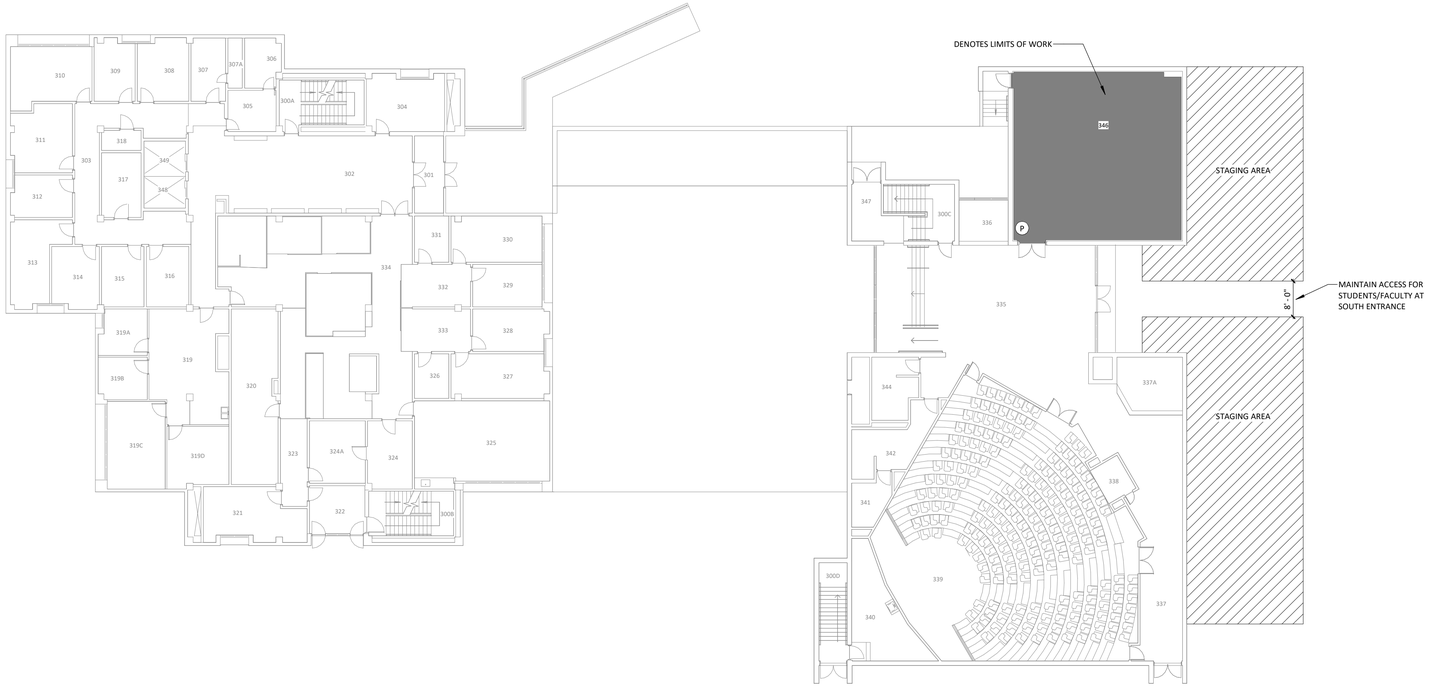
LEON JOHNSON HALL
MONTANA STATE UNIVERSITY

950 WEST GARFIELD STREET, BOZEMAN, MT 59715

ROOM #346
PPA#: 23-0828



DEFERRED SUBMITTALS

INDEX OF DRAWINGS

BUILDING REQUIREMENTS FROM THE INTERNATIONAL EXISTING BUILDING CODE 2021

ALTERATION - LEVEL 1: ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT OR FIXTURES USING NEW MATERIALS, ELEMENTS, OR EQUIPMENT OR FIXTURES THAT SERVE THE SAME PURPOSE.

COMPLIANCE METHOD:

PRESCRIPTIVE - CHAPTER 5
ALTERATIONS: EXCEPT AS PROVIDED BY SECTION 302.4, 302.5 OR THIS SECTION, ALTERATIONS TO ANY BUILDING OR STRUCTURE SHALL COMPLY WITH THE REQUIREMENTS OF THE IBC FOR NEW CONSTRUCTION. ALTERATIONS SHALL BE SUCH THAT THE EXISTING BUILDING OR STRUCTURE IS NOT LESS COMPLYING WITH THE PROVISIONS OF THE IBC THAN THE EXISTING BUILDING OR STRUCTURE WAS PRIOR TO THE ALTERATION.

NO CHANGE IS BEING MADE TO THE OCCUPANCY SIZE OR TYPE.

NO CHANGE TO EXIT DISTANCE OR PATH.

Ⓟ LOCATION OF EXISTING ELECTRICAL PANEL.

GENERAL CONDITIONS

1. THE GENERAL CONTRACTOR IS TO GUARANTEE ALL WORK INCLUDING WORK DONE BY SUBCONTRACTORS FOR A PERIOD OF ONE (1) YEAR COMMENCING WITH THE FINAL ACCEPTANCE AND FULL COMPLETION OF THE PROJECT.
2. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL GOVERNING CODES, ORDINANCES AND AUTHORITIES HAVING JURISDICTION. GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL REQUIRED BUILDING PERMITS.
3. THE GENERAL CONTRACTOR IS TO HAVE A FULL TIME QUALIFIED SUPERVISOR ON THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED.
4. ALL MATERIAL SPECIFIED IS TO BE NEW & INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. GENERAL CONTRACTOR IS TO CONSTRUCT PROJECT IN ACCORDANCE WITH THE DOCUMENTS. ANY DEVIATION FROM THE INTENT OF THE DOCUMENTS, WITHOUT ARCHITECT OR ENGINEER'S APPROVAL, ARE AT THE CONTRACTOR'S OWN RISK AND MAY RESULT IN THE WORK BEING DONE OVER AT CONTRACTOR'S EXPENSE (MATERIALS AND LABOR).

GENERAL NOTES

1. CONTRACTOR TO REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT INDICATED ON CONTRACT DOCUMENTS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO BEGINNING WORK.
2. CONTRACTOR TO CONTACT LOCAL UTILITIES, IF NECESSARY, SUBMIT ALL APPLICABLE PERMIT DOCUMENTS, QUALIFICATIONS, ETC., AND BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH PERMITS, UTILITY EXTENSIONS, TAP-INS, ETC.
3. THE CONTRACTOR SHALL REMOVE ALL DEBRIS AS A RESULT OF THIS PROJECT. THE CONTRACTOR WILL REMOVE EXISTING EQUIPMENT, FIXTURES, ETC. IN THE SPACE PRIOR TO CONSTRUCTION AND RELOCATE PER OWNER.
4. THE CONTRACTOR SHALL SCHEDULE HIS WORK AND MATERIAL AND EQUIPMENT DELIVERIES SO AS NOT TO INTERFERE WITH THE DAILY OPERATIONS OF THE REMAINDER OF THE FACILITY.
5. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, EQUIPMENT, FIXTURES, ETC. FROM DAMAGE DURING THE COURSE OF CONSTRUCTION.
6. ALL SURFACES AND/OR FINISHES DAMAGED AS A RESULT OF AND ADJACENT TO THE WORK SHALL BE REPAIRED AND FINISHED TO THEIR ORIGINAL CONDITION.
7. USE DETAILS MARKED 'TYPICAL' (TYP) WHEREVER APPLICABLE.
8. ALL ITEMS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY PERSONS SKILLED IN THEIR RESPECTIVE TRADE AND WHO NORMALLY PARTICIPATE IN THE WORK OF THAT TRADE.
9. WORDS WHICH HAVE WELL KNOWN TECHNICAL OR TRADEMEANINGS ARE USED IN THE DRAWINGS AND SPECIFICATIONS IN ACCORDANCE WITH SUCH RECOGNIZED MEANINGS.
11. WITHIN THE DRAWINGS AND RELATED SPECIFICATIONS THERE SHALL BE THE FOLLOWING PRECEDENCE:
    A. ADDENDA OR MODIFICATIONS TO THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE OVER THE ORIGINAL, WHEN ISSUED BY THE ARCHITECT.
    B. SPECIFICATIONS SHALL TAKE PRECEDENCE OVER DRAWINGS.
    C. WITHIN THE DRAWINGS THE LARGER SCALE TAKES PRECEDENCE OVER THE SMALLER, FIGURED DIMENSIONS OVER SCALED AND NOTED MATERIALS OVER GRAPHIC INDICATIONS.
12. THE ARCHITECT OR ENGINEER SHALL BE IN THE FIRST INSTANCE THE SOLE INTERPRETER OF THE DRAWINGS AND SPECIFICATIONS WITH REGARD TO THEIR MEANING OR INTENT.
13. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES AND PROCEDURES.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY DURING BUILDING CONSTRUCTION.
15. SUBMITTALS AND SAMPLES REQUIRED ON ALL FINISH MATERIALS AND COLORS, AND SHALL BE REVIEWED BY OWNER'S REPRESENTATIVE FOR FINAL APPROVAL PRIOR TO ORDERING. SAMPLES SHALL BE FULL SIZE WITH PAINTS/STAINS APPLIED TO ACTUAL SUBSTRATES. ALL MATERIALS SHALL BE VIEWED ON SITE AT SAME TIME IN SPACES USED, ONE MEETING FOR EXTERIOR FINISHES AND ONE MEETING FOR INTERIOR FINISHES.

PROJECT INFORMATION:

OWNER / DEVELOPER

STATE OF MONTANA - MONTANA STATE UNIVERSITY
UNIVERSITY FACILITIES MANAGEMENT,
MANAGED BY: PLANNING, DESIGN, & CONSTRUCTION
PLEW BUILDING 6TH & GRANT
PO BOX 1720760
BOZEMAN, MT 59717-2760
ATTN: JENNISSE WATERS
EMAIL: JENNISSE.WATERS@MONTANA.EDU
TEL: (406) 994-5970

DESIGN PROFESSIONALS

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2250 HWY 93 SOUTH
PO BOX 1134
KALISPELL, MT 59903
TEL: (406) 755-3208

ARCHITECT: MIKE J MYERS, AIA

STRUCTURAL ENGINEER: KEOLA JAMIESON, PE

MECHANICAL ENGINEER: TYLER TONJUM, PE

ELECTRICAL ENGINEER: JON RUONAVAARA, PE

BUILDING DEPARTMENT

CITY OF BOZEMAN
20 E. OLIVE ST. 1ST FLOOR
PO BOX 1230
BOZEMAN, MT 59771
EMAIL: PLANNINGTECH@BOZEMAN.NET
TEL: (406) 582-2260

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FOR PERMIT & BIDDING

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ROOM #346
PPA#: 23-0828

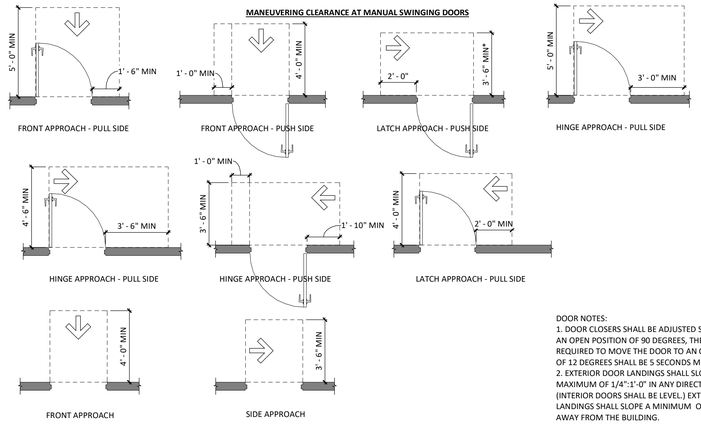
DRAWN: KCE CHECKED: MJM

DATE: 11/19/2024

REVISIONS:

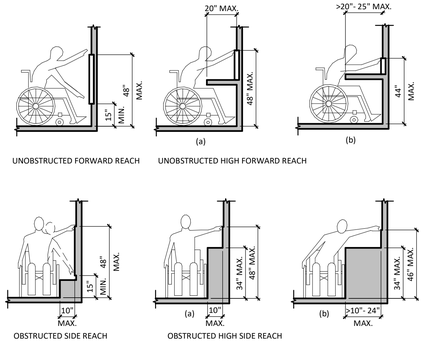
TITLE SHEET

G-001

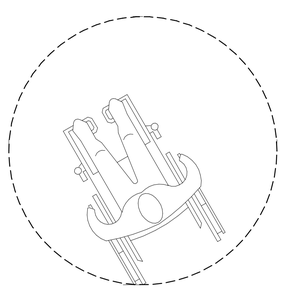


DOOR NOTES:
1. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM.
2. EXTERIOR DOOR LANDINGS SHALL SLOPE A MAXIMUM OF 1/4":1'-0" IN ANY DIRECTION. (INTERIOR DOORS SHALL BE LEVEL.) EXTERIOR LANDINGS SHALL SLOPE A MINIMUM OF 1/8":1'-0" AWAY FROM THE BUILDING.
3. DOOR LANDINGS SHALL BE A MINIMUM OF 44" IN DEPTH.

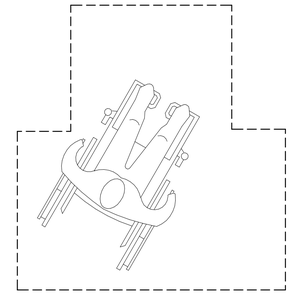
1 DOOR CLEARANCE AND LANDING REQUIREMENTS
1/4" = 1'-0"



2 ADA REACH RANGES
1/4" = 1'-0"

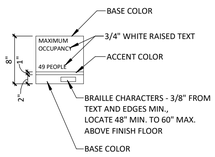


60" Ø SPACE FOR
SINGLE WHEELCHAIR



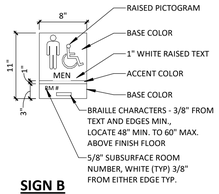
T-SHAPED SPACE
FOR 180° TURNS

3 WHEELCHAIR TURNING REQUIREMENTS
NTS



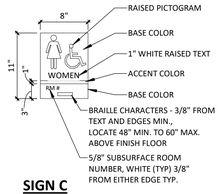
SIGN A

BASE AND ACCENT COLORS TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE



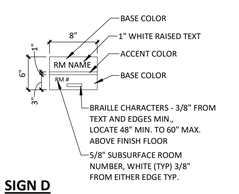
SIGN B

BASE AND ACCENT COLORS TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE



SIGN C

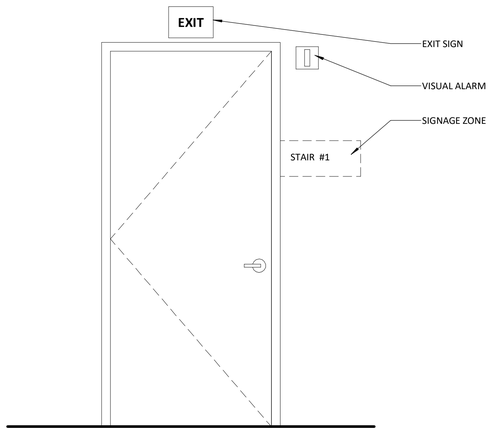
BASE AND ACCENT COLORS TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE



SIGN D

BASE AND ACCENT COLORS TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE

4 ACCESSIBLE SIGNAGE
1" = 1'-0"



5 TYP. MOUNTING HTS. @ EXIT DOOR
3/4" = 1'-0"

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DATE: 11/19/2024

REVISIONS:

ACCESSIBILITY DETAILS

G-013

ABBREVIATIONS

A	
AFF	ABOVE FINISH FLOOR
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
AB	ANCHOR BOLT
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT
B	
BSMT	BASEMENT
BATH	BATHROOM
BM	BEAM
BRG	BEARING
BEDRM	BEDROOM
BET	BETWEEN
BLDG	BUILDING
BO	BOTTOM OF
BOT	BOTTOM
BN	BOUNDARY NAILING
BS	BOTH SIDES
C	
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CPT	CARPET
CLG	CEILING
CT	CERAMIC TILE
CLR	CLEAR
CLST	CLOSET
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACT, CONTRACTOR
CORR	CORRIDOR
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
D	
DEMO	DEMOLISH, DEMOLITION
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DW	DISHWASHER
DIV	DIVISION
DL	DEAD LOAD
DR	DOOR
DN	DOWN
DS	DOWNSPOUT
DWG	DRAWING
DF	DRINKING FOUNTAIN
D	DRYER
E	
EA	EACH
E	EAST
ELEC	ELECTRIC
ELEV	ELEVATION, ELEVATOR
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP	EXPANSION
EJ	EXPANSION JOINT
EXT	EXTERIOR
F	
FOB	FACE OF BRICK
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FIN	FINISH
FF	FINISH FLOOR
FEC	FIRE EXTINGUISHER/AND OR CABINET
FL	FLASHING
FLR	FLOOR
FD	FLOOR DRAIN
FT	FOOT, FEET
FTG	FOOTING
FND	FOUNDATION
FURN	FURNITURE
FUT	FUTURE
FBO	FURNISHED BY OTHERS
FRP	FIBER REINFORCED PANEL
G	
GA	GAUGE
GALV	GALVANIZED
GEN	GENERAL
GL	GLASS
GWB	GYPSUM WALL BOARD
GYPC	GYPCRETE
H	
HALL	HALLWAY
HDW	HARDWARE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HWT	HOT WATER TANK
HR	HOUR
I	
IBC	INTERNATIONAL BUILDING CODE
INCL	INCLUDE, INCLUDED (ING)
INFO	INFORMATION
ID	INSIDE DIAMETER
INSUL	INSULATE,INSULATION
INT	INTERIOR
J	
JAN	JANITOR
JC	JANITOR'S CLOSET
JT	JOINT
K	
KIT	KITCHEN
KO	KNOCK OUT
L	
LBL	LABEL
LAM	LAMINATED
LNDRY	LAUNDRY
LAV	LAVATORY
LVL	LEVEL
LL	LIVE LOAD
LR	LIVING ROOM
LOC'N	LOCATION
M	
MFR	MANUFACTURER
MAS	MASONRY
MO	MASONRY OPENING
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL, MECHANICAL ROOM
MTL	METAL
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
N	
NOM	NOMINAL
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
O	
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OFF	OFFICE
OPG	OPENING
OPP	OPPOSITE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
O/O	OUT TO OUT
P	
PNT	PAINT, PAINTED
PNL	PANEL
PH	PHASE
PLAS	PLASTIC
P-LAM	PLASTIC LAMINATE
PL	PLATE
PLYWD	PLYWOOD
PVC	POLYVINYL CHLORIDE
PREFIN	PREFINISHED
PROP	PROPERTY
Q	
QUAN	QUANTITY
R	
RAD	RADIUS
RWL	RAIN WATER LEADER
REF	REFERENCE
REINF	REINFORCE, REINFORCEMENT
RCP	REFLECTED CEILING PLAN
REQ'D	REQUIRED
RFI	REQUEST FOR INFORMATION
REV	REVISION
R	RISER
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING
S	
SCHED	SCHEDULE
SEC	SECTION
SG	SAFETY GLASS
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
S	SOUTH
SPEC	SPECIFICATION
SQ	SQUARE
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SF	SQUARE FEET
SUSP	SUSPENDED
T	
TEAL	TECHNOLOGY ENHANCED ACTIVE LEARNING
TEL	TELEPHONE
TV	TELEVISION
TEMP	TEMPERED, TEMPORARY
T&G	TONGUE AND GROOVE
TOB	TOP OF BRICK
TOS	TOP OF SLAB
TOW	TOP OF WALL
TOM	TOP OF MASONRY
T	TREAD
TYP	TYPICAL
U	
UAS	UPWARD ACTING SECTIONAL DOOR
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	
VB	VAPOR BARRIER
VNR	VENEER
VERT	VERTICAL
VG	VERTICAL GRAIN
VCT	VINYL COMPOSITION TILE
W	
WSCT	WAINSCOT
WC	WATER CLOSET
WIN	WINDOW
WP	WATERPROOF (ING)
WRB	WEATHER RESISTANT BARRIER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WT	WEIGHT
W	WEST, WASHER
W/	WITH
W/D	WASHER / DRYER

SYMBOLS USED AS ABBREVIATIONS

&	AND
L	ANGLE
@	AT
CL	CENTERLINE
U	CHANNEL
Ø	DIAMETER
PL	PLATE

SYMBOLS & MATERIALS

STRUCTURAL FILL
UNDISTURBED EARTH
DISTURBED EARTH
GRAVEL
POURED CONCRETE
CONCRETE BLOCK VENEER
BRICK VENEER
EIFS
ROUGH WOOD
BLOCKING
SECTION (XX / AX.X)
ELEVATION (XX / AX.X)
DETAIL (XX / AX.X)
ITEM IDENTIFICATION (XX / AX.X) SHEET WHERE ITEM IS CUT
NORTH ARROW

