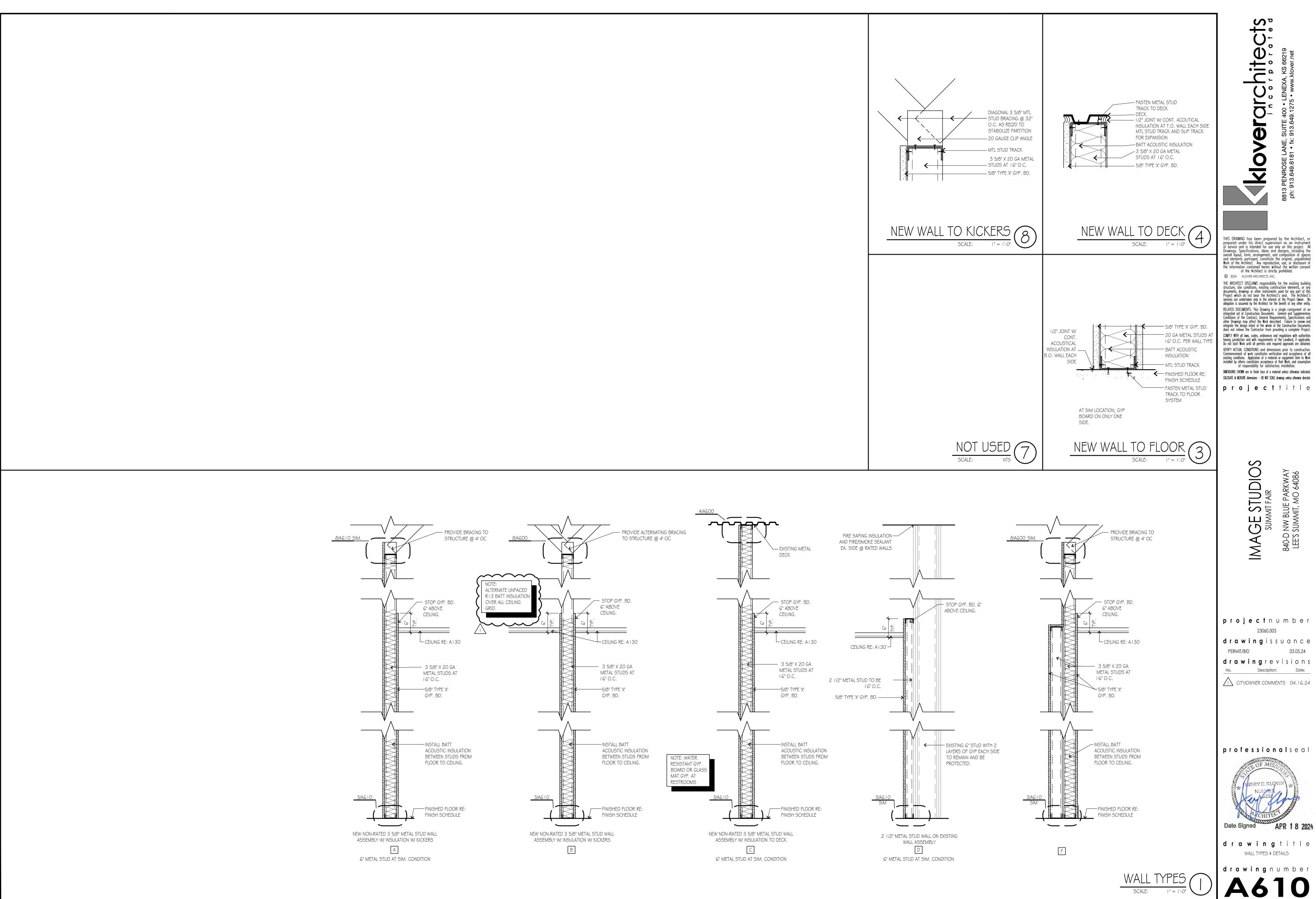
drawingtitle ENLARGED BREAKROOM/LAUNDRY ROOM PLAN **drawing**number

A530



	EQUIPMENT, MILLWORK,	AND FURNITURE SCHEDL	JLE				MATERIA	AL & COI
SYMBOL DESCRIPTION	VENDOR	MODEL	LOCATION	REMARKS	SYMBOL	MATERIAL	MANUFACTURER	PR
EQUIPMENT E- I SHAMPOO BACKWASH UNIT	KAEMARK	MALIA, 282-B-W OR 282-B-B	STUDIOS	BLACK SINK BOWL	FLOORING	-		NATURAL
E-2 STYLING CHAIR	KAEMARK	FANTASIA STYLING CHAIR W/ IMPORT FLAT	STUDIOS	FINISH TO BE BLACK AND STAINLESS STEEL	FF-1 LV1		INTERFACE	DUNE
E-3 LIT MIRROR	KAEMARK	SQUARE BASE GL3GR	STUDIOS	FINISH TO BE STAINLESS STEEL	FF-2 TIL	E	EMSER	STERLINA II
E-4 REFRIGERATOR	BY FRANCHISE OWNER	TBD	BREAKROOM	FINISH TO BE STAINLESS STEEL OR BLACK	BASE		Т	
E-5 MICROWAVE	BY FRANCHISE OWNER	TBD	BREAKROOM		BF-I TH	IERMOPLASTIC RUBBER BASE ROLLED	MANNINGTON COMMERCIAL	PREMIUM E
E-G ICE MACHINE		15X20.3X33.5, BLACK	BREAKROOM		BF-2 RU	IBBER BASE	JOHNSONITE	MONUMEN
E-7 SINK E-8 DISHWASHER	AMERICAN STANDARD OR SIMILAR FRIGIDAIRE	33X22 FFBD1831UB, 18" BUILT IN	BREAKROOM	TO INCLUDE GARBAGE DISPOSAL	WALLS			
E-9 STACKABLE LAUNDRY UNIT	BY FRANCHISE OWNER	TBD	LAUNDRY ROOM			ALL PAINT	SHERWIN WILLIAMS	SW 7006 I
MILLWORK						ALL PAINT	SHERWIN WILLIAMS	SW6990 C
M- I STUDIO MILLWORK	KAEMARK				PF-3 WA	ALL PAINT	SHERWIN WILLIAMS	SW 7006 I
M-2 ESTHETIC MILLWORK	KAEMARK				WF-1 NO	DT USED	m	
M-3 ROLLING TROLLEY	KAEMARK				y	DT USED	2	
DOOR SCH			_		(DT USED	K	
NO. WIDTH HEIGHT THICK TYPE MATERIAL FINISH TYPE MATERIAL FIN	ISH HEAD JAMB HARDWARE REMARKS	FRONT DOOR WITH STOREFRONT MODIFICATIONS	5			DT USED	}	
		DOR VENDOR KAEMARK , PROVIDE FIRE-TREATED BLOCKING AS REQ.	_		WF-5 WA	ALL TILE	ESMER	NUOVO, 12
203 6'-4" 8-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	DOR VENDOR KAEMARK DOR VENDOR KAEMARK	-			ALL TILE	ESMER	ARTWORK,
205 G'-4" 8'-0" I/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DC	DOR VENDOR KAEMARK DOR VENDOR KAEMARK	-			ALL TILE	ESMER	NUOVO, I
207 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	DOR VENDOR KAEMARK DOR VENDOR KAEMARK DOR VENDOR KAEMARK	-			ALL TILE	ESMER	GLITZ MOS
209 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK	-			ALL TILE	ТВД	TBD
211 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	DOR VENDOR KAEMARK DOR VENDOR KAEMARK DOR VENDOR KAEMARK	-		WF-10 WA	ALL TILE	твр	TBD
213 6'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	DOR VENDOR KAEMARK DOR VENDOR KAEMARK DOR VENDOR KAEMARK	-				5	
215 5'-0" 8'-2" 1/4" B GLASS N/A N/A N/A N/A	IA N/A N/A 2 FRAMELESS	, PROVIDE FIRE-TREATED BLOCKING AS REQ.	-		hum	······································		36"-40" HE
217 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	DOR VENDOR KAEMARK DOR VENDOR KAEMARK				HITE MATTE PRIVACY FILM	SUNTEK OR SIMILAR PRODUCT	WINDOW LE
219 6'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK			CEILING			
221 6'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK				INTED GYPSUM BOARD ¢ OPEN STRUCTURE		SW 7006
223 5'-0" 8'-2" 1/4" B GLASS N/A N/A N/A N/A	A N/A N/A 2 FRAMELESS	DOR VENDOR KAEMARK 5, PROVIDE FIRE-TREATED BLOCKING AS REQ.				COUSTICAL CEILING TILE	ARMSTRONG	681/684 N
225 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK	-		COUNTERTOPS CT-1 QU	JARTZ	CAMBRIA	OAKLEIGH,
227 G'-4" 8'-0" I/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK	-			JARTZ	CAMBRIA	ARMITAGE,
228 6'-4" 8'-0" I/4" C GLASS N/A N/A ALUM. BLA 229 6'-4" 8'-0" I/4" C GLASS N/A N/A ALUM. BLA		OOR VENDOR KAEMARK OOR VENDOR KAEMARK	_				LX HAUSYS	VIATERA, S EDGE, 3CM
230 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BL/		OOR VENDOR KAEMARK OOR VENDOR KAEMARK	_		MILLWORK		1	
232 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK			PL-I LAN	MINATE	WILSONART	BLACK 155
234 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BL/	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK					FIXED SIDE	<u> </u>
236 6'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BL/	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK	-				5/8" GYPSUM E	BOARD
238 G'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BLA	ACK N/A N/A I SLIDING DO	OOR VENDOR KAEMARK OOR VENDOR KAEMARK	-					
240 6'-4" 8'-0" 1/4" C GLASS N/A N/A ALUM. BL/	ACK N/A N/A I SLIDING DC -2 LAGOO LAGOO 3 JAMB IS 6"	COP-VENDOR-KAEMARK	-					/
242 3'-0" 8'-0" I 3/4" A WOOD PF-2 I H.M. PF	-2 1A600 1A600 3 -2 1A600 1A600 3		-					
244 3'-0" 8'-0" I 3/4" A WOOD PF-2 I H.M. PF	-2 1A600 1A600 3 -2 1A600 1A600 3		-					
246 3'-0" 8'-0" 1 3/4" A WOOD PE 2 1 HM PE			-					ACK STUD
DOOR HAR	DWARE						KING STU	D
SET # I SLIDING DOORS: BLACK 36" LADDER DOOR PULL DEADLOCK W/ THUMB TURN & KEYED CYLINDER	SET #4 EXTERIOR DOORS: TRIMCO LOCK SET					SLIDIN	IG GLASS DOOR .	JAMB SCALE:
BLACK ANODIZED SILL CHANNEL, ROLLERS, DOOR STOP	STOREFRONT PULL CONT./PIANO HINGE THRESHOLD							JUALL:
SET #2 GLASS DOORS: 36" STRAIGHT PULL HANDLE	CLOSER						LATCH SIDE	ERIOR HANDLE
36" STRAIGHT PULL HANDLE DEADLOCK W/ THUMB TURN & KEYED CYLINDER 2EA HINGES W/ CLOSERS AND HOLD OPEN FUNCTIONS	NOTES:						Ľ	
GET #3	PROVIDE COMMERCIAL GRADE HARDW. ALL HARDWARE TO BE FINISHED IN BLA	ACK.	DOOR TYPE D	DOOR TYPE C 6'-4"	DOOR TYPE B DOOR TYPE A W/ FRAME I			- DOOR FRAME - DOOR TRIM
SET #3 WOOD DOORS: SCHLAGE LEVER STYLE DOOR HANDLE I	 ESTHETIC STUDIOS MAY HAVE A 2 ML TRANSLUCENT WHITE FILM APPLIED TO SERVICE PROVIDED REQUIRES PRIVACY 	THE DOOR IF THE Y.		HOLD FOR ROUGH OPENING	REF SCHED 2" REF SCHED 2	2"		
2EA 4" SQUARE HINGES LOCKSET (PASSAGE, STOREROOM, OR PRIVACY) FLOOR STOP	4. ALL STUDIO DOORS TO BE INDIVIDUAL MASTER KLY	LLY KEYED WITH I						
SYM. WIDTH HEIGHT GLASS FRAME REMARKS	ILUULL INSTALLED AND FURN	NISHED BY G.C. UNLESS NOTED OTEHRWISE						
4'-6" 8'-1 1" I" INSULATED CLEAR ANOD. GLASS STOREFRONT					CHI CHI			
2 3'-0" I 4-0" I "INSULATED CLEAR ANOD. ALUMINUM MATCH ADJACENT EXISTING STORE	FRONT, VERIFY DIMENSIONS IN FIELD BEFORE OF	RDERING					F	LJACK
GLASS STOREFRONT							≻ _{EX}	FERIOR HANDLE
				. י ן יין	SOILD COR	E WOOD DOOR.		
					DOOR & FRJ PAINTED TC	AME ARE TO BE D MATCH.		
				NOTE: ALL GLASS TO BE CLEAR TEMPERED	DOOR TYPES	SCAL SLIDIN	IG GLASS DOOR .	JAMB
					SCALE: " = '-C	- \ . / /		SCALE:
			I			<u> </u>		





GENERAL NOTES - STRUCTURAL

I. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.

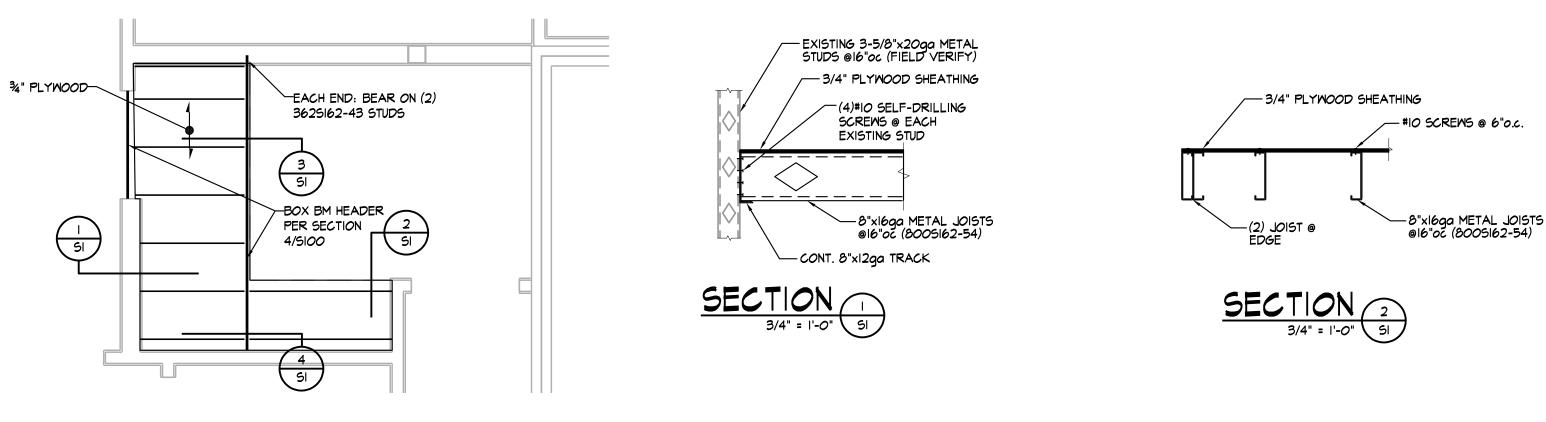
- The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. All conflicts, 2. inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding. 3. All design and construction work for this project shall conform to the
- All design and construction work for this project shall conform to the requirements of the 2018 International Building Code, as amended by the City of Lee's Summit, Missouri.
 These drawings are for this specific project and no other use is
- authorized. 5.
- Structural Design Load Criteria: A. Dead Load= 10 psf B. Live Load= 125 psf
- C. Lateral Loads:
- l.) Seismic: S5 = 0.1, S1 = 0.068, le = 1.0
- Site Classification D (assumed); Sds=0.108; Sdl=0.109

- Seismic Design Category B. Basic Seismic Force-Resisting System: Light Framed Walls with Shear Panels of All Other Materials R=2.0, Omega = 2.5, Cd = 1.75, V=0.054*W
- E. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2018 International Building Code.

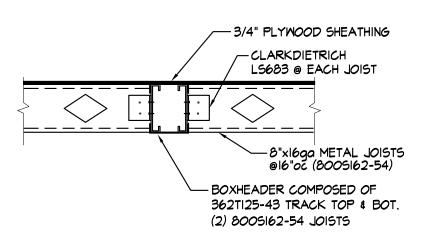
6. Light Gage Metal Structural Framing

- A. All load bearing, light gage structural studs, track, and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
 B. All materials shall be 33,000 psi minimum yield, except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.

- C. All properties, fabrication, and erection shall be in accordance with latest editions C. All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members."
 D. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
 E. Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for wind bracing shall be as shown on the plans.
 F. Prior to fabrication and/or erection, the contractor shall submit shop drawings complete with detail of erection, fabrication, attachments, anchorages, lintels, ect. for review by the architect/engineer.
- 7. Copyright and Disclaimer:
- A. All drawings in the structural set (S-series drawings) are A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
 B. I, Clark A. Basinger, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby
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SECTION (4)



BR3 PENROSE LANCE AGE 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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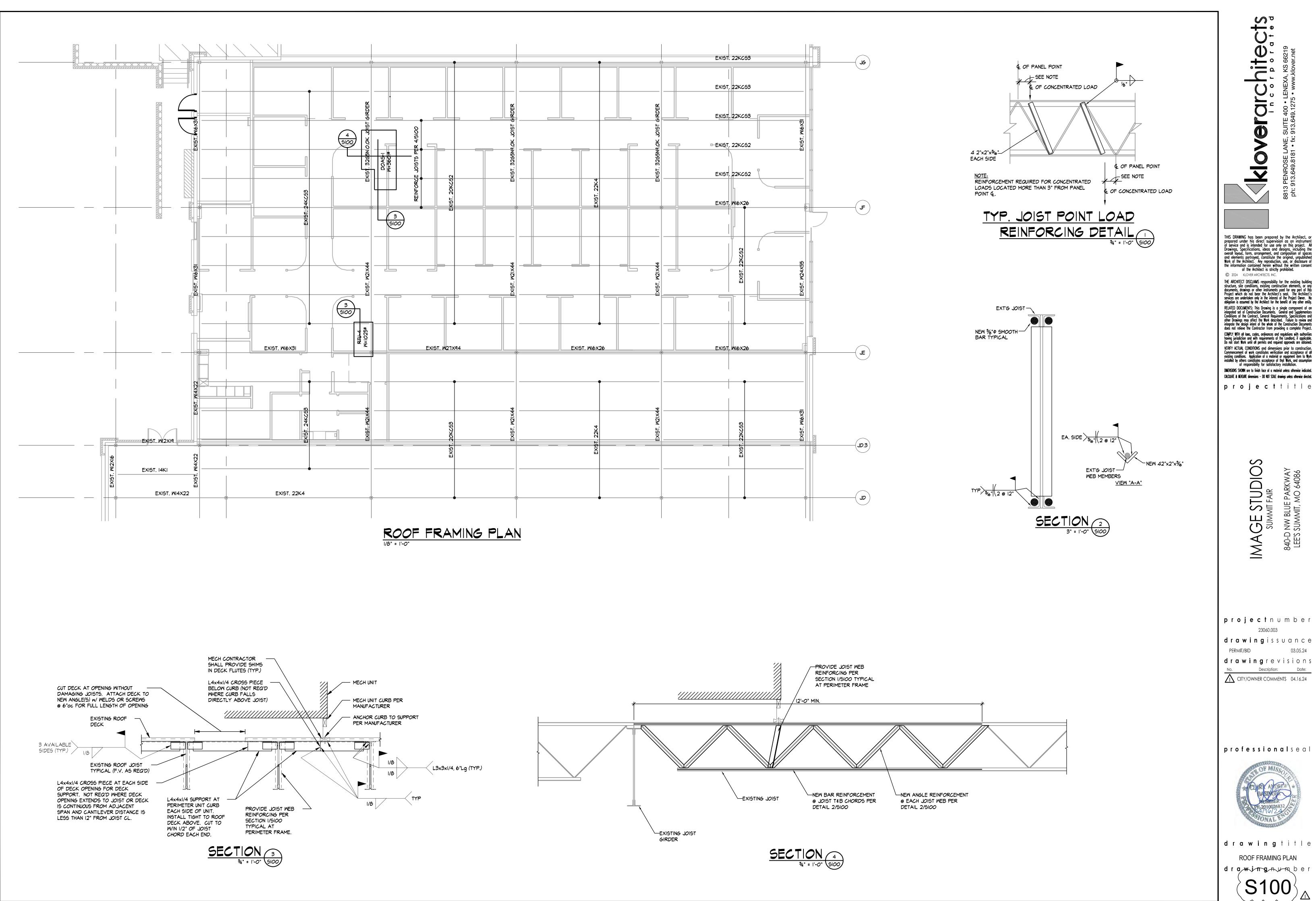
S001

- 3/4" PLYWOOD SHEATHING

CLARKDIETRICH LS683 @ EACH JOIST

- BOX HEADER COMPOSED OF 362T125-43 TRACK TOP & BOT. (2) 800S162-54 JOISTS

SECTION 3 3/4" = 1'-0" 51



MECHANICAL SPECIFICATIONS

1. GENERAL PROVISIONS: A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE

- PLUMBING AND MECHANICAL SYSTEMS OUTLINED. B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR
- APPROVAL AS REQUIRED BY THE AUTHORITIES
- C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE. D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
- E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL
- ACCEPTANCE F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY, PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY. SO THAT THE EXISTING ROOFING WARRANTY WILL BE
- MAINTAINED G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE. 2. OPERATION AND MAINTENANCE MANUALS:
- A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS. ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRAC
- B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATION AND MAINTENANCE MANUALS.
- C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE BOUND IN A 3-RING BINDER AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC.
- 3. MANUFACTURERS: A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN UNLESS NOTED OTHERWISE
- 4. MOTORS: A. PROVIDE THERMAL OVERLOAD PROTECTION FOR EACH MOTOR PROVIDED BY THIS WORK.
- 5 TESTING BALANCING AND CLEANING
- A. ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR COVERED WITH INSULATION
- B. SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS. C. FIRE PROTECTION PIPING SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA.
- D. DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE BUT NOT LESS THAN 60 PSI FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS
- E. NATURAL GAS PIPING SHALL BE PNEUMATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 50 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.
- F. DUCTWORK AND PIPING SHALL BE BALANCED BY QUALIFIED INDEPENDENT BALANCING PERSONNEL WHO HAVE PREVIOUS EXPERIENCE WITH BALANCING PROCEDURES AND ARE CERTIFIED BY THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) 1) BALANCING SHALL INCLUDE THE BALANCING OF THE EQUIPMENT AND AIR DISTRIBUTION SYSTEMS
- TO PROVIDE DESIGN QUANTITIES INDICATED AND VERIFICATION OF PERFORMANCE OF ALL EQUIPMENT AND AUTOMATIC CONTROLS. 2) WITH IN 30 DAYS OF THE COMPLETION OF THE TESTING AND BALANCING WORK, SUBMIT THE TEST
- AND BALANCING REPORT BEARING THE SIGNATURE OF THE TEST AND BALANCE ENGINEER. THI REPORTS SHALL BE CERTIFIED PROOF THAT THE SYSTEMS HAVE BEEN TESTED, ADJUSTED, AND BALANCED IN ACCORDANCE WITH THE REFERENCED STANDARDS' ARE AN ACCURATE REPRESENTATION OF HOW THE SYSTEMS HAVE BEEN INSTALLED AND ARE OPERATING. REPORTS SHALL BE BOUND IN A VINYL BINDER AND THE BINDER LABELED OR MAY BE AN ELECTRONIC PDF SUBMITTAL.
- G. BEFORE DOMESTIC WATER PIPING IS PLACED IN SERVICE, ALL DOMESTIC WATER DISTRIBUTION SYSTEMS, INCLUDING THOSE FOR COLD WATER AND HOT WATER SYSTEMS, SHALL BE FLUSHED, STERILIZED AND CHLORINATED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS. THE SYSTEMS HALL BE THOROUGHLY FLUSHED OF ALL DIRT AND FOREIGN MATTER, THEN FILLED WITH WATER TREATED WITH 50 PPM OF CHLORINE. DURING THE FILLING PROCESS, VALVES AND FAUCETS SHALL BE OPENED SEVERAL TIMES TO ASSURE TREATMENT OF THE ENTIRE SYSTEM. THE TREATED WATER SHALL BE LEFT IN THE SYSTEM FOR 24 HOURS AFTER WHICH TIME THE SYSTEM SHALL BE FLUSHED; IF THE RESIDUAL CHLORINE IS NOT LESS THAN 10 PPM, THE FLUSHING SHALL BE REPEATED. AFTER STERILIZATION, SAMPLES OF WATER IN THE SYSTEM SHALL BE APPROVED BY THE BOARD OF HEALTH.
- 6 PLUMBING
- A. PROVIDE AN APPROVED WATER HAMMER ARRESTOR FOR EACH PLUMBING FIXTURE SUPPLY AS REQUIRED BY FIXTURE MANUFACTURER.
- B. ALL EXPOSED WASTE PIPE SHALL BE CHROME PLATED BRASS PIPE, NO FERROUS PIPE. C. PROVIDE CLEANOUTS AT EACH CHANGE OF DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS.
- D. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND TRAPS.
- E. CLEANOUTS:
- 1) VINYL THE FLOOR: JR SMITH #4140, OR FOUAL 2) QUARRY THE FLOOR JR SMITH #4200 OR FOUAL
- 3) CARPETED FLOOR: JR SMITH #4020-Y, OR EQUAL. () UNFINISHED FLOOR: JR SMITH #4020, OR EQUA
- \ WALLY IR SMITH #4472 OR FOLIAL 24" ABOVE TH 6) WAREHOUSE FLOORS/FORK TRUCK AREAS: JR SMITH #4100, OR EQUAL, WITH HEAVY DUTY CAST IRON BODY AND ROUND ADJUSTABLE SCORIATED EXTRA HEAVY DUTY NICKEL BRONZE TOP.
- F. PROVIDE DIELECTRIC UNIONS WITH APPROPRIATE END CONNECTIONS TO MATCH THE PIPE SYSTEM IN WHICH INSTALLED (SCREWED, SOLDERED, OR FLANGED), PROVIDE DIELECTRIC UNIONS ON ALL PIPING CONNECTIONS TO HOT WATER HEATERS AND EXPANSION TANKS.
- G. WATER HEATERS:
- 1) EVERY WATER HEATER SHALL HAVE AN APPROVED MEANS INSTALLED ON THE COLD WATER SUPPLY LINE ABOVE THE EQUIPMENT TO PREVENT SIPHONING OF A STORAGE WATER HEATER OR TANK. 2) BOTTOM FED WATER HEATERS AND TANKS CONNECT TO WATER HEATERS SHALL HAVE A VACCUM
- RELIEF VALVE INSTALLED, ANSI Z21.22. 3) STORAGE HEATERS OPERATING ABOVE ATMOSPHERIC PRESSURE SHALL HAVE AN APPROVED
- PRESSURE RELIEF VALVE AND/OR TEMPERATURE RELIEF VALVE.
- H. ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES.
- 1) INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL. 2) INSTALL 3" AND LARGER PIPE AT 1/8" PER FOOT FALL.
- 7. PIPING:
- A. DOMESTIC COLD, HOT, AND HOT WATER RECIRCULATING (ABOVEGROUND).
- 1) TYPE L HARD DRAWN COPPER TUBING, ASTM B-88. a) WROUGHT COPPER SOLDERED FITTINGS, ASTM B75 ALLOY C12200. ANSI B16.22. MSS SP-104. b) MECHANICAL PRESS COPPER FITTINGS FOR USE IN PLUMBING OR MECHANICAL APPLICATIONS. ASME B16.22, ASME B16.51, or ASME B16.18. MECHANICAL PRESS COPPER FITTINGS SHALL CONFORM TO IAPMO PS-117 OR ASME B16 51
- 2) PEX, HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE MANUFACTURED TO THE REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE
- RATINGS FROM PLASTIC PIPE INSTITUTE IN ACCORDANCE WITH TR-4/03.
- a) PEX-A AND PEX-B MEETING ANSI/NSF61 AND ANSI/NSF372 STANDARDS FOR POTABLE WATER SAFETY AND LEAD-FREE STANDARDS AND MUST BE MARKED WITH "PW-G". "NSF-61-G" OR OTHER NSF-APPROVED MARKING. ASTM F2023 FOR USE WITH CHLORINATED WATER
- b) PEX MECHANICAL, CRIMP/INSERT OR EXPANSION FITTINGS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. INCREASE PEX PIPING SIZE TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER FOR SUPPLY MAINS.
- VALVES
- a) TO BE INSTALLED ON THE FIXTURE SUPPLY TO EACH PLUMBING FIXTURE. b) TO BE INSTALLED ON THE WATER SUPPLY SIDE TO EACH APPLIANCE OR MECHANICAL EQUIPMENT.
- 1. GATE VALVE: JOMAR T/S-301G OR EQUAL. LEAD-FREE NSF 61, ANSI B1.20.1.
- 2. GLOBE VALVE: JOMAR TGG OR EQUAL. 3. BALL VALVE: JOMAR JP100PxP OR EQUAL COMPACT LEAD FREE BRASS BALL VALVE. UL842, CSA 3371-12 & 3371-92, FM, CALIFORNIA CODE AB1953, NSF61 ANNEX G APPROVED.

4. BALL VALVE: JOMAR T-100NE OR EQUAL. UL842, FM, CSA, NSF 61-8, MSS SP-110

- B. DOMESTIC COLD, AND HOT WATER (UNDERGROUND).
- 1) TYPE L HARD DRAWN COPPER TUBING, ASTM B-88. a) WROUGHT COPPER SOLDERED FITTINGS. ASTM B75 ALLOY C12200. ANSI B16.22. MSS SP-104 b) MECHANICAL PRESS COPPER FITTINGS FOR USE IN PLUMBING OR MECHANICAL APPLICATIONS ASME B16 22 ASME B16.51, or ASME B16.18. MECHANICAL PRESS COPPER FITTINGS SHALL CONFORM TO IAPMO PS-117 OR
- ASME B16.51. 2) PEX, HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE MANUFACTURED TO THE
- REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE RATINGS FROM PLASTIC PIPE INSTITUTE IN ACCORDANCE WITH TR-4/03.
- a) PEX-A AND PEX-B MEETING ANSI/NSF61 AND ANSI/NSF372 STANDARDS FOR POTABLE WATER SAFETY AND LEAD-FREE STANDARDS AND MUST BE MARKED WITH "PW-G", "NSF-61-G" OR OTHER NSF-APPROVED MARKING. ASTM F2023 FOR USE WITH CHLORINATED WATER
- b) PEX MECHANICAL, CRIMP/INSERT OR EXPANSION FITTINGS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE.
- INCREASE PEX PIPING SIZE TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER FOR SUPPLY MAINS. c) HDPE, PIGMENTED BLUE THROUGHOUT, CTS SIZES 1"-2" AWWA C901 4710 DR9 PC250

SHALL COMPLY WITH NSF 372 AND SHALL HAVE A WEIGHTED AVERAGE LEAD CONTENT OF 0.25% OR LESS.

- IPS SIZES 2"-3", AWWA C901 4710 DR11 PC200. C. LEAD CONTENT OF WATER SUPPLY PIPE AND FITTINGS:
- 1) PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, UTILIZED IN THE WATER SUPPLY SYSTEM SHALL NOT HAVE MORE THAN 8% LEAD
- CONTENT 2) PIPE, PIPE FITTINGS, JOINTS, VALVES, FAUCETS, AND FIXTURE FITINGS UTILIZED TO SUPPLY WATER FOR DRINKING OR COOKING PURPOSES
- D. SANITARY SEWER AND VENTS. (UNDERGROUND, INTERIOR TO THE BUILDING).
 - ABS PIPE AND FITTINGS: ABS PIPE AND FITTINGS SHALL COMPLY WITH NSE 14. "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS," FOR PLASTIC PIPING COMPONENTS. INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL ABS PIPE: ASTM D 2661, SCHEDULE 40. ABS SOCKET FITTINGS: ASTM D 2661, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. SOLVENT CEMENT: ASTM D 2235.

