JOHN KNOX VILLAGE - SALON

1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

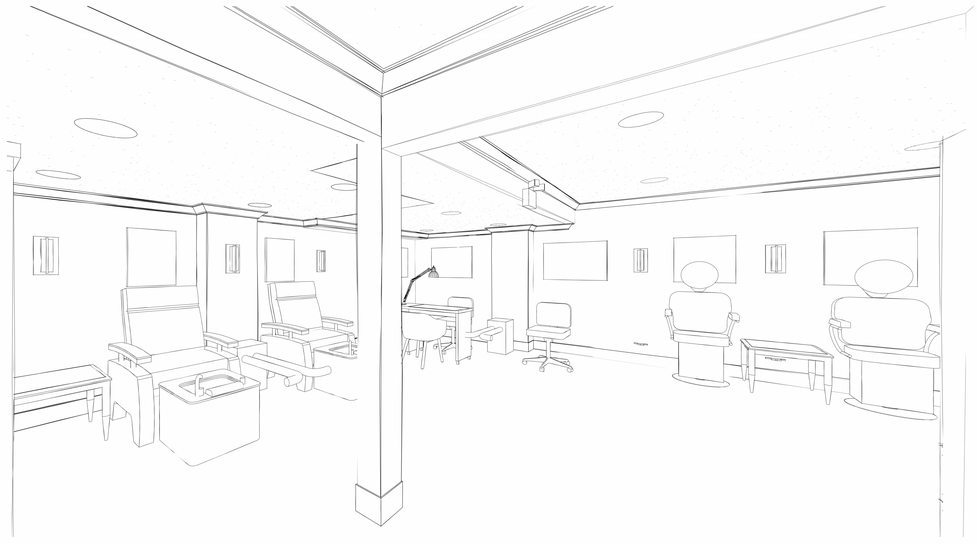
PERMIT SET

03 MAY 2023

COLLINS WEBB #: 22118

307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com

collins | webb ARCHITECTURE



VICINITY PLAN

GENERAL

SHEET NUMBER	SHEET NAME	REVISION
CS	COVER SHEET	
G002	ACCESSIBILITY GUIDELINES	
G003	LIFE SAFETY PLANS AND PROJECT INFO.	
G001	GENERAL INFORMATION	
G500	GENERAL PROJECT SPECIFICATIONS	
G501	GENERAL PROJECT SPECIFICATIONS	

STRUCTURAL

SHEET NUMBER	SHEET NAME	REVISION
S101	STRUCTURAL FLOOR PLAN	

ARCHITECTURAL

SHEET NO.	SHEET NAME	REVISION
A101	FLOOR PLAN AND REFLECTED CEILING PLAN	
A201	ELEVATIONS, SECTIONS, SCHEDULES & DETAILS	
A501	FINISH FLOOR PLAN, LEGEND, AND SCHEDULE	

MEP

SHEET NUMBER	SHEET NAME	REVISION
M101	MECHANICAL NOTES, SYMBOLS & ABBREVS.	
M201	MECHANICAL FLOOR PLAN	
M301	MECHANICAL SPECIFICATIONS	
E101	ELECTRICAL NOTES, SYMBOLS & ABBREVS.	
E201	ELECTRICAL POWER PLAN	
E301	FIRST FLOOR LIGHTING PLAN	
E401	ELECTRICAL ONE-LINE DIAGRAM, DETAILS & SCHEDULES	
E501	ELECTRICAL SPECIFICATIONS	
P101	PLUMBING NOTES, SYMBOLS & ABBREVS.	
P102	PLUMBING SCHEDULES AND DETAILS	
P201	WASTE AND VENT PLAN	
P202	WATER PLAN	
P301	PLUMBING SPECIFICATIONS	

OWNER

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ARCHITECT

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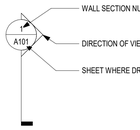
ARCHITECTURAL ABBREVIATIONS

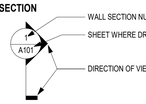
A	
&	AND
<	ANGLE
AB	ANCHOR BOLT
ACOUS/ACS	ACOUSTICAL()
TCT	ACOUSTICAL CEILING TILE
ACP	ACOUSTICAL CEILING PANEL
ACS PNL	ACCESS PANEL
AD	AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFS	ABOVE FINISH SLAB
AGGR	AGGREGATE
ALUM, AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
ASSH	AT
AVG	AVERAGE
B	
BB	BULLETIN BOARD
BD	BOARD
BTWN	BETWEEN
BITUM	BITUMINOUS
BLK / BLKG	BLOCK / BLOCKING
BLDG	BUILDING
BM	BENCHMARK
BMD	BOTTOM OF METAL DECK
BO	BOTTOM OF / BY OTHERS
BOT	BOTTOM
BOS	BOTTOM OF STEEL
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOFING SYSTEM
C	
[	CHANNEL
CAB	CABINET
CPT	CARPET
CI	CAST IRON
CB	CATCH BASIN
CCR	CARD CONTROL READER
CSWK	CASEWORK
CCT	CUBICLE CURTAIN TRACK
CCTV	CLOSED CIRCUIT TELEVISION
CSP	COMBINATION STANDPIPE
CG	CORNER GUARD
CEM	CEMENT, CEMENTITIOUS
CER	CERAMIC
CT	CERAMIC TILE
CH BD	CHALKBOARD
℄, �€	CENTER LINE
CLG	CEILING
CLR	CLEAR
CLO	CLOSET
CMU	CONCRETE MASONRY UNIT
CRSC	COLD ROLLED STEEL CHANNEL
CW	COLD WATER
COL	COLUMN
CNTR	COUNTER
CSK	COUNTERSUNK
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CJ	CONTROL JOINT
CG	CORNER GUARD
CORR	CORRUGATED, CORRIDOR
CU	CUBIC
D	
D	DEPTH
DBL	DOUBLE
DBL ACT	DOUBLE ACTING
DEG	DEGREE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIM PT	DIMENSION POINT
DISP	DISPENSER
DIST	DISTANCE
DK	DECK
DN	DOWN
DR	DRAIN, DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DT	DRAPERY TRACK
DTL	DETAIL
DW	DISHWASHER
DWG/DWGS	DRAWING / DRAWINGS
E	
E	EAST
EA	EACH
EDR	EQUIPMENT DRAWING
EG	EDGE GUARD
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EPB	ELECTRICAL BOARD
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESCAL	ESCALATOR
EST	ESTIMATE(D)
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATED
EXH	EXHAUST
EXIST, (E)	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
EX-BR	EXISTING BRICK
F	
F/F	FACE TO FACE
FA	FIRE ALARM
FAS	FIRE ALARM STATION
FB	FLAT BAR
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FG	FINISH GRADE
FHC	FIRE HOSE CABINET
FH/FEC	FIRE HOSE / FIRE EXTINGUISHER CABINET
FHMS	FLAT HEAD MACHINE SCREW
FHWS	FLAT HEAD WOOD SCREW
FHY	FIRE HYDRANT
FIN	FINISH, FINISHED
FLAM	FLAMMABLE
FLASH	FLASHING
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FACE OF
FRT	FIRE RETARDANT TREATMENT
FRZ	FREEZER
FSB	FOLDING SHOWER BENCH
FSTNR	FASTENER
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FXTR	FIXTURE
G	
G	GAS
GA	GAUGE, GAGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GLU LAM	GLUE LAMINATED
GLZ	GLAZING
GR	GRADE OR GRADING
GVL	GRAVEL
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	
H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HEAD
HDBD	HARDBOARD
HDW,HDW	HARDWARE
HDWD	HARDWOOD
HGT, HT	HEIGHT
HM	HOLLOW METAL
HNDRL	HANDRAIL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HOUR
HVAC	HEATING-VENTILATION-AIR CONDITIONING
HW	HOT WATER
I	
ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDE, INCLUDING
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
IVT	INTRAVENOUS TRACK
J	
JAN	JANITOR
JST	JOIST
JT	JOINT
K	
KG	KILOGRAM
KIT	KITCHEN
KPL	KICK PLATE
KS	KNEE SPACE
L	
L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE, LAMINATION
LAV	LAVATORY
LB	POUND
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT
LG	LENGTH
LIN	LINEAR
LL	LEAD LINED
LPT	LOW POINT
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING
LVR	LOUVER
M	
M	METERS
MACH	MACHINE
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MEDICINE CABINET
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MET, MTL	METAL
MEMB	MEMBRANE
MFR / MFG	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING
MM	MILLIMETERS
MO	MASONRY OPENING
MOD	MODULE, MODULAR
MTD	MOUNTED
MTG	MOUNTING
MVBL	MOVABLE
MULL	MULLION
N	
(N)	NEW
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOICE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
NW	NORTHWEST
O	
OC	ON CENTER
OA	OVERALL
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED-CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED-OWNER INSTALLED
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OVHD	OVERHEAD
OZ	OUNCE
P	
PA	PUBLIC ADDRESS
PART	PARTIAL
PBD	PARTICLEBOARD
PBX	PRIVATE TELEPHONE EXCHANGE
PCF	POUNDS PER CUBIC FOOT
PCI	POUNDS PER CUBIC INCH
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PI	POINT OF INTERSECTION
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNEU	PNEUMATIC
PNL	PANEL
PNL BD	PANEL BOARD
PNT, P	PAINT
PORT	PORTABLE
PP	PLASH PLATE
PPM	PARTS PER MILLION
PR	PAIR
PRCST	PRECAST
PREP	PREPARATION
PREFAB	PREFABRICATION
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT / PTD	POINT, PAINT / PAINTED
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PVMT	PAVEMENT
PWR	POWER
Q	
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	
R	RISER
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RCPT	RECEPTACLE
RD	ROOF DRAIN
RECT	RECTANGULAR
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE (D) (ING) (MENT)
REQD	REQUIRED
REQT	REQUIREMENT
RESIL	RESILIENT
RET	RETURN
REV	REVISION
RF	RESILIENT FLOORING
RH	RIGHT HAND
RHMS	ROUND HEAD MACHINE SCREW
RHWS	ROUND HEAD WOOD SCREW
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER
S	
S	SOUTH
SA	SUPPLY AIR
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SCRN	SCREEN
SD	STORM DRAIN
SE	SOUTHEAST
SECT	SECTION
SEG	SEGMENT
SEP	SEPARATION OR SEPARATE
SEP JT	SEPARATION JOINT
SHT	SHEET, SHEETING
SHWR	SHOWER
SHV	SHELVES, SHELVING
SIM	SIMILAR
SK	SINK
SMS	SHEET METAL SCREW
SP	SPACE, SPACED, SPACING
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SS	SANITARY SEWER
SSK	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STAG	STAGGERED
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
STS	SELF-TAPPING STEEL
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SVCE	SERVICE
SW	SOUTHWEST
SYMM	SYMMETRICAL
SYST	SYSTEM
T	
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CONCRETE, TOP OF CURB
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPORARY
THERM	THERMAL
THK	THICK, THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMPD GL	TEMPERED GLASS
TO	TOP OF
TOR	TOP OF RAILING
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF TWL
TP	TOP OF PAVEMENT
TPH	TOILET PAPER HOLDER
TRANS	TRANSPARENT
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL
TW	TOP OF WALL
U	
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UNF	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
UR	URINAL
UTIL	UTILITY
V	
VAC	VACUUM
VB	VALVE BOX
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIT	VITREOUS
VP	VENT PIPE
VOL	VOLUME
VWC	VINYL WALL COVERING
W	
W	WEST
W	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WAINS	WAINSCOT
WC	WATER CLOSET, WALL COVERING
WD	WOOD
WDW	WINDOW
WGL	WIRE GLASS
WCHR	WHEELCHAIR
WM	WIRE MESH
WO	WHERE OCCURS
W/O	WITHOUT
WP	WATERPROOF
WPT	WORKING POINT
WR	WATER RESISTANT
WSCT	WAINSCOT
WSP	WET STANDPIPE
WT	WEIGHT
WTHPRF	WEATHERPROOF
WTRPRF	WATERPROOF
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	
XFMR	TRANSFORMER
Y	
YD	YARD

TYPICAL ARCHITECTURAL REFERENCE SYMBOLS

WALL SECTION



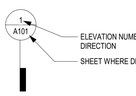
BUILDING SECTION



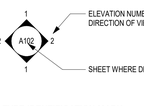
EXTERIOR ELEVATION

DETAIL REFERENCE

SECTION DETAIL REFERENCE



INTERIOR ELEVATION REFERENCE

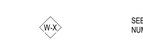


PARTITION TYPE IDENTIFICATION MARK

EQUIPMENT/ACCESSORY IDENTIFICATION MARK

DOOR IDENTIFICATION MARK

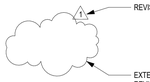
WINDOW AND LOUVER TYPE MARK



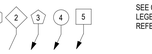
LEVEL LINE

ROOM NAME AND NUMBER

REVISION EXTENT

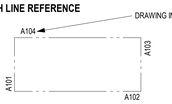


KEYED NOTE MARK



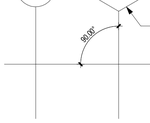
SEE CORRESPONDING NUMBERED LEGEND ON SHEET WHERE REFERENCE OCCURS

MATCH LINE REFERENCE

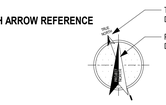


DRAWING TITLE SYMBOLS

LAYOUT GRID LINES



NORTH ARROW REFERENCE

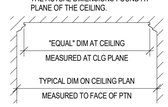


ARCHITECTURAL DIMENSIONING CONVENTIONS

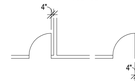
1. EXCEPT WHERE DIRECTED TO PLACE ITEMS OF THE WORK AT THE "APPROXIMATE LOCATION SHOWN," DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.
2. ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN (OR MAY BE DERIVED FROM THOSE SHOWN OR NOTED) ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, SCHEDULES, CONFIGURATION DETAILS, AND SPECIFICATIONS. SEE THE NOTES BELOW FOR DIMENSIONING CONVENTIONS USED ON THIS PROJECT.
3. EXCEPT WHERE SPECIFICALLY NOTED TO THE CONTRARY, ALL DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS CONFORM TO THE FOLLOWING CONVENTIONS:
   A. DIMENSIONS UTILIZING THE "CENTERLINE" SYMBOL ARE MEASURED TO:
      - STRUCTURAL OR DIMENSIONAL GRID LINES.
      - CENTERLINE OF CONCRETE OR CONC MASONRY UNIT WALLS (EXCLUSIVE OF FURRING OR APPLIED FINISHES HAVING THICKNESS). REFER TO THE ARCH PLANS AND SECTIONS, THE STRUCT DRAWINGS, OR PARTITION SCHEDULE TO DETERMINE THE THICKNESS OF CONCRETE OR CONC MASONRY UNIT WALLS.
      - CENTERLINE OF PARTITION ASSEMBLY (EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALLS) AT PARTITIONS FRAMED WITH METAL STUDS. REFER TO "PARTITION SCHEDULE" TO DETERMINE THICKNESS OF EACH PARTITION TYPE.
      - CENTERLINE OF DOOR, WINDOW, OR LOUVER OPENING.
      - CENTERLINE OF EQUIPMENT OR FURNISHING.
      - CENTERLINE OF OTHER FEATURES AS INDICATED.
   B. REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE CENTERLINE DIMENSION.
   C. DIMENSIONS UTILIZING THE "FACE OF" SYMBOL ARE MEASURED TO:
      - FACE OF CONCRETE OR CONC MASONRY UNIT WALL (EXCLUSIVE OF APPLIED FINISHES HAVING THICKNESS OR FURRING WHICH MAY BE ADDED TO THE FACE OF SUCH WALLS).
      - FACE OF PARTITION ASSEMBLY (EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALL) AS DEFINED BY THE PARTITION SCHEDULE. UNLESS NOTED AS A "FACE OF FINISH" OR "CLEAR" DIMENSION (SEE NOTE "E" BELOW), DIMENSIONS ARE NOT MEASURED TO THE FACE OF APPLIED FINISH. REFER TO THE "PARTITION SCHEDULE" TO DETERMINE THE THICKNESS OF EACH PARTITION TYPE.
      - INSIDE EDGE OF FINISHED DOOR OPENING. REFER TO THE DOOR SCHEDULE FOR ADDITIONAL DIMENSIONAL INFORMATION.
      - DIMENSION OR WORK POINT AS INDICATED ON RELATED ARCH DETAIL PLAN, SECTION, ELEVATION, LAYOUT OR CONFIGURATION DETAIL, OR CONSTRUCTION DETAIL.
   D. REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE "FACE OF" DIMENSION.
   E. WHERE "FACE OF FINISH" OR "CLEAR" DIMENSIONS ARE SPECIFICALLY NOTED, THE DIM IS MEASURED TO:
      - FINISH FACES AT THE MOST NARROW OR CONSTRICTED POINTS OF SECTION WHERE DIMENSION IS SHOWN, WHEN THE DIMENSION OCCURS ACROSS AN OPEN SPACE. THIS CASE, A "FACE OF FINISH" DIMENSION IS EQUIVALENT TO A "CLEAR" DIMENSION.
      - FINISH FACES AT THE WIDEST OR MOST EXPANSIVE POINTS OF THE SECTION THE DIMENSION IS SHOWN WHEN THE DIMENSION OCCURS ACROSS AN OBJECT OR GROUP OF OBJECTS.
   F. WHERE "EQUAL" DIMENSIONS ARE USED ON REFLECTED CEILING PLANS TO LOCATE CEILING GRID WORK POINTS, MEASURE DIMENSIONS TO:
      - EDGE OF THE INDICATED CEILING AT THE FACE OF THE ADJACENT APPLIED FINISH MEASURED AT THE PLANE OF THE CEILING.

NOTE NO 3 CONTINUED:

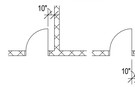
- CAUTION: DUE TO THE POSSIBLE APPLICATION OF APPLIED FINISHES - THICKNESS OF WHICH MAY VARY BETWEEN FLOOR AND CEILING AND IS NOT ACCOUNTED FOR (EXCEPT AS INDICATED BY "FOF" OR "CLEAR") BY THE DIMENSION SHOWN ON THE FLOOR PLANS - THE CONTRACTOR MUST ADJUST, AS NECESSARY, THE FLOOR PLAN DIMENSIONS TO REFLECT THE ACTUAL DIMENSIONS FOUND AT PLANE OF THE CEILING.



4. WHERE DIMENSIONS ARE NOT PROVIDED ON FLOOR PLANS TO LOCATE DOOR OPENINGS, APPLY THE FOLLOWING RULES, **IN ORDER**, TO DETERMINE THE LOCATION OF DOOR OPENINGS:
   A. DOOR OPENINGS MAY BE DIMENSIONED ON DRAWINGS OTHER THAN THE FLOOR PLANS. REFER TO THE SECTIONS, ELEVATIONS, DETAILS, AND DOOR SCHEDULE NOTES FOR ADDITIONAL DIMENSIONAL INFORMATION.
   B. WHERE THE HINGE-SIDE OF A DOOR IS SHOWN ADJACENT TO A WALL - OR WALLS - PERPENDICULAR TO THE WALL IN WHICH THE DOOR OPENING OCCURS:
      - AT DOORS OCCURRING IN METAL FRAMED GYPSUM BOARD PARTITIONS, LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 4 INCHES FROM THE FACE (EXCLUSIVE OF APPLIED FINISHES) OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.

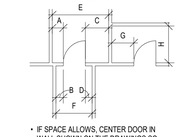


      - AT DOORS OCCURRING IN WALLS OF CONC MASONRY UNIT CONSTRUCTION, LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 10 INCHES FROM THE FACE (EXCLUSIVE OF APPLIED FINISHES) OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.

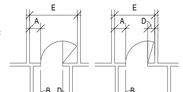


NOTE NO 4 CONTINUED:

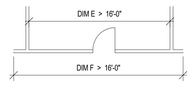
   C. WHERE DOOR OCCURS NOT ADJACENT TO A PERPENDICULAR WALL AND EITHER "DIM E" OR "DIM F" IN DIAGRAM BELOW IS 16'-0" OR LESS, LOCATE DOOR UTILIZING THE FOLLOWING MINIMUM DIMENSIONS:
      - DIMENSION A = 18 INCHES MIN
      - DIMENSION B = 12 INCHES MIN
      - DIMENSION C = DOOR WIDTH + 2 INCHES MINIMUM
      - DIMENSION D = 4 INCHES MIN AT METAL FRAMED GYP BD PARTITIONS OR - EVEN MULTIPLE OF 1/2 CMU MODULE PLUS 2 INCHES AT CONC MASONRY UNIT WALLS
      - DIMENSIONS E AND F = AS SHOWN ON PLANS
      - DIMENSION G = 36 INCHES MIN
      - DIMENSION H = 60 INCHES MIN



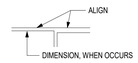
      - IF SPACE ALLOWS, CENTER DOOR IN WALL SHOWN ON THE DRAWINGS SO THAT EITHER "DIM A" EQUALS "DIM C" OR "DIM B" EQUALS "DIM D".
   D. IF "DIM E" IN DIAGRAMS BELOW IS LESS THAN THE SUM OF 2 TIMES THE DOOR WIDTH PLUS 20 INCHES, LOCATE DOOR SO THAT MINIMUMS STATED BY NOTE NO 4C ABOVE FOR "DIM A", "DIM B," AND "DIM D" ARE MET - MAXIMIZING "DIM A" AND MINIMIZING "DIM D" TO THE EXTENT POSSIBLE.



   E. WHERE DOOR IS SHOWN LOCATED IN A LARGE EXPANSE OF OPEN WALL ("DIM E" AND "DIM F" IN DIAGRAM BELOW BOTH EXCEED 16'-0"), PLACE DOOR AT APPROXIMATE LOCATION SHOWN ON THE PLANS. WHERE DOOR OCCURS IN CMU WALL, PLACE DOOR AT APPROXIMATE LOCATION SHOWN WHILE MINIMIZING "CUT" OR PARTIAL CMU MODULES ADJACENT TO THE JAMBS.



5. WHERE WALLS AND/OR PARTITIONS OF UNEQUAL THICKNESS ABUT, ALIGN EXPOSED FACES, UNLESS OTHERWISE NOTED.



REFLECTED CEILING PLAN SYMBOLS:

- 9'-0" — CEILING HEIGHT
- EXHAUST GRILLE
- RETURN / TRANSFER GRILLE
- SUPPLY DIFFUSER
- LINEAR SLOT DIFFUSER
- 10" DOWNLIGHT
- 5" DOWNLIGHT
- LINEAR DOWNLIGHT
- WALL SCONCE
- EMERGENCY LIGHT
- UNDERCABINET LIGHTING
- FIRE EXIT SIGN
- 5/8" GYP. BD. CEILING, BULKHEAD OR SOFFIT. SEE APPLICABLE DETAILS AND SECTIONS.
- 2'X2' SUSPENDED ACT CEILING SYSTEM
- OPEN TO STRUCTURE

TYP DOOR LEGEND

NEW CONSTRUCTION	EXISTING	DEMOLITION

WALL TYPE LEGEND

- EXISTING PARTITION
- DEMOLISHED PARTITION
- CMU PARTITION
- UNRATED PARTITION

TYPICAL RULES FOR DETERMINING REFLECTED CEILING PLAN LOCATIONS, DIMENSIONS, AND CONFIGURATIONS

GENERAL NOTES

A. THE A-SERIES DRAWINGS ESTABLISH AND COORDINATE THE FINISHED APPEARANCE AND LOCATION OF ALL EXPOSED ELEMENTS. THE A-SERIES DRAWINGS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND LOCATION OF ALL PARTS OF THE WORK.
EXCEPTION: DIMENSIONED LOCATIONS SHOWN ON DRAWINGS OF OTHER DISCIPLINES SHALL GOVERN ONLY WHERE:
1. SPECIFICALLY AND INDIVIDUALLY INDICATED BY SYMBOL, KEYED NOTE, OR NOTATION ON THE ARCHITECTURAL DRAWINGS.
2. OCCURRING WITHIN A ROOM OR OTHER IDENTIFIABLE SPACE FOR WHICH ARCH SHEET OR SCHEDULE NOTES INDICATE THAT DIMENSIONS PROVIDED ELSEWHERE SHALL GOVERN.

B. THE PURPOSE OF THIS SHEET IS TO ILLUSTRATE THE TYPICAL RULES WHICH GOVERN THE LOCATION, CONFIGURATION IN RELATIONSHIP TO OTHER ELEMENTS OF THE WORK, AND FINISHED ALIGNMENT OF ALL ITEMS OCCURRING ON REFLECTED CEILING PLANS OF THE PROJECT.

C. THE A-SERIES FLOOR PLANS, REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, AND DETAILS ILLUSTRATE THE DIMENSIONED LOCATION OF MANY - BUT NOT ALL - EXPOSED PARTS OF THE WORK. APPLY THE RULES ON THIS SHEET - **IN ORDER** - TO DETERMINE THE LOCATION OF EXPOSED PART OF THE WORK.
1. WHEN UNIQUELY AND SPECIFICALLY DIMENSIONED ON THE A-SERIES PLANS, SECTIONS, OR ELEVATIONS (OR COMBINATION THEREOF), LOCATE AS DIMENSIONED.
2. IF NOT SHOWN, OR IF SHOWN BUT NOT DIMENSIONED, BY THE A-SERIES PLANS OR ELEVATIONS, LOCATE AS INDICATED BY THE APPLICABLE RULE.

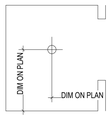
D. REFER TO THE "ARCHITECTURAL GENERAL NOTES" FOR ADDITIONAL NOTES WHICH MAY BE APPLICABLE TO THE WORK SHOWN ON THIS SHEET.

E. FOR MANY SPACES, THE ARCHITECTURAL REFLECTED CEILING PLANS ESTABLISH AN IDEAL PATTERN FOR LOCATING SPRINKLER HEADS. IN SPACES WHERE HEADS ARE SHOWN, FOLLOW PATTERN ESTABLISHED BY THE DRAWINGS. WHERE ADDL HEADS ARE REQUIRED TO CONFORM WITH CODE, PROVIDE HEADS IN GENERAL CONFORMITY WITH PATTERN ESTABLISHED BY THE DRAWINGS.

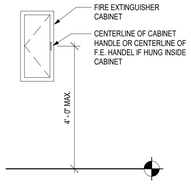
F. IN SPACES WHERE SPRINKLER HEADS ARE NOT SHOWN BY THE ARCHITECTURAL REFLECTED CEILING PLANS, PROVIDE HEADS AS REQUIRED BY CODE.

RULE 1

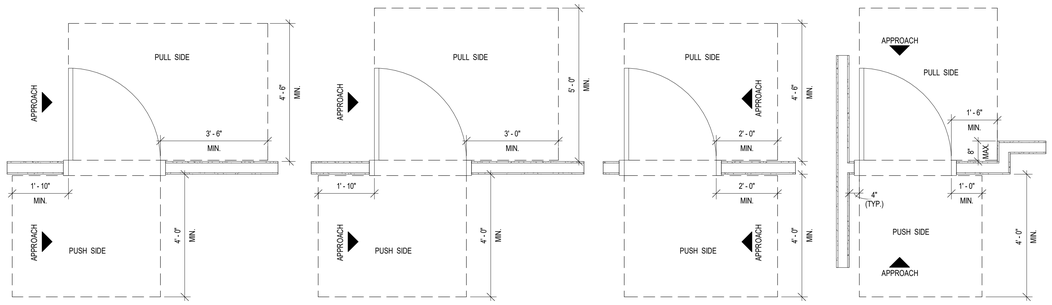
WHEN COMPLETELY DIMENSIONED ON REFLECTED CEILING PLAN



LOCATE ITEMS AS INDICATED WHEN SHOWN DIMENSIONED BY A REFLECTED CEILING PLAN, ENLARGED REFLECTED CEILING PLAN, OR DETAIL

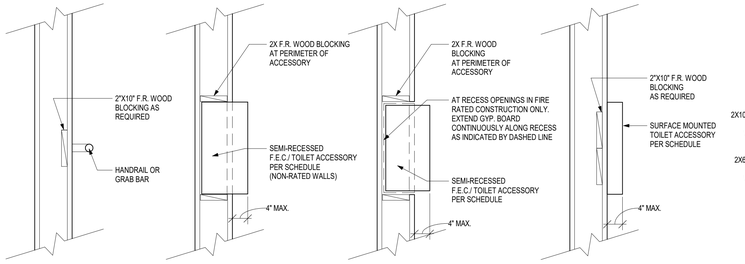


J10 FE CABINET
1/2" = 1'-0"

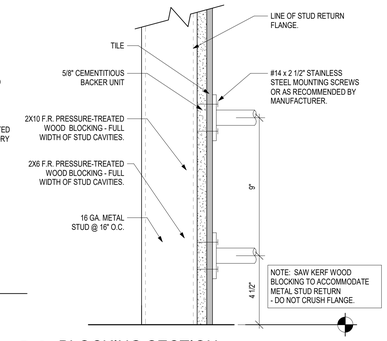


J6 TYP. DOOR APPROACH CLEARANCES
1/2" = 1'-0"

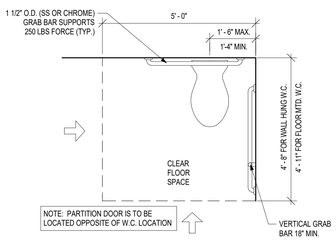
G10 FIRE EXTINGUISHER
1/2" = 1'-0"



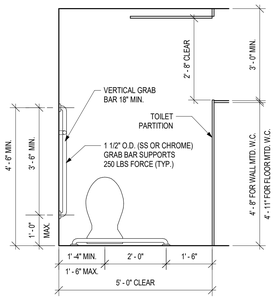
G6 TYP. BLOCKING DETAILS
3/4" = 1'-0"



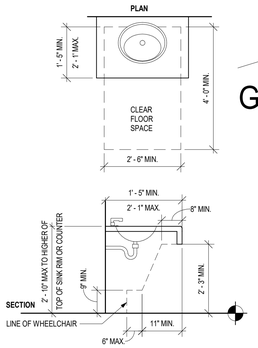
G2 BLOCKING SECTION
3" = 1'-0"



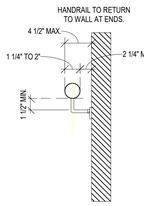
E12 ACCESSIBLE CLEAR FLOOR SPACE
1/2" = 1'-0"



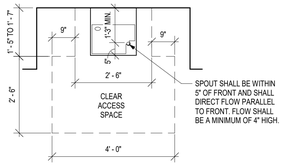
E10 ACCESSIBLE TOILET STALL
1/2" = 1'-0"



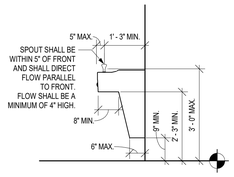
E8 SINK IN COUNTER CLEARANCES
1/2" = 1'-0"



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



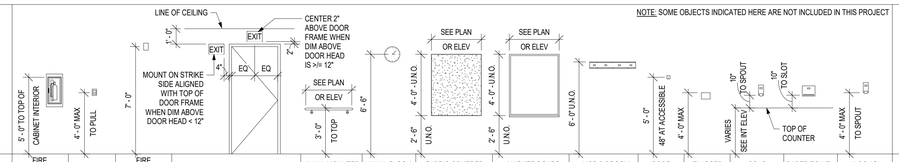
E4 E.W.C. - CLEAR SPACE
1/2" = 1'-0"



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

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS

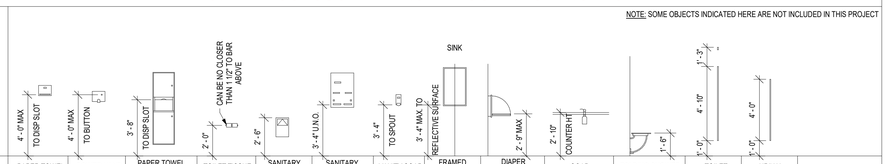
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR	5' - 0" TO TOP OF CABINET INTERIOR	4' - 6" MAX TO PULL	7' - 0"	6' - 0"	4' - 0" U.N.O.	4' - 0" U.N.O.	6' - 0" U.N.O.	5' - 0"	48" AT ACCESSIBLE	4' - 6" MAX	VARIES	10" TO SPOUT	10" TO SLOT	4' - 6" MAX. TO SPOUT
ACCESSORY TYPE	FIRE EXTINGUISHER CABINET	MANUAL FIRE PULL	FIRE STROBE/LIGHT/ AUDIBLE ALARM	WALL MOUNTED EXIT SIGN	WALL MOUNTED HANDRAIL	WALL CLOCK	FABRIC COVERED TACK BOARD	MARKER BOARD	MOP & BROOM HOLDER	ROBE HOOK	ELAPSED TIME CLOCK	SOAP DISPENSER	PAPER TOWEL DISPENSER	ALCOHOL DISPENSER
COMMENTS	SEMI RECESSED	SURFACE MOUNTED	SURFACE MOUNTED	WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED

TOILET ACCESSORY TYPICAL MOUNTING HEIGHTS

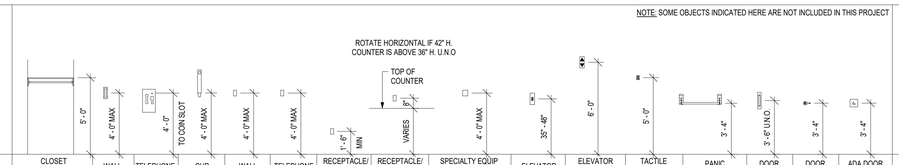
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR	4' - 6" MAX. TO DISP SLOT	4' - 6" MAX. TO BUTTON	3' - 6" TO DISP SLOT	2' - 0"	2' - 9"	3' - 4" U.N.O.	3' - 4"	3' - 4" MAX. TO REFLECTIVE SURFACE	2' - 9" MAX	2' - 10" COUNTER HT	1' - 6"	4' - 10"	2' - 0"
ACCESSORY TYPE	PAPER TOWEL DISPENSER	POWER HAND DRYER	PAPER TOWEL DISPENSER & TRASH RECEPTACLE	TOILET TISSUE DISPENSER	SANITARY NAPKIN DISPOSAL	SANITARY NAPKIN DISPENSER	VANITY SOAP DISPENSER	FRAMED VANITY MIRROR	DIAPER CHANGING STATION	SOAP DISPENSER	FOLDING SHOWER SEAT	TOILET PARTITION	URINAL SCREEN
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SEMI RECESSED	SURFACE MOUNTED	SURFACE MOUNTED	RECESSED & SURFACE	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	COUNTERTOP MOUNTED	SURFACE MOUNTED	WALL MOUNTED	WALL MOUNTED

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR																
ACCESSORY TYPE	CLOSET HANGAR ROD & SHELF	WALL PHONE	TELEPHONE HOUSING	CUP DISPENSER	WALL SWITCH	TELEPHONE OUTLET	RECEPTACLE/ TELEPHONE/ DATA	RECEPTACLE/ TELEPHONE/ DATA	SPECIALTY EQUIP (IE. THERMOSTAT,CARD READER,INTERCOM)	ELEVATOR CALL BUTTON	ELEVATOR VISIBLE SIGNAL INDICATOR	TACTILE CHARACTER INDICATOR	PANIC BAR	DOOR PULL	DOOR LATCH	ADA DOOR OPERATOR
COMMENTS	WALL MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	VARIES

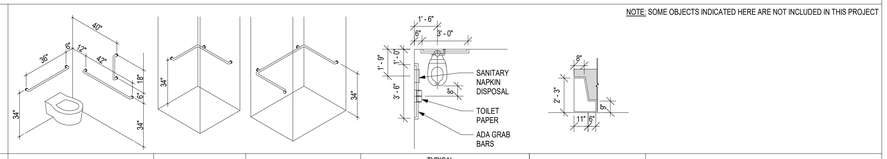
PLUMBING FIXTURE TYPICAL MOUNTING HEIGHTS

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT

FINISH FLOOR	3' - 4" U.N.O.	3' - 9" U.N.O.	3' - 9" U.N.O.	2' - 10"	2' - 10"	2' - 6" MAX. TO SPOUT	3' - 0" TO SPOUT	3' - 0" MAX TO SPOUT	2' - 6" TO SPOUT	17" - 19"	2' - 0" TYP.
ACCESSORY TYPE	SHOWER MIXING VALVE	SHOWER HEAD	HAND HELD SHOWER	LAVATORY	LAVATORY	CHILDREN'S DRINKING FOUNTAIN	SINGLE DRINKING FOUNTAIN	DOUBLE DRINKING FOUNTAIN		TOILET	URINAL
COMMENTS	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	COUNTER MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED		WALL/FLOOR MOUNTED	WALL MOUNTED

GRAB BAR TYPICAL MOUNTING HEIGHTS & TOILET ACCESSORY PLANS

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT



FINISH FLOOR					
ACCESSORY TYPE	ADA TOILET GRAB BAR	SHOWER STALL GRAB BAR	ROLL-IN SHOWER STALL GRAB BAR	TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY	

A11 TYP. MOUNTING HEIGHTS
1/4" = 1'-0"

GENERAL NOTES: ACCESSIBILITY GUIDELINES

1. NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
2. ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
3. ELEVATORS: STANDARD CALL BUTTONS: 35" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP.) & 48" MAX. (3/4" SMALLEST DIM.). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM.). TACTILE SIGNAL ON HOISTWAY: 60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH CHARACTERS.
4. DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42", KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR. KICKPLATES: WIDTH = DOOR WIDTH MINUS 2". CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX.. ADA HARDWARE = 34" MIN. TO 48" MAX.
5. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STANDARD = 40" TYP., 42" MAX. ADA =36" MAX. (27" MIN. CLEAR KNEE SPACE)
6. COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 34" MAX.
7. WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15". ADA (TO TOP OF SEAT) = 17" TO 19". ADA FLUSH CONTROLS = 44" MAX.
8. URINALS (TO RIM): STANDARD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX.
9. LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 36" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE)
10. MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD = VARIES. ADA = 40" MAX.
11. GRAB BARS - ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 36" MAX. SHOWERS = 33" MIN. TO 36" MAX. (FROM B.O.SHOWER). BATHTUBS: TOP BAR = 33" MIN. TO 36" MAX. BOT. BAR = 9" ABOVE T.O. TUB
12. SHOWER HEADS (FROM FLOOR TO HEAD): STANDARD = 72" TO 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF.
13. SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP). ADA = 38" MIN. TO 48" MAX.
14. SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX.
15. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 70" TO TOP. URINALS = 18" TO BOT. & 60" TO TOP
16. TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD = 24". ADA = 19" MIN. TO 24" MAX.
17. WALL MOUNTED SOAP DISPENSERS (TO C. L. OF PUSH BUTTON): STANDARD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER.
18. PAPER TOWEL DISPENSER/ WASTE RECEPTACLE (TO TOWEL SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
19. WARM AIR HAND DRYER (TO PUSH SWITCH): STANDARD = 44" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
20. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
21. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STANDARD = 28" MAX. ADA = 19" MIN. TO 24" MAX. (TO OPNG.)
22. TOILET SEAT COVER DISPENSERS (TO OPNG.): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
23. SHELVES: ADA = 48" MAX.
24. COAT HOOKS: STANDARD = 68". ADA = 48" MAX.
25. CHALKBOARDS, TACKBOARDS,& MARKERBOARDS: STANDARD = 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED. TO T.O. BOARD)
26. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX.
27. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX.
28. CONVENIENCE RECEPTACLES – ELECTRICAL/ TELEPHONE/ DATA (TO C.L.): STANDARD = 18". ADA = 15" MIN.
29. EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN. ABOVE DOOR FRAME. EQUAL SPACE FROM CEILING TO TOP OF FRAME.
30. FIRE EXTINGUISHERS (TO TOP, U.N.O.): GROSS WT. 40 LBS. OR LESS = 60" MAX. GROSS WT. MORE THAN 40 LBS. = 42" MAX. ADA = 40" MAX. (B.O. CABINET)
31. FIRE ALARM PULL STATIONS (TO LEVER): STANDARD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX.
32. SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING HEIGHT
33. HORN/ SPEAKER/ VISUAL SIGNALS: STANDARD = 80" AFF. OR 6" BELOW CEILING - WHICHEVER IS LOWER.
34. ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OFLATCH SIDE OF DOOR

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PERMIT SET

JOHN KNOX VILLAGE - SALON

1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

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REVISION DATES:

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05/03/23
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ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

ACCESSIBILITY GUIDELINES

5/4/2023 10:36:45 AM

WALL PRIORITY LEGEND

NOTE: *THIS LEGEND IS FOR GRAPHIC REPRESENTATION ONLY.*

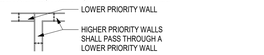
FOUR HOUR FIRE WALL (**4FW**)
THREE HOUR FIRE WALL (**3FW**)
TWO HOUR FIRE WALL (**2FW**)
FOUR HOUR FIRE BARRIER (**4FB**)
THREE HOUR FIRE BARRIER (**3FB**)

TWO HOUR FIRE BARRIER (**2FB**) *(INCLUDES THE FOLLOWING)*
- TWO HOUR SHAFT ENCLOSURE (**2SE**)

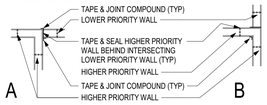
ONE HOUR FIRE BARRIER (**1FB**) *(INCLUDES THE FOLLOWING)*
- ONE HOUR SHAFT ENCLOSURE (**1SE**)

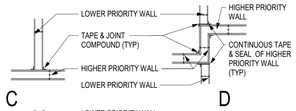
SMOKE TIGHT PARTITION (**X**) *(INCLUDES THE FOLLOWING)*
- SMOKE TIGHT PARTITION TO SMOKE TIGHT CEILING (**XC**)
- SMOKE TIGHT PARTITION WITHIN PLENUM ABOVE CEILING (**XP**)
- SMOKE TIGHT PARTITION SEPARATION OF INTERSTITIAL SPACES (**XI**)

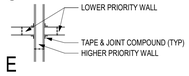
DETAIL ABUTMENT OF DISSIMILAR WALL



INTERSECTION OF RATED WALLS







NOTES:
1. REFER TO WALL TYPES ON SHEET G121-TI FOR WALL COMPONENTS, NUMBER OF GYPSUM BOARD LAYERS, TYPE OF GYPSUM BOARD, AND OTHER SIMILAR INFO.
2. THE HIGHER PRIORITY WALL SHALL PASS THROUGH THE LOWER PRIORITY WALL.
3. TAPING AND SEALING OF HIGHER PRIORITY WALLS SHALL BE CONTINUOUS.
4. ALTERNATE LAYERS OF GYPSUM BOARD SHALL OVERLAP AT CORNER INTERSECTIONS OF MULTI-LAYERED RATED GYPSUM BOARD PARTITIONS.