FINISHED WOOD
PLYWOOD
RIGID INSULATION
BATT INSULATION
SPRAYFOAM INSULATION
SAND, PLASTER, GROUT
METAL
STEEL
WINDOW TYPE (XX)
DOOR NUMBER (X)
ROOM NUMBER (XXX)
WALL TYPE (X.XX - S) X'-X"
REVISION NUMBER (X)
KEY NOTE (X)
DEMOLITION NOTE (X)
FINISH TAG (X)
EQUIPMENT TAG (XX)
ROOM FINISH KEY (WALL N, WALL W, WALL E, WALL S, CLG, SILL, FLR, BASE, NOTES)

A-102

- LEVEL 1 DISCIPLINE DESIGNATOR
- LEVEL 2 DISCIPLINE DESIGNATOR
- LEVEL SEQUENCE NUMBER
- PLAN TYPE SEQUENCE NUMBER
- SHEET TYPE DESIGNATOR

*** NOTE ***
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS

ARCHITECTURAL SHEET INDEX

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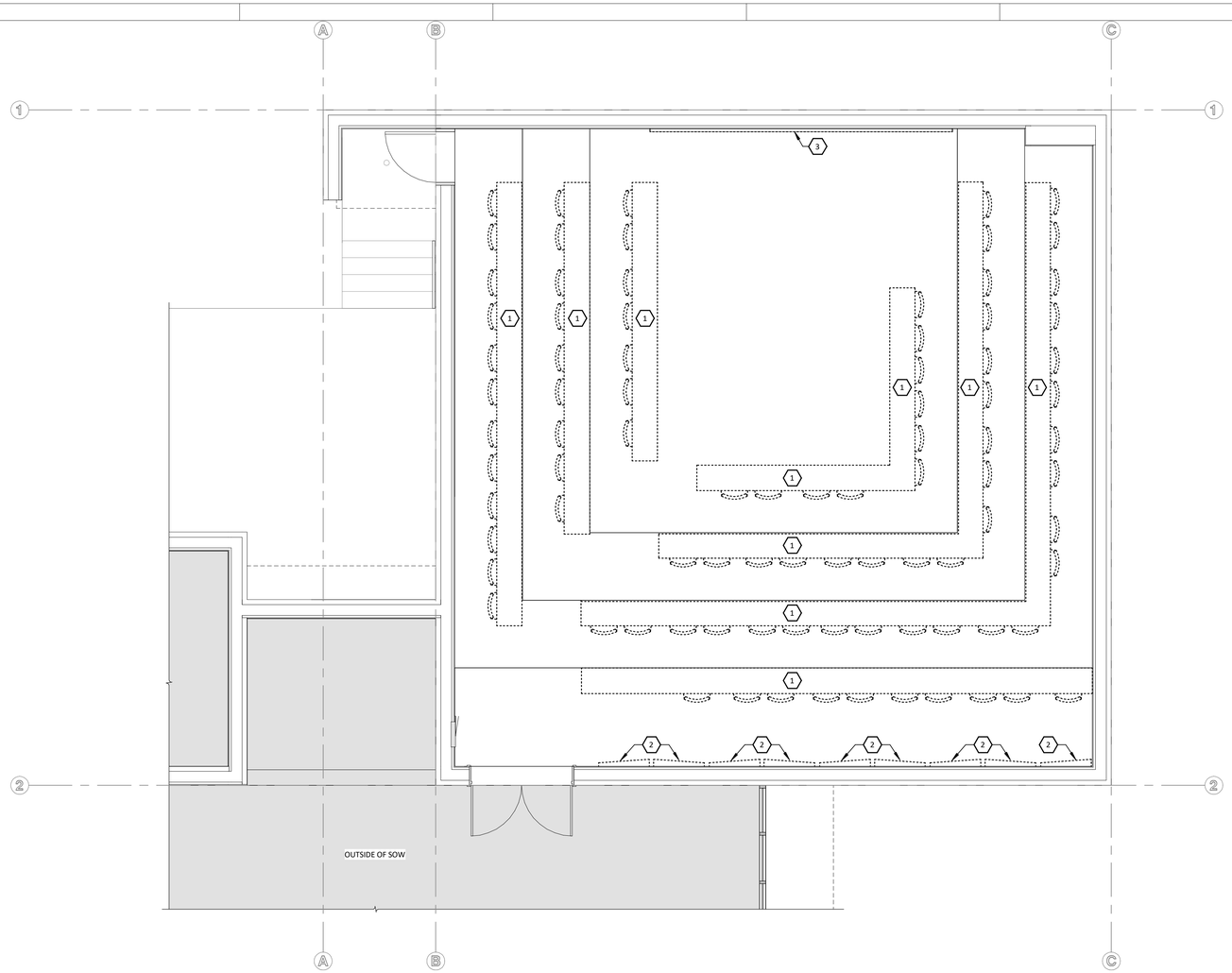
ARCHITECTURAL NOTES

A-001



1 DEMO FLOOR PLAN
1/4" = 1'-0"
0 2' 4' 8'

APPROXIMATE OCCUPANCY: 89 (15.9 S.F./STUDENT)

CLASSROOM DEMO KEYNOTES

1 REMOVE FIXED TABLES AND CHAIRS, TYP. DELIVER TO OWNER'S STORAGE ON CAMPUS
2 REMOVE ACOUSTIC PANELS, RECYCLE WHERE POSSIBLE, DISPOSE OTHERWISE
3 REMOVE WHITE BOARD AND PROJECTOR SCREEN, DELIVER TO OWNER'S STORAGE ON CAMPUS

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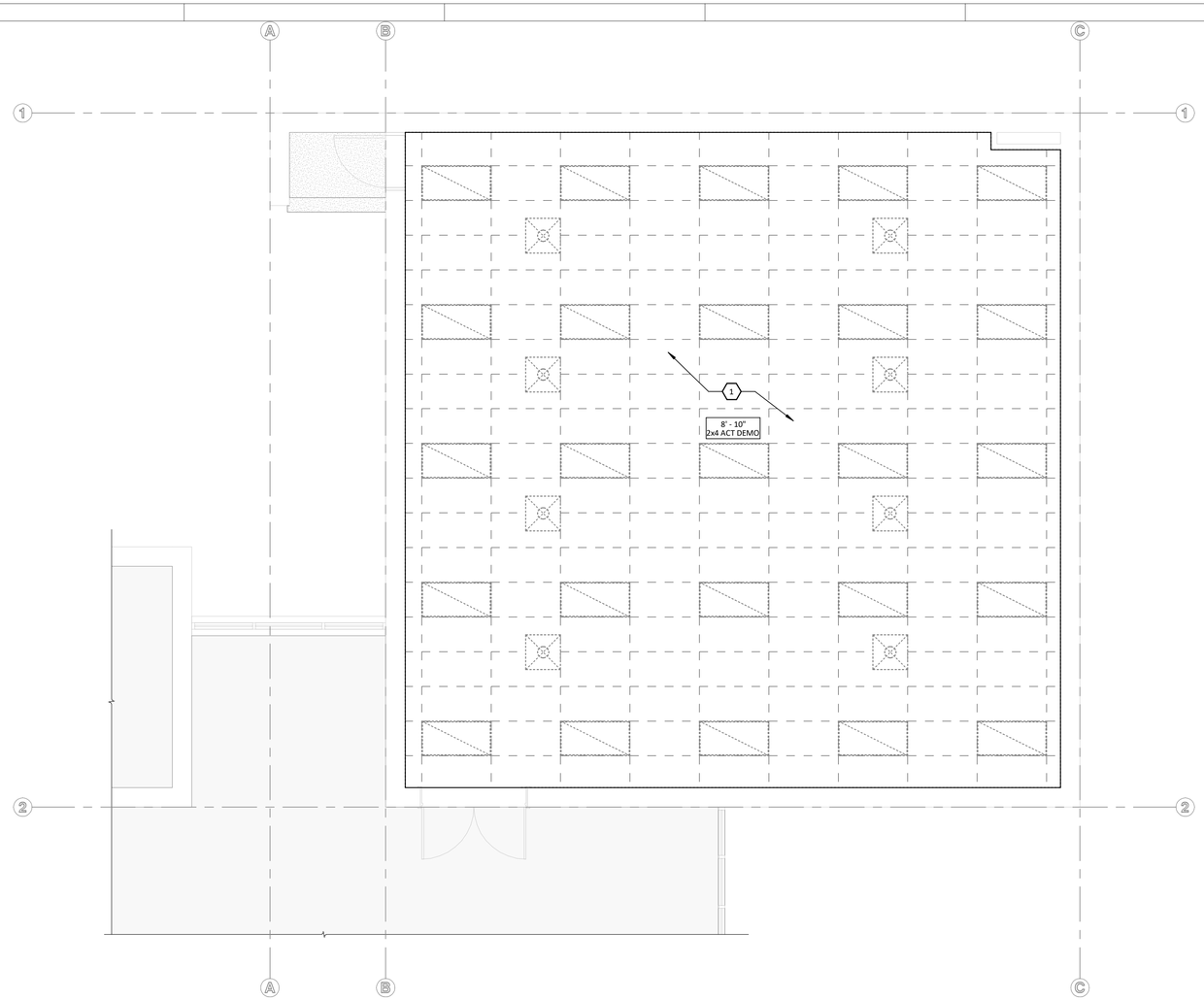
DEMO CLASSROOM FLOOR PLAN

AD101



1 REFLECTED CEILING PLAN DEMO PLAN
1/4" = 1'-0"
0 2' 4' 8'

RCP DEMO KEYNOTES

1 DEMO ALL EXISTING ACT AND GRID

DEMO CEILING PLAN LEGEND

(2X4)
ACOUSTIC CEILING TILE

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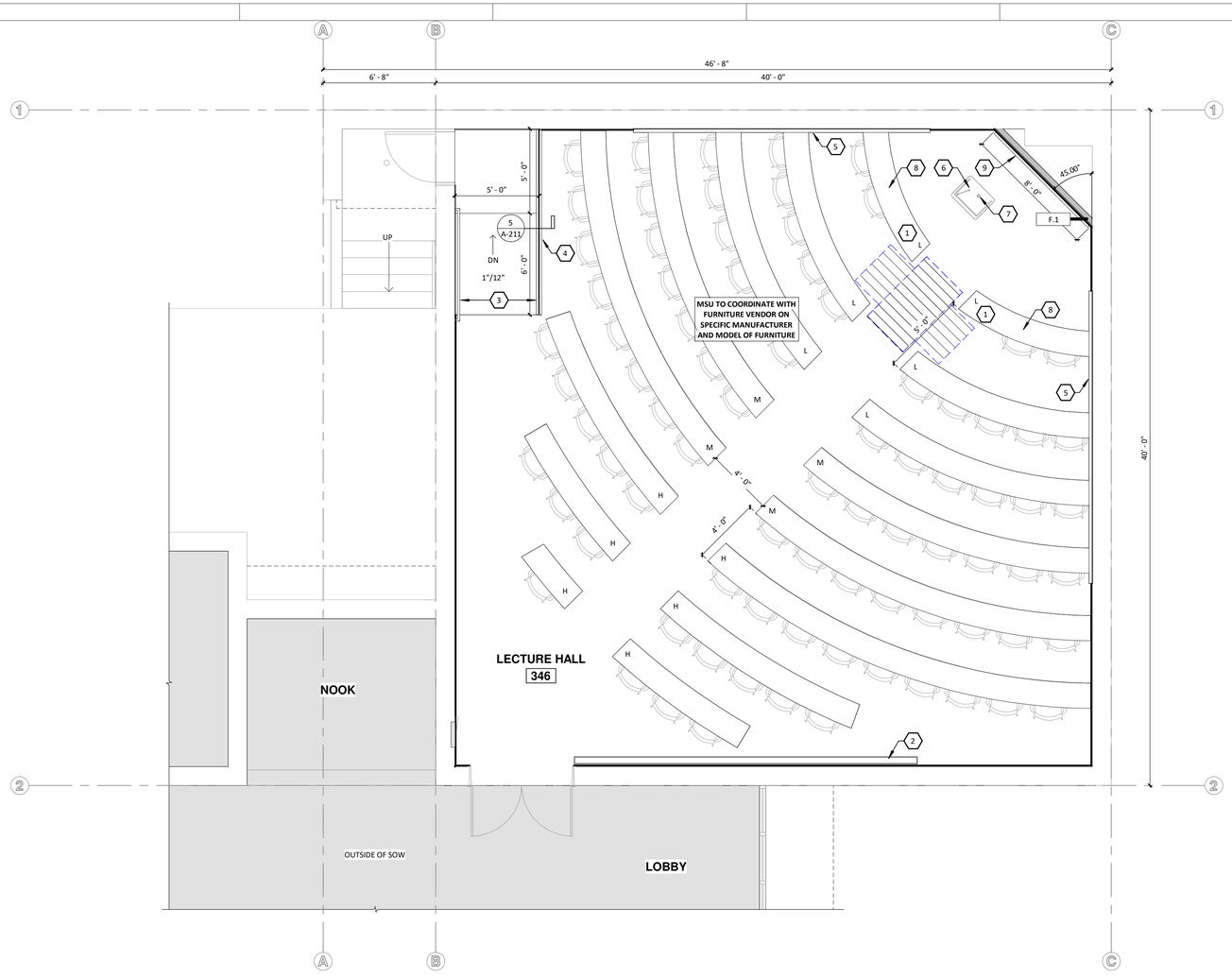
REVISIONS:

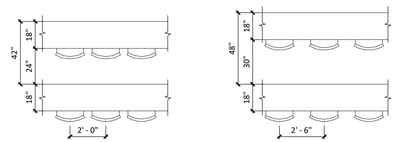
DEMO CLASSROOM REFLECTED CEILING PLAN

AD121



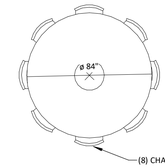
1 FLOOR PLAN
1/4" = 1'-0"

APPROXIMATE OCCUPANCY: 84 *(-5 FROM EXISTING)* - 16.9 S.F./STUDENT



FIXED TABLES AND SEATING
LINFIELD HALL ROOM #125

MOVABLE TABLES AND SEATING
HARRISON HALL ROOM #123
TIERED SEATING HEIGHTS:
LOW - 29" A.F.F.
MEDIUM - 36" A.F.F.
HIGH - 42" A.F.F.



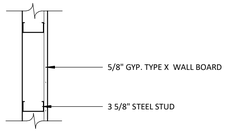
T.E.A.L. CLASSROOM
CHEEVER HALL ROOM #212:
7'-0" DIAMETER TABLE, 7 CHAIRS
ROMNEY HALL ROOM #211:
7'-0" DIAMETER TABLE, 8 CHAIRS
GAINES HALL ROOM #143:
7'-0" DIAMETER TABLE, 8 CHAIRS
WILSON HALL ROOM #1-119:
7'-0" DIAMETER TABLE, 8 CHAIRS

2 FURNITURE KEY
1/4" = 1'-0"

FLOOR PLAN KEYNOTES

1 ADA ACCESSIBLE LOCATION
2 NEW RETURN DUCT IN FLOOR, SEE MECHANICAL
3 HAND RAIL AT RAMP (CFCI)
4 GUARD RAIL (CFCI)
5 FIXED PROJECTOR SCREEN (OFCI)
6 LECTERN PODIUM. B.O.D: DELUXE LECTERN - LE3040 (OFOI)
7 CONDUIT FOR POWER/DATA AT LECTERN PODIUM
8 MOVABLE TABLE AT FIRST ROW FOR ADA ACCESS
9 8'-0" W x 4'-0" H WHITE BOARD, NO TRAY (CFCI)

GENERAL NOTES:
A. ALL TABLES ARE OFCI. ALL ROWS ARE MOUNTED TO THE CONCRETE FLOOR, EXCEPT FRONT ROW WHICH WILL HAVE CASTERS.
B. ALL CHAIRS ARE OFOI.



F.1 3 5/8" FURR WALL
SCALE: 1 1/2" = 1'

3 WALL TYPE
1" = 1'-0"

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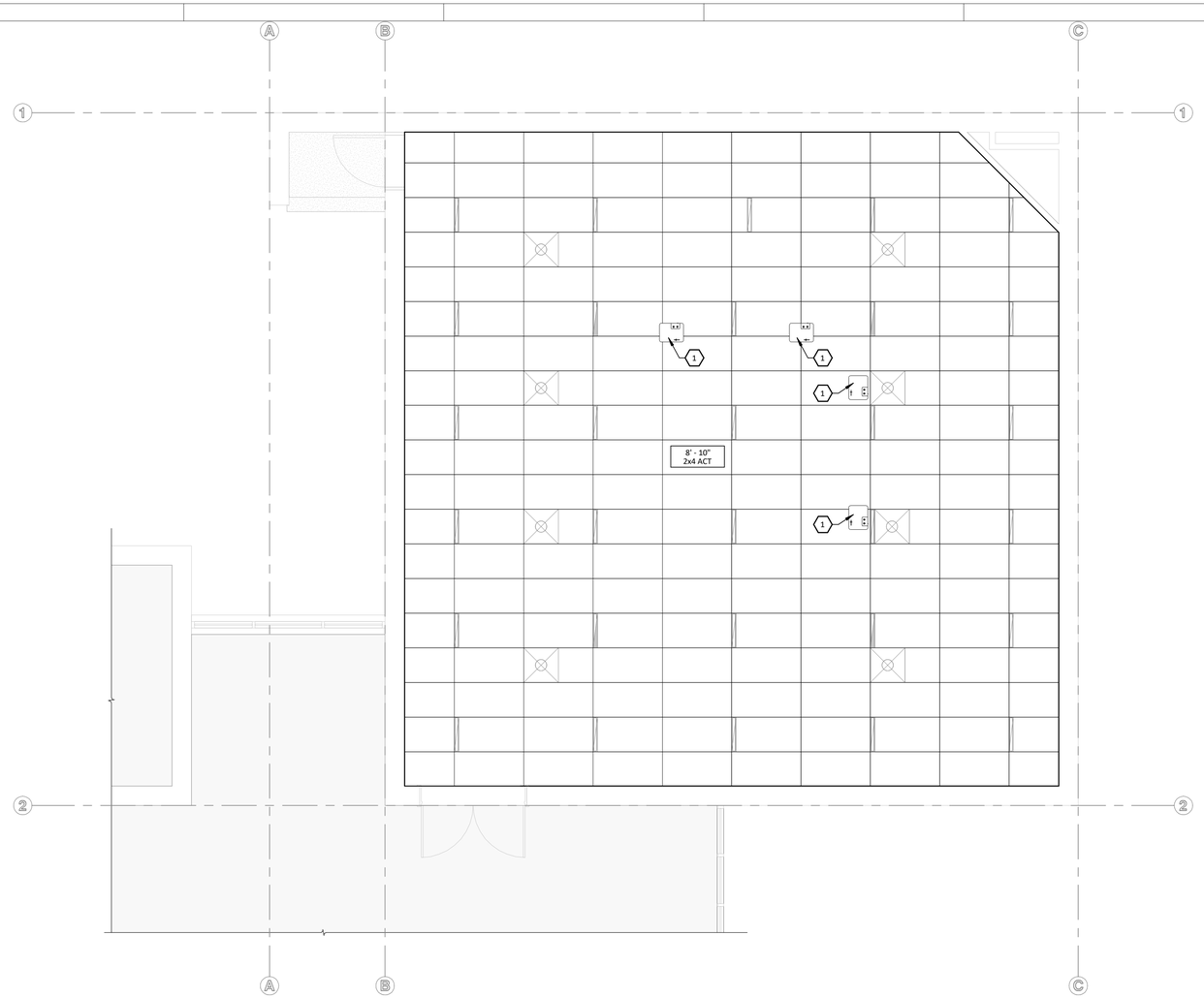
MONTANA STATE UNIVERSITY
ROOM #346
PPA#: 23-0828

DRAWN: KCE CHECKED: MJM
DATE: 11/19/2024
REVISIONS:

CLASSROOM FLOOR PLAN

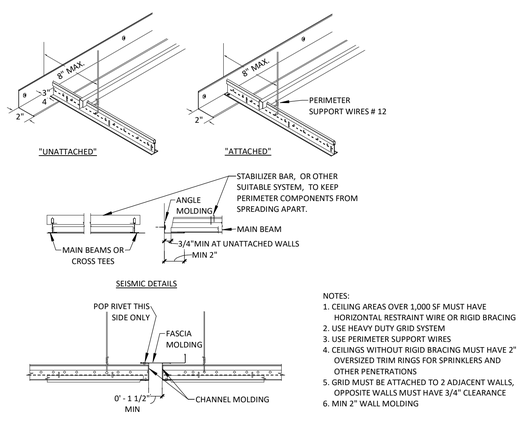
A-111



1 REFLECTED CEILING PLAN

1/4" = 1'-0"