- E SANITARY SEWER AND VENTS (ABOVE GROUND, INTERIOR TO THE BUILDING) D 2661, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. SOLVENT CEMENT: ASTM D 2235.
- 2) PVC PIPE AND FITTINGS: PVC PIPE AND FITTINGS SHALL COMPLY WITH NSF 14, "PLASTICS PIPING SYSTEMS FITTINGS: ASTM D 2665, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PIPE. ADHESIVE PRIMER: ASTM F 656. SOLVENT CEMENT: ASTM D 2564.
- 3) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL
- 4) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.
- F. CONDENSATE DRAINS & INDIRECT WASTE (ABOVEGROUND) 1) DWV, WROUGHT COPPER, ANSI B-16.29 (CONDENSATE INSIDE BUILDING). 2) DWV, WROUGHT COPPER, ANSI B-16.29 (WATER HEATER T&P).
- G. REFRIGERANT
- COPPER TUBING. 2) WROUGHT COPPER, ANSI B16.22, STREAMLINED PATTERN, FITTINGS. BRAZED JOINTS, AWS A 5.8, CLASSIFICATION BAG-1 (SILVER). 3) TUBING SHALL BE FACTORY CLEANED, READY FOR INSTALLATION, AND HAVE ENDS CAPPED TO
- PROTECT CLEANLINESS OF PIPE INTERIORS PRIOR TO SHIPPING. 4) SIZE AND INSTALLATION OF PIPE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- H. NATURAL GAS.
- 1) BLACK STEEL PIPE, SCHEDULE 40, ASTM A53. a) PIPE 3" AND SMALLER; 150 LB. MALLEABLE IRON, THREADED FITTINGS. b) PIPE 4" AND SMALLER; VIEGA MEGAPRESS G FOR WATER AND GAS. CSA LC4, TSSA/ASME B31 FOR USE WITH ASTM A53 SCHEDULE 40 BLACK IRON PIPE.
- c) PIPE 2-1/2" AND LARGER, WELDED. d) PLUG VALVE: ROCKWELL NORDSTROM FIGURE NO. 142 OR 143. e) BALL VALVE: JOMAR T-100NE. APPROVALS- UL842, FM, CSA, NSF 61-8, MSS SP-110
- 2) GAS PIPING LABELING a) ALL ELEVATED PRESSURE GAS PIPING SHALL BE LABELED EVERY 40 FEET WITH SIGNS INDICATING "ELEVATED PRESSURE"
- 3) GAS PIPING PAINTING:
- LOCATED ON THE ROOF I. ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ELCEN. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.
- J. SLEEVES 1) PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK. ALL SLEEVES
- SHALL BE OF SUFFICIENT SIZE TO PERMIT PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION AND TO ACCOMMODATE PIPE INSULATION.
- SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT 3) ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WATERPROOF SEAL.
- 4) PROTECTION AGAINST CONTACT: METALLIC PIPING, EXCEPT FOR CAST IRON, DUCTILE IRON AND GALVANIZED
- BE PROVIDED WITH A RELIEVING ARCH, OR A PIPE SLEEVE SHALL BE BUILT INTO THE FOUNDATION WALL. THE SLEEVE
- 5) PLUMBING VENTS: FLASH ROOF VENT INTO ROOFING SYSTEM AS REQUIRED BY THE ROOFING CONTRACTOR TO MAINTAIN EXISTING ROOF WARRANTY. ALL PLUMBING VENT TERMINALS SHAL
- TERMINATE A MINIMUM OF 12" ABOVE ROOF OR EQUAL TO HEIGHT OF PARAPET, WHICHEVER IS GREATER. O. PROVIDE CHROME PLATED ESCUTCHEONS ON ALL PIPE ENTERING FINISHED AREAS.
- 8. WATER HEATERS
- A. GAS-FIRED, TANKLESS, DOMESTIC-WATER HEATERS
- APPLICATION.
- C. CONSTRUCTION: COPPER PIPING OR TUBING COMPLYING WITH NSF 61 AND NSF 372 BARRIER MATERIAL FOR POTABLE WATER, WITHOUT STORAGE CAPACITY
- 1. PRESSURE RATING: 150 PSIG.
- 2. HEAT EXCHANGER: STAINLESS STEEL 3 INSULATION: COMPLY WITH ASHRAF/IES
- 4. JACKET: METAL, WITH ENAMELED FINISH, OR PLASTIC. 5. BURNER: FOR USE WITH TANKLESS, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
- 6. AUTOMATIC IGNITION: MANUFACTURER'S PROPRIETARY SYSTEM FOR AUTOMATIC, GAS IGNITION.
- 7. TEMPERATURE CONTROL: ADJUSTABLE THERMOSTAT. D. SUPPORT: BRACKET FOR WALL MOUNTING
- E. DOMESTIC-WATER EXPANSION TANKS:
- 1. DESCRIPTION: STEEL, PRESSURE-RATED TANK CONSTRUCTED WITH WELDED JOINTS AND
- FACTORY-INSTALLED, BUTYL-RUBBER DIAPHRAGM. INCLUDE AIR PRECHARGE TO MINIMUM SYSTEM-OPERATING PRESSURE AT TANK. 2. CONSTRUCTION:
- a. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING. INCLUDE ASME B1.20.1 PIPE THREAD
- b. INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER
- c. AIR-CHARGING VALVE: FACTORY INSTALLED.
- 3. CAPACITY AND CHARACTERISTICS a. WORKING-PRESSURE RATING: 150 PSIG .
- 9. INSULATION AND DUCT LINING

ARMAFLEX OR ARMAFLEX 2000.

AS SPECIFIED BELOW

c) HOT WATER RECIRCULATING

e) REFRIGERANT SUCTION

C. PIPE INSULATION - BELOW GRADE:

4) INSULATION SCHEDULE

SMACNA STANDARDS.

a) DOMESTIC HOT WATER

D. DUCTWORK: ACOUSTICAL INSULATION.

b) HOT WATER RECIRCULATING 1-1/2"

d) CONDENSATE DRAINS INSIDE BUILDING 1/2"

6) INSULATION SCHEDULE

a) DOMESTIC COLD WATER

b) DOMESTIC HOT WATER

- A. ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE HAZARD CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25. A FUEL CONTRIBUTION RATING OF NOT OVER 50, AND A SMOKE DEVELOPED RATING OF NOT OVER 50. IN ACCORDANCE WITH NFPA.
- B. PIPE INSULATION ABOVE GRADE: 1) THE PIPING INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 Btu PER in/hr*sqft*F° OR LESS.

2) PVC PIPE AND FITTINGS: PVC PIPE AND FITTINGS SHALL COMPLY WITH NSF 14. "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS." FOR PLASTIC PIPING COMPONENTS, INCLUDE MARKING WITH "NSE-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSE-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL PVC PIPE: ASTM D 2665, DRAIN, WASTE, AND VENT. PVC SOCKET FITTINGS: ASTM D 2665, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PIPE. ADHESIVE PRIMER: ASTM F 656. SOLVENT CEMENT: ASTM D 2564

3) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL

4) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.

ABS PIPE AND FITTINGS: ABS PIPE AND FITTINGS SHALL COMPLY WITH NSF 14, "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS " FOR PLASTIC PIPING COMPONENTS, INCLUDE MARKING WITH "NSE-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING, SOLID-WALL ABS PIPE: ASTM D 2661, SCHEDULE 40. CELLULAR-CORE ABS PIPE: ASTM F 628, SCHEDULE 40. ABS SOCKET FITTINGS: ASTM

COMPONENTS AND RELATED MATERIALS." FOR PLASTIC PIPING COMPONENTS, INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING, SOLID-WALL PVC PIPE: ASTM D 2665, DRAIN, CELLULAR-CORE PVC PIPE: ASTM F 891, SCHEDULE 40. WASTE, AND VENT. PVC SOCKET

MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301.

1) ASTM B 280, TYPE ACR, HARD-DRAWN STRAIGHT LENGTHS, AND SOFT-ANNEALED COILS, SEAMLESS

a) ALL BLACK STEEL GAS PIPING LOCATED EXTERIOR TO THE BUILDING SHALL BE PRIMED AND PAINTED TO FITHER MATCH ADJACENT EXTERIOR WHERE LOCATED ON OR NEAR EXTERIOR WALL AND PAINTED SAFETY YELLOW WHERE

2) INTERIOR PARTITIONS: 16 GAGE GALVANIZED STEEL. PACK BETWEEN PIPE AND SLEEVE WITH FIRE

COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY

STEEL SHALL NOT BE PLACED IN DIRECT CONTACT WITH STEEL FRAMING MEMBERS, CONCRETE, OR CINDER WALLS AND FLOORS OR OTHER MASONRY. METALLIC PIPING SHALL NOT BE PLACED IN DIRECT CONTACT WITH CORROSIVE SOIL. SHEATHING USED TO PREVENT DIRECT CONTACT SHALL HAVE A THICKNESS OF GREATER THAN .008: AND THE SHEATHING SHALL BE MADE OF PLASTIC. ANY PIPE THAT PASSES THROUGH A FOUNDATION WALL OR FOOTING SHAL

SHALL BE TWO SIZES GREATER THAN THE PIPE PASSING THOUGH THE WALL OR FOOTING

B. STANDARD: ANSI Z21.10.3/CSA 4.3 FOR GAS-FIRED, INSTANTANEOUS, DOMESTIC-WATER HEATERS FOR INDOOR

90.1

TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.

2) FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, ASJ JACKET, FACTORY APPLIED PRESSURE SEALING LONGITUDE LAP JOINT, NO STAPLES, ZESTON PREMOLDED PVC FITTING COVERS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS 3) FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSLIT OR PRESLIT WITH PRESSURE SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO ARMSTRONG AP

4) FOR NON CIRCULATING SYSTEMS, THE FIRST 8 FEET OF INLET AND OUTLET PIPING BETWEEN THE TANK AND THE HEAT TRAP (INCLUDING THE HEAT TRAP) MUST BE INSULATED. 5) FOR CIRCULATING SYSTEMS, ALL HOT WATER PIPING IN THE CIRCULATION LOOP MUST BE INSULATED

1" FOR PIPING UP TO 1-1/4"Ø, & 1-1/2" FOR PIPING 1-1/2"Ø AND LARGER

3/4" FOR PIPING UP TO 1-1/4"Ø, & 1" FOR PIPING 1-1/2"Ø AND LARGER

1) THE PIPING INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 Btu PER in/hr*sqft*F° OR LESS. 2) FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSLIT OR PRESLIT WITH PRESSURE SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO KFLEX INSUL-TUBE OR EQUAL RATED FOR UNDERGROUND INSTALLATION ABOVE THE WATER TABLE. COVER PIPING WITH A CLEAN FILL SUCH AS SAND (3"-5" LAYER) TO PROTECT INSULATION FROM COMPACTION.

3) PRE-INSULATED PIPE SYSTEMS WITH CLOSED CELL PEX-FOAM INSULATION AND COVERED BY A WATERPROOF CORRUGATED HDPE JACKET. UPONOR ECOFLEX OR EQUAL. ASTM F876, F877, CSA B137.5

1) DUCT LINING: 2 LB/CF, THICKNESS AS SCHEDULED, AIR STREAM SIDE COATED, INSTALL PER

MECHANICAL SPECIFICATIONS (CONTINUED)

a) DUCT LINING SCHEDULE (1) RECTANGULAR SUPPLY DUCT 1/2": THROUGHOUT THE FIRST 10 FEET OF DUCT.

(2) RETURN AIR DUCT 1/2" : THROUGHOUT THE FIRST 10 FEET OF DUCT.

E. DUCTWORK: THERMAL INSULATION. 1) DUCT COVERING: 3/4 LB/CF, FIBERGLASS BLANKET WITH FACTORY APPLIED VAPOR BARRIER AND

FACING, THICKNESS AS SCHEDULED, INSTALLATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

a) DUCT COVERING SCHEDULE: MINIMUM R-6

(1) ROUND SUPPLY DUCT (2) RECTANGULAR SUPPLY DUCT (3) RETURN AIR DUCT

(4) OUTDOOR AIR

2) EXPOSED SPIRAL DUCT. a) DOUBLE WALL SPIRAL - DOUBLE WALL INSULATED SPIRAL DUCT AND FITTINGS WITH PERFORATED

3". R8

1"LINER WITH A K VALUE OF 0.27

b) SPIRAL DUCT LINING: JOHNS MANVILLE SPIRACOUSTIC PLUS ROUND DUCT LINER SYSTEM, VSD, SD, AND LD SIZES, 8"Ø AND UP. MEETS ASTM E 84 25/50 FLAME AND SMOKE, ASHRAE 62, MEA#237-86-M, SMACNA APPLICATION STANDARDS FOR DUCT LINERS, NAIMA FIBERBLASS DUCT LINER STANDARD. 1" THICKNESS, AIR STREAM SIDE COATED, INSTALL PER SMACNA STANDARDS.

3) DUCT COVERING (EXTERIOR SUPPLY AND RETURN) a) EXTERIOR INSULATION: JOHN MANVILLE XSPECT ISOFOAM APF BOARD, 1-1/2" THICK R-9.3, UNIFORM CLOSED-CELL POLYISOCYANURATE FOAM CORE BONDED WITH A FOIL FACER. INSTALLED PER MANUFACTURER'S REQUIREMENTS. COVER ISOFOAM BOARD INSULATION WITH POLYGUARD ALUMAGUARD, COMPOSITE MEMBRANE MULTI-PLY EMBOSSED UV-RISISTANT ALUMINUM FOIL/POLYMER LAMINATE, ALL WEATHER FLEXIBLE WEATHER-PROOFING JACKET. MINIMUM R-8 RATING. MINIMUM R-12 CLIMATE ZONES 5-8.

a) EXTERIOR INSULATION: JOHNS MANVILLE XSPECT ISOFOAM APF BOARD, 2" THICK R-13, UNIFORM CLOSED-CELL POLYISOCYANURATE FOAM CORE BONDED WITH A FOIL FACER. INSTALLED PER MANUFACTURER'S REQUIREMENTS. COVER ISOFOAM BOARD INSULATION WITH POLYGUARD ALUMAGUARD, COMPOSITE MEMBRANE MULTI-PLY EMBOSSED UV-RESISTANT ALUMINUM FOIL/POLYMER LAMINATE, ALL WEATHER FLEXIBLE WEATHER-PROOFING JACKET, MINIMUM R-12 RATING.

10. DUCTWORK:

A. ALL DUCTWORK, UNLESS OTHERWISE INDICATED, SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL COMPLYING WITH ASTM A 527, LOCKFORMING QUALITY, WITH G 90 ZINC COATING IN ACCORDANCE WITH ASTM A 525; AND MILL PHOSPHATIZED FOR EXPOSED LOCATIONS

B. WHERE DUCTWORK IS INDICATED TO BE EXPOSED TO VIEW IN OCCUPIED SPACES, PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING SEAM MARKS, ROLLER MARKS

STAINS AND DISCOLORATIONS, AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING

C. DUCTWORK, METAL GAUGES, REINFORCING, ETC. SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION FOR A 2 INCH WATER GAUGE STATIC PRESSURE 1) RECTANGULAR DUC

a) ELBOWS, UNLESS INDICATED OTHERWISE SHALL BE CONSTRUCTED WITH CENTERLINE RADIUS OF NOT LESS THAN 1.5 DUCT WIDTH OR SQUARE ELBOW WITH DOUBLE WALL STREAMLINE VANES. b) RETURN AIR ACOUSTICAL ELBOWS AND SOUND BOOTS SHALL BE A SQUARE ELBOW WITH NO TURNING VANES.

c) SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3. 2) ROUND AND OVAL SPIRAL SEAM DUCT

a) PROVIDE RADIUS TYPE FITTINGS FABRICATED OF MULTIPLE SECTIONS WITH MAXIMUM 15 DEGREE CHANGE OF DIRECTION PER SECTION. UNLESS SPECIFICALLY DETAILED OTHERWISE. USE 45 DEGREE LATERALS FOR BRANCH TAKEOFF CONNECTIONS. WHERE 90 DEGREE BRANCHES ARE INDICATED PROVIDE CONICAL TYPE TEES

b) SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3 c) AS AN OPTION, PROVIDE FACTORY-FABRICATED DUCT AND FITTINGS, IN LIEU OF SHOP-

FABRICATED DUCT AND FITTINGS. (1) ELBOWS: ONE PIECE CONSTRUCTION FOR 90 DEGREES AND 45 DEGREE ELBOW 14" AND SMALLER. PROVIDE MULTIPLE GORE CONSTRUCTION FOR LARGER DIAMETERS WITH

STANDING SEAM CIRCUMFERENTIAL JOINT. (2) DIVIDED FLOW FITTINGS: 90 DEGREE TEES, CONSTRUCTED WITH SADDLE TAP SPOT WELDED AND BONDED TO DUCT FITTING BODY

d) ROUND LONGITUDINAL SEAM DUCT. USE FOR RIGID METAL DUCT ON LEAVING SIDE OF DUCT. IN CONCEALED LOCATIONS FOR EXTENSION TO FLEX FOR DIFFUSERS, UNLESS OTHERWISE

D. DUCT SIZES SHOWN ON THE DRAWINGS ARE SHEETMETAL SIZES, ALLOWANCE FOR DUCT LINER HAS BEEN MADE WHERE APPLICABLE.

E. INSTALLATION OF METAL DUCTWORK:

INDICATED

1) GENERAL: ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE AIR-TIGHT SYSTEMS (MAXIMUM 5% LEAKAGE) WITH NO OBJECTIONABLE NOISE, AND CAPABLE OF PERFORMING INDICATED SERVICE. INSTALL EACH RUN WITH MINIMUM NUMBER OF JOINTS. ALIGN DUCTWORK ACCURATELY WITH INTERNAL SURFACES SMOOTH. SUPPORT DUCTS RIGIDLY WITH SUITABLE STRAPS, BRACES, HANGERS AND ANCHORS IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" LATEST EDITION DUCT HANGERS SHALL BE OF THE TYPE WHICH WILL HOLD DUCTS TRUE-TO-SHAPE AND TO PREVENT

BUCKLING. SUPPORT VERTICAL DUCTS AT EVERY FLOO 2) AUXILIARY STEEL: PROVIDE AUXILIARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT DUCTWORK. 3) ROUTING: LOCATE DUCTWORK RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND DIAGRAMS, DETAILS AND NOTATIONS OR, IF NOT OTHERWISE INDICATED, RUN DUCTWORK IN

SHORTEST ROUTE WHICH DOES NOT OBSTRUCT USABLE SPACE OR BLOCK ACCESS FOR SERVICING BUILDING AND ITS EQUIPMENT. HOLD DUCTS CLOSE TO WALLS, OVERHEAD CONSTRUCTION COLUMNS, AND OTHER STRUCTURAL AND PERMANENT ENCLOSURE ELEMENTS OF BUILDING. WHEREVER POSSIBLE IN FINISHED AND OCCUPIED SPACES, CONCEAL DUCTWORK FROM VIEW, BY LOCATING IN MECHANICAL SHAFTS, HOLLOW WALL CONSTRUCTION OR ABOVE SUSPENDED CEILINGS. DO NOT ENCASE HORIZONTAL RUNS IN SOLID PARTITIONS, EXCEPT AS SPECIFICALLY SHOWN. COORDINATE LAYOUT WITH SUSPENDED CEILING AND LIGHTING LAYOUTS AND SIMILAR FINISHED WORK.

4) DO NOT ROUTE DUCTWORK THROUGH ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES, UNLESS INDICATED OTHERWISE. 5) PENETRATIONS:

a) WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS OR EXTERIOR WALLS, AND ARE EXPOSED O VIEW, CONCEAL SPACE BETWEEN OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME GAGE AS DUCT. OVERLAP OPENING ON 4 SIDES BY AT LEAST 1-1/2". FASTEN TO DUCT AND WALL

b) WHERE DUCTS PASS THROUGH FIRE-RATED FLOORS, WALLS, OR PARTITIONS, PROVIDE FIRESTOPPING BETWEEN DUCT AND WALL 6) COORDINATION: COORDINATE DUCT INSTALLATIONS WITH INSTALLATION OF ACCESSORIES,

DAMPERS, COIL FRAMES, EQUIPMENT, CONTROLS, AND OTHER ASSOCIATED WORK OF THE DUCTWORK

7) INSTALLATION: INSTALL METAL DUCTWORK IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION. F. EQUIPMENT CONNECTIONS:

1) CONNECT METAL DUCTWORK TO EQUIPMENT AS INDICATED, PROVIDE FLEXIBLE CONNECTION FOR EACH DUCTWORK CONNECTION TO EQUIPMENT MOUNTED ON VIBRATION ISOLATORS, AND/OR EQUIPMENT CONTAINING ROTATING MACHINERY. PROVIDE ACCESS DOORS AS REQUIRED.

G. SEAL ALL CONCEALED DUCTWORK JOINTS WITH NON-HARDENING, NON-MIGRATING MASTIC SEALANT, AS RECOMMENDED FOR SEALING SEAMS AND JOINTS IN DUCTWORK. OIL BASE CAULKING AND GLAZING COMPOUNDS SHALL NOT BE ACCEPTABLE. DUCTS SHALL BE SEALED TO THE CLASS LEVEL LISTED BELOW. 1) UNCONDITIONED SPACES CLASS B CLASS A CLASS C CLASS B 2) CONDITIONED SPACES (PLENUM) CLASS C CLASS B CLASS B CLASS C SUPPLY ≤ 2" W.C. SUPPLY > 2" W.C. EXHAUST RETURN

11. FLEXIBLE DUCT:

A. ATCO #086 (R-6), OR EQUAL. B. FACTORY APPLIED INSULATION AND VAPOR BARRIER, 1-1/2" THICK.

C. MAXIMUM LENGTH OF 5'-0". 12. FLUES AND ACCESSORIES:

A. FLUE FOR GAS FIRED CONDENSING WATER HEATER SHALL BE AS RECOMMENDED BY THE

GAS APPLIANCE MANUFACTURER. FLUES SHALL BE SCHEDULE 40, PVC OR CPVC PIPE PER THE MANUFACTURERS INSTALLATION REQUIREMENT B. PROVIDE MANUFACTURER'S STANDARD ACCESSORY ITEMS INCLUDING BIRD PROOF TOP, STORM COLLAR,

ROOF THIMBLE, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. ROOF THIMBLES THROUGH THE BUILDING ROOF SHALL BE SUITABLE FOR USE WITH THE ROOF PROVIDED.

13. DOAS UNITS:

A. UNIT SHALL BE FACTORY-ASSEMBLED AND TESTED, DESIGNED FOR ROOF INSTALLATION, AND SHALL CONSIST OF SCROLL TYPE COMPRESSOR(S), CONDENSERS, EVAPORATOR COILS, THERMAL EXPANSION VALVE, CONDENSATE DRAIN PAN, CONDENSER AND EVAPORATOR FANS, CONDENSER FANS TO BE SEQUENCED. REFRIGERATION CONTROLS, GAS FIRED HEAT EXCHANGER OR ELECTRIC HEATING SECTION, FILTERS, AND DAMPERS. CAPACITIES AND ELECTRICAL CHARACTERISTICS SHALL BE AS SCHEDULED ON THE DRAWINGS

B. COMPRESSOR(S): UNIT SHALL INCLUDE VIBRATION ISOLATORS AND CRANKCASE HEATER. REFRIGERANT CIRCUIT SHALL INCLUDE A FILTER DRYER, SIGHT GLASS, COMPRESSOR SERVICE VALVES, AND LIQUID LINE SERVICE VALVES.

C. SAFETY CONTROLS SHALL INCLUDE: a) LOW PRESSURE CUTOUT, MANUAL RESET

) HIGH PRESSURE CUTOUT, MANUAL RESET.) COMPRESSOR MOTOR OVERLOAD PROTECTION, MANUAL RESET.

d) ANTI-RECYCLING TIMING DEVICE. e) ADJUSTABLE LOW-AMBIENT LOCKOUT. f) OIL PRESSURE SWITCH.

D. REFRIGERANT COIL: ALUMINUM FINS BONDED TO SEAMLESS COPPER TUBE BY MEANS OF MECHANICAL EXPANSION. AN EQUALIZING TYPE VERTICAL DISTRIBUTOR SHALL ENSURE EACH COIL CIRCUIT RECEIVES THE SAME AMOUNT OF REFRIGERANT

- E. ECONOMIZER SHALL CONSIST OF RETURN AIR DAMPER, OUTDOOR AIR DAMPER, AND BAROMETRIC RELIEF DAMPER. PROVIDE POWERED EXHAUST FAN WITH MANUFACTURER'S STANDARD CONTROLS FOR UNITS SCHEDULED ON THE DRAWINGS.
- F. GAS HEAT: INDIRECT FIRED, GAS HEAT EXCHANGER, AUTOMATIC SPARK IGNITION, MANUFACTURER'S STANDARD GAS TRAIN WITH REGULATOR (IF REQUIRED), AGA APPROVED. VERIFY GAS SERVICE

PRESSURE TO INDIVIDUAL ROOFTOP UNITS. G. ROOFTOP UNITS SHALL BE WIRED TO SHUTDOWN ON A SIGNAL FROM THE SMOKE DETECTORS AND SHALL

AUTOMATICALLY RESET WHEN THE SMOKE DETECTORS ARE RESET

	MECHANICAL SPECIFICATIONS (CONTINUED)
4. ROOFTOP UNITS: A. UNIT SHALL BE FACT(ORY-ASSEMBLED AND TESTED, DESIGNED FOR ROOF INSTALLATION, AND SHALL CONSIST OF SCROLL TYPE COMPRESSOR(S),
CONDENSERS, EVAPO BE SEQUENCED. REF	ORATOR COILS, THERMAL EXPANSION VALVE, CONDENSATE DRAIN PAN, CONDENSER AND EVAPORATOR FANS, CONDENSER FANS TO RIGERATION CONTROLS, GAS FIRED HEAT EXCHANGER OR ELECTRIC HEATING SECTION, FILTERS, AND DAMPERS. CAPACITIES AND CTERISTICS SHALL BE AS SCHEDULED ON THE DRAWINGS.
	NIT SHALL INCLUDE VIBRATION ISOLATORS AND CRANKCASE HEATER. REFRIGERANT IDE A FILTER DRYER, SIGHT GLASS, COMPRESSOR SERVICE VALVES, AND LIQUID 3.
C. SAFETY CONTROLS S	SHALL INCLUDE:
b) HIGH PRESSURE c) COMPRESSOR MO d) ANTI-RECYCLING	N-AMBIENT LOCKOUT.
EXPANSION. AN EQUA	ALUMINUM FINS BONDED TO SEAMLESS COPPER TUBE BY MEANS OF MECHANICAL ALIZING TYPE VERTICAL DISTRIBUTOR SHALL ENSURE EACH COIL CIRCUIT AMOUNT OF REFRIGERANT.
	CONSIST OF RETURN AIR DAMPER, OUTDOOR AIR DAMPER, AND BAROMETRIC RELIEF OWERED EXHAUST FAN WITH MANUFACTURER'S STANDARD CONTROLS FOR UNITS DRAWINGS.
STANDARD GAS TRAIN	FIRED, GAS HEAT EXCHANGER, AUTOMATIC SPARK IGNITION, MANUFACTURER'S N WITH REGULATOR (IF REQUIRED), AGA APPROVED. VERIFY GAS SERVICE DUAL ROOFTOP UNITS.
	CTRICAL RESISTANCE HEATER WITH RESET LIMIT PROTECTION, SINGLE POINT POWER SUPPLY IRE HEATER ELEMENTS WITH INDIVIDUAL FUSES.
	ALL BE WIRED TO SHUTDOWN ON A SIGNAL FROM THE SMOKE DETECTORS AND SHALL ET WHEN THE SMOKE DETECTORS ARE RESET.
	AND WIRING CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE TEMPERATURE IALL BE PROVIDED BY THIS CONTRACTOR, UNLESS SPECIFICALLY SHOWN ON THE IS OR SPECIFICATIONS.
NEAT WORKMANLIKE M	RING, WITHOUT SPLICES BETWEEN TERMINAL POINTS, COLOR CODED. INSTALL IN JANNER, SECURELY FASTENED. INSTALL IN ACCORDANCE WITH NATIONAL D THE ELECTRICAL SPECIFICATIONS.
,	OVER 25 VOLT WITH COLOR CODED NUMBER 12 WIRE.
	JNDER 25 VOLT WITH COLOR CODED NUMBER 18 WIRE WITH 0.031 INCH HIGH DEGREES F PLASTIC INSULATION ON EACH CONDUCTOR AND PLASTIC SHEATH OVER
-,	IC CIRCUITS WITH COLOR CODED NUMBER 22 WIRE WITH 0.023 INCH ULATION ON EACH CONDUCTOR WITH PLASTIC JACKETED COPPER SHIELD OVER
	AGE CIRCUITS, LOCATED IN CONCRETE SLABS AND MASONRY WALLS, OR EXPOSED 5, IN ELECTRIC CONDUIT.
VOLTAGE WIRING MA	AS USED AS AIR PLENUMS SHALL BE IN ELECTRIC CONDUIT EXCEPT THAT LOW AY BE TEFLON COATED, ALUMINUM SHEATHED CABLE OR OTHER WIRE OVED FOR INSTALLATION IN AIR PLENUMS, WHERE ACCEPTABLE BY LOCAL
	AS NOT USED FOR AIR MOVEMENT SHALL BE IN ELECTRIC METALLIC TUBING GE WIRING MAY BE IN APPROVED SIGNAL CABLE WHERE ACCEPTED BY LOCAL
	TROLS TO HAVE A 5°F DEADBAND AND SETPOINT OVERLAP RESTRICTIONS. NTROLS SETBACK TO BE 55°F (HEAT) AND 85° (COOL), 2-HOUR OCCUPANT OVERRIDE,
D. THERMOSTATIC CONT	IROLS TO HAVE A 5°F DEADBAND AND SETPOINT OVERLAP RESTRICTIONS.
	NECT, DEMOLISH, AND REMOVE ABANDONED MECHANICAL MATERIALS AND EQUIPMENT OVED AND NOT INDICATED TO BE SALVAGED OR REMAIN.
/	REMOVE, EXISTING MECHANICAL EQUIPMENT INDICATED TO BE REMOVED AND
2) ALL MATERIALS AND REMOVED, AND STO "LIKE NEW" CONDITIC REPAINTED AS REQU ANY ITEMS WHICH BI	R EQUIPMENT TO THE LOCATION DESIGNATED BY THE OWNER FOR STORAGE. D EQUIPMENT DESIGNATED TO BE REUSED OR RELOCATED SHALL BE CAREFULLY RED UNTIL NEEDED FOR REMODELING WORK. ALL ITEMS SHALL BE RESTORED TO ON WITH RUST OR CORROSION REMOVED, SURFACE PAINT TOUCHED UP OR JIRED TO MATCH NEW CONSTRUCTION, AND THOROUGHLY CLEANED AND INSPECTED. ECOME DAMAGED BEYOND REPAIR AS A RESULT OF CONSTRUCTION OR DEMOLITION REPLACED WITH NEW MATERIAL EQUIVALENT IN EVERY RESPECT.
	IUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND ATED TO BE SALVAGED.
BARRIERS TO KEEP DIF	MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE RT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE RIERS AFTER REMODELING OPERATIONS ARE COMPLETE.
SERVING OTHER AREA REMODELING LIMITS. \ DEMOLISHED, REROUT	ID PROTECT MECHANICAL SERVICES PASSING THROUGH REMODELING AREA AND IS OUTSIDE THE REMODELING LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE WHERE MECHANICAL SERVICES ARE LOCATED IN A WALL, ETC. TO BE TE PIPING TO NEW OR EXISTING CONSTRUCTION TO MAINTAIN CONTINUITY OF THE ICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
F. REMOVE ALL PIPING T PIPE.	O BE DEMOLISHED BACK TO PIPE MAIN OR EDGE OF PROJECT AREA, AND CAP
NOT INTERFERE WITH ARCHITECT. REMOVE	MBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NEW INSTALLATIONS. PIPING AND DUCTS TO REMAIN SHALL BE APPROVED BY THE MATERIALS ABOVE ACCESSIBLE CEILINGS. DRAIN AND CAP PIPING AND DUCTS ABOVE CEILING OR BELOW FLOOR, CONCEALED FROM VIEW, EXCEPT AS OTHERWISE & TO MATCH EXISTING.

MECHANICAL SPECIFICATIONS (CONTINUED)

H. PIPE AND DUCT SHALL BE CONCEALED WITH NEW OR EXISTING CONSTRUCTION WHENEVER POSSIBLE, UNLESS INDICATED OTHERWISE.

FIRE PROTECTION NOTE:

- THE EXISTING SPACE IS PROTECTED WITH AN EXISTING WET PIPE SPRINKLER SYSTEM. RELOCATE AND PROVIDE ADDITIONAL SPRINKLER HEADS AND PIPING AS REQUIRED FOR THE NEW CONSTRUCTION. SPRINKLER HEADS IN FINISHED CEILINGS SHALL BE SEMI-RECESSED PENDENT TYPE (VERIFY FINISH). SPRINKLER HEADS IN ROOMS WITHOUT CEILINGS SHALL BE UPRIGHT BRASS TYPE HEADS.
- SPRINKLER WORK SHALL BE PERFORMED BY A LICENSED SPRINKLER CONTRACTOR PRE-APPROVED BY THE OWNER/LANDLORD.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR NEW WALL CONSTRUCTION. 4. SPRINKLER PIPING SHALL MATCH EXISTING AND COMPLY WITH NFPA 13.
- SPRINKLER SYSTEM (SHOP DRAWINGS) SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY AND OWNERS/LANDLORD'S INSURANCE CARRIER PRIOR TO START OF WORK.