FIRE & SMOKE RESISTIVE LEGEND DEFINITIONS

FIRE WALLS (FW)

DEFINITION
A FIRE RATED WALL THAT IS CONTINUOUS VERTICALLY FROM FOUNDATION TO ROOF TO SEPARATE CONSTRUCTION INTO SEPARATE BUILDINGS.

USE
FIRE WALLS SERVE TO CREATE SEPARATE BUILDINGS FOR THE FOLLOWING REASONS.
- CONSTRUCTION TYPE VARIES FROM ONE BUILDING TO ANOTHER.
- COMPLIANCE WITH MAXIMUM ALLOWABLE AREA REQUIREMENTS.
- TO SEPARATE BUILDINGS WITH DIFFERENT LEVELS OF FIRE PROTECTION.
- TO ADDRESS A PROPERTY LINE DEFINING DIFFERENT OWNERSHIP.

SPECIAL CONSIDERATIONS
- THE FIRE WALL REQUIRES SUFFICIENT STRUCTURAL STABILITY UNDER FIRE CONDITIONS TO ALLOW THE COLLAPSE OF CONSTRUCTION ON EITHER SIDE WITHOUT COLLAPSE OF THE WALL.
- OPENINGS ARE REQUIRED TO BE PROTECTED.
- OPENINGS ARE LIMITED BASED ON A PERCENTAGE OF WALL LENGTH.
- EXTENDING THE FIRE WALL THROUGH THE ROOF WITH A PARAPET IS REQUIRED FOR SOME CONSTRUCTION CLASSIFICATIONS.
- THE REQUIRED FIRE RATING OF A FIRE WALL IS BASED ON OCCUPANCY GROUPS AND CLASS OF CONSTRUCTION.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

FIRE BARRIERS (FB)

DEFINITION
A FIRE RATED WALL CONSTRUCTED TO RESTRICT THE SPREAD OF FIRE. CONTINUITY SHALL BE MAINTAINED FROM TOP OF FLOOR TO UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE.

USE
FIRE BARRIERS HAVE THE FOLLOWING APPLICATIONS.
- TO CREATE HORIZONTAL EXITS.
- TO SEPARATE EXIT PASSAGEWAYS.
- OCCUPANCY SEPARATIONS.
- TO SEPARATE INCIDENTAL USE AREAS.
- ISOLATION OF HAZARDS.
- TO SEPARATE ROOMS WITH DIFFERENT LEVELS OF FIRE PROTECTION.
- SMOKE BARRIERS AND SHAFT ENCLOSURES ARE FIRE BARRIERS. SEE ADDITIONAL REQUIREMENTS.

SPECIAL CONSIDERATIONS
- WITHIN SOME CONSTRUCTION CLASSIFICATIONS, CONSTRUCTION THAT PROVIDES STRUCTURAL SUPPORT OF A FIRE BARRIER IS REQUIRED TO BE OF THE SAME HOURLY FIRE RATING AS THE FIRE BARRIER, OR BETTER.
- OPENINGS ARE REQUIRED TO BE PROTECTED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

SHAFT ENCLOSURES (SE)

DEFINITION
A SHAFT ENCLOSURE IS A FIRE BARRIER FORMING THE BOUNDARY OF A VERTICAL SHAFT.

USE
PROTECT OPENINGS IN FIRE RATED FLOOR/CEILING ASSEMBLIES.

SPECIAL CONSIDERATIONS
- PENETRATIONS IN SHAFT ENCLOSURES ARE PROHIBITED UNLESS NECESSARY FOR THE FUNCTION OF THE SHAFT. WHERE ALLOWED, OPENINGS ARE REQUIRED TO BE PROTECTED.
- DUCT PENETRATIONS REQUIRE COMBINATION SMOKE AND FIRE DAMPERS EXCEPT FOR EXISTING CONDITIONS THAT ARE GRANDFATHERED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH, CLOSER, AND PERIMETER SMOKE SEALS.

FIRE PARTITIONS (FP)

DEFINITION
A FIRE RATED PARTITION THAT IS USED FOR THE APPLICATIONS LISTED BELOW. IT SHALL BE CONTINUOUS FROM TOP OF FLOOR TO UNDERSIDE OF A FIRE-RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLY. WHERE ALLOWED BY CODE EXCEPTION, A FIRE PARTITION SHALL BE ALLOWED TO TERMINATE AT THE UPPER MEMBRANE OF A FIRE RATED CEILING

USE
FIRE PARTITIONS ARE USED IN CERTAIN OCCUPANCIES TO DO THE FOLLOWING.
- SEPARATE DWELLING UNITS
- SEPARATE SLEEPING SPACES
- SEPARATE CORRIDORS FROM ADJACENT SPACES
- SEPARATE ELEVATOR LOBBIES
- SEPARATE TENANT SPACES IN COVERED MALL BUILDINGS

SPECIAL CONSIDERATIONS
- OPENINGS ARE REQUIRED TO BE PROTECTED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

BEARING WALLS (BW)

DEFINITION
AN INTERIOR OR EXTERIOR WALL DESIGNED TO SUPPORT FLOOR OR ROOF LOADS. A BEARING WALL IS FIRE-RATED ONLY TO MAINTAIN THE INTEGRITY OF ITSELF AS A FIRE RATED STRUCTURAL ELEMENT. THE WALL DOES NOT SERVE AS A FIRE SEPARATION FROM ONE SIDE TO THE OTHER SIDE.

USE
A VERTICAL, LOAD BEARING STRUCTURAL ELEMENT.

SPECIAL CONSIDERATIONS
- DOORS AND WINDOWS ARE NOT REQUIRED TO BE RATED.
- HVAC DUCT PENETRATIONS ARE NOT REQUIRED TO BE FIRE-DAMPERED.
- PLUMBING, ELECTRICAL, SPRINKLER SYSTEM, AND CABLE PENETRATIONS ARE REQUIRED TO BE FIRE-STOPPED WITH FIRE SEALANT AT BOTH SIDES, FOR WALLS CONSTRUCTED OF HOLLOW CMU OR STUD FRAMING.

ACTIVE FIRE PROTECTION SYSTEMS:

- AUTOMATIC SPRINKLER SYSTEM - PROVIDED THROUGHOUT (903.2.1)
- STANDPIPE SYSTEM - PROVIDED IN STAIRS THROUGHOUT (905)
  1. ADDITIONAL CONNECTIONS PROVIDED AS SHOWN (905)
- ESCALATOR OPING PROTECTED IN ACCORDANCE WITH IBC 712.1.3.1. DRAFT CURTAIN AND CLOSELY SPACED SPRINKLERS.

GENERAL NOTES

1. THE FOLLOWING INFORMATION SERVES TO PROVIDE BUILDING OWNERS WITH CONCISE DEFINITIONS OF WALL TYPES RELATED TO LIFE SAFETY ISSUES. THIS INFORMATION IS NOT MEANT TO BE A SUBSTITUTE FOR APPLICABLE BUILDING CODES.
2. WHEN A WALL HAS MORE THAN ONE CLASSIFICATION, THE MOST RESTRICTIVE REQUIREMENTS FOR EACH CLASSIFICATION SHALL APPLY.
3. FOR NEW CONSTRUCTION, PERIMETER SMOKE-SEALS MAY BE REQUIRED AT FIRE-RATED DOORS IN CERTAIN OCCUPANCIES.

GENERAL DESCRIPTION

PROJECT NAME: JOHN KNOX VILLAGE - SALON
PROJECT LOCATION: 1001 NW CHIPMAN RD SUITE 123, LEE'S SUMMIT, MO 64081
COUNTY: JACKSON

COLLINS WEBB ARCHITECTURE
307B SW MARKET STREET
LEES SUMMIT, MISSOURI 64063

APPLICABLE CODES:
INTERNATIONAL BUILDING CODE - 2018 ED.
INTERNATIONAL PLUMBING CODE - 2018 ED.
INTERNATIONAL MECHANICAL CODE - 2018 ED.
INTERNATIONAL FUEL GAS CODE - 2018 ED.
INTERNATIONAL FIRE CODE - 2018 ED.
NATIONAL ELECTRICAL CODE - 2017 ED.
ADA STANDARDS FOR ACCESSIBLE DESIGN - 2010 ED.
ICC/ANSI A117.1: ACCESSIBILITY AND USABILITY CODE - 2009 ED.

CODE INFORMATION

		TABLE/SECTION/REFERENCE
BUILDING/PROJECT USE:	**MASSAGE SPA AND SALON**	**IBC SECTION 304**
CONSTRUCTION TYPE	**TYPE VB (EXISTING), FULLY SPRINKLERED**	**IBC TABLE 601**
OCCUPANCY CLASSIFICATION	**GROUP "B" BUSINESS**	**IBC SECTION 304**
BUILDING FRAME	**SOLID WOOD**	
ACTUAL TENANT AREA (GROSS)	**1,075 SQ. FT.**	
ALLOWABLE STORIES	**3**	
ACTUAL NUMBER OF STORIES	**2 STORIES (EXISTING)**	**IBC TABLE 504.4**
ALLOWABLE HEIGHT	**60'-0"**	
ACTUAL HEIGHT IN FEET	**EXISTING**	**IBC TABLE 504.3**

FIRE RESISTIVE REQUIREMENTS

		TABLE/SECTION/REFERENCE
PRIMARY FRAME	**0 HRS**	**IBC TABLE 601**
NON-BEARING WALLS	**0 HRS**	**IBC TABLE 601**
BEARING WALLS INT./ EXT.	**0 INT. / EXT. HRS**	**IBC TABLE 601**
FLOOR CONSTRUCTION	**0 HRS**	**IBC TABLE 601**
CEILING/ROOF	**0 HRS**	**IBC TABLE 601**
CORRIDORS	**0 HRS**	**IBC TABLE 1020.1**

FIRE EXTINGUISHERS

1. **PROVIDE PORTABLE FIRE EXTINGUISHERS IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE LOCAL GOVERNING FIRE PREVENTION CODE. SEE PLANS FOR SUGGESTED LOCATIONS. NOTIFY ARCHITECT OF ANY PROPOSED RELOCATION OR IF A CONFLICT IS ENCOUNTERED.**
2. **PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.**

CEILING HEIGHT NOTES: (IBC 1003 & 1207)

1. **ALL MEANS OF EGRESS TO HAVE A MINIMUM CEILING HEIGHT OF 7'-6" A.F.F., NOR SHALL HAVE ANY PROJECTION FROM THE CEILING BE LESS THAN 6'-8" A.F.F.**
2. **OCCUPIED SPACES, HABITABLE SPACES AND CORRIDORS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6" A.F.F.**
3. **BATHROOMS, TOILET ROOMS, KITCHENS, STORAGE ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0" A.F.F.**

INTERIOR FINISHES

GROUP B	**MAX. FLAME SPREAD**	
EXIT ENCLOSURES	**CLASS B**	**IBC TABLE 803.13**
LOBBIES & CORRIDORS	**CLASS C**	**IBC TABLE 803.13**
ALL OTHER SPACES	**CLASS C**	**IBC TABLE 803.13**
TEXTILES	**CLASS C (76-200)**	**IBC 803.1.1, 803.5.1, 803.5.2**
SMOKE DEVELOPED	**0-450**	**IBC 803.1.1**

NOTE:
Decorative Materials and Trim (including plastics) must comply with IBC SECTION 806

GENERAL EXITING REQUIREMENTS

		TABLE/SECTION/REFERENCE
EXIT TRAVEL DISTANCE	**300 FEET**	**IBC SECTION 1017.2**
DEAD END CORRIDOR	**50 FEET**	**IBC SECTION 1020.4**
COMMON PATH OF TRAVEL	**30 FEET, OR 75' IF OCC. < 50**	**IBC SECTION 1029.8**
MIN. CORRIDOR WIDTH	**44", OR 36" IF OCC. < 50**	**IBC SECTION 1020.2**

POSTING OF OCCUPANT LOAD

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.

EXIT REQUIREMENTS

	TABLE/SECTION/REFERENCE
A. REQUIRED CAPACITY	
1. STAIRS - 0.3" / PERSON	**IBC SECTION 1005.3.1**
2. OTHER COMPONENTS - 0.2" / PERSON	**IBC SECTION 1005.3.2**
B. MINIMUM NUMBER	
1. OCCUPANT LOAD OF 1-500 PERSONS - 2 EXITS PER STORY	**IBC TABLE 1006.3.2**
2. OCCUPANT LOAD OF 501-1000 PERSONS - 3 EXITS PER STORY	
3. OCCUPANT LOAD OF MORE THAN 1000 PERSONS - 4 EXITS PER STORY	

SIGNAGE

1. **STAIR TACTILE AND BRAILLE SIGNAGE ON EACH FLOOR FOR EXIT STAIRWELL, FLOOR DISCHARGE, AND ROOF TOP ACCESS IN ACCORDANCE WITH ICC A117.1.**
2. **PROVIDE SIGNAGE "IN FIRE EMERGENCY DO NOT USE ELEVATOR, USE EXIT STAIRS" IN ACCORDANCE WITH IBC (3002.3)**
3. **EVACUATION DIAGRAM PROVIDED IN ACCORDANCE WITH IBC 1023.9**

OCCUPANT LOAD

				TABLE/SECTION/REFERENCE
OCCUPANT LOAD	**8 OCC**	**BEAUTY SHOP:**	**150 SF/OCC**	**IBC TABLE 1004.5**
EXITS REQUIRED	**2 EXITS**			**IBC TABLE 1006.3.2**
EXITS PROVIDED	**2 EXITS**			

TOTAL OCCUPANT LOAD

TOTAL OCCUPANT LOAD IN TENANT SPACE: 9 OCC

PLUMBING FIXTURE REQUIREMENTS

IBC TABLE 2902.1

B OCC WATER CLOSETS = 1/25 FIRST 50, 1/50 REMAINDER
B OCC LAVATORIES = 1/40 FIRST 80, 1/80 REMAINDER
B OCC DRINKING FOUNTAIN = 1/100
B OCC SERVICE SINK = 1

PLUMBING FIXTURES REQUIRED
WATER CLOSETS: 9/25 = 1 REQUIRED
LAVATORIES: 9/25 = 1 REQUIRED
DRINKING FOUNTAINS: 9/100 = 1 REQUIRED
SERVICE SINKS: = 1 REQUIRED

PLUMBING FIXTURES PROVIDED
WATER CLOSETS: = 1 PROVIDED
LAVATORIES: = 1 PROVIDED
DRINKING FOUNTAINS: = 0 PROVIDED (BOTTLED WATER PROVIDED)
SERVICE SINKS: = 0 PROVIDED (PROVIDED ELSEWHERE IN FACILITY)

LIFE SAFETY LEGEND

NUMBER OF OCCUPANTS EXITING — CALCULATED EXIT WIDTH REQ'D (IN.) — EXIT WIDTH PROVIDED (IN.) — 200 / 40" 32" / 68" — MIN. WIDTH OF MEANS OF EGRESS COMPONENT (IN.)

X" FROM ROOM OR LEVEL
X = CLEAR WIDTH OF OPENING IN INCHES

F.A.C.P. FIRE ALARM CONTROL PANEL

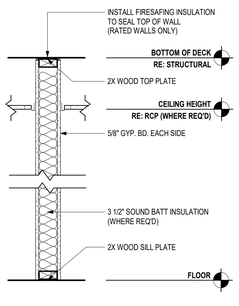
FDC FIRE DEPARTMENT CONNECTION

EGRESS PATH

FE-1 INDICATES FIRE EXTINGUISHER CABINET(FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE.

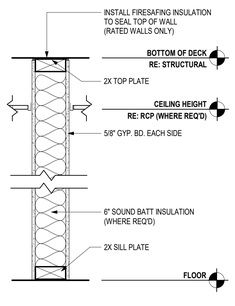
WALL TYPE NOTES:

1. DRYWALL PARTITIONS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH ASTM E497 - STANDARD PRACTICE FOR INSTALLING SOUND ISOLATING GYPSUM BOARD PARTITIONS, AND ASTM C919 - STANDARD PRACTICE FOR USE OF SEALANTS IN ACOUSTICAL APPLICATIONS. ALL SOUND BARRIER PARTITIONS SHOULD EXTEND FROM FLOOR TO STRUCTURE UNLESS STATED OTHERWISE. METAL STUDS SHALL BE RIGIDLY ATTACHED ONLY AT HEAD AND FOOT. STRUCTURAL CROSS BRACING MUST NOT RIGIDLY CONNECT TO BOTH METAL STUD WALLS.
2. RE: LIFE SAFETY PLAN(S) FOR RATED WALL LOCATIONS.
3. RE: WALL TYPE DETAIL SHEET FOR TYPICAL WALL DETAILS AND ADDITIONAL WALL TYPE INFORMATION.
4. FOR TYPICAL TOP OF WALL CONDITIONS AT JOISTS AND BEAMS, REFER TO THE CLOSURE DETAILS ON THE WALL TYPE DETAILS SHEET.
5. WHERE "ACOUSTIC SEALANT" IS INDICATED ON WALL TYPES: PROVIDE ACOUSTIC (SOUND) SEALANT ABOVE TOP TRACK, UNDER BOTTOM TRACK, AND AT ALL PENETRATIONS (BOTH SIDES), SEE SPECIFICATION FOR PRODUCT REQUIREMENTS.
6. WHERE "FIRE-RATED SEALANT" IS INDICATED ON WALL TYPES: PROVIDE FIRE-RATED SEALANT ABOVE TOP TRACK, UNDER BOTTOM TRACK, AT ALL PENETRATIONS (BOTH SIDES), AND AS REQUIRED BY FIRE RATING UL NUMBER.
7. EXTEND FIRE-RATED WALL CONSTRUCTION BEHIND RECESSED OR BUILT-IN EQUIPMENT; SUCH AS FIRE EXTINGUISHER CABINETS (FEC), ELECTRICAL WATER COOLERS (EWC), ELECTRICAL PANELS, ETC., UNLESS NOTED OTHERWISE.
8. PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR LABORATORY EQUIPMENT.
9. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS, STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT. ALL PENETRATIONS THROUGH ACOUSTICAL AND FIRE RATED WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE, AND/OR ACOUSTICAL ISOLATION OF SPACES WITH APPROPRIATE ACOUSTICAL/ FIRESTOP MATERIAL.
10. THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN.
11. WALL BASE IS NOT SHOWN ON ALL WALL TYPES FOR CLARITY. REFER TO FINISH SCHEDULE.
12. PROVIDE GLASS-MAT, WATER RESISTANT BACKING BOARD AT ALL WET LOCATIONS.
13. EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLUMN GYPSUM BOARD FACING SHALL BE HELD AT 5/8 INCH BELOW STRUCTURE, UNLESS NOTED OR SHOWN OTHERWISE.
14. PROVIDE AND INSTALL BLOCKING REQUIRED FOR ALL A.V. EQUIPMENT. G.C. TO COORDINATE WITH TI CONSULTANT FOR FINAL LOCATIONS AND SIZE REQUIREMENTS.
15. COMPRESSIBLE FILLER - ACCEPTABLE MATERIALS WOULD BE FIBERGLASS INSULATION OR FIRESTOPPING. VOIDS TO BE COMPLETELY FILLED AND A FIRESTOP SEALANT OVER ANY ENDS. THIS IS TYPICAL FOR ALL ACOUSTICAL WALL ASSEMBLIES WHERE "COMPRESSIBLE FILLER" IS CALLED FOR. THERE CAN BE NO VOIDS IN THE INSTALLATION.



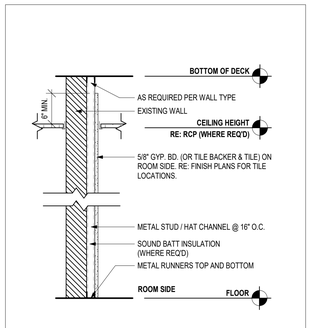
WALL TYPE AA

TYPE	WALL DESCRIPTION
AA	• 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • NON RATED



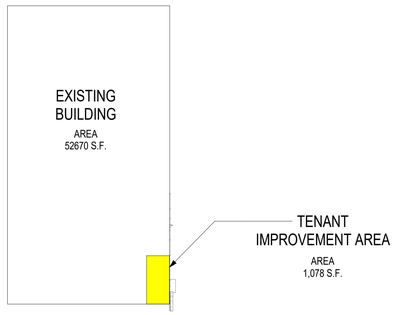
WALL TYPE BB

TYPE	WALL DESCRIPTION
BB	• 2X6 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE • BATT INSUL. • NON RATED

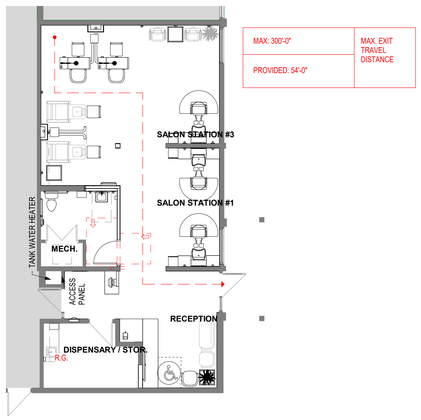


WALL TYPE EE

TYPE	WALL DESCRIPTION
EE	• 7/8" HAT CHANNEL @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. ONE SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • NON RATED
EE1	• 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE • 5/8" TYPE "X" GYP. BD. ONE SIDE TO DECK ABOVE • NO SOUND BATT INSUL. • NON RATED



6B KEY PLAN
1/64" = 1'-0"



3B 1ST FLOOR - LIFE SAFETY
1/8" = 1'-0"

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307B SW Market Street, Lee's Summit, Missouri 64063 | 816.249.2270

PERMIT SET

JOHN KNOX VILLAGE - SALON

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REVISION DATES:

STATE OF MISSOURI — ROGER J. FERRIN NUMBER A-2010020108 ARCHITECT

05/03/23

PROFESSIONAL SEAL

G003

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LIFE SAFETY PLANS AND PROJECT INFO.

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SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

GENERAL REQUIREMENTS APPLICABLE TO ALL MATERIALS FOR THE PROJECT:

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

DIVISION 01 - GENERAL REQUIREMENTS

1. SEE ADMINISTRATIVE SPECIFICATION FOR GENERAL REQUIREMENTS RELATED TO ADMINISTATION OF THIS CONTRACT.

A. CONTRACTOR LICENSES

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

B. BUILDING PERMITS

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

C. UTILITY FEES

1. THE CONTRACTOR SHALL PAY THE NECESSARY FEES TO CONNECT TO EXISTING UTILITIES AT THE PROPERTY LINE OR IN ADJACENT STREETS AND RIGHT OF WAY AS SPECIFIED, NECESSARY, AND/OR INCLUDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PAY ALL UTILITY COSTS (BILLS) DURING CONSTRUCTION UNTIL OWNER TAKES POSSESSION OF THE FACILITY OR THE FACILITY IS CERTIFIED AS SUBSTANTIALLY COMPLETE.

D. PROTECTION OF FINISHED WORK

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

E. GENERAL CONDITIONS

1. ANY DISCREPANCY OR CONFLICT WITHIN OR BETWEEN DRAWINGS AND ANY DISCREPANCY OR CONFLICT BETWEEN ANY DRAWING AND ANY SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. NOTWITHSTANDING, DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ARCHITECT'S AND OWNERS ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION.
2. THE GENERAL CONTRACTOR SHALL KEEP A COMPLETE PROTOTYPE SET OF DOCUMENTS ON THE PROJECT SITE AT ALL TIMES FOR REFERENCE DURING CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILLS AND ATTENTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
4. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER ALL JOB SITE SAFETY PROCEDURES AND POLICIES. THE GENERAL CONTRACTOR SHALL HAVE A SAFETY COORDINATOR AND BE RESPONSIBLE TO HOLD REGULARLY SCHEDULED SAFETY TRAINING WITH ALL JOB SITE PERSONNEL, INCLUDING ALL SUB CONTRACTOR PERSONNEL.
5. NEITHER THE ARCHITECT'S OR THE OWNERS INSPECTION NOR FAILURE TO INSPECT SHALL RELIEVE THE CONTRACTOR OF ANY OBLIGATION HEREUNDER. IF ANY WORK FAILS TO CONFORM TO THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY REMEDY AND/OR REPLACE THE SAME AT THE CONTRACTOR'S EXPENSE. NO ACCEPTANCE OR PAYMENT BY THE OWNER OR ARCHITECT SHALL CONSTITUTE A WAIVER OF THE FOREGOING AND NOTHING HEREIN SHALL EXCLUDE OR LIMIT ANY WARRANTIES IMPLIED BY LAW.
6. THE GENERAL CONTRACTOR SHALL SO CONDUCT ITS OPERATIONS AS NOT TO UNREASONABLY INTERFERE WITH TRAFFIC ON PUBLIC THOROUGHFARES ADJACENT OR NEAR TO THE PROJECT SITE.
7. DO NOT SCALE DRAWINGS.

F. PROJECT REQUIREMENTS

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

G. INSPECTIONS/OBSERVATIONS

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OVERSEE CONSTRUCTION OF THE PROJECT, CONTINUALLY INSPECTING THE WORK, MATERIALS, AND WORKMANSHIP PROVIDED BY ALL OF HIS TRADESMEN, SUBCONTRACTORS, AND SUPPLIERS. EXCELLENCE IN QUALITY OF CONSTRUCTION CAN ONLY BE ACHIEVED IF THE CONTRACTOR ENFORCES HIGH STANDARDS OF ACCEPTABILITY. THE GENERAL CONTRACTOR CANNOT DELEGATE HIS RESPONSIBILITY TO THE SUBCONTRACTORS, BUT MUST CONTINUALLY MONITOR THE WORK OF EACH TRADE ON THE PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE AND SCHEDULE ALL AGENCIES HAVING JURISDICTION (AHJ) INSPECTIONS NECESSARY TO OBTAIN THE CERTIFICATE OF OCCUPANCY (CERTIFICATE OF COMPLIANCE). PRIOR TO THE DATE OF THE AGENCY INSPECTION, THE GENERAL CONTRACTOR SHOULD INSPECT THE PROJECT TO INSURE THAT CONSTRUCTION COMPLIES WITH THE AGENCY REQUIREMENTS. SCHEDULING FINAL INSPECTIONS WITH AGENCY REPRESENTATIVES WHEN THE PROJECT IS NOT COMPLETE MUST BE AVOIDED. COPIES OF FINAL INSPECTIONS MUST BE PROVIDED TO OWNER & ARCHITECT AS THEY ARE AVAILABLE.
3. PRIOR TO REQUESTING THE SUBSTANTIAL COMPLETION INSPECTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OWN PRE-SUBSTANTIAL COMPLETION INSPECTION OF THE CONSTRUCTION FOR QUALITY OF CONSTRUCTION AND COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
4. THE FOLLOWING PEOPLE SHOULD BE IN ATTENDANCE FOR THE SUBSTANTIAL COMPLETION INSPECTION:
   A. GENERAL CONTRACTOR
   B. GENERAL CONTRACTOR SUPERINTENDENT
   C. MECHANICAL CONTRACTOR
   D. ELECTRICAL CONTRACTOR
   E. PLUMBING CONTRACTOR
   F. PAINTING CONTRACTOR
   H. FLOORING CONTRACTOR
5. ITEMS TO BE SUBMITTED AS A PREREQUISITE TO THE REQUEST FOR THE CERTIFICATE OF SUBSTANTIAL COMPLETION AND OWNER / ARCHITECT OBSERVATION OF ITEMS TO BE COMPLETED AND CORRECTED.
   A. GENERAL CONTRACTOR'S PUNCH LISTS
   B. HVAC TEST AND BALANCE REPORT
   C. SPRINKLER SYSTEM ACCEPTANCE INSPECTION REPORT
   D. COPY OF VIDEO OF COMPLETED SEWER SYSTEM
6. THE REVIEW TEAM SHOULD PROCEED IN AN ORGANIZED MANNER THROUGHOUT THE BUILDING INSPECTING EACH SPACE OR ROOM. THE PUNCH LIST GENERATED BY THE SUBSTANTIAL COMPLETION INSPECTION TOUR IS TO BE PREPARED BY THE CONTRACTOR. ALONG WITH THE PUNCH LIST, THE ARCHITECT SHALL PREPARE THE "CERTIFICATE OF SUBSTANTIAL COMPLETION."
7. IMMEDIATELY AFTER RECEIPT OF THE PUNCH LIST, THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO BEGIN CORRECTION OF THE OUTSTANDING ITEMS. AFTER COMPLETION OF PUNCHLIST, THE CONTRACTOR SHALL NOTIFY OWNER & ARCHITECT IN WRITTING THAT FULL LIST OF ITEMS TO BE COMPLETED AND OR CORRECT IS FINALIZED.

H. RECORD (CLOSE-OUT) DOCUMENTS

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

I. FINAL CLOSE-OUT OF THE PROJECT

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

J. CLOSE-OUT DOCUMENTS

1. THE CATEGORIES LISTED BELOW SHOULD BE SUBMITTED AT THE SAME TIME.
   A. A DISK WITH ALL PHOTOS TAKEN DURING CONSTRUCTION.
   B. CHANGE ORDERS AND ALL ADDENDA ATTACHED AND POSTED TO THE AS-BUILT DRAWINGS.
   C. AS-BUILT DRAWINGS: ONE HARD COPY TO REMAIN ON SITE AND IN PLAN TUBE; ONE ELECTRONIC COPY TO BE SENT WITH CLOSE-OUT PAPERWORK.
   D. MATERIALS SELECTION DATA - PROVIDE ALL APPROVED SUBMITTALS.
   E. OPERATION AND MAINTENANCE MANUALS (O&M) - PROVIDE O&M MANUALS BOXED AND BOUND. THIS ITEM IS OF SIGNIFICANT IMPORTANCE TO MSI FUTURE MAINTENANCE ACTIVITIES.
   F. ALL HVAC TEST AND BALANCE REPORTS.
   H. RELEASE OF LIEN (AIA FORM 706A). PAYMENT OF DEBT (AIA FORM 706),
      I. WARRANTIES, CERTIFICATES, AFFIDAVITS:
      2. ALL INFORMATION INCLUDED IN THIS CATEGORY WILL BE FURNISHED IN ONE (1) COPY AND BOUND IN A STURDY THREE-RING BINDER WITH A LABEL ON THE OUTSIDE READING "GENERAL CLOSE-OUT DOCUMENTS" TO INCLUDE AN INDEX OF THE CONTENTS. ALL AIA DOCUMENTS WILL BE ORIGINAL (WITH RED LETTERING ON THE BOTTOM OF THE FORM) AND NOTARIZED. IF THE ELECTRONIC VERSION IS USED A COPY WITH ORIGINAL SIGNATURES WILL BE SUBMITTED. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR WILL HAVE SEPARATE TABS IDENTIFYING EACH BY NAME. THE GENERAL CONTRACTOR WILL LIST EACH SUBCONTRACTOR ALPHABETICALLY AND WILL CHECK TO INSURE THAT A "RELEASE OF LIEN" - AIA FORM G706A AND A "PAYMENT OF DEBT-AIA FORM G706 IS INCLUDED FOR HIMSELF AND EACH SUBCONTRACTOR. THE GENERAL CONTRACTOR WILL INCLUDE A "CONSENT OF SURETY" - AIA FORM G707. IN ADDITION, THE GENERAL CONTRACTOR WILL INCLUDE BEHIND HIS TAB THE FOLLOWING INFORMATION:
         A. A LIST OF NAMES, BUSINESS ADDRESSES, PHONE NUMBERS AND EMAIL ADRESSES FOR THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR.
         B. AN ANNOTATED COPY OF THE SUBSTANTIAL COMPLETION PUNCH LIST INDICATING ACTION TAKEN ON EACH ITEM.
         C. WARRANTIES, CERTIFICATES AND AFFIDAVITS SHALL BE INCLUDED FOR ANY EQUIPMENT, MATERIALS OR SYSTEMS, COMBINED WITH ALL OF THE ABOVE INFORMATION AND PLACED BEHIND THE TAB OF THE CONTRACTOR THAT ISSUED IT.

DIVISION 02 - EXISTING CONDITIONS

02 4119- SELECTIVE DEMOLITION

A. REFERENCE CONSTRUCTION DRAWING DEMOLITION SHEETS.

DIVISION 05 - METALS

05 6000- STRUCTURAL METAL STUDS AND TRACK

THIS SECTION IS A DELEGATED DESIGN SUBMITTAL. CONTRACTOR SHALL ENGAGE A STRUCUTRAL ENGINEER LICENSED IN THE JURISDICTION WHRE THIS PROJECT IS LOCATED, ALL FEES SUBJECT OF THIS SERVICE WILL BE PART OF BASE CONTRACT.

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

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

C. INSTALLATION:
1. FOLLOW MANUFACTURER INSTALLATION GUIDLINES. INSTALLATION SHALL BE COMPLIANT WITH APPLICABLE BUILDING CODES.

DIVISION 06 - WOOD AND PLASTICS

06 1000- ROUGH CARPENTRY

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

06 2000 - FINISH CARPENTRY AND WOOD FRAMES

A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS.

B. QUALITY STANDARD: ARCHITECTURAL WOODWORK INSTITUTES "ARCHITECTURAL WOODWORK QUALITY STANDARDS"

C. MATERIALS:
1. SOFTWOOD LUMBER: MAXIMUM MOISTURE CONTENT OF 6 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH.
2. HARDWOOD LUMBER:MAXIMUM MOISTURE CONTENT OF 8 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH.
3. SHEET MATERIALS: SOFTWOOD PLYWOOD, EXPOSED TO VIEW: FACE SPECIES AS INDICATED, PLAIN SAWN, MEDIUM DENSITY FIBERBOARD CORE; PS 1 GRADE A-B, GLUE TYPE AS RECOMMENDED FOR APPLICATION.

D. INTERIOR WOODWORK:
1. COMPLETE FABRICATION BEFORE SHIPPING TO PROJECT SITE TO MAXIMUM EXTENT FEASIBLE. DISASSEMBLE ONLY AS NEEDED FOR SHIPPING AND INSTALLING. WHERE NECESSARY FOR FITTING AT PROJECT SITE, PROVIDE FOR SCRIBING AND TRIMMING.
2. BACKOUT AND GROOVE BACKS OF FLAT MEMBERS, KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT WHERE ENDS WILL BE EXPOSED IN FINISHED WORK.

E. INSTALLATION:
1. DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETED, HVAC IS OPERATING, AND WOODWORK IS CONDITIONED TO PREVAILING CONDITIONS OF SPACE WHERE INSTALLED. MAINTAIN TEMPERATURE BETWEEN 55 F. AND 75 F. FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR DURATION OF PROJECT.
2. VERIFY ADEQUACY OF BACKING AND SUPPORT FRAMING.
3. VERIFY LOCATION AND SIZES OF UTILITY ROUGH-IN ASSOCIATED WITH WORK OF THIS SECTION.
4. SET AND SECURE CUSTOM CABINETS IN PLACE, ASSURING THAT THEY ARE RIGID, PLUMB, AND LEVEL.
5. USE FIXTURE ATTACHMENTS IN CONCEALED LOCATIONS FOR WALL MOUNTED COMPONENTS.
6. USE CONCEALED JOINT FASTENERS TO ALIGN AND SECURE ADJOINING CABINET UNITS.
7. CAREFULLY SCRIBE CASEWORK ABUTTING OTHER COMPONENTS, WITH MAXIMUM GAPS OF 1/32 INCH. DO NOT USE ADDITIONAL OVERLAY TRIM FOR THIS PURPOSE.
8. SECURE CABINETS TO FLOOR USING APPROPRIATE ANGLES AND ANCHORAGES.
9. CLEAN CASEWORK, COUNTERS, SHELVES, HARDWARE, FITTINGS, AND FIXTURES.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 1300 - SHEET WATERPROOFING

A. SUBMITTALS:
1. PRODUCT DATA: PROVIDE DATA FOR MEMBRANE.
2. PROVIDE SHOP DRAWINGS: INDICATE SPECIAL JOINT OR TERMINATION CONDITIONS AND CONDITIONS OF INTERFACE WITH OTHER MATERIALS.
3. CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.

B. SURFACE BURNING CHARACTERISTICS:
1. FLAME SPREAD INDEX: 25 OR LESS.
2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREAS AND PLENUMS; 450 OR LESS WHERE CONCEALED.

C. FIELD CONDITIONS:
1. MAINTAIN AMBIENT TEMPERATURES ABOVE 40 DEGREES F FOR 24 HOURS BEFORE AND DURING APPLICATION AND UNTIL LIQUID OR MASTIC ACCESSORIES HAVE CURED.

D. WARRANTY:
1. CONTRACTOR SHALL CORRECT DEFECTIVE WORK WITHIN A FIVE YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION. WARRANTY INCLUDES REMOVAL OF ALL MANUFACTURER INSTALLATION, MAINTENANCE INSTRUCTIONS, AND OTHER APPLICABLE DOCUMENTS BEFORE INSTALLATION.

07 6200 - SHEET METAL FLASHING AND TRIM

A. STANDARDS
FABRICATED SHEET METAL ITEMS, INCLUDING FLASHINGS, COUNTERFLASHINGS, AND OTHER ITEMS INDICATED IN SCHEDULE.

- AAMA 611 - VOLUNTARY SPECIFICATION FOR ANODIZED ARCHITECTURAL ALUMINUM 2014 (2015 ERRATA).
- ASTM C920 - STANDARD SPECIFICATION FOR ELASTOMERIC JOINT SEALANTS 2018.
- CDA A4050 - COPPER IN ARCHITECTURE - HANDBOOK CURRENT EDITION.
- SMACNA (ASMM) - ARCHITECTURAL SHEET METAL MANUAL 2012.

B. SUBMITTALS
1. SHOP DRAWINGS: INDICATE MATERIAL PROFILE, JOINTING PATTERN, JOINTING DETAILS, FASTENING METHODS, FLASHINGS, TERMINATIONS, AND INSTALLATION DETAILS.

C. QUALITY ASSURANCE
1. PERFORM WORK IN ACCORDANCE WITH SMACNA (ASMM) AND CDA A4050 REQUIREMENTS AND STANDARD DETAILS, EXCEPT AS OTHERWISE INDICATED.

D. DELIVERY, STORAGE, AND HANDLING
1. STACK MATERIAL TO PREVENT TWISTING, BENDING, AND ABRASION, AND TO PROVIDE VENTILATION. SLOPE METAL SHEETS TO ENSURE DRAINAGE.
2. PREVENT CONTACT WITH MATERIALS THAT COULD CAUSE DISCOLORATION OR STAINING.