0 2' 4' 8'



NOTES:
1. CEILING AREAS OVER 1,000 SF MUST HAVE HORIZONTAL RESTRAINT WIRE OR RIGID BRACING
2. USE HEAVY DUTY GRID SYSTEM
3. USE PERIMETER SUPPORT WIRES
4. CEILINGS WITHOUT RIGID BRACING MUST HAVE 2" OVERSIZED TRIM RINGS FOR SPRINKLERS AND OTHER PENETRATIONS
5. GRID MUST BE ATTACHED TO 2 ADJACENT WALLS, OPPOSITE WALLS MUST HAVE 3/4" CLEARANCE
6. MIN 2" WALL MOLDING

2 HUNG CLG DTL - SEISMIC

1 1/2" = 1'-0"

CLASSROOM RCP KEYNOTES

1 CEILING MOUNTED PROJECTOR (OFOI)

CEILING PLAN LEGEND

ACT-1 (2X4)
ACOUSTIC CEILING TILE

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PPA#: 23-0828

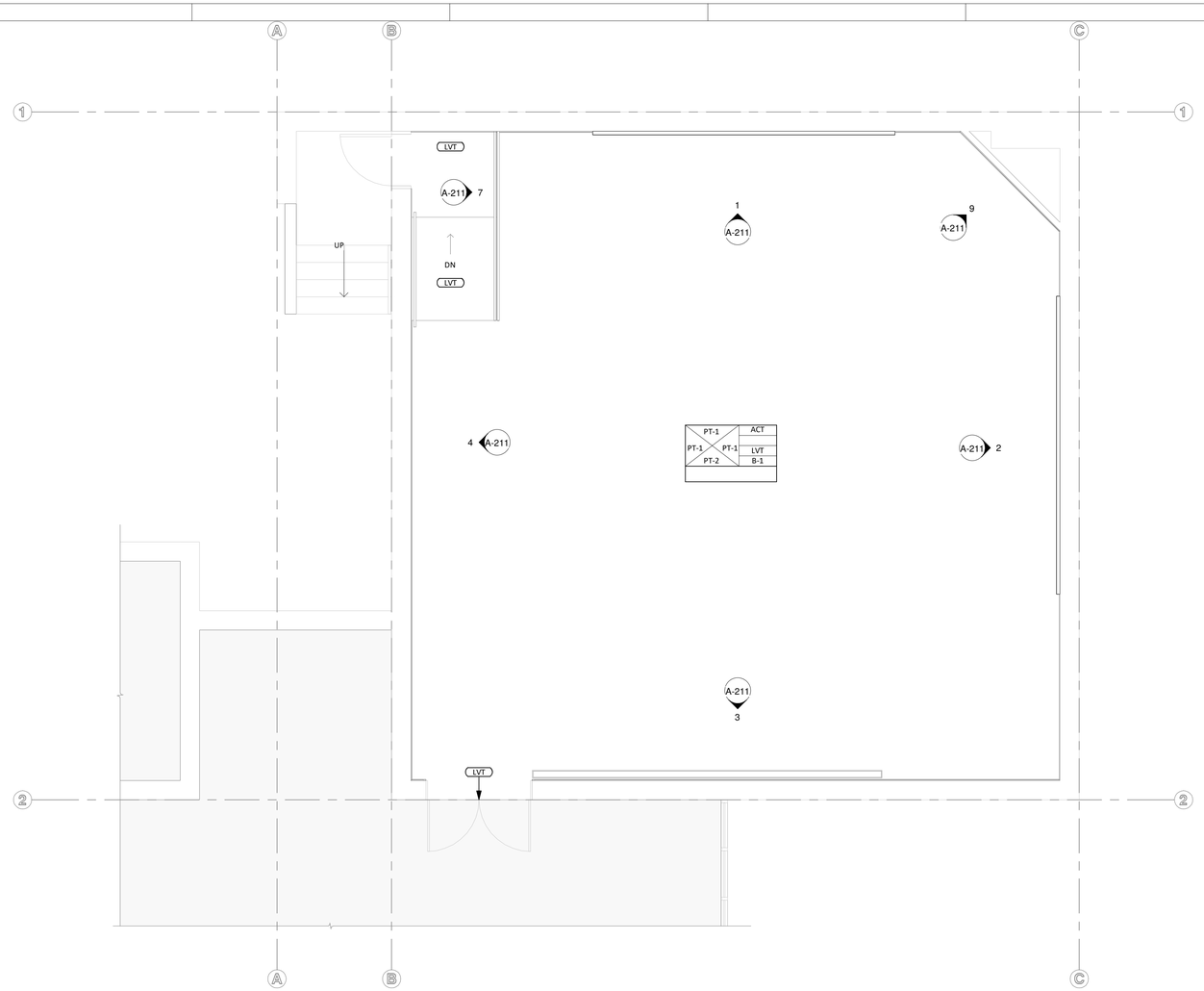
DRAWN: KCE CHECKED: MJM

DATE: 11/19/2024

REVISIONS:

CLASSROOM REFLECTED CEILING PLAN

A-121



1 LEVEL 1 FLOOR FINISH PLAN

1/4" = 1'-0"

0 2' 4' 8'

FINISH SCHEDULE

TAG	KEY	COLOR	MANUFACTURER	STYLE	NOTE
ACT	ACOUSTICAL CEILING TILES	WHITE	ARMSTRONG	CIRRUS 584	ANGLED TEGULAR EDGE
B-1	6" RUBBER BASE	BLACK	JOHNSONITE	DURACOVE 6"	THERMOPLASTIC RUBBER 1/8"
LVT	LUXURY VINYL TILE	IMPLY 43518	SHAW	DIALOGUE	BRICK INSTALLATION METHOD
PT-1	PAINT	SW 7650 ELLIE GRAY	SHERWIN WILLIAMS	EGGSHELL	
PT-2	PAINT	SW 7602 INDIGO BATIK	SHERWIN WILLIAMS	EGGSHELL	ACCENT WALL
SS-1	SOLID SURFACE	DEEP STORM	CORIAN		CHAIR RAIL (9 5/8" H X 1/2" D)

ROOM FINISH KEY

WALL / WALL / WALL	CEILING
	SILL
	FLOOR
	BASE
NOTES	

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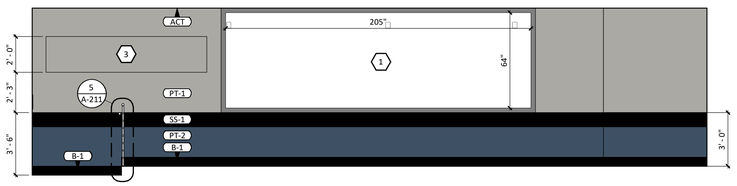
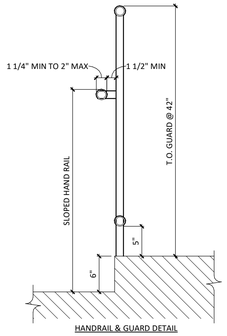
REVISIONS:

CLASSROOM FINISH PLAN

A-131

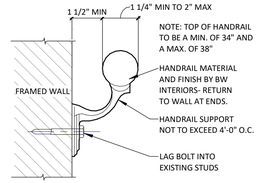


1 EAST INTERIOR ELEVATION
1/4" = 1'-0"

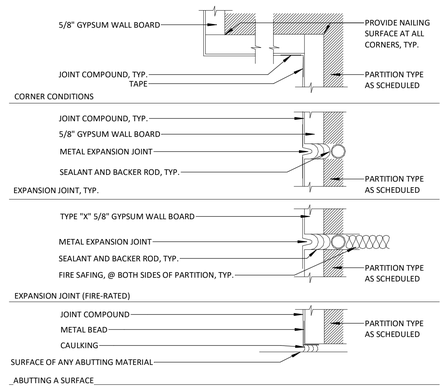


HANDRAIL & GUARD DETAIL

5 GUARD RAIL DETAIL
1" = 1'-0"



6 HANDRAIL DETAIL
1/4" = 1'-0"

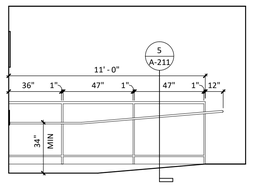


10 GYPSUM WALLBOARD DETAIL
3" = 1'-0"

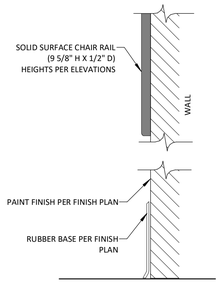
INTERIOR ELEVATION KEYNOTES

1 FIXED PROJECTOR SCREEN, DUAL CONTENT (OFCI)
2 8'-0" W x 4'-0" H WHITE BOARD, NO TRAY (CFCI)
3 ACOUSTIC WALL PANEL. B.O.D: ARMSTRONG SOUNDSOAK 85 FIBERGLASS, 24" x 108", 1" THICK, 0.80 NRC, COLOR; FR-701 GREY MIX (CFCI)
4 POE WALL CLOCK (OFCI)

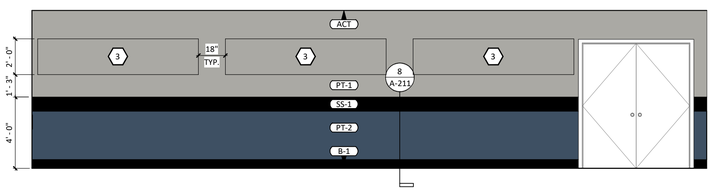
2 SOUTH INTERIOR ELEVATION
1/4" = 1'-0"



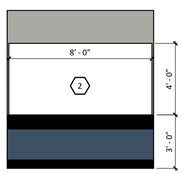
7 RAMP ELEVATION
1/4" = 1'-0"



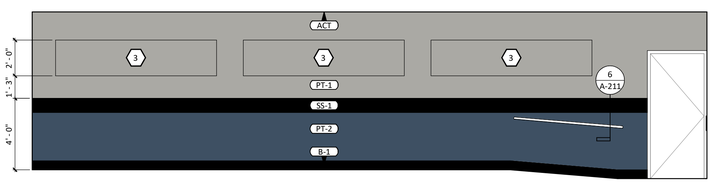
8 FINISH WALL DTL
3" = 1'-0"



3 WEST INTERIOR ELEVATION
1/4" = 1'-0"



9 SOUTH-EAST INTERIOR ELEVATION
1/4" = 1'-0"



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

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PPA#: 23-0828

DRAWN: KCE CHECKED: MJM
DATE: 11/19/2024
REVISIONS:

INTERIOR ELEVATIONS

A-211

ABBREVIATIONS

A

AFF	ABOVE FINISH FLOOR
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
AB	ANCHOR BOLT
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT
AVG	AVERAGE

B

BSMT	BASEMENT
BM	BEAM
BRG	BEARING
BET	BETWEEN
BLDG	BUILDING
BLKG	BLOCKING
B.O.	BOTTOM OF
BOT	BOTTOM
BN	BOUNDARY NAILING
BS	BOTH SIDES

C

CIP	CAST-IN-PLACE
CLG	CEILING
CLR	CLEAR
CLT	CROSS LAMINATED TIMBER
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACT, CONTRACTOR
CORR	CORRIDOR
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT

D

DBL	DOUBLE
DBL TP	DOUBLE TOP PLATE
DEG	DEGREE
DEMO	DEMOLISH, DEMOLITION
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DF/L	DOUGLAS/FIR LARCH
DIV	DIVISION
DL	DEAD LOAD
DR	DOOR
DN	DOWN
DS	DOWNSPOUT
DWG	DRAWING

E

EA	EACH
E	EAST
(E)	EXISTING
EF	EACH FACE
EIFS	EXTERIOR INSULATION FINISHING SYSTEMS
ELEC	ELECTRIC
EN	EDGE/END NAIL
ELEV	ELEVATION, ELEVATOR
EMBED	EMBEDMENT
EOS	EDGE OF SLAB
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXC	EXCAVATION
EJ	EXPANSION JOINT
EXT	EXTERIOR

F

F.O.B.	FACE OF BRICK
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
FIN	FINISH
FF	FINISH FLOOR
FL	FLASHING
FLR	FLOOR
FN	FIELD NAILING
FD	FLOOR DRAIN
FT	FOOT, FEET
FTG	FOOTING
FDN	FOUNDATION
FUT	FUTURE
FBO	FURNISHED BY OTHERS
FRP	FIBER REINFORCED PANEL
FS	FAR SIDE

G

GA	GAUGE
GALV	GALVANIZED
GEN	GENERAL
GL	GLASS
G/L, GLM	GLULAM BEAM/COLUMN
GWB	GYPSUM WALL BOARD
GYPC	GYPCRETE

H

HALL	HALLWAY
HD	HOLDOWN, HOLD-DOWN
HDR	HEADER
HDW	HARDWARE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION

I

IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
INCL	INCLUDE, INCLUDED (ING)
INFO	INFORMATION
ID	INSIDE DIAMETER
IJ	ISOLATION JOINT
INSUL	INSULATE,INSULATION
INT	INTERIOR

J

JST	JOIST(S)
JT	JOINT

K

KO	KNOCK OUT

L

LB	POUND(S)
LBL	LABEL
LAM	LAMINATED
LAV	LAVATORY
LVL	LAMINATED VENEER LUMBER
LL	LIVE LOAD
LT	LIGHT
LOC'N	LOCATION
LSL	LAMINATED STRAND LUMBER
LWC	LIGHT WEIGHT CONCRETE

M

MEP	MECHANICAL, ELECTRICAL, AND PLUMBING DOCUMENTS
MFR	MANUFACTURER
MAS	MASONRY
MO	MASONRY OPENING
MTL	METAL
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL, MECHANICAL ROOM
MIN	MINIMUM
MISC	MISCELLANEOUS

N

N	NORTH
(N)	NEW
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NWC	NORMAL WEIGHT CONCRETE

O

OC	ON CENTER
OFF	OFFICE
OPG	OPENING
OPP	OPPOSITE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
O/O	OUT TO OUT
OSB	ORIENTED STRAND BOARD

P

PERP	PERPENDICULAR
PNT	PAINT, PAINTED
PNL	PANEL
PH	PHASE
PIJ	PERIMETER ISOLATION JOINT
PLAS	PLASTIC
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PLYWD	PLYWOOD
PVC	POLYVINYL CHLORIDE
PREFIN	PREFINISHED
PROP	PROPERTY
PT	PRESSURE TREATED

Q

QUAN	QUANTITY

R

RAD	RADIUS
REB	REBAR
REF	REFERENCE
REINF	REINFORCE, REINFORCEMENT
RCP	REFLECTED CEILING PLAN
REQ'D	REQUIRED
RFI	REQUEST FOR INFORMATION
REV	REVISION
R	RISER
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING

S

SCHED	SCHEDULE
SEC	SECTION
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
S	SOUTH
(S)	SIMPSON
SPEC	SPECIFICATION
SQ	SQUARE
STAG	STAGGERED
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SF	SQUARE FEET
SUSP	SUSPENDED
SQ	SQUARE
SW	SHEAR WALL
SYMM	SYMMETRY, SYMMETRICAL

T

TBD	TO BE DETERMINED/DESIGNED
TBU	TO BE UPDATED
TEL	TELEPHONE
TEMP	TEMPERED, TEMPORARY
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK	THICK
THRU	THROUGH
T.O.	TOP OF
T.O.B.	TOP OF BRICK
T.O.C.	TOP OF CONCRETE
T.O.S.	TOP OF SLAB
T.O.W.	TOP OF WALL
T.O.M.	TOP OF MASONRY
T	TREAD
TYP	TYPICAL

U

UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY

V

VB	VAPOR BARRIER
VNR	VENEER
VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
VIF	VERIFY IN FIELD

W

WF	WIDE FLANGE
WD	WOOD
WIN	WINDOW
WP	WATERPROOF (ING)
WRB	WEATHER RESISTANT BARRIER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WT	WEIGHT
W	WEST, WASHER
W/	WITH
W/O	WITHOUT

SYMBOLS USED AS ABBREVIATIONS

&	AND
L	ANGLE
2L	DOUBLE ANGLE
@	AT
℄	CENTERLINE
u	CHANNEL
Ø	DIAMETER
#	NUMBER

SYMBOLS & MATERIALS

- STRUCTURAL FILL
- UNDISTURBED EARTH
- DISTURBED EARTH
- GRAVEL
- POURED CONCRETE
- CONCRETE BLOCK VENEER
- BRICK VENEER
- EIFS
- ROUGH WOOD
- BLOCKING
- FINISHED WOOD
- PLYWOOD
- RIGID INSULATION
- BATT INSULATION
- SPRAYFOAM INSULATION
- SAND, PLASTER, GROUT
- METAL
- STEEL
- GYPCRETE
- FLOOR SHEATHING

XX / SX.XX — SECTION

XX / SX.XX — ELEVATION

XX / SX.XX — DETAIL

XX / SX.XX — ITEM IDENTIFICATION / SHEET WHERE FOUND

NORTH ARROW

- HOLD DOWN
- HANGER
- X — REVISION NUMBER
- X — KEY NOTE
- X — DEMOLITION NOTE

S-102

- LEVEL 1 DISCIPLINE DESIGNATOR
- LEVEL 2 DISCIPLINE DESIGNATOR
- LEVEL SEQUENCE NUMBER
- PLAN TYPE SEQUENCE NUMBER
- SHEET TYPE DESIGNATOR

*** NOTE ***
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS

STRUCTURAL SHEET INDEX

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ROOM #346
PPA#: 23-0828

DRAWN: MES CHECKED: KLJ

DATE: 11/19/2024

#1 REVISIONS:

STRUCTURAL TITLE SHEET

S-001

STRUCTURAL DESIGN

GOVERNING CODES AND GENERAL NOTES

A. INTERNATIONAL BUILDING CODE (IBC) 2021
B. INTERNATIONAL EXISTING BUILDING CODE (IEBC) 2021
C. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) - MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES - ASCE 7-16 WITH SUPPLEMENT 1
D. AMERICAN CONCRETE INSTITUTE (ACI) - BUILDING CODE & COMMENTARY ACI 318-19
E. THE MASONRY SOCIETY (TMS) - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES TMS 402-16
F. AMERICAN INSTITUTE STEEL OF CONSTRUCTION (AISC) - STEEL CONSTRUCTION MANUAL FOURTEENTH EDITION AISC 360-16
G. AMERICAN FOREST & PAPER ASSOCIATION (AF&PA) - NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION NDS 2018
H. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) 9TH EDITION

PROJECT SCOPE

A. THE SCOPE OF THIS DESIGN AND PLANS IS LIMITED TO A NEW SLAB ON GRADE AT LEON JOHNSON ROOM 346. NO ANAYLSIS OF THE EXISTING BUILDING'S ENTIRE GRAVITY OR LATERAL SYSTEMS WAS PERFORMED AND NO ENDORSEMENT OF THE ADAQUACY OF THE EXISTING BUILDING'S ENTIRE GRAVITY OR LATERAL SYSTEMS IS EXPRESSED OR IMPLIED.

DESIGN LOADS

A. RISK CATEGORY - II
B. GRAVITY LOADS
   1. FLOOR LOADS
      a. NEW FLOOR DEAD LOAD - 150 PSF (SLAB ON GRADE)
      b. FLOOR LIVE LOAD - 40 PSF (CLASSROOMS)
C. LATERAL LOADS
   1. THE NEW GROUND LEVEL FLOOR DOES NOT IMPOSE NEW WIND OR SEISMIC LOADS ON THE BUILDING.

1 STRUCTURAL DESIGN INFORMATION

CONCRETE

A. MATERIALS:
   1. ALL CEMENT IN CONCRETE SHALL BE TYPE I/IA AND CONFORM TO ASTM C150 SPECIFICATION FOR PORTLAND CEMENT.
   2. ALL AGGREGATE TO CONFORM TO ASTM C33 SPECIFICATION FOR CONCRETE AGGREGATES.
   3. CONCRETE SUPPLIER TO MIX BASED ON TESTING TO ASSURE THE MINIMUM COMPRESSIVE STRENGTH PER ACI 318 26.4.4.1 (a). IN THE ABSENCE OF SUFFICIENT TEST DATA, CONCRETE PROPORTIONING SHALL BE DONE IN ACCORDANCE WITH ACI 318 26.4.4.1 (c).
   4. THE MAXIMUM NOMINAL AGGREGATE SIZE SHALL BE THE SMALLEST OF:
      a. ONE FIFTH THE NARROWEST DIMENSION BETWEEN THE FORMS.
      b. ONE THIRD THE DEPTH OF THE SLAB.
      c. THREE-FOURTHS THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES.
      d. THESE PROVISIONS ARE TO ASSURE CONCRETE PLACEMENT WITHOUT VOIDS OR HONEYCOMBS AND MAY BE WAIVED ONLY BY THE BUILDING OFFICIAL IF THEY JUDGE THAT LARGER SIZES ARE ADEQUATE BECAUSE OF WORKABILITY AND METHODS OF CONSOLIDATION.

