WHEN REQUESTED BY THE BUILDING OFFICIAL, UPON REVIEW AND NOTATION INDICATING THAT THE STRUCTURAL DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS INCLUDE:

AND THEREFORE, MUST BE VERIFIED BY THE GENERAL CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR MASONRY, AS WELL AS OPENINGS IN STRUCTURE FOR MECHANICAL AND ELECTRICAL INSTALLATIONS.

THE CONTRACTOR SHALL CHECK AND COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTOR

EXISTING BUILDING/SITE DIMENSIONS AND ASSUMED CONDITIONS ARE TO BE VERIFIED IN THE FIELD AND

SEE ARCHITECTURAL DRAWINGS FOR NON-STRUCTURAL PARTITION WALL LOCATIONS AND ALL WINDOW AND

1. DEAD LOADS: ROOF = 18 PSF, FLOOR = 75 PSF

LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

- WIND-RESISTING COMPONENTS (1705.10.3)

INTERNATIONAL BUILDING CODE.

ALLOWABLE SOIL BEARING PRESSURE FOR COLUMNS 4000 PSF, ALLOWABLE SOIL BEARING PRESSURE FOR WALLS 3300 PSF

EARTHWORK:

13. PROVIDE REINFORCEMENT AT OPENINGS IN CONCRETE PER DTL

PLACEMENT. DO NOT STAB THE ABOVE LISTED ITEMS INTO FRESH CONCRETE AFTER PLACEMENT.

8. PROVIDE SUPPORTS FOR REINFORCING AS SPECIFIED TO MAINTAIN BAR POSITION IN CONCRETE. AT

EXPOSED TO WATER, WEATHER, SLABS waiting for EXHIBITION

GR.60.

REINFORCING INDICATED AS REQUIRING WELDING, WHICH SHALL CONFORM TO ASTM A706,

CONCRETE DESIGN

MAXIMUM WATER-
1. FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. NON-BEARING WALLS, WINDOW AND DOOR OPENINGS, AND OTHER INTERIOR PARTITIONS ARE SHOWN FOR INFORMATION ONLY. SEE ARCHITECTURAL FOR DIMENSIONS, LOCATIONS, AND SIZES.
3. SEE ARCHITEC/ CIVIL FOR ALL EXTERIOR, NON-STRUCTURAL CONCRETE SLABS AND WALLS NOT DETAILLED IN WALLS. PROVIDE CONTRACTOR, PROVIDE JOINT PER DETL. 5/S5.02.
4. VERTICAL FOOTING AND FOUNDATION WALL CONSTRUCTION JOINTS ARE NOT SHOWN. WHERE REQUIRED BY CODE, PROVIDE ISOLATION JOINT BLOCKOUT & HORIZONTAL JOINTS. SEE DETAIL FOR SLAB CONTRACTION JOINT REQUIREMENTS.
5. COORDINATE ALL OPENINGS IN FOUNDATION WALLS WITH ARCHITECTURES, MECHANICAL, ELECTRICAL, AND PLUMBING. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AS REQUIRED PER DETL. 11/S5.02.
6. NOTE 2 TYP. HSS5X5X1/4.T.O.FTG. @ COL., TYP. ISOLATION JOINT
7. PROVIDE ICF CORBEL SECTION TO SUPPORT 40 PSF BRICK VENEER LOAD. SEE ARCHITECTURAL FOR BRICK HEIGHT.
8. PROVIDE ICF CORBEL SECTION TO SUPPORT 40 PSF BRICK VENEER LOAD. SEE ARCHITECTURAL FOR BRICK HEIGHT.
9. PROVIDE BRICK VENEER TIES ALONG WALL PER DETAIL.
10. ALL DIMENSIONS SHOWN FOR LIFT PIT ARE REPRESENTATIVE OF AVERAGE APPLICATIONS. THE DIMENSIONS WILL CHANGE BASED ON APPLICATION SPECIFIC CONDITIONS.