E. PRODUCTS
PRE-FINISHED ALUMINUM: ASTM B209 (ASTM B209M); 20 GAGE, (0.032 INCH) THICK; PLAIN FINISH
SHOP PRE-COATED WITH MODIFIED SILICONE COATING.
1. FLUOROPOLYMER COATING: HIGH PERFORMANCE ORGANIC FINISH, AAMA 2604; MULTIPLE COAT, THERMALLY CURED FLUOROPOLYMER FINISH SYSTEM.
2. COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

F. FABRICATION
1. FORM SECTIONS TRUE TO SHAPE, ACCURATE IN SIZE, SQUARE, AND FREE FROM DISTORTION OR DEFECTS.
2. FORM PIECES IN LONGEST POSSIBLE LENGTHS.
3. HEM EXPOSED EDGES ON UNDERSIDE 1/2 INCH; MITER AND SEAM CORNERS.
4. FORM MATERIAL WITH FLAT LOCK SEAMS, EXCEPT WHERE INDICATED; AT MOVING JOINTS, USE SEALED LAPPED, BAYONET-TYPE OR INTERLOCKING HOOKED SEAMS.
5. FABRICATE FLASHINGS TO ALLOW TOE TO EXTEND 2 INCHES OVER ROOFING GRAVEL. RETURN AND BRAKE EDGES.

G. ACCESSORIES
1. FASTENERS: GALVANIZED STEEL, WITH SOFT NEOPRENE WASHERS.
2. PRIMER: ZINC CHROMATE TYPE.
3. CONCEALED SEALANTS: NON-CURING BUTYL SEALANT
4. EXPOSED SEALANTS: ASTM C920; ELASTOMERIC SEALANT, WITH MINIMUM MOVEMENT CAPABILITY AS RECOMMENDED BY MANUFACTURER FOR SUBSTRATES TO BE SEALED; COLOR TO MATCH ADJACENT MATERIAL.

H. INSTALLATION
1. SECURE FLASHINGS IN PLACE USING CONCEALED FASTENERS, AND USE EXPOSED FASTENERS ONLY WHERE PERMITTED
2. APPLY PLASTIC CEMENT COMPOUND BETWEEN METAL FLASHINGS AND FELT FLASHINGS.
3. FIT FLASHINGS TIGHT IN PLACE; MAKE CORNERS SQUARE, SURFACES TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES.
4. SEAL METAL JOINTS WATERTIGHT.

07 8100 - APPLIED FIREPROOFING

A. SUBMITTALS: PRODUCT DATA: PROVIDE DATA INDICATING PRODUCT CHARACTERISTICS.
1. TEST REPORTS: REPORTS FROM REPUTABLE INDEPENDENT TESTING AGENCIES FOR PROPOSED PRODUCTS, INDICATING COMPLIANCE WITH SPECIFIED CRITERIA, CONDUCTED UNDER CONDITIONS SIMILAR TO THOSE ON PROJECT, AS FOLLOWS:
   A. BOND STRENGTH.
   B. BOND IMPACT.
   C. COMPRESSIVE STRENGTH.
   D. FIRE TESTS USING SUBSTRATE MATERIALS SIMILAR THOSE ON PROJECT.
2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES.
3. MANUFACTURER'S QUALIFICATION STATEMENT.

B. FIELD CONDITIONS:
1. DO NOT APPLY FIREPROOFING WHEN TEMPERATURE OF SUBSTRATE MATERIAL AND SURROUNDING AIR IS BELOW 40 DEGREES F OR WHEN TEMPERATURE IS PREDICTED TO BE BELOW SAID TEMPERATURE FOR 24 HOURS AFTER APPLICATION.
2. PROVIDE VENTILATION IN AREAS TO RECEIVE FIREPROOFING DURING APPLICATION AND 24 HOURS AFTERWARD, TO DRY APPLIED MATERIAL.
3. PROVIDE TEMPORARY ENCLOSURE TO PREVENT SPRAY FROM CONTAMINATING AIR.

C. WARRANTY:
1. CORRECT DEFECTIVE WORK WITHIN A TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
   A. INCLUDE COVERAGE FOR FIREPROOFING TO REMAIN FREE FROM CRACKING, CHECKING, DUSTING, FLAKING, SPALLING, SEPARATION, AND BLISTERING.
   B. REINSTALL OR REPAIR FAILURES THAT OCCUR WITHIN WARRANTY PERIOD.

D. MANUFACTURERS:
1. GCP APPLIED TECHNOLOGIES : WWW.GCPAT.COM/FIREPROOFING
2. ISOLATEK INTERNATIONAL CORP : WWW.ISOLATEK.COM
3. SOUTHWEST FIREPROOFING PRODUCTS COMPANY : WWW.SFRM.COM.

E. MATERIALS:
1. PROVIDE ASSEMBLIES AS INDICATED ON DRAWINGS.
2. PROVIDE FIRE RESISTANCE RATINGS FOR FOLLOWING BUILDING ELEMENTS AS REQUIRED BY LOCAL BUILDING CODE:
   A. PRIMARY STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, AND TRUSSES: [1 HOUR].
   B. BEARING WALLS, INTERIOR: [1 HOUR].
   C. FLOOR CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS: [1 HOUR].
   D. ROOF CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS: [1HOUR].

F. MATERIALS: APPLIED FIREPROOFING MATERIAL FOR INTERIOR APPLICATIONS, CONCEALED. MANUFACTURER'S STANDARD FACTORY MIXED MATERIAL, WHICH WHEN COMBINED WITH WATER IS CAPABLE OF PROVIDING INDICATED FIRE RESISTANCE, AND COMPLYING WITH FOLLOWING REQUIREMENTS:
1. COMPOSITION: GYPSUM-BASED; NOT MINERAL-FIBER-BASED.
2. BOND STRENGTH: 150 POUNDS PER SQUARE FOOT, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E736/E736M WHEN SET AND DRY.
3. DRY DENSITY: AS REQUIRED BY FIRE RESISTANCE DESIGN.
4. COMPRESSIVE STRENGTH: 8.33 POUNDS PER SQUARE INCH, MINIMUM.
5. EFFECT OF IMPACT ON BONDING: NO CRACKING, SPALLING OR DELAMINATION, WHEN TESTED IN ACCORDANCE WITH ASTM E760/E760M.
6. CORROSIVITY: NO EVIDENCE OF CORROSION, WHEN TESTED IN ACCORDANCE WITH ASTM E937/E937M.
7. SURFACE BURNING CHARACTERISTICS: MAXIMUM FLAME SPREAD INDEX OF 0 (ZERO) AND MAXIMUM SMOKE DEVELOPED INDEX OF 0 (ZERO), WHEN TESTED IN ACCORDANCE WITH ASTM E84.

G. ACCESSORIES:
1. PRIMER ADHESIVE: OF TYPE RECOMMENDED BY APPLIED FIREPROOFING MANUFACTURER.
2. OVERCOAT: AS RECOMMENDED BY MANUFACTURER OF APPLIED FIREPROOFING MATERIAL.
3. METAL LATH: EXPANDED METAL LATH; MINIMUM WEIGHT OF 1.7 PSF, GALVANIZED FINISH.
4. WATER: CLEAN, POTABLE.

H. INSTALLATION:
1. VERIFY THAT SURFACES AND CONDITIONS ARE READY TO ACCEPT THE WORK OF THIS SECTION.
2. REMOVE PROJECTIONS, PROTRUDING FASTENERS, AND LOOSE OR FOREIGN MATTER THAT MIGHT INTERFERE WITH PROPER INSTALLATION.
3. CLEAN AND PRIME SUBSTRATE SURFACES TO RECEIVE ADHESIVES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

G. INSTALLATION:
1. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. AIR BARRIERS: INSTALL CONTINUOUS AIR TIGHT BARRIER OVER SURFACES INDICATED, WITH SEALED SEAMS AND WITH SEALED JOINTS TO ADJACENT SURFACES.
3. PREPARE SUBSTRATE IN MANNER RECOMMENDED BY COATING MANUFACTURER; TREAT JOINTS IN SUBSTRATE AND BETWEEN DISSIMILAR MATERIALS AS RECOMMENDED BY MANUFACTURER.
4. MASTIC COATING: INSTALL BY TROWEL OR ROLLER TO MINIMUM THICKNESS OF 1/4 INCH; US

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

08 3100 - ACCESS DOORS AND PANELS

A. SUBMITTALS: PRODUCT DATA.

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

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

08 4313 - ALUMINUM FRAMED STOREFRONTS

A. SUBMITTALS: PRODUCT DATA: PROVIDE COMPONENT DIMENSIONS. DESCRIBE COMPONENTS WITHIN ASSEMBLY, ANCHORAGE AND FASTENERS, GLASS AND INFILL, DOOR HARDWARE, INTERNAL DRAINAGE DETAILS.
1. HARDWARE SCHEDULE: COMPLETE ITEMIZATION OF EACH ITEM OF HARDWARE TO BE PROVIDED FOR EACH DOOR. CROSS-REFERENCED TO DOOR IDENTIFICATION NUMBERS IN CONTRACT DOCUMENTS.
2. SHOP DRAWINGS: INDICATE SYSTEM DIMENSIONS, FRAMED OPENING REQUIREMENTS AND TOLERANCES, AFFECTED RELATED WORK, EXPANSION AND CONTRACTION JOINT LOCATION AND DETAILS, AND FIELD WELDING REQUIRED.

B. WARRANTY: WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.
1. CORRECT DEFECTIVE WORK WITHIN A FIVE YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
2. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST FAILURE OF GLASS SEAL ON INSULATING GLASS UNITS, INCLUDING INTERPANE DUSTING OR MISTING. INCLUDE PROVISION FOR REPLACEMENT OF FAILED UNITS.
3. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST EXCESSIVE DEGRADATION OF EXTERIOR FINISH. INCLUDE PROVISION FOR REPLACEMENT OF UNITS WITH EXCESSIVE FADING, CHALKING, OR FLAKING.

C. BASIS OF DESIGN: KAWNEER . ENCORE-MEDIUM STILE , ANODIZED: VERIFY FINISH WITH OWNER.
1. OTHER MANUFACTURERS: PROVIDE EITHER THE PRODUCT IDENTIFIED AS "BASIS OF DESIGN" OR AN EQUIVALENT PRODUCT.

D. MATERIALS:
1. ALUMINUM-FRAMED STOREFRONT: FACTORY FABRICATED, FACTORY FINISHED ALUMINUM FRAMING MEMBERS WITH INFILL, AND RELATED FLASHINGS, ANCHORAGE AND ATTACHMENT DEVICES.
2. ALUMINUM FRAMING MEMBERS: TUBULAR ALUMINUM SECTIONS[<>], DRAINAGE HOLES AND INTERNAL WEEP DRAINAGE SYSTEM.
3. EXTRUDED ALUMINUM: ASTM B221 (ASTM B221M).
4. STRUCTURAL STEEL SECTIONS: ASTM A36/A36M; SHOP PRIMED.
5. FASTENERS: STAINLESS STEEL.
6. CONCEALED FLASHINGS: STAINLESS STEEL, 26 GAGE, 0.0187 INCH MINIMUM THICKNESS.
7. SEALANT FOR SETTING THRESHOLDS: NONSLIPPING BUTYL TYPE.
8. GLAZING GASKETS: TYPE TO SUIT APPLICATION TO ACHIEVE WEATHER, MOISTURE, AND AIR INFILTRATION REQUIREMENTS.

E. FINISHES:
1. CLASS I COLOR ANODIZED FINISH: AAMA 611 AA-M12C22A44 ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING NOT LESS THAN 0.7 MILS THICK. COLOR AS SELECTED BY OWNER & ARCHITECT.

F. HARDWARE:
1. FOR EACH DOOR, INCLUDE WEATHERSTRIPPING, SILL SWEEP STRIP, AND THRESHOLD.
2. OTHER DOOR HARDWARE: STOREFRONT MANUFACTURER'S STANDARD TYPE TO SUIT APPLICATION.
   A. FINISH ON HAND-CONTACTED ITEMS: POLISHED CHROME.
   B. FOR EACH DOOR, INCLUDE BUTT HINGES, PIVOTS, PUSH HANDLE, PULL HANDLE, EXIT DEVICE, NARROW STILE HANDLE LATCH, AND CLOSER. COORDINATE ADA PUSH BUTTON LOCATION.

G. INSTALLATION:
1. VERIFY DIMENSIONS, TOLERANCES, AND METHOD OF ATTACHMENT WITH OTHER WORK.
2. VERIFY THAT WALL OPENINGS AND ADJOINING AIR AND VAPOR SEAL MATERIALS ARE READY TO RECEIVE WORK OF THIS SECTION.
3. INSTALL WALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ATTACH TO STRUCTURE TO PERMIT SUFFICIENT ADJUSTMENT TO ACCOMMODATE CONSTRUCTION TOLERANCES AND OTHER IRREGULARITIES.
5. ALIGN ASSEMBLY PLUMB AND LEVEL, FREE OF WARP OR TWIST. MAINTAIN ASSEMBLY DIMENSIONAL TOLERANCES, ALIGNING WITH ADJACENT WORK.
6. PROVIDE THERMAL ISOLATION WHERE COMPONENTS PENETRATE OR DISRUPT BUILDING INSULATION.
7. INSTALL SILL FLASHINGS. TURN UP ENDS AND EDGES; SEAL TO ADJACENT WORK TO FORM WATER TIGHT DAM.
8. WHERE FASTENERS PENETRATE SILL FLASHINGS, MAKE WATERTIGHT BY SEATING AND SEALING FASTENER HEADS TO SILL FLASHING.
9. PACK FIBROUS INSULATION IN SHIM SPACES AT PERIMETER OF ASSEMBLY TO MAINTAIN CONTINUITY OF THERMAL BARRIER.
10. SET THRESHOLDS IN BED OF SEALANT AND SECURE.
11. INSTALL HARDWARE USING TEMPLATES PROVIDED. ADJUST OPERATING HARDWARE AND SASH FOR SMOOTH OPERATION.
12. WASH DOWN SURFACES WITH A SOLUTION OF MILD DETERGENT IN WARM WATER, APPLIED WITH SOFT, CLEAN WIPING CLOTHS, AND TAKE CARE TO REMOVE DIRT FROM CORNERS AND TO WIPE SURFACES CLEAN.
13. PROTECT INSTALLED PRODUCTS FROM DAMAGE UNTIL DATE OF SUBSTANTIAL COMPLETION.

08 0671 - DOOR HARDWARE

A. SUBMITTALS: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS. REFER TO ARCHITECTURAL PLANS AND HARDWARE SCHEDULES PROVIDED.
1. HARDWARE SUPPLIER SHALL SUBMIT FOUR COPIES OF FINAL HARDWARE SCHEDULE AT EARLIEST POSSIBLE DATE PARTICULARLY WHERE ACCEPTANCE OF HARDWARE SCHEDULE MUST PRECEDE FABRICATION OF OTHER WORK WHICH IS CRITICAL IN THE PROJECT CONSTRUCTION SCHEDULE. INCLUDE WITH SCHEDULE SHOP DRAWINGS OF OTHER WORK AFFECTED BY BUILDERS HARDWARE, AND OTHER INFORMATION ESSENTIAL TO THE COORDINATE REVIEW OF HARDWARE SCHEDULE.
2. KEYING SCHEDULE. SUBMIT SEPARATE DETAILED SCHEDULE INDICATING CLEARLY HOW THE OWNER'S FINAL INSTRUCTIONS ON KEYING OF LOCKS HAS BEEN FULFILLED. ALL KEYING SHALL BE COORDINATED WITH THE OWNER.

B. PRODUCTS: CONTRACTOR TO COORDINATE HARDWARE SELECTION WITH OWNER. REFER TO ARCHITECTURAL DRAWINGS.
1. STRIKES. PROVIDE MANUFACTURER'S STANDARD WROUGHT BOX STRIKE FOR EACH LATCH OR LOCK BOLT, WITH CURVED LIP EXTENDED TO PROTECT FRAME. FINISH TO MATCH HARDWARE SET. PROVIDE STANDARD (OPEN) STRIKE PLATES FOR INTERIOR DOORS WHERE WOOD DOOR FRAMES ARE USED.
2. IN GENERAL, HARDWARE FINISH SHALL BE US15 (SATIN NICKEL) UNLESS SPECIFIED DIFFERENTLY ON HARDWARE SCHEDULE.
3. SUPPLY CAL ROYAL HDF53 FLEXIBLE DOOR STOPS IN THE APARTMENT DWELLING UNITS. USE 2 IVHP-23 HINGE STOPS WHERE FLEXIBLE STOPS CANNOT BE USED.
4. SUPPLY OUT SWINGING EXTERIOR DOORS WITH NON REMOVABLE PINS.

C. INSTALLATION:
1. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN "RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS AND FRAMES" BY THE DOOR AND HARDWARE INSTITUTE, EXCEPT AS SPECIFICALLY INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS, AND EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT. MOUNT HARDWARE IN UNITS DESIGNATED FOR USE BY THE HANDICAPPED AT HEIGHTS RECOMMENDED FOR USE BY THE HANDICAPPED.
2. INSTALL EACH HARDWARE ITEM IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. WHEREVER CUTTING AND FITTING IS REQUIRED TO INSTALL HARDWARE ONTO OR INTO SURFACES WHICH ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE AND REINSTALLATION OR APPLICATION OF SURFACE PROTECTIONS WITH FINISHING WORK SPECIFIED IN THE DIVISION 9 SECTIONS. DO NOT INSTALL SURFACE MOUNTED ITEMS UNTIL FINISHES HAVE BEEN COMPLETED ON THE SUBSTRATE.
3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER INSTALLATION AND OPERATION.
4. DRILL AND COUNTERSINK UNITS WHICH ARE NOT FACTORY PREPARED FOR ANCHORAGE FASTENERS. SPACE FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.
5. METAL THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THICKOL BASE CAULKING.
6. ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
7. FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND FINISH OF HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT.

08 8000 - GLAZING

A. SUBMITTALS: PRODUCT DATA ON INSULATING GLASS UNIT, GLAZING UNIT, AND [SPANDREL] GLAZING TYPES: PROVIDE STRUCTURAL, PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING AND INSTALLATION REQUIREMENTS.
1. PRODUCT DATA ON GLAZING COMPOUNDS AND ACCESSORIES: PROVIDE CHEMICAL, FUNCTIONAL, AND ENVIRONMENTAL CHARACTERISTICS, LIMITATIONS, SPECIAL APPLICATION REQUIREMENTS, AND IDENTIFY AVAILABLE COLORS.
2. SAMPLES: SUBMIT TWO SAMPLES [12] BY [12] INCH IN SIZE OF GLASS UNITS.

B. WARRANTY: WARRANTY DOCUMENTATION: SUBMIT MANUFACTURER WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.
1. INSULATING GLASS UNITS: PROVIDE A FIVE (5) YEAR MANUFACTURER WARRANTY TO INCLUDE COVERAGE FOR SEAL FAILURE, INTERPANE DUSTING OR MISTING, INCLUDING PROVIDING PRODUCTS TO REPLACE FAILED UNITS

C. STOREFRONT GLAZING BASIS OF DESIGN: GUARDIAN -SUNGUARD _ SNX 62/27 _COATED GLASS, CLEAR. WITH .24 U-VALUE ARGON FILLED.

D. QUALITY STANDARDS:
1. SAFETY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1.
2. GLAZING PUBLICATIONS: WHERE APPLICABLE, COMPLY WITH WITH THE PUBLISHED RECOMMENDATIONS OF THE FOLLOWING:
   A. GANA PUBLICATIONS: "GLAZING MANUAL" AND "LAMINATED GLASS DESIGN GUIDE".
   B. SIGMA PUBLICATIONS: SIGMA TM-3000, "VERTICAL GLAZING GUIDELINES".

E. GLASS:
1. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY q3
2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY q3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION CONDITIONS.
3. MIRROR GLASS: ASTM C 1036, TYPE I, CLASS 1, QUALITY q1, SILVER COATED PER FS DDM411C, 6.0mm THICK, WITH EDGES FLAT POLISHED.

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

G. INSTALLATION:
1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE CONTAINED IN GANA'S "GLAZING MANUAL".
2. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.
3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALK-THROUGH.

08 8100 - MIRRORS

A. SUBMITTALS: FOR EACH TYPE OF PRODUCT INDICATED.THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS: INCLUDE MIRROR ELEVATIONS, EDGE DETAILS, MIRROR HARDWARE, AND ATTACHMENTS TO OTHER WORK. WARRANTY: SAMPLE OF SPECIAL WARRANTY.

B. QUALITY ASSURANCE: VINYL CASEMENT WINDOWS- BASIS OF DESIGN: MI 3500 VINYL SINGLE- HUNG WINDOWS.
1. GLAZING PUBLICATIONS: COMPLY WITH GANA'S "GLAZING MANUAL" AND "MIRRORS, HANDLE WITH EXTREME CARE: TIPS FOR THE PROFESSIONAL ON THE CARE AND HANDLING OF MIRRORS."
2. SAFETY GLAZING PRODUCTS: FOR MIRRORS, PROVIDE PRODUCTS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 FOR CATEGORY II MATERIALS.
3. PRECONSTRUCTION MIRROR MASTIC COMPATIBILITY TEST: SUBMIT MIRROR MASTIC PRODUCTS TO MIRROR MANUFACTURER FOR TESTING TO DETERMINE COMPATIBILITY OF MASTIC WITH MIRROR BACKING AND SUBSTRATES ON WHICH MIRRORS ARE INSTALLED.

C. WARRANTY: SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MIRROR MANUFACTURER AGREES TO REPLACE MIRRORS THAT DETERIORATE WITHIN SPECIFIED WARRANTY PERIOD. DETERIORATION OF MIRRORS IS DEFINED AS DEFECTS DEVELOPED FROM NORMAL USE THAT ARE NOT ATTRIBUTED TO MIRROR BREAKAGE OR TO MAINTAINING AND CLEANING MIRRORS CONTRARY TO MANUFACTURER'S WRITTEN I NSTRUCTIONS. DEFECTS INCLUDE DISCOLORATION, BLACK SPOTS, AND CLOUDING OF THE SILVER FILM.
1. WARRANTY PERIOD: FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

D. BASIS OF DESIGN: SILVERED FLAT GLASS MIRRORS
1. GLASS MIRRORS, GENERAL: ASTM C 1503; MANUFACTURED USING COPPER FREE, LOW LEAD MIRROR COATING PROCESS.
2. CLEAR GLASS: MIRROR GLAZING QUALITY; ULTRACLEAR (LOW IRON) FLOAT GLASS WITH A MINIMUM 91 PERCENT VISIBLE LIGHT TRANSMISSION. NOMINAL THICKNESS: 1/4 INCH.
3. TEMPERED CLEAR GLASS: MIRROR GLAZING QUALITY, FOR BLEMISH REQUIREMENTS; AND COMPLY WITH ASTM C 1048 FOR KIND FT, CONDITION A, TEMPERED FLOAT GLASS BEFORE SILVER COATING IS APPLIED. NOMINAL THICKNESS: 1/4 INCH.

E. MIRROR HARDWARE: TOP AND BOTTOM ALUMINUM J CHANNELS: ALUMINUM EXTRUSIONS WITH A RETURN DEEP ENOUGH TO PRODUCE A GLAZING CHANNEL TO ACCOMMODATE MIRRORS OF THICKNESS INDICATED AND IN LENGTHS REQUIRED TO COVER BOTTOM AND TOP EDGES OF EACH MIRROR IN A SINGLE PIECE. FINISH: CLEAR BRIGHT ANODIZED.
1. TOP AND BOTTOM MIRROR MOUNTING CLIPS: #277 MIRROR CLIPS AS MANUFACTURED BY KNAPE & VOGT OR APPROVED EQUAL.
2. FASTENERS: FABRICATED OF SAME BASIC METAL AND ALLOY AS FASTENED METAL AND MATCHING IT IN FINISHED COLOR AND TEXTURE WHERE FASTENERS ARE EXPOSED.

F. INSTALLATION: GENERAL: EXAMINE SUBSTRATES, OVER WHICH MIRRORS ARE TO BE MOUNTED, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH INSTALLATION TOLERANCES, SUBSTRATE PREPARATION, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.
1. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY OF MIRROR MASTIC WITH EXISTING FINISHES OR PRIMERS.
2. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES ARE DRY.
3. INSTALL MIRRORS TO COMPLY WITH MIRROR MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH REFERENCED GANA PUBLICATIONS. MOUNT MIRRORS ACCURATELY IN PLACE IN A MANNER THAT AVOIDS DISTORTING REFLECTED IMAGES.
4. INSTALL WALL MOUNTED ANNEALED GLASS MIRRORS IN THE APARTMENT UNITS WITH MIRROR CLIPS. ATTACH MIRROR HARDWARE SECURELY TO MOUNTING SURFACES WITH MECHANICAL FASTENERS INSTALLED WITH
5. ANCHORS OR INSERTS AS APPLICABLE. INSTALL FASTENERS SO HEADS DO NOT IMPOSE POINT LOADS ON BACKS OF MIRRORS.
6. PROTECT MIRRORS FROM BREAKAGE AND CONTAMINATING SUBSTANCES RESULTING FROM CONSTRUCTION OPERATIONS.
7. MAINTAIN ENVIRONMENTAL CONDITIONS THAT WILL PREVENT MIRRORS FROM BEING EXPOSED TO MOISTURE FROM CONDENSATION OR OTHER SOURCES FOR CONTINUOUS PERIODS OF TIME.
8. WASH EXPOSED SURFACE OF MIRRORS NOT MORE THAN FOUR DAYS BEFORE DATE SCHEDULED FOR INSPECTIONS THAT ESTABLISH DATE OF SUBSTANTIAL COMPLETION. WASH MIRRORS AS RECOMMENDED IN WRITING BY MIRROR MANUFACTURER.

DIVISION 09 - FINISHES

09 2116 - GYPSUM BOARD ASSEMBLIES

A. STEEL FRAMING MEMBERS: COMPLY WITH ASTM C754 IN DEPTHS AND GAGES AS INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
1. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C645 WITH MANUFACTURER'S STANDARD CORROSION-RESISTANT ZINC COATING.
2. TIE WIRE: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0625" DIAMETER OR DOUBLE STRAND OF .0475" DIAMETER WIRE.
3. WIRE HANGERS: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0162" DIAMETER.

B. PANEL PRODUCTS:PROVIDE IN THICKNESS AND TYPE INDICATED IN THE CONSTRUCTION DRAWINGS IN MAXIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS:
1. GYPSUM WALLBOARD: ASTM C 36, TYPE "X" WITH TAPERED EDGES, SAG-RESISTANT TYPE FOR CEILING SURFACES
2. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 630, TYPE 'X' ON ALL TOILET ROOM AND SHOWER ROOM WALLS, BEHIND ALL PLUMBING FIXTURES, AND AS INDICATED.

C. ACCESSORIES:
1. TRIM: ASTM 1047, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC, OR PLASTIC
   a. OUTSIDE CORNER: PROVIDE CORNER BEAD UNLESS NOTED OTHERWISE
   b. EXPOSED PANEL EDGES: PROVIDE LC-BEAD (J-BEAD) UNLESS NOTED OTHERWISE; USE TEAR-AWAY BEAD WHERE GYP. BD. MEETS WINDOW FRAMES OR CEILING GRID.
   c. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATIONS IF NOT INDICATED.
2. SOUND-ATTENUATION BLANKETS: ASTM C 665, TYPE I (UNFACED)
3. ACOUSTICAL SEALANT: COMPLY WITH ASTM C 834, NONSAG, PAINTABLE, NONSTAINING LATEX

D. INSTALLATION:
1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
2. GYPSUM PANELS AND FINISH: COMPLY WITH ASTM C 840 AND GA-216. ISOLATE GYPSUM BOARD ASSEMBLIES FROM ABUTTING STRUCTURAL AND MASONRY WORK AND FINISH AS FOLLOWS:
   A. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED FOR FIRE-RESISTANCE-RATED ASSEMBLY.
   B. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE. FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT); AT SUBSTRATES BEHIND TILE
   C. LEVEL 4 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT); AT ALL WALLS RECEIVING FLAT, EGGSHELL, OR SATIN SHEEN PAINT OR WALLCOVERING)
   D. LEVEL 5 (EMBED TAPE, APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY THIN SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD CEILINGS)

09 2216 - NON-STRUCTURAL METAL FRAMING

A. SUBMITTALS: SHOP DRAWINGS: INDICATE PREFABRICATED WORK, COMPONENT DETAILS, STUD LAYOUT, FRAMED OPENINGS, ANCHORAGE TO STRUCTURE, ACOUSTIC DETAILS, TYPE AND LOCATION OF FASTENERS, ACCESSORIES, AND ITEMS OF OTHER RELATED WORK. DESCRIBE METHOD FOR SECURING STUDS TO TRACKS, SPLICING, AND FOR BLOCKING AND REINFORCEMENT OF FRAMING CONNECTIONS.
1. PRODUCT DATA: PROVIDE MANUFACTURER'S DATA ON PARTITION HEAD TO STRUCTURE CONNECTORS, SHOWING COMPLIANCE WITH REQUIREMENTS.
2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES AND PERIMETER CONDITIONS REQUIRING SPECIAL ATTENTION.

B. MANUFACTURERS:
1. CLARKDIETRICH BUILDING SYSTEMS: WWW.CLARKDIETRICH.COM.
2. CEMCO: WWW.CEMCOSTEEL.COM
3. JAMES INDUSTRIES: WWW.JAMESINO.COM
4. STEEL CONSTRUCTION SYSTEMS: WWW.STEELCONSYSTEMS.COM

C. FRAMING MATERIALS:
1. FIRE RATED ASSEMBLIES: COMPLY WITH APPLICABLE CODE AND AS FOLLOWS:
   A. TOP OF FIRE RATED PARTITIONS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1 AND 2] HOUR RATING.
   B. FIRE RATED SHAFT WALL REQUIREMENTS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1] HOUR RATING.
2. NON-LOADBEARING FRAMING SYSTEM COMPONENTS: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 FOR THE SPACING INDICATED, WITH MAXIMUM DEFLECTION OF WALL FRAMING OF L/240 AT 5 PSF.
   A. TRACKS AND RUNNERS: SAME MATERIAL AND THICKNESS AS STUDS, BENT LEG RETAINER NOTCHED TO RECEIVE STUDS WITH PROVISION FOR CRIMP LOCKING TO STUD. STUDS: C SHAPED WITH FLAT OR FORMED WEBS WITH KNURLED FACES.
   B. CEILING CHANNELS: C SHAPED.
   C. FURRING: HAT-SHAPED SECTIONS, MINIMUM DEPTH OF 7/8 INCH.
   D. CONTRACTOR TO PROVIDE BRACING AS REQUIRED TO COMPLETE SYSTEM.
   E. WHERE INDICATED IN DRAWINGS, SHAFT WALL STUDS AND ACCESSORIES: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 AND SPECIFIED PERFORMANCE REQUIREMENTS.
   G. CEILING HANGERS: TYPE AND SIZE AS SPECIFIED IN ASTM C754 FOR SPACING REQUIRED.
   H. PARTITION HEAD TO STRUCTURE CONNECTIONS: PROVIDE MECHANICAL ANCHORAGE DEVICES THAT ACCOMMODATE DEFLECTION USING SLOTTED HOLES, SCREWS AND ANTI-FRICTION BUSHINGS, PREVENTING ROTATION OF STUDS WHILE MAINTAINING STRUCTURAL PERFORMANCE OF PARTITION.
   I. FIT, REINFORCE, AND BRACE FRAMING MEMBERS TO SUIT DESIGN REQUIREMENTS.

D. INSTALLATION:
1. COMPLY WITH REQUIREMENTS OF ASTM C754.
2. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK.
3. VERIFY THAT ROUGH-IN UTILITIES ARE IN PROPER LOCATION.
4. EXTEND PARTITION FRAMING TO STRUCTURE WHERE INDICATED AND TO CEILING IN OTHER LOCATIONS.
5. PARTITIONS TERMINATING AT CEILING: ATTACH CEILING RUNNER SECURELY TO CEILING TRACK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6. PARTITIONS TERMINATING AT STRUCTURE: ATTACH TOP RUNNER TO STRUCTURE, MAINTAIN CLEARANCE BETWEEN TOP OF STUDS AND STRUCTURE, AND CONNECT STUDS TO TRACK USING SPECIFIED MECHANICAL DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS; VERIFY FREE MOVEMENT OF TOP OF STUD CONNECTIONS; DO NOT LEAVE STUDS UNATTACHED TO TRACK.
7. FIT RUNNERS UNDER AND ABOVE OPENINGS; SECURE INTERMEDIATE STUDS TO SAME SPACING AS WALL STUDS.
8. ALIGN STUD WEB OPENINGS HORIZONTALLY.
9. SECURE STUDS TO TRACKS USING CRIMPING METHOD. DO NOT WELD.
10. STUD SPLICING IS NOT PERMISSIBLE.
11. FABRICATE CORNERS USING A MINIMUM OF THREE STUDS.
12. DOUBLE STUD AT WALL OPENINGS, DOOR AND WINDOW JAMBS, NOT MORE THAN 2 INCHES FROM EACH SIDE OF OPENINGS.
13. BRACE STUD FRAMING SYSTEM RIGID.
14. COORDINATE ERECTION OF STUDS WITH REQUIREMENTS OF DOOR FRAMES; INSTALL SUPPORTS AND ATTACHMENTS.
15. COORDINATE INSTALLATION OF BUCKS, ANCHORS, AND BLOCKING WITH ELECTRICAL, MECHANICAL, AND OTHER WORK TO BE PLACED WITHIN OR BEHIND STUD FRAMING.
16. BLOCKING: USE WOOD BLOCKING SECURED TO STUDS. PROVIDE BLOCKING FOR SUPPORT OF PLUMBING FIXTURES, WALL CABINETS, TOILET ACCESSORIES, HARDWARE, AND OPENING FRAMES.

09 3000 - TILING

A. SUBMITTALS: PRODUCT DATA FOR SETTING AND GROUTING MATERIALS AND THREE (3) SAMPLES OF EACH TILE SPECIFIED FOR VERIFICATION PURPOSES.

B. ATTIC STOCK: FURNISH 2% OF EACH TYPE OF CERAMIC TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.

C. BASIS OF DESIGN: SEE DRAWING SCHEDULES.

D. TILE: COMPLY WITH STANDARD GRADE REQUIREMENTS IN ANSI A137.1 "SPECIFICATIONS FOR CERAMIC TILE" FOR PRODUCTS AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS.

E. INSTALLATION MATERIALS:
1. THIN-SET MORTAR:
   A. TYPICAL INTERIOR INSTALLATIONS: LATEX/POLYMER MODIFIED PORTLAND CEMENT COMPLYING WITH ANSI A108.5 AND ANSI 118.4.
   2. GROUT:UNSANDED FOR JOINTS 1/16" WIDTH OR LESS, SANDED FOR JOINTS GREATER THAN 1/16" IN COLOR INDICATED IN SCHEDULE OR TO BE SELECTED BY ARCHITECT AND OWNER.
   A. TYPICAL INTERIOR INSTALLATIONS: STANDARD CEMENT GROUT WITH INTEGRAL STAIN INHIBITORS (TEC ACCUCOLOR XT, OR EQUAL)
3. SETTING BED ACCESSORIES: ANSI A 108.1A

F. INSTALLATION METHODS: COMPLY WITH TILE INSTALLATION STANDARDS IN ANSI'S "SPECIFICATIONS FOR THE INSTALLATIONS OF CERAMIC TILE" AND TCA'S "HANDBOOK FOR CERAMIC TILE INSTALLATION" THAT APPLY TO THE MATERIALS AND METHODS INDICATED BELOW:

G. TRANSITIONS:
1. WHERE CUT TILE IS SPECIFIED AS THE TOP COURSE ON WALL WAINSCOTING OR WALL BASE WITH AN EXPOSED TOP EDGE, THE FACTORY EDGE SHALL BE USED AS THE EXPOSED EDGE.

H. CONFLICTS: IF NOT ADDRESSED ON DRAWINGS, WHERE ELECTRICAL DEVICES OR TOILET ACCESSORIES STRADDLE THE TRANSITION FROM THE TOP EDGE OF WAINSCOT WALL TILE TO GYPSUM BOARD SUBSTRATE, CONTACT ARCHITECT FOR RESOLUTION.

I. GROUT JOINTS:
1. JOINT SIZE: SET TILE WITH THE SMALLEST GROUT JOINT ACHIEVABLE AND AS RECOMMENDED BY THE MFR. BASED ON THE TILE PRODUCT AND SUBSTRATE CONDITIONS, UNLESS NOTED OTHERWISE.
2. TILE PATTERN: LAY TILE IN PATTERNS AS INDICATED IN THE CONSTRUCTION DOCUMENTS. ALIGN JOINTS WHERE ADJOINING TILES ON FLOOR, BASE, WALLS, AND TRIM ARE THE SAME SIZE, UNLESS INDICATED OTHERWISE.
3. INSTALLATION: INSTALL GROUT PER MANUFACTURER'S INSTRUCTIONS, EXERCISING CARE TO AVOID REMOVAL OF GROUT COLOR BY USE OF EXCESS WATER DURING INSTALLATION. FADED OR CHALKY GROUT SHALL BE CAUSE FOR REJECT

1. ALL WORK SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI.
2. DESIGN LOADS
   - A. OVERALL BUILDING CLASSIFICATIONS
     - 1. RISK CATEGORY — II
     - 2. SNOW IMPORTANCE FACTOR, I_s — 1.00
     - 3. ICE IMPORTANCE FACTOR - WIND, I_w — 1.00
     - 4. SEISMIC IMPORTANCE FACTOR, I_e — 1.00
   - B. SLAB ON GRADE FLOOR LOADS
     - 1. LIVE LOAD — 100 PSF
     - 2. CONCENTRATED LOAD — 3000 LB ACTING ON AN AREA 4.5 IN. BY 4.5 IN.
   - C. ROOF DEAD AND LIVE LOADS
     - 1. DEAD LOAD — 20 PSF
     - 2. LIVE LOAD — 20 PSF
   - D. ROOF SNOW LOADS
     - 1. GROUND SNOW LOAD, P_g — 15 PSF
     - 2. FLAT ROOF SNOW LOAD, P_f — 11.34 PSF
     - 3. SNOW EXPOSURE FACTOR, C_e — 0.9
     - 4. THERMAL FACTOR, C_t — 1.2
     - 5. SLOPE FACTOR, C_s — 0.6
     - 6. DRIFTING — PER CODE
   - E. WIND LOADS
     - 1. BASIC WIND SPEED (3 SECOND GUST) — 107 MPH
     - 2. EXPOSURE CATEGORY — C
     - 3. INTERNAL PRESSURE COEFFICIENT, GC_{pi} — +/- 0.18
   - F. SEISMIC LOADS
     - 1. S_S — 0.189
     - 2. S_1 — 0.105
     - 3. SITE CLASS — C
     - 4. S_{DS} — 0.164
     - 5. S_{D1} — 0.105
     - 6. SEISMIC DESIGN CATEGORY — B
     - 7. SEISMIC FORCE RESISTING SYSTEM — WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR
     - 8. DESIGN BASE SHEAR — C,W
     - 9. DESIGN RESPONSE COEFFICIENT, C_S — 0.025
     - 10. RESPONSE MODIFICATION COEFFICIENT, R — 6.5
     - 11. ANALYSIS PROCEDURE USED — EQUIVALENT LATERAL FORCE (ELF) PROCEDURE
   - G. ROOF RAIN LOADS
     - 1. 60-MIN DURATION/100 YEAR RAIN INTENSITY, i — 3.20 IN
     - 2. 15-MIN DURATION/100 YEAR RAIN INTENSITY, i — 1.61 IN
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION.
4. IF DISCREPANCIES EXIST BETWEEN CONTRACT DRAWINGS, AND/OR SHOP DRAWINGS NOTIFY THE ENGINEER OF RECORD.
5. THE CONTRACTOR SHALL REVIEW DRAWINGS FROM ALL OTHER DISCIPLINES FOR PERTINENT MISC. ITEMS OR INFORMATION RELATED TO THE STRUCTURAL WORK AND COORDINATE AS REQUIRED.
6. THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS, PERMANENT BRACING, AND EXTERIOR LOAD-BEARING WALLS ARE COMPLETE AND HAVE ACHIEVED THEIR RESPECTIVE DESIGN STRENGTHS. CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING STRUCTURAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.
7. PROVIDE ADEQUATE SHORING DURING CONSTRUCTION TO RESIST FORCES SUCH AS WIND AND UNBALANCED LOADS DUE TO CONSTRUCTION. DO NOT BACKFILL UNTIL CONCRETE HAS CURED 14 DAYS.
8. ROUGH CARPENTRY
   - A. HEADERS, JOISTS, AND RAFTERS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
     - 1. F_B — 875 PSI
     - 2. F_V — 135 PSI
     - 3. F_C — 1150 PSI
     - 4. E — 1400 KSI
   - B. INTERIOR WALLS AND EXTERIOR WALLS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
     - 1. F_B — 875 PSI
     - 2. F_V — 135 PSI
     - 3. F_C — 1150 PSI
     - 4. E — 1400 KSI
   - C. TIMBER FRAMING MEMBERS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS. (EXAMPLE SPECIES: #2 SPRUCE-PINE-FIR)
     - 1. F_B — 875 PSI
     - 2. F_V — 135 PSI
     - 3. F_C — 1150 PSI
     - 4. E — 1400 KSI
   - D. ALL LVL MEMBERS SHALL BE BOISE CASCADE MICROLLAM 2.0E 2600 OR APPROVED EQUAL.
   - E. ALL WOOD FRAMING MEMBERS INDICATED ARE NOMINAL SIZES. PROVIDE ACTUAL DRESSED SIZES, KILN-DRIED, WITH MAXIMUM IN-PLACE MOISTURE CONTENT OF 19%.
   - F. ALL BOLTS ARE A36 OR A307, GRADE 1, AND ALL NAILS ARE COMMON WIRE NAILS UNLESS NOTED OTHERWISE.
   - G. LAY ALL STRUCTURAL PANELS WITH FACE GRAIN PERPENDICULAR TO SUPPORTING MEMBERS AND OFFSET END JOINTS 4'-0". PANELS TO BE APA RATED AND STAMPED FOR THE LOADING SHOWN IN SECTION 2 "DESIGN" AND SHOULD MATCH THE SUPPORT SPACING SHOWN ON THE PLANS.
   - H. ROOF DECKING SHALL BE 3/4" THICK APA RATED EXTERIOR GRADE SHEATHING FASTENED WITH 10d NAILS AT 6" O.C. ON EDGES AND 12" O.C. IN FIELD UNLESS NOTED OTHERWISE.
   - I. FASTENER QUALITY, QUANTITY, SIZE, AND SPACING SHALL COMPLY WITH IBC FASTENING SCHEDULE (TABLE 2304.9) UNLESS NOTED OTHERWISE.
   - J. ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESERVATIVE TREATED.