CODE INFORMATION

2018- INTERNATIONAL MECHANICAL CODE 2018 - INTERNATIONAL PLUMBING CODE 2018 - INTERNATIONAL FIRE CODE 2018 - INTERNATIONAL FUEL GAS CODE

2017 - NATIONAL ELECTRIC CODE

BC PROJECT #: 23615

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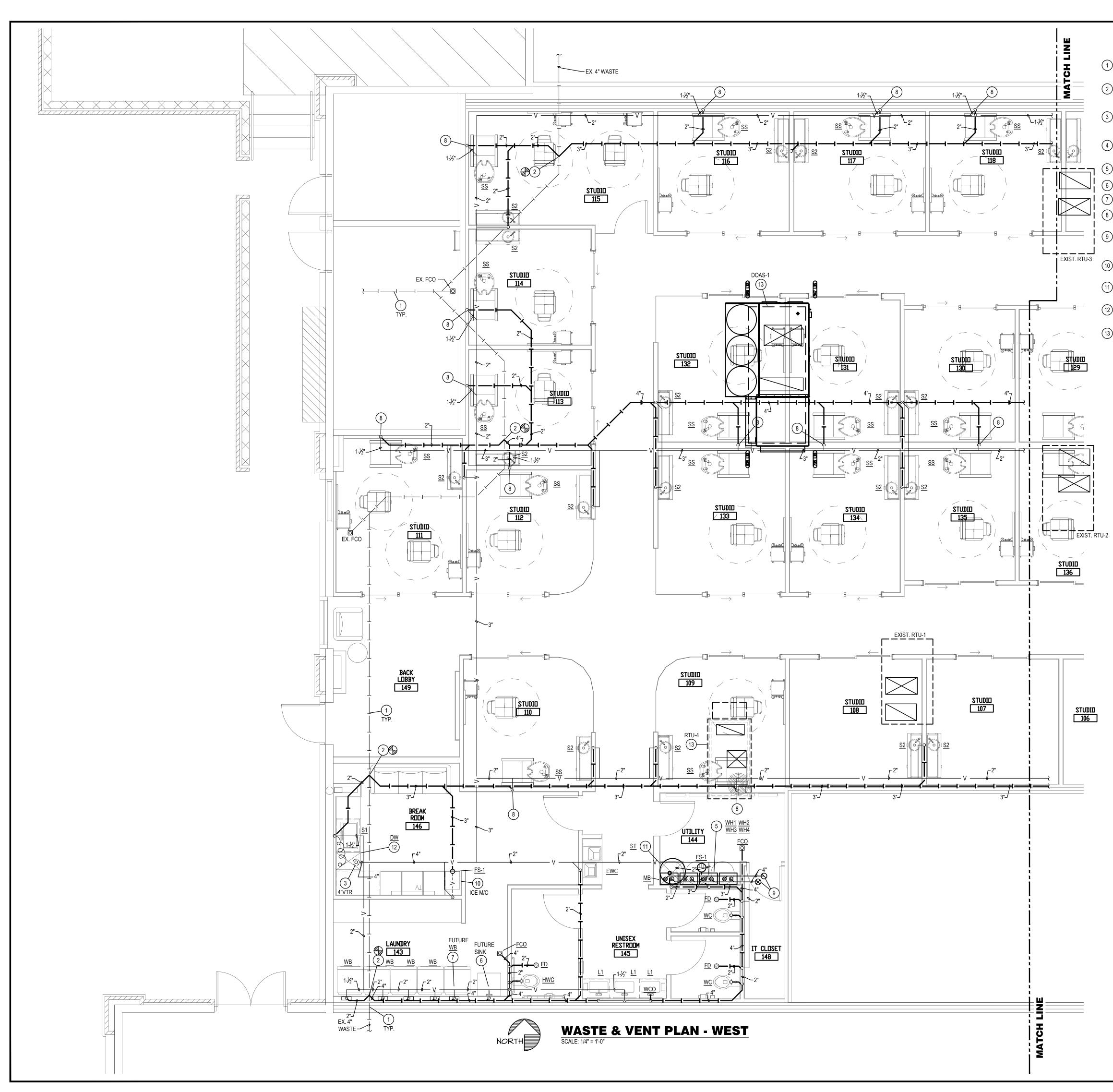
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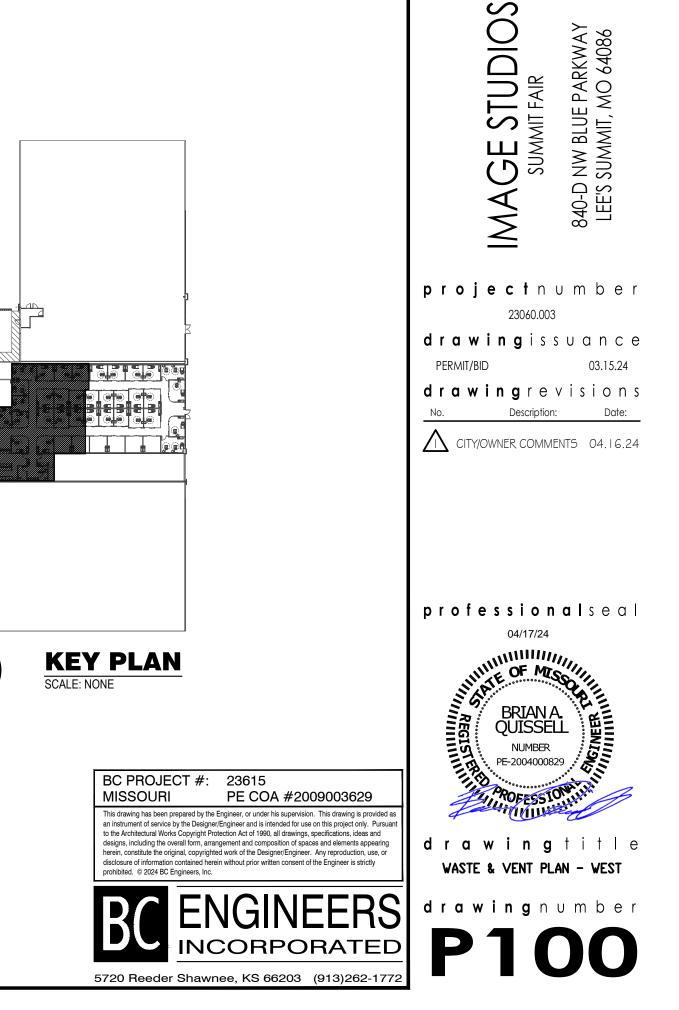
rawinatitle MECHANICAL AND PLUMBING Specifications



1	PLUMBING PLAN NOTES: (NOT ALL NOTES MAY APPLY TO THIS SHEET) EXISTING SANITARY WASTE WASTE TO REMAIN. VERIFY EXACT LOCATION OF EXITING SANITARY WASTE WASTE PRIOR TO BEGINNING OF NEW WORK.
2	CONNECT NEW SANITARY LINE TO EXISTING SANITARY LINE AS SHOWN ON THE PLAN AND AS REQUIRED. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF EXISTING SANITARY LINE IN FIELD PRIOR TO INSTALLATION OF NEW PIPING.
3	LOCATION OF 4" VTR. CONNECT TO NEW VENT LINE TO EXISTING 3" VTR LOCATION AS REQUIRED. VERIFY EXACT LOCATION OF EXISTING VTTR IN FIELD. VERIFY 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
4	
5	ROUTE WATER HEATER T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
6	PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE SINK.
7	PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE CLOTHES WASHER.
8	PROVIDE WASTE CONNECTION FOR SHAMPOO BOWL. REFER TO THE SHAMPOO SINK INSTALLATION DETAIL ON SHEET P202 FOR MORE INFORMATION.
9	PROVIDE 2" PVC INTAKE AND FLUE PIPING FROM EACH WATER HEATER AND MANIFOLD TO 4" COMMON VENTS. ROUTE PIPING UP TO THE MANUFACTURERS RECOMMENDED TERMINATION AT THE ROOF. SEAL PENETRATION WEATHER TIGHT.
(10)	CONNECT DRAIN FROM ICE MACHINE TO FLOOR SINK WITH AIR GAP PER MANUFACTURER'S INSTRUCTION.
(11)	INSTALL HOT WATER STORAGE TANK ON PLATFORM PROVIDED BY OTHERS AT APPROXIMATELY 7' AFF. ROUTE PIPING FROM T&P VALVE AND TANK DRAIN TO MOP SINK WITH AIR GAP.
(12)	PROVIDE FLEXIBLE DRAIN HOSE AND ROUTE FROM DISHWASHER DRAIN TO SINK TAILPIECE WITH AIR GAP FITTING AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
(13)	CONNECT CONDENSATE TO RTU AS REQUIRED AND AS DETAILED.

IMAGE STUDIO

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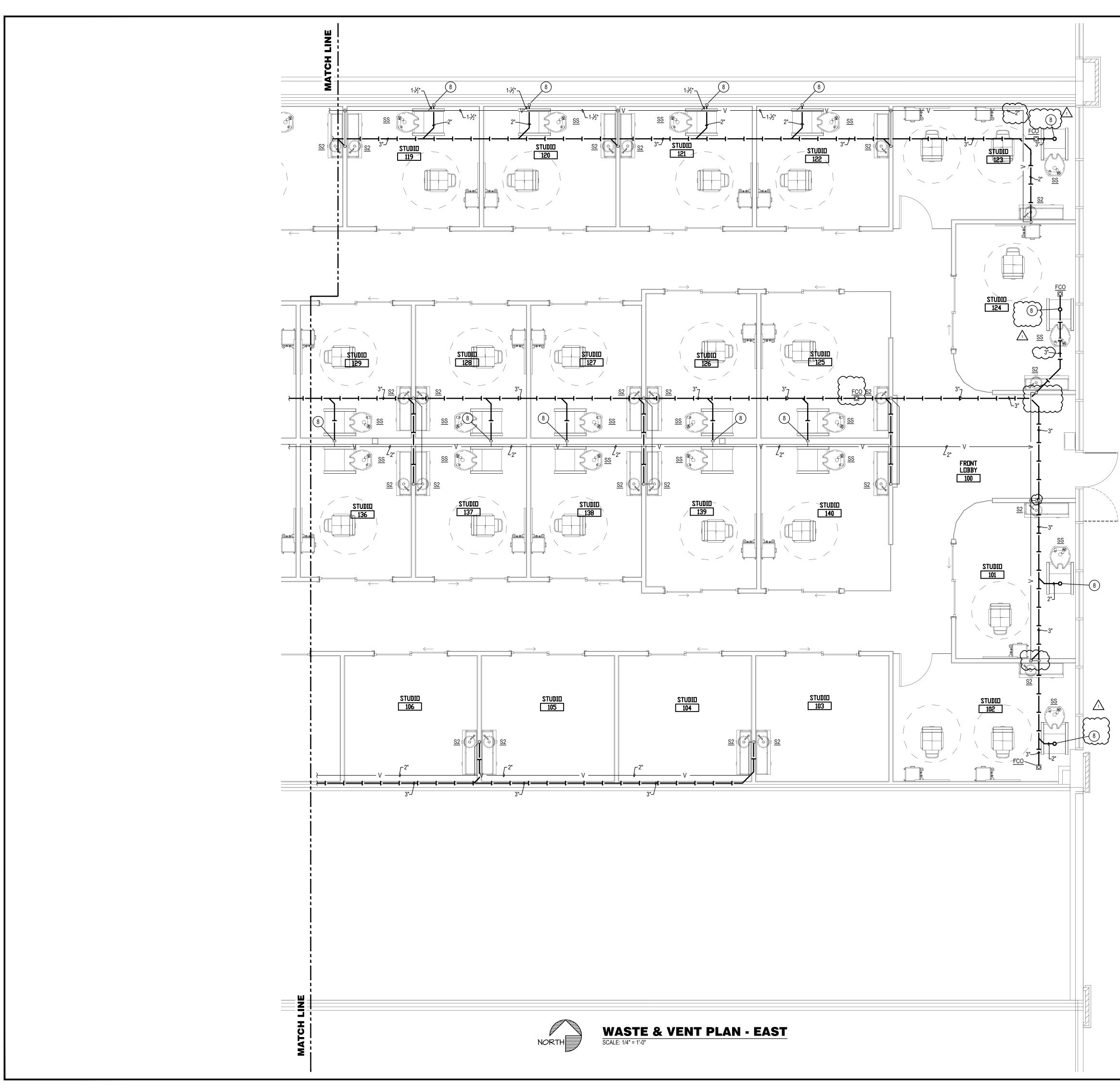


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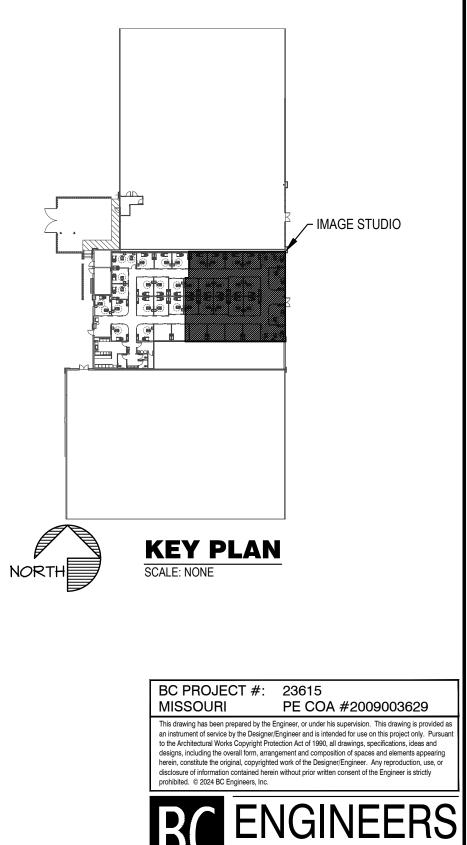
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- PLUMBING PLAN NOTES: (NOT ALL NOTES MAY APPLY TO THIS SHEET)
- 1 EXISTING SANITARY WASTE WASTE TO REMAIN. VERIFY EXACT LOCATION OF EXITING SANITARY WASTE WASTE PRIOR TO BEGINNING OF NEW WORK.
- 2 CONNECT NEW SANITARY LINE TO EXISTING SANITARY LINE AS SHOWN ON THE PLAN AND AS REQUIRED. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF EXISTING SANITARY LINE IN FIELD PRIOR TO INSTALLATION OF NEW PIPING.
- 3 LOCATION OF 4" VTR. CONNECT TO NEW VENT LINE TO EXISTING 3" VTR LOCATION AS REQUIRED. VERIFY EXACT LOCATION OF EXISTING VTTR IN FIELD. VERIFY 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
- 41
- 5 ROUTE WATER HEATER T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
- 6 PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE SINK.
- 7 PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE CLOTHES WASHER.
- 8 PROVIDE WASTE CONNECTION FOR SHAMPOO BOWL. REFER TO THE SHAMPOO SINK INSTALLATION DETAIL ON SHEET P202 FOR MORE INFORMATION.
- 9 PROVIDE 2" PVC INTAKE AND FLUE PIPING FROM EACH WATER HEATER AND MANIFOLD TO 6" COMMON VENTS. ROUTE PIPING UP TO THE MANUFACTURERS RECOMMENDED TERMINATION AT THE ROOF. SEAL PENETRATION WEATHER TIGHT.
- (10) CONNECT DRAIN FROM ICE MACHINE TO SINK TAILPIPE WITH AIR GAP FITTING PER MANUFACTURER'S INSTRUCTION.
- (11) ROUTE STORAGE TANK T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
- (12) PROVIDE FLEXIBLE DRAIN HOSE AND ROUTE FROM DISHWASHER DRAIN TO SINK TAILPIECE WITH AIR GAP FITTING AS REQUIRED BY MANUFACTURER'S INSTRUCTION.





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CITY/OWNER COMMENTS 04.16.24

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Description: Date:



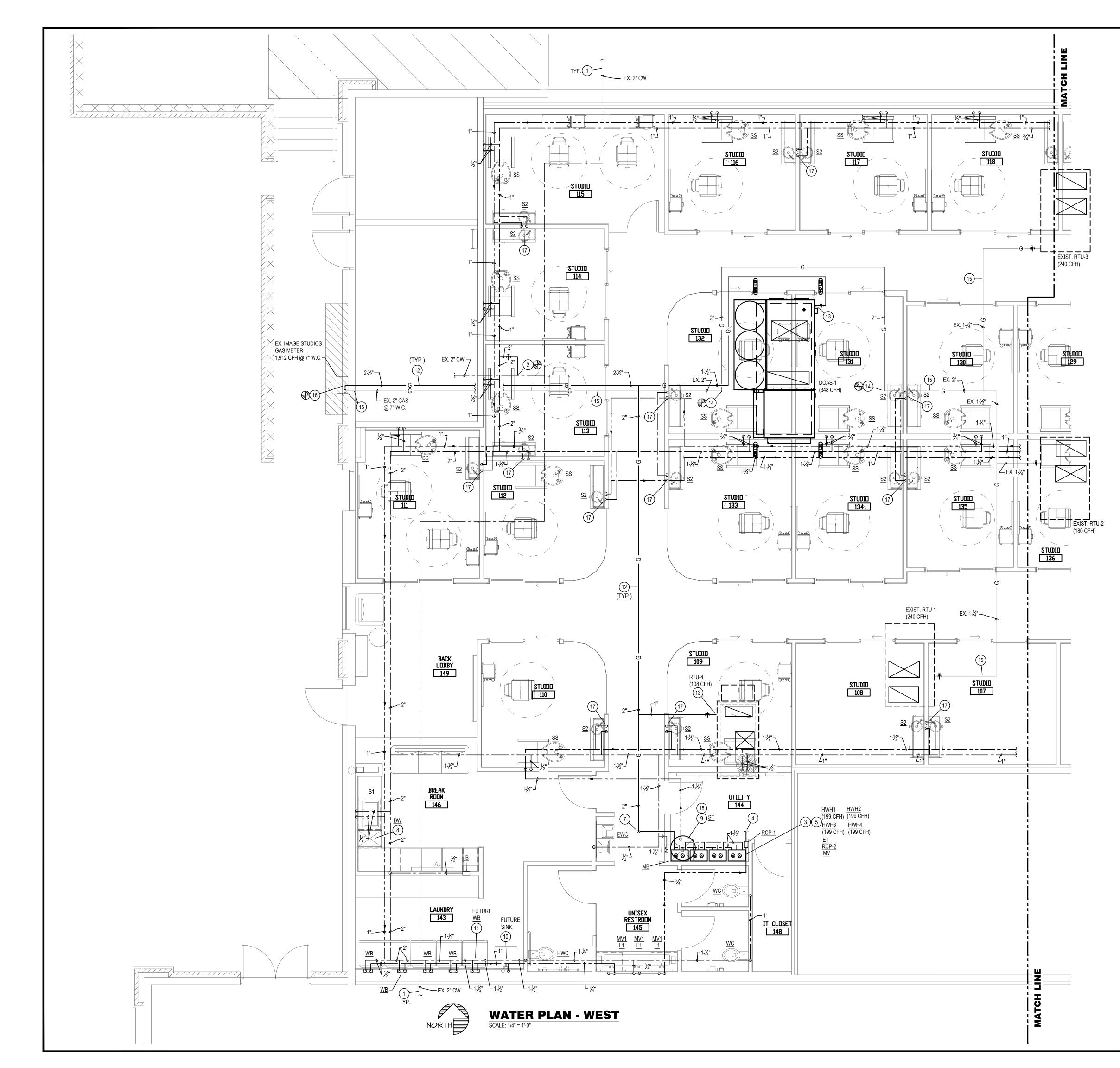
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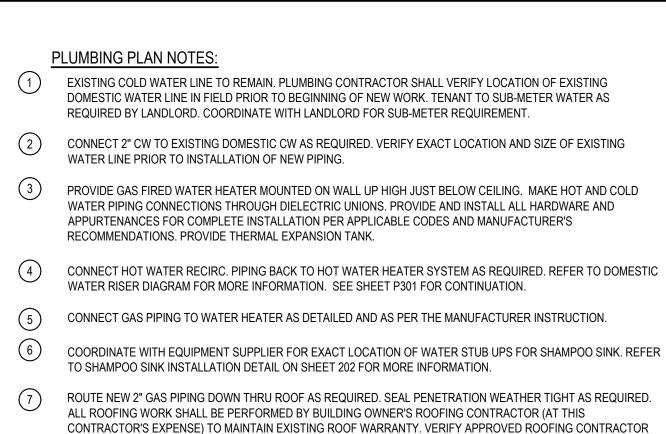
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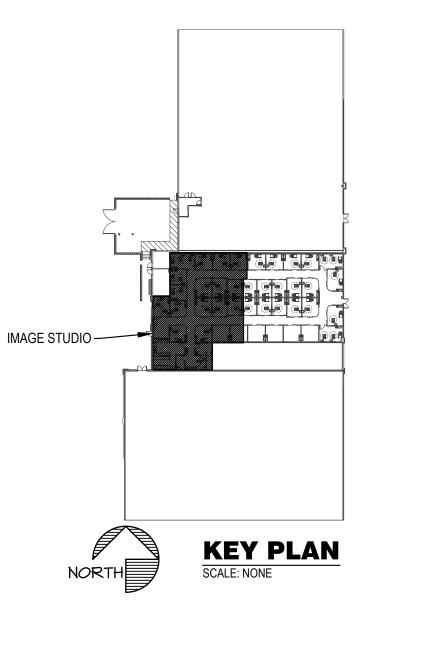


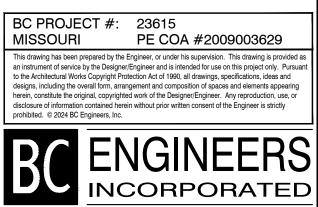


- 8 ROUTE ½" HOT WATER FROM SINK TO DISHWASHER AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
- 9 PROVIDE STORAGE TANK MOUNTED ON WALL UP HIGH ON STRUCTURAL PLATFORM PROVIDED BY OTHERS AT APPROXIMATELY 7 FT. ABOVE THE FLOOR. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE PLATFORM TO SUPPORT 80 GALLON STORAGE TANK. APPROXIMATELY 1,000 LBS.
- (10) PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE SINK.
- (1) PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE CLOTHES WASHER.
- (12) GAS PIPING ON ROOF. SUPPORT AS REQUIRED AND AS DETAILED.

WITH BUILDING OWNER PRIOR TO PERFORMING WORK.

- (13) CONNECT GAS PIPING TO ROOFTOP UNIT AS DETAILED AND AS PER THE MANUFACTURER INSTRUCTION.
- (14) ROUTE EXISTING GAS PIPE AROUND LOCATION OF NEW DOAS UNIT AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR TO ALLOW PROPER CLEARANCE FOR MAINTENANCE. CONNECT GAS PIPE TO EXISTING GAS PIPE ON ROOF AS REQUIRED. FIELD VERIFY EXACT LOCATION, SIZE AND PRESSURE PRIOR TO INSTALLATION OF ANY PIPING.
- (15) EXISTING GAS LINE TO REMAIN. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING NATURAL GAS LINE IN FIELD PRIOR TO BEGINNING OF NEW WORK.
- (16) MANIFOLD NEW 2-½" GAS PIPING WITH EXISTING 2" GAS PIPE AT EXISTING GAS METER LOCATION AS REQUIRED. COORDINATE WITH GAS COMPANY FOR CONNECTION TO A GAS METER WITH CAPACITY FOR 1,912 CFH @ 7" W.C. ROUTE PIPING UP THE FACE OF THE BUILDING AND ONTO ROOF AS REQUIRED. VERIFY ALL EQUIPMENT GAS CAPACITIES AND OPERATING PRESSURES PRIOR TO INSTALLATION OF ANY PIPING.
- (17) COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR HAND SINK.
- (18) INSTALL DIGITAL MIXING VALVE PER THE MANUFACTURERS REQUIREMENTS. SET OUTLET TEMPERATURE TO 120 DEG. F. SET STORAGE TANK TEMPERATURE TO 140 DEG. F.





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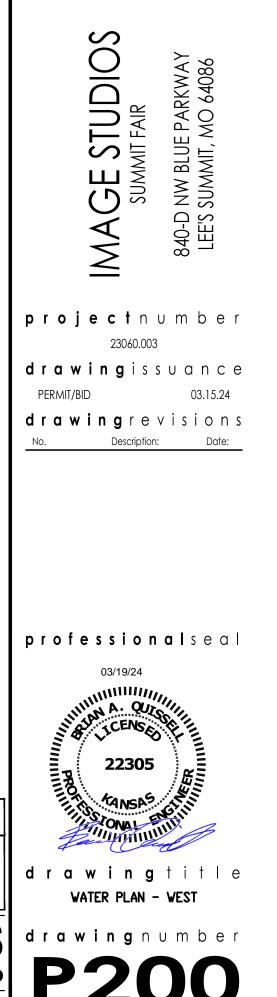
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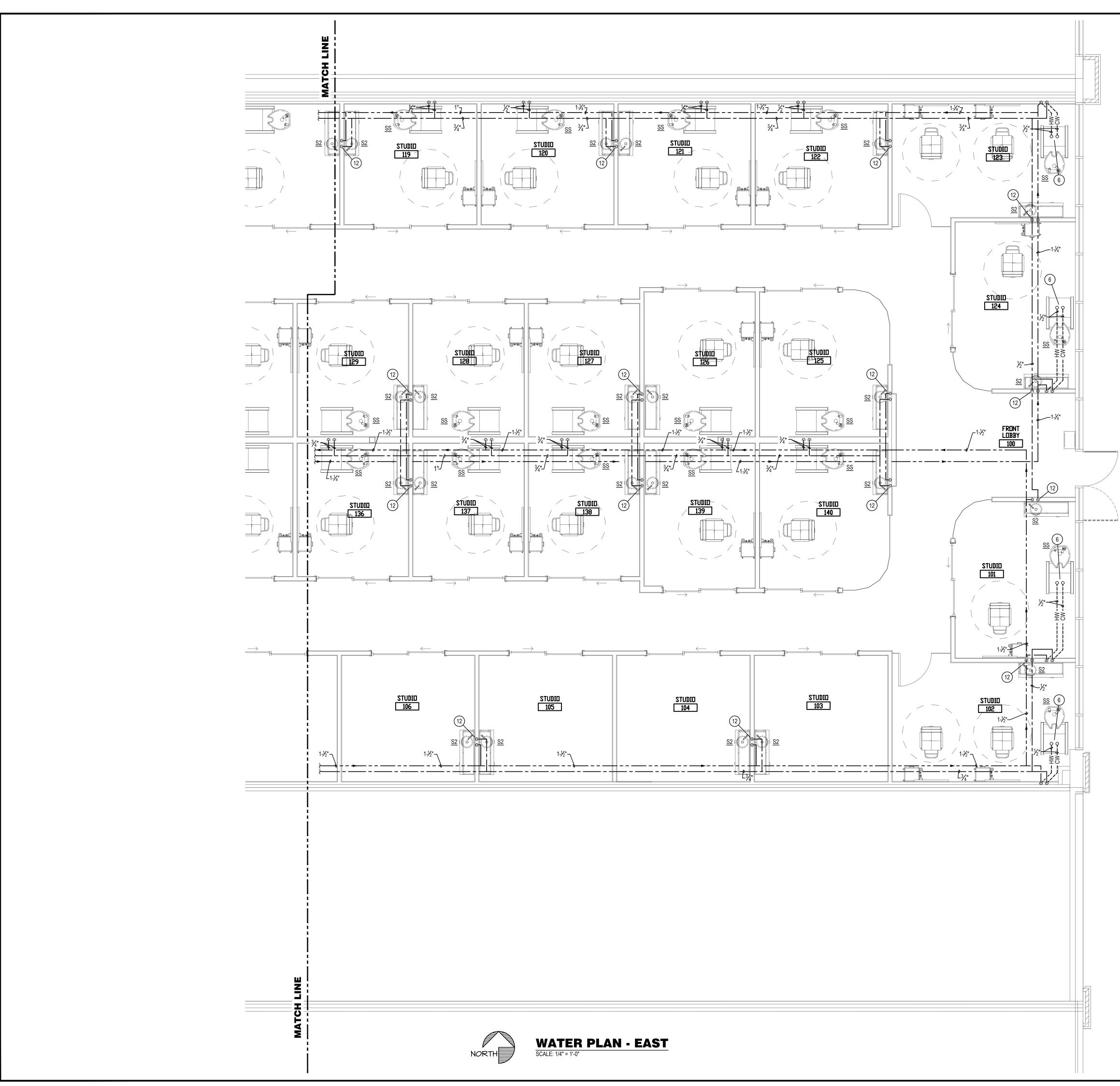
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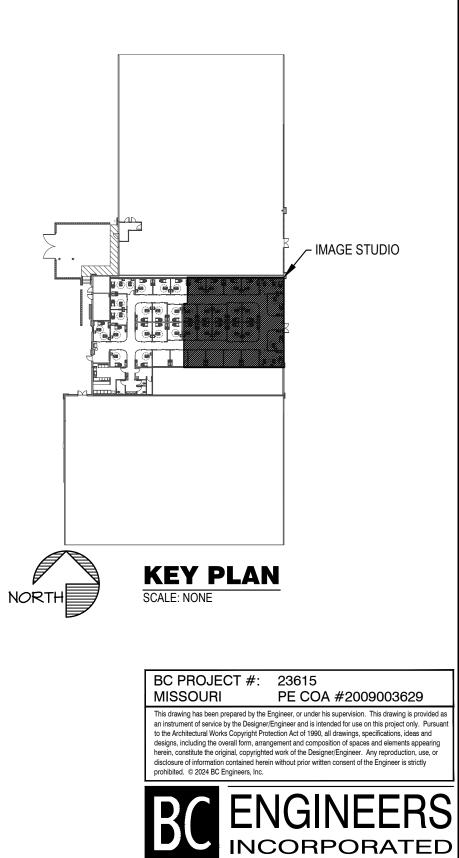
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PLUMBING PLAN NOTES:

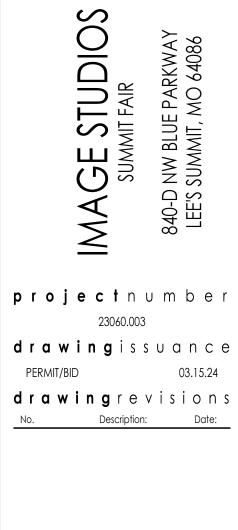
- (1)EXISTING COLD WATER LINE TO REMAIN. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING DOMESTIC WATER LINE IN FIELD PRIOR TO BEGINNING OF NEW WORK. TENANT TO SUB-METER WATER AS REQUIRED BY LANDLORD. COORDINATE WITH LANDLORD FOR SUB-METER REQUIREMENT.
- 2 CONNECT 2" CW TO EXISTING DOMESTIC CW AS REQUIRED. VERIFY EXACT LOCATION AND SIZE OF EXISTING WATER LINE PRIOR TO INSTALLATION OF NEW PIPING.
- (3) PROVIDE GAS FIRED WATER HEATER MOUNTED ON WALL UP HIGH JUST BELOW CEILING. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE THERMAL EXPANSION TANK.
- (4)CONNECT HOT WATER RECIRC. PIPING BACK TO HOT WATER HEATER SYSTEM AS REQUIRED. REFER TO DOMESTIC WATER RISER DIAGRAM FOR MORE INFORMATION.
- CONNECT GAS PIPING TO WATER HEATER AS DETAILED AND AS PER THE MANUFACTURER INSTRUCTION. (5)
- 6 COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR SHAMPOO SINK. REFER TO SHAMPOO SINK INSTALLATION DETAIL ON SHEET P302 FOR MORE INFORMATION.
- (7)CONNECT GAS LINE TO EXISTING GAS LINE. FIELD VERIFY ALL EXISTING CONDITIONS. ROUTE NEW 1-1/2" GAS PIPING DOWN THRU ROOF. SEAL PENETRATION WEATHER TIGHT AS REQUIRED.
- 8 ROUTE $\frac{1}{2}$ " HOT WATER FROM SINK TO DISHWASHER AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
- (9) PROVIDE STORAGE TANK MOUNTED ON WALL UP HIGH. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE PLATFORM TO SUPPORT 80 GALLON STORAGE TANK. APPROXIMATELY 1,000 LBS.
- (10) PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE SINK.
- (11) PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE CLOTHES WASHER.
- COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR HAND SINK. (12)



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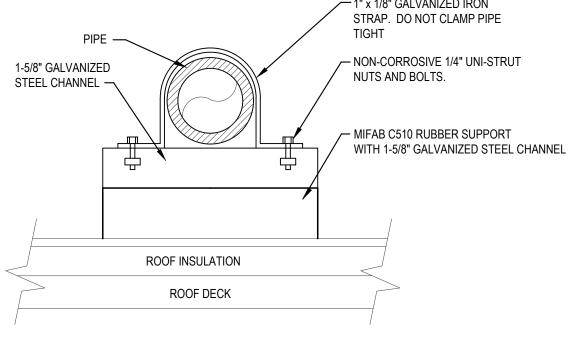
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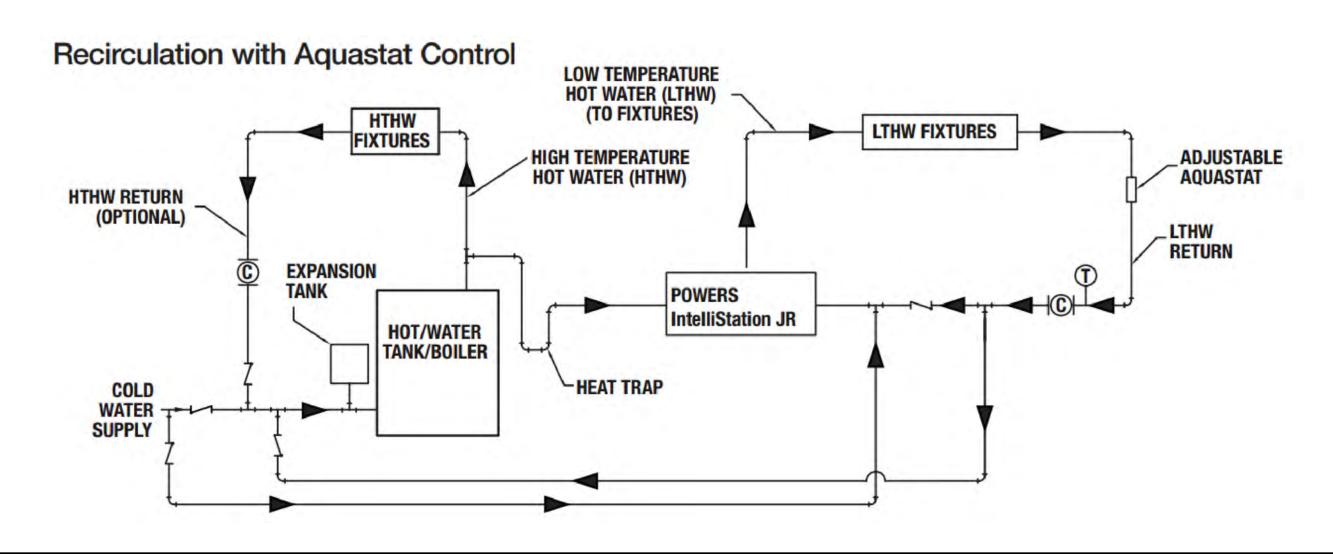
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PLUMBING SYMBOLS