B. INSTALLATION:
   1. CONCRETE CURING (OTHER THAN HIGH-EARLY) SHALL BE MAINTAINED ABOVE A TEMPERATURE OF 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT.
   2. HIGH EARLY CONCRETE SHALL BE CURED ABOVE 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST THREE DAYS.
   3. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER.
   4. FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL NOT BE USED.
   5. ALL CONCRETE MATERIALS, REINFORCEMENT, FORMS, FILLERS, AND GROUND WHICH THE CONCRETE IS TO BE IN CONTACT WITH IS TO BE FREE OF FROST.
   6. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES AND EVAPORATION THAT MAY IMPAIR REQUIRED STRENGTH OR SERVICEABILITY OF THE MATERIAL.
   7. ALL WALLS & FOUNDATIONS SHALL BE MECHANICALLY CONSOLIDATED.
   8. VIBRATORS SHALL BE INSERTED IN PREVIOUS POURED FRESH CONCRETE TO PREVENT COLD JOINTS WHEN MULTIPLE LAYER OF CONCRETE ARE PLACED IN A WALL.
   9. CONDUITS, PIPES, AND SLEEVES SHALL BE ALLOWED ONLY WHERE NOTED ON THE PLANS.
   10. ANY ADDITIONAL ALTERATIONS ARE NOT PERMITTED WITHOUT ENGINEER APPROVAL THAT IT WILL NOT COMPROMISE STRUCTURAL INTEGRITY.
   11. CONTRUCTION JOINTS:
      a. THE SURFACE OF ALL CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED.
      b. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.
      c. PROVISIONS SHALL BE MADE TO TRANSFER SHEAR FORCES THROUGH CONSTRUCTION JOINTS.

C. SLABS:
   1. INTERIOR SLAB ON GRADE SHALL BE CLASS 1 W/ A NORMAL STEEL TROWELED FINISH.
   2. FLOOR SHALL BE WITHIN 1/8" PER 10 FT FOR FLATNESS REQUIREMENTS.
   3. WHERE EXPOSED, SLAB SHALL BE SEALED WITH A HIGH SOLID CONTENT SOLVENT BASED CURE & SEAL, EUCLID SUPER DIAMOND OR APPROVED EQUAL.
   4. CONCRETE IN SIDEWALKS OR EXTERIOR SLABS THAT WILL BE EXPOSED TO FREEZING/THAWING OR DEICING CHEMICALS SHALL HAVE A MAXIMUM 0.45 WATER/CEMENTITIOUS RATIO BY WEIGHT FOR NORMAL WEIGHT AGGREGATE CONCRETE AND BE 4500 PSI MINIMUM.

D. REINFORCEMENT:
   1. ALL REINFORCING BARS SPECIFIED SHALL BE DEFORMED BARS AT LEAST GRADE 60.
   2. ALL BENDING OF REINFORCING MATERIAL SHALL BE DONE COLD AND MINIMUM BEND DIAMETER SHALL BE 6 TIMES THE NOMINAL BAR DIAMETER FOR #3-#8 BAR AND 8 TIMES THE NOMINAL BAR DIAMETER FOR #9-#11 BARS.
   3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE MAY NOT BE FIELD BENT WITHOUT PRIOR APPROVAL FROM EOR.
   4. REINFORCEMENT, ANCHORS AND EMBEDDED ITEMS SHALL BE ACCURATELY PLACED AND SUPPORTED BEFORE CONCRETE IS PLACED AND SHALL BE SECURED AGAINST DISPLACEMENT WITHIN TOLERANCES OF SECTION 1901.7 OF THE CURRENT VERSION OF THE IBC.
   5. STANDARD HOOK ON REINFORCING BAR SHALL BE:
      a. 180° BEND PLUS 4d EXTENSION, BUT NOT LESS THAN 2 1/2" AT FREE END OF BAR.
      b. 90° BEND PLUS 12d EXTENSION AT FREE END OF BAR.
      c. FOR STIRRUP AND TIE HOOKS: SEE DETAILS.
   6. MINIMUM REBAR LAPS - PER SCHEDULE
      a. CLEAR SPACING OF NOT LESS THAN 2d AND CLEAR COVER OF NOT LESS THAN d.
      b. ALL OTHER SPLICES CONDITIONS SHALL BE BY THE EOR AND ILLUSTRATED ON FOUNDATION PLAN & DETAIL SHEETS.

E. GYPCRETE:
   1. GYPCRETE SHALL BE MAXXON GYP-CRETE MULTIFAMILY 2,000 FLOOR UNDERLAYMENT OR APPROVED EQUAL.

F. REFER TO TABLE BELOW FOR MINIMUM COVER AND TOTAL AIR CONTENT FOR CONCRETE IN DIFFERENT SERVICE CONDITIONS.

CONCRETE PROTECTION FOR REINFORCEMENT
CAST-IN-PLACE CONCRETE (NON-PRESTRESSED)

DESCRIPTION	MINIMUM COVER (IN)
CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	3
CONCRETE EXPOSED TO EARTH OR WEATHER:	
No. 6 THRU No. 18 BAR	2
No. 5 BAR, W31 OR D31 WIRE AND SMALLER	1-1/2
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:	
SLABS, WALLS, AND JOISTS:	
No. 14 AND No. 18 BAR	1-1/2
No. 11 BAR AND SMALLER	3/4
CONCRETE TILT-UP PANELS CAST AGAINST A RIGID HORIZONTAL SURFACE	
SUCH AS A CONCRETE SLAB EXPOSED TO THE WEATHER:	
No. 8 BAR AND SMALLER	1
No. 9 THRU No. 18 BAR	2

	28 DAY COMPRESSIVE STRENGTH	SLUMP (IN) MAX/MIN	MAX W/C RATIO	AIR CONTENT (%)
FOOTINGS	3000 PSI	5/3	.5	6 +/- 1.5%
FOUNDATION WALLS	3000 PSI	5/3	.5	6 +/- 1.5%
INTERIOR SLAB	4000 PSI	5/3	.45	3 MAX
EXTERIOR SLAB	4500 PSI	5/3	.45	6 +/- 1.5%

NOTE: SLABS WITH SUPER PLASTICIZER SHALL HAVE A MAXIMUM SLUMP OF 6 1/2".

2 CONCRETE NOTES

SUBMITTALS

SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) FOR REVIEW. ALLOW 7-14 DAYS FOR REVIEW BY THE EOR.

A. SUBMIT MIX DESIGNS FOR:
   1. CAST-IN-PLACE CONCRETE

3 LIST OF SUBMITTALS

SOILS AND FOUNDATIONS

A. CONSTRUCTION MATERIALS:
   1. VAPOR BARRIER:
      a. 10 MIL WR MEADOWS PERMIATOR, STEGO INDUSTRIES STEGO WRAP CLASS A OR APPROVED EQUAL.
      b. ALL SEAMS SHALL BE OVERLAPPED & SEALED WITH MANUFACTURER APPROVED TAPE. ALL PROTRUSIONS & PENETRATIONS SHALL BE SEALED. HOLES SHALL BE REPAIRED.
      c. SEAL THE VAPOR BARRIER TO THE VERTICAL FACE OF THE STEM WALL WITH THE MANUFACTURER RECOMMENDED ATTACHMENT DETAIL.
      d. INSTALLATION SHALL MEET ASTM E 1643-C STANDARD PRACTICE FOR INSTALLATION OF VAPOR RETARDER USED IN CONTACT WITH EARTH OR FILL UNDER CONCRETE SLAB.
      e. SUBSTITUTIONS SHALL BE SUBMITTED FOR APPROVAL.
   2. FOUNDATION & SLAB INSULATION:
      a. USE DOW CHEMICAL BUILDING PRODUCT OR APPROVED EQUAL
      b. HORIZONTAL INSULATION
         - STYROFOAM BRAND EXTRUDED POLYSTYRENE FOAM SQUARE EDGE INSULATION W/ MIN COMPRESSIVE STRENGTH OF 25 PSI.

B. SLAB PREPARATION:
   1. INTERIOR SLAB PREPARATION:
      A. A LAYER OF OPEN-GRADED ANGULAR CRUSHED ROCK TO BE INSTALLED BENEATH THE SLAB WHERE SHOWN.
      B. THE UPPER 2 INCHES OF CRUSHED ROCK MAY BE SUBSTITUTED FOR 3/4-INCH MINUS CRUSHED ROCK FOR LEVELING.
      C. THE SLAB-ON GRADE BASE COURSE SHOULD BE COMPACTED USING VIBRATORY COMPACTION METHODS UNTIL WELL KEYED.

4 SOILS & GEOTECHNICAL NOTES

1" = 1'-0"

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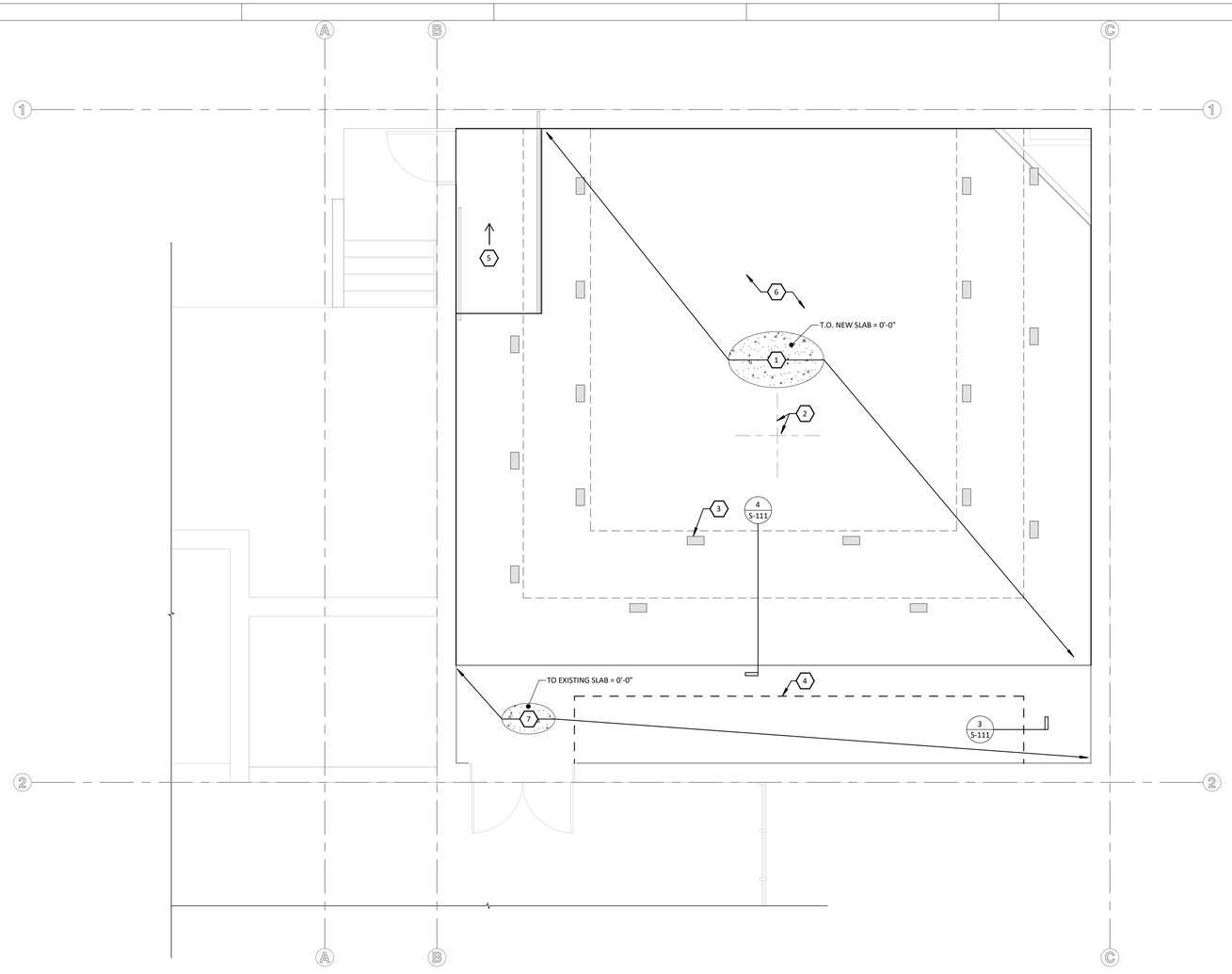
DRAWN: MES CHECKED: KLJ

DATE: 11/19/2024

REVISIONS:

STRUCTURAL NOTES

S-002



1 FRAMING PLAN

1/4" = 1'-0"

0 2' 4' 8'

LEGEND

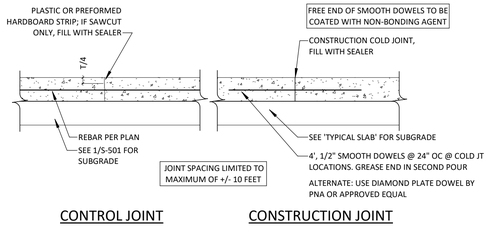
	CONTROL JOINT
	CONCRETE SLAB

GENERAL NOTES:

A. SEE S-501-550X FOR TYPICAL DETAILS.
B. SEE S-001-S-00X FOR DESIGN CRITERIA AND GENERAL STRUCTURAL NOTES.
C. DIMENSIONS ARE SHOWN FOR INFORMATION ONLY. LAYOUT SHOULD BE COORDINATED WITH ARCHITECTURAL PLANS.
D. DIMENSIONS ARE SHOWN TO OUTSIDE OF FRAMING AND OUTSIDE OF CONCRETE UNLESS NOTED OTHERWISE.
E. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND ROOFS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
F. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING OR HAVING LOCATED THE BUILDING ON THE SITE AND VERIFYING ALL FOUNDATION DIMENSIONS, AND SETBACK REQUIREMENTS FROM EASEMENTS AND PROPERTY LINES WITH THE ARCHITECT PRIOR TO CONSTRUCTION.
G. COORDINATE GROUNDING ELECTRODE REQUIREMENTS WITH ELECTRICAL DRAWINGS AND CONTRACTOR.

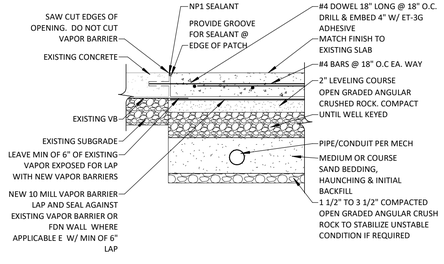
KEYNOTES

1 4" MIN. THICKNESS SLAB ON GRADE ON TOP OF (E) SLAB ON GRADE. REINFORCE W/ #4 BARS @ 18" OC EA WAY TOP
2 CONTROL JOINT SEE 02/S-501
3 EXISTING VENTS. COVER
4 SAWCUT AND PATCH EXISTING SLAB FOR NEW MECH.
5 NEW RAMP TO EXISTING DOOR
6 FILL SPACE UNDER SLAB WITH UP TO 14" OF COMPACTED GRANULAR STRUCTURAL FILL
7 EXISTING SLAB TO REMAIN



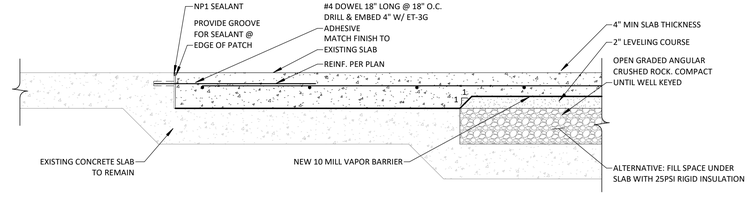
2 SLAB AND CONTROL JOINTS

1" = 1'-0"



3 EXISTING SLAB PATCH

1" = 1'-0"



4 NEW SLAB ABOVE EXISTING SLAB

1" = 1'-0"

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REVISIONS:

FRAMING PLAN

S-111

PROJECT GENERAL NOTES

- REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN TENANT SPACE AND WITHIN CLOSE PROXIMITY OF TENANT SPACE.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS U.N.O.

HVAC GENERAL NOTES

- ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.
- THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

