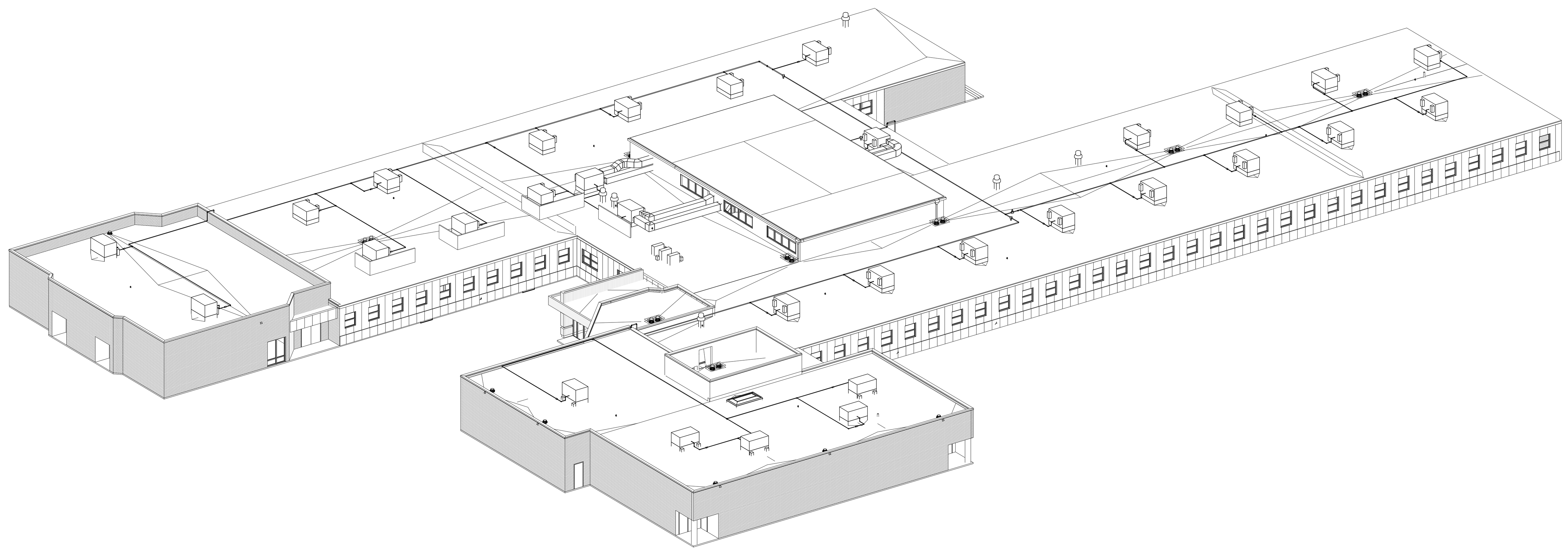

PROJECT:

HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

CLIENT:

TWIN FALLS SCHOOL DISTRICT #411

201 MAIN AVE.
TWIN FALLS, IDAHO 83301

HUMMEL
ARCHITECTS

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VICINITY MAP :

H.A.-JOB # 24075

NOT TO SCALE

CONSULTANTS:

STRUCTRUAL ENGINEER
KPFF

MECHANICAL AND ELECTRICAL ENGINEER
CATOR RUMA & ASSOCIATES CO

DRAWING SET:

ARCHITECTURAL
STRUCTURAL
MECHANICAL
ELECTRICAL

100% CD

100% CD - 01/15/2025

Autodesk Docs://24075 - TFSD Harrison HVAC Replacement/24075-00 TFSD Harrison HVAC Replacement_V24.rvt
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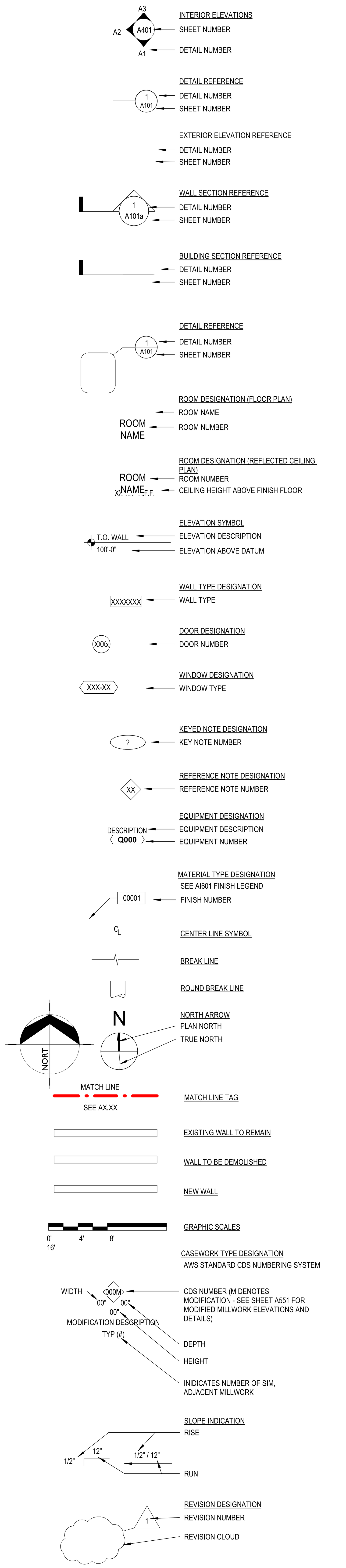

ABBREVIATIONS:

#	NUMBER OR POUND
ø	DIAMETER
	ANGLE
@	AT
&	AND
CL	CENTERLINE
AB	ANCHOR BOLT
ACP	ACOUSTICAL CEILING PANEL
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ASFP	ABRASIVE SURFACE FLOOR PLATE
ASSOC	ASSOCIATED
AWP	ACOUSTICAL WALL PANEL
AWS	ACOUSTICAL WALL SYSTEM
BD	BOARD
BFC	BROOM FINISH CONCRETE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
CAB	CABINET
C.I.P.	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNITS
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCT
CONT	CONTINUOUS
CPT	CARPET
CSK	COUNTERSINK
CMT	CERAMIC MOSAIC TILE
CQT	CERAMIC QUARRY TILE
CWB	CERAMIC WALL BASE
DBL	DOUBLE
DEPT	DEPARTMENT
DT	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
EA	EACH
EBT	EXPANSION BASE TRIM
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EP	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
ESTR	EXPOSED STRUCTURE (NEW OR EXISTING)
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EPOXY	EPOXY FLOOR SYSTEM
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
F.D.C.	FIRE DEPARTMENT CONNECTION
FB	FIRE BLANKET
FE	FIRE EXTINGUISHER
FF	FACTORY FINISH
F.H.	FIRE HYDRANT
FIN	FINISH
FL	FLOOR LINE
FLR	FLOOR
FND	FOUNDATION
FOC	FACE OF CHANNEL
FOF	FACE OF FINISH
FOS	FACE OF STUDS
FRP	FIBER REINF. PANEL
FT	FEET
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE
GALV	GALVANIZED
GB	GYPSUM BOARD
GYP.BD.	GYPSUM BOARD
HAS	HEAD ANCHOR STUD
HCW	HOLLOW CORE WOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HW	HARDWOOD
ICB	INTEGRAL COVE BASE
ICMU	INTEGRAL COLORED CONCRETE MASONRY UNITS
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
INV	INVERT

JAN	JANITOR
JST	JOIST
JT	JOINT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LVT	LUXURY VINYL TILE
LWT	LOWER WALL GUARD
MAT	MATERIAL
MAX	MAXIMUM
MCB	METAL COVE BASE
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MEASURING LINE
MO	MASONRY OPENING
MTD	MOUNTED
MTG	MOUNTING
NA	NOT APPLICABLE
NB	NO BASE (EXPOSED WALL OR FOUNDATION)
NC	NEW CONCRETE
NIC	NOT IN CONTRACT
NM	NEW MASONRY
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OFCI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED/ OWNER INSTALLED
OPNG	OPENING
OTA	OPEN TO ABOVE
OTS	OPEN TO STRUCTURE
OVF	OVERFLOW
P	PAINT
PC	PAINT COLOR
PFT	PORCELAIN FLOOR TILE
P.I.V.	POST INDICATOR VALVE
PL	PLASTIC LAMINATE
PLAST	PLASTIC
PLYWD	PLYWOOD
POLY	POLY-RESINOUS FLOORING
PR	PAIR
PWT	PORCELAIN WALL TILE
R	THERMAL RESISTANCE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDL	RAIN DRAIN LEADER
RE:	REFERENCE
REFRIG	REFRIGERATOR
REINF	REINFORCING
REQ	REQUIRED
RFT	RUBBER FLOOR TILE
RM	ROOM
RMA	RESILIENT MOLDING ACC
RO	ROUGH OPENING
RST	RUBBER STAIR TREADS
RSV	RIGID SHEET VINYL
RUB	RUBBER SHEET FLOORING
RW	REDWOOD
RWB	RUBBER WALL BASE
RWC	RAIN WATER CONDUCTOR
SC	SEALED CONCRETE
SCHED	SCHEDULE
SCW	SOLID CORE WOOD
SGWB	SUSPENDED GYPSUM WALL BOARD
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
SSC	STAINLESS STEEL COUNTERTOP
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
T&G	TONGUE AND GROOVE
TEMP	TEMPORARY
TO	TOP OF
TOM	TOP OF MASONRY
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UWG	UPPER WALL GUARD
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDP	WOOD PLANKS
WF	WALL FABRIC
WH	WATER HEATER
WM	WALK-OFF MAT
W/O	WITH OUT
WP	WATERPROOF
WRGB	WATER RESISTANT GYPSUM BOARD
WS	WINDOW SHADE
WT	WEIGHT
WWF	WELDED WIRE FABRIC

MASTER KEYNOTES:

Keynote #	Keynote Text
033000.A	CAST-IN-PLACE CONCRETE.
061000.A	DIMENSIONAL LUMBER
061000.C	SHEATHING
061000.D	SHIM AS REQUIRED.
062023.A	WOOD TRIM. PAINT TO MATCH EXISTING.
072500.A	WEATHER RESISTIVE BARRIER
072500.C	SELF ADHERED FLEXIBLE FLASHING
072500.E	LAP SELF ADHERED FLEXIBLE FLASHING OVER EXISTING AND NEW WEATHER BARRIER
074213.13.A	FORMED METAL WALL PANELS
074213.A	EXPOSED FASTENER LAP SEAM METAL WALL PANEL
075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
075423.B	TPO SHEET FLASHING
075423.E	ROOF INSULATION
075423.I	TERMINATION BAR
075423.J	FASTENER AND PLATE
075423.K	FLEXIBLE WALKWAY
075423.L	ROOFING MANUFACTURER'S RECOMMENDED SEALANT
075423.O	MANUFACTURED ROOF PAD
076200.A	PARAPET COPING
076200.E	FLASHING AND DRIP EDGE
076200.G	PROVIDE NEW COUNTERFLASHING IN EXISTING LOCATION.
076200.J	DOWNSPOUT
076200.K	OVERFLOW SCUPPER. SEE DETAIL C1/A2.92
076200.L	GUTTER STRAP
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
076200.P	DRIP EDGE
076200.Z	CLEAT
077200.B	ROOF HATCH
077200.H	FALL ARREST ANCHOR. FLASH SIMILAR TO DETAIL C1/A2.91.
079200.B	JOINT SEALANT
084113.B	ALUMINUM STOREFRONT FRAMING SYSTEM
086200.A	FIBERGLASS-SANDWICH-PANEL SKYLIGHT ASSEMBLY
092216.E	Hat-Shaped Rigid Furring Channel
092900.A	GYPSUM WALL BOARD
092900.F	METAL J BEAD
095113.C	APC-3
095113.D	2" CURBED TRIM, BASIS OF DESIGN: AXIOM VECTOR CURVED PERIMETER TRIM BY ARMSTRONG
095113.E	HANGER WIRE
095113.F	T-BAR GRID SYSTEM
095123.A	ACOUSTICAL PANEL TO BE APPLIED TO EXISTING STRUCTURE USING ADHESIVE.
096813.B	CARPET INFILL TO MATCH EXISTING

DRAWING INDEX:

CODE INFORMATION:

APPLICABLE CODES

2017 NATIONAL ELECTRICAL CODE
2017 IDAHO STATE PLUMBING CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2009 ICC A117.1-2009 ACCESSIBLE AND USABLE BUILDNGS AND FACILITIES
1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS

HARRISON ELEMENTARY SCHOOL

EXISTING SCHOOL

OCCUPANY TYPE: **E** FULLY SPRINKLERED

PROJECT DESCRIPTION: REROOFING, HVAC & ELEC UPGRADES AND A TENANT IMPROVEMENT TO THE EXISTING CLASSROOMS AND HALLWAY CEILINGS.

OCCUPANT LOAD: **UNCHANGED**

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

Sheet:
DRAWING INFORMATION

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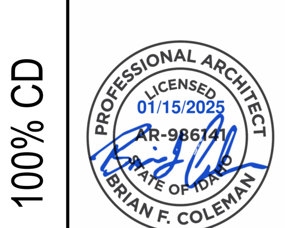

Revisions:

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Sheet No:
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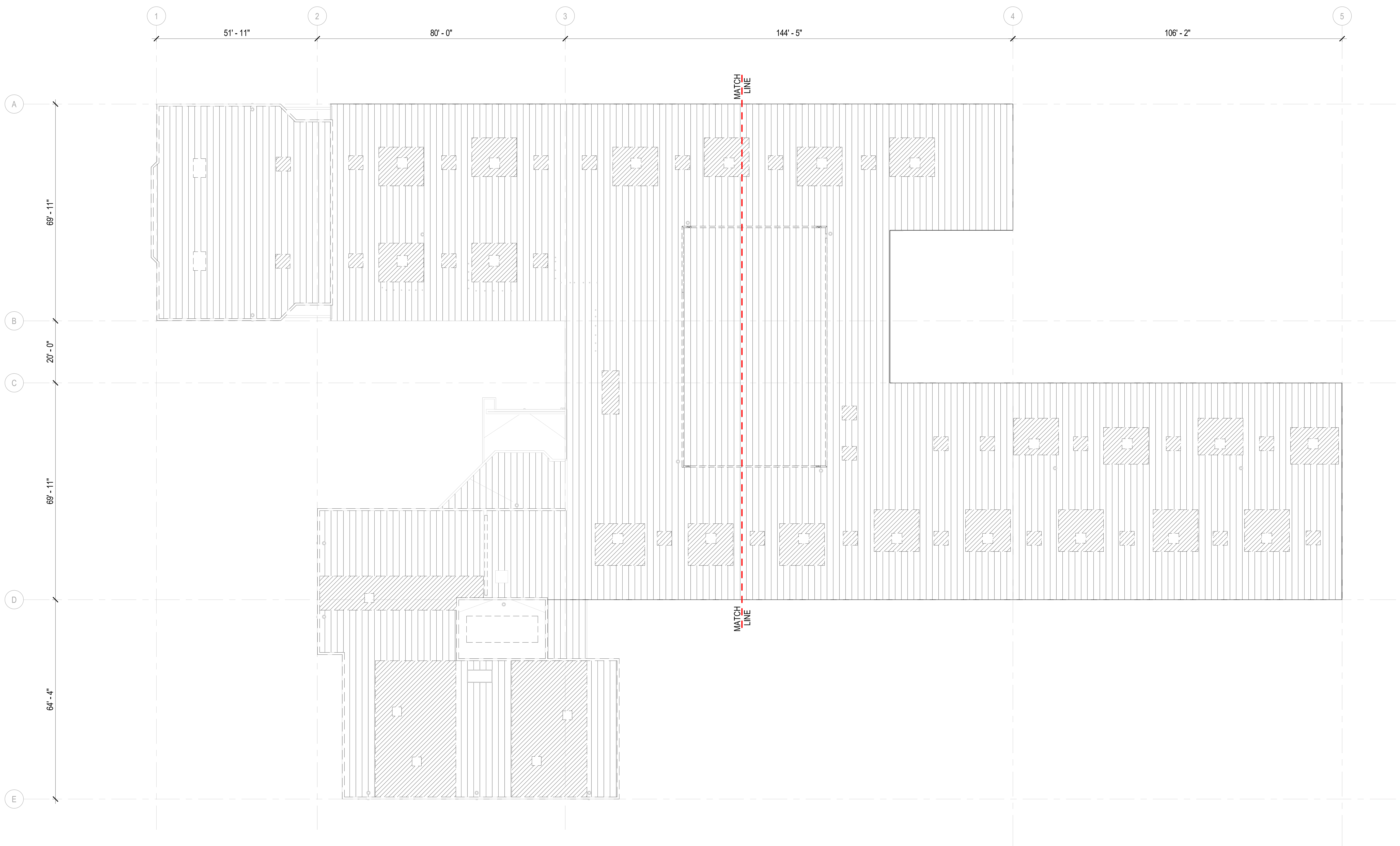
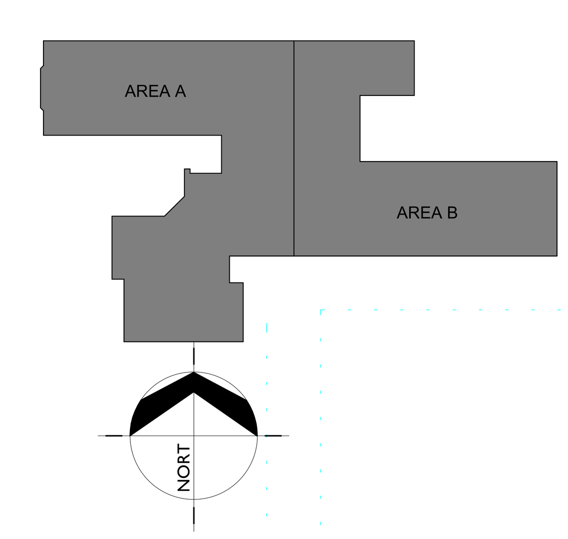


E1 D2.04 **COMPOSITE DEMO ROOF PLAN**
1/16" = 1'-0"



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GENERAL DEMO ROOF PLAN NOTES

A. CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING CONDITIONS PRIOR TO BID. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS.
B. DIMENSIONS ARE FOR REFERENCE. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS.
C. PROVIDE COMPLETE TEAR-OFF OF EXISTING ROOFING SYSTEMS DOWN TO INSULATION.
D. DISCONNECT AND RE-ATTACH EXISTING GAS PIPING, ELECTRICAL CONDUITS AND ALL ASSOCIATE ITEM TO ACCOMPLISH RE-ROOF WORK. COORDINATE WITH ELECTRICAL AND MECHANICAL DRAWINGS.

LEGEND

- IN AREAS INDICATED EXISTING METAL ROOFING SHALL BE REMOVED, EXISTING RIGID INSULATION TO REMAIN.
- IN AREAS INDICATED EXISTING RIGID INSULATION SHALL BE REMOVED AS REQUIRED TO ACCOMMODATE STRUCTURAL MODIFICATIONS - SEE STRUCTURAL DRAWINGS.
- EXISTING MECHANICAL UNITS, METAL PARAPET CAP, GUTTERS, FLASHINGS, AND TRIM PIECES SHALL BE REMOVED.

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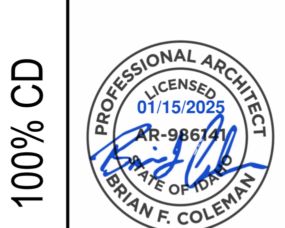
COMPOSITE DEMO ROOF PLAN



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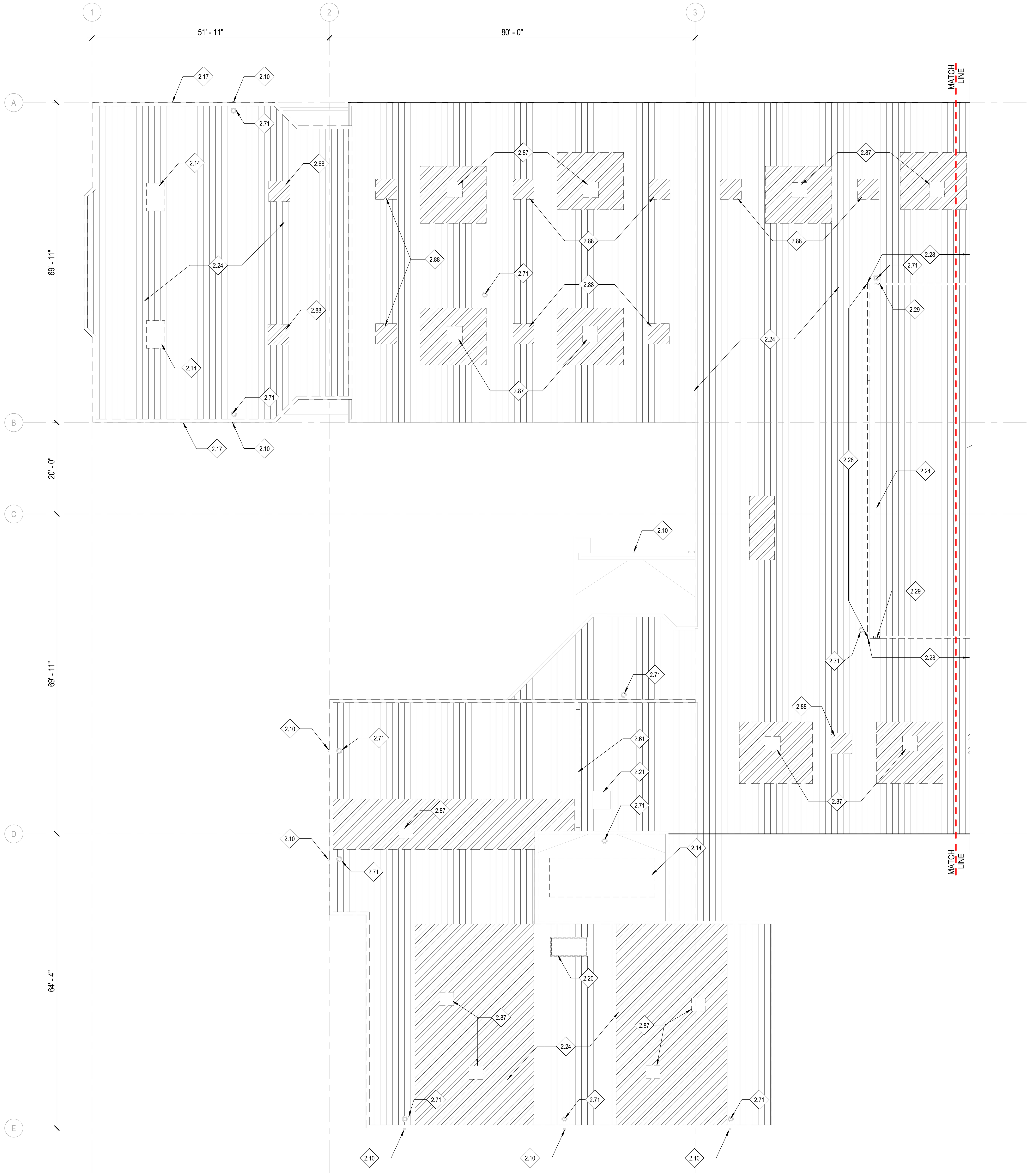
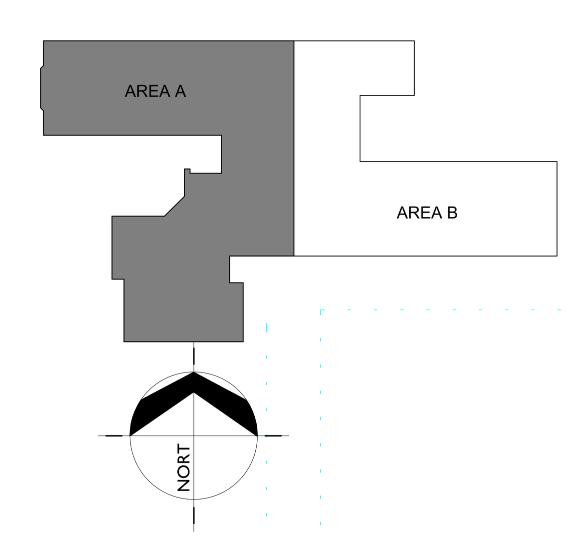


E1 D2.05 **AREA 'A' DEMO ROOF PLAN**

3/32" = 1'-0"



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GENERAL DEMO ROOF PLAN NOTES

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B. DIMENSIONS ARE FOR REFERENCE. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS.
C. PROVIDE COMPLETE TEAR-OFF OF EXISTING ROOFING SYSTEMS DOWN TO INSULATION.
D. DISCONNECT AND RE-ATTACH EXISTING GAS PIPING, ELECTRICAL CONDUITS AND ALL ASSOCIATE ITEM TO ACCOMPLISH RE-ROOF WORK. COORDINATE WITH ELECTRICAL AND MECHANICAL DRAWINGS.

KEYNOTES

REFERENCE NOTES

2.10 EXISTING OVERFLOW SCUPPER TO BE REMOVED AND REPLACED IN SAME LOCATION.
2.14 EXISTING MECHANICAL UNIT TO BE REMOVED. SEE MECHANICAL.
2.17 REMOVE EXISTING COPING, PREPARE FOR NEW COPING.
2.20 DEMO EXISTING SKYLIGHT, PREPARE FOR INFILL.
2.21 DEMO EXISTING ROOF HATCH, PREPARE FOR NEW HATCH.
2.24 EXISTING METAL ROOFING SYSTEM TO BE REMOVED COMPLETELY. DOWN TO RIGID INSULATION. INCLUDING ANY ASSOCIATED METAL TRIMS. PREPARE FOR NEW TPO ROOF MEMBRANE.
2.28 DEMO EXISTING GUTTER
2.29 DEMO EXISTING DOWNSPOUT
2.61 REMOVE EXISTING WINDOW SYSTEM. PROVIDE NEW CLEARSTORY WINDOW. RE SHEET A7.01.
2.71 EXISTING ROOF DRAIN TO BE REMOVED AND PREPARED FOR NEW ROOF DRAIN. SEE PLUMBING DRAWINGS.
2.87 TYP. EXISTING EVAPORATIVE COOLING UNIT TO BE REMOVED. REMOVE EXISTING RIGID INSULATION AS REQUIRED FOR STRUCTURAL MODIFICATIONS. SEE STRUCTURAL DRAWINGS.
2.88 TYP. EXISTING SKYLIGHT AND CURB TO BE REMOVED AND INFILLED AS REQUIRED. SEE STRUCTURAL DRAWINGS. PREP AREA FOR NEW RIGID INSULATION AND ROOFING SYSTEM.

LEGEND

- IN AREAS INDICATED EXISTING METAL ROOFING SHALL BE REMOVED, EXISTING RIGID INSULATION TO REMAIN.
- IN AREAS INDICATED EXISTING RIGID INSULATION SHALL BE REMOVED AS REQUIRED TO ACCOMMODATE STRUCTURAL MODIFICATIONS - SEE STRUCTURAL DRAWINGS.
- EXISTING MECHANICAL UNITS, METAL PARAPET CAP, GUTTERS, FLASHINGS, AND TRIM PIECES SHALL BE REMOVED.

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St.
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Sheet:
AREA 'A' DEMO ROOF PLAN

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

Project No:	24075
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Date:	01/15/2025

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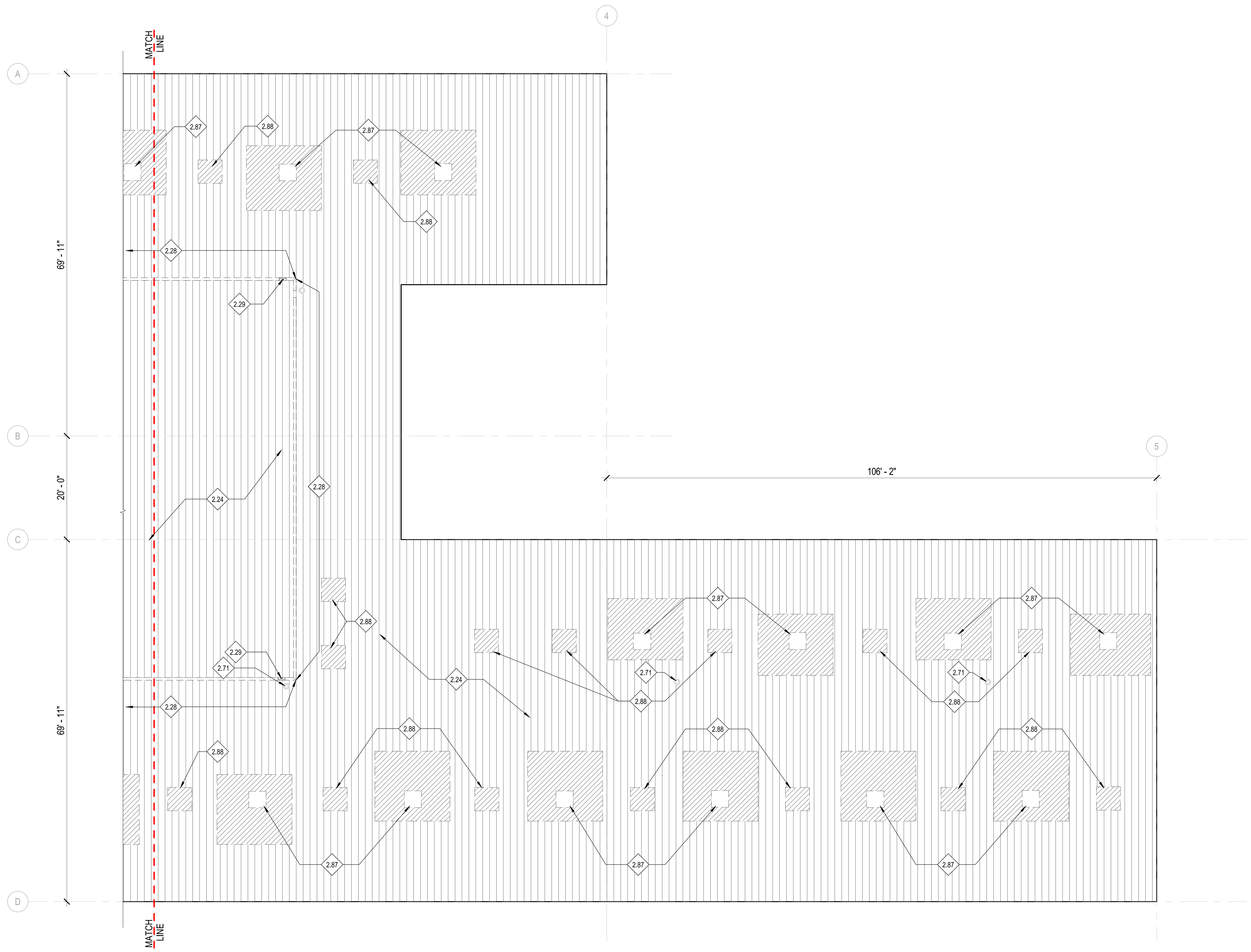
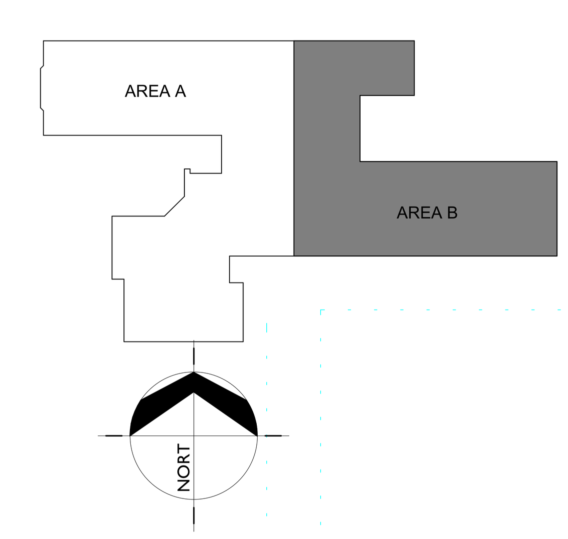


D1 / D2.06 AREA 'B' DEMO ROOF PLAN
3/32" = 1'-0"



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GENERAL DEMO ROOF PLAN NOTES

A. CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING CONDITIONS PRIOR TO BID. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS.
B. DIMENSIONS ARE FOR REFERENCE. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS.
C. PROVIDE COMPLETE TEAR-OFF OF EXISTING ROOFING SYSTEMS DOWN TO INSULATION.
D. DISCONNECT AND RE-ATTACH EXISTING GAS PIPING, ELECTRICAL CONDUITS AND ALL ASSOCIATE ITEM TO ACCOMPLISH RE-ROOF WORK. COORDINATE WITH ELECTRICAL AND MECHANICAL DRAWINGS.

KEYNOTES

REFERENCE NOTES

2.24	EXISTING METAL ROOFING SYSTEM TO BE REMOVED COMPLETELY. DOWN TO RIGID INSULATION. INCLUDING ANY ASSOCIATED METAL TRIMS. PREPARE FOR NEW TPO ROOF MEMBRANE.
2.28	DEMO EXISTING GUTTER
2.29	DEMO EXISTING DOWNSPOUT
2.71	EXISTING ROOF DRAIN TO BE REMOVED AND PREPARED FOR NEW ROOF DRAIN. SEE PLUMBING DRAWINGS.
2.87	TYP. EXISTING EVAPORATIVE COOLING UNIT TO BE REMOVED. REMOVE EXISTING RIGID INSULATION AS REQUIRED FOR STRUCTURAL MODIFICATIONS. SEE STRUCTURAL DRAWINGS.
2.88	TYP. EXISTING SKYLIGHT AND CURB TO BE REMOVED AND INFILLED AS REQUIRED. SEE STRUCTURAL DRAWINGS. PREP AREA FOR NEW RIGID INSULATION AND ROOFING SYSTEM.

LEGEND

- IN AREAS INDICATED EXISTING METAL ROOFING SHALL BE REMOVED, EXISTING RIGID INSULATION TO REMAIN.
- IN AREAS INDICATED EXISTING RIGID INSULATION SHALL BE REMOVED AS REQUIRED TO ACCOMMODATE STRUCTURAL MODIFICATIONS - SEE STRUCTURAL DRAWINGS.
- EXISTING MECHANICAL UNITS, METAL PARAPET CAP, GUTTERS, FLASHINGS, AND TRIM PIECES SHALL BE REMOVED.

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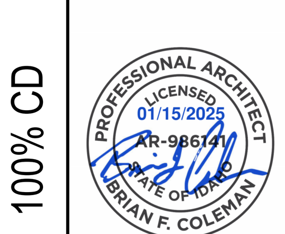
AREA 'B' DEMO ROOF PLAN



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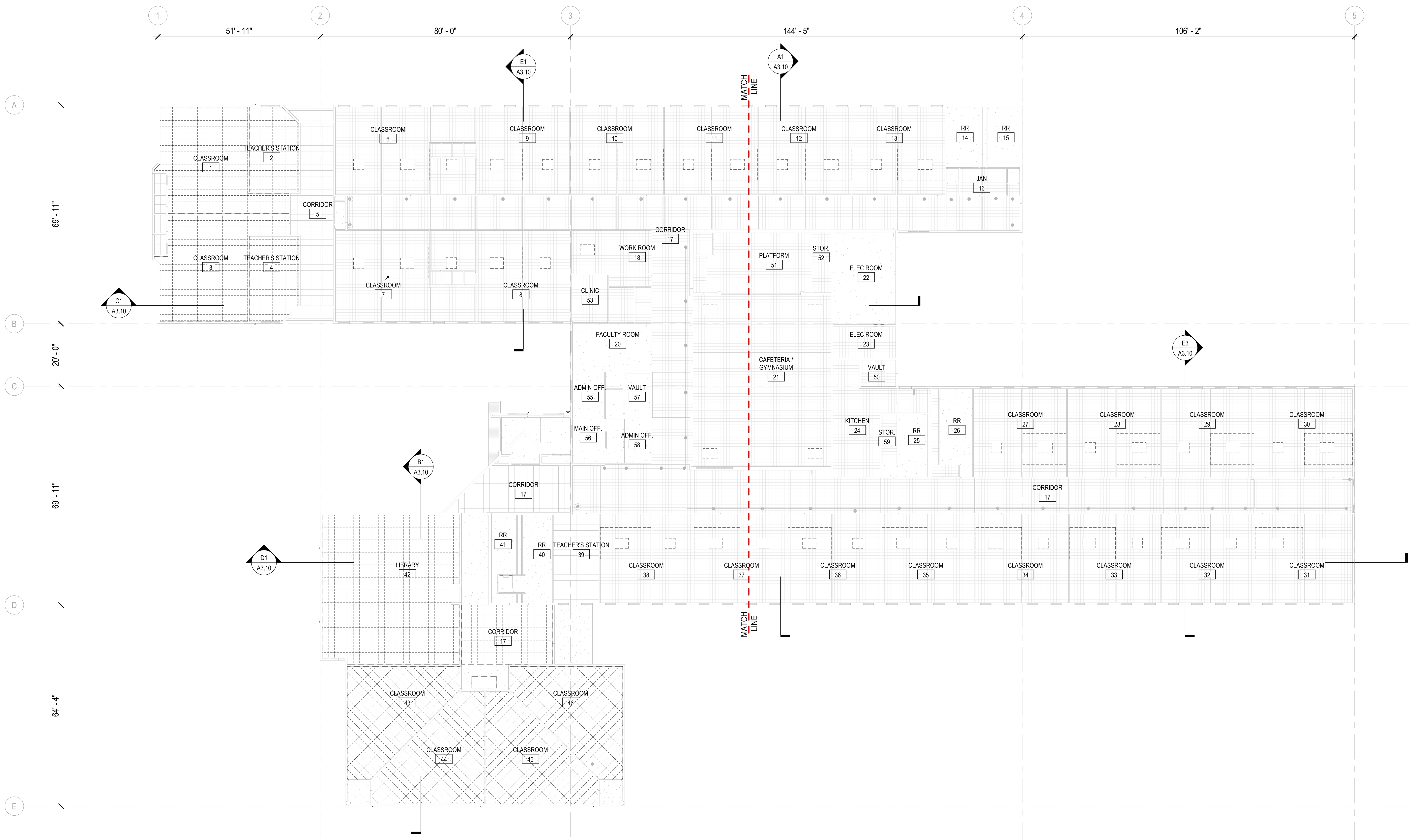
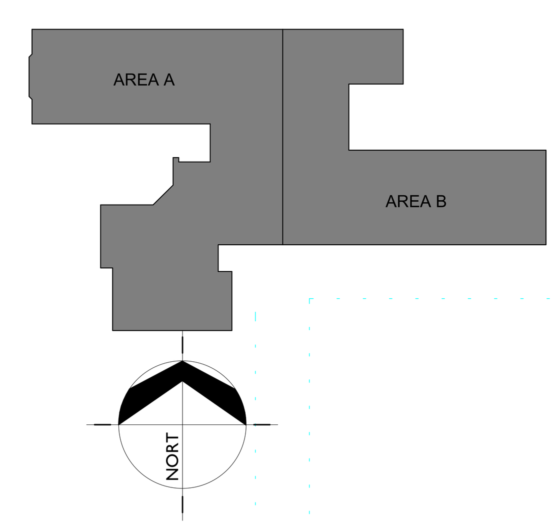


E1 D2.08 **COMPOSITE DEMO REFLECTED CEILING PLAN**
1/16" = 1'-0"



GENERAL NOTES

1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FACE OF STUDS FOR GWB WALLS/PARTITIONS.
2. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE OF FINISHED MASONRY FOR CMU.
3. SCREENED LINES REPRESENT EXISTING WALLS, DOORS, WINDOWS, CEILINGS, ETC TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
4. PROTECT FROM DAMAGE ALL EXISTING TO REMAIN CASEWORK, EQUIPMENT, FLOOR FINISHES AND CEILING FINISHES DURING CONSTRUCTION.
5. PROTECT FROM DAMAGE DURING DEMOLITION, MOVING AND CONSTRUCTION ALL EXISTING CASEWORK, EQUIPMENT, FURNITURE, PROJECTORS AND ARTWORK THAT IS TO BE RE-USED.
6. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
7. COORDINATE THE DEMOLITION OF EXISTING CEILING WITH NEW PLANS, REFLECTED CEILING PLANS AND ROOF FINISH SCHEDULE.
8. FIELD VERIFY ALL EXISTING STURCTURAL WALLS AND BEAMS.

LEGEND

EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.

EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.

EXISTING GYPSUM BOARD CEILING TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.

EXISTING CEILING SYSTEM TO BE REMOVED.

IN AREAS INDICATED STRUCTURAL MODIFICATIONS ARE OCCURING ABOVE THE CEILING - SEE STRUCTURAL DRAWINGS.

EXISTING PORTION OF CEILING TO BE REMOVED.

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
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Sheet:
COMPOSITE DEMO REFLECTED CEILING PLAN

100% CD

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-986141 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

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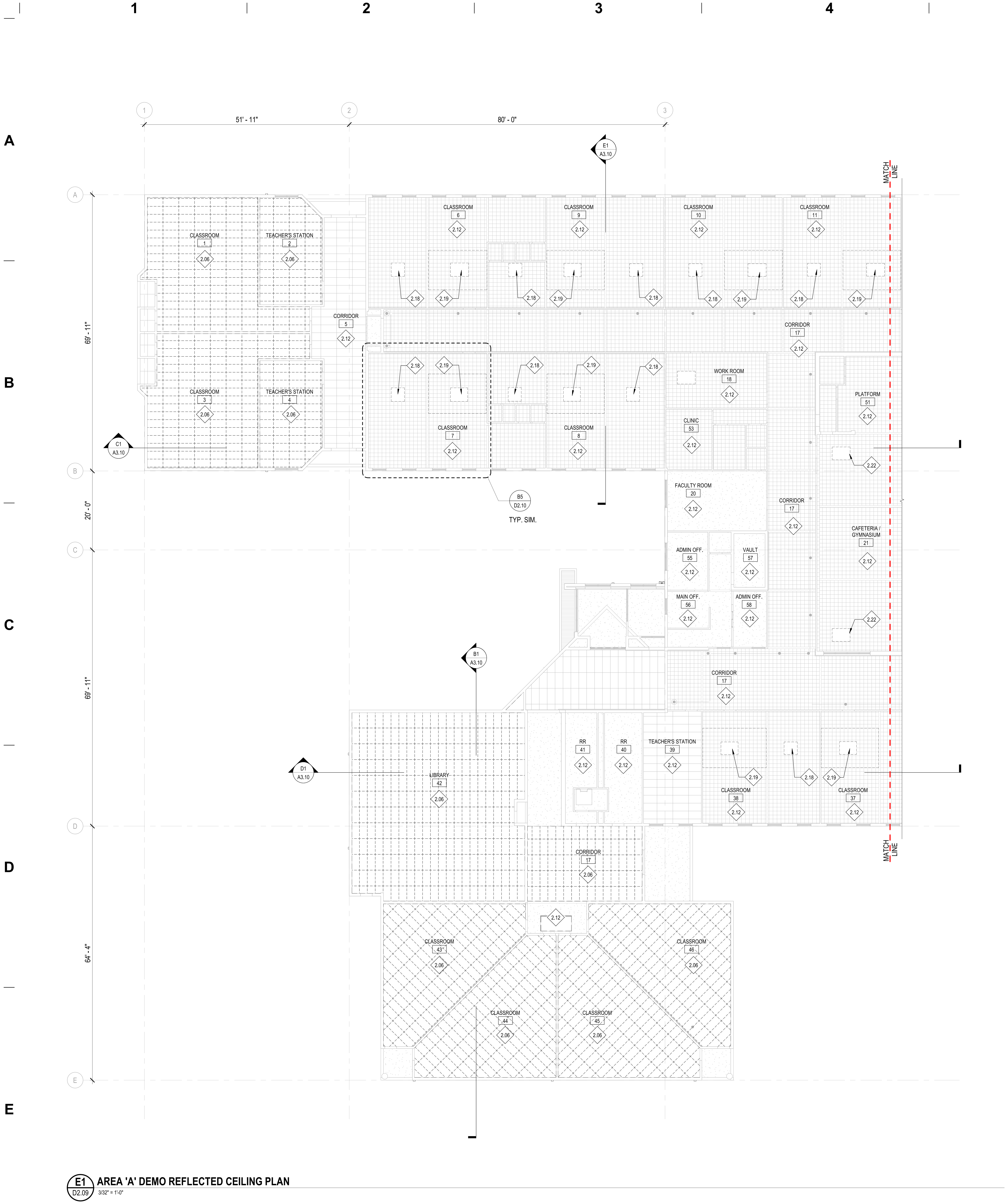
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

Sheet No: D2.08

A B C D E



E1 D2.09 AREA 'A' DEMO REFLECTED CEILING PLAN
3/32" = 1'-0"

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FACE OF STUDS FOR GWB WALLS/PARTITIONS.
2. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE OF FINISHED MASONRY FOR CMU.
3. SCREENED LINES REPRESENT EXISTING WALLS, DOORS, WINDOWS, CEILINGS, ETC TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
4. PROTECT FROM DAMAGE ALL EXISTING TO REMAIN CASEWORK, EQUIPMENT, FLOOR FINISHES AND CEILING FINISHES DURING CONSTRUCTION.
5. PROTECT FROM DAMAGE DURING DEMOLITION, MOVING AND CONSTRUCTION ALL EXISTING CASEWORK, EQUIPMENT, FURNITURE, PROJECTORS AND ARTWORK THAT IS TO BE RE-USED.
6. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
7. COORDINATE THE DEMOLITION OF EXISTING CEILING WITH NEW PLANS, REFLECTED CEILING PLANS AND ROOF FINISH SCHEDULE.
8. FIELD VERIFY ALL EXISTING STURCTURAL WALLS AND BEAMS.

KEYNOTES

REFERENCE NOTES

2.06 EXISTING CEILING TILES AND CHANNELS TO BE REMOVED, PREPARE FOR NEW CEILING. REMOVE EXISTING ELECTRICAL FIXTURES, SEE ELECTRICAL DRAWINGS FOR SCOPE OF WORK. EXISTING DUCTING AND DIFFUSERS TO BE REMOVED, SEE MECHANICAL DRAWINGS FOR SCOPE OF WORK.

2.12 CEILING AND LIGHTS EXISTING TO REMAIN

2.18 DEMO EXISTING SKYLIGHT AND INFILL. MATCH EXISTING FINISHES.

2.19 EXISTING EVAPORATIVE COOLING UNIT, CURB, DUCTING, DIFFUSER, ELECTRICAL CONNECTIONS AND WATER SUPPLY TO BE REMOVED. SEE MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. TYPICAL WHERE INDICATED. VERIFY EXACT LOCATION .

2.22 EXISTING CEILING MOUNTED UNIT VENTILATOR INCLUDING ASSOCIATED SUPORT SYSTEM, PIPING, DUCTING, AND ELECTRICAL TO BE REMOVED - SEE MECHANICAL AND ELECTRICAL PLANS FOR ADDITIONAL INFORMATION

LEGEND

- EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING GYPSUM BOARD CEILING TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING CEILING SYSTEM TO BE REMOVED.
- IN AREAS INDICATED STRUCTURAL MODIFICATIONS ARE OCCURING ABOVE THE CEILING - SEE STRUCTURAL DRAWINGS.
- EXISTING PORTION OF CEILING TO BE REMOVED.

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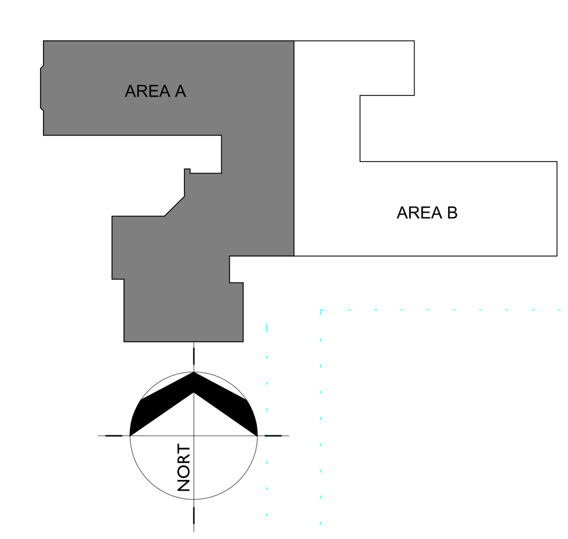
Sheet:
AREA 'A' DEMO REFLECTED CEILING PLAN



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LICENSED
01/15/2025
STATE OF IDAHO
BRIAN F. COLEMAN

Revisions:

Project No:	24075
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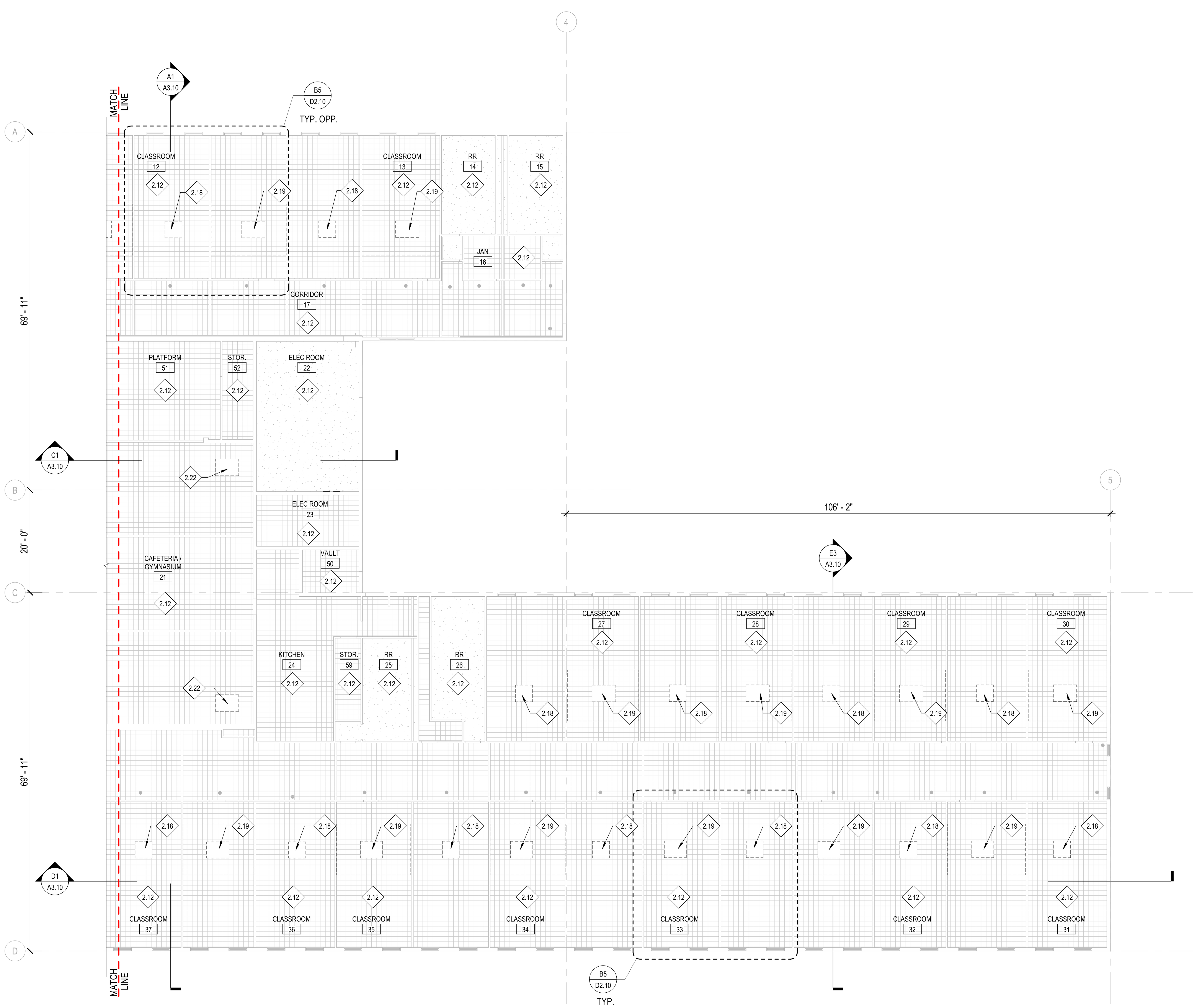
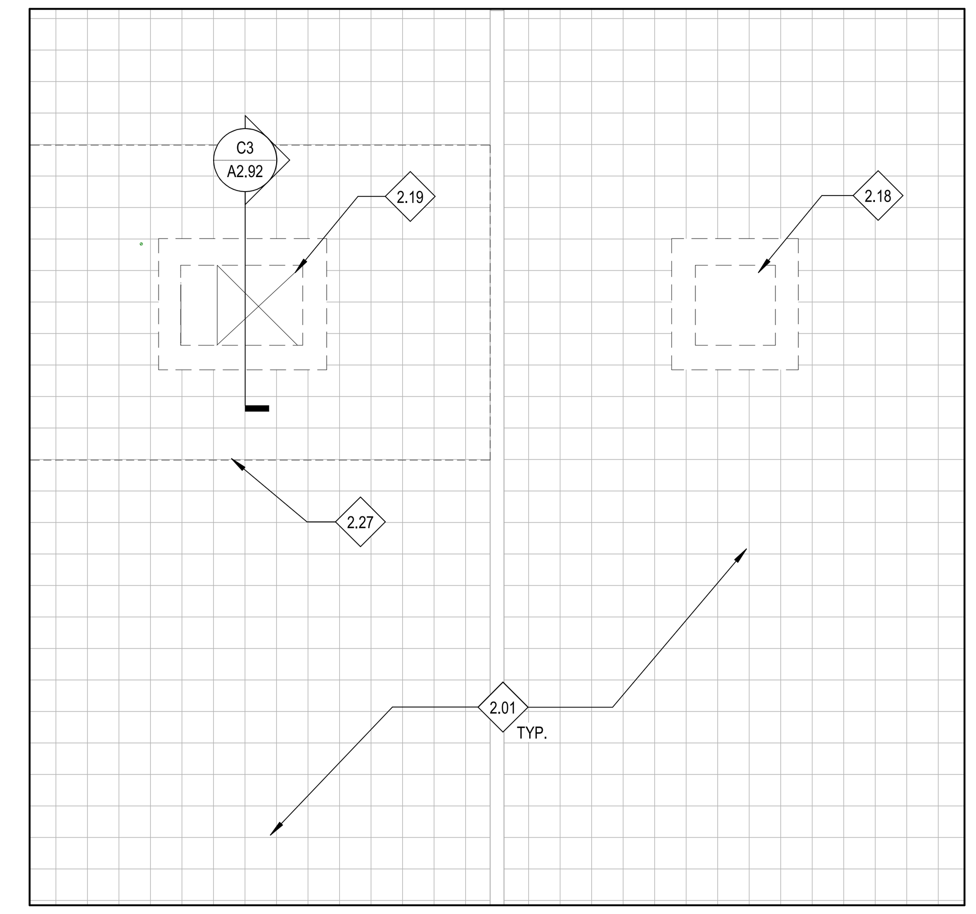


D1 D2.10 **AREA 'B' DEMO REFLECTED CEILING PLAN**
3/32" = 1'-0"



B5 D2.10 **TYPICAL CLASSROOM RCP - DEMO B**
1/4" = 1'-0"

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FACE OF STUDS FOR GWB WALLS/PARTITIONS.
2. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE OF FINISHED MASONRY FOR CMU.
3. SCREENED LINES REPRESENT EXISTING WALLS, DOORS, WINDOWS, CEILINGS, ETC TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
4. PROTECT FROM DAMAGE ALL EXISTING TO REMAIN CASEWORK, EQUIPMENT, FLOOR FINISHES AND CEILING FINISHES DURING CONSTRUCTION.
5. PROTECT FROM DAMAGE DURING DEMOLITION, MOVING AND CONSTRUCTION ALL EXISTING CASEWORK, EQUIPMENT, FURNITURE, PROJECTORS AND ARTWORK THAT IS TO BE RE-USED.
6. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.
7. COORDINATE THE DEMOLITION OF EXISTING CEILING WITH NEW PLANS, REFLECTED CEILING PLANS AND ROOF FINISH SCHEDULE.
8. FIELD VERIFY ALL EXISTING STURCTURAL WALLS AND BEAMS.

KEYNOTES

REFERENCE NOTES

2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
2.12	CEILING AND LIGHTS EXISTING TO REMAIN
2.18	DEMO EXISTING SKYLIGHT AND INFILL. MATCH EXISTING FINISHES.
2.19	EXISTING EVAPORATIVE COOLING UNIT, CURB, DUCTING, DIFFUSER, ELECTRICAL CONNECTIONS AND WATER SUPPLY TO BE REMOVED. SEE MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. TYPICAL WHERE INDICATED. VERIFY EXACT LOCATION .
2.22	EXISTING CEILING MOUNTED UNIT VENTILATOR INCLUDING ASSOCIATED SUPORT SYSTEM, PIPING, DUCTING, AND ELECTRICAL TO BE REMOVED - SEE MECHANICAL AND ELECTRICAL PLANS FOR ADDITIONAL INFORMATION
2.27	REMOVE EXISTING ROOFING, INSULATION, ROOF SHEATHING, FRAMING AND CEILING FINISHES AS REQUIRED FOR INSTALLATION OF NEWROOF TOP AIR CONDITIONING UNIT. SEE MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. TYPICAL WHERE INDICATED. VERIFY EXACT LOCATION.

LEGEND

- EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING CEILING SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING GYPSUM BOARD CEILING TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- EXISTING CEILING SYSTEM TO BE REMOVED.
- IN AREAS INDICATED STRUCTURAL MODIFICATIONS ARE OCCURING ABOVE THE CEILING - SEE STRUCTURAL DRAWINGS.
- EXISTING PORTION OF CEILING TO BE REMOVED.

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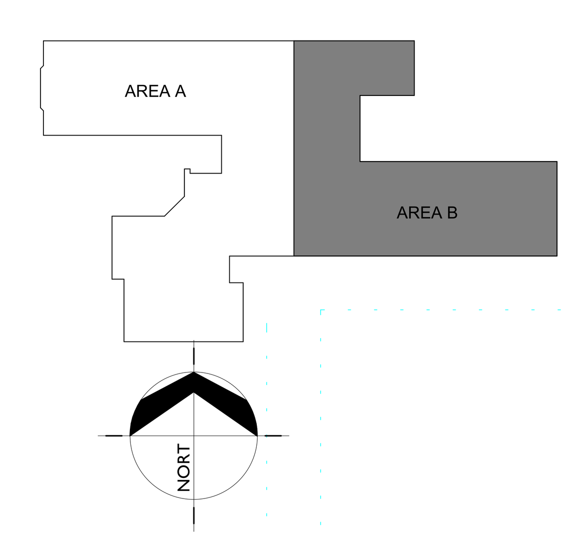
AREA 'B' DEMO REFLECTED CEILING PLAN



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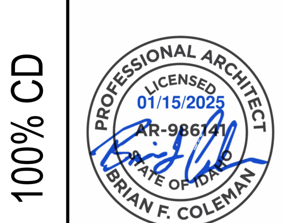

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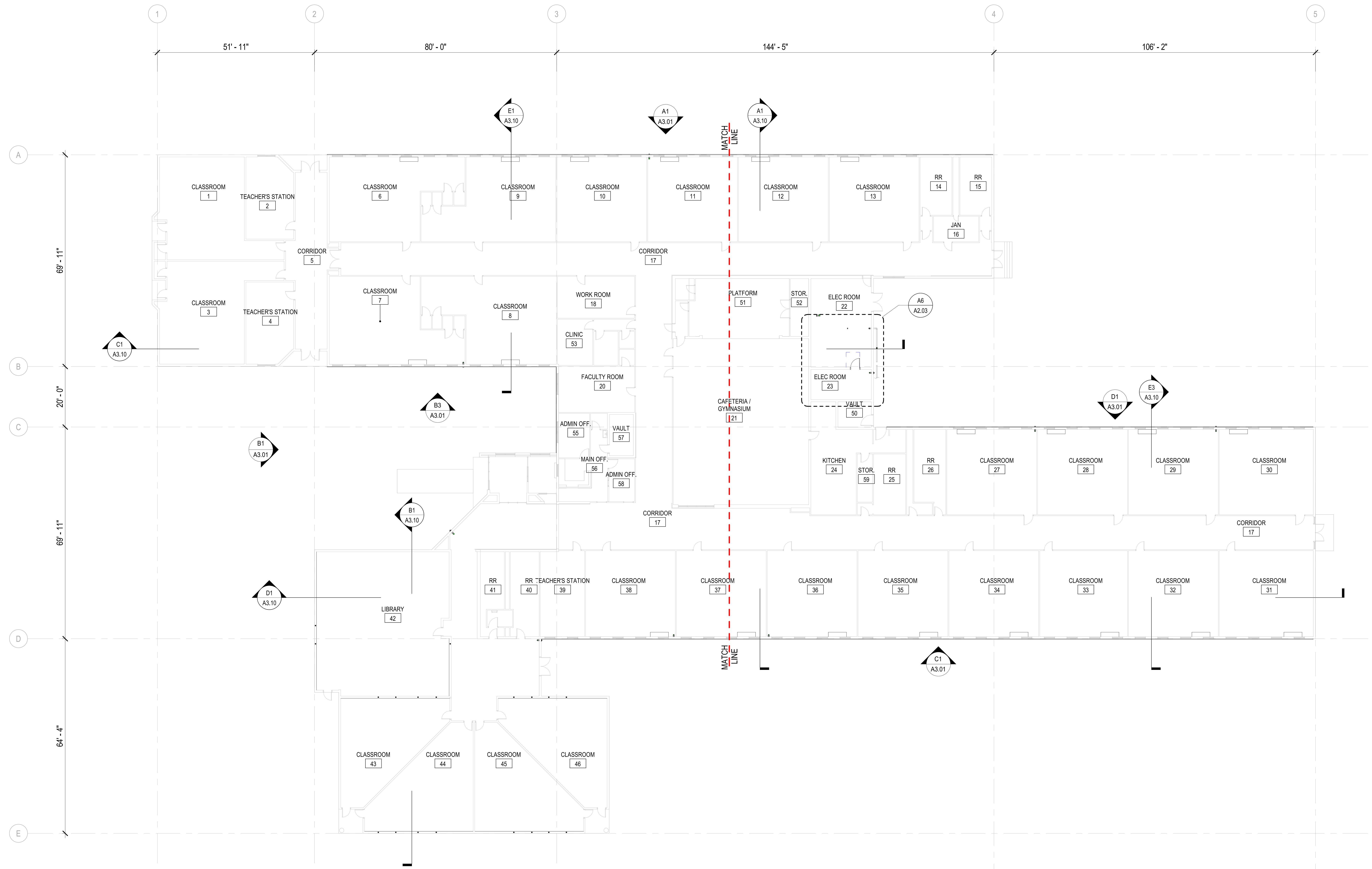
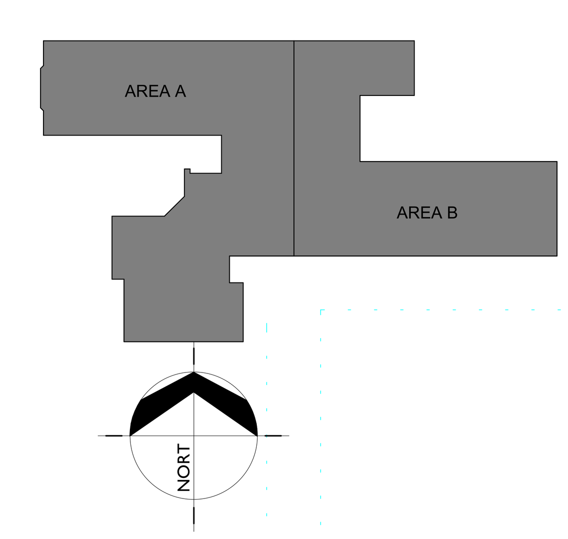


E1 A2.01 COMPOSITE FLOOR PLAN
1/16" = 1'-0"



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GENERAL NOTES

A. THE COMPOSITE PLANS ARE INTENDED TO SHOW OVERALL LAYOUT. RE: AREA PLANS FOR ADDITIONAL INFORMATION
B. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
C. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
D. DO NOT SCALE DRAWINGS.
E. STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.

LEGEND

NEW CONSTRUCTION
EXISTING WALL
EXISTING WINDOW
MATCH LINE
EXISTING DOOR

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COMPOSITE FLOOR PLAN

LICENSED ARCHITECT — BRIAN F. COLEMAN — STATE OF IDAHO — 01/15/2025

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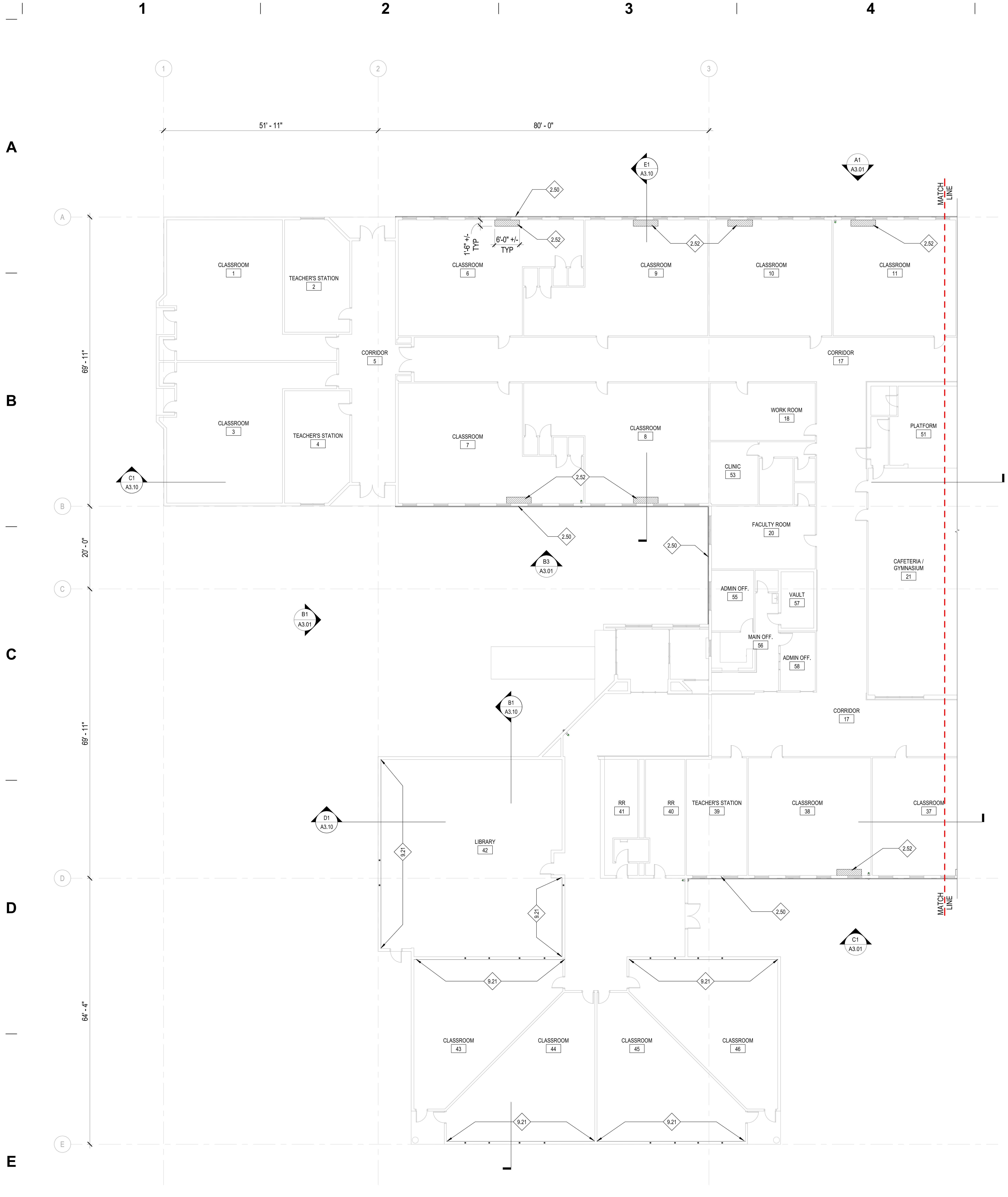

E1 A2.02 **AREA 'A' FLOOR PLAN**
3/32" = 1'-0"

GENERAL NOTES

A. THE COMPOSITE PLANS ARE INTENDED TO SHOW OVERALL LAYOUT. RE: AREA PLANS FOR ADDITIONAL INFORMATION
B. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
C. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
D. DO NOT SCALE DRAWINGS.
E. STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.

KEYNOTES

REFERENCE NOTES

2.50 NEW SHEATHING AND PRE-FINISHED METAL WALL PANEL PAINTED TO MATCH EXISTING
2.52 REPLACE EXTENTS OF DAMAGED CPT FROM EQUIPMENT REMOVAL, MATCH EXISTING MATERIALS. PROVIDE NEW RWB CORNER TO CORNER. REFERENCE DETAIL B1/A4.91
9.21 PATCH AND TEXTURE WALL OPENINGS FLUSH TO ADJACENT EXISTING GYP BOARD SURFACES. PAINT WALL CORNER TO CORNER TO MATCH EXISTING.

LEGEND

NEW CONSTRUCTION
EXISTING WALL
EXISTING WINDOW
EXISTING DOOR
FLOOR INFILL
MATCH LINE
XXXx DOOR SYMBOL. COORDINATE WITH DOOR SCHEDULE

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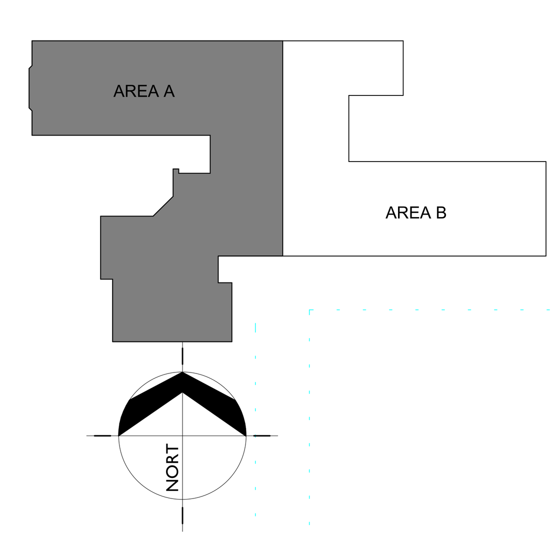
AREA 'A' FLOOR PLAN



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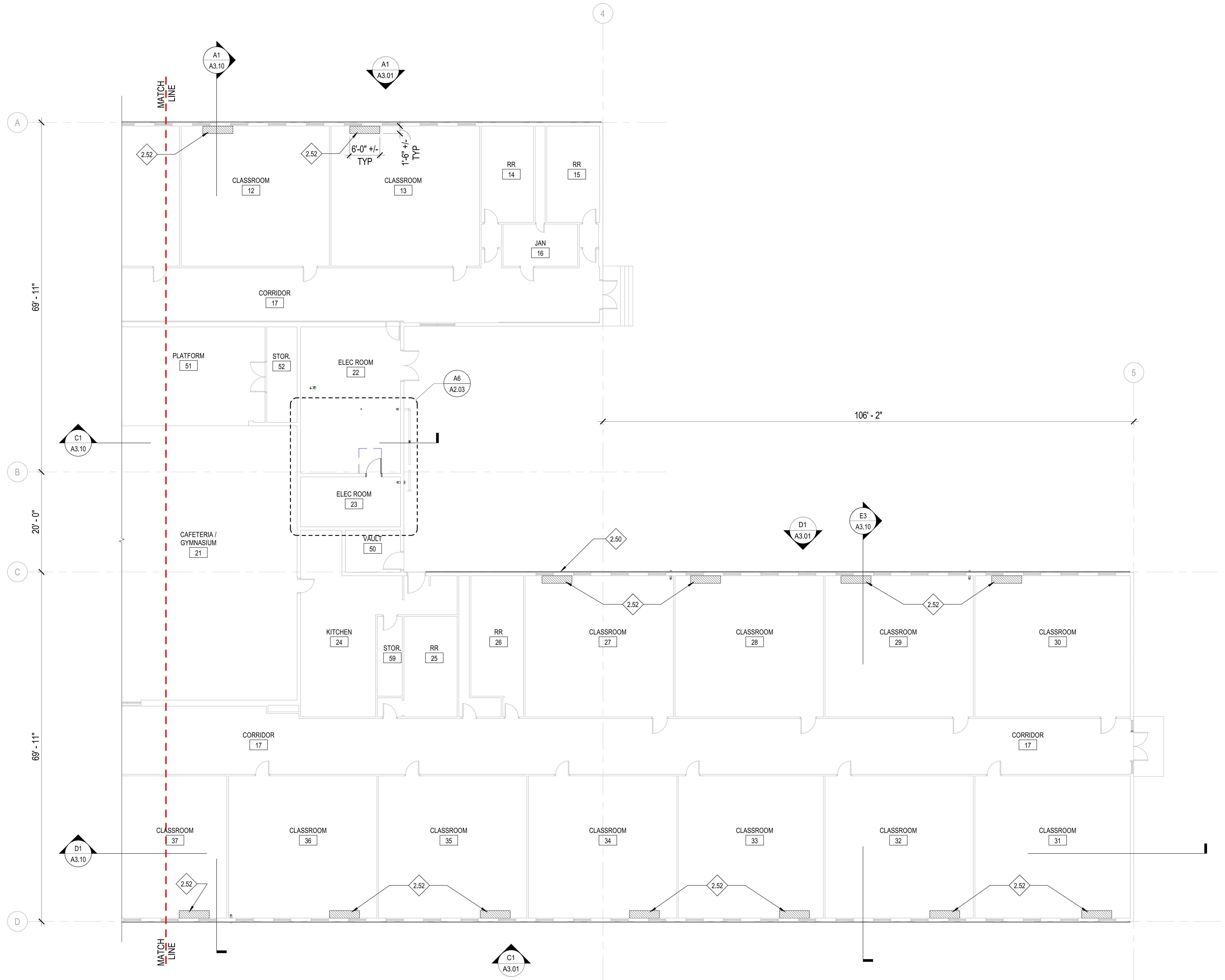
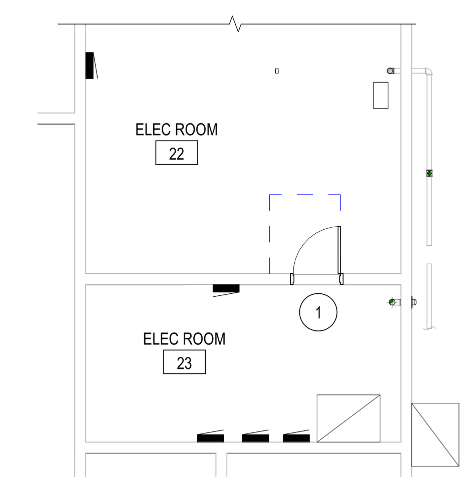


D1 A2.03 **AREA 'B' FLOOR PLAN**
3/32" = 1'-0"



A6 A2.03 **FUEL ROOM - ENLARGED PLAN**
1/8" = 1'-0"

GENERAL NOTES

A. THE COMPOSITE PLANS ARE INTENDED TO SHOW OVERALL LAYOUT. RE: AREA PLANS FOR ADDITIONAL INFORMATION
B. PLAN WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
C. FIELD VERIFY ALL EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE DISCREPANCIES WITH ARCHITECT.
D. DO NOT SCALE DRAWINGS.
E. STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.

KEYNOTES

REFERENCE NOTES

2.50 NEW SHEATHING AND PRE-FINISHED METAL WALL PANEL PAINTED TO MATCH EXISTING
2.52 REPLACE EXTENTS OF DAMAGED CPT FROM EQUIPMENT REMOVAL, MATCH EXISTING MATERIALS. PROVIDE NEW RWB CORNER TO CORNER. REFERENCE DETAIL B1/A4.91

LEGEND

NEW CONSTRUCTION
EXISTING WALL
EXISTING WINDOW
EXISTING DOOR
FLOOR INFILL
MATCH LINE
XXXx DOOR SYMBOL. COORDINATE WITH DOOR SCHEDULE

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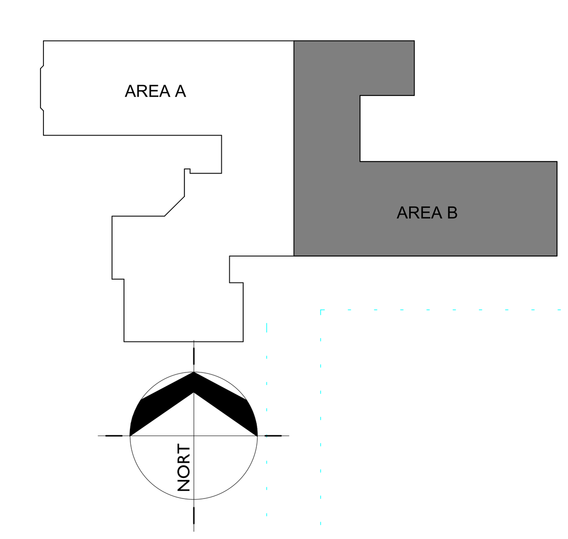
AREA 'B' FLOOR PLAN



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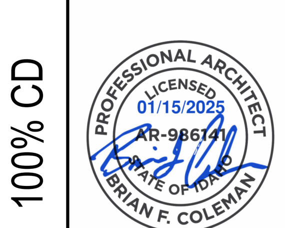

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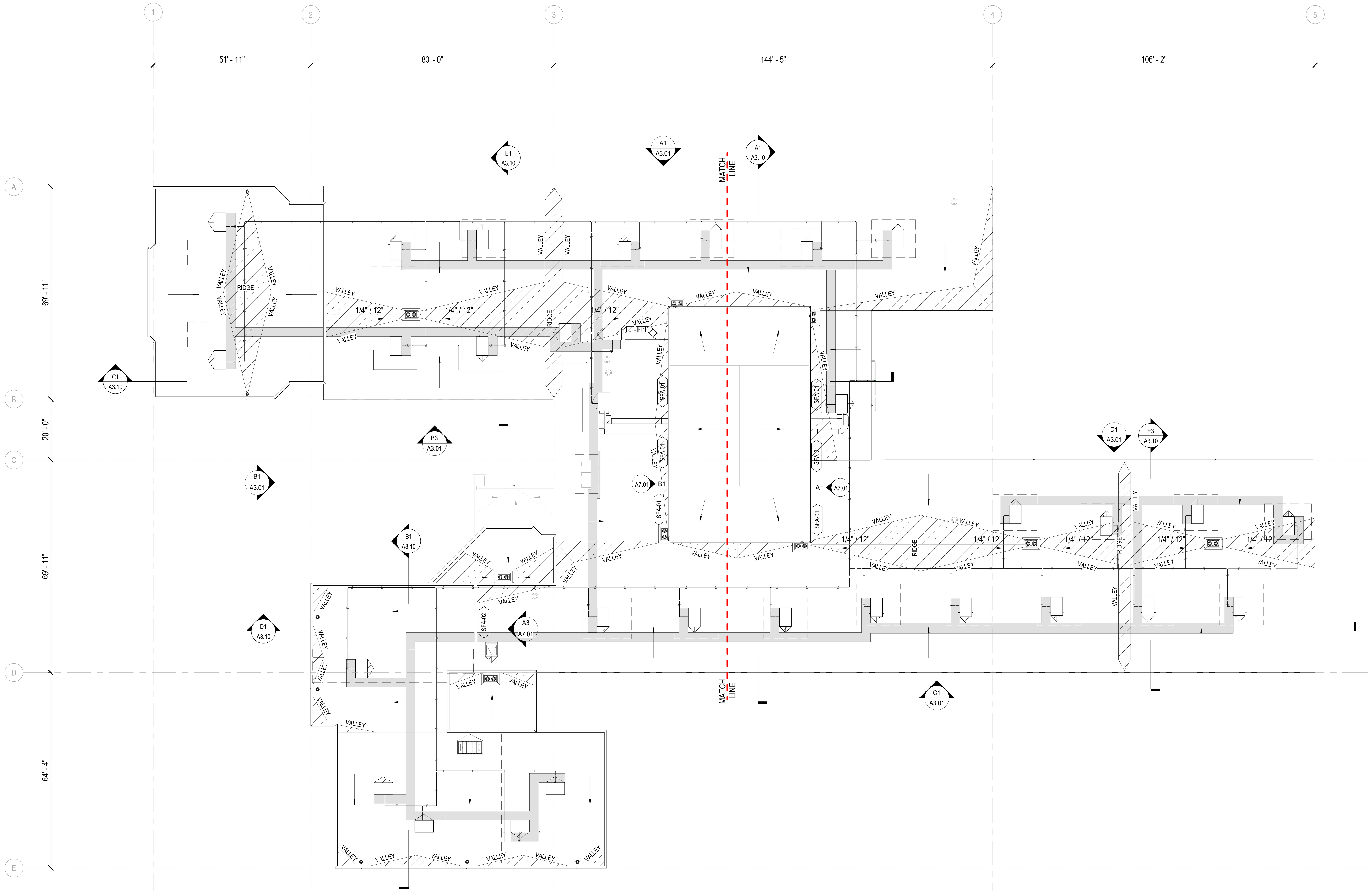
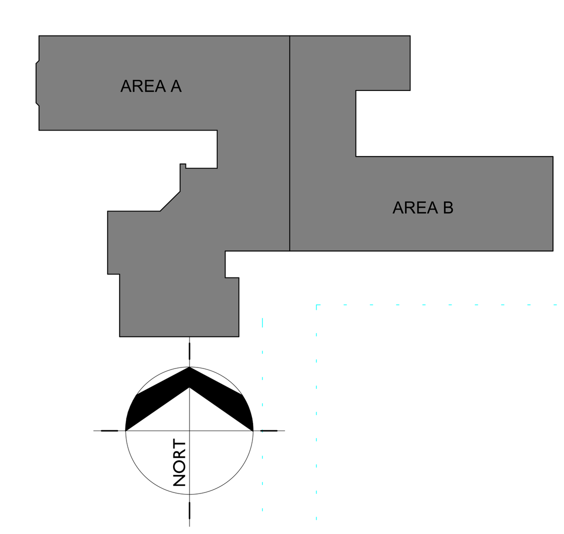


E1 A2.04 **COMPOSITE ROOF PLAN**
1/16" = 1'-0"



GENERAL NOTES

A. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND NUMBER OF OTHER ROOF PENETRATIONS (I.E., VENT STACKS, VENT PIPES, CONDUIT PENETRATIONS, ETC.), FLASH ALL PENETRATIONS WEATHER TIGHT. COORDINATE WITH ROOF DETAILS.
B. SLOPE ALL CRICKETS AS SHOWN AT A SLOPE OF 1/2" PER FOOT, EXCEPT WHERE NOTED.
C. PROVIDE BUILT-UP TAPERED INSULATION ROOF CRICKETS AT ALL CURB LOCATIONS TO ALLOW POSITIVE DRAINAGE AND PREVENT PONDING.
D. COORDINATE ROOF DRAIN SUMP LOCATION AND REQUIRED PENETRATION WITH PLUMBING DRAWINGS.
E. ALL ROOF MEMBRANE ACCESSORIES SHALL COME FROM THE SAME MANUFACTURER OR FROM A SUPPLIER APPROVED BY THE MEMBRANE MANUFACTURER. ALL ROOF COVERING, MATERIAL AND ACCESSORIES SHALL BE COMPATIBLE.
F. PREFABRICATED CURBS SHALL BE INSTALLED AND SET LEVEL.
G. ALL DIMENSIONS ARE FOR GENERAL ARRANGEMENT AND LOCATION ONLY. ACTUAL REQUIREMENTS AND DIMENSIONS ARE TO BE VERIFIED AND COORDINATED WITH EQUIPMENT, OTHER CONSTRUCTION TRADES, SHOP DRAWINGS AND STRUCTURAL FRAMING.
H. CONSTRUCTION SHALL BE IN FULL COMPLIANCE WITH ALL CURRENT LOCAL CODES AND REGULATIONS IN EFFECT AT THE TIME OF AGREEMENT BETWEEN OWNER AND CONTRACTOR.
I. AT AREAS WHERE STRUCTURAL ROOF DECK IS LEVEL, PROVIDE SLOPED INSULATION TO ACHIEVE REQUIRED SLOPE.
J. DETAILS IN THE PROJECT DRAWING ARE SHOWN AT SPECIFIC LOCATIONS AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT.
K. REMOVE DAMAGED EXISTING ROOF INSULATION. REPLACE WITH NEW INSULATION, LEVEL WITH EXISTING INSULATION.