_ 	SOIL AND WASTE PIPING BELOW FLOOR/GRADE	PIPE HANG	ER SCHEDU	LE
	SOIL AND WASTE PIPING ABOVE FLOOR/GRADE	PIPE MATERIAL	MAXIMUM HANGER SPACING	HANGER ROD DIAMETER
	SANITARY VENT PIPING ABOVE GRADE	ABS (All sizes)	4'	3/8"
	SANITARY VENT PIPING BELOW GRADE	PVC (All Sizes)	4'	3/8"
	DOMESTIC COLD WATER PIPING	CPVC, 1 inch and smaller	3'	1/2"
	DOMESTIC HOT WATER PIPING	CPVC, 1-1/4 inches and	4'	1/2"
	DOMESTIC HOT WATER RECIRCULATION PIPING	larger		
	GAS PIPING	Cast Iron (All Sizes)	5'	5/8"
-	GAS PIPING ON ROOF	Cast Iron (All Sizes) with 10 foot length of pipe	10'	5/8"
	EQUIPMENT DRAIN LINE	Copper Tube, 1-1/4	6'	1/2"
	PIPING TURNING DOWN	inches and smaller		
	PIPING TURNING UP	Copper Tube, 1-1/2 inches and larger	10'	1/2"
	TEE TOP CONNECTION	Steel, 3 inches and smaller	12'	1/2"
		Steel, 4 inches and larger	12'	5/8"
	BACKFLOW PREVENTER FLOOR DRAIN	Pex, 1" and below without	32"	3/8"
	FLOOR CLEAN OUT	support channel Pex, 1-1/4" and above		
	WALL CLEAN OUT	without support channel	48"	3/8"
	VALVE	Pex ¾" and below with support channel	6'	3/8"
	BALANCING VALVE	Pex 1" and above with		
	SOLENOID VALVE	support channel	8'	3/8"
	PRESSURE REGULATOR			
	CHECK VALVE			
	CONNECT TO EXISTING			
	INVERT ELEVATION OF PIPE	FROM UNIT DR	AIN PAN	
	MATCH MARKS ON PLUMBING RISER DIAGRAM		CLEANOUT WITH PIPE CAP (TYPICAL)	
	CHECK VALVE		o, (11110/)	
	THERMOMETER		" MIN.	
	PRESSURE GUAGE			
	TEMPERATURE AND PRESSURE RELIEF VALVE			
	AQUASTAT			NE SLOPE AS REQUIRED I CONNECTION.
	1" x 1/8" GALVANIZED IRON STRAP. DO NOT CLAMP PIPE TIGHT		TERMINA WITH AIR	TE AT P-TRAP



RUBBER ROOF PIPE SUPPORT DETAIL SCALE: NONE



PIPE HANGER SCHEDULE

PLUMBING DRAINAGE CALCULATIONS

SN	FIXTURE	QTY.	FIXTURE	TOTAL FIXTURE
1	WATER CLOSET (FLUSH VALVE)	3	6	18
2	LAVATORY	3	1	3
3	SINK - BREAKROOM	1	2	2
4	MOP BASIN	1	2	2
5	WASHER BOX	4	2	8
6	SINK - STUDIO	40	1	40
7	SINK - SHAMPOO	34	2	68
8	WATER COOLER	1	0.5	0.5
9	FLOOR DRAIN/SINK	4	2	8
	TOTAL			149.5 FU

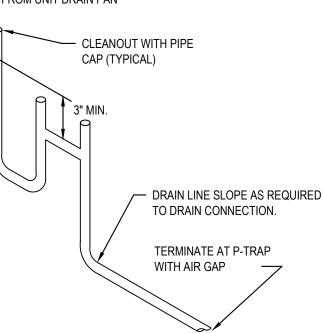
PLUMBING FIXTURE WATER COUNT

SN	FIXTURE	QTY.	CM FU	CM TOTAL	HM	HM TOTAL	COMBINED FU	TOTAL COMBINED FU
1	WATER CLOSET (FLUSH VALVE)	3	10	30	0	0	10	30
2	LAVATORY	3	1.5	4.5	1.5	4.5	2	6
З	SINK - BREAKROOM	1	2.25	2.25	2.25	2.25	3	3
4	MOP BASIN	1	2.25	2.25	2.25	2.25	3	З
5	WASHER BOX	4	2.25	9.00	2.25	9.00	3	12
6	SINK - STUDIO	40	1.5	60.0	1.5	60.0	2	80
٦	SINK - SHAMPOO	34	2.0	68.0	2.0	68.0	3	102
8	ICE BOX	2	0.25	0.50	0	0	0.25	0.50
9	WATER COOLER	1	0.25	0.25	0	0	0.25	0.25
1.1	TOTAL)		176.75		146.00		237 FU

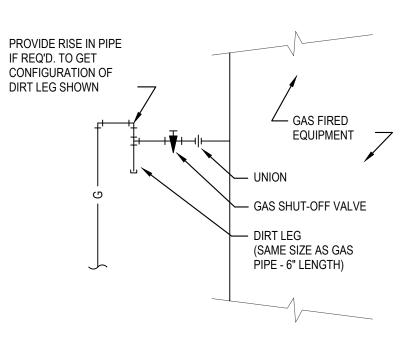
COLD WATER MAIN 2"

HOT WATER MAIN 1-1/2"





CONDENSATE DRAIN DETAIL SCALE: NONE



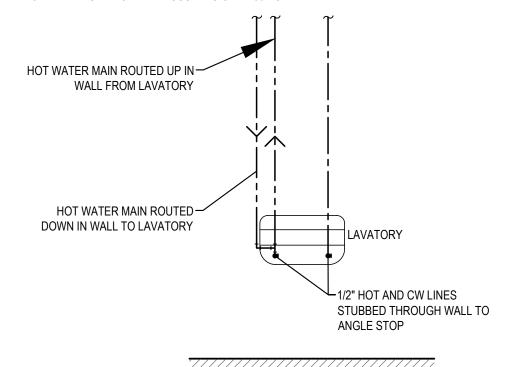
GAS CONNECTION DETAIL

SCALE: NONE

	EQUIPMENT	GAS INPL	JT (BTUH)
SN	ITEM	NEM	EXISTING
1	WATER HEATER - 1	199,000	
2	WATER HEATER - 2	199,000	
3	WATER HEATER - 3	199,000	
4	WATER HEATER - 4	199,000	
5	RTV - 4	108,000	
6	DOAS UNIT - 1	348,000	
7	RTU's - 1-3	660,000	
TOTAL BTU/	HR	1,912,000	0
NEW TOTAL	BTU/HR (EXISTING AND NEW)	1,912,000	£
NEW TOTAL	CFH (EXISTING AND NEW)	1,912	
MAXIMUM DE	EVELOPMENT LENGTH >	150 FT	
NOTE			

PLUMBING GENERAL NOTES:

- INSTALL ALL PIPE, ETC. AS HIGH AS POSSIBLE.
- COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF 3. FIXTURES.
- 4. SAWCUT EXISTING FLOOR AS REQUIRED FOR INSTALLATION OF UNDERFLOOR PIPING. PATCH FLOOR TO MATCH EXISTING.
- 5. NO PIPING SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- CONTRACTOR TO TEST WATER PRESSURE ON SITE AND PROVIDE PRESSURE REDUCING VALVE ON WATER SERVICE IF PRESSURE IS OVER 80 PSI.



FINISH FLOOR

LAVATORY HOT WATER DETAIL SCALE: NONE



		_
PLU	JMBING FIXTURE SCHEDULE:	
<u>WC</u>	WATER CLOSET: KOHLER, #K-96053, ELONGATED BOWL, FLOOR MOUNTED, FLOOR OUTLET, VITREOUS CHINA, SIPHON-JET ACTION, SLOAN 111 MANUAL VALVE, 1.28 GAL/FLUSH, #SC534 OPEN FRONT ELONGATED SEAT WITH CHECK HINGE AND LESS COVER, CHROME PLATED ANGLE STOP AND RISER.	
<u>HWC</u>	HANDICAP WATER CLOSET: KOHLER, #K-96057, FLOOR MOUNTED, FLOOR OUTLET, 16-1/2" HIGH ELONGATED BOWL, VITREOUS CHINA, SIPHON-JET ACTION, SLOAN 111 MANUAL VALVE, 1.28 GAL/FLUSH, #SC534 OPEN FRONT SEAT WITH CHECK HINGE AND LESS COVER, CHROME PLATED ANGLE STOP AND RISER. HANDLE ON WIDE SIDE OF FIXTURE.	
<u>L1</u>	HANDICAP LAVATORY, UNDERMOUNT: TOTO #LT1535G, 17-11/16"x 13", VITREOUS CHINA, FRONT OVERFLOW, SLOAN EAF 250-ISM CP BATTERY OPERATED FAUCET, OFFSET GRID ELBOW DRAIN AND 1-1/4" TAILPIECE, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT (MOUNTED PARALLEL WITH WALL), CHROME PLATED LOOSE KEY ANGLE STOPS AND RISERS.	
<u>S1</u>	BREAK ROOM SINK, SINGLE COMPARTMENT: RUVATI 33-INCH LOW-DIVIDE UNDERMOUNT TIGHT RADIUS 60/40 DOUBLE BOWL 16 GAUGE STAINLESS STEEL - RVH7419, AMERICAN STANDARD "EDGEWATER" #4932300.002 GOOSE NECK FAUCET, PULL OUT SPRAY, SWIVELING SPOUT, SINGLE LEVER HANDLE, AERATOR, #LK-35 BASKET STRAINER WITH 1-1/2" TAILPIECE, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, IN-SINK-ERATOR#BADGER 5 DISPOSAL, 1/2 HP, 120 VOLT, CHROME PLATED ANGLE STOPS AND RISERS. SINK CUT-OUT IN CASEWORK SHALL BE BY CASEWORK CONTRACTOR.	
<u>S2</u>	STUDIO ROOM SINK : SINK PROVIDED BY OTHER. PROVIDE WITH CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED ANGLE STOPS AND RISERS.	
<u>SS</u>	SHAMPOO SINK : SINK PROVIDED BY OTHER. PROVIDE WITH CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED ANGLE STOPS AND RISERS.	
<u>EWC</u>	ELECTRIC WATER COOLER: ELKAY, #EZSTL8WSSK, BARRIER FREE TWO-STATION WATER COOLER WITH BOTTLE FILLING STATION, 8.0 GPH, 50 DEGREES F WATER WITH 90 DEGREES F AIR TEMPERATURE, 120 VOLT, COLOR TO BE SELECTED BY ARCHITECT AFTER AWARD OF CONTRACT, FRONT AND SIDE PUSH BARS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED LOOSE KEY ANGLE STOP, FLOOR MOUNTED CARRIER AND CANE APRON.	
<u>WB</u>	WASHER BOX: SIOUX CHIEF #696-G2313XF, WASHER BOX WITH 1-1/2" DRAIN OUTLET AND TAILPIECE, BUILT IN WATER HAMMER ARRESTER AND 1/2" HOSE BIBBS.	
<u>MB</u>	MOP BASIN: FIAT, #MSB-2424, MOLDED STONE MOP BASIN, 2" DRAIN, 24"X 24" BASIN, VINYL BUMPER GUARD, STERN WILLIAMS #T-10-VB FAUCET, SPRING CHECKS, VACUUM BREAKER, INTEGRAL STOPS, WALL BRACE & PAIL HOOK, WALL BRACKET WITH 30" HOSE.	
<u>FD</u>	FLOOR DRAIN: JR SMITH, #2005-A, CAST IRON FLOOR DRAIN WITH ADJUSTABLE TOP AND 6" NIKALOY STRAINER. PROVIDE WITH #2692 QUAD CLOSE TRAP SEAL DEVICE.	
<u>HWH1</u> <u>HWH2</u> <u>HWH3</u> HWH4	HOT WATER HEATER: RINNAI, #CU199i, GAS FIRED, 96% THERMAL EFFICIENCY, INSTANTANEOUS HEATER, 199 MBTUH INPUT, 4 GPM AT 100 DEGREES F RISE. PROVIDE WITH WALL MOUNTING BRACKET, PRESSURE RELIEF VALVE, CONDENSATE DRAIN HOSE, CONDENSATE NEUTRALIZER, VENT TERMINATORS. INTERCONNECTION CABLES FOR CASCADING.	
<u>ST</u>	HOT WATER STORAGE TANK: AO SMITH, #TJ-80A, 80 GALLON INSULATED STORAGE TANK, 160 PSI WORKING PRESSURE, (4) 2" THREADED CONNECTIONS, THERMOMETER, THERMOWELL, RELIEF VALVE, AND DRAIN VALVE, R12.5 INSULATION.	
<u>ET</u>	HOT WATER EXPANSION TANK: AMTROL, #ST-12, 4.4 GALLON EXPANSION TANK WITH DIAPHRAGM.	
RCP-1	HOT WATER RECIRCULATING PUMP: BELL & GOSSETT, #SERIES NBF-10, 3 GPM @ 10 FT. HEAD, 1/12 HP, 120 VOLT, WITH AQUASTAT & TC-1 TIMER KIT.	
<u>RCP-2</u>	TACO 0013-SF3 12 GPM @ 23' TOTAL HEAD. STAINLESS STEEL CONSTRUCTION. 1/6 HP, 120V. PROVIDE AQUASTAT WITH THERMOWELL FOR TANK AND TC-1 TIMER KIT.	
MV	MIXING VALVE: WATTS INTELLISTATION JR, DIGITAL WATER MIXING VALVE, #LFIS100VL, 0.5-61 GPM, 0.5 GPM MINIMUM FLOW CAPACITY, 1" INLET, 1-1/4" OUTLET, WITH INLET AND OUTLET THERMOMETERS, 1/6 HP, INTEGRAL CHECK VALVES, WI-FI ENABLED, 3.5" COLOR TOUCH SCREEN, 125 PSI MAXIMUM OPERATING PRESSURE, ASSE 1017 CERTIFIED, SET AT 125°F. 110V.	
<u>MV1</u>	MIXING VALVE: WATTS, #LFUSG-B, THERMOSTATIC CONTROLLED MIXING VALVE, LEAD FREE BRONZE BODY, LOCKED TEMPERATURE ADJUSTMENT CAP (VANDAL RESISTANT), COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH BRASS SHUTTLE, STAINLESSSTEEL SPRINGS, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. (SET TO 110°F). ASSE 1070 LISTED.	
<u>IB</u>	ICE BOX: SIOUX CHIEF #696-1000, ICE BOX WITH 1/2" INLET AND CONNECTION AND 1/4-TURN SHUT OFF VALVE.	
	}	1
FCO/WCO	VINYL TILE FLOOR: JR SMITH #4140, OR EQUAL. QUARRY TILE FLOOR: JR SMITH #4200, OR EQUAL. CARPETED FLOOR: JR SMITH #4020-Y, OR EQUAL. UNFINISHED FLOOR: JR SMITH #4020, OR EQUAL. WALL: JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.	

FLOOR SINK: SIOUX CHIEF:, #860 ROUND PVC FLOOR SINK WITH STAINLESS STEEL MESH DEBRIS SCREEN, PVC HALF OPEN STRAINER. <u>FS-1</u>

PEX PIPING REQUIREMENTS

PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. IF PEX PIPING IS USED, INCREASE PEX PIPING ONE SIZE ABOVE LISTED SIZES AS REQUIRED TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER. FOR ALL SUPPLY MAINS AND RECIRCULATION LOOPS.

PLUMBING FIXTURE BRANCH PI	PING SC	CHEDUI	E	
FIXTURE	WASTE	VENT	CW	HW
WATER CLOSET (FLUSH VALVE)	4"	2"	1"	
LAVATORY	1-1/4"	1-1/4"	1/2"	1/2"
SINK	1-1/2"	1-1/2"	1/2"	1/2"
FLOOR DRAIN	2"	2"		
MOP BASIN	2"	2"	3/4"	3/4"
ELECTRIC WATER COOLER (BI-LEVEL)	1-1/2"	1-1/2"	1/2"	
WASHER BOX	1-1/2"	1-1/2"	1/2"	1/2

NOTE: INDIVIDUAL VENTS FOR FIXTURES ON PLANS AND RISER DIAGRAMS HAVE BEEN INCREASED WHERE HORIZONTAL VENT LENGTH IS IN EXCESS OF THE MAXIMUM DISTANCE INDICATED BY THE CODE.



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drawingtitle PLUMBING SCHEDULES & DETAILS



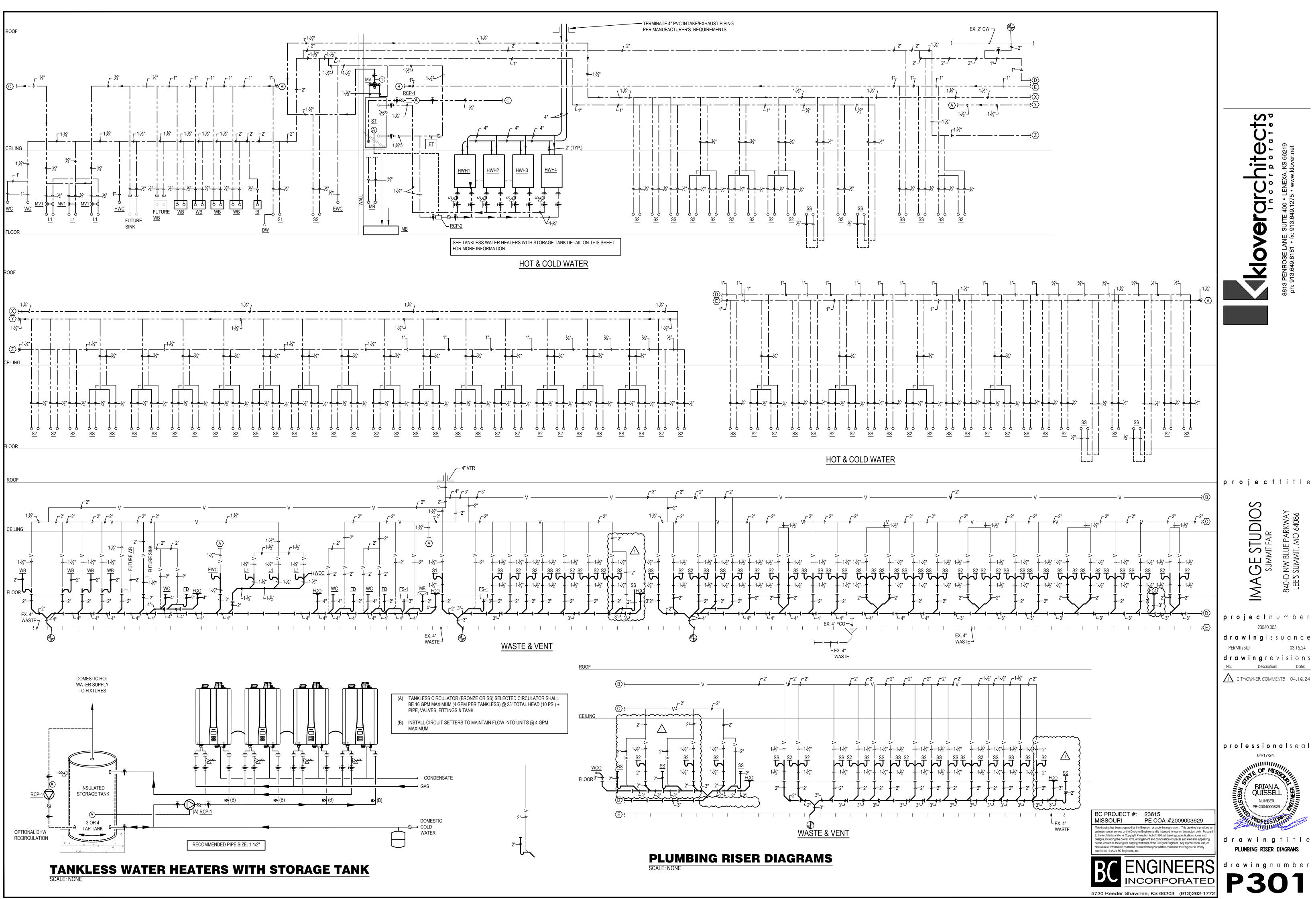
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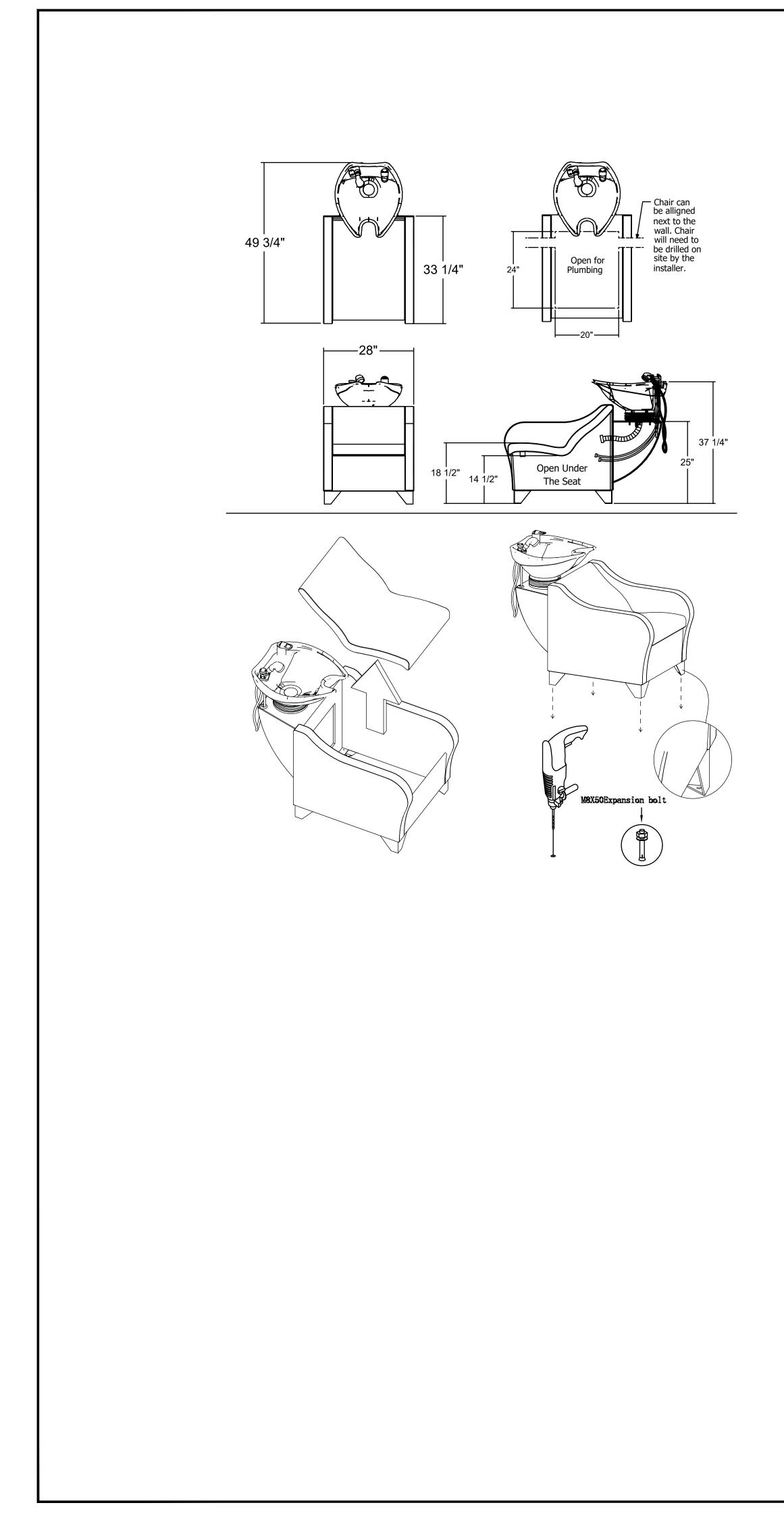
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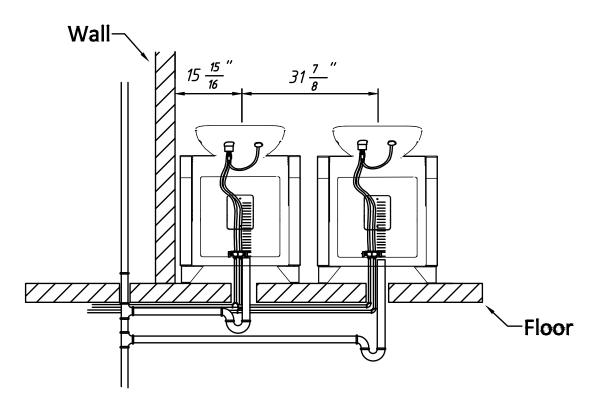
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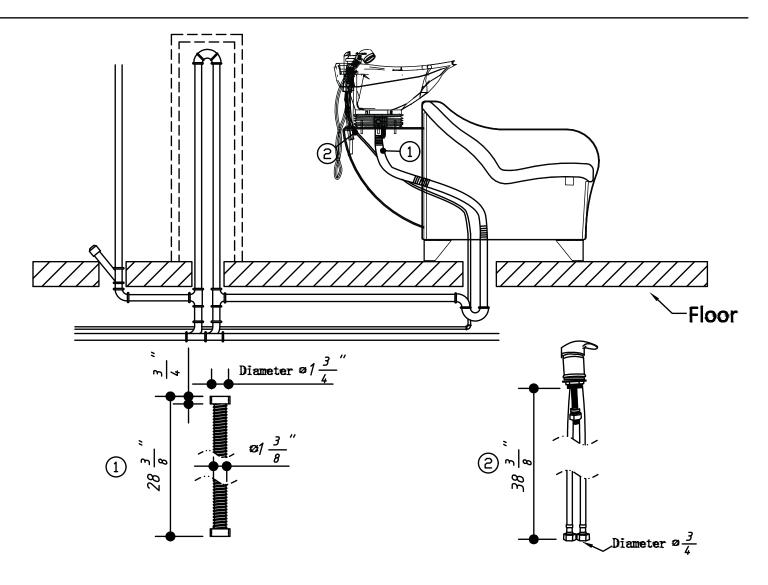




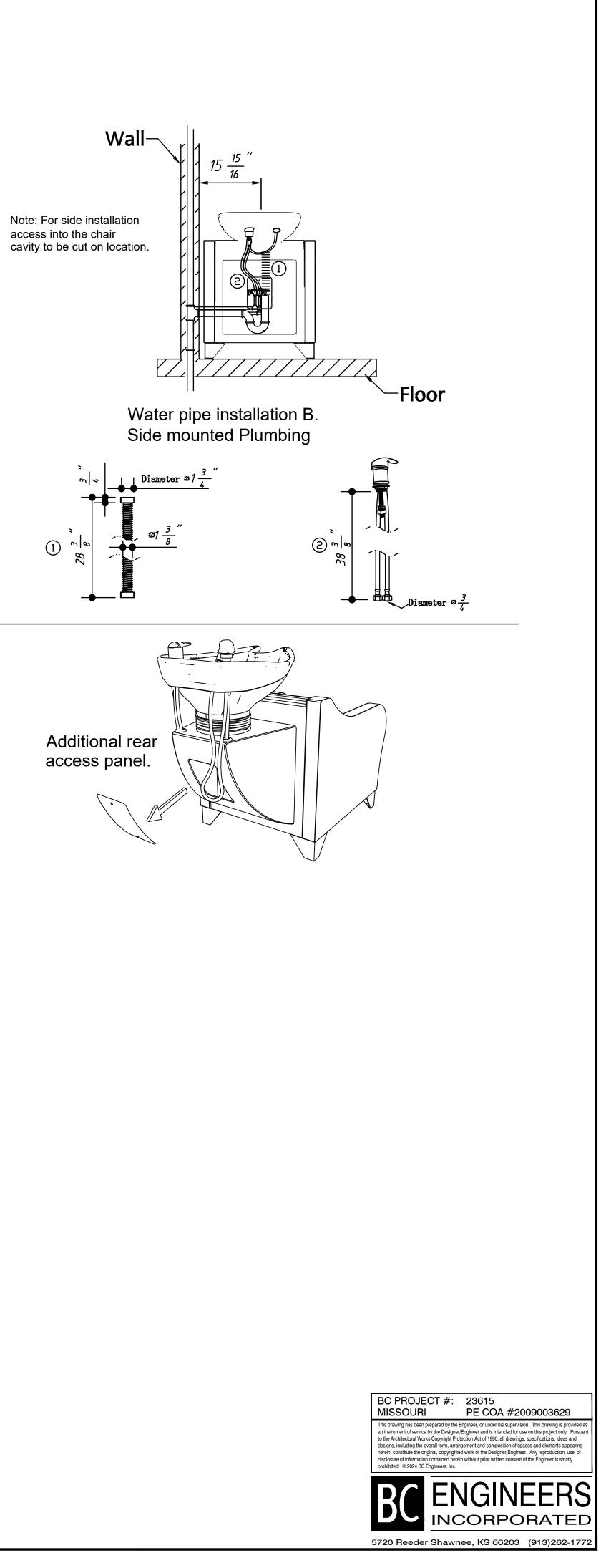


Water pipe installation A.

Water pipes go all the way inside shampoo base.



SHAMPOO SINK INSTALLATION DETAIL





MECHANICAL SYMBOLS

\Join	NEW SUPPLY DIFFUSER
\square	NEW RETURN AIR GRILLE
\square	EXHAUST GRILLE/FAN
S	REMOTE TEMPERATURE SENSOR
\bigcirc	THERMOSTAT, MOUNTED AT 48" AFF
	DUCT-MOUNTED SMOKE DETECTOR
M	MOTORIZED DAMPER/LOUVER
+	NEW DUCTWORK
32"x14"	SIZE OF RECTANGULAR DUCT
6"Ø	SIZE OF ROUND DUCT
	FLEXIBLE DUCTWORK
	FLEXIBLE CONNECTION TO FAN
3	FLOOR PLAN NOTE DESIGNATION
S.A.	SUPPLY AIR
R.A.	RETURN AIR
EXH.	EXHAUST AIR
	TRANSITION IN DUCT SIZE
	ELBOW WITH TURNING VANES
	MANUAL VOLUME DAMPER
	MANUAL VOLUME DAMPER
	SUPPLY AIR DUCT UP/DOWN
	RETURN AIR DUCT UP/DOWN
	EXHAUST AIR DUCT UP/DOWN
<u>RTU-1</u>	SCHEDULED MECHANICAL EQUIPMENT

MECHANICAL GENERAL NOTES:

- 1. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- 2. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEMS.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DIFFUSERS.
- 4. INSTALL ALL DUCT, PIPE, ETC. AS HIGH AS POSSIBLE.
- 5. DUCT SIZES SHOWN ARE ACTUAL SHEET METAL SIZES AND INCLUDE AN ALLOWANCE FOR DUCT LINER WHERE APPLICABLE.
- 6. PROVIDE FLEXIBLE CONNECTION BETWEEN DUCTWORK AND ROOFTOP UNITS, EXHAUST FANS, AND OTHER MOTORIZED
- EQUIPMENT.
- 7. NO DUCT SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- 8. ALL MECHANICAL SYSTEMS SHALL BE BALANCED BY A CERTIFIED BALANCING CONTRACTOR. REFER TO SPECIFICATIONS FOR DETAILS.
- MECHANICAL PLAN NOTES (1)EXISTING ROOF TOP UNIT TO REMAIN AS IS. PERFORM PREVENTATIVE MAINTENANCE CHECK AS NOTED ON SHEET M200. CONNECT NEW DUCTWORK TO THE EXISTING DUCT DROPS WITH FLEXIBLE CONNECTIONS.
- EXISTING DUCT DETECTOR TO REMAIN. VERIFY UNIT IS IN PROPER WORKING ORDER. PROVIDE REMOTE ENUNCIATOR (2) AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- (3) ALL SUPPLY DUCTWORK EXPOSED IN OPEN CEILING AREA SHALL BE INTERNALLY LINED. PREP DUCTWORK FOR PAINT.
- 4 CONNECT VENTILATION SUPPLY DUCT TO THE RTU RETURNS AND CONNECT WITH A BALANCING DAMPER. REFER TO SCHEDULE FOR OUTDOOR AIR VOLUME.
- (5) PROVIDE DUCT DETECTOR IN LOCATION SHOWN. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- LOCATION OF LOCAL HMI FOR THE DOAS UNIT. THE DOAS UNIT SHALL OPERATE IN DISCHARGE AIR TEMPERATURE CONTROL (6)AND ENGAGE HEATING, COOLING OR DEHUMIDIFICATION BASED ON THE SET POINTS IN THE SEQUENCE OF OPERATION BELOW. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE A JUNCTION BOX AND CONDUIT FOR THE HMI.
- THERMOSTATS FOR RTU'S 1-4. PROVIDE NEW WIFI COMPATIBLE THERMOSTATS WITH REMOTE SENSORS FOR RTU-1, 2, 3.
- (8) LOCATION OF TEMPERATURE SENSOR FOR RTU. MOUNT SENSOR 48" ABOVE THE FINISHED FLOOR.
- (9) PROVIDE SOUND ABSORBING FLEX DUCT SOUND BOOT FOR EACH SUITE AS DETAILED. PROVIDE FLEXFLOW ELBOW. INSTALL AS DETAILED & AS REQUIRED BY THE MANUFACTURER.
- (10) PROVIDE DRYERBOX #425 FOR EACH DRYER. CONNECT 4"Ø METALLIC FLEX DUCT TO DRYER VENT BOX AS REQUIRED BY THE MANUFACTURER.
- (11) DRYER EXHAUST DUCT SHALL BE CONSTRUCTED OF METAL NOT LESS THAN 0.016 INCH IN THICKNESS. SUPPORT DRYER DUCT AT 4 FT. INTERVAL AND SEALED JOINTS AS SPECIFIED.
- (12) ROUTE 4" DRYER EXHAUST DUCT THROUGH WALL AT 12' AFF. MAINTAIN 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES.
- (13) CUT EXISTING ROOF AND FLASH INTO ROOF AS REQUIRED. ALL ROOFING WORK SHALL BE PERFORMED BY BUILDING OWNER'S ROOFING CONTRACTOR (AT THIS CONTRACTOR'S EXPENSE) TO MAINTAIN EXISTING ROOF WARRANTY. VERIFY
- APPROVED ROOFING CONTRACTOR WITH BUILDING OWNER PRIOR TO PERFORMING WORK.