GENERAL MECHANICAL NOTES

1. INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE BY A LICENSED CONTRACTOR PER THE STATE BUILDING, MECHANICAL ENERGY, FIRE, PLUMBING AND HEALTH CODES, AND REGULATIONS AS ADOPTED BY LOCAL JURISDICTIONS.
2. ALL EQUIPMENT SHALL BE THE CAPACITY AND TYPE AS SHOWN ON THE EQUIPMENT SCHEDULE AND SHALL BE THE LISTED MANUFACTURER AND MODEL NUMBER OR SHALL BE AN EQUAL APPROVED BY THE OWNER/ENGINEER.
3. CONTRACTOR IS TO BRING UP THE DISCREPANCIES AND ITEMS WHICH ARE NOT SPECIFICALLY CALLED FOR OR SHOWN BUT ARE REQUIRED FOR A COMPLETE MECHANICAL SYSTEM. ALL SUCH ITEMS REQUIRED FOR A COMPLETE SYSTEM READY FOR THE OWNER'S BENEFICIAL USE SHALL BE FURNISHED AND INSTALLED INCLUDING ALL SUCH DISCREPANCY ITEMS MENTIONED ABOVE, AT NO ADDITIONAL COST TO THE OWNER AND PER LOCAL CODES, MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE STANDARDS WITH THE ARCHITECT/ENGINEER'S APPROVAL.
4. ALL EQUIPMENT SUPPLIED FOR THESE SPECIFICATIONS SHALL BE FREE FROM DEFECTS IN MATERIAL, WORKMANSHIP, AND TITLE, AND SHALL BE OF THE KIND AND QUALITY DESCRIBED HEREIN. IF IT APPEARS WITHIN ONE YEAR FROM DATE OF FINAL ACCEPTANCE THAT EQUIPMENT DOES NOT MEET THE WARRANTIES ABOVE, THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DEFECT AND SHALL RESTORE THE SYSTEM TO THE ORIGINAL SATISFACTORY CONDITIONS AT HIS EXPENSE. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF OTHER WARRANTIES, WHETHER WRITTEN, ORAL, IMPLIED, OR STATUTORY. NO WARRANTY OR MERCHANT ABILITY OF FITNESS FOR PURPOSE SHALL APPLY (THE WARRANTY SHALL START FROM THE TIME OF ARCHITECT/ENGINEER'S FINAL ACCEPTANCE).
5. COORDINATE THE CONSTRUCTION SCHEDULE WITH THE GC AND PERFORM ALL REQUIRED WORK IN STRICT ACCORDANCE WITH THE OWNER'S SCHEDULE.
6. MECHANICAL CONTRACTOR SHALL PAY FOR AND OBTAIN ALL REQUIRED PERMITS AND CERTIFICATES REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
7. HVAC NOTES:
   - A. PROVIDE FLEXIBLE CONNECTION IN ALL DUCTS CONNECTING TO AIR MOVING EQUIPMENT AS CLOSE TO FAN AS POSSIBLE. FLEXIBLE CONNECTION SHALL CONSIST OF 6" OR MORE OF AIR TIGHT, FIRE PROOF FLEXIBLE NEOPRENE COATED WOVEN FIBROUS GLASS MATERIAL. VENT FABRICS, INC. OR APPROVED EQUAL.
   - B. ALL MAIN TRUNK AND BRANCH TAKEOFF DUCTWORK SHALL BE SHEET METAL. FLEXIBLE DUCT IS ALLOWED ON LAST 6' SERVING GRDs. FIBERGLASS DUCTWORK SHALL NOT BE USED.
   - C. ALL SUPPLY & RETURN FLEXIBLE DUCTS CONNECTING TO GRILLES, REGISTERS AND DIFFUSERS SHALL BE CONSTRUCTED OF DOUBLE LAMINATION OF POLYESTER ENCAPSULATED STEEL WIRE HELIX FOR INNER CORE HIGH DENSITY FIBERGLASS INSULATION AND GRAY POLYESTER FILM WITH SPIRAL REINFORCEMENTS, EQUAL TO ATCO-70 SERIES (MIN. POS. PRESS. = 6" W.C. NEG. PRESS. = 0.75" W.C. & R=5.79).
   - D. SEAL ALL DUCTWORK JOINTS PER SMACNA CLASS C FOR SYSTEMS UP TO 2 IN W.G. AND SEAL ALL JOINTS AND SEAMS PER SMACNA CLASS B FOR SYSTEMS GREATER THAN 2 IN W.G.
   - E. ALL EQUIPMENT, DUCTWORK AND PIPING SHALL BE STRUCTURALLY SUPPORTED AND SECURELY FASTENED TO BUILDING STRUCTURE IN AN ACCEPTABLE MANNER TO OWNER, ARCHITECT, ENGINEER AND LOCAL JURISDICTION AND SHALL BE SEISMICALLY BRACED PER THE SMACNA AND/OR REQUIRED BY LOCAL JURISDICTIONS.
   - F. PROVIDE LOCKABLE VOLUME DAMPERS IN ALL TAKEOFFS.
   - G. DUCT HANGERS, SUPPORTS AND METHODS OF INSTALLATION SHALL CONFORM TO ASHRAE & SMACNA RECOMMENDATIONS.
   - H. DUCT SIZES SHOWN ON PLANS INDICATE INSIDE FREE AREA.
   - I. ALL DUCTWORK SHALL BE CLASS-1 AIR DUCT AS APPROVED BY U.L.-181.
   - J. ALL SQUARE ELBOWS SHALL HAVE TURNING VANES.
   - K. DUCT INSULATION SHALL BE PROVIDED PER DUCT INSULATION SCHEDULE ON M0.00.
8. ALL FIRE RATED STRUCTURE SHALL BE FIRE DAMPERED AS REQUIRED BY THE JURISDICTION.
9. FLEXIBLE DUCTS SHALL HAVE MAXIMUM 6 FEET LENGTH UNLESS SHOWN OTHERWISE AND SHALL NOT PENETRATE THROUGH ANY FIRE RATED WALLS. DO NOT INSTALL FLEXIBLE DUCTS WITHIN 6 FEET OF HEATING ELEMENT.
10. HVAC SYSTEM SHALL BE STARTED UP AND FUNCTIONALLY TESTED BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL CONFIRM THAT ALL HVAC SYSTEMS ARE READY FOR TESTING, ADJUSTING, AND BALANCING. HVAC SYSTEMS SHALL BE TESTED, ADJUSTED, AND BALANCED (TAB) BY CONTRACTOR CERTIFIED BY THE AABC, NEBB, OR OTHER APPROVED AGENCY. REFRIGERATION PIPING SHALL BE TESTED UNDER PRESSURE AND PROVEN TO BE LEAK FREE. REFRIGERATION SYSTEM SHALL BE STARTED UP AND BROUGHT DOWN TO DESIGN TEMPERATURE.
11. MECHANICAL, HVAC, AND PLUMBING ELEMENTS SHALL AT NO TIME COME IN CONTACT WITH CEILING CONSTRUCTION EXCEPT AS NECESSARY PENETRATIONS MAY REQUIRE. ESCUTCHEONS SHALL BE USED ON ALL VISIBLE PENETRATIONS
12. ACCESS SHALL BE PROVIDED BY GC AS REQUIRED FOR INSTALLATION AND MAINTENANCE OF MECHANICAL,ELECTRICAL, AND OTHER ELEMENTS WITHIN CEILING SPACE AND AS REQUIRED BY CODE. LOCATIONS FOR SPECIAL ACCESS DOORS, HATCHES, ETC. SHALL BE COORDINATED WITH OTHER TRADES.
13. INSPECTIONS, AS REQUIRED BY LOCAL AUTHORITIES, SHALL BE COORDINATED BY GC PRIOR TO CLOSING OF CEILING.
14. SHOP DRAWINGS FOR ALL RELATED TRADES (PLUMBING, HVAC) SHALL BE SUBMITTED FOR REVIEW/APPROVAL PRIOR TO MANUFACTURING AND INSTALLATION.
15. ALL HVAC ELEMENTS SHALL MATCH ADJACENT WALL OR CEILING FINISH COLOR, INSTALLED FLUSH AND TRUE AND CENTERED WITHIN THE CEILING GRID. LOCATIONS SHALL BE PER APPROVED MECHANICAL PLANS.
16. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION. ALL PRODUCT WARRANTY REGISTRATION CARDS, APPLICATIONS, AND CERTIFICATES SHALL BE COMPLETED AND TURNED OVER TO THE OWNER.

ABBREVIATIONS

Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	AREA DRAIN
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
E/A	EXHAUST AIR
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FD	FIRE DAMPER
FDV	FIRE DEPARTMENT VALVE
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MU/A	MAKE-UP/AIR
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	DUCT RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
RL/A	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
S/A	SUPPLY AIR
SAN	SANITARY
SF	SQUARE FOOT
SD	SMOKE DAMPER
SM	SURFACE MOUNT
SP	STANDPIPE
SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
V	VENT
VAV	VARIABLE AIR VOLUME
VENT	VENTILATION
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WCO	WALL CLEAN OUT
WH	WALL HYDRANT

CODE COMPLIANCE

BUILDING MECHANICAL SYSTEMS ARE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES:

- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 UNIFORM PLUMBING CODE
- 2021 IECC INTERNATIONAL ENERGY CONSERVATION CODE
- ANSI/ASHRAE/IESNA STANDARD 90.1-2019 ENERGY STANDARD FOR BUILDINGS EXCEPT FOR LOW-RISE RESIDENTIAL BUILDINGS
- ANSI/ASHRAE STANDARD 62.1-2019 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

HVAC DESIGN CRITERIA

BOZEMAN, MONTANA

ANNUAL DESIGN CONDITIONS: ASHRAE FUNDAMENTALS 2017

WEATHER STATION - BOZEMAN, MT WMO# 726797
ELEVATION: 4427' LAT: 44.788N LONG: 111.161W
WINTER: -13.4 (99.6%)
SUMMER: 98.1 DRY BULB (0.4%)
62.5 WET BULB (0.4%)

INDOOR DESIGN CONDITIONS:
WINTER: 70 ± 2º F
SUMMER: 75 ± 2º F

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	FC	FAN COIL
AHU	AIR HANDLING UNIT	FP	FIRE PUMP
AS	AIR SEPARATOR	GI	GREASE INTERCEPTOR
B	BOILER	GRV	GRAVITY ROOF VENTILATOR
BP	BOILER PUMP	HP	HEAT PUMP
CC	COOLING COIL	HS	HYDRAULIC SEPARATOR
CH	CHILLER	HWP	HEATING WATER PUMP
CT	COOLING TOWER	HX	HEAT EXCHANGER
CU	CONDENSING UNIT	HRV	HEAT RECOVERY VENTILATOR
CWP	CONDENSER WATER PUMP	MAU	MAKE-UP AIR UNIT
CHWP	CHILLED WATER PUMP	P	PUMP
DBP	DOMESTIC WATER BOOSTER PUMP	RF	RETURN FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	RTU	ROOF TOP UNIT
DF	DUCT FURNACE	SD	SLIM DUCT
DH	DUCT HEATER	SEP	SEWAGE EJECTOR PUMP
EF	EXHAUST FAN	SF	SUPPLY FAN
EH	ELECTRIC HEATER	SP	SUMP PUMP
ERV	ENERGY RECOVERY VENTILATOR	UH	UNIT HEATER
ET	EXPANSION TANK	VAV	VARIABLE AIR VOLUME BOX
F	FURNACE	WH	WATER HEATER
		WM	WALL MOUNT

DUCT INSULATION SCHEDULE

DUCT SYSTEM	OUTSIDE BUILDING ENVELOPE, EXPOSED TO ENVIRONMENT	OUTSIDE BUILDING ENVELOPE, WITHIN BUILDING	WITHIN THE BUILDING ENVELOPE
SUPPLY AIR OUTSIDE AIR FRESH AIR	MIN. R-12 INSULATION & VAPOR BARRIER. PRE-ENGINEERED Q-DUCT OR SIMILAR	MIN. R-6 INSULATION & VAPOR BARRIER	MIN. R-6 INSULATION & VAPOR BARRIER WHERE UNCONDITIONED
RETURN AIR RELIEF AIR TRANSFER AIR GENERAL EXHAUST AIR	MIN. R-12 INSULATION & VAPOR BARRIER. PRE-ENGINEERED Q-DUCT OR SIMILAR	MIN. R-6 INSULATION & VAPOR BARRIER	MIN. R-6 INSULATION WHERE UNCONDITIONED
RETURN AIR PLENUMS @ GRILLES	N/A	LINE GRILLE PLENUM AND FIRST 6 FT OF DUCT MIN. R-6 INSULATED	LINE GRILLE PLENUM AND FIRST 6 FT OF DUCT MIN. R-6 INSULATED
GREASE EXHAUST AIR	N/A	N/A	MIN. R-6 GREASE DUCT FIRE INSULATION. FYREWRAP ELITE OR SIMILAR

REMARKS:
1. ALL DUCT DIMENSIONS INDICATE INSIDE FREE DIMENSIONS AND DO NOT INCLUDE INSULATION THICKNESS.
2. THE 6' OF EXHAUST DUCT NEAREST TO THE EXTERIOR TO BE INSULATED WITH MIN. R-6 INSULATION (1 1/2" THICKNESS, 0.24 K VALUE).

2021 INTERNATIONAL ENERGY CONSERVATION CODE NOTES

1. PROVIDE COMMISSIONING PLAN IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE SECTION C408.2.1.
2. PROVIDE COMMISSIONING COMPLIANCE REPORT IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE SECTION C407.3.1 & C407.3.2.
3. PROVIDE SYSTEMS TESTING AND BALANCING IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE SECTION C408.2.2.
   - A. PROVIDE TAB REPORT FOR ALL AIR MOVING EQUIPMENT TO ENGINEER OF RECORD. ALL AIRFLOWS INDICATED ON PLANS ARE UNDER NORMAL OPERATING CONDITIONS WITH ALL SYSTEMS RUNNING IN OCCUPIED MODE AT MINIMUM OUTSIDE AIR.
4. PROVIDE SYSTEMS, EQUIPMENT, AND CONTROLS FUNCTIONAL TESTING IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE SECTION C408.2.3.
5. PROVIDE SUPPORTING DOCUMENTATION IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE CHAPTER 1 CHECKLIST, INCLUDING OPERATION AND MAINTENANCE MANUALS, HVAC CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, HVAC CONTROL SEQUENCE OF OPERATIONS, COMMISSIONING REPORT, AND RECORD DRAWINGS.
6. PROVIDE OWNER SYSTEMS OPERATION TRAINING IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE SECTION C103.6.
7. MOTORS SHALL COMPLY WITH SECTION C403.8 OF THE INTERNATIONAL ENERGY CONSERVATION CODE. FOR ADDITIONAL DETAILS, SEE EQUIPMENT SCHEDULES CONTAINED WITHIN THIS DRAWING SET.
8. SYSTEMS SHALL BE INSULATED AS PRESCRIBED IN SECTION C403.12. FOR ADDITIONAL DETAILS, SEE DUCTWORK AND PIPING SPECIFICATION MATRICES CONTAINED WITHIN THIS DRAWING SET.

M-102

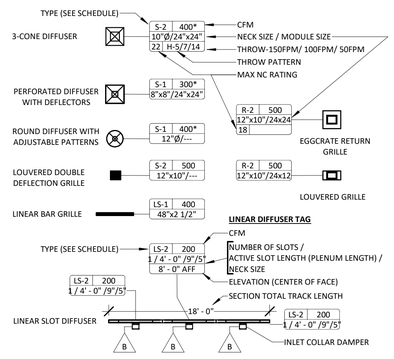
- LEVEL 1 DISCIPLINE DESIGNATOR
- LEVEL 2 DISCIPLINE DESIGNATOR
- LEVEL SEQUENCE NUMBER
- PLAN TYPE SEQUENCE NUMBER
- SHEET TYPE DESIGNATOR

* NOTE *
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

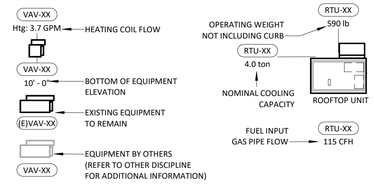
PLUMBING AND PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- GWR — GEOTHERMAL WATER RETURN
- GWS — GEOTHERMAL WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- DV-I — DIRECT VENT - INTAKE
- DV-E — DIRECT VENT - EXHAUST
- CD — CONDENSATE DRAINAGE
- NG — NATURAL GAS

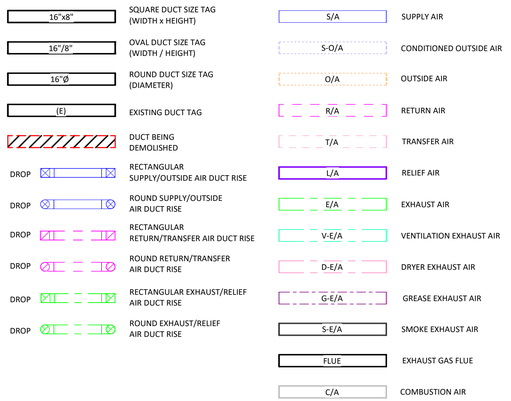
GRILLES, REGISTERS & DIFFUSERS TAG



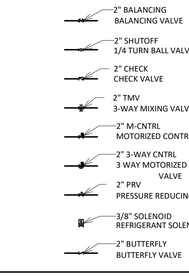
MECHANICAL EQUIPMENT TAGS



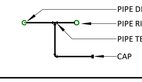
HVAC SYMBOLS



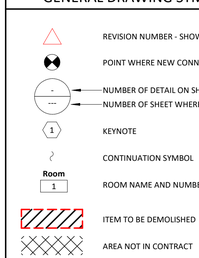
PIPE ACCESSORY TAGS



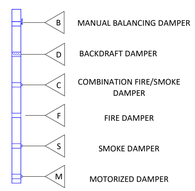
PIPE SYMBOLS



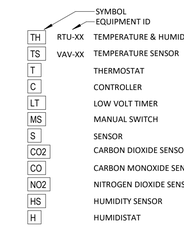
GENERAL DRAWING SYMBOLS



DAMPER TAGS



MECHANICAL CONTROL DEVICE TAGS



MECHANICAL SHEET INDEX

* NOTE *
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ROOM #346
PPA#: 23-0828

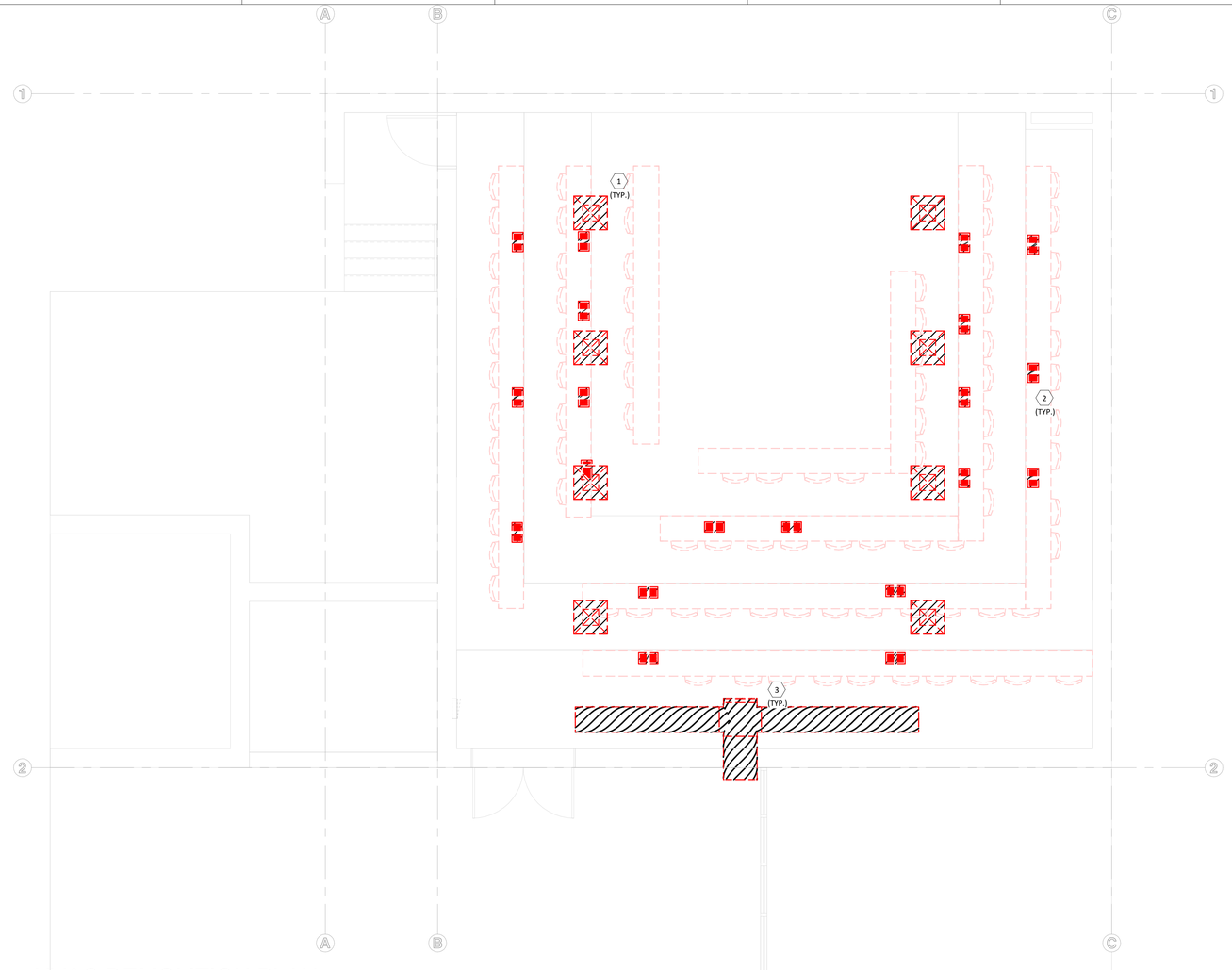
DRAWN: ADM CHECKED: TAT
DATE: 11/19/2024

REVISIONS:

MECHANICAL TITLE SHEET

M-001

PROJECT # 240602



1 HVAC DEMOLITION PLAN
1/4" = 1'-0"
0 2' 4' 8'

KEYNOTES

1 DEMOLISH EXISTING DIFFUSERS AND PREP FLEXIBLE DUCT FOR CONNECTION TO NEW AIR OUTLET.
2 CAP EXISTING RETUN DIFFUSERS IN THE FLOOR IN PREARATION FOR COVERING WITH CONCRETE. ABANDON IN PLACE.
3 REMOVE EXISTING DUCT IN THIS LOCATION IN PREPARATION FOR NEW DUCT BELOW SLAB. CAP EXISTING NOT DEMOLISHED DUCT AND ABANDON IN PLACE.