LEGEND

- AREA OF TAPERED INSULATION
- AREA OF STRUCTURAL ROOF FRAMING MODIFICATIONS - SEE STRUCTUAL. REPLACE RIGID INSULATON BOARD TO PROVIDE A MINIMUM 5" THICKNESS AND SLOPES INDICATED.
- FLEXIBLE WALKWAY. RE: SPECIFICATION 075423.C
- ROOF DRAIN SUMP
- ROOF HATCH

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COMPOSITE ROOF PLAN

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LICENSED
01/15/2025
AR-986141
STATE OF IDAHO
BRIAN F. COLEMAN

Revisions:

Project No:	24075
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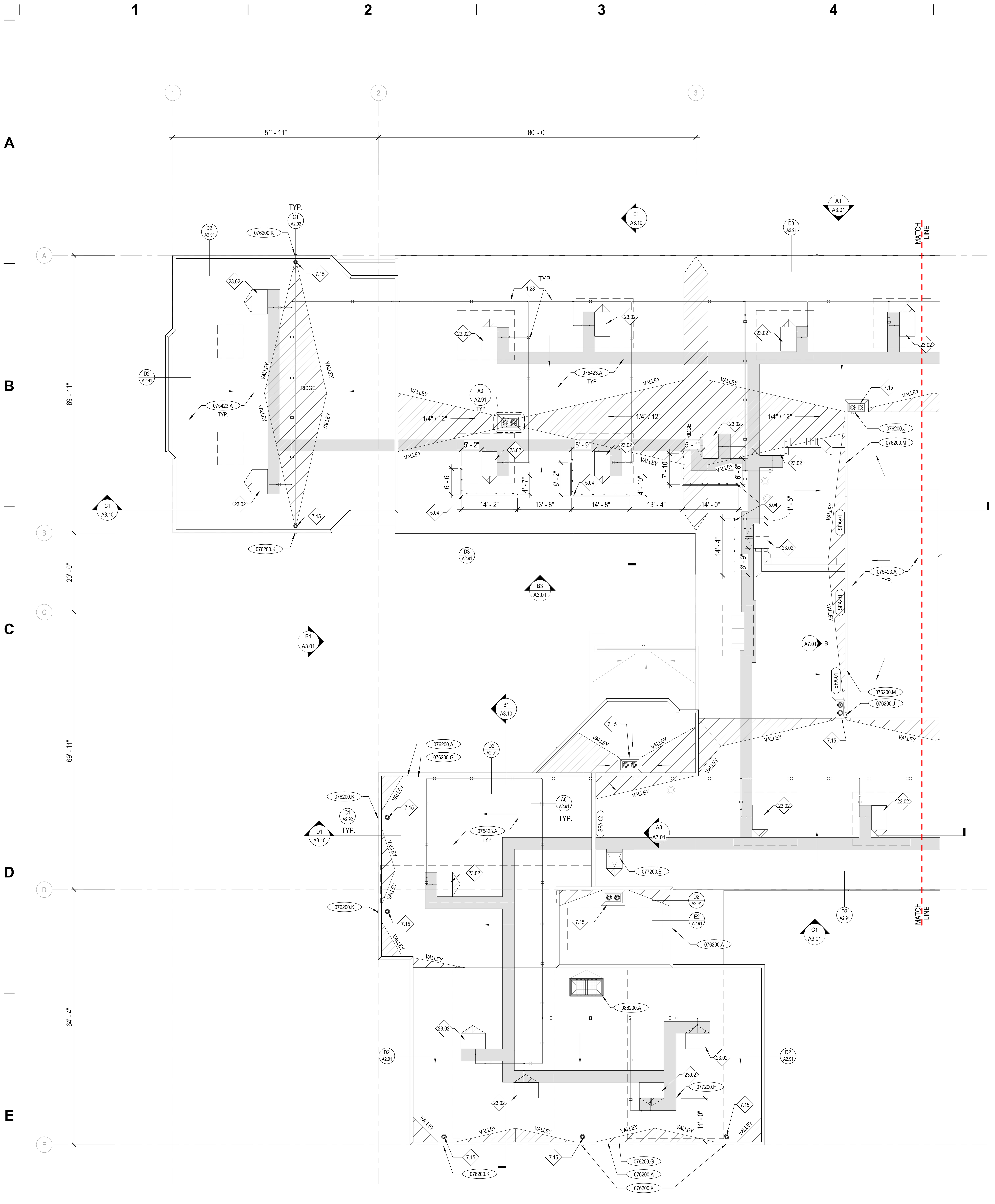
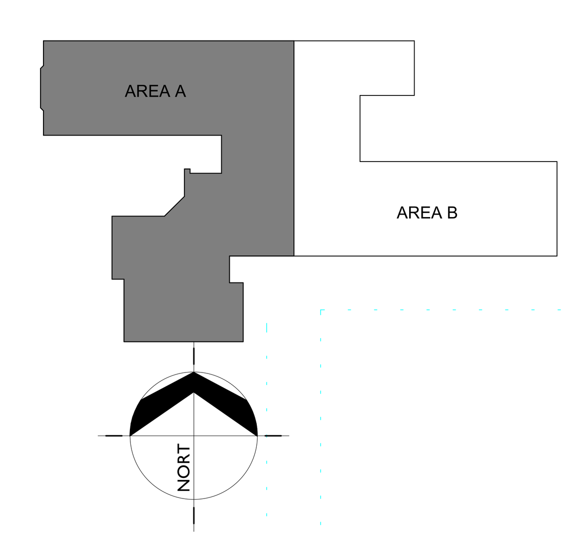


E1 A2.13 AREA 'A' ROOF PLAN

3/32" = 1'-0"



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GENERAL NOTES

A. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND NUMBER OF OTHER ROOF PENETRATIONS (I.E., VENT STACKS, VENT PIPES, CONDUIT PENETRATIONS, ETC.), FLASH ALL PENETRATIONS WEATHER TIGHT. COORDINATE WITH ROOF DETAILS.
B. SLOPE ALL CRICKETS AS SHOWN AT A SLOPE OF 1/2" PER FOOT, EXCEPT WHERE NOTED.
C. PROVIDE BUILT-UP TAPERED INSULATION ROOF CRICKETS AT ALL CURB LOCATIONS TO ALLOW POSITIVE DRAINAGE AND PREVENT PONDING.
D. COORDINATE ROOF DRAIN SUMP LOCATION AND REQUIRED PENETRATION WITH PLUMBING DRAWINGS.
E. ALL ROOF MEMBRANE ACCESSORIES SHALL COME FROM THE SAME MANUFACTURER OR FROM A SUPPLIER APPROVED BY THE MEMBRANE MANUFACTURER. ALL ROOF COVERING, MATERIAL AND ACCESSORIES SHALL BE COMPATIBLE.
F. PREFABRICATED CURBS SHALL BE INSTALLED AND SET LEVEL.
G. ALL DIMENSIONS ARE FOR GENERAL ARRANGEMENT AND LOCATION ONLY. ACTUAL REQUIREMENTS AND DIMENSIONS ARE TO BE VERIFIED AND COORDINATED WITH EQUIPMENT, OTHER CONSTRUCTION TRADES, SHOP DRAWINGS AND STRUCTURAL FRAMING.
H. CONSTRUCTION SHALL BE IN FULL COMPLIANCE WITH ALL CURRENT LOCAL CODES AND REGULATIONS IN EFFECT AT THE TIME OF AGREEMENT BETWEEN OWNER AND CONTRACTOR.
I. AT AREAS WHERE STRUCTURAL ROOF DECK IS LEVEL, PROVIDE SLOPED INSULATION TO ACHIEVE REQUIRED SLOPE.
J. DETAILS IN THE PROJECT DRAWING ARE SHOWN AT SPECIFIC LOCATIONS AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT.
K. REMOVE DAMAGED EXISTING ROOF INSULATION. REPLACE WITH NEW INSULATION, LEVEL WITH EXISTING INSULATION.

KEYNOTES

075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
076200.A	PARAPET COPING
076200.G	PROVIDE NEW COUNTERFLASHING IN EXISTING LOCATION.
076200.J	DOWNSPOUT
076200.K	OVERFLOW SCUPPER. SEE DETAIL C1/A2.92
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
077200.B	ROOF HATCH
077200.H	FALL ARREST ANCHOR. FLASH SIMILAR TO DETAIL C1/A2.91.
086200.A	FIBERGLASS-SANDWICH-PANEL SKYLIGHT ASSEMBLY

REFERENCE NOTES

1.28	PIPE/ CONDUIT SUPPORT PADS; COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR LOCATION
5.04	MECHANICAL SCREENING WALL. RE B1/A2.92.
7.15	NEW ROOF DRAIN, COORDINATE WITH PLUMBING DRAWINGS.
23.02	NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.

LEGEND

- AREA OF TAPERED INSULATION
- AREA OF STRUCTURAL ROOF FRAMING MODIFICATIONS - SEE STRUCTUAL. REPLACE RIGID INSULATON BOARD TO PROVIDE A MINIMUM 5" THICKNESS AND SLOPES INDICATED.
- FLEXIBLE WALKWAY. RE: SPECIFICATION 075423.C
- ROOF DRAIN SUMP
- ROOF HATCH

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AREA 'A' ROOF PLAN

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-986141 STATE OF IDAHO BRIAN F. COLEMAN

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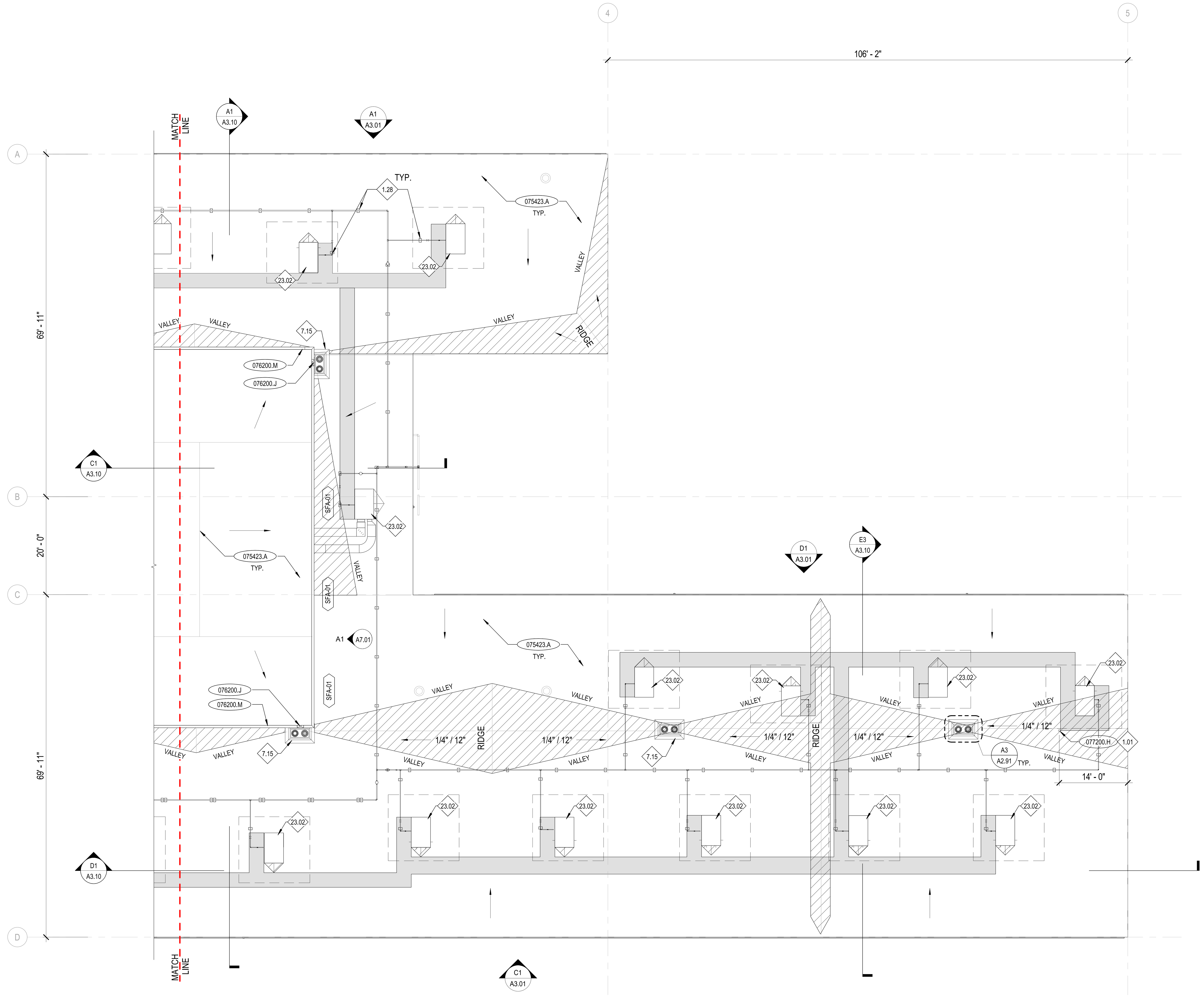

D1 A2.14 **AREA 'B' ROOF PLAN**
3/32" = 1'-0"

GENERAL NOTES

A. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND NUMBER OF OTHER ROOF PENETRATIONS (I.E., VENT STACKS, VENT PIPES, CONDUIT PENETRATIONS, ETC.), FLASH ALL PENETRATIONS WEATHER TIGHT. COORDINATE WITH ROOF DETAILS.
B. SLOPE ALL CRICKETS AS SHOWN AT A SLOPE OF 1/2" PER FOOT, EXCEPT WHERE NOTED.
C. PROVIDE BUILT-UP TAPERED INSULATION ROOF CRICKETS AT ALL CURB LOCATIONS TO ALLOW POSITIVE DRAINAGE AND PREVENT PONDING.
D. COORDINATE ROOF DRAIN SUMP LOCATION AND REQUIRED PENETRATION WITH PLUMBING DRAWINGS.
E. ALL ROOF MEMBRANE ACCESSORIES SHALL COME FROM THE SAME MANUFACTURER OR FROM A SUPPLIER APPROVED BY THE MEMBRANE MANUFACTURER. ALL ROOF COVERING, MATERIAL AND ACCESSORIES SHALL BE COMPATIBLE.
F. PREFABRICATED CURBS SHALL BE INSTALLED AND SET LEVEL.
G. ALL DIMENSIONS ARE FOR GENERAL ARRANGEMENT AND LOCATION ONLY. ACTUAL REQUIREMENTS AND DIMENSIONS ARE TO BE VERIFIED AND COORDINATED WITH EQUIPMENT, OTHER CONSTRUCTION TRADES, SHOP DRAWINGS AND STRUCTURAL FRAMING.
H. CONSTRUCTION SHALL BE IN FULL COMPLIANCE WITH ALL CURRENT LOCAL CODES AND REGULATIONS IN EFFECT AT THE TIME OF AGREEMENT BETWEEN OWNER AND CONTRACTOR.
I. AT AREAS WHERE STRUCTURAL ROOF DECK IS LEVEL, PROVIDE SLOPED INSULATION TO ACHIEVE REQUIRED SLOPE.
J. DETAILS IN THE PROJECT DRAWING ARE SHOWN AT SPECIFIC LOCATIONS AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT.
K. REMOVE DAMAGED EXISTING ROOF INSULATION. REPLACE WITH NEW INSULATION, LEVEL WITH EXISTING INSULATION.

KEYNOTES

075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
076200.J	DOWNSPOUT
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
077200.H	FALL ARREST ANCHOR. FLASH SIMILAR TO DETAIL C1/A2.91.

REFERENCE NOTES

1.01	COORDINATE WITH STRUCTURAL DRAWINGS.
1.28	PIPE/ CONDUIT SUPPORT PADS; COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR LOCATION
7.15	NEW ROOF DRAIN, COORDINATE WITH PLUMBING DRAWINGS.
23.02	NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.

LEGEND

AREA OF TAPERED INSULATION

AREA OF STRUCTURAL ROOF FRAMING MODIFICATIONS - SEE STRUCTUAL. REPLACE RIGID INSULATON BOARD TO PROVIDE A MINIMUM 5" THICKNESS AND SLOPES INDICATED.

FLEXIBLE WALKWAY. RE: SPECIFICATION 075423.C

ROOF DRAIN SUMP

ROOF HATCH

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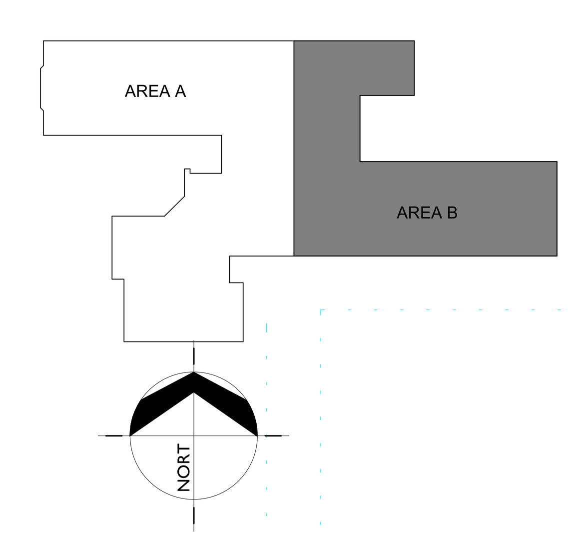
Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

Sheet:
AREA 'B' ROOF PLAN



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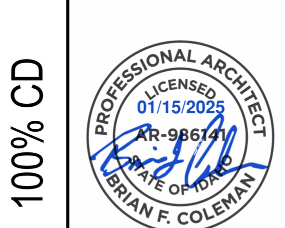

Revisions:

Project No:	24075
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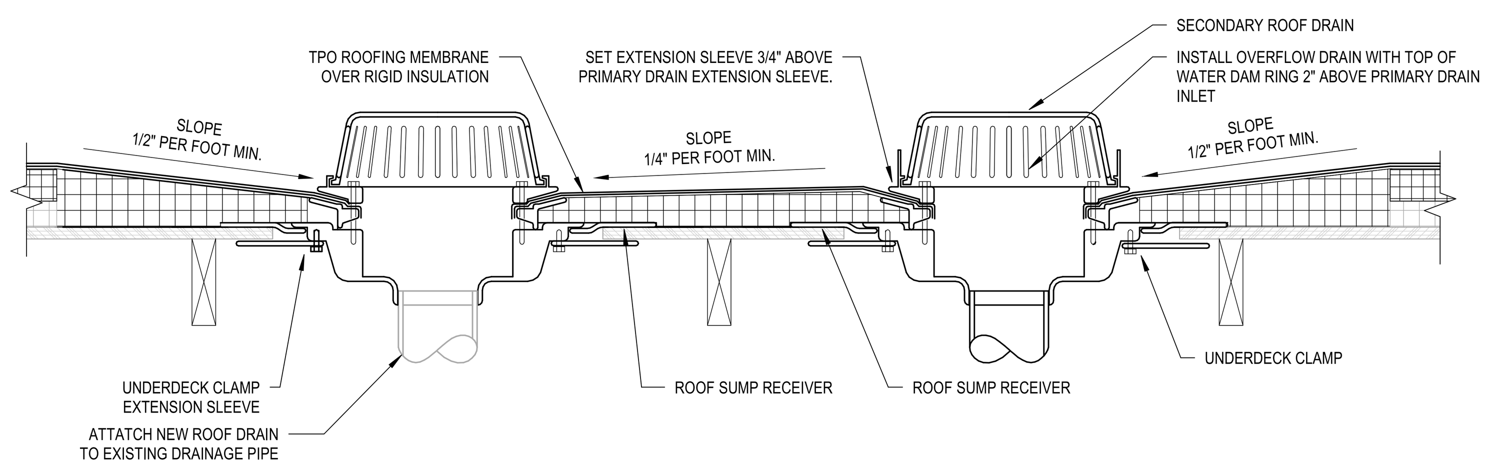
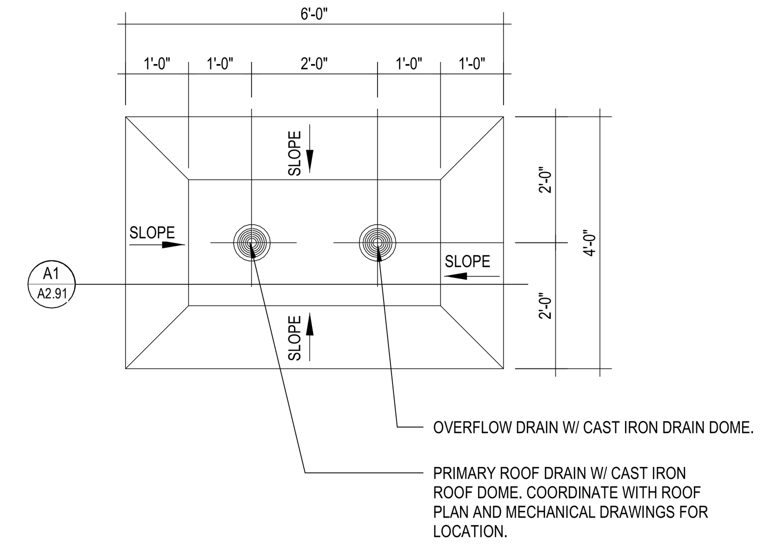
Date:	01/15/2025

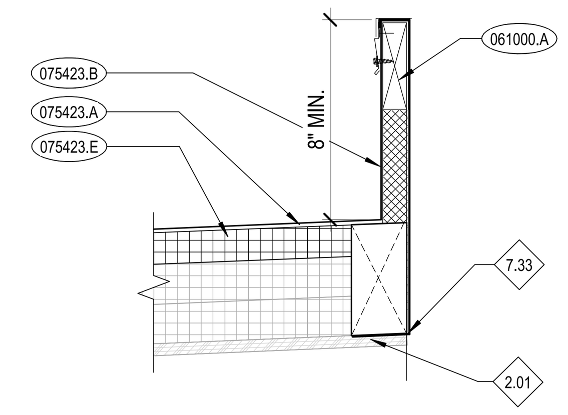
Sheet No:
A2.14



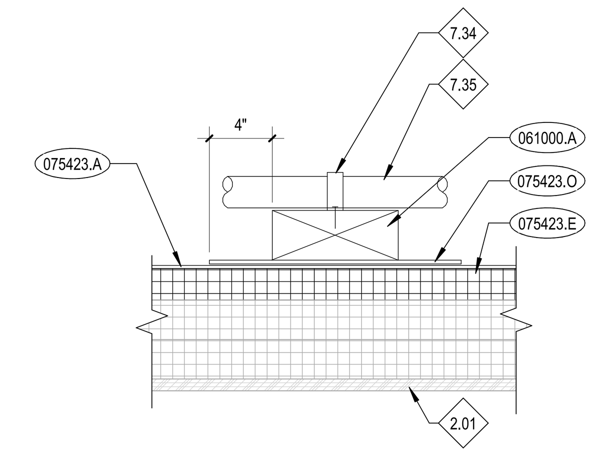
A1 ROOF DRAIN DETAIL (BASIC)
A2.91
1 1/2" = 1'-0"



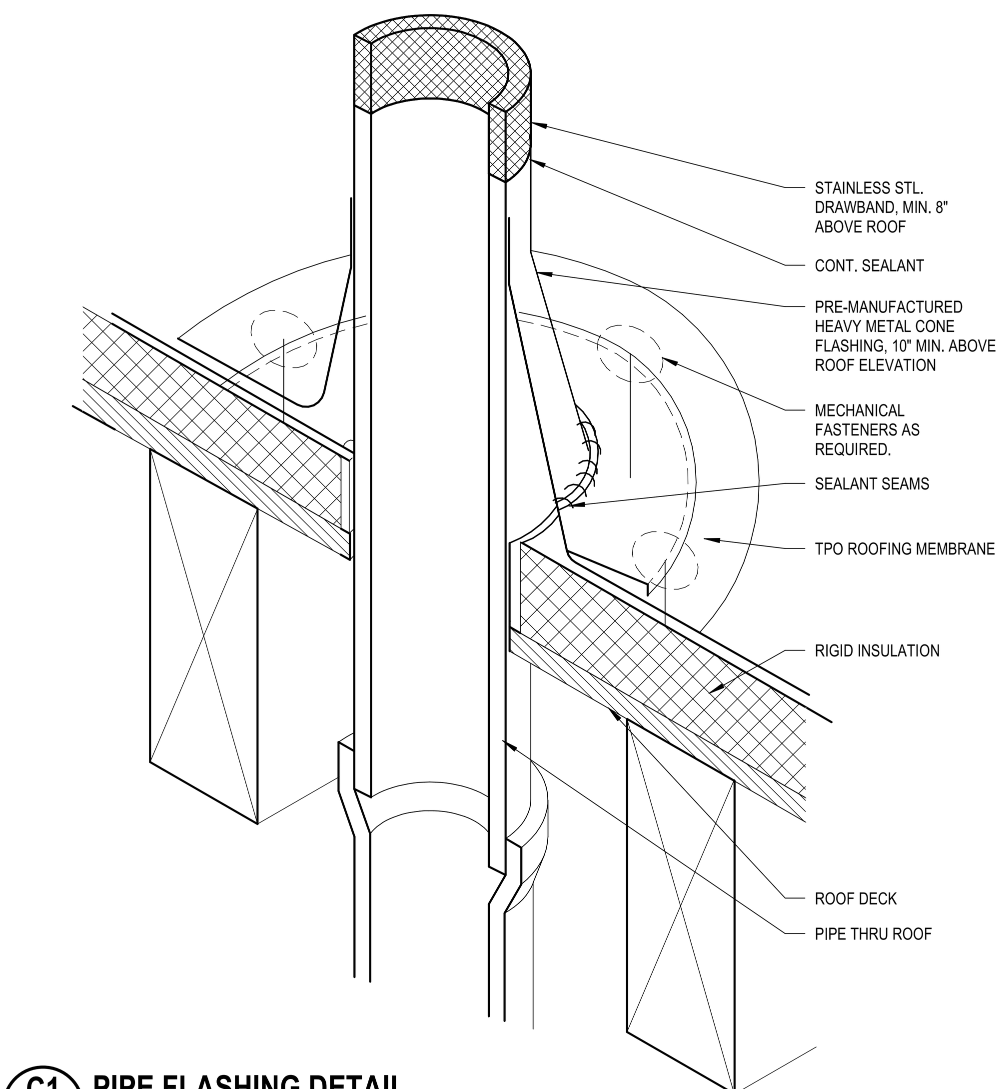
A3 ROOF SUMP PLAN
A2.91
1/2" = 1'-0"



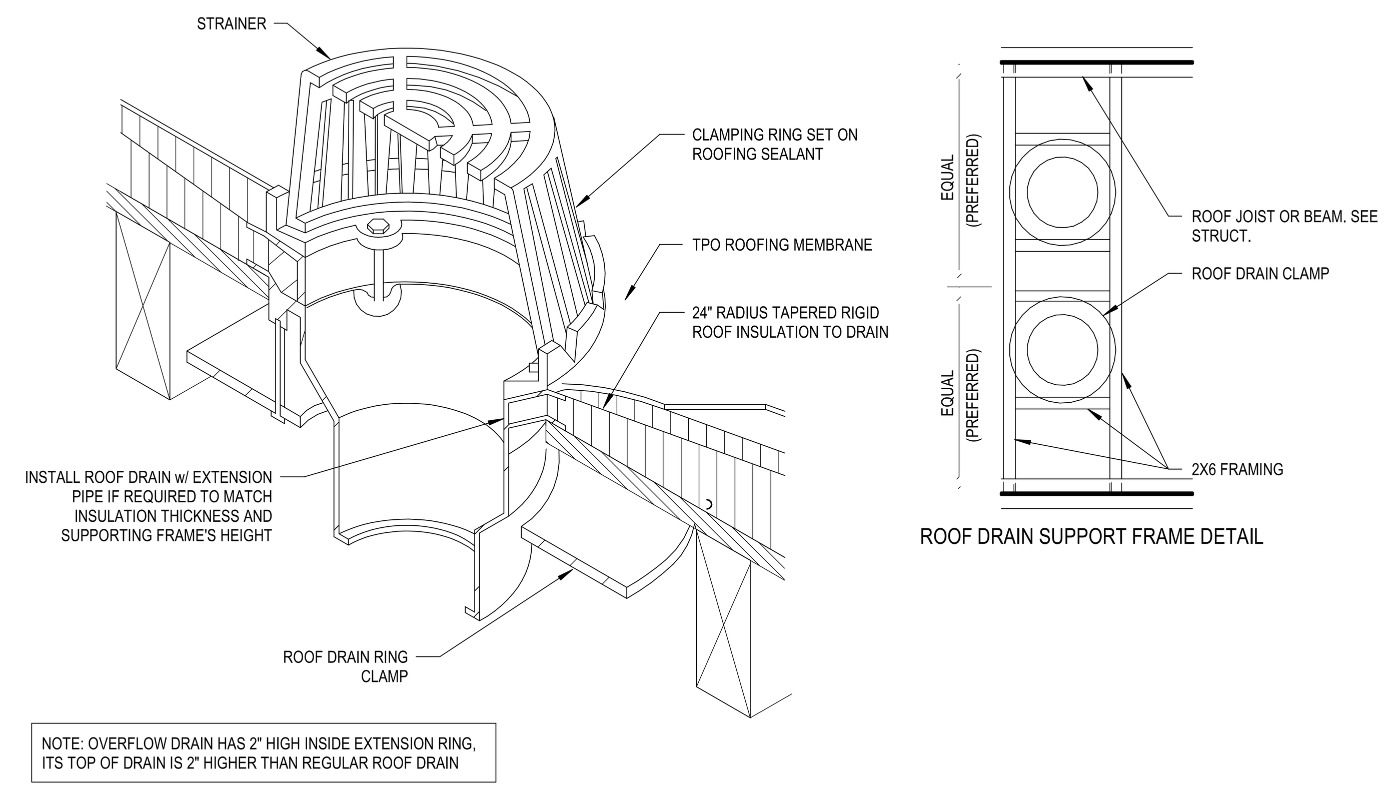
A5 TYPICAL CURB DETAIL
A2.91
1 1/2" = 1'-0"



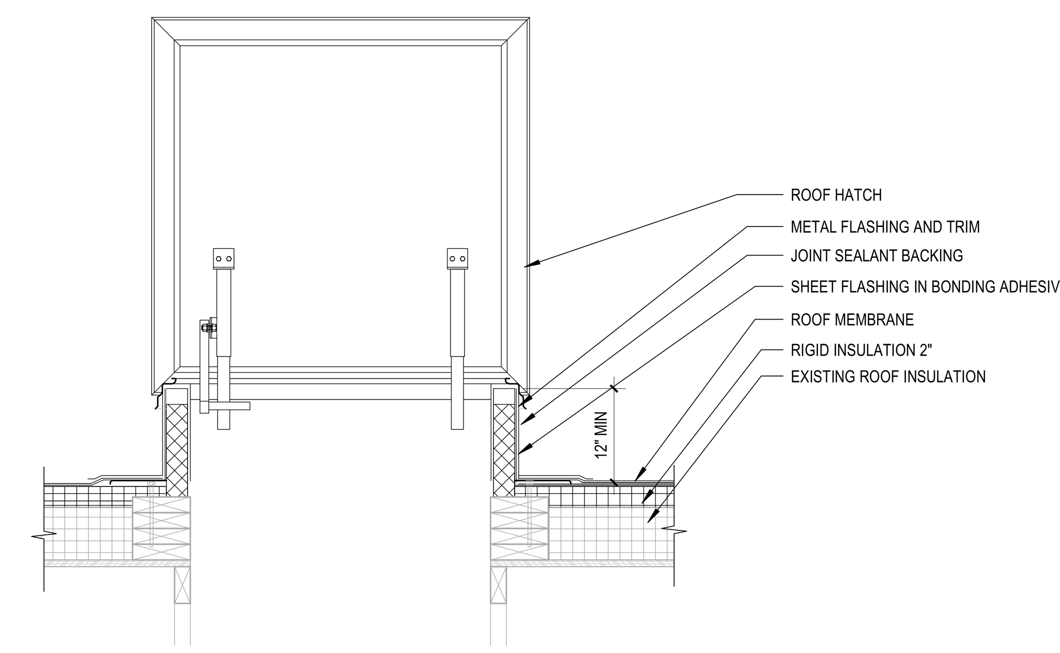
A6 PIPE SUPPORT DETAIL
A2.91
1 1/2" = 1'-0"



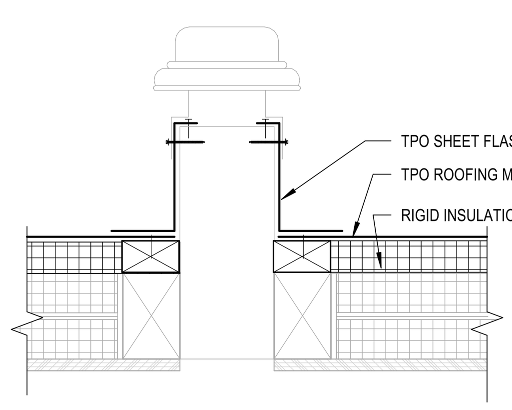
C1 PIPE FLASHING DETAIL
A2.91
6" = 1'-0"



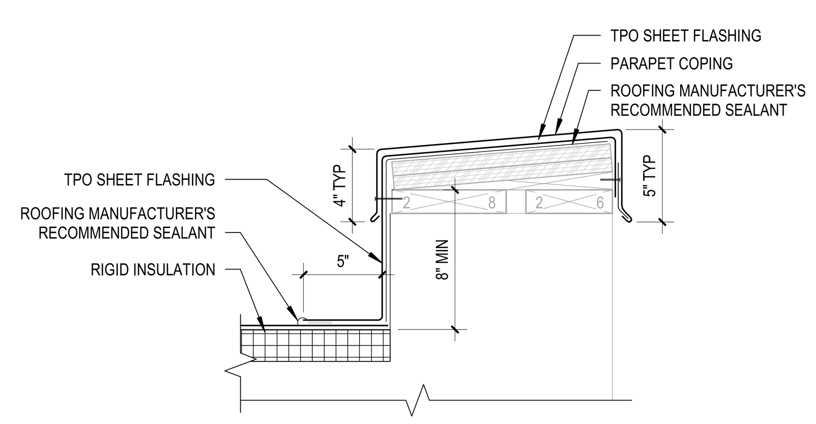
C3 TYPICAL ROOF DRAIN DETAIL
A2.91
3" = 1'-0"



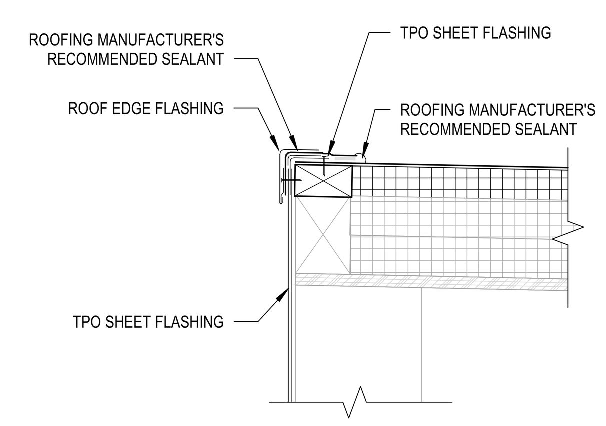
C5 ROOF HATCH DETAIL
A2.91
1" = 1'-0"



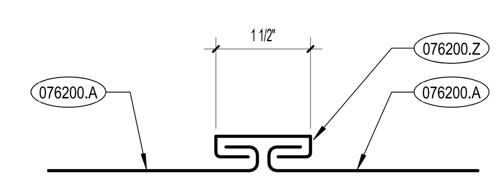
D1 EXHAUST FAN DETAIL
A2.91
1 1/2" = 1'-0"



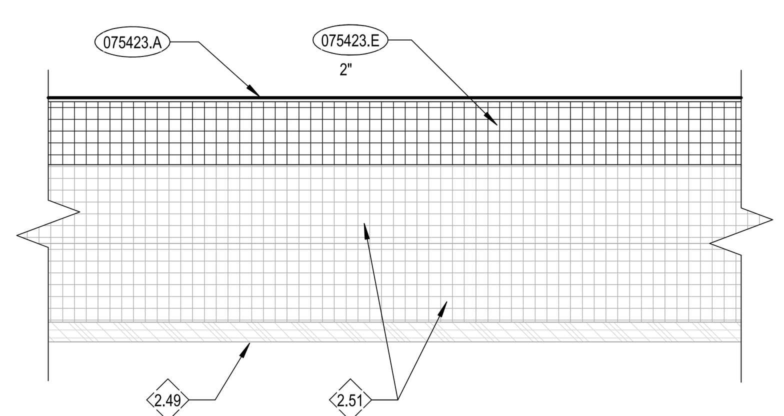
D2 TYPICAL PARAPET
A2.91
1 1/2" = 1'-0"



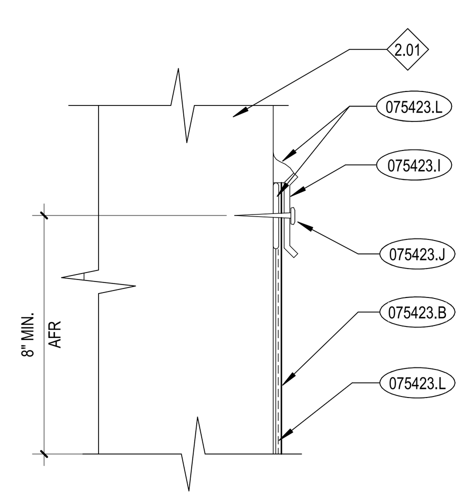
D3 ROOF EDGE DETAIL
A2.91
1 1/2" = 1'-0"



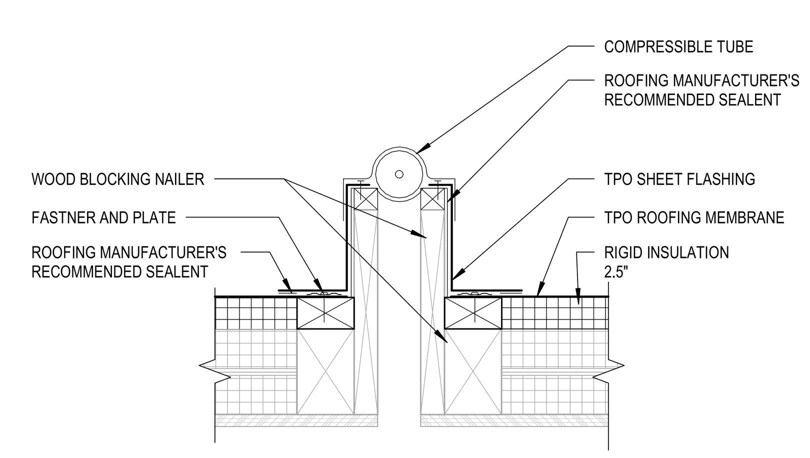
D4 TYP. COPING SEAM DETAIL
A2.91
6" = 1'-0"



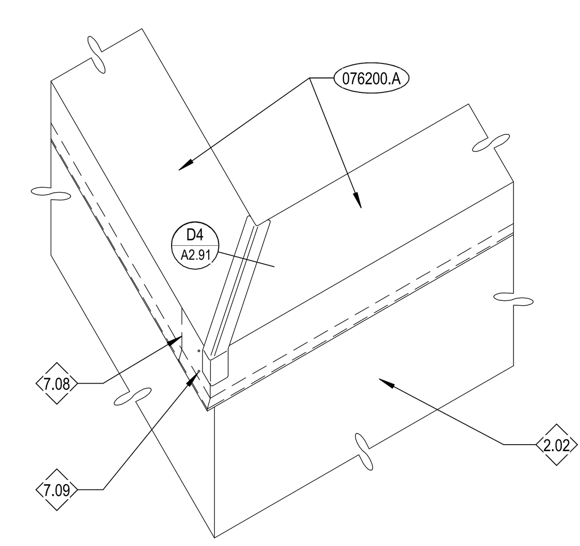
D6 ROOF ASSEMBLY
A2.91
3" = 1'-0"



E2 ROOF VERTICAL TERM. NON MASONRY
A2.91
3" = 1'-0"



E3 ROOF EXPANSION JOINT
A2.91
1 1/2" = 1'-0"



E4 TYPICAL CORNER COPING DETAIL
A2.91
1 1/2" = 1'-0"

GENERAL NOTES

A. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SEALED PER ROOF MANUFACTURER'S RECOMMENDATION.
B. COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL FOR ALL ROOF PENETRATION SIZES AND LOCATIONS.
C. ALL METAL ROOF FLASHING DETAILS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND REVIEWED BY THE ARCHITECT FOR DESIGN INTENT.
D. SEE CIVIL, STRUCTURAL, MECHANCIAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
E. DO NOT SCALE DRAWINGS.

KEYNOTES

061000.A	DIMENSIONAL LUMBER
075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
075423.B	TPO SHEET FLASHING
075423.E	ROOF INSULATION
075423.I	TERMINATION BAR
075423.J	FASTENER AND PLATE
075423.L	ROOFING MANUFACTURER'S RECOMMENDED SEALANT
075423.O	MANUFACTURED ROOF PAD
076200.A	PARAPET COPING
076200.Z	CLEAT

REFERENCE NOTES

2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
2.02	PRESERVE & PROTECT EXISTING BRICK WALL.
2.49	EXISTING SHEATHING AND UNDERLAYMENT.
2.51	EXISTING EPS ROOF INSULATION TO REMAIN. PRESERVE AND PROTECT.
7.08	COPING END CLOSURE, PROVIDE FOLDED TAB UNDER COPING FACE AS SHOWN
7.09	LINE OF FLASHING UNDERLAP BELOW
7.33	PREFABRICATED OR FIELD INSTALLED & INSULATED METAL CURB ANCHORED TO STRUCTURE
7.34	PIPE CLAMP. FASTEN SECURELY TO WOOD BLOCK.
7.35	PIPE. COORDINATE WITH MECHANICAL DRAWINGS.

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Sheet:
ROOF DETAILS

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PROFESSIONAL ARCHITECT
LICENSED
01/15/2025
AR-986141
STATE OF IDAHO
BRIAN F. COLEMAN

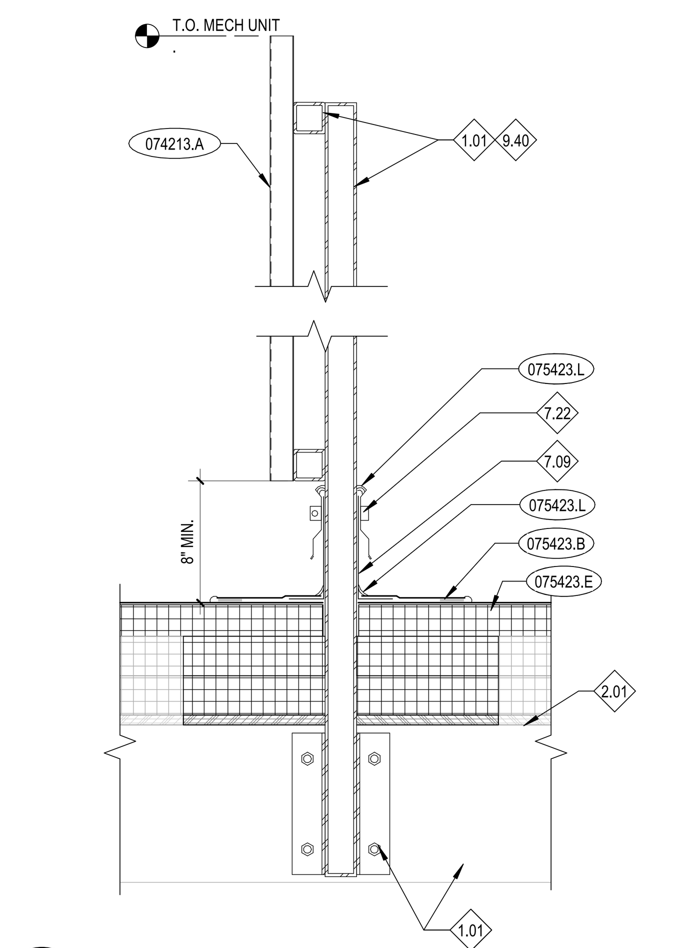
Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

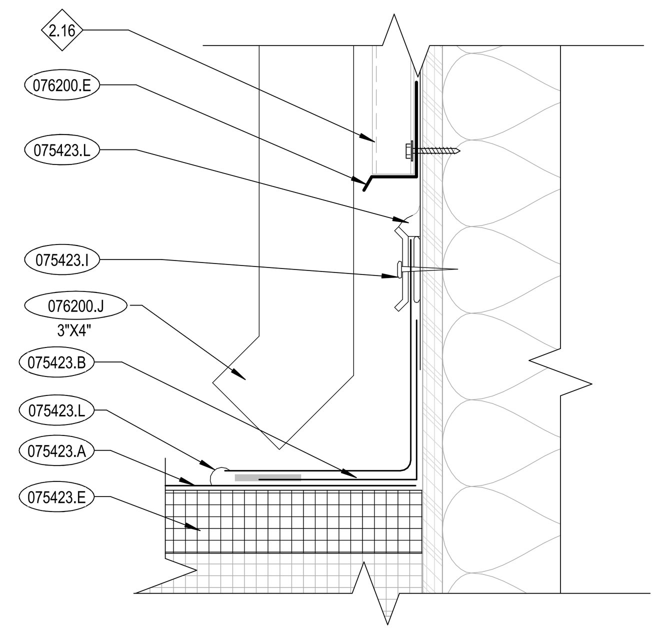
Sheet No:
A2.91

1 2 3 4 5 6

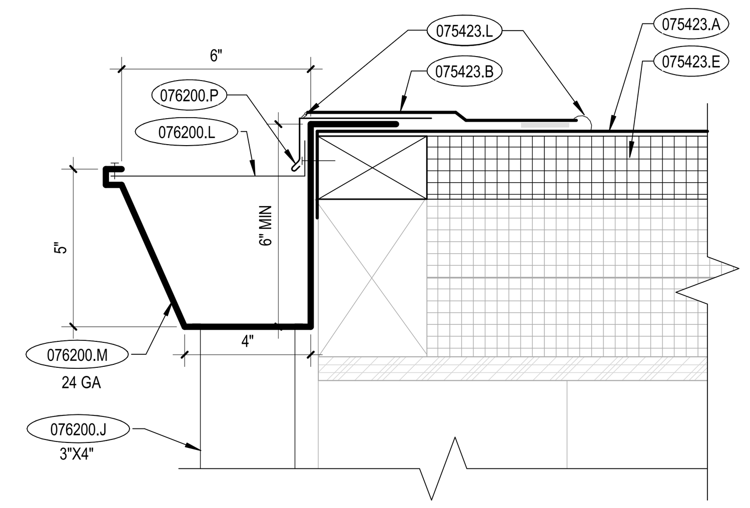
A



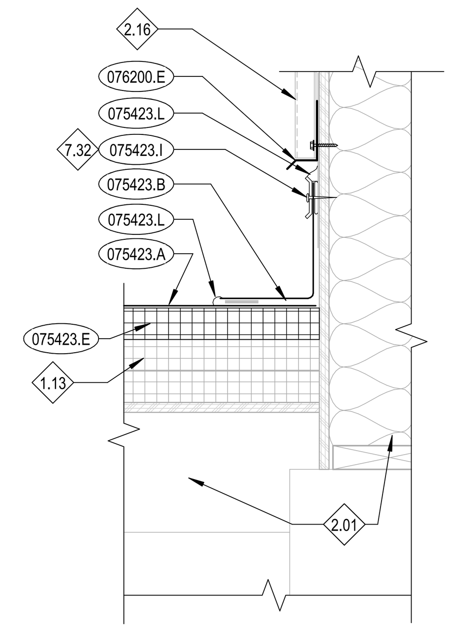
B1 MECHANICAL SCREEN CONNECTION DETAIL
A2.92 1 1/2" = 1'-0"



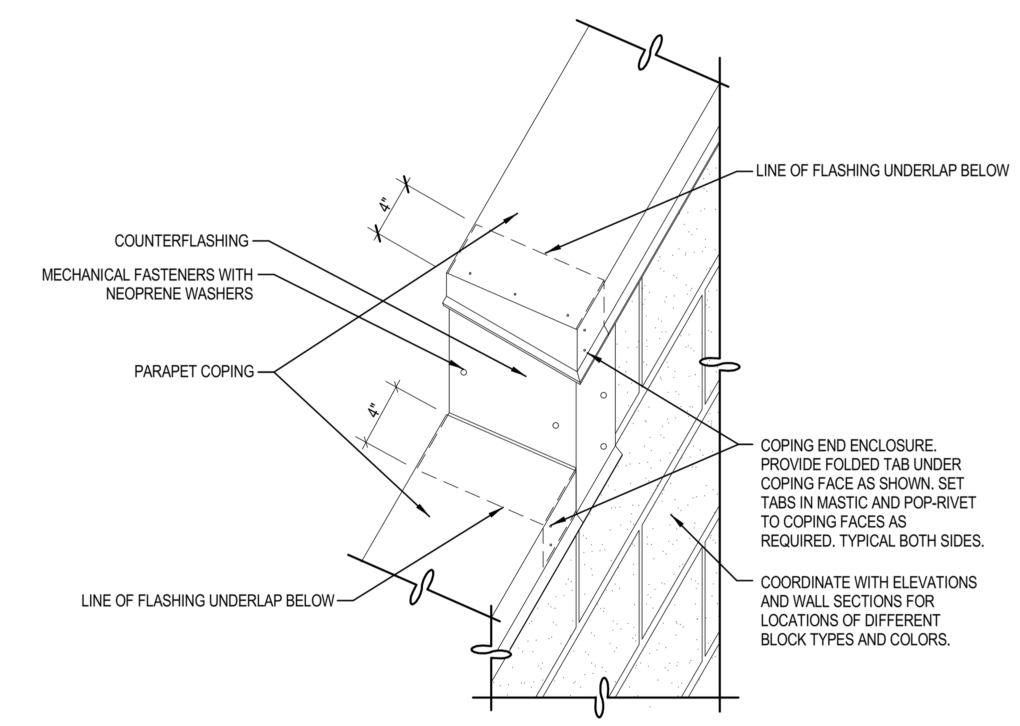
B2 DOWNSPOUT @ ROOF
A2.92 3" = 1'-0"



B3 HANGING GUTTER @ TPO
A2.92 3" = 1'-0"

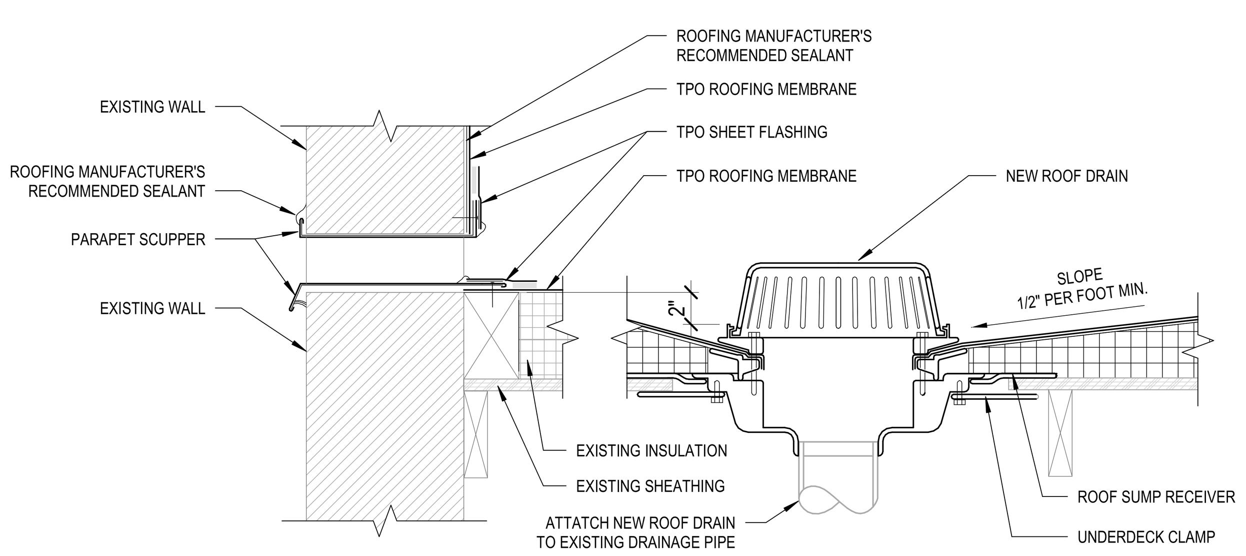


B5 ROOF @ METAL PANEL
A2.92 1 1/2" = 1'-0"

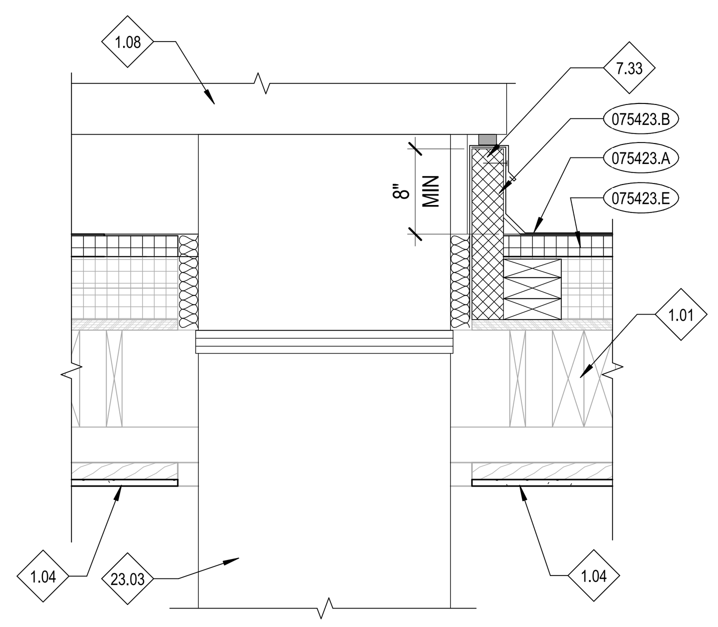


B6 COPING DETAIL
A2.92 1 1/2" = 1'-0"

B



C1 THROUGH WALL SCUPPER @ ROOF DRAIN
A2.92 1 1/2" = 1'-0"



C3 DUCT PENETRATION @ ROOF
A2.92 1" = 1'-0"

C

D

E

GENERAL NOTES

A. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SEALED PER ROOF MANUFACTURER'S RECOMMENDATION.
B. COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL FOR ALL ROOF PENETRATION SIZES AND LOCATIONS.
C. ALL METAL ROOF FLASHING DETAILS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND REVIEWED BY THE ARCHITECT FOR DESIGN INTENT.
D. SEE CIVIL, STRUCTURAL, MECHANCIAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
E. DO NOT SCALE DRAWINGS.

KEYNOTES

074213.A	EXPOSED FASTENER LAP SEAM METAL WALL PANEL
075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
075423.B	TPO SHEET FLASHING
075423.E	ROOF INSULATION
075423.I	TERMINATION BAR
075423.L	ROOFING MANUFACTURER'S RECOMMENDED SEALANT
076200.E	FLASHING AND DRIP EDGE
076200.J	DOWNSPOUT
076200.L	GUTTER STRAP
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
076200.P	DRIP EDGE

REFERENCE NOTES

1.01	COORDINATE WITH STRUCTURAL DRAWINGS.
1.04	COORDINATE WITH REFLECTED CEILING PLAN.
1.08	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
1.13	VERIFY EXISTING SLOPE TAPERED INSULATION SLOPES AND RESLOPE ROOF TO DRAIN
2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
2.16	EXISTING METAL WALL PANEL TO BE PRESERVED AND PROTECTED.
7.09	LINE OF FLASHING UNDERLAP BELOW
7.22	FLASHING CLAMP
7.32	INSTALL TERMINATION BAR AS CLOSE AS POSSIBLE TO THE BOTTOM OF THE METAL PANEL TOR CREATE A WEATHER TIGHT SEAL.
7.33	PREFABRICATED OR FIELD INSTALLED & INSULATED METAL CURB ANCHORED TO STRUCTURE
9.40	PAINT TO MATCH EXISTING STEEL SIDING.
23.03	NEW DUCT, COORDINATE WITH MECHANICAL DRAWINGS.

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Sheet:
ROOF DETAILS

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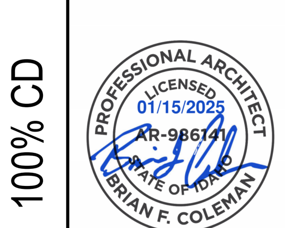
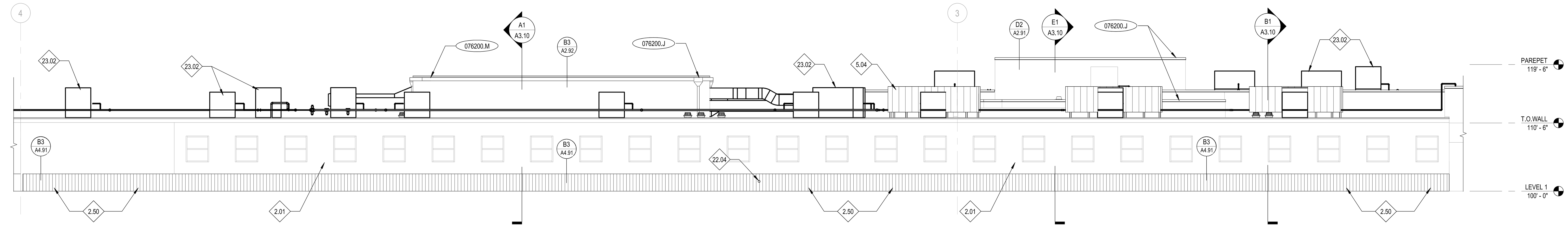


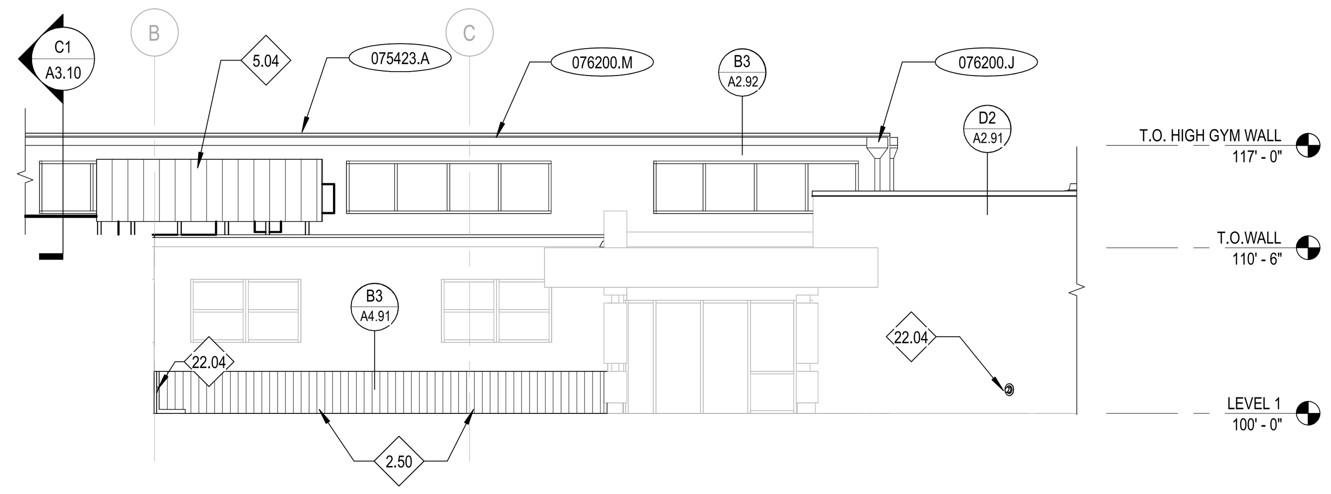
Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

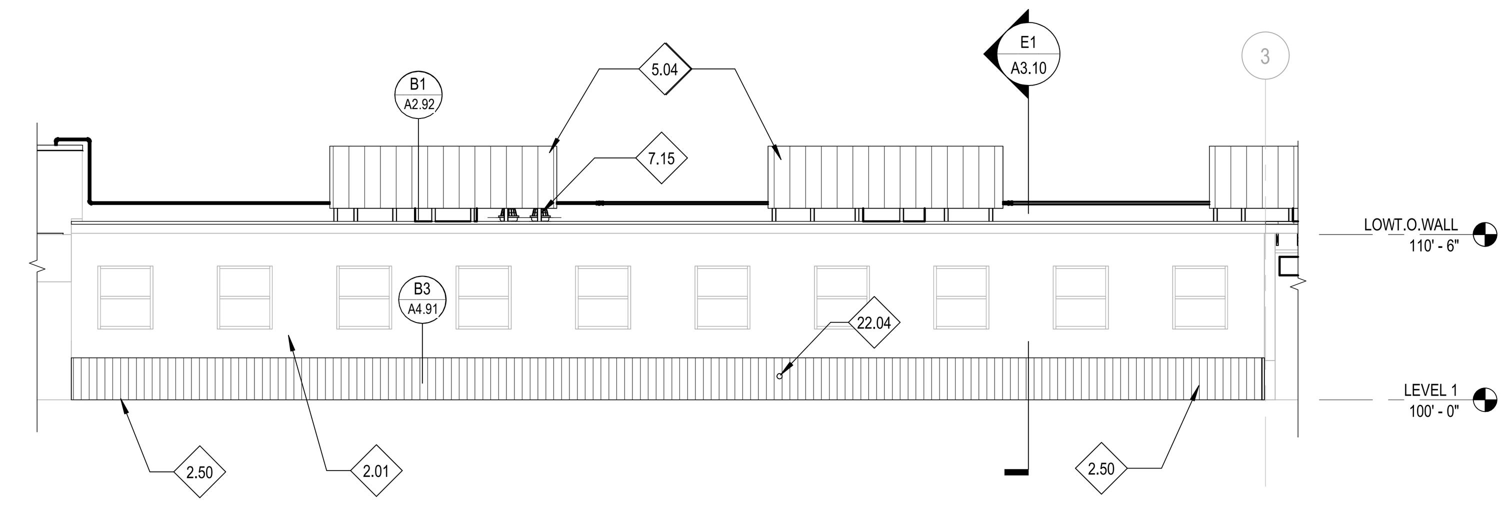
Sheet No:
A2.92



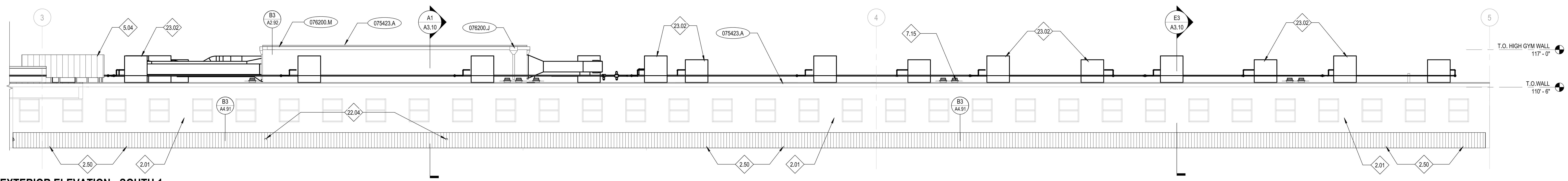
A1 / A3.01 EXTERIOR ELEVATION - NORTH 1
1/8" = 1'-0"



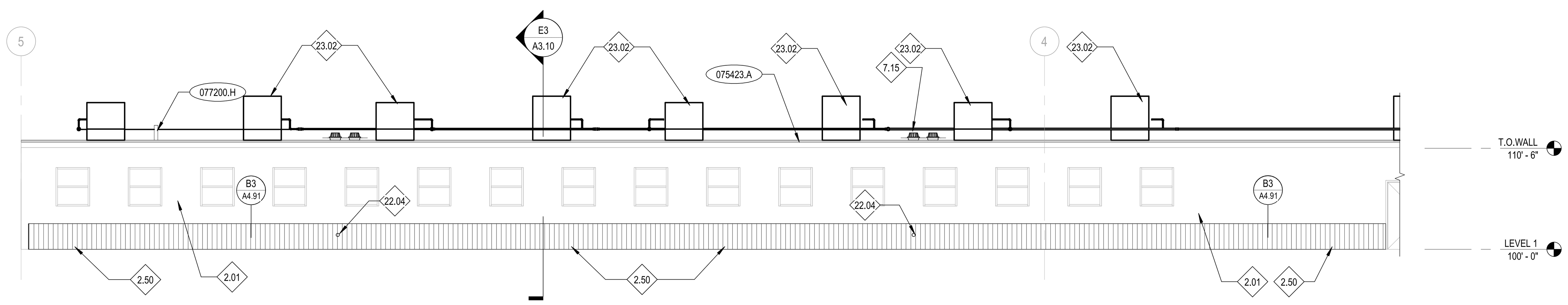
B1 / A3.01 EXTERIOR ELEVATION - WEST
1/8" = 1'-0"



B3 / A3.01 EXTERIOR ELEVATION - SOUTH 2
1/8" = 1'-0"



C1 / A3.01 EXTERIOR ELEVATION - SOUTH 1
1/8" = 1'-0"



D1 / A3.01 EXTERIOR ELEVATION - NORTH 2
1/8" = 1'-0"

KEYNOTES

075423.A	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
076200.J	DOWNSPOUT
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
077200.H	FALL ARREST ANCHOR. FLASH SIMILAR TO DETAIL C1/A2.91.

REFERENCE NOTES

2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
2.50	NEW SHEATHING AND PRE-FINISHED METAL WALL PANEL PAINTED TO MATCH EXISTING
5.04	MECHANICAL SCREENING WALL. RE B1/A2.92.
7.15	NEW ROOF DRAIN, COORDINATE WITH PLUMBING DRAWINGS.
22.04	OVERFLOW ROOF DRAIN. SEE PLUMBING DRAWINGS FOR SIZES AND LOCATIONS.
23.02	NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.

LEGEND

HATCH PATTERN INDICATES AREAS WITH CORRUGATED METAL WALL PANELS.

HATCH PATTERN INDICATES AREAS WITH PREFINISHED METAL WALL PANELS.

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Sheet:
BUILDING ELEVATIONS

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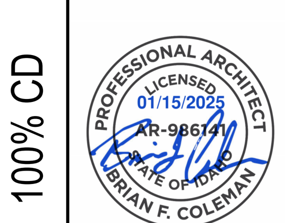

Revisions:

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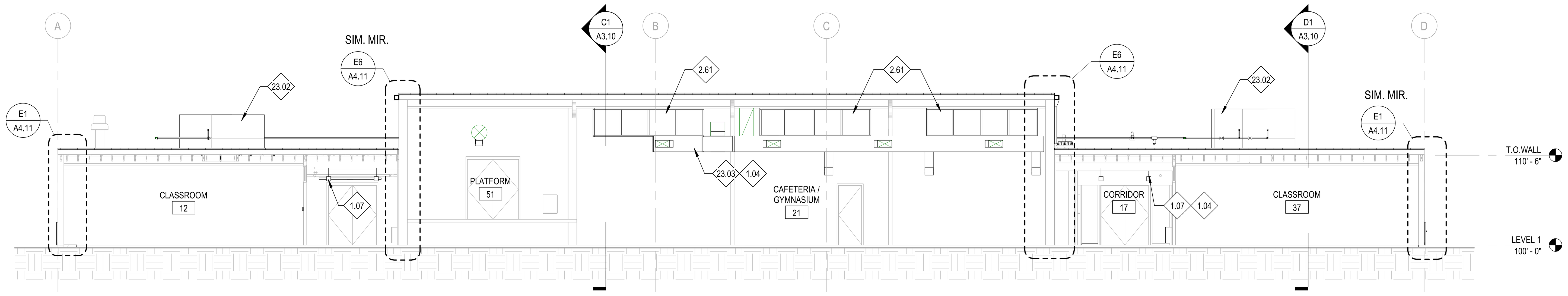
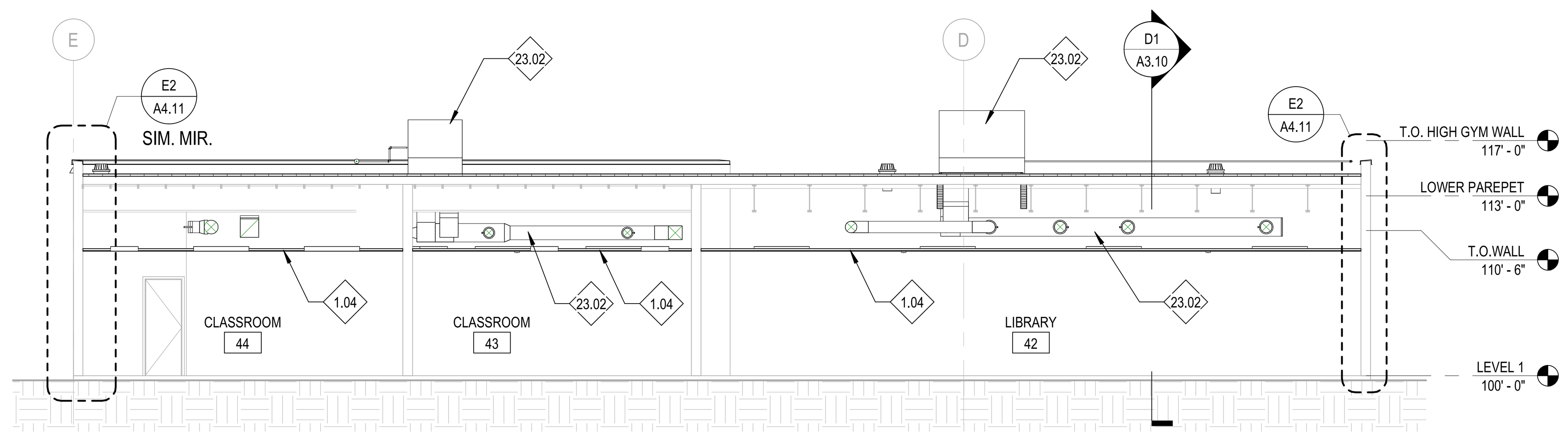
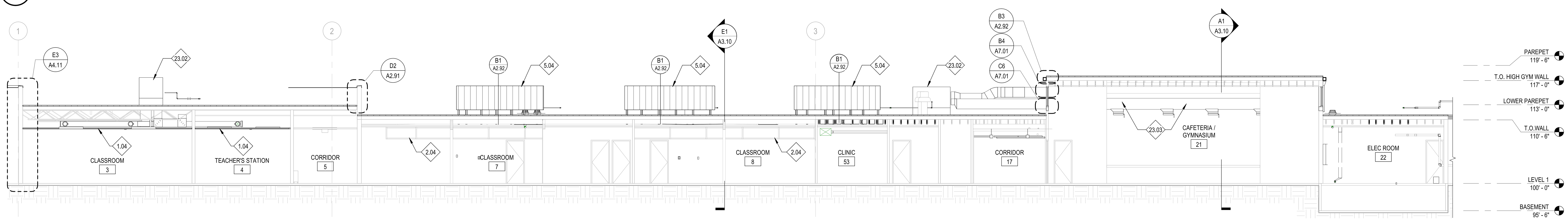
Sheet No:
A3.01



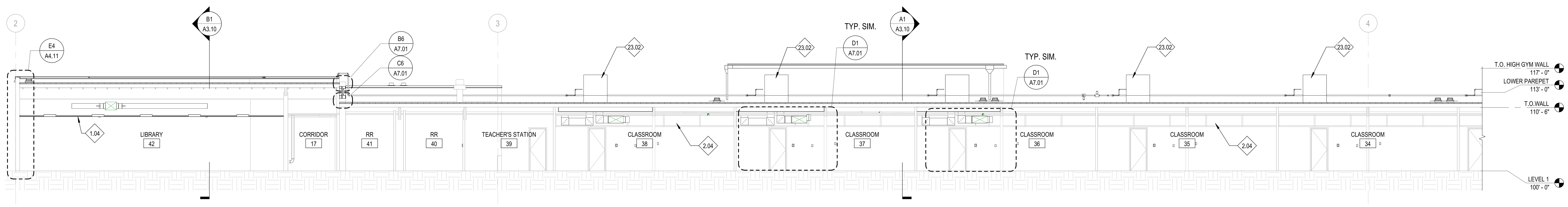
A1 BUILDING SECTION 2
A3.10 1/8" = 1'-0"



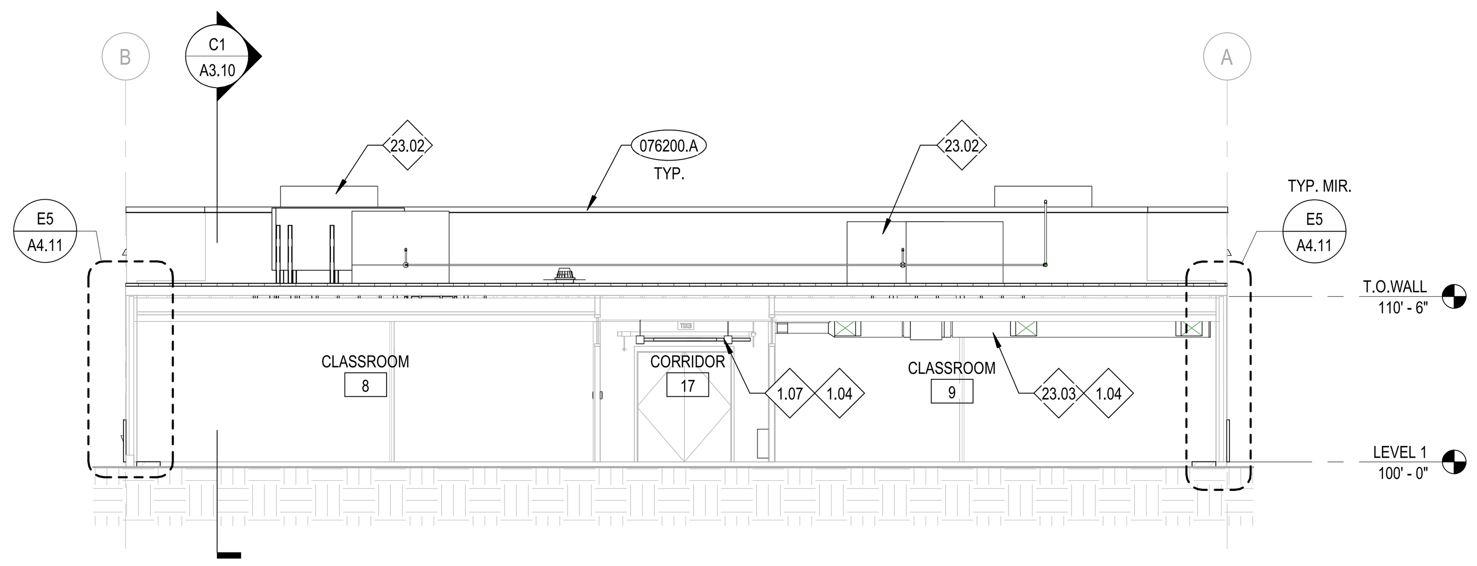
B1 BUILDING SECTION 5
A3.10 1/8" = 1'-0"



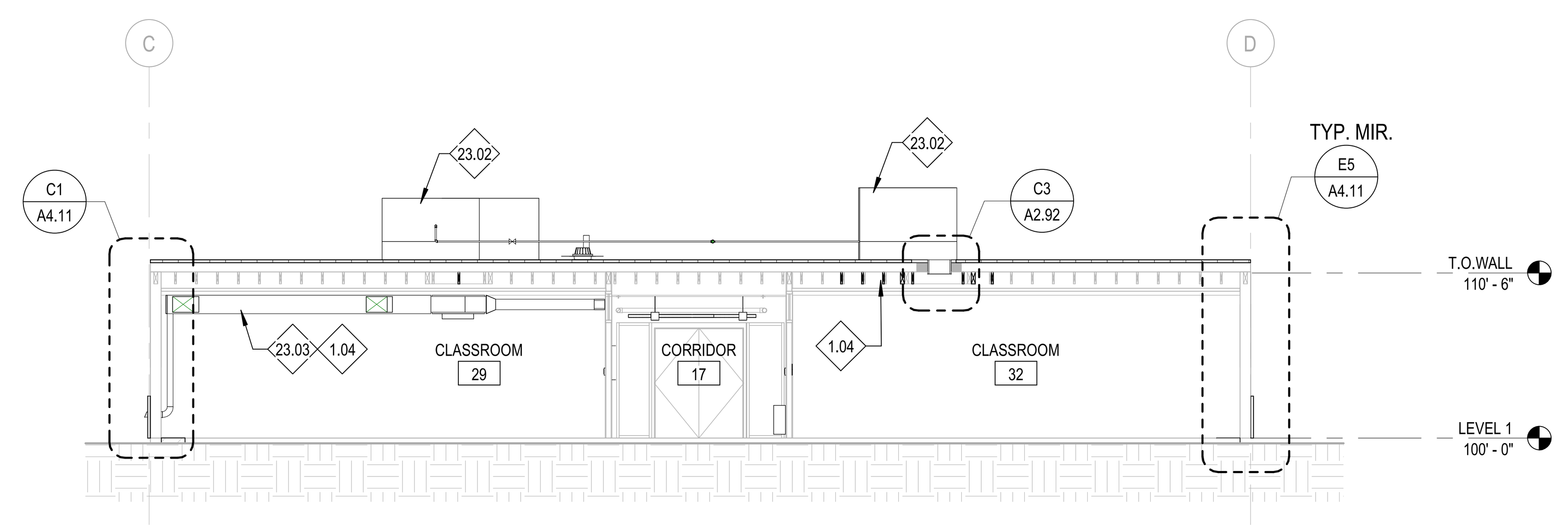
C1 BUILDING SECTION 6
A3.10 1/8" = 1'-0"



D1 BUILDING SECTION 3
A3.10 1/8" = 1'-0"



E1 BUILDING SECTION 1
A3.10 1/8" = 1'-0"



E3 BUILDING SECTION 4
A3.10 1/8" = 1'-0"

GENERAL NOTES

A. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
B. DO NOT SCALE DRAWINGS.
C. FOR ALL EXTERIOR WORK, RE: EXTERIOR ELEVATIONS.
D. FOR ROOF FRAMING COORDINATE WITH STRUCTURAL DRAWINGS

REFERENCE NOTES

1.04	COORDINATE WITH REFLECTED CEILING PLAN.
1.07	LIGHTING FIXTURES, COORDINATE WITH ELECTRICAL DRAWINGS.
2.04	PRESERVE AND PROTECT EXISTING WINDOW SYSTEM
2.61	REMOVE EXISTING WINDOW SYSTEM. PROVIDE NEW CLEARSTORY WINDOW. RE SHEET A7.01.
5.04	MECHANICAL SCREENING WALL. RE B1/A2.92.
23.02	NEW MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.
23.03	NEW DUCT, COORDINATE WITH MECHANICAL DRAWINGS.