SEQUENCE OF OPERATION

RTU SEQUENCE OF OPERATION:

- PACKAGED ROOFTOP UNITS UNIT SHALL CONSIST OF SUPPLY AIR FAN, FILTERS, DX COOLING COIL, GAS-FIRED HEAT SECTION, AND A 7-DAY PROGRAMMABLE THERMOSTAT WITH BACNET CONNECTION TO THE CENTRAL CONTROLLER.
- 2. PROVIDE AN OVERRIDE CONTROL TO OPERATE THE UNIT DURING UNOCCUPIED HOURS. THIS CONTROL SHALL BE PART OF THE PROGRAMMABLE THERMOSTAT. OVERRIDE SWITCH ALLOWS THE UNIT TO OPERATE FOR TWO HOURS (ADJUSTABLE).
- 3. OCCUPIED MODE: BASED ON THE ROOFTOP UNIT'S HOURS OF OCCUPANCY, START THE UNIT AT THE BEGINNING OF OCCUPANCY AND SHUT DOWN THE UNIT AT THE END OF OCCUPANCY (NOTE: OUTSIDE AIR DAMPER WITHIN THE RTU SHALL OPEN AND THEN THE RTU SHALL START). THE UNIT SHALL START EARLIER AS DETERMINED BY THE PROGRAM FOR EARLY WARM-UP OR COOL DOWN. ON A SYSTEM STARTUP, THE RTU FAN SHALL START AND RUN CONTINUOUSLY. BASED ON THE SPACE TEMPERATURE SENSOR, THE UNIT SHALL CYCLE THE HEATING/COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE 2 SPEED SUPPLY FAN (RTU-4) SHALL REDUCE TO LOW SPEED WHEN THE UNIT IS IN FIRST STAGE HEATING OR COOLING MODE TO OPERATE THE UNIT IN SINGLE ZONE VAV MODE.
- 3.1. ECONOMIZER MODE: WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW 55° OR HAS AN ENTHALPY BELOW 28 BTU/LB, ECONOMIZER MODE SHALL BE ENABLED. ECONOMIZER MODE SHALL LINEARLY MODULATE OUTDOOR AIR CFM FROM MINIMUM OA CFM TO 100% BASED ON ENTHALPY READINGS.
- 4. UNOCCUPIED MODE: THE RTU INTERNAL OA DAMPERS SHALL REMAIN CLOSED WHEN THE BUILDING IS NOT OCCUPIED. THE RTU SHALL STOP HEATING/COOLING AND THE FAN SHALL STOP. BASED ON THE SPACE TEMPERATURE SENSOR, THE UNIT SHALL CYCLE THE HEATING/COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE 2 SPEED SUPPLY FAN (RTU-4) SHALL REDUCE TO LOW SPEED WHEN THE UNIT IS IN FIRST STAGE HEATING OR COOLING MODE.
- 5. UPON DETECTION OF SMOKE BY UNIT SMOKE DETECTOR ALL RTUS SHALL SHUT DOWN AND AN ALARM SHALL BE SENT TO THE FIRE ALARM CONTROL PANEL (WHERE APPLICABLE). LOCAL REMOTE ANNUNCIATORS SHALL ALSO BE ACTIVATED.

DOAS SEQUENCE OF OPERATION:

- THE SUPPLY / EXHAUST FAN SHALL RUN CONTINUOUSLY DURING OPERATION HOURS. THE SUPPLY / EXHAUST FAN SHALL SHUT & THE OUTSIDE AIR DAMPER SHALL BE CLOSED DURINF UNOCCUPIED HOURS.
- HEATING THE UNIT SHALL ACTIVATE HEATING WHEN THE INTAKE TEMPERATURE DROPS BELOW 45 DEG F. THE HEATING DISCHARGE TEMPERATURE SHALL BE 55 DEG F.
- COOLING THE UNIT SHALL ACTIVATE COOLING WHEN THE INTAKE TEMPERATURE RISES ABOVE 65 DEG F. THE COOLING DISCHARGE TEMPERATURE SHALL BE 55 DEG F.
- DEHUMIDIFICATION THE UNIT SHALL ACTIVATE DEHUMIDIFICATION WHEN THE INTAKE CONDITIONS RISE ABOVE 56 DEG F AND THE DEW POINT IN THE SPACE RISES ABOVE 56 DEG F WB.

BUILDING TEMPERATURE SET POINTS

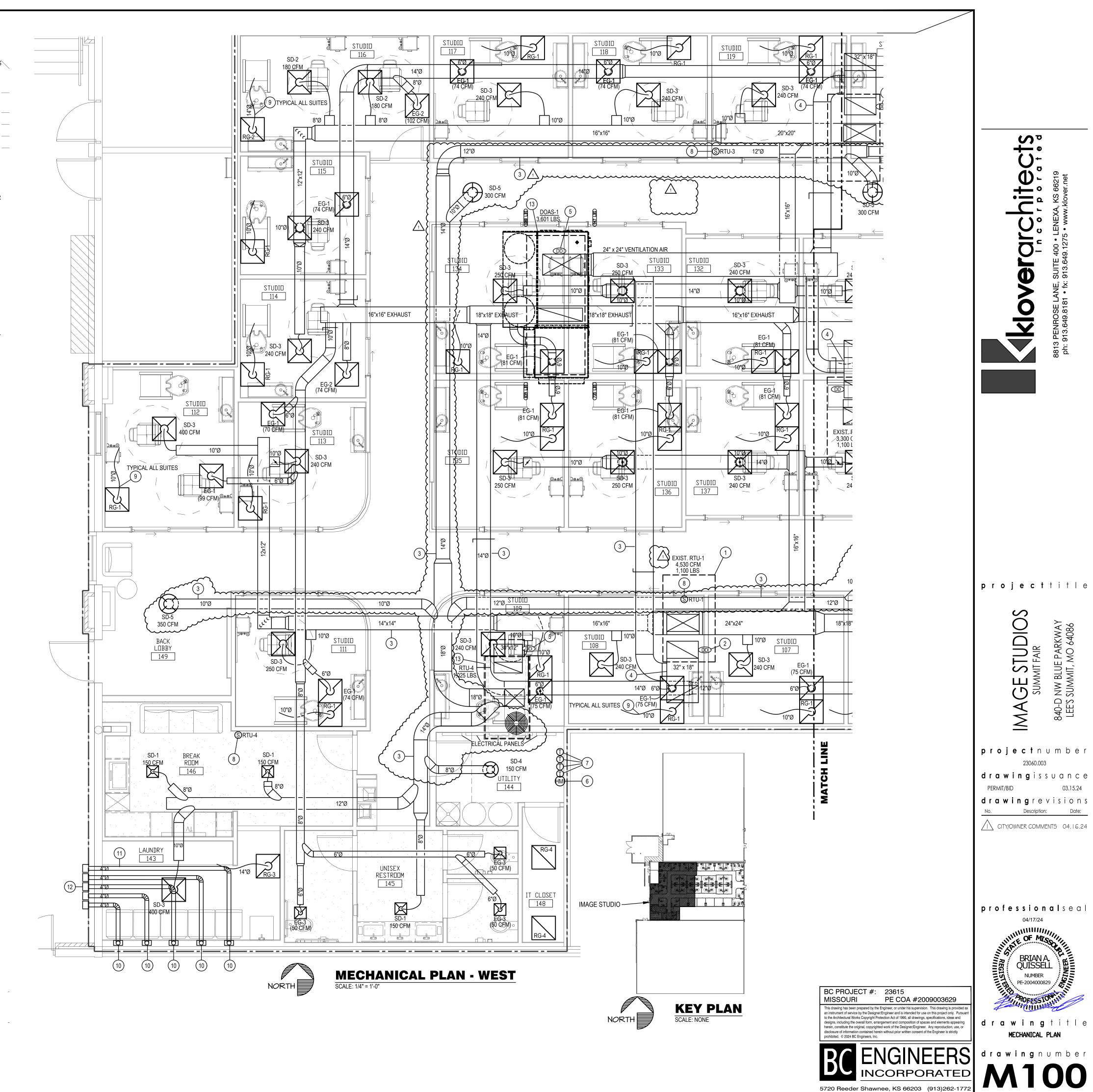
OCCUPIED MODE ZONE SET POINTS (5° DEADBAND) COOLING SET POINT 75°F (ADJUSTABLE) HEATING SET POINT 70°F (ADJUSTABLE)

UNOCCUPIED MODE ZONE SET POINTS

COOLING SET POINT 78°F (ADJUSTABLE) HEATING SET POINT 65°F (ADJUSTABLE)

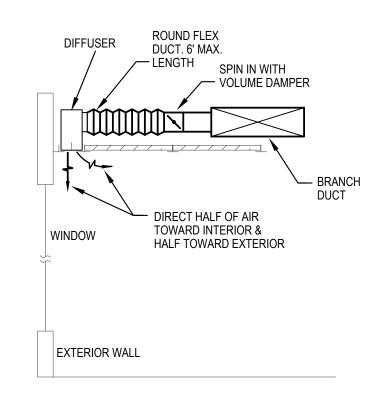
THE MECHANICAL CONTRACTOR SHALL ENSURE THE SYSTEMS ARE WIRED, INTERLOCKED, PROGRAMMED CORRECTLY, AND FULLY TESTED IN ALL MODES TO ENSURE THESE REQUIREMENTS ARE MET.

THE SYSTEMS SHALL BE BALANCE BY A NEBB CERTIFIED BALANCER, AND SHALL BE STARTED UP BY FACTORY TRAINED PERSONNEL.

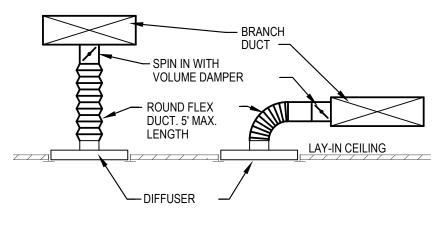


MECHANICAL PLAN NOTES:

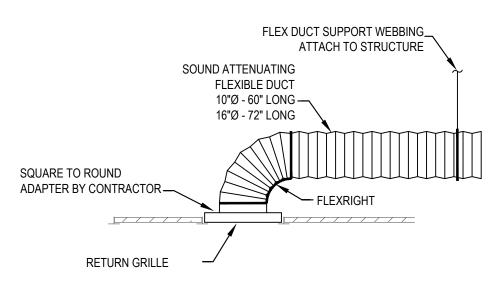
- (1)EXISTING ROOF TOP UNIT TO REMAIN AS IS. PERFORM PREVENTATIVE MAINTENANCE CHECK AS NOTED ON SHEET M200. CONNECT NEW DUCTWORK TO THE EXISTING DUCT DROPS WITH FLEXIBLE CONNECTIONS.
- EXISTING DUCT DETECTOR TO REMAIN. VERIFY UNIT IS IN PROPER WORKING ORDER. PROVIDE REMOTE ENUNCIATOR 2 AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- (3)ALL SUPPLY DUCTWORK EXPOSED IN OPEN CEILING AREA SHALL BE INTERNALLY LINED. PREP DUCTWORK FOR PAINT.
- (4)CONNECT VENTILATION SUPPLY DUCT TO THE RTU RETURNS AND CONNECT WITH A BALANCING DAMPER. REFER TO SCHEDULE FOR OUTDOOR AIR VOLUME.
- (5)PROVIDE DUCT DETECTOR IN LOCATION SHOWN. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- 6 PROVIDE SOUND ABSORBING FLEX DUCT SOUND BOOT FOR EACH SUITE AS DETAILED. PROVIDE FLEXFLOW ELBOW. INSTALL AS DETAILED & AS REQUIRED BY THE MANUFACTURER.
- 8 LOCATION OF TEMPERATURE SENSOR FOR RTU. MOUNT SENSOR 48" ABOVE THE FINISHED FLOOR.



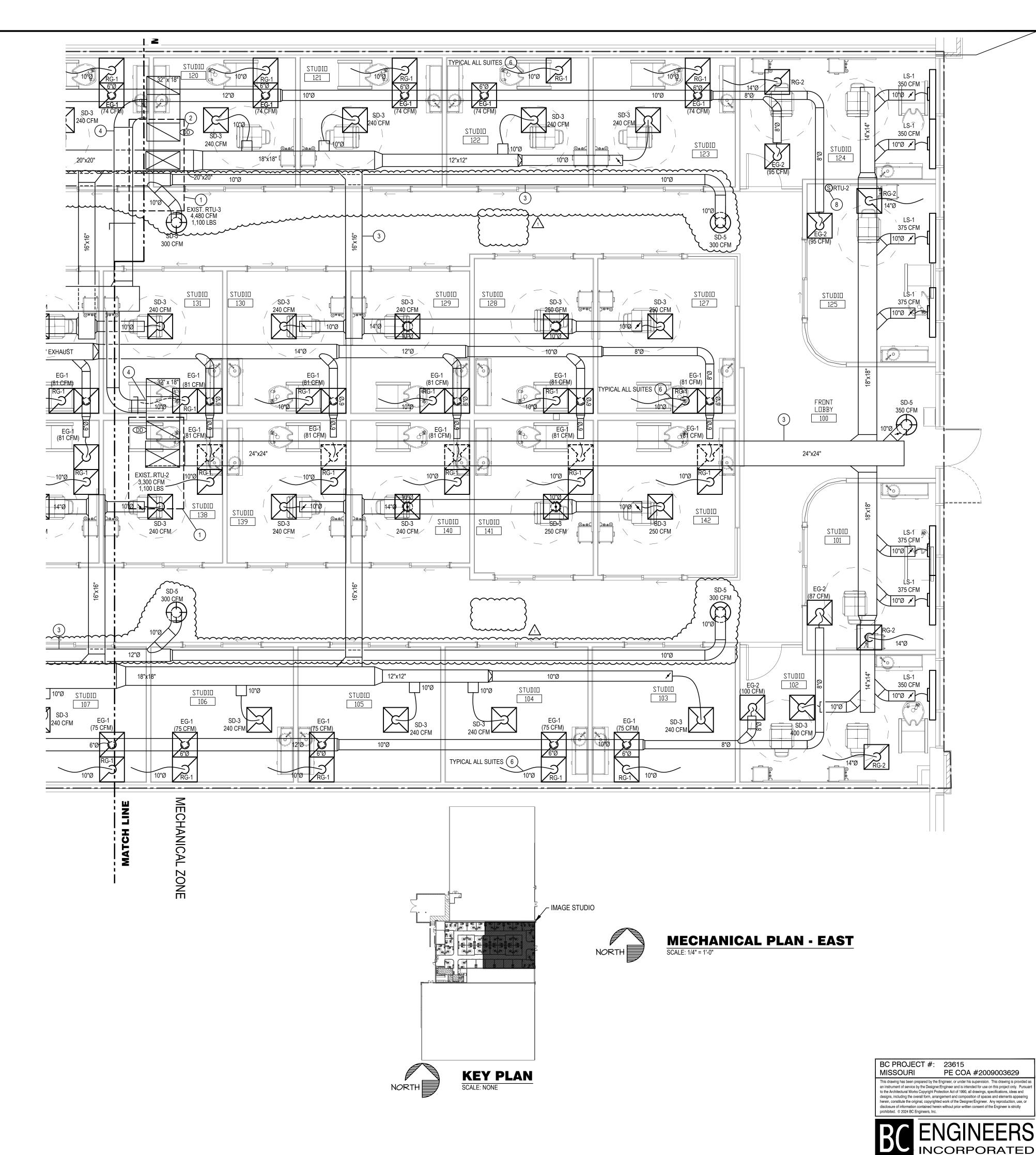
LINEAR DIFFUSER DETAIL SCALE: NONE



DIFFUSER DETAIL SCALE: NONE



ACOUSTICAL RETURN BOOT DETAIL SCALE: NONE







	LINEAR DIFFUSER SCHEDULE												
MARK	MFGR	MODEL	# SLOTS	SLOT WIDTH	LENGTH	INLET	FINISH	NOTES					
LS-1	TITUS	FTI-20	1	2"	48"	10"	WHITE	1,2					

NOTES: 1. PROVIDE INSULATED PLENUM BOX FOR SUPPLY DIFFUSER. 2. PROVIDE WITH HIGH THROW PATTERN CONTROLLER AND BORDER TYPE 11.

		DIFFUSE	R, REGISTE	ER & GRILL	E SCHEDI	JLE
MARK	MFGR		NECK SIZE	FACE SIZE	FINISH	NOTES
SD-1	TITUS	{ TMS/3 }	6"Ø	12"x12"	WHITE	1
SD-2			8"Ø	24"x24"		2
SD-3			10"Ø	24"x24"		2
SD-4		TMR	8"Ø	18" DIA.		2
SD-5		•	10"Ø	22.5" DIA.		2
RG-1		PAR/3	10"Ø	24"x24"		2
RG-2			14"Ø			}
RG-3		•	14"Ø			WITH GYP FRAME
EG-1		PAR/1	6"Ø	24"x24"		2
EG-2		+	8"Ø	•		2
EG-3		PAR/3	6"Ø	12"x12"		1
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NOTES: 1. PROVIDE WITH AG-75 OPPOSED BLADE DAMPER IN NECK & GYP FRAME.

12. PROVIDE WITH AG-75 OPPOSED BLADE DAMPER IN NECK.

							EXISTI	NG	ROOFTO	OP UNI	SCHE	DULE					
		NOM		EVHALIST	EXT. STATIC P		COOLING			HEAT	ING (GAS)	ELECTRICAL	MINIMUM	TOTAL			
	MODEL NO.	TONS	CFM	CFM	IN. WG. (NOTE 2)	TOTAL BTUH	SENS. BTUH	AMB.	EVAP. EAT DB/WB	BTUH INPUT	BTUH OUTPUT	VOLT/Ø/HZ	OUTDOOR AIR (CFM)	WEIGHT (LBS)	EER	FREON	REMARKS
TRANE	-	10	4,000	4,000	1.0	113,600	85,200	105	80/67	240,000	192,000	480/3/60	1,744	1,600	12.0	R-410a	-
	-	7.5	3,000	3,000		84,100	62,200			180,000	144,000		524	1,525	12.5		
•	-	10	4,000	4,000	•	113,600	85,200	1	V	240,000	192,000	•	1,732	1,600	12.0	•	
			TRANE - 10	MFGR MODEL NO. TONS CFM TRANE - 10 4,000 - 7.5 3,000	MFGR MODEL NO. TONS CFM CFM TRANE - 10 4,000 4,000 - 7.5 3,000 3,000	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM STATIC P. IN. WG. (NOTE 2) TRANE - 10 4,000 4,000 1.0 - 7.5 3,000 3,000 1.0	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM STATIC P. IN. WG. (NOTE 2) TOTAL BTUH TRANE - 10 4,000 4,000 1.0 113,600 - 7.5 3,000 3,000 10 84,100	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. (NOTE 2) TOTAL BTUH SENS. BTUH TRANE - 10 4,000 4,000 1.0 113,600 85,200 - 7.5 3,000 3,000 84,100 62,200	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOTE 2) COOLING TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 - 7.5 3,000 3,000 10 84,100 62,200 10	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOTE 2) COOLING TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 - 7.5 3,000 3,000 84,100 62,200 1 1	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOTE 2) COOLING EVAP. EAT BTUH INPUT TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 - 7.5 3,000 3,000 84,100 62,200 1 180,000	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. (NOTE 2) COOLING EVAP. MODEL NO. HEATING (GAS) TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 - 7.5 3,000 3,000 1 84,100 62,200 1 180,000 144,000	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM STATIC P. IN. WG. (NOTE 2) TOTAL BTUH SENS. BTUH AMB. EVAP. EAT DB/WB BTUH INPUT BTUH OUTPUT VOLT/Ø/HZ TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 480/3/60 - 7.5 3,000 3,000 84,100 62,200 1 180,000 144,000 1	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOTE 2) COOLING EVAP. EAT BTUH INPUT BTUH OUTPUT VOLT/Ø/HZ MINIMUM OUTDOOR AIR (CFM) TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 480/3/60 1,744 - 7.5 3,000 3,000 1 84,100 62,200 1 180,000 144,000 1 524	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOTE 2) COOLING EVAP. EAT BTUH INPUT BTUH OUTPUT BTUH OUTPUT ELECTRICAL MINIMUM OUTDOOR AIR (CFM) TOTAL WEIGHT (LBS) TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 480/3/60 1,744 1,600 - 7.5 3,000 3,000 84,100 62,200 1 180,000 144,000 144,000 524 1,525	MFGR MODEL NO. NOM. TONS EVAP. CFM EXHAUST CFM EXT. STATIC P. IN. WG. (NOT 2) COOLING ELECTRICAL MINIMUM OUTDOOR AIR (CFM) TOTAL WEIGHT (LBS) EVAP. WEIGHT (LBS) TOTAL WEIGHT (LBS) TOTAL WEIGHT (LBS) EVAP. ER TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 480/3/60 1,744 1,600 12.0 - - 7.5 3,000 3,000 84,100 62,200 1 180,000 144,000 524 1,525 12.5	MFGR MODEL NO. NOM. TONS EVAP. CFM EXAPUST CFM EXT. STATIC P. (NOTE 2) COOLING SENS. BTUH AMB. EVAP. ADB/WB BTUH DB/WB BTUH OUTPUT BTUH OUTPUT MINIMUM OUTPUT TOTAL WEIGHT (LBS) EER FREON TRANE - 10 4,000 4,000 1.0 113,600 85,200 105 80/67 240,000 192,000 480/3/60 1,744 1,600 12.0 R-1/04 - 7.5 3,000 3,000 84,100 62,200 1 180,000 144,000 524 1,525 12.5 12.5

NOTES: EXISTING ROOF TOP UNIT TO REMAIN. INFORMATION PROVIDED FOR REFERENCE ONLY. PERFORM PREVENTATIVE MAINTENANCE CHECK AS LISTED BELOW.

ALL EXISTING HVAC UNITS SHOULD HAVE A PREVENTATIVE MAINTENANCE CHECK-UP TO INCLUDE THE FOLLOWING CRITERIA

CHANGE ALL FILTERS. CLEAN ALL CONDENSATE DRAIN PANS AND FLUSH ALL CONDENSATE DRAIN LINES.

CLEAN ALL EVAPORATOR AND CONDENSER COILS WITH A NON-ACID CLEANER.

CHECK REFRIGERANT CHARGE (GUAGES OR RETURN/SUPPLY TEMPERATURE VARIANCE).

PROVIDE COMPLETE LUBRICATION OF ALL SHAFTS AND BEARINGS THAT HAVE LUBRICATION ZERKS. THE REPLACEMENT OF ALL BELTS, HOSES AND FABRIC/RUBBER COATED ITEMS THAT ARE SUBJECT TO WEAR.

CHECK AMPS OF THE INDOOR, OUTDOOR MOTORS, AND COMPRESSORS

TURN UNIT POWER OFF - TIGHTEN ALL ELECTRICAL CONNECTIONS, CONTACTORS, ETC.

EXAMINE AND REPAIR ALL ELECTRICAL WIRING, CONTROLS, STARTERS, RELAYS, CAPACITORS AND LIKE ITEMS THAT TEND TO DETERIORATE OVER TIME OR BECOME NON-OPERATIONAL. THIS INCLUDES SMOKE DETECTORS.

10. GREASE ALL FITTINGS 11. CHECK DUCTWORK CONNECTIONS AND REPAIR AS NEEDED.

12. NOTIFY GENERAL CONTRACTOR OF ANY REQUIRED PARTS OR REPAIRS NOT INCLUDED IN THIS LIST. ALL UNITS SHALL BE FUNCTIONING AND COOLING PROPERLY AT

COMPLETION OF JOB. 13. CHECK THE ECONOMIZER FOR PROPER FUNCTION AND CORRECT OPERATION OF THE SYSTEM WHEN A CALL FOR COOLING COMES FROM THE THERMOSTAT. REPAIR AND ADJUST AS NEEDED.

14. VERIFY ANY WORK REQUIRED BY THE LANDLORD PRIOR TO BID.

15. ALL FINDINGS AND VALUES TO BE NOTED AND PROVIDED TO TENANT'S CONSTRUCTION MANAGER & OR TENANT'S MAINTENANCE DIRECTOR.

													R	OFTOP	UNIT SCHE	DULE											
			NOM.	E\/AD	EXT.			COOLING			НОТ		HEATING (GAS	6)		ELECTF	RICAL			UNIT	BLOWER	ECONOMIZER + BARC	METRIC RELIEF	MINIMUM		TOTAL	
MARK	MFGR.	MODEL NO.	TONS	CFM	IN. WG. (NOTE 2)	COOLING STAGES	TOTAL BTUH	SENS. BTUH	AMB.	EVAP. EAT DB/WB	GAS REHEAT	BTUH INPUT	BTUH OUTPUT	HEATING STAGES	VOLT/Ø/HZ	BLOWER MOTOR	POWER EXHAUST	MCA (AMPS)	MOCP (AMPS)	CONTROLS	DRIVE TYPE	TYPE	CONTROLLER	OUTDOOR AIR (CFM)	IEER	WEIGHT (LBS)	NOTES
rtu-4	LENNOX	KGB072H4B	6	2,650	1.0	2	67,300	49802	105	80/67	NO	108,000	86,000	2	480/3/60	2 HP	NO	16	20	ELECTRO- MECHANICAL	MSAV	HIGH PERFORMANCE	SENSIBLE	260	15.0	1,025	1,2,3,4,5,6

NOTES: 1. PROVIDE HINGED ACCESS DOORS, SCROLL COMPRESSORS WITH CRANKCASE HEATER, HIGH PRESSURE SWITCHES, FREEZESTAT, HAIL GUARDS. STANDARD COOLING DOWN TO 30°F. OUTDOOR AIR DAMPER TO FULLY CLOSE W/ FAN SHUTDOWN FOR ALL UNITS. 2. EXTERNAL STATIC PRESSURE LISTED REPRESENTS STATIC PRESSURE REQUIRED FOR DUCTWORK AND DIFFUSERS OUTSIDE THE HVAC UNIT COMPLETELY INDEPENDENT OF ANY PRESSURE DROP THROUGH THE HVAC EQUIPMENT INCLUDING BUT NOT LIMITED TO FILTERS, COILS AND ECONOMIZERS.

THE FAN AND MOTOR SHALL BE SIZED APPROPRIATELY TO MEET THIS DEFINITION OF EXTERNAL STATIC PRESSURE. 3. PROVIDE COMMERCIAL 7-DAY PROGRAMMABLE HEAT/COOL/AUTO CHANGEOVER TOUCHSCREEN, WIFI COMPATIBLE THERMOSTAT WITH OPTIMUM START CONTROLS, ECONOMIZER OUTPUT FAULT DETECTION INPUT. PROVIDE REMOTE TEMPERATURE. MATCH THERMOSTAT PROVIDED FOR RTU-1, RTU-2, RTU-3.

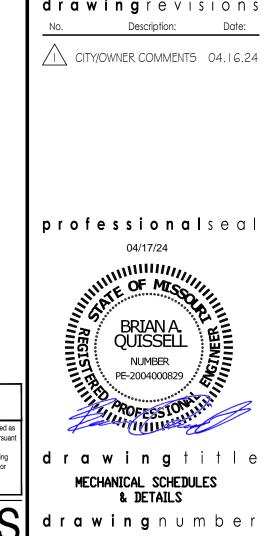
ECONOMIZER/OUTDOOR AIR DAMPER IS TO CLOSE DURING UNOCCUPIED HOURS.

4. PROVIDE 18" HIGH (AT LOWEST POINT) PRE-FABRICATED INSULATED ROOF CURB WITH SLOPE TO MATCH SLOPE OF ROOF FOR EACH UNIT. 5. PROVIDE NEW 2" MERV 8 FILTERS UPON COMPLETION OF CONSTRUCTION.

6. MECHANICAL CONTRACTOR SHALL COORDINATE ALL UNIT MOCP'S OF ACTUAL INSTALLED EQUIPMENT WITH ELECTRICAL CONTRACTOR.

		OUTDOOR	AIR CALCU	LATIO	NS				
UNIT	Area (sqft)	OCCUPANCY CLASSIFICATION	Occupant Density #/1000 sqft	People outdoor airflow rate in breathing zone, (Rp) cfm/person	Area outdoor airflow rate in breathing zone, (Ra) cfm/sqft	Exhaust airflow rate cfm/sqft	Breathing zone outdoor airflow (Vbz)	Zone air distribution effectivene ss (Ez)	Zone outdoor airflow (cfm)
RTU-1	2250	Beauty salons	25	20	0.12	0.60	1395	0.8	1744
								Total	1744
RTU-2	140	Corridors	0	0	0.06		8	0.8	11
RTU-Z	637	Beauty salons	25	20	0.12	0.60	395	0.8	494
								Total	504
RTU-3	2235	Beauty salons	25	20	0.12	0.60	1386	0.8	1732
								Total	1732
	523	Break Room	25	5	0.06		97	0.8	121
RTU-4	1600	Corridors	0	0	0.06		96	0.8	120
	123	Storage rooms	0	0	0.12		15	0.8	18
								Total	259





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FAN UNIT	TAG	QTY	DDAS/RT	J MODEL #		NFORMATI	BLOWER	RETURN	MAX DUTSIDE	TOTAL CFM	WEIGHT (LBS)	ESP	НР		PHASE	
ND	DDAS-1		CASRTU3-I.40				24MF-3-R1	AIR CFM	AIR CFM 4000	СF М 4000	3573	1.000	5.00			4
	TES:													0.00		
2. DI 3. II 5. E E S 7. 8. F A 10. 7 11. 7 13. 1 14. 1 15. 1 16. 1	DIRECT D NTEGRAT REFRIGER C MOTOF LECTRON SUCTION ACTORY VERAGIN 2" EXTEN 81% EFF EXHAUST FILTERE SUPPLY FULLY M	RIVE PI ED MONI ATION F CONDE IC EXP LINE AC COMMISS IG INTAI RIOR DU NERGY F ICIENT F CFM MO O SUPPL CFM MOI DDULAT	L COMPRESSO LENUM BLOWE TORING VIA PRESSURE MO NSING FANS ANSION VALV COMULATOR SIONING WITH (E, EVAP AN AL-WALL COM RECOVERY WH TURNACE, WI ONITORING INT INTORING INT NITORING INT ING HOT GAS UNIT FILTRA	ER. BELT DE CELLULAR C NITORING ON /E. TXV NO /E. TXV NO /E. TXV NO /E. TXV NO /E. TXV NO /E. TXV NO NO CONTORNA /E. TXV /E. TXV/E. TX	RIVEN BLDY CONNECTION HIGH AND T ACCEPTA MATS WARRA TEMPERAT W∕ R-13 II CPEED CONT NG INDUCEI UNIT WITH REAMS WITH	WERS ARE BY MANU LOW PRE BLE OURE SENS NSULATION ROLS FOR R TO MAIN CFM MEAS IN ENERG	NOT ACCE FACTURER SSURE SIDI YEAR WARF SORS (DISC N-MINIMUM FROST PF NTAIN CONS SUREMENT	PTABLE E OF SYST RANTY ON S HARGE SEN 20GA EXTE ROTECTION TANT COME INCLUDED T RY VENTIL	EM INCLU STAINLES SOR TO 3 RIOR W/ AND MOD SUSTION I FHROUGH ATOR MOD	DED THRE S STEEL BE FACTO 14GA BAS ULATION EFFICIENC DIGITAL S DULE	HEAT EX RY MOUN E TO CAPA Y ACROS	CHANG TED W CITY. : S FIR CE	INTERF SER /ITHIN INCLUI	UNIT DES S	SUPPLY	
<u>0AS</u>																
FAN JNIT ND										SENSIB	TY					
1	DDAS-1	3350	1.577	4.8	460/3/60	86.7/	79.0	79.7/70.2	75	5.0/62.0	140.9	мвн а	27.5 M	BH :	113.5 M	 3H
	OPTIO	VS	I													
FAN INIT ND	TAG	QTY				DE	SCRIPTION						IMPOR"	TANT	NDTE	
		1	RTU TOTAL FREEZESTAT		RING											
		1	SHIP LOOSE	GAS STRAIN			RTIL 750			FN 15 *					IRCULA IRBORN	
		1	PREWIRE CO	NT ELECTRIC INTROLS THIS D. DOES NOT	S UNIT, TH	E #28, #4	17, "MA", OI	R "E2" PRE					CARE	FACI	ANCE W	٩N
		1			TORING SYS	TEM - IN				TION REQ	JIRED				COVER	
		1	D∨ERHEAT S	STAT			00000	A					BACK	INTO	THE F	RES
		1	COMMERCIAL	RY MOUNTED SMOKE DETE											THIS INCLU	
		1	120V FIRE I]				
		1		ENIENCE DUT RECEPTACLE,			- REQUIRE	S SEPARAT	E 120V (]N.					
		1	CLOGGED FI RTU3 DOWN		H - NOTIFI	CATION DI	N HMI									
1	DOAS-1	1	RTU3 EC⊡N⊡ 4″ MER∨ 15	MIZER BARDM FILTERS FE												
		1	RTU3 HAIL					ור								
		1	VAV PACKA	GE W/ MANU	AL/DDC CO											
		1	INLET PRES		0-35″											
		1	COMPRESSOR	ULATING COD , ECM CONDE	INSING FAN	S			-	RIABLE SP	EED					
		1		ULATING REH				POINT CON	TROL							
		1	2″ MER∨ 13		TERS FOR	ERV3										
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INFORMATION COOLING INFORMATION						R	EHEAT IN	FORMATIO	IN		GAS HEAT INFORMATION														
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460	41A	45A	86.7 ° F	79.0 * F	79.7 ° F	70.2*F	55.3 ° F	55.2 ° F	55.2 ° F	186.0 MBH	101.8 MBH	18.8	5.7	74.0°F	72.0 ° F	81 MBH	129.6 MB	BH 76.6 LBS/HF		AL 34	7710 281	1645	60 ° F	7 IN. W.C. – 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20
							19. B	ARDMET	RIC REL	R CONDENS LIEF DAMPE E/DOWN RE	ER														

EXHAUST FILTER & WHEEL MONITORING DOWN WITH NG AND 12:1 TURNDOWN WITH LP

SUPPLY A	IR WINTER	RETURN AIR	DESIGN RECOVERED WINTER CAPACITY						
ENTERING AIR DB/WB TEMP(*F)	LEA∨ING AIR DB∕WB TEMP(*F)	DB/WB TEMP(*F)	TOTAL	SENSIBLE	LATENT				
10.0/7.1	43.3/37.5	69.0/55.0	200.8 MBH	141.8 MBH	59.0 MBH				

AN ENERGY RECOVERY WHEEL. BY VIRTUE OF THEIR DESIGN, ALL ENERGY RECOVERY WHEELS ALLOW A LEVEL OF RETURN/EXHAUST AIR AND CONTAMINANTS D INTO THE SUPPLY AIRSTREAM. ACCEPTING AND OPERATING THIS UNIT WITH OR WITHOUT THE ENERGY RECOVERY WHEEL IN OPERATION INCREASES THE BACTERIA, VIRUS AND CONTAMINANT SPREAD BETWEEN THE RETURN/EXHAUST AIR, INTO THE FRESH AIRSTREAM.