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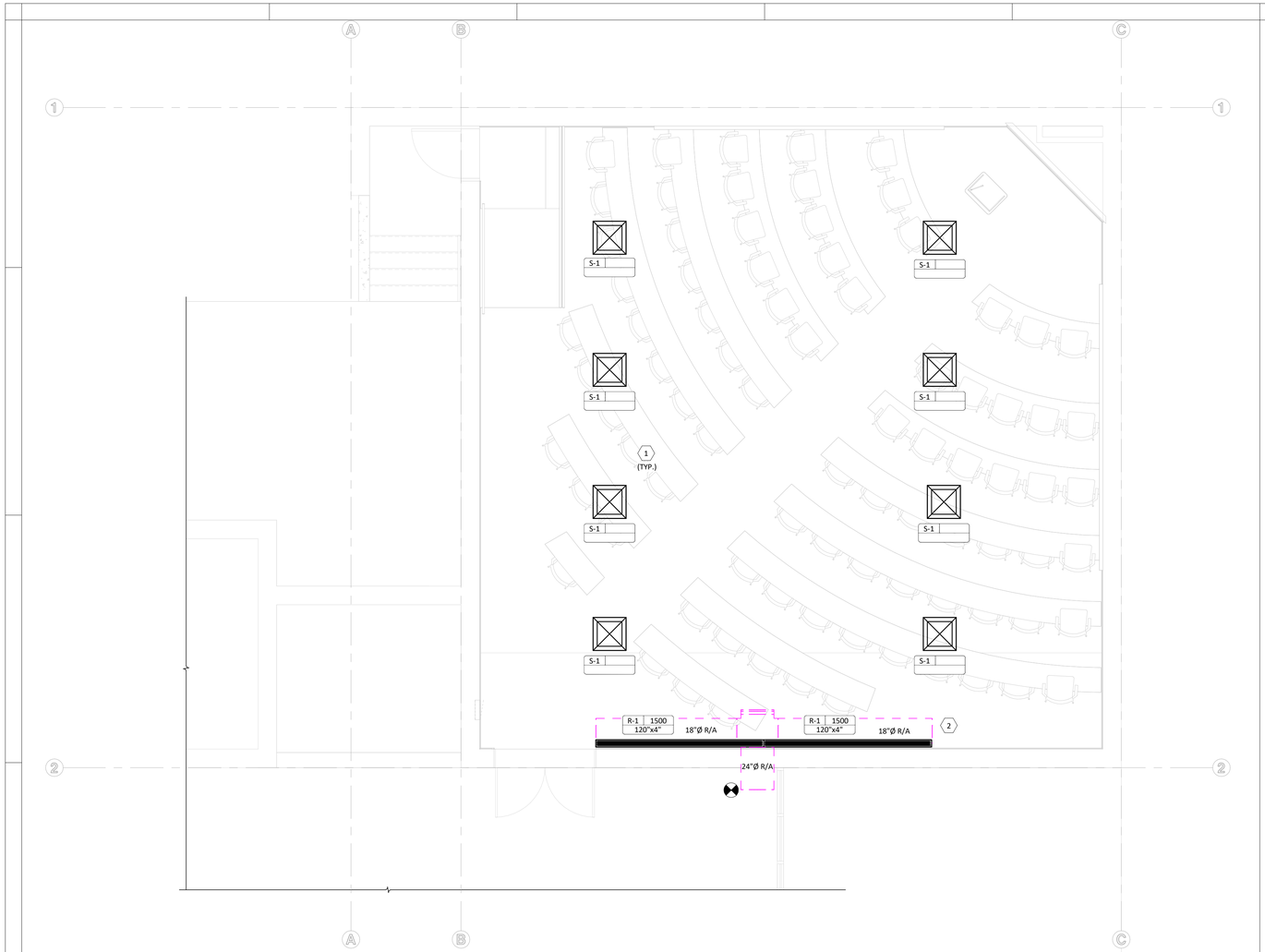
MECHANICAL DEMOLITION PLAN

MD111

PROJECT #:240602



1 HVAC PLAN
1/4" = 1'-0"
0 2' 4' 8'

KEYNOTES

1 COORDINATE DIFFUSERS WITH ACT AND REUSE FLEX DUCT AND DUCTWORK WHERE POSSIBLE.
2 NEW RETURN DUCT IN FLOOR TO BE REPLACED WITH NEW BLUE DUCT, OR EQUAL, UNDERGROUND DUCT OR EQUVALENT AND ROUTED UP TO NEW FLOOR GRILLE. ROUTE DUCT AS CLOSE AS POSSIBLE TO WALL AND UP TO RETURN GRILLE WITH MANUFACTURER BOOT.

INTERIOR AIR INLETS & OUTLETS SCHEDULE

TAG	DESCRIPTION	BASIS OF DESIGN		FINISH	FACE SIZE	INSTALLATION		REMARKS
		MANUFACTURER	MODEL NO.			BORDER TYPE	DAMPER	
R-1	LINEAR BAR GRILLE	Titus	CT-PP-0	WHITE ENAMEL		TYPE 1	---	
R-1	LINEAR BAR GRILLE	Titus	CT-PP-0	WHITE ENAMEL		TYPE 1	---	
S-1L	PLAQUE FACE DIFFUSER	TITUS	OMNI	WHITE ENAMEL	24"x24"	TYPE 3 (LAY-IN)	---	1

1. MATCH EXISTING DIFFUSER SIZES AND AIRFLOWS

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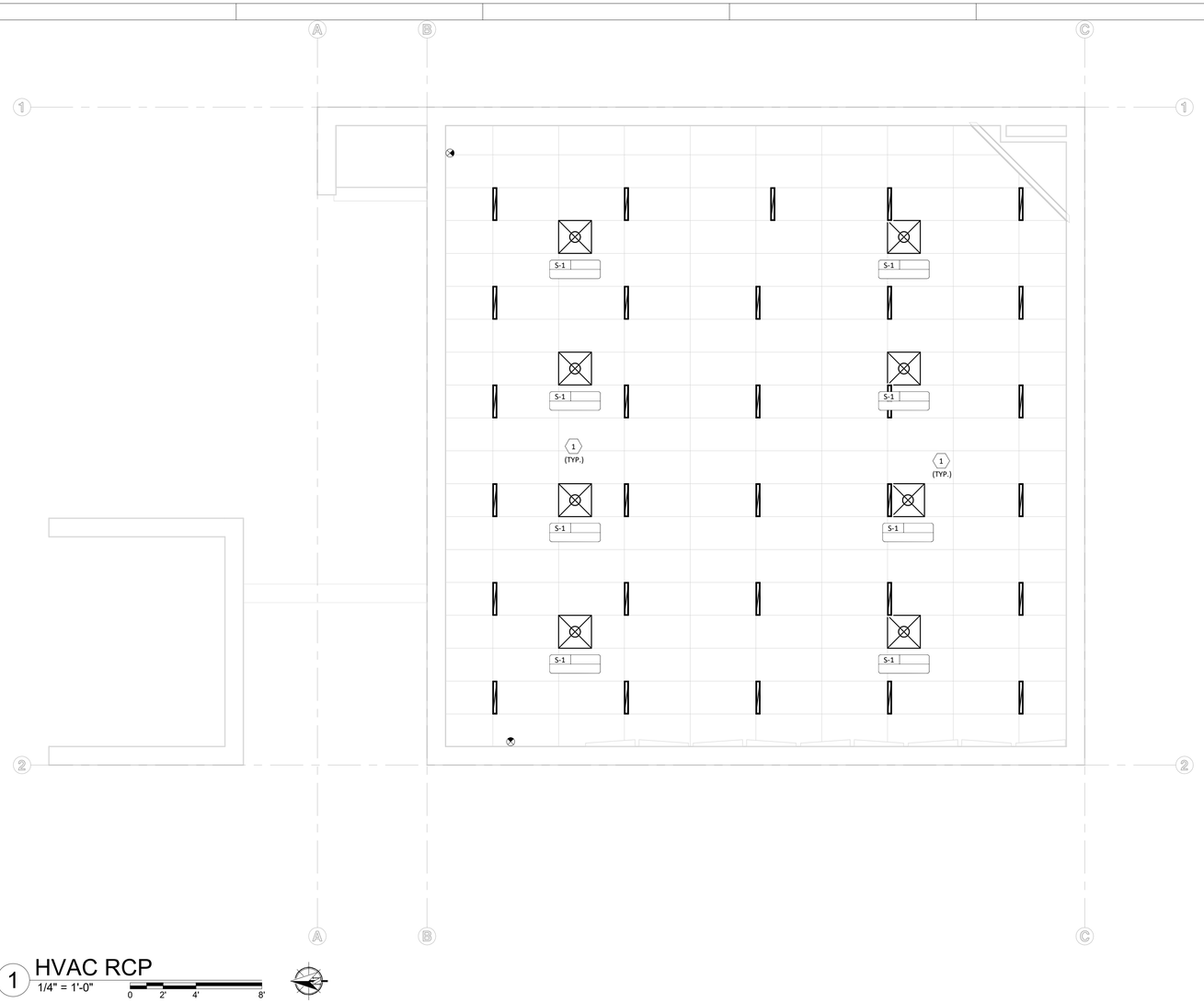
REVISIONS:

HVAC PLAN

M-111

PROJECT #:240602



1 HVAC RCP
1/4" = 1'-0"
0 2' 4' 8'

KEYNOTES

1 NEW DIFFUSERS TO MATCH EXISTING SIZE AND AIRFLOW. CORRDINATE WITH NEW ACT.

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DATE: 11/19/2024

REVISIONS:

HVAC RCP

M-131

PROJECT # 240602

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	SURFACE LIGHT (TYPE DENOTED)
	WALL MOUNTED FLOODLIGHT (TYPE DENOTED)
	RECESSED LIGHT (TYPE DENOTED)
	POLE MOUNTED LIGHT (TYPE DENOTED)
	SURFACE LINEAR LIGHT (TYPE DENOTED)
	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)
	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)
	RECESSED LINEAR LIGHT (TYPE DENOTED)
	STRIP LIGHT (TYPE DENOTED)
	TRACK AND TRACK LIGHT (TYPES DENOTED)
	EMERGENCY BATTERY LIGHT (TYPE DENOTED)
	EXIT SIGN (TYPE DENOTED)
	LIGHT FIXTURE ON (EM) LIFE SAFETY BRANCH
	LIGHT FIXTURE ON (EM) CRITICAL BRANCH
	LIGHT ON CORD REEL (TYPE DENOTED)
	LIGHTING CHANNEL WIRE (TYPE DENOTED)
	LED TAPE LIGHT
	DAYLIGHT ZONE 1
	DAYLIGHT ZONE 2
	SINGLE POLE SWITCH
2	2 POLE SINGLE THROW SWITCH
3	3-WAY SWITCH
4	4-WAY SWITCH
K	KEYED SWITCH
	SWITCH W/PILOT
D	DIMMER SWITCH
OS	OCCUPANCY SENSOR SWITCH
MC	MOMENTARY CONTACT SWITCH
T	TIMER SWITCH
TD	TIME DELAY SWITCH
	PUSH BUTTON
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	SPLIT DUPLEX RCPT.
	ISOLATED GROUND RCPT (DUPLEX SHOWN)
	RCPT ON EMERGENCY CKT (DUPLEX SHOWN)
	FOURPLEX RECEPT.
	FOURPLEX RCPT ON EMERGENCY CIRCUIT
	240 VOLT RECEPTACLE
	FLOOR RECEPTACLE (DUPLEX SHOWN)
J	RCPT ON DROP CORD (DUPLEX SHOWN)
J	RCPT ON CORD REEL (DUPLEX SHOWN)
	MULTIOUTLET ASSEMBLY (TYPE DENOTED)
	CLOCK (TYPE DENOTED)

SYMBOL	DESCRIPTION
	STATIC GROUND RECEPTACLE (TYPE DENOTED)
	LIGHTNING PROTECTION AIR TERMINAL
	LIGHTNING PROTECTION CONDUCTOR SPLICE
	GROUND ROD (PLAN VIEW)
P	UTILITY SERVICE POWER POLE (SITE)
	SPECIAL RECEPT. OR CONN. (SEE SCHEDULE)
J	JUNCTION BOX
PB	PULL BOX
	CIRCUIT BREAKER PANEL
	POWER OR DISTRIBUTION PANEL
T	TRANSFORMER (TYPE DENOTED)
PP	POWER PACK (TYPE DENOTED)
XX-1	MOTOR (SEE SCHEDULE)
	COMB. MOTOR STARTER (FUSED)
	SAFETY DISC. SW. (NON-FUSED)
	SAFETY DISC. SW. (FUSED)
R	RELAY
	ENCLOSED CIRCUIT BREAKER
	PRESSURE SWITCH
	FLOAT SWITCH
OS	OCCUPANCY SENSOR - TYPE DENOTED
DS	LIGHT LEVEL SENSOR - TYPE DENOTED
PC	PHOTOCELL
TC	TIME CONTROL SWITCH (TIME SWITCH)
H	HUMIDISTAT
T	THERMOSTAT
	SOLENOID VALVE
	HALFTONE SYMBOL INDICATES EXISTING
	DASHED SYMBOL INDICATES DEMOLISHED
	TELEPHONE OUTLET (TYPE DENOTED)
W	WALL TELEPHONE OUTLET (TYPE DENOTED)
	INFORMATION OUTLET (TYPE DENOTED)
	WIRELESS ACCESS POINT
	TELEVISION OUTLET
	BELL
	BUZZER
	CHIME
D	DOOR SIGNAL - APT. UNIT
S	SPEAKER (WALL OR CEILING MT.)
S	HORN TYPE SPEAKER
V	VOLUME CONTROL
M	MICROPHONE OUTLET
	ANTENNA

SYMBOL	DESCRIPTION
F	FIRE ALARM HORN W/STROBE (CANDELAS)
F	FIRE ALARM BELL
F	FIRE ALARM BELL W/STROBE (CANDELAS)
F	FIRE ALARM CHIME W/STROBE (CANDELAS)
F	FIRE ALARM STROBE (CANDELAS)
F S	FIRE ALARM SPEAKER W/STROBE (CANDELAS)
	FIRE ALARM REMOTE ANNUNCIATOR
	SMOKE DETECTOR (TYPE DENOTED)
	HEAT DETECTOR (TYPE & TEMP DENOTED)
	LINEAR HEAT DETECTOR
S	DUCT SMOKE DETECTOR (TYPE DENOTED)
	REMOTE TEST/STATUS STATION
	FLAME DETECTOR (TYPE DENOTED)
	GAS DETECTOR (TYPE DENOTED)
F P	F.A. PULLSTATION (TYPE DENOTED)
Z	F.A. ZONE ADDRESSABLE MODULE
	F.A. INDIVIDUAL ADDRESSABLE MODULE
	F.A. DOOR HOLDER
	F.A. DOOR CLOSER
FR	FIRE ALARM SHUT DOWN RELAY
	SPRINKLER FLOW SWITCH
	SPRINKLER VALVE TAMPER SWITCH
	SPRINKLER LEVEL SWITCH
	SPRINKLER PRESSURE SWITCH
T	SPRINKLER TEMPERATURE SWITCH
	END OF LINE RESISTOR
ES	ELECTRIC STRIKE
ML	MAGNETIC LOCK
CL	COMBINATION LOCK
DC	DOOR CONTACTS
CR	CARD READER
	KEYPAD
MD	MOTION DETECTOR (TYPE DENOTED)
	NURSE CALL EMERG. STATION
	NURSE CALL CODE BLUE EMERG. STATION
D	NURSE CALL DUTY STATION
S	NURSE CALL STAFF STATION
P	NURSE CALL SINGLE PATIENT STATION
P 2	NURSE CALL DUAL PATIENT STATION
N 1	NURSE CALL DOME LIGHT (2 LAMP)
	CCTV CAMERA
	CCTV CAMERA WITH PAN/TILT DRIVE
1	KEYED NOTE (SEE SCHEDULE)

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)
A	AMPERE
AC	ABOVE COUNTER OR AIR CONDITIONER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUASTAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
CLG	CEILING
CMPR	COMPRESSOR
COMB	COMBINATION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION OR CONTINUOUS
CONTR	CONTRACTOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DWH	DOMESTIC WATER HEATER
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DS	SAFETY DISCONNECT SWITCH
DT	DOUBLE THROW
DWG	DRAWING
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR

ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXH	EXHAUST
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FU	FUSE
FUDS	FUSED SAFETY DISCONNECT SWITCH
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HOA	HANDS-OFF-AUTOMATIC SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWP	HYDRONIC WATER PUMP
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
I/W	INTERLOCK WITH
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
L, LTG	LIGHTS, LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
M, MTR	MOTOR, MOTORIZED
MAX	MAXIMUM
MAG.S	MAGNETIC STARTER
M/C	MOMENTARY CONTACT
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER

MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSP	MOTOR STARTER PANELBOARD
MSBD	MAIN SWITCHBOARD
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
(N)	NEW
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, CONTRACTOR INSTALLED
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
(R)	RELOCATED
R, RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
S/N	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SPDT	SINGLE POLE DOUBLE THROW
SR	SURFACE RACEWAY
SS	STAINLESS STEEL

S/S	STOP/START PUSHBUTTONS STATION
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TEL/DATA	TELEPHONE/DATA
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	UNIT VENTILATOR OR ULTRAVIOLET
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER
∠	ANGLE
@	AT
▲	DELTA
°	DEGREES
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C	CENTER LINE
P	PLATE

GENERAL ELECTRICAL NOTES AND SPECIFICATIONS

GENERAL NOTES:
1. ALL WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF FEDERAL AND STATE CODES, REGULATIONS, LAWS AND ORDINANCES, LOCAL LAWS AND REGULATIONS, LOCAL JURISDICTIONS, AND THE AUTHORITY HAVING JURISDICTION (AHJ).
2. ALL ELECTRICAL WORK UNDER THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL MEET THE REQUIREMENTS OF THE CURRENT STATE ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC) AND SHALL ALSO BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND/OR LOCAL LAWS AND ORDINANCES.
3. THE CONTRACTOR SHALL COOPERATE WITH AND ASSIST THE OWNER IN SECURING FROM THE AHJ ANY "SPECIAL PERMISSION" OR INTERPRETATION NEEDED TO COMPLETE THE WORK.
4. ALL DRAWINGS AND DETAILS PROVIDED ARE GENERAL IN NATURE AND MAY NOT REPRESENT ALL CONDITIONS AND DIMENSIONS FOR THE ACTUAL WORK. ELECTRICAL CONTRACTOR (EC) SHALL REVIEW ALL DOCUMENTS PROVIDED AND/OR REFERENCED. EC SHALL VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS INCLUDING: ACCESS TO WORK, VERIFICATION OF MEASUREMENTS, VERIFICATION OF QUANTITIES AND LOCATIONS LISTED HEREIN, POWER REQUIREMENTS, STAGING, DISPOSAL AND MATERIAL STORAGE. IF DRAWING OR SPECIFICATIONS ARE NOT AVAILABLE FOR A PARTICULAR CONDITION, OR A NEW CONDITION IS EXPOSED DURING THE PROJECT, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REQUEST INFORMATION OR ADJUSTMENT OF SCOPE FROM OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH SUCH WORK.

COORDINATION:
1. ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES. EC TO COORDINATE ALL ELECTRICAL MATERIAL, EQUIPMENT, FIXTURES, AND DEVICE LOCATIONS WITH ALL RELATED ARCHITECTURAL, MECHANICAL, STRUCTURAL, AND OTHER TRADE DRAWINGS TO AVOID AND PREVENT IMPROPER INSTALLATIONS OR WASTEFUL PRACTICES.
2. ALL WORK SHALL BE CLOSELY COORDINATED WITH THE ACTIVITIES OF OTHERS AROUND THE WORK SITE.
3. OWNER, GENERAL CONTRACTOR, AND ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY ALL OTHER ELECTRICAL WORK REQUIRED WHETHER OR NOT SPECIFIED ON THE DRAWINGS. OTHER WORK INCLUDES BUT IS NOT LIMITED TO: AUDIO SYSTEMS, LIFE SAFETY SYSTEMS, FIRE/SECURITY ALARMS, MECHANICAL SYSTEMS, TELEPHONE/DATA CABLES, SITE/SEWERAGE WORK, UTILITY/TRENCHING, AND EMERGENCY/STANDBY POWER SYSTEMS.

ELECTRICAL DRAWINGS:
1. UNLESS OTHERWISE NOTED, ELECTRICAL WORK IS DRAWN WITH BOLD LINES.
2. FURNITURE INDICATED ON PLANS IS FOR REFERENCE ONLY.
3. THE CONTRACTOR SHALL KEEP A RECORD OF CHANGES MADE AND THE RECORD SHALL BE TURNED OVER TO THE OWNER AT THE COMPLETION OF PROJECT FOR THE OWNERS RECORDS. PROVIDE THE OWNER WITH ONE COMPLETE SET OF ELECTRICAL "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.

WORKMANSHIP:
1. WORKMANSHIP SHALL BE FIRST QUALITY AND IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE. ONLY WORKMEN SKILLED IN THE TASKS ASSIGNED TO THEM SHALL BE EMPLOYED.
2. ALL ELECTRICAL WORK IS TO BE PERFORMED, INSTALLED, TESTED, INSPECTED, AND APPROVED BY QUALIFIED, LEGALLY LICENSED AND BONDED ELECTRICAL CONTRACTORS PER THE LAWS OF THE STATE.
3. CONTRACTOR SHALL CARRY OUT ALL WORK IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE LAWS LOCAL BUILDING CODES, MANUFACTURE SPECIFICATIONS, STANDARDS OF CARE AND THE SPECIFICATIONS SET FORTH WITHIN THESE DOCUMENTS AND FULLY COMPLY WITH ALL OSHA REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED BY THE CONTRACTOR OR ITS EMPLOYEES TO THE SOLE SATISFACTION OF OWNER.

WORK SAFETY:
1. ALL WORK PERFORMED BY CONTRACTOR SHALL MEET SAFETY REQUIREMENTS BY OSHA AND/OR THE STATE AND AHJ.
2. ELECTRICAL WORK REQUIRED ON OR NEAR EXPOSED LIVE PARTS, OR TO ANY HAZARDOUS EQUIPMENT SHALL ONLY BE PERFORMED BY OSHA CERTIFIED EMPLOYEE FOR THE WORK BEING PERFORMED.