STANDARD ABBREVIATIONS

ALT.	ALTERNATE
A.B.	ANCHOR BOLT
ARCH.	ARCHITECT
@	AT
BM.	BEAM
BOT.	BOTTOM
B.O.	BOTTOM OF
BLDG.	BUILDING
CL.	CENTER LINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
C.J.	CONTROL JOINT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG(S)	DRAWING(S)
EA.	EACH
ELEV.	ELEVATION
EL.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
EXT.	EXTERIOR
F.S.	FAR SIDE
FIN.	FINISH
FLR.	FLOOR
FTG.	FOOTING
FOUND.	FOUNDATION
GALV.	GALVANIZED
GYP.	GYPSUM
H.S.	HEADED STUD
HI	HIGH
HORIZ.	HORIZONTAL
INSUL.	INSULATION
INT.	INTERIOR
LOC.	LOCATION
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUT
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LO	LOW
MSRY.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MIR.	MIRRORED
N.S.	NEAR SIDE
N.A.	NOT APPLICABLE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG.	OPENING
PL.	PLATE
R.	RADIUS
RE:	REFERENCE
REINF.	REINFORCING
REQ'D	REQUIRED
SCHED.	SCHEDULE
SEC.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SQ.	SQUARE
S.S.	STAINLESS STEEL
STL.	STEEL
T&B	TOP & BOTTOM
T.O.	TOP OF
TRANS.	TRANSVERSE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT

PLAN SYMBOL KEY

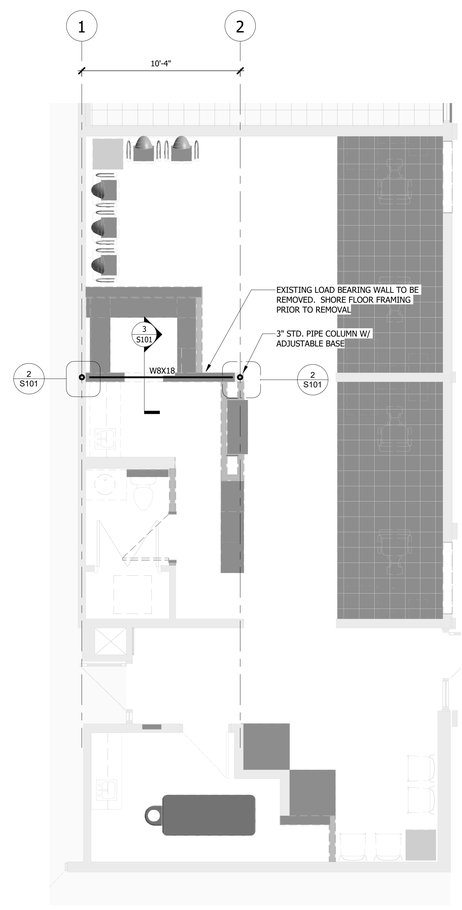
- F7 = FOOTING TYPE (REFER TO FOOTING SCHEDULE)
- C7 = COLUMN TYPE (REFER TO COLUMN SCHEDULE)
- W7 = WOOD WALL TYPE (REFER TO WOOD WALL SCHEDULE)
- SW7 = SHEAR WALL TYPE (REFER TO WOOD WALL SCHEDULE)
- CW7 = CONCRETE WALL TYPE (REFER TO CONCRETE WALL SCHEDULE)
- MW7 = MASONRY WALL TYPE (REFER TO MASONRY WALL SCHEDULE)
- = SHEAR WALL HOLDOWN
- = MOMENT FRAME CONNECTION
- = BEAM SPLICE CONNECTION

HATCH PATTERN KEY

- = CONCRETE IN SECTION
- = EARTH IN SECTION
- = EPOXY IN SECTION
- = EXISTING IN PLAN AND SECTION
- = GRANULAR FILL IN SECTION
- = GRATING IN PLAN AND SECTION
- = GROUT IN SECTION
- = INSULATION IN SECTION
- = PLYWOOD IN SECTION
- = SNOW DRIFT LOADING IN PLAN
- = STEEL IN SECTION
- = TOPPING IN SECTION
- = WOOD END GRAIN IN SECTION
- = WOOD FACE GRAIN IN SECTION

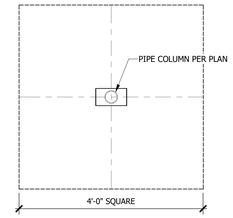
WALL TYPE KEY

- = LOAD BEARING WALL
- = NON-LOAD BEARING WALL
- = SHEAR WALL

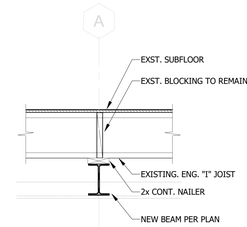


1 FLOOR PLAN
1/4" = 1'-0"

1. CONTRACTOR TO DETERMINE THICKNESS OF EXISTING SLAB ON GRADE. IF EXISTING SLAB ON GRADE IS LESS THAN 12" THICK, CONTRACTOR TO REMOVE EXISTING SLAB ON GRADE IN THE AREA SHOWN, AND REPLACE WITH NEW 12" SLAB ON GRADE W/ #4 @ 12" O.C. EACH WAY.
2. ALL EXISTING FRAMING MUST BE SHORED PRIOR TO REMOVAL OF EXISTING LOAD BEARING WALL.



2 COLUMN ENLARGED DETAIL
3/4" = 1'-0"



NOTE: SHORE EXISTING JOIST ON EITHER SIDE OF EXISTING LOAD BEARING WALL TO ALLOW FOR REMOVAL OF EXISTING WALL AND REPLACE WITH NEW BEAM SHOWN. CONTRACTOR RESPONSIBLE FOR ALL SHORING WALL DESIGN AND SEQUENCE.

3 NEW BEAM UNDER EXISTING FLOOR FRAMING
3/4" = 1'-0"

PLAN NOTES

1. CONTRACTOR TO SHORE EXISTING CEILING FRAMING PRIOR TO REMOVING EXISTING LOAD BEARING WALLS ALONG GRIDLINES A AND B.
2. NEW COLUMNS AND BEAMS MUST BE IN PLACE PRIOR TO REMOVAL OF SHORING BELOW EXISTING CEILING FRAMING.
3. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
4. REFER TO ARCHITECTURAL FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.

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REVISION DATES:

STATE OF MISSOURI ADAM CHRISTOPHER WEBB PE-2004008214 PROFESSIONAL ENGINEER
05.05.23

PROFESSIONAL SEAL

S101

ISSUE DATE: 1 MAY 2023
COLLINS WEBB #: 22009

STRUCTURAL FLOOR PLAN

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GENERAL NOTES - DEMOLITION PLANS:

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. CONTRACTOR TO VISIT PROJECT SITE AND BUILDING PRIOR TO BID.
3. BUILDING AND SITE TO REMAIN SECURE DURING DEMOLITION AND CONSTRUCTION.
4. PROTECT ALL ITEMS TO REMAIN (WALLS, PLUMBING FIXTURES, PIPING, HVAC UNITS, COLUMNS, ETC).
5. CONTRACTOR TO PROTECT EXISTING FINISHES ADJACENT TO DEMOLITION WORK.
6. CONTRACTOR TO PATCH AND REPAIR ALL WORK, ESPECIALLY WORK ADJACENT TO EXISTING AREAS, AS REQUIRED.
7. CONTRACTOR TO REPAIR ANY AREAS DAMAGED DURING DEMOLITION.
8. CONTRACTOR TO REPAIR ANY PUNCTURES OR TEARS TO THE VAPOR BARRIER AT THE EXTERIOR WALLS.
9. CONTRACTOR TO COORDINATE DEMOLITION OPENINGS WITH NEW PLANS AND ELEVATIONS.
10. REMOVE EXISTING GYP BOARD OR PLASTER AS NECESSARY, TO PROVIDE NEW BLOCKING IN EXISTING WALLS FOR NEW CASEWORK AND EQUIPMENT.
11. SPRINKLER HEADS TO REMAIN. PROTECT DURING DEMOLITION.
12. PROTECT ALL ITEMS TO REMAIN (WALLS, PLUMBING FIXTURES, PIPING, HVAC UNITS, COLUMNS, ETC).
13. REMOVE ALL CEILING ELEMENTS IN CONSTRUCTION AREA INDICATED. FIXTURES/CONTROLS ARE SHOWN FOR GENERAL SCOPE ONLY AND DO NOT RELIEVE THE CONTRACTOR OF ANY OBLIGATION TO REMOVE ALL ELEMENTS IN THE CEILING GRID. REFERENCE MEP DRAWINGS FOR EXTENTS ABOVE CEILING GRID. ALL CEILING FIXTURES, DIFFUSERS, SPEAKERS, SMOKE ALARMS, EXIT SIGNS, STROBES, CEILING TILES, CEILING GRID BULKHEADS, AND SOFFIT ELEMENTS TO BE REMOVED.
14. SPRINKLER HEADS TO REMAIN-PROTECT DURING DEMOLITION.
15. BUILDING TO REMAIN SECURE DURING DEMOLITION AND CONSTRUCTION.
16. PROTECT EXISTING CONDITIONS AND MAINTAIN WEATHER TIGHTNESS FOR ALL OCCUPIED/UNOCCUPIED SPACES, BOTH VERTICALLY AND HORIZONTALLY FOR THE ENTIRE DURATION THAT THE BUILDING IS EXPOSED TO THE ELEMENTS. PATCH/REPAIR/REPLACE AS REQUIRED.

KEYED NOTES: DEMO FLOOR PLAN

1	PREPARE EXISTING SLAB FOR NEW FLOOR FINISHES AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. SEE FINISH PLANS FOR ROOMS WITH NEW FLOOR FINISHES.
2	REMOVE EXISTING CASEWORK AND SHELVING
3	REMOVE EXISTING WALL
4	REMOVE EXISTING DOOR AND FRAME
5	REMOVE EXSITING GLASS BLOCK WINDOW; PREPARE OPENING FOR NEW INFILL WINDOW; G.C. TO VERIFY R.O.
6	NOT USED
7	REMOVE EXISTING PLUMBING FIXTURES AND CAP EXISTING PLUMBING DRAIN AT FLOOR/WALL
8	REMOVE ALL EXISTING ACOUSTIC CEILING TILE AND GRID.
9	REMOVE EXISTING GYPSUM CEILING
10	EXISTING TO REMAIN
11	REMOVE EXISTING GYPSUM HEADER

FF&E SCHEDULE

NO.	DESCRIPTION	MODEL	QTY.	REMARKS
1	OFS - KASURA SINGLE DINING CHAIR	92031	2	TX3, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
3	OFS - KASURA SINGLE DINING CHAIR	92031	2	TX4, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
4	OFS - KASURA DOUBLE DINING CHAIR	92032	1	TX2, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
6	COLLINS - 7710 ALL PURPOSE SALON CHAIR	COLLINS 7710	3	TX6, RECLINING, WITH SWING-AWAY FOOTRESTS (#350-7700D)
7	BELVEDERE MALETTI - S4U (STYLE FOR YOU) - LOOK DRYER CHAIR	LK13, B900C-H	2	TX6, LOOK DRYER CHAIR, MEGA DRYER
8	LIVING EARTH CRAFTS - 5TH AVENUE PEDICURE CHAIR W/ PLUMBED BASIN	L100137	2	TX1, SS2, HPL1
8A	LEMI ITALIAN WELLNESS EQUIPMENT - CAPRI PEDI SPA (OR SIMILAR)		2	CONTRACTOR OPTION ADD. ALTERNATE; 650 ROVER TEXAS, SPA PRESTIGE 1422
9	LIVING EARTH CRAFTS - DUET MANI/PEDI COMBO STOOL, ROUND EDGE, CASTORS	L100140	4	TX1
12	NATIONAL OFFICE FURNITURE - ARROWOOD END TABLE, TURNED LEGS	31N2424ENPLW	4	HPL2, WD1
14	MANICURE TABLE	-	2	P6, GLASS TOP, HDW1, [RE: CASEWORK DETAIL SHEETS]
18	WEST ELM - MID-CENTURY WALL RACK - ACORN, 25"W	7416159	1	ACORN FINISH,ANTIQUE BRASS, 25"W x 4.4"D x 4"H
19	BUY-RITE-BEAUTY EQUIPMENT - 3' X 5' SUPER SOFT CIRCULAR MAT 5/8"	SHP-SS3050C5/8	3	3' x 5' x 5/8"
20	LAMP PLUS - KICHLER WALL MIRROR	Style # P0955	3	24"W x 30"H x 1 1/2"D, OLDE BRONZE
21	BLACK TRIM MIRROR	B-290 1830.MBLK	1	18" W x 30" H (46 x 76cm)
22	60" TV (APPROX. 52.3"W x 29.4"H), BY OWNER	-	1	
23	SUMMIT - ADA UNDERCOUNTER REFRIGERATOR	SPR489OSADA	1	32.5"H x 19"W x 17"D
24	COFFEE MAKER	-	1	FREESTANDING COUNTERTOP STYLE, BY OWNER
25	BOBRICK WASHROOM EQUIPMENT, INC. - DOUBLE-ROLL TOILET TISSUE DISPENSER	B-686	1	
26	BOBRICK WASHROOM EQUIPMENT, INC. - SANITARY NAPKIN DISPOSAL	B-35139	1	TRIM LINE SERIES, SURFACE-MOUNTED
27	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 18	B-5806-18	1	
28	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 36"	B-5806-36	1	3Hx30Wx3D
29	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 42"	B-5806-42	1	3Hx30Wx3D
30	FIRE EXTINGUISHER	-	1	BY OWNER
31	ARTWORK	-	TBD	BY OWNER
32	BELVEDERE - SHAMPOO BOWL	8600/522	3	BLACK PORCELAIN ENAMEL, PIVOTING BACKWASH, WALL-MOUNT, WITH FAUCET
33	ADJUST-A-SINK - HYDRAULIC SHAMPOO UNIT	ADJ-K100, MP3000 - BLACK (306)	1	CONTRACTOR OPTION ADD. ALTERNATE; BLACK PORCELAIN ENAMEL, PIVOTING BACKWASH, HYDRAULIC HEIGHT ADJUSTABLE
34	AMERICAN-STANDARD ADA LAVATORY, WALL MOUNT, 20" x 28"	355.012 LUCERNE	1	WHITE
37	OLYMPIA - SINGLE HANDLE LAVATORY FAUCET	L-6030-BN	1	FINISH: PVD BRUSHED NICKEL
38	WALL MOUNTED MANUAL SOAP DISPENSER	-	2	BY OWNER
41	MECHO SYSTEMS - MANUAL ROLLER SHADE	1922 HOWARD (MOCHA) 5% OPEN	2	4'-8"W x 6'-8"H, SINGLE ROLLER, REGULAR ROLL, WALL MOUNTED, QUAKER BRONZE FASCIA
42	MECHO SYSTEMS - MANUAL ROLLER SHADE	1922 HOWARD (MOCHA) 5% OPEN	1	2'-0"W x 7'-0"H, SINGLE ROLLER, REGULAR ROLL, WALL MOUNTED, QUAKER BRONZE FASCIA
44	POS STATION	MICROS WORKSTATION 625/655	1	WITH ADJUSTABLE STAND, BY OWNER
45	PLANTER	-	2	FREESTANDING, BY OWNER
46	PORTABLE SOURCE- CAPTURE EXHAUST UNIT	46 - PORTABLE SOURCE-CAPTURE EXHAUST SYSTEM	2	RE: MECHANICAL SHEETS
47	GEORGIA-PACIFIC PAPER TOWEL DISPENSER	59462A	2	BY OWNER

LIGHTING LEGEND

NO.	DESCRIPTION	MODEL NUMBER	QTY.	FINISHES
L1	WESPORT LIGHTING - ASPEN 102S WALL SCONCE	ASPEN-102S	8	WHITE ACRYLIC, 3500K, BRONZE
L2	WESPORT LIGHTING - ASPEN 102 WALL SCONCE	ASPEN-102	6	WHITE ACRYLIC, 3500K, BRONZE
L3	LINEAR STRIP LED LIGHT	RE: MEP SHEETS	2	WHITE
L4	RECESSED LED CAN LIGHT		22	WHITE
L5	EMERGENCY LIGHT	RE: MEP SHEETS	4	WHITE
L6	LUMENS - Z-BAR GEN 3 DESK LAMP	R307422	2	METALLIC BLACK, THROUGH-TABLE MOUNT, LED, WARM LIGHT (4500K)

GENERAL NOTES: ACCESSORIES

GENERAL NOTES:
A. ALL TOILET ACCESSORY LOCATIONS BASED ON FLOOR PLAN LAYOUT.
B. REFER TO INTERIOR ELEVATIONS FOR ANY ACCESSORIES THAT MAY NOT SHOW UP ON THE PLANS.
C. REFER TO G002 AND MANUFACTURER'S SPECIFICATIONS FOR MOUNTING HEIGHTS.
D. COORDINATE ALL MOUNTING HEIGHTS W/ PLUMBING FIXTURES TO ALLOW PROPER OPERATION & INFORM ARCHITECT IN WRITING OF ANY CONFLICTS.
E. G.C. TO VERIFY DIRECTLY W/ OWNER TO DETERMINE MOUNTING HEIGHTS, U.N.O.
F. REFER TO PLANS AND ELEVATIONS FOR ITEMS NOTED AS FF&E.

REMARKS:
1. FF&E ITEM - OWNER PROVIDED. CONTRACTOR INSTALLED. REFER TO PLANS FOR FURTHER CLARIFICATION.
2. MIRRORS TO BE CENTERED AT SINKS, TYP.
3. REFER TO SHEET G002 FOR MOUNTING HEIGHTS.
4. BATHROOM ACCESSORIES PER CONTRACTOR BUDGET, COORD. WITH OWNER.
5. TOWEL BARS LOCATED IN FLOAT ROOM. COORD. WITH OWNER.

GENERAL NOTES: FLOOR PLANS

1. SEE GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0"
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF STUD, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS AND PER WALL TYPES. SEE GENERAL SHEETS.
5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
6. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. PROVIDE FINISH LEVELS AS DESCRIBED:
   LEVEL 2:
   - AREAS WHERE SETTING TYPE COMPOUND FOR WATER RESISTANT GYPSUM BACKER OR FIBER REINFORCED WALL PANELS ARE USED.
   - ALL OPEN TO PLENUM SPACES ABOVE CEILINGS.
   - OPEN TO STRUCTURE SPACES WHERE PAINTED BLACK.
   - AREAS IN MECHANICAL, ELECTRICAL AND STORAGE ROOMS.
   LEVEL 3:
   - OPEN TO STRUCTURE SPACES WHERE PAINTED OTHER THAN BLACK.
   LEVEL 4:
   - AREAS FOR BACK OF HOUSE EMPLOYEE OPERATIONS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.
   - CIRCULATION CORRIDORS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.
8. RE: FINISH LEGEND, FINISH SCHEDULE AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
9. STAIR ENCLOSURES, SHAFT WALLS, EXIT PASSAGE WAYS AND EXTERIOR WALLS TO BE COORDINATED FO PHASE OF WORK PER MATRIX AND PROJECT SCOPING.
10. MAINTAIN AND PROTECT EXISTING EXPANSION JOINTS DURING CONSTRUCTION. PATCH/REPAIR/REPLACE TO MATCH EXISTING RATINGS AS REQUIRED ON THE SHELL PORTION OF PROJECT.
11. ALL WOOD PRODUCTS TO BE FIRE-RETARDANT, INCLUDING BLOCKING AND PLYWOOD.
12. CONTRACTOR TO COORDINATE INSTALLATION OF SPECIALTY EQUIPMENT WITH CONSTRUCTION.

GENERAL NOTES: REFLECTED CEILING PLANS

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: DETAILS FOR ADDITIONAL CONDITIONS AND CEILING HEIGHT INFORMATION.
3. RE: ELECTRICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON LIGHT FIXTURE SCHEDULE.
4. RE: MECHANICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON DIFFUSERS.
5. RE: MECHANICAL SHEETS FOR LOCATIONS OF SOUND ISOLATION BELOW AND OR AROUND MECH. EQUIPMENT.
6. DIMENSIONS SHOWN ON THE REFLECTED CEILING PLANS ARE TO THE FACE OF GYP. BOARD (FOG), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
7. ALL CEILINGS TO BE OPEN TO STRUCTURE, UNLESS NOTED OTHERWISE.
8. ALL CEILING HEIGHTS AS SHOWN ON PLANS AND DETAILS ARE FROM SLAB OR TILE FLOOR (FINISHED FLOOR) TO FINISH CEILING.
9. RECESSED LIGHTING, SPEAKERS, SMOKE DETECTORS, ETC. AND PENDANT LIGHT FIXTURES - SHALL BE CENTERED IN GYP. BD. CEILING, UNLESS NOTED OTHERWISE.
10. COORDINATE ALL PENDANT MOUNTED LIGHT FIXTURES IN EQUIPMENT AREAS WITH EXPOSED STRUCTURE.
11. COORDINATE ALL CEILING MOUNTED EQUIPMENT WITH CASEWORK BELOW.
12. IF THERE IS A CONFLICT BETWEEN ANY ABOVE-CEILING MECHANICAL / ELECTRICAL / PLUMBING WORK & THE SCHEDULED OR SHOWN CEILING HEIGHT, CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
13. PROVIDE OVERALL CEILING COORDINATION DRAWING SHOWING ALL DEVICES DURING SHOP SUBMITTAL PROCESS.
14. ALL LIGHTING BY G.C. COORD. WITH MILLWORK CONTRACTOR FOR LOCATION.
15. ALL EXPOSED CONDUIT, DUCTWORK, ETC. TO BE PAINTED BLACK, TYP.

KEYED NOTES: FLOOR PLAN

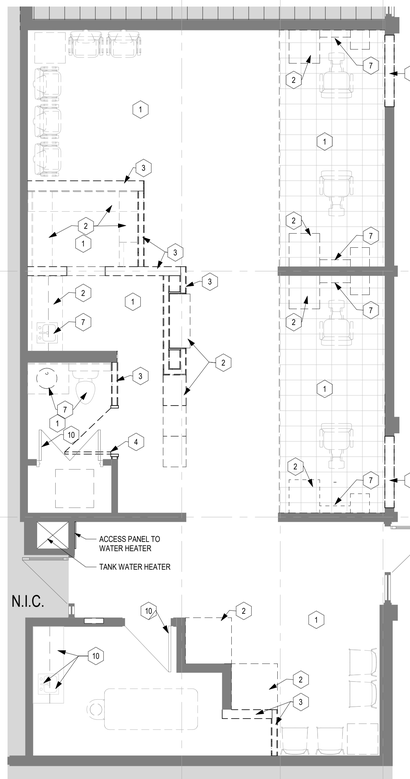
1	NOT USED
2	NAIL POLISH DISPLAY SHELVING
3	OPEN WHEELCHAIR AREA
4	BUILT-IN POS STATION
5	EXISTING DOOR TO REMAIN; ADD AUTO DOOR OPERATOR

REFLECTED CEILING PLAN SYMBOLS:

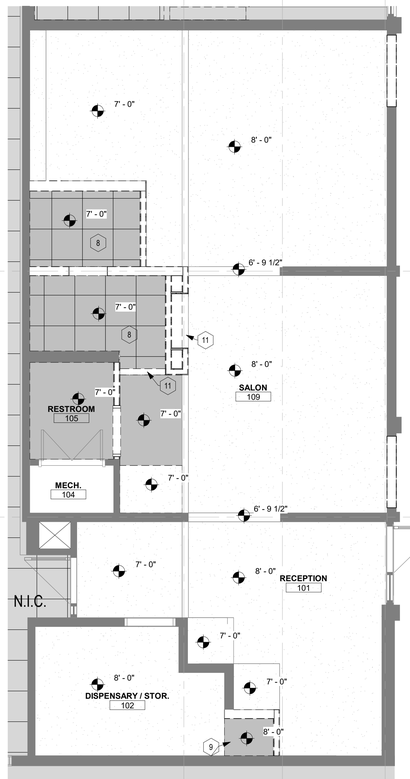
9'-0"	CEILING HEIGHT
	EXHAUST GRILLE
	RETURN / TRANSFER GRILLE
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	10" DOWNLIGHT
	5" DOWNLIGHT
	LINEAR DOWNLIGHT
	WALL SCONCE
	EMERGENCY LIGHT
	UNDERCABINET LIGHTING
	FIRE EXIT SIGN
	5/8" GYP. BD. CEILING, BULKHEAD OR SOFFIT. SEE APPLICABLE DETAILS AND SECTIONS.
	2'X2' SUSPENDED ACT CEILING SYSTEM
	OPEN TO STRUCTURE

DOOR LEGEND IN NEW FLOOR PLAN

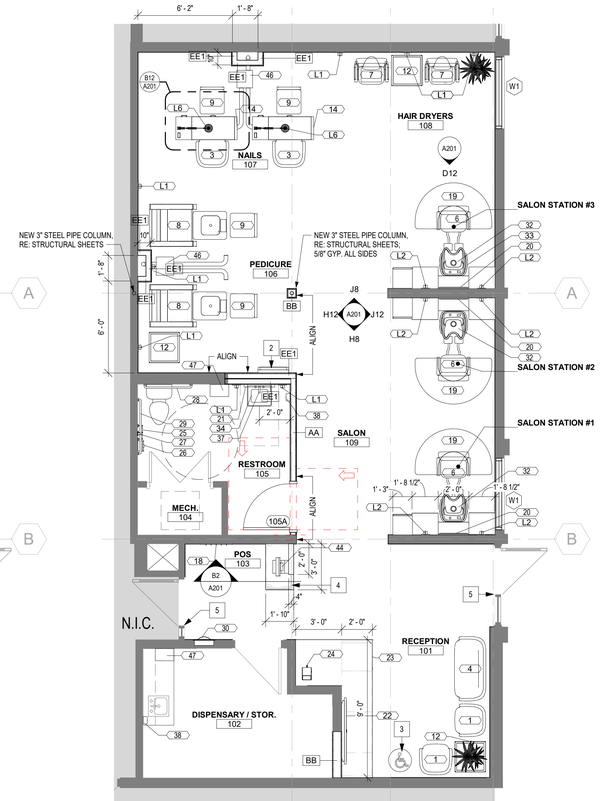
	EXISTING DOOR TO BE REUSED AND RELOCATED. COORDINATE FINISH WITH OWNER. RE: A501
	NEW DOOR. COORDINATE FINISH WITH OWNER. RE: A501.



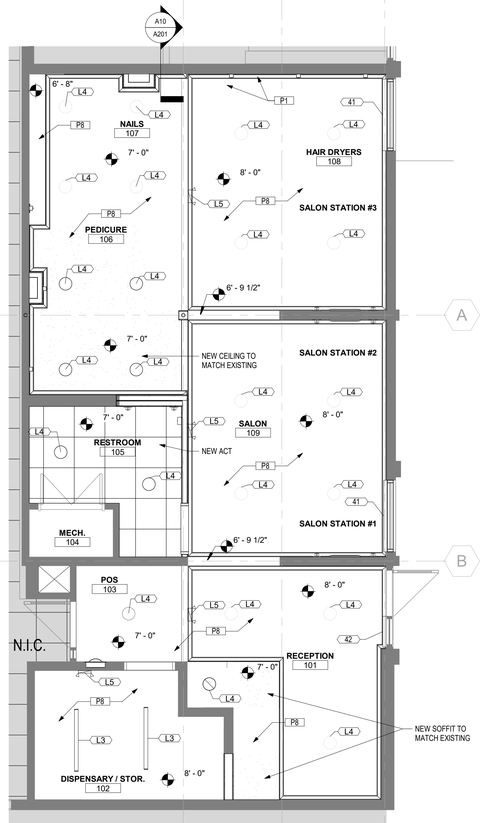
A12 DEMO PLAN
1/4" = 1'-0"



A9 DEMO REFLECTED CEILING PLAN
1/4" = 1'-0"



A6 1ST FLOOR PLAN
1/4" = 1'-0"



A3 1ST FLOOR RCP
1/4" = 1'-0"

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3076 SW Market Street, Lee's Summit, Missouri 64063 | 816.249.2270

PERMIT SET

JOHN KNOX VILLAGE - SALON

1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

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REVISION DATES:

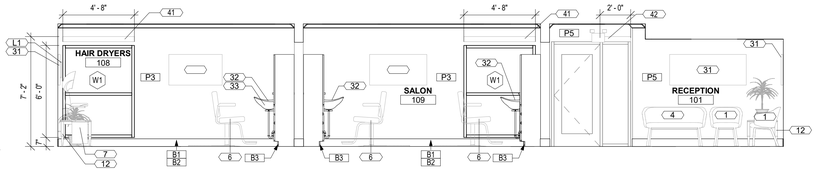
STATE OF MISSOURI
ROGER L. PEARSON
NUMBER A-2010038928
ARCHITECT
05/03/23
PROFESSIONAL SEAL

A101

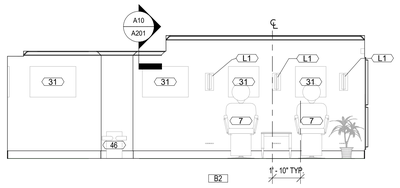
ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

FLOOR PLAN AND REFLECTED CEILING PLAN

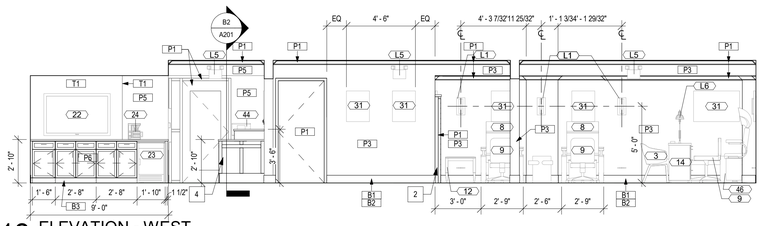
5/4/2023 10:36:33 AM



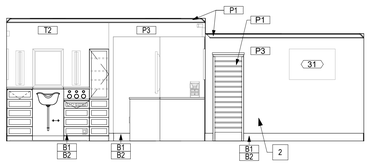
J12 ELEVATION - EAST
1/4" = 1'-0"



J8 ELEVATION - NORTH
1/4" = 1'-0"



H12 ELEVATION - WEST
1/4" = 1'-0"



H8 ELEVATION - SOUTH
1/4" = 1'-0"

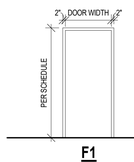
DOOR AND FRAME SCHEDULE

ROOM	ROOM NO.	DOOR NO.	DOOR SIZE LEAF QTY	DOOR SIZE WIDTH	DOOR SIZE HGT	DOOR TYPE	DOOR MAT	DOOR FIN	FRAME TYPE	FRAME MAT	RATING (MIN)	GEN. NOTES
LEVEL 1												
RESTROOM	105	105A	1	3' - 0"	6' - 8"	D1	WD	P1	F1	P7	0	SL-1010

DOOR SCHEDULE REMARKS:

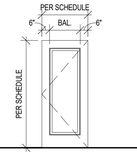
1. PROTECT DOOR AND FRAME FROM DAMAGE THROUGHOUT CONSTRUCTION. ANY DAMAGE TO BE REPAIRED/REPLACED PER OWNER DISCRETION.
2. HARDWARE BY M/R.
3. DOOR FRAME 2" OFF FINISHED FACE ON HINGE SIDE.
4. POCKET DOOR TO BE MANUALLY LOCKABLE FROM BOTH SIDES OF DOOR.
5. DOOR TO BE MANUALLY LOCKABLE FROM INSIDE OF ROOM.
6. DOOR TO BE MANUALLY LOCKABLE FROM INSIDE OF ROOM. DOOR TO HAVE A KEY LOCK ON OUTSIDE OF ROOM.
7. PROVIDE PANIC HARDWARE.
8. EXISTING DOOR TO BE REUSED. HARDWARE TO MEET CODE MINIMUM REQUIREMENTS. HINGES TO BE REUSED.
9. HARDWARE TO MEET CODE MINIMUM REQUIREMENTS.

FRAME TYPES



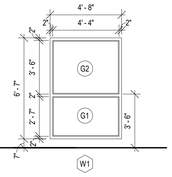
F1
PAINTED WOOD

DOOR TYPES



D1
TIMBERLAND DOOR
RE: DOOR SCHEDULE

WINDOW TYPES



W1

NOTES:

1. DOORS TO BE 1 3/4" THK. UNLESS OTHERWISE NOTED ON DOOR SCHEDULE.
2. REFER TO DOOR SCHEDULE FOR GLASS TYPE AND THICKNESS.
3. CONTRACTOR TO VERIFY R.O. FOR NEW WINDOW INFILL.

GENERAL NOTES: DOOR SCHEDULE

1. ALUM REFERS TO ALUMINUM
2. WD REFERS TO WOOD
3. FOR FINISH COLOR DESIGNATION FOR INTERIOR DOOR AND FRAMES, COORDINATE WITH OWNER.
4. PROTECT ALL DOORS & FRAMES FROM DAMAGE THROUGHOUT CONSTRUCTION PHASES.
5. ALL EGRESS DOORS TO BE PROVIDED WITH PANIC HARDWARE.
6. CONTRACTOR TO COORDINATE ALL HARDWARE WITH OWNER.

GENERAL NOTES: GLASS TYPES

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ALL DIMENSIONS ARE TO ROUGH OPENING AND TO TOP OR BOTTOM OF MULLION, UNLESS NOTED OR SHOWN OTHERWISE.
3. ALL OPENINGS ARE TO BE FIELD VERIFIED, AND NOTED AS SUCH ON SHOP DRAWINGS, PRIOR TO ARCHITECT'S REVIEW.
4. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 1-4" OF THE FLOOR, AND WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF A DOOR, ETC., SHALL BE SAFETY GLAZING AS APPROVED FOR IMPACT BY APPLICABLE BUILDING CODES, AND SHALL BE LABELED AS SUCH.

GLASS TYPE LEGEND

DESIGNATION NUMBER	DESCRIPTION
G1	TEMPERED INSULATED GLAZING, CLEAR
G2	NON-TEMPERED INSULATED GLAZING, CLEAR

GENERAL NOTES: INTERIOR DETAILS

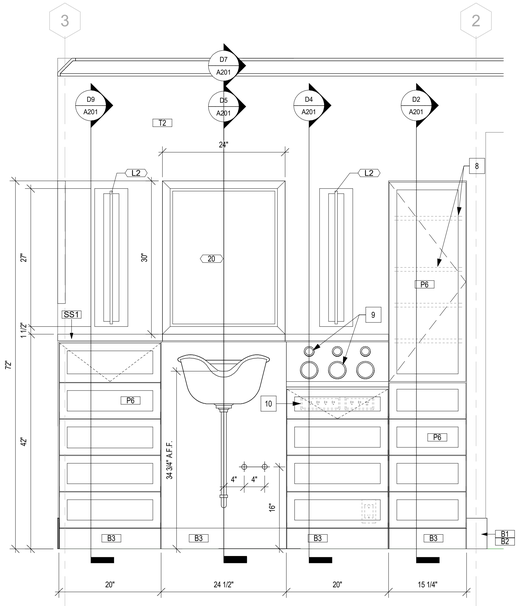
1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: SHEET G002 ACCESSIBILITY GUIDELINES FOR MOUNTING HEIGHTS OF FIXTURES AND ACCESSORIES.
3. COORDINATE SPECIFIC FINISH INFORMATION AND LOCATIONS WITH OWNER.
4. RE: A101 FOR TOILET ACCESSORY SCHEDULE.
5. PROVIDE GYPSUM BOARD CONTROL JOINTS AT DOOR HEADERS WHERE EXPOSED/FINISHED GYPSUM BOARD EXCEEDS 30 FEET (TYP.), UNLESS SHOWN OTHERWISE. JOINTS TO BE LINED UP WITH BOTH SIDES OF DOOR FRAMES FOR DOORS 4'-0" AND OVER AND ALL DOORS THAT ARE LEAD LINED. CONTROL JOINTS NOT NECESSARY AT WALLS WHERE ACOUSTICAL WALLCOVERING IS SPECIFIED.
6. CONTINUE WALL FINISH AS SCHEDULED BEHIND ALL FURNITURE AND EQUIPMENT, INCLUDING UNDER OPEN COUNTERS.
7. TRANSITION ALL WALL AND BASE FINISHES, AND/ OR COLOR CHANGES AT INSIDE CORNERS, UNLESS NOTED OTHERWISE. CONSULT ARCHITECT FOR CLARIFICATION, IF NECESSARY.
8. CONTINUE WALL BASE AT ALL WALLS, FURRED OUT COLUMNS & COLUMN COVERS, AND AT ALL CASEWORK TOE KICKS, SIDE PANELS, AND UNDER OPEN COUNTERS, UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO MILLWORK/ CASEWORK FABRICATION & INSTALLATION.
10. CASEWORK VENDOR TO COORDINATE WITH OWNER FOR HARDWARE.
11. CONTRACTOR SHALL PROVIDE & INSTALL GROMMETS AT 48" O.C. MAX. AT ALL WORK STATIONS WITH OPEN KNEE SPACE. COORDINATE LOCATIONS DIRECTLY WITH ELECTRICAL/DATA DRAWINGS FOR OUTLET LOCATIONS. COLOR TO BE SELECTED BY OWNER.
12. CONTRACTOR SHALL PROVIDE COUNTERTOP BRACKETS AT OPEN KNEE SPACES WIDER THAN 42" (TYP.). CENTER IN OPEN AREA AND PAINT TO MATCH WALL COLOR, UNLESS NOTED OR SHOWN OTHERWISE.
13. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
14. RE: EQUIPMENT DRAWINGS FOR EQUIPMENT ITEMS SHOWN DASHED, PROVIDED BY EQUIP. CONSULTANT AND/ OR SUPPLIED BY OWNER. COORDINATE WITH OTHER TRADES AS NECESSARY.
15. MECH. & ELEC. SYMBOLS AND OUTLETS ARE SHOWN FOR REFERENCE ONLY. COORDINATE LOCATIONS WITH MEP DRAWINGS. CONSULT ARCHITECT FOR CLARIFICATION, IF NECESSARY.
16. ALL HEIGHT OF TILE FINISH ON WALLS TO BE COORDINATED WITH OWNER.