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

Sheet:
BUILDING SECTIONS

100% CD

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-986141 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

Sheet No: A3.10

1	2	3	4	5	6

A

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C

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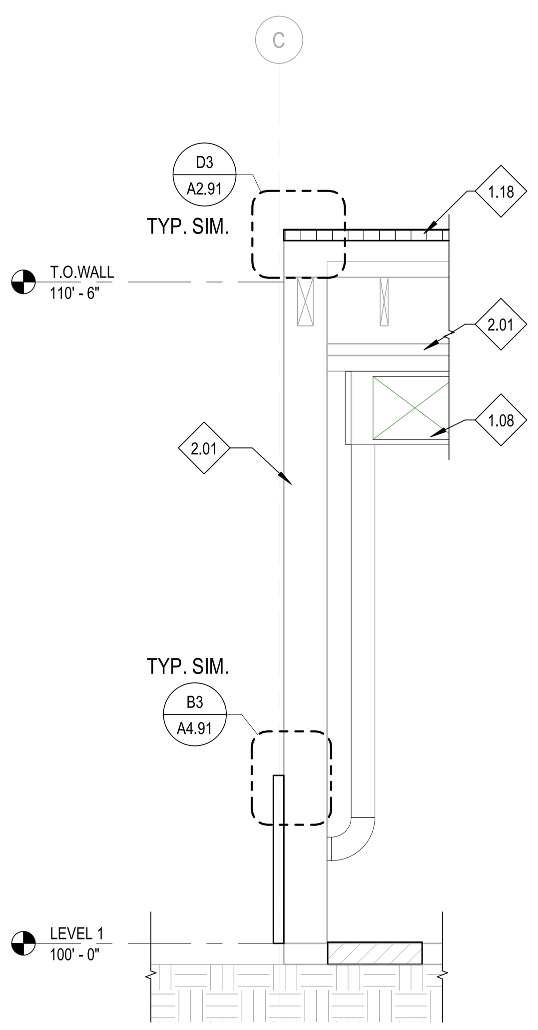
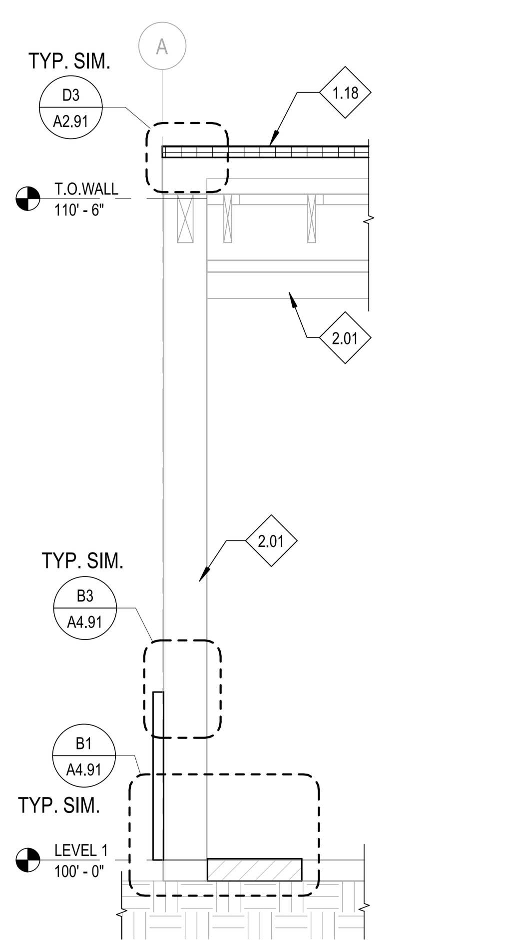
E



C1 A4.11 **WALL SECTION - 7**
1/2" = 1'-0"



E1 A4.11 **WALL SECTION - 1**
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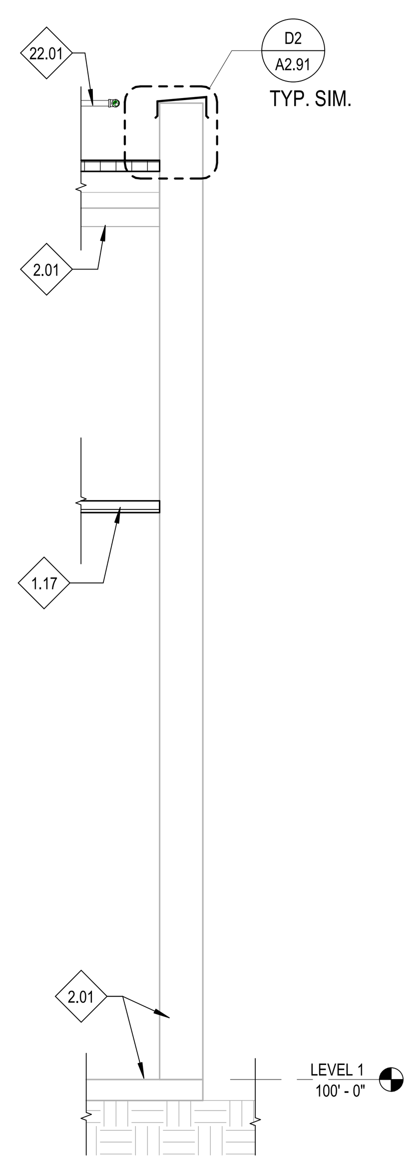

E2 A4.11 **WALL SECTION - 2**
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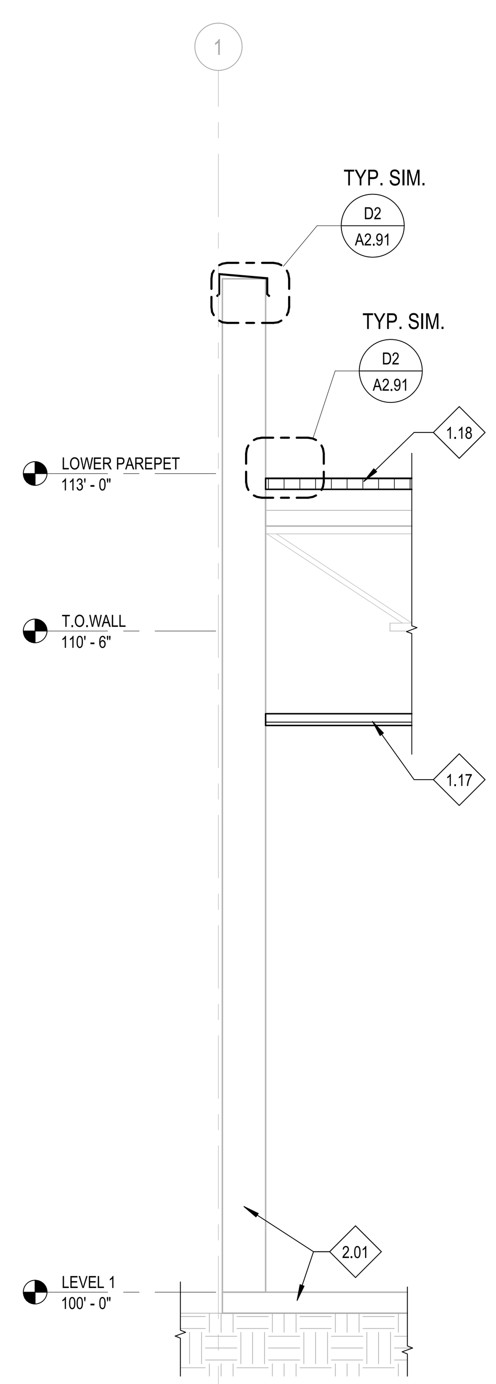
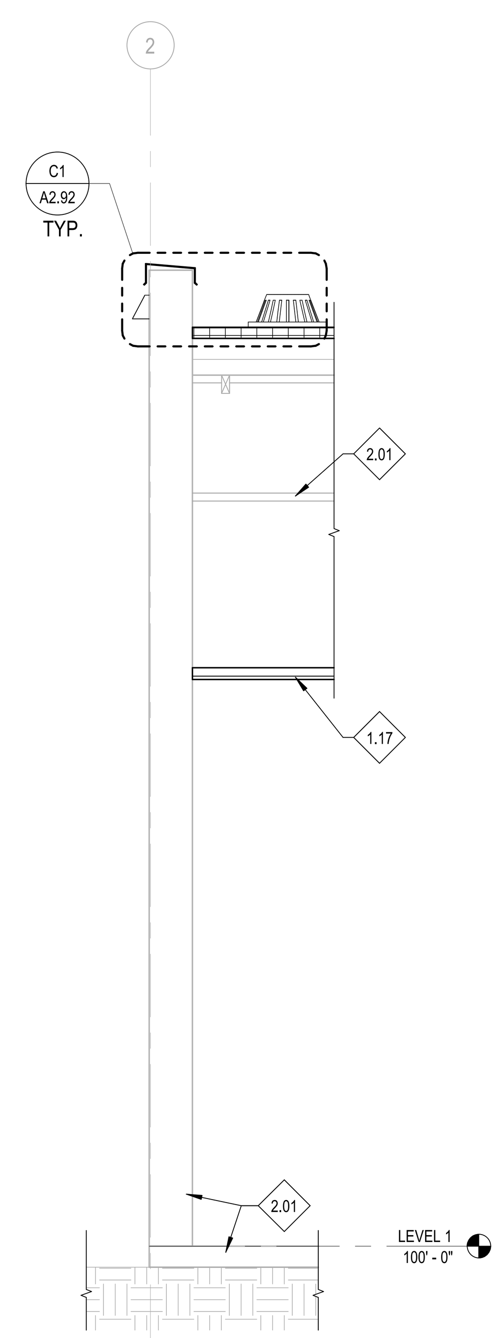
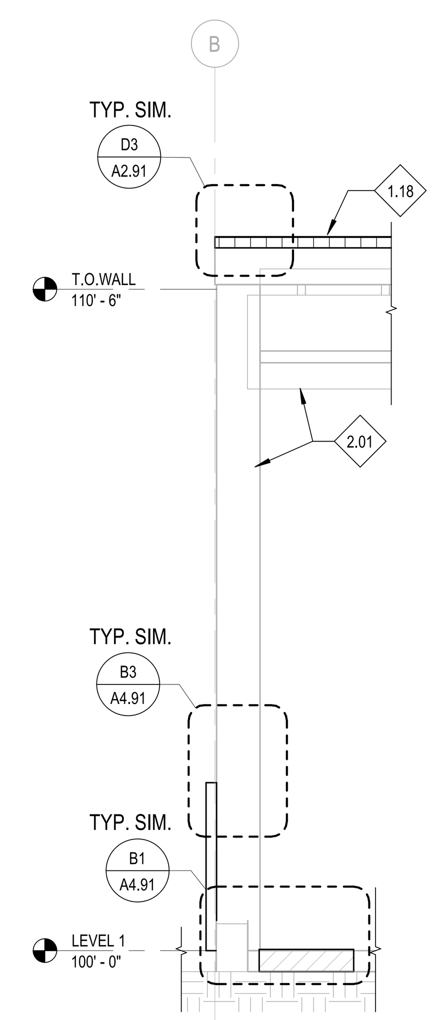


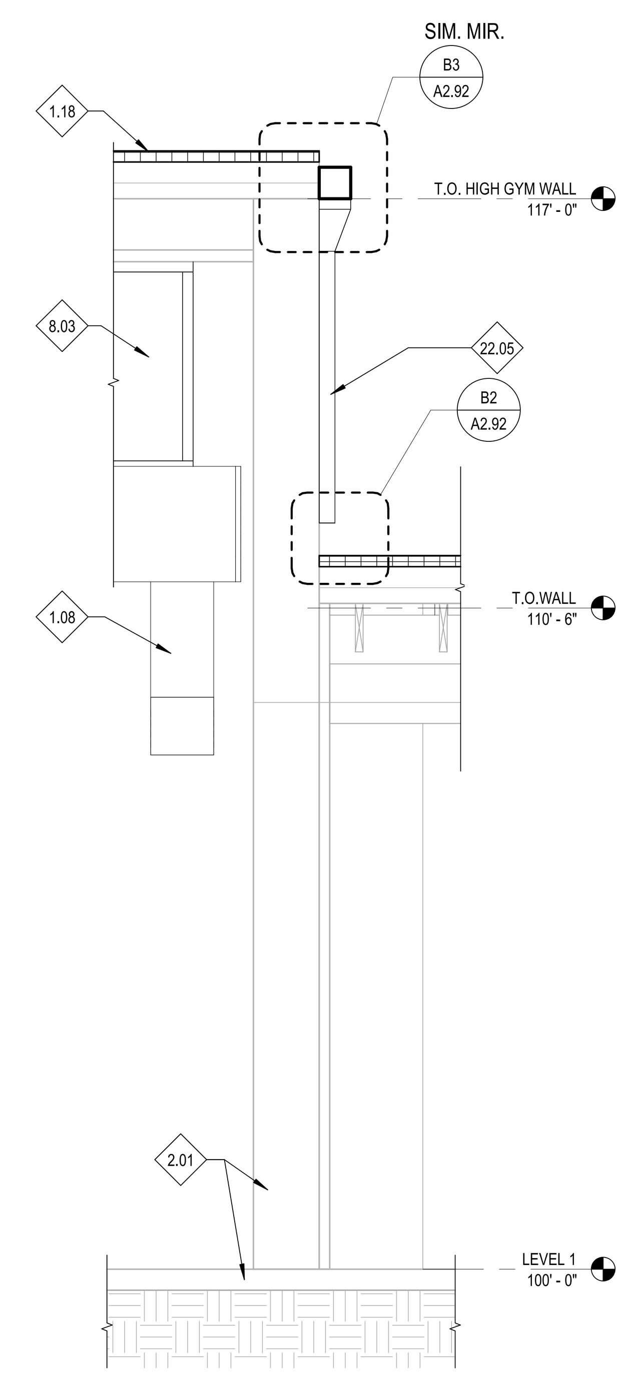
E3 A4.11 **WALL SECTION - 3**
1/2" = 1'-0"



E4 A4.11 **WALL SECTION - 4**
1/2" = 1'-0"



E5 A4.11 **WALL SECTION - 5**
1/2" = 1'-0"



E6 A4.11 **WALL SECTION - 6**
1/2" = 1'-0"

KEYNOTES

REFERENCE NOTES

1.08	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
1.17	RE: CEILING PLAN FOR CEILING TYPES
1.18	REFER D6/A2.91 FOR ROOF COMPOSITION
2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
8.03	WINDOW SYSTEM AND/OR DOOR SYSTEM. RE: FLOOR PLANS AND WINDOW/DOOR TYPES.
22.01	COORDINATE WITH PLUMBING DRAWINGS.
22.05	ROOF DRAIN DOWNSPOUT. SEE PLUMBING DRAWINGS FOR SIZES AND LOCATIONS.

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

Sheet:
EXTERIOR WALL SECTIONS

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PROFESSIONAL ARCHITECT
LICENSED
01/15/2025
AR-986141
STATE OF IDAHO
BRIAN F. COLEMAN

Revisions:

Project No:	24075
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Checked By:	PR
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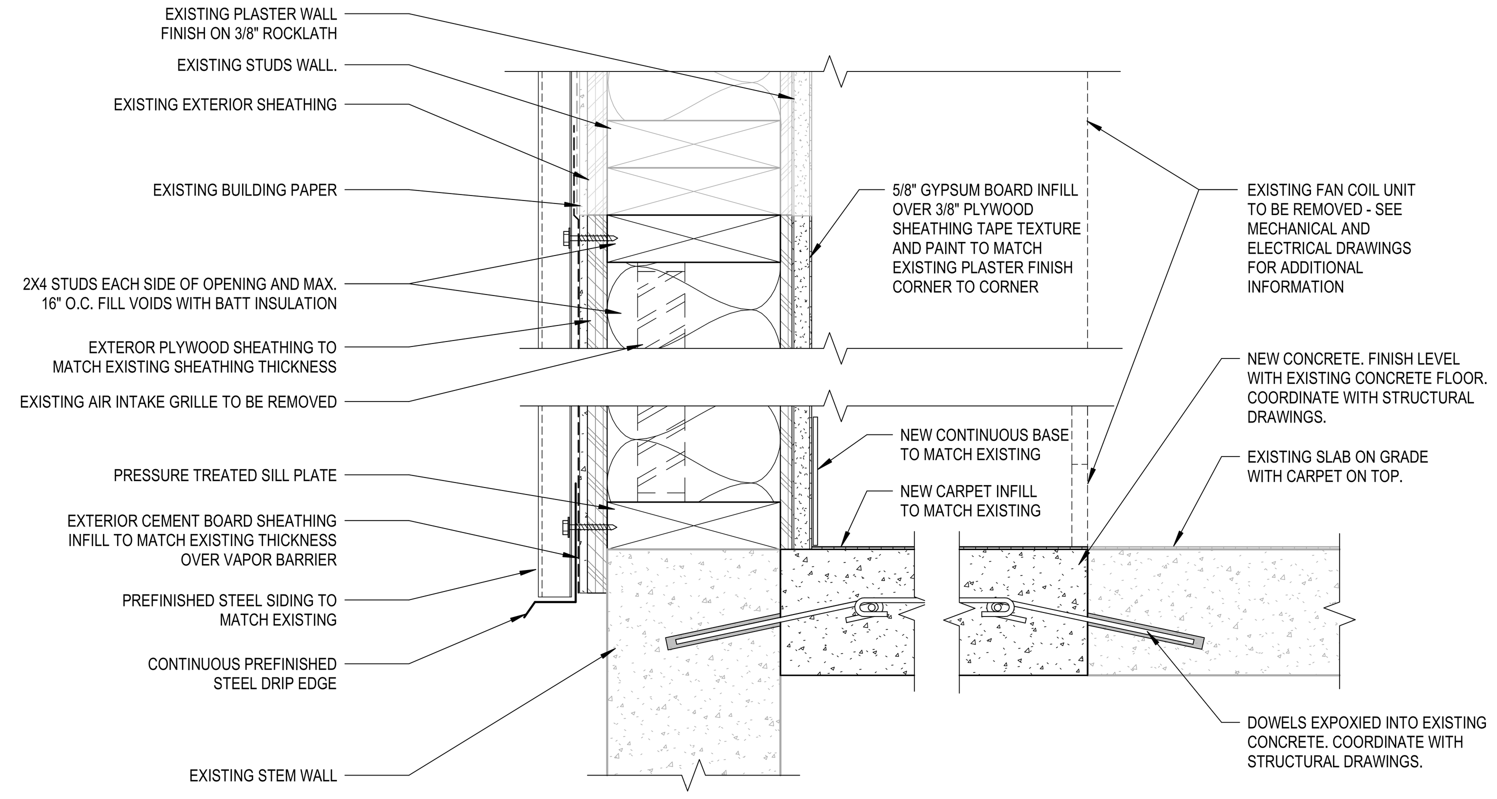
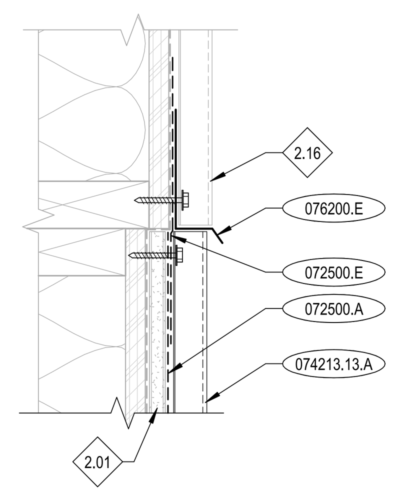
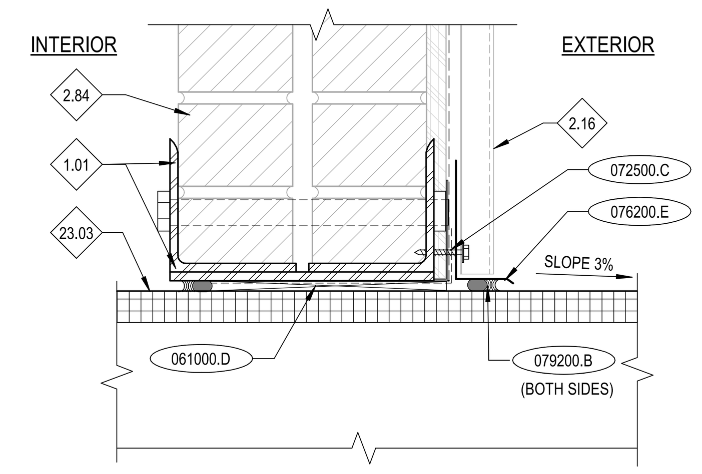
Sheet No:
A4.11



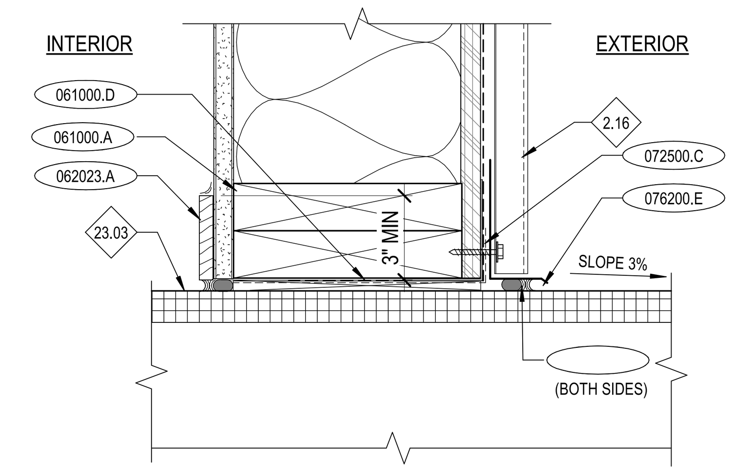
B1 / A4.91 FANCOIL UNIT AND INTAKE GRILL REMOVAL AND INFILL
3" = 1'-0"



B3 / A4.91 METAL SIDING TRANSITION
3" = 1'-0"



A5 / A4.91 DUCT HEAD @ MASONRY EXTERIOR METAL SIDING
3" = 1'-0"



A6 / A4.91 DUCT HEAD @ EXTERIOR METAL SIDING
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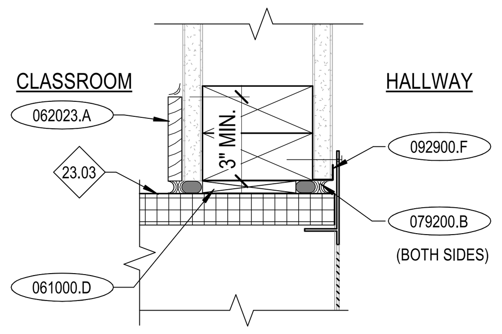
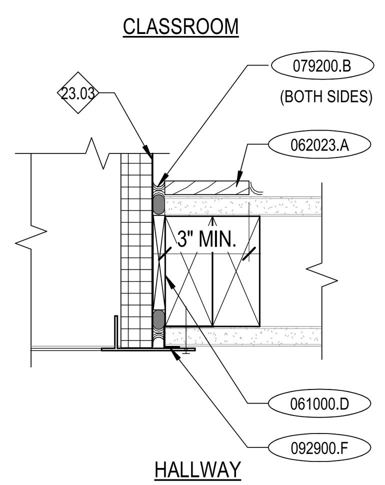
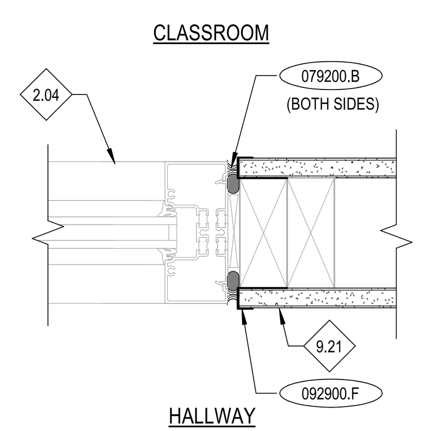


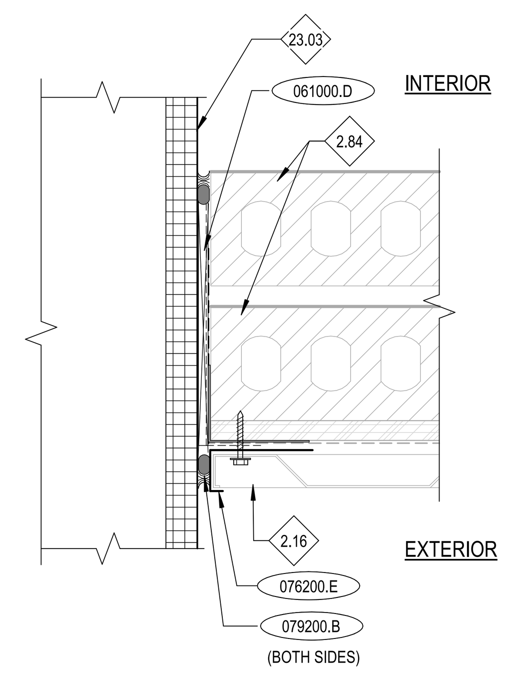
C1 / A4.91 DUCT HEAD/SILL @ GYP
3" = 1'-0"



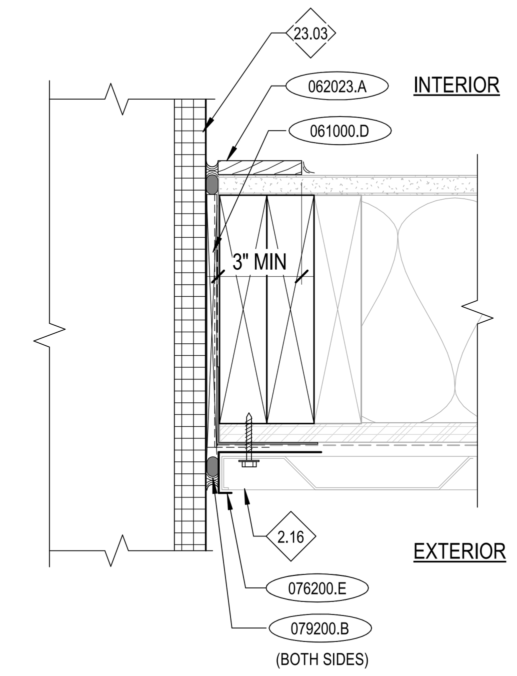
C2 / A4.91 DUCT JAMB @ GYP
3" = 1'-0"



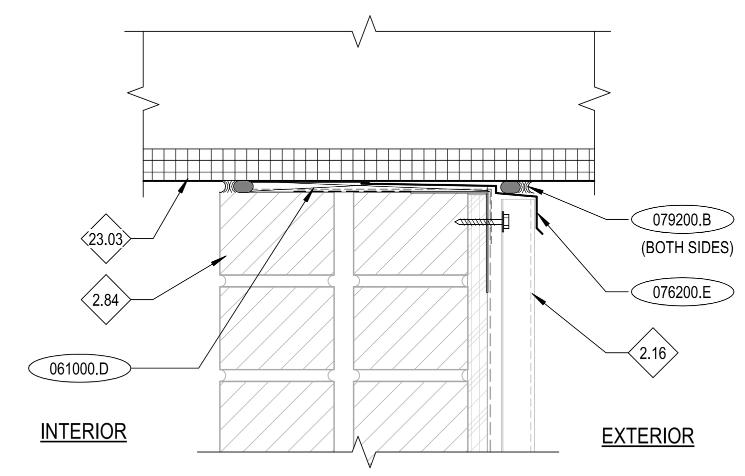
C4 / A4.91 WINDOW JAMB @ GYP INFILL
3" = 1'-0"



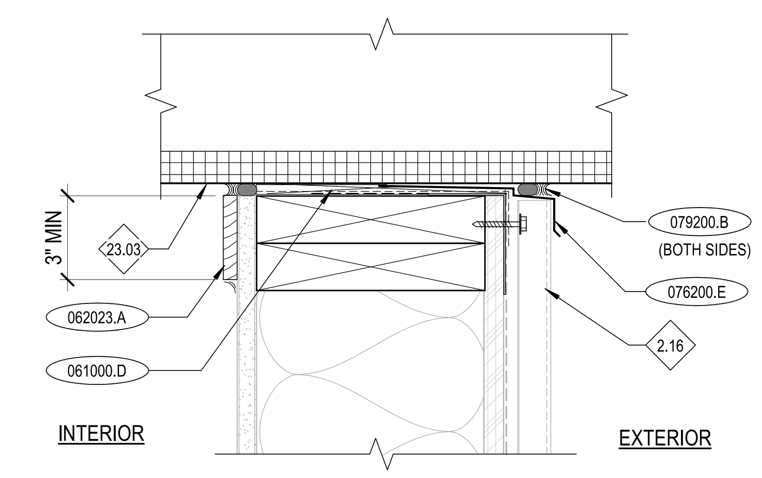
C5 / A4.91 DUCT JAMB @ MASONRY EXTERIOR METAL SIDING
3" = 1'-0"



C6 / A4.91 DUCT JAMB @ EXTERIOR METAL SIDING
3" = 1'-0"



D5 / A4.91 DUCT SILL @ MASONRY EXTERIOR METAL SIDING
3" = 1'-0"



D6 / A4.91 DUCT SILL @ EXTERIOR METAL SIDING
3" = 1'-0"

GENERAL NOTES

A. FOR SIZE AND CONNECTION DETAILS OF STEEL FRAMING COMPONENTS (BEAMS AND COLUMNS), STEEL JOISTS AND GIRDERS, STEEL DECKING AND OTHER STEEL SECTIONS, REFERENCE THE STRUCTURAL DRAWINGS.
B. FOR REINFORCING OF CONCRETE SLABS, FOOTINGS AND FOUNDATIONS, COORDINATE WITH STURCTURAL DRAWINGS.
C. FOR WINDOW TYPES, COORDINATE WITH FLOOR PLANS.
D. PROVIDE BITUMINOUS DAMPROOFING ON ALL EXTERIOR FOUNDATION WALLS AS PER SPECIFICATION DIVISION 7. PROVIDE BELOW GRADE ONLY.
E. PAINT ALL EXPOSED TO VIEW STRUCTURAL STEEL, DECK, AND ASSOCIATED STRUCTURAL ITEMS.
F. PAINT ALL EXPOSED TO VIEW MECHANICAL DUCTWORK AND ASSOCIATED ITEMS, ELECTRICAL CONDUIT AND ASSOCIATED ITEMS, PLUMBING AND FIRE PROTECTION LINES AND ALL ASSOCIATED ITEMS, UNLESS NOTED OTHERWISE.
G. RE: FLOOR PLANS FOR WALL TYPES.
H. FLOOR JOISTS, BEAMS, ROOF DECK, AND SUPPORTING COLUMNS SHALL BE FIRE-RESISTIVE-RATED PER ASSEMBLIES IN DIV. 7 SECTION "SPRAYED FIRE RESISTIVE-RATED MATERIALS."
I. WALL DIMENSIONS ARE TO GRID LINE OR FACE OF WALL STRUCTURE. "CLEAR" DIMENSIONS ARE TO FACE OF WALL FINISH.
J. SEE CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
K. SEE G SERIES SHEETS FOR WALL TYPES AND TYPICAL ACCESSIBILITY CLEARANCE AND COMPLIANCE REQUIREMENTS.
L. DO NOT SCALE DRAWINGS.

KEYNOTES

061000.A	DIMENSIONAL LUMBER
061000.D	SHIM AS REQUIRED.
062023.A	WOOD TRIM. PAINT TO MATCH EXISTING.
072500.A	WEATHER RESISTIVE BARRIER
072500.C	SELF ADHERED FLEXIBLE FLASHING
072500.E	LAP SELF ADHERED FLEXIBLE FLASHING OVER EXISTING AND NEW WEATHER BARRIER
074213.13.A	FORMED METAL WALL PANELS
076200.E	FLASHING AND DRIP EDGE
079200.B	JOINT SEALANT
092900.F	METAL J BEAD

REFERENCE NOTES

1.01	COORDINATE WITH STRUCTURAL DRAWINGS.
2.01	PRESERVE AND PROTECT EXISTING CONSTRUCTION
2.04	PRESERVE AND PROTECT EXISTING WINDOW SYSTEM
2.16	EXISTING METAL WALL PANEL TO BE PRESERVED AND PROTECTED.
2.84	PRESERVE AND PROTECT EXISTING MASONRY WALL SYSTEM TO REMAIN. REPAIR DAMAGED AREAS TO MATCH ADJACENT WALL FINISH.
9.21	PATCH AND TEXTURE WALL OPENINGS FLUSH TO ADJACENT EXISTING GYP BOARD SURFACES. PAINT WALL CORNER TO CORNER TO MATCH EXISTING.
23.03	NEW DUCT, COORDINATE WITH MECHANICAL DRAWINGS.

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Harrison Elementary School
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Sheet:
EXTERIOR & INTERIOR DETAILS

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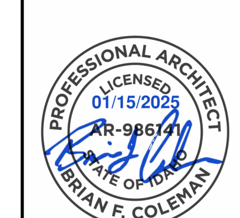

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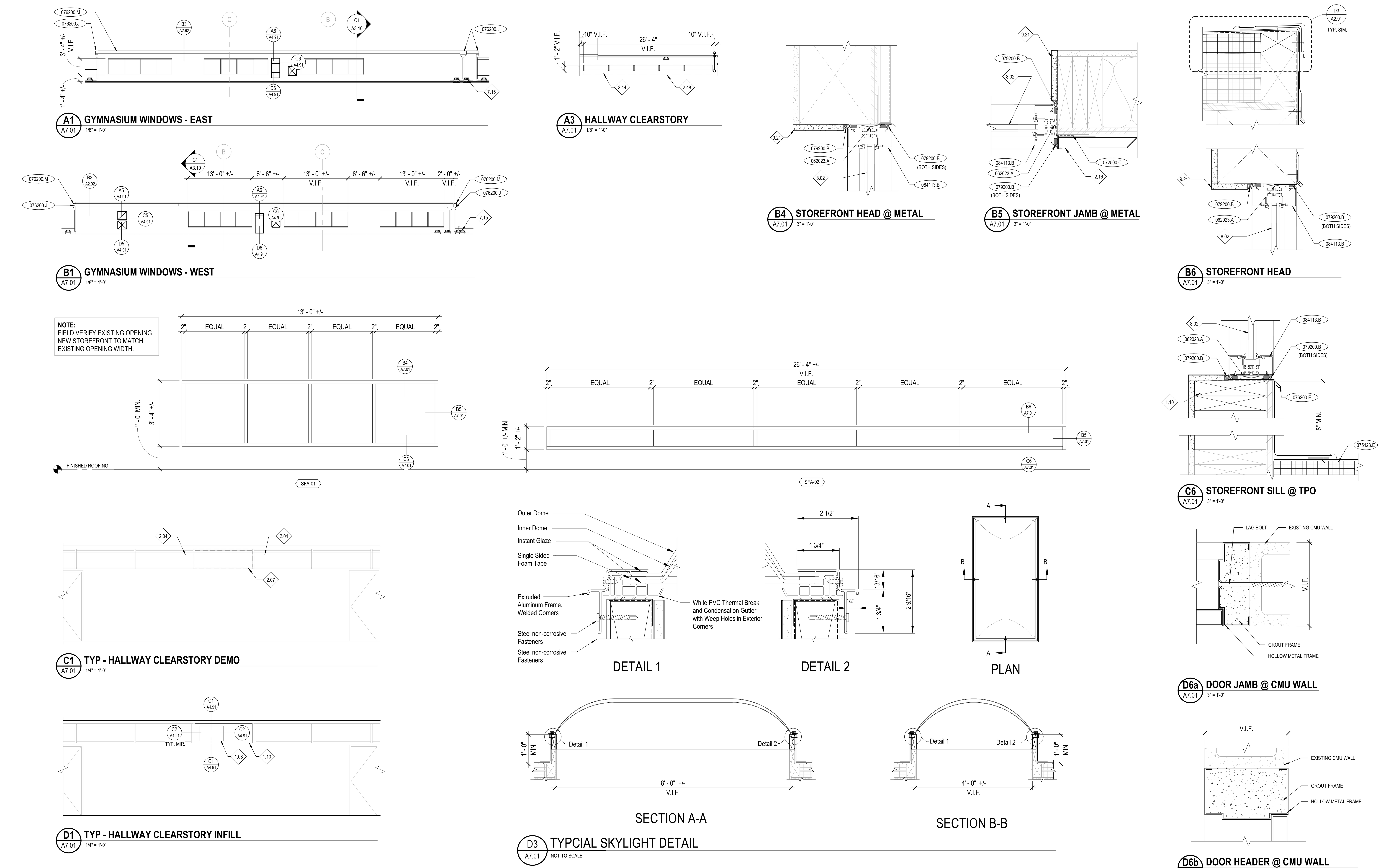


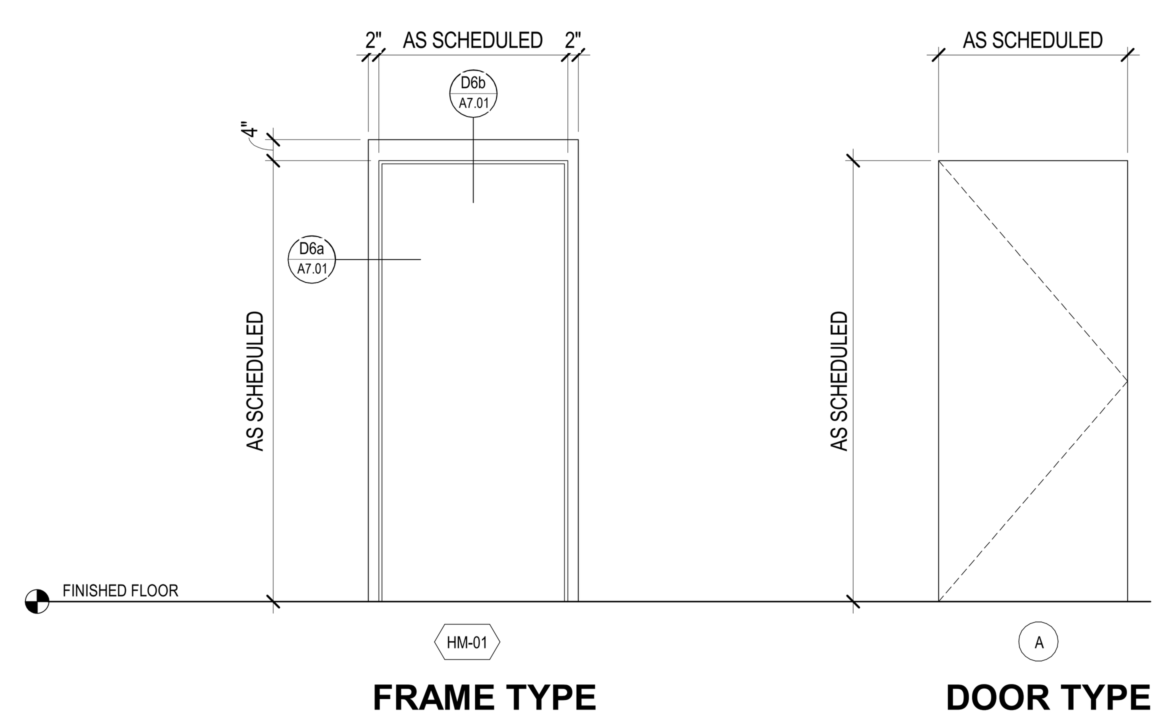
DOOR SCHEDULE																							
	DOOR				FRAME				REMARKS														
DOOR#	TYPE	WIDTH	HEIGHT	MATERIAL	TYPE	MATERIAL	FINISH	HARDWARE SET	1.CARD READER	2.KEYED LOCK	3.KEY PAD	4.PRIVACY LOCK	5.ELECTRIC LOCK	6.AUTO DOOR OPENER	7.OPENER PADDLE	8.PROXIMITY READER	9.AUTO DOOR SENSOR	10.MAGNETIC HOLD OPEN	11.FIRE-RATING	12.SWINGS 180°	13.X-RAY LEAD DOOR	14.PANIC HARDWARE	REMARKS
1	A	3' - 0"	7' - 0"	HM	HM-01	HM	P	HW-1		X												X	

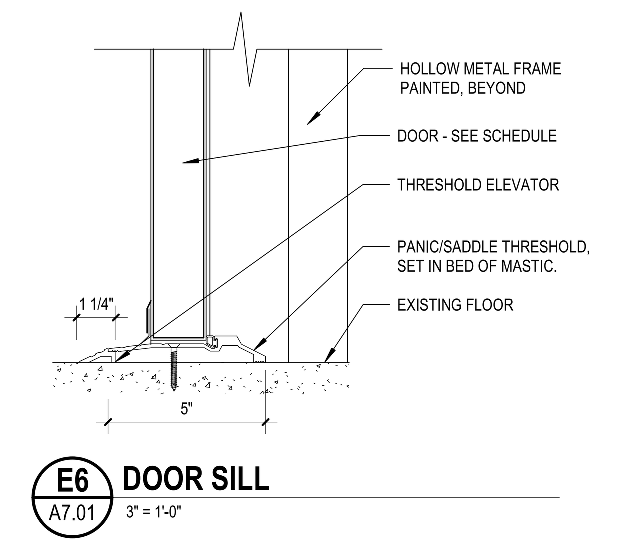
HW SET 1:

FOR USE ON DOOR #: 1
EACH TO HAVE:

3	EA.	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA.	SURFACE CLOSER	4040XP HEDA	689	LCN
1	EA.	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA.	WALL STOP	WS406/407CCV	630	IVE
1	EA.	GASKETING	488SBK PSA	BK	ZER
1	EA.	PANIC HARDWARE	S2108 X V4908A	630	BES
1	EA.	CYLINDER	12E72-S2-RP	626	BES

* KEYED TO DISTRICT STANDARD





GENERAL NOTES

A. PROVIDE FULLY TEMPERED FIRE-RATED GLAZING (08800.C) IN METAL FRAMES AND DOORS WHERE 60M ASSEMBLY AT DOORS ARE REQUIRED (RE: DOOR SCHEDULE). FIRE-RATED GLAZING ASSEMBLY SHALL BE 60M.
B. PROVIDE SAFETY GLAZING WHERE REQUIRED BY I.B.C. SECTION 2406 AND SPECIFICATION SECTION 08800 - GLAZING.
C. PROVIDE FLOAT GLASS (08800.A) AT CONDITIONS OTHER THAN THOSE DESCRIBED IN THE GENERAL NOTES.
D. GLASS AT 60M OPENINGS SHALL BE FULLY TEMPERED FIRE-RATED GLAZING AND CARRY 60M LABEL. WIRE GLASS DOES NOT CARRY THIS LABEL.
E. FIELD VERIFY ALL ROUGH OPENING DIMENSIONS PRIOR TO SHOP DRAWING SUBMITTAL AND SUBSEQUENT FABRICATION OF ALL DOOR AND WINDOW FABRICATION/INSTALLATION.
F. FOR DOOR AND WINDOW FRAME THICKNESS, RE: FLOOR PLANS AND ASSEMBLY DETAILS.
G. REFERENCE PLANS AND ELEVATIONS FOR WINDOW LOCATIONS AND TYPES.
H. FIRE AND SMOKE ASSEMBLY DOORS SHALL BE LABELED BY AN APPROVED AGENCY AND IN COMPLIANCE WITH IBC SECTION 716.5.7.1.

KEYNOTES

062023.A	WOOD TRIM. PAINT TO MATCH EXISTING.
072500.C	SELF ADHERED FLEXIBLE FLASHING
075423.E	ROOF INSULATION
076200.E	FLASHING AND DRIP EDGE
076200.J	DOWNSPOUT
076200.M	CONTINUOUS FASCIA GUTTER, TO BE INSTALLED ALONG ENTIRE PERIMETER OF THE HIGH WALL.
079200.B	JOINT SEALANT
084113.B	ALUMINUM STOREFRONT FRAMING SYSTEM

REFERENCE NOTES

1.08	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
1.10	BUILD UP CURB AT EXISTING WINDOW OPENING TO THE MINIMUM CURB HEIGHT AS SHOWN IN WINDOW ELEVATIONS TO ACCOMMODATE NEW STOREFRONT HEIGHT AND SUFFICIENT ROOFING TRANSITION.
2.04	PRESERVE AND PROTECT EXISTING WINDOW SYSTEM
2.07	REMOVE SECTION OF GLAZING WITHIN THE EXISTING WINDOW SYSTEM FOR NEW WORK. PROTECT IN PLACE WOOD FRAMES AND ADJACENT GLAZING SECTIONS WITHIN THE WINDOW SYSTEM. COORDINATE LOCATION WITH MECH PLANS.
2.16	EXISTING METAL WALL PANEL TO BE PRESERVED AND PROTECTED.
2.44	INFILL EXISTING OPENING. SEE DETAIL C6/ A7.01
2.48	EXISTING CLEARSTORY WINDOW OPENING.
7.15	NEW ROOF DRAIN, COORDINATE WITH PLUMBING DRAWINGS.
8.02	REFER TO WINDOW TYPES FOR GLAZING.
9.21	PATCH AND TEXTURE WALL OPENINGS FLUSH TO ADJACENT EXISTING GYP BOARD SURFACES. PAINT WALL CORNER TO CORNER TO MATCH EXISTING.

ABBREVIATIONS

ALUM	- ALUMINUM
FF	- FACTORY FINISH AS SPECIFIED
HM	- HOLLOW METAL
HPC	- HIGH PERFORMANCE COATING
M	- MINUTES
P#	- PAINT COLOR "NUMBER" (RE: DIVISION 9 SECTION "INTERIOR PAINTING".
WD	- WOOD
S	- SMOKE
AN	- ANODIZED

LEGEND

HATCH IN FRAME UNITS INDICATES AREAS OF FULLY-TEMPERED FLOAT GLASS. RE: DIVISION 088000 IN THE SPECIFICATIONS.

NO HATCH AREA IN FRAME UNITS INDICATES AREAS OF FLOAT GLASS. RE: DIVISION 088000 IN THE SPECIFICATIONS.

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Project:
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Harrison Elementary School
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Twin Falls, ID 83301

Sheet:
WINDOW FRAME & DETAILS

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PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-986141 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

Project No: 24075
Drawn By: NB
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Sheet No:
A7.01

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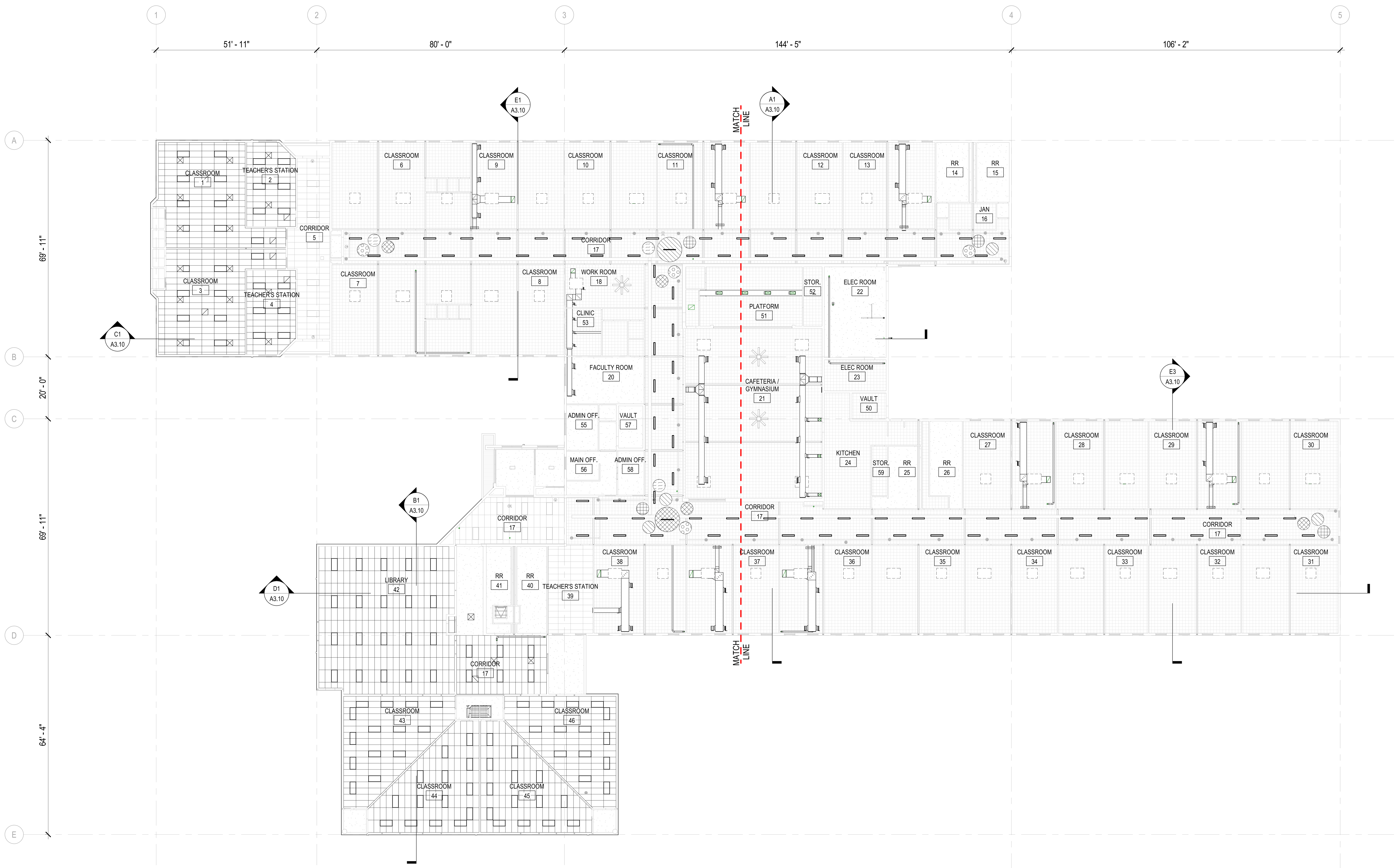
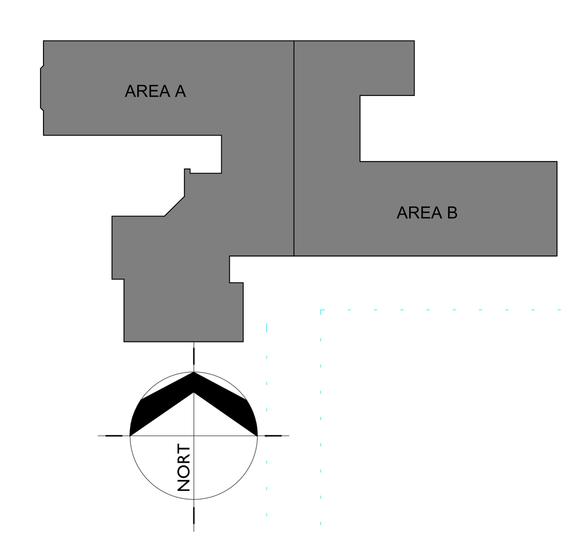


E1 / A9.01 — COMPOSITE CEILING PLAN
1/16" = 1'-0"



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GENERAL NOTES

1. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ITEMS TO BE PROVIDED AT THE CEILING PLANE AND IN THE WORK.
2. INSTALL ALL SUSPENSION SYSTEMS FOR ACOUSTICAL PANEL CEILINGS PER PROVISIONS OF ASTM C 635 AND ASTM C 636.
3. COORDINATE WITH MECHANICAL & ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR PHYSICAL SIZES OF ALL CEILING GRILLES, DIFFUSERS, FIXTURES, CANS, AND ALL RELATED ITEMS.
4. PAINT ALL EXPOSED-TO-VIEW STRUCTURAL DECK, BEAMS AND ASSOCIATED STRUCTURAL ITEMS PAINT COLOR P-9, UNLESS OTHERWISE NOTED. RE: DIVISION 9 SECTION "INTERIOR PAINTING".
5. PAINT ALL EXPOSED-TO-VIEW MECHANICAL DUCTWORK AND ASSOCIATED ITEMS, ELECTRICAL CONDUIT, CABLE TRAYS AND ASSOCIATED ITEMS, PLUMBING AND FIRE PROTECTION LINES AND ALL ASSOCIATED ITEMS PAINT COLOR P-9, UNLESS OTHERWISE NOTED. RE: DIVISION 9 SECTION "INTERIOR PAINTING".
6. RE: DIVISION 9 SECTION "INTERIOR PAINTING" FOR ACOUSTIC CEILING TILE PAINT SYSTEM.
7. NEW WORK SHALL ALLOW FOR CONTINUED FUNCTIONALITY OF THE EXISTING EXIT SIGNS AND SECURITY CAMERAS. ADJUST EXISTING EXIT SIGNS AND SECURITY CAMERAS WHERE NECESSARY AND OTHER ASSOCIATED ITEMS. SEE MECHANICAL, PLUMBING, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR OTHER ITEMS REQUIRING ADJUSTMENTS.
8. PAINT ALL EXISTING AND NEW ITEMS INCLUDING BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ITEMS ABOVE NEW CEILING CLOUDS.

CEILING FINISH LEGEND

- C-2, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-4, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-5, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-7, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-8, PANEL CEILING COLOR - SEE SPEC SECTION 095113

LEGEND

- 2' x 4' ACOUSTICAL CEILING METAL SUSPENSION SYSTEM WITH ACOUSTICAL PANEL CEILING UNITS, APC-1, U.N.O. RE: DIVISION 09 - FINISHES IN THE SPECIFICATIONS
- AREA OF CEILING INFILL
- LIGHTING FIXTURES, COORDINATE WITH ELECTRICAL DRAWINGS.
- MECHANICAL FIXTURES, COORDINATE WITH MECHANICAL DRAWINGS.
- ACCESS DOOR. RE: SPECIFICATION SECTION 077200.B
- 8'-0" DIAMETER CIRCLE CLOUD
- 4'-0" DIAMETER CIRCLE CLOUD

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Sheet:
COMPOSITE CEILING PLAN

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

Project No:	24075
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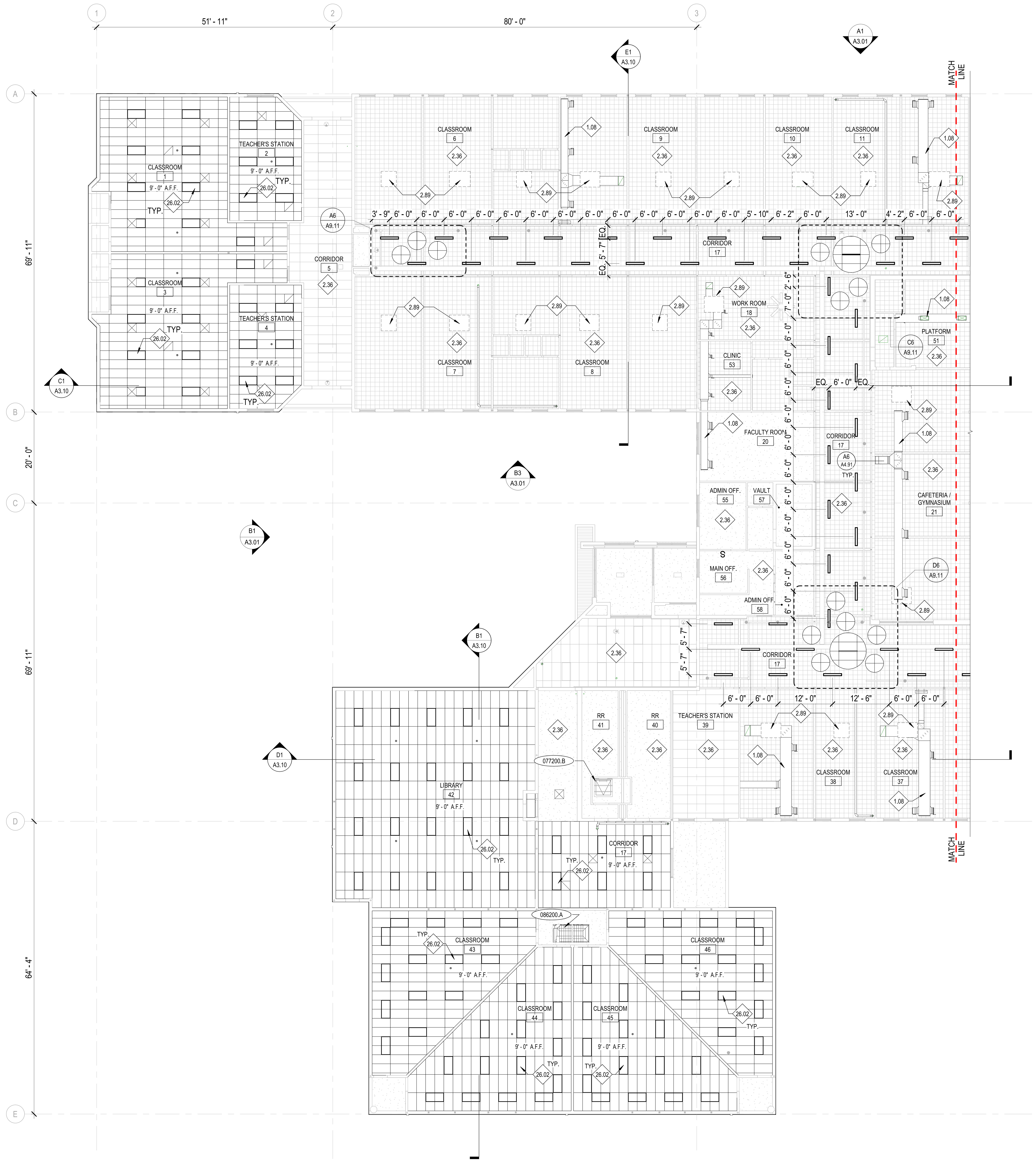
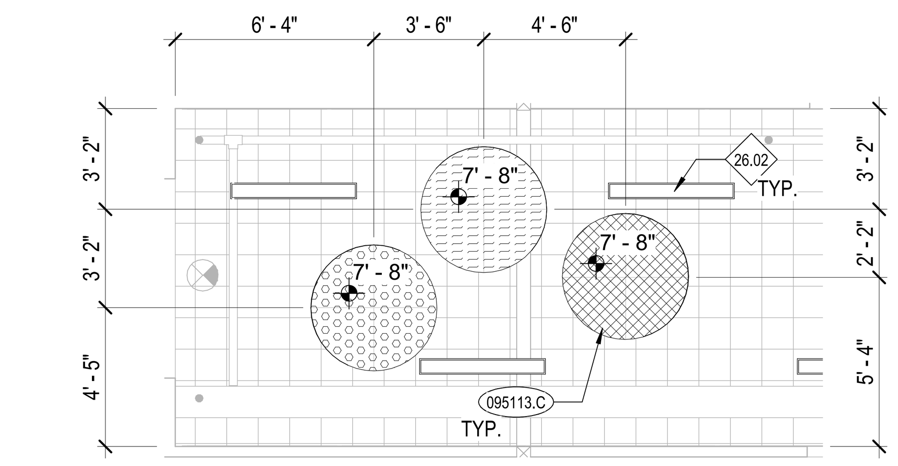


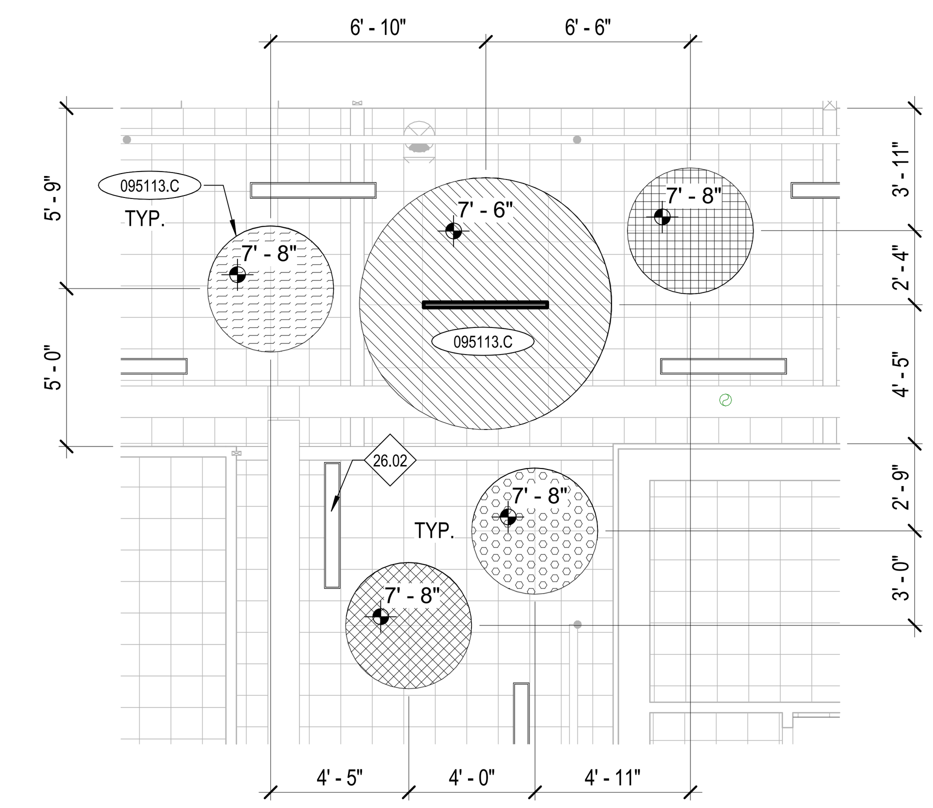
E1 AREA A CEILING PLAN

A9.11 3/32" = 1'-0"



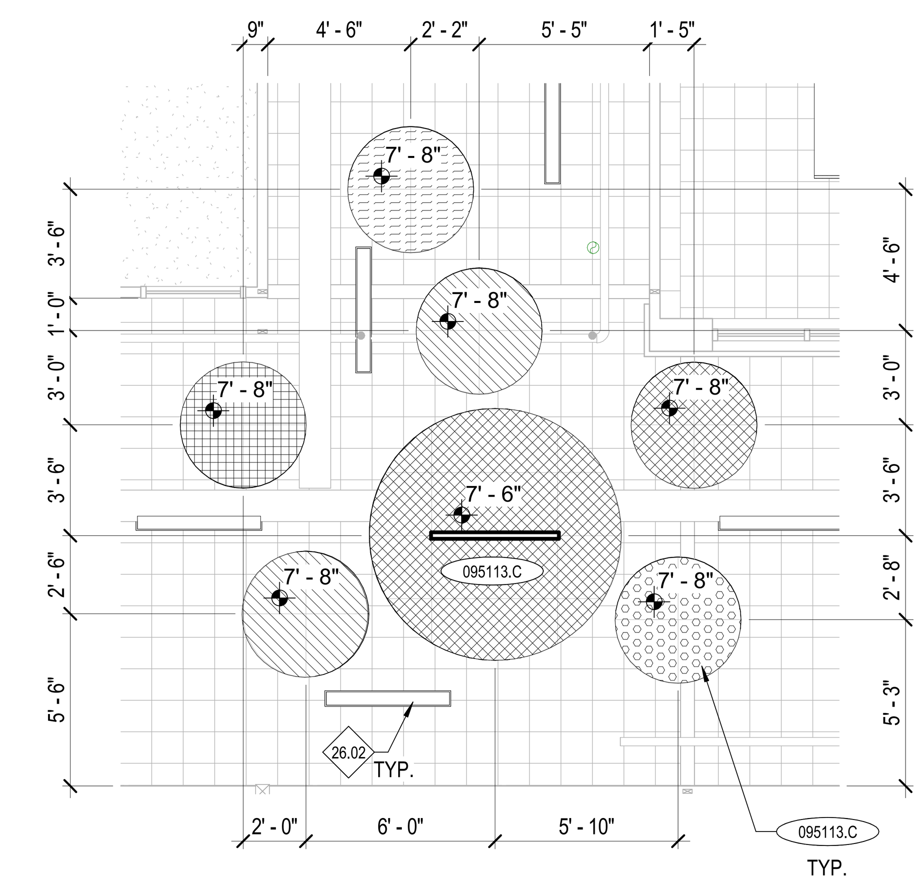
A6 SMALL CEILING CLOUD - NORTH WEST

A9.11 1/4" = 1'-0"



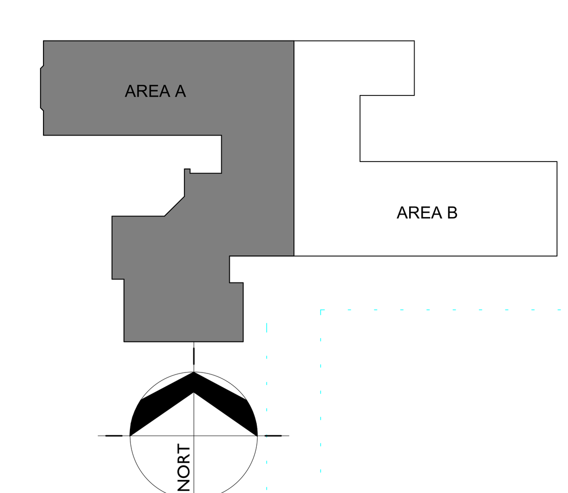
C6 LARGE CEILING CLOUD - NORTH

A9.11 1/4" = 1'-0"



D6 LARGE CEILING CLOUD - SOUTH

A9.11 1/4" = 1'-0"



GENERAL NOTES

1. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ITEMS TO BE PROVIDED AT THE CEILING PLANE AND IN THE WORK.
2. INSTALL ALL SUSPENSION SYSTEMS FOR ACOUSTICAL PANEL CEILINGS PER PROVISIONS OF ASTM C 635 AND ASTM C 636.
3. COORDINATE WITH MECHANICAL & ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR PHYSICAL SIZES OF ALL CEILING GRILLES, DIFFUSERS, FIXTURES, CANS, AND ALL RELATED ITEMS.
4. PAINT ALL EXPOSED-TO-VIEW STRUCTURAL DECK, BEAMS AND ASSOCIATED STRUCTURAL ITEMS PAINT COLOR P-9, UNLESS OTHERWISE NOTED. RE: DIVISION 9 SECTION "INTERIOR PAINTING".
5. PAINT ALL EXPOSED-TO-VIEW MECHANICAL DUCTWORK AND ASSOCIATED ITEMS, ELECTRICAL CONDUIT, CABLE TRAYS AND ASSOCIATED ITEMS, PLUMBING AND FIRE PROTECTION LINES AND ALL ASSOCIATED ITEMS PAINT COLOR P-9, UNLESS OTHERWISE NOTED. RE: DIVISION 9 SECTION "INTERIOR PAINTING".
6. RE: DIVISION 9 SECTION "INTERIOR PAINTING" FOR ACOUSTIC CEILING TILE PAINT SYSTEM.
7. NEW WORK SHALL ALLOW FOR CONTINUED FUNCTIONALITY OF THE EXISTING EXIT SIGNS AND SECURITY CAMERAS. ADJUST EXISTING EXIT SIGNS AND SECURITY CAMERAS WHERE NECESSARY AND OTHER ASSOCIATED ITEMS. SEE MECHANICAL, PLUMBING, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR OTHER ITEMS REQUIRING ADJUSTMENTS.
8. PAINT ALL EXISTING AND NEW ITEMS INCLUDING BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ITEMS ABOVE NEW CEILING CLOUDS.

KEYNOTES

077200.B	ROOF HATCH
086200.A	FIBERGLASS-SANDWICH-PANEL SKYLIGHT ASSEMBLY
095113.C	APC-3

REFERENCE NOTES

1.08	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
2.36	EXISTING CEILING TO REMAIN. PROTECT IN PLACE.
2.89	TYP. EXTENT OF CEILING INFILL, REFER TO TYPICAL CLASSROOM RCP FOR MORE DETAILS
26.02	NEW LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS

CEILING FINISH LEGEND

- C-2, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-4, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-5, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-7, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-8, PANEL CEILING COLOR - SEE SPEC SECTION 095113

LEGEND

- 2' x 4' ACOUSTICAL CEILING METAL SUSPENSION SYSTEM WITH ACOUSTICAL PANEL CEILING UNITS, APC-1, U.N.O. RE: DIVISION 09 - FINISHES IN THE SPECIFICATIONS
- AREA OF CEILING INFILL
- LIGHTING FIXTURES, COORDINATE WITH ELECTRICAL DRAWINGS.
- MECHANICAL FIXTURES, COORDINATE WITH MECHANICAL DRAWINGS.
- X' - X" CEILING HEIGHT ABOVE FINISH FLOOR
- ACCESS DOOR. RE: SPECIFICATION SECTION 077200.B
- 8'-0" DIAMETER CIRCLE CLOUD , APC-3, U.N.O. RE: DIVISION 09 - FINISHES IN THE SPECIFICATIONS
- 4'-0" DIAMETER CIRCLE CLOUD, APC-3, U.N.O. RE: DIVISION 09 - FINISHES IN THE SPECIFICATIONS

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Project:
HARRISON ELEMENTARY SCHOOL HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St.
Twin Falls, ID 83301

Sheet:
AREA 'A' CEILING PLAN

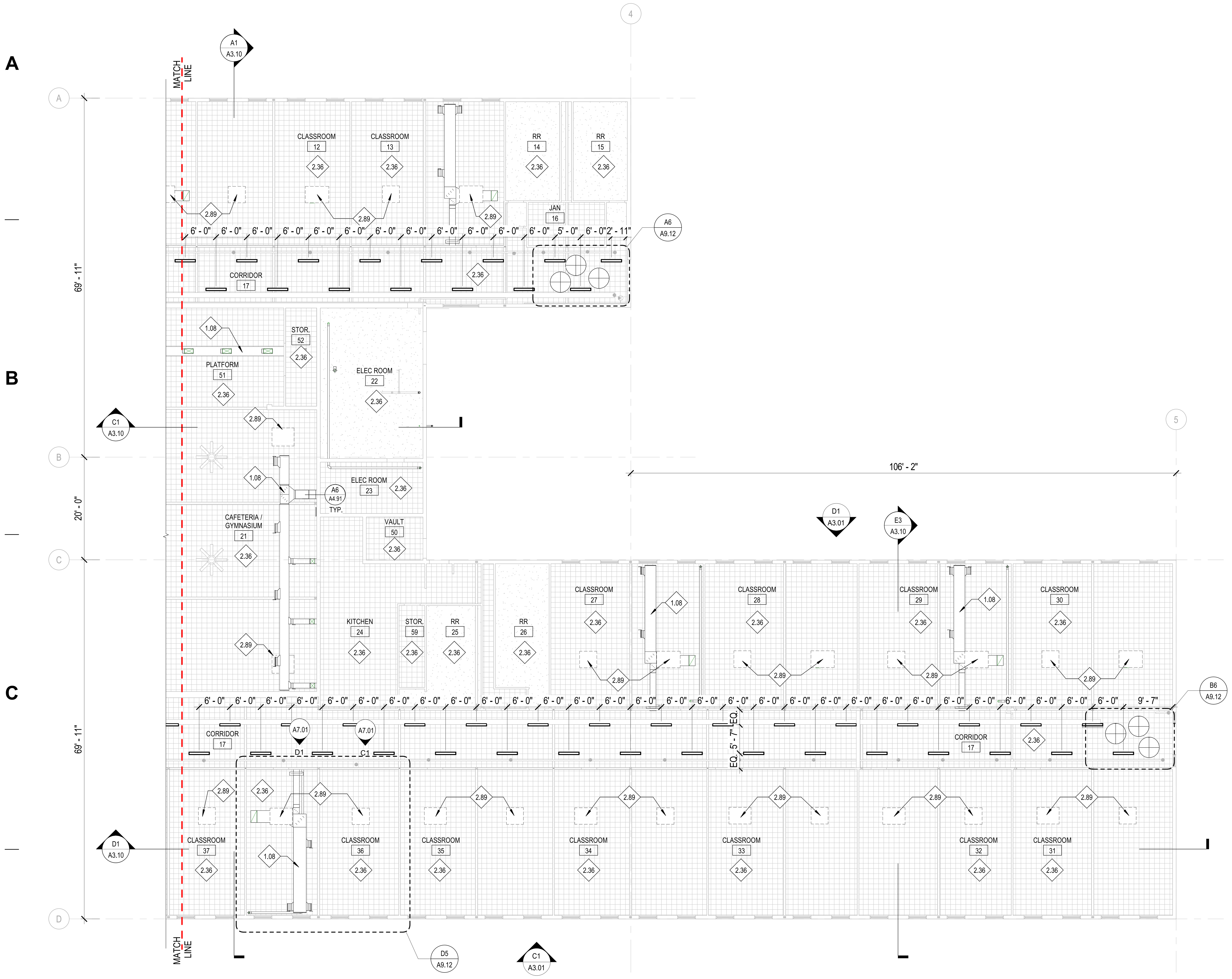
100% CD

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-986141 STATE OF IDAHO BRIAN F. COLEMAN

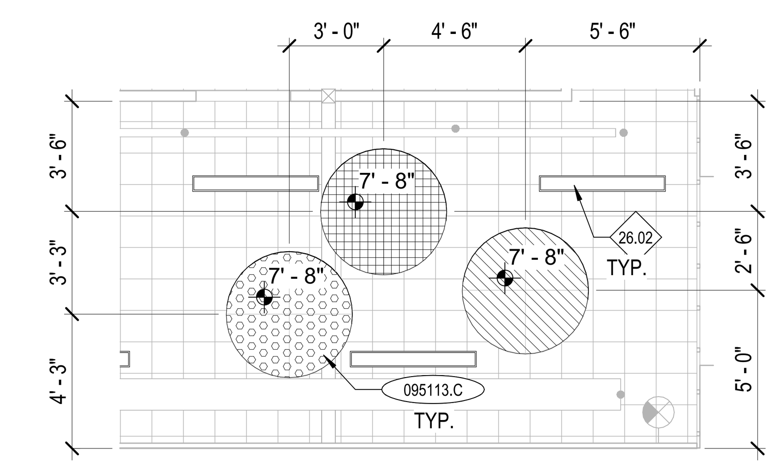
Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

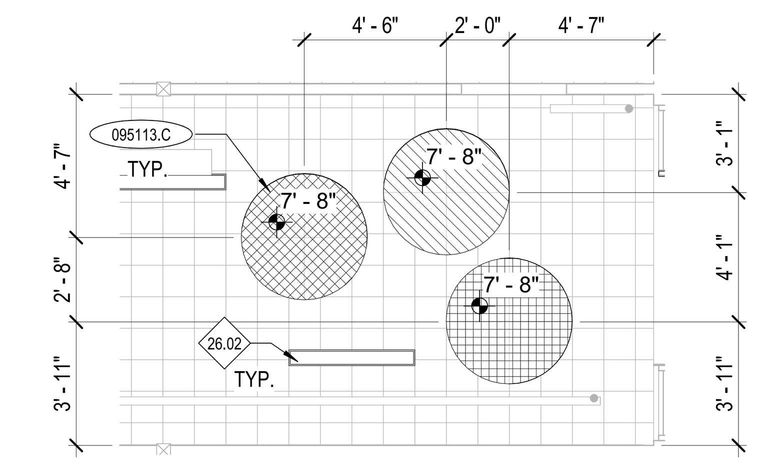
Sheet No: A9.11



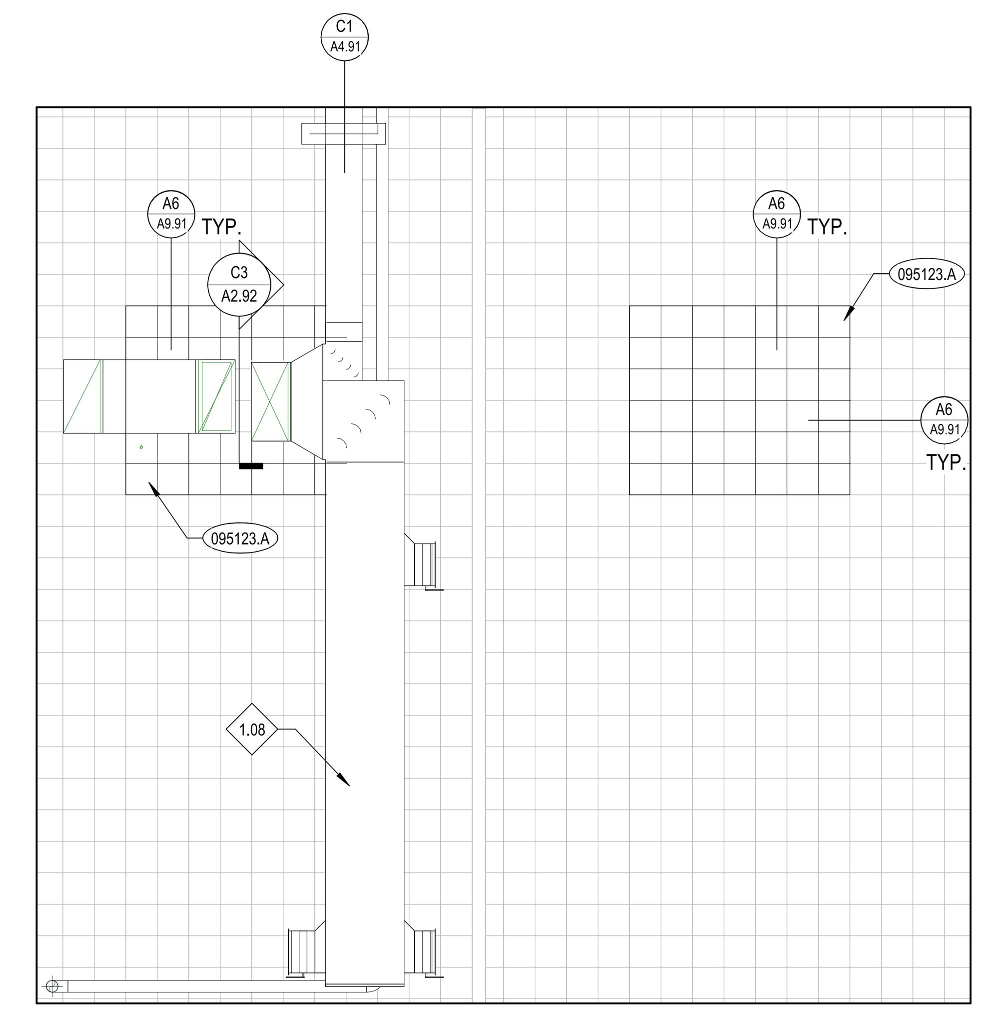
D1 A9.12 **AREA B CEILING PLAN**
3/32" = 1'-0"



A6 A9.12 **SMALL CEILING CLOUD - NORTH EAST**
1/4" = 1'-0"



B6 A9.12 **SMALL CEILING CLOUD - SOUTH EAST**
1/4" = 1'-0"



D5 A9.12 **TYPICAL CLASSROOM RCP**
1/4" = 1'-0"

GENERAL NOTES

1. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ITEMS TO BE PROVIDED AT THE CEILING PLANE AND IN THE WORK.
2. INSTALL ALL SUSPENSION SYSTEMS FOR ACOUSTICAL PANEL CEILINGS PER PROVISIONS OF ASTM C 635 AND ASTM C 636.
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KEYNOTES

095113.C	APC-3
095123.A	ACOUSTICAL PANEL TO BE APPLIED TO EXISTING STRUCTURE USING ADHESIVE.