DELIVERY, STORAGE, AND HANDLING:
1. RECEIVE, INSPECT, HANDLE, AND STORE ALL ELECTRICAL EQUIPMENT, FIXTURES, AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

MATERIAL :
1. ALL ELECTRICAL EQUIPMENT, FIXTURES, MATERIALS, METHODS, AND WORK MUST BE IN ACCORDANCE AND IN COMPLIANCE WITH THE MOST RECENT APPROVED EDITION OF ADAAG, ANSI, IEEE, NEC, NEMA, NFPA, OSHA, IBC, TIA, CODES AND STANDARDS, OR OTHER AS REQUIRED BY THE AHJ.
2. ALL ELECTRICAL EQUIPMENT, FIXTURES, MATERIAL, AND DEVICES SHALL BE NEW AND ORIGINAL EQUIPMENT MANUFACTURED (UNLESS OTHERWISE NOTED), AND BE LISTED WITH THE UNDERWRITERS LABORATORIES INC., OR EQUAL.
3. ALL ELECTRICAL EQUIPMENT, FIXTURES, MATERIAL, AND DEVICES SHALL BE COMPATIBLE, EACH WITH ONE ANOTHER AND WITH EXISTING WORK AND WITH EXISTING BUILDING (IF APPLICABLE) STANDARDS.

   COMMERCIAL SPACES:
   a. ELECTRICAL DEVICES SHALL BE 20A COMMERCIAL GRADE. COLOR AND STYLE SHALL BE CHOSEN BY THE ARCHITECT AND/OR OWNER.

CONTRACTOR RESPONSIBILITIES:
1. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL ELECTRICAL WORK AND TO PROVIDE COMPLETE AND WORKING SYSTEMS COMPLYING WITH THE CONTRACT DOCUMENTS. ALL PROPOSED DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE SUBMITTED AND APPROVED BEFORE EXECUTION OF THE AFFECTED WORK.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL REQUIRED PERMITS, FEES, LICENSES AND INSPECTIONS FOR ALL ELECTRICAL WORK.
3. CONTRACTOR IS RESPONSIBLE FOR ANY DELAYS DUE TO THE EQUIPMENT THAT THEY PROVIDE.
4. CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT, LABOR AND SERVICES NECESSARY TO FURNISH AND INSTALL COMPLETE WORKING ELECTRICAL SYSTEMS.
5. UNLESS OTHERWISE INDICATED, MANUFACTURERS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS ARE BASIS OF DESIGN. APPROVED EQUAL PRODUCTS ARE ALSO ALLOWED IF:
   a. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS FOR ENGINEER AND ARCHITECTURAL REVIEW PRIOR TO CONSTRUCTION.
   b. AT A MINIMUM PROVIDE SUBMITTALS FOR ENGINEER AND ARCHITECTURAL REVIEW FOR LIGHTING AND ELECTRICAL DEVICES.
6. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL ELECTRICAL MATERIAL RATINGS. PRIOR TO INSTALLATION, CONFIRM BREAKER, FUSE, CONDUIT AND CONDUCTOR SIZES ARE CONSISTENT WITH CIRCUIT VOLTAGES AND MANUFACTURES' RECOMMENDATIONS AND NAMEPLATE DATA FOR EQUIPMENT AND THE AHJ REQUIREMENTS.

CLEANING:
1. COMPLETE FINAL CLEANING FOR ALL ELECTRICAL PARTS. REMOVE CONDUCTIVE AND HARMFUL DELETERIOUS MATERIALS AND REMOVE DIRT AND DEBRIS, PLASTER, AND OTHER FOREIGN MATERIALS FROM ENCLOSURES.
2. CLEAN FINISHES, TOUCH UP PAINT, AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES TO ELIMINATE VISUAL DEFECTS. MATCH ORIGINAL FACTORY FINISH.

CLOSEOUT:
1. COMPLETE STARTUP AND TESTING OF SYSTEMS AND EQUIPMENT.
2. ALL SYSTEMS, AT PROJECT COMPLETION AND BEFORE FINAL ACCEPTANCE, SHALL BE DEMONSTRATED TO HAVE A COMPLETE AND WORKING FUNCTIONAL OPERATION.
3. ALL BROCHURES, OPERATING AND MAINTENANCE DATA AND MANUALS, CATALOGS, SHOP DRAWINGS, ETC, RELATED TO ELECTRICAL WORK SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION BY EC. ADDITIONALLY, ALL PRODUCT WARRANTY REGISTRATION CARDS, APPLICATIONS, AND CERTIFICATES SHALL BE COMPLETED, FILLED OUT, AND TURNED OVER TO OWNER. ALL SPARE, SURPLUS, AND RELATED ADJUSTMENT PARTS, TOOLS OR DEVICES ARE TO BE TURNED OVER TO OWNER.
4. ALL COMPLETED ELECTRICAL JOB(S) SHALL BE GUARANTEED BY THE EC. AT COMPLETION OF WORK, PROVIDE WRITTEN WARRANTY. THE EC WARRANTIES SHALL INCLUDE:
   A. WORK WILL BE PERFORMED IN A WORKMANLIKE MANNER
   B. FINISHED WORK IS FREE FROM DEFECTS AND IS IN ACCORDANCE WITH STANDARDS
   C. A MINIMUM WARRANTY DURRATION OF ONE YEAR (1) AFTER THE DATE OF ACCEPTANCE BY OWNER.
   D. ANY WORKMANSHIP PERFORMED BY THE EC FOUND TO BE DEFECTIVE OR FAULTY DURING THAT PERIOD OF TIME SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION AND AT THE SOLE EXPENSE OF THE EC

ELECTRICAL WORK:
1. ALL ELECTRICAL EQUIPMENT, FIXTURES, MATERIAL, AND DEVICES MUST BE INSTALLED PER THE MANUFACTURERS INSTRUCTIONS AND MUST NOT INTERFERE, REMOVE, OR ALTER ITS LISTING, FUNCTION, WARRANTY, OR SAFETY AGREEMENTS.
2. THE ELECTRICAL WORK INCLUDES BUT IS NOT SPECIFICALLY LIMITED TO ITEMS INDICATED ON DRAWINGS AND SPECIFICATIONS. PERFORM ALL OPERATIONS NECESSARY OR INCIDENTAL TO PROPER EXECUTION AND COMPLETION OF ALL "ELECTRICAL WORK" WHETHER SPECIFICALLY MENTIONED OR NOT.
3. CIRCUIT PATH WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
4. CONTRACTOR SHALL MAINTAIN ALL CEILING, FLOOR, AND WALL WIRE AND SMOKE PROTECTION RATINGS. SEAL AROUND CABLES PASSING THROUGH FIRE-RATED ELEMENTS. SEAL ALL CONDUIT, CONDUCTOR, AND BOX PENETRATIONS THROUGH OR IN ALL FIRE RATED ASSEMBLIES.
   a. COORDINATE SEALANTS MATERIAL AND COLOR WITH ARCHITECT.

LINE-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES:
1. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN CIRCUIT NUMBERS SHOWN ON DRAWING CORRESPOND TO PANELBOARD BREAKERS (SEE PANEL SCHEDULE).
2. BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER SIZE AND RATING, UNLESS INDICATED OTHERWISE ON THE EQUIPMENT SCHEDULE.
3. PROVIDE AND INSTALL PROPER SIZE AND NUMBER OF CONDUCTORS REQUIRED BY THE NEC TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
4. ALLOW FOR 3% MAXIMUM VOLTAGE DROP ON ALL CONDUCTORS. UPSIZE WIRES IF NECESSARY. COORDINATE SIZES OF RACEWAYS, BOXES, AND EQUIPMENT ENCLOSURES INSTALLED UNDER OTHER SECTIONS WITH THE ACTUAL CONDUCTORS TO BE INSTALLED.
5. MINIMUM CONDUCTOR SIZE:
   A. BRANCH CIRCUITS: 12 AWG.
   B. CONTROL CIRCUITS: 14 AWG.
6. CONDUCTOR MATERIAL:
   A. ALL CONDUCTOR SHALL BE TYPE THHN, THHN/THWN, OR THHN/THWN-2 UNLESS NOTED OTHERWISE.
   B. PROVIDE COPPER CONDUCTORS FOR ALL CIRCUITS UNLESS NOTED OTHERWISE. CONDUCTOR SIZES INDICATED ARE BASED ON COPPER.
   C. MC CABLE IS NOT PERMITTED.
   D. SURFACE MOUNT EMT WHERE CONCEALING CONDUIT IS NOT POSSIBLE.

GROUNDING AND BONDING FOR ELECTRICAL SYSTEM:
1. GROUNDING AND BONDING WORK SHALL COMPLY WITH REQUIREMENTS OF NEC, LOCAL UTILITY, TELEPHONE COMPANY REQUIREMENTS, AND AHJ.
   a. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED COMPONENTS, CONDUCTORS, CONNECTORS, CONDUIT, BOXES, FITTING, SUPPORTS, ACCESSORIES, ETC. AS NECESSARY FOR COMPLETE GROUNDING AND BONDING SYSTEM.
   b. PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED, AND LABELED AS COMPLYING WITH UL 467 WHERE APPLICABLE.
   c. WHERE CONDUCTOR SIZE IS NOT INDICATED, SIZE TO COMPLY WITH NEC BUT NOT LESS THAN APPLICABLE MINIMUM SIZE REQUIREMENTS SPECIFIED OR THAT REQUIRED BY THE AHJ.
   d. PROVIDE GROUNDING ELECTRODE SYSTEM. CONCRETE-ENCASED GROUNDING ELECTRODE (UFER GROUND) AT EACH ELECTRICAL SERVICE ENTRANCE. COMPLY WITH UL 467 FOR GROUNDING AND BONDING MATERIALS AND EQUIPMENT. REFER TO ELECTRICAL SINGLE DIAGRAM DETAIL.
   e. PROVIDE A COPPER EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS.

CONDUIT FOR ELECTRICAL SYSTEM:
1. PROVIDE CONDUIT FOR ALL WIRING.
2. HOMERUNS SHALL CONSIST OF 3/4" EMT AND #12 COPPER MINIMUM.
3. CONCEAL ALL CONDUIT AND WIRING IN WALLS AND CEILING SPACES. MECHANICAL/ELECTRICAL ROOMS AND AREAS WITH UNFINISHED SURFACES MAY HAVE EXPOSED CONDUIT.

IDENTIFICATION FOR ELECTRICAL SYSTEM:
1. COMPLY WITH REQUIREMENTS OF NEC.
2. VERIFY FINAL DESIGNATIONS FOR EQUIPMENT, SYSTEMS, AND COMPONENTS TO BE IDENTIFIED PRIOR TO FABRICATION OF IDENTIFICATION PRODUCTS.
3. DO NOT CONCEAL ITEMS TO BE IDENTIFIED, IN LOCATIONS SUCH AS ABOVE SUSPENDED CEILINGS, UNTIL IDENTIFICATION PRODUCTS HAVE BEEN INSTALLED.
4. DO NOT INSTALL IDENTIFICATION PRODUCTS UNTIL FINAL SURFACE FINISHES AND PAINTING ARE COMPLETE.
5. PANELBOARD IDENTIFICATION MUST BE TWO-LAYER OR THREE LAYER LAMINATED ACRYLIC OR ELECTRICALLY NON-CONDUCTIVE PHENOLIC WITH BEVELED EDGES, MINIMUM THICKNESS OF 1/16 INCH; MECHANICALLY ENGRAVED TEXT.

LIGHTING CONTROL DEVICES:
1. LUTRON VIVE LIGHTING CONTROL SYSTEM IS PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
2. PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE INDICATED, CONNECT LIGHTING CONTROL DEVICE GROUNDING TERMINAL OR CONDUCTOR TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR AND TO OUTLET BOX WITH BONDING JUMPER.
4. ADJUST OCCUPANCY SENSOR SETTING TO MINIMIZE UNDESIRED ACTIVATIONS WHILE OPTIMIZING ENERGY SAVING, AND TO ACHIEVE DESIRED FUNCTION AS INDICATED OR AS DIRECTED BY ARCHITECT.

INTERIOR LIGHTING:
1. COORDINATE THE INSTALLATION OF LUMINARIES WITH MOUNTING SURFACES INSTALLED UNDER OTHER SECTIONS OR BY OTHERS. COORDINATE THE WORK WITH PLACEMENT OF SUPPORTS, ANCHORS, ETC. REQUIRED FOR MOUNTING. COORDINATE COMPATIBILITY OF LUMINARIES AND ASSOCIATED TRIMS WITH MOUNTING SURFACES AT INSTALLED LOCATIONS.
2. COORDINATE THE PLACEMENT OF LUMINARIES WITH STRUCTURAL MEMBERS, DUCTWORK, PIPING, EQUIPMENT DIFFUSERS, FIRE SUPPRESSION SYSTEM COMPONENTS, AND OTHER POTENTIAL CONFLICTS INSTALLED BY OTHERS.
3. COORDINATE THE PLACEMENT OF EXIT SIGNS WITH FURNITURE, EQUIPMENT, SIGNAGE OR OTHER POTENTIAL VISIBILITY OBSTRUCTIONS INSTALLED BY OTHERS.
4. NOTIFY ARCHITECT OF ANY CONFLICTS OR DEVIATIONS FROM CONTRACT DOCUMENTS TO OBTAIN DIRECTION PRIOR TO PROCEEDING WITH WORK.

26 06 00 SCHEDULES FOR ELECTRICAL:
1. WHEN ADDING CIRCUITS, UPDATE EXISTING PANEL SCHEDULES WITH TYPEWRITTEN DIRECTORY OF CIRCUITS AND PLACED IN LOCATION PROVIDED BY PANELBOARD MANUFACTURER.

26 27 00 WIRING DEVICES:
1. LOCATION AND MOUNTING HEIGHTS OF RECEPTACLES AND SWITCHES AS INDICATED ON ARCHITECTURAL ELEVATIONS. EXACT LOCATION SHALL BE COORDINATED WITH THE ARCHITECT.
2. COLOR AND MATERIALS OF RECEPTACLES AND SWITCHES SHALL MATCH EXISTING.
3. PROVIDE AND INSTALL GFCI AND ARC FAULT PROTECTION REQUIRED BY THE NEC AND AHJ.
4. PROVIDE AND INSTALL TAMPER-RESISTANT(TR) RECEPTACLES REQUIRED BY THE NEC AND AHJ.
5. PROVIDE AND INSTALL WEATHER-RESISTANT RECEPTACLES AND COVERS REQUIRED BY THE NEC AND AHJ.
6. INSTALL WIRING DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. DO NOT SHARE NEUTRAL CONDUCTOR ON BRANCH CIRCUITS UTILIZING WALL DIMMERS.

27 00 00 COMMUNICATIONS:
1. ROUGH-IN BY CONTRACTOR.
2. WIRING & TERMINATIONS BY OWNER.

28 00 00 FIRE DETECTION AND ALARM:
1. NICET CERTIFIED CONTRACTOR SHALL REMOVE AND REINSTALL DEVICES AS REQUIRED TO ACCOMMODATE CONSTRUCTION.

SPECIFIC CODE NOTES

FIRE PROTECTION & SOUND REQUIREMENTS

A. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE/SOUND RATED WALLS AND CEILINGS.
B. LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.36, MEANS OF SUPPORT.
   1. CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRE-STOPPED.
   2. OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.
   3. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES WHERE POSSIBLE WITHOUT ADDING HAVING TO ADD RECEPTACLES. WHERE 24" SPACING IS NOT POSSIBLE, USE MAXIMUM SEPARATION AND AVOID USING THE STUD BAY IF POSSIBLE.
   4. PROVIDE PUTTY PADS AROUND BOXES IN FIRE RATED WALLS AND ACOUSTICAL ASSEMBLIES. PUTTY PACKS SHALL BE INSTALLED SO THAT GYPSUM BOARD SEALS AIR GAP.
C. RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

E-102

LEVEL 1 DISCIPLINE DESIGNATOR
LEVEL 2 DISCIPLINE DESIGNATOR
LEVEL SEQUENCE NUMBER
PLAN TYPE SEQUENCE NUMBER
SHEET TYPE DESIGNATOR

* NOTE *
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

ELECTRICAL SYMBOL NOTES

SYMBOL	NOTE
a	THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "a" TO CONTROL LIGHTING FIXTURES INDICATED BY "a".
1 1,3,5	SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. 1; 3 PHASE CONNECTION TO CIRCUITS 1, 3, 5.
LPN-1,3,5	HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN WITH THE HOME RUN ARROW AIMING AT THE ID. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD LPN; CIRCUITS 1, 3, 5.
30AF/2P/3R 15A FU	DISCONNECT NOTATION. EXAMPLE: 30 AMP FRAME DISCONNECT, 2 POLE, NEMA 3R, 15 AMP FUSE
T1	TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".
LPN-102	PANEL BOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANEL BOARDS.
1	KEYNOTE. SEE THE SPECIAL NOTES ON THAT SHEET FOR THE NOTE NUMBER INDICATED IN THE HEXAGON.
(ISO)	CONDUIT/WIRES SHOWN WITH SLASH MARKS. SLASH MARK INDICATORS ARE: SHORT STRAIGHT = PHASE CONDUCTOR; LONG STRAIGHT = NEUTRAL; GROUND = DOT; ISOLATED GROUND = DOT WITH T
$ P1-11,13	CIRCUIT ID. NOTATION IS FOUND NEXT TO A SWITCH, WIRE, LIGHT, RCPT OR EQMT. INDICATES PANEL NAME AND CIRCUIT NUMBER(S). EXAMPLE: PANEL P1, CIRCUIT NUMBERS 11 & 13.

CODE COMPLIANCE

BUILDING ELECTRICAL SYSTEMS ARE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:

- 2021 IBC (INTERNATIONAL BUILDING CODE)
- 2021 IEBC (INTERNATIONAL EXISTING BUILDING CODE)
- 2017 ICC A117.1 - ACCESSIBLITY
- 2020 NFPA 70 (NATIONAL ELECTRICAL CODE)
- 2019 NFPA 72
- MONTANA STATE UNIVERSITY - BOZEMAN ENGINEERING GUIDELINES REVISION 04-05-2024

ELECTRICAL MOUNTING HEIGHTS

HEIGHTS ARE TO CENTER OF BOX UNLESS OTHERWISE NOTED

RECEPTACLE	18"
SWITCH	46"
THERMOSTAT	58"
DATA/TEL	18"
PANELBOARD	72" TOP OF ENCLOSURE
FA PULL STATION	46"
FA HORN STROBE	12" BELOW CEILING, IF CEILING IS 80"-96" AFF
FA HORN HORN	86" OR 6" BELOW CEILING
TV/AV/INTERCOM	86"
EXIT SIGN	12" ABOVE DOOR TO CENTER OF FIXTURE, UNLESS CEILING MOUNTED

ELECTRICAL SHEET INDEX

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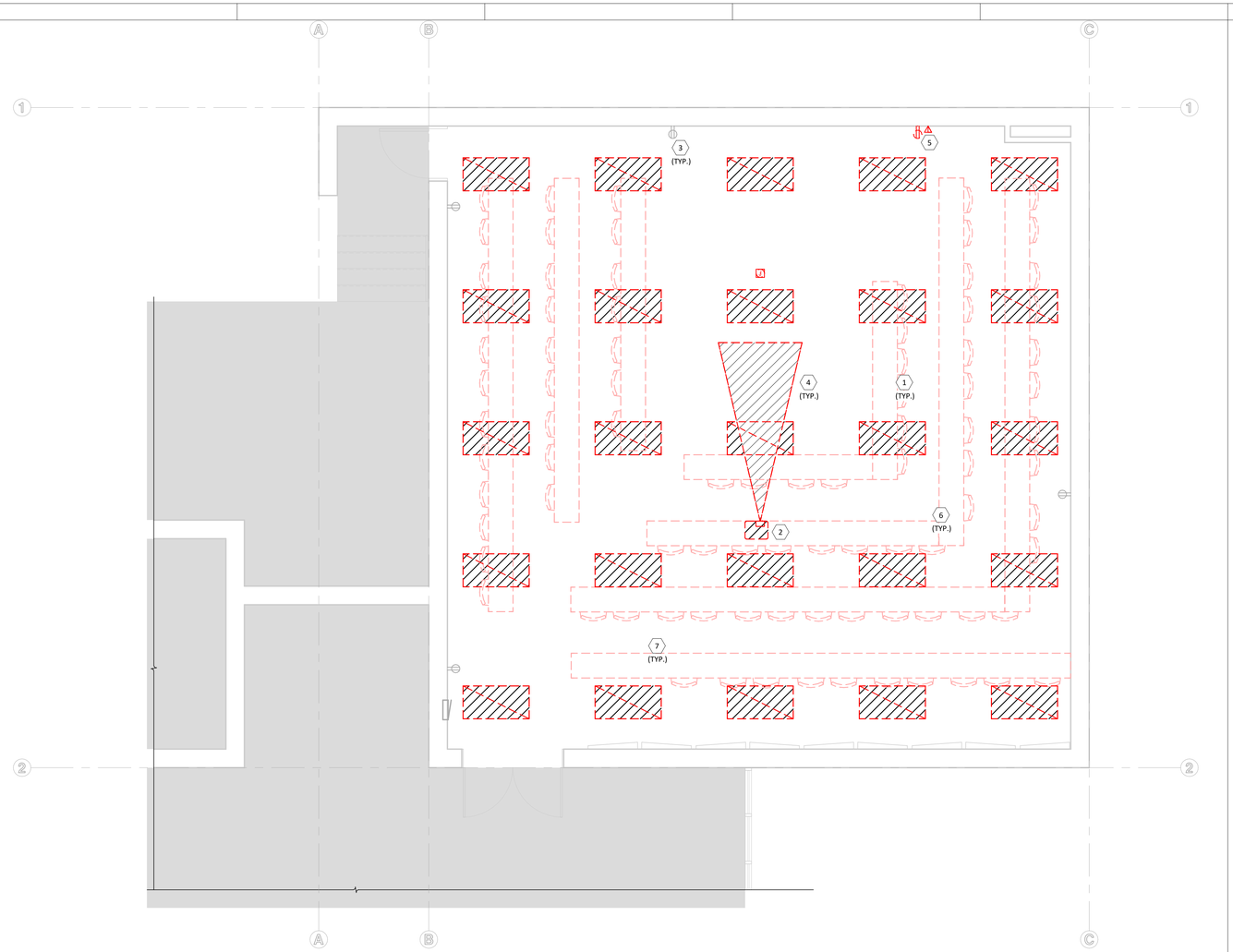
ROOM #346
PPA#: 23-0828

DRAWN: CDH CHECKED: JLR
DATE: 11/19/2024
REVISIONS:

ELECTRICAL TITLE SHEET

E-001

PROJECT #:240602



1 ELECTRICAL DEMOLITION PLAN

1/4" = 1'-0"

0 2' 4' 8'

DEMOLITION GENERAL NOTES

* SAVE CIRCUITS FOR DEMOLISHED ELECTRICAL COMPONENTS FOR REUSE. COORDINATE ELECTRICAL DEMOLITION WORK WITH GENERAL CONTRACTOR.
* FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.
* NOT ALL EXISTING DEVICES/EQUIP ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DEMOLITION WORK WITH EXISTING CONDITIONS.
* REROUTE/REINSTALL DEMOLISHED ELECTRICAL AS NOTED. DISPOSE OF ALL OTHER DEMOLISHED ELECTRICAL MATERIALS IN A SAFE AND LEGAL MANNER.