GENERAL NOTES: INTERIOR FINISHES

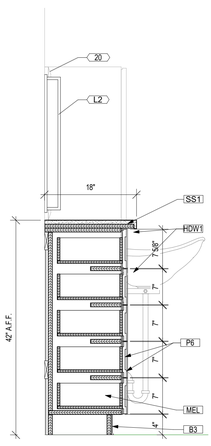
1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: G002 FOR ACCESSIBILITY GUIDELINES.
3. ALL FLOORS TO BE SEALED CONCRETE.
4. COORD. FINAL WALL FINISH SELECTIONS WITH OWNER. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION. COORDINATE CASEWORK FINISH SELECTIONS WITH OWNER.
6. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE 1MM PVC EDGEBANDING AND ALL COUNTERTOPS TO RECEIVE 3MM PVC EDGEBANDING.
7. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP MATERIAL; U.N.O. COORDINATE FINISH SELECTION WITH OWNER.
8. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, U.N.O.
9. WALL BASE ALONG ALL GYP. WALLS. - COORD. FINISH WITH OWNER.
10. NO WALL BASE ALONG EXISTING BRICK WALL.
11. ALL GYP. CEILINGS AND CEILINGS O.T.S. TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
12. ALL EXPOSED STRUCTURE AND PLUMBING TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
13. COORDINATE FINAL TILE SELECTIONS WITH OWNER. ALL HEIGHT OF TILE FINISH ON WALLS TO BE COORDINATED WITH OWNER.
14. PROVIDE LEVEL 4 FINISH FOR ALL WALLS TYP.
15. COORDINATE ALL FINAL FINISH SELECTIONS WITH OWNER.

KEYED NOTES: ELEVATIONS & SECTIONS

1	NOT USED
2	NAIL POLISH DISPLAY SHELVING
3	OPEN WHEELCHAIR AREA
4	BUILT-IN POS STATION
5	NOT USED
6	NOT USED
7	NOT USED
8	ADJUSTABLE SHELVING
9	HOT TOOL STORAGE; HEAT-RESISTANT METAL LINERS WITH OUTER BEVEL
10	POWER ACCESS AND CORD STORAGE WITH HINGED ACCESS PANEL



D12 SALON CASEWORK ELEVATION
1" = 1'-0"



D9 CASEWORK SECTION
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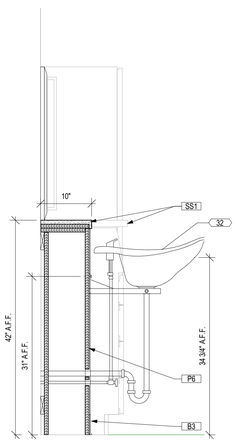
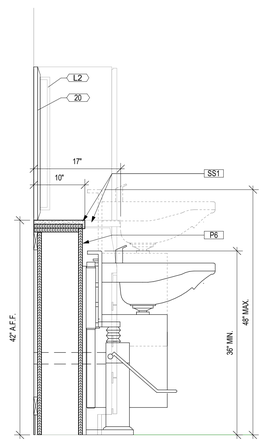
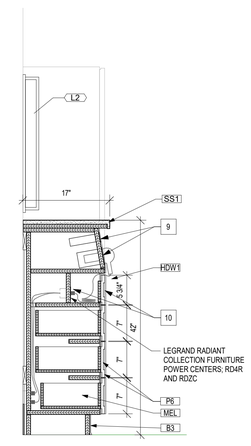


D7 CASEWORK SECTION
1" = 1'-0"



D5 CASEWORK SECTION - ALT.
1" = 1'-0"



D4 CASEWORK SECTION
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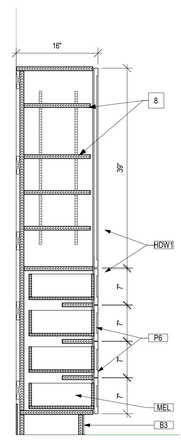

D2 CASEWORK SECTION
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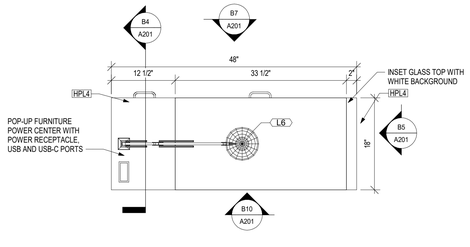
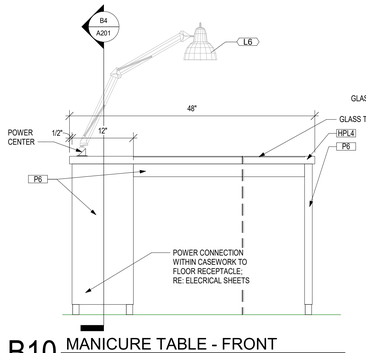
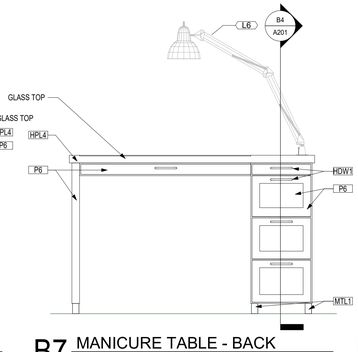


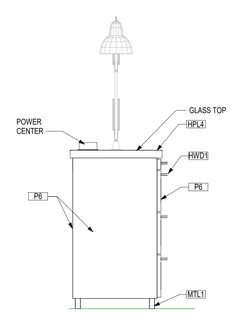
B12 CASEWORK PLAN - MANICURE TABLE
1" = 1'-0"



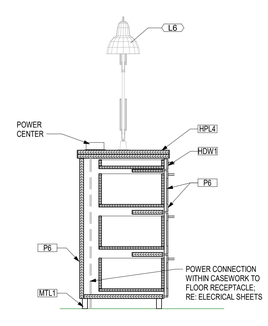
B10 MANICURE TABLE - FRONT
1" = 1'-0"



B7 MANICURE TABLE - BACK
1" = 1'-0"



B5 MANICURE TABLE - SIDE
1" = 1'-0"



B4 MANICURE TABLE - SECTION
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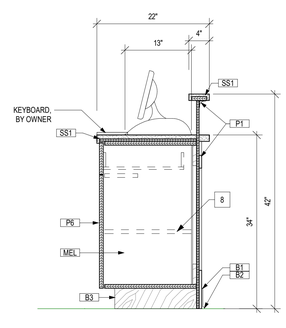
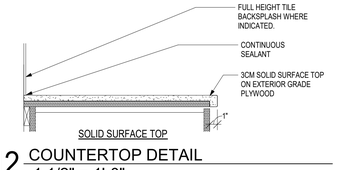
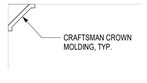


B2 POS SECTION DETIAL
1" = 1'-0"



A12 COUNTERTOP DETAIL
1 1/2" = 1'-0"



A10 MOLDING DETAIL
1 1/2" = 1'-0"

GENERAL NOTE:

COORDINATE ALL FINAL FINISH SELECTIONS WITH OWNER.

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STATE OF MISSOURI
ROGER L. WEBB
NUMBER A-2010038935
ARCHITECT
05/03/23

PROFESSIONAL SEAL

A201

ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

ELEVATIONS, SECTIONS, SCHEDULES & DETAILS

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MATERIAL SCHEDULE

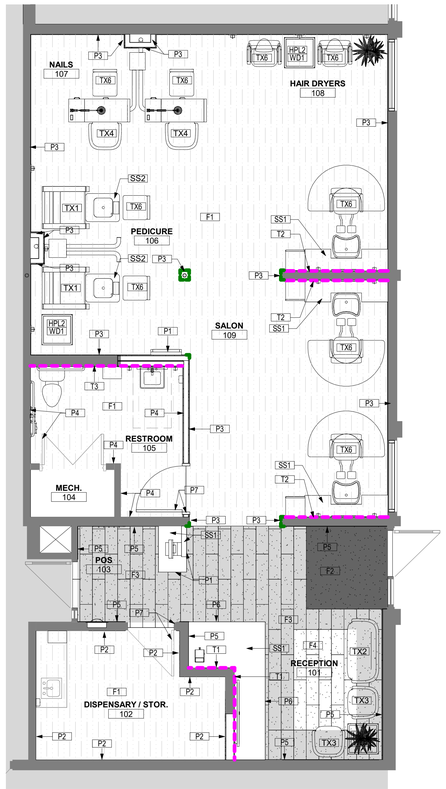
CODE	DESCRIPTION	MANUFACTURER	PRODUCT #	COLOR	FINISH	SIZE	CONTACT	REMARKS
FLOOR FINISH								
F1	LUXURY VINYL TILE (LVT)	INTERFACE	EVEN PATH	A05011 NATURAL		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
F2	CARPET - WALK-OFF	TBD	TBD	TBD				COORDINATE WITH OWNER TO MATCH EXISTING PRODUCT USED IN FACILITY
F3	CARPET TILE	INTERFACE	HAPTIC	PEPPER		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
F4	CARPET TILE	INTERFACE	HAPTIC	NATURAL		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
WALL BASE								
B1	RUBBER WALL BASE	TARKETT - JOHNSONITE	MILLWORK - MONUMENT 4" - MW-XX-S4	TG1 SNOWBOUND W		4" H	ABBEY HELLAND 816-678-8605	COMMON AREAS
B2	RUBBER WALL BASE	TARKETT - JOHNSONITE	QUARTER ROUND - QTR-XXX-A	TG1 SNOWBOUND W		4" H	ABBEY HELLAND 816-678-8605	COMMON AREAS
B3	RUBBER WALL BASE	TARKETT - JOHNSONITE	MILLWORK - MONUMENT 4" - MW-XX-S4	32 PEBBLE WG		4" H	ABBEY HELLAND 816-678-8605	BACK OF HOUSE COMMOM AREAS, CASEWORK TOEKICKS IN COMMON AREAS
WALL ACCESSORIES								
CG1	CORNER GUARD	TARKETT	CORNER GUARD 1-1/2"	TG1 SNOWBOUND W		1-1/2" X 1-1/2"	ABBEY HELLAND 816-678-8605	RE: FINISH FLOOR PLAN
WALL FINISH								
P1	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7551 GREEK VILLA	EGGSHELL		PETER KREMM 303-902-7239	TRIM MOLDING, NAIL POLISH DISPLAY
P2	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6246 NORTH STAR	EGGSHELL		PETER KREMM 303-902-7239	WALL PAINT - DISPENSARY
P3	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6249 STORM CLOUD	EGGSHELL		PETER KREMM 303-902-7239	WALL PAINT - SALON
P4	PAINT	SHERWIN WILLIAMS	EPOXY BASED PAINT	SW 7022 ALPACA	EGGSHELL		PETER KREMM 303-902-7239	WALL PAINT - RESTROOM
P5	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6247 KRYPTON	EGGSHELL		PETER KREMM 303-902-7239	WALL PAINT - RECEPTION, POS
P6	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7024 FUNCTIONAL GRAY	SEMI-GLOSS		PETER KREMM 303-902-7239	CASEWORK, MANICURE TABLE
P7	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7551 GREEK VILLA	SEMI-GLOSS		PETER KREMM 303-902-7239	DOORS, DOOR FRAMES
P8	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7006 EXTRA WHITE	FLAT		PETER KREMM 303-902-7239	CEILINGS AND SOFFITS
TILE								
T1	WALL TILE - CERAMIC	MARAZZI	ARTEZEN	CLASSIC BLUE		2" X 5" PICKET MOSAIC	NIKKI VAN DYNE 913-620-6098	LOBBY
T2	WALL TILE - GLASS	ANATOLIA TILE	BLISS - ELEMENT	CLOUD		PETAL GLASS MOSAIC	NIKKI VAN DYNE 913-620-6098	SALON
T3	WALL TILE - GLASS	MARAZZI	COASTAL EFFECTS	SAPPHIRE		5/8" X 2" SMALL PICKET MOSAIC	NIKKI VAN DYNE 913-620-6098	RESTROOM - ACCENT COLOR
SOLID SURFACE								
SS1	QUARTZ SOLID SURFACE	WILSONART		Q4051 TRAVANO			MANDY BRIDGES 913-484-2691	COUNTERTOPS - SALON, RECEPTION, POS
SS2	SOLID SURFACE	AVONITE		SILVER PEARL 8345			BROOKE COLE 859-538-4897	SALON PEDICURE STATION
PLASTIC LAMINATE								
HPL1	HIGH PRESSURE LAMINATE	WILSONART		LOFT OAK 7968K-60	MATTE		MANDY BRIDGES 913-484-2691	PEDICURE CHAIRS
HPL2	HIGH PRESSURE LAMINATE	WILSONART	KIMBALL INTERNATIONAL	TF TRUFFLE			CANDIE THURMAN 816-719-1520	ARROWOOD OCCAISONAL TABLES
HPL4	HIGH PRESSURE LAMINATE	WILSONART		CRYSTAL D388-60	MATTE		MANDY BRIDGES 913-484-2691	MANICURE TABLES
MEL	MELAMINE			WHITE				INTERIOR CASEWORK
HARDWOOD								
WD1	CHERRY HARDWOOD		KIMBALL INTERNATIONAL	TRUFFLE			CANDIE THURMAN 816-719-1520	ARROWOOD OCCAISONAL TABLES
TEXTILES / UPHOLSTERY								
TX1	UPHOLSTERY	ULTRAFABRICS	ULTRALEATHER	291-2508 RAIN DANCE			KIMBERLY DE JESUS 914-460-1726	PEDICURE STATION CHAIR
TX2	UPHOLSTERY	DESIGNTEX	DAPPLE	OCEANSIDE			KATHY ANDERSON 212-886-8100	RECEPTION CHAIR - DOUBLE
TX3	UPHOLSTERY	DESIGNTEX	BILLIARD CLOTH	SUNFLOWER			KATHY ANDERSON 212-886-8100	RECEPTION CHAIRS - SINGLE
TX4	UPHOLSTERY	DESIGNTEX	DAPPLE	COVE			KATHY ANDERSON 212-886-8100	MANICURE GUEST CHAIRS
TX6	UPHOLSTERY	SPIRIT MILLENIUM	GENUINE NAUGHYDE	US 421 OAK			KELLY POREMBA 331-225-0946	SALON STYLING CHAIRS, DRYER CHAIRS
CEILING FINISH								
ACT	ACOUSTIC CEILING TILE			WHITE				
HARDWARE								
HWD1	DRAWER / DOOR PULL	COSMAS	703-128ORB	OIL RUBBED BRONZE				
MTL1	METAL FINISH			OIL RUBBED BRONZE				

ROOM FINISH SCHEDULE

RM. NO.	ROOM NAME	FLOORS: FLOOR	FLOORS: WALL BASE	WALL FINISH: NORTH WALL	WALL FINISH: EAST WALL	WALL FINISH: SOUTH WALL	WALL FINISH: WEST WALL	CEILING FINISH	CASEWORK: COUNTERTOP	CASEWORK: BASE CABINET	CASEWORK: UPPER CABINET	CASEWORK: FULL HEIGHT	CASEWORK: SHELVING	REMARKS
101	RECEPTION	F1, F2, F3, F4	B1, B2, B3	P5	P5	P5	P5, T1	P8	SS1	P6	-	-	MEL	
102	DISPENSARY / STOR.	F1	B1, B2	P2	P2	P2	P2	ACT	-	-	-	-	-	EXISTING CASEWORK TO REMAIN
103	POS	F3	B1, B2	P5	-	P5	P5	P8	SS1	P6	-	-	MEL	
104	MECH.	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING TO REMAIN
105	RESTROOM	F1	B1, B2	T3	P4	P4	P4	ACT	-	-	-	-	-	
106	PEDICURE	F1	B1, B2	-	-	P3	P3	P8	-	-	-	-	-	
107	NAILS	F1	B1, B2	P3	-	-	P3	P8	-	-	-	-	-	
108	HAIR DRYERS	F1	B1, B2	P3	P3	-	-	P8	-	-	-	-	-	
109	SALON	F1	B1, B2, B3	P3, T2	P3	P3, T2	P3	P8	SS1	P6	-	P6	MEL	

GENERAL NOTE:

FINISH MATERIALS TO BE PROCURRED FROM MANUFACTURERS AS LISTED IN FINISH LEGEND. ALTERNATIVES OR SUBSTITUTIONS WILL NOT BE ACCEPTED UNLESS APPROVED BY OWNER AND MEETS OR EXCEEDS ESTABLISHED PRODUCT REQUIREMENTS.



F4 1ST FLOOR FINISH PLAN
1/4" = 1'-0"

GENERAL NOTES: INTERIOR FINISHES

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: G002 FOR ACCESSIBILITY GUIDELINES.
3. ALL FLOORS TO BE SEALED CONCRETE.
4. COORD. FINAL WALL FINISH SELECTIONS WITH OWNER. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION. COORDINATE CASEWORK FINISH SELECTIONS WITH OWNER.
6. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE 1MM PVC EDGEBAND AND ALL COUNTERTOPS TO RECEIVE 3MM PVC EDGEBANDING.
7. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP MATERIAL, U.N.O. COORDINATE FINISH SELECTION WITH OWNER.
8. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, U.N.O.
9. WALL BASE ALONG ALL GYP. WALLS. - COORD. FINISH WITH OWNER.
10. NO WALL BASE ALONG EXISTING BRICK WALL.
11. ALL GYP. CEILINGS AND CEILINGS O.T.S. TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
12. ALL EXPOSED STRUCTURE AND PLUMBING TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
13. COORDINATE FINAL TILE SELECTIONS WITH OWNER. ALL HEIGHT OF TILE FINISH ON WALLS TO BE COORDINATED WITH OWNER.
14. PROVIDE LEVEL 4 FINISH FOR ALL WALLS TYP.
15. COORDINATE ALL FINAL FINISH SELECTIONS WITH OWNER.

GENERAL NOTES: FLOOR FINISH PLANS

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND, FINISH SCHEDULE, AND FLOOR FINISH PLANS FOR SPECIFIC FLOOR FINISH INFORMATION AND LOCATIONS.
3. RE: FINISH DETAILS SHEET FOR ADDITIONAL FINISH AND FLOOR TRANSITION CONDITIONS.
4. FLOOR FINISHES SHOWN ARE FOR ACCENT CLARIFICATION ONLY. RE: FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
5. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.
6. FLOOR FINISH PATTERN SHALL BE CENTERED IN ROOM, UNLESS NOTED OTHERWISE.
7. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
8. ALL CLOSETS & ALCOVES W/OUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FLOOR FINISHES AS ADJOINING SPACES.
9. FLOOR FINISH MATERIAL AND/ OR PATTERN SHALL BE INSTALLED UNDER TOE KICKS OF CASEWORK/MILLWORK, UNDER OPEN COUNTERTOPS, AND UNDER EQUIPMENT.
10. FLOOR MATERIAL/ COLOR TRANSITIONS TO ALIGN WITH ROOM SIDE OF DOOR STOP, UNLESS NOTED OR SHOWN OTHERWISE.
11. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.

WALL FINISH / WALL PROTECTION PLANS:

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND & FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION & LOCATIONS.
3. ALL AUDITORIUM WALLS TO BE PRIMED PRIOR TO THE INSTALLATION OF WALL CARPET AND ACOUSTICAL PANELS.
4. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING FOR WALL PROTECTION ATTACHMENT. THIS INCLUDES, BUT IS NOT LIMITED TO: HANDRAILS,POSTER CASES, TV MONITORS, BATHROOM ACCESSORIES, FIRE EXTINGUISHERS AND EQUIPMENT. RE: ROUGH CARPENTRY SPECIFICATION SECTION FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE MANUFACTURER'S STANDARD ACCESSORY MOLDING OR TRIM FOR WALL PROTECTION ITEMS, UNLESS NOTED OTHERWISE.
6. IF WALL IS LESS THAN 18" WIDE DO NOT PROVIDE HANDRAIL. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM THE OPEN SWING OF A DOOR. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM A CORNER GUARD.

GENERAL NOTES – FURNITURE & EQUIPMENT PLANS:

1. RE: SHEET G001 - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: SHEET G002 - FOR TYPICAL MOUNTING HEIGHTS.
3. RE: SHEET A201 - FOR ENLARGED TOILET ROOM PLANS.
4. REFER TO ARTWORK PACKAGE FOR ARTWORK PLACEMENT PLANS AND SPEC SHEETS.
5. REFER TO I.O. BINDER FOR PRICING AND LOG CATEGORY DESIGNATIONS.

WALL FINISH LEGEND	
L	WALL PROTECTION CORNER GUARD (CG)
- - - - -	WALL TILE (T)

REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR SPECIFIC LOCATIONS AND MATERIALS.

FLOOR FINISH LEGEND	
	F1 LVT
	F2 CARPET TILE
	F3 CARPET TILE
	F4 CARPET TILE

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NUMBER A-2010038820
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05/03/23

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A501

ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

FINISH FLOOR PLAN, LEGEND, AND SCHEDULE

5/4/2023 10:36:38 AM

MECHANICAL LEGEND

SYMBOLS	DESCRIPTION
	EXHAUST GRILLE
	RETURN / TRANSFER GRILLE
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	RECTANGULAR SUPPLY ELBOW - UP / DOWN
	RECTANGULAR RETURN ELBOW - UP / DOWN
	RECTANGULAR EXHAUST ELBOW - UP / DOWN
	ROUND SUPPLY ELBOW - UP / DOWN
	ROUND RETURN ELBOW - UP / DOWN
	ROUND EXHAUST ELBOW - UP / DOWN
	MITERED ELBOW W/ TURNING VANES
	RADIUS ELBOW
	45° HIGH EFFICIENCY TAKEOFF FITTING
	GORED ELBOW
	MANUAL VOLUME DAMPER
FD	FIRE DAMPER
FSD	FIRE / SMOKE DAMPER
MD	MOTORIZED DAMPER
T	THERMOSTAT
S	REMOTE SENSOR
H	HUMIDISTAT

ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DX	DIRECT EXPANSION
GRD	GRILLE, REGISTER AND DIFFUSER
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
ETC	AND SO FORTH
EX	EXHAUST
°F	DEGREES FAHRENHEIT
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FT	FEET
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HZ	HERTZ
IN	INCHES
KW	KILOWATT
MBH	THOUSANDS OF BTU PER HOUR
MIN	MINIMUM
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
PH	PHASE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RH	RELATIVE HUMIDITY
SA	SUPPLY AIR
SH	SENSIBLE HEAT
SP	STATIC PRESSURE
TEMP	TEMPERATURE
TYP	TYPICAL
UC	UNDERCUT
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN

ANNOTATIONS	DESCRIPTION
#	SHEET NOTE NUMBER
	CONNECT TO EXISTING
X	REVISION TAG AND CLOUD
X / 1	EQUIPMENT MARK / EQUIPMENT NUMBER
X / # / #	DIFFUSER MARK / NECK SIZE / CFM
X / X	DETAIL, PLAN, OR DIAGRAM NUMBER / SHEET ON WHICH THE DETAIL APPEARS
TYP	INDICATES TYPICAL DETAIL
X / X	SECTION OR ELEVATION NUMBER / SHEET ON WHICH THE SECTION APPEARS
	DUCTWORK CONTINUATION

MECHANICAL GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. DUCTWORK AND PIPING SHALL BE ROUTED TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
3. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION DURING WORK. REPAIR ANY DAMAGE CAUSED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
5. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING IS SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND SHALL MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. FIELD VERIFY FINAL LOCATIONS TO INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
6. PROVIDE COMPLETE AND OPERATIONAL H.V.A.C. SYSTEM AS IT RELATES TO DRAWINGS AND SPECIFICATIONS.
7. PROVIDE MINIMUM 10 FEET SEPARATION BETWEEN OUTSIDE AIR INTAKES AND EXHAUST VENTS, PLUMBING VENTS, ETC.
8. OPERATION AND MAINTENANCE MANUALS FOR ALL MECHANICAL EQUIPMENT SHALL BE COMPILED INTO A THREE RING BINDER AND TURNED OVER TO BUILDING OWNER UPON PROJECT COMPLETION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASE AND PENETRATIONS INTENDED FOR DUCTWORK AND PIPING SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
10. COORDINATE LOCATION OF ROOF PENETRATIONS WITH THE EXISTING CONDITIONS AND ARCHITECTURAL DRAWINGS.
11. SEAL ALL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. FIREPROOF ALL PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
12. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
13. LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE FINAL CEILING AND LIGHTING LOCATIONS.
14. DUCTWORK CROSSING FIRE RATED WALL OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
15. PROVIDE FIRE AND/OR FIRE/SMOKE DAMPERS IN DUCTWORK AT CEILINGS AND WALLS AS REQUIRED BY BUILDING CODE AUTHORITY HAVING JURISDICTION. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE.
16. PROVIDE WALL AND/OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO ALL FIRE AND/OR FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 6"x6" AND SHALL BE INSTALLED WITH 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR A 6"x6" ACCESS DOOR.
17. THERMOSTATS AND HUMIDISTATS SHALL BE LOCATED AND SET BY MECHANICAL CONTRACTOR AND WIRED IN CONDUIT BY ELECTRICAL CONTRACTOR. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHTS SHALL BE 48" AFF TO MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS.
18. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH ANY WALL MOUNTED ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF ANY WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
19. ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS, AND GRILLES SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT.
20. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
21. RIGID DUCTWORK INSULATION: PROVIDE R-6 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-6 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED DUCTWORK. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE DIMENSIONS, SHEET METAL SIZES SHALL INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL DUCTWORK INSTALLED IN UNCONDITIONED SPACES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
22. FLEXIBLE DUCT WORK SHALL BE THERMAFLEX TYPE MKE, FLEXMASTER TYPE 8M, OR APPROVED EQUAL, SHALL BE LISTED UNDER 181 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL R-6 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORT TO AVOID SHARP BENDS AND SAGGING.

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RYAN BREWER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023

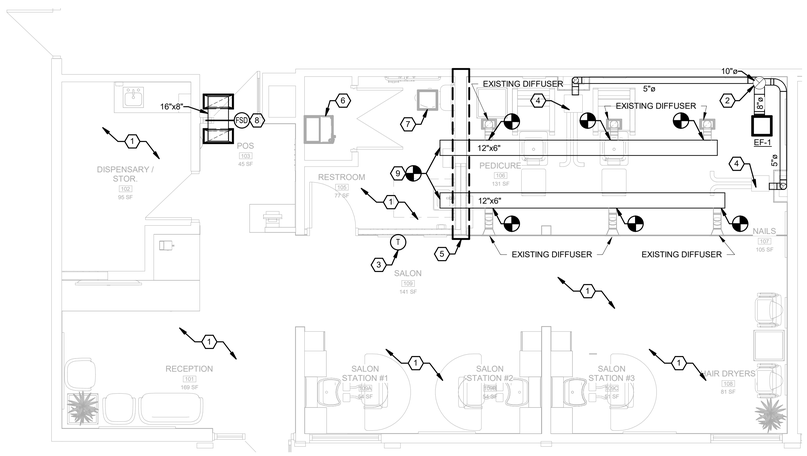
PROFESSIONAL SEAL

M101

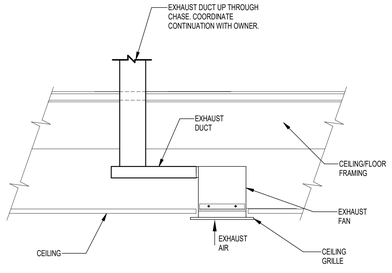
ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

MECHANICAL NOTES, SYMBOLS & ABBREVS.

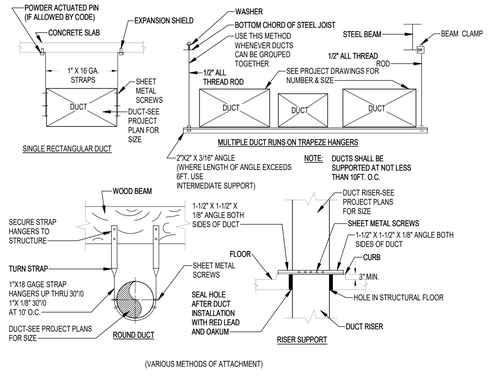
5/1/2023 2:15:17 PM



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



2 CEILING EXHAUST FAN DETAIL
SCALE: 12" = 1'-0"



3 LOW PRESSURE DUCT HANGER AND SUPPORT DETAIL
SCALE: 12" = 1'-0"

EXHAUST CALCULATIONS (2018 IMC)

SPACE	AREA (SQ.FT)	EA RATE (CFM/SQ.FT)	EA REQUIRED (CFM)
SALON	619	0.6	371
		TOTAL:	371

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	MOUNTING	VOLUME (CFM)	ESP (IN)	FAN RPM	DRIVE (BELT/DIRECT)	MOTOR WATTS	ELECTRICAL VOLTS/PH	WEIGHT (LBS)	NOTE
EF-1	GREENHECK	SP-A510-VG	CEILING	375	0.5	1197	DIRECT	84	120/1	40	1,2

NOTES:
1 PROVIDE WITH BACK DRAFT DAMPER AND SPEED CONTROLLER FOR BALANCING. COORDINATE GRILLE FINISH WITH OWNER.
2 FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. PROVIDE WITH PLUG TYPE DISCONNECT.

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET M101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. PROVIDE TURNING VANES FOR ALL SUPPLY DUCT ELBOWS.
3. CONTRACTOR SHALL VERIFY EXACT CONDITIONS OF EXISTING SPACE AND COORDINATE EXACT DUCT ROUTING WITH EXISTING CONDITIONS AND CONSTRAINTS.
4. FIRE DAMPERS SHALL BE PROVIDED AT ANY DUCTWORK PENETRATION OF A FIRE RATED ASSEMBLY.

KEYED NOTES:

1. EXISTING SUPPLY DIFFUSERS AND RETURN GRILLES IN THIS AREA TO REMAIN. FIELD VERIFY EXACT LOCATIONS.
2. PROVIDE CHASE FOR 10" ROUND EXHAUST DUCT UP TO SECOND FLOOR. COORDINATE WITH OWNER AND ABOVE TENANTS FOR EXACT ROUTING AND TERMINATION LOCATION.
3. RELOCATE EXISTING THERMOSTAT TO LOCATION SHOWN.
4. PROVIDE HEALTHY AIR MODEL HA-5CE-02 EXHAUST SOURCE CAPTURE FAN-FILTER UNIT. ROUTE 5"Ø EXHAUST DUCT AND CONNECT TO EXHAUST DUCTWORK ABOVE CEILING. WHEN IN USE, INLET HOSES SHALL BE LOCATED NOT LESS THAN 12" HORIZONTALLY AND VERTICALLY FROM THE POINT OF CHEMICAL APPLICATION AT NAIL STATION. BALANCE EXHAUST RATE OF EACH HOSE TO MINIMUM 50 CFM.
5. INTENT IS TO PROVIDE NEW SUPPLY DUCTWORK ROUTED OVER NEW STRUCTURAL BEAM. CONNECT EXISTING BRANCH DUCTWORK FROM EXISTING DIFFUSERS TO NEW SUPPLY DUCT AS INDICATED. FIELD VERIFY EXACT LOCATION.
6. EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK SERVING SPACE TO REMAIN. BALANCE OUTDOOR AIRFLOW TO 425 CFM. IF EXISTING UNIT CANNOT ACHIEVE OUTDOOR AIRFLOW INDICATED, CONTACT ENGINEER IMMEDIATELY.
7. EXISTING RESTROOM EXHAUST FAN TO REMAIN.
8. PROVIDE 24"x12" CEILING TRANSFER GRILLES ON BOTH SIDES OF WALL. TITUS MODEL 350FL OR APPROVED EQUAL. PROVIDE COMBINATION FIRE/SMOKE DAMPER AT PENETRATION OF RATED WALL.
9. CONNECT NEW SUPPLY DUCTWORK TO SUPPLY MAIN. FIELD VERIFY EXACT LOCATION.

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REVISION DATES:

STATE OF MISSOURI
RYAN BREWER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023
PROFESSIONAL SEAL

M201

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

MECHANICAL FLOOR PLAN

5/2/2023 1:26:59 PM

15000 - BASIC MECHANICAL REQUIREMENTS

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 15.

READ THE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL DIVISIONS OF WORK AND COORDINATE AND THE WORK OF SUBCONTRACTORS WITH ALL DIVISIONS OF WORK. PROVIDE SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.

SCHEDULE THE COMPLETION AND INSPECTION OF WORK AND THE WORK OF SUBCONTRACTORS WORK TO COMPLY WITH THE SCHEDULE AND THE PROJECT COMPLETION DATE.

VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE RESPONSIBILITY IN PERFORMANCE OF WORK.

READ ALL RELEVANT DOCUMENTS, BECOME FAMILIAR WITH THE JOB, SCOPE OF WORK, TYPE OF GENERAL CONSTRUCTION, AND THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. ALSO UNDERSTAND THE PURPOSE FOR WHICH THESE DOCUMENTS HAVE BEEN PREPARED AND BECOME COGNIZANT OF ALL THE DETAILS INVOLVED. COORDINATE WORK WITH THAT OF OTHERS.

DEFINITIONS:

FURNISH - PURCHASE AND DELIVER TO PROJECT SITE COMPLETE WITH EVERY NECESSARY APURTENANCE AND SUPPORT.

INSTALL - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT.

PROVIDE - FURNISH AND INSTALL

GENERAL REQUIREMENTS

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OTHERS SHALL BE PROVIDED. CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE ARCHITECT-ENGINEER, AS REQUIRED.

THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF CONTRACT.

WHERE THE DRAWINGS OR SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODES OR THE CONTRACT CRITERIA, PROVIDE THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS AS DESIGNED AND DESCRIBED ON THESE DRAWINGS, UNLESS SPECIFICALLY NOTED OTHERWISE.

ALL MECHANICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

ALL WORK SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES.

UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW, UNDERWRITERS LABORATORIES LISTED AND LABELED AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.

CODES

ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, THE STATE'S, COUNTY'S, CITY'S MEDICAL CARE AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED BY THE OWNER.

LICENSES, PERMITS, COMMISSIONING, INSPECTIONS & FEES.

OBTAIN AND PAY FOR ALL LICENSES, PERMITS, COMMISSIONING, INSPECTIONS, AND FEES REQUIRED OR RELATED TO THIS WORK.

PROVIDE TO THE OWNER-ARCHITECT A COMMISSIONING PLAN, PRELIMINARY COMMISSIONING REPORT, FINAL COMMISSIONING REPORT, AND CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS.

WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY ARCHITECT-ENGINEER PRIOR TO BID THROUGH SHOP DRAWING SUBMITTAL PROCESS, FOR ACCEPTANCE PRIOR TO INSTALLATION. ANY CHANGES TO ELECTRICAL SERVICE, STRUCTURAL FRAMING, ETC. OR ANY OTHER MODIFICATION THAT IS REQUIRED BY THE USE OF ALTERNATE EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND SHALL INCLUDE ALL COSTS IN BID FOR THE REQUIRED CHANGES. THE USE THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT NO EXPENSE TO THE OWNER.

GUARANTEE ALL MATERIALS AND WORK PROVIDED UNDER THIS CONTRACT AND MAKE GOOD, REPAIR OR REPLACE AT NO EXPENSE TO THE OWNER, ANY DEFECTIVE WORK, MATERIAL, OR EQUIPMENT WHICH MAY BE DISCOVERED WITHIN A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION. EXTENDED WARRANTIES ARE AS SPECIFIED WITH INDIVIDUAL EQUIPMENT.

QUALITY ASSURANCE

INDUSTRY STANDARDS AND CODES: UNLESS MODIFIED BY THESE SPECIFICATIONS, THE DESIGN, MANUFACTURER, TESTING AND METHODS OF INSTALLING ALL MATERIALS, APPARATUS AND EQUIPMENT SHALL CONFORM TO THE FOLLOWING:

1. ARI CODE FOR REFRIGERATION APPARATUS
2. ANSI B9.1 SAFETY CODE FOR MECHANICAL REFRIGERATION
3. STANDARDS OF NATIONAL FIRE PROTECTION ASSOCIATION
4. SMACNA
5. ASHRAE

RECORD DRAWINGS

MAINTAIN ONE COPY OF DRAWINGS ON THE JOB SITE TO RECORD DEVIATIONS FROM CONTRACT DRAWINGS. SUCH AS: LOCATION OF CONCEALED PIPING VALVES AND DUCTS, REVISIONS, ADDENDUMS, AND CHANGE ORDERS, AND SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS. APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.

AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, MAKE ANY FINAL CORRECTIONS TO DRAWINGS AND CERTIFY THE ACCURACY OF EACH PRINT BY SIGNATURE THEREON. A SET OF REPRODUCIBLE DRAWINGS ALONG WITH ONE SET OF BLUELINES OF THE MOST RECENT SET OF DRAWINGS WITH TEMPERATURE CONTROL DRAWINGS INCLUDED SHALL BE DELIVERED TO THE ARCHITECT UPON COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

DISCREPANCIES IN DOCUMENTS

DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. WHERE DRAWINGS, EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE UNCLEAR, ADVISE THE ARCHITECT-ENGINEER IN WRITING OF VARIATIONS TO CONTRACT DOCUMENTS PRIOR TO SUBMISSION OF BID. OTHERWISE, ARCHITECT-ENGINEER'S INTERPRETATION OF CONTRACT DOCUMENTS OR CONDITIONS SHALL BE FINAL WITH NO ADDITIONAL COMPENSATION PERMITTED.

PHASING REQUIREMENTS

INCLUDE IN BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE OPERATING PHASE OF THE PROJECTS HVAC, PLUMBING AND SPRINKLER SERVICE IN OPERATION. IF APPLICABLE, SCHEDULE IN WRITING WITH ARCHITECT ONE WEEK PRIOR TO ANY SHUT DOWN OF THE HVAC, PLUMBING OR FIRE PROTECTION SYSTEMS.

DEMOLITION

COORDINATE THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY OTHER. COORDINATE ANY EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.

VERIFY SCOPE OF AND THE REMOVAL OF ALL EXISTING FIRE PROTECTION, PLUMBING FIXTURES, PIPING, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FANS, ETC. AND ASSOCIATED ROOF CURBS NOT TO BE REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE. VERIFY ALL PRESUMED ABANDONED EQUIPMENT, PIPES, DUCTWORK, AND EQUIPMENT PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEOUS ITEMS IN THE SPACE OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF WALL FLOOR PATCHED/REPAIRED TO MATCH EXISTING STRUCTURE. EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. ABANDONED PIPING AND/OR DUCTWORK MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.

CUTTING AND PATCHING

PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SPECIFICATION. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OR ARCHITECT.

PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE ARCHITECT.

EXISTING UTILITIES, ETC. THAT ARE DAMAGED DURING THE CONSTRUCTION PERIOD, WHETHER OR NOT DUE TO NEGLIGENCE SHALL BE REPAIRED OR REPLACED AND LEFT IN A CONDITION SUITABLE TO THE ARCHITECT.

SLEEVES

PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. COORDINATE THROUGH THE ARCHITECT ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.

ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.

SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.

HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT DUCTWORK OR PIPING, INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, AND OTHER EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO LANDLORD CRITERIA.

HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPLIT CIRCLE GALVANZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION.

HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

PROVIDE SWAY AND SEISMIC BRACING WHERE REQUIRED BY CODE.

JOB CONDITIONS
PROTECT MATERIALS, APPARATUS AND EQUIPMENT FROM DAMAGE, MOISTURE, DIRT, DEBRIS AND WORK OF OTHER TRADES.

OPERATION MANUALS AND INSTRUCTIONS

PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS TO OWNER AT THE COMPLETION OF THE PROJECT. SUBMIT COPIES TO ARCHITECT.

SCHEDULE A MEETING WITH THE OWNER'S REPRESENTATIVE AT THE SITE TO PROVIDE DETAILED INFORMATION ON THE OPERATING AND MAINTENANCE OF EQUIPMENT.

SUBMITTALS
SUBMIT WITHIN THIRTY (30) DAYS AFTER THE DATE OF NOTICE TO PROCEED AND BEFORE PURCHASING ANY MATERIALS OR EQUIPMENT, SUBMIT TO THE ARCHITECT FOR REVIEW, A COMPLETE LIST OF ALL MATERIALS INCORPORATED IN THE WORK. THIS LISTING SHALL BE ARRANGED BY THE ORDER OF OCCURRENCE IN THE SPECIFICATIONS. FOLLOWING REVIEW OF THE DRAWING NOT SPECIFICALLY INCLUDED IN THE SPECIFICATIONS.