REFERENCE NOTES

1.08	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
2.36	EXISTING CEILING TO REMAIN. PROTECT IN PLACE.
2.89	TYP. EXTENT OF CEILING INFILL, REFER TO TYPICAL CLASSROOM RCP FOR MORE DETAILS
26.02	NEW LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS

CEILING FINISH LEGEND

- C-2, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-4, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-5, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-7, PANEL CEILING COLOR - SEE SPEC SECTION 095113
- C-8, PANEL CEILING COLOR - SEE SPEC SECTION 095113

LEGEND

- 2' x 4' ACOUSTICAL CEILING METAL SUSPENSION SYSTEM WITH ACOUSTICAL PANEL CEILING UNITS, APC-1, U.N.O. RE: DIVISION 09 - FINISHES IN THE SPECIFICATIONS
- AREA OF CEILING INFILL
- LIGHTING FIXTURES, COORDINATE WITH ELECTRICAL DRAWINGS.
- MECHANICAL FIXTURES, COORDINATE WITH MECHANICAL DRAWINGS.
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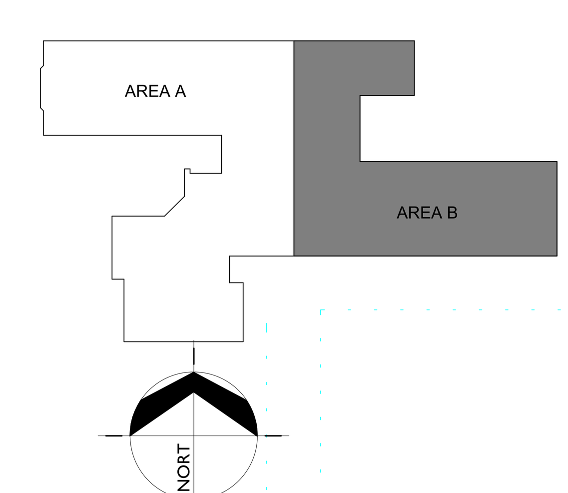
Sheet:
AREA 'B' CEILING PLAN



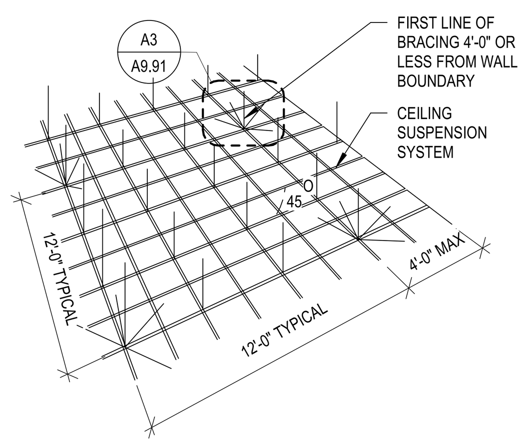
100% CD

PROFESSIONAL ARCHITECT
LICENSED
01/15/2025
AR-986141
STATE OF IDAHO
BRIAN F. COLEMAN

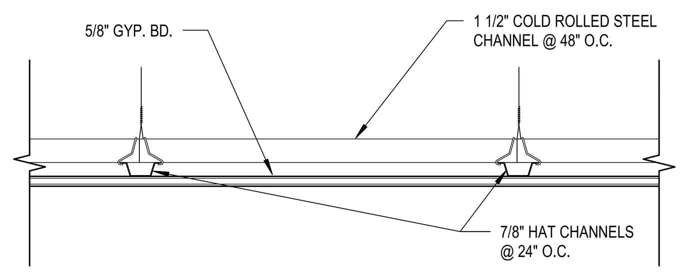
Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

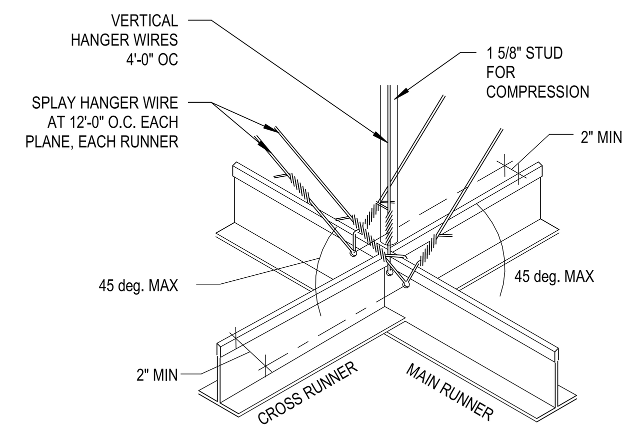
Sheet No:
A9.12



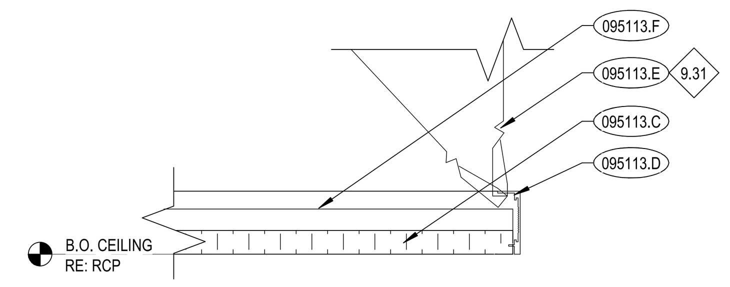
A1 / A9.91 **TYPICAL SEISMIC BRACING DETAIL-02**
NOT TO SCALE



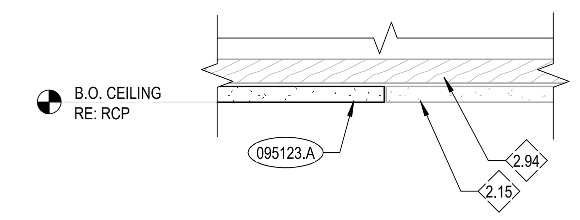
A2 / A9.91 **SUSPENDED CEILING DETAIL**
3" = 1'-0"



A3 / A9.91 **TYPICAL SEISMIC BRACING DETAIL-01**
12" = 1'-0"



A4 / A9.91 **CEILING CLOUD DETAIL**
3" = 1'-0"



A6 / A9.91 **CEILING TRANSITION DETAIL**
3" = 1'-0"

GENERAL NOTES

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KEYNOTES

095113.C	APC-3
095113.D	2" CURBED TRIM, BASIS OF DESIGN: AXIOM VECTOR CURVED PERIMETER TRIM BY ARMSTRONG
095113.E	HANGER WIRE
095113.F	T-BAR GRID SYSTEM
095123.A	ACOUSTICAL PANEL TO BE APPLIED TO EXISTING STRUCTURE USING ADHESIVE.

REFERENCE NOTES

2.15	EXISTING ACOUSTIC CEILING TILE, PRESERVE AND PROTECT. PATCH AND REPAIR AS REQUIRED.
2.94	EXISTING 3/4" STRIPPING
9.31	CROSS BRACING PER MANUFACTURERS INSTRUCTIONS

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Twin Falls, ID 83301

Sheet:
CEILING DETAILS

100% CD

PROFESSIONAL ARCHITECT LICENSED 01/15/2025 AR-985447 STATE OF IDAHO BRIAN F. COLEMAN

Revisions:

Project No:	24075
Drawn By:	NB
Checked By:	PR
Date:	01/15/2025

Sheet No: A9.91

STRUCTURAL SHEET INDEX

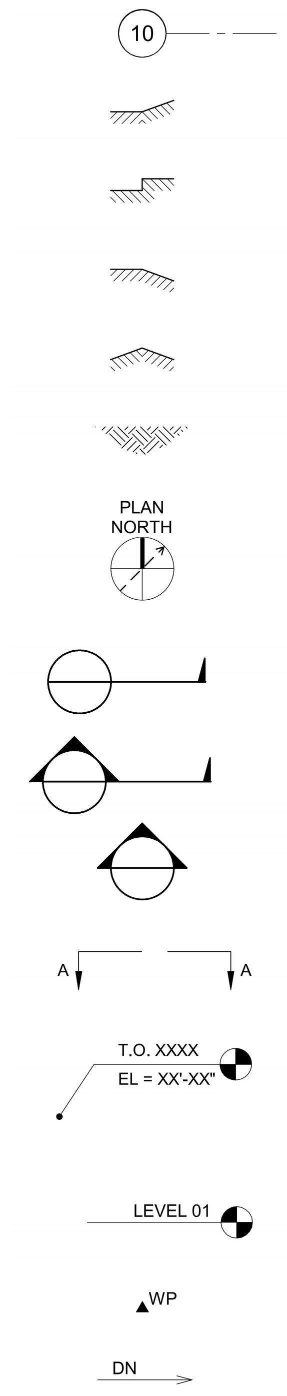
SHEET NUMBER	SHEET NAME	ISSUE LOG: 100% DD	50% CD SET	75% CD SET	BID SET
S0.00	ABBREVIATIONS, SYMBOLS AND SHEET INDEX	X	X	X	X
S1.00	GENERAL STRUCTURAL NOTES	X	X	X	X
S1.01	GENERAL STRUCTURAL NOTES	X	X	X	X
S1.02	STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING	X	X	X	X
S1.03	STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING	X	X	X	X
S2.01	ROOF FRAMING PLAN	X	X	X	X
S3.00	RETROFIT DETAILS	X	X	X	X
S3.01	RETROFIT DETAILS		X	X	X
S3.02	RETROFIT DETAILS		X	X	X

ISSUE LOG KEY:
X ISSUED AS PART OF A SET
- NOT AS PART OF ISSUED SET
* FOR INFORMATION ONLY

STRUCTURAL ABBREVIATIONS

(E)	EXISTING
AB	ANCHOR BOLT
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
ANCH	ANCHOR
ARCH	ARCHITECTURAL
B.O.	BOTTOM OF
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	DIAPHRAGM BOUNDARY NAILING
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
C	CAMBER
CAP	CAPACITY
CC	CENTER TO CENTER
CDF	CONTROLLED DENSITY FILL
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CTR	CENTER
CY	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DCW	DEMAND CRITICAL WELD
DEMO	DEMOLISH
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DKG	DECKING
DN	DOWN
DWF	DEFORMED WIRE FABRIC
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELECT	ELECTRICAL
ELEV	ELEVATOR
EN	PANEL EDGE NAILING
EQ	EQUAL OR EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
F	FAHRENHEIT
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISH FLOOR
FLR	FLOOR
FOB	FACE OF BUILDING
FS	FAR SIDE
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GEN	GENERAL
GL	GLUED LAMINATED TIMBER
GOV	GOVERNMENT
GR	GRADE
GWB	GYPSUM WALL BOARD
HF	HEM-FIR
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1,000 LBS.)
KSF	KIPS PER SQUARE FOOT
LF	LINEAL FOOT
LFH	LONG FACE HORIZONTAL
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNGT	LONGITUDINAL
LP	LOW POINT
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NS	NONSHRINK
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
PAF	POWER ACTUATED FASTENER
PC	PIECE
PC	PILE CAP
PEN	PENETRATION
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PT	PRESERVATIVE-TREATED
PWT	PREFABRICATED WOOD TRUSS
R	RADIUS
RD	ROOF DRAIN
REINF	REINFORCING
REQ'D	REQUIRED
RND	ROUND
RO	ROUGH OPENING
RTN	RETURN
SC	SLIP CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SFRS	SEISMIC FORCE-RESISTING SYSTEM
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB-ON-GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SUPP	SUPPORT
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T.O.	TOP OF
THK	THICK(NESS)
THRU	THROUGH
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UT	ULTRASONIC TESTING
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WIDE FLANGE
WHS	WELDED HEADED STUD
WP	WORK POINT

STRUCTURAL DRAWING SYMBOLS

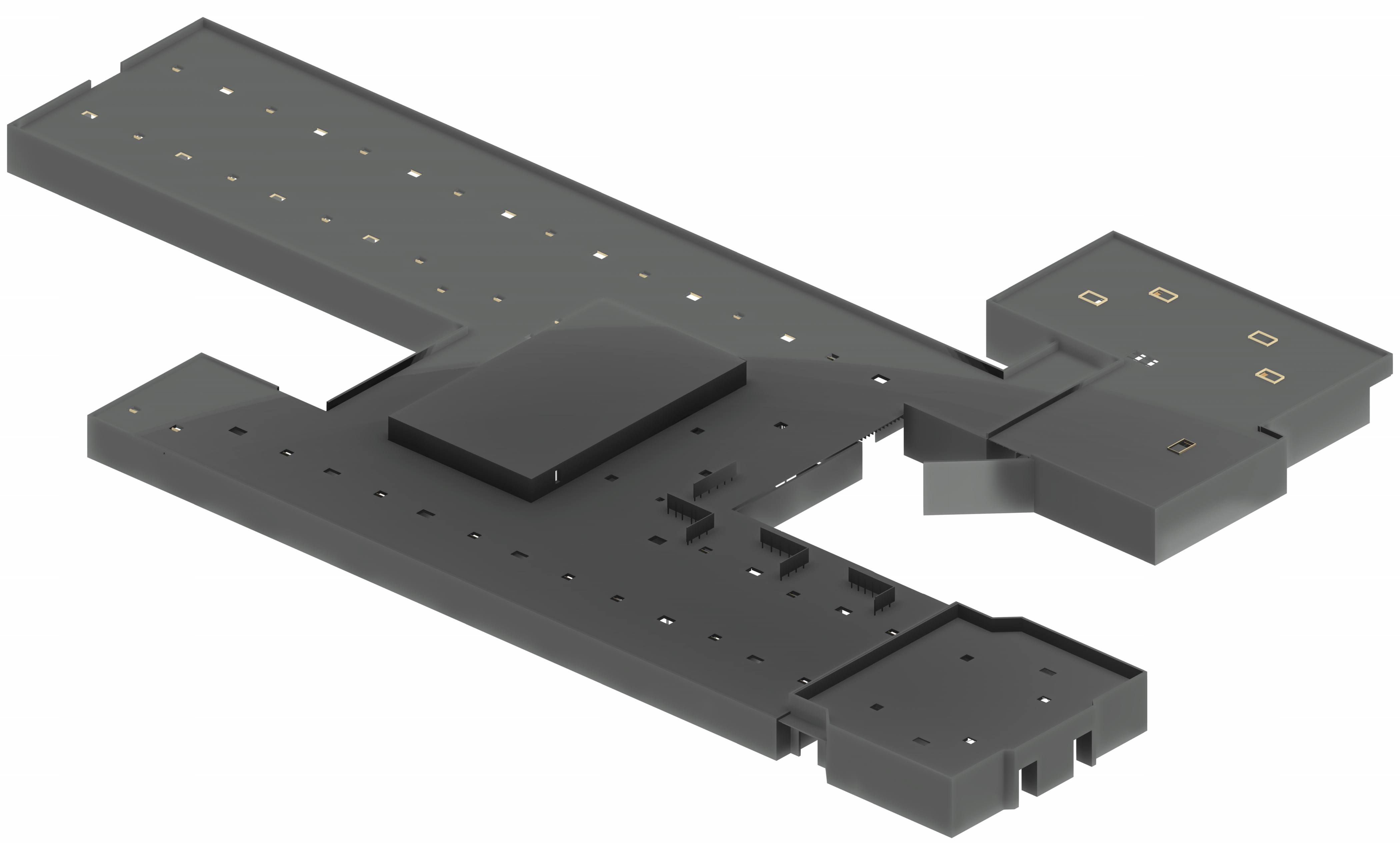


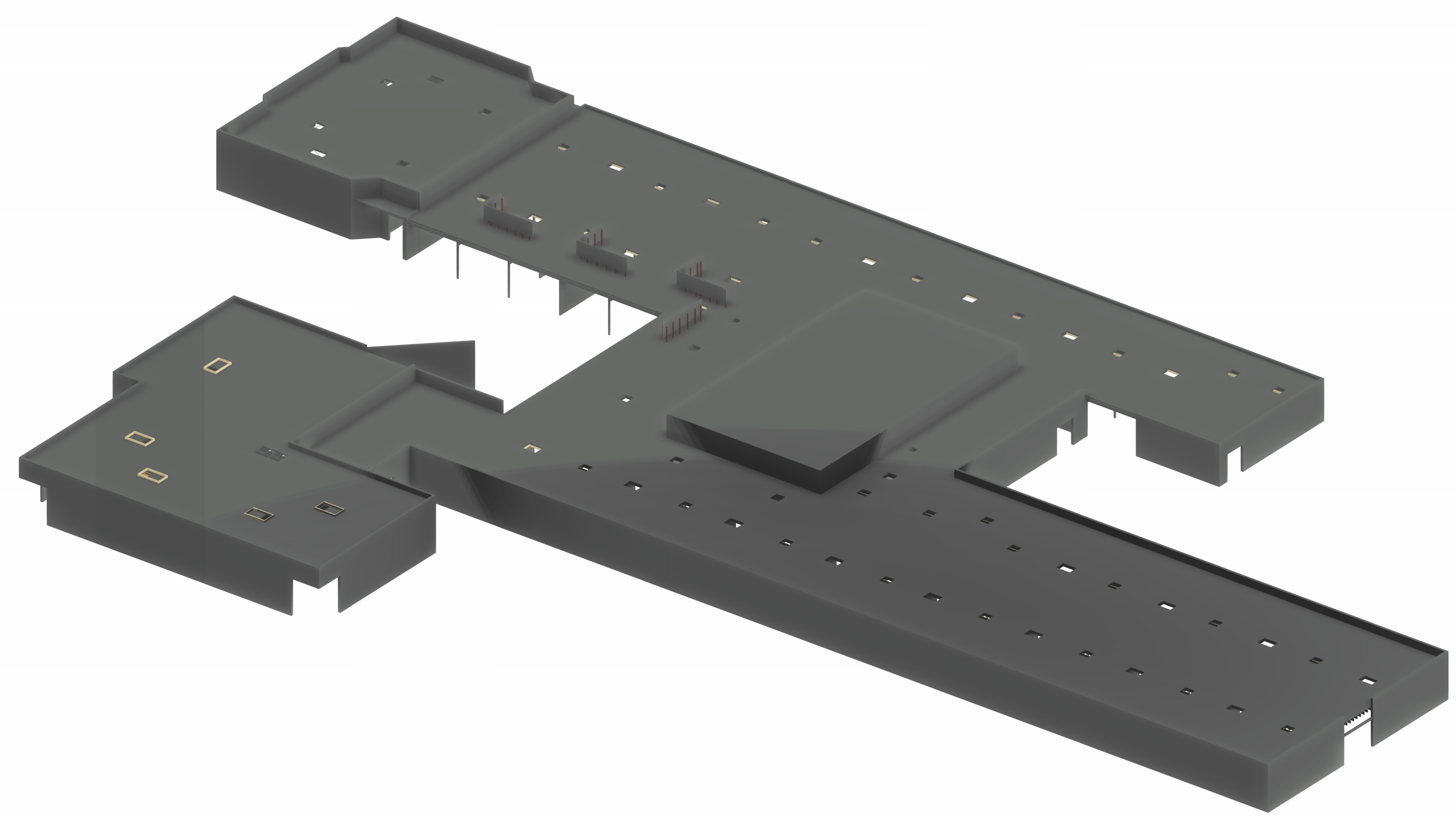
GRIDLINE
SURFACE - SLOPE UP
SURFACE - STEPPED
SURFACE - SLOPE DOWN
SURFACE - SLOPE TWO WAYS
UNDISTURBED SOIL, COMPACTED SOIL, BACKFILL, OR ANY PREPARED SUBGRADE.
NORTH ARROW
DETAIL SYMBOL
BUILDING SECTION CUTS
ELEVATION OF WALL OR FRAME
DETAIL SECTION
SPOT ELEVATION AS INDICATED
T.O. DECK
T.O.CONC.
T.O. STEEL
T.O. PLY
DECK BRG
ELEVATION OF LEVEL
WORKPOINT
DIRECTION OF DOWNWARD SLOPE

CONCRETE WALL
CMU WALL
WALL ABOVE
WALL BELOW

PROFESSIONAL ENGINEER LICENSED 12033 STATE OF IDAHO JUDSEN WILLIAMS

ISOMETRIC VIEWS





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Project:
HARRISON ELEMENTARY SCHOOL

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
ABBREVIATIONS, SYMBOLS AND SHEET INDEX

BID SET

Revisions:

Project No:	10212400109
Drawn By:	DPC/YK
Checked By:	JW
Date:	01/15/2025

Sheet No:
S0.00

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA:

ROOF LIVE LOADS:

ROOF 20 PSF (REDUCIBLE)

ROOF SNOW LOADS: (SECTION 1603.1.3 OF THE CODE):

GROUND SNOW LOAD: P_g = 15 PSF

FLAT ROOF SNOW LOAD: P_f = 12 PSF

MINIMUM SNOW LOAD: P_m = 25 PSF

SNOW EXPOSURE FACTOR: C_e = 1.0

SNOW LOAD IMPORTANCE FACTOR: I_s = 1.1

SLOPE FACTOR: C_S = 1.0

THERMAL FACTOR: C_t = 1.0

RAIN LOADS:

RAIN INTENSITY: i = 1.0 in/hr

WIND DESIGN DATA:

WIND LOADS ARE IN ACCORDANCE WITH SECTION 1609 OF THE CODE.

RISK CATEGORY: III

BASIC WIND SPEED: V = 109 MPH (3-SECOND GUST)

WIND EXPOSURE: C

INTERNAL PRESSURE COEFFICIENT: GC_{pi} = ± 0.18

LOCATION		COMPONENT TRIBUTARY AREA (SQ FT)		
		10	50	100
ROOF	ZONE 1	10.8/-26.4	9.2/-24.8	8.5/-24.1
	ZONE 2	10.8/-44.2	9.2/-33.3	8.5/-28.6
	ZONE 3	10.8/-66.6	9.2/-40.1	8.5/-28.6
WALLS	ZONE 4	26.4/-28.6	23.6/-25.8	22.4/-24.7
	ZONE 5	26.4/-28.6	23.6/-29.8	22.4/-27.3
PARAPETS	ZONE 4	70.5/-54.9	56.9/-49.4	50.9/-47.1
	ZONE 5	92.9/-61.6	63.6/-53.4	50.9/-49.7

EARTHQUAKE DESIGN DATA:

SITE AND OCCUPANCY PARAMETERS	
SEISMIC IMPORTANCE FACTOR	I_e = 1.25
RISK CATEGORY	III
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS	S_S = 0.190
	S_1 = 0.082
SITE CLASS	D-DEFAULT
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS	S_{DS} = 0.202
	S_{D1} = 0.131
SEISMIC DESIGN CATEGORY	B

BUILDING PARAMETERS	
SEISMIC FORCE RESISTING SYSTEM	LIGHT-FRAME WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
SEISMIC RESPONSE COEFFICIENTS	C_S = 0.101
RESPONSE MODIFICATION FACTOR	R = 2.5
SYSTEM OVERSTRENGTH FACTOR	Ω_0 = 2.5
DEFLECTION AMPLIFICATION FACTOR	C_d = 2.5
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE
DESIGN BASE SHEAR	V = 99.43 KIPS

GENERAL:

STRUCTURAL DRAWINGS:

1. STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH OTHER DRAWINGS, SPECIFICATIONS, AND DOCUMENTS ENUMERATED IN THE OWNER/CONTRACTOR AGREEMENT.
2. REVIEW AND COORDINATE THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY IDENTIFIED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.

CODE REQUIREMENTS AND REFERENCED STANDARDS:

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:

   2018 INTERNATIONAL BUILDING CODE (IBC) AND INTERNATIONAL EXISTING BUILDING CODE (IEBC) WITH LATEST REVISIONS REFERRED TO HERE AS “THE CODE”, AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES & STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
2. ASTM SPECIFICATIONS AND REFERENCED STANDARDS ON THE DRAWINGS SHALL BE THE VERSION REFERENCED IN CHAPTER 35 OF THE CODE OR AS REFERENCED IN THE APPLICABLE DESIGN STANDARD.

EXISTING CONDITIONS:

1. VERIFY EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES.
2. INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, NOTIFY THE ARCHITECT IMMEDIATELY.

TEMPORARY CONDITIONS:

1. THE CONTRACT DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, INCLUDING BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
2. THE CONTRACT STRUCTURAL DRAWINGS SHOW THE BUILDING IN ITS FINAL INTENDED POSITION. MAKE PROVISIONS IN THE CONSTRUCTION SEQUENCING OF THE BUILDING TO TAKE INTO ACCOUNTS SHRINKAGE, CREEP, SHORTENING, THERMAL EXPANSION, ETC.
3. SPREAD OUT CONSTRUCTION MATERIALS IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OTHER DRAWINGS:

1. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
   A. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED
   B. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS UNLESS NOTED AND/OR DETAILED ON THE STRUCTURAL DRAWINGS
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC
   D. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN
   E. FLOOR AND ROOF FINISHES
   F. MISCELLANEOUS DRAINAGE AND WATERPROOFING
   G. ALL FIREPROOFING REQUIREMENTS INCLUDING FIREPROOFING OF STRUCTURAL STEEL
   H. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS
2. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
   A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
   B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
   C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
   D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION WILL BE PROVIDED BY A THIRD-PARTY TESTING AGENCY, RETAINED BY THE OWNER TO VERIFY COMPLIANCE WITH ITEMS SUMMERIZED IN THE STATEMENT OF SPECIAL INSPECTION.
2. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

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Sheet:
GENERAL STRUCTURAL NOTES

BID SET

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GENERAL STRUCTURAL NOTES

ROUGH CARPENTRY:

GENERAL:

1. COMPLY WITH THE REQUIREMENTS IN CHAPTER 23 OF THE CODE AND AF&PA'S WCD 1, "DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION," UNLESS OTHERWISE INDICATED

PRODUCTS:

2. DIMENSIONAL LUMBER FRAMING:
   A. SPECIES, GRADE, AND MOISTURE CONTENT NOTED BELOW:

DIMENSIONAL LUMBER			
USE	SPECIES	GRADE	MOISTURE CONTENT
LUMBER 2" TO 4" THICK x 5" OR WIDER (JOISTS/RAFTERS)	DOUGLAS FIR-LARCH	#2 & BETTER	KD (15%)
LUMBER 2" TO 3" THICK x 4" TO 6" WIDE (STUDS)	DOUGLAS FIR-LARCH	#2 & BETTER	KD (15%)
LUMBER 5x5 AND GREATER (BEAMS)	DOUGLAS FIR-LARCH	#1	S-DRY (19%)
LUMBER 5x5 AND GREATER (POSTS)	DOUGLAS FIR-LARCH	#1	S-DRY (19%)

3. FIRE-RETARDANT-TREATED MATERIALS
   A. APPLICATION: TREAT ALL LUMBER IN 3 HOUR FIRE RATED WALLS AND EXTERIOR WALLS IN TYPE III CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATED WALL LOCATIONS AND DETAILS.
4. FASTENERS:
   A. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, PRESERVATIVE TREATED, FIRE RETARDANT TREATED, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING WITH ASTM A 153.
   B. NAILS: ASTM F1667, COMMON TYPE.
5. WOOD CONNECTORS:
   A. PROVIDED BASIS OF DESIGN HANGERS, STRAPS, TIES, HOLD DOWNS, ETC, AS INDICATED ON THE DRAWINGS.
   B. WHERE CONNECTORS ARE IN EXPOSED, EXTERIOR APPLICATIONS OR IN CONTACT WITH PRESERVATIVE TREATED LUMBER, PROVIDE HOT-DIP GALVANIZED OR STAINLESS STEEL CONNECTORS.

EXECUTION:

1. WHERE POSTS OR MULTIPLE STUDS UNDER BEAMS OR HEADERS ARE CALLED FOR ON DRAWINGS THOSE POSTS OR MULTIPLE STUDS SHALL BE CARRIED TO THE FOUNDATLON/PODIUM LEVEL U.N.O.
2. JOIST BLOCKING AND BRIDGING:
   A. PROVIDE FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT AND BELOW PARTITION WALLS.
   B. PROVIDE FULL DEPTH BRIDGING AT 8'-0" O.C. MAX, NOT MORE THAN 8'-0" FROM SUPPORT.
3. PROVIDE DOUBLE JOISTS UNDER NON-BEARING WALLS RUNNING PARALLEL TO JOISTS.
4. PROVIDE REQUIRED FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING THAT ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
5. SECURELY ATTACH ROUGH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED, COMPLYING WITH TABLE 2304.10.1 OF THE CODE AND THE ICC-ES REPORT FOR THE FASTENER.
6. INSTALL WOOD CONNECTORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE ICC-ES REPORT.

GLUED-LAMINATED CONSTRUCTION:

GENERAL:

1. FABRICATE GLUED-LAMINATED (GLULAM) MEMBERS IN CONFORMANCE WITH ANSI STANDARD A190.1, "AMERICAN NATIONAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER"

PRODUCTS:

1. GLUED-LAMINATED TIMBER PRODUCTS
   A. PROVIDE STRUCTURAL GLUED-LAMINATED TIMBER THAT COMPLIES WITH AITC A190.1 AND AITC 117 OR RESEARCH/EVALUATION REPORTS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AS FOLLOWS:

GLUED-LAMINATED MEMBERS				
COMBINATION SYMBOL (SPECIES)	USE	FLEXURAL STRESS F_b (PSI)	MODULUS OF ELASTICITY	SHEAR STRESS F_v (PSI)
24F-V4 (DF/DF)	SIMPLE SPAN	+2,400	1,800,000	265
24F-V8 (DF/DF)	CONTINUOUS OR CANTILEVER	2,400	1,800,000	265
L2 (DF/DF)	COLUMNS	1,300	1,800,000	230

   B. APPEARANCE GRADE:
      a. ARCHITECTURAL WHEN EXPOSED TO VIEW
      b. INDUSTRIAL WHEN CONCEALED FROM VIEW

EXECUTION:

1. DO NO FIELD NOTCH OR BOAR GLUED-LAMINATED MEMBERS UNLESS APPROVED BY ARCHITECT.

STRUCTURAL STEEL:

GENERAL:

1. DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH THE FOLLOWING PROVISIONS:
   A. AISC 303 - "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   B. AISC 360 - "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS"
   C. AISC 341 - "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" FOR MEMBERS OF THE SEISMIC FORCE RESISTING SYSTEM (SFRS)
   D. RCSC's - "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS"
2. COMPLY WITH THE FOLLOWING PROVISIONS FOR ALL WELDED JOINTS:
   A. AWS D1.1 - "STRUCTURAL STEEL WELDING CODE"
   B. AWS D1.8 - "SEISMIC SUPPLEMENT" FOR CONNECTIONS OF THE SEISMIC FORCE RESISTING SYSTEM (SFRS)
3. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360 SECTION J2.2b.

PRODUCTS:

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO):

TYPE	ASTM SPECIFICATION
ANGLES & CHANNELS	A36
PLATES & BARS	A36 A572, GR 50 (WHERE INDICATED)
HSS SECTIONS	A500 GR C A1085 (WHERE INDICATED)
COMMON/MACHINE BOLTS	A307, GR A

EXECUTION:

1. DO NOT CUT OR DAMAGE EXISTING REINFORCEMENT. PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED TO REINFORCED CONCRETE/MASONRY USING POST-INSTALLED ANCHORS, LOCATE ALL REINFORCEMENT AND CONFIRM CONSTRUCTABILTY OF ANCHOR LOCATIONS. SHOULD CONFLICTS WITH REINFORCEMENT OCCUR, SUBMIT ALTERNATE ANCHOR LOCATIONS AND REVISED STEEL FABRICATIONS TO ARCHITECT FOR REVIEW AND APPROVAL.
2. BACKUP BARS MAY REMAIN IN PLACE UNLESS NOTED IN DRAWINGS, OR WHEN ULTRASONIC TESTING INDICATES A POSSIBLE WELD DEFECT. IF DEFECTS ARE INDICATED BACKUP BAR IS TO BE REMOVED AND THE ROOT INSPECTED. IF IMPERFECTIONS ARE FOUND, THEY ARE TO BE REMOVED AND REPAIRED PER AWS REQUIREMENTS.

CAST-IN-PLACE CONCRETE:

GENERAL:

1. COMPLY WITH THE PROVISIONS OF ACI 301 AND ACI 117, EXCEPT AS MODIFIED BY THESE CONTRACT DOCUMENTS.
2. MANUFACTURER QUALIFICATIONS: CERTIFIED ACCORDING TO NRMCA's "CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES.

PRODUCTS:

1. CONCRETE MIXTURES: PREPARE DESIGN MIXTURES FOR EACH TYPE AND STRENGTH OF CONCRETE, PROPORTIONED ON THE BASIS OF LABRATORY TRIAL MIXTURES OR FIELD TEST DATA OR BOTH, ACCORDING TO ACI 301.

CONCRETE MIXTURES				
LOCATIONS IN STRUCTURE	DESIGN STRENGTH	MAX UNIT WEIGHT	MAX W/C RATIO	EXPOSURE CATEGORIES
ELEVATED SLAB	4,000 PSI	145 PCF	0.45	F0, S0, W0, C0

EXECUTION:

1. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, OR WALLS UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE ARCHITECT WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS.
2. PIPES AND CONDUITS EMBEDDED IN CONCRETE:
   A. PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY ARCHITECT.
   B. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS.
   C. DO NOT STACK CONDUITS. SPACE EMBEDDED PIPES AND CONDUITS AT A MINIMUM OF AT A MINIMUM OF 3 DIAMETERS CLEAR FROM OTHER EMBEDDED PIPES/CONDUITS AND 1 1/2" CLEAR FROM REINFORCING BARS.
   D. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECK.
3. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED WITHOUT ARCHITECT REVIEW AND APPROVAL.
4. SCREED CONCRETE FILL OVER STEEL DECK TO A CONSTANT THICKNESS AS SPECIFIED IN THE DECKING SCHEDULE. DO NOT EXCEED THE SPECIFIED DECK THICKNESS BY MORE THAN 1/2".
5. ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE CLEANED AND ROUGHENED TO 1/4" AMPLITUDE.

REINFORCING STEEL:

GENERAL:

1. DETAIL, FABRICATE, AND INSTALL REINFORCING IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301, ACI 117, AND THE "CRSI MANUAL OF STANDARD PRACTICE."

PRODUCTS:

1. REINFORCING STEEL: ASTM A615, GRADE 60, DEFORMED
2. WELDED WIRE REINFORCEMENT (WWR): ASTM A1064

EXECUTION:

1. PROVIDE THE MINIMUM CONCRETE COVER FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) AS INDICATED IN THE TABLE BELOW.

MINIMUM CONCRETE CLEAR COVER		
LOCATION	BAR SIZE	CLEAR COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	ALL	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	#6 & LARGER	2"
	#5 & SMALLER	1 1/2"
SLABS, WALLS, OR JOISTS NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND	#14 & LARGER	1 1/2"
	#11 & SMALLER	3/4"

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STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING

TABLE 2 - REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	INSPECTION: IBC CODE REFERENCE	INSPECTION: CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 8): OBSERVE	FREQUENCY (NOTE 8): PERFORM	REMARKS
STEEL					
INSPECTION TASKS PRIOR TO WELDING:					
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	1705.2	AISC 360: TB N5.4-1 AISC 360: N5.4	-	X	-
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE			-	X	-
MATERIAL IDENTIFICATION (TYPE/GRADE)			X	-	-
WELDER IDENTIFICATION SYSTEM			X	-	-
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)			X	-	-
CONFIGURATION AND FINISH OF ACCESS HOLES			X	-	-
FIT-UP OF FILLET WELDS: DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)			X	-	-
CHECK WELDING EQUIPMENT			-	-	FABRICATOR OR ERECTOR SHALL OBSERVE
INSPECTION TASKS DURING WELDING:					
USE OF QUALIFIED WELDERS	1705.2	AISC 360: TB N5.4-2 AISC 360: N5.4	X	-	-
CONTROL AND HANDLING OF WELDING CONSUMABLES: PACKAGING, EXPOSURE CONTROL			X	-	-
NO WELDING OVER CRACKED TACK WELDS			X	-	-
ENVIRONMENTAL CONDITIONS: WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE			X	-	-
WPS FOLLOWED: SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.), PROPER POSITION (F, V, H, OH)			X	-	-
WELDING TECHNIQUES: INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS			X	-	-
INSPECTION TASKS AFTER WELDING:					
WELDS CLEANED	1705.2	AISC 360: TB N5.4-3 AISC 360: N5.4	X	-	-
SIZE, LENGTH AND LOCATION OF WELDS			-	X	-
WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, POROSITY			-	X	-
ARC STRIKES			-	X	-
K-AREA			-	X	-
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)			-	X	-
REPAIR ACTIVITIES			-	X	-
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER			-	X	-
INSPECTION TASKS PRIOR TO BOLTING:					
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	1705.2	AISC 360: TB N5.6-1 AISC 360: N5.6	-	X	-
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS			X	-	-
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)			X	-	-
PROPER BOLTING PROCEDURE FOR JOINT DETAIL			X	-	-
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS			X	-	-
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED			X	-	-
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS			X	-	-
INSPECTION TASKS DURING BOLTING:					
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2	AISC 360: TB N5.6-2 AISC 360: N5.6	X	-	-
JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION			X	-	-
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING			X	-	-
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES			X	-	-
INSPECTION TASKS AFTER BOLTING:					
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2	AISC 360: TB N5.6-3	-	X	-
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT:					
PLACEMENT AND INSTALLATION OF STEEL DECK	1705.2	AISC 360: TB N6.1 AISC 360: N6.1	-	X	-
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS			-	X	-
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS			-	X	-
INSTALLATION OF OPEN WEB STEEL JOISTS AND JOIST GIRDERS	1705.2.3 2207.1	-	-	X	SEE JOIST MANUFACTURER FOR SPECIAL INSPECTION REQUIREMENTS ASSOCIATED WITH THE DEFERRED SUBMITTAL

TABLE 3 - REQUIRED STRUCTURAL TESTING

SYSTEM OR MATERIAL	TESTING: IBC CODE REFERENCE	TESTING: CODE OR STANDARD REFERENCE	FREQUENCY (CONTINUOUS | PERIODIC)	REMARKS
STEEL				
RADIOGRAPHIC (RT) MAGNETIC PARTICLE (MT) AND ULTRASONIC (UT) TESTING OF WELDS	AISC 360 N5.5	RT- AWS D1.1: 6.16 MT- AWS D1.1: 6.14.4 UT- AWS D1.1: 6.13 & 6.14.3	PER DRAWINGS	ALL CJP WELDS IN MATERIALS 5/16" OR GREATER REQUIRE UT TESTING
PRE-CONSTRUCTION TESTING OF WELDED STUDS	1705.2.2	AWS D1.1: 7.7.1	EACH SIZE AND TYPE OF STUD EACH SHIFT	-
* PRE-INSTALLATION TESTING OF WELDED STUDS WELDED THROUGH DECKING	1705.2.2	AWS D1.1: 7.6	EACH STUD SIZE AND DECK GAUGE COMBINATION	-
* PRE-INSTALLATION VERIFICATION OF PRETENSIONED HIGH STRENGTH BOLTS	1705.2.1 AISC 360: TB N5.6-1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, SECTION 7	EACH COMBINATION OF DIAMETER, LENGTH, GRADE, AND LOT TO BE USED IN THE WORK	-

* TABLE N2 - REQUIRED NONSTRUCTURAL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

SYSTEM OR MATERIAL	TESTING: IBC CODE REFERENCE	TESTING: CODE OR STANDARD REFERENCE	FREQUENCY: CONTINUOUS	FREQUENCY: PERIODIC	REMARKS
ARCHITECTURAL					
INSTALLATION AND ANCHORAGE OF ACCESS FLOORS	1704.3.2 1705.12.5.1	-	-	X	REFERENCE ARCHITECTURAL FOR INFORMATION
INSTALLATION AND ANCHORAGE OF CLADDING AND INTERIOR/EXTERIOR VENEER WEIGHING MORE THAN 5 PSF IN BUILDINGS MORE THAN 30 FEET IN HEIGHT	1704.3.2 1705.12.5	-	-	X	
ERECTION AND FASTENING OF INTERIOR NONBEARING WALLS WEIGHING MORE THAN 15 PSF IN BUILDINGS MORE THAN 30 FEET IN HEIGHT		-	-	X	
ERECTION AND FASTENING OF EXTERIOR NONBEARING WALLS IN BUILDINGS MORE THAN 30 FEET IN HEIGHT		-	-	X	
INSTALLATION AND ANCHORAGE OF STORAGE RACKS	1704.3.2 1705.12.7	ASCE 7: 15.5.3	-	X	FOR RACKS OVER 8 FEET IN HEIGHT
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1704.3.2 1705.12.5	-	-	X	REFERENCE ARCHITECTURAL FOR INFORMATION
ELECTRICAL					
ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1704.3.2 1705.12.6	-	-	X	SEISMIC RESTRAINT OF ELECTRICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE ELECTRICAL FOR FURTHER INFORMATION.
ANCHORAGE OF ALL ELECTRICAL EQUIPMENT IN SEISMIC DESIGN CATEGORY E OR F ONLY		-	-	X	
INSTALLATION OF VIBRATION ISOLATION SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25 INCHES OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT	1705.12.6 1705.12.8	-	-	X	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS	1705.12.6	-	-	X	
PROCESS MECHANICAL AND PLUMBING					
INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS DESIGNED TO CARRY HAZARDOUS MATERIALS AND ASSOCIATED MECHANICAL UNITS	1704.3.2 1705.12.6	-	-	X	SEISMIC RESTRAINT OF PROCESS MECHANICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE MECHANICAL FOR FURTHER INFORMATION.
INSTALLATION OF EQUIPMENT USING COMBUSTIBLE ENERGY SOURCES	1705.12.4	-	-	X	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS		-	-	X	
BUILDING MECHANICAL AND PLUMBING					
INSTALLATION AND ANCHORAGE OF HVAC DUCTWORK DESIGNED TO CARRY HAZARDOUS MATERIALS	1704.3.2 1705.12.6	-	-	X	SEISMIC RESTRAINT OF BUILDING MECHANICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE MECHANICAL FOR FURTHER INFORMATION.
INSTALLATION OF FIRE PROTECTION SPRINKLER SYSTEM	1705.12	-	-	X	
INSTALLATION OF EQUIPMENT USING COMBUSTIBLE ENERGY SOURCES	1705.12.4	-	-	X	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS		-	-	X	
INSTALLATION OF VIBRATION ISOLATION SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25 INCHES OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT	1705.12.6	-	-	X	

TABLE N4 - REQUIRED NONSTRUCTURAL TESTING FOR SEISMIC RESISTANCE

SYSTEM OR MATERIAL	TESTING: IBC CODE REFERENCE	TESTING: CODE OR STANDARD REFERENCE	FREQUENCY		REMARKS
MECHANICAL AND ELECTRICAL					
COMPONENT TESTING INCLUDING MOUNTING SYSTEMS OR ANCHORAGE IF CERTIFICATES OF COMPLIANCE ARE NOT AVAILABLE	1705.13 1705.13.2 1705.13.3	ASCE 7: 13.2	-	X	SEISMIC RESTRAINT OF MECHANICAL AND ELECTRICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. REFERENCE MECHANICAL AND ELECTRICAL FOR FURTHER INFORMATION.

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Sheet: STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING

BID SET

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STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING - CONTINUED

STATEMENT OF SPECIAL INSPECTION AND TESTING NOTES:

1. SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE IBC AND THE REFERENCE CODES AND STANDARDS LISTED IN NOTE 2. REFER TO TABLES 1 AND 2 FOR SPECIAL INSPECTION AND TABLES 3 AND 4 FOR TESTING REQUIREMENTS.

2. REFERENCE CODES AND STANDARDS ARE THOSE REFERENCED IN CHAPTER 35 OF THE CODE.

3. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED QUALIFIED TESTING AND INSPECTING AGENCY MEETING THE REQUIREMENTS OF ASTM E 329 (MATERIALS), ASTM D 3740 (SOILS), ASTM C 1077 (CONCRETE), AND ASTM E 543 (NON-DESTRUCTIVE). SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1.

4. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS. ISSUES REQUIRING IMMEDIATE CORRECTIVE ACTIONS OR ENGINEERING INPUT ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY UPON DISCOVERY.

5. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, **STRUCTURAL** **ENGINEER** **ARCHITECT**, CONTRACTOR, AND OWNER. THE TESTING AND INSPECTING AGENCY SHALL SUBMIT A FINAL REPORT STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

6. CONTINUOUS SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.

7. WHERE PERIODIC INSPECTION IS ALLOWED IN ACCORDANCE WITH THE ANCHOR ICC/IAPMO EVALUATION REPORT, INSPECTIONS SHALL BE AS FOLLOWS:
   - FOR ALL ANCHORS, PRIOR TO CONCEALMENT, VERIFY: ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR SPACING AND EDGE DISTANCE.
   - FOR EACH ANCHOR TYPE AND SIZE, INSPECTOR SHALL BE ONSITE TO CONTINUOUSLY INSPECT A MINIMUM OF THE FIRST 10 ANCHORS INSTALLED BY EACH INSTALLER FOR CONFORMANCE WITH ICC/IAPMO EVALUATION REPORT. PROVIDED ALL ANCHORS ARE INSTALLED CORRECTLY PER MANUFACTURER'S INSTRUCTIONS, PROVIDE PERIODIC INSPECTION ON A MINIMUM OF 10% OF THE NEXT 1000 ANCHORS BY EACH INSTALLER AND A MINIMUM OF 5% OF THE REMAINING ANCHORS BY EACH INSTALLER. INSPECTIONS SHALL OCCUR A MINIMUM OF ONCE PER WEEK AT A RANDOM TIME WHILE ANCHOR INSTALLATION IS ONGOING. ANY NON-COMPLIANCE ISSUES SHALL RESET THE INSPECTION REQUIREMENTS TO TEN (10) CONTINUOUS INSPECTIONS. NON-COMPLIANT ANCHORS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR REVIEW AND SHALL BE BROUGHT INTO COMPLIANCE BY EITHER TESTING OR RE-INSTALLATION.
   - INSPECTION REPORTS SHALL IDENTIFY NAMES OF INSTALLERS.
   - SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING THAT THE MINIMUM NUMBER OF ANCHORS WERE INSPECTED.

8. OBSERVE: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
   PERFORM: PERFORM THESE TASKS FOR EACH ELEMENT.

9. INDICATED CONCRETE TESTING MEETS MINIMUM REQUIREMENTS FOR STRUCTURAL TESTING TO BE PROVIDED BY THE APPROVED QUALIFIED TESTING AND INSPECTING AGENCY. ADDITIONAL TESTING FOR CONSTRUCTION CONSIDERATIONS ARE NOT INDICATED AND SHALL BE DETERMINED BY THE CONTRACTOR AND PROVIDED AT CONTRACTOR'S EXPENSE.

CONTRACTOR RESPONSIBILITY:

FOR SEISMIC DESIGN CATEGORY C, D, E AND F STRUCTURES, THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND OR SEISMIC FORCE-RESISTING SYSTEM, OR A WIND OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN TABLES 2C, 3 AND 4. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

1. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

2. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.

3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.

4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

* **CASTELLATED BEAM POST TESTING REQUIREMENTS:**

1. PROVIDE ULTRASONIC TESTING ON THE GREATER OF 20% OF ALL WELDS OR FOUR WEB POST WELDS AT EACH CASTELLATED BEAM. THIS SHALL INCLUDE THE FIRST WEB POST AT EACH END OF THE BEAM AS WELL AS A MINIMUM OF TWO ADDITIONAL WEB POST WELDS SELECTED AT RANDOM FROM THE INTERIOR OF EACH BEAM SPAN. ULTRASONIC TESTING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1 CRITERIA AND SHALL BE EVALUATED AGAINST ACCEPTANCE CRITERIA FOR STATICALLY LOADED STRUCTURES.

2. FREQUENCY OF ULTRASONIC TESTING MAY BE REDUCED TO TWO MINIMUM WEB POSTS AT EACH BEAM ONCE A MINIMUM OF TEN BEAMS HAVE BEEN TESTED WITH OUT REJECTABLE FLAWS. TESTS SHALL INCLUDE ONE OF THE END WEB POSTS AND ONE POST SELECTED AT RANDOM ON EACH SUBSEQUENT BEAM.

3. WHERE REJECTABLE FLAWS ARE ENCOUNTERED, THEY SHALL BE EVALUATED BY THE CELLULAR BEAM DESIGNER FOR DETERMINATION OF ANY NECESSARY REPAIRS, SUBJECT TO REVIEW AND APPROVAL BY STRUCTURAL ENGINEER.

4. WHERE REJECTABLE FLAWS ARE DETECTED AND REPAIRS ARE REQUIRED PER ITEM 3 ABOVE, 100% OF ALL WEB POST WELDS FOR THAT PARTICULAR BEAM SHALL BE TESTED, AND SAMPLING FREQUENCY FOR SUBSEQUENT BEAMS SHALL REVERT TO THE REQUIREMENTS STATED IN ITEM 1 UNTIL AN ACCEPTABLE PASS RATE CAN AGAIN BE ESTABLISHED AS NOTED IN ITEM 2.

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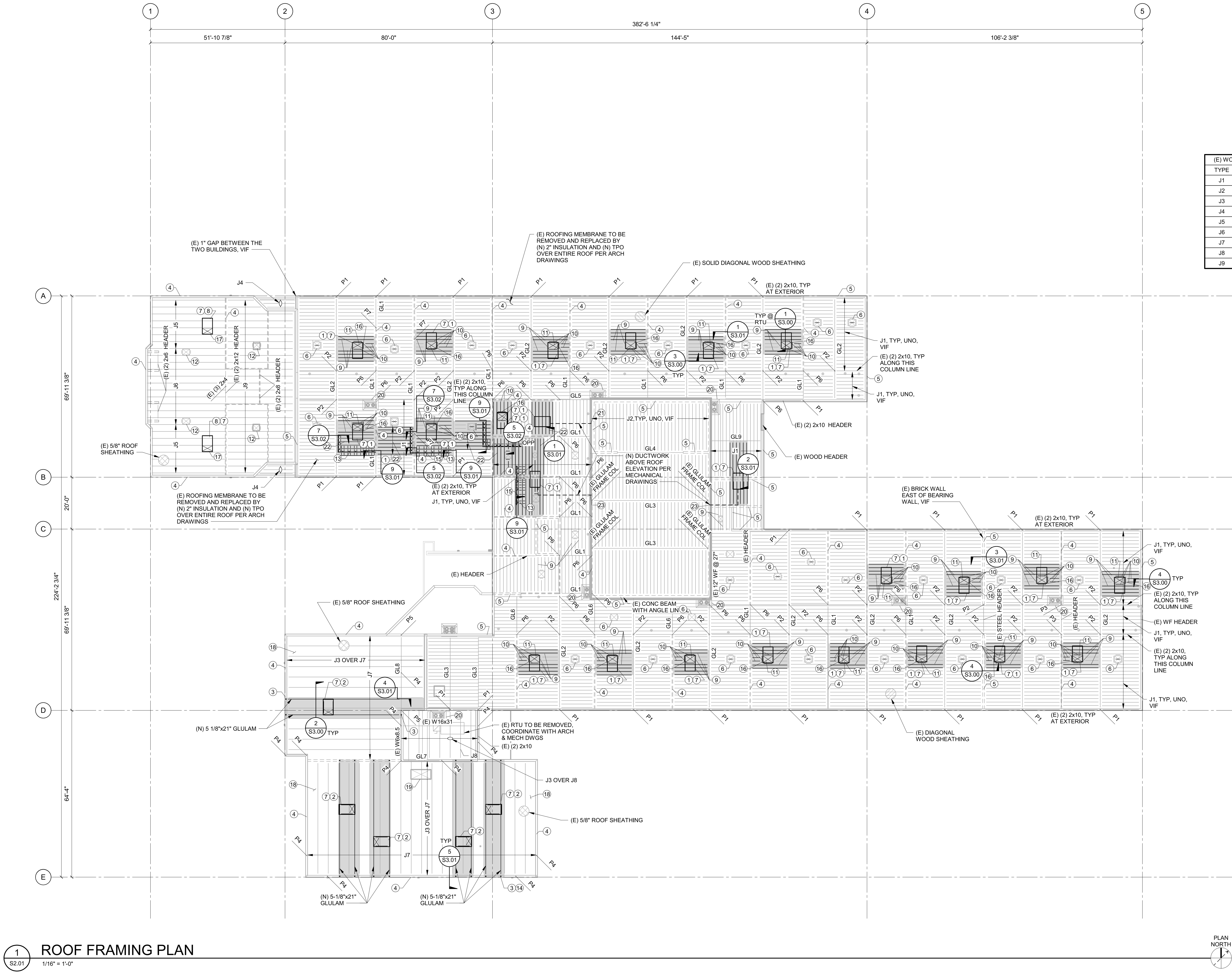


1 / S2.01 ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NORTH

GENERAL PLAN NOTES:

G1 REFERENCE DRAWINGS:

S0.00 - ABBREVIATIONS, SYMBOLS AND SHEET INDEX
S1.0X - GENERAL STRUCTURAL NOTES
S2.01 - ROOF FRAMING PLAN
S3.0X - RETROFIT DETAILS

G2 SEE SHEET S0.00 FOR TYPICAL SYMBOLS

G3 CONTRACTOR SHALL FIELD VERIFY EXISTING STRUCTURAL CONDITIONS. IF ANY DISCREPANCY OCCURS BETWEEN EXISTING CONDITIONS AND PROPOSED ALTERATIONS, CONTRACTOR SHALL CONTACT ARCHITECT AND STRUCTURAL ENGINEER BEFORE PERFORMING ALTERATION WORK.

PLAN NOTES:

S1 INDICATES AREA WHERE RETROFITS TO (E) ROOF FRAMING IS REQUIRED. (E) SHEATHING TO BE REMOVED FOR JOIST RETROFITS IN SHADED AREA. REPLACE WITH (N) 5/8" THICK OSB ROOF SHEATHING MATCH (E) EDGE & FIELD NAILING PATTERN, SIZE & SPACING.

S2 ## (E) BEAM/JOIST, SEE SCHEDULE.

S3 P-# (E) POST, SEE SCHEDULE.

S4 (N) BEAM/JOIST.

S5 (N) WOOD POST/COLUMN

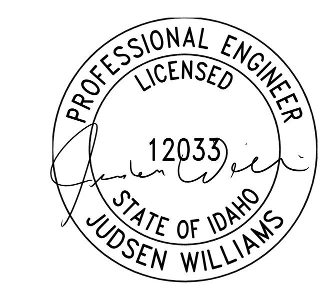
(E) WOOD JOIST SCHEDULE	
TYPE	SIZE
J1	2x10 @ 16" OC
J2	2x12 @ 16" OC
J3	2x4 @ 24" OC
J4	2x8 @ 16" OC
J5	20" TJL @ 32" OC
J6	22" TJL @ 32" OC
J7	24" TJH @ 48" OC
J8	16" TJL @ 48" OC
J9	12" TJI @ 32" OC

(E) GLULAM SCHEDULE	
TYPE	SIZE
GL1	GL 5 1/4"x9 3/4"
GL2	GL 5 1/4"x17 7/8"
GL3	GL 5 1/4"x24 3/8"
GL4	GL 5 1/4"x21 1/8"
GL5	GL 5 1/4x13"
GL6	GL 11 3/8x5 1/4
GL7	GL 5 1/8"x21"
GL8	GL 5 1/8"x16 1/2"
GL9	GL 5 1/4"x14 5/8"

(E) POST SCHEDULE	
TYPE	SIZE
P1	4x6
P2	5 1/4x5 1/4
P3	5 1/4x3 5/8
P4	3" PIPE
P5	3x4 TUBE
P6	2x4
P7	2x6

KEY NOTES

KEY VALUE	KEYNOTE TEXT
1	SISTER (E) 2x JOIST WITH (N) 2x PER 1/S3.00, TYP BELOW (N) RTU UNITS.
2	(N) GLULAM/LVL BEAMS BELOW (N) RTU UNITS, SEE DETAIL 2/S3.00.
3	(N) 4x6 WOOD POSTS IN (E) WALL AT EA END OF (N) GLULAM BEAM, TYP, UNO.
4	(E) WOOD BEARING WALL BELOW, 2x4 @ 16" OC, UNO, VIF.
5	(E) UNREINFORCED BRICK WALL BELOW, 8 1/4" THICK UNO,VIF.
6	(E) SKYLIGHTS NOT BEING USED AS A (N) RTU DUCT PENETRATION OPENING TO BE IN-FILLED AND COVERED, SEE DETAIL 5/S3.00 .
7	(N) RTU, MAX WEIGHT = 850 LBS.
8	LOCATE RTU SUCH THAT IT IS SUPPORTED BY MINIMUM OF 3 TRUSSES BELOW, PROVIDE 2x6 BLOCKING ALIGNED BELOW ROOF CURB, BLOCKING TO ATTACH TO (E) TRUSS WITH SIMPSON LB26 TOP MOUNT HANGERS.
9	(E) (2) 2x10, AROUND (E) SKYLIGHTS OPENING, TYP, UNO.
10	(N) 2x10, ATTACH TO (E) or (N) 2x WITH SIMPSON LUS210 FACE MOUNT HANGER.
11	(E) SKYLIGHT OPENING TO BE ENLARGED FOR (N) RTU DUCT PENETRATIONS, SEE DETAIL 6/S3.00.
12	(E) ROOF OPENING BELOW (E) MECH UNIT OPENING TO BE IN-FILLED AND COVERED, SEE DETAIL 5/S3.00.
13	SCREEN WALL FRAMING AND ATTACHMENT PER 9/S3.01.
14	WOOD POST CONNECTION AT BASE PER 1/S3.02.
15	(N) 2x10 WOOD BLOCKING BETWEEN (E) SISTERED JOISTS, EITHER SIDE OF (N) HSS SCREEN WALL SUPPORT POST.
16	(N) (2) 2x10, ATTACH TO (E) 2x WITH SIMPSON LUS210 FACE MOUNT HANGER.
17	(N) OPENING IN (E) ROOF FOR RTU DUCT PENETRATIONS PER 3/S3.02. (N) OPENING TO BE LOCATED BETWEEN (E) ROOF TRUSSES, DO NOT DAMAGE (E) ROOF TRUSSES. CONTRACTOR TO FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION, NOTIFY ENGINEER OF ANY DISCREPANCIES OR INCONSISTENSIES.
18	IN THE SW ADDITION BUILDING, (E) COOLING UNITS TO BE REMOVED AND ROOF OPENINGS BELOW TO BE IN-FILLED AND COVERED, TYP WITH 5/8" SHEATHING, COORDINATE WITH ARCH DRAWINGS.
19	(E) SKYLIGHT TO REMAIN
20	(N) ROOF DRAINS, COORDINATE WITH ARCHITECTURAL & PLUMBING DRAWINGS, LOCATE BETWEEN (E) JOISTS/BEAMS. DO NOT DAMAGE (E) JOIST/BEAMS DURING PLACEMENT.
21	SEE 6/S3.02 FOR STACKED MECHANICAL OPENING IN (E) BRICK WALL DETAIL.
22	0.148" DIA WITH 1 1/2" MINIMUM PENETRATION @ 3" OC (EDGE NAILING) AND 6" OC (FIELD NAILING)
23	(N) MECH OPENING IN (E) STUD WALL PER DETAIL 4/S3.02.



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ROOF FRAMING PLAN

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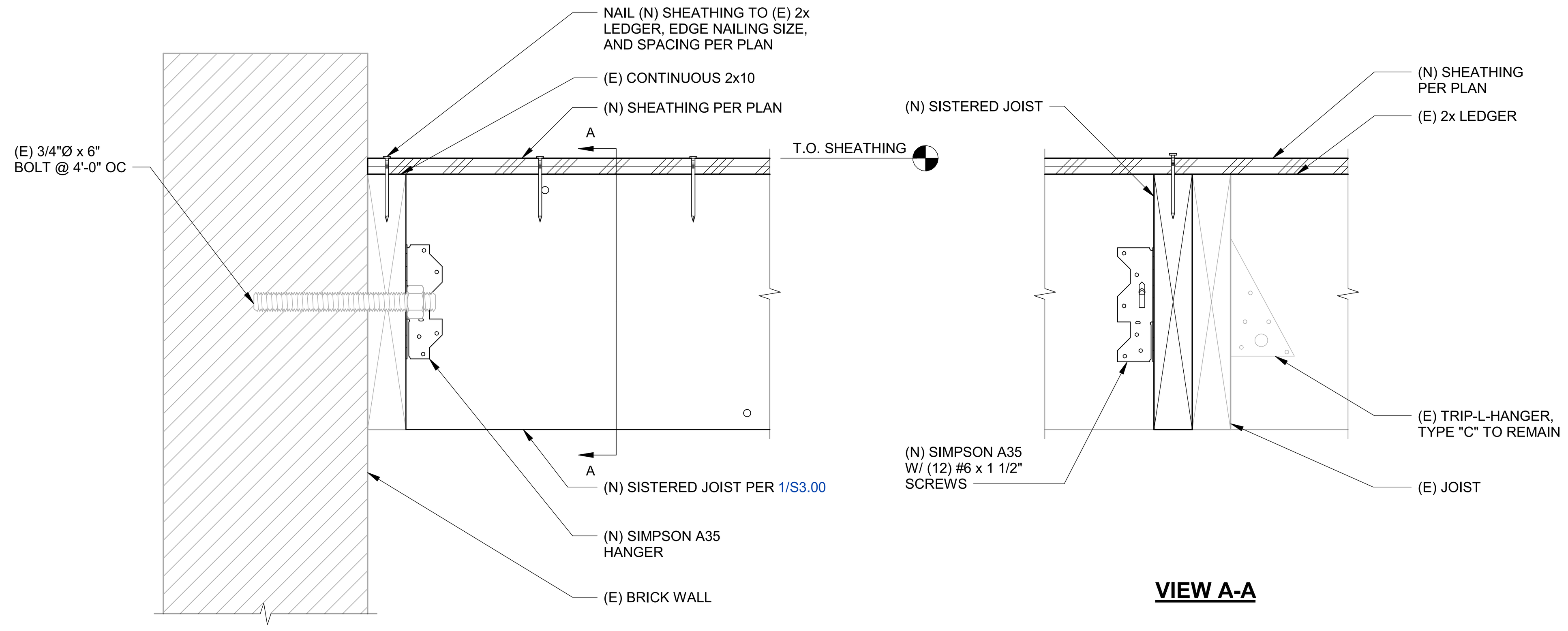
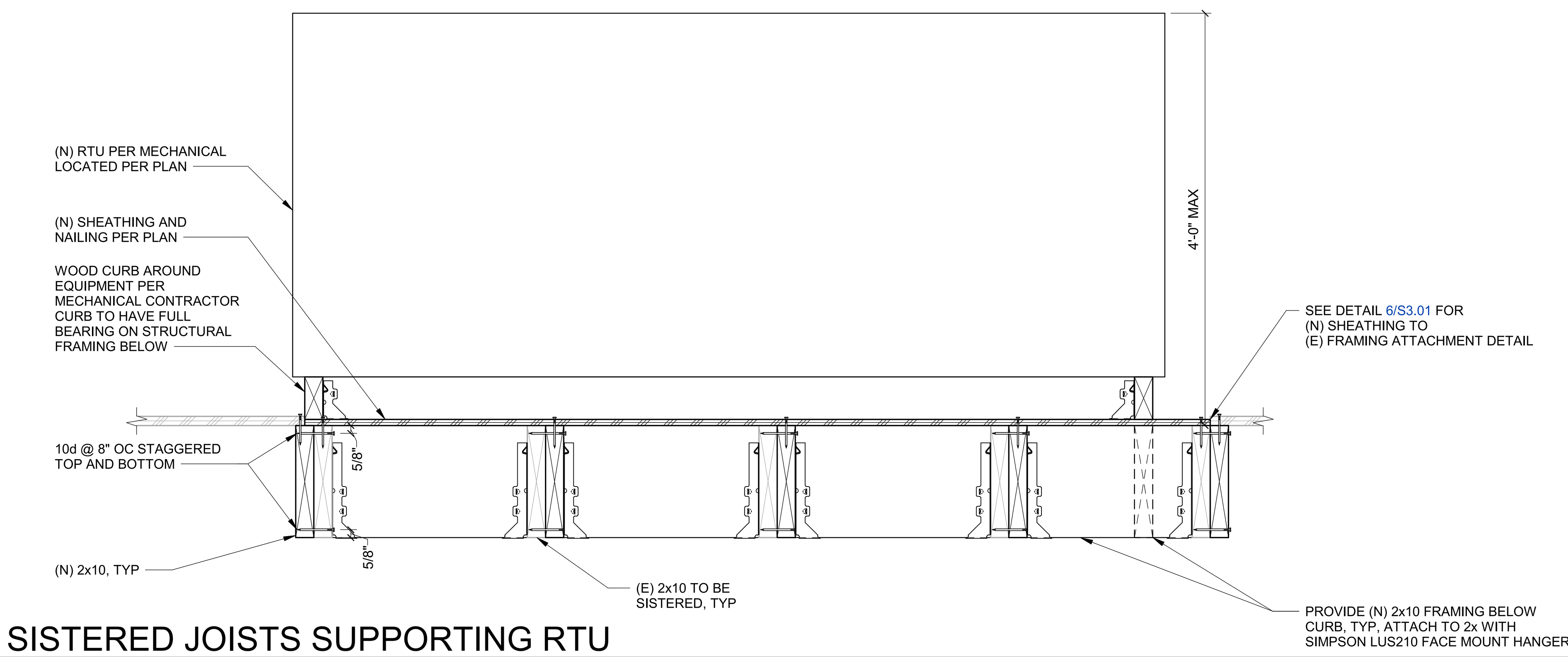


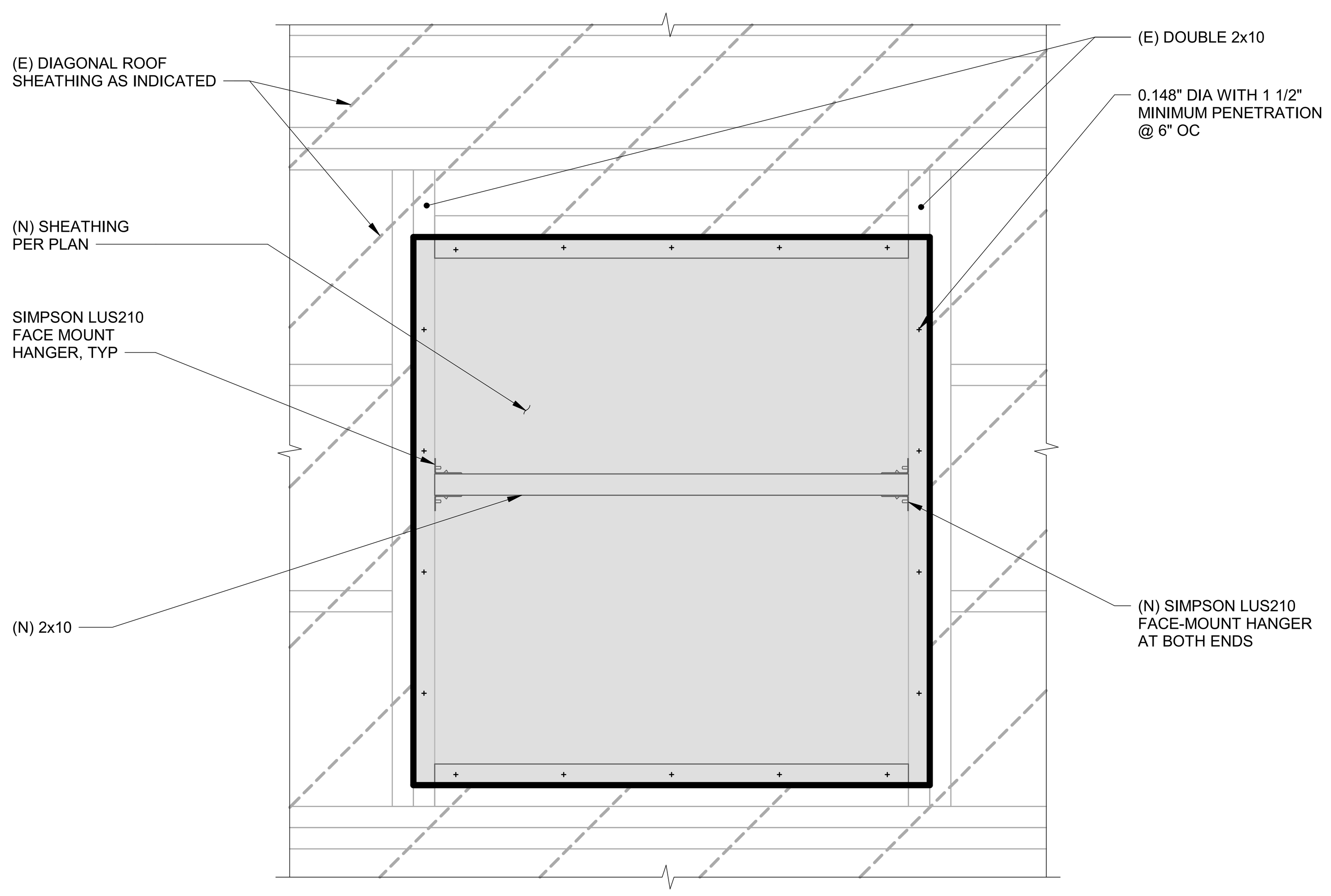
4 S3.00 END SUPPORT CONNECTION AT BRICK WALL
3" = 1'-0"



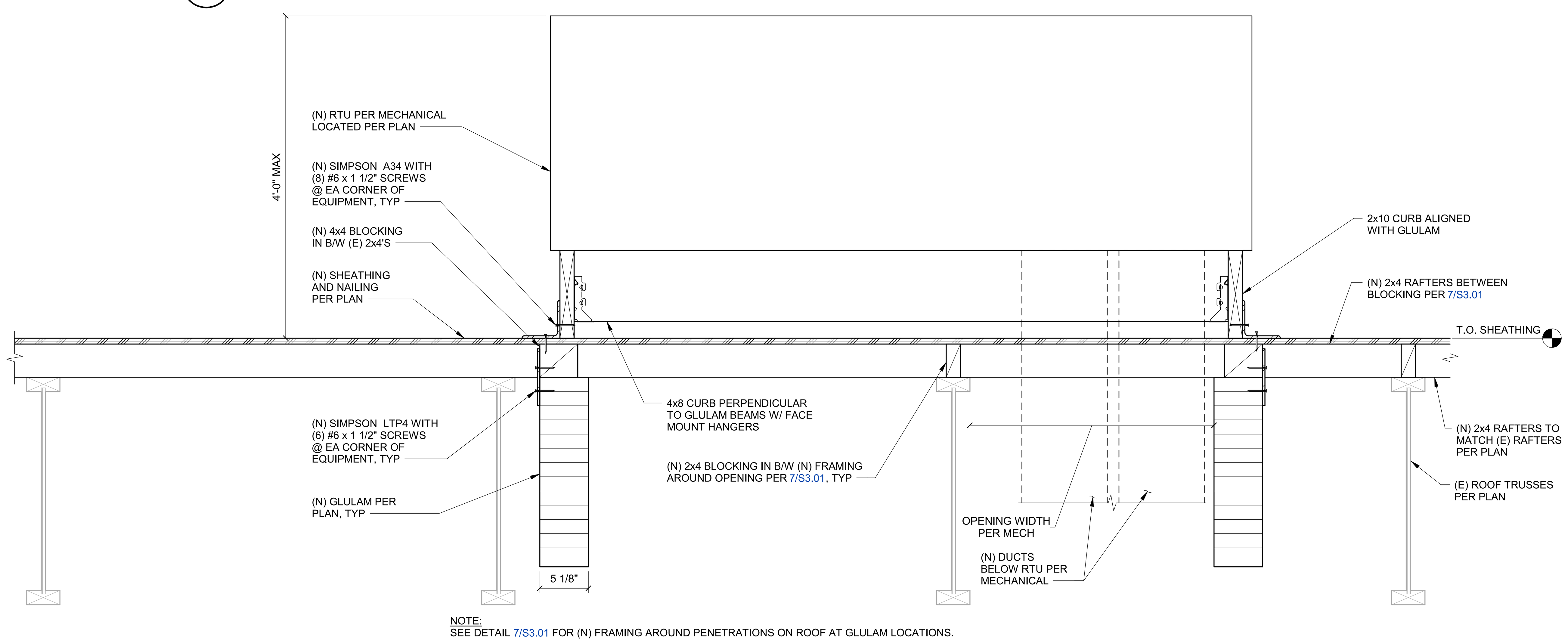
1 S3.00 SISTERED JOISTS SUPPORTING RTU
1 1/2" = 1'-0"

B

C



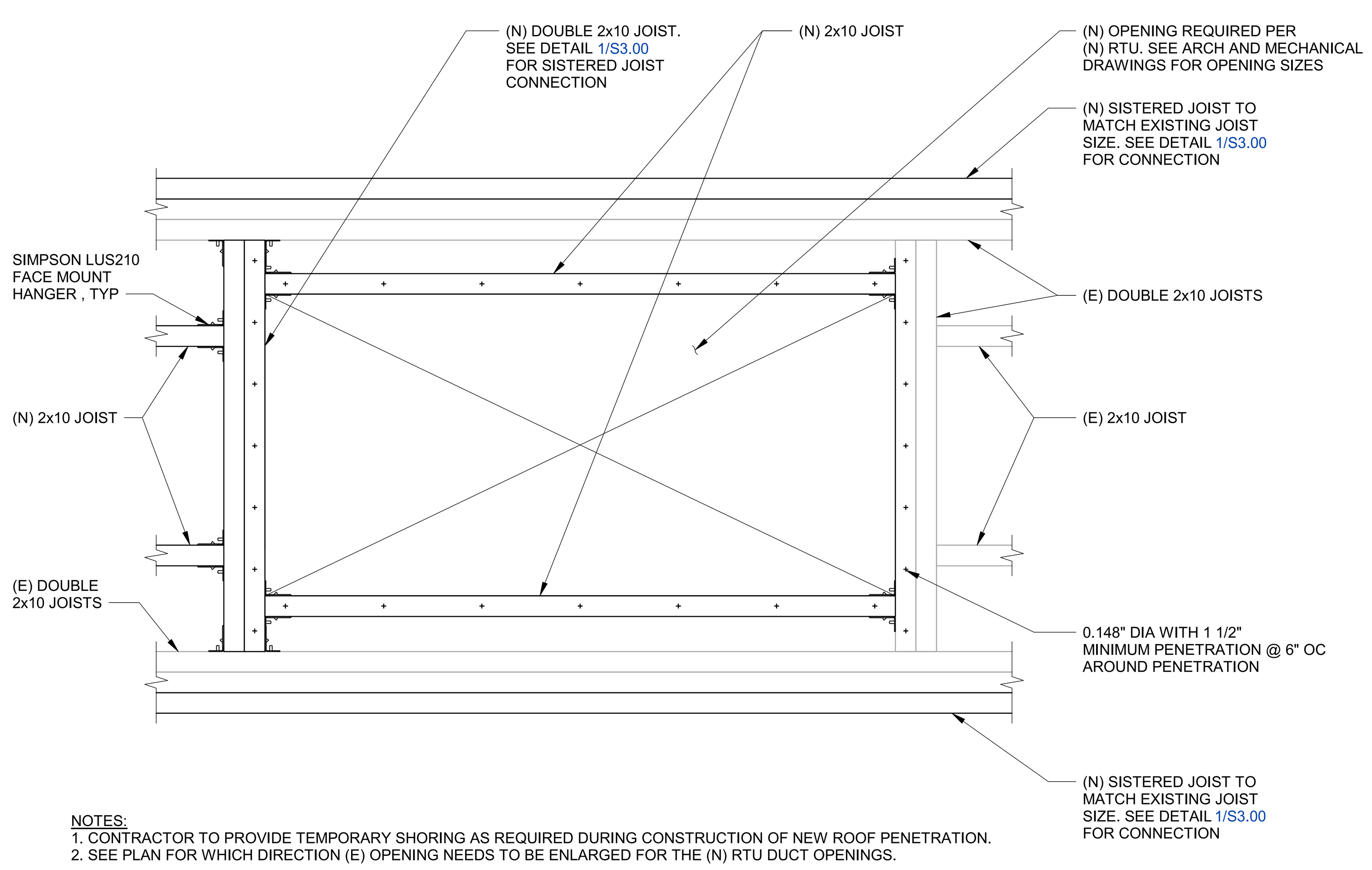
5 S3.00 (E) ROOF OPENING INFILL DETAIL
1 1/2" = 1'-0"



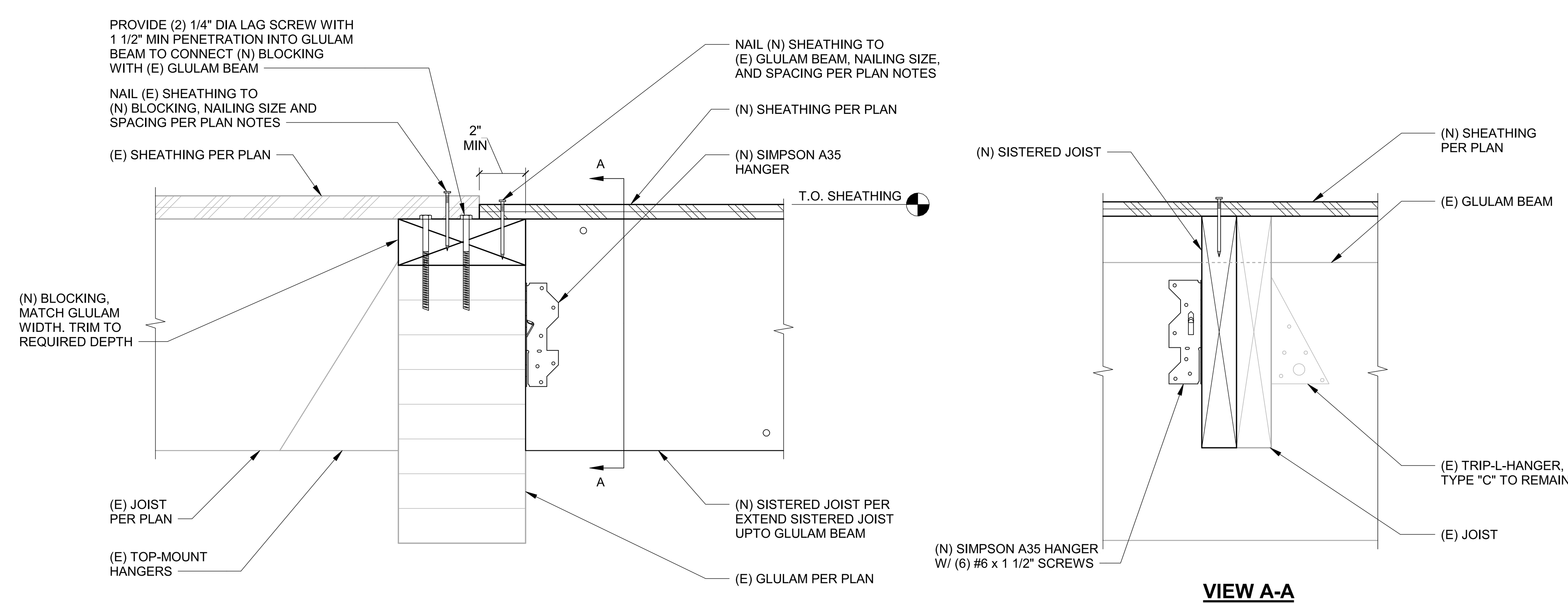
NOTE:
SEE DETAIL 7/S3.01 FOR (N) FRAMING AROUND PENETRATIONS ON ROOF AT GLULAM LOCATIONS.