ADDITIONAL NOTES:
- KEEPING PAD W/ #4@ 18" O.C.
- SEE MECH. FOR ADD'L INFO
- WILL CHANGE BASED ON APPLICATION SPECIFIC CONDITIONS.
- SIM, TYP. HSS5X5X1/4
- T.O.FTG.
- T.O.SL.
- T.O.SL. /88' - 0"
- LOT OF 100%
- SLATE# 15056
- MAY 27, 2016
- FOUNDATION/SLAB PLAN
- NEW COLLECTIONS + STORAGE FACILITY
- MUSEUM OF THE ROCKIES, MONTANA STATE UNIVERSITY
5. KEEPING PAD W/ #4@18"
6. 2" x 18GA METAL DECK BELOW SEE DETAIL
7. 4" CONC. MEP HOUSE O.C.EA WAY SEE MEP
8. CONC. HEADER
9. CONC. HEADER (5 TOTAL) TYP.
10. 1 SECOND FLOOR FRAMING PLAN TYP
11. W/ 3" CONC.
12. MECHANICAL DUCT FLOOR PENITRATIONS, SEE MECHANICAL FOR SIZE AND LOCATION, PROVIDE OPENING REVIEW AND APPROVAL. SEE DETAIL 7/S5.02 FOR SEAL CONTRACTION JOINT REQUIREMENTS.
13. PROPOSED JOINT LOCATIONS A MIN. OF (7) DAYS PRIOR TO SLAB PLACEMENT FOR 6. LOCATIONS OF SCJ'S ARE NOT SHOWN CONTRACTOR SHALL SUBMIT A DETAILED LAYOUT OF DTL. 11/S5.02.
14. COORDINATE ALL OPENINGS IN CONCRETE WALLS WITH ARCH., MECH., ELECT., AND PROVIDE JOINT PER DTL. 5/S5.02.
15. VERTICAL CONCRETE WALL CONSTRUCTION JOINTS ARE NOT SHOWN. WHERE REQUIRED BY CONTRACTOR, DETAIL IN THE STRUCTURAL DRAWINGS
16. SEE ARCH./CIVIL FOR ALL EXTERIOR, NON-STRUCTURAL CONCRETE SLABS AND WALLS NOT LOCATIONS, AND SIZES. WALLS ARE SHOWN FOR INFORMATION ONLY. SEE ARCHITECTURAL FOR DIMENSIONS, ANY DISCREPANCIES.
17. NON-BEARING WALLS, WINDOW AND DOOR OPENINGS, AND OTHER INTERIOR PARTITION ANY DISCREPANCIES.
18. LOCATIONS OF SCJ'S ARE NOT SHOWN CONTRACTOR SHALL SUBMIT A DETAILED LAYOUT OF DTL. 11/S5.02.
19. COORDINATE ALL OPENINGS IN CONCRETE WALLS WITH ARCH., MECH., ELECT., AND PROVIDE JOINT PER DTL. 5/S5.02.
MEZZANINE FLOOR FRAMING PLAN

1. FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATION S, AND CONDITIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. NON-BEARING WALLS, WINDOW AND DOOR OPENINGS, AND OTHER INTERIOR PARTITION WALLS ARE SHOWN FOR INFORMATION ONLY. SEE ARCHITECTURAL FOR DIMENSIONS, LOCATIONS, AND SIZES.

3. VERTICAL CONCRETE WALL CONSTRUCTION JOINTS ARE NOT SHOWN. WHERE REQUIRED BY CONTRACTOR, PROVIDE JOINT PER DTL. 5/55.02.

4. COORDINATE ALL OPENINGS IN CONCRETE WALLS WITH ARCH., MECH., ELECT., AND PLUMBING. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AS REQUIRED PER DTL. 10/55.02.

5. PROVIDE 1-1/2"x3/16" STEEL BAR GRATING, SEE ARC H FOR TOP FINISH.

6. AT BRACING INTERSECTION BRING ONE BRACING PLATE OVER THE TOP OF THE OTHER AND WELD BRACING FLAT PLATE TO THE OTHER.
GENERAL DEMOLITION NOTES

1. SEE SPECIFICATIONS FOR A DETAILED SCHEDULE OF SELECTIVE DEMOLITION ITEMS.

2. ALL EQUIPMENT, FURNITURE, ETC. LEFT IN AREAS WHERE DEMOLITION IS TO COMMENCE IS TO BE COORDINATED WITH OWNER, PRIOR TO REMOVING FROM THE PREMISES.