KEYNOTES

1 DEMOLISH ALL TROFFER LIGHT FIXTURES IN ROOM. SAFE OFF EXISTING CIRCUITING FOR RECONNECTION OF NEW FIXTURES, SEE KEYNOTE 1/E-111.
2 DEMOLISH EXISTING PROJECTOR. REMOVE WIRING BACK TO NEAREST JUNCTION BOX.
3 UNLESS NOTED OTHERWISE, REPLACE HALFTONED EXISTING RECEPTACLE AND PHONE DATA DEVICES AND COVERS. REUSE EXISTING BOXES, CONDUIT, AND WIRING. SEE KEYNOTE 4/E-121.
4 DEMOLISH DEVICE, WIRING, AND RACEWAY WHERE SHOWN IN DASHED BOLD.
5 DEMOLISH EXISTING SURFACE RACEWAY, POWER, AND DATA WIRING BACK TO NEAREST ACCESSABLE JUNCTION BOX. REROUTE DATA TO NEW LECTURN, SEE KEYNOTE 2/E-121.
6 REINSTALL ALL DEVICES AFTER NEW CEILING IS REPLACED, SEE DIVISION OF RESPONSIBITY.
7 FLOOR HEIGHT INCREASED, SEE A-301. COORDINATE ALL DEVICES AND CONDUIT WITH INCREASE IN FLOOR HEIGHT. EXTEND/RELOCATE DEVICES AS REQUIRED.

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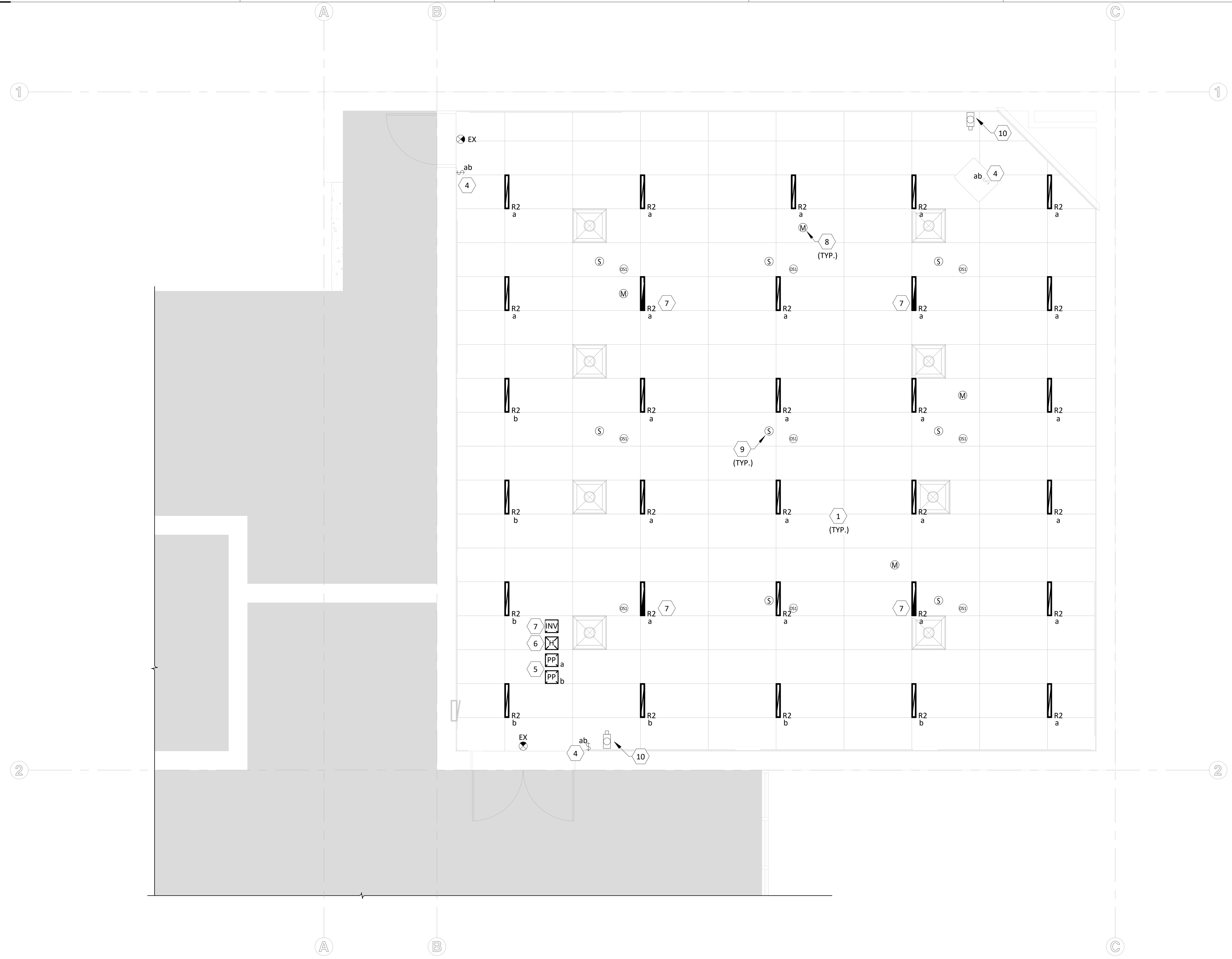
ELECTRICAL DEMOLITION PLAN

ED111

PROJECT #:240602



1 LIGHTING PLAN
1/4" = 1'-0"
0 2' 4' 8'

LIGHTING GENERAL NOTES

* LIGHTING LAYOUT AND PLACEMENT IS SCHEMATIC ONLY. COORDINATE EXACT LOCATION OF LIGHT FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLAN TO AVOID INTERFERENCE WITH MECHANICAL, PLUMBING, AND STRUCTURAL SYSTEMS.
* EXIT AND EMERGENCY EGRESS LIGHTING SHALL BE NON-SWITCHED AND CIRCUITED TO THE NEAREST INTERIOR LIGHTING CIRCUIT. EMERGENCY FIXTURES SHALL HAVE A 90 MINUTE MINIMUM BATTERY BACKUP. WHERE EMERGENCY FIXTURES HAVE AN ADJUSTABLE HEAD, DIRECT LIGHT TOWARDS PATH OF EGRESS.
* CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
* SEE ELECTRICAL SYMBOL NOTES ON TITLE SHEET E-001 FOR SWITCHING NOMENCLATURE. SWITCHES DESIGNATED WITH LOWER CASE LETTERS TO CONTROL FIXTURES WITH MATCHING DESIGNATIONS.
* * LAY-IN LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENT OF GRID CEILINGS FROM THE STRUCTURE ABOVE FROM AT LEAST TWO CORNERS. ATTACH WITH GRID CLIPS OR TABS RATED FOR LAY-IN CEILINGS.

KEYNOTES

1 RECONNECT/REUSE EXISTING CIRCUITING FOR NEW FIXTURES AS POSSIBLE, SEE KEYNOTE 1/ED111. REWIRE AS NECESSARY, CONFORM TO NEC ARTICLE 300 FOR WIRING METHODS.
2 NOT USED.
3 NOT USED.
4 LUTRON VIVE SWITCHING WITH DIMMING, PROVIDED BY OWNER'S AV DEPARTMENT.
5 LUTRON VIVE POWERPACK, PROVIDED BY OWNER'S AV DEPARTMENT. MOUNT POWER PACK WITHIN 30' OF ALL CONTROLS, SENSORS, AND DEVICES. ROUTE FIXTURE AND FAN POWER AND CONTROLS BACK TO APPROPRIATE POWERPACK
6 LUTRON VIVE HUB, PROVIDED BY OWNER'S AV DEPARTMENT. ROUTE 1-1/2" DATA CABLE PATHWAY FROM HUB TO 521A TELECOMM ROOM.
7 PROVIDE AND INSTALL 100VA BATTERY BACKUP INVERTER, BASIS OF DESIGN: BODINE ELI-S-100 OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATION. FEED CONTROL SWITCH LEG a OF EMERGENCY FIXTURE FROM INVERTER.
8 CEILING MICROPHONE PROVIDED AND INSTALLED BY MSU. MSU AV DEPARTMENT TO RUN CABLE TO PODIUM LOCATION.
9 CEILING SPEAKER PROVIDED AND INSTALLED BY MSU. MSU AV DEPARTMENT TO RUN CABLE TO PODIUM LOCATION.
10 CAMERA PROVIDED AND INSTALLED BY MSU. MSU AV DEPARTMENT TO RUN CABLE TO 521 TELECOMM ROOM.

LIGHTING FIXTURE SCHEDULE

		BASIS OF DESIGN					LED LAMP			
TAG	DESCRIPTION	MFR	CATALOG SERIES	MOUNTING	VOLT	WATTS	COLOR TEMP	LUMENS	CRI	NOTE
EX	EXIT - WALL MOUNT	LITHONIA	EDG 1 R EL SD	WALL/SURFACE	120 V	5 W	NA	0 lm	NA	MOUNT BOTTOM OF SIGN 12" ABOVE DOOR.
R2	RECESSED LINEAR - 2'	LUMENWERX	SQUR-D-MR035-BK-SW-90CRI-1000LMF-35K-2FT0IN-UNF-D1-1C-NA-W-FWC	RECESSED	120 V	20 W	3500K	2000 lm	90	

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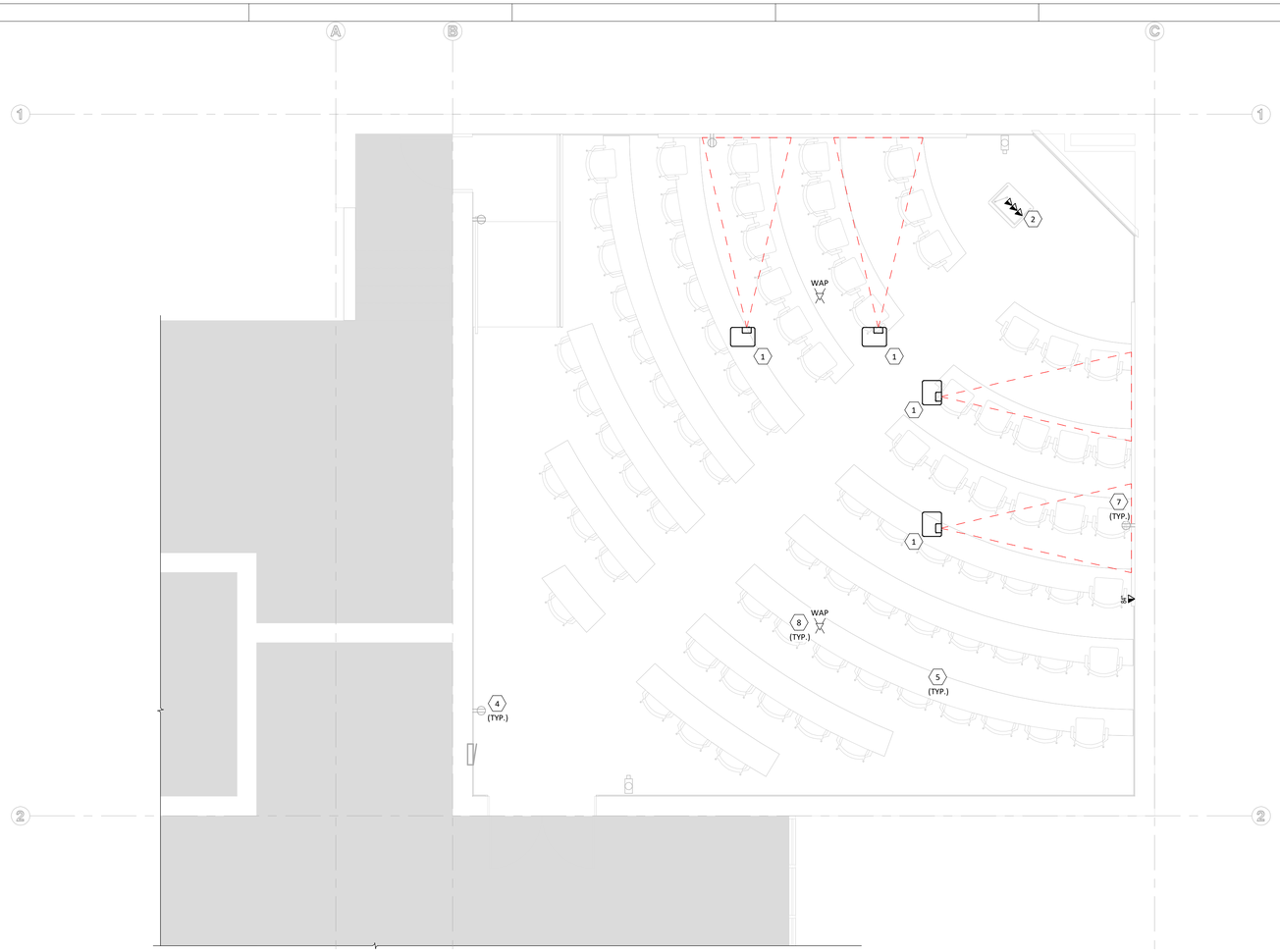
DRAWN: CDH CHECKED: JLR
DATE: 11/19/2024
REVISIONS:

LIGHTING PLAN

E-111

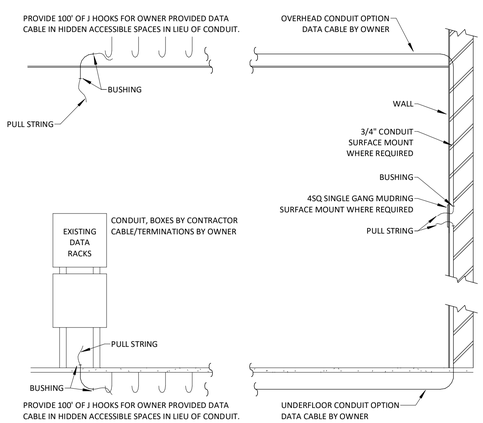
PROJECT #:240602



1 POWER PLAN

1/4" = 1'-0"

0 2' 4' 8'



2 DATA DETAIL

N.T.S.

POWER GENERAL NOTES

- PRIOR TO ROUGH-IN AND INSTALLATION, ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND REQUIREMENTS OF ALL ELECTRICAL ITEMS. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS OF HVAC EQUIPMENT.
- CONDUIT IS REQUIRED, PROVIDE 3/4" EMT (MINIMUM) HOMERUNS FOR ALL BRANCH CIRCUITS.
- WHERE POSSIBLE, CONCEAL ALL CONDUITS AND RACEWAYS EXCEPT ABOVE ACT CEILINGS.
- FIRE SEAL ALL PENETRATIONS IN FIRE RATED ASSEMBLIES, SEE FIRE PROTECTION NOTES ON E-001.
- CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- ROUTE ALL DATA CABLE PATHWAYS TO 236 TELECOMM ROOM, SEE DETAIL 2/E-121.
- LIMIT LENGTHS OF EXPOSED RACEWAYS WHERE POSSIBLE, MATCH EXISTING INSTALLATION/ROUTING METHODS.
- ROUTE NEW CIRCUITS TO ELECTRICAL PANEL IN ROOM 346, SEE G-001 FOR LOCATION.

KEYNOTES

1 PROJECTOR OFCI, PROJECTOR OFOI. COORDINATE DATA AND POWER REQUIREMENTS WITH OWNER'S IT DEPARTMENT. VERIFY INSTALL LOCATION ONSITE. REROUTE EXISTING WIRING TO NEW LOCATION AND EXTEND AS NECESSARY, SEE KEYNOTE 2/ED111.

2 REROUTE EXISTING POWER UNDER FLOOR TO NEW LECTURN AND PROVIDE (2) 1-1/2" C SLEEVES FOR DATA, SEE KEYNOTE 5/ED111. COORDINATE EXACT LOCATIONS ONSITE WITH GC. COORDINATE ALL CONTROLS REQUIREMENTS WITH OWNER'S IT DEPARTMENT PRIOR TO INSTALL.

3 NOT USED.

4 REPLACE 1/2 TONE EXISTING RECEPTACLE AND PHONE DATA DEVICES AND COVERS. REUSE EXISTING BOXES, CONDUIT AND WIRING. SEE KEYNOTE 3/ED111.

5 ADD ALTERNATE #5: PROVIDE AND INSTALL (1) DUPLEX OUTLET FOR EVERY (4) CHAIRS OR FRACTION THEREOF. OUTLETS SHOULD BE 12" HIGH WALL MOUNTED AT DESK ROWS. WHERE THE DESKS DO NOT ABUT THE WALLS THEN FLUSH FLOOR OUTLETS WITH POWER FROM BELOW ARE ACCEPTABLE.

7 FLOOR HEIGHT INCREASED, SEE A-301. COORDINATE ALL DEVICES AND CONDUIT WITH INCREASE IN FLOOR HEIGHT. EXTEND/RELOCATE DEVICES AS REQUIRED.

8 REINSTALL ALL DEVICES AFTER NEW CEILING IS REPLACED, SEE DIVISION OF RESPONSIBITY.

DIVISION OF RESPONSIBILITY:

CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI) :
JUNCTION BOXES, CONDUIT, & HOOKS
SHADES
BACKING FOR ALL MOUNTS

OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI) :
CENTER PEDESTAL FOR THE WIRED DESKS (ADD ALTERNATE #4)
MOUNTS FOR TVS, PROJECTORS, & CAMERAS
PROJECTOR SCREENS
SPEAKERS
FANS

OWNER FURNISHED, OWNER INSTALLED (OFOI) :
LECTURNS
AV CONTROLS, INCLUDING LIGHTING CONTROLS
AV EQUIPMENT, INCLUDING TVS, PROJECTORS, WAP, SWITCHES, & COVER PLATES
AV EQUIPMENT CABINETS
ALL AV CABLES & WIRING
WALL CLOCKS

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1 REVISIONS:

POWER PLAN

E-121

PROJECT # 240602