2 S3.00 (N) GLULAM BEAMS SUPPORTING RTU
1 1/2" = 1'-0"

D



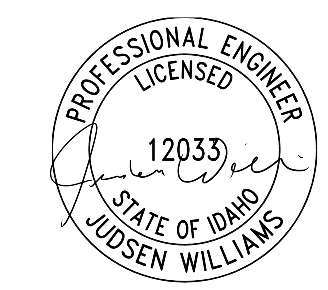
NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY SHORING AS REQUIRED DURING CONSTRUCTION OF NEW ROOF PENETRATION.
2. SEE PLAN FOR WHICH DIRECTION (E) OPENING NEEDS TO BE ENLARGED FOR THE (N) RTU DUCT OPENINGS.



E

6 S3.00 (N) FRAMING FOR PENETRATION ON ROOF
1 1/2" = 1'-0"

3 S3.00 END SUPPORT CONNECTION AT GLULAM
3" = 1'-0"



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Sheet:
RETROFIT DETAILS

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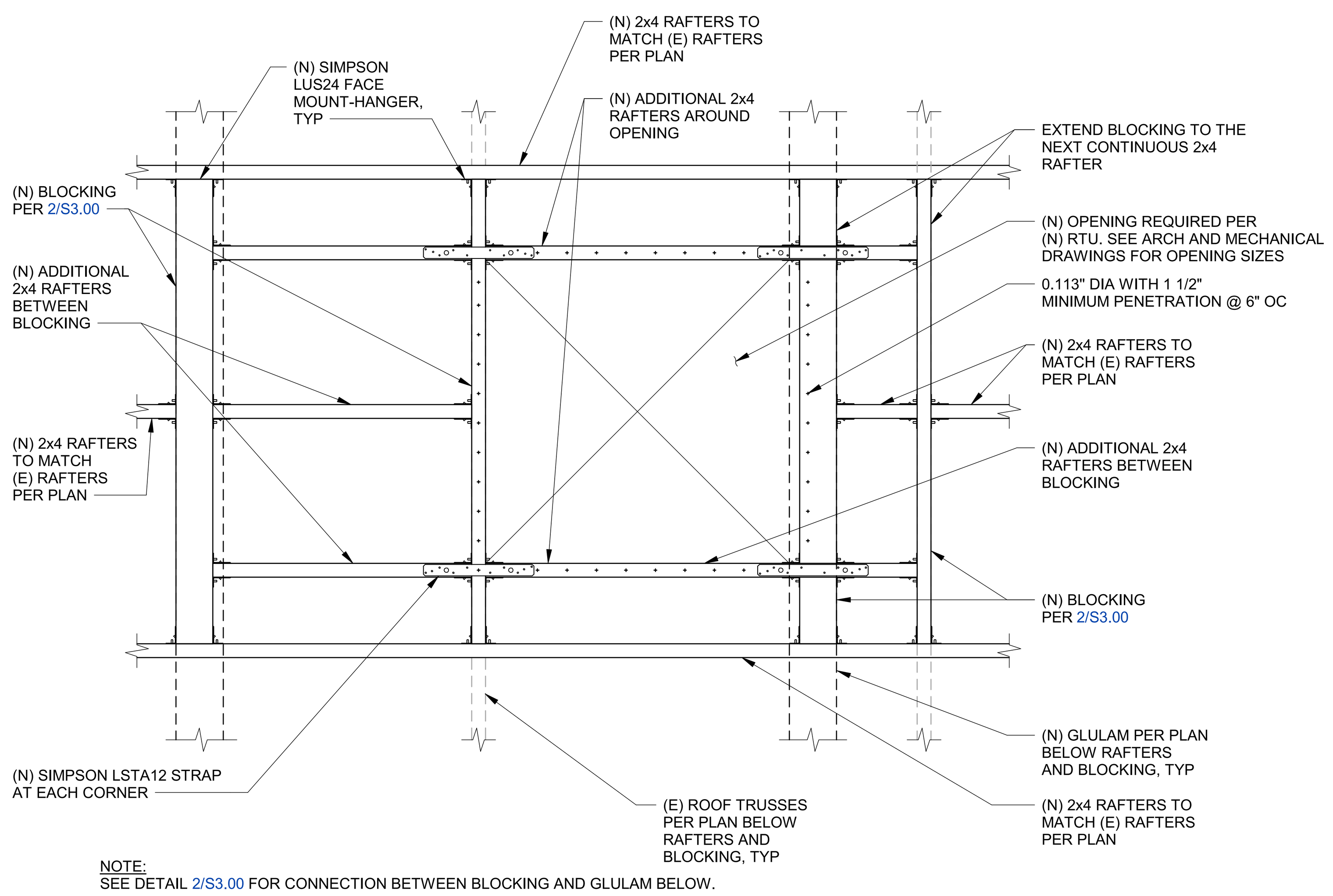
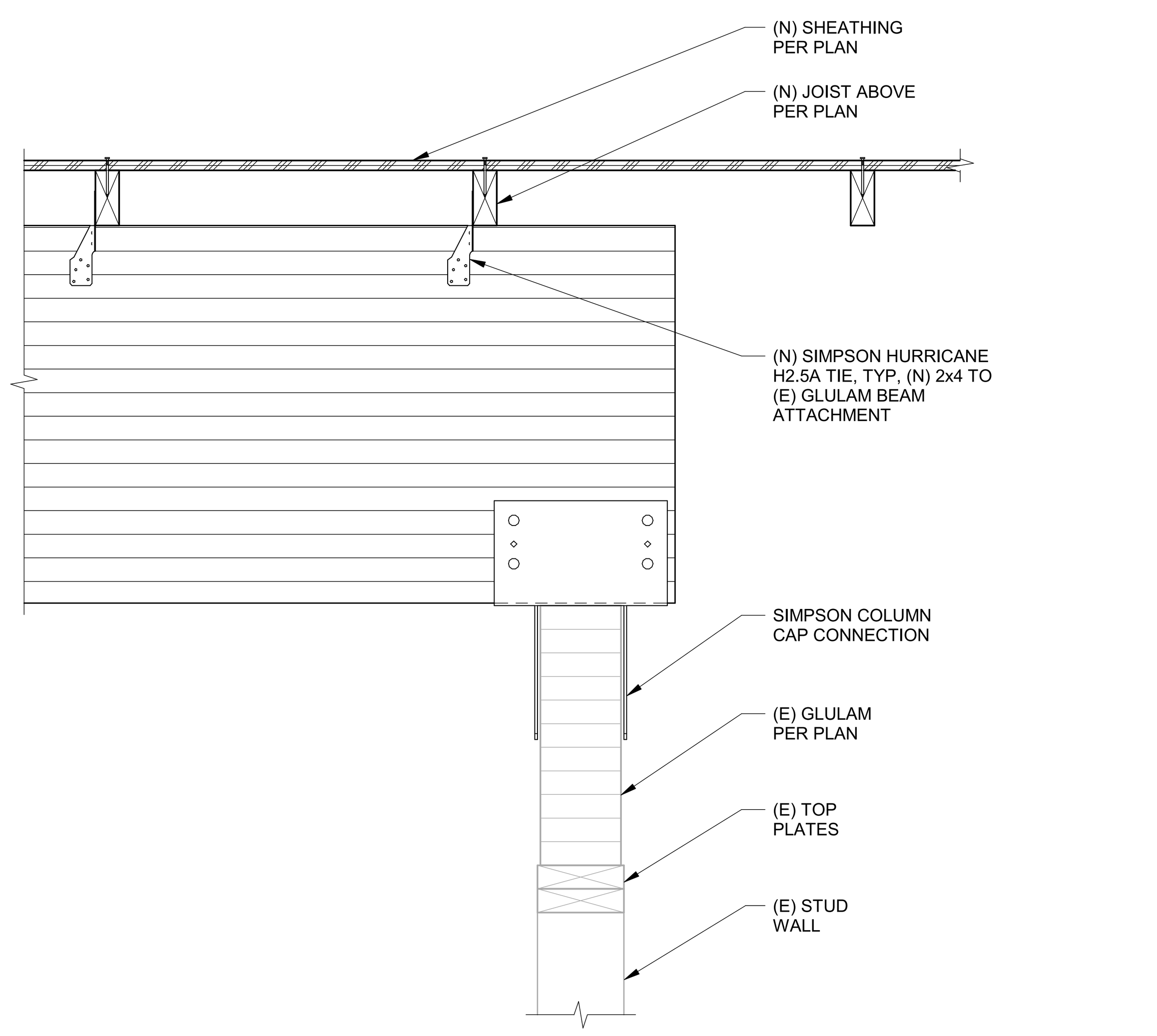
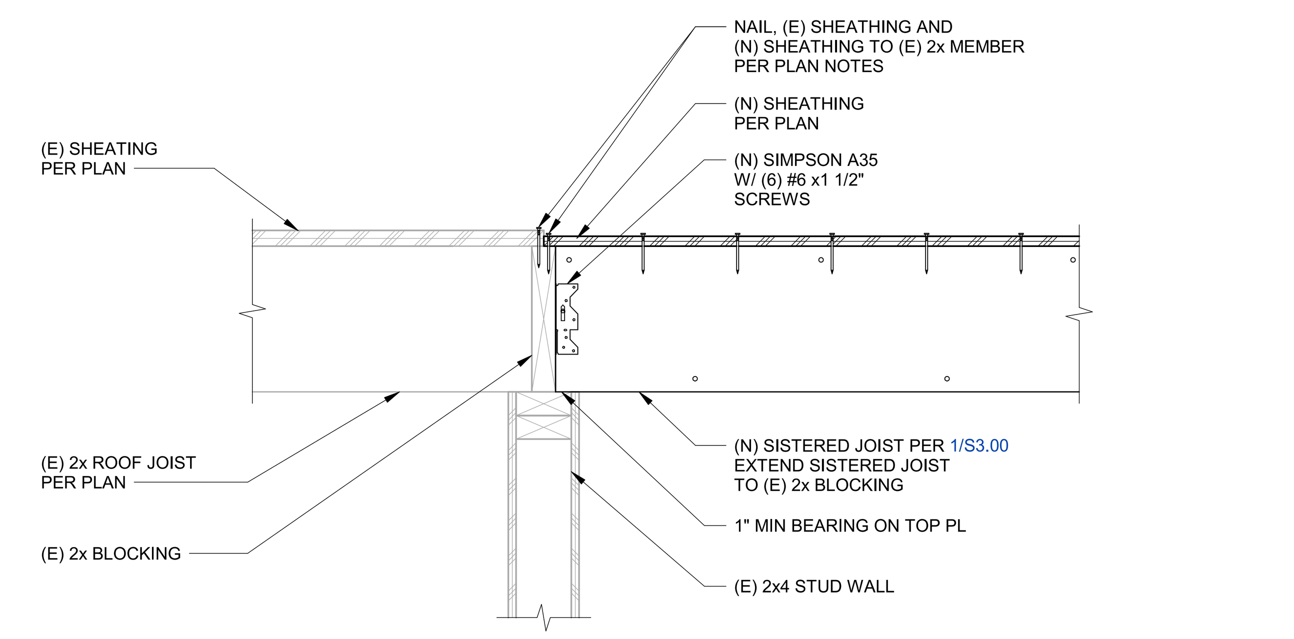


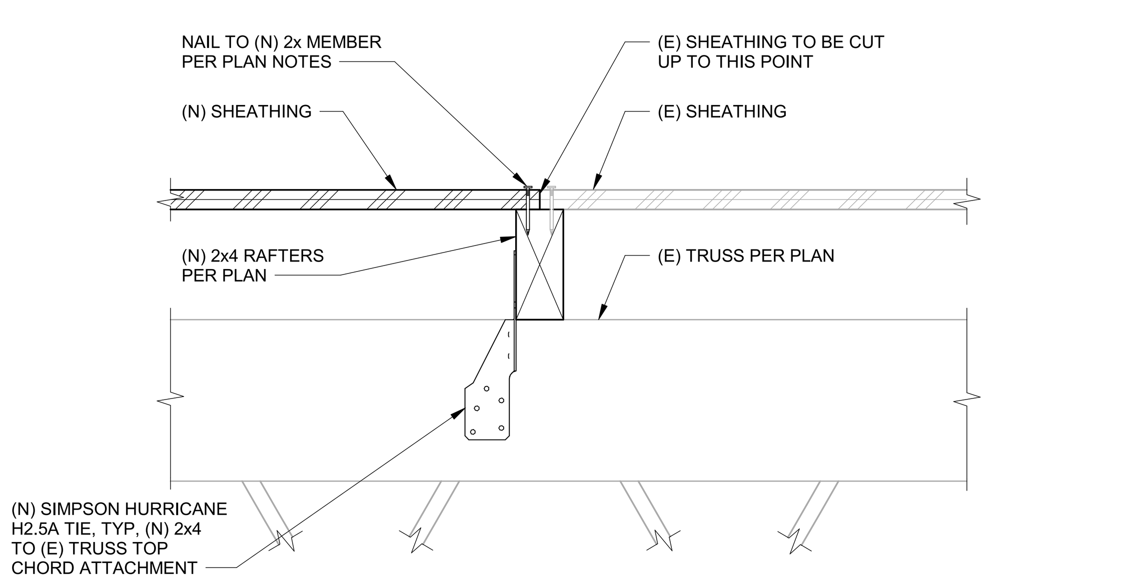
7 S3.01 (N) FRAMING FOR PENETRATION ON ROOF AT (N) GLULAM LOCATIONS
1" = 1'-0"



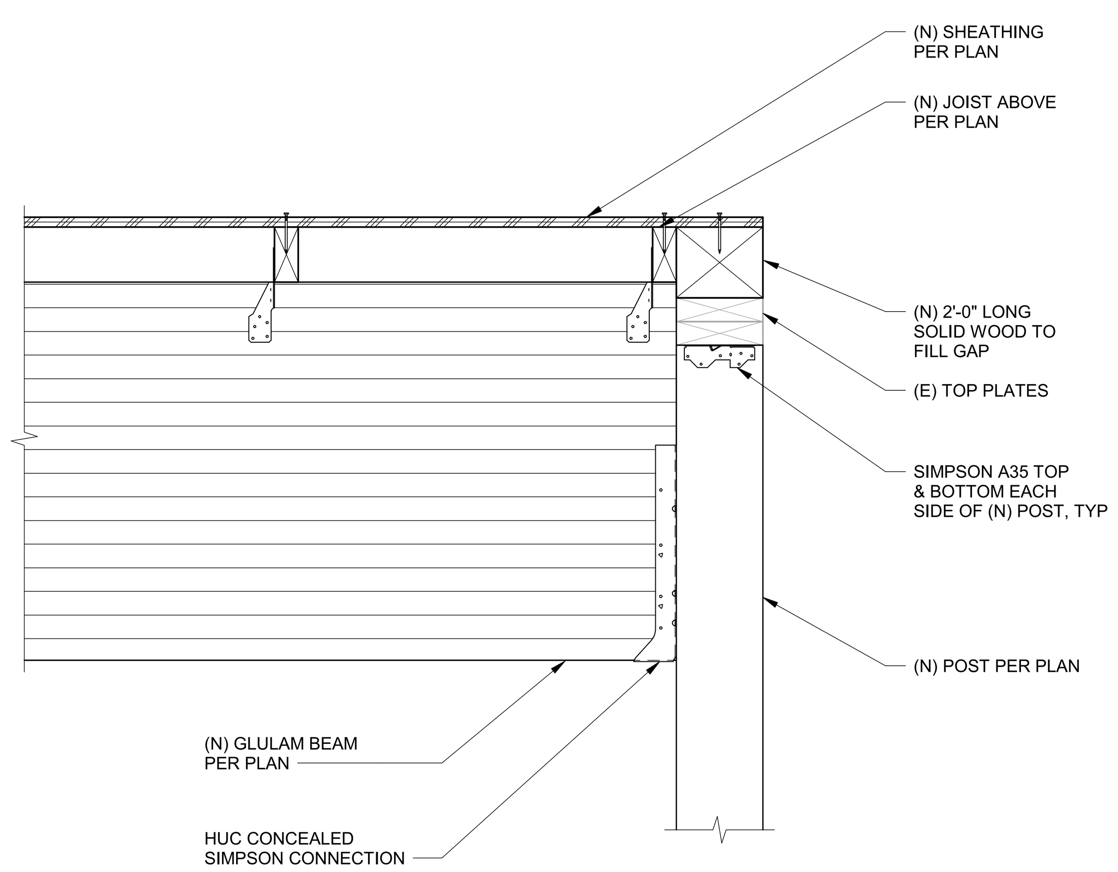
4 S3.01 GLULAM OVER GLULAM CONNECTION
1 1/2" = 1'-0"



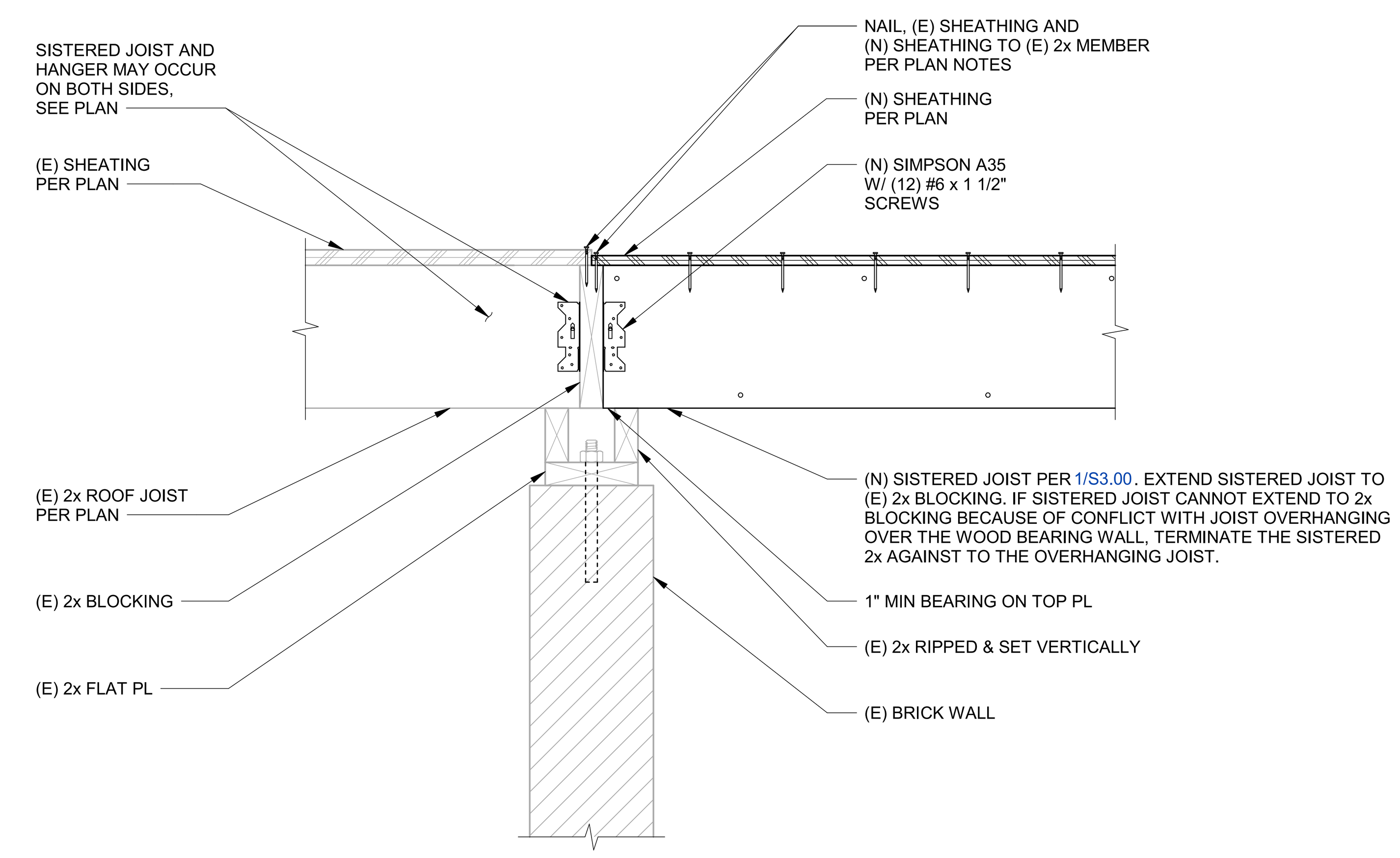
1 S3.01 SISTERED JOIST TO (E) WOOD STUD WALL
1 1/2" = 1'-0"



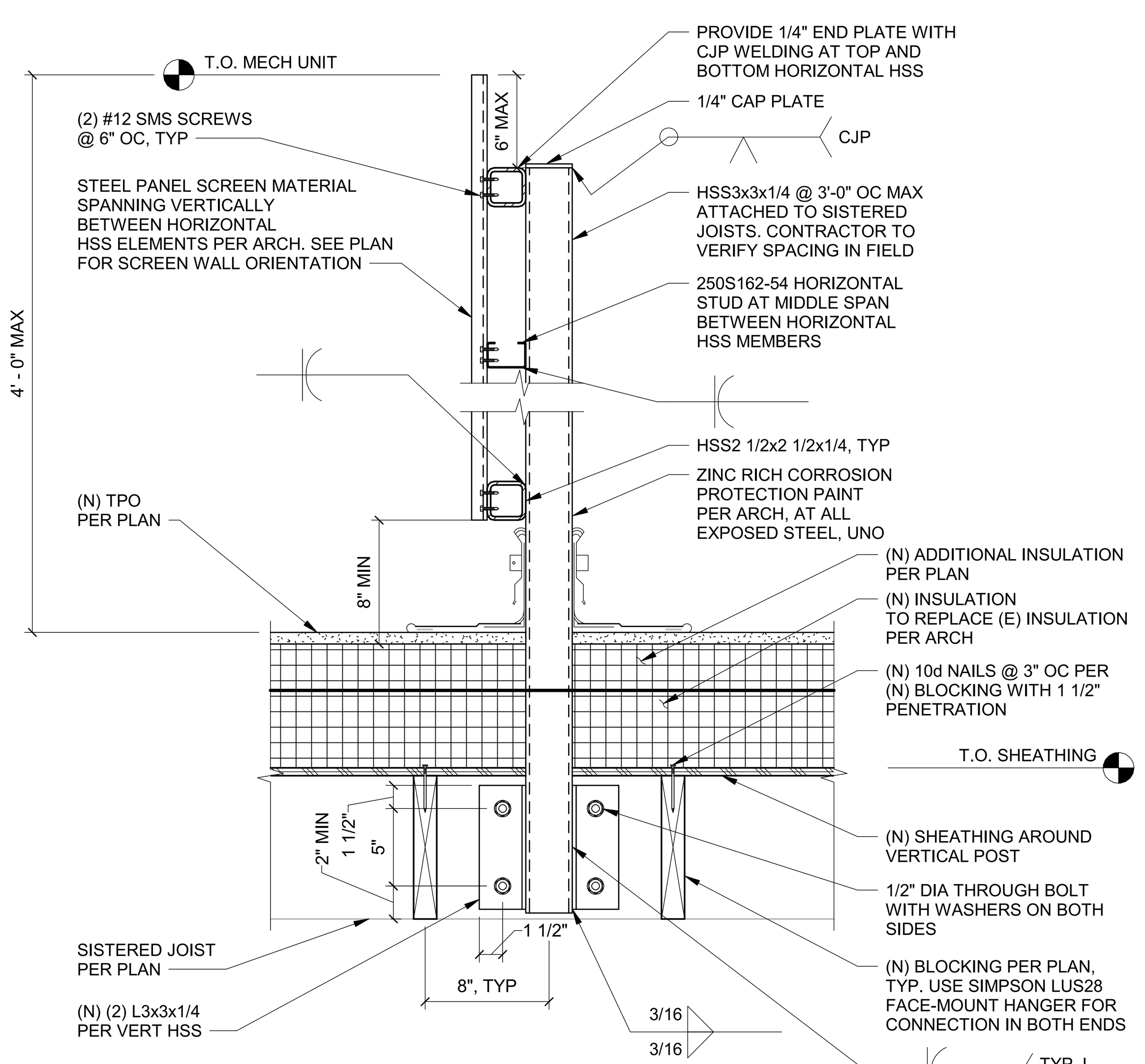
8 S3.01 (N) SHEATING TO (E) FRAMING ATTACHMENT DETAIL AT ADDITION BUILDINGS
3" = 1'-0"



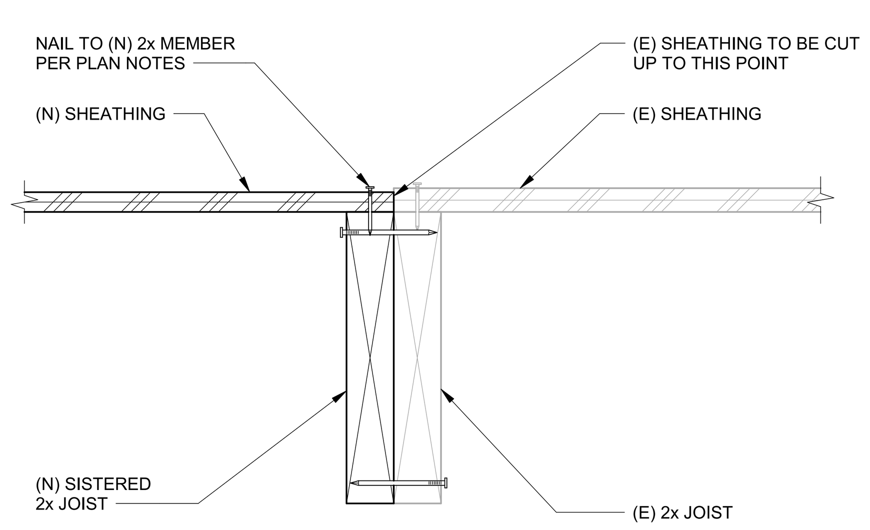
5 S3.01 GLULAM TO POST CONNECTION
1 1/2" = 1'-0"



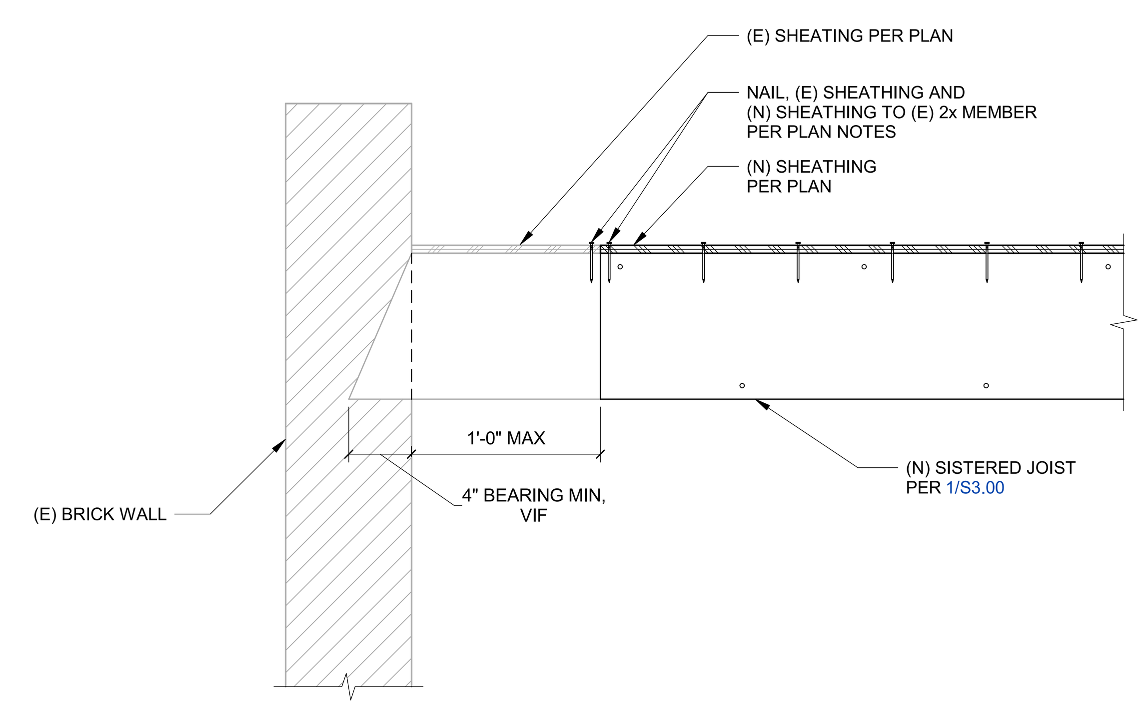
2 S3.01 SISTERED JOIST TO TOP OF (E) BRICK WALL
1 1/2" = 1'-0"



9 S3.01 SCREEN WALL ATTACHMENT
1 1/2" = 1'-0"



6 S3.01 (N) SHEATING TO (E) FRAMING ATTACHMENT DETAIL
3" = 1'-0"



3 S3.01 SISTERED JOIST TO FACE OF (E) BRICK WALL
1 1/2" = 1'-0"

A B C D E

PROFESSIONAL ENGINEER LICENSED 12033 STATE OF IDAHO JUDSEN WILLIAMS

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hummelarch.com

Project:
HARRISON ELEMENTARY SCHOOL

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
RETROFIT DETAILS

BID SET

Revisions:

Project No:	10212400109
Drawn By:	DPC/YK
Checked By:	JW
Date:	01/15/2025

Sheet No:
S3.01

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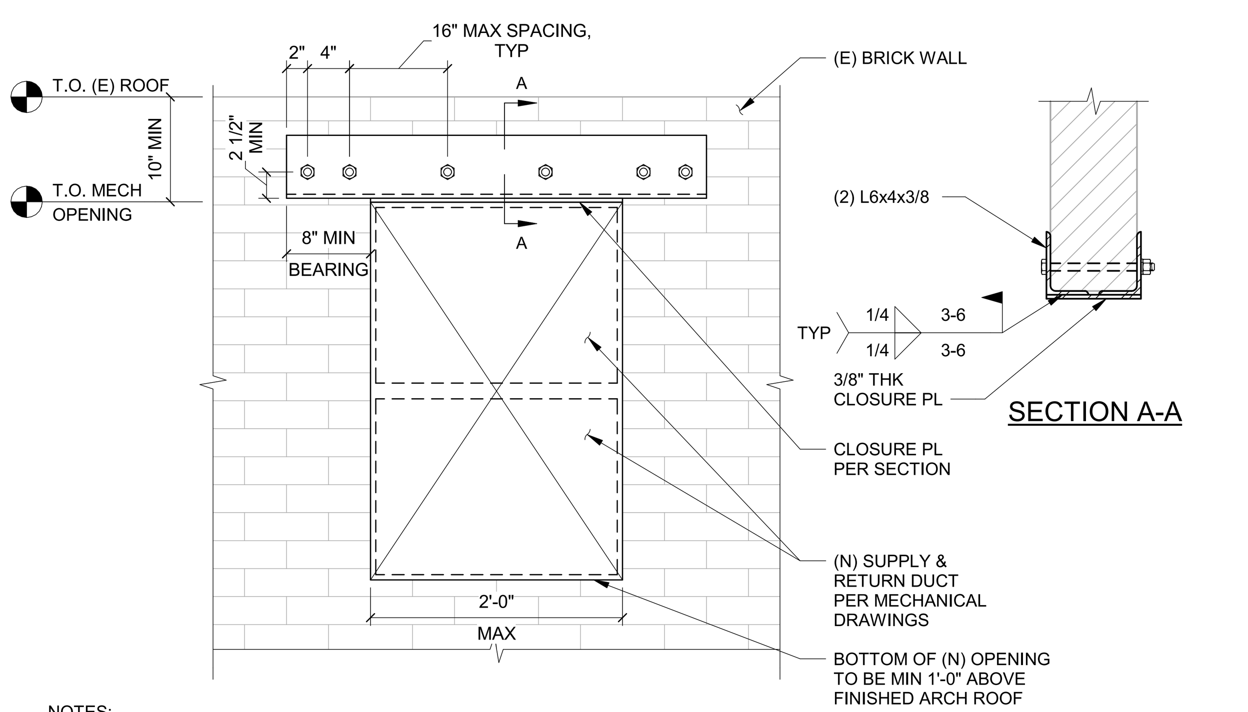
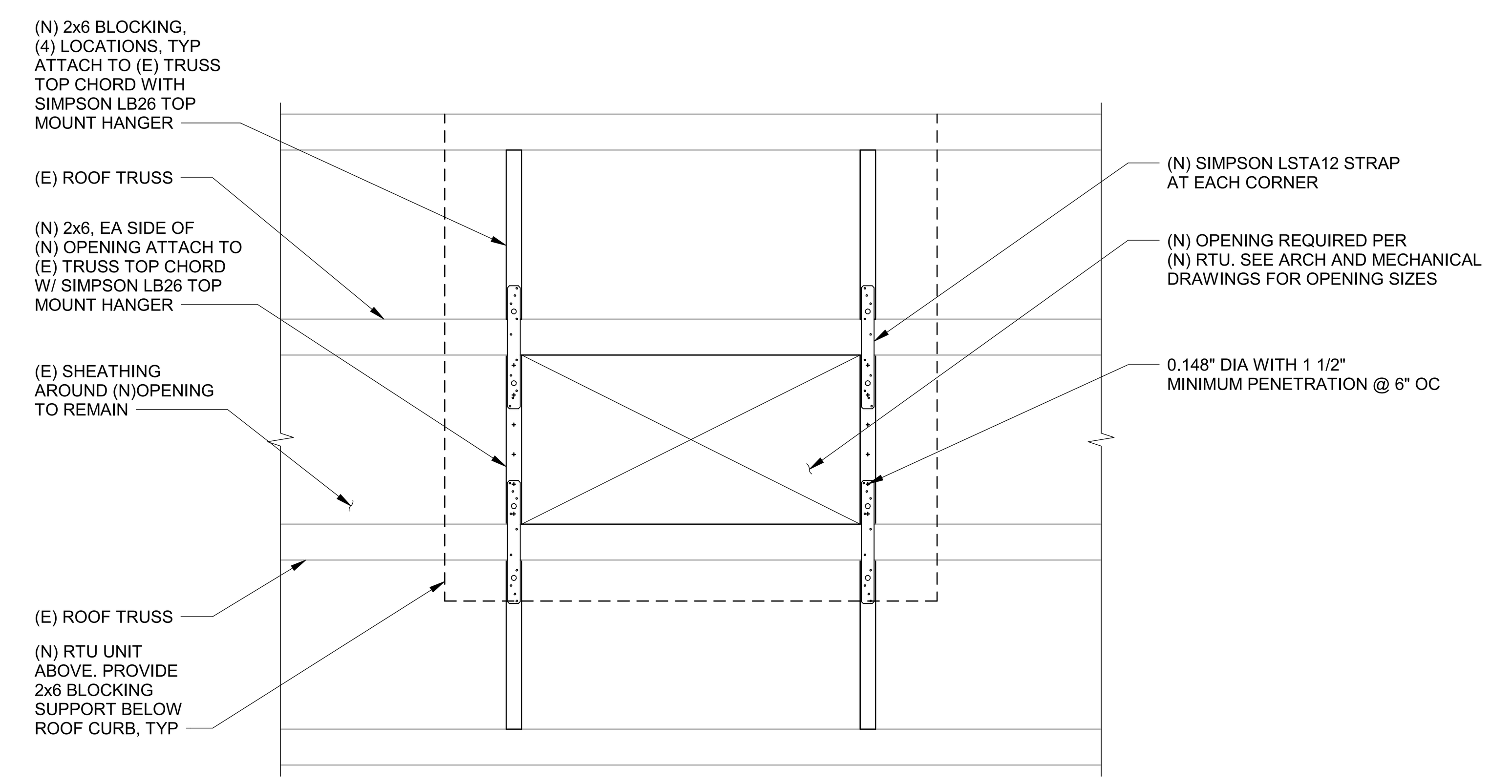
1 2 3 4 5 6

A B C D E

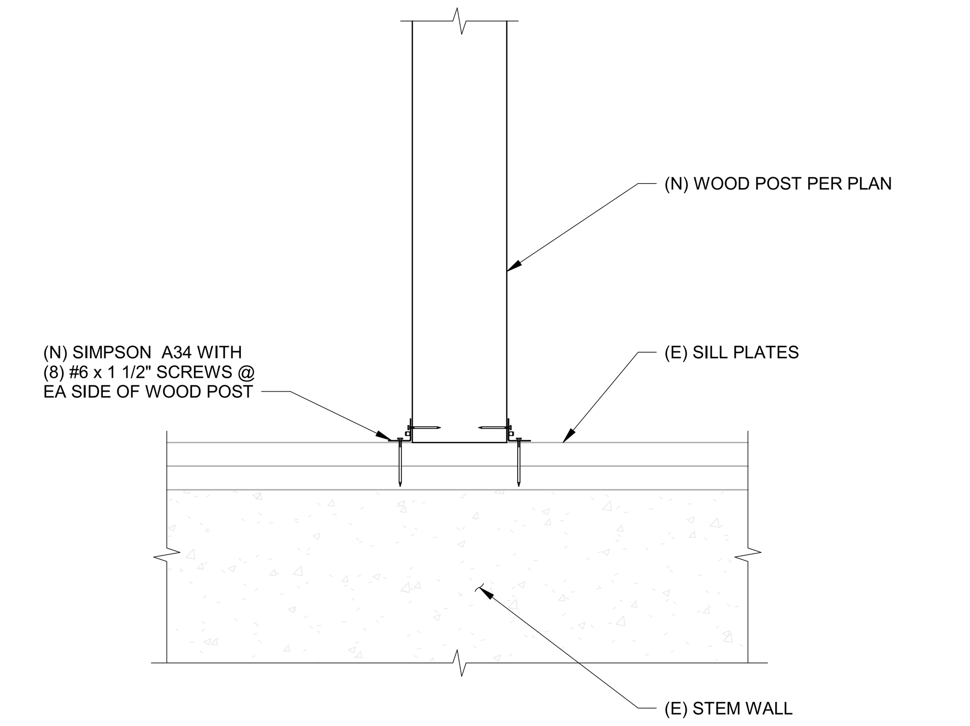


NOTES:
1. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO ANY DEMOLISHING WORK AND/OR FABRICATION OF DUCTWORK. PLEASE CONTACT ARCHITECT AND SEOR IF THERE ARE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND PROPOSED MODIFICATIONS.
2. STEEL LINTEL & PLATES EXPOSED TO WEATHER TO BE HOT-DIP GALVANIZED.
3. CONTRACTOR TO INSTALL LINTEL SUPPORT PRIOR TO DEMOLISHING OF THE MECHANICAL OPENING BELOW.

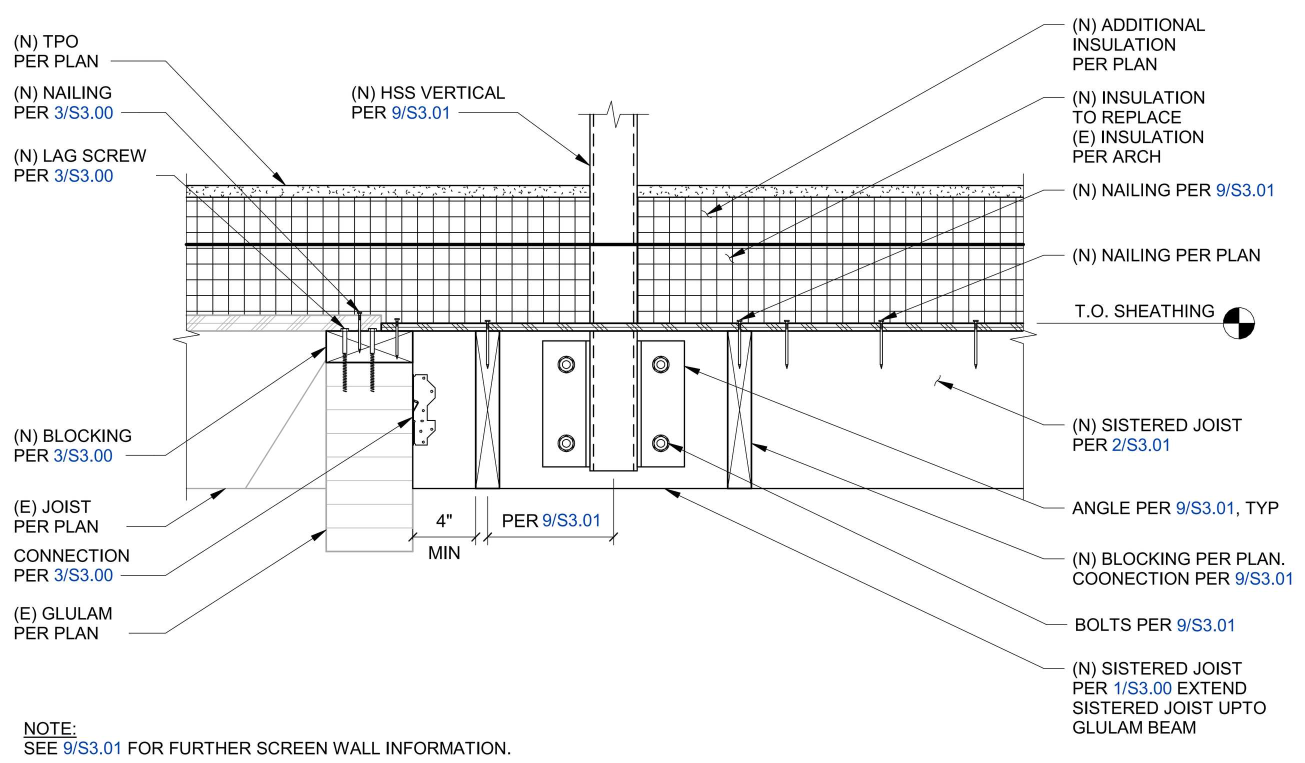
6 S3.02 STACKED MECHANICAL OPENING IN (E) BRICK WALL
1" = 1'-0"



3 S3.02 (N) MECHANICAL ROOF OPENING IN (E) ROOF WITH TRUSSES
1" = 1'-0"

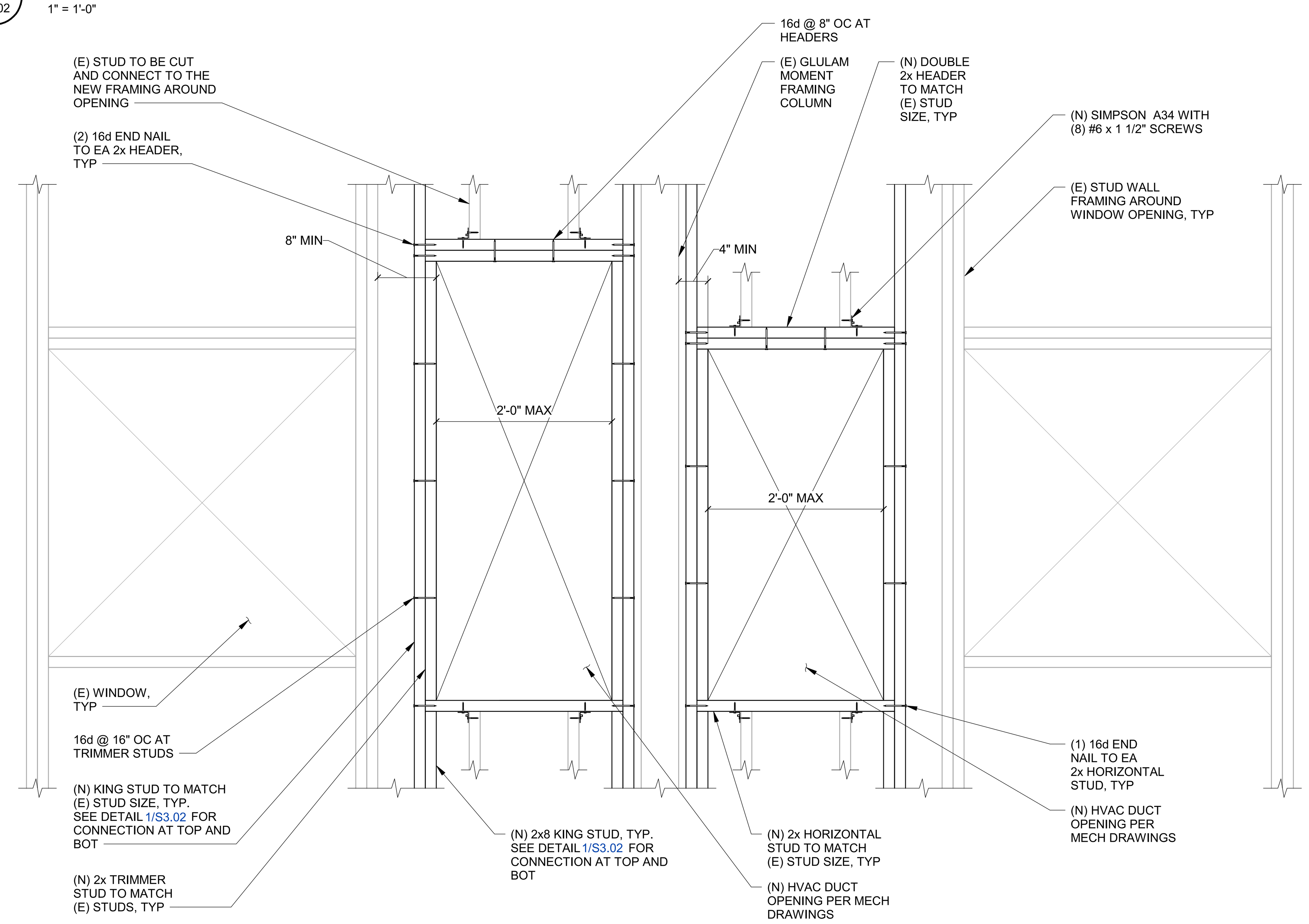


1 S3.02 WOOD POST CONNECTION
1 1/2" = 1'-0"



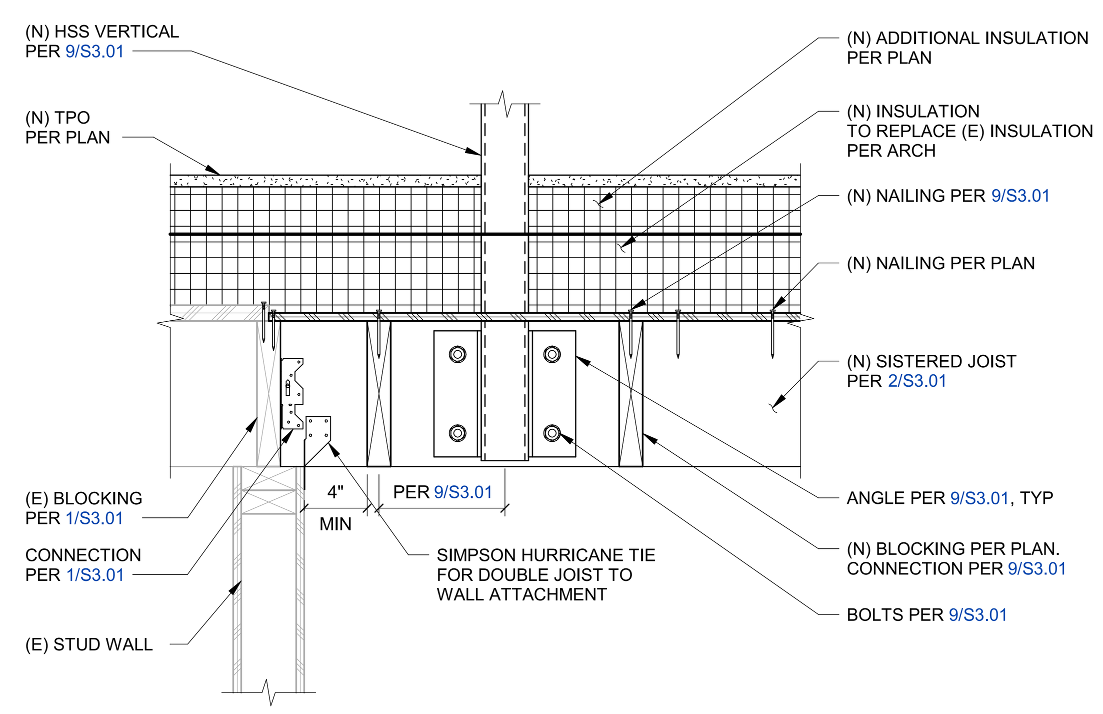
NOTE:
SEE 9/S3.01 FOR FURTHER SCREEN WALL INFORMATION.

7 S3.02 SCREEN WALL POST CONNECTION NEAR PARALLEL GLULAM
1 1/2" = 1'-0"



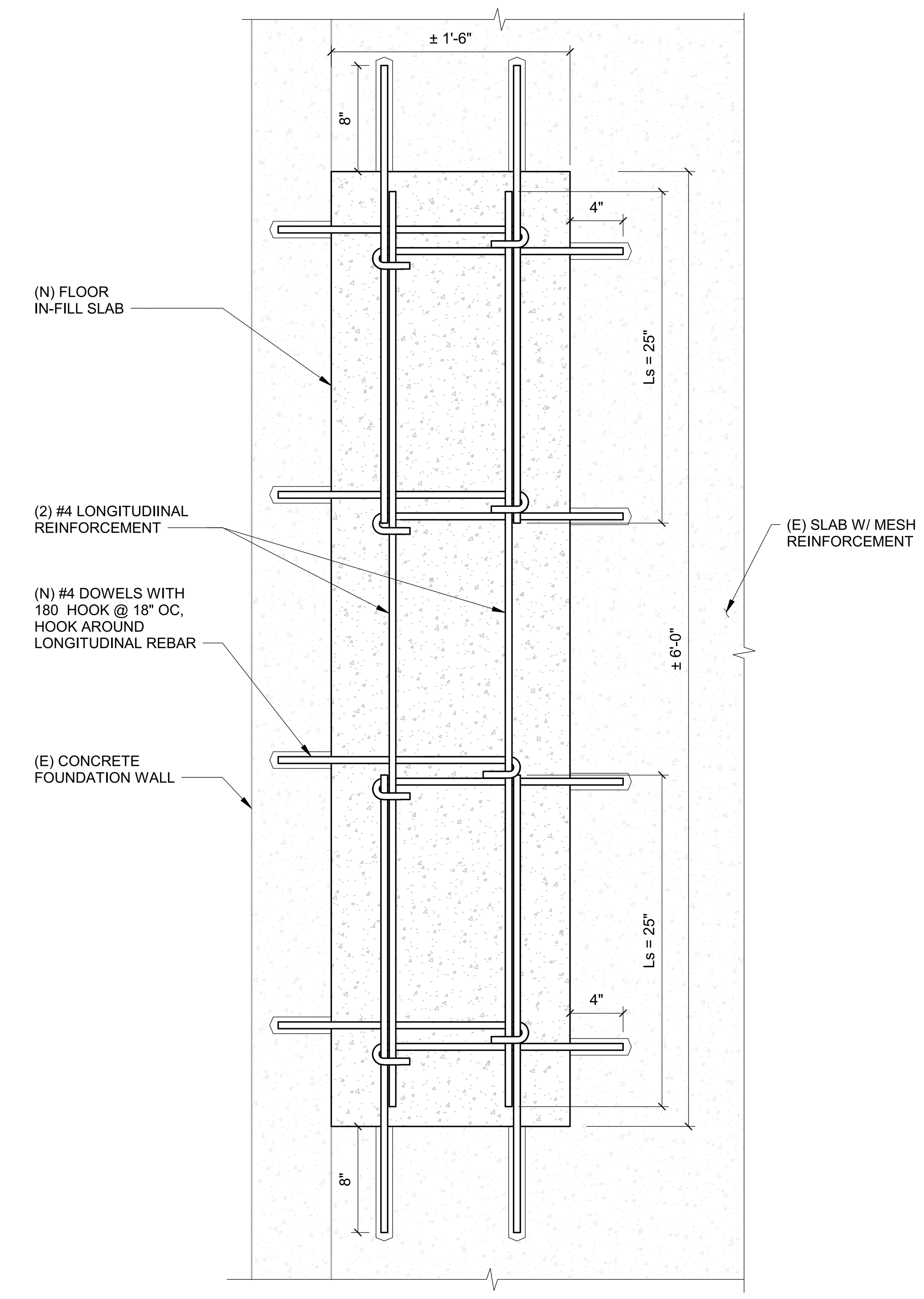
NOTE:
CONTRACTOR TO FIELD VERIFY IF THE EXISTING CONDITIONS MATCH THE EXISTING CONDITIONS IN THIS DETAIL ABOVE. NOTIFY SEOR IF THERE ARE ANY DISCREPANCIES.

4 S3.02 WALL OPENING - HVAC AT CAFETERIA - TYPICAL
1" = 1'-0"

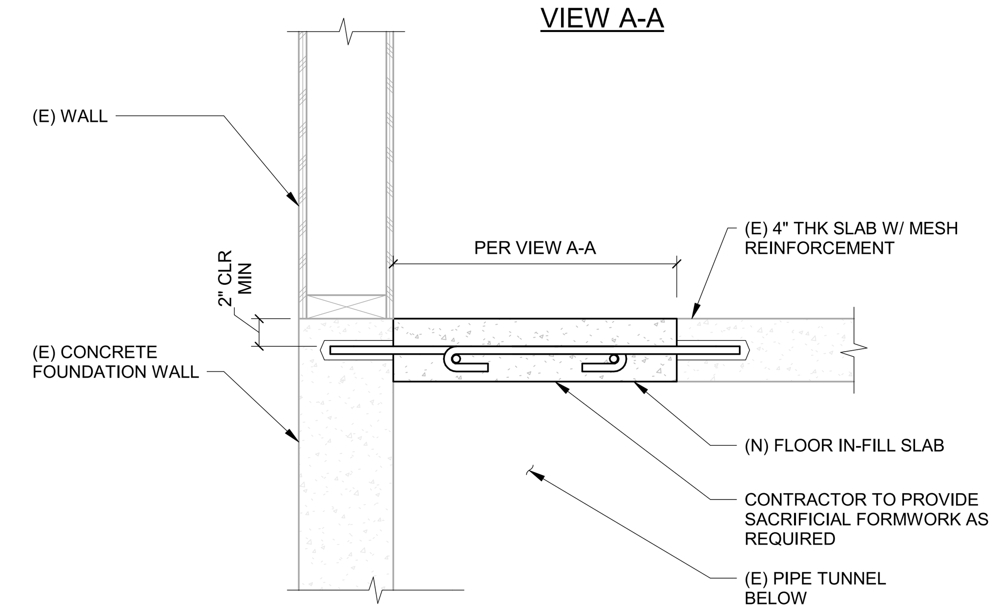


NOTE:
SEE 9/S3.01 FOR FURTHER SCREEN WALL INFORMATION.

5 S3.02 SCREEN WALL POST CONNECTION NEAR STUD WALL PARALLEL
1 1/2" = 1'-0"



VIEW A-A



NOTE:
SHORING PER CONTRACTOR AND OWNER.

2 S3.02 FLOOR INFILL AT (E) FCU LOCATION
1 1/2" = 1'-0"

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Project No:	10212400109
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S3.02

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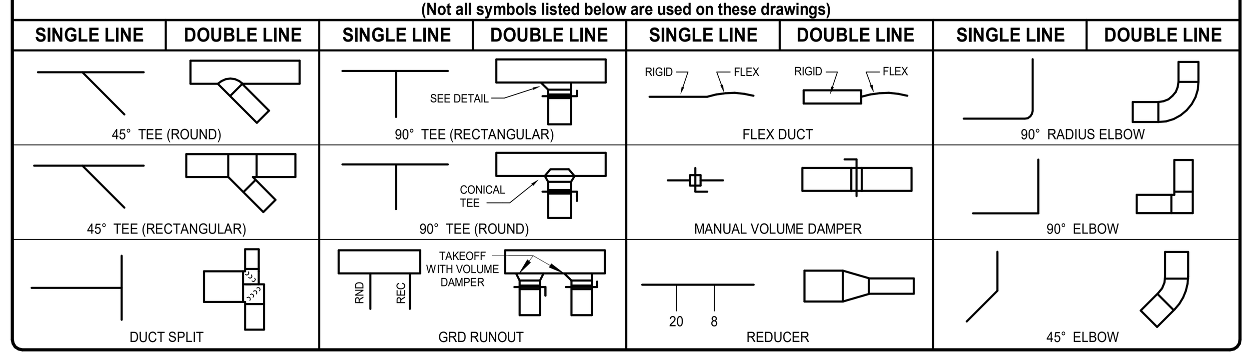
GENERAL LEGEND
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION
	X / X-X	SECTION DESIGNATION SECTION CUT ON THIS SHEET
	X / X-X	VIEW REFERENCE DESIGNATION VIEW REFERENCE ON THIS SHEET
	X / 1-2-3	EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER (UNIT SERVED - FLOOR - SEQUENCE #)
	A 10 / 250	DIFFUSER IDENTIFICATION DIFFUSER NECK DIAMETER DIFFUSER CFM
	E 8ø/24"L / 9999	LINEAR DIFFUSER IDENTIFICATION LINEAR DIFFUSER NECK DIAMETER LINEAR DIFFUSER LENGTH LINEAR DIFFUSER CFM
	2'-6" FTR 28 3'-6"	FINNED TUBE RADIATOR ACTIVE ELEMENT LENGTH EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER RADIATOR ENCLOSURE LENGTH (OR W-W=WALL-TO-WALL)
	X	KEY NOTE REFERENCE
	1	KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE
	X / X	TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR)
		POINT OF CONNECTION, NEW TO EXISTING
		POINT OF DISCONNECTION, DEMO
		DIRECTION OF FLOW IN PIPE
		DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED
(E)		EXISTING
(N)		NEW
(R)		RELOCATED
(F)		FUTURE
DIA	Ø	DIAMETER
WAD		WALL ACCESS DOOR
NIC		NOT IN CONTRACT
AFF		ABOVE FINISHED FLOOR
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
UNO		UNLESS NOTED OTHERWISE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

ABBR.	SYMBOL	DESCRIPTION
		CAP END OF PIPE
	SLOPE	PITCH DOWN IN DIRECTION OF ARROW
		PIPE ANCHOR
		PIPE ALIGNMENT GUIDE
		UNION OR FLANGE
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
PRV		PRESSURE REDUCING VALVE
PTRV		PRESSURE AND/OR TEMPERATURE RELIEF VALVE
		ISOLATION VALVE (RE: SPEC FOR TYPE)
		VERTICAL PIPE VALVE
CV		CHECK VALVE
		SOLENOID / MOTORIZED VALVE
		SOLENOID VALVE
		HOSE END DRAIN VALVE
P/T	P/T	PRESSURE / TEMPERATURE TAP
		STRAINER
		STRAINER W/ BLOWDOWN
		BRAIDED FLEXIBLE PIPE CONNECTOR
		DOUBLE-BOWL FLEXIBLE PIPE CONNECTOR
		THERMOMETER
		PRESSURE GAUGE
		SIGHT GLASS
C.A.P.		CEILING ACCESS PANEL
		PUMP
TB		THRUST BLOCK
MAV		MANUAL AIR VENT
AAV		AUTOMATIC AIR VENT

DOUBLE/SINGLE LINE DUCT LEGEND
(Not all symbols listed below are used on these drawings)



HVAC LEGEND
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION
HWS	—HWS—	HEATING WATER SUPPLY PIPING
HWR	— -HWR- —	HEATING WATER RETURN PIPING
HTWS	—HTWS—	HIGH TEMPERATURE HEATING WATER SUPPLY PIPING
HTWR	— HTWR —	HIGH TEMPERATURE HEATING WATER RETURN PIPING
CHWS	—CHWS—	CHILLED WATER SUPPLY PIPING
CHWR	— CHWR —	CHILLED WATER RETURN PIPING
D	—D—	COOLING COIL DRAIN PAN PIPING
CWS	—CWS—	CONDENSER WATER SUPPLY PIPING
CWR	— -CWR- —	CONDENSER WATER RETURN PIPING
GHWS	—GHWS—	GLYCOL HEATING WATER SUPPLY PIPING
GHWR	— GHWR —	GLYCOL HEATING WATER RETURN PIPING
PCWS	—PCWS—	PROCESS CHILLED WATER SUPPLY PIPING
PCWR	— PCWR —	PROCESS CHILLED WATER RETURN PIPING
LPS	—LPS—	LOW PRESSURE STEAM SUPPLY PIPING (0 - 15#)
LPC	— -LPC- —	LOW PRESSURE CONDENSATE RETURN PIPING
MPS	—MPS—	MEDIUM PRESSURE STEAM SUPPLY PIPING (16# - 60#)
MPC	— -MPC- —	MEDIUM PRESSURE CONDENSATE RETURN PIPING
HPS	—HPS—	HIGH PRESSURE STEAM SUPPLY PIPING (61# - 125#)
HPC	— -HPC- —	HIGH PRESSURE CONDENSATE RETURN PIPING
PC	—PC—	PUMPED CONDENSATE PIPING
BBD	—BBD—	BOILER BLOWDOWN PIPING
BF	—BF—	BOILER FEED WATER PIPING
RL	—RL—	REFRIGERANT LIQUID PIPING
RS	— -RS- —	REFRIGERANT SUCTION PIPING
RHG	—RHG—	REFRIGERANT HOT GAS PIPING
TT	TT	THERMOSTATIC STEAM TRAP
F&T	F&T	FLOAT AND THERMOSTATIC STEAM TRAP
IBT	T IBT	INVERTED BUCKET STEAM TRAP
TCV		(2 OR 3-WAY) TEMPERATURE CONTROL VALVE
		VENTURI METER
BV		CALIBRATED BALANCING VALVE
AFV		AUTO FLOW VALVE
RSV		REFRIGERANT SERVICE VALVE
DPS	DP	DIFFERENTIAL PRESSURE SWITCH
FS		FLOW SWITCH
EJ		EXPANSION JOINT
BJ		BALL JOINT EXPANSION COMPENSATOR
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR

ABBR.	SYMBOL	DESCRIPTION
		SUPPLY DUCT UP / DOWN
		RETURN DUCT UP / DOWN
		EXHAUST DUCT UP / DOWN
		ROUND DUCT UP / ROUND DUCT DOWN
48F12		FLAT OVAL DUCTWORK
		FLEXIBLE DUCT CONNECTION
BDD		BACKDRAFT DAMPER
TCD		TEMP. CONTROL DAMPER-OPPOSED BLADE
TCD		TEMP. CONTROL DAMPER- PARALLEL BLADE
MVD		MANUAL VOLUME DAMPER
MD	M	DUCT MOTORIZED DAMPER
		CONICAL FITTING WITH MVD
		SPIN-IN FITTING WITH MVD
FD		DUCT FIRE DAMPER
FSD		COMBINATION DUCT FIRE/SMOKE DAMPER
SD		DUCT SMOKE DAMPER
	F	DUCT SMOKE DETECTOR
DAD		DUCT ACCESS DOOR
		TURNING VANES IN DUCT ELBOW
EP		ELECTRIC-PNEUMATIC CONTROL VALVE
PE		PNEUMATIC-ELECTRIC CONTROL SWITCH
	S ES	WALL SWITCH / EMERGENCY SWITCH
	TS	TEMPERATURE SENSOR
	T	WALL MOUNTED THERMOSTAT
	CO2	WALL MOUNTED CARBON DIOXIDE SENSOR
	O	WALL MOUNTED OXYGEN SENSOR
	H	HUMIDISTAT
	T	UNIT MOUNTED THERMOSTAT
	P PM	PRESSURE SENSOR / PRESSURE MONITOR
	U	UNDERCUT DOOR
	L	LOUVER IN DOOR
	RISE	DUCT RISE
	DROP	DUCT DROP
A.L.		ACOUSTICALLY LINED DUCTWORK
TCOAD		TEMPERATURE CONTROL OUTSIDE AIR DAMPER
TCRAD		TEMPERATURE CONTROL RETURN AIR DAMPER
TCEAD		TEMPERATURE CONTROL EXHAUST AIR DAMPER
SP IN WC		STATIC PRESSURE IN INCHES WATER COLUMN
EOMD		END OF MAIN DRIP
SCCR		SHORT CIRCUIT CURRENT RATING
SD		SUPPLY AIR DEVICE
RG		RETURN AIR DEVICE
RG		RETURN AIR DEVICE WITH SOUND BOOT
EG		EXHAUST AIR DEVICE

BAS CONTROL LEGEND & NOTES
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION
D.I.	D.I.	DIGITAL INPUT
D.O.	D.O.	DIGITAL OUTPUT
A.I.	A.I.	ANALOG INPUT
A.O.	A.O.	ANALOG OUTPUT

GENERAL NOTES:

1. **THE TEMPERATURE CONTROL MATRIX, CONTROL DIAGRAMS, AND THE SEQUENCE OF OPERATIONS ARE ALL BINDING AND COMPLEMENTARY. IF THERE IS A DISCREPANCY BETWEEN THEM, THE WORST CASE SCENARIO SHALL BE USED FOR BIDDING PURPOSES. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR DISCREPANCIES BETWEEN THE SPECIFICATIONS AND THE DRAWINGS.**
2. **IN ADDITION TO THE DDC POINTS LISTED, THE CONTRACTOR SHALL CAREFULLY REVIEW ALL DRAWINGS, ALL SPECIFICATIONS, AND ALL SEQUENCES OF OPERATION. THE DOCUMENTS ARE ALL INCLUSIVE AND COMPLIMENTARY TO EACH OTHER. THE PROJECT SHALL INCLUDE ANY AND ALL NECESSARY DDC POINTS TO SUPPORT THE REQUIREMENTS OF ALL THE DOCUMENTS.**
3. **ALWAYS REFER TO DRAWINGS FOR QUANTITY.**
4. **PROVIDE OPEN PROTOCOL COMMUNICATION WITH FACTORY SUPPLIED CONTROLLER.**
5. **BAS CONTRACTOR SHALL COORDINATE STATUS LEVEL FOR EACH ALARM POINT WITH THE OWNER TO DETERMINE WHICH ONES REQUIRE IMMEDIATE ATTENTION.**
6. **IF THERE IS A DISCREPANCY BETWEEN ANY DOCUMENTATION, THE WORST CASE SCENARIO SHALL BE USED FOR BIDDING PURPOSES. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS.**

IECC INFORMATION ON CONSTRUCTION DOCUMENTS FOR MECHANICAL DRAWINGS

THE FOLLOWING INFORMATION IS PROVIDED TO ACCOMMODATE THE REQUIREMENTS FOR THE CODE SECTION REFERENCED BELOW ON LINE ITEMS 4, 5, 6, 7, 8, & 9 FOR MECHANICAL SYSTEMS ON THIS PROJECT.

IECC 2015/2018-C103.2 INFORMATION ON CONSTRUCTION DOCUMENTS.

4. MECHANICAL SYSTEM DESIGN CRITERIA.

[ ] NOT APPLICABLE TO THIS PROJECT.

HVAC HEATING & COOLING LOADS ARE CALCULATED IN ACCORDANCE WITH THE ASHRAE FUNDAMENTALS HANDBOOK.

DESIGN PROJECT ELEVATION

3700	FEET ELEVATION FOR THE PROJECT SITE LOCATION.
0.87	ALTITUDE CORRECTION FACTOR FOR HEAT TRANSFER CALCULATION REQUIRED.

DESIGN TEMPERATURES

95	°F DB OUTDOOR SUMMER	75	°F DB INDOOR SUMMER
62.6	°F WB OUTDOOR SUMMER	30	%RH INDOOR SUMMER
7	°F WB OUTDOOR WINTER	70	°F WB INDOOR WINTER

DESIGN OUTSIDE AIR VENTILATION

[X] IMC 2015/2018 CHAPTER 4
[ ] ASHRAE STANDARD 62.1 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY
[ ] ASHRAE STANDARD 62.2 VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY IN LOWRISE RESIDENTIAL BUILDINGS
[ ] ANSI/ASHRAE/ASHE STANDARD 170 VENTILATION OF HEALTH CARE FACILITIES

5. MECHANICAL AND SERVICE WATER HEATING SYSTEM AND EQUIPMENT TYPES, SIZES AND EFFICIENCIES.

[X] NOT APPLICABLE TO THIS PROJECT.
[ ] REFER TO EQUIPMENT SCHEDULES, NOTES & SPECIFICATIONS FOR SYSTEM & EQUIPMENT TYPES, EQUIPMENT SIZES & EFFICIENCES.

6. ECONOMIZER DESCRIPTION.

[ ] NOT APPLICABLE TO THIS PROJECT.
[X] REFER TO ECONOMIZER SEQUENCES OF OPERATION IN SPECIFICATION SECTION 230993 OR ON DRAWINGS FOR DESCRIPTION OF AIR HANDLING & ROOFTOP UNITS.

7. EQUIPMENT AND SYSTEM CONTROLS.

[ ] NOT APPLICABLE TO THIS PROJECT.
[X] REFER TO SEQUENCES OF OPERATION IN SPECIFICATION SECTION 230993 OR ON THE DRAWINGS FOR EQUIPMENT & SYSTEM CONTROLS.

8. FAN MOTOR HORSEPOWER (HP) AND CONTROLS.

[X] NOT APPLICABLE TO THIS PROJECT.
[ ] REFER TO EQUIPMENT SCHEDULES FOR FAN MOTOR HORSEPOWER (HP). REFER TO SEQUENCES OF OPERATION IN SPECIFICATION SECTION 230993 OR ON THE DRAWINGS FOR FAN CONTROLS.

9. DUCT SEALING, DUCT AND PIPE INSULATION AND LOCATION.

[ ] NOT APPLICABLE TO THIS PROJECT.
[X] REFER TO SPECIFICATION SECTION 233113 MECH DUCTS FOR DUCT SEALING REQUIREMENTS. REFER TO SPECIFICATION SECTION 230700 INSULATION FOR MECHANICAL SYSTEMS FOR DUCT & PIPE INSULATION REQUIREMENTS FOR THE SYSTEMS SHOWN ON THE DRAWINGS.

UNLESS NOTED OTHERWISE ALL SCHEDULED DATA IS LISTED AT ELEVATION 3700 FT

HVAC PLAN NOTES:

1. SUPPLY AIR DUCTWORK SHALL EXTEND FROM EACH ROOFTOP UNIT TO THE SPACE SERVED. WHERE CEILING PLENUM SPACE IS LIMITED OR BLOCKED BY STRUCTURE, EXTERIOR ROOF-MOUNTED DUCTWORK MAY BE REQUIRED.
2. WHERE ROOFTOP UNITS SERVE A SINGLE ZONE, THE RETURN AIR DUCTWORK SHALL BE ROUTED FROM THE ROOFTOP UNIT TO THE SPACE SERVED. IF THE UNIT SERVES MULTIPLE ZONES, THE DUCTWORK SHALL EXTEND TO A COMMON LOCATION AMONGST THE SPACES SERVED.
   A. UNLESS EXISTING CONSTRUCTION PROHIBITS PLENUM RETURN (I.E. CONSISTS OF COMBUSTIBLE MATERIALS), THE CEILING PLENUMS SHALL BE UTILIZED FOR RETURN WITH TRANSFER AIR DUCTS FROM THE OCCUPIED SPACE OR FROM SPACE TO SPACE.
   B. IF THE CEILING PLENUM IS EXPOSED TO COMBUSTIBLE MATERIALS THEN THE RETURN SHALL BE FULLY DUCTED TO THE OCCUPIED SPACE AND CONTRACTOR TO NOTIFY ENGINEER.
3. SUPPLY AIR DUCTWORK SHALL BE LOW-PRESSURE.
4. UNLESS OTHERWISE NOTED, ALL SUPPLY AIR DUCTWORK SHALL BE EXTERNALLY WRAPPED TO MEET THE MINIMUM IECC INSULATION VALUES BASED UPON LOCATION (EXTERIOR, ATTIC, AND/OR INTERIOR) OF DUCTWORK. SUPPLY AIR DUCTWORK EXPOSED TO THE OCCUPIED SPACE DOES NOT REQUIRE INSULATION. INTERIOR RETURN AIR DUCTWORK SHALL NOT BE WRAPPED BUT EXTERIOR AND ATTIC RETURN DUCTWORK SHALL MEET MINIMUM INSULATION VALUES PER IECC. EXHAUST DUCTWORK DOES NOT REQUIRE INSULATION.
5. ALL EXPOSED DUCTWORK SHALL BE SPIRAL OR FLAT OVAL, WITH LABELS REMOVED, FREE OF IMPERFECTIONS, AND PREPPED FOR PAINTING.
6. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATION DETAILS.
7. DUCT SIZES INDICATED ARE SHEET METAL SIZES. WHERE INTERNAL DUCT LINING IS PROVIDED, SHEET METAL SHALL NOT BE INCREASED IN SIZE.
8. ALL SUPPLY AIR DIFFUSERS ARE 4-WAY AIR PATTERN UNLESS SHOWN OTHERWISE.
9. DUCT SIZE OF BRANCH DUCT TO AIR DEVICE SHALL BE THE SAME SIZE AS NECK SIZE OF AIR DEVICE UNLESS NOTED OTHERWISE

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. A DETAILED METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY AFFECTS THE SAFETY OF THE OCCUPANTS, OWNER'S EQUIPMENT OR VALUABLE CONTENTS OR ANY SYSTEM WHICH SUPPORTS THESE SYSTEMS; OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR SECURITY.
3. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK AND SHALL NOTIFY THE ENGINEER/ARCHITECT OF ANY DISCREPANCIES FOR RESOLUTION.
4. COORDINATE WORK WITH ALL TRADES.
5. CONTRACTOR IS RESPONSIBLE FOR SECURING AND WEATHERPROOFING ANY ROOF OPENING NOT COMPLETED DURING WORKING HOURS.
6. COORDINATE ALL DUCTWORK AND PIPING WITH EQUIPMENT, STRUCTURE, ETC.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DEACTIVATION OF ROOF-MOUNTED EQUIPMENT AND ASSOCIATED INDOOR EQUIPMENT. ONLY ONE UNIT SHALL BE TAKEN OUT OF SERVICE AT ANY TIME, WITH REMAINDER OF UNITS LEFT OPERATIONAL.
8. CONTRACTOR SHALL NOT SHUT DOWN / TAKE OUT OF SERVICE ANY SYSTEMS WITHOUT FIRST COORDINATING WITH OWNER AND PREPARING M.O.P.

DEMOLITION GENERAL NOTES:

1. THE SCOPE OF WORK SHALL INCLUDE REMOVAL OF THE EXISTING STEAM BOILERS, CONDENSATE PUMPS, WATER TREATMENT, STEAM PIPING DISTRIBUTION, CONVECTORS/RADIATORS, UNIT VENTILATORS, AND CONDENSATE RETURN. THE STEAM AND CONDENSATE PIPING SHALL BE DEMOLISHED AND REMOVED TO THE GREATEST EXTENT POSSIBLE. THE EXISTING PIPING IS GENERALLY ROUTED THROUGHOUT THE BUILDING VIA AN UNDERGROUND TUNNEL SYSTEM.
2. THE EXISTING STEAM HEATING AND ALL LOUVERS OR CONNECTIONS TO OUTDOORS SHALL BE INSULATED AND FILLED (RE:ARCH).
3. EXISTING SWAMP COOLERS SHALL BE DEMOLISHED INCLUDING ALL PIPING, HANGERS, SUPPORTS, ROOF CURBS, AND AIR DEVICES. WHERE PIPING PASSES THROUGH THE ROOF, THE ROOF SHALL BE REPAIRED.
4. EXISTING ITEMS TO REMAIN ARE DENOTED LIGHTLY UNLESS OTHERWISE NOTED. ALL ITEMS SHOWN DASHED & BOLD SHALL BE REMOVED UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL NOT SHUT-OFF OR PUT-OUT OF SERVICE ANY SYSTEMS OR SERVICE WITHOUT FIRST COORDINATING WITH THE OWNER.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND UNDERSTAND THE EXTENT OF THE REMODEL WORK REQUIRED PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR WORK REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY THE CONTRACT DOCUMENT.
7. CONTRACTOR SHALL DETERMINE AND COORDINATE THE EXACT EXTENT OF DEMOLITION TO FACILITATE ALL WORK INDICATED BY THE CONCEPTUAL DESIGN FOR BUDGETING.
8. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
9. ALL ITEMS IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. REMOVED ITEMS SHALL BE TURNED OVER TO THE OWNER UNLESS OTHERWISE NOTED AND STORED IN THE AREA DESIGNATED BY THE OWNER. REMOVE FROM SITE AND LEGALLY DISPOSE OF ALL ITEMS THE OWNER CHOOSES NOT TO ACCEPT.
10. WHERE EXISTING PIPING, T.C. TUBING/WIRING ETC. ARE TO BE REMOVED FROM WALLS WHICH ARE REMAINING, THE WALLS SHALL BE REPAIRED TO MATCH ORIGINAL CONDITIONS.
11. WHERE EXISTING PIPING TO BE REMOVED PASSES THROUGH FLOORS, THEY SHALL BE CUT BACK TO WITHIN CONCRETE AND FILLED WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH WITH CONCRETE SURFACE.
12. ALL EQUIPMENT SERVED BY STEAM IS TO BE DEMOLISHED. NOTIFY ENGINEERS IF ANY STEAM EQUIPMENT IS NOT SHOWN ON DEMO PLANS.

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
MECHANICAL LEGENDS & NOTES

100% CD

PROFESSIONAL ENGINEER LICENSED 20608 01/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

Revisions:

Project No:	23028
Drawn By:	AK
Checked By:	MG
Date:	1/15/2025

Sheet No: M0.01

EQUIPMENT SOUND DATA SCHEDULE

REMARKS:

1.

DESIG. NAME	DESIG. NO.	INLET NC (Hz) 63	125	250	500	1K	2K	4K	8K	OUTDOOR NC (Hz) 63	125	250	500	1K	2K	4K	8K	DISCHARGE NC (Hz) 63	125	250	500	1K	2K	4K	8K	SONES	REMARKS
RTU	1	83.2	75.4	67.2	59.1	66.6	56	47.5	44.7	81.8	81.8	77	72.6	69.9	64.6	59.3	55.6	89.1	80.7	79.9	65.5	63.1	62.5	56	56.9		
RTU	2	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	3	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	4	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	5	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	6	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	7	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	8	80.5	77.4	72.2	62.3	64.9	59.6	50	46.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.2	75.9	70	65.9	67.4	60.6	58.6		
RTU	9	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	10	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	11	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	12	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	13	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	14	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	15	81.6	78.8	72.9	64.3	66.6	61.3	51.6	47.9	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.8	83	77	71.7	67.9	69.5	62.2	59.6		
RTU	16	80.6	77.6	72	63	65.7	65.7	50.5	47.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.3	81.4	75.4	71	66.9	68.6	61.4	59		
RTU	17	80.6	77.6	72	63	65.7	65.7	50.5	47.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.3	81.4	75.4	71	66.9	68.6	61.4	59		
RTU	18	80.6	77.6	72	63	65.7	65.7	50.5	47.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.3	81.4	75.4	71	66.9	68.6	61.4	59		
RTU	19	80.6	77.6	72	63	65.7	65.7	50.5	47.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.3	81.4	75.4	71	66.9	68.6	61.4	59		
RTU	20	81.4	78.9	72.6	64.7	67.2	67.2	51.9	48.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.9	82.2	76.4	72.6	68.7	70.6	62.9	59.9		
RTU	21	81.4	78.9	72.6	64.7	67.2	67.2	51.9	48.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.9	82.2	76.4	72.6	68.7	70.6	62.9	59.9		
RTU	22	81.4	78.9	72.6	64.7	67.2	67.2	51.9	48.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.9	82.2	76.4	72.6	68.7	70.6	62.9	59.9		
RTU	23	81.4	78.9	72.6	64.7	67.2	67.2	51.9	48.4	85.6	84.7	80.5	76	72.4	68	62.8	59.3	91.9	82.2	76.4	72.6	68.7	70.6	62.9	59.9		
RTU	24	81.8	79.6	73	65.6	67.9	67.9	52.6	49.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.7	76.9	73.3	69.6	71.5	63.6	60.3		
RTU	25	81.8	79.6	73	65.6	67.9	67.9	52.6	49.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.7	76.9	73.3	69.6	71.5	63.6	60.3		
RTU	26	81.8	79.6	73	65.6	67.9	67.9	52.6	49.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.7	76.9	73.3	69.6	71.5	63.6	60.3		
RTU	27	81.8	79.6	73	65.6	67.9	67.9	52.6	49.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.7	76.9	73.3	69.6	71.5	63.6	60.3		
RTU	28	81.8	79.6	73	65.6	67.9	67.9	52.6	49.1	85.6	84.7	80.5	76	72.4	68	62.8	59.3	92.2	82.7	76.9	73.3	69.6	71.5	63.6	60.3		
RTU	29	83.6	82.1	74.4	68.5	70.4	70.4	54.9	51.2	85.6	84.7	80.4	76	72.4	68	62.8	59.3	93.9	84.8	79.2	75.7	72.4	74.4	65.8	61.8		
RTU	30	83.6	82.1	74.4	68.5	70.4	70.4	54.9	51.2	85.6	84.7	80.4	76	72.4	68	62.8	59.3	93.9	84.8	79.2	75.7	72.4	74.4	65.8	61.8		
RTU	31	83.6	82.1	74.4	68.5	70.4	70.4	54.9	51.2	85.6	84.7	80.4	76	72.4	68	62.8	59.3	93.9	84.8	79.2	75.7	72.4	74.4	65.8	61.8		

AIR DEVICE SCHEDULE

REMARKS:

GENERAL - APPLIES TO ALL AIR DEVICES: MANUAL VOLUME DAMPERS SHALL BE ACCEPTABLE IN DUCTWORK AT THE BRANCH POINT OF THE RUNOUT DUCT OR IN-LINE TO THE AIR DEVICE BY THE CONTRACTOR INSTALLING DUCTWORK. A DAMPER LOCATED AT THE AIR DEVICE SHALL BE ACCEPTABLE WHEN PERMITTED BY ENGINEER ON A CASE-BY-CASE BASIS OR WHEN THE MANUFACTURER REQUIRES AN INTEGRAL MANUAL VOLUME DAMPER.

1.

DESIG.	FUNCTION	STYLE	MFR.	MODEL	FRAME STYLE	MODULE SIZE	MATERIAL	FINISH	REMARKS
A	SIDEWALL SUPPLY	ADJUSTABLE VANES, DOUBLE DEFLECTION, 3/4" O.C.	PRICE	520	SURFACE	SEE PLANS	STEEL	WHITE	
B	SIDEWALL RETURN, TRANSFER	FIXED ANGLE VANES, 3/4" O.C.	PRICE	530	SURFACE	SEE PLANS	STEEL	WHITE	
C	CEILING SUPPLY	PLAQUE FACE FIXED PATTERN, RECTANGULAR DIFFUSER	PRICE	SPD	SEE PLANS	24x24	STEEL	WHITE	
D	CEILING RETURN	MODULAR PERFORATED FACE GRILLE	PRICE	PDDR	SEE PLANS	SEE PLANS	STEEL	WHITE	
E	SUPPLY, RETURN	CONCENTRIC SUPPLY/RETURN DIFFUSER WITH PLENUM	RUSKIN	CDS-18	SURFACE	24X48	ALUMINUM	WHITE	

CABINET UNIT HEATER SCHEDULE (ELECTRIC)

REMARKS:

1. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS, INCLUDING COORDINATION OF VOLTAGE, PHASE, SCCR, WIRE SIZES, AND OVERCURRENT PROTECTIVE DEVICES.
   REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MINIMUM FAULT CURRENT RATING THAT EACH UNIT SHALL EXCEED. UNIT NAMEPLATE SHALL INDICATE THE SHORT CIRCUIT CURRENT RATING.
2. PROVIDE WITH INTEGRAL THERMOSTAT.
3. PROVIDE REMOTE WALL MOUNTED THERMOSTAT.
4. SURFACE MOUNTED MODEL.
5. PROVIDE RECESSED FRAME.
6. REFER TO MECHANICAL LEGENDS AND NOTES SHEET FOR PROJECT ELEVATION.

DESIG. NAME	DESIG. NO.	INSTALLATION STYLE	AIR OPENINGS INLET	AIR OPENINGS OUTLET	MFR	MODEL	ELECTRIC HEAT KW	MBH	STAGES	FAN MOTOR CFM (HIGH)	NO.	AIR TEMP EAT (ºF)	LAT (ºF)	ELECTRICAL VOLTAGE	PHASE	SIZE (INCHES) L	D	H	OPER WEIGHT (LBS)	REMARKS
ECUH	1	WALL SURFACE	FRONT BOTTOM	FRONT TOP	MARKEL	6333D02	2	6.8	2	250	1	60	89.0	208	3	33.0	9.0	25.0	100	1,2,4,6
ECUH	2	WALL SURFACE	FRONT BOTTOM	FRONT TOP	MARKEL	6333D03	3	10.2	2	250	1	60	89.0	208	3	33.0	9.0	25.0	100	1,2,4,6
ECUH	3	WALL RECESSED	FRONT BOTTOM	FRONT TOP	MARKEL	6333D02	2	6.8	2	250	1	60	103.0	208	3	33.0	9.0	25.0	100	1,2,5,6

UNIT HEATER SCHEDULE (ELECTRIC)

REMARKS:

1. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS, INCLUDING COORDINATION OF VOLTAGE, PHASE, SCCR, WIRE SIZES, AND OVERCURRENT PROTECTIVE DEVICES.
   REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MINIMUM FAULT CURRENT RATING THAT EACH UNIT SHALL EXCEED. UNIT NAMEPLATE SHALL INDICATE THE SHORT CIRCUIT CURRENT RATING.
2. PRODUCT IS SUITABLE FOR INSTALLATION AT ALTITUDES ABOVE 6000 FEET.
3. REFER TO PLANS FOR THERMOSTAT LOCATION, REMOTE OR INTEGRAL. PROVIDE 2-STAGE THERMOSTAT CONTROL WHERE 2-STAGE HEATING ELEMENT IS INDICATED.
4. UNITS PROVIDED WITH INTEGRAL AUTOMATIC RESETTING LIMIT CONTROL FOR OVER-TEMPERATURE CONDITION ON HEATER.
5. REFER TO MECHANICAL LEGENDS AND NOTES SHEET FOR PROJECT ELEVATION.

DESIG. NAME	DESIG. NO.	MFR	MODEL	HEATING CAPACITY KW	MBH	STAGES	FAN MOTOR AIRFLOW (CFM)	NO.	AIR TEMP EAT (ºF)	LAT (ºF)	SIZE (INCHES) L	D	H	OPER. WEIGHT (LBS)	ELECTRICAL VOLTAGE	PHASE	MAX MTG. HEIGHT TO BOTTOM (FT.)	CONTROL	REMARKS
EUH	1	MARKEL	UH05	5	17.1	1	400	1	60	99	20	11	13	44	208	3	9	SEE SPEC	1,2,3,4

ROOF TOP UNIT SCHEDULE

COMMON NOTES (APPLIES TO ALL UNITS):

A. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS, INCLUDING COORDINATION OF VOLTAGE, PHASE, SCCR, WIRE SIZES, AND OVERCURRENT PROTECTIVE DEVICES.
   REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR MINIMUM FAULT CURRENT RATING THAT EACH UNIT SHALL EXCEED. UNIT NAMEPLATE SHALL INDICATE THE SHORT CIRCUIT CURRENT RATING.
B. UNIT HEIGHT DOES NOT INCLUDE HEIGHT OF CURB.
C. PROVIDE BASE RAIL OR CURB HEIGHT TO ACCOMMODATE CONDENSATE DRAIN P-TRAP.
D. PROVIDE SHAFT GROUNDING RINGS FOR EACH BEARING ON MOTORS POWERED THROUGH VARIABLE FREQUENCY DRIVES.
E. REFER TO SOUND DATA SCHEDULE FOR SOUND INFORMATION.
F. REFER TO MECHANICAL LEGENDS AND NOTES SHEET FOR PROJECT ELEVATION.
G. COOLING COIL PRESSURE DROP INCLUDED IN SIZING OF FAN.

DESIG. NAME	DESIG. NO.	AREA SERVED	MFR	MODEL NO.	OUTSIDE AIR CFM MIN.	SUPPLY FAN SECTION: OPERATION AT ELEV CFM	ESP (IN WC)	TSP (IN WC)	NO. OF FANS	WHEEL DIA. (IN)	WHEEL TYPE (AF/BI/FC)	DRIVE (BELT/ DIRECT)	RPM APPROX.	MOTORS EACH FAN REQ'D BHP	MAX HP SIZE	SUM OF MAX HP ALL FANS	NO. OF VFDS	VFD BYPASS (YES/NO)	VIBRATION ISOLATOR TYPE
RTU	1	FACULTY ROOM AND WORKROOM	CARRIER	48GEDM04A2A6-0A3A0	360	1,200	0.50	0.60	1	19	FC	DIRECT	1686	0.30	1.07	1.07	1	No	SEE SPEC
RTU	2	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	3	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	4	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	5	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	6	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	7	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	8	CLASSROOM	CARRIER	48GEEM05A2A60A3A0	420	1,400	0.50	0.64	1	19	FC	DIRECT	1742	0.50	1.96	1.96	1	No	SEE SPEC
RTU	9	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	10	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	11	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	12	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	13	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	14	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	15	CLASSROOM	CARRIER	48GEEM05A2A6-0A3A0	480	1,600	0.50	0.67	1	19	FC	DIRECT	1872	0.62	1.96	1.96	1	No	SEE SPEC
RTU	16	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	510	1,700	0.50	0.66	1	19	FC	DIRECT	1817	0.56	2.43	2.43	1	No	SEE SPEC
RTU	17	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	510	1,700	0.50	0.66	1	19	FC	DIRECT	1817	0.56	2.43	2.43	1	No	SEE SPEC
RTU	18	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	510	1,700	0.50	0.66	1	19	FC	DIRECT	1817	0.56	2.43	2.43	1	No	SEE SPEC
RTU	19	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	510	1,700	0.50	0.66	1	19	FC	DIRECT	1817	0.56	2.43	2.43	1	No	SEE SPEC
RTU	20	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	570	1,900	0.50	0.69	1	19	FC	DIRECT	1937	0.68	2.43	2.43	1	No	SEE SPEC
RTU	21	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	570	1,900	0.50	0.69	1	19	FC	DIRECT	1937	0.68	2.43	2.43	1	No	SEE SPEC
RTU	22	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	570	1,900	0.50	0.69	1	19	FC	DIRECT	1937	0.68	2.43	2.43	1	No	SEE SPEC
RTU	23	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	570	1,900	0.50	0.69	1	19	FC	DIRECT	1937	0.68	2.43	2.43	1	No	SEE SPEC
RTU	24	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	600	2,000	0.50	0.71	1	19	FC	DIRECT	1998	0.74	2.43	2.43	1	No	SEE SPEC
RTU	25	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	600	2,000	0.50	0.71	1	19	FC	DIRECT	1998	0.74	2.43	2.43	1	No	SEE SPEC
RTU	26	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	600	2,000	0.50	0.71	1	19	FC	DIRECT	1998	0.74	2.43	2.43	1	No	SEE SPEC
RTU	27	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	600	2,000	0.50	0.71	1	19	FC	DIRECT	1998	0.74	2.43	2.43	1	No	SEE SPEC
RTU	28	CLASSROOM	CARRIER	48GEEM06A2A6-0A3A0	600	2,000	0.50	0.71	1	19	FC	DIRECT	1998	0.74	2.43	2.43	1	No	SEE SPEC
RTU	29	CAFETERIA/GYM, KITCHEN	CARRIER	48GEFM06A2A5-0A3A0	660	2,200	0.50	0.75	1	19	FC	DIRECT	2198	0.99	2.43	2.43	1	No	SEE SPEC
RTU	30	CAFETERIA/GYM, KITCHEN	CARRIER	48GEFM06A2A5-0A3A0	660	2,200	0.50	0.75	1	19	FC	DIRECT	2198	0.99	2.43	2.43	1	No	SEE SPEC
RTU	31	CAFETERIA/GYM, KITCHEN	CARRIER	48GEFM06A2A5-0A3A0	660	2,200	0.50	0.75	1	19	FC	DIRECT	2198	0.99	2.43	2.43	1	No	SEE SPEC

DESIG. NAME	DESIG. NO.	POWER EXHAUST FAN SECTION: OPERATION AT ELEV CFM	ESP (IN WC)	TSP (IN WC)	NO. OF FANS	WHEEL DIA. (IN)	WHEEL TYPE (AF/BI/FC)	DRIVE (BELT/DIRECT)	RPM APPROX.	MOTORS EACH FAN REQ'D BHP	MAX HP SIZE	SUM OF MAX HP ALL FANS	VOLTAGE	PHASE	NO. OF VFDS	VFD BYPASS (YES/NO)	VIBRATION ISOLATOR TYPE	COOLING COIL SECTION: NET FACE AREA (SF)	AT ELEV CFM	MBH SENS	MBH TOTAL	EAT °F DB	EAT °F WB	LAT °F DB	LAT °F WB
RTU	1	1100	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1200	29	35	81	64	55	53
RTU	2	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	3	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	4	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	5	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	6	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	7	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	8	1300	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1400	38	46	81	64	53	52
RTU	9	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	10	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	11	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	12	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	13	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	14	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	15	1500	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	6	1600	40	47	81	64	54	53
RTU	16	1600	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1700	45	55	81	64	53	52
RTU	17	1600	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1700	45	55	81	64	53	52
RTU	18	1600	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1700	45	55	81	64	53	52
RTU	19	1600	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1700	45	55	81	64	53	52
RTU	20	1800	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1900	47	56	81	64	55	53
RTU	21	1800	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1900	47	56	81	64	55	53
RTU	22	1800	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1900	47	56	81	64	55	53
RTU	23	1800	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	1900	47	56	81	64	55	53
RTU	24	1900	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2000	49	57	81	64	56	53
RTU	25	1900	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2000	49	57	81	64	56	53
RTU	26	1900	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2000	49	57	81	64	56	53
RTU	27	1900	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2000	49	57	81	64	56	53
RTU	28	1900	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2000	49	57	81	64	56	53
RTU	29	2000	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2200	51	58	81	64	57	54
RTU	30	2000	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2200	51	58	81	64	57	54
RTU	31	2000	0.40	0.50	1	0	FC	DIRECT	0	0	0.5	0.5	208	3	1	No	SEE SPEC	7	2200	51	58	81	64	57	54

DESIG. NAME	DESIG. NO.	GAS HEATING SECTION: AT ELEV CFM	AIR P.D. (IN WC)	GAS PRESS RANGE (IN WC)	MBH INPUT AT S.L.	MBH OUTPUT AT S.L.	MBH OUTPUT AT ELEV	TURNDOWN RATIO	EAT °F	LAT °F	REFRIGERATION SECTION: REFRIGERANT TYPE	LOAD PER CIRCUIT (LBS)	NO. OF CIRCUITS	COMPRESSORS NO.	CONTROL STAGES	LOW STG VARIABLE SCROLL (YES/NO)	HOT GAS BYPASS (YES/NO)	AIR-COOLED OUTDOOR AIR TEMP °F	NO. OF FANS	AHRI EFF SEER	SEER2
RTU	1	1200	0.03	4-13	67.0	54.3	45.4	2:1	51	91	R-454B	8.50	1	1	2	No	No	95	1	17.2	16.8
RTU	2	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	3	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	4	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	5	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	6	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	7	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	8	1400	0.13	4-13	110.0	88.0	73.9	2:1	51	107	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	9	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	10	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	11	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	12	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	13	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	14	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	15	1600	0.19	4-13	110.0	88.0	73.9	2:1	51	100	R-454B	8.00	1	1	2	No	No	95	1	17.2	16.8
RTU	16	1700	0.23	4-13	110.0	88.0	73.9	2:1	51	97	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	17	1700	0.23	4-13	110.0	88.0	73.9	2:1	51	97	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	18	1700	0.23	4-13	110.0	88.0	73.9	2:1	51	97	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	19	1700	0.23	4-13	110.0	88.0	73.9	2:1	51	97	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	20	1900	0.29	4-13	110.0	88.0	73.9	2:1	51	92	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	21	1900	0.29	4-13	110.0	88.0	73.9	2:1	51	92	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	22	1900	0.29	4-13	110.0	88.0	73.9	2:1	51	92	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	23	1900	0.29	4-13	110.0	88.0	73.9	2:1	51	92	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	24	2000	0.33	4-13	110.0	88.0	73.9	2:1	51	90	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	25	2000	0.33	4-13	110.0	88.0	73.9	2:1	51	90	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	26	2000	0.33	4-13	110.0	88.0	73.9	2:1	51	90	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	27	2000	0.33	4-13	110.0	88.0	73.9	2:1	51	90	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	28	2000	0.33	4-13	110.0	88.0	73.9	2:1	51	90	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	29	2200	0.47	4-13	150.0	120.0	100.8	2:1	51	100	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	30	2200	0.47	4-13	150.0	120.0	100.8	2:1	51	100	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8
RTU	31	2200	0.47	4-13	150.0	120.0	100.8	2:1	51	100	R-454B	10.30	1	1	2	No	No	95	1	17.2	16.8

DESIG. NAME	DESIG. NO.	AIR FILTER SECTIONS: PRE-FILTER AREA (SF)	MERV-A RATING	AIR P.D. CLEAN (IN WC)	AIR P.D. CHANGE OUT (IN WC)	UNIT SIZE L (IN)	W (IN)	H (IN)	OPER WEIGHT (LBS)	ELECTRICAL VOLTAGE	PHASE	MCA	MOCP	CONTROL	REMARKS
RTU	1	3	8	0.06	0.20	74	47	33	760	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	2	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	3	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	4	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	5	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	6	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	7	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	8	3	8	0.08	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	9	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	10	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	11	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	12	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	13	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	14	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	15	3	8	0.10	0.20	74	47	33	840	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	16	3	8	0.07	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	17	3	8	0.07	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	18	3	8	0.07	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	19	3	8	0.07	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	20	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	21	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	22	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	23	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	24	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	25	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	26	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	27	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	28	3	8	0.09	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	29	3	8	0.11	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	30	3	8	0.11	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	
RTU	31	3	8	0.11	0.20	74	47	41	880	208	3	NOTE A	NOTE A	SEE SPEC	

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HUMMEL ARCHITECTS
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482 Constitution Way, Suite 111 Idaho Falls, ID 83402 208.343.7523
hummelarch.com

Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
MECHANICAL SCHEDULES

100% CD

PROFESSIONAL ENGINEER LICENSED 20608 01/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

Revisions:

Project No: 23028
Drawn By: AK
Checked By: MG
Date: 1/15/2025

Sheet No:
M0.02

1/15/2025 4:00:53 PM

1 | 2 | 3 | 4 | 5 | 6

COMcheck Software Version 4.1.5.5
Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	TFSD DISTRICT WIDE HVAC REPLACEMENT
Location:	Twin Falls, Idaho
Climate Zone:	5b
Project Type:	Alteration

Construction Site:	Owner/Agent:	Designer/Contractor:
HARRISON ELEMENTARY SCHOOL TWIN FALLS, ID 83301	TFSD TWIN FALLS, ID	LILLY JOHNSON P.E. CATOR RUMA BOISE, ID 2083433663

Mechanical Systems List

Quantity	System Type & Description
27	RTU 1 THRU 27 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 110 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 57 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 2000 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade
3	RTU 28 THRU 30 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 150 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 58 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 2 Supply, Constant Volume, 2200 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Lilly Johnson, P.E.
Name - Title ____________ Signature ____________ Date ____________

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-1	8.5	4-454B	A2L	4.6	0.0046	FACULTY ROOM, WORKROOM, CLINIC, BATHROOM	1035	9	9315	9315	1	42.849	YES

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-2 - RTU-15	8	4-454B	A2L	4.6	0.0046	CLASSROOM*	832	9.3	7737.6	7737.6	1	35.59296	YES

* CALCULATION DONE BASED ON SMALLEST CLASSROOM SERVED BY UNIT

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-16-RTU-28	10.3	4-454B	A2L	4.6	0.0046	CLASSROOM*	825	9.3	7672.5	7672.5	1	35.2935	YES

* CALCULATION DONE BASED ON SMALLEST CLASSROOM SERVED BY UNIT

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-29	10.3	4-454B	A2L	4.6	0.0046	PLATFORM	627	13	8151	8151	1	37.4946	YES

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-30	10.3	4-454B	A2L	4.6	0.0046	GYM/CAFETERIA AND KITCHEN	1857	13	24141	24141	1	111.0486	YES

ASHRAE 15 7.3.1 (EQ. 7-3a) CIRCUIT CHARGE PERMITTED RCL

SYSTEM	REFRIGERANT: CIRCUIT CHARGE (LB)	REFRIGERANT: TYPE	REFRIGERANT: CLASSIFICATION	REFRIGERANT: REFRIGERANT CHARGE ALLOWED (ASHRAE 34 RCL LBS/1000 CF)	RCL PER CF	SPACE 1: NAME	SPACE 1: SQ FT	SPACE 1: HEIGHT	SPACE 1: ROOM CU FT	TOTAL VOLUME	OCC. FACTOR	EDVC (LBS)	COMPLIANT
RTU-31	10.3	4-454B	A2L	4.6	0.0046	GYM/CAFETERIA	1232	16	19712	19712	1	90.6752	YES

RTU 1 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 1 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
18	WORK ROOM	WORKROOMS	COPY, PRINTING ROOMS	353	100	5.0	0.06	4	1	28	35	0.353	7	21
53	CLINIC	OFFICES	OFFICE SPACE	177	100	5.0	0.06	5	1	15	19	0.188	4	11
	STORAGE	RETAIL STORES, SALES FLOORS AND SHOWROOM FLOORS	STORAGE ROOMS	91	100	0.0	0.12	0	0	11	14	0.137	0	11
20	FACULTY ROOM	OFFICES	OFFICE SPACE	381	900	5.0	0.06	5	2	32	40	0.045	10	23
Project:	TFSD Harrison Elementary Elementary HVAC Upgrade		Total Supply Air CFM =		1,200				Uncorrected Outside Air Intake, CFM (Vou) =		87	< < < < < OA Sum	21	66
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.353	System Ventilation Efficiency (Ev) =		0.719	Corrected Outside Air Intake Air, CFM (Vot) =		120	Corrected Outside Air as % of Supply Air =		10.0%

RTU 2,3,4 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 2,3,4 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
28, (10,12)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	835	1,400	10.0	0.12	25	21	309	386	0.276	209	100
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,400				Uncorrected Outside Air Intake, CFM (Vou) =		309	< < < < < OA Sum	209	100
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.276	System Ventilation Efficiency (Ev) =		0.945	Corrected Outside Air Intake Air, CFM (Vot) =		327	Corrected Outside Air as % of Supply Air =		23.4%

RTU 5,7 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 5,7 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
43, (45)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	891	1,200	10.0	0.12	25	22	330	412	0.343	223	107
17 (1/10th)	CORRIDOR	PUBLIC SPACES	CORRIDORS	826	200	0.0	0.06	0	0	50	62	0.310	0	50
Project:	TFSD Morningside Elementary HVAC Upgrade		Total Supply Air CFM =		1,400				Uncorrected Outside Air Intake, CFM (Vou) =		379	< < < < < OA Sum	223	156
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.343	System Ventilation Efficiency (Ev) =		0.927	Corrected Outside Air Intake Air, CFM (Vot) =		409	Corrected Outside Air as % of Supply Air =		29.2%

RTU 6,8 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 6,8 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
44, (46)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	886	1,300	10.0	0.12	25	22	328	410	0.315	222	106
17 (1/10th)	CORRIDOR	PUBLIC SPACES	CORRIDORS	826	100	0.0	0.06	0	0	50	62	0.620	0	50
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,400				Uncorrected Outside Air Intake, CFM (Vou) =		377	< < < < < OA Sum	222	156
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.315	System Ventilation Efficiency (Ev) =		0.954	Corrected Outside Air Intake Air, CFM (Vot) =		395	Corrected Outside Air as % of Supply Air =		28.2%

RTU 9,10,11,12 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 9,10,11,12 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
29, (27,13,11)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	832	1,380	10.0	0.12	25	21	308	385	0.279	208	100
17 (1/10th)	CORRIDOR	PUBLIC SPACES	CORRIDORS	826	220	0.0	0.06	0	0	50	62	0.282	0	50
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,600				Uncorrected Outside Air Intake, CFM (Vou) =		357	< < < < < OA Sum	208	149
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.282	System Ventilation Efficiency (Ev) =		0.942	Corrected Outside Air Intake Air, CFM (Vot) =		379	Corrected Outside Air as % of Supply Air =		23.7%

RTU 13 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 13 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
6	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	1,009	1,600	10.0	0.12	25	25	373	467	0.292	252	121
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,600				Uncorrected Outside Air Intake, CFM (Vou) =		373	< < < < < OA Sum	252	121
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.292	System Ventilation Efficiency (Ev) =		0.942	Corrected Outside Air Intake Air, CFM (Vot) =		396	Corrected Outside Air as % of Supply Air =		24.8%

RTU 14 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 14 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
9	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	1,006	1,400	10.0	0.12	25	25	372	465	0.332	252	121
17 (1/10th)	CORRIDOR	PUBLIC SPACES	CORRIDORS	826	200	0.0	0.06	0	0	50	62	0.310	0	50
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,600				Uncorrected Outside Air Intake, CFM (Vou) =		422	< < < < < OA Sum	252	170
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.332	System Ventilation Efficiency (Ev) =		0.931	Corrected Outside Air Intake Air, CFM (Vot) =		453	Corrected Outside Air as % of Supply Air =		28.3%

RTU 15 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 15 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
30	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	860	1,600	10.0	0.12	25	22	318	398	0.249	215	103
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,600				Uncorrected Outside Air Intake, CFM (Vou) =		318	< < < < < OA Sum	215	103
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.249	System Ventilation Efficiency (Ev) =		0.950	Corrected Outside Air Intake Air, CFM (Vot) =		335	Corrected Outside Air as % of Supply Air =		20.9%

RTU 16,17,18,19 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 16,17,18,19 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
15, (16,17,18)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	860	1,700	10.0	0.12	25	22	318	398	0.234	215	103
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,700				Uncorrected Outside Air Intake, CFM (Vou) =		318	< < < < < OA Sum	215	103
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.234	System Ventilation Efficiency (Ev) =		0.953	Corrected Outside Air Intake Air, CFM (Vot) =		334	Corrected Outside Air as % of Supply Air =		19.6%

RTU 20, 23 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 20, 23 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
36, (37)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	848	1,680	10.0	0.12	25	21	314	392	0.233	212	102
17 (1/10th)	CORRIDOR	PUBLIC SPACES	CORRIDORS	826	220	0.0	0.06	0	0	50	62	0.282	0	50
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,900				Uncorrected Outside Air Intake, CFM (Vou) =		363	< < < < < OA Sum	212	151
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.282	System Ventilation Efficiency (Ev) =		0.910	Corrected Outside Air Intake Air, CFM (Vot) =		399	Corrected Outside Air as % of Supply Air =		21.0%

RTU 21 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 21 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
8	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	1,067	1,900	10.0	0.12	25	27	395	493	0.260	267	128
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,900				Uncorrected Outside Air Intake, CFM (Vou) =		395	< < < < < OA Sum	267	128
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.260	System Ventilation Efficiency (Ev) =		0.948	Corrected Outside Air Intake Air, CFM (Vot) =		416	Corrected Outside Air as % of Supply Air =		21.9%

RTU 22 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 22 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
31	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	865	2,000	10.0	0.12	25	22	320	400	0.200	216	104
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		2,000				Uncorrected Outside Air Intake, CFM (Vou) =		320	< < < < < OA Sum	216	104
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.200	System Ventilation Efficiency (Ev) =		0.960	Corrected Outside Air Intake Air, CFM (Vot) =		333	Corrected Outside Air as % of Supply Air =		16.7%

RTU 24 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 24 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
7	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	1,041	1,900	10.0	0.12	25	26	385	481	0.253	260	125
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		1,900				Uncorrected Outside Air Intake, CFM (Vou) =		385	< < < < < OA Sum	260	125
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.253	System Ventilation Efficiency (Ev) =		0.949	Corrected Outside Air Intake Air, CFM (Vot) =		406	Corrected Outside Air as % of Supply Air =		21.4%

RTU 25,26 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 25,26 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
3, (1)	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	1,070	1,500	10.0	0.12	25	27	396	495	0.330	268	128
4, (2)	TEACHERS STATION	OFFICES	OFFICE SPACE	416	500	5.0	0.06	5	2	35	44	0.088	10	25
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		2,000				Uncorrected Outside Air Intake, CFM (Vou) =		431	< < < < < OA Sum	278	153
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.330	System Ventilation Efficiency (Ev) =		0.886	Corrected Outside Air Intake Air, CFM (Vot) =		487	Corrected Outside Air as % of Supply Air =		24.3%

RTU 27 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 27 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
42	LIBRARY	PUBLIC SPACES	LIBRARIES	2,056	2,000	5.0	0.12	10	21	350	437	0.218	103	247
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		2,000				Uncorrected Outside Air Intake, CFM (Vou) =		350	< < < < < OA Sum	103	247
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.218	System Ventilation Efficiency (Ev) =		0.956	Corrected Outside Air Intake Air, CFM (Vot) =		365	Corrected Outside Air as % of Supply Air =		18.3%

RTU 28 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 28 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
38	CLASSROOM	EDUCATION	CLASSROOMS (AGES 5-8)	840	1,680	10.0	0.12	25	21	311	389	0.231	210	101
39	TEACHERS STATION	OFFICE	OFFICE SPACE	415	320	5.0	0.06	5	2	35	44	0.138	10	25
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		2,000				Uncorrected Outside Air Intake, CFM (Vou) =		346	< < < < < OA Sum	220	126
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.231	System Ventilation Efficiency (Ev) =		0.942	Corrected Outside Air Intake Air, CFM (Vot) =		367	Corrected Outside Air as % of Supply Air =		18.4%

RTU 29,30,31 — OUTSIDE AIR VENTILATION CALCULATIONS (OA)

AIR SYSTEM TAG: RTU 29,30,31 | ROOM OCCUPANCY CLASSIFICATON | Code Basis: IMC 2018 | ZONE VENTILATION EFFECTIVENESS (Ez) = 0.8 | SYSTEM OCCUPANT DIVERSITY (D) = 100% | OUTSIDE AIR SUMMARY

ROOM NUMBER	ROOM NAME	PRIMARY	SECONDARY	ZONE AREA (SF) (Az)	ZONE PRIMARY AIR CFM (Vpz)	PEOPLE OUTSIDE AIR RATE (CFM) (Rp)	AREA OUTSIDE AIR RATE (CFM/SF) (Ra)	OCCUPANT DENSITY #/1000 SF	TOTAL PEOPLE (Pz)	BREATHING ZONE OUTSIDE AIR CFM (Vbz)	ZONE OUTSIDE AIR CFM (Voz)	PRIMARY OUTSIDE AIR FRACTION (Zp)	PEOPLE OUTSIDE AIR CFM	ROOM OUTSIDE AIR CFM
21 (1/3)	CAFETERIA	FOOD SERVICE	DINING ROOMS	570	1,216	7.5	0.18	70	40	402	502	0.413	299	103
51 (1/3)	PLATFORM	EDUCATION	THEATER	205	700	10.0	0.06	35	7	84	105	0.150	72	12
52 (1/3)	STORAGE	GENERAL	STORAGE ROOMS	39	34	5.0	0.12	2	0	5	6	0.186	0	5
24 (1/3)	KITCHEN	FOOD SERVICE	KITCHEN	208	250	7.5	0.12	20	4	56	70	0.281	31	25
Project:	TFSD Harrison Elementary HVAC Upgrade		Total Supply Air CFM =		2,200				Uncorrected Outside Air Intake, CFM (Vou) =		547	< < < < < OA Sum	403	145
Location:	Twin Falls, Idaho		Critical Zone Outside Air Fraction (MAX Zp) =		0.413	System Ventilation Efficiency (Ev) =		0.836	Corrected Outside Air Intake Air, CFM (Vot) =		655	Corrected Outside Air as % of Supply Air =		29.8%

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HUMMEL ARCHITECTS
205 N. 10th Street, Suite 300, Boise, Idaho 83702, 208.343.7523
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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT
Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
MECHANICAL SCHEDULES

100% CD

PROFESSIONAL ENGINEER LICENSED 20608 01/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

Revisions: △

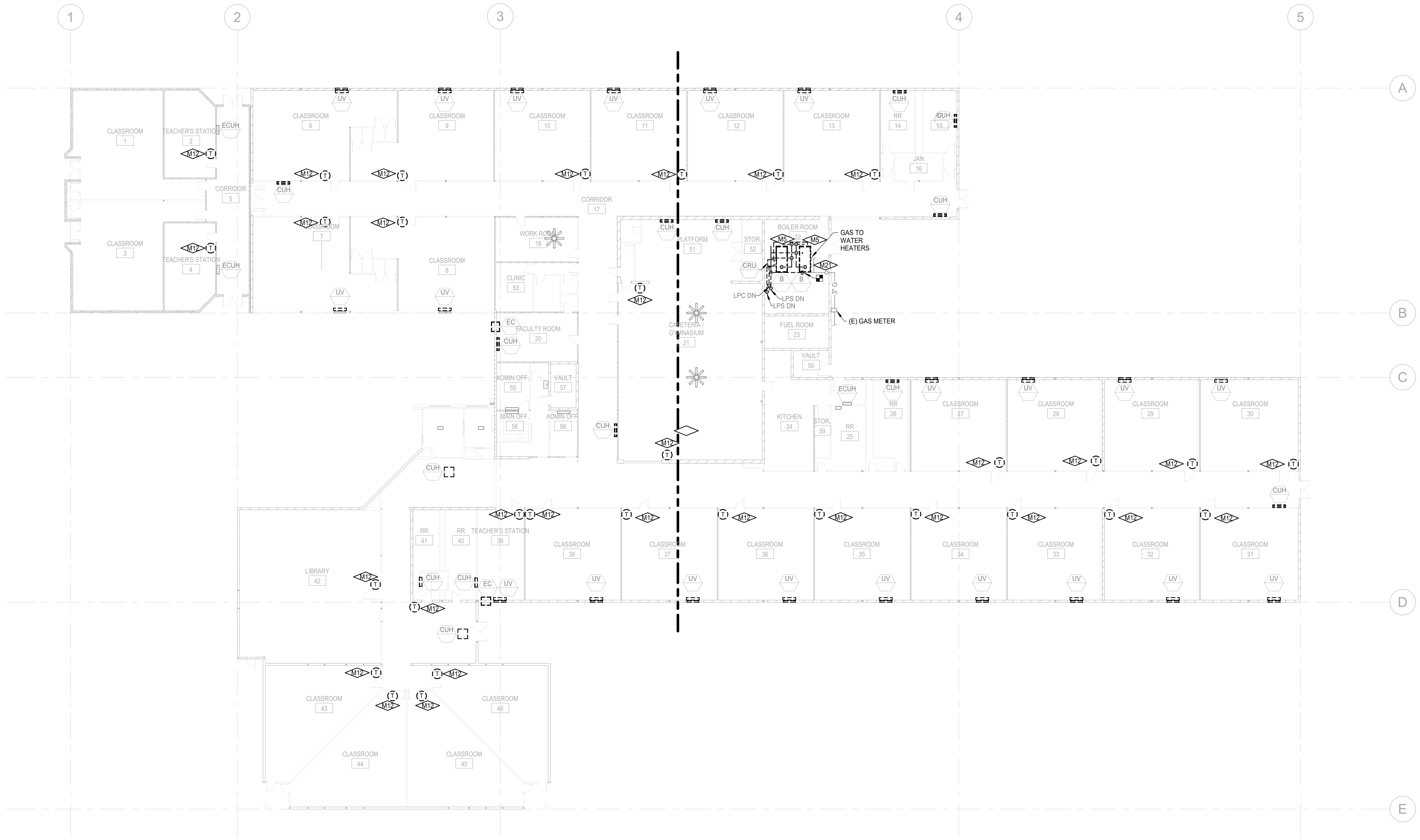
Project No:	23028
Drawn By:	AK
Checked By:	MG
Date:	1/15/2025

Sheet No: M0.03

A | B | C | D | E

1/15/2025 4:00:54 PM

KEYNOTES	
M5	DEMOLISH STEAM BOILERS, CONDENSATE PUMPS, PNEUMATIC CONTROLS AIR COMPRESSOR, CONDENSATE RECEIVER AND WATER TREATMENT. DEMOLISH ALL ASSOCIATED STEAM AND CONDENSATE PIPING TO THE GREATEST EXTENT POSSIBLE.
M12	DEMOLISH THERMOSTAT CONNECTED TO EXISTING UNIT BEING DEMOLISHED.
M21	DEMOLISH AND CAP GAS PIPING TO STEAM BOILERS. GAS TO WATER HEATERS TO REMAIN.



HVAC PIPING DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

1"

IF LINE DOES NOT MEASURE 1 INCH, DRAWING IS NOT TO SCALE

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Harrison Elementary School
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HVAC PIPING DEMOLITION PLAN

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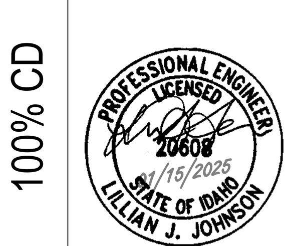

Revisions:

Project No:	23028
Drawn By:	AK
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Date:	1/15/2025

Sheet No:
MD2.11

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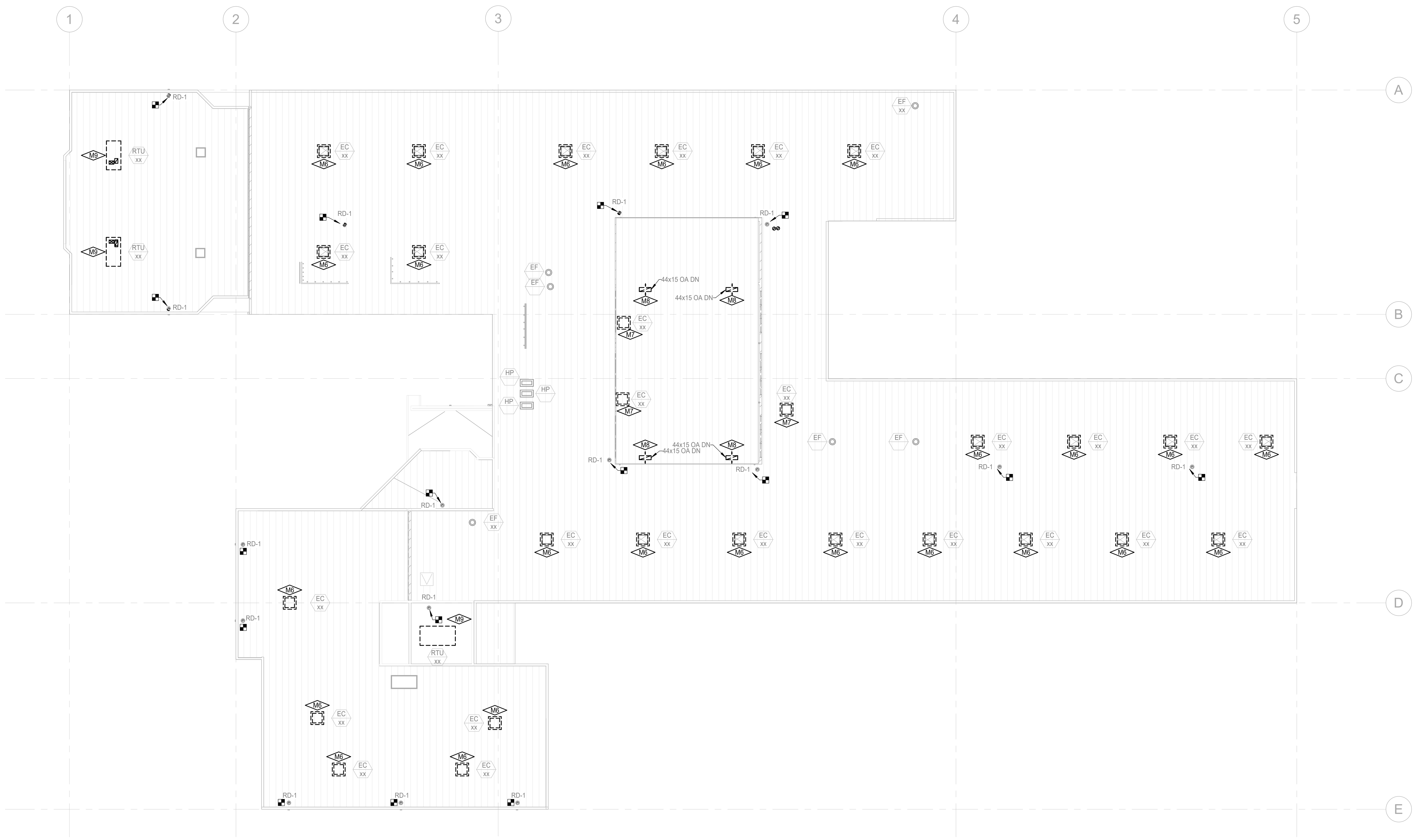
KEYNOTES

M6	DEMOLISH EXISTING EVAPORATIVE COOLER, ROOF CURB, DUCTWORK, DOMESTIC WATER SERVICE, CONTROLS, AND APPURTENANCES COMPLETE. ROOF OPENING TO REMAIN FOR REUSE.
M7	DEMOLISH EXISTING EVAPORATIVE COOLER, ROOF CURB, DUCTWORK, DOMESTIC WATER SERVICE, CONTROLS, AND APPURTENANCES COMPLETE. SEE ARCHITECTURAL FOR ROOFING REPAIR.
M8	DEMOLISH DUCTWORK, CURB, AND APPURTENANCES. SEE ARCHITECTURAL FOR ROOFING REPAIR.
M9	DEMOLISH ROOFTOP UNIT, DUCTWORK, SUPPORTS, PIPING, CONTROLS, AND APPURTENANCES COMPLETE.



ROOF HVAC DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

1"

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ROOF MECHANICAL DEMOLITION PLAN

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Revisions:

Project No:	23028
Drawn By:	AK
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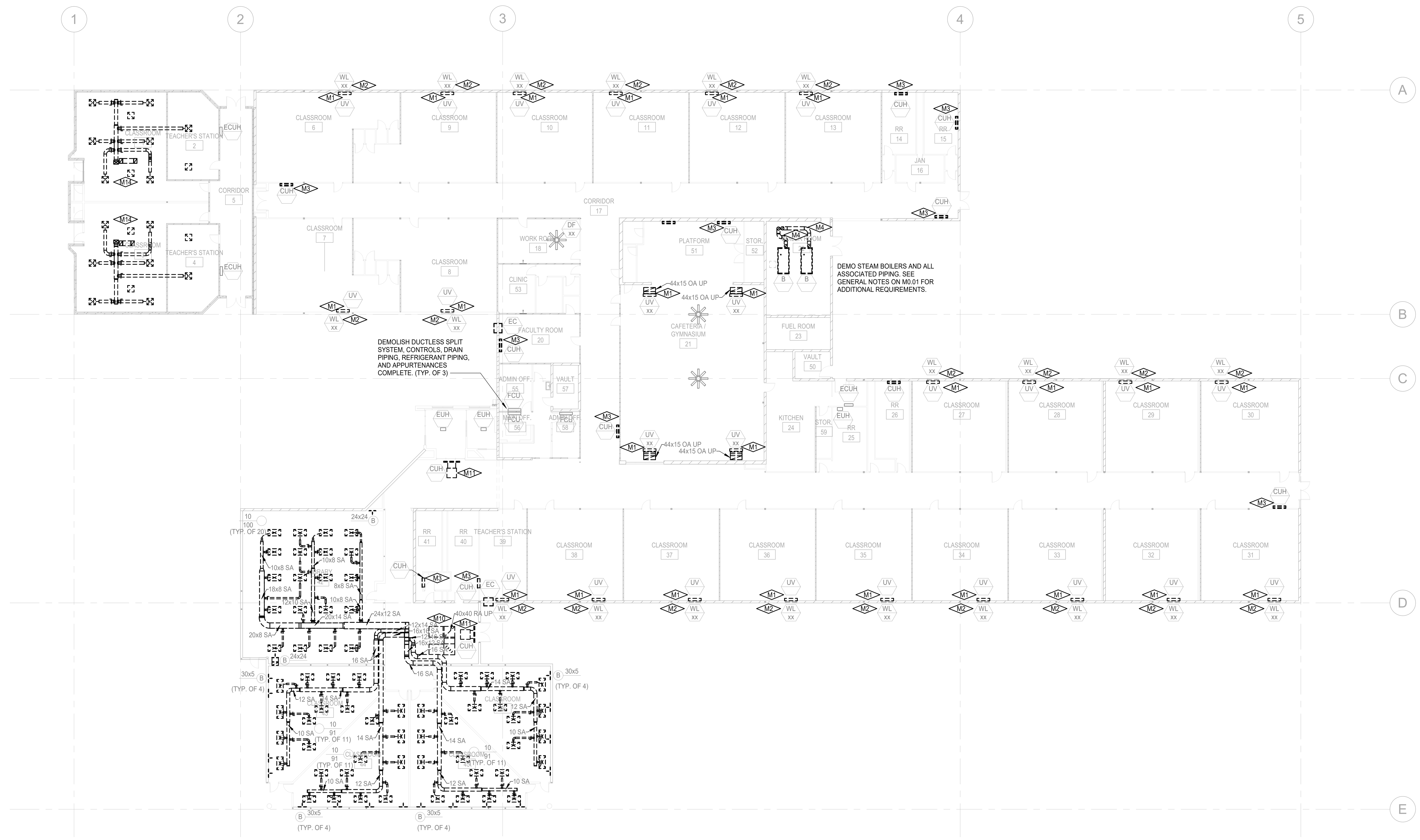
Sheet No: MD1.02

KEYNOTES

M1	DEMOLISH EXISTING UNIT VENTILATOR. DEMO ACCESSIBLE ASSOCIATED PIPING AND CAP EXISTING STEAM PIPING IN WALL (TYP.)
M2	DEMOLISH LOUVER AND INSTALL SHEET METAL COVER WITH INSULATION. RE: ARCHITECTURAL (TYP.)
M3	DEMOLISH CABINET UNIT HEATER. DEMO ACCESSIBLE ASSOCIATED PIPING AND CAP EXISTING STEAM PIPING IN WALL (TYP.)
M4	DEMOLISH AND CAP BOILER FLUE.
M10	DEMOLISH ALL DUCTWORK, PIPING AND AIR DEVICES SERVED BY EXISTING ROOFTOP UNIT.
M11	DEMOLISH CABINET UNIT HEATER IN CEILING AND ALL ACCESSIBLE ASSOCIATED PIPING.
M14	DEMOLISH ALL DUCTWORK AND AIR DEVICES SERVED BY EXISTING ROOFTOP UNIT.



HVAC DEMOLITION PLAN

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1"

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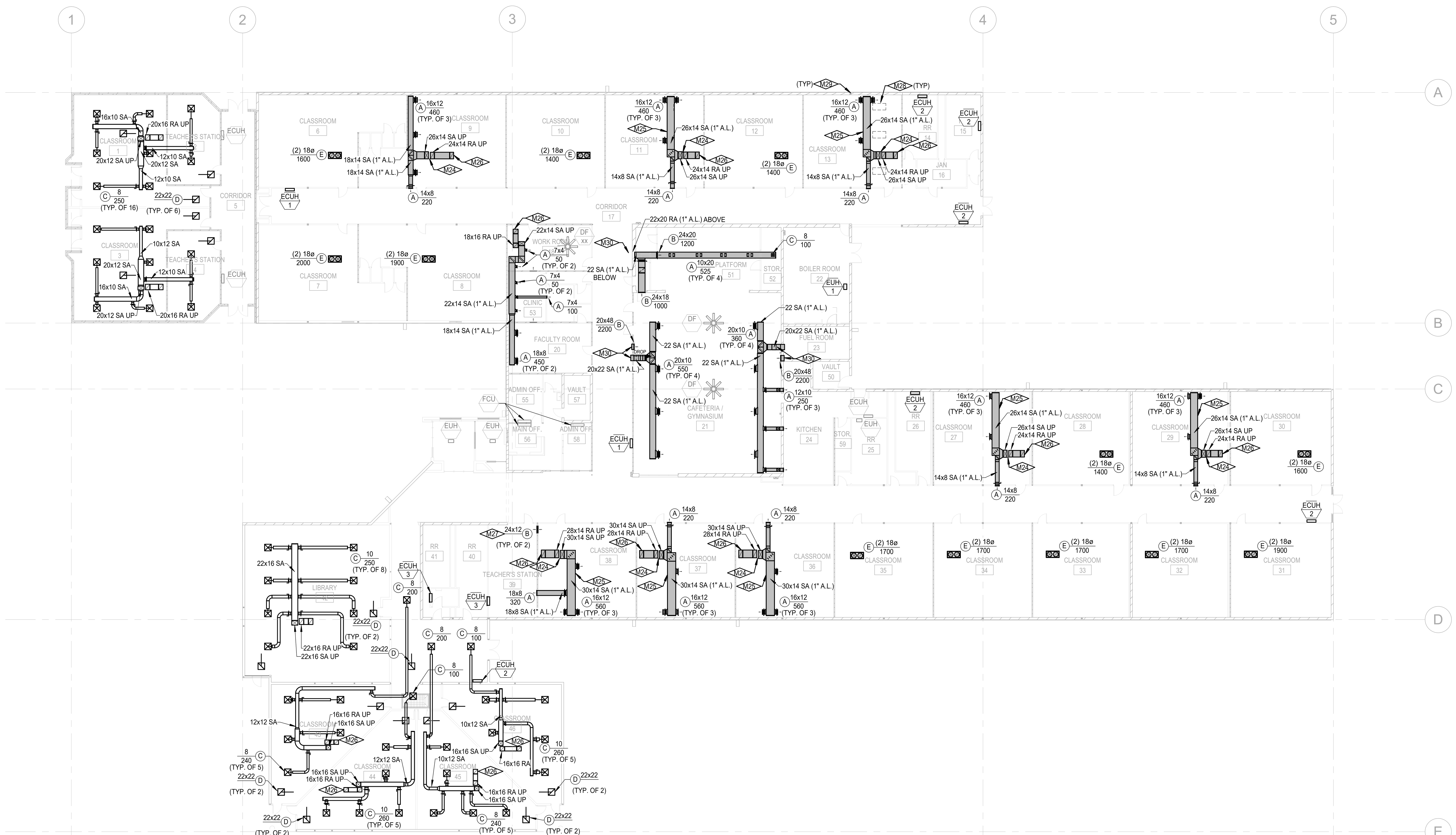
MD1.01

KEYNOTES

M24	EXTEND NEW SUPPLY AND RETURN DUCTS UP TO NEW RTU ABOVE. BOTH DUCTS SHALL HAVE 1" ACCOUSTICAL LINING TO UNIT CONNECTION. TRANSITION DUCTS TO FULL SIZE OF UNIT CONNECTIONS.
M25	LOCATE NORTH/SOUTH RUN OF DUCT BETWEEN EXISTING LIGHTS AND EXPOSED BEAM IN THE CENTER OF THE ROOM. VERIFY LOCATION IN THE FIELD WITH ACTUAL CONDITIONS. KEEP DUCTWORK AS HIGH AS POSSIBLE.
M26	RETURN OPENING IN THE TOP OF THE DUCT. OPENING TO BE 6" BELOW CEILING\STRUCTURE. SEE DETAIL.
M27	LOCATE ONE GRILLE HIGH AND ONE GRILLE LOW IN A SINGLE WALL STUD SPACE. REMOVE ANY INSULATION IN THAT STUD SPACE TO CREATE A TRANSFER AIR PATH.
M28	APPROXIMATE LOCATION OF EXISTING LIGHTS. VERIFY IN THE FIELD.
M29	EXISTING CEILING BEAM LOCATION.
M30	SEE M1.02 FOR CONTINUATION.



HVAC PLAN

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1"

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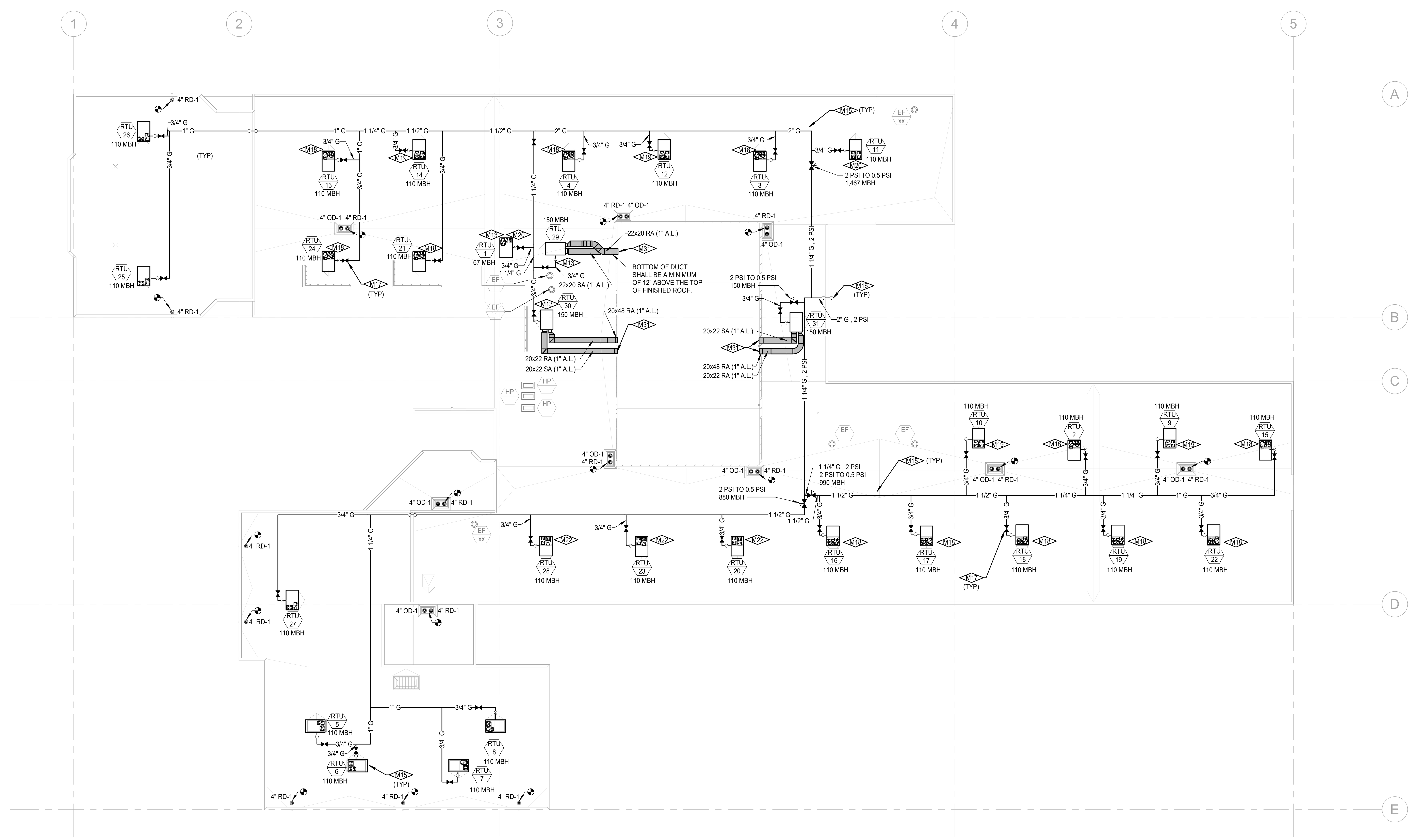
KEYNOTES

M13	RTU VENTILATION INLET SHALL BE A MINIMUM OF 10' FROM ALL EXHAUST FAN DISCHARGES (TYP.)
M15	SUPPORT PIPING OFF ROOF WITH 'DURA' BLOCK RUBBER PIPE SUPPORTS WITH PIPE CLAMPS , OR SIMILAR. INSTALL SUPPORTS A MINIMUM OF 8 FOOT ON CENTERS AND AT ALL JOINTS, UNIONS, ELBOWS, AND VALVES.
M16	DROP 2", 2 PSI GAS DOWN THE SIDE OF THE BUILDING AND CONNECT TO THE EXISTING MAIN OUT OF THE METER BELOW. MODIFY EXISTING PIPING AS REQUIRED TO MAKE A PROPER CONNECTION. FIELD VERIFY LOCATION.
M17	PROVIDE GAS SHUT-OFF AND DIRT LEG FOR EACH UNIT PER CODE.
M18	TRANSITION FROM RTU SUPPLY AIR AND RETURN AIR OPENINGS TO 18" ROUND DUCT WITH 1" ACOUSTICAL LINING TO CONCENTRIC DIFFUSER IN CLASSROOM BELOW.
M19	TRANSITION FROM RTU OPENING TO LINED 26X14 SUPPLY AIR DUCT AND LINED 24X14 RETURN AIR DUCT DOWN TO CLASSROOM BELOW.
M20	TRANSITION FROM RTU OPENING TO LINED 22X14 SUPPLY AIR DUCT AND LINED 18X16 RETURN AIR DUCT DOWN TO WORKROOM BELOW.
M22	TRANSITION FROM RTU OPENING TO LINED 30X14 SUPPLY AIR DUCT AND LINED 28X14 RETURN AIR DUCT DOWN TO CLASSROOM BELOW.
M31	SEE M1.01 FOR CONTINUATION.



ROOF HVAC PLAN
SCALE: 1/16" = 1'-0"

1"
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ROOF MECHANICAL PLAN

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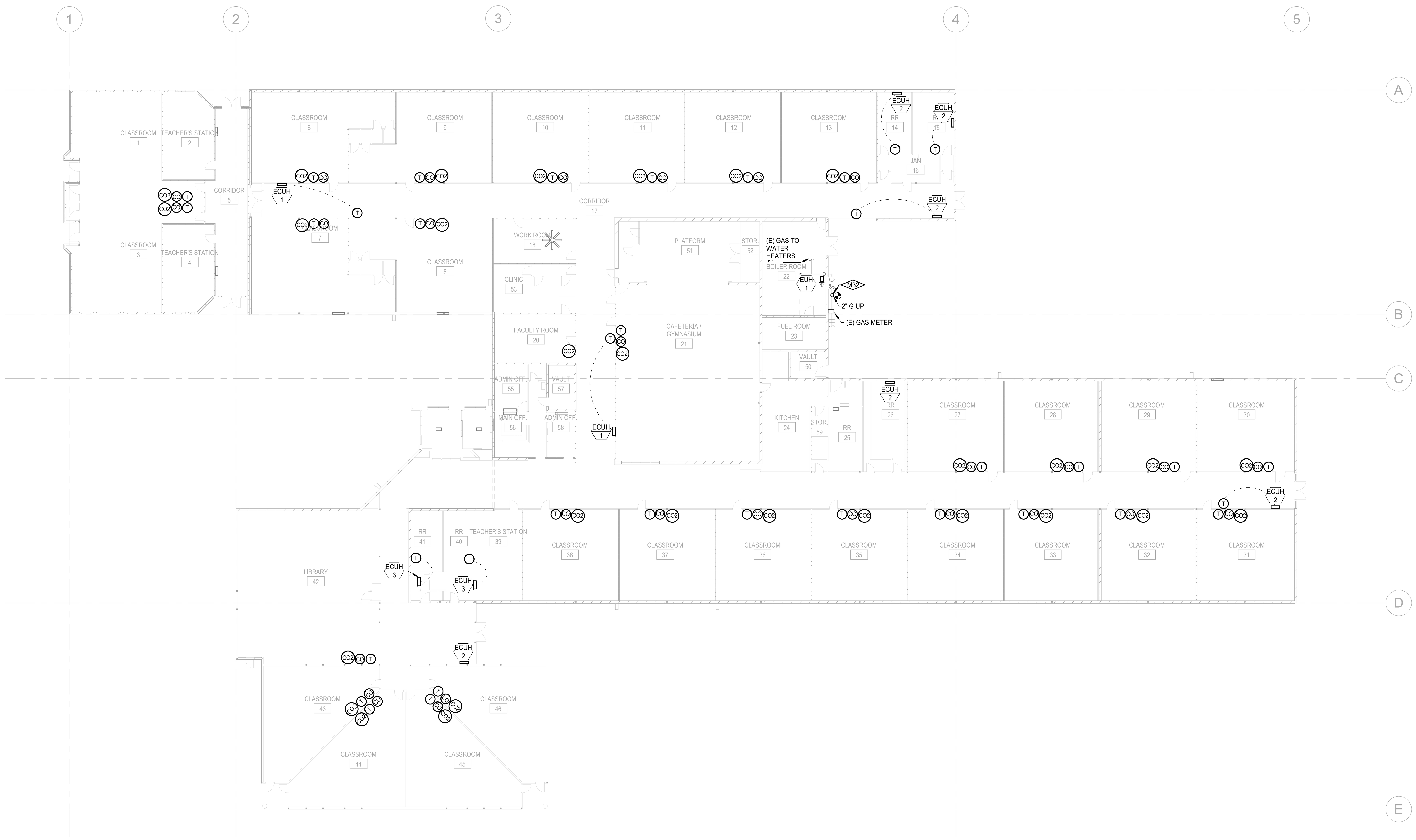
M1.02

KEYNOTES	
M32	NEW 2" GAS LINE UP TO ROOF TO SERVE NEW RTUS.



HVAC PIPING PLAN

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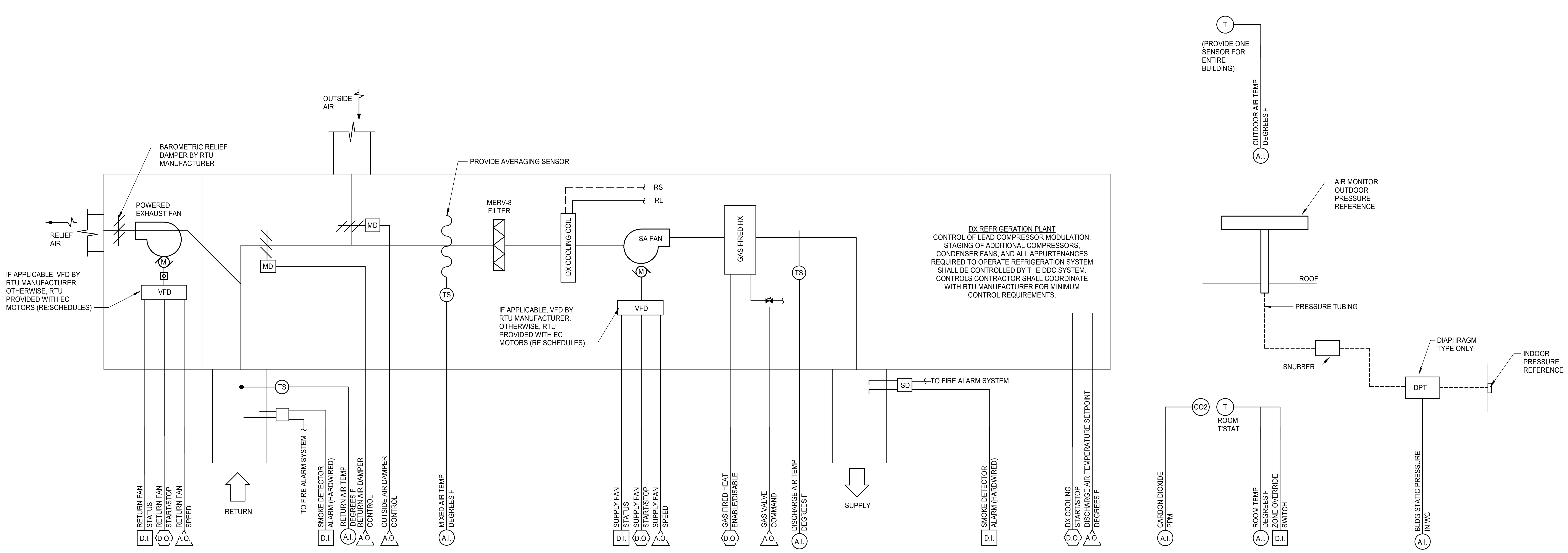


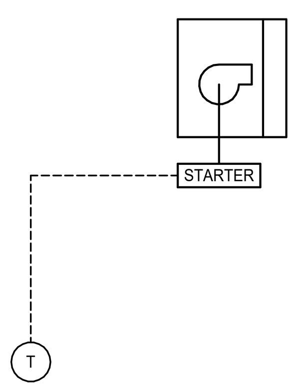
ROOFTOP UNIT - VAV, RELIEF FANS, GAS HEAT, SINGLE ZONE

SCALE: NONE

SEQUENCE OF OPERATION:

CABINET UNIT HEATERS AND UNIT HEATERS:

1. HEATER SHALL OPERATE VIA STANDALONE CONTROLS TO ACHEIVE THE FOLLOWING FUNCTION.
2. OPERATION
   a. A WALL MOUNTED ROOM THERMOSTAT OR INTEGRATED THERMOSTAT WILL STAGE THE ELECTRIC HEAT AND CYCLE THE FAN MOTOR TO MAINTAIN ROOM THERMOSTAT TEMPERATURE SETTING.
   b. VESTIBULE SPACE SETPOINT SHALL NOT EXCEED 60F.



CABINET UNIT HEATER & UNIT HEATER - ELECTRIC

SCALE: NONE

SEQUENCE OF OPERATION (CONT.):

F. Night Setback and Warmup Mode:
   1. Warm Up: The BAS shall calculate the required warm up time based on the zone's occupied heating setpoint, the current zone temperature, the outdoor air temperature, and a mass/capacity factor for each zone. The mass factor shall be manually adjusted or self-tuned by the BAS. If automatic, the tuning process shall be turned on or off by a software switch, to allow tuning to be stopped after the system has been trained. Warmup Mode shall start based on the zone with the longest calculated warm up time requirement, but no earlier than 3 hours before the start of the scheduled occupied period and shall end at the scheduled Occupied start hour.
   2. Night Setback Mode: During Unoccupied Mode operate the air handling unit to maintain zone temperatures.
      a. NSB Heating: if the zone falls below the unoccupied heating setpoints, the AHU shall enter Setback Mode until the zone is 5°F above their unoccupied setpoints.
         1. The OA damper shall be closed in NSB mode that unit shall operate in 100% return air mode
         2. Supply air setpoint shall by 95 deg F
      b. NSB cooling: if the zone temperature rises above their unoccupied cooling setpoints the AHU shall enter Night Setback Mode until the zone is 5°F below the unoccupied setpoint.
         1. The OA damper shall be closed in NSB mode that unit shall operate in 100% return air mode unless outside air temperature is below the supply air temperature setpoint. Then outside air shall be utilized for cooling
         2. Supply air setpoint is 55 deg F

G. Fault Detection and Diagnostics
   a. Economizer Fault Detection and Diagnostics (FDD)
      a. Economizer Temperature Sensor Failure.
      b. Not Economizing when it Should.
      c. Economizing when it Should Not.
      d. Damper Not Modulating.
      e. Excess Outdoor Air.

H. Alarms and Safeties
   1. Generate a fan failure alarm if the status being different from the command for a period of 15 seconds.
      a. Commanded on, status off: Level 2
      b. Commanded off, status on: Level 4
   2. Generate a high building pressure alarm if the building static pressure is more than 0.10": Level 3
   3. Generate a low building pressure alarm if the building is negative(less than 0.0"),: Level 4
   4. Generate a heating failure alarm if the supply air temperature is 15 deg F below the setpoint: Level 2. If the supply air temperature is less than 40 deg F, shut the unit down until the low temp alarm is reset by an operator.
   5. Generate a cooling failure alarm if the supply air temperature is 15 deg F above the setpoint: Level 2

DIAGRAM NOTES:

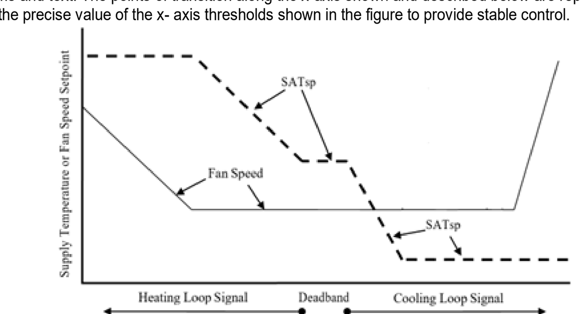
1. ROOFTOP UNIT SHALL BE PROVIDED WITH FACTORY TERMINAL STRIP (BASIS OF DESIGN: MICROMETL DRY BULB ECONOMIZER) FOR FIELD INSTALLED CONTROLS BY TEMPERATURE CONTROLS CONTRACTOR.
2. CONTROLS CONTRACTOR SHALL FURNISH AND INSTALL ALL DDC HARDWARE TO MEET THE REQUIREMENTS OF THE SEQUENCES OF OPERATION PROVIDED.
3. DAMPERS AND ACTUATORS SHALL BE FURNISHED BY THE ROOFTOP UNIT MANUFACTURER UNLESS OTHERWISE NOTED.

SEQUENCE OF OPERATION:

SINGLE-ZONE VARIABLE AIR VOLUME ROOF TOP UNITS:

A. Supply Fan Control and Supply Air Temperature Setpoint Reset
   1. The supply fan shall run whenever the unit is in any mode other than Unoccupied Mode.
   2. Provide a ramp function to prevent changes in fan speed of more than 10% per minute.
   3. If the unit is equipped with a VFD, Fan speeds shall be as follows:
      a. Fan speed shall be reset linearly based on space temperature.
      b. When space is satisfied operate at Min-speed. As the heating or cooling loop increases increase fan speed correspondingly to max speed (heating or cooling).
      c. Max Heating speed shall be 75% (adj)
      d. Max Cooling Speed shall be 100% (adj)

B. Minimum and maximum supply air temperature setpoints shall be as follows:
   1. The Deadband values of SATsp shall be the average of the zone heating setpoint and the zone cooling setpoint, but shall be no lower than 70°F and no higher than 75°F.
   2. When the supply fan is proven on, fan speed and supply air temperature setpoints are controlled as shown in the following diagrams and text. The points of transition along the x-axis shown and described below are representative. Contractor shall adjust the precise value of the x- axis thresholds shown in the figure to provide stable control.



   a. Fan Speed Control (As applicable):
      1. For a Heating Loop signal of 100% - 0%, fan speed is reset from MaxHeatSpeed to MinSpeed.
      2. In Deadband, fan speed setpoint is MinSpeed.
      3. For a Cooling Loop signal of 0% - 100%, fan speed is reset from MinSpeed to MedSpeed.
   b. Supply Air Temperature Setpoint:
      1. For a Heating Loop signal of 100% - 50%, SATsp is 100 deg F (adj).
      2. For a Heating Loop signal of 50% - 0%, SATsp is reset from 100 deg F(adj) to the Deadband value (~70 deg F as described above).
      3. In Deadband, SATsp is the Deadband value.
      4. For a Cooling Loop signal of 0% - 75%, SATsp is reset from the Deadband value to 55 deg F.
      5. For a Cooling Loop signal above 75%, SATsp is unchanged at 55deg F, the supply fan speed continues to increase to additional cooling capacity.

C. Outdoor Air Damper Control
   1. Modulate the air damper shall be modulated to the greater of the economizer command or the ventilation command.
   2. An economizer control loop shall modulate the outdoor air damper open to meet the supply air temperature setpoint anytime the unit is in cooling mode and the outdoor air temperature is less than the return air temperature.
   3. Ventilation command is determined based on zone level CO2 feedback. The ventilation rate is reset linearly between MinVent and MaxVent based on the number of zones that have a high CO2 concentration.
   4. Minimum Outdoor airflow shall be controlled by **monitoring the mixed air temperature** and modulating the outdoor air damper to achieve the ventilation setpoint. The volume of outdoor air is determined by a weighted ratio of the return and outdoor air temperatures. The BAS shall evaluate the actual temperatures and calculate the appropriate ratio every 15min (minimum) and modulate the outdoor air damper to achieve the required volume of outdoor air (based on the calculated mixed air temperature).
      a. The Outdoor Air Volume is calculated as follows:

         1. % OUTSIDE AIR = $(TEMP_{MIX} - TEMP_{RETURN}) / (TEMP_{OUTDOOR\ AIR} - TEMP_{RETURN})$
         2. OUTDOOR AIR VOLUME = %OA * UNIT CAPACITY * (SUPPLY FAN SPEED / 100)

      b. The outdoor air volume setpoint shall be reset between the absolute minimum and the ventilation maximum (see mechanical schedule for setpoints).
      c. When zones are calling for additional ventilation air (CO2 control loop >50% as defined in the VAV sequence of operation) then utilize a trim and response reset algorithm to adjust the minimum ventilation setpoint between the absolute minimum and the ventilation maximum.

VARIABLE	VALUE
SP_0	SP_{MIN}
SP_{MIN}	ABSOLUTE MIN OA
SP_{MAX}	VENTILATION MAX OA
T_d	10 MINUTES
T	2 MINUTES
I	0
R	ZONE VENTILATION REQUESTS
SPtrim	+100 CFM
SPres	-200 CFM
SPres-max	-300 CFM

D. Economizer Lockout
   1. The outside will be utilized for free cooling anytime the supply air temperature setpoint is less than return temperature and the return temperature is greater than the outside air temperature by at least 2 deg F. If the outside air temperature is greater than the return air temperature disable the economizer.
      a. Modulate the outside air damper to maintain a mixed air temperate 2 deg F below the supply air temperature setpoint when the economizer is enabled
   2. Once the economizer is disabled, it shall not be re-enabled within 10 minutes and vice versa.

E. Relief Fan and Building Static Pressure Control
   1. Relief Fan Control **– Building Pressure Control**
      a. Relief fan operates whenever associated supply fan is proven on.
      b. Relief fan speed shall be controlled to maintain building static pressure at setpoint. The setpoint shall be determined during balancing (utilize +0.04 iwc as the base condition). This setpoint should be determined in 100% economizer mode and should result in a slightly positive building in that mode.

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MECHANICAL CONTROLS

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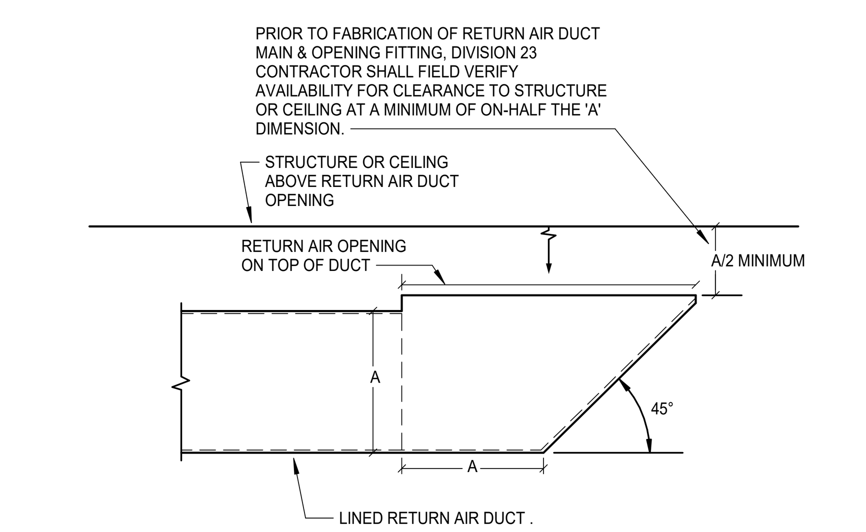
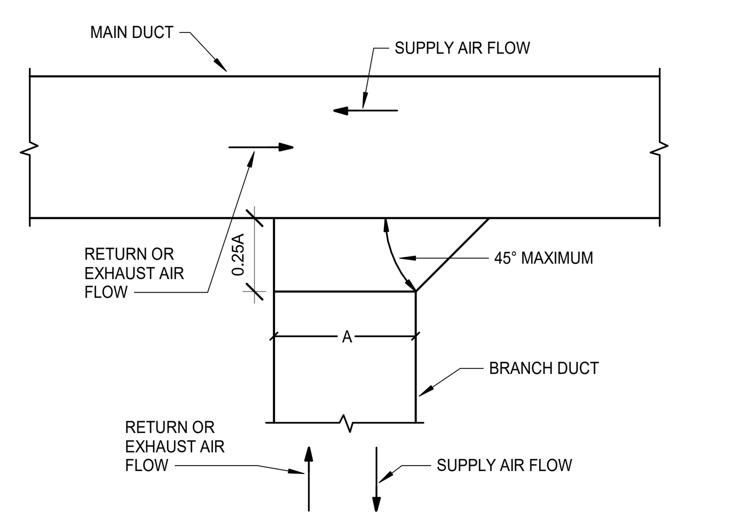


RETURN AIR DUCT DETAIL

SCALE: NONE

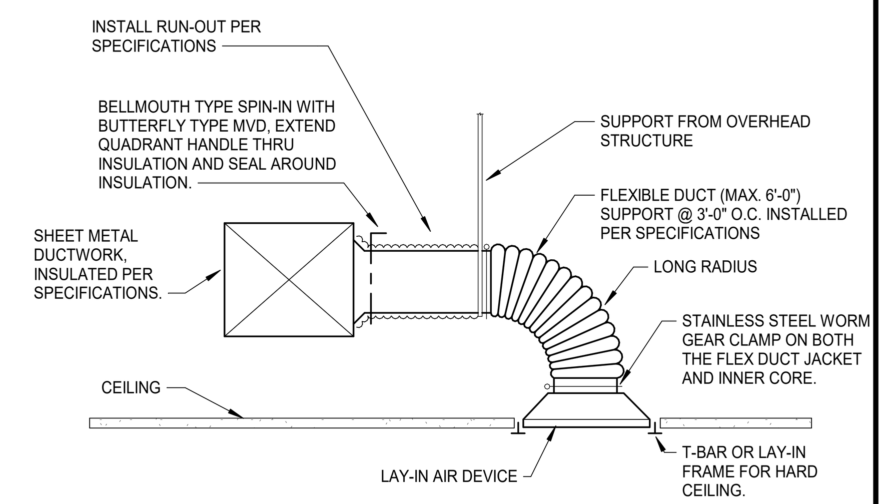
3300-04 04.20.22



DUCT TAKE-OFF DETAIL

SCALE: NONE

3300-02



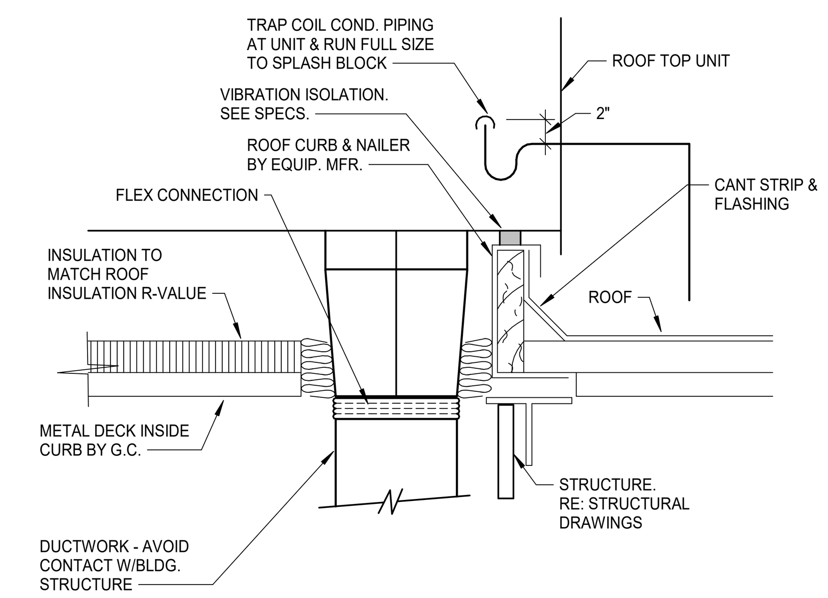
NOTE:
CEILING DIFFUSER SHOWN; REGISTERS AND GRILLES SIMILAR.