3. PROTECT ALL ITEMS/ELEMENTS NOT SPECIFIED AS BEING DEMO'D, AND PATCH AND REPAIR ALL DAMAGED ITEMS/ELEMENTS TO REMAIN.

4. PATCH AND INFILL ALL MECHANICAL, ELECTRICAL & PLUMBING WORK THAT ARE OUTLINED IN THEIR SHEETS, EVEN IF NOT CALLED OUT IN THE ARCHITECTURAL SHEETS.

5. THE CONTRACTOR SHALL PROVIDE ALL DEMOLITION INCIDENTAL TO OR REQUIRED FOR NEW AND RENOVATION CONSTRUCTION WHETHER OR NOT IT IS SPECIFICALLY NOTED, INCLUDING, BUT NOT LIMITED TO, ALL OTHER WORK THAT MIGHT REASONABLY BE REQUIRED TO BE REMOVED IN PREPARATION FOR SPECIFIED FINISHES. DEMOLITION SHALL BE PERFORMED IN A MANNER THAT WILL NOT DAMAGE ANY ITEMS OR SURFACES INDICATED TO REMAIN. ITEMS OR SURFACES SHALL BE PATCHED IF NECESSARY TO PROVIDE A SUITABLE SUBSTRATA FOR NEW FINISHES.

6. PRIOR TO BIDDING, THE CONTRACTOR SHALL VISIT THE FACILITY AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS.

7. THE CONTRACTOR SHALL MAINTAIN AND ADHERE TO ALL CURRENT LIFE-SAFETY AND INTERIM LIFE-SAFETY RULES AND REGULATIONS THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

DEMO KEYNOTE LEGEND

D01 EXISTING WALL TO BE DEMOLISHED AND PREPARED FOR NEW DOOR. REFER TO C/S5.03 FOR SEQUENCE AND DETAILS. SALVAGE OR RECYCLE ALL APPLICABLE MATERIALS.

D02 PROTECT EXISTING FIRE RISER FROM DAMAGE DURING CONSTRUCTION.

D03 RELOCATE FIBER OPTIC CABLES. COORDINATE WITH OWNER.

D04 EXCAVATE FOR NEW ADDITION.

D05 NEW ADDITION PERIMETER.

D06 REMOVE EXISTING DOOR AND FRAME, SALVAGE OR RECYCLE. PREPARE FOR NEW DOOR INSTALLATION.

D07 PROTECT THE EXISTING EXHIBITS AND ARTIFACTS DURING ENTIRE CONSTRUCTION PROCESS. COORDINATE WITH OWNER FOR ALL WORK THAT EFFECTS OR MAY EFFECT THE MUSEUM.

D08 COORDINATE WITH OWNER. REMOVE EXISTING WATER CLOSET, SALVAGE OR RECYCLE. PREPARE FOR NEW WATER CLOSET INSTALLATION.

D09 COORDINATE WITH OWNER. REMOVE EXISTING LAVATORY AND FIXTURES, SALVAGE OR RECYCLE. PREPARE FOR NEW LAVATORY AND FIXTURES INSTALLATION.

D10 COORDINATE WITH OWNER. REMOVE EXISTING SHOWER AND FIXTURES, SALVAGE OR RECYCLE. PREPARE FOR NEW SHOWER INSTALLATION.

D11 EXISTING STOOP TO BE DEMOLISHED AND PREPARE FOR NEW FLOOR SLAB. SALVAGE OR RECYCLE ALL APPLICABLE MATERIALS.

SYMBOL LEGEND

EXISTING CEILING/FLOOR IS TO BE DEMOLISHED, FIELD VERIFY TYPES AND CONDITIONS

EXISTING WALL/ITEM/ELEMENT TO BE DEMOLISHED, FIELD VERIFY TYPES AND CONDITIONS

EXISTING WALL/ITEM/ELEMENT TO REMAIN AND BE PROTECTED, FIELD VERIFY TYPES AND CONDITIONS
THE INTENT OF THE DRAWINGS IS TO PROVIDE INFORMATION FOR:

- 15' - 7 1/2"
- 27' - 2 1/4"
- 10' - 3"
- 030

(3) LAYERS EA. SIDE

5/8" AMERICAN"

- 23' - 0 1/4"
- 10' - 3"
- 108' - 9"

THE CONTRACTOR SHALL PROVIDE ALL DEMOLITION INCIDENTAL