AFTER THE LIST HAS BEEN PROCESSED BY THE ARCHITECT, SUBMIT COMPLETE SHOP DRAWINGS AND PRODUCT DATA OF ALL EQUIPMENT. THESE SUBMITTALS SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS AFTER THE PROCESSING DATE OF THE ORIGINAL SUBMITTAL LIST. SUBMISSIONS SHALL BE MADE EARLY ENOUGH IN PROJECT TO ALLOW FOR (10) WORKING DAYS FOR REVIEW BY ARCHITECT-ENGINEER WITHOUT CAUSING DELAYS OR CONFLICTS IN THE PROJECT'S PROGRESS.

ALL SUBMITTALS SHALL BE COMPLETE; NO CONSIDERATION WILL BE GIVEN TO PARTIAL SUBMITTALS, UNLESS NOTED OTHERWISE BY ARCHITECT. EACH ITEM SHALL HAVE A COVER PAGE STATING PROJECT, SPECIFICATION AND PARAGRAPH REFERENCE NUMBER, OR DRAWING REFERENCE NUMBER, AND SCHEDULED EQUIPMENT IDENTIFICATION NUMBER, IF APPLICABLE.

THE REVIEW OF SUBMITTALS DOES NOT RELIEVE RESPONSIBILITY OF SHOP DRAWING ERRORS IN DETAILS, SIZES, QUANTITIES, WIRING DIAGRAM ARRANGEMENTS AND DIMENSIONS WHICH DEVIATE FROM THE SPECIFICATIONS, CONTRACT DRAWINGS AND/OR JOB CONDITIONS AS THEY EXIST.

IF APPARATUS OR MATERIALS ARE SUBSTITUTED FOR THOSE SPECIFIED UNDER THIS SECTION, AND SUCH SUBSTITUTIONS NECESSITATE CHANGES IN OR ADDITIONAL CONNECTIONS, PIPING SUPPORTS OR CONSTRUCTIONS, SAME SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ASSUME COST AND ENTIRE RESPONSIBILITY THEREOF. ARCHITECT'S PERMISSION TO MAKE SUCH SUBSTITUTION SHALL NOT RELIEVE FULL RESPONSIBILITY FOR WORK.

TEST AND BALANCE REPORT: SUBMIT AT FINAL INSPECTION OPERATION AND MAINTENANCE MANUALS: SUBMIT COPIES IN COMPLIANCE WITH SECTION, OPERATION AND MAINTENANCE MANUALS

15400 - HEATING VENTILATION AND & AIR CONDITIONING

PRODUCTS:
ALL MATERIALS AND EQUIPMENT SHALL BE NEW. SYSTEMS SHALL FUNCTION CORRECTLY AS A WHOLE, AND IN ALL ITS PARTS, UP TO THE SPECIFIED CAPACITY. SYSTEMS OR DEVICES FAILING TO MEET PERFORMANCE REQUIREMENTS SHALL BE REPLACED, ALTERED OR REPAIRED AS REQUIRED TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS. WORK DAMAGED OR MARRED BY SUCH REPLACEMENTS, ALTERATIONS, OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITIONS, AT NO ADDITIONAL COST TO THE OWNER. WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED, THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. BEFORE ORDERING EQUIPMENT, THE PHYSICAL DIMENSIONS OF THE UNITS SHALL BE CHECKED IN THE SPACES ALLOTTED ON THE DRAWINGS. INSERTS, PIPE SLEEVES, AND SUPPORTS OF AIR CONDITIONING EQUIPMENT SHALL BE PROVIDED AS SPECIFIED. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AT THE PROPER TIME FOR SETTING OR EMBEDMENT SO AS TO CAUSE NO DELAY. DUCTWORK AND EQUIPMENT ASSEMBLIES SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC. ADDITIONAL DUCTWORK AND APPURTENANCES REQUIRED FOR PROPER OPERATION OF EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

MANUFACTURER'S NAMES AND CATALOG NUMBERS
SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS NECESSARILY AN "OFF THE SHELF" ITEM; REQUIREMENTS FOR SPECIFIC FINISHES, MATERIALS OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURER'S STANDARDS. ASCERTAIN THAT SUCH MODIFICATIONS ARE FULLY CONSIDERED.

DIAGRAMS, NAMEPLATES AND LABELS
EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS AND CATALOG NUMBER ON A PLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF A DISTRIBUTING AGENT WILL NOT BE ACCEPTED. ALL PIECES OF EQUIPMENT, VALVES, STARTERS, DISCONNECTS, AND ALL PNEUMATIC AND ELECTRIC CONTROL INSTRUMENTS AND APPARATUS SHALL BE IDENTIFIED WITH 1/16" THICK BLACK LAMINATED PLASTIC NAMEPLATES, WITH 3/16" HIGH WHITE LAMINATED LETTERS. SIMILAR AND LIKE EQUIPMENT SHALL BE DESIGNATED WITH NUMERICAL SUFFIX (EXAMPLE: THERMOSTAT, T-1). THE NAMEPLATE IDENTIFICATIONS SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. PROVIDE A LABEL FOR THE MECHANICAL SYSTEM STATING: (NAME, ADDRESS AND PHONE NUMBER OF CONTRACTOR) LETTERS SHALL BE 1/4" HIGH AND LOCATED IN A CONSPICUOUS PLACE NEAR THE HVAC EQUIPMENT.

EXECUTION

INSTALLATION AND WORKMANSHIP
THE WORK SHALL BE PERFORMED BY QUALIFIED MECHANICS. ALL MATERIALS, APPARATUS AND EQUIPMENT SHALL BE INSTALLED IN NEAT, WORKMANLIKE MANNER. MATERIALS, DEVICES OR EQUIPMENT WHICH, IN THE OPINION OF THE ARCHITECT-ENGINEER, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER. THE WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES. WHERE THE WORK IS DEPENDENT UPON WORK OF OTHER TRADES OR WORK ALREADY IN PLACE, SUCH OTHER WORK AND WORK IN PLACE SHALL BE EXAMINED AND SHALL BE IN PROPER CONDITION AND STATE OF COMPLETION BEFORE CONTINUING THE INSTALLATION. THE INSTALLATION OF WORK SHALL, IN GENERAL, BE AS HIGH AS POSSIBLE AND LOCATED IN ACCORDANCE WITH THE DRAWINGS. DUCTWORK INDICATED SHALL BE FOLLOWED AS ACCURATELY AS POSSIBLE. ANY NECESSARY DEVIATIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT-ENGINEER. PROVIDE DRAWINGS SHOWING PROPOSED CHANGES. APPROVAL IS REQUIRED BEFORE CHANGES SHALL TAKE EFFECT.

CUTTING AND PATCHING
LAYOUT OPENINGS FOR CUTTING BY OTHER TRADES AS REQUIRED. CUTTING OF STEEL, CONCRETE OR ANY OTHER STRUCTURAL PART MUST BE APPROVED IN WRITING BY ARCHITECT-ENGINEER PRIOR TO CUTTING.

WATERPROOFING
DO NOT CUT OR PENETRATE WATERPROOFED SURFACES, OR WATERPROOFING MEMBRANES, WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY ARCHITECT-ENGINEER.

PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.

ELECTRICAL WORK
POWER WIRING FROM PANELS TO MOTOR CONTROLLERS AND FROM CONTROLLERS TO MOTORS IS SPECIFIED IN DIVISION 16. MOTOR STARTERS NOT SPECIFIED TO BE INCLUDED WITH THE MOTORS FROM THE FACTORY ARE SPECIFIED IN DIVISION 16. SUBMIT WIRING DIAGRAMS FOR APPROVAL AND FURNISH APPROVED DIAGRAMS TO THE ELECTRICAL CONTRACTOR FOR COORDINATION. ELECTRICAL CONTROL WIRING CONSISTING OF TEMPERATURE CONTROLLERS, PUSH BUTTONS, INTERLOCKS IN MOTOR CONTROLLERS, AND LIKE ITEMS IS SPECIFIED IN THE CONTROL SECTION(S) IN THIS DIVISION. FURNISH ALL EQUIPMENT WITH COMPLETE INTERNAL CONTROL WIRING. ELECTRICAL WORK SPECIFIED IN THIS DIVISION SHALL CONFORM TO APPLICABLE PROVISIONS OF DIVISION 16. ALL CONTROL WIRING SHALL BE IN CONDUIT. PROVIDE WIRING CONFORMING TO CHARACTERISTICS SHOWN ON ELECTRICAL DRAWINGS.

ACCESS DOORS (ACCESS PANELS)
PROVIDE ACCESS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, CONTROLS, DAMPERS, EQUIPMENT AND LIKE ITEMS. PROVIDE ACCESS DOORS (ACCESS PANELS) CONFORMING TO REQUIREMENTS OF DIVISION 8 SPECIFICATIONS. PANELS SHALL BE LOCATED TO MAKE ALL ITEMS EASILY ACCESSIBLE.

CLEAN UP
REFER TO GENERAL CONDITIONS FOR CLEAN-UP. CLEAN ALL MATERIALS AND EQUIPMENT OF DIRT, DUST, PAINT, SPOTS AND STAINS, SOIL MARKS AND OTHER FOREIGN MATTER.

FINAL INSPECTION
GIVE NOTICE TO THE ARCHITECT-ENGINEER THAT THE WORK IS READY FOR FINAL INSPECTION.
1. SUBMIT TEST AND BALANCE REPORT AND COMPLETE REQUIREMENTS AS NOTED.
2. SUBMIT LETTER FROM CONTROL MANUFACTURER CERTIFYING THAT CONTROLS HAVE BEEN INSTALLED FOR OPERATION AND CALIBRATION, AND THAT THE SYSTEM IS OPERATING AS INTENDED.

FURNISH NECESSARY MECHANICS TO OPERATE SYSTEM, MAKE NECESSARY ADJUSTMENTS AND ASSIST WITH FINAL INSPECTION.

INSTRUCTION OF OWNERS' OPERATING PERSONNEL
INCLUDE THE COST OF THE SERVICES OF QUALIFIED INSTRUCTOR(S) TO INSTRUCT THE OWNERS OPERATING PERSONNEL IN THE OPERATION, ADJUSTMENT, CARE AND MAINTENANCE OF ALL HVAC EQUIPMENT AND SYSTEMS. INSTRUCTION SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER AND AFTER ALL HVAC EQUIPMENT AND SYSTEMS ARE INSTALLED, COMPLETE, TESTED AND OPERATING TO SPECIFIED REQUIREMENTS. NOTIFY THE ARCHITECT-ENGINEER WHEN INSTRUCTIONS WILL BE GIVEN. QUALIFICATIONS OF INSTRUCTORS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT-ENGINEER AND MANUFACTURER. ADDITIONAL REQUIREMENTS CONCERNING OPERATION AND MAINTENANCE OF MECHANICAL EQUIPMENT AND SYSTEMS MAY BE SPECIFIED IN OTHER SECTIONS. TWO COPIES OF ACKNOWLEDGMENT OF ALL REQUIRED INSTRUCTIONS TO OWNER'S OPERATING PERSONNEL, SIGNED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, SHALL BE SUBMITTED TO THE ARCHITECT-ENGINEER PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT. AN ADDITIONAL COPY OF THIS ACKNOWLEDGMENT IS REQUIRED IN EACH COPY OF OPERATION AND MAINTENANCE MANUALS REQUIRED IN THE SECTION, OPERATION AND MAINTENANCE MANUALS.

OPERATION AND MAINTENANCE MANUALS

FURNISH COPIES OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE ARCHITECT ENGINEER, FOR APPROVAL AND FOR THE OWNER, ON ALL EQUIPMENT AND SYSTEMS.
MANUALS SHALL CONTAIN A TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHONE NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL SUBCONTRACTOR, RELATED CONTRACTORS AND MATERIAL AND EQUIPMENT SUPPLIERS.

A COPY OF ACKNOWLEDGMENT OF INSTRUCTION TO THE OWNER'S OPERATING PERSONNEL IN THE OPERATION OF ALL MECHANICAL EQUIPMENT AND SYSTEMS, SIGNED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE. TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNER'S PERSONNEL DESCRIBING HOW TO STOP AND START EACH PIECE OF EQUIPMENT, HOW TO SET THE TEMPERATURE CONTROL SYSTEM FOR NORMAL OPERATION AND NORMAL RESTARTING PROCEDURES, CAUTION AND WARNING NOTICES. APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTENANCE BOOKLET FOR EACH ITEM OF MATERIAL AND EQUIPMENT FURNISHED UNDER DIVISION 15000. RECORD DRAWINGS OF ALL SYSTEMS INCLUDING ELECTRICAL AND CONTROL DIAGRAMS. TEST AND BALANCE REPORT. COPIES OF CERTIFICATES OF INSPECTION. GUARANTEES, INCLUDING EXTENDED GUARANTEES.

DELIVER THE MANUALS TO THE OWNER PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT.

HVAC/HYDRONIC PIPING

CONDENSATE DRAIN
PROVIDE CONDENSATE DRAINS FOR ALL AIR CONDITIONING UNITS AND PIPE AS DENOTED ON DRAWINGS. CONDENSATE DRAIN PIPING SHALL BE INSTALLED WITH TRAP AT THE COIL CONNECTION AND SHALL HAVE A MINIMUM SEAL DEPTH EQUAL TO THE RESPECTIVE AIR HANDLING UNIT FAN STATIC PRESSURE. DEPTH SHALL BE A MINIMUM OF 2".

CONDENSER WATER PIPING
PROVIDE SUPPLY AND RETURN CONDENSER WATER PIPING AS SHOWN ON DRAWINGS AND SPECIFIED HEREIN. HYDRONIC PIPING FOR CHILLED WATER, CONDENSER WATER AND/OR HEATING WATER SHALL BE ASTM A-120, SCHEDULE 40, ERW, BLACK STEEL PIPE WITH PLAIN ENDS. INSTALL STEEL PIPE WITH WELDED JOINTS WHERE PIPE IS 2-1/2 INCH AND LARGER. INSTALL STEEL PIPE WITH THREADED JOINTS AND FITTINGS FOR 2 INCH AND SMALLER PIPE. PROVIDE DIELECTRIC UNIONS BETWEEN DISSIMILAR METALS. ALL PIPING SHALL BE IN STRICT CONFORMANCE WITH ASTM, AND ASA, WHICHEVER IS MOST STRINGENT. UNIONS OR FLANGES MUST BE USED AT EQUIPMENT CONNECTIONS WHERE SERVICE OR REMOVAL MAY BE REQUIRED.

ALL PIPING AND EQUIPMENT SHALL BE PRESSURE TESTED WITHOUT LEAKAGE AT A MINIMUM PRESSURE OF 125 PSI.

ALL HYDRONIC PIPING AND EQUIPMENT CONNECTED TO THE HVAC PIPING SYSTEM SHALL BE CLEANED AND FLUSHED. REMOVE, CLEAN, AND REPACE STRAINER SCREENS. FILL TENANT'S SYSTEM WITH DOMESTIC WATER OR PER LANDLORD'S REQUIREMENTS AND VENT ALL PIPING AND EQUIPMENT PRIOR TO CONNECTION TO THE LANDLORD'S SYSTEM. DO NOT FILL SYSTEM WITH WATER FROM THE BASE BUILDING SYSTEM UNLESS SPECIFICALLY INSTRUCTED TO DO SO.

PRIOR TO CONNECTION TO THE BASE BUILDING SYSTEM, OBTAIN WRITTEN CONFIRMATION THAT ALL TESTING, FLUSHING, AND PROPER FILLING OF THE SYSTEM HAS BEEN COMPLETED IN ACCORDANCE TO THE BASE BUILDING REQUIREMENTS AND THAT THE SYSTEM IS READY TO BE CONNECTED TO THE BASE BUILDING SYSTEM.

VALVES
GATE VALVES (2-INCH AND SMALLER): CLASS 150, BODY AND UNION BONNET OF ASTM B-62 CAST BRONZE WITH THREADED OR SOLDER ENDS, INTEGRAL SEAT, RENEWABLE SOLID BRONZE WEDGE DISC, RISING STEM, SCREWED BONNET AND RE-PACKABLE UNDER PRESSURE. BALL VALVES ARE ACCEPTED AS AN EQUAL SUBSTITUTION.

GATE VALVES (2-1/2 INCH AND LARGER): CLASS 125 CAST IRON BODY, RENEWABLE BRONZE SEAT AND DISC, OUTSIDE SCREW AND YOKE, RISING STEM, FLANGED ENDS, AND RE-PACKABLE UNDER PRESSURE.

SWING CHECK VALVES (2-INCH AND SMALLER): CLASS 150, CAST BRONZE BODY AND CAP CONFORMING TO ASTM B 62 WITH INTERNAL SWING, Y-PATTERN, RENEWABLE BRONZE DISC, AND HAVING THREADED OR SOLDERED ENDS.

SWING CHECK VALVE

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE AHJ AND ALL LOCAL & STATE CODES.
2. DO NOT SCALE FROM THESE DRAWINGS.
3. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS.
5. ALL JUNCTION BOXES SHALL HAVE A COVER.
6. COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED.
7. ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 2#12,1#12EG,3/4"C. UNLESS NOTED OTHERWISE. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
8. ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT BE SMALLER THAN 3/4"C. UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.
10. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT GROUND.
11. ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER (INDEPENDENT OF THE SUSPENDED CEILING) WITH 12 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES.
12. ELECTRICAL DEVICE MOUNTING HEIGHTS, UNO:

PANELBOARDS	78" AFF TO TOP OF PANEL
SWITCHES	48" AFF TO CENTER OF SWITCH
RECEPTACLES	18" AFF TO CENTER OF RECEPTACLE
TELE/DATA OUTLETS	18" AFF TO CENTER OF RECEPTACLE

13. ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO SCALE ON THE FLOOR PLANS.
14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.
15. ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION. RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF ADHESIVE LABEL.
16. PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABEL (BLACK W/ WHITE LETTERING).
17. PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
A	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)
A	DOWNLIGHT WITH EMERGENCY BACKUP (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)
A	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)
A	2X4 LIGHT FIXTURE WITH EMERGENCY BACKUP (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)
X	EMERGENCY EXIT SIGN (ARROW(S) AS INDICATED, SHADE INDICATES FACE, LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)
$2	WALL SWITCH - DESIGNATIONS AS FOLLOWS: 2=2 POLE 4=4-WAY 3=3-WAY K=KEY OPERATED M=MOTOR RATED SWITCH TS=TIME SWITCH a,b,c=INDICATES SWITCHING SCHEME TO RELATED FIXTURES
S1	OCCUPANCY SENSOR SWITCH (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)
LC 1	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)
PP SC	SWITCHING POWER PACK (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)
PP DC	DIMMING POWER PACK (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)
S3	CEILING MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)
	SIMPLEX RECEPTACLE - NEMA 5-20R
	DUPLEX RECEPTACLE - NEMA 5-20R
	DUPLEX RECEPTACLE - NEMA 5-20R MOUNTED 6" ABOVE FINISHED COUNTER (VERIFY EXACT HEIGHT PRIOR TO ROUGH-IN)
	SPLIT RECEPTACLE - NEMA 5-20R TOP OUTLET WIRED HOT, BOTTOM OUTLET SWITCHED.
	QUAD RECEPTACLE - NEMA 5-20R
	QUAD RECEPTACLE - NEMA 5-20R MOUNTED 6" ABOVE FINISHED COUNTER (VERIFY EXACT HEIGHT PRIOR TO ROUGH-IN)
	CEILING MOUNTED DUPLEX RECEPTACLE - NEMA 5-20R
	SPECIAL PURPOSE RECEPTACLE - REFER TO PLANS FOR MORE INFORMATION
	JUNCTION BOX
FB	WIREMOLD RFB4 SERIES FLOOR BOX, OR EQUAL, W/ (2) DUPLEX RECEPTACLES, COORDINATE DATA/TELECOM REQUIREMENTS WITH OWNER PRIOR TO ORDERING.
PX	WIREMOLD RC4 SERIES 4" POKE-THRU, OR EQUAL, W/ CQM75 ADAPTER, (2) DUPLEX RECEPTACLES & (4) RJ45 PORTS. COORDINATE DATA/TELECOM REQUIREMENTS WITH OWNER PRIOR TO ORDERING.
	DATA, TELEPHONE, OR COMBINATION TELE/DATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING
	ELECTRICAL PANELBOARD
	ELECTRICAL SWITCHBOARD/DISTRIBUTION PANEL
	DISCONNECT SWITCH 60/3 = 60 AMP SWITCH, 3 POLE 60/3/40 = 60 AMP SWITCH, 3 POLE, 40 AMP FUSE
	CIRCUIT DESIGNATIONS ARE AS FOLLOWS: • LA-1 SINGLE PHASE CIRCUIT TO PANEL 'LA', CIRCUIT #1 WITH (1) HOT/SWITCH LEG, (1) NEUTRAL AND (1) GROUND. • LA-3/5 SINGLE PHASE CIRCUIT TO PANEL 'LA', CIRCUITS #3,5 WITH (2) HOT CONDUCTORS AND (1) GROUND. PROVIDE NEUTRAL AS REQUIRED. • LA-7/9/11 THREE PHASE CIRCUIT TO PANEL 'LA', CIRCUITS #7,9,11 WITH (3) HOT CONDUCTORS AND (1) GROUND. PROVIDE NEUTRAL AS REQUIRED. REFER TO PANELBOARD SCHEDULES FOR ALL WIRE SIZES. ALL CONDUITS SHALL HAVE AN EGC.

SYMBOL	DESCRIPTION
	NOTE: LOW VOLTAGE DEVICES TO BE ROUGH-IN ONLY. PROVIDE EACH ROUGH-IN WITH APPROPRIATE SIZE JUNCTION BOX AND 3/4" CONDUIT MINIMUM STUBBED INTO ACCESSIBLE CEILING SPACE ABOVE, UNO ON PLANS.
	TELEPHONE OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
AV	AUDIO/VISUAL OUTLET
B	BELL
	PUSH BUTTON
	SPEAKER
TV	TELEVISION OUTLET
V	VOLUME CONTROL
	CAMERA
	WIRELESS ACCESS POINT
CR	CARD READER

ELECTRICAL ABBREVIATIONS

A	AMPERE
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CURRENT
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
BRKR	BREAKER
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CU	COPPER
EC	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EX	EXISTING
G	GROUND
GFI	GROUND-FAULT CIRCUIT INTERRUPTER
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT
HACR	HEATING, AIR CONDITIONING, AND REFRIGERATION
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HZ	HERTZ (CYCLE PER SECOND)
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
K	KELVIN
KCMIL	ONE THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LED	LIGHT-EMITTING DIODE
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NL	NIGHTLIGHT
P	POLE
PART	PARTIAL CIRCUIT
PC	PHOTOCELL
PNLBD	PANELBOARD
RCPT	RECEPTACLE
RR	RESTROOM
RTU	ROOF TOP UNIT
SPD	SURGE-PROTECTION DEVICE
SWD	SWITCHING DUTY
TR	TAMPER-RESISTANT
TS	TIMESWITCH
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
V	VOLT
VA	VOLT-AMPERE
WP	WEATHERPROOF
XFMR	TRANSFORMER

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REVISION DATES:

STATE OF MISSOURI
RYAN BREMER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023

PROFESSIONAL SEAL

E101

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

ELECTRICAL NOTES, SYMBOLS & ABBREVS.

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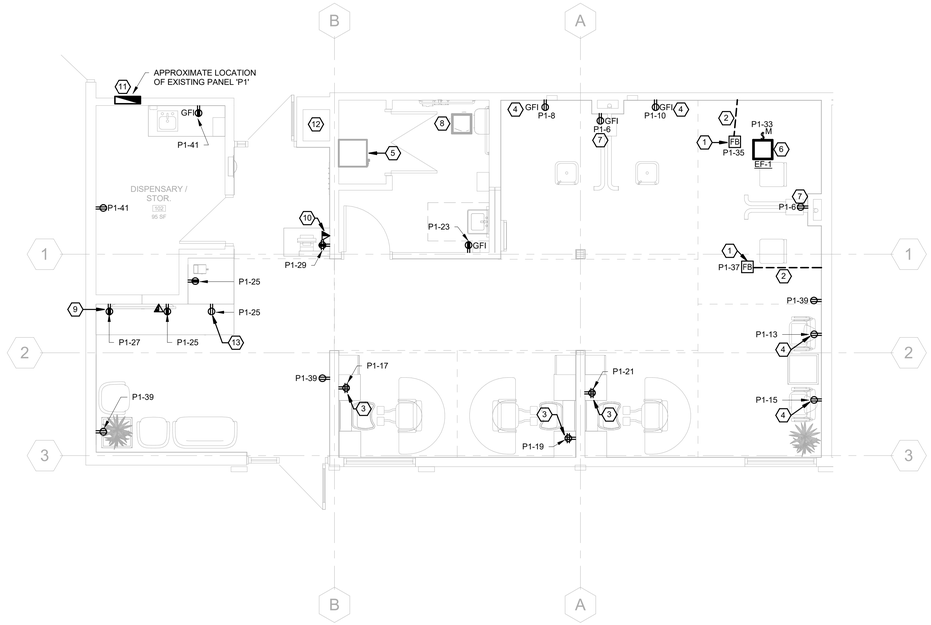

1 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
3. PROVIDE AND INSTALL 3/4" CONDUIT AND PULL STRINGS FROM TELEPHONE/DATA OUTLETS TO ABOVE ACCESSIBLE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND/OR TENANT.
4. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
5. REMOVE EXCESS WIRING RESULTING FROM DEMOLITION. ELECTRICAL CONTRACTOR TO RECIRCUIT OUTLETS LEFT ON INCOMPLETE CIRCUITS.
6. WHERE POSSIBLE, RE-USE SPARE CIRCUITS RESULTING FROM DEMOLITION PRIOR TO PULLING NEW CIRCUITS FROM PANELBOARD.
7. ALL DEVICES LABELED 'EX' ARE EXISTING TO REMAIN. ALL DEVICES LABELED 'EXR' ARE EXISTING TO BE RELOCATED.

KEYED NOTES:

1. PROVIDE RECESSED FLOOR BOX SIMILAR TO HUBBELL #CFB03GR WITH (2) DUPLEX RECEPTACLES FOR NAIL STATION POWER. FIELD COORDINATE EXACT LOCATION WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.
2. ROUTE (1) 3/4" CONDUIT FOR POWER FROM FLOOR BOX TO NEAREST WALL AND UP INTO ACCESSIBLE CEILING. PATCH AND REPAIR CONCRETE AS REQUIRED.
3. POWER FOR CUTTING STATION TOOLS. FIELD COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT AND MILLWORK PROVIDER PRIOR TO ROUGH-IN.
4. RECEPTACLE FOR PEDICURE CHAIR POWER. FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
5. APPROXIMATE LOCATION OF EXISTING FAN COIL UNIT TO REMAIN.
6. CONTROL INTENT FOR EXHAUST FAN IS FOR FAN TO OPERATE CONTINUOUSLY DURING BUSINESS HOURS. PROVIDE nPP16 POWERPACK AND PROGRAM THROUGH DIGITAL TIMECLOCK. COORDINATE TIME-OF-DAY SCHEDULE WITH OWNER.
7. RECEPTACLE FOR SOURCE CAPTURE EXHAUST UNIT. COORDINATE EXACT LOCATION OF RECEPTACLE WITH WALL FUR OUT AND DUCT WORK AS REQUIRED.
8. EXISTING RESTROOM EXHAUST FAN AND CONTROLS TO REMAIN. DESIGN INTENT IS FOR FAN TO OPERATE ON SAME CONTROL SCHEME. IF FAN IS CURRENTLY SWITCHED 'ON'/OFF' WITH THE LIGHTS IN THE SPACE, CONNECT FAN TO LIGHTING SWITCHLEG AS REQUIRED.
9. RECEPTACLE FOR OWNER PROVIDED COFFEE MACHINE. FIELD VERIFY EXACT CONNECTION REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
10. POWER AND DATA FOR CHECK-IN STAND. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
11. AFTER DEMOLITION, VERIFY THE QUANTITY OF AVAILABLE CIRCUITS IN EXISTING PANELS 'P1' AND 'P2' LOCATED IN THE COMMON CORRIDOR. IF THE QUANTITY OF AVAILABLE CIRCUITS IS NOT ENOUGH TO COMPLETE THE NEW SCOPE OF WORK, NOTIFY ENGINEER. WHERE NECESSARY, PROVIDE NEW BREAKERS AS REQUIRED.
12. APPROXIMATE LOCATION OF EXISTING WATER HEATER TO REMAIN.
13. POWER FOR UNDERCOUNTER REFRIGERATOR. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

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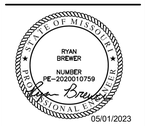

05/01/2023

PROFESSIONAL SEAL

E201

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

ELECTRICAL POWER PLAN

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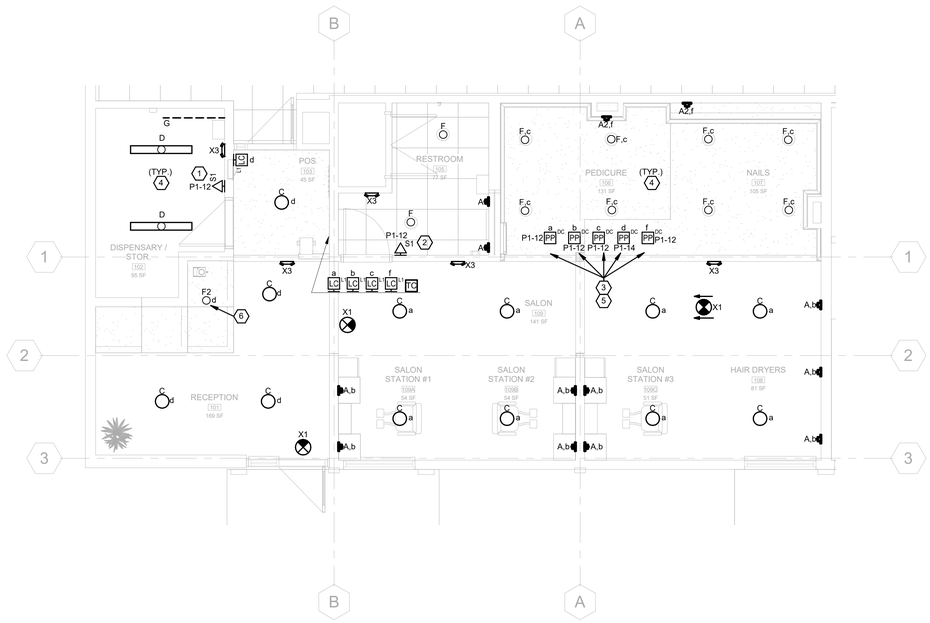

1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
3. CIRCUIT ALL EXIT SIGNS TO NEAREST EMERGENCY LIGHTING CIRCUIT (OR NEAREST LIGHTING CIRCUIT IF NO GENERATOR).
4. VERIFY ALL EXISTING BRANCH CIRCUITING. CONTRACTOR SHALL WIRE FIXTURES IN ACCORDANCE WITH SWITCHING INDICATED. CONNECTED LOAD ON 277V-20A CIRCUITS SHALL NOT EXCEED 4000W. 120V-20A CIRCUITS SHALL NOT EXCEED 1800W.
5. CIRCUIT NUMBERS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
6. EXISTING, RELOCATED, AND EXISTING TO REMAIN FIXTURES SHALL BE REFURBISHED AND CLEANED. REPLACE BAD BALLASTS/DRIVERS
AS WELL AS DIM, OR BURNED OUT LAMPS. LAMP COLOR AND WATTAGE TO MATCH EXISTING.
7. FIXTURES LABELED 'EX' ARE EXISTING FIXTURES TO REMAIN, FIXTURES LABELED 'EXR' ARE EXISTING FIXTURES TO BE RE-USED/RELOCATED.

KEYED NOTES:

1. LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE MANUAL 'ON'. AUTOMATIC 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE VIA SWITCH.
2. LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE AUTOMATIC 'ON'. AUTOMATIC 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE VIA SWITCH.
3. LIGHTING CONTROL INTENT FOR ZONES 'a,b,c,d,f' IS FOR FIXTURES TO BE ON TIME-OF-DAY SCHEDULE WITH MANUAL OVERRIDE VIA LOW-VOLTAGE CONTROL STATION. COORDINATE TIME-OF-DAY SCHEDULE WITH OWNER. AFTER BUSINESS HOURS LOW-VOLTAGE CONTROL STATION TO ENERGIZE FIXTURES 'ON' FOR NOT MORE THAN 2 HOURS (MAXIMUM).
4. FIELD COORDINATE EXACT LOCATION OF FIXTURES TO ENSURE FIXTURES DO NOT CONFLICT WITH UTILITIES AND EQUIPMENT ABOVE THE CEILING.
5. LOCATE POWER PACKS ABOVE ACCESSIBLE CEILING IN RESTROOM AS REQUIRED.
6. REPLACE EXISTING DOWNLIGHT IN SOFFIT OVER COUNTER WITH NEW LED DOWNLIGHT AS INDICATED.

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REVISION DATES:

STATE OF MISSOURI
RYAN BREWER
NUMBER
PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023

PROFESSIONAL SEAL

E301

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

FIRST FLOOR LIGHTING PLAN

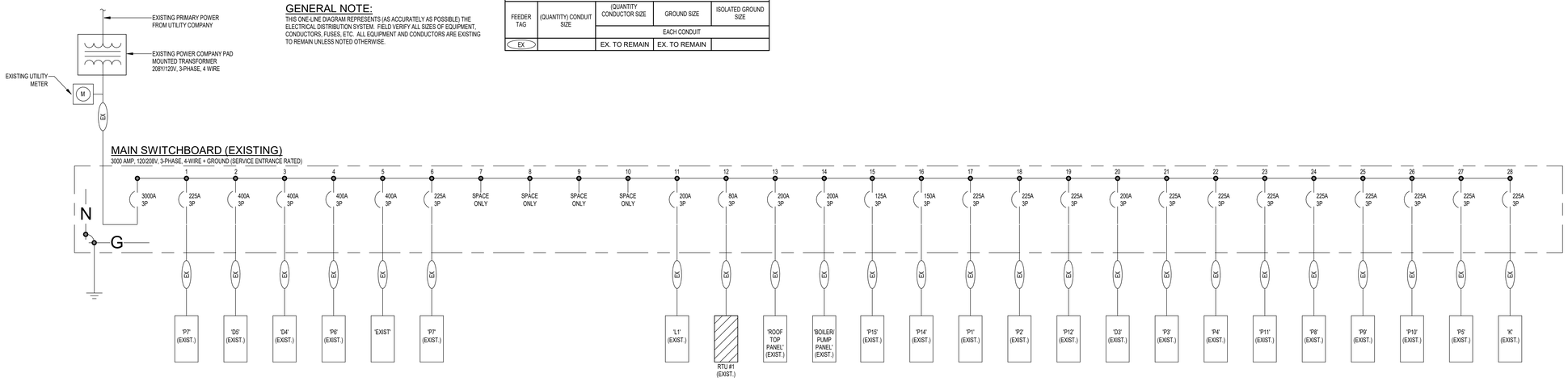
5/1/2023 4:45:23 PM

GENERAL NOTE:

THIS ONE-LINE DIAGRAM REPRESENTS (AS ACCURATELY AS POSSIBLE) THE ELECTRICAL DISTRIBUTION SYSTEM. FIELD VERIFY ALL SIZES OF EQUIPMENT, CONDUCTORS, FUSES, ETC. ALL EQUIPMENT AND CONDUCTORS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

FEEDER SCHEDULE

FEEDER TAG	(QUANTITY) CONDUIT SIZE	(QUANTITY CONDUCTOR SIZE	GROUND SIZE	ISOLATED GROUND SIZE
		EACH CONDUIT		
EX		EX. TO REMAIN	EX. TO REMAIN	



1 ELECTRICAL ONE-LINE DIAGRAM
NOT TO SCALE

PANEL P1 (EXISTING)

VOLTAGE/PHASE: **208Y/120V, 3PH, 4W**
BUS AMPERAGE: **225A**
MAIN TYPE: **MLO**

AFC VALUE: **EXISTING**
AIC RATING: **EXISTING**
MOUNTING: **RECESSED (NEMA 1)**

GROUNDS: **EG (PER T250.122)**
ISOLATED GROUND BUS: **NO**
SERVICE ENTRANCE RATED: **NO**

	LTG	RCPT	MOTOR	HEAT	COOL	MISC	KITCHENE	ELEV	DESCRIPTION	AMP	P	WIRE	CKT #	PHASE	CKT #	WIRE	P	AMP	DESCRIPTION	LTG	RCPT	MOTOR	HEAT	COOL	MISC	KITCHENE	ELEV
													PL1 LOADS IN VA														
EX			281	2800					SALON FURNACE	40	2	EX	1	A	2	EX	2	40	RANGE							3750	EX
			281	2800									3	B	4											3750	
EX					2200				SALON WATER HEATER	30	2	EX	5	C	6	12	1	20	BRGE CAPT EXH RCPTS	500							
					2200								7	A	8	12	1	20	PEDICURE CHAIR				840				
EX						3750			RANGE 12R	40	2	EX	9	B	10	12	1	20	PEDICURE CHAIR				840				
						3750							11	C	12	12	1	20	SALON AREA LTG	744							
					996				DRYING STATION #1	20	1	12	13	A	14	EX	1	20	EXISTING		400						EX
					996				DRYING STATION #2	20	1	12	15	B	16	EX	1	20	EXISTING		400						EX
GF		720							CUT STATION #1 RCPTS	20	1	12	17	C	18	EX	1	20	EXISTING		400						EX
GF		720							CUT STATION #2 RCPTS	20	1	12	19	A	20	EX	1	20	EXISTING		400						EX
GF		720							CUT STATION #3 RCPTS	20	1	12	21	B	22	EX	1	20	EXISTING		400						EX
		180							SNK LR RCPT	20	1	12	23	C	24	EX	1	20	EXISTING		400						EX
		540							LOBBY COUNTER RCPTS	20	1	12	25	A	26	EX	1	20	EXISTING		400						EX
					1800				LOBBY COFFEE MAKER	20	1	12	27	B	28	EX	1	20	EXISTING		400						EX
		360							CHECK-IN AREA QUAD	20	1	12	29	C	30	EX	1	20	EXISTING		400						EX
									SPARE	20	1	12	31	A	32	EX	1	20	EXISTING		400						EX
			84						EXHAUST FAN	20	1	12	33	B	34	EX	1	20	EXISTING		400						EX
		360							WALL STATION #1 FLRBOX	20	1	12	35	C	36	EX	1	20	EXISTING		400						EX
		360							WALL STATION #2 FLRBOX	20	1	12	37	A	38	EX	1	20	EXISTING		400						EX
		540							CONV. RCPTS	20	1	12	39	B	40	EX	1	20	EXISTING		400						EX
		360							DISPENSARY RCPTS	20	1	12	41	C	42	EX	1	20	EXISTING		400						EX
					5000								43	A	44				UNUSABLE SPACE								
EX					5000				SUB-FEED BREAKER	150	3	EX	45	B	46				UNUSABLE SPACE								
					5000								47	C	48				UNUSABLE SPACE								
	0	4860	846	5600	0	23200	7500	0	TOTALS										TOTAL	744	5000	0	0	0	1680	7500	0

NEC CODE REFERENCES

* 125% OF 125 TO KVA, 50% OF REMAINING
** 125% OF LARGEST MOTOR + 100% SUM OF REMAINING MOTORS
*** ELEVATOR DEMAND FACTOR BASED ON NEC T620.14

PANEL ABBREVIATIONS

GF - GROUND FAULT BREAKER
BT - SHUNT TRIP BREAKER
AF - ARC FAULT BREAKER
GFAF - COMBO ARC/GROUND FAULT BREAKER
IG - PROVIDE ISOLATED GROUND
EH - PROVIDE EMERGENCY LOCKING TAB
FA - FIRE ALARM, PROVIDE RED LOCKING TAB
LOK - PROVIDE PADLOCKABLE BREAKER
OL - REFER TO ONE-LINE DIAGRAM FOR WIRE SIZE
RP - CIRCUIT CONTROLLED VIA RELAY PANEL

PANEL NOTES

PHASE LOAD SUMMARY

TOTAL	PHASE	LTG	RCPT	MOTOR	HEAT	COOL	MISC	KITCHENE	ELEV
19637	A	0	3622	281	2800	0	9088	3750	0
20841	B	0	3200	363	2800	0	9538	7500	0
19224	C	744	4480	0	0	0	7250	3750	0

PANEL LOAD SUMMARY

59322	CONNECTED VA	744	11302	644	8400	0	24972	15000	0
0.9	DEMAND FACTORS	1.25	1	1**	1.00	1.00	1.00	1.00	1.00
57626	DEMAND VA	931	10868	646	8400	0	24972	15000	0
0	SHOW WINDOW DEMAND								
0	TRACK TO DEMAND								
0%	SPARE								
57626	DEMAND(KVA) WITH SPARE								
160.5	TOTAL DESIGN AMPS								

LIGHTING FIXTURE SCHEDULE

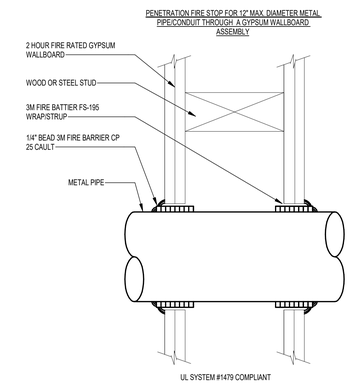
FIXT. TYPE	DESCRIPTION & MANUFACTURER OPTIONS	LAMPS NO.	LAMPS TYPE	FIXT. VOLT	TOTAL WATTS	FINISH	REMARKS/MOUNTING	NOTES
A	Decorative LED Wall Sconce w/ 0-10V Dimming M# WESPORT LIGHTING #AS-102-BZ-LPPD11-3500-12 M# M#	1	LED	UNV	12W	Standard	Surface (Wall)	
A2	Decorative LED Wall Sconce w/ 0-10V Dimming M# WESPORT LIGHTING #AS-102S-BZ-LPPD5-3500-12 M# M#	1	LED	UNV	12W	Standard	Surface (Wall)	
C	10" Round SlimSurface LED Surface Mounted Luminaire w/ 0-10V Dimming M# LIGHTOLIER #S10R-80-35K-22-_-Z10U M# M#	1	LED	UNV	23.2W	Coord. w/ Architect	Surface (Ceiling)	
D	4' Surface Mounted LED Strip w/ 0-10V Dimming M# ILP #SS4-4L-U-35-FRL	1	LED	UNV	35W	Coord. w/ Architect	Surface (Ceiling)	
F	5" Recessed LED Downlight w/ 0-10V Dimming M# CSL #ED5S-NIC-35-90-50-25-S CSL #ED5-R-F-ST (TRIM) CSL #ED5-50-OPTIC (OPTIC)	1	LED	UNV	24W	Coord. w/ Architect	Recessed (Ceiling - Provide Flange)	
F2	4" Recessed LED Downlight w/ 0-10V Dimming M# OPUS #RB4-RD-SW80-35K-10LM-U-10V	1	LED	UNV	9.83W	Coord. w/ Architect	Recessed (Ceiling - Provide Flange)	
G	Undercabinet Lighting in Dispensary. Provide Lengths as Required. M# KELVIX #UC22-2040-010V-120277-WH	1	LED	UNV	12W	Coord. w/ Architect	Coord. w/ Architect	
X1	LED Exit Sign, Single/Double Sided, Universal Mount, Emergency Battery Pack. Provide Arrows as Indicated. M# EVENLITE #TLX-EM-RU-W DUAL LITE #EVE-U-R-W-E	1	LED	UNV	2W		Wall/Ceiling/Pendant	1
X3	LED Emergency Light w/ (2) 2-Watt Adjustable LED Heads and Emergency Battery Backup M# EVENLITE #TCL-4-W DUAL LITE #EV4D-02L	2	LED	UNV	5W	White	Surface (Wall/Ceiling)	1

NOTES:
1. CIRCUIT EXIT SIGNS TO LOCAL EMERGENCY GENERATOR LIGHTING CIRCUIT AHEAD OF ANY MEANS OF CONTROL FOR PROPER OPERATION

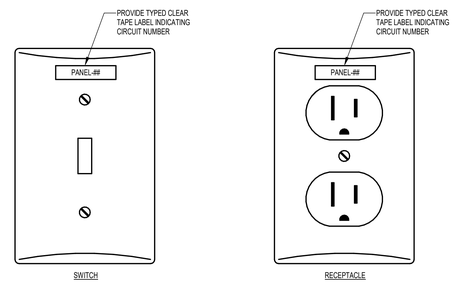
LIGHTING CONTROLS SCHEDULE

FIXTURE TAG	MANUFACTURER	MODEL #	SETTINGS	DESCRIPTION	NOTES
DC	ACUITY BRANDS: nLIGHT	nPP16-D SERIES	ON: MANUAL OFF: 20 MINUTE DELAY	ON/OFF ROOM 0-10V DIMMING CONTROLLER LINE VOLTAGE - SINGLE RELAY	1,2,4
L1	ACUITY BRANDS: nLIGHT	nPODM-DX	-	ON/OFF AND DIMMING LOW VOLTAGE SWITCH WITH 1-CHANNEL CONTROL	1,6
S1	SENSOR SWITCH	WSX SERIES	ON: AUTOMATIC OFF: 20 MINUTE DELAY	WALL MOUNT OCCUPANCY SENSOR LINE VOLTAGE - SINGLE RELAY	1
WIRE	-	-	-	CAT5, CAT5e, OR CAT 6. STANDARD OR SOLID. TERMINATED AS RJ45 TIA/EIA-568B	
TC	ACUITY BRANDS: nLIGHT	nDTC-WH	-	nLIGHT LOW VOLTAGE DIGITAL TOUCHSCREEN W/ TIMECLOCK	8

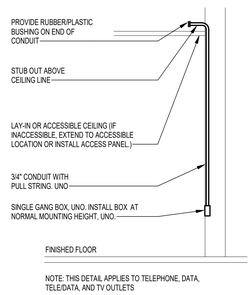
NOTES:
1. COORDINATE ALL MODEL NUMBERS WITH MANUFACTURER PRIOR TO ORDERING. PROVIDE DEVICES TO MEET CONTROL INTENT INDICATED ON THE DRAWINGS.
2. PROVIDE 6'-0" OF EXCESS CONTROL WIRING, COILED AND TIED, BETWEEN CEILING MOUNTED OCCUPANCY SENSOR AND CORRESPONDING LOAD CONTROLLER.
3. MODIFY LOCATIONS OF CEILING MOUNTED OCCUPANCY SENSORS AS REQUIRED SO THAT NO OCCUPACNY SENSORS IS WITHIN 4'-0" OF AN HVAC SUPPLY DIFFUSER.
4. LOCATE DEVICE ABOVE CEILING OR AT STRUCTURE IN ACCESSIBLE LOCATION. LOCATIONS SHOWN ON DRAWINGS ARE SCHEMATIC. ADD ACCESS PANEL WITHIN CEILING IF NECESSARY. COORDINATE ACCESS PANEL LOCATION AND SPECIFICATION DIRECTLY WITH ARCHITECT.
5. LOCATION SHOWN ON PLAN FOR REFERENCE ONLY. CONTRACTOR MAY RELOCATE BRIDGE PORTS FOR A MORE ECONOMICAL LAYOUT IF DESIRED.
6. PROVIDE DEVICES WITH DEFAULT MANUFACTURE MARKINGS ON BUTTONS.
7. ROUTE RECEPTACLE CIRCUIT INDICATED ON PLAN AS "CONTROLLED RECEPTACLES" THROUGH PLUG LOAD CONTROLLER FOR AUTOMATIC ON/OFF CONTROL VIA OCCUPACNY SENSOR. ONE CONTROLLED CIRCUIT PER PLUG CONTROLLER.
8. DEVICE TO BE INSTALLED IN SINGLE GANG BOX. COORDINATE TIME-OF-DAY SCHEDULES WITH OWNER FOR ZONES TO BE ON TIME-OF-DAY CONTROL.



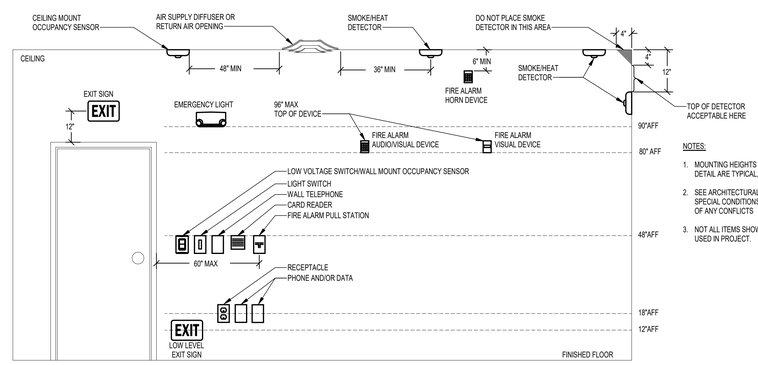
4 PENETRATION THROUGH FIRE RATED WALL DETAIL
SCALE: NOT TO SCALE



3 WIRING DEVICE FACE PLATES - LABELING
SCALE: NOT TO SCALE



6 COMMUNICATION DEVICE ROUGH-IN DETAIL
SCALE: NOT TO SCALE



NOTES:
1. MOUNTING HEIGHTS SHOWN IN THIS DETAIL ARE TYPICAL, UNO.
2. SEE ARCHITECTURAL ELEVATIONS FOR SPECIAL CONDITIONS. NOTIFY ARCHITECT OF ANY CONFLICTS
3. NOT ALL ITEMS SHOWN IN DETAIL MAY BE USED IN PROJECT.

5 ELECTRICAL DEVICE MOUNTING HEIGHTS
SCALE: NOT TO SCALE

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.

KEYED NOTES:

www.collinsandwebb.com
collins|webb ARCHITECTURE
307B SW Market Street, Lee's Summit, Missouri 64063 | 816.249.2270

PERMIT SET

JOHN KNOX VILLAGE - SALON
1001 NW CHIPMAN RD SUITE 123
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REVISION DATES:

STATE OF MISSOURI
RYAN BREWER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023
PROFESSIONAL SEAL

E401

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

ELECTRICAL ONE-LINE DIAGRAM, DETAILS & SCHEDULES

5/1/2023 4:33:26 PM

16000 - ELECTRICAL

GENERAL

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WALLS AND FLOORS - SLEEVES FOR RACEWAYS AND CABLES:
STEEL PIPE SLEEVES: ASTM A 53A SSM, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED STEEL, PLAIN ENDS AND DRIP RINGS.

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

FIRESTOPPING: FIRE RESISTANT THROUGH PENETRATION SEALANTS - TWO PART, FOAMED-IN-PLACE, SILICONE SEALANT FORMULATED FOR USE IN THROUGH-PENETRATION FIRE-STOPPING AROUND CABLES, RACEWAYS, AND OTHER TYPICAL PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS. SEALANTS AND ACCESSORIES SHALL HAVE FIRE-RESISTANCE RATINGS INDICATED, AS ESTABLISHED BY TESTING PERIODICAL ASSEMBLIES IN ACCORDANCE WITH ASTM E 814, BY UNDERWRITER'S LABORATORIES, INC., OR OTHER NRTL ACCEPTABLE TO AHJ. ACCEPTABLE MANUFACTURERS - HILTI, INC., 3M CORP., RECTORSEAL, SPECIFY TECHNOLOGY INC., UNITED STATES GYPSUM COMPANY.

ELECTRICAL SERVICE SHALL BE AS SHOWN ON DRAWINGS.

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

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

PROVIDE ALL NECESSARY ENCLOSURES REQUIRED BY THE OWNER FOR THE UTILITY COMPANY METERING. REFER TO DRAWINGS FOR MINIMUM REQUIREMENTS. COORDINATE WITH UTILITY COMPANY PRIOR TO BID FOR ALL REQUIREMENTS. VERIFIED WITH THE TELEPHONE CO. THE TELEPHONE TERMINAL BOARD SHALL BE PROVIDED WITH A DOUBLE DUPLEX RECEPTACLE LOCATED WHERE INDICATED ON THE DRAWINGS. THE TERMINAL BOARD SHALL BE CONSTRUCTED OF 4' X 8' X 3/4" PLYWOOD WITH TWO (2) COATS OF FLAME RETARDANT PAINT UNLESS NOTED OTHERWISE ON DRAWINGS.

PRODUCTS

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

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

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

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

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

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

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

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

CONDUCTORS AND CABLES
GENERAL: SERVICE LATERALS AND PANELBOARD FEEDERS SHALL BE OF ANNEALED (SOFT) COPPER COMPLYING WITH ICEA S-95-658/NEMA WC70; SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER; CONCENTRIC, COMPRESSED STRANDED FOR NO. 8 AWG AND LARGER. ALL FEEDER CONDUCTORS NO 8 AWG AND LARGER; STRANDED, TYPE THWN-2 OR XHHW-2 INSULATION.

ALL BRANCH CIRCUITS SHALL BE ANNEALED (SOFT) COPPER COMPLYING WITH ICEA S-95-658/NEMA WC70; SOLID CONDUCTOR FOR NO. 10AWG AND SMALLER; CONCENTRIC, COMPRESSED STRANDED FOR NO. 8 AWG AND LARGER. ALL BRANCH CIRCUIT CONDUCTORS NO 8 AWG AND LARGER; STRANDED, TYPE THWN-2 OR XHHW-2 INSULATION. ALL CONDUCTORS, NO 10 AWG AND SMALLER, USED FOR POWER AND LIGHTING CIRCUITS; SOLID COPPER, TYPE THWN-2 INSULATION (WET OR DAMP LOCATIONS, OR IN CONDUIT BELOW GRADE OR SLAB); TYPE THHN INSULATION (DRY LOCATIONS ONLY ABOVE GRADE), OR DUAL RATED TYPE THHN/THWN-2. ALL BRANCH CIRCUIT WIRING SHALL NOT BE SMALLER THAN NO 12 AWG. IF NO CONDUCTOR SIZE IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER NFPA 70 AND BASED ON THE INDICATED BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE RATING AND NUMBER OF POLES. WHERE NO CIRCUIT SIZE (CONDUCTORS AND OVERCURRENT PROTECTIVE DEVICE) IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE THREE NO 12 AWG CONDUCTORS IN 3/4" RACEWAY, AND A 20A SINGLE POLE CIRCUIT BREAKER.

CONDUCTOR INSULATION TYPES: 90-DEGREE C-RATED, TYPE THHN/THWN-2 OR XHHW-2 COMPLYING WITH ICEA S-95-658/NEMA WC70.

COLORS FOR 208/120V CONDUCTORS
PHASE A: BLACK
PHASE B: RED
PHASE C: BLUE
NEUTRAL: WHITE
EQUIPMENT GROUND: GREEN
ISOLATED GROUND: GREEN WITH YELLOW STRIPE

COLORS FOR 480/277V CONDUCTORS
PHASE A: BROWN
PHASE B: ORANGE
PHASE C: YELLOW
NEUTRAL: WHITE
EQUIPMENT GROUND: GREEN

UNLESS NOTED OTHERWISE, SPECIAL PURPOSE CONDUCTORS AND CABLES, SUCH AS LOW VOLTAGE CONTROL AND SHIELDED INSTRUMENT WIRING, SHALL BE AS RECOMMENDED BY THE SYSTEM EQUIPMENT MANUFACTURER.

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

MC TYPE CABLE CAN BE USED IF ACCEPTED BY LOCAL AUTHORITY AND GOVERNING CODES FOR WHIPS FROM JUNCTION BOX TO LIGHT FIXTURES ONLY. TYPE MC CABLE: 600V, UNJACKETED, ANSI E119 AND E814. UL STANDARDS 44 OR 83 (UL 1569 CABLE), AND 1569, NFPA 70 ARTICLE 330; ALUMINUM OR GALVANIZED STEEL INTERLOCKED ARMOR; THHN- OR XHHW-INSULATED CONDUCTORS; COLOR CODE; ICEA METHOD 1, WITH GREEN INSULATED GROUNDING CONDUCTOR.

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

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

VOLTAGE DROP IN BRANCH CIRCUITS SHALL NOT EXCEED 2%.

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

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

JUNCTION AND PULL BOXES: FABRICATE IN ACCORDANCE WITH NEMA AND N.E.C. STANDARDS AND REQUIREMENTS INSOFAR AS MATERIAL, GAUGES, DIMENSIONS, AND FABRICATION METHODS. BOXES SHALL BEAR THE UL LABEL. WHERE BOXES ARE NOT SIZED ON THE DRAWINGS, THEY SHALL BE SIZED IN ACCORDANCE WITH N.E.C. REQUIREMENTS. FINISH IN STANDARD GRAY ENAMEL, WITH BOXES AND BACK SPOT-WELDED IN POSITION AND THE REMOVABLE SCREW COVER MOUNTED WITH BRASS MACHINE SCREWS.

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

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

RECEPTACLES: THREE WIRE GROUNDING TYPE, 120 VOLT RATED, SPECIFICATION GRADE 20 AMPERES DUPLEX UNLESS NOTED OTHERWISE ON DRAWINGS. HUBBELL # 5362 OR EQUAL. COORDINATE RECEPTACLE COLOR WITH COVERPLATE AS DESCRIBED BELOW UNDER "PLATES". SINGLE RECEPTACLE, 20 AMPERE, 120 VOLT, SPECIFICATION GRADE. HUBBELL #5361 OR EQUAL.

DUST AND MOISTURE RESISTANT, MELAMINE BODY, GRAY NYLON FACE BACKED BY FABRIC REINFORCED NEOPRENE GASKET SLIT TO PROVIDE WIPING ACTION ON CAP BLADES. PASS & SEYMOUR #6307 OR APPROVED EQUAL. GROUND FAULT CIRCUIT INTERRUPTER, NYLON FACE CLASS A, NEMA 5-20R, SPECIFICATION GRADE. HUBBELL #GF-5362* OR EQUAL.

CORROSION RESISTANT, SIMILAR AND APPROVED EQUAL TO STANDARD RECEPTACLE, EXCEPT FABRICATED FROM YELLOW MELAMINE PLASTIC WITH YELLOW NYLON FACE AND EXPOSED METAL PARTS FINISHED TO RESIST CORROSION. (NEMA 5-15R + HUBBELL #52CM61).

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

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

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

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

INTERIOR DAMP LOCATIONS: STAINLESS STEEL.

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

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

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

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

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

PANELBOARDS
SHALL CONSIST OF BOX, INTERIOR, FRONT, AND CIRCUIT PROTECTIVE DEVICES. THE ASSEMBLY SHALL BE U.L. LABELED AND BE LISTED FOR SERVICE. THE ASSEMBLY SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NEMA STANDARD PB-1. THE LATEST U.L. STANDARD (UL-50) AND SHALL HAVE A TURNED EDGE AROUND THE FRONT FOR RIGIDITY AND FOR CLAMPING ON FRONT. PROVIDE STANDARD KNOCKOUTS ON REMOVABLE BOX ENDS. FABRICATE FROM SHEET STEEL AND FINISH WITH BAKED ENAMEL OVER RUST INHIBITOR. EACH PANEL FRONT SHALL HAVE A DOOR MOUNTED ON SEMI-CONCEALED HINGES WITH A CYLINDER LOCK. INDEX CARD CIRCUIT DIRECTORY MOUNTED BEHIND CLEAR PLASTIC AND HELD IN A METAL FRAME, AND CONCEALED TRIM CLAMPS FOR MOUNTING TO THE BOX. ALL LOCKS SHALL BE MASTER KEYED AND ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

ALL INTERIORS SHALL BE COMPLETELY FACTORY ASSEMBLED. THE DESIGN OF THE INTERIOR SHALL PERMIT REPLACEMENT OF INDIVIDUAL BRANCH BREAKERS WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT MACHINE DRILLING OR TAPPING. BUS BARS FOR PANELS RATED 600 AMPERES OR MORE SHALL BE PLATED 99% CONDUCTIVITY COPPER OR TIN FINISH ALUMINUM (57% CONDUCTIVITY) OF RECTANGULAR CROSS-SECTION. BUS BARS FOR PANELS RATED LESS THAN 600 AMPERES SHALL BE TIN PLATED 98% CONDUCTIVITY COPPER OF RECTANGULAR CROSS-SECTION. BUS BAR CONNECTIONS TO BRANCH CIRCUIT BREAKERS SHALL BE THE PHASE SEQUENCE TYPE AND ACCEPT BOLT-ON TYPE BREAKERS ONLY. PANELBOARD BUS STRUCTURE AND MAIN BREAKER OR MAIN LUGS SHALL BE RATED AS SCHEDULED ON DRAWING. SUCH RATINGS SHALL BE ESTABLISHED BASED ON HEAT RISE TESTS IN ACCORDANCE WITH UL STANDARDS. GROUP INCOMING CABLE LUGS AT ONE END FOR SEPARATION FROM LOAD SIDE CABLES. EQUIPMENT NEUTRAL BUSSING WITH A LUG FOR EACH BRANCH BREAKER POSITION. INTERIOR SHALL MOUNT TO BOX WITHOUT TOOLS.

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

EACH PANELBOARD, AS A COMPLETE UNIT, SHALL HAVE A SHORT CIRCUIT RATING EQUAL TO OR GREATER THAN THE A

PLUMBING PIPING SCHEDULE

DESCRIPTION	MATERIAL
ABOVE GROUND GAS	SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. PROVIDE CORROSION-RESISTANT MATERIAL ON PIPING EXPOSED TO ATMOSPHERE OR IN CONTACT WITH MATERIAL EXERTING A CORROSIVE ACTION
ABOVE GROUND SANITARY SEWER AND VENT	CAST IRON PIPE AND FITTINGS.
FLEXIBLE GAS PIPING INSIDE BUILDING	CORRUGATED STAINLESS STEEL GAS LINE WITH POLYETHYLENE JACKET AND FITTINGS BY MFG. MUST MEET ANSI, NFPA, FACTORY MUTUAL CODE AND LISTINGS AS AN ACCEPTABLE GAS PIPING MATERIAL. ALL STATE AND LOCAL CODE APPROVALS. PROVIDE PIPING EQUAL TO TRACPIPE BY OMEGA FLEX.
STORM DRAIN PIPING, ROOF DRAIN PIPING ABOVE AND BELOW GROUND	CAST IRON PIPE AND FITTINGS.
UNDER GROUND GAS	APPROVED PLASTIC WITH COMPATIBLE FITTINGS CONFORMING WITH ASTM D 2513 AND SHALL BE INSTALLED IN ACCORDANCE WITH GAS CODE OR WITH SCH. 40 STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. MILL COAT PIPE WITH HIGH DENSITY POLYETHYLENE OVER ADHESIVE UNDERCOATING WRAP FIELD JOINTS AND FITTINGS WITH REPUBLIC "X-TRU-TAPE" OR EQUAL.
UNDERGROUND SANITARY SEWER AND VENT PIPING INSIDE BUILDING AND OUTSIDE BUILDING	PVC SCHEDULE 40 PIPE AND FITTINGS. OR CAST IRON PIPE AND FITTINGS.
WATER DISTRIBUTION PIPE	WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER OR PEX AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.4 OF THE I.P.C
WATER SERVICE PIPE	WATER SERVICE PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER OR PEX AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.3 OF THE I.P.C

PLUMBING LEGEND

SYMBOL (COARSE / FINE)	DESCRIPTION
	BALL VALVE
	CHECK VALVE
	EMERGENCY MIXING VALVE
	PLUG VALVE
	RPZ BACKFLOW PREVENTER
	SOLENOID VALVE
	PVC ELBOW
	PVC CAP
	PVC CLOSET FLANGE
	PVC REDUCER
	PVC DOUBLE SANITARY TEE
	PVC VENT TEE
	PVC P-TRAP
	PVC COMBINATION WYE WITH 8TH BEND
	PVC DOUBLE COMBINATION WYE WITH 8TH BEND
	CROSS
	COPPER ELBOW
	COPPER TEE
	TRANSITION/REDUCER
	WALL CLEANOUT
	PIPE TURN DOWN/UP

SYMBOL	DESCRIPTION
	FLOOR CLEANOUT
	DOWNSPOUT NOZZLE
	WASHING MACHINE BOX
	ROOF DRAIN
	WALL HYDRANT
	FLOOR DRAIN
	FLOOR SINK
	GAS METER

SYSTEM DESIGNATIONS

CD	CONDENSATE
CW	DOMESTIC COLD WATER
HWR	HOT WATER RECIRCULATION
HW	DOMESTIC HOT WATER
S	SANITARY
V	VENT
ST	STORM DRAIN
OST	OVERFLOW STORM DRAIN

ABBREVIATIONS

AD	AREA DRAIN, ACCESS DOOR
AFC	ABOVE FINISH CEILING
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
BFP	BACKFLOW PREVENTER
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BP	BOOSTER PUMP
CD	CONDENSATE
CO	CLEANOUT
CW	DOMESTIC COLD WATER
DD	DECK DRAIN
DN	DOWN
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWS	EMERGENCY EYE WASH
FCO	FLOOR CLEANOUT
FFA	FROM FLOOR ABOVE
FP	FIRE PROTECTION
FS	FLOOR SINK
G	GAS (NATURAL)
GCO	GRADE CLEANOUT
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HW	DOMESTIC HOT WATER
HWC	HOT WATER CIRCULATION
HWS	HOT WATER SUPPLY
IE	INVERT ELEVATION
LP	LIQUEFIED PETROLEUM
LT	LAMBS TONGUE/DOWNSPOUT NOZZLE
MBH	1000 BTU PER HOUR
N/A	NOT APPLICABLE
ORD	OVERFLOW ROOF DRAIN
OST	STORM OVERFLOW
PD	PUMP DISCHARGE
PIV	POST INDICATOR VALVE
PRV	PRESSURE REDUCING VALVE
REV	REVISION
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SAN	SANITARY
ST	STORM
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TW	TEMPERED WATER
TYP	TYPICAL
UH	UNIT HEATER
V	VENT PIPE
VTR	VENT THROUGH ROOF
WCO	WALL CLEANOUT
WH	WALL HYDRANT

PLUMBING GENERAL NOTES:

1. DEFINITIONS:
   A. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION AND SIMILAR OPERATIONS."
   B. INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
   C. PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
2. EXCEPT AS OTHERWISE NOTED, ALL SCHEDULED PLUMBING FIXTURES SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL MAKE ALL ROUGH-IN AND FINAL CONNECTIONS TO ALL PLUMBING EQUIPMENT.
3. EACH SINK, WATER CLOSET, ETC. SHALL HAVE SHUT-OFF VALVES LOCATED AT THE FIXTURE.
4. FIRE SEAL ALL PENETRATIONS THROUGH RATED WALLS SLEEVE IN ENTIRETY WITH APPROPRIATE SLEEVE MATERIAL.
5. PROVIDE PROPERLY SIZED WATER HAMMER ARRESTORS ON QUICK CLOSING VALVES.
6. ALL WORK SHALL COMPLY WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES AS WELL AS THE CONSTRUCTION DOCUMENTS. REPORT ANY CONFLICTS TO THE ENGINEER AS SOON AS THEY ARE DISCOVERED.
7. REVIEW THE DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING JOB AND DURING CONSTRUCTION. EXCEPT AS OTHERWISE NOTED, PROVIDE ALL EQUIPMENT, MATERIALS, & LABOR FOR A COMPLETE PROJECT AS SHOWN IN THE DRAWINGS AND SPECIFICATIONS. DRAWINGS AND SPECIFICATIONS CARRY EQUAL IMPORTANCE AND ITEMS LISTED IN EITHER SHALL BE PROVIDED AS IF LISTED IN BOTH. ALSO REVIEW DETAILS AND RISER DIAGRAMS FOR ADDITIONAL ITEMS/INSTRUCTIONS WHETHER SPECIFICALLY REFERRED TO ON PLANS OR NOT.
8. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHOW THE GENERAL INSTALLATION OF EQUIPMENT & MATERIALS IN RELATIONSHIP TO STRUCTURE & OTHER TRADES. THEY MAY NOT SHOW EVERY REQUIRED OFFSET, FITTING, ETC. FIELD VERIFY ACTUAL JOB CONDITIONS AND COORDINATE WORK WITH OTHER TRADES PRIOR TO BIDDING JOB AND PRIOR TO ORDERING EQUIPMENT, FABRICATION OF MATERIALS, OR STARTING WORK. DO NOT SCALE THE DRAWINGS.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL ITEMS THAT AFFECT OTHER DISCIPLINES WITH THE CORRESPONDING CONTRACTOR AND THE GENERAL CONTRACTOR IF EQUIPMENT, MATERIALS, ETC. OTHER THAN THOSE SCHEDULED & SPECIFIED (PENDING PRE-APPROVAL) ARE FURNISHED.
10. MAINTAIN ALL REQUIRED SERVICE, FRESH AIR, & ROOF EDGE CLEARANCES FOR ALL NEW AND EXISTING EQUIPMENT, AND PLUMBING VENTS.
11. THE RESPONSIBILITY OF EACH CONTRACTOR IS NOT LIMITED TO THEIR SPECIFIC DISCIPLINE'S DRAWING SHEETS. REFER TO OTHER DISCIPLINES' DRAWING SHEETS AS REQUIRED FOR ADDITIONAL INFORMATION/INSTRUCTIONS.
12. SANITARY WASTE AND VENT PIPING BOTH ABOVE AND BELOW GRADE SHALL BE SOLID WALL SCHEDULE 40 PVC-DWV PLASTIC PIPE AND FITTINGS WITH SOLVENT WELD JOINTS. PLASTIC PIPING AND PIPING COMPONENTS SHALL BE LISTED AS CONFORMING WITH ANSI/NSF STD. 14 AND ASTM D-2665.
13. WATER PIPING MAINS SHALL BE CPVC AND INSTALLED IN ACCORDANCE WITH 2012 INTERNATIONAL PLUMBING CODE. TYPE "A" PEX IS PERMISSIBLE ONLY ON WATER LINES 2" AND SMALLER.
14. PROVIDE REMOVABLE PVC COVERS ON ALL EXPOSED SUPPLY AND WASTE FITTINGS TO COMPLY WITH ANSI STD. A117.1 REQUIREMENTS.
15. WALL CLEANOUTS IN INTERIOR FINISHED WALL AREAS (WCO) - LINE TYPE WITH LACQUERED CAST IRON BODY AND ROUND EPOXY COATED GASKET COVER, AND ROUND STAINLESS STEEL ACCESS COVER SECURED WITH MACHINE SCREW.
16. ALL HOT WATER PIPE ABOVE GRADE SHALL BE INSULATED WITH 1-1/2" FIBERGLASS OR ARMAFLEX, LOW PRESSURE INSULATION WITH WHITE UNIVERSAL JACKET.
17. ALL BALL/CONTROL/BALANCING VALVES WHICH ARE NOT READILY ACCESSIBLE VIA LAY-IN CEILING OR OPEN TO SPACE SHALL BE PROVIDED WITH AN ACCESSIBLE LOCKING PANEL EQUAL TO MIFAB TYPE CAD-FL ACCESS PANEL SHALL BE PAINTED TO MATCH CEILING OR WALL FINISH.
18. REFERENCE SPECIFICATIONS FOR FIRE PERFORMANCE SPECIFICATIONS. FINAL DESIGN TO BE DONE BY PROFESSIONAL ENGINEER LICENSED IN CALIFORNIA, QUALIFIED TO PREPARE THE NECESSARY COORDINATED DRAWINGS, CALCULATIONS, AND EQUIPMENT SPECIFICATIONS REQUIRED FOR A FULL AND COMPLETE DESIGN PER ALL AUTHORITIES HAVING JURISDICTION.
19. WALL CLEANOUTS TO BE INSTALLED ON BASE OF ALL STACKS.

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PROFESSIONAL SEAL

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PLUMBING NOTES, SYMBOLS & ABBREVS.

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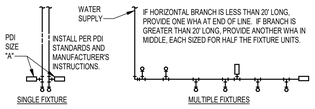
PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE TYPE	MANFUACTURER	MODEL	DESCRIPTION	CONNECTION SIZES				
					ELEC	WASTE	VENT	COLD WATER	HOT WATER
FCO	CLEANOUT	JR SMITH	4239L	DUCO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED CAST IRON TOP, TAPERED THREAD BRONZE PLUG.					
FD	FLOOR DRAIN	SIOUX CHIEF	832-25PNR	GRAY ABS BODY, ADJUSTABLE TOP WITH ROUND NICKEL BRONZE STRAINER.		3"	2"		
LAV	LAVATORY	SLOAN	DSWD-81000	DESIGNER SERIES 1-STATION WALL MOUNTED SINK WITH OPTIMA ETF-410 FAUCET AND ESD-410 SOAP DISPENSER. PROVIDE WITH ASSE 1070 COMPLIANT MIXING VALVE AND PRO-EXTREME WHITE TRAP WRAP.		2"	1-1/2"	1/2"	1/2"
SK1	HAND SINK	JUST MANUFACTURING	SL-ADA-1617-A-GR	DROP IN 18 GAUGE STAINLESS STEEL SINK WITH CHICAGO FAUCETS 431 SERIES DECK MOUNT FAUCET. PROVIDE WITH ASSE 1070 COMPLIANT MIXING VALVE.		2"	1-1/2"	1/2"	1/2"
SK2	PEDICURE CHAIR SINK	LIVING EARTH CRAFTS	5TH AVENUE	MANI/PEDI COMBO CHAIR COORDINATE EXACT MODEL AND OPTIONS WITH OWNER		2"	1-1/2"	3/4"	3/4"
SK3	HAIR WASH SINK	BELVEDERE	8600 PIVOTING BACKWASH	PORCELAIN ENAMEL CAST-IRON SHAMPOO POWL WITH WALL-MOUTING BRACKET, VACUUM BREAKER AND FLEXIBLE DRAIN HOSE. INSTALL ASSE 1070 VALVE BELOW SINK. PROVIDE WITH STRIEM SIDEKICK SOLIDS INTERCEPTOR.		2"	1-1/2"	1/2"	1/2"
WC	WATER CLOSET	KOHLER	K-3999-TR	FLOOR MOUNT ELONGATED WATER CLOSET WITH K-4636 SEAT 1.28 GPF		3"	2"	1/2"	
WMB	WASHING MACHINE BOX	GUY GRAY	B200	WASHING MACHINE SUPPLY AND DRAIN BACK BOX. PROVIDE WITH DRAIN, DRAIN FITTINGS, AND SHUTOFF VALVES WITH ARRESTORS.		2"	2"	1/2"	1/2"

NOTES:
PROVIDE CARRIERS FOR ALL WALL HUNG LAVATORIES.
PROVIDE ALL ADA LAVATORIES & SINKS NOT PROTECTED BY AN ARCHITECTURAL SKIRT PANEL WITH UNDERSINK PIPING COVERS EQUAL TO TRUEBRO.
SEE ARCHITECTURAL PLANS & ELEVATIONS FOR INSTALLATION HEIGHTS OF ALL PLUMBING FIXTURES.
PROVIDE TRAP PRIMERS TO SERVE ALL FLOOR DRAINS.
PROVIDE ALL ACCESSORIES, VALVES, WATER HAMMER ARRESTORS, ETC. NOT SCHEDULED OR CALLED OUT ON PLANS BUT REQUIRED TO MAKE THE PLUMBING SYSTEM COMPLETE.

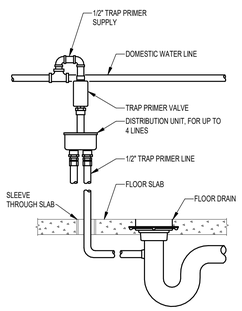


PDI SIZE	PIPE SIZE	FIXTURE LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

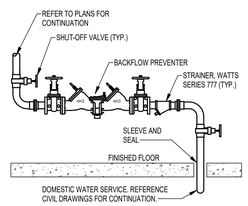
FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

PROVIDE WATER HAMMER ARRESTERS ON ALL QUICK CLOSING VALVES. INSTALLED AS CLOSE TO THE FIXTURES AS POSSIBLE TO CONTROL THE EFFECTS OF WATER HAMMER INSTALLATION SHALL COMPLY WITH CPC 609.10. DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE.

8 WATER HAMMER ARRESTERS
SCALE: 12" = 1'-0"



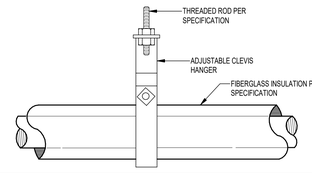
7 TRAP SEAL PRIMER DETAIL
SCALE: 6" = 1'-0"



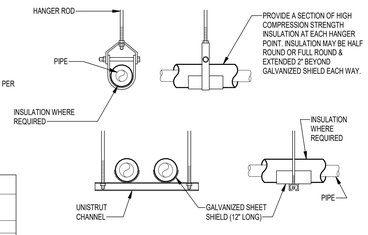
NOTE:

- SECURE PIPING TO WALL WITH UNISTRUT AND PIPE CLAMPS 30" ON CENTERS MINIMUM.
- COORDINATE AND FIELD ORIENT ALL PIPING SO AS NOT TO INTERFERE WITH SPRINKLER PIPING AND/OR ASSOCIATED DEVICES.

6 DOMESTIC WATER ENTRY
SCALE: 3" = 1'-0"



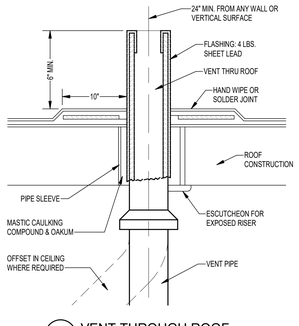
WATER PIPING (COPPER TYPE "L")				
PIPE SIZE	WEIGHT / FT. WITH WATER (LBS.)	MAX SPACING	LOAD / HANGE	ROD SIZE
1/2"	.38	6'	2.28	3/8"
3/4"	.66	6'	3.95	3/8"
1"	1.04	6'	6.24	3/8"
1-1/4"	1.43	6'	8.58	3/8"
1-1/2"	1.92	6'	19.2	3/8"
2"	3.09	10'	30.8	3/8"
2-1/2"	4.52	10'	45.2	3/8"



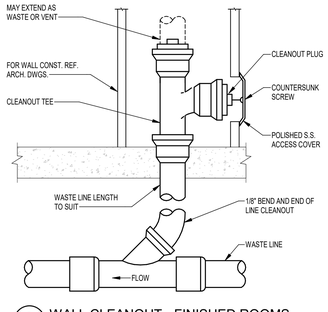
NOTES:

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

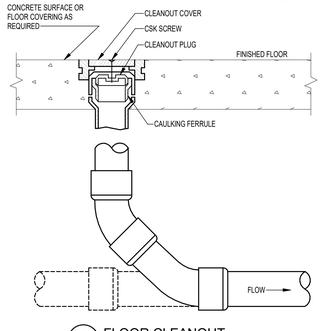
5 PIPE HANGING DETAIL
SCALE: 12" = 1'-0"



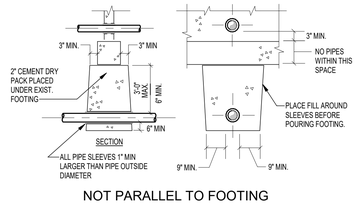
4 VENT THROUGH ROOF
SCALE: 12" = 1'-0"



3 WALL CLEANOUT - FINISHED ROOMS
SCALE: 12" = 1'-0"



2 FLOOR CLEANOUT
SCALE: 12" = 1'-0"



NOT PARALLEL TO FOOTING

1 PIPE AT CONCRETE FOOTING
SCALE: 12" = 1'-0"

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STATE OF MISSOURI
RYAN BREWER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023
PROFESSIONAL SEAL

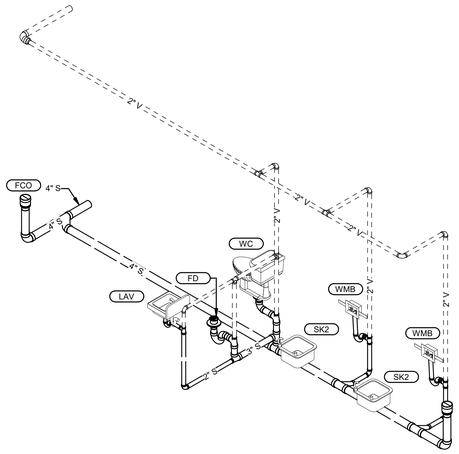
P102

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

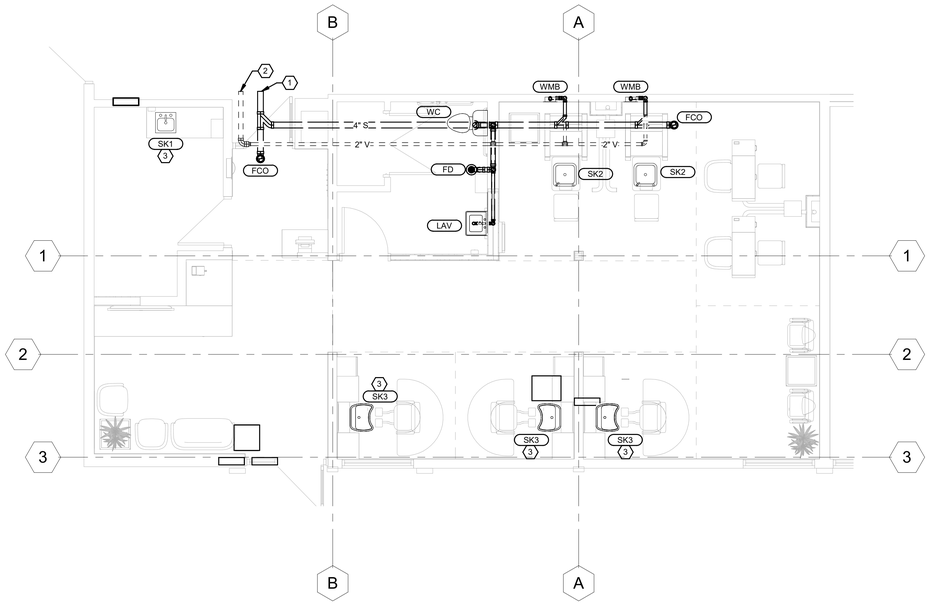
PLUMBING SCHEDULES AND DETAILS

5/1/2023 2:15:21 PM

CONTRACTOR TO FULLY INVESTIGATE SITE AND REUSE AS MUCH PIPING AS POSSIBLE. INSURE EXISTING PIPING IS IN GOOD WORKING ORDER AND ADEQUATELY SIZED.



2 WASTE AND VENT RISER
NOT TO SCALE



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

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR NOTES, SYMBOLS & ABBREVIATIONS.

KEYED NOTES:

1. CONNECT NEW SANITARY PIPING INTO EXISTING SANITARY PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, MATERIAL AND INVERT.
2. CONNECT NEW VENT PIPING INTO EXISTING VENT PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
3. NEW PLUMBING FIXTURE IN EXISTING LOCATION. RECONNECT EXISTING UTILITIES OFFSETTING AS REQUIRED FOR A COMPLETE INSTALLATION.

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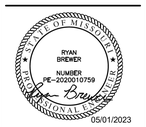


PROFESSIONAL SEAL

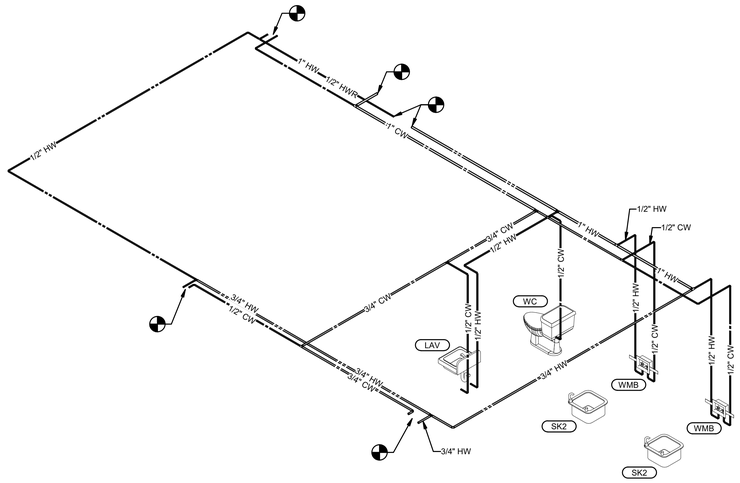
P201

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

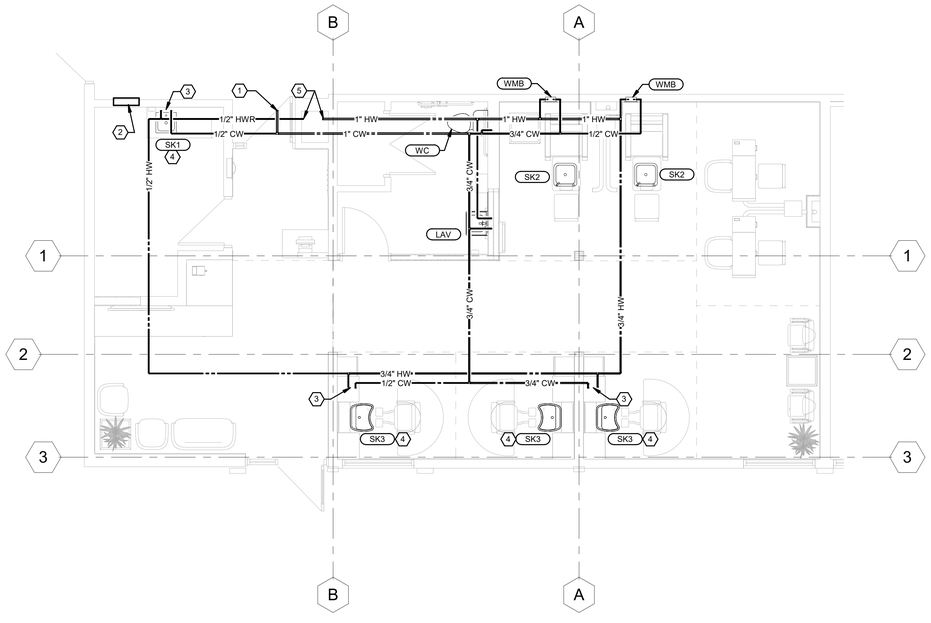
WASTE AND VENT PLAN

5/1/2023 2:15:23 PM

CONTRACTOR TO FULLY INVESTIGATE SITE AND REUSE AS MUCH PIPING AS POSSIBLE. INSURE EXISTING PIPING IS IN GOOD WORKING ORDER AND ADEQUATELY SIZED.



2 WATER RISER
NOT TO SCALE



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

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR NOTES, SYMBOLS & ABBREVIATIONS.

KEYED NOTES:

1. CONNECT NEW 1" COLD WATER PIPING INTO EXISTING DOMESTIC WATER TAP IN SPACE. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
2. DO NOT ROUTE ANY PLUMBING PIPING OVER ELECTRICAL PANELS.
3. CONNECT NEW HOT AND COLD WATER PIPING INTO EXISTING PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINTS, LINE SIZES, AND MATERIALS.
4. NEW PLUMBING FIXTURE IN EXISTING LOCATION. RECONNECT EXISTING UTILITIES OFFSETTING AS REQUIRED FOR A COMPLETE INSTALLATION.
5. CONNECT NEW HOT, COLD, AND HOT WATER RECIRCULATION PIPING INTO EXISTING TO REMAIN WATER HEATER. FIELD VERIFY CONDITION OF EXISTING WATER HEATER; ENSURE EXISTING WATER HEATER IS IN GOOD WORKING ORDER.

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RYAN BREWER
NUMBER PE-2020010759
PROFESSIONAL ENGINEER
05/01/2023

PROFESSIONAL SEAL

P202

ISSUE DATE: 28 APR 2023
COLLINS WEBB #: 22118

WATER PLAN

5/1/2023 2:15:25 PM

15400 - PLUMBING WORK

DESCRIPTION
ALL PLUMBING AND ASSOCIATED WORK IN DIVISION 15 IS GOVERNED BY THIS SECTION. PROVIDE LABOR AND MATERIALS NECESSARY TO PROVIDE THE WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. REFER TO OTHER DIVISIONS FOR CONTINUATION OF EXTERIOR AND ALLIED WORK.

QUALITY ASSURANCE
OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND CONNECTION FEES REQUIRED BY GOVERNING BODIES IN CONNECTION WITH THE WORK. DELIVER CERTIFICATES OF INSPECTION TO THE OWNER'S REPRESENTATIVE. ALL WORK SHALL COMPLY WITH GOVERNING CODES, ORDINANCES, AND REGULATIONS OF CITY, COUNTY AND STATE.

SUBMITTALS
SHOP DRAWINGS: SUBMIT MATERIALS, PRODUCTS, EQUIPMENT AND SYSTEMS AS SPECIFIED UNDER EACH PLUMBING SECTION IN THIS DIVISION IN ACCORDANCE WITH THE GENERAL CONDITIONS. SHOW PIPE SIZES, LOCATION, SLOPES OF HORIZONTAL RUNS, FITTINGS, VALVES, METERS, GAGES AND CONNECTIONS.

PRODUCT DATA: SUBMIT ON MATERIALS, FIXTURES, AND EQUIPMENT UNLESS OTHERWISE SPECIFIED OR ACKNOWLEDGED IN WRITING.

SAMPLES: SUBMIT WHEN SPECIFIED OR REQUESTED.

RECORD DOCUMENTS
REFER TO GENERAL CONDITIONS FOR REQUIREMENTS CONCERNING RECORD DOCUMENTS. ADDITIONAL REQUIREMENTS MAY BE SPECIFIED IN DIVISION 1. UNLESS SEPIAS OF THE DRAWINGS ARE TO BE FURNISHED BY THE ARCHITECT-ENGINEER FOR PREPARATION OF RECORD DRAWINGS, FURNISH OWNER'S REPRESENTATIVE WITH TWO SETS OF ACCURATELY MARKED COPIES OF THE DRAWINGS, INSTEAD OF ONE SET AS REQUIRED BY THE GENERAL CONDITIONS, INDICATING ALL CHANGES FROM ORIGINAL DRAWINGS AS INSTALLED.

PRODUCT HANDLING
PIPE, FIXTURES AND ACCESSORIES SHALL BE PROTECTED FROM DAMAGE IN SHIPMENT, HANDLING, STORAGE AND INSTALLATION. FROM MOISTURE, DIRT AND DEBRIS. PIPE, CLEANOUT AND FLOOR DRAIN OPENINGS SHALL BE TEMPORARILY PLUGGED WITH TEST PLUGS UNTIL FINAL CONNECTIONS ARE MADE.

GUARANTEE AND SERVICE
REFER TO GENERAL CONDITIONS FOR GUARANTEE. WHERE EXTENDED GUARANTEES ARE CALLED-FOR, FURNISH THREE COPIES TO BE INSERTED INTO OPERATION AND MAINTENANCE MANUALS.

GENERAL
PLUMBING SYSTEMS SHALL BE PROVIDED COMPLETE. SHOULD A SYSTEM, OR ANY PART THEREOF FAIL TO MEET PERFORMANCE REQUIREMENTS, NECESSARY REPLACEMENTS, ALTERATIONS OR REPAIRS, AS REQUIRED BY THE OWNER'S REPRESENTATIVE, SHALL BE MADE TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS AND ALL BUILDING CONSTRUCTION AND FINISHES DAMAGED OR MARRED BY SUCH REPLACEMENTS, ALTERATIONS OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITION. AT NO ADDITIONAL COST TO THE OWNER.

WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER.

INSERTS, PIPE SLEEVES, HANGERS, SUPPORTS, FIXTURES, TRIM DRAINS AND ANCHORAGE OF PLUMBING SHALL BE PROVIDED AS SPECIFIED HEREIN. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE. MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AND LAYOUT MADE AT THE PROPER TIME FOR THE SETTING OR EMBEDMENT THEREOF SO AS TO CAUSE NO DELAY IN THE WORK.

MANUFACTURER'S NAMES AND CATALOG NUMBERS
SPECIFIED REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT NECESSARILY INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS AN "OFF THE SHELF" ITEM. REQUIREMENTS FOR SPECIFIC FINISHES, MATERIAL OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURERS' STANDARDS. MODIFICATIONS SHALL BE FULLY CONSIDERED.

CHARTS AND TAGS
IN AREAS HAVING VALVES, PROVIDE SINGLE LINE DIAGRAMS FRAMED UNDER GLASS AND MOUNTED ON EQUIPMENT ROOM WALL. THE DIAGRAMS SHALL GIVE NAME, NUMBER DESIGNATION AND LOCATION OF VALVE.

VALVES SHALL BE IDENTIFIED WITH 1/16 INCH THICK WHITE LAMINATED PLASTIC NAMEPLATES WITH 3/16 INCH HIGH BLACK LAMINATED LETTERS. THE NAMEPLATE IDENTIFICATION SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. ATTACH NAMEPLATES TO VALVES WITH NON-CORROSIVE CHAIN OR WIRE.

ACCESS DOORS
PROVIDE ACCESS DOORS AS INDICATED AND SPECIFIED IN DRAWINGS

INSTALLATION AND WORKMANSHIP
THE WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY MATERIAL, APPARATUS OR EQUIPMENT WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER.

THE LOCATION OF PLUMBING PIPING SHALL BE COORDINATED TO ENSURE THAT IT CLEARS OPENINGS AND STRUCTURAL MEMBERS; THAT PIPING INDICATED AS CONCEALED CAN BE PROPERLY CONCEALED IN WALLS OR PARTITIONS AND THAT IT DOES NOT INTERFERE WITH LIGHTS, DUCTWORK OR EQUIPMENT HAVING FIXED LOCATIONS. MAKE NECESSARY HORIZONTAL OR VERTICAL OFFSETS WITH PIPE FITTINGS TO INSTALL THE SYSTEM IN THE AVAILABLE SPACE. CONCEAL OR INSTALL TIGHT TO STRUCTURE (IF EXPOSED) UNLESS OTHERWISE NOTED.

PIPING SHALL BE EXPOSED IN FINISHED AREAS ONLY WHERE INDICATED OR WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

WHERE DRAIN OR WATER CONNECTIONS NECESSARY TO THE OPERATION OF FIXTURES OR EQUIPMENT ARE NOT SPECIFICALLY SHOWN ON DIAGRAMS, EXTEND NECESSARY BRANCHES TO THE CLOSEST INDICATED BRANCH OR MAIN, AT NO ADDITIONAL COST TO THE OWNER.

EACH FIXTURE, EQUIPMENT DRAIN OR FLOOR DRAIN SHALL BE SEPARATELY TRAPPED UNLESS OTHERWISE INDICATED OR SPECIFIED.

PLUMBING PIPING AND EQUIPMENT SHALL NOT BE FIELD PAINTED, OR PRIMED BEYOND THE DEGREE OF APPLICATION FROM THE FACTORY SOURCE, OR EXCEPT AS REQUIRED BY APPLICABLE CODES AND AUTHORITIES HAVING JURISDICATION.

WATERPROOFING
DO NOT CUT OR PENETRATE WATERPROOFED SURFACES OR WATERPROOFING MEMBRANES WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY THE OWNER'S REPRESENTATIVE.

ACCESS DOORS
INSTALL AS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, EQUIPMENT AND LIKE ITEMS. DOORS SHALL BE CONVENIENTLY LOCATED AND OF SUFFICIENT SIZE.

PIPING PROVISIONS FOR FIXTURES AND EQUIPMENT SPECIFIED IN OTHER SECTIONS OR FURNISHED BY THE OWNER
ROUGH IN LOCATIONS SHALL BE DETERMINED FOR SERVICES. PROVIDE ALL NECESSARY PLUMBING SERVICES, ACCESSIBLE VALVES ON PLUMBING BRANCHES AND MAKE ALL FINAL CONNECTIONS.

PLUMBING OPERATION AND MAINTENANCE MANUALS

DESCRIPTION
FURNISH TWO COPIES OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL AND FOR THE OWNER, ON PLUMBING EQUIPMENT AND SPECIALTIES. THE MANUAL SHALL BE BOUND IN HARD-BACK, THREE-RING LOOSE-LEAF BINDERS.

MANUAL CONTENTS
TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHONE NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL SUBCONTRACTOR, RELATED CONTRACTOR AND MATERIAL AND EQUIPMENT SUPPLIERS.

INDEX OF CONTENTS
TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNER'S PERSONNEL DESCRIBING HOW TO OPERATE EACH PIECE OF EQUIPMENT, AND CAUTION AND WARNING NOTICES.

APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTENANCE BOOKLET FOR EACH ITEM OF PLUMBING, EQUIPMENT SPECIFIED IN DIVISION 15.

COPIES OF CERTIFICATES OF INSPECTION, WHERE INSPECTION IS REQUIRED.
GUARANTEES, INCLUDING EXTENDED GUARANTEES.

DELIVERY
DELIVER THE MANUALS TO THE OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT.

PLUMBING PIPING.

DESCRIPTION
FURNISH AND INSTALL PLUMBING PIPING WHERE SHOWN ON DRAWINGS AND AS SPECIFIED.

PIPING MATERIALS
OPTIONS
1. CAST IRON HUBLESS SANITARY PIPE AND FITTINGS: CISPI STD. 301.
2. CAST IRON SOIL PIPE AND FITTINGS, SERVICE WEIGHT: ASTM A 74.
3. CAST IRON SOIL PIPE AND FITTINGS, EXTRA HEAVY WEIGHT: ASTM A 74.
4. STEEL PIPE: ASTM A 53.
5. MALLEABLE IRON FITTINGS, 150 LB.: ASTM A 197.
6. PIPE THREADS: ANSI B2.1.
7. NIPPLES, PIPE (THREADED): FED SPEC. WW-N-351.
8. COPPER WATER TUBE: ASTM B 88.
9. WROUGHT COPPER AND BRONZE SOLDER-JOINT PRESSURE FITTINGS: ANSI B16.29.
10. WROUGHT COPPER AND WROUGHT COPPER ALLOY SOLDER-JOINT DRAINAGE FITTINGS: ANSI B16.29.
11. CAULKING LEAD: FED. SPEC. QQ-C-40 (2).
12. SHEET LEAD: FED. SPEC. QQ-L-201.
13. SHEET COPPER: ASTM B 152.
14. NO-HUB STAINLESS STEEL COUPLING AND GASKETS: CISPI STD. S-301.

JOINTS AND CONNECTIONS
OPTIONS
1. CAST IRON, HUB AND SPIGOT: PACKED WITH OAKUM AND FINISHED WITH LEAD NOT LESS THAN 1 INCH DEEP. WELL CAULKED.
2. CAST IRON, NO-HUB: NEOPRENE GASKET AND CORRUGATED 304 STAINLESS STEEL SHIELD IN CONJUNCTION WITH 4 STAINLESS STEEL CLAMPS FOR 4" AND SMALLER, 6 CLAMPS FOR 5" AND LARGER.
3. BETWEEN LEAD AND BRASS: FERRULES OR SOLDERING NIPPLES WITH WIPED JOINTS 3/8" THICK AND 3/4" EACH SIDE OF JOINTS.
4. SCREWED JOINTS: AMERICAN NATIONAL STANDARD WITH PIPE FREE FROM CUTTING AND BURRS. THREE THREADS EXPOSED MAXIMUM.
5. SOLDERED JOINTS: 95-5 TIN-ANTIMONY SOLDER. SLIP JOINTS: USE FOR PLUMBING TRAP SEALS ON INLET SIDE ONLY.
6. BETWEEN COPPER AND FERROUS MATERIALS: INSULATING DIELECTRIC UNION.
7. FLANGED JOINTS: FURNISH WITH COMPANION FLANGE AND CLOTH INSERTED RUBBER GASKET.
8. FLANGED BOLTS: ASTM A 354, MINIMUM GRADE BD, ALLOY STEEL WITH HEX NUTS IN COMPLIANCE WITH ANSI B18.22 AND STANDARD ROLLED STEEL WASHERS.
9. ASSEMBLY FOR HUBLESS PIPING: AS RECOMMENDED BY THE MANUFACTURER.
10. CHANGES IN PIPE SIZE SHALL BE MADE WITH REDUCERS, INCREASERS OR REDUCING FITTINGS. BUSHINGS WILL NOT BE PERMITTED.

INSTALLATION
BEFORE INSTALLING PIPE IN ANY PART OF THE SYSTEM, THE PIPE SHALL BE CLEANED INSIDE AND MADE FREE OF OIL, DIRT, AND FOREIGN MATTER. PROPERLY ALIGN AND INSTALL IN NEAT ARRANGEMENT, TRUE TO THE LINES OF THE BUILDING. PITCH LINE AT A CONSTANT SLOPE FOR PROPER DRAINAGE.

EXCEPT AS NOTED OTHERWISE ON DRAWINGS, PIPING SHALL BE HELD AS HIGH AS POSSIBLE, BETWEEN STRUCTURES AND THROUGH JOIST WEBBING, WITH DUE REGARD TO CONFLICTS WITH OTHER SYSTEMS AND THEIR REQUIREMENTS FOR SPACE.

PIPING, INCLUDING NO-HUB PIPING, SHALL BE INSTALLED STRAIGHT AND TRUE TO VERTICAL AND HORIZONTAL LINES. DEFLECTION SHALL NOT EXCEED ONE DEGREE. WHEN NECESSARY TO ACHIEVE THIS ALIGNMENT PROVIDE ADDITIONAL HANGERS OR BRACING.

APPLY LUBRICANT TO SCREW JOINT MALE THREADS.

METAL TO BE SOLDERED SHALL BE CLEANED AND FLUXED AS SUITABLE FOR THE SOLDER USED.

NOTCHING OF COPPER TUBING OR PLASTIC PIPING FOR CONNECTIONS WILL NOT BE PERMITTED.

PLUMBING SPECIALITES

PIPE SLEEVES
SCHEDULE 40 BLACK STEEL, GALVANIZED 26 GAGE STEEL, PROVIDE FOR ALL PIPES THROUGH WALLS AND FLOORS.

ESCUTCHEONS
PROVIDE FOR ALL PIPING THROUGH WALLS, FLOORS AND CEILING WERE PIPING IS EXPOSED TO VIEW IN FINISHED AREA. ESCUTCHEONS SHALL BE CHROMIUM PLATED, TWO PIECE, HINGED WITH SET SCREW.

UNIONS
PROVIDE GROUND JOINT BRASS UNIONS OR FLANGES ON EACH PIPING CONNECTION TO EQUIPMENT.

PROVIDE DIELECTRIC UNIONS BETWEEN COPPER AND STEEL PIPING CONNECTION TO EQUIPMENT.

VACUUM BREAKERS
SHALL CONFORM TO THE REQUIREMENTS OF THE REFERENCED PLUMBING CODE AND SHALL BE PROVIDED FOR HOSE BIBBS, FLUSHOMETERS AND ANY FIXTURE OR EQUIPMENT WATER SUPPLY HAVING A THREADED OUTLET.

FLASHING
VENT FLASHING SHALL COMPLY WITH ROOFING MANUFACTURER'S WRITTEN SPECIFICATIONS

CLEANOUTS
CLEANOUTS ON NO-HUB PIPE SHALL BE STANDARD NO-HUB FITTINGS.
CLEANOUTS ON CAST IRON HUB AND SPIGOT PIPING, SHALL BE CADMIUM PLATED.
APPROVED MANUFACTURERS: ZURN, JOSAM OR JONESPEC.

TRAP PRIMERS
PROVIDE WHERE INDICATED ON DRAWINGS. PRECISION PRODUCTS WITH DISTRIBUTION UNIT OR APPROVED EQUAL.

PIPE SLEEVES
1. EXTEND SLEEVE 1/4 INCH BEYOND FINISHED SURFACE.
2. SET SLEEVE BEFORE POURING CONCRETE.
3. PROVIDE CLEARANCE BETWEEN SLEEVE AND PIPE OR BETWEEN SLEEVE AND INSULATION TO ALLOW FOR PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION.
4. INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE.
5. CAULK BETWEEN SLEEVE AND PIPE OR SLEEVE AND INSULATION. PREFABRICATED, PRE-INSULATED, "PIPE SHIELDS" WILL BE ACCEPTABLE FOR PIPES PASSING THROUGH FLOORS, EXTERIOR WALLS, FIRE WALLS AND FIRE RESISTIVE WALLS AND PARTITIONS.
6. ESCUTCHEONS: FIT AROUND INSULATION WHERE PRESENT. PROVIDE DEEP ESCUTCHEON PLATES WHERE PIPE SLEEVES EXTEND ABOVE FLOORS.
7. WATER HAMMER ARRESTERS: INSTALL WHERE SHOWN ON DRAWINGS.
8. CLEANOUTS: INSTALL WHERE SHOWN ON DRAWINGS AND AT BASE OF ALL RISERS. PROVIDE ADDITIONAL CLEANOUTS WHERE REQUIRED BY LOCAL CODES AND FOR CONVENIENCE OF TESTING AND ERECTION AT CONTRACTOR'S OPTION.
9. FRAMES AND COVERS SHALL BE FLUSH WITH ADJOINING ARCHITECTURAL FINISH.

PLUMBING VALVES.

DESCRIPTION
INSTALL IN ACCESSIBLE LOCATION.
VALVES SHALL NOT BE INSTALLED WITH THE STEMS BELOW THE HORIZONTAL POSITION.

VALVES, GATE, 125# UNION BONNET. RISING STEM
3 INCH AND SMALLER:
1. SCREWED: ITT GRINELL #3080 OR APPROVED EQUAL.
2. SOLDER JOINT: ITT GRINNELL #3080 SJ OR APPROVED EQUAL.

VALVES, BALL (MAY BE USED IN LIEU OF GATE VALVES UP TO 2"): 2" AND SMALLER NIBCO #T580; TWO PIECE BRONZE BODY, WITH SCREWED ENDS, CHROME PLATED BRONZE BALL WITH CONVENTIONAL PORT, 400 PSI, BLOW OUT PROOF STEM.

VALVES, GLOBE 150# TEFLON DISC. UNION BONNET
3 INCH OR SMALLER:
1. SCREWED: ITT GRINELL #3240 OR APPROVED EQUAL.
2. SOLDER JOINT: ITT GRINELL #3240 SJ OR APPROVED EQUAL.

VALVES, CHECK 125# REMOVABLE REGRINDABLE DISC A. 3 INCH AND SMALLER.
HORIZONTAL:
1. SCREWED: ITT GRINELL #3300 OR APPROVED EQUAL.
2. SOLDER JOINT: ITT GRINELL #3300 SJ OR APPROVED EQUAL.

3 INCH AND SMALLER. VERTICAL:
1. FOR SCREWED AND SOLDER JOINT INSTALLATION. SAME AS SECTION A OR APPROVED EQUAL. PROVIDE ADAPTERS FOR SOLDER JOINT CONNECTION. 2.05 HOSE BIBBS A. SEE FIXTURE SCHEDULE ON DRAWINGS. B. PLUG COCKS. 125# BRONZE COCKS. TWO (2) INCH AND SMALLER SHALL BE CRANE NO. 250 OR APPROVED EQUAL.

INSTALLATION
INSTALL VALVES WHERE SHOWN ON DRAWINGS.

PLUMBING HANGERS AND SUPPORTS.

DESCRIPTION
PROVIDE HANGERS FOR ALL PIPING NOT INDICATED BELOW GRADE. USE HANGERS CAPABLE OF ADJUSTMENT.

HANGERS AND SUPPORTS
HANGERS FOR BLACK OR GALVANIZED STEEL PIPE SHALL BE GRINNELL, MODEL NO. 65 OR APPROVED EQUAL.

HANGERS FOR CAST IRON PIPE SHALL BE GRINNELL, MODEL NO. 260 OR APPROVED EQUAL.

HANGERS FOR COPPER TUBING SHALL BE GRINNELL, MODEL NO. 97 C OR APPROVED EQUAL.

TRAPEZE HANGERS OF A TYPE APPROVED BY THE OWNER'S REPRESENTATIVE MAY BE USED WHERE PIPES ARE DESIGNED TO RUN PARALLEL AT THE SAME ELEVATION.

PROVIDE ISOLATION HANGER WITH PROTECTIVE SHIELD, GRINNELL, MODEL NO. 300 103 OR APPROVED EQUAL. FOR ALL INSULATED PIPING. AT HANGER POINTS, PROVIDE 6 INCH LONG SECTION OF 1/2 INCH THICK CALCIUM SILICATE SECTIONAL PIPE INSULATION WITH FACTORY LONGITUDINAL LAP. SEAL BUTT JOINTS WITH INSULATING CEMENT.

STRAP HANGERS: NOT PERMITTED.

RISER CLAMPS: PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL, GRINNELL MODEL NO. 261

INSERTS: IN CONCRETE. GRINNELL MODEL NO. 285 OR APPROVED EQUAL, HAVING ADJUSTMENT FROM 3/4 INCH THROUGH 1-1/4 INCH. IN METAL DECKS READHEAD SD1 OR APPROVED EQUAL. POWDER PROPELLED PERMITTED IN NEW CONSTRUCTION WHERE TYPE AND LOCATION ARE APPROVED PRIOR TO INSTALLATION. IN EXISTING CONSTRUCTION, START SLUGIN NO. 6800 SERIES OR APPROVED EQUAL.

SIDE BEAM CLAMPS: PROVIDE WHEN SUPPORTING FROM STRUCTURAL STEEL MEMBERS, GRINNELL, MODEL 225 OR APPROVED EQUAL.

OTHER SUPPORTS: OBTAIN OWNER'S REPRENTATIVE APPROVAL FOR OTHER METHODS OF SUPPORT.

SPACING OF HANGERS
PROVIDE HANGER AT EACH CHANGE OF DIRECTION.

SPACE HANGERS AND SUPPORTS TO PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES WITH SPACING NO GREATER AND ROD NO SMALLER THAN SHOWN ON THE FOLLOWING TABLE. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION.

FERROUS PIPING AND COPPER TUBING:

DIAMETER OF PIPE	MAXIMUM SPACING	ROD SIZE
1/2" THROUGH 1-1/2"	6 FT.	3/8"
2" THROUGH 3"	10 FT.	1/2"
4" THROUGH 5"	12 FT.	5/8"
6" AND LARGER	16 FT.	3/4" D.

CAST IRON PIPING:

DIAMETER OF PIPE	MAXIMUM SPACING	ROD SIZE
2" AND 3"	EACH JOINT	3/8"
4" AND 5"	EACH JOINT	1/2"
6" AND 8"	EACH JOINT	3/4"
10" THROUGH 15"	EACH JOINT	3/4" (TWO HANGERS)

RISER CLAMPS
INSTALL AT EACH LEVEL BELOW THE FLOOR. SUSPEND FROM TWO HANGER RODS AND INSERTS WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.

TESTING OF PLUMBING PIPING.

DESCRIPTION
CONDUCT ALL TESTS AFTER PIPING IS INSTALLED AND BEFORE PIPING IS CONCEALED OR COVERED.

PROVIDE ALL NECESSARY TEMPORARY PIPING CLOSURES.

PROVIDE ALL TESTING EQUIPMENT, MATERIALS AND SUPPLIES.

SYSTEMS SHALL REMAIN UNDER TEST FOR SUFFICIENT LENGTH OF TIME TO PROVE TIGHTNESS THEREOF AND FOR ADEQUATE OBSERVATION BY THE ARCHITECT-ENGINEER.

MATERIALS OTHER THAN THOSE SPECIFIED FOR JOINING WILL NOT BE PERMITTED IN THE PIPING SYSTEMS FOR THE PURPOSE OF STOPPING LEAKS.

ALL LEAKS DISCLOSED BY THE TESTING PROCEDURES SHALL BE REPAIRED AND TESTING REPEATED UNTIL THE SYSTEM IS PROVEN TIGHT.

TESTING REQUIREMENTS ARE MINIMUM AND ARE NOT INTENDED TO BE LIMITING WHERE ADDITIONAL TESTING METHODS ARE REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

SUBMITTALS
STERILIZATION: PROVIDE A DATED LETTER TO THE ARCHITECT-ENGINEER'S REPRESENTATIVE STATING THAT PIPING SYSTEM HAS BEEN STERILIZED AND FLUSHED AS SPECIFIED.

PIPING TEST
DOMESTIC HOT AND COLD WATER PIPING SHALL BE FILLED, THEN TESTED TO A HYDROSTATIC PRESSURE OF 150 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF ONE HOUR.

SANITARY PIPING, PREVIOUS TO CONNECTION OF FIXTURES, SHALL BE FILLED WITH WATER TO THE TOP OF THE SYSTEM AND PROVEN TIGHT. WHEN TESTING THE SYSTEM BY SECTIONS THE MINIMUM HEIGHT OF THE WATER COLUMN SHALL BE 10 FEET. EXAMINE ALL JOINTS FOR LEAKS.

NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.

GAS PIPING SHALL BE TESTED WITH NITROGEN TO 60 PSIG. PRESSURE SHALL BE MEASURED WITH A MANOMETER. MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.

STERILIZATION
AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.

PLUMBING, FIXTURES, TRIM AND DRAINS

MANUFACTURER
MANUFACTURER SHALL BE AS SCHEDULED OR BY APPROVED EQUAL

PIPING
PIPING TO SERVE FIXTURES AND EQUIPMENT AND EXPOSED TO VIEW IN FINISHED AREAS SHALL BE BRASS, CHROMIUM PLATED.

SUPPORTS
PROVIDE ALL BRACKETS, PLATES, ANCHORS AND FASTENING DEVICES REQUIRED FOR ANCHORING THE FIXTURES RIGIDLY IN PLACE. RISERS TO SHOWER HEADS SHALL BE ANCHORED TO THE WALL CONSTRUCTION TO PREVENT MOVEMENT.

FIXTURES
PROVIDE PLUMBING FIXTURES AS SCHEDULED ON DRAWINGS, AMERICAN STANDARD, KOHLER, ELJER OR APPROVED EQUAL.

PLUMBING DRAINS
FURNISH WITH SEEPAGE FLANGE WHERE INSTALLED WITH PANS OR FLASHING, FURNISH CLAMPING RING.

ALL DRAINS SHALL BE OF THE SAME MANUFACTURER.

FURNISH FLOOR DRAINS WITH PRIMER CONNECTIONS WHERE INDICATED ON THE DRAWINGS. IN LIEU OF CAST-IN PRIMER CONNECTIONS ON THE DRAIN BODY, A TEE BETWEEN THE DRAIN BODY AND THE TRAP, TO RECEIVE THE PRIMER DISCHARGE WILL BE ACCEPTABLE.

PROVIDE FLOOR DRAINS WITH 4 INCH DEEP SEAL TRAPS.

PROVIDE ALL DRAINS AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL.

INSTALLATION
DRAIN SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS. ACCESSIBLE AND LOCATED TO SUIT EQUIPMENT APPROVED FOR INSTALLATION. WHERE FLUSH VALVES ARE SPECIFIED WITH FIXTURES, THE SUPPLY TO THE VALVE IN EACH ROOM SHALL BE AT THE SAME HEIGHT FOR THE TYPE OF FIXTURE AND THE VALVE SHALL BE SET IN PLACE SO THAT THE CENTER LINE OF THE VALVE DISCHARGE IS DIRECTLY ABOVE THE CENTER LINE OF FIXTURE STUD. BENDING OF NIPPLE BETWEEN THE VALVE AND THE STUD TO ACHIEVE CONNECTION WILL NOT BE PERMITED.

CHROME PLATED PIPING REQUIRING THE USE OF WRENCH SHALL BE PROTECTED FROM DAMAGE.

BOLT WATER CLOSET CARRIER TO FLOOR.

GAS PIPING.

PIPING
SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.

PIPE SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE FITTINGS

INSTALLATION
PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.

INSTALL GAS SHUT-OFF AND GAS MANIFOLDS AS INDICATED OR REQUIRED.

DOMESTIC HOT AND COLD WATER.

DESCRIPTION
THE WORK INCLUDES FURNISHING AND INSTALLING HOT AND COLD WATER PIPING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

PIPING
HOT AND COLD WATER PIPING SHALL BE COPPER WATER TUBE HARD TEMPER, TYPE "L" WITH WROUGHT SOLDER FITTINGS ABOVE FLOOR AND SOFT TEMPER TYPE "K" WITH WROUGHT SOLDER FITTINGS BELOW GRADE.

GATE VALVES
SPECIFIED IN SECTION. PLUMBING VALVES .

INSTALLATION
NOTCHING OF PIPE FOR CONNECTION NOT PERMITTED.

WHERE POSSIBILITY OF BACKFLOW FROM THE DRAIN TO THE SUPPLY FITTING EXISTS, INSTALL VACUUM BREAKERS.

NOT MORE THAN ONE LAVATORY, SINK, OR SIMILAR FIXTURE SHALL BE SUPPLIED BY A 1/2 INCH BRANCH. LINEAR DIMENSIONS NOT TO EXCEED 5 FEET.

MAKE CONNECTION TO EQUIPMENT AND FIXTURES INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.

HOT WATER BRANCH CONNECTIONS TO DISTRIBUTION MAINS SHALL BE TOP TAKE-OFF, SWING JOINT TYPE.

ALL PIPING INSTALLED BELOW GROUND SHALL RECEIVE TWO COATS OF KOPPERS NO. 50 OR APPROVED EQUAL.

PLUMBING INSULATION

DESCRIPTION
INSULATION SHALL NOT BE INSTALLED UNTIL TESTING PROCEDURES HAVE BEEN COMPLIED WITH AND ALL SURFACES HAVE BEEN CLEANED AND FREE OF DIRT, GREASE AND COMPLETELY DRIED.

MATERIALS SHALL COMPLY WITH UL 723, FLAME SPREAD RATING, HOT SURFACE TEST PERFORMANCE, AND SMOKE DEVELOPED RATING.

SUBMITTALS
SAMPLES AND MANUFACTURER'S PRODUCT DATA: SUBMIT SAMPLES OF INSULATION AND ADHESIVE AND PRODUCT DATA LISTING RECOMMENDATIONS FOR USE AND COMPLIANCE WITH NFPA 90.

INSULATION
INSULATION FOR HOT AND COLD WATER PIPING, SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SSLII OR APPROVED EQUAL, WITH FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET.

INSULATION FOR EXPOSED HOT AND COLD WATER PIPING SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SSLII OR APPROVED EQUAL, WITH FACTORY APPLIED, .016 EMBOSSED ALUMINUM JACKET.

ADHESIVE SHALL BE BENJAMIN FOSTER 30-36, OR APPROVED EQUAL, WHITE INSULATION LAGGING ADHESIVE.

VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.

INSTALLATION
HOT AND COLD WATER PIPING: SHALL BE INSULATED WITH 1/2 INCH THICK GLASS FIBER INSULATION HAVING A FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET WITH A MINIMUM R-4.0 PER INCH. CONCEALED AND EXPOSED PIPING SHALL HAVE THE INSULATION APPLIED WITH SIDE AND END JOINTS BUTTED TIGHTLY. SEAL JACKET LEGS AND BUTT JOINT STRIPS WITH ADHESIVE.

INSULATE FITTINGS FOR PIPING UP TO 3 INCHES IPS WITH MOLDED GLASS FIBER. INSULATE FITTINGS FOR PIPING LARGER THAN 3 INCHES WITH MOLDED FITTINGS OR SEGMENTED SECTIONS, WIRED IN PLACE TO THE SAME THICKNESS AS ADJACENT INSULATION. EXPOSED INSULATED PIPING AND FITTINGS SHALL BE JACKETED WITH 6 OUNCE CANVAS PIPING INCLUDING THE FITTING CHANGE FROM HORIZONTAL TO VERTICAL. CONCEALED AND EXPOSED PIPING SHALL HAVE THE INSULATION APPLIED WITH SIDE AND END JOINTS BUTTED TIGHTLY. SEAL OFF ENDS OF INSULATION WITH VAPOR BARRIER MASTIC AT EACH FITTING AND AT 21 FOOT INTERVALS ON CONTINUOUS RUNS.

INSTALL THE FACTORY APPLIED FIRE RETARDANT JACKET VAPOR BARRIER SO THAT IT WILL LAP SMOOTHLY AND SECURELY AT THE LONGITUDINAL LAP AND ADHERE IT WITH VAPOR BARRIER MASTIC. ADHERE 3 INCH WIDE BUTT STRIPS X SMOOTHLY OVER ALL END JOINTS WITH THE VAPOR BARRIER MASTIC TO ASSURE A CONTINUOUS VAPOR BARRIER - NO STAPLES ALLOWED. INSULATE DRAIN BODIES AND FITTINGS WITH METERED SEGMENTS OF PIPE INSULATION, OVERSIZED PIPE INSULATION OR MOLDED FITTINGS. COAT WITH TWO, 1/8 INCH COATS OF VAPOR BARRIER MASTIC REINFORCED WITH GLASS FABRIC EXTENDING 2 INCHES ONTO ADJACENT PIPES. EXPOSED INSULATED PIPING AND FITTINGS SHALL BE JACKETED WITH 8 OUNCE CANVAS. TERMINATE INSULATION NEATLY AT CLEANOUTS ON STORM AND COLD DRAIN PIPING. DO NOT COVER CLEANOUTS.

DOMESTIC WATER HEATING

DESCRIPTION
PROVIDE DOMESTIC WATER HEATING EQUIPMENT WHERE SHOWN ON DRAWINGS AND SPECIFIED.

DISCHARGE PIPE
RELIEF VALVE DISCHARGE SHALL BE COPPER WATER TUBE, TYPE M.

INSTALLATION
WATER HEATER SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS.

DISCHARGE PIPE SHALL HAVE TERMINATING END CUT AT 45 DEGREE AN