H ANSI∕ASHRAE∕ASHE STANDARD 170-2017, ENERGY RECO∨ERY WHEEL TECHNOLOGY SHOULD NOT BE USED AS A MEANS OF ∨ENTILATION FOR CERTAIN HEALTH ASHRAE POSITION DOCUMENT ON INFECTIOUS AEROSOLS, APPRO∨ED BY ASHRAE BOARD OF DIRECTORS, DATED APRIL 14, 2020, ALSO RECOMMENDS THAT DE∨ICES BE BYPASSED FOR NON-HEALTH CARE FACILITY ∨ENTILATION TO HELP REDUCE THE SPREAD OF ∨IRUS.

DUTDOOR AIR % OR VOLUME BELOW WHAT THIS UNIT WAS DESIGNED FOR ELE∨ATES THE RISK OF AIRBORNE BACTERIA, VIRUS AND CONTAMINANT RECIRCULATION SH AIRSTREAM AND THE SPACE.

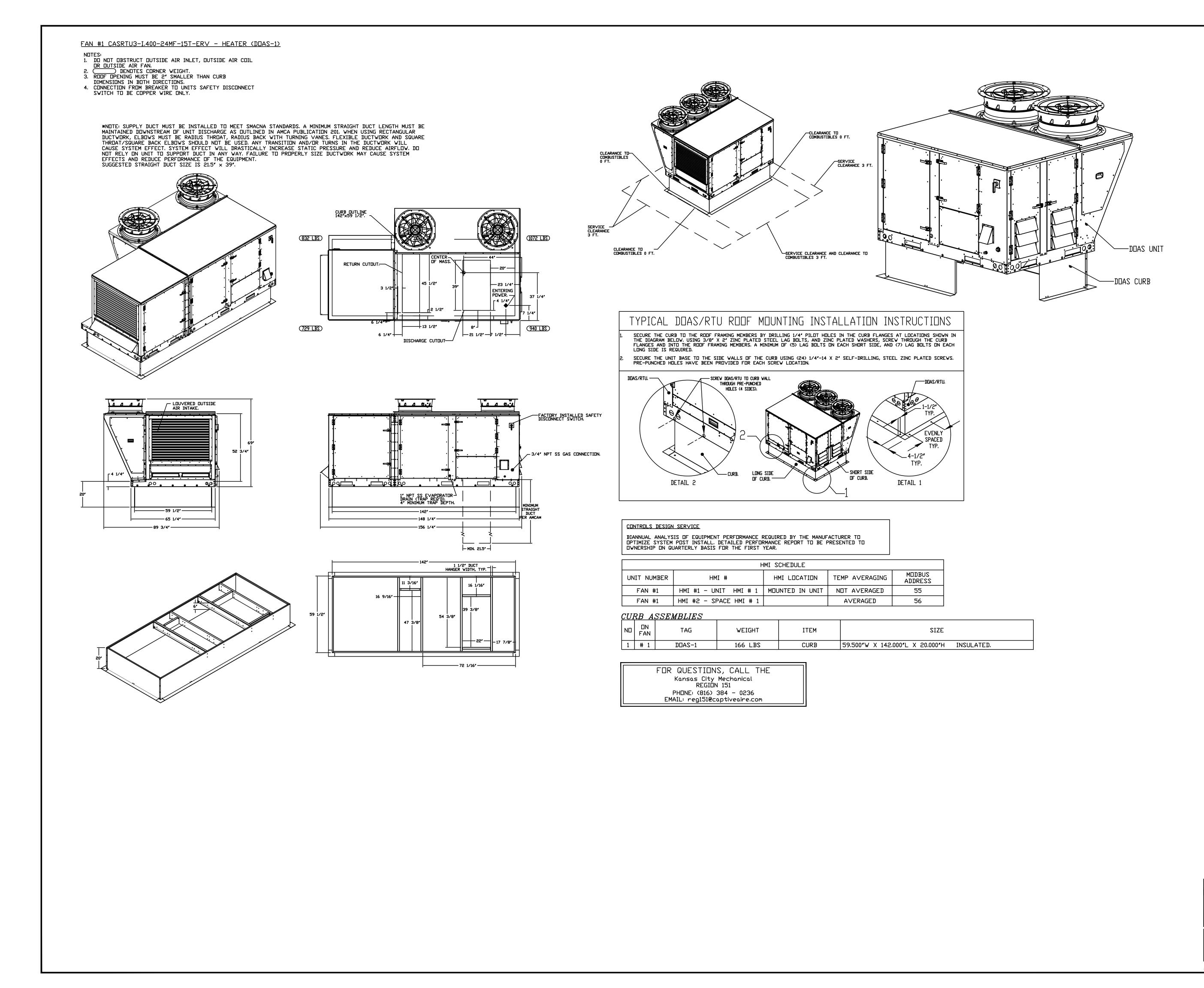
WITH AN EXHAUST LEVEL LESS THAN 50% OF THE SUPPLY LEVEL NULLIFIES ALL RETURN ON INVESTMENT STATEMENTS AND LIMITS THE AMOUNT OF ENERGY RECOVERY. THE ENERGY RECOVERY WHEEL, MUST BE SERVICED AND MAINTAINED AS PER THE INSTALLATION AND OPERATION MANUAL'S RECOMMENDED FREQUENCIES.

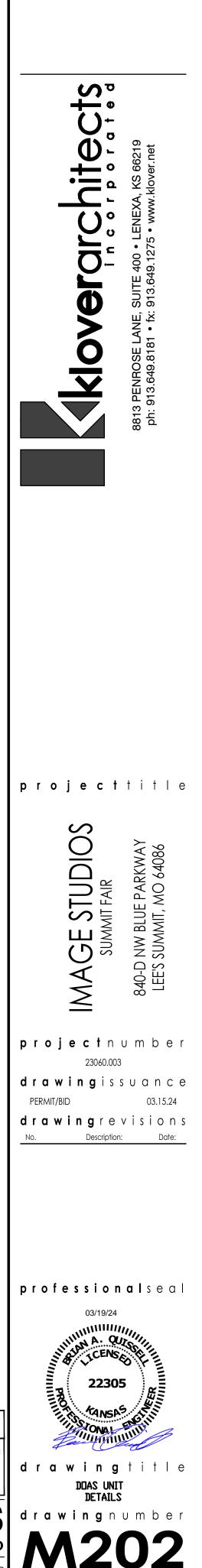


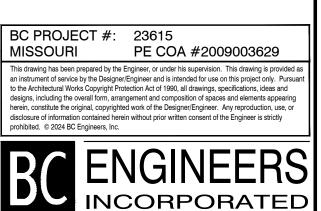
840-D NW BLUE PARKWAY LEE'S SUMMIT, MO 64086

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ELECTRICAL SPECIFICATIONS	
GENERAL PROVISIONS: A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS OUTLINED.	11. DRY TYPE TRANSFORMERS: A. DRY TYPE TRANSFORMERS SHALL BE ENCLOSED IN DR PROVIDE FOR AIR COOLING AND PREVENT ACCIDENTAL
3. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.	AND FINAL PERFORMANCE SHALL COMPLY WITH APPLIC. TRANSFORMERS SHALL BE FULLY RATED TWO WINDING INDICATED. TRANSFORMERS SHALL BE EQUAL TO SQUA
C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE (NEC), AND ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE. D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.	B. TRANSFORMERS SHALL BE CAPABLE OF OPERATING AT IN A 40°C. AMBIENT WITHOUT EXCEEDING THE RATED AV ANSI INSULATION USED. INSULATION SHALL BE CLASS L CLASS 220C FOR TRANSFORMERS 30 KVA TO 500 KVA. T TRANSFORMERS SHALL HAVE OVER-LOAD CAPACITY TO
E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, CONDUIT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE.	MAINTAINED. SOUND RATINGS SHALL NOT EXCEED MAX ANSI C89.1. C. TRANSFORMERS 30 KVA AND LARGER SHALL BE EQUIPP AND FOUR 2-1/2% TAPS BELOW NORMAL RATED VOLTAG
F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE MAINTAINED.	RATINGS SHALL BE PROVIDED WITH CLAMP-TYPE SOLDE COPPER OR ALUMINUM CABLES. THE CONNECTORS SH/ AND LOW-VOLTAGE TERMINALS HELD IN A FIXED POSITIO BE RATED AT 75°C. TRANSFORMERS 30 KVA AND LARGE ISOLATION PADS MOUNTED BETWEEN THE CORE AND CO AND VIBRATION.
3. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.	12. DISCONNECTS:
CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE NECESSARY FOR CONCEALED ELECTRICAL COMPONENTS. CONTRACTOR SHALL PROMPTLY CALL ENGINEERS ATTENTION TO ANY APPARENT CONTRADICTIONS,	A. DISCONNECTS SHALL BE EXTERNALLY OPERATED, QUIC FOR PAD LOCKING. FUSED AND NON-FUSED DISCONNEC B. INDOOR SWITCHES SHALL BE NEMA I AND OUTDOOR SW
AMBIGUITIES, ERRORS, DISCREPANCIES, OR OMISSIONS IN THE PLANS OR SPECIFICATIONS. OPERATION AND MAINTENANCE MANUALS:	OTHERWISE. 13. FUSES:
A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.	A. FUSES PROTECTING CIRCUIT BREAKER PANELS SHALL WITH 200,000 AMPERES RMS SYM INTERRUPTING CAPAC RATINGS ABOVE 60 AMPERES.
3. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATION AND MAINTENANCE MANUALS.	B. ALL OTHER FUSES SHALL BE U.L. CLASS RK-5, DUAL-ELE SECONDS AT 500% RATING. FUSES SHALL HAVE CURREL AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING F
C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE COLLATED AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC. CONTRACTORS, ETC. DOCUMENTS SHALL BE COMPILED AND BOUND IN DIGITAL FILE OR 3 RING BINDER.	14. LIGHT FIXTURES: A. WHERE LIGHT FIXTURES ARE MOUNTED IN A LAY-IN CEI
MANUFACTURERS: A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS	ATTACHED DIRECTLY BETWEEN EACH LIGHT FIXTURE AN SHALL BE A MINIMUM OF 12 GAUGE GALVANIZED STEEL V
LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN, UNLESS NOTED OTHERWISE. TESTING, AND BALANCING:	 B. FIXTURES ARE REQUIRED AT ALL LIGHTING OUTLETS SF FIXTURE WIRE IS REQUIRED IN ALL FIXTURES AND FIXTU REQUIRED FOR EXTERIOR FIXTURES. ALL PARTS OF FIX WITH NEC REQUIREMENTS. C. ALL FIXTURES SHALL CARRY UL AND ETL LABELS.
A. ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY, SHORTS, AND GROUNDS BEFORE CONNECTING TO THE PROPER PHASE AS DESIGNED TO BALANCE THE LOADING BETWEEN PHASES.	15. SLEEVES:
3. POWER AND LIGHTING PANELS SHALL BE PROPERLY PHASED TO DISTRIBUTE THE LOAD AND SHALL BE CONNECTED AND ADJUSTED TO OPERATE AS SPECIFIED.	A. PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES / B. INTERIOR PARTITIONS: 16 GAGE GALVANIZED STEEL, P/ SAFING AND CAULK AT EACH END WITH FIRE RESISTANT
C. ALL MOTORS AND SIMILAR EQUIPMENT SHALL BE CHECKED FOR PROPER PHASE ROTATION AND OPERATION. RACEWAYS:	C. ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHE COORDINATE WITH ROOFING CONTRACTOR AND FLASH
A. CONDUIT INSIDE THE BUILDING SHALL BE METALLIC TUBING (EMT), BEARING THE UL LABEL, WITH COMPRESSION TYPE FITTINGS OR SCREW SET FITTINGS.	16. GROUNDING: A. GROUND ALL ELECTRICAL APPARATUS IN ACCORDANCE
3. CONDUIT EXPOSED TO THE WEATHER, INSTALLED UNDERGROUND, IN CONCRETE, OR USED FOR SERVICE ENTRANCE SHALL BE STANDARD RIGID CONDUIT (GALVANIZED) WITH THREADED FITTINGS. C. UNDERGROUND CONDUIT MAY BE POLYVINYL CHLORIDE WITH A DEFLECTION TEMPERATURE, UNDER LOAD	AND ANY LOCAL REQUIREMENTS. INSURE CONTINUOUS PROVIDE BONDING JUMPER INSIDE ALL FLEXIBLE CONDU
AT 264 PSI, OF 78 DEGREES C, AND A TENSILE STRENGTH OF 5,200 PSI. JOINTS SHALL BE FLUSH SOLVENT WELDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE EQUAL TO CARLON POWER AND COMMUNICATIONS DUCT TYPE DB (DIRECT BURIAL). CONDUIT AND FITTINGS	B. BOND METAL PIPING SYSTEMS IN COMPLIANCE WITH NE 17. REMODELING WORK:
SHALL BE PRODUCED BY THE SAME MANUFACTURER. D. FLEXIBLE METAL CONDUIT SHALL ONLY BE USED FOR CONNECTIONS TO MOTORS, TRANSFORMERS, AND LIGHT FIXTURES. MAXIMUM LENGTH SHALL BE 6'-0".	A. DEMOLITION: DISCONNECT, DEMOLISH AND REMOVE AE INDICATED TO BE REMOVED AND NOT INDICATED TO BE
CONDUCTORS: A. WIRES SHALL BE CONTINUOUS WITHOUT SPLICES OR TAPS IN CONDUIT RUNS. ALL SPLICES SHALL BE	 B. EQUIPMENT TO BE SALVAGED: 1) DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT TO THE LOCATION E
MADE IN JUNCTION, PULL, OR OUTLET BOXES. ALL WIRE SHALL BE INSTALLED IN CONDUIT, WIREWAYS, OR OTHER PROTECTIVE COVER SANCTIONED BY CODES.	2) ALL MATERIALS AND EQUIPMENT DESIGNATED TO BE REMOVED, AND STORED UNTIL NEEDED FOR REMODE
 CONDUCTORS FOR LIGHTING AND POWER SHALL BE COPPER, MINIMUM NO. 12 A.W.G., 600 VOLT. NO. 10 GAUGE AND SMALLER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY LOCATIONS), SOLID CONDUCTOR, UNLESS OTHERWISE INDICATED. 	"LIKE NEW" CONDITION WITH RUST OR CORROSION RE REPAINTED AS REQUIRED TO MATCH NEW CONSTRUC ANY ITEMS WHICH BECOME DAMAGED BEYOND REPAI
D. NO. 8 GAUGE AND LARGER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED, UNLESS OTHERWISE INDICATED.	ACTIVITY SHALL BE REPLACED WITH NEW MATERIAL E C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND EQUIPMENT NOT INDICATED TO BE SALVAGED.
E. SERVICE ENTRANCE AND PANEL FEEDER CONDUCTORS, NO. 3 GAUGE AND LARGER SHALL BE TYPE XHHW-2 (WET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED COPPER, UNLESS OTHERWISE INDICATED.	D. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEIND
MC CABLE: A. MC CABLE SHALL CONSIST OF INTERLOCK ARMORED CABLE MADE OF THREE OR FOUR TYPE THHN SOLID (#8 AWG AND LARGER MAY BE STRANDED) COPPER CONDUCTORS RATED 90°C	PROTECTION AND BARRIERS AFTER REMODELING OPER E. PROVIDE ALL ALTERATIONS AND REWORK INDICATED A AND OPERATION OF ALL EXISTING ELECTRICAL SYSTEM
FOR DRY LOCATIONS, WITH NYLON OR EQUIVALENT UL LISTED JACKET, PER UL STANDARD 83 THE THREE CONDUCTORS SHALL BE TWISTED TOGETHER WITH THE COPPER GROUNDING CONDUCTOR, SUITABLE FILLERS, AND WRAPPED IN BINDER TAPE. THE ASSEMBLY SHALL BE	LOCATE, IDENTIFY, AND PROTECT ELECTRICAL SERVICE SERVING OTHER AREAS OUTSIDE THE REMODELING LIM REMODELING LIMITS. WHEN SERVICES MUST BE INTERF
ARMORED WITH SPIRALLY WRAPPED INTERLOCKED ARMOR OF ALUMINUM OR GALVANIZED STEEL. CABLES SHALL BE TESTED IN ACCORDANCE WITH UL STANDARD 1569 FOR TYPE MC CABLE AND RATED	AFFECTED AREAS. 1) ABANDONED CONDUIT SHALL HAVE WIRE REMOVED A WALLS OR PARTITIONS SHALL HAVE DEVICES AND WIF
AT 600 VOLTS, 90 DEG. C FOR DRY LOCATIONS AND 75 DEG. C FOR WET LOCATIONS. WIRING DEVICES:	2) WHERE EXISTING CONDUITS TERMINATE AT AN EXIST TO BE REMOVED, DISCONNECT AND REMOVE DEVICE
A. WALL SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE, FLUSH TOGGLE SWITCH, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES.	CUT BACK AND CAPPED (BELOW THE FLOOR OR ABOV OBSTRUCTION. PATCH FLOOR TO MATCH EXISTING.
1) SINGLE POLE: HUBBELL #CS1221-X, OR EQUAL. 2) THREE WAY: HUBBELL #CS1223-X, OR EQUAL. 3) AS SPECIFIED ON PLANS	3) WHERE EXISTING CIRCUITS EXTEND BEYOND THE OU FLOOR TO BE REMOVED, FURNISH AND INSTALL NEW CIRCUIT OR FEED THE REMAINING OUTLET(S) FROM A A MANNER AS NOT TO REVISE THE CIRCUIT. ALL RER(
3. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX, GROUNDING, THREE-WIRE TYPE, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES. HUBBELL #CR5352-X, OR EQUAL.	ARCHITECT. 4) WHERE EXISTING OUTLETS IN A WALL, CEILING, OR FI
C. GROUND FAULT INTERRUPTER RECEPTACLES (GFI) SHALL BE HUBBELL #GF20-XL. DEVICE COVER PLATES SHALL BE AS HEREINBEFORE SPECIFIED. D. RECEPTACLES OUTSIDE BUILDING AND WHERE NOTED AS WEATHERPROOF, SHALL BE LISTED 'WEATHER-	MAINTAIN OPERATION OF OTHER REMAINING OUTLETS LOCATION. EXISTING WIRING DEVICES SHALL NOT BE 5) WHERE LIGHTING FIXTURES ARE INDICATED TO BE DE
RESISTANT HUBBEL #GFTR20-X OR EQUAL AND SHALL BE INSTALLED IN A WEATHERPROOF ENCLOSURE WHICH SHALL BE INTERMATIC #WP1010MXD OR #WP1010HMXD DIECAST METAL WEATHERPROOF RECEPTACLE COVER. COVER SHALL BE WEATHER PROOF RATED WHILE IN USE.	EXISTING CONDUIT (IF APPLICABLE) FOR THE NEW LIG REMOVED.
E. VERIFY DEVICES AND DEVICE COVERPLATES COLOR AND STYLE WITH ARCHITECT. BOXES:	6) WHERE A TELEPHONE CIRCUIT EXTENDS BEYOND AN FLOOR TO BE REMOVED, PROVIDE NECESSARY EMPT REQUEST THE OWNER TO ARRANGE WITH THE TELEPI REMAIN.
A. HOT DIPPED GALVANIZED STEEL BOXES. PROVIDE TYPE TO SUIT CONDITIONS FOR INSTALLATION. 3. ALL BOXES SHALL BE FLUSH MOUNTED, UNLESS INDICATED OTHERWISE.	7) WHERE EXISTING CONDUIT AND WIRE RUNS ARE LOC CEILING OR FLOOR TO BE REMOVED, THEY SHALL BE I CONSTRUCTION TO MAINTAIN CONTINUITY OF CIRCUIT
PANELBOARDS:	 8) CONDUIT SHALL BE CONCEALED WITHIN THE EXISTIN POSSIBLE, EXCEPT WHERE OTHERWISE INDICATED.
A. FURNISH AND INSTALL CIRCUIT BREAKER PANELBOARDS AS SHOWN ON THE DRAWINGS. PANELBOARDS SHALL BE LISTED BY UL AND SO LABELED, AND SHALL BE FULLY RATED FOR THE VOLTAGE AND CURRENT CAPACITY INDICATED ON THE PANEL SCHEDULE. PANELBOARDS SHALL BE EQUAL TO SQUARE D TYPE NQ OR NF WITH BOLT IN TYPE BREAKERS. PANELBOARD LUGS SHALL BE RATED AT 75°C.	 EXISTING WIRE SHALL BE DISCONNECTED AND REMO ABANDONED.
1) CIRCUIT BREAKER INTERRUPTING CAPACITIES SHALL MEET OR EXCEED THE AVAILABLE RMS SYMMETRICAL FAULT CURRENTS INDICATED AND AS REQUIRED TO MEET OR EXCEED THE AVAILABLE	 BOXES IN FIRE RATED ASSEMBLIES: A. OUTLET BOXES THAT DO NOT EXCEED 16 SQUARE INCHES AND INST CLOSER THAN 24" HORIZONTAL INCHES TO OTHER OUTLET BOXES.
FAULT CURRENT FROM LOCAL UTILITY. 3. CIRCUIT BREAKERS SHALL MEET APPLICABLE PORTIONS OF UL STANDARD 489 AND NEMA AB-L. CIRCUIT BREAKERS SHALL BE BOLT-ON, GROUP MOUNTED, AMBIENT MAGNETIC, WITH COMMON TRIP, UL RATED TO	B. IF BOXES MUST BE INSTALLED WITHIN 24" OF EACH OTH PROTECTED WITH LISTED PUTTY PADS, 3M FIRE BARRIE
CARRY 80% OF NAMEPLATE RATING CONTINUOUSLY IN FREE AIR AT 40° C. CIRCUIT BREAKERS SHALL BE TRIP INDICATING AND FULLY INTERCHANGEABLE WITHOUT DISTURBING ADJACENT UNITS. WIRE TERMINALS SHALL BE RATED 75 DEGREES C. THE OPERATING MECHANISM SHALL BE TRIP-FREE SO THAT CONTACTS CANNOT BE HELD CLOSED AGAINST ANY ABNORMAL OVERCURRENT OR SHORT CIRCUIT	19. FIRE ALARM SYSTEM: A. ELECTRICAL CONTRACTOR SHALL PROVIDE DESIGN BU
a) BREAKERS SHALL MEET APPLICABLE NEMA AND/OR UL SPECIFICATIONS.	PROVIDE DEVICES, CONDUIT, WIRES, CABLE, PROGRAM DEPARTMENT FOR A CODE COMPLIANT FIRE ALARM/DE PREVAILING CODES. THE SYSTEM SHALL BE COMPLETE
C. PANELBOARD BOXES SHALL BE GALVANIZED SHEET STEEL WITH AMPLE WIRING GUTTER SPACE IN ACCORDANCE WITH NEC. FRONTS SHALL BE OF SHEET STEEL PAINTED LIGHT GREY OVER A SUITABLE RUST INHIBITOR PRIMER. PANELBOARDS SHALL BE EQUIPPED WITH ONE PIECE DOOR, CYLINDER TUNDI ED TOTE LOOP CARD VIOLEDED AND OLVERTED TURDI AD INTEGRAL	CALCULATIONS. EQUIPMENT TO BE NEW AND SHALL BE FIRE ALARM DEVICES ARE SHOWN FOR INTENT ONLY FO BID/DESIGN ALL NECESSARY DEVICES (ANNUNCIATOR(S
TUMBLER TYPE LOCK, DIRECTORY CARD-HOLDER AND QUARTER-TURN ADJUSTABLE TRIM CLAMPS. D. PANELBOARD INTERIORS SHALL CONSIST OF REINFORCED GALVANIZED SHEET STEEL FRAMES WITH ALUMINUM BUS BARS AND CIRCUIT BREAKERS, PROPERLY SUPPORTED TO PREVENT VIBRATIONS AND BREAKAGE IN HANDLING. BUS BARS SHALL BE SEQUENCE PHASED. PANELBOARD SHALL HAVE A FULL SIZED SOLID	
ALUMINUM NEUTRAL AND GROUND BUS. E. BUS BAR BRACING SHALL BE UL LISTED AS INDICATED ON DRAWINGS. ADDITIONAL BRACING SHALL BE PROVIDED AS REQUIRED TO MEET OR EXCEED INDICATED AVAILABLE FAULT	

ELECTRICAL SPECIFICATIONS (CONTINUED)
ALL BE ENCLOSED IN DRIPPROOF METALLIC ENCLOSURES DESIGNED TO PREVENT ACCIDENTAL CONTACT WITH LIVE CONDUCTORS. MATERIALS L COMPLY WITH APPLICABLE IEEE, ANSI AND NEMA STANDARDS. LY RATED TWO WINDING UNITS CAPABLE OF CARRYING THE LOADS HALL BE EQUAL TO SQUARE D TYPE EP.
PABLE OF OPERATING AT 100% NAMEPLATE KVA RATING CONTINUOUSLY WHILE (CEEDING THE RATED AVERAGE WINDING TEMPERATURE RISE OF THE ITION SHALL BE CLASS L85C FOR TRANSFORMERS 5 KVA TO 25 KVA AND RS 30 KVA TO 500 KVA. TRANSFORMERS SHALL BE UL APPROVED. VER-LOAD CAPACITY TO COMPLY WITH ANSI C57.960L WITH NORMAL LIFE SHALL NOT EXCEED MAXIMUM VALUES FOR KVA RATINGS AS MEASURED PER
ARGER SHALL BE EQUIPPED WITH TWO 2-1/2% FULL CAPACITY TAPS ABOVE NORMAL RATED VOLTAGE. IN ADDITION, TRANSFORMERS OF THESE VITH CLAMP-TYPE SOLDERLESS CONNECTORS SUITABLE FOR USE WITH . THE CONNECTORS SHALL BE MOUNTED ON A TERMINAL BOARD WITH HIGH-VOLTAGE HELD IN A FIXED POSITION AND CLEARLY MARKED. TRANSFORMER LUGS SHALL MERS 30 KVA AND LARGER SHALL BE PROVIDED WITH NEOPRENE RUBBER WEEN THE CORE AND COIL ASSEMBLY AND ENCLOSURE TO ISOLATE SOUND
RNALLY OPERATED, QUICK-MAKE, QUICK-BREAK, SAFETY, WITH PROVISIONS NON-FUSED DISCONNECT SWITCHES SHALL BE PROVIDED AS INDICATED. IEMA I AND OUTDOOR SWITCHES SHALL BE NEMA 3R, UNLESS INDICATED
REAKER PANELS SHALL BE CURRENT LIMITING U.L. CLASS RK-1 FUSES M INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE SILVER FOR
L. CLASS RK-5, DUAL-ELEMENT WITH A MINIMUM TIME-DELAY OF 10 SES SHALL HAVE CURRENT-LIMITING SHORT-CIRCUIT LINKS AND 200,000 ING CAPACITY. FUSING ELEMENTS SHALL BE COPPER.
IOUNTED IN A LAY-IN CEILING, PROVIDE A MINIMUM OF 2 SUPPORT WIRES EACH LIGHT FIXTURE AND THE BUILDING STRUCTURE. SUPPORT WIRES IGE GALVANIZED STEEL WIRE, SOFT ANNEALED.
LL LIGHTING OUTLETS SHOWN ON THE DRAWINGS. APPROVED LIGHTING ALL FIXTURES AND FIXTURE RACEWAYS. WEATHERPROOF WIRING IS JRES. ALL PARTS OF FIXTURES AND WIRING SHALL BE IN ACCORDANCE
L AND ETL LABELS.
LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK.
E GALVANIZED STEEL, PACK BETWEEN CONDUIT AND SLEEVE WITH FIRE ID WITH FIRE RESISTANT SEALANT.
NUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WEATHERPROOF SEAL. DNTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY.
ARATUS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) 250, S. INSURE CONTINUOUS BOND WHERE FLEXIBLE CONDUIT IS USED. IDE ALL FLEXIBLE CONDUIT.
IN COMPLIANCE WITH NEC 250.4(A)(4).
MOLISH AND REMOVE ABANDONED ELECTRICAL MATERIALS AND EQUIPMENT D NOT INDICATED TO BE SALVAGED OR REMAIN.
EXISTING ELECTRICAL EQUIPMENT INDICATED TO BE REMOVED AND IENT TO THE LOCATION DESIGNATED BY THE OWNER FOR STORAGE.
ENT DESIGNATED TO BE REUSED OR RELOCATED SHALL BE CAREFULLY IL NEEDED FOR REMODELING WORK. ALL ITEMS SHALL BE RESTORED TO RUST OR CORROSION REMOVED, SURFACE PAINT TOUCHED UP OR MATCH NEW CONSTRUCTION, AND THOROUGHLY CLEANED AND INSPECTED. AMAGED BEYOND REPAIR AS A RESULT OF CONSTRUCTION OR DEMOLITION D WITH NEW MATERIAL EQUIVALENT IN EVERY RESPECT.
OVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND BE SALVAGED.
LS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE , AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE TER REMODELING OPERATIONS ARE COMPLETE.
D REWORK INDICATED AND/OR REQUIRED FOR THE PROPER INSTALLATION NG ELECTRICAL SYSTEMS, INTEGRATING THE NEW AND EXISTING AREAS. CT ELECTRICAL SERVICES PASSING THROUGH REMODELING AREA AND DE THE REMODELING LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE RVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR
. HAVE WIRE REMOVED AND SHALL BE CAPPED. ABANDONED OUTLETS IN . HAVE DEVICES AND WIRE REMOVED, AND SHALL BE COVERED.
TERMINATE AT AN EXISTING OUTLET IN A WALL, CEILING, OR FLOOR CT AND REMOVE DEVICE AND WIRE FROM CONDUIT. CONDUIT SHALL BE DW THE FLOOR OR ABOVE THE CEILING) SO NOT TO CREATE AN R TO MATCH EXISTING.
EXTEND BEYOND THE OUTLET IN THE EXISTING WALL, CEILING, OR NISH AND INSTALL NEW CONDUIT AND WIRE TO EITHER REROUTE THE NING OUTLET(S) FROM ANOTHER ELECTRICAL SOURCE, BUT IN SUCH E THE CIRCUIT. ALL REROUTED CONDUIT SHALL BE APPROVED BY THE
N A WALL, CEILING, OR FLOOR TO BE REMOVED ARE ESSENTIAL TO HER REMAINING OUTLETS, RELOCATE THE OUTLET TO A NEW CONVENIENT DEVICES SHALL NOT BE REUSED, UNLESS OTHERWISE INDICATED.