HARD CEILING INSTALLATIONS:
1. PROVIDE LAY-IN FRAME TO ALLOW AIR DEVICE TO BE REMOVED.
2. LOCATE MVD TO BE ACCESSIBLE. IF SPIN-IN IS NOT ACCESSIBLE PROVIDE A SEPARATE MVD ACCESSIBLE BY REMOVING THE GRILLE IN LIEU OF THE ONE AT THE SPIN-IN.

ROUND NECK AIR DEVICE DETAIL

SCALE: NONE

3713-08



ROOF MOUNTED UNIT INSTALLATION DETAIL

SCALE: NONE

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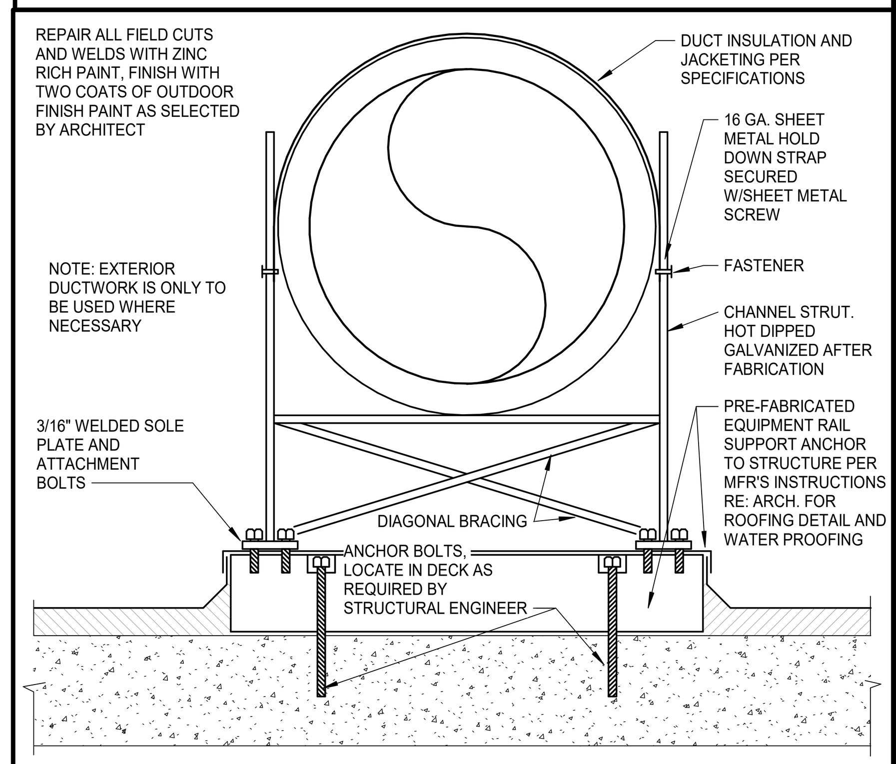
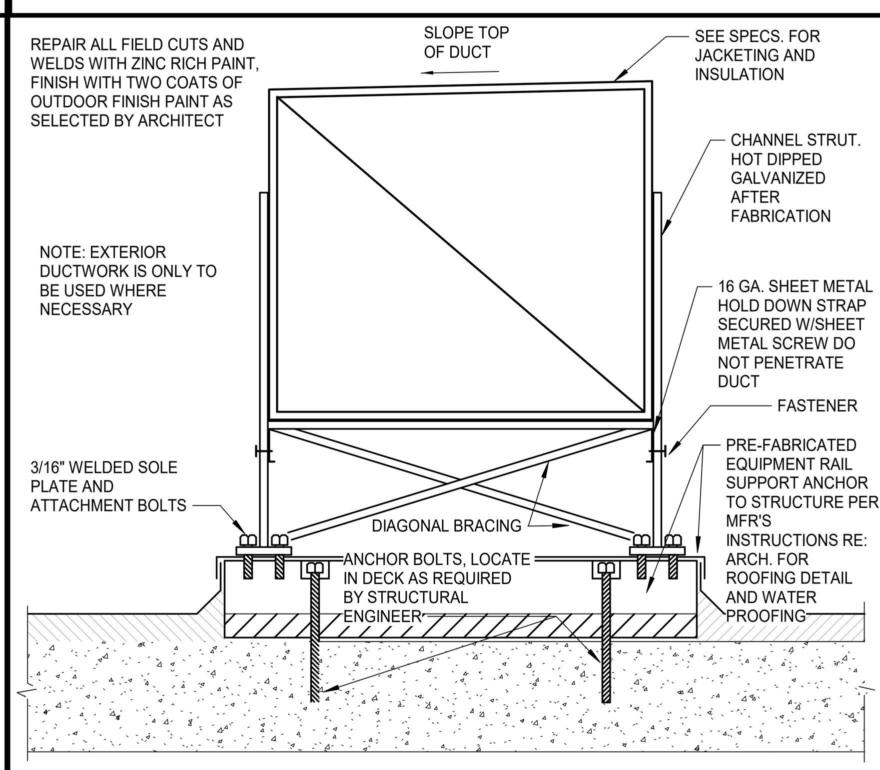


ROOF DUCT SUPPORT DETAIL, ROUND

SCALE: NONE

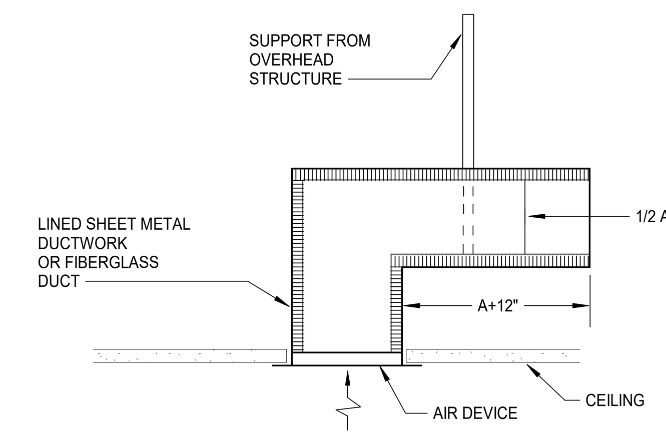
3113-05



ROOF DUCT SUPPORT DETAIL, RECTANGULAR

SCALE: NONE

3113-07



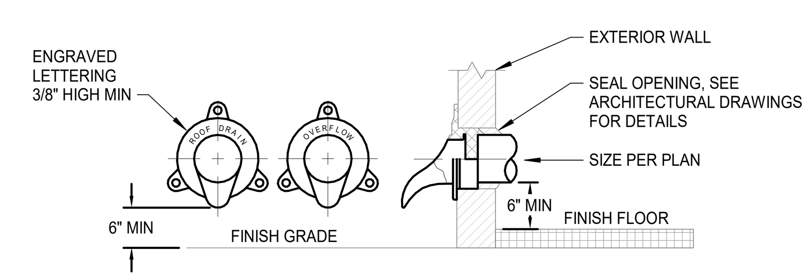
NOTES:
1. PROVIDE ON ALL LAY-IN RETURN AIR DEVICES, UNLESS NOTED OTHERWISE.
2. "A" EQUALS LONGEST DIMENSION OF AIR DEVICE NECK. EXAMPLE: FOR A 22/10 AIR DEVICE, "A" EQUALS 22".

SOUND ELBOW DETAIL

SCALE: NONE

3713-04

NOTES:
A. SEE PLANS FOR SIZES AND LOCATIONS.
B. PROVIDE SPLASH BLOCK IN LANDSCAPED AREAS.
C. SEE ARCHITECTURAL DRAWINGS FOR FINISH DETAILS.



ROOF DRAIN DOWNSPOUT DETAIL

SCALE: NONE

1423-04

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MECHANICAL DETAILS

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PROFESSIONAL ENGINEER LICENSED 20608 1/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

Revisions:

Project No:	23028
Drawn By:	AK
Checked By:	MG
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GENERAL LEGEND
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION
	X / X-X	SECTION DESIGNATION SECTION CUT ON THIS SHEET
	X / X-X	VIEW REFERENCE DESIGNATION VIEW REFERENCE ON THIS SHEET
	X / 1-2-3	EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER (UNIT SERVED - FLOOR - SEQUENCE #)
	A 10 / 250	DIFFUSER IDENTIFICATION DIFFUSER NECK DIAMETER DIFFUSER CFM
	E 8ø/24"L / 9999	LINEAR DIFFUSER IDENTIFICATION LINEAR DIFFUSER NECK DIAMETER LINEAR DIFFUSER LENGTH LINEAR DIFFUSER CFM
	2'-6" FTR / 3'-6" 28	FINNED TUBE RADIATOR ACTIVE ELEMENT LENGTH EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER RADIATOR ENCLOSURE LENGTH (OR W-W=WALL-TO-WALL)
	X	KEY NOTE REFERENCE
	1	KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE
	X / X	TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR)
		POINT OF CONNECTION, NEW TO EXISTING
		POINT OF DISCONNECTION, DEMO
		DIRECTION OF FLOW IN PIPE
		DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED
(E)		EXISTING
(N)		NEW
(R)		RELOCATED
(F)		FUTURE
DIA	Ø	DIAMETER
WAD		WALL ACCESS DOOR
NIC		NOT IN CONTRACT
AFF		ABOVE FINISHED FLOOR
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
UNO		UNLESS NOTED OTHERWISE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

ABBR.	SYMBOL	DESCRIPTION
		CAP END OF PIPE
	SLOPE	PITCH DOWN IN DIRECTION OF ARROW
		PIPE ANCHOR
		PIPE ALIGNMENT GUIDE
		UNION OR FLANGE
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
PRV		PRESSURE REDUCING VALVE
PTRV		PRESSURE AND/OR TEMPERATURE RELIEF VALVE
		ISOLATION VALVE (RE: SPEC FOR TYPE)
		VERTICAL PIPE VALVE
CV		CHECK VALVE
		SOLENOID / MOTORIZED VALVE
		SOLENOID VALVE
		HOSE END DRAIN VALVE
P/T	P/T	PRESSURE / TEMPERATURE TAP
		STRAINER
		STRAINER W/ BLOWDOWN
		BRAIDED FLEXIBLE PIPE CONNECTOR
		DOUBLE-BOWL FLEXIBLE PIPE CONNECTOR
		THERMOMETER
		PRESSURE GAUGE
		SIGHT GLASS
C.A.P.		CEILING ACCESS PANEL
		PUMP
TB		THRUST BLOCK
MAV		MANUAL AIR VENT
AAV		AUTOMATIC AIR VENT

PLUMBING LEGEND
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION
CW	CW	DOMESTIC COLD WATER PIPING
HW	HW	DOMESTIC HOT WATER PIPING
HWC	HWC	DOMESTIC HOT WATER CIRC PIPING
CW-S	CW-S	SOFTENED DOMESTIC COLD WATER PIPING
HW-S	HW-S	SOFTENED DOMESTIC HOT WATER PIPING
140°F HW	140°F HW	DOMESTIC HOT WATER PIPING @ TEMP SHOWN
140°F HWC	140°F HWC	DOMESTIC HOT WATER CIRC PIPING @ TEMP SHOWN
TW	TW	TEPID WATER PIPING
TWC	TWC	TEPID WATER CIRC PIPING
ICW	ICW	INDUSTRIAL COLD WATER PIPING
IHW	IHW	INDUSTRIAL HOT WATER PIPING
IHWC	IHWC	INDUSTRIAL HOT WATER CIRC PIPING
NPCW	NPCW	NON-POTABLE COLD WATER PIPING
NPHW	NPHW	NON-POTABLE HOT WATER PIPING
NPHR	NPHR	NON-POTABLE HOT WATER CIRC PIPING
V	V	VENT PIPING
AV	AV	ACID RESISTANT VENT PIPING
W	W	WASTE PIPING
W	W	WASTE PIPING BELOW FLOOR
AW	AW	ACID RESISTANT WASTE PIPING
AW	AW	ACID RESISTANT WASTE PIPING BELOW FLOOR
GW	GW	GREASE WASTE (TO GREASE INTERCEPTOR)
GW	GW	GREASE WASTE PIPING BELOW FLOOR
SD	SD	STORM DRAIN PIPING
SD	SD	STORM DRAIN PIPING BELOW FLOOR
OD	OD	OVERFLOW DRAIN PIPING
OD	OD	OVERFLOW DRAIN PIPING BELOW FLOOR
CA	CA	COMPRESSED AIR
G	G	NATURAL GAS PIPING

ABBR.	SYMBOL	DESCRIPTION
GCO/SCO		GRADE CLEANOUT / SURFACE CLEANOUT
FCO		FLOOR CLEANOUT
WCO		WALL CLEANOUT
CO		LINE CLEANOUT
AD		AREA DRAIN
FD		FLOOR DRAIN
FS		FLOOR SINK
RD / OD		ROOF DRAIN OR OVERFLOW DRAIN
VB		ATMOSPHERIC VACUUM BREAKER
BFP		BACKFLOW PREVENTER
SA		SHOCK ARRESTOR W / ISOLATION VALVE
GC		GAS SHUT-OFF VALVE
		STOP AND DRAIN VALVE
BV		BALANCING VALVE
WH		WALL HYDRANT
HB		HOSE BIBB
RH		ROOF HYDRANT
YH		YARD HYDRANT
DSN		DOWNSPOUT NOZZLE
MH		MANHOLE
CI		CAST IRON
CB		CATCH BASIN
VTR		VENT THRU ROOF
IE		INVERT ELEVATION
PVC		POLYVINYL CHLORIDE

PLUMBING SPECIALTY SCHEDULE

NOTES:

1. **COORDINATE WITH ROOF/WALL CONSTRUCTION FOR EACH FIXTURE.**

DESIG.	FIXTURE TYPE	LOCATION	MANUFACTURER	MODEL #	REMARKS
DSN-1	DOWNSPOUT NOZZLE WITH HINGED COVER	EXTERIOR WALL	J.R. SMITH	1775-CP	CHROME PLATED BRASS FINISH WITH WALL FLANGE
OD-1	OVERFLOW ROOF DRAIN	ROOF	J.R. SMITH	1070	CAST IRON DRAIN WITH CAST IRON DOME STRAINER, PROVIDE DECK CLAMP ASSEMBLY & DRAIN RECEIVER ASSEMBLY AS REQUIRED
RD-1	ROOF DRAIN	ROOF	J.R. SMITH	1010	CAST IRON DRAIN WITH CAST IRON DOME STRAINER, PROVIDE DECK CLAMP ASSEMBLY & DRAIN RECEIVER ASSEMBLY AS REQUIRED

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. A DETAILED METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY AFFECTS THE SAFETY OF THE OCCUPANTS, OWNER'S EQUIPMENT OR VALUABLE CONTENTS OR ANY SYSTEM WHICH SUPPORTS THESE SYSTEMS; OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR SECURITY.
3. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK AND SHALL NOTIFY THE ENGINEER/ARCHITECT OF ANY DISCREPANCIES FOR RESOLUTION.
4. COORDINATE WORK WITH ALL TRADES.
5. CONTRACTOR IS RESPONSIBLE FOR SECURING AND WEATHERPROOFING ANY ROOF OPENING NOT COMPLETED DURING WORKING HOURS.
6. COORDINATE ALL PIPING WITH EQUIPMENT, STRUCTURE, ETC.
7. CONTRACTOR SHALL NOT SHUT DOWN / TAKE OUT OF SERVICE ANY SYSTEMS WITHOUT FIRST COORDINATING WITH OWNER AND PREPARING M.O.P.

PLUMBING NOTES:

1. CONTRACTOR SHALL NOT SHUT-OFF/PUT OUT OF SERVICE ANY SYSTEMS/SERVICES WITHOUT FIRST COORDINATING WITH OWNER.
2. THIS CONTRACTOR SHALL COORDINATE LOCATIONS OF PIPING WITH OTHER TRADES AND ADVISE ARCHITECT/ENGINEER OF ANY POSSIBLE CONFLICTS. VERIFY EXACT LOCATIONS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS.
3. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.
4. ALL EXISTING FIXTURES AND EQUIPMENT TO BE REMOVED SHALL HAVE ALL ASSOCIATED PIPING CONTROLS, HANGERS, SUPPORTS AND ANY MISCELLANEOUS ASSOCIATED SERVICE OR PART REMOVED COMPLETELY.
5. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATION DETAILS.
6. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE ELEVATIONS AND LOCATIONS.
7. INVERT ELEVATIONS SHOWN ARE BASED ON A GROUND FLOOR FINISH ELEVATION OF 100 FT.
8. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR DIMENSIONED LOCATION OF PLUMBING FIXTURES AND WALLS.
9. PROVIDE CLEANOUTS IN ACCESSIBLE LOCATIONS PER THE PROJECT SPECIFICATIONS AND LOCAL PLUMBING CODES.

DEMOLITION GENERAL NOTES:

1. EXISTING ITEMS TO REMAIN ARE DENOTED LIGHTLY UNLESS OTHERWISE NOTED. ALL ITEMS SHOWN DASHED & BOLD SHALL BE REMOVED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL NOT SHUT-OFF OR PUT-OUT OF SERVICE ANY SYSTEMS OR SERVICE WITHOUT FIRST COORDINATING WITH THE OWNER.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND UNDERSTAND THE EXTENT OF THE REMODEL WORK REQUIRED PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR WORK REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY THE CONTRACT DOCUMENT.
4. CONTRACTOR SHALL DETERMINE AND COORDINATE THE EXACT EXTENT OF DEMOLITION TO FACILITATE ALL WORK INDICATED BY THE CONTRACT DOCUMENT.
5. PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
6. ALL ITEMS IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. REMOVED ITEMS SHALL BE TURNED OVER TO THE OWNER UNLESS OTHERWISE NOTED AND STORED IN THE AREA DESIGNATED BY THE OWNER. REMOVE FROM SITE AND LEGALLY DISPOSE OF ALL ITEMS THE OWNER CHOOSES NOT TO ACCEPT.
7. WHERE EXISTING PIPING, WIRING ETC. ARE TO BE REMOVED FROM WALLS WHICH ARE REMAINING, THE WALLS SHALL BE REPAIRED TO MATCH ORIGINAL CONDITIONS.
8. WHERE EXISTING PIPING TO BE REMOVED PASSES THROUGH FLOORS, THEY SHALL BE CUT BACK TO WITHIN CONCRETE AND FILLED WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH WITH CONCRETE SURFACE.

FIRE PROTECTION NOTES:

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR THE INSTALLATION OF A COMPLETE AND PROPERLY FUNCTIONING FIRE PROTECTION SYSTEM.
2. THE FIRE PROTECTION WORK INVOLVES ENGINEERING AND DESIGN BY THE CONTRACTOR TO DETERMINE THE EXTENT OF NEW WORK AND THE MODIFICATION AND EXTENSION OF EXISTING SYSTEMS TO PROVIDE FULL COVERAGE TO THE PROJECT AREA SHOWN ON THESE AND THE ARCHITECTURAL PLANS.
3. THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC. IT DOES NOT NECESSARILY REPRESENT ALL ELBOWS, OFFSETS, HANGERS, ETC., REQUIRED FOR A COMPLETE WORKING SYSTEM.
4. ALL FIRE PROTECTION SYSTEMS INSTALLED SHALL BE IN ACCORDANCE WITH NFPA-13, 14, 20, ETC. AND LOCAL BUILDING CODES AND ORDINANCES.
5. FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL NEW FIRE PROTECTION EQUIPMENT AND PIPING WITH ALL OTHER TRADES PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND SYSTEM INSTALLATION, SO AS NOT TO INTERFERE WITH THE ROUTING OF NEW DUCTWORK, PLUMBING PIPING, ETC.
6. PROVIDE ALL FITTINGS, RISER NIPPLES, ARM-OVERS, HANGERS, ETC. TO MAINTAIN CONFORMANCE WITH APPLICABLE STANDARDS AND TO POSITION THE SPRINKLERS IN THE PROPER LOCATIONS.
7. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH FIRE STOPPING MATERIALS AS REQUIRED.
8. FOR REMODEL AREAS NEW SPRINKLERS SHALL MATCH EXISTING SPRINKLERS.
9. PROVIDE WORKING DRAWINGS AND HYDRAULICALLY CALCULATE THIS FIRE SPRINKLER SYSTEM PER NFPA-13 WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
10. PROVIDE FIELD COORDINATION OF PIPING AND SPRINKLER INSTALLATIONS WITH DUCTWORK, LIGHTS, SMOKE DETECTORS, DIFFUSERS, ETC.

FIRE PROTECTION DENSITIES:

1. ALL ROOMS TO BE LIGHT HAZARD UNLESS NOTED OTHERWISE ON THE PLANS.

	LIGHT HAZARD, 0.1 GPM OVER 1,500 SQ.FT
OH1	ORDINARY HAZARD GROUP 1, 0.15 GPM OVER 1,500 SQ.FT
OH2	ORDINARY HAZARD GROUP 2, 0.2 GPM OVER 1,500 SQ.FT
XH1	EXTRA HAZARD, GROUP 1, 0.3 GPM OVER 2,500 SQ.FT
XH2	EXTRA HAZARD, GROUP 2, 0.4 GPM OVER 2,500 SQ.FT

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
PLUMBING LEGENDS & NOTES

100% CD

PROFESSIONAL ENGINEER LICENSED 20608 01/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

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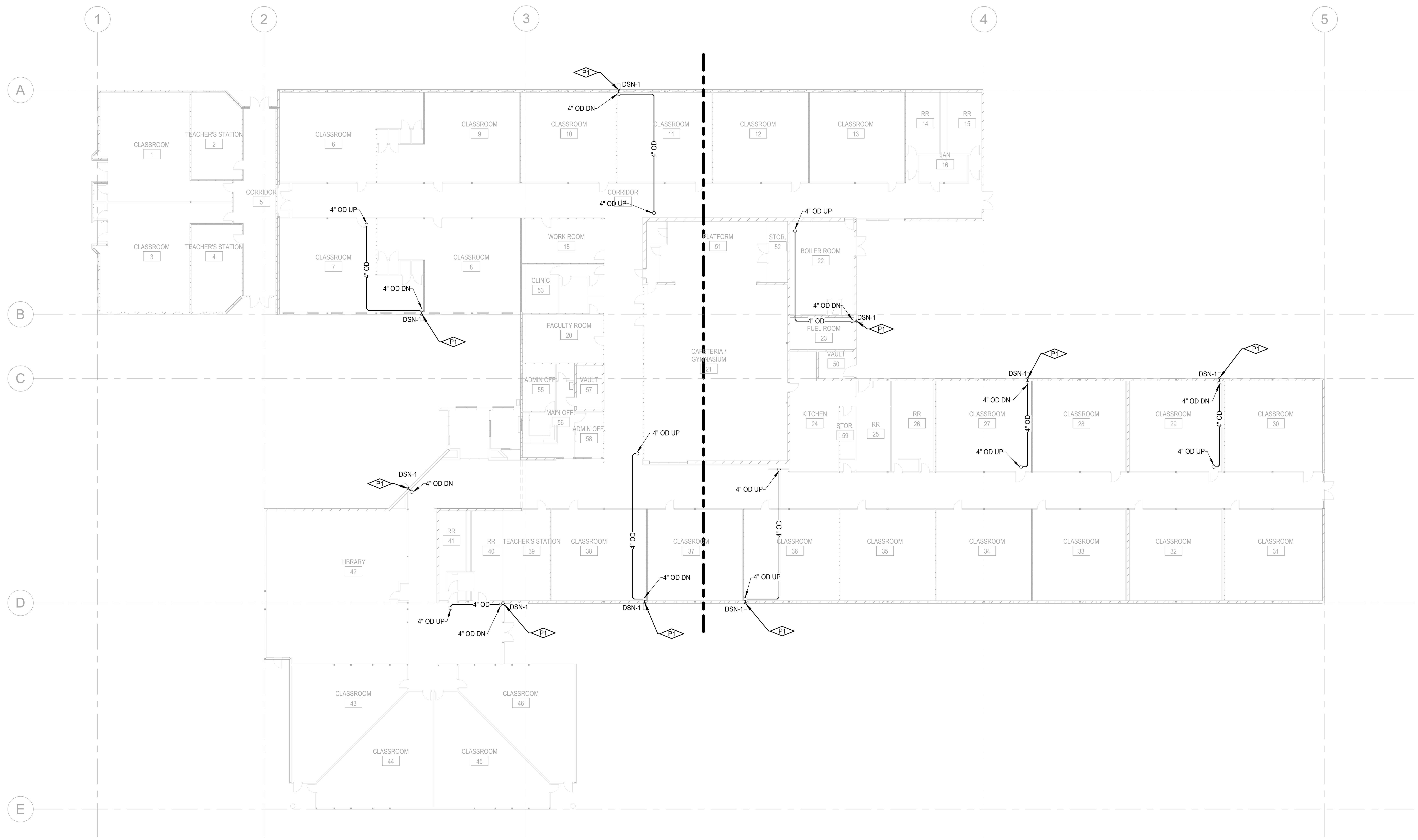
KEYNOTES

P1	INSTALL NEW DOWNSPOUT NOZZLE INTO EXISTING EXTERIOR WALL. DISCHARGE APPROXIMATLEY 18" ABOVE FINISHED GRADE. REFER TO ARCHITECTURAL DRAWINGS.



LEVEL 1 WASTE & VENT PLAN
SCALE: 1/16" = 1'-0"

1"
IF LINE DOES NOT MEASURE 1 INCH, DRAWING IS NOT TO SCALE

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Sheet:
WASTE & VENT PLAN

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GENERAL LEGEND
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ABBR.	SYMBOL	DESCRIPTION	ABBR.	SYMBOL	DESCRIPTION
	X / X-X	SECTION DESIGNATION SECTION CUT ON THIS SHEET			CAP END OF PIPE
				SLOPE	PITCH DOWN IN DIRECTION OF ARROW
					PIPE ANCHOR
	X / X-X	VIEW REFERENCE DESIGNATION VIEW REFERENCE ON THIS SHEET			PIPE ALIGNMENT GUIDE
					UNION OR FLANGE
	X / 1-2-3	EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER (UNIT SERVED - FLOOR - SEQUENCE #)			CONCENTRIC PIPE REDUCER
					ECCENTRIC PIPE REDUCER
	A 10 / 250	DIFFUSER IDENTIFICATION DIFFUSER NECK DIAMETER DIFFUSER CFM	PRV		PRESSURE REDUCING VALVE
			PTRV		PRESSURE AND/OR TEMPERATURE RELIEF VALVE
	E 8ø/24"L / 9999	LINEAR DIFFUSER IDENTIFICATION LINEAR DIFFUSER NECK DIAMETER LINEAR DIFFUSER LENGTH LINEAR DIFFUSER CFM			ISOLATION VALVE (RE: SPEC FOR TYPE)
					VERTICAL PIPE VALVE
			CV		CHECK VALVE
	2'-6" / 3'-6" FTR / 28	FINNED TUBE RADIATOR ACTIVE ELEMENT LENGTH EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER RADIATOR ENCLOSURE LENGTH (OR W-W=WALL-TO-WALL)			SOLENOID / MOTORIZED VALVE
					SOLENOID VALVE
					HOSE END DRAIN VALVE
	X	KEY NOTE REFERENCE	P/T	P/T	PRESSURE / TEMPERATURE TAP
	1	KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE			STRAINER
	X / X	TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR)			STRAINER W/ BLOWDOWN
		POINT OF CONNECTION, NEW TO EXISTING			BRAIDED FLEXIBLE PIPE CONNECTOR
		POINT OF DISCONNECTION, DEMO			DOUBLE-BOWL FLEXIBLE PIPE CONNECTOR
		DIRECTION OF FLOW IN PIPE			THERMOMETER
		DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED			PRESSURE GAUGE
(E)		EXISTING			SIGHT GLASS
(N)		NEW	C.A.P.		CEILING ACCESS PANEL
(R)		RELOCATED			PUMP
(F)		FUTURE	TB		THRUST BLOCK
DIA	Ø	DIAMETER	MAV		MANUAL AIR VENT
WAD		WALL ACCESS DOOR	AAV		AUTOMATIC AIR VENT
NIC		NOT IN CONTRACT			
AFF		ABOVE FINISHED FLOOR			
GC		GENERAL CONTRACTOR			
MC		MECHANICAL CONTRACTOR			
EC		ELECTRICAL CONTRACTOR			
UNO		UNLESS NOTED OTHERWISE			
C		COMMON			
NC		NORMALLY CLOSED			
NO		NORMALLY OPEN			

FIRE PROTECTION LEGEND
(Not all symbols listed below are used on these drawings)

ABBR.	SYMBOL	DESCRIPTION	ABBR.	SYMBOL	DESCRIPTION
F	F	FIRE SERVICE PIPING			NEW SPRINKLER HEAD
O.S.&Y.		O.S.&Y. GATE VALVE W/ TAMPER SWITCH			EXISTING SPRINKLER HEAD
FS		FLOW SWITCH			RELOCATED SPRINKLER HEAD
PIV		POST INDICATOR VALVE			SIDEWALL SPRINKLER HEAD
FDC		FIRE DEPARTMENT CONNECTION		D24	DRY SPRINKLER HEAD (SHAFT LENGTH)
			FHC		FIRE HOSE CABINET
			FVC		FIRE VALVE CABINET
			A/S		AUTOMATIC FIRE SPRINKLER

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FIRE PROTECTION DENSITIES:

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OH2	ORDINARY HAZARD GROUP 2, 0.2 GPM OVER 1,500 SQ.FT
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XH2	EXTRA HAZARD, GROUP 2, 0.4 GPM OVER 2,500 SQ.FT

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Sheet:
FIRE PROTECTION LEGENDS & NOTES

100% CD

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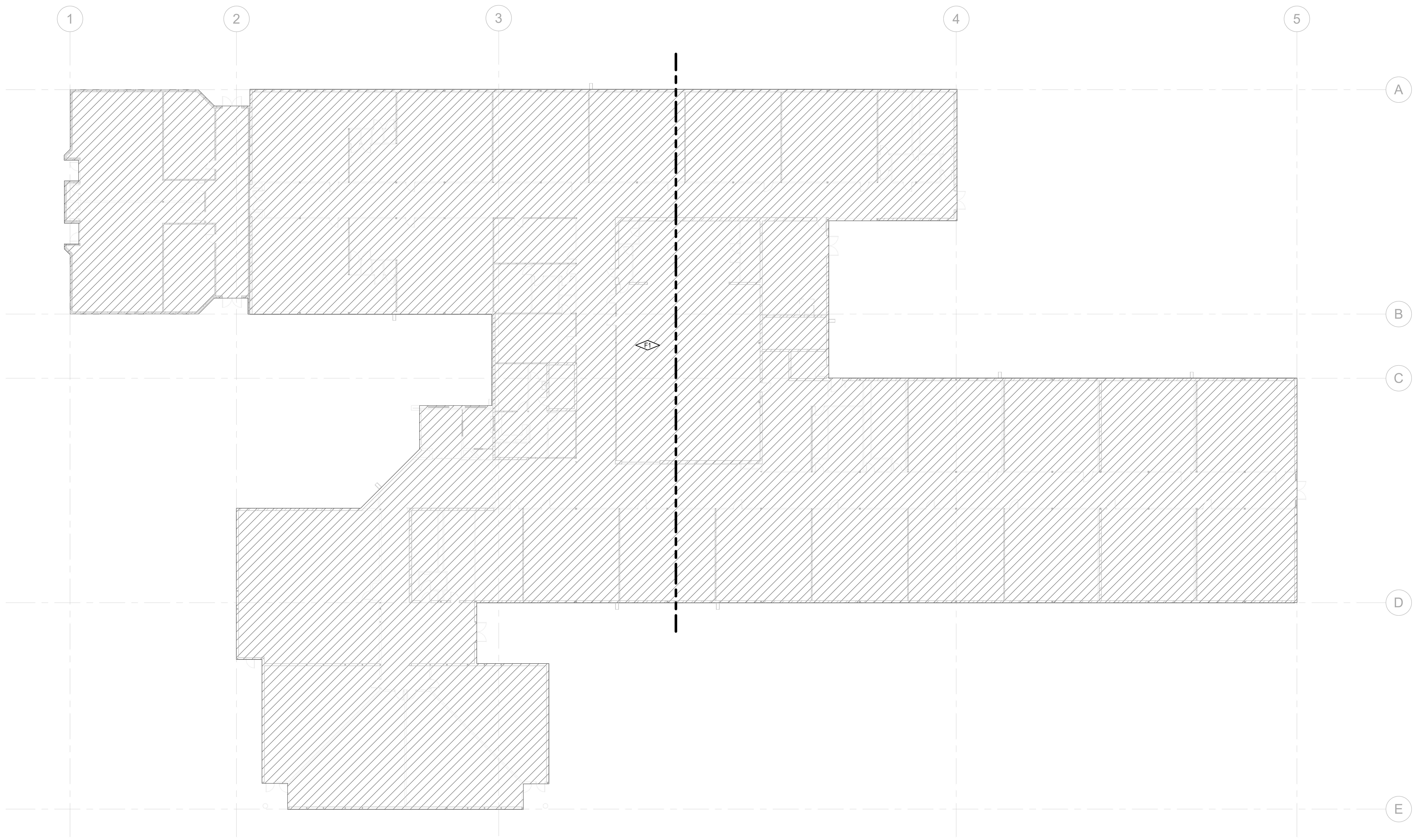
KEYNOTES

F1	REVISE EXISTING SPRINKLER SYSTEM LAYOUT TO MATCH NEW WALLS, CEILING LAYOUT, ETC. IN AREA HATCHED. MATCH EXISTING HEADS. REFER TO ARCHITECUTRAL PLANS FOR ACTUAL AREAS REMODELED.



LEVEL 1 FIRE PROTECTION PLAN

SCALE: 1/16" = 1'-0"

1"

IF LINE DOES NOT MEASURE 1 INCH, DRAWING IS NOT TO SCALE

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
FIRE PROTECTION PLAN SERIES

100% CD

PROFESSIONAL ENGINEER LICENSED 20608 1/15/2025 STATE OF IDAHO LILLIAN J. JOHNSON

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Project No:	23028
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POWER LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SINGLE RECEPTACLE		ELECTRICAL PANELBOARD, CONTROL PANEL, OR OTHER CABINET AS NOTED
	DUPLEX RECEPTACLE; WALL, CEILING, FLOOR MOUNTED	PM	PLUG MOLD (MULTI-OUTLET ASSEMBLY)
	DOUBLE DUPLEX RECEPTACLE; WALL, CEILING, FLOOR MOUNTED	WM	WIREMOLD (SURFACE RACEWAY)
	SPECIAL RECEPTACLE; WALL, CEILING, FLOOR MOUNTED		CONDUIT CONCEALED
J	JUNCTION BOX; WALL, CEILING, FLOOR MOUNTED	UG	CONDUIT, UNDERGROUND OR CONCEALED IN FLOOR AS ALLOWED PER SPECIFICATIONS
	DUPLEX RECEPTACLE, HALF CONTROLLED		CONDUIT TURNING DOWN
	DUPLEX RECEPTACLE, FULL CONTROLLED		CONDUIT TURNING UP
	DOUBLE DUPLEX RECEPTACLE, HALF CONTROLLED		CONDUIT CAPPED
	DOUBLE DUPLEX RECEPTACLE, FULL CONTROLLED		GROUND BAR
A-1	SHADING INDICATES EMERGENCY SYSTEM TEXT INDICATES PANEL AND CIRCUIT DESIGNATION		MAIN SWITCHBOARD/DISTRIBUTION CENTER
	DISCONNECT SWITCH (NON-FUSED)	T	TRANSFORMER
	DISCONNECT SWITCH (FUSED)	CT	CURRENT TRANSFORMER
	VARIABLE SPEED DRIVE WITH DISCONNECT	T	THERMOSTAT
	ENCLOSED CIRCUIT BREAKER	GANN	GENERATOR ANNUNCIATOR PANEL
S	TOGGLE SWITCH	M	UTILITY METER
			POWER POLE

CONTROLS LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
S_a	SINGLE POLE SWITCH (SUBSCRIPT DENOTES SWITCHING)	S_{VS}	VARIABLE SPEED/SPEED CONTROLLER SWITCH
S_2	TWO POLE SWITCH	S_{EP}	EXPLOSION PROOF SWITCH
S_3	THREE-WAY SWITCH	S_{TO}	THERMAL OVERLOAD SWITCH
S_4	FOUR-WAY SWITCH	S_{MC}	MOMENTARY CONTACT SWITCH
S_K	KEY OPERATED SWITCH	S	COMBINATION SWITCH AND DUPLEX RECEPTACLE
S_M	MANUAL SWITCH, HORSEPOWER RATE	P	PHOTOCELL
S_D	DIMMER SWITCH		PUSH BUTTON
S_{PI}	SWITCH WITH PILOT LIGHT (PILOT LIGHT IS 'ON' WHEN SWITCH IS 'ON')	TC	TIME CLOCK
S_P	SWITCH WITH PILOT LIGHT LOCATOR (CONTINUOUSLY LIGHTED HANDLE)		OCCUPANCY SENSOR - WALL MOUNTED IR=INFRARED, US=ULTRASONIC, DT=DUAL TECHNOLOGY
S_{LV}	LOW VOLTAGE SWITCH		

LIGHTING LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
a A	SHADING INDICATES EM SYSTEM, LOWER CASE SUBSCRIPT INDICATES SWITCHING, UPPER CASE SUBSCRIPT INDICATES LUMINAIRE TYPE (TYP)		PENDANT LUMINAIRE - SINGLE SUSPENSION
	TROFFER - RECESSED		PENDANT LUMINAIRE - MULTIPLE SUSPENSION
	SURFACE LUMINAIRE		WALL MOUNTED LUMINAIRE
	LINEAR LUMINAIRE - RECESSED		IN-WALL LUMINAIRE
A B	FIELD MEASURED LUMINAIRE LENGTH AND SHAPE DENOTED BY LINEWORK SUBSCRIPT IN RECTANGLE INDICATES LUMINAIRE TYPE		POLE LUMINAIRE - ARM MOUNTED
	DOWNLIGHT - RECESSED		POLE LUMINAIRE - POST TOP
	DOWNLIGHT - SURFACE		BOLLARD
	EXIT SIGN - CEILING MOUNTED		TRACK HEAD AND TRACK
	EXIT SIGN - WALL MOUNTED (FLUSH TO WALL)		EXTERIOR STAKE MOUNTED
	EXIT SIGN - WALL MOUNTED (PROJECTS FROM WALL)		EMERGENCY LIGHTING UNIT - WALL MOUNTED
	INDICATES EXIT SIGN FACES - SINGLE OR DOUBLE		EMERGENCY LIGHTING UNIT - CEILING MOUNTED
	INDICATES EXIT SIGN CHEVRONS - LEFT/RIGHT OR BOTH		INDICATES DIRECTIONAL AIMING

REFERENCE SYMBOLS LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
X	KEY NOTE REFERENCE	1	KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE
LPA-#	TYPICAL CIRCUIT NUMBER	E	EXISTING TO REMAIN
TG#	TYPICAL LUMINAIRE TYPE	R	EXISTING TO BE REMOVED
X X	TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR)	RL	EXISTING TO BE RELOCATED
UH	MECHANICAL EQUIPMENT REFERENCE	ER	EXISTING TO REMAIN - REPLACE DEVICE
LC1	LIGHTING CONTROL / EQUIPMENT REFERENCE	RR	EXISTING TO BE REMOVED AND REPLACED
LC1	ELECTRICAL ACCESSORIES REFERENCE		

ABBREVIATIONS LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A	AMPERES	MCP	MOTOR CIRCUIT PROTECTOR
AC	ABOVE COUNTER, MOUNT HORIZONTALLY TO CENTERLINE OF DEVICE, +6" ABOVE COUNTER OR BACK SPLASH	MEC	SEE MECHANICAL EQUIPMENT SCHEDULE
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
ANN	ANNUNCIATOR	MTS	MANUAL TRANSFER SWITCH
ARF	ABOVE RAISED FLOOR	NC	NORMALLY CLOSED
ASSD	AIR SAMPLING SMOKE DETECTION	NIC	NOT IN CONTRACT
ATS	AUTOMATIC TRANSFER SWITCH	NL	NIGHT LIGHT
BFG	BELOW FINISHED GRADE	NO	NORMALLY OPEN
C	CONDUIT	NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
CB	CIRCUIT BREAKER	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CCTV	CLOSED CIRCUIT TELEVISION	OFOI	OWNER FURNISHED, OWNER INSTALLED
(E)	EXISTING	OSWF	ON SITE WORK FORCE
EM	EMERGENCY	PB	PULL BOX
EMDC	EMERGENCY MAIN DISTRIBUTION CENTER	SB	STAND-BY
EP	EXPLOSION PROOF	SDC	SUB-DISTRIBUTION CENTER
EPO	EMERGENCY POWER OFF	TP	TAMPER PROOF
EVO	EMERGENCY VENTILATION ON/OFF	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
EWC	ELECTRIC WATER COOLER	TYP	TYPICAL
FA	FIRE ALARM	UF	UNDER FLOOR
G	GROUND	UG	UNDER GROUND
GCP	GENERATOR CONTROL PANEL	UON	UNLESS OTHERWISE NOTED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UPS	UNINTERRUPTIBLE POWER SUPPLY
HOA	HAND OFF AUTOMATIC	V	VOLTS
IG	ISOLATED GROUND	VFD	VARIABLE FREQUENCY DRIVE
MAX	MAXIMUM	W/	WITH
MCB	MAIN CIRCUIT BREAKER	W/O	WITHOUT
MCC	MOTOR CONTROL CENTER	WP	WEATHER PROOF
MDC	MAIN DISTRIBUTION CENTER	XFMR	TRANSFORMER

ONE-LINE DIAGRAM LEGEND
(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DISCONNECT SWITCH	A	PANELBOARD "A"
	DISCONNECT SWITCH, FUSED	PM	EM=ENERGY METER, PM=POWER METER, CM=CIRCUIT MONITOR
	CIRCUIT BREAKER	VS	VOLTMETER TEST SWITCH
	FUSE	AS	AMMETER TEST SWITCH
	GROUND	V	VOLTMETER
T ##	STEP DOWN TRANSFORMER, ## INDICATES KVA	A	AMMETER
TK ##	K-RATED STEP DOWN TRANSFORMER ## INDICATES KVA, # INDICATES K RATING	XXX	SEE FEEDER/MEC/TRANSFORMER SCHEDULES FOR FEEDER SIZE
	CURRENT TRANSFORMER	G	ENGINE GENERATOR
	POTENTIAL TRANSFORMER		CONTACTOR/RELAY/CAPACITOR (AS NOTED)
OR	SERVICE ENTRANCE TRANSFORMER		TRANSFER SWITCH - ATS=AUTOMATIC, MTS=MANUAL
M	METER	GFI	GROUND FAULT INTERRUPTER
	EQUIPMENT ENCLOSURE	SPD	SURGE PROTECTIVE DEVICE
	SERVICE WEATHERHEAD	ST	SHUNT TRIP
ISCA	SHORT CIRCUIT CURRENT AVAILABLE		TERMINATIONS LB=LOAD BREAK, NLB=NO LOAD BREAK
K a	KIRK KEY INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP		DRAW-OUT DEVICE
E a	ELECTRICAL INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP		PLUG-IN DEVICE
M	MECHANICAL INTERLOCK	EO	ELECTRICALLY OPERATED

LIGHTING PLAN NOTES:

1. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT MOUNTING LOCATIONS OF DEVICES AND LUMINAIRES.
2. COORDINATE LUMINAIRE LOCATIONS WITH MECHANICAL PIPING, DUCTWORK, ETC., TO AVOID CONFLICTS. SEE SPECIFICATIONS FOR COORDINATION REQUIREMENTS.
3. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V CIRCUIT.
4. FIELD COORDINATE EXACT LOCATION OF CEILING MOUNTED OCCUPANCY SENSORS PER MANUFACTURER'S INSTRUCTIONS. OCCUPANCY/VACANCY SENSING DEVICES ARE SHOWN FOR GENERAL DESIGN INTENT ONLY. CONTRACTOR SHALL PROVIDE THE TYPE AND QUANTITY OF OCCUPANCY/VACANCY SENSING DEVICES AS NECESSARY FOR PROPER COVERAGE AND CONTROL OF LUMINAIRES WHERE INDICATED ON THE LIGHTING PLANS. FIELD ADJUSTMENT TO DEVICE LOCATIONS SHALL BE MADE AS REQUIRED TO CAPTURE ALL OCCUPANTS, WHETHER SITTING AT A DESK OR MOVING AROUND THE SPACE. ADDITIONAL DEVICES SHALL BE PROVIDED AND FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY, AT NO ADDITIONAL COST TO OWNER. CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

POWER PLAN NOTES:

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
2. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
3. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
4. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
5. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.
6. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V CIRCUIT.
7. CIRCUITS MAY BE COMBINED INTO HOMERUNS OF UP TO SIX (6) CURRENT CARRYING CONDUCTORS, INCLUDING NEUTRALS, UNLESS OTHERWISE INDICATED. WHERE CIRCUITS ARE COMBINED WITHIN A SINGLE CONDUIT, PROVIDE STRIPING FOR FULL LENGTH OF NEUTRAL CONDUCTOR INSULATION TO MATCH THE COLOR CODE OF THE ASSOCIATED PHASE CONDUCTOR. SEE SPECIFICATION FOR COLOR CODES.
8. GFCI RECEPTACLES ARE NOT GENERALLY SHOWN ON DRAWINGS. ALL RECEPTACLE OUTLETS LOCATED IN TOILET ROOMS, SHOWER ROOMS, LOCKER ROOMS, GARAGES, SERVICE BAYS, ROOFTOPS, OUTDOOR LOCATIONS, MECHANICAL ROOMS, WITHIN 6 FEET OF A SINK, AT ELECTRIC WATER COOLERS, OR OTHER WET LOCATIONS SHALL BE PROVIDED WITH GFCI PROTECTION PER NEC ARTICLE 210 AND NEC SECTION 422.5. PROVIDE GFCI RECEPTACLES IN ELEVATOR PITS, HOISTWAYS, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS PER NEC SECTION 620.85. ADDITIONAL GFCI PROTECTION TO BE PROVIDED AS INDICATED. WHERE GFCI DEVICES ARE REQUIRED AND/OR SHOWN BUT ARE NOT ACCESSIBLE WHEN EQUIPMENT IS INSTALLED, I.E. VENDING MACHINES, ETC., PROVIDE BLANK FACE GFCI DEVICE AND COVERPLATE AHEAD OF INACCESSIBLE RECEPTACLES. MOUNT ADJACENT TO EQUIPMENT AT SWITCH HEIGHT UNLESS OTHERWISE SHOWN.
9. 120V POWER HAS BEEN SHOWN ON DRAWINGS TO J-BOXES IDENTIFIED FOR BAS CONTROLS, DAMPER ACTUATORS AND OTHER MISCELLANEOUS POWER TO OPERATE MECHANICAL CONTROLS AND DEVICES. COORDINATE ALL 120V REQUIREMENTS WITH MECHANICAL CONTROLS AND EQUIPMENT AND MAKE ALL CONNECTIONS REQUIRED TO THESE OR OTHER 120V MECHANICAL CIRCUITS AS REQUIRED. DO NOT CONNECT THESE LOADS TO OTHER CIRCUITS WITH LOADS OTHER THAN THOSE IDENTIFIED HERE.
10. ALL OUTDOOR AND ROOFTOP RECEPTACLES SHALL BE OUTDOOR RATED AND SHALL HAVE A WEATHERPROOF IN USE COVER.

ONE-LINE DIAGRAM NOTES:

1. PANELBOARDS INDICATED ON ONE-LINE DIAGRAMS DO NOT SHOW ALL BRANCH CIRCUITS. REFER TO PANELBOARD SCHEDULE(S).
2. EXISTING ONE-LINE DIAGRAM TAKEN FROM OWNER FURNISHED DRAWINGS. EXISTING INFORMATION SHOWN OTHER THAN LOCATIONS IMPACTED BY NEW WORK HAS NOT BEEN VERIFIED.
3. COORDINATE MOUNTING, CONDUIT, WIRE, AND OCPD SIZE FOR SPD'S WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

GENERAL NOTES:

1. FOR REMODELING, WORK INCLUDED IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND ORDERING MATERIALS OR EQUIPMENT.
7. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CATOR, RUMA & ASSOCIATES IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
8. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
9. PROVIDE SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

DEMOLITION NOTES:

1. UNLESS NOTED OTHERWISE, BOLD ITEMS INDICATE EQUIPMENT, DEVICES, ETC. TO BE REMOVED. SEE SPECIFICATION SECTION 260500 FOR REMODEL/DEMOLITION DETAILED REQUIREMENTS.
2. DEMOLITION DRAWINGS MAY NOT SHOW EVERY ITEM TO BE DEMOLISHED. CONTRACTOR SHALL VISIT SITE TO DETERMINE AND COORDINATE THE EXACT EXTENT OF DEMOLITION TO FACILITATE ALL WORK INDICATED BY THE CONTRACT DOCUMENTS PRIOR TO QUOTATION. NO EXTRAS WILL BE ALLOWED FOR WORK REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY THE CONTRACT DOCUMENTS. REWORK EXISTING TERMINATIONS, CONNECTIONS, CONDUIT, WIRING, ETC. TO ACCEPT NEW WORK. MAINTAIN CIRCUIT CONTINUITY TO EXISTING CIRCUITS AND DEVICES TO REMAIN OR REMODEL/DEMOLITION DETAILED REQUIREMENTS TO BE RELOCATED. PRIOR TO COMMENCEMENT OF ANY DEMO WORK, CONFIRM EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
3. ALL ITEMS IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL WIRING AND EXPOSED CONDUIT AND CONDUIT SUPPORTS BACK TO POINT OF ORIGIN OR NEXT DEVICE TO REMAIN. REMOVED ITEMS SHALL BE TURNED OVER TO THE OWNER, UNLESS NOTED OTHERWISE, AND STORED IN THE AREA DESIGNATED BY THE OWNER. REMOVE FROM SITE AND LEGALLY DISPOSE OF ALL ITEMS THE OWNER CHOOSES NOT TO ACCEPT.
4. WHERE EXISTING CONDUITS ARE SHOWN TO BE REMOVED AND HAVE BEEN ROUTED IN CONCRETE FLOOR SLABS, CONCRETE WALLS OR CONCRETE CEILINGS, THEY SHALL BE CUT BACK FLUSH WITH CONCRETE. FILL WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH FLUSH WITH CONCRETE SURFACE AFTER CONDUCTORS HAVE BEEN REMOVED.
5. REUSE EXISTING CONDUIT WHERE CURRENT NEC AND LOCAL CODE REQUIREMENTS ARE MAINTAINED. PROVIDE NEW CONDUIT AND WIRE FOR NEW INSTALLATIONS AND EXTENSION OF EXISTING INSTALLATIONS. REUSE EXISTING CONDUIT IN PLACE, DO NOT REINSTALL EXISTING CONDUIT. PROVIDE LABELING PER SPECIFICATIONS FOR REUSED CONDUIT.
6. WHERE EXISTING DEVICES, SWITCHES, MOTOR CONNECTIONS, ETC. ARE TO BE REMOVED FROM WALLS WHICH ARE REMAINING, WALLS SHALL BE PATCHED TO MATCH ORIGINAL FINISH. BLANK COVERPLATES OVER EXISTING BOXES ARE NOT ACCEPTABLE, UNLESS NOTED OTHERWISE.

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Sheet:
ELECTRICAL LEGENDS & NOTES

100% CD

PROFESSIONAL ENGINEER
LICENSED
17703
01/15/2025
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Electrical

Revisions:

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Drawn By:	JS
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LUMINAIRE SCHEDULE

COMMON NOTES:

A. CATALOG NUMBER REFERS TO FIRST NAME LISTED UNDER MANUFACTURER PER LUMINAIRE TYPE. REMAINING MANUFACTURERS LISTED ARE CONSIDERED TO BE EQUIVALENT PRODUCTS FOR THIS PROJECT AND SHALL MEET ALL CRITERIA LISTED INCLUDING THAT CALLED FOR BY THE SPECIFIC LUMINAIRE CATALOG NUMBER. CATALOG NUMBERS DO NOT NECESSARILY REPRESENT COMPLETE CATALOG NUMBERS. ALL ITEMS LISTED IN THE DESCRIPTION SHALL BE PROVIDED.
B. REFER TO LIGHTING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
C. PROVIDE UNIT PRICING FOR ALL LUMINAIRES BY TYPE AND SUBMIT WITH BID FORM.
D. PROVIDE AN EMERGENCY BALLAST TEST SWITCH FOR RECESSED DOWNLIGHTS ON CEILING ADJACENT TO LUMINAIRE.
E. PROVIDE FLICKER FREE LED DRIVERS MEETING IEEE 1789.

SPECIFIC REMARKS:

1. SUSPEND FIXTURES SO THE BOTTOM OF FIXTURE ALIGNS WITH THE BOTTOM OF THE DATA TRAY.

TYPE	DESCRIPTION	LAMP		BALLAST/DRIVER			APPARENT LOAD	MANUFACTURER	CATALOG SERIES	FINISH	MOUNTING	REMARKS
		COLOR	LUMENS	TYPE	DIM LEVEL	VOLTAGE						
L1	4'LX2"W RECESSED MOUNTED LINEAR, DIRECT HIGH-EFFICIENCY LAMBERTIAN OPTIC, FLUSH LENS, STATIC WHITE, 80 CRI	3500K	200L/FT	0-10V	1%	120 V	17 VA	FINELITE	HP-2-R	WHITE	RECESSED	
L2	4'LX2"W SUSPENDED LINEAR, DIRECT HIGH-EFFICIENCY LAMBERTIAN OPTIC, INDIRECT WIDESPREAD OPTIC, FLUSH LENS, STATIC WHITE, 80 CRI	3500K	350L/FT D 200L/FT ID	0-10V	1%	120 V	17 VA	FINELITE	HP-2-P	WHITE	SUSPENDED	1
T1	4X2 RECESSED TROFFER, ANGLED BASKET, 3500K, 3700 LUMENS, 0-10V DIMMING DRIVER TO 1%,	3500K	3700 LM	0-10V	1%	120 V	27 VA	FINELITE	HPR LED	WHITE	RECESSED	
T1E	SAME AS T1 WITH ADDED EMERGENCY BATTERY	-	-	-	-	120 V	27 VA	-	-	-	-	

LIGHTING CONTROL MATRIX

COMMON NOTES:

A. NOT ALL SPACE NAMES ARE LISTED FOR EACH LIGHTING CONTROL TYPE. REFER TO PLANS FOR ALL SPACES TO BE CONTROLLED.
B. SPACES MAY CONTAIN MULTIPLE ZONES OF CONTROL. REFER TO PLANS FOR QUANTITY OF ZONES, SWITCHES, ETC.
C. PROVIDE THE QUANTITY OF SENSORS AS REQUIRED FOR FULL COVERAGE OF THE SPACE. DEVICES SHOWN ON PLAN ARE FOR DESIGN INTENT ONLY AND DO NOT NECESSARILY REFLECT THE EXACT QUANTITY REQUIRED FOR FULL COVERAGE.
D. WHERE A SINGLE SWITCH/DIMMER IS DENOTED WITH MULTIPLE SWITCH LEGS, DESIGN INTENT IS A SINGLE-GANG DEVICE WITH MULTIPLE-MODE CONTROL.

SPECIFIC REMARKS:

1. TIE LIGHTING INTO EXISTING BUILDING LIGHTING CONTOLS.

KEY:

ON / OFF M = MANUAL (SWITCH), A = AUTOMATIC (SENSOR), T = TIME SCHEDULE, P = EXTERIOR PHOTOCELL, #% = CONTROL TO #% LIGHT LEVEL
CONTROL 0-10V DIMMING, ELV DIMMING, STEP DIMMING, DMX CONTROL
OCC / VAC DT = DUAL TECHNOLOGY, PIR = PASSIVE INFRARED, CLG = CEILING MOUNT, WALL = WALL CORNER MOUNT, SW = INTEGRAL TO WALL SWITCH
DAYLIGHT CALIBRATE BOTTOM LIMIT OF DAYLIGHT SENSOR TO DENOTED FOOTCANDLE LEVEL AT HEIGHT LISTED
INTERFACE AV = ALLOW OVERRIDE BY A/V SYSTEM, BAS = COMMUNICATE OCCUPIED/UNOCCUPIED STATE TO BAS, VAV = TIE SENSOR RELAY DIRECTLY TO VAV BOX IN ROOM
NETWORK X = CONNECT ZONE TO CENTRAL LIGHTING CONTROL SYSTEM
EMERGENCY X = PROVIDE AUTOMATIC LOAD CONTROL RELAYS (ALCR) FOR LUMINAIRES ON EMERGENCY CIRCUIT, PROVIDE TEST SWITCH IF NOT INTEGRAL TO RELAY

TYPE	SPACE	ON	OFF	CONTROL	OCCUPANCY / VACANCY SENSOR			DAYLIGHT SENSOR		RCPT CONTROL	INTERFACE	NETWORK	EMERGENCY	REMARKS
					TECH	MOUNT	DELAY (MIN.)	TARGET LEVEL (FC)	MEASURED HEIGHT (IN.)					
LC1	CORRIDOR			0-10V										1
LC2	LIBRARY	A	A	0-10V	DT	CLG	20						X	
LC10	OPEN OFFICE	M	A	0-10V	DT	CLG	20						X	
LC13	CLASSROOM	M	A	0-10V	DT	CLG	20						X	

MECHANICAL EQUIPMENT SCHEDULE

COMMON NOTES:

A. PRIOR TO WORK, VERIFY ELECTRICAL REQUIREMENTS (VOLTAGE, AMPERAGE, RECOMMENDED OCPD, CONDUCTORS, AND DISCONNECT) FOR EACH PIECE OF EQUIPMENT.
B. PRIOR TO WORK, VERIFY EXACT LOCATION FOR EACH PIECE OF EQUIPMENT.
C. COORDINATE AND PROVIDE ALL FIELD CONNECTIONS AS REQUIRED.
D. COORDINATE 120V POWER CONNECTIONS TO DAMPERS AND OTHER CONTROL CIRCUITS. GROUP EQUIPMENT CONTROL CIRCUITS SUCH THAT FAILURE OF ONE CONTROL CIRCUIT DOES NOT AFFECT OPERATION OF OTHER EQUIPMENT. FOR EXAMPLE, DO NOT CONNECT A DAMPER ASSOCIATED WITH ONE AIR HANDLING UNIT TO THE SAME BRANCH CIRCUIT AS DAMPERS ASSOCIATED WITH A DIFFERENT AIR HANDLING UNIT.
E. FEEDERS, BREAKERS, DISCONNECTS, AND FUSING APPLIES TO FIELD-INSTALLED AND/OR FACTORY-INSTALLED EQUIPMENT.
F. COORDINATE LOCATION OF VFD(S) AND WORKING SPACE CLEARANCES. IF INSTALLED REMOTE FROM EQUIPMENT, PROVIDE CIRCUIT CONNECTION FROM VFD TO MOTOR(S).
G. WHERE MULTIPLE MOTORS ARE SERVED BY A SINGLE VFD, COORDINATE FIELD-WIRING REQUIREMENTS WITH EQUIPMENT VENDOR.

SPECIFIC REMARKS:

1. ROOF TOP UNIT AND POWERED EXHAUST FAN NUMBERED THE SAME SERVICED BY SAME BRANCH CIRCUIT.
2. POWERED EXHAUST FAN SECTION PROVIDED WITH MANUFACTURER FURNISHED VFD AND FUSED DISCONNECT.

KEY	#	ITEM	HP	FLA	LOAD	EQ LOAD (VA)	VOLTAGE	FEEDERS			PROTECTION			REMARKS
								WIRE	GROUND	CONDUIT	BREAKER	DISCONNECT	FUSE	
ECUH	1	CABINET UNIT HEATER (ELECTRIC)	0	0 A	2000 VA	2000 VA	208 V/ 3ph	3#12	#12G	3/4”	15 A	30 A	7 A	
ECUH	2	CABINET UNIT HEATER (ELECTRIC)	0	0 A	3000 VA	3000 VA	208 V/ 3ph	3#12	#12G	3/4”	15 A	30 A	12 A	
ECUH	3	CABINET UNIT HEATER (ELECTRIC)	0	0 A	2000 VA	2000 VA	208 V/ 3ph	3#12	#12G	3/4”	15 A	30 A	7 A	
EUH	1	ELECTRIC UNIT HEATER	0	0 A	5000 VA	5000 VA	208 V/ 3ph	3#12	#12G	3/4”	20 A	30 A	20 A	
PEF	1	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	35 A	60 A	10 A	1,2
PEF	2	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	3	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	4	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	5	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	6	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	7	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	8	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	9	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	10	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	11	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	12	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	13	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	14	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	15	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	10 A	1,2
PEF	16	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	17	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	18	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	19	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	20	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	21	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	22	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	23	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	24	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	25	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	26	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	27	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	28	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	29	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	30	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
PEF	31	POWERED EXHAUST FAN	0.5	0 A	0 VA	865 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	10 A	1,2
RTU	1	ROOF TOP UNIT	0	21 A	0 VA	7385 VA	208 V/ 3ph	3#8	#10G	1"	35 A	60 A	30 A	1
RTU	2	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	3	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	4	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	5	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	6	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	7	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	8	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	9	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	10	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	11	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	12	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	13	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	14	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	15	ROOF TOP UNIT	0	26 A	0 VA	9367 VA	208 V/ 3ph	3#8	#10G	1"	40 A	60 A	35 A	1
RTU	16	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	17	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	18	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	19	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	20	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	21	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	22	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	23	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	24	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	25	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	26	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	27	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	28	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	29	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	30	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1
RTU	31	ROOF TOP UNIT	0	32 A	0 VA	11529 VA	208 V/ 3ph	3#6	#10G	1"	45 A	60 A	40 A	1

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
ELECTRICAL SCHEDULES

100% CD

PROFESSIONAL ENGINEER LICENSED 17703 01/15/2025 STATE OF IDAHO KYLE E. OLSON
Electrical

Revisions:

Project No: 23028
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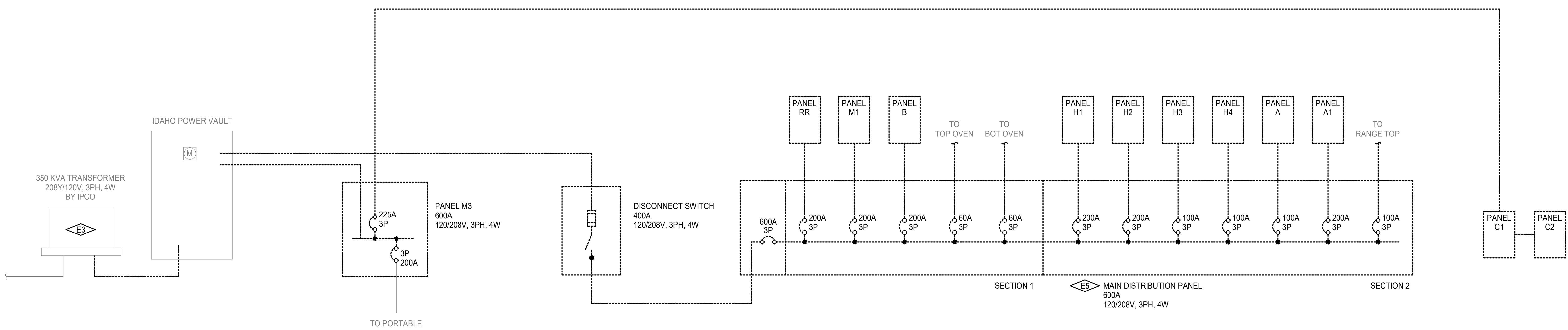
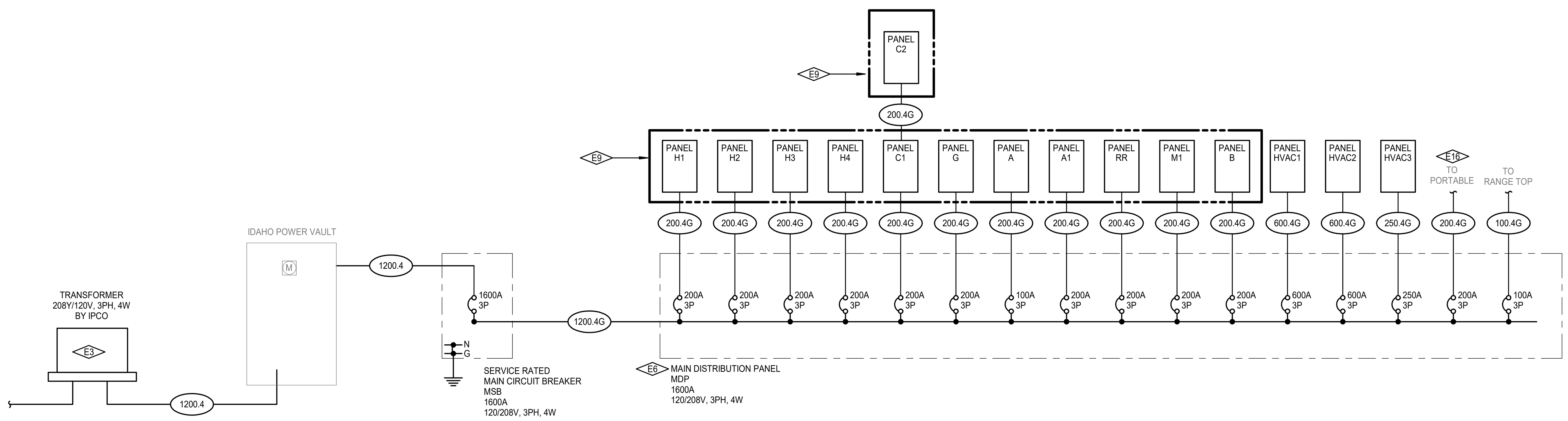


ELECTRICAL ONE-LINE DIAGRAM - DEMOLITION

SCALE: NONE



ELECTRICAL ONE-LINE DIAGRAM - NEW

SCALE: NONE

KEYNOTES

E3	EXISTING UTILITY TRANSFORMER TO BE REPLACED BY UTILITY. COORDINATE WITH UTILITY FOR ALL WORK REQUIRED.
E5	SERVICE ENTRANCE SWITCHBOARD AND DISTRIBUTION TO BE REMOVED AND REPLACED. DISCONNECT AND REMOVE EQUIPMENT AS NOTED.
E6	PROVIDE NEW SWITCHBOARD. BACKFEED ALL EXISTING TO REMAIN EQUIPMENT FROM NEW SWITCHBOARD. COORDINATE INSTALLATION WITH DEMOLITION TO MINIMIZE FACILITY DOWNTIME.
E9	PROVIDE BID ALT FOR REPLACING OF ALL EXISTING PANELS WITH NEW.
E16	REMOVE NEUTRAL TO GROUND BOND AT PORTABLE BUILDING.

BUILDING LOAD SUMMARY

MAIN SWITCHBOARD RATING	600	A
EXISTING PEAK DEMAND	105	KW
EXISTIGN PEAK DEMAND (208V 3PH)	292	A
NEC DEMAND FACTOR	x	125%
NEC CORRECTED PEAK DEMAND LOAD	365	A
LOAD REMOVED	100	A
NEW LOAD ADDED	977	A
NEW TOTAL BUILDING LOAD	1242	A
NEW TOTAL BUILDING LOAD	447	KVA

FEEDER SCHEDULE

NOTE: CONDUCTORS WITH 'AL' DESIGNATION ARE ALUMINUM TYPE XHHW-2 COMPACT 600V.

KEY	CONDUCTORS	C"
100.4G	4 # 1 , 1 # 8 G	1 1/2
200.4G	4 # 3/0 , 1 # 6 G	2 1/2
250.4G	4 # 250 , 1 # 4 G	3
600.4G	2 [4 # 350 , 1 # 1 G	3]
1200.4	4 [4 # 500 AL	3]
1200.4G	4 [4 # 500 AL , 1 # 250 AL G	3]

FAULT CURRENT CALCULATIONS *(UTILIZES THE BUSSMAN CALCULATION METHOD AND TABLES)*

CONTRACTOR IS RESPONSIBLE FOR ACTUAL FEEDER DISTANCES AND FIELD CONDITIONS IN PROJECT BID AND SCOPE.

Description	Voltage	Ph	Length (FT)	# of Run(s)	Conductor "C" value	Available Fault Current (ISC)
At Utility Co						65,000
TO MCB	208	3	100	5	23451	44,488
TO MDP	208	3	10	5	23451	43,127
TO H1	208	3	100	1	12843	11,370
TO H2	208	3	150	1	12843	8,311
TO H3	208	3	70	1	12843	14,594
TO H4	208	3	170	1	12843	7,503
TO C1	208	3	115	1	12843	10,239
TO C2	208	3	5	1	12843	9,911
TO G	208	3	55	1	12843	17,005
TO A	208	3	270	1	12843	5,049
TO A1	208	3	270	1	12843	5,049
TO RR	208	3	200	1	12843	6,548
TO M1	208	3	25	1	12843	25,395
TO B	208	3	45	1	12843	19,110
TO HVAC1	208	3	10	2	19703	39,529
TO HVAC2	208	3	13	2	19703	38,564
TO HVAC3	208	3	16	2	19703	37,644

Switchboard MDP

Location:
Supply From:
Mounting: Surface

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65 KAIC
Mains Type: MLO
Bus Rating: 1600 A

Circuit Notes:

Load	Type	A	B	C	Note
H4	Spare	0 VA	0 VA	0 VA	
RR	Spare	0 VA	0 VA	0 VA	
H1	Spare	0 VA	0 VA	0 VA	
H3	Spare	0 VA	0 VA	0 VA	
G	Spare	0 VA	0 VA	0 VA	
C1	Spare	0 VA	0 VA	0 VA	
H2	Spare	0 VA	0 VA	0 VA	
A	Spare	0 VA	0 VA	0 VA	
A1	Spare	0 VA	0 VA	0 VA	
M1	Spare	0 VA	0 VA	0 VA	
HVAC1	Spare; R; M	56261 VA	56261 VA	56441 VA	
HVAC1	Spare; M	57643 VA	57643 VA	57643 VA	
HVAC3	Spare; M	13744 VA	13744 VA	13744 VA	
PORTABLE	--	0 VA	0 VA	0 VA	
RANGE TOP	--	0 VA	0 VA	0 VA	
Refer to one-line diagram for space, spare, and circuit breaker quantities.		127648 VA	127648 VA	127828 VA	
		1064 A	1064 A	1065 A	
		0	0	0	
		% A-B	% B-C	% C-A	

Load Type		Connected Load	Demand Factor	Demand Load	Switchboard Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	
R	Receptacle	2340 VA	100.00%	2340 VA		
M	Motor	380783 VA	100.76%	383665 VA	Total Connected Load:	383123 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	1063 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	386005 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	1071 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
ELECTRICAL ONE-LINE DIAGRAM

100% CD

PROFESSIONAL ENGINEER LICENSED 17703 01/15/2025 STATE OF IDAHO KYLE E. OLSON
Electrical

Revisions:

Project No:	23028
Drawn By:	JS
Checked By:	KO
Date:	1/15/2025

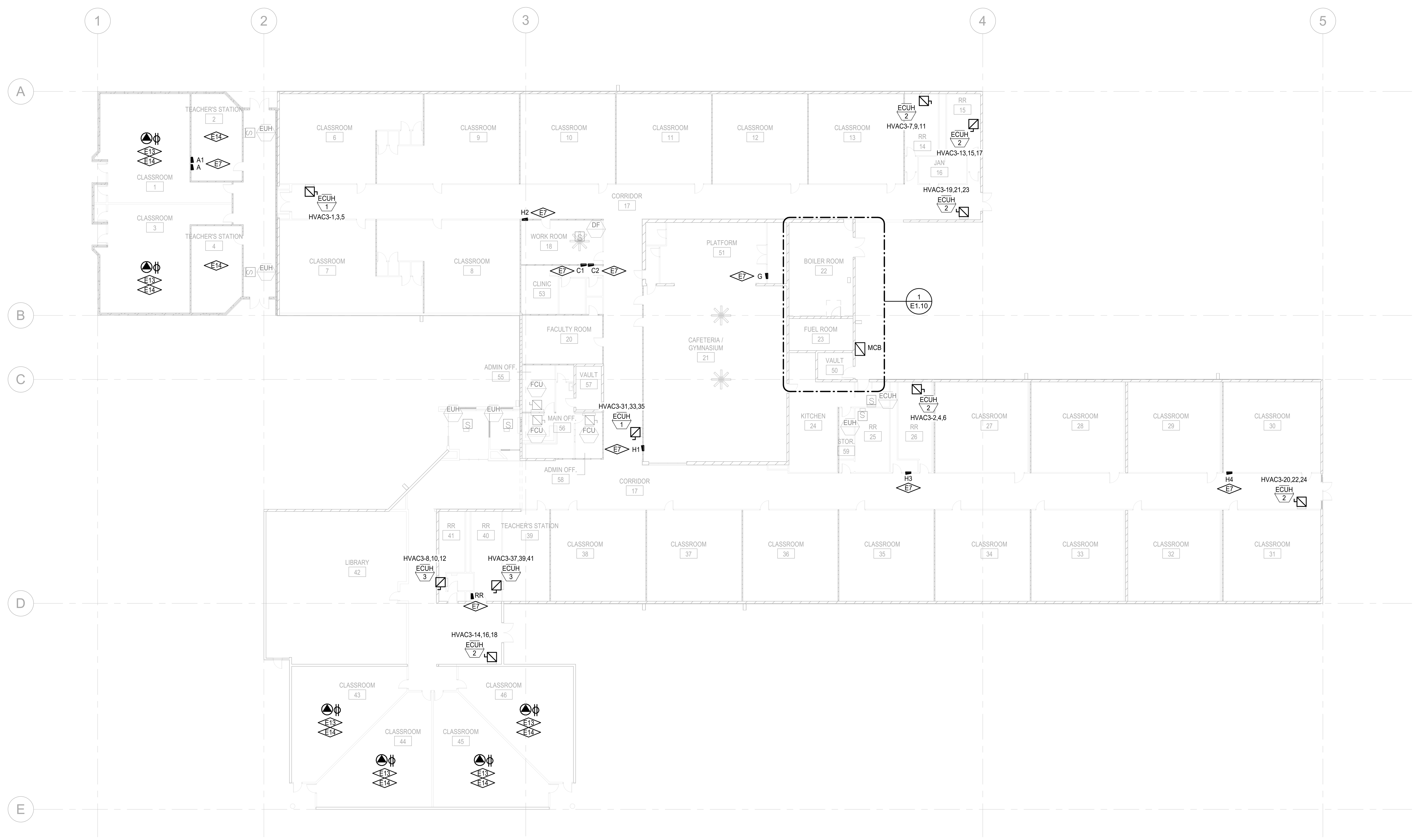
Sheet No:
E0.11

1 2 3 4 5 6

A B C D E

KEYNOTES

E7	BID ALT SCOPE: PROVIDE NEW PANELBOARD TO REPLACE EXISTING PANELBOARD REMOVED THROUGH DEMO PHASE AT THIS LOCATION. PROVIDE NEW FEEDER. REFER TO ONE-LINE DIAGRAM.
E13	CONNECT NEW RECEPTACLES TO EXISTING CIRCUIT SERVING RECEPTACLES IN THIS AREA. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES IS MAINTAINED. VERIFY EXISTING LOADS ON CIRCUIT TO AVOID OVERLOADING CIRCUIT AND UPDATE PANEL SCHEDULE.
E14	REINSTALL CEILING MOUNTED POWER, FIRE ALARMA ND LOW VOLTAGE DEVICES REMOVED THROUGH DEMO PHASE.



LEVEL 1 POWER PLAN

SCALE: 1/16" = 1'-0"

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LEVEL 1 POWER PLAN

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E1.01

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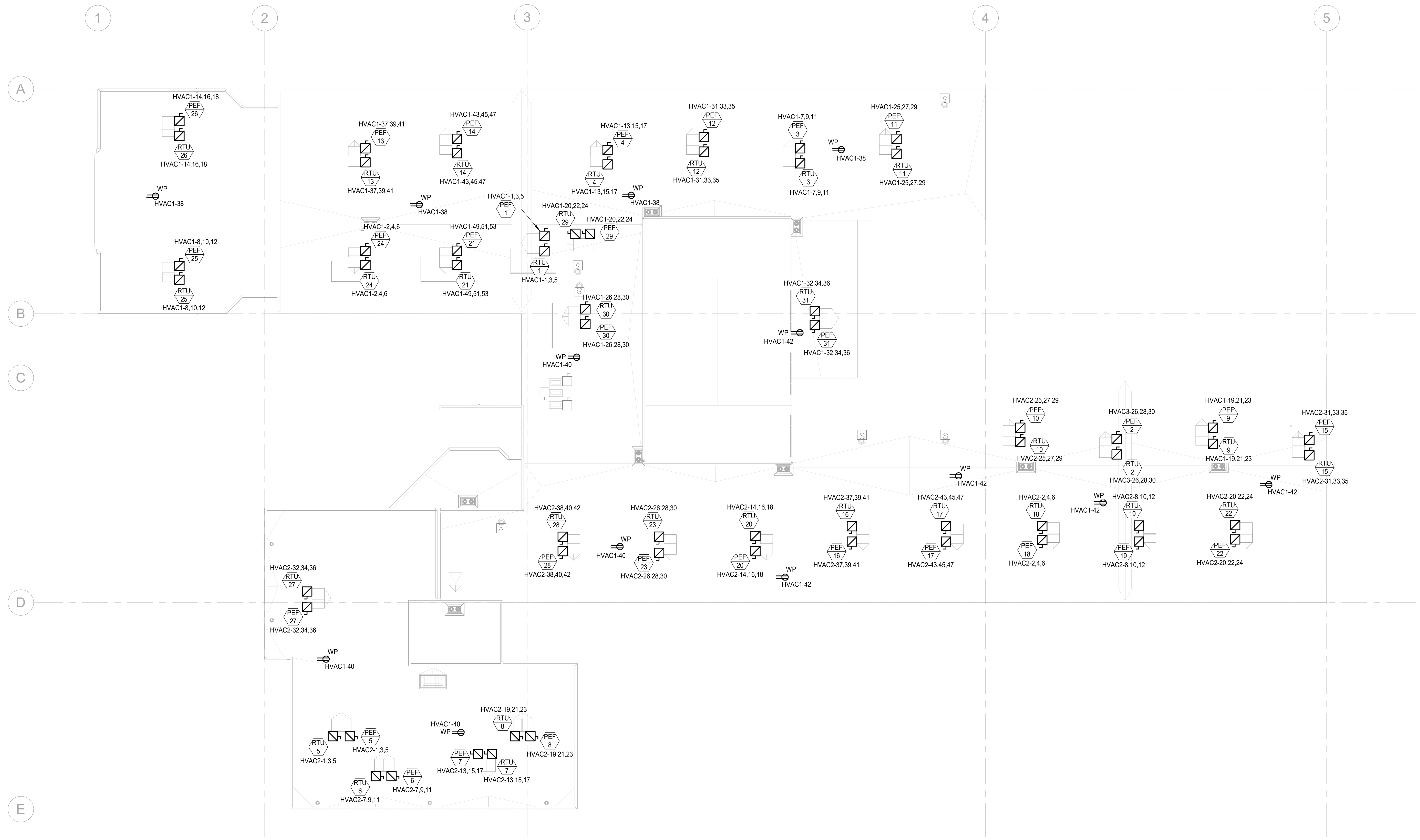
KEYNOTES



ROOF POWER PLAN
SCALE: 1/16" = 1'-0"

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ROOF POWER PLAN

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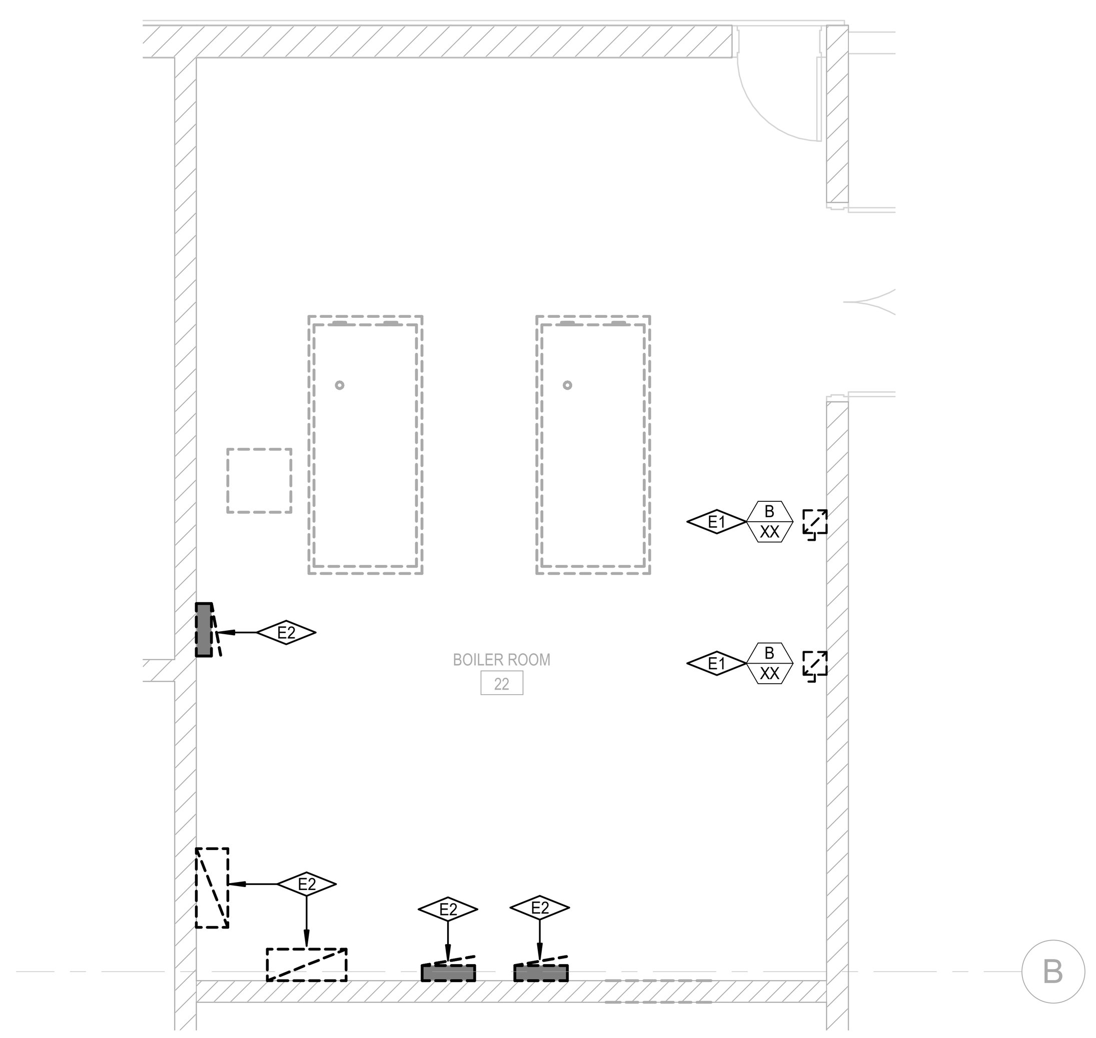
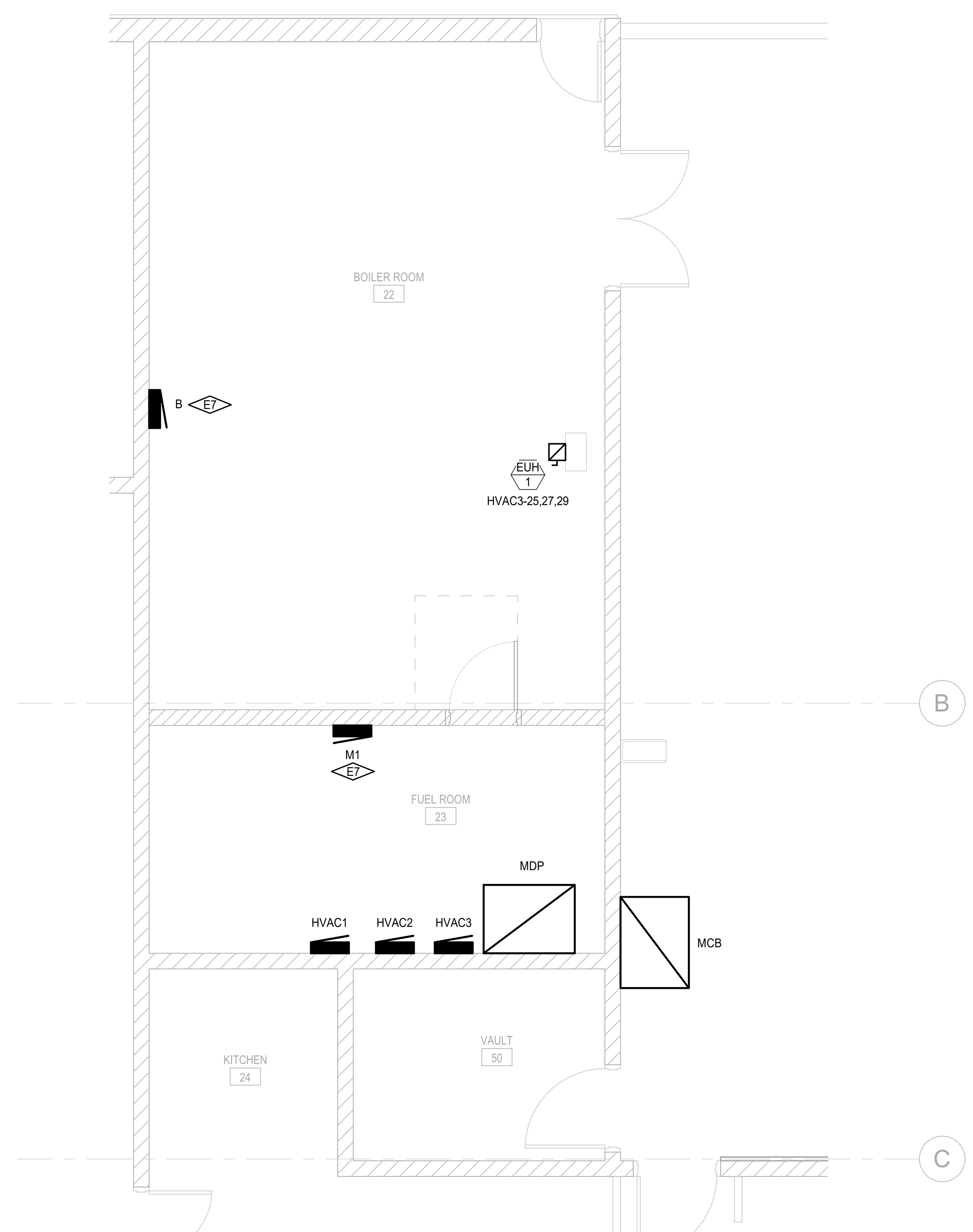
KEYNOTES

E1	EXISTING EQUIPMENT TO BE REMOVED THROUGH DEMO PHASE. DEMO CONDUIT AND ASSOCIATED BRANCH CIRCUITRY BACK TO PANEL. TURN BREAKER TO OFF POSITION AND RE-LABEL AS SPARE.
E2	EXISTING EQUIPMENT TO BE REMOVED THROUGH DEMO. PRESERVE AND PROTECT EXISTING CIRCUITRY FOR RE-USE. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES AND ADJACENT SPACES IS MAINTAINED THROUGHOUT WORK.
E7	BID ALT SCOPE: PROVIDE NEW PANELBOARD TO REPLACE EXISTING PANELBOARD REMOVED THROUGH DEMO PHASE AT THIS LOCATION. PROVIDE NEW FEEDER. REFER TO ONE-LINE DIAGRAM.



2
ED1.01
ENLARGED DEMOLITION ELECTRICAL ROOM PLAN
SCALE: 1/4" = 1'-0"



1
E1.01
ENLARGED ELECTRICAL ROOM PLAN
SCALE: 1/4" = 1'-0"

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ELECTRICAL ENLARGED PLANS

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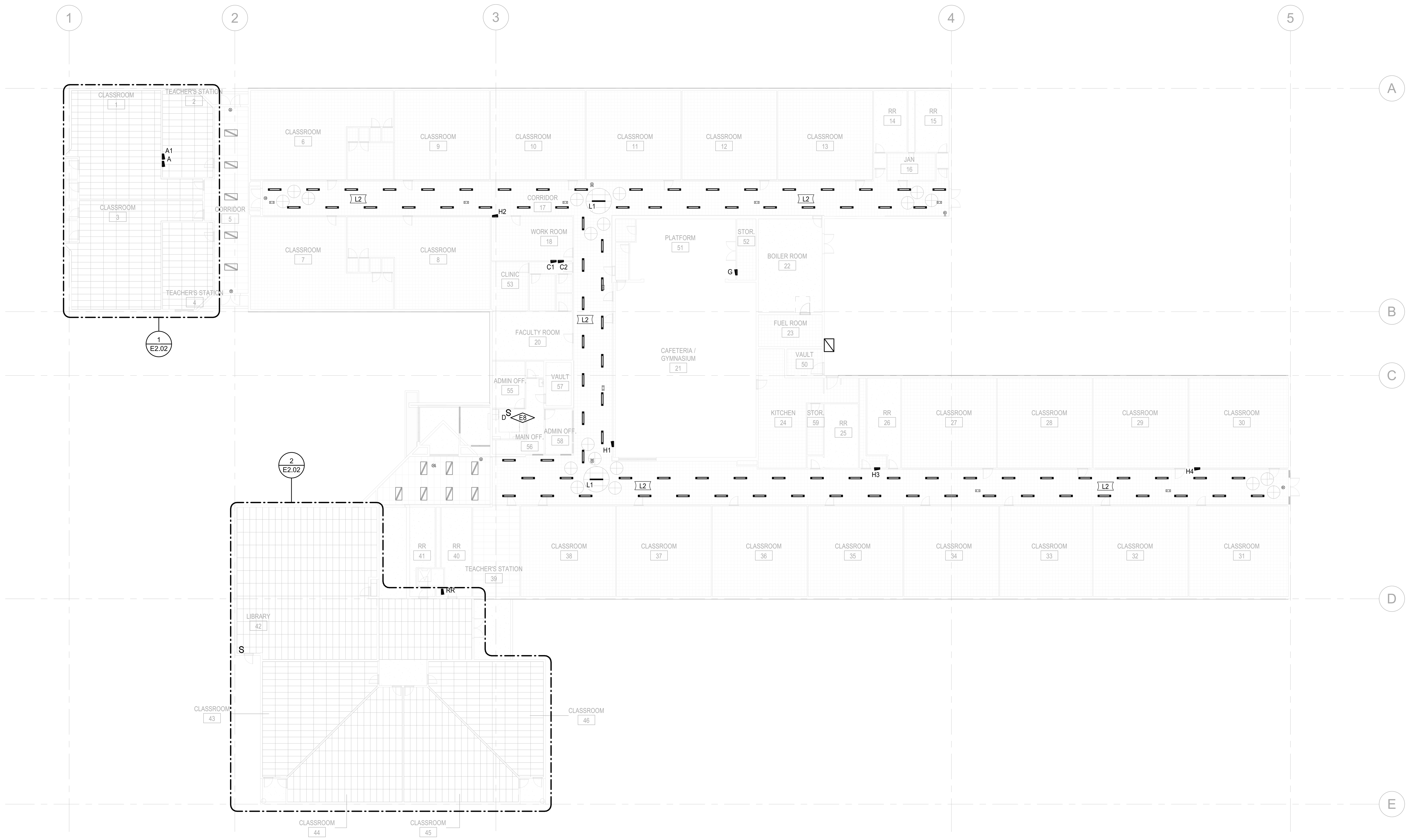
E1.10

KEYNOTES

E8	TIE LIGHTING INTO EXISTING BUILDING LIGHTING CONTROLS. INCORPORATE WALL BOX DIMMER FOR FINAL OUTPUT.

GENERAL NOTES:

1. EXISTING LIGHTING CIRCUITRY TO BE MAINTAINED AND EXTENDED TO NEW FIXTURES.
2. RELOCATE EXISTING CAMERAS WHERE NEW ARCHITECTURAL CEILING CLOUDS AND LIGHTING OBSCURE CAMERA'S FIELD OF VIEW. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CAMERA CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
3. RELOCATE EXISTING EMERGENCY LIGHTS AND EXIT LIGHTS WHERE NEW ARCHITECTURAL CEILING CLOUDS AND LIGHTING LAYOUT CONFLICT WITH EXISTING LOCATIONS. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
4. RELOCATE EXISTING SPEAKERS WHERE NEW ARCHITECTURAL CEILING CLOUDS CONFLICT WITH EXISTING LOCATIONS. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
5. COORDINATE ALL RELOCATED DEVICES WITH ARCHITECT PRIOR TO PERFORMING WORK.



LEVEL 1 LIGHTING PLAN
SCALE: 1/16" = 1'-0"

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LEVEL 1 LIGHTING PLAN

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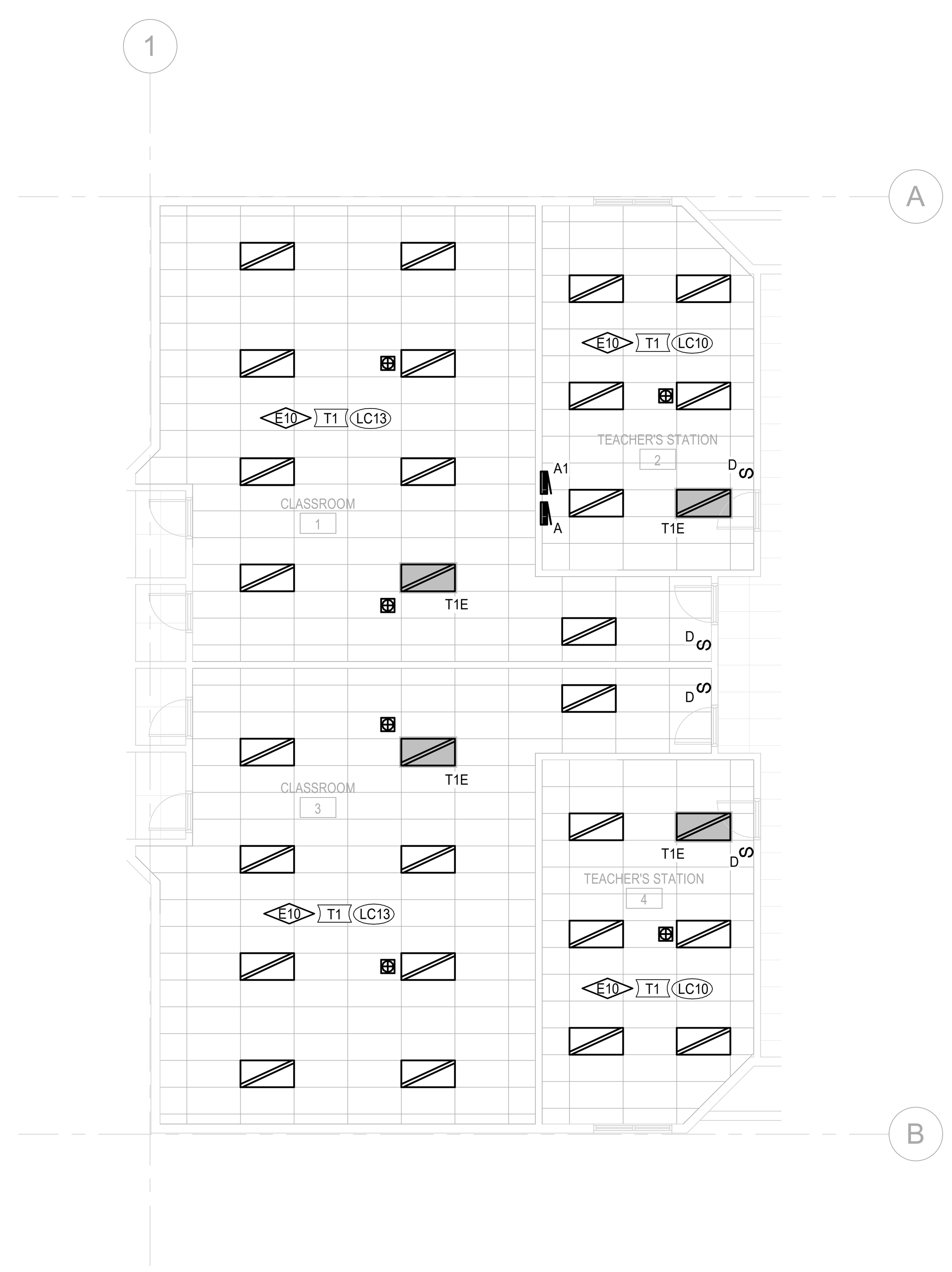
E2.01

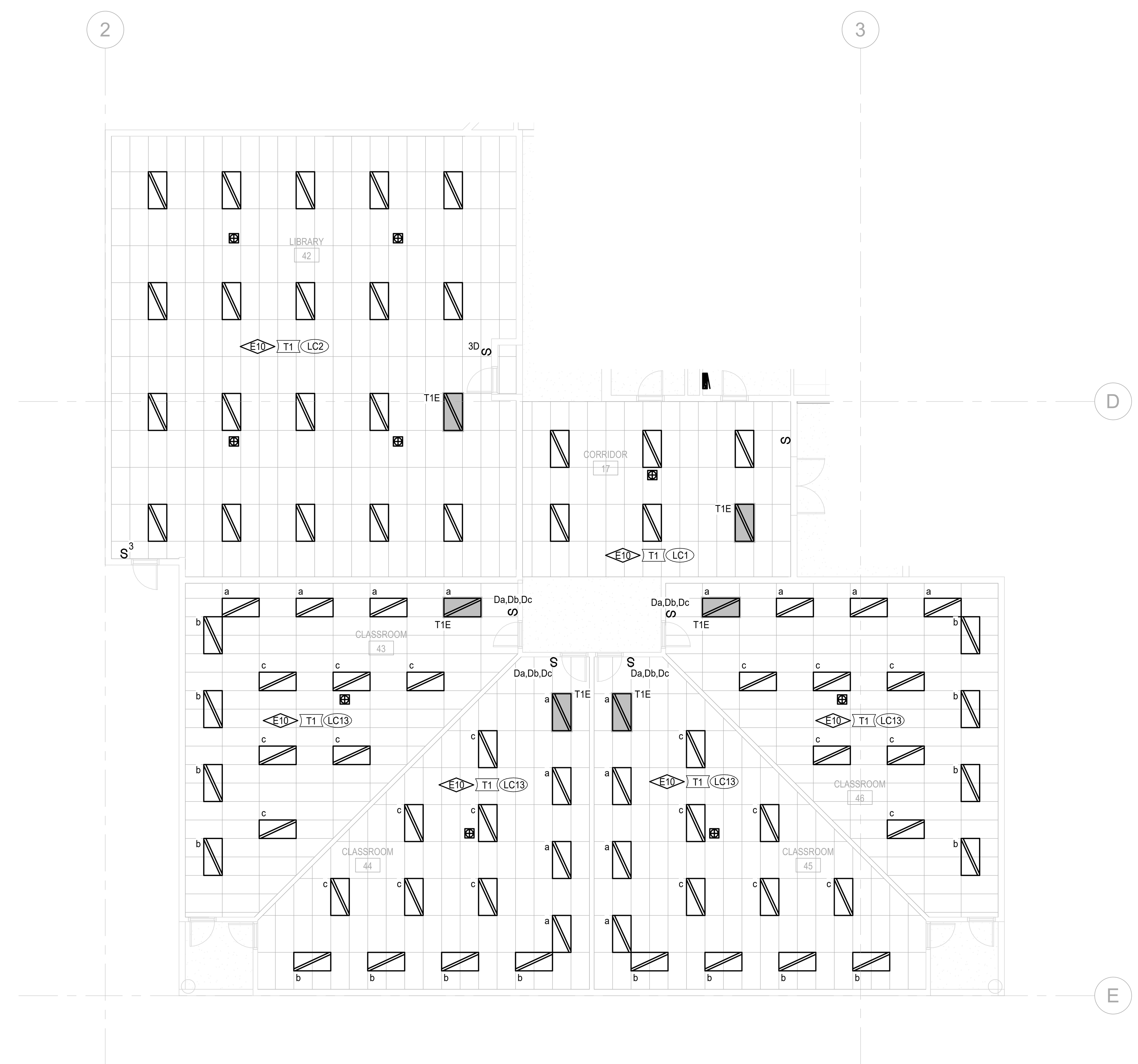
	KEYNOTES
E10	CONNECT NEW LUMINAIRES THIS AREA TO EXISTING CIRCUITRY MADE AVAILABLE THROUGH DEMOLITION. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES IS MAINTAINED.

GENERAL NOTES:

1. EXISTING LIGHTING CIRCUITRY TO BE MAINTAINED AND EXTENDED TO NEW FIXTURES.
2. RELOCATE EXISTING CAMERAS WHERE NEW ARCHITECTURAL CEILING CLOUDS AND LIGHTING OBSCURE CAMERA'S FIELD OF VIEW. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CAMERA CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
3. RELOCATE EXISTING EMERGENCY LIGHTS AND EXIT LIGHTS WHERE NEW ARCHITECTURAL CEILING CLOUDS AND LIGHTING LAYOUT CONFLICT WITH EXISTING LOCATIONS. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
4. RELOCATE EXISTING SPEAKERS WHERE NEW ARCHITECTURAL CEILING CLOUDS CONFLICT WITH EXISTING LOCATIONS. RL TAGS PLACED ON THE REFLECTED CEILING PLAN INDICATE POSSIBLE CONFLICTS. FIELD VERIFY ALL LOCATIONS WITH OWNER.
5. COORDINATE ALL RELOCATED DEVICES WITH ARCHITECT PRIOR TO PERFORMING WORK.



ENLARGED LIGHTING PLAN
SCALE: 1/8" = 1'-0"



ENLARGED LIGHTING PLAN
SCALE: 1/8" = 1'-0"

CATOR | RUMA & ASSOCIATES, CO.
420 South Orchard Street, Boise, ID 83705
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hummelarch.com

Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
LEVEL 1 ENLARGED LIGHTING PLANS

100% CD

PROFESSIONAL ENGINEER LICENSED 17703 01/15/2025 STATE OF IDAHO KYLE E. OLSON
Electrical

Revisions:

Project No:	23028
Drawn By:	JS
Checked By:	KO
Date:	1/15/2025

Sheet No:
E2.02

1 | 2 | 3 | 4 | 5 | 6

A | B | C | D | E

Panel M1

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	42 KAIC
Supply From:	MDP	Phase:	3	Mains Type:	MLO
Mounting:	Surface	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1				

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1					0 VA	0 VA					1	20 A	--	R - ROOF	2	
	3	AIR COMP	--	20 A	3			0 VA	0 VA			1	20 A	--	SPARE	4	
	5									0 VA	0 VA	1	20 A	--	SPARE	6	
	7	R - ROOF	--	20 A	1	0 VA	0 VA					1	20 A	--	R - ROOF	8	
	9	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	10	
	11	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	12	
	13	R - ROOF	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	14	
	15	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	FREEZER	16	
	17	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	FREEZER	18	
	19	L - EXTERIOR	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21							0 VA	0 VA							22	
	23	TOP OVEN	--	50 A	3					0 VA	0 VA	3	50 A	--	BOTTOM OVEN	24	
	25					0 VA	0 VA									26	
	27	SPARE	--	30 A	1			0 VA	0 VA			1	20 A	--	R - ROOF	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel B

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	22 KAIC
Supply From:		Phase:	3	Mains Type:	MLO
Mounting:	Surface	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1			MCB Rating:	1 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1	L - TUNNEL	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	2	
	3	L - TUNNEL	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	4	
	5	L - TUNNEL	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	6	
	7	KITCHEN FLOOR STAND	--	20 A	1	0 VA	0 VA					1	20 A	--	KITCHEN FLOOR STAND	8	
	9	KITCHEN FLOOR STAND	--	20 A	1			0 VA	0 VA			1	20 A	--	KITCHEN FLOOR STAND	10	
	11	KITCHEN FLOOR STAND	--	20 A	1					0 VA	0 VA	1	20 A	--	CONDENSATE PUMP	12	
	13	COAL ANOPR	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	14	
	15	L - BOILE ROOM	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	16	
	17	R - KITCHEN	--	20 A	1					0 VA	0 VA	1	20 A	--	R - BOILER ROOM	18	
	19	R - KITCHEN	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21	CONDENSATE PUMP	--	20 A	1			0 VA	0 VA			1	20 A	--	HOT WATER CIRC PUMP	22	
	23	FAN	--	15 A	2					0 VA	0 VA	2	20 A	--	SPARE	24	
	25					0 VA	0 VA									26	
	27	STOKER MOTOR	--	20 A	2			0 VA	0 VA			2	30 A	--	SPARE	28	
	29									0 VA	0 VA					30	
	31					0 VA	0 VA					1	20 A	--	SPARE	32	
	33	ALC PANEL	--	20 A	3			0 VA	0 VA			1	20 A	--	SPARE	34	
	35									0 VA	0 VA	1	20 A	--	SPARE	36	
	37	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	38	
	39	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	40	
	41	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	42	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

Panel A1

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	10 KAIC
Supply From:	MDP	Phase:	3	Mains Type:	MCB
Mounting:	Surface	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1			MCB Rating:	200 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	2	
	3	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	4	
	5	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	6	
	7	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	8	
	9	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	10	
	11	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	12	
	13	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	14	
	15	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	16	
	17	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	18	
	19	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	22	
	23	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	
	31	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	32	
	33	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	34	
	35	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	36	
	37	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	38	
	39	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	40	
	41	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	42	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

Panel A

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	10 KAIC
Supply From:	MDP	Phase:	3	Mains Type:	MCB
Mounting:	Surface	Wire:	4	Bus Rating:	100 A
Enclosure:	Type 1			MCB Rating:	100 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1					0 VA	0 VA					1	20 A	--	R - TEACHER RM	2	
	3	HEATER	--	30 A	3			0 VA	0 VA			1	20 A	--	R - TEACHER RM	4	
	5									0 VA	0 VA	1	20 A	--	R - CLASSROOM	6	
	7	L - CLASSROOM	--	20 A	1	0 VA	0 VA					1	20 A	--	R - ROOF SERVICE	8	
	9	L - CLASSROOM	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	10	
	11	L - TEACHER ROOM	--	20 A	1					0 VA	0 VA	1	20 A	--	R - ROOF SERVICE	12	
	13	L - TEACHER ROOM	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	14	
	15	L - CLASSROOM	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	16	
	17	L - CLASSROOM	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	18	
	19	L - HALLWAY	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21	L - EXTERIOR	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	22	
	23	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	SPARE	--	20 A	1	0 VA	0 VA									26	
	27	SPARE	--	20 A	1			0 VA	0 VA			3	100 A	--	MAIN BREAKER	28	
	29	SPARE	--	20 A	1					0 VA	0 VA					30	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

Panel G

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	22 KAIC
Supply From:	MDP	Phase:	3	Mains Type:	MLO
Mounting:	Recessed	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1				

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1	L - AUDITORIUM	--	20 A	1	0 VA	0 VA					1	20 A	--	L - AUDITORIUM	2	
	3	L - AUDITORIUM	--	20 A	1			0 VA	0 VA			1	20 A	--	R - STAGE EAST	4	
	5	R - BALCONY EAST	--	20 A	1					0 VA	0 VA	1	20 A	--	R - STAGE WEST	6	
	7	R - CEILING	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	8	
	9	L - STAGE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	10	
	11	L - ROOM 7	--	20 A	1					0 VA	0 VA	1	20 A	--	L - ROOM 7	12	
	13	L - ROOM 8	--	20 A	1	0 VA	0 VA					1	20 A	--	L - ROOM 8	14	
	15	L - ROOM 8	--	20 A	1			0 VA	0 VA			1	20 A	--	R - CLASSROOM	16	
	17										0 VA	1	20 A	--	R - AUDITORIUM	18	
	19	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	L - ROOM 8	20	
	21	L - STAGE	--	20 A	1			0 VA	0 VA			1	20 A	--	L - ROOF	22	
	23	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel C2

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	22 KAIC
Supply From:	C1	Phase:	3	Mains Type:	MLO
Mounting:	Recessed	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1				

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1	ROOM 1	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 7	2	
	3	ROOM 1	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 7	4	
	5	ROOM 3	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM 8	6	
	7	ROOM 3	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 8	8	
	9	ROOM 2	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM A	10	
	11	ROOM 2	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM A	12	
	13	ROOM 4	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM B	14	
	15	ROOM 4	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM B	16	
	17	ROOM 5	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM C	18	
	19	ROOM 5	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM C	20	
	21	ROOM 6	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM D	22	
	23	ROOM 6	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM D	24	
	25	LIBRARY	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM D	26	
	27	ROOM 11	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM D	28	
	29	ROOM 11	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	
	31	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	32	
	33	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	34	
	35	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	36	
	37	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	38	
	39	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	40	
	41	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	42	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel C1

Location:		Voltage:	120/208 Wye	A.I.C. Rating:	22 KAIC
Supply From:	MDP	Phase:	3	Mains Type:	MLO
Mounting:	Recessed	Wire:	4	Bus Rating:	225 A
Enclosure:	Type 1				

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A		B		C		Po...	Trip	Type	Load	Circ...	Note
	1	A: RM 9 - B: DR ACCESS	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 18	2	
	3	A: RM 9 - B: VESTIBULE	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 18	4	
	5	ROOM 10	--	20 A	1					0 VA	0 VA	2	30 A	--	VESTIBULE HEATERS	6	
	7	ROOM 10	--	20 A	1	0 VA	0 VA									8	
	9	ROOM 11	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 18	10	
	11	ROOM 11	--	20 A	1					0 VA	0 VA	1	20 A	--	A: RM 25 - B: RM 19	12	
	13	ROOM 12	--	20 A	1	0 VA	0 VA					1	20 A	--	A: RM 25 - B: RM 24	14	
	15	ROOM 12	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 24	16	
	17	ROOM 14	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM 20	18	
	19	ROOM 14	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 20	20	
	21	ROOM 15	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 23	22	
	23	ROOM 15	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM 23	24	
	25	ROOM 16	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 21	26	
	27	ROOM 16	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 21	28	
	29	ROOM 17	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM 22	30	
	31	ROOM 17	--	20 A	1	0 VA	0 VA					1	20 A	--	ROOM 22	32	
	33	OFFICE	--	20 A	1			0 VA	0 VA			1	20 A	--	ROOM 14	34	
	35	OFFICE	--	20 A	1					0 VA	0 VA	1	20 A	--	ROOM 14	36	
	37						0 VA									38	
	39	R - T.R.	--	20 A	1			0 VA	0 VA			3	100 A	Spare	C2	40	
	41	ROOM 14	--	20 A	1					0 VA	0 VA					42	

	A	B	C
Total Load:	0 VA	0 VA	0 VA
Total Amps:	0 A	0 A	0 A
Phase Balance:	% A-B	% B-C	% C-A

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	Power Factor:	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	Total Connected Load:	0 VA
C	Continuous	0 VA	0.00%	0 VA	Total Connected Current:	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	Total Demand Load:	0 VA
E	Existing	0 VA	0.00%	0 VA	Total Demand Current:	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

100% CD

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hummelarch.com

Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
600 Harrison St
Twin Falls, ID 83301

Sheet:
ELECTRICAL PANEL SCHEDULES

PROFESSIONAL ENGINEER
LICENSED
17703
01/15/2025
STATE OF IDAHO
KYLE E. OLSON
Electrical

Revisions:

Project No:	23028
Drawn By:	JS
Checked By:	KO
Date:	1/15/2025

Sheet No:
E3.01

Panel HVAC3

Location:
Supply From: MDP
Mounting: Surface
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 42 KAIC
Mains Type: MLO
Bus Rating: 250 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1					667 VA	1000 VA									2	
	3	ECUH-1	M	20 A	3			667 VA	1000 VA			3	20 A	M	ECUH-2	4	
	5									667 VA	1000 VA					6	
	7					1000 VA	667 VA									8	
	9	ECUH-2	M	20 A	3			1000 VA	667 VA			3	20 A	M	ECUH-3	10	
	11									1000 VA	667 VA					12	
	13					1000 VA	1000 VA									14	
	15	ECUH-2	M	20 A	3			1000 VA	1000 VA			3	20 A	M	ECUH-2	16	
	17									1000 VA	1000 VA					18	
	19					1000 VA	1000 VA									20	
	21	ECUH-2	M	20 A	3			1000 VA	1000 VA			3	20 A	M	ECUH-2	22	
	23									1000 VA	1000 VA					24	
	25					1667 VA	3411 VA									26	
	27	EUH-1	M	20 A	3			1667 VA	3411 VA			3	40 A	M	RTU-2	28	
	29									1667 VA	3411 VA					30	
	31					667 VA	0 VA									32	
	33	ECUH-1	M	20 A	3			667 VA	0 VA			3	20 A	--	SPARE	34	
	35									667 VA	0 VA					36	
	37					667 VA	0 VA									38	
	39	ECUH-3	M	20 A	3			667 VA	0 VA			3	20 A	--	SPARE	40	
	41									667 VA	0 VA					42	
	43					0 VA	0 VA									44	
	45	SPARE	--	20 A	3			0 VA	0 VA			3	20 A	--	SPARE	46	
	47									0 VA	0 VA					48	
	49					--	--									50	
	51	SPACE	--	--	3			--	--			3	--	--	SPACE	52	
	53									--	--					54	
	55					--	--									56	
	57	SPACE	--	--	3			--	--			3	--	--	SPACE	58	
	59									--	--					60	
					Total Load:	13744 VA		13744 VA		13744 VA							
					Total Amps:	115 A		115 A		115 A							
					Phase Balance:	0 % A-B		0 % B-C		0 % C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	41232 VA	105.68%	43573 VA	**Total Connected Load:**	41232 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	114 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	43573 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	121 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel HVAC2

Location:
Supply From: MDP
Mounting: Surface
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 42 KAIC
Mains Type: MLO
Bus Rating: 600 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1					3411 VA	4131 VA									2	
	3	RTU-5	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-18	4	
	5									3411 VA	4131 VA					6	
	7					3411 VA	4131 VA									8	
	9	RTU-6	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-19	10	
	11									3411 VA	4131 VA					12	
	13					3411 VA	4131 VA									14	
	15	RTU-7	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-20	16	
	17									3411 VA	4131 VA					18	
	19					3411 VA	4131 VA									20	
	21	RTU-8	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-22	22	
	23									3411 VA	4131 VA					24	
	25					3411 VA	4131 VA									26	
	27	RTU-10	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-23	28	
	29									3411 VA	4131 VA					30	
	31					3411 VA	4131 VA									32	
	33	RTU-15	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-27	34	
	35									3411 VA	4131 VA					36	
	37					4131 VA	4131 VA									38	
	39	RTU-16	M	45 A	3			4131 VA	4131 VA			3	45 A	M	RTU-28	40	
	41									4131 VA	4131 VA					42	
	43					4131 VA	0 VA									44	
	45	RTU-17	M	45 A	3			4131 VA	0 VA			3	40 A	--	SPARE	46	
	47									4131 VA	0 VA					48	
	49					0 VA	0 VA									50	
	51	SPARE	--	30 A	3			0 VA	0 VA			3	40 A	--	SPARE	52	
	53									0 VA	0 VA					54	
	55					0 VA	0 VA									56	
	57	SPARE	--	30 A	3			0 VA	0 VA			3	40 A	--	SPARE	58	
	59									0 VA	0 VA					60	
					Total Load:	57643 VA		57643 VA		57643 VA							
					Total Amps:	480 A		480 A		480 A							
					Phase Balance:	0 % A-B		0 % B-C		0 % C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	172928 VA	101.67%	175810 VA	**Total Connected Load:**	172928 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	480 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	175810 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	488 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel HVAC1

Location:
Supply From: MDP
Mounting: Surface
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 42 KAIC
Mains Type: MLO
Bus Rating: 600 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1					2750 VA	4131 VA									2	
	3	RTU-1	M	35 A	3			2750 VA	4131 VA			3	45 A	M	RTU-24	4	
	5									2750 VA	4131 VA					6	
	7					3411 VA	4131 VA									8	
	9	RTU-3	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-25	10	
	11									3411 VA	4131 VA					12	
	13					3411 VA	4131 VA									14	
	15	RTU-4	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-26	16	
	17									3411 VA	4131 VA					18	
	19					3411 VA	4131 VA									20	
	21	RTU-9	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-29	22	
	23									3411 VA	4131 VA					24	
	25					3411 VA	4131 VA									26	
	27	RTU-11	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-30	28	
	29									3411 VA	4131 VA					30	
	31					3411 VA	4131 VA									32	
	33	RTU-12	M	40 A	3			3411 VA	4131 VA			3	45 A	M	RTU-31	34	
	35									3411 VA	4131 VA					36	
	37					3411 VA	720 VA					1	20 A	R	R ROOF	38	
	39	RTU-13	M	40 A	3			3411 VA	720 VA			1	20 A	R	R ROOF	40	
	41									3411 VA	900 VA	1	20 A	R	R ROOF	42	
	43					3411 VA	0 VA									44	
	45	RTU-14	M	40 A	3			3411 VA	0 VA			3	40 A	--	SPARE	46	
	47									3411 VA	0 VA					48	
	49					4131 VA	0 VA									50	
	51	RTU-21	M	45 A	3			4131 VA	0 VA			3	30 A	--	SPARE	52	
	53									4131 VA	0 VA					54	
	55					0 VA	0 VA									56	
	57	SPARE	--	30 A	3			0 VA	0 VA			3	30 A	--	SPARE	58	
	59									0 VA	0 VA					60	
					Total Load:	56261 VA		56261 VA		56441 VA							
					Total Amps:	469 A		469 A		470 A							
					Phase Balance:	0 % A-B		0 % B-C		0 % C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	2340 VA	100.00%	2340 VA		
M	Motor	166623 VA	101.73%	169505 VA	**Total Connected Load:**	168963 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	469 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	171845 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	477 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel H3

Location:
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 22 KAIC
Mains Type: MLO
Bus Rating: 225 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1	L - ROOM 24	--	20 A	1	0 VA	0 VA					1	20 A	--	L - ROOM 16	2	
	3	L - ROOM 24	--	20 A	1			0 VA	0 VA			1	20 A	--	L - ROOM 16	4	
	5	L - ROOM 24	--	20 A	1					0 VA	0 VA	1	20 A	--	L - ROOM 16	6	
	7	L - ROOM 19	--	20 A	1	0 VA	0 VA					1	20 A	--	UNIT HEATERS	8	
	9	L - ROOM 19	--	20 A	1			0 VA	0 VA			1	20 A	--	R - CLASSROOM	10	
	11	L - ROOM 19	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	12	
	13	L - ROOM 18	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	14	
	15	L - ROOM 18	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	16	
	17	L - ROOM 18	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	18	
	19	L - ROOM 25,JANITOR	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21	L - ROOM...	--	20 A	1			0 VA	0 VA			1	20 A	--	R - ROOM 17,18	22	
	23	L - ROOM...	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	L - ROOM 17	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	26	
	27	L - ROOM 17	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	28	
	29	L - ROOM 17	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	
					Total Load:	0 VA		0 VA		0 VA							
					Total Amps:	0 A		0 A		0 A							
					Phase Balance:	% A-B		% B-C		% C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	**Total Connected Load:**	0 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	0 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel H2

Location:
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 10 KAIC
Mains Type: MLO
Bus Rating: 225 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1	L - RM 6	--	20 A	1	0 VA	0 VA					1	20 A	--	L - RM 6	2	
	3	L - RM 6	--	20 A	1			0 VA	0 VA			1	20 A	--	L - RM 5	4	
	5	L - RM 5	--	20 A	1					0 VA	0 VA	1	20 A	--	L - RM 5	6	
	7	L - N CORRIDOR	--	20 A	1	0 VA	0 VA					1	20 A	--	R - CORRIDOR	8	
	9	L - N CORRIDOR	--	20 A	1			0 VA	0 VA			1	20 A	--	L - RM 4	10	
	11	L - RM 4	--	20 A	1					0 VA	0 VA	1	20 A	--	L - RM 4	12	
	13	L - RM 1	--	20 A	1	0 VA	0 VA					1	20 A	--	L - RM 1	14	
	15	L - RM 1	--	20 A	1			0 VA	0 VA			1	20 A	--	L - RM 2	16	
	17	L - RM 2	--	20 A	1					0 VA	0 VA	2	50 A	--	COOK TOP	18	
	19	L - RM 3	--	20 A	1	0 VA	0 VA									20	
	21	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	FRIDGE	22	
	23	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			2	30 A	--	DRYER	28	
	29	SPARE	--	20 A	1					0 VA	0 VA					30	
					Total Load:	0 VA		0 VA		0 VA							
					Total Amps:	0 A		0 A		0 A							
					Phase Balance:	% A-B		% B-C		% C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	**Total Connected Load:**	0 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	0 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel H1

Location:
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 22 KAIC
Mains Type: MLO
Bus Rating: 225 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1	L - ROOM 11	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	2	
	3	L - ROOM 11	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	4	
	5	L - ROOM 11	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	6	
	7	L - ROOM 10	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	8	
	9	L - ROOM 10	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	10	
	11	L - ROOM 10	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	12	
	13	L - E CORRIDOR	--	20 A	1	0 VA	0 VA					1	20 A	--	L - CORRIDOR	14	
	15	L - E CORRIDOR	--	20 A	1			0 VA	0 VA			1	20 A	--	L - FACULTY ROOM	16	
	17	L - W CORRIDOR	--	20 A	1					0 VA	0 VA	1	20 A	--	A: L OFFICE - B: R AUD	18	
	19	L - ROOM 9	--	20 A	1	0 VA	0 VA					1	20 A	--	OFFICE	20	
	21	L - ROOM 9	--	20 A	1			0 VA	0 VA			1	20 A	--	OFFICE	22	
	23	L - ROOM 9	--	20 A	1					0 VA	0 VA	1	20 A	--	L - OFFICE	24	
	25	A: R CLASS - B: UNIT...	--	20 A	1	0 VA	0 VA					1	20 A	--	CODER	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	
					Total Load:	0 VA		0 VA		0 VA							
					Total Amps:	0 A		0 A		0 A							
					Phase Balance:	% A-B		% B-C		% C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	**Total Connected Load:**	0 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	0 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel RR

Location:
Supply From: MDP
Mounting: Surface
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating:
Mains Type: MLO
Bus Rating: 225 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1	S WATER COOLER	--	20 A	1	0 VA	0 VA					1	20 A	--	L - S ENTRY	2	
	3	N WATER COOLER	--	20 A	1			0 VA	0 VA			1	20 A	--	L - OUTSIDE	4	
	5	R - MUSIC, RR	--	20 A	1					0 VA	0 VA	1	20 A	--	L - N ENTRY	6	
	7	R - CLASSROOM 24	--	20 A	1	0 VA	0 VA					1	20 A	--	L - RR	8	
	9	R - CLASSROOM 24	--	20 A	1			0 VA	0 VA			1	20 A	--	L - LIBRARY	10	
	11	R - CLASSROOM 22,23	--	20 A	1					0 VA	0 VA	1	20 A	--	L - LIBRARY	12	
	13	R - LIBRARY, HALL	--	20 A	1	0 VA	0 VA					1	20 A	--	L - LIBRARY	14	
	15	R - RM 9	--	20 A	1			0 VA	0 VA			1	20 A	--	L - CLASSROOM 21	16	
	17	R - RM 10,11	--	20 A	1					0 VA	0 VA	1	20 A	--	L - CLASSROOM 21	18	
	19	R - 10,11	--	20 A	1	0 VA	0 VA					1	20 A	--	L - CLASSROOM 22	20	
	21	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	L - CLASSROOM 22	22	
	23	S ENTRY HEATER	--	20 A	1					0 VA	0 VA	1	20 A	--	L - CLASSROOM 23	24	
	25	N ENTRY HEATER	--	20 A	1	0 VA	0 VA					1	20 A	--	L - CLASSROOM 23	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	L - CLASSROOM 24	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	L - CLASSROOM 24	30	
	31	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	32	
	33	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	R - LIBRARY	34	
	35	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	36	
	37	SPARE	--	20 A	1	0 VA	0 VA									38	
	39	SPARE	--	20 A	1			0 VA	0 VA			3	20 A	--	SPARE	40	
	41	SPARE	--	20 A	1					0 VA	0 VA					42	
					Total Load:	0 VA		0 VA		0 VA							
					Total Amps:	0 A		0 A		0 A							
					Phase Balance:	% A-B		% B-C		% C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	**Total Connected Load:**	0 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	0 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

Panel H4

Location:
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1
Voltage: 120/208 Wye
Phase: 3
Wire: 4
A.I.C. Rating: 10 KAIC
Mains Type: MLO
Bus Rating: 225 A

Circuit Notes:

Note	Circ...	Load	Type	Trip	Po...	A	A	B	B	C	C	Po...	Trip	Type	Load	Circ...	Note
	1	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	LTG - CLASSROOM 22	2	
	3	LTG - CLASSROOM 22	--	20 A	1			0 VA	0 VA			1	20 A	--	LTG - CLASSROOM 22	4	
	5	LTG - CLASSROOM 23	--	20 A	1					0 VA	0 VA	1	20 A	--	LTG - CLASSROOM 23	6	
	7	LTG - CLASSROOM 23	--	20 A	1	0 VA	0 VA					1	20 A	--	LTG - HALL	8	
	9	LTG - CLASSROOM 21	--	20 A	1			0 VA	0 VA			1	20 A	--	LTG - CLASSROOM 21	10	
	11	LTG - CLASSROOM 21	--	20 A	1					0 VA	0 VA	1	20 A	--	LTG - CLASSROOM 20	12	
	13	LTG - CLASSROOM 20	--	20 A	1	0 VA	0 VA					1	20 A	--	LTG - CLASSROOM 20	14	
	15	RCPT - RM 22,23	--	20 A	1			0 VA	0 VA			1	20 A	--	RCPT - RM 20,21	16	
	17	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	18	
	19	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	20	
	21	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	22	
	23	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	24	
	25	SPARE	--	20 A	1	0 VA	0 VA					1	20 A	--	SPARE	26	
	27	SPARE	--	20 A	1			0 VA	0 VA			1	20 A	--	SPARE	28	
	29	SPARE	--	20 A	1					0 VA	0 VA	1	20 A	--	SPARE	30	
					Total Load:	0 VA		0 VA		0 VA							
					Total Amps:	0 A		0 A		0 A							
					Phase Balance:	% A-B		% B-C		% C-A							

Load Type		Connected Load	Demand Factor	Demand Load	Panel Totals	
L	Lighting	0 VA	0.00%	0 VA	**Power Factor:**	1
R	Receptacle	0 VA	0.00%	0 VA		
M	Motor	0 VA	0.00%	0 VA	**Total Connected Load:**	0 VA
C	Continuous	0 VA	0.00%	0 VA	**Total Connected Current:**	0 A
G	General	0 VA	0.00%	0 VA		
K	Kitchen	0 VA	0.00%	0 VA	**Total Demand Load:**	0 VA
E	Existing	0 VA	0.00%	0 VA	**Total Demand Current:**	0 A
O	Other	0 VA	0.00%	0 VA		

General Notes:

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Project:
TFSD DISTRICT WIDE HVAC REPLACEMENT

Harrison Elementary School
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Sheet:
ELECTRICAL PANEL SCHEDULES

100% CD

PROFESSIONAL ENGINEER LICENSED 17703 01/15/2025 STATE OF IDAHO KYLE E. OLSON
Electrical

Revisions:

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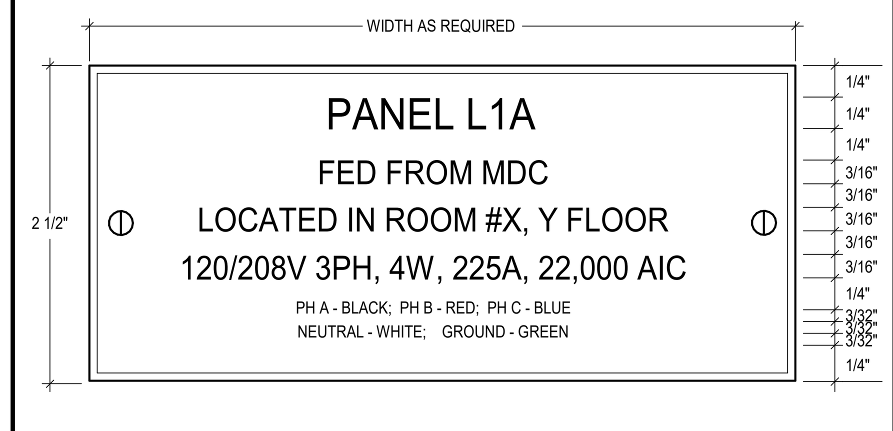
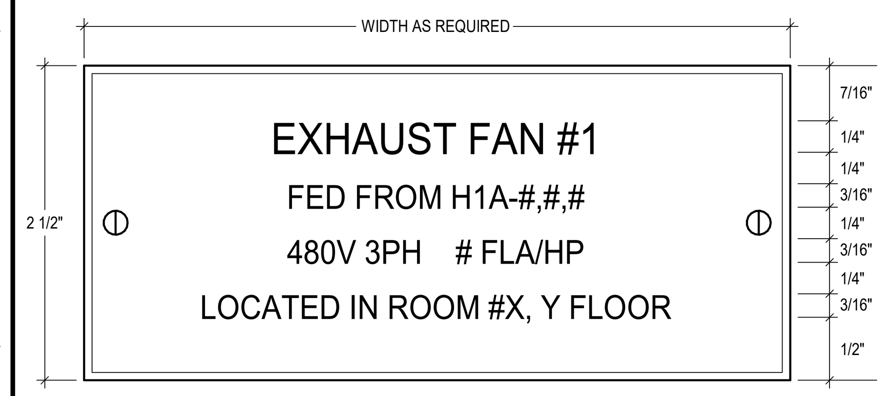


SUB-DISTRIBUTION CENTER AND BRANCH PANELBOARD NAMEPLATE DETAIL

SCALE: FULL

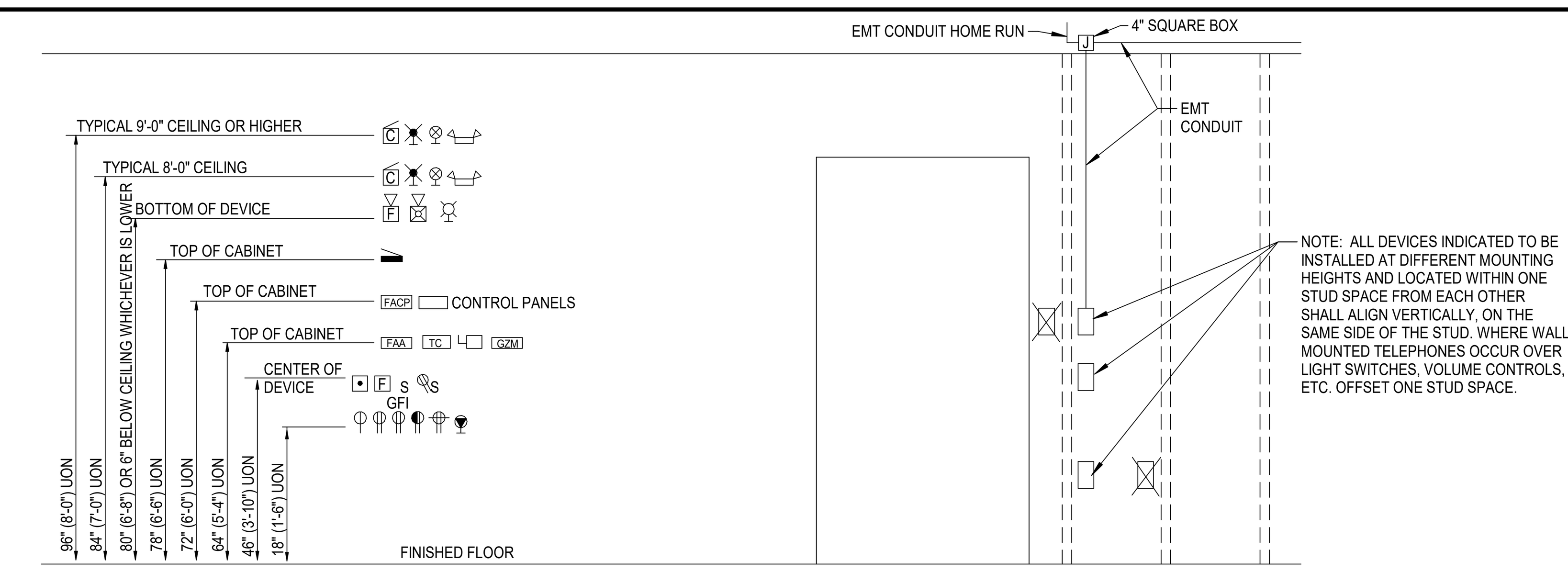
NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.
3. AMP RATING SHALL INDICATE BUS RATING.
4. CONFIRM ROOM NUMBER (X) AND FLOOR (Y) WITH OWNER AND ARCHITECT PRIOR TO PRINTING LABEL.
5. REFER TO SPECIFICATIONS FOR 277/480V PHASE CONDUCTOR COLOR REQUIREMENTS.



UTILIZATION EQUIPMENT NAMEPLATE DETAIL

SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.
3. HP SHALL INDICATE HORSEPOWER; FLA SHALL INDICATE FULL LOAD AMPS.
4. CONFIRM ROOM NUMBER (X) AND FLOOR (Y) WITH OWNER AND ARCHITECT PRIOR TO PRINTING LABEL.

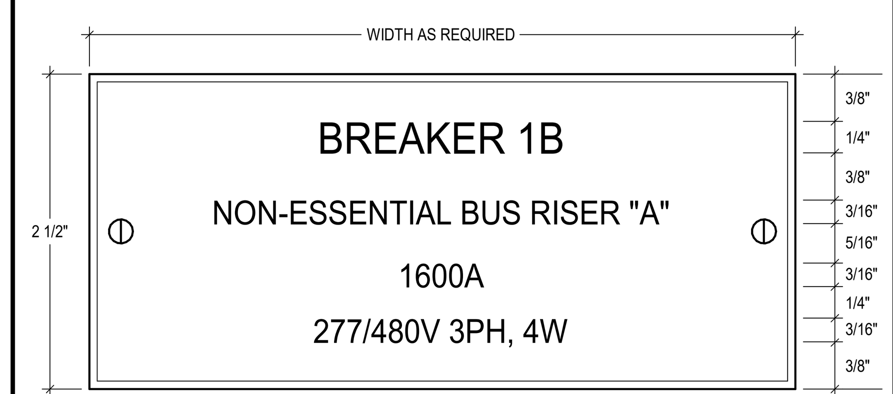


TYPICAL ELECTRICAL DEVICE MOUNTING HEIGHTS

NO SCALE

NOTES:
1. HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
2. WHERE EVER DEVICES ARE INDICATED TO BE ABOVE DOORS, DEVICE SHALL BE CENTERED BETWEEN TOP OF DOOR TRIM AND CEILING LINE.
3. MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER THOSE SHOWN ABOVE. VERIFY MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS. DEVICES AND COVER PLATES SHALL NOT COVER/OVERLAP EDGES OF WAINSCOTING, TILE OR OTHER SPECIALTY WALL FINISHES.
4. REFER TO TYPICAL TECHNOLOGY DEVICE MOUNTING HEIGHTS DETAIL FOR ADDITIONAL INFORMATION.

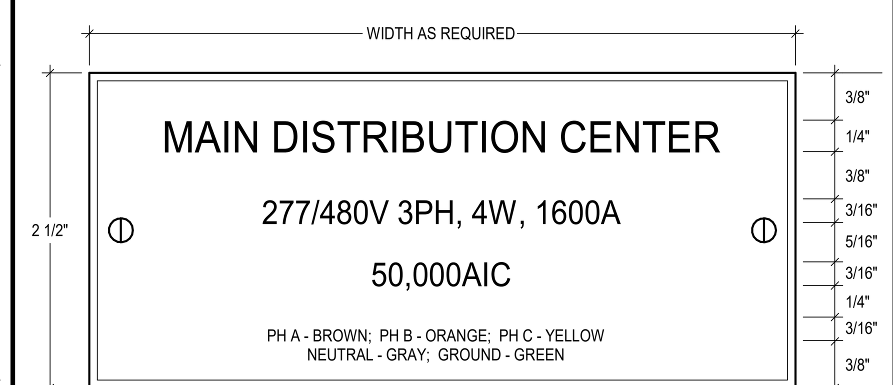
NOTES:
5. DEVICE MOUNTING HEIGHTS SHALL BE PER MOST CURRENT VERSION OF GOVERNING CODES AND STANDARDS NEC, IBC, NFPA, ADA, ETC. WHERE DESCREPANCIES BECOME EVIDENT CONSULT THE ARCHITECT AND ENGINEER OF RECORD.
6. WHERE RECEPTACLES, SWITCHES AND OTHER DEVICES ARE INSTALLED ABOVE COUNTERS, THE DEVICES SHALL BE INSTALLED AT 46" MAXIMUM (COUNTERS/SHELVES 0-20 INCHES WIDE) AND 44" MAXIMUM (COUNTERS/SHELVES 20-25 INCHES WIDE) ABOVE FINISHED FLOOR TO DEVICE CENTER.
7. RECEPTACLES AND LOW VOLTAGE DEVICES SHALL NOT BE INSTALLED BELOW 15" AFF PER ADA STANDARDS.



MAIN DISTRIBUTION CENTER COMPARTMENT NAMEPLATE DETAIL

SCALE: FULL

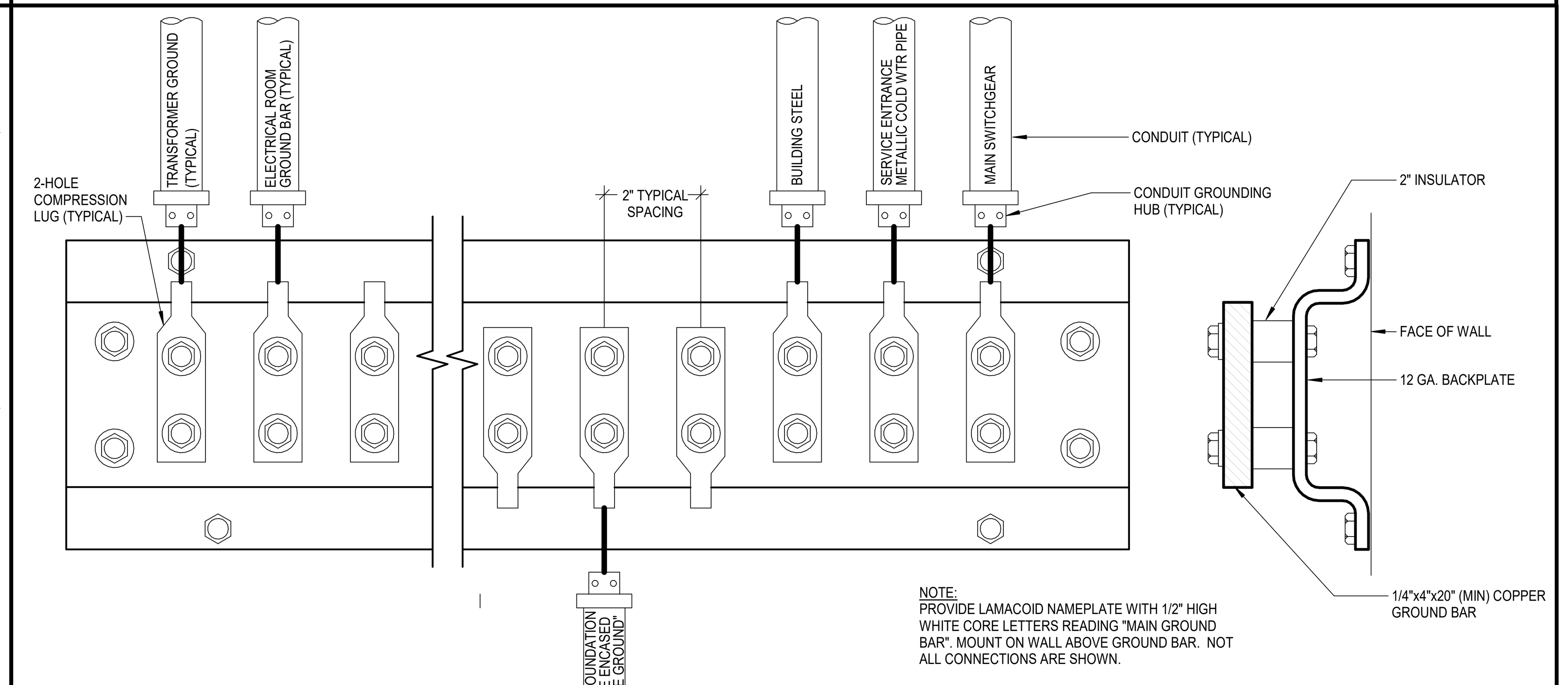
NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.



MAIN DISTRIBUTION CENTER NAMEPLATE DETAIL

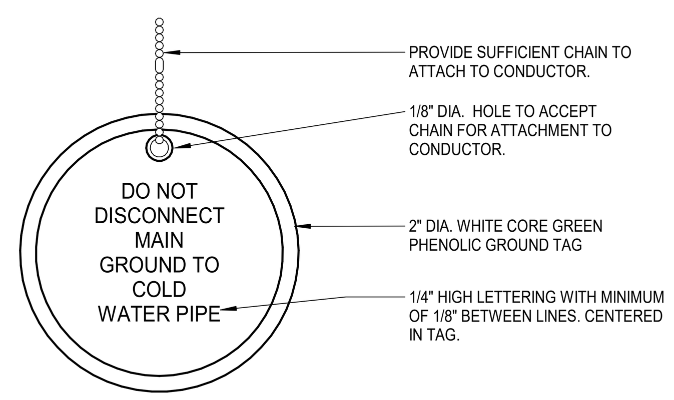
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.
3. AMP RATING SHALL INDICATE BUS RATING.



MAIN GROUND BAR DETAIL

NO SCALE



GROUND CONDUCTOR TAG DETAIL

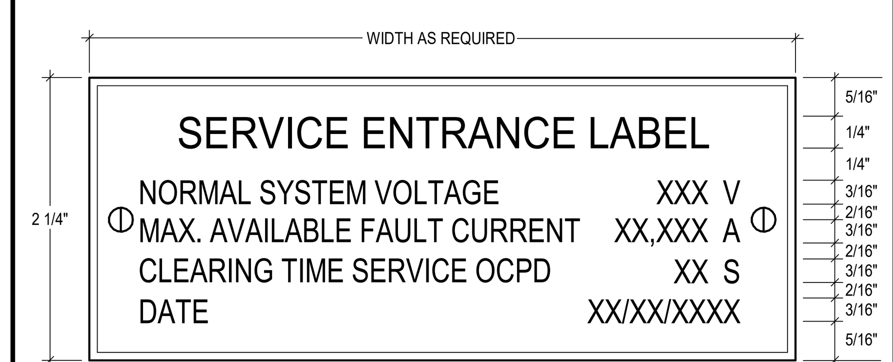
NO SCALE

ALL GROUNDING WORK DONE UNDER THIS CONTRACT SHALL INCLUDE THE FOLLOWING UNLESS SPECIFICALLY EXCLUDED:

A. TAG ALL GROUNDING ELECTRODE CONDUCTORS AND ASSOCIATED BONDING CONDUCTORS AT THEIR POINT OF ATTACHMENT TO GROUND BUS AND GROUNDING ELECTRODE (WHERE POSSIBLE) WITH A ROUND WHITE CORE. GREEN PHENOLIC NAMEPLATE AS SHOWN IN DETAIL 'A'.

B. IDENTIFY ABOVE REFERENCED CONDUCTORS WITH 6" BAND OF GREEN TAPE AT EACH END AND AT 10'INTERVALS WHERE RUN EXPOSED. STENCIL CONDUITS CONTAINING THESE CONDUCTORS "MAIN GROUND" IN GREEN KROY LETTERS. 1/2" DIAMETER OF CONDUIT IN HEIGHT.

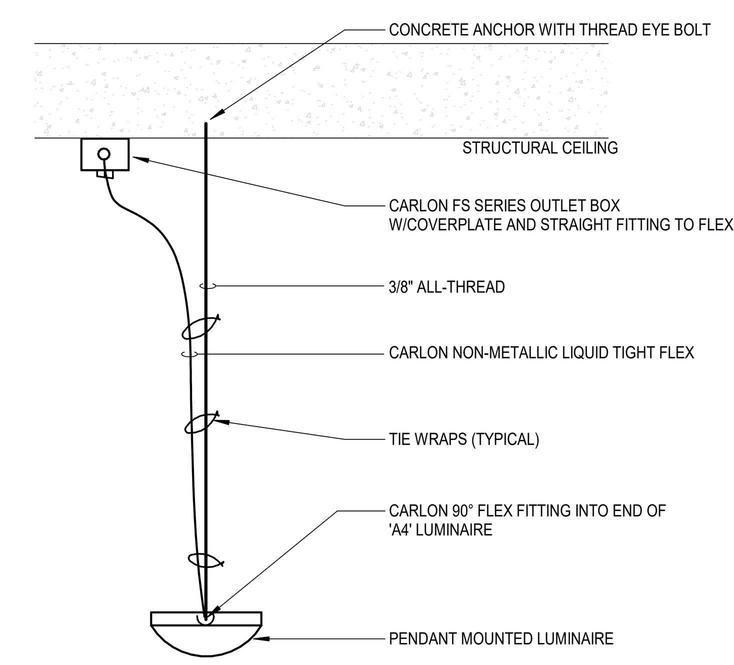
C. SHOW GROUNDING ELECTRODE SYSTEM CONNECTIONS BY IDENTIFYING (ON THE RECORD DRAWING MARK-UPS) WHERE (ROOM NO. AND/OR NAME) AND TO WHAT (ROD, WATER PIPE, GROUND BUS, ETC.) THEY TERMINATE.



SERVICE ENTRANCE LABEL SECONDARY NAME PLATE DETAIL MAX AVAILABLE FAULT CURRENT

SCALE: FULL

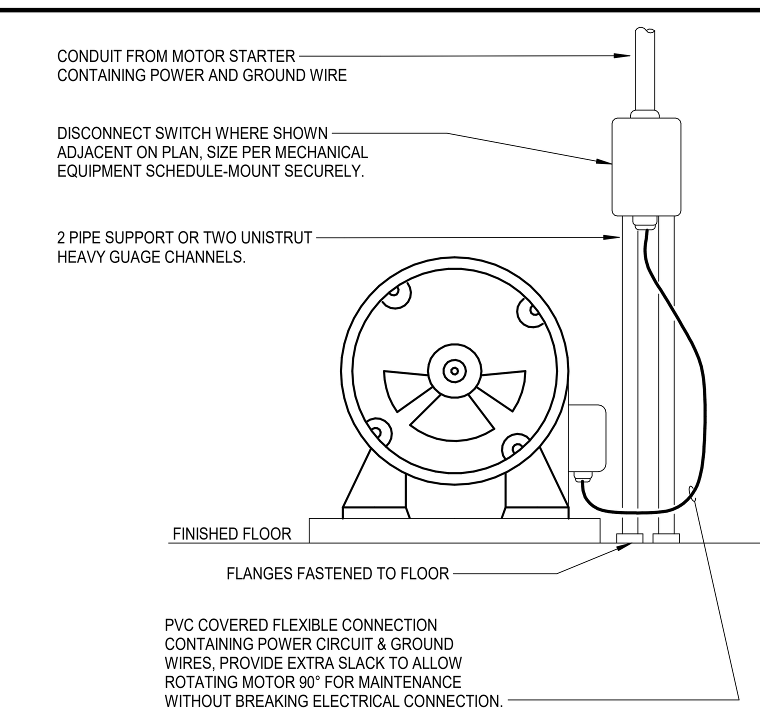
NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.



PENDANT LUMINAIRE MOUNTING DETAIL

NO SCALE

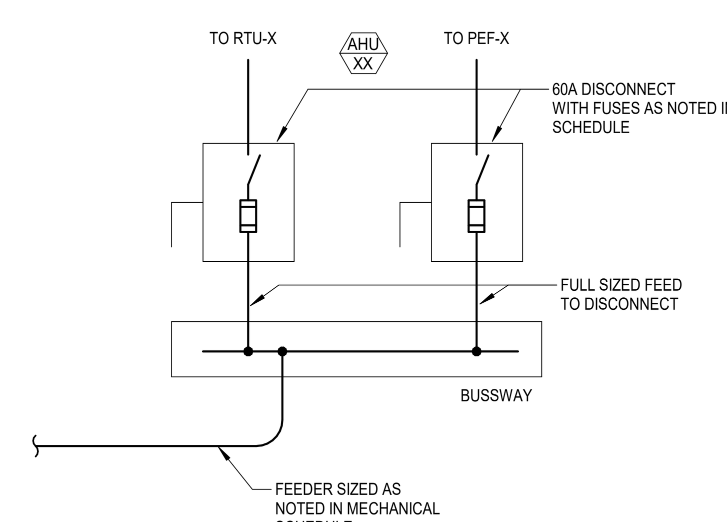
NOTE: SEE SPECIFICATIONS FOR ADDITIONAL SUPPORT, SEISMIC AND OTHER REQUIREMENTS.



CONNECTION TO FLOOR MOUNTED MOTORS

NO SCALE

NOTE: SEE SPECIFICATIONS FOR ADDITIONAL SUPPORT, SEISMIC AND OTHER REQUIREMENTS.



ROOFTOP UNIT / POWERED EXHAUST FAN CONNECTION DETAIL

NO SCALE

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ELECTRICAL DETAILS

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Electrical

Revisions:

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E4.01

KEYNOTES

E1	EXISTING EQUIPMENT TO BE REMOVED THROUGH DEMO PHASE. DEMO CONDUIT AND ASSOCIATED BRANCH CIRCUITRY BACK TO PANEL. TURN BREAKER TO OFF POSITION AND RE-LABEL AS SPARE.
E2	EXISTING EQUIPMENT TO BE REMOVED THROUGH DEMO. PRESERVE AND PROTECT EXISTING CIRCUITRY FOR RE-USE. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES AND ADJACENT SPACES IS MAINTAINED THROUGHOUT WORK.
E12	EXISTING CEILING IN THIS ROOM TO BE REMOVED THROUGH DEMO. REMOVE ALL CEILNG MOUNTED POWER, FIRE ALARM AND LOW VOLTAGE OUTLETS. PRESERVE AND PROTECT EXISTING CIRCUITRY FOR RE-USE. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES AND ADJACENT SPACES IS MAINTAINED THROUGHOUT WORK.

LEVEL 1 POWER DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

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LEVEL 1 POWER DEMOLITION PLAN

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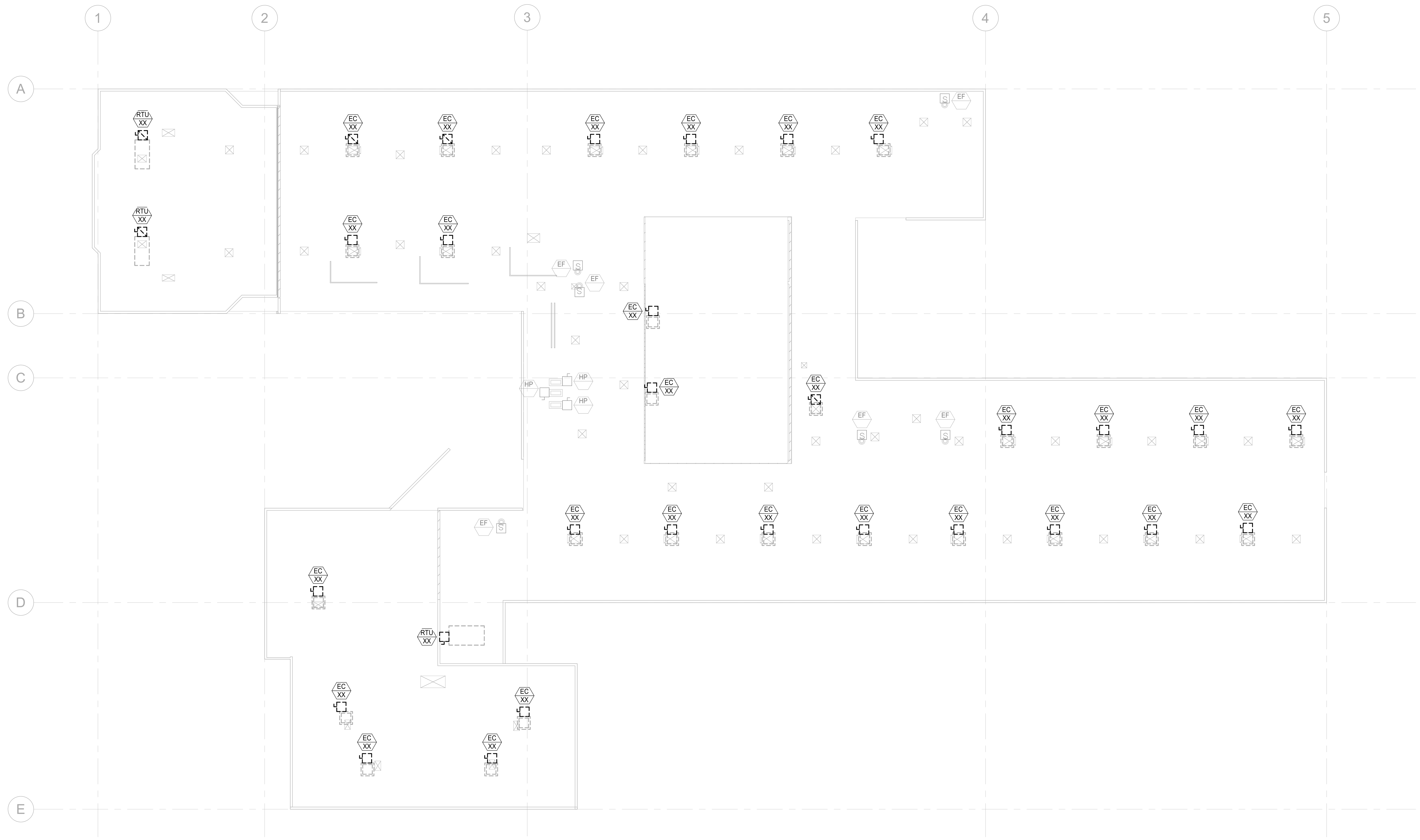
KEYNOTES



ROOF POWER DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

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ROOF POWER DEMOLITION PLAN

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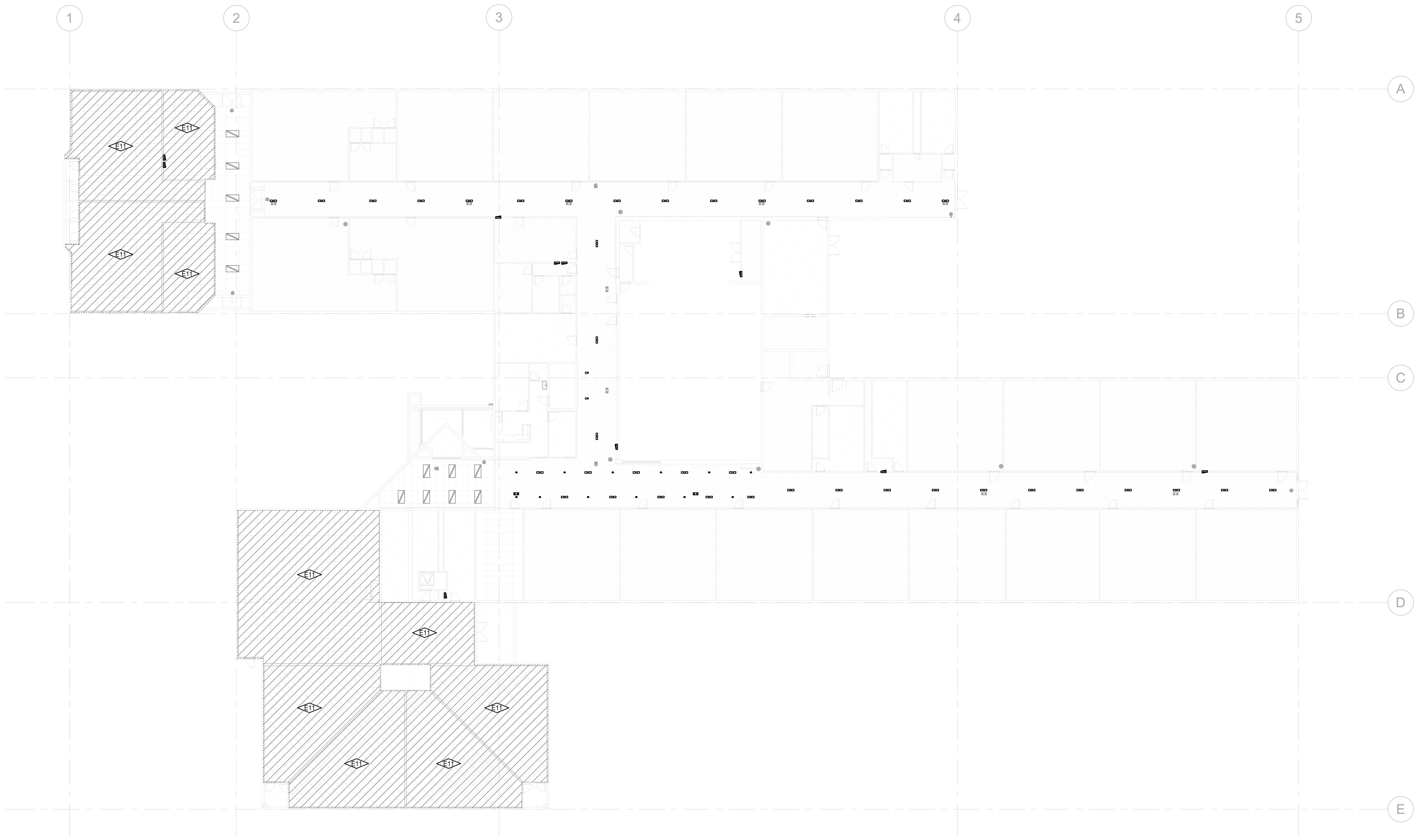
KEYNOTES

E11	EXISTING LUMINAIRES TO BE REMOVED THROUGH DEMO. PRESERVE AND PROTECT EXISTING CIRCUITRY FOR RE-USE. ENSURE CIRCUIT CONTINUITY OF DOWNSTREAM DEVICES AND ADJACENT SPACES IS MAINTAINED THROUGHOUT WORK.



LEVEL 1 LIGHTING DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

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LEVEL 1 LIGHTING DEMOLITION PLAN

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