EVICES SHALL NOT BE REUSED, UNLESS OTHERWISE INDICATED. E INDICATED TO BE DEMOLISHED, REMOVE ALL WIRE AND MODIFY THE ABLE) FOR THE NEW LIGHTING. ALL UNUSED CONDUIT SHALL BE

EXTENDS BEYOND AN OUTLET IN AN EXISTING WALL, CEILING, OR IDE NECESSARY EMPTY CONDUIT AND NOTIFY THE OWNER WHO WILL ANGE WITH THE TELEPHONE COMPANY FOR NEW WIRING TO OUTLETS THAT

WIRE RUNS ARE LOCATED IN OR ATTACHED TO AN EXISTING WALL, VED, THEY SHALL BE REROUTED IN EITHER NEW OR EXISTING ONTINUITY OF CIRCUITS UNLESS OTHERWISE INDICATED. D WITHIN THE EXISTING BUILDING CONSTRUCTION WHEREVER

HERWISE INDICATED. ONNECTED AND REMOVED WHEREVER EXISTING CIRCUITS ARE

6 SQUARE INCHES AND INSTALLED IN FIRE RATED WALLS SHALL NOT BE INSTALLED

/ITHIN 24" OF EACH OTHER THAN BOTH OUTLET BOXES SHALL BE PADS, 3M FIRE BARRIER MOLDABLE PUTTY + OR EQUAL.

PROVIDE DESIGN BUILD ENERGINEERED SHOP DRAWINGS OF FIRE ALARM SYSTEM TO BE INSTALLED. ES, CABLE, PROGRAMMING AND TESTING AS DIRECTED BY EQUIPMENT MANUFACTURER AND LOCAL FIRE LIANT FIRE ALARM/DETECTION SYSTEM. MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL MEET I SHALL BE COMPLETE AND OPERABLE. SUBMIT ONE LINE DIAGRAM OF SYSTEM WITH SIZES AND BATTERY DIE NEW AND SHALL BE STAMPED, SIGNED, CALIBRATION AND TESTED BY FACTORY CERTIFIED TECHNICIAN. VN FOR INTENT ONLY FOR PERMITTING PROCESS. CONTRACTOR IS RESPONSIBLE FOR INCLUDING IN ICES (ANNUNCIATOR(S), NOTIFICATION APPLICANCES, INITIATING DEVICES, AND ADDITIONAL COMPONENTS).

	ELECTRICAL SYMBOLS LIST
CIRCUITING & NO	 <u>DTES</u>
+46"	SPECIAL MOUNTING HEIGHT FOR ASSOCIATED DEVICE (CENTERLINE OF DEVICE)
GFI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE
WP	WEATHERPROOF ENCLOSURE ON DEVICE PARTIAL HOMERUN. REFER TO PLANS FOR ADDITIONAL DEVICES CONNECTED TO THIS
(TIE)	CIRCUIT.
X	ELECTRICAL FLOOR PLAN NOTE WITH DESIGNATION
2 LP	CONDUIT CONCEALED WHERE POSSIBLE OR AS NOTED, ARROWS INDICATE HOME RUN TO PANEL. CIRCUIT NUMBERS INDICATED
	#12 WIRE IN CONDUIT, UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATION
	GROUNDING CONDUCTOR, #12 WIRE UNLESS NOTED OTHERWISE ON DRAWINGS OR
	SPECIFICATION
LIGHTING	Т
	EMERGENCY TWIN HEAD LIGHT FIXTURE EXIT LIGHT WITH DIRECTIONAL ARROWS INDICATED
	STRIP FIXTURE WITH TYPE DESIGNATION
	RECESSED OR SURFACE MOUNTED FIXTURE WITH TYPE DESIGNATION
<u>АД</u> АД-	CEILING OR RECESSED FIXTURE WITH TYPE DESIGNATION WALL MOUNTED FIXTURE WITH TYPE DESIGNATION
<u> </u>	
	-
ф и	DUPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
	FOURPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
•	DUPLEX RECEPTACLE ON SWITCHED CIRCUIT, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
♦▽	DEVICE MOUNTED ABOVE COUNTER AND/OR SPLASH GUARD
	HEAVY DUTY OUTLET - NEMA CONFIGURATION SIZE PER EQUIPMENT MANUFACTURER'S
	PANEL BOARD, TOP OF BOX 6'-0" AFF
0	JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH
Dr	FUSED DISCONNECT SWITCH
<i>\</i> ?	MOTOR WITH DESIGNATION
CONTROLS	
S	SINGLE POLE WALL SWITCH, TOP OF BOX AT 48" AFF
FROM SUPPLY/EXI	<u>NSORS</u> OGY/ULTRASONIC CEILING SENSORS SHALL BE MOUNTED 6' HAUST AIR DIFFUSERS. CEILING SENSORS SHALL BE PROVIDED WITH 6' SLACK CONDUCTOR COILED AT SENSOR.
S o	WALL MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR, WATT STOPPER #DSW-301, TOP OF BOX AT 48" AFF
Ś.od	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D LINE VOLTAGE OR #DW-311 0-10V, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY
S.on	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D LINE VOLTAGE OR
	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D LINE VOLTAGE OR #DW-311 0-10V, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, WATTSTOPPER DT-300 OCCUPANCY SENSOR POWER PACK, WATTSTOPPER BZ-150 OR EQUAL, PROVIDE LOW
05	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D LINE VOLTAGE OR #DW-311 0-10V, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, WATTSTOPPER DT-300
OS PP	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D LINE VOLTAGE OR #DW-311 0-10V, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, WATTSTOPPER DT-300 OCCUPANCY SENSOR POWER PACK, WATTSTOPPER BZ-150 OR EQUAL, PROVIDE LOW VOLTAGE WIRING TO OCCUPANCY SENSORS AND MOMENTARY SWITCHES MOMENTARY SWITCH, WATTSTOPPER LVSW-10X OR EQUAL, TOP OF BOX AT 48" AFF
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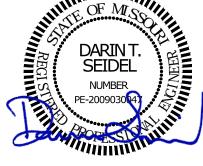
ELECTRICAL GENERAL NOTES:

- 1. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- 2. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROPERLY BALANCE ALL BRANCH CIRCUITS BETWEEN THE PHASES OF THE SYSTEM REGARDLESS OF CIRCUITING INDICATED.
- 3. ALL EXPOSED RACEWAYS SHALL BE IN EMT CONDUIT, MC CABLE IS NOT PERMITTED IN EXPOSED AREAS.
- 4. ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, SYSTEMS, CONDUIT AND WIRE, ETC. NOT BEING REUSED. DO NOT JUST ABANDON.
- 5. ELECTRICAL CONTRACTOR TO COORDINATE MANUFACTURER ELECTRICAL REQUIREMENTS FOR HVAC EQUIPMENT BEING FURNISHED WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. EQUIPMENT DISCONNECTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE IN MECHANICAL SCHEDULES.
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHT FIXTURES AND DEVICES.
- 7. REFER TO ARCHITECTURAL & STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR SUPPORTING TRANSFORMERS, EQUIPMENT, ETC. FROM THE STRUCTURE. PROVIDE ADDITIONAL STEEL AS REQUIRED TO PROPERLY SUPPORT SYSTEMS FROM THE STRUCTURE.
- 8. ALL ELECTRICAL DEVICES ARE EXISTING AND TO REMAIN UNLESS NOTED OTHERWISE OR CONFLICT WITH NEW CONSTRUCTION. MAINTAIN PROPER OPERATION OF ALL EXISTING ELECTRICAL.
- 9. ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- 10. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL PER NEC 210.4.
- 11. FIRE ALARM SYSTEM IS SHOWN FOR SCHEMATIC PURPOSES. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR PROVIDING DESIGN AND SHOP DRAWINGS SUBMITTAL TO FIRE MARSHAL FOR APPROVAL AS REQUIRED BY THE FIRE MARSHAL. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ADDITIONAL DEVICES, POWER SUPPLIES, ETC FOR COMPLIANCE WITH CODE.
- 12. PLANS INDICATE MINIMUM WIRE SIZES PER NEC. ALL BRANCH CIRCUITS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 3% VOLTAGE DROP. ALL FEEDERS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 2% VOLTAGE DROP. ELECTRICAL CONTRACTOR SHALL VERIFY WIRING INDICATED IS SUFFICIENT AND INCREASE CONDUCTOR SIZE AS REQUIRED BASED OFF ACTUAL INSTALLED LENGTH OF CONDUCTORS.
- 13. PROVIDE LOW VOLTAGE WIRING BETWEEN ALL 0-10V DIMMING DRIVERS CONTROLLED BY 0-10V DIMMERS PER MANUFACTURER'S INSTRUCTIONS.
- 14. WHEREVER POSSIBLE, CONDUIT SHALL BE RUN CONCEALED WITHIN WALLS, CEILINGS, SOFFITS, ETC. SURFACE MOUNTED CONDUIT IN FINISHED SPACES MUST BE APPROVED BY THE ENGINEER OR ARCHITECT PRIOR TO INSTALLATION. EXTERIOR CONDUIT SHALL NOT BE RUN EXPOSED IN PUBLICLY VISIBLE AREAS WITHOUT APPROVAL OF THE ARCHITECT OR ENGINEER.
- 15. OUTLET ROUGH-IN BOXES SHALL BE COMPATIBLE WITH TWO SCREW COVER PLATES.



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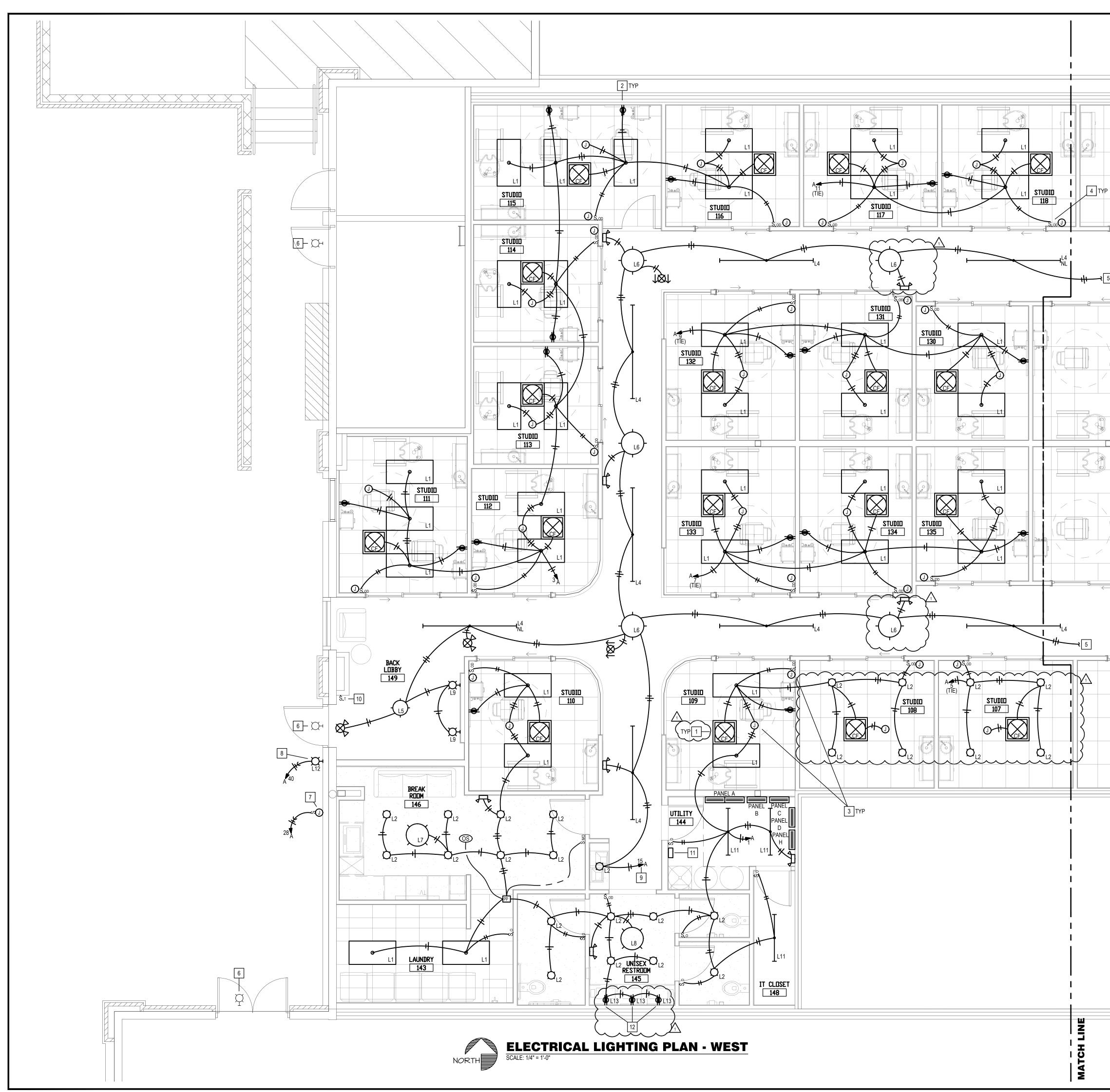


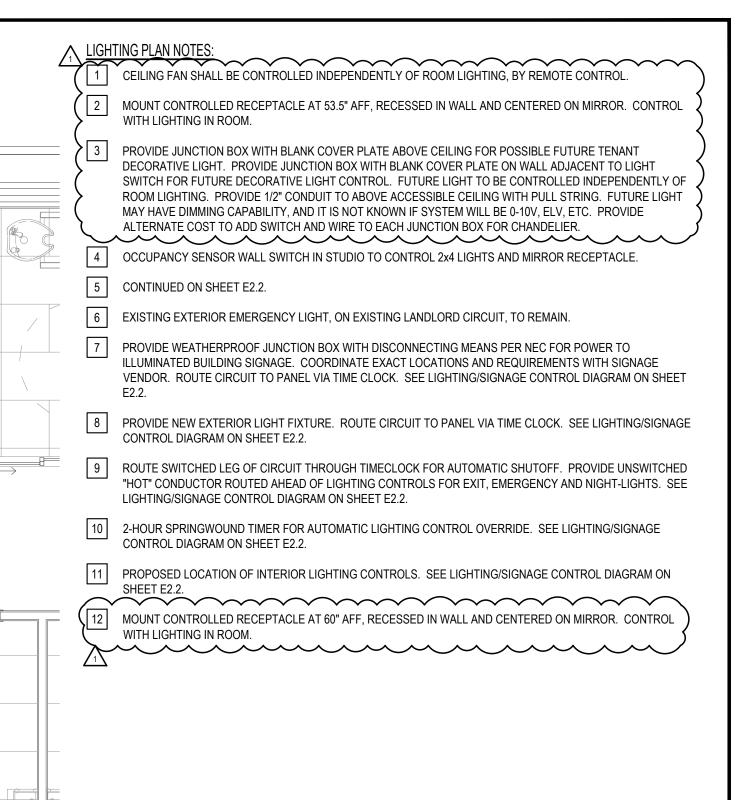


drawingtitle ELECTRICAL SPECIFICATIONS



drawing number E1





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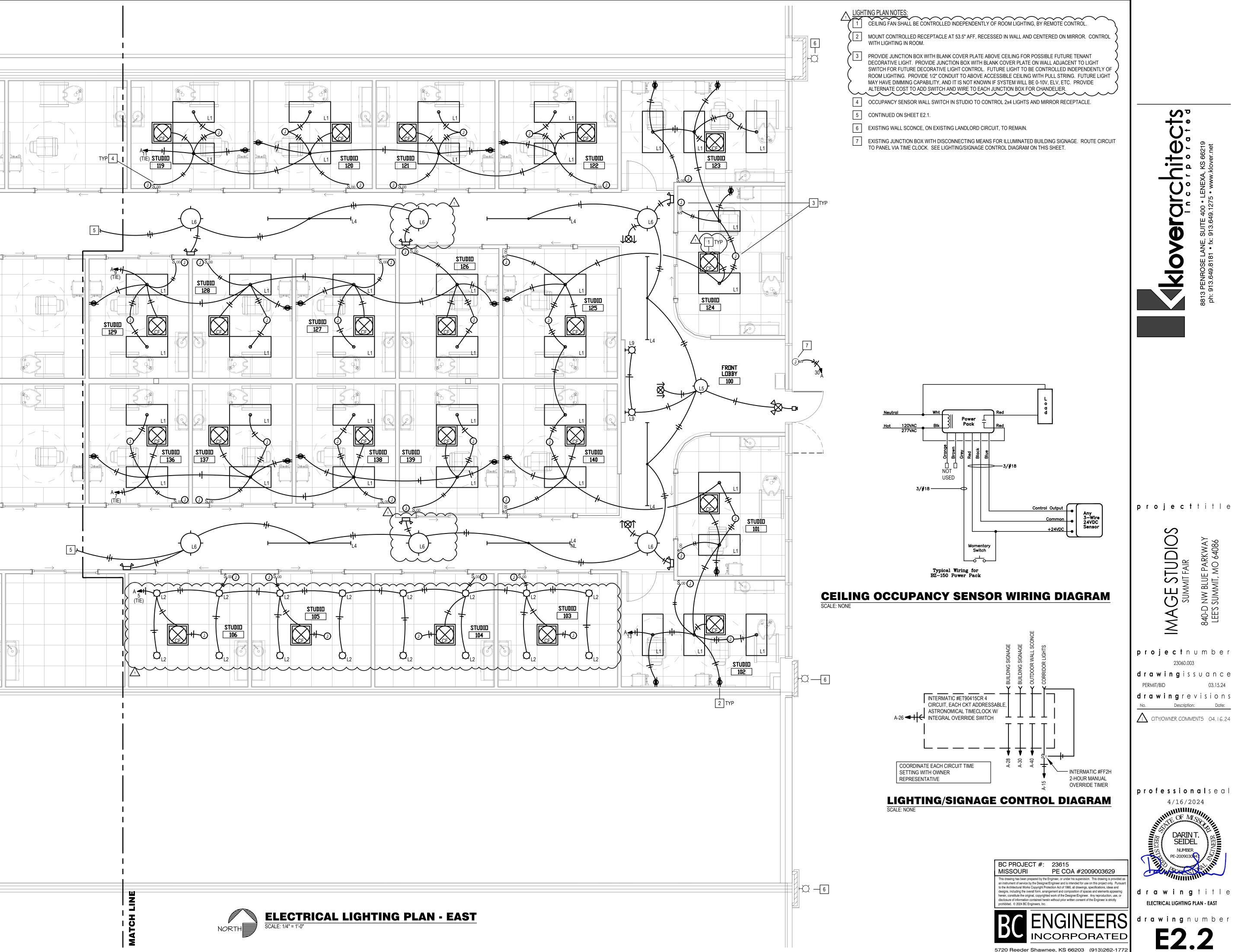
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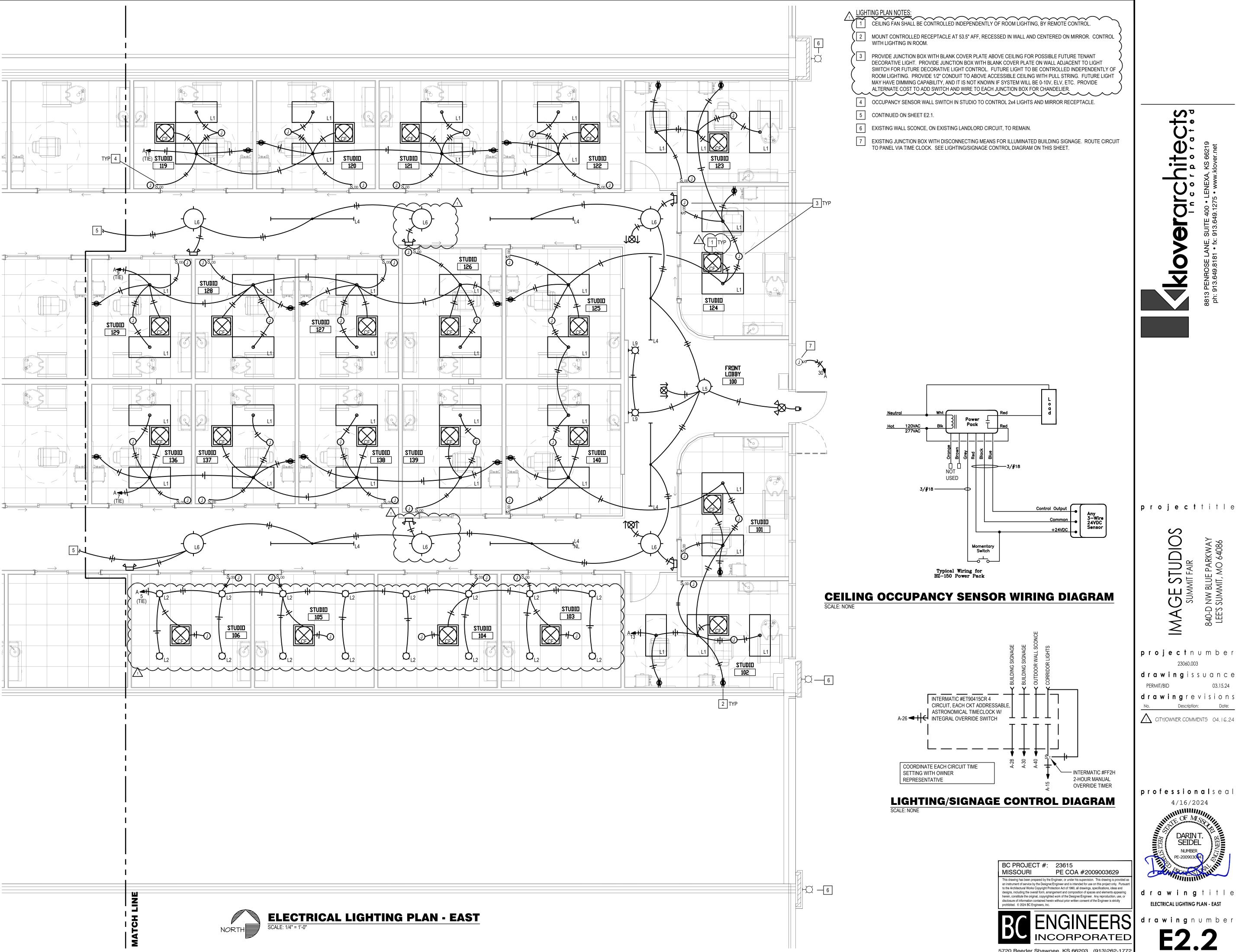
E2



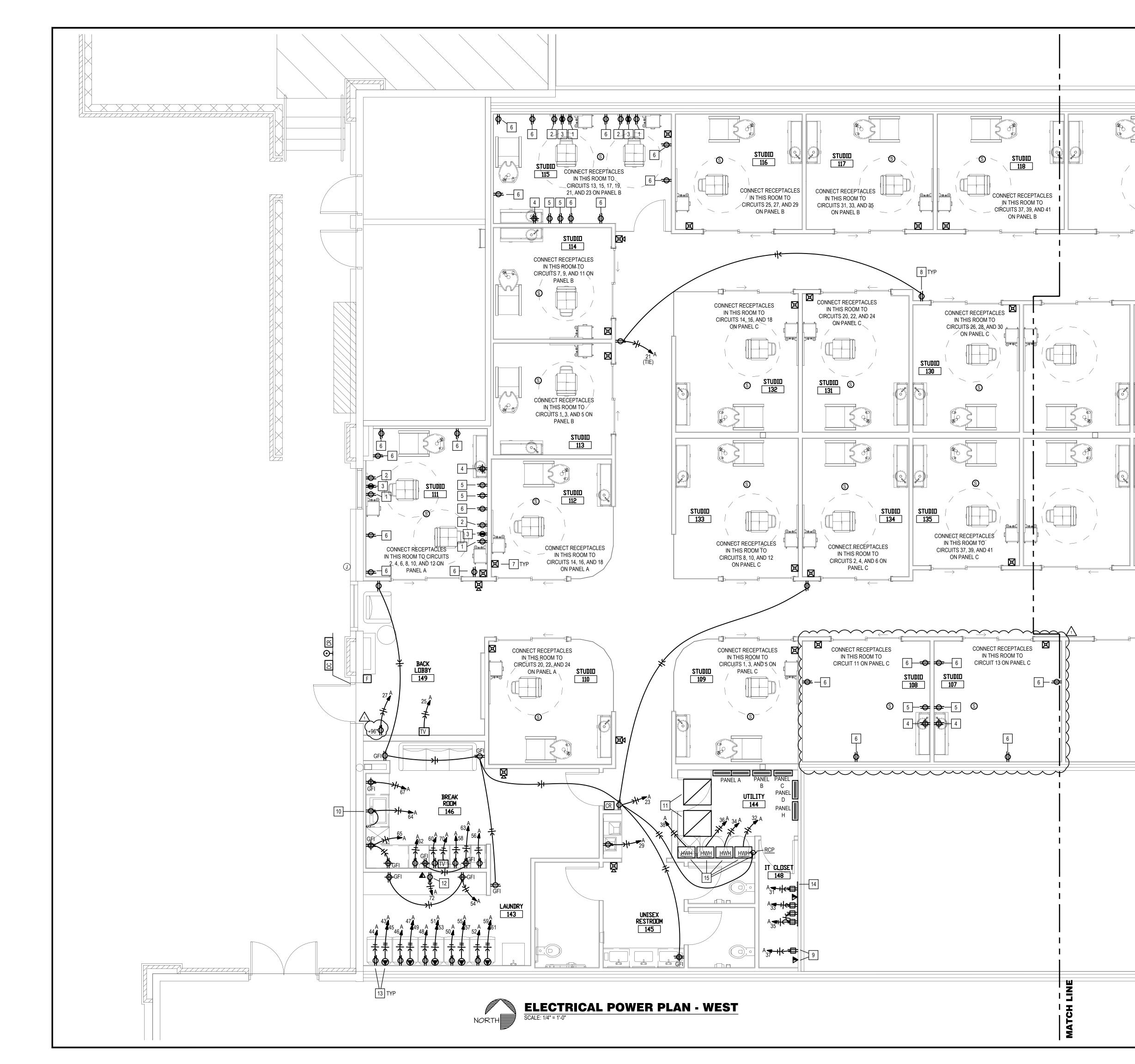
 BC PROJECT #:
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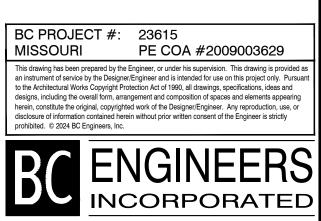


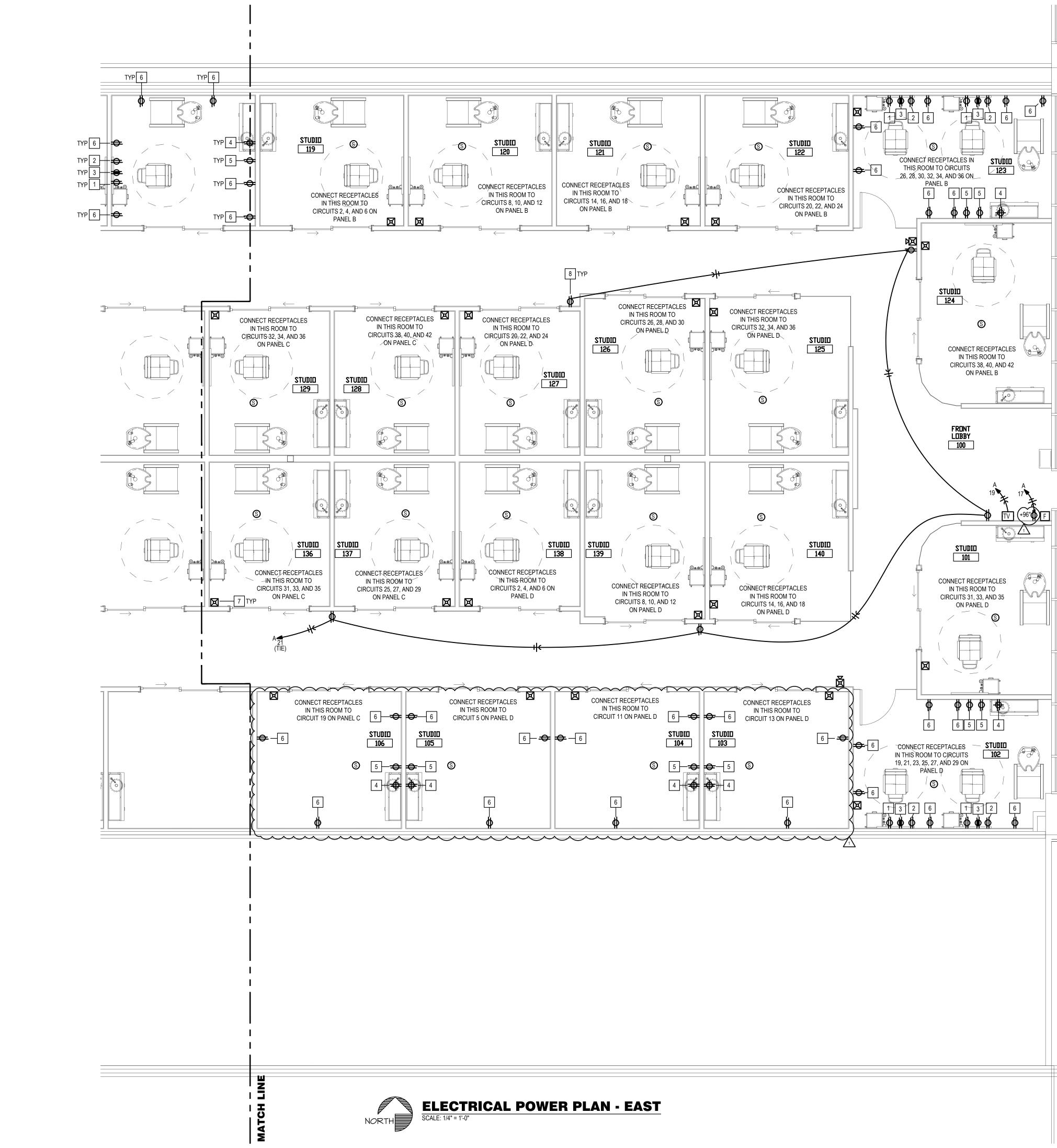
	POWE	ER PLAN NOTES:
	1	STYLING TOOLS. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	2	BLOW DRYER. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	3	MIRROR. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2 FOR CIRCUITING.
5	4	MILLWORK COUNTERTOP. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	5	<u>FUTURE MINI-FRIDGE</u> . RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	6	CONVENIENCE RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
(FIRE ALARM STROBES TO BE EITHER CEILING MOUNTED OR TO MATCH THE WALL COLOR. WALL STROBES PREFERRED DUE TO LARGE AMOUNT OF DIFFUSERS, GRILLES, LIGHTS, ETC, IN CEILINGS.
<	8	RECEPTACLE AND COVER PLATE COLORS IN CORRIDORS WILL VARY BASED ON WALL PAINT COLOR. VERIFY REQUIREMENTS WITH ARCHITECT.
<u> </u>	9	RECEPTACLE AND JUNCTION BOX FOR A/V RACK, WITH (2) 1" CONDUITS FOR CAT5 AND SPEAKER WIRE TO ABOVE ACCESSIBLE CEILING FOR SOUND SYSTEM. COORDINATE EXACT REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.
	10	SPLIT SWITCHED DUPLEX RECEPTACLE LOCATED IN CABINET BELOW SINK FOR CONNECTION TO DISHWASHER AND DISPOSAL. VERIFY EXACT LOCATION.
	11	MOUNT TRANSFORMERS ON OVERHEAD PLATFORM.
	12	PROVIDE RECEPTACLE INSIDE CABINET FOR FUTURE PRINTER OR OTHER APPLIANCE. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
	13	VERIFY RECEPTACLE MOUNTING HEIGHT WITH MANUFACTURER'S INSTRUCTIONS.
	14	PROVIDE 4'x8'x3/4" FIRE RETARDANT PLYWOOD TELECOM BACKBOARD WITH #6 CU BOND TO BUILDING ELECTRODE SYSTEM. EXTEND (2) 4"C WITH PULL STRING FROM LANDLORD'S PHONEBOARD TO ABOVE TENANT BACKBOARD.
	15	MAKE CONNECTIONS TO WATER HEATERS AND RE-CIRCULATION PUMP PER MANUFACTURER'S INSTRUCTIONS. COORDINATE WITH PLUMBING CONTRACTOR.



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	POWE	ER PLAN NOTES:
	1	STYLING TOOLS. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	2	BLOW DRYER. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	3	MIRROR. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2 FOR CIRCUITING.
	4	MILLWORK COUNTERTOP. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
	5	FUTURE MINI-FRIDGE. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
\bigwedge	6	CONVENIENCE RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
$\overline{\langle}$	7	FIRE ALARM STROBES TO BE EITHER CEILING MOUNTED OR TO MATCH THE WALL COLOR. WALL STROBES PREFERRED DUE TO LARGE AMOUNT OF DIFFUSERS, GRILLES, LIGHTS, ETC, IN CEILINGS.

8 RECEPTACLE AND COVER PLATE COLORS IN CORRIDORS WILL VARY BASED ON WALL PAINT COLOR. VERIFY REQUIREMENTS WITH ARCHITECT.

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IMAGE STUDIO SUMMIT FAIR

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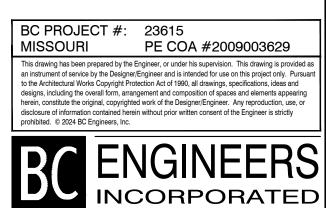
ELECTRICAL POWER PLAN - EAST

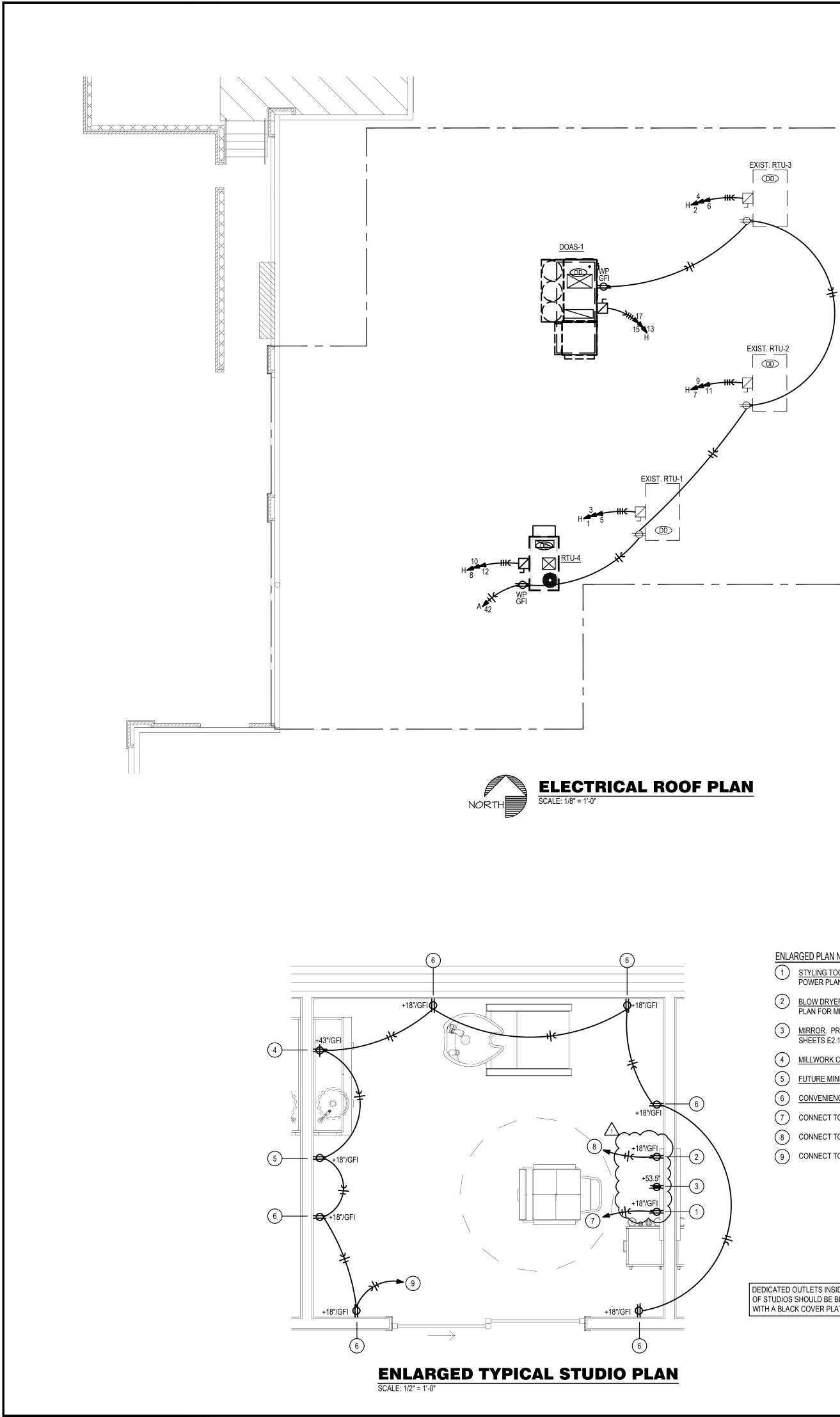
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840-d NW BLUE PARKWA' LEE'S SUMMIT, MO 64086

03.15.24



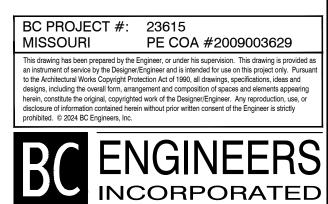


ENLARGED PLAN NOTES:

- <u>STYLING TOOLS</u>. RECEPTACLE TO BE ON DEDICATED CIRCUIT. LOCATE NEAR MIRROR--REFER TO ELECTRICAL POWER PLAN FOR MIRROR LOCATION IN EACH ROOM. RECEPTACLE AND COVERPLATE TO BE BLACK.
- 2 <u>BLOW DRYER</u>. RECEPTACLE TO BE ON DEDICATED CIRCUIT. LOCATE NEAR MIRROR--REFER TO ELECTRICAL POWER PLAN FOR MIRROR LOCATION IN EACH ROOM. RECEPTACLE AND COVERPLATE TO BE BLACK.
- 3 <u>MIRROR</u>. PROVIDE RECESSED RECEPTACLE, ROUTED THROUGH LIGHTING CONTROLS. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2.
- 4 <u>MILLWORK COUNTERTOP</u>. REFER TO ELECTRICAL POWER PLAN FOR MILLWORK LOCATION IN EACH ROOM.
- 5 <u>FUTURE MINI-FRIDGE</u>. LOCATE RECEPTACLE FOR FUTURE MINI-FRIDGE. VERIFY EXACT LOCATION
- 6 <u>CONVENIENCE RECEPTACLE</u>.
- 7 CONNECT TO "TOOLS" CIRCUIT ON PANELBOARD.
- 8 CONNECT TO "DRYER" CIRCUIT ON PANELBOARD.
- 9 CONNECT TO "GENERAL" CIRCUIT ON PANELBOARD.

DEDICATED OUTLETS INSIDE OF STUDIOS SHOULD BE BLACK WITH A BLACK COVER PLATE.

		LIG	HT FIX	TURE SCHEDULE	
MARK N0.	MANUFACTURER & CATALOG NUMBER	VOLTS WATTS	LIGHT SOURCE	DESCRIPTION	EQUIVALENT MANUFACTUREI
L1	COOPER 24CGTS-L3C3	120 53	LED 6426 LUM 3500K	2'X4' LED RECESSED TROFFER WITH 0-10V DIMMING.	
L2	CREE CR6T-825L-35K-12-E26GU24 HOUSING: RC6-UNI	120 12	LED 800 LUM 3500K	6" RECESSED DOWNLIGHT, DIMMABLE TO 5%.	WILLIAMS LITHONIA OR EQUAL
L4	SAYLITE L23-P-SF-96L-T-32W-DMV-BK- 35K-HC612BK	120 32	LED 3500 LUM 3500K	8' LONG DIRECT LINEAR PENDANT WITH BLACK TRIM AND 0-10V DIMMING.	WILLIAMS LITHONIA OR EQUAL
L5	ROYAL PEARL BO9ZK5NPYJ	120 240	LED 12000LUM 6000K	GOLD 6-RING MODERN PENDANT CHANDELIER.	
L6	EDISLIVE B07T9H76TK	120 10	LED 3000K	MODERN ARTISTIC 1-LIGHT 6-CLEAR GLOBE GLASS BUBBLE SPUTNIK CHANDELIER.	WILLIAMS LITHONIA OR EQUAL
L7	PUVAUE MD2023-D600	120 63	LED 3000K	24" DIAMETER SILVER MODERN CRYSTAL TREE BRANCH CHANDELIER. MOUNT AT 8'-0" AFF. SUPPLY LED EQUIVALENTS OF (9) G9 BULBS	
L8	LIGHTING LION B0B5VW4X12	120 100	LED 2800 LUM 3000K	MODERN RING CHANDELIER.	
L9	FARMHOUZE LIGHT	120 18	LED 3000K	MINIMALIST BLACK LED WALL SCONCE.	
L11	LITHONIA ZL1D L48 3000LM FST MVOLT 35K 80CRI	120 30	LED 3966 LUM 3500K	4' STRIP LIGHT	H E WILLIAMS OR EQUAL
L12	OZARKE IP65	120 25	LED 1900 LUM	40" TALL BLACK WALL SCONCE, OUTDOOR RATED, WITH CHANGEABLE COLOR TEMPERATURE	OR OWNER-APPRO EQUAL
L13	TETOTE 40x24 LED BACKLIT VANITY MIRROR	120 36	LED 3900 LUM 6000K	RESTROOM CORRIDOR MIRRORS WIRED INTO RESTROOM OCCUPANCY SENSORS	~~ ~ ~ ~
CF	ALASKA SA-398 OR AS DIRECTED BY CLIENT	120 45		RECESSED CEILING FAN WITH HANDHELD REMOTE CONTROL.	
¢	DUAL-LITE EV2-x	120 1	INCL	EMERGENCY LIGHT WITH TWIN ADJUSTABLE 1 WATT LED HEADS AND BATTERY, MOUNT AT 7'-6"±, TO CLEAR OBSTACLES. (PROVIDES 1 FC AVG. ON 27' CENTER FIXTURE SPACING). HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
8	DUAL-LITE EVE-U-R-x-E	120 1	INCL	EXIT LIGHT WITH LED LAMPS, RED LETTERS, UNIVERSAL MOUNT, BATTERY BACKUP. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
\$\$	DUAL-LITE EVC-U-R-x	120 3	INCL	COMBINATION EMERGENCY/EXIT LIGHT WITH LED LAMPS, RED LETTERS, TWIN LED EMERGENCY LIGHT HEADS, UNIVERSAL MOUNT, BATTERY BACKUP. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
œ و	DUAL-LITE EVC-U-R-x-D4 WITH EVO-D-X	120 5	INCL	COMBINATION EMERGENCY/EXIT LIGHT WITH LED LAMPS, RED LETTERS, TWIN 6W EMERGENCY LIGHT HEADS, UNIVERSAL MOUNT, HIGH CAPACITY BATTERY BACKUP AND REMOTE TWIN HEAD OUTDOOR RATED FIXTURE. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL



5720 Reeder Shawnee, KS 66203 (913)262-1772

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IMAGE STUDIO SUMMIT FAIR

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CITY/OWNER COMMENTS 04.16.24

Description: Date:

840-D NW BLUE PARKWA LEE'S SUMMIT, MO 64086

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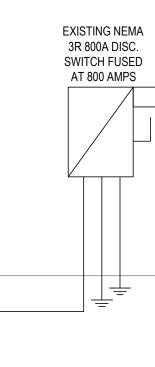
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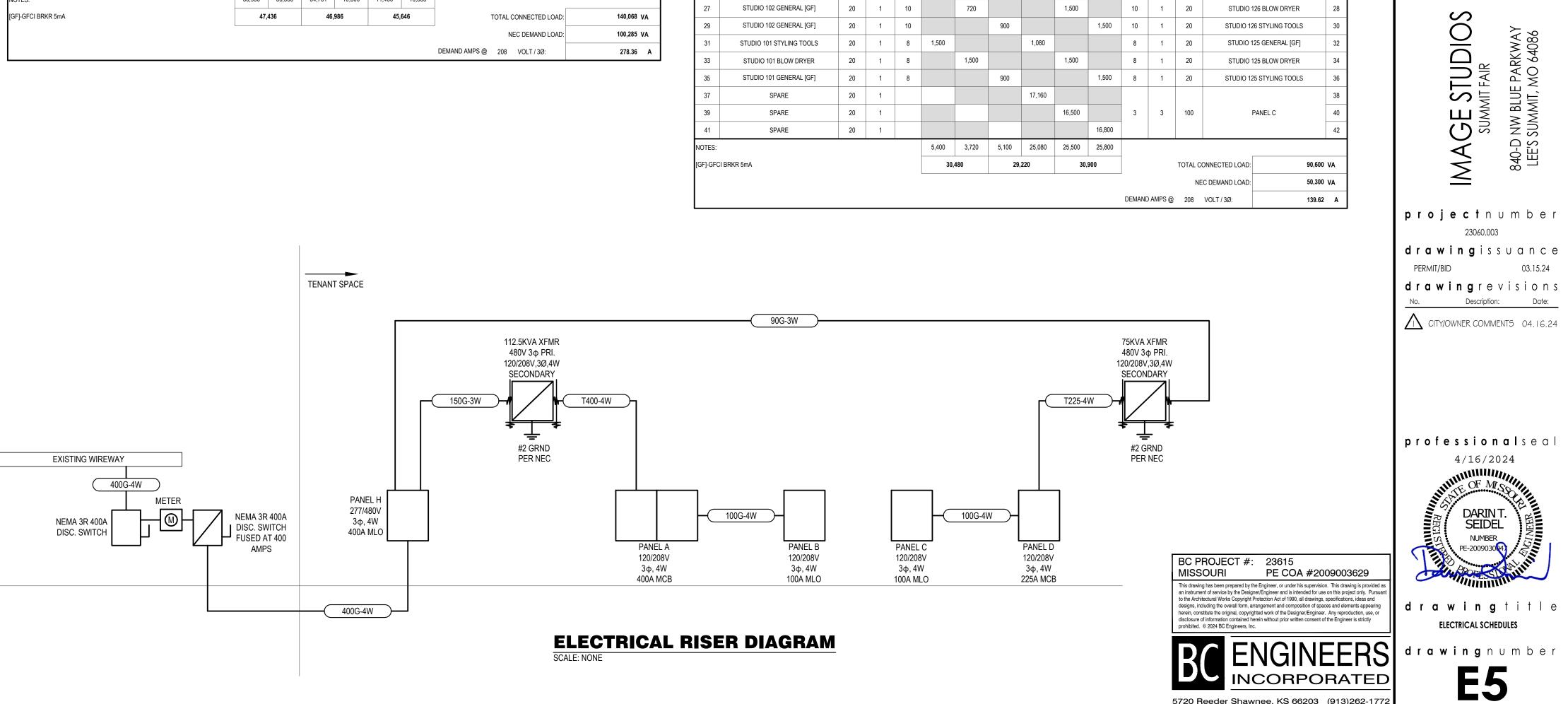
E4

	PANEL: H	VOLTS:	27	7/480V	PH:	3Ø	WIRE:	4W	LOCATION	:	UTILITY 1	144	MOUNT	NG: SURFACE			PANEL: A	VOLTS:	120/208V	PH:	3Ø	WIRE: 4	1W L	OCATION:		UTILITY 14	4	MOUNTING: SURFACE	
	BUS : 400A	MAIN:	400A	MLO	IC:	35	5,000	RMS SYM A	MPS				FEEDER	: SEE RISER DIAGRAM			BUS: 400A	MAIN:	400A MCB	IC:	22,	,000 F	RMS SYM AMF	PS				FEEDER: SEE RISER	DIAGRAM
СКТ	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS			СКТ	DESCRIPTION	AMPS	POLE WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE AMPS	DESCRIPTION	I
1					6,731			6,731							2 2		LTG - SOUTHWEST	20	1 12	1,177	\sim	\sim	1,500			10	1 20	STUDIO 111 STYLING	TOOLS
3	RTU-1	30	3	10		6,731			6,731		10	3	30	RTU-3	4	3	LTG - WEST	20	1 12		1,372			1,500		10	1 20	STUDIO 111 STYLING	TOOLS
5							6,731			6,731					6	5	LTG - SOUTH	20	1 12			565			1,500	10	1 20	STUDIO 111 BLOW D	RYER
7					5,402			4,432							8	7	LTG - CENTRAL	20	1 12	1,407		<	1,500			10	1 20	STUDIO 111 BLOW D	RYER
9	RTU-2	25	3	10		5,402			4,432		12	3	20	RTU-4	10	9	LTG - CENTRAL	20	1 10		1,407	5		900		10	1 20	STUDIO 111 GENERA	√L [GF]
11							5,402			4,432	-				12	11	LTG - NORTH	20	1 10			1,206			900	10	1 20	STUDIO 111 GENERA	√L [GF]
13					14,850							1	20	SPARE	14	13	LTG - EAST	20	1 8	1,372		Ż	1,500			12	1 20	STUDIO 112 STYLING	TOOLS
15	DOAS-1	60	3	6		14,850						1	20	SPARE	16	15	LTG - CORRIDORS	20	1 10		1,137			1,500		12	1 20	STUDIO 112 BLOW D	RYER
17							14,850					1	20	SPARE	18	17	REC - SCENT MACHINE	20	1 10	\sim	\sim	1,200			1,080	12	1 20	STUDIO 112 GENERA	L [GF]
19	SPARE	20	1									1	20	SPARE	20	19	REC - DIRECTORY SCREEN	20	1 12	600			1,500			12	1 20	STUDIO 110 STYLING	TOOLS
21	SPARE	20	1									1	20	SPARE	22	21	REC - GENERAL	20	1 10		1,260			1,500		12	1 20	STUDIO 110 BLOW D	RYER
23	SPARE	20	1									1	20	SPARE	24	23	REC - GENERAL	20	1 12			1,290			1,080	12	1 20	STUDIO 110 GENERA	√L [GF]
25	BUSSED SPACE													BUSSED SPACE	26	25	REC - DIRECTORY SCREEN	20	1 12	600			50			12	1 20	TIME CLOCK	
27	BUSSED SPACE													BUSSED SPACE	28	27	REC - SCENT MACHINE	20	1 12		1,200			1,200		12	1 20	BUILDING SIGNA	GE
29	BUSSED SPACE													BUSSED SPACE	30	29	DRINKING FOUNTAIN [GF]	20	1 12			500			1,200	10	1 20	BUILDING SIGNA	GE
31	BUSSED SPACE													BUSSED SPACE	32	31	REC - PHONE BOARD	20	1 12	360			225			12	1 20	GAS WATER HEAT	. ER
33	BUSSED SPACE													BUSSED SPACE	34	33	REC - CCTV	20	1 12		360			225		12	1 20	GAS WATER HEAT	íER
35	BUSSED SPACE													BUSSED SPACE	36	35	REC - SERVER	20	1 12			720			225	12	1 20	GAS WATER HEAT	ĩER
37					47,436			30,480							38	37	REC - AV RACK	20	1 12	360			225			12	1 20	GAS WATER HEAT	íER
39	PANEL A VIA TRANSFORMER	150	3	1/0		46,986			29,220		3	3	90 I	PANEL D VIA TRANSFORMER	40	39	SPARE	20	1					25		12	1 20	LTG - OUTDOOR WALL	SCONCE
41							45,646			30,900				_	42	41	SPARE	20	1						900	12	1 20	RECEPT - ROOF CONVE	ENIENCE
NOTES:					74,419	73,969	72,629	41,643	40,383	42,063												SECTIO	ON 2			I			
					116	062	114	4,352	114	4,692	_		TOTAL CONNECT	ED LOAD: 345,106 V		43	CLOTHES DRYER	30	2 10	2,500			1,200			12	1 20	CLOTHES WASHE	ĒR
													NEC DEMA	ND LOAD: 260,023 V		45					2,500			1,200		12	1 20	CLOTHES WASHE	ER
											DEMAND	D AMPS @	480 VOLT / 3	Ø: 312.76	A	47	CLOTHES DRYER	30	2 10			2,500			1,200	12	1 20	CLOTHES WASHE	ER
																49				2,500			1,200			12	1 20	CLOTHES WASHE	ER
																51	CLOTHES DRYER	30	2 10		2,500			1,200		12	1 20	CLOTHES WASHE	ER
	PANEL: C	VOLTS:	12	20/208V	PH:	3Ø	WIRE:	4W	LOCATION	:	UTILITY 1	144	MOUNT	NG: SURFACE		53						2,500			800	12	1 20	REC - LAUNDRY COU	JNTER
	BUS: 125A	MAIN:	100A	MLO	IC:	10),000	RMS SYM A	MPS				FEEDER	: SEE RISER DIAGRAM		55	CLOTHES DRYER	30	2 10	2,500			800			12	1 20	ICE MACHINE [G	F]
СКТ	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS		кт	57					2,500			800		12	1 20	U.C. FRIDGE [GF	-]
							20			200					10	59	CLOTHES DRYER	30	2 10			2,500			800	12	1 20	U.C. FRIDGE [GF	-]
1	STUDIO 109 STYLING TOOLS	20	1	12	1,500			1,440			12	1	-		2	61				2,500			800			12	1 20	U.C. FRIDGE [GF	
3	STUDIO 109 BLOW DRYER	20	1	12		1,500	4		1,500	4	12	1	20		4	63	REC - BREAK ROOM COUNTER	20	1 12		1,500			800		12	1 20	DW/GARB DISPOSAI	L [GF]
5	STUDIO 109 GENERAL [GF]				~~~	\sim	1,080			1,500	12	1		STUDIO 134 STYLING TOOLS	6	65	REC - BREAK ROOM COUNTER	20	1 12			1,500					1 20	SPARE	
7	SPARE	20	1					1,080	4		12	1	-		8	67	REC - BREAK ROOM COUNTER	20	1 12	1,500							1 20	SPARE	
9	SPARE	20	1					<u>}</u>	1,500		12	1			10	69	SPARE	20	1					600		12	1 20	TELEVISION [GF	-]
11	STUDIO 108 GENERAL [GF]	20	1	12			900)		1,500	12	1			12	71	SPARE	20	1						1,200	12	1 20	REC - PRINTER [0	ĴF]
13	STUDIO 107 GENERAL [GF]	20	1	12	900			1,080			12	1			14	73	SPARE	20	1								1 20	SPARE	
15	SPARE	20	1				<	{	1,500		12	1	20		16	75	SPARE	20	1								1 20	SPARE	
17	SPARE	20	1				<	5		1,500	12	1			18	77	SPARE	20	1								1 20	SPARE	
19	STUDIO 106 GENERAL [GF]	20	1	12	900		<	1,440			12	1	20	STUDIO 131 GENERAL [GF]	20	79				19,560							1 20	SPARE	
21	SPARE	20	1					{	1,500		12	1	20	STUDIO 131 BLOW DRYER	22	81	PANEL B	100	3 3		19,800						1 20	SPARE	
23	SPARE	20				\sim)		1,500	12	1	20	STUDIO 131 STYLING TOOLS	24	83						20,280					1 20	SPARE	
25	STUDIO 137 STYLING TOOLS	20	1	10	1,500			1,440			10	1	20	STUDIO 130 GENERAL [GF]	26	NOTES:				36,936	35,536		10,500	11,450	10,885				
27	STUDIO 137 BLOW DRYER	20	1	10		1,500			1,500		10	1	20	STUDIO 130 BLOW DRYER	28	[GF]-GFCI E	BRKR 5mA				436	46,98		45,6			TOTAL	CONNECTED LOAD:	140,068
29	STUDIO 137 GENERAL [GF]	20	1	10			1,440			1,500	10	1	20	STUDIO 130 STYLING TOOLS	30													NEC DEMAND LOAD:	100,285
31	STUDIO 136 STYLING TOOLS	20	1	10	1,500			1,440			10	1	20	STUDIO 129 GENERAL [GF]	32											DEMAND	AMPS @ 208		278.36
33	STUDIO 136 BLOW DRYER	20		10		1,500			1,500		10	1	20	STUDIO 129 BLOW DRYER	34	1													

	PANEL: C	VOLTS:	120	/208V	PH:	3Ø	WIRE:	4W	LOCATION:		UTILITY 1	44		MOUNTING:	SURFACE	
	BUS: 125A	MAIN:	100A	MLO	IC:	10	,000	RMS SYM A	MPS					FEEDER:	SEE RISER DIAGRA	M
СКТ	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DE	ESCRIPTION	CK NC
1	STUDIO 109 STYLING TOOLS	20	1	12	1,500			1,440			12	1	20	STUDIO	134 GENERAL [GF]	2
3	STUDIO 109 BLOW DRYER	20	1	12		1,500			1,500		12	1	20	STUDIO	134 BLOW DRYER	4
5	STUDIO 109 GENERAL [GF]	20		12			1,080			1,500	12	1	20	STUDIO 1	34 STYLING TOOLS	6
7	SPARE	20	1	\sim	\sim	\sim	m	1,080			12	1	20	STUDIO	133 GENERAL [GF]	8
9	SPARE	20	1				5		1,500		12	1	20	STUDIO	133 BLOW DRYER	10
11	STUDIO 108 GENERAL [GF]	20	1	12			900)		1,500	12	1	20	STUDIO 1	33 STYLING TOOLS	12
13	STUDIO 107 GENERAL [GF]	20	1	12	900		5	1,080			12	1	20	STUDIO	132 GENERAL [GF]	14
15	SPARE	20	1				λ		1,500		12	1	20	STUDIO	132 BLOW DRYER	16
17	SPARE	20	1				7			1,500	12	1	20	STUDIO 1	32 STYLING TOOLS	18
19	STUDIO 106 GENERAL [GF]	20	1	12	900		<	1,440			12	1	20	STUDIO	131 GENERAL [GF]	20
21	SPARE	20	1)	1,500		12	1	20	STUDIO	131 BLOW DRYER	22
23	SPARE	20	1		•					1,500	12	1	20	STUDIO 1	31 STYLING TOOLS	24
25	STUDIO 137 STYLING TOOLS	20	1	10	1,500	\sim		1,440			10	1	20	STUDIO	130 GENERAL [GF]	26
27	STUDIO 137 BLOW DRYER	20	1	10		1,500			1,500		10	1	20	STUDIO	130 BLOW DRYER	28
29	STUDIO 137 GENERAL [GF]	20	1	10			1,440			1,500	10	1	20	STUDIO 1	30 STYLING TOOLS	30
31	STUDIO 136 STYLING TOOLS	20	1	10	1,500			1,440			10	1	20	STUDIO	129 GENERAL [GF]	32
33	STUDIO 136 BLOW DRYER	20	1	10		1,500			1,500		10	1	20	STUDIO	129 BLOW DRYER	34
35	STUDIO 136 GENERAL [GF]	20	1	10			1,440			1,500	10	1	20	STUDIO 1	29 STYLING TOOLS	36
37	STUDIO 135 STYLING TOOLS	20	1	12	1,500			1,440			10	1	20	STUDIO	128 GENERAL [GF]	38
39	STUDIO 135 BLOW DRYER	20	1	12		1,500			1,500		10	1	20	STUDIO	128 BLOW DRYER	40
41	STUDIO 135 GENERAL [GF]	20	1	12			1,440			1,500	10	1	20	STUDIO 1	28 STYLING TOOLS	42
NOTES:					7,800	6,000	6,300	9,360	10,500	10,500						
[GF]-GF(CI BRKR 5mA				17,	160	16,	,500	16,	800			TOTAL C	ONNECTED LOAD:		50,460 VA
													NE	EC DEMAND LOAD:		30,230 VA
											DEMAND	AMPS @	208	VOLT / 3Ø:		83.91 A

FEE	DER SCHEDULE
NO.	FEEDER
90G-3W	3#3, 1#8G, 1-1/4"C
100G-4W	4#3, 1#8G, 1-1/4"C
150G-3W	3#1/0, 1#6G, 1-1/2"C
T225-4W	4#4/0, 1#2G, 2-1/2"C
T400-4W	(2) SETS, 4#3/0, 1#2G, (2) 2"C
400G-4W	(2) SETS, 4#3/0, 1#3G, (2) 2"C





PANEL: B VOLTS: 120/208V						3Ø	WIRE:	4W	LOCATION:		UTILITY 1	144		MOUNTING: SURFACE	
	BUS: 125A	MAIN:	100A	MLO	IC:	2:	2,000	RMS SYM /	AMPS					FEEDER: SEE RISER DIAGRAM	
СКТ	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DESCRIPTION	CK NC
1	STUDIO 113 STYLING TOOLS	20	1	12	1,500			1,440			10	1	20	STUDIO 119 GENERAL [GF]	2
3	STUDIO 113 BLOW DRYER	20	1	12		1,500			1,500		10	1	20	STUDIO 119 BLOW DRYER	4
5	STUDIO 113 GENERAL [GF]	20	1	12			1,440			1,500	10	1	20	STUDIO 119 STYLING TOOLS	6
7	STUDIO 114 STYLING TOOLS	20	1	10	1,500			1,440			8	1	20	STUDIO 120 GENERAL [GF]	8
9	STUDIO 114 BLOW DRYER	20	1	10		1,500		_	1,500		8	1	20	STUDIO 120 BLOW DRYER	10
11	STUDIO 114 GENERAL [GF]	20	1	10			1,440			1,500	8	1	20	STUDIO 120 STYLING TOOLS	12
13	STUDIO 115 STYLING TOOLS	20	1	10	1,500			1,440			8	1	20	STUDIO 121 GENERAL [GF]	14
15	STUDIO 115 STYLING TOOLS	20	1	10		1,500			1,500		8	1	20	STUDIO 121 BLOW DRYER	16
17	STUDIO 115 BLOW DRYER	20	1	10			1,500			1,500	8	1	20	STUDIO 121 STYLING TOOLS	18
19	STUDIO 115 BLOW DRYER	20	1	10	1,500			1,440			8	1	20	STUDIO 122 GENERAL [GF]	20
21	STUDIO 115 GENERAL [GF]	20	1	10		900		_	1,500		8	1	20	STUDIO 122 BLOW DRYER	22
23	STUDIO 115 GENERAL [GF]	20	1	10			1,080			1,500	8	1	20	STUDIO 122 STYLING TOOLS	
25	STUDIO 116 STYLING TOOLS	20	1	10	1,500			900			8	1	20	STUDIO 123 GENERAL [GF]	26
27	STUDIO 116 BLOW DRYER	20	1	10		1,500			900		8	1	20	STUDIO 123 GENERAL [GF]	28
29	STUDIO 116 GENERAL [GF]	20	1	10			1,440			1,500	8	1	20	STUDIO 123 BLOW DRYER	30
31	STUDIO 117 STYLING TOOLS	20	1	10	1,500			1,500			8	1	20	STUDIO 123 BLOW DRYER	32
33	STUDIO 117 BLOW DRYER	20	1	10		1,500			1,500		8	1	20	STUDIO 123 STYLING TOOLS	34
35	STUDIO 117 GENERAL [GF]	20	1	10			1,440			1,500	8	1	20	STUDIO 123 STYLING TOOLS	36
37	STUDIO 118 STYLING TOOLS	20	1	10	1,500			900			8	1	20	STUDIO 124 GENERAL [GF]	38
39	STUDIO 118 BLOW DRYER	20	1	10		1,500			1,500		8	1	20	STUDIO 124 BLOW DRYER	40
41	STUDIO 118 GENERAL [GF]	20	1	10			1,440			1,500	8	1	20	STUDIO 124 STYLING TOOLS	42
DTES:					10,500	9,900	9,780	9,060	9,900	10,500					
F]-GFC	BRKR 5mA				19,	560	19	9,800	20,2	80			TOTAL C	ONNECTED LOAD: 59,	640 VA

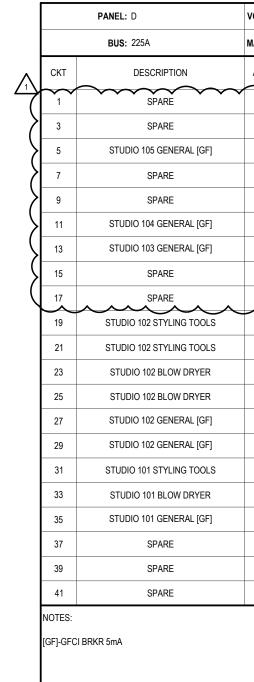
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	VOLTS:	120	/208V	PH:	3Ø	WIRE:	4W	LOCATION:		UTILITY 1	44		MOUNTING:	SURFACE	
	MAIN:	225A	MCB	IC:	10,	000	RMS SYM A	MPS					FEEDER:	SEE RISER DIAGRAM	
	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DE	SCRIPTION	CKT NO
/	20	1	\sim		\sim		1,440			10	1	20	STUDIO 1	38 GENERAL [GF]	2
	20	1				<		1,500		10	1	20	STUDIO 1	38 BLOW DRYER	4
	20	1	12			900)		1,500	10	1	20	STUDIO 13	8 STYLING TOOLS	6
	20	1				<	1,440			10	1	20	STUDIO 1	39 GENERAL [GF]	8
	20	1				<hr/>		1,500		10	1	20	STUDIO 1	39 BLOW DRYER	10
	20	1	12			900)		1,500	10	1	20	STUDIO 13	9 STYLING TOOLS	12
	20	1	12	900		<	1,080			10	1	20	STUDIO 1	UDIO 140 GENERAL [GF]	
	20	1				<hr/>	ý	1,500		10	1	20	STUDIO 1	40 BLOW DRYER	16
	20				\sim)		1,500	10	1	20	STUDIO 14	0 STYLING TOOLS	18
	20	1	10	1,500	\sim		1,440			10	1	20	STUDIO 127 GENERAL [GF		20
	20	1	10		1,500			1,500		10	1	20	STUDIO 1	22	
	20	1	10			1,500			1,500	10	1	20	STUDIO 12	24	
	20	1	10	1,500			1,440			10	1	20	STUDIO 1	26 GENERAL [GF]	26
	20	1	10		720			1,500		10	1	20	STUDIO 1	26 BLOW DRYER	28
	20	1	10			900			1,500	10	1	20	STUDIO 126 STYLING TOOLS		30
	20	1	8	1,500			1,080			8	1	20	STUDIO 1	25 GENERAL [GF]	32
	20	1	8		1,500			1,500		8	1	20	STUDIO 1	25 BLOW DRYER	34
	20	1	8			900			1,500	8	1	20	STUDIO 12	5 STYLING TOOLS	36
	20	1					17,160								38
	20	1						16,500		3	3	100	F	PANEL C	40
	20	1							16,800						42
				5,400	3,720	5,100	25,080	25,500	25,800						
				30,4	480	29	,220	30,	900			TOTAL C	ONNECTED LOAD:	90	,600 VA
												NE	EC DEMAND LOAD:	50	,300 VA
										DEMAND) AMPS @	208	VOLT / 3Ø:	13	9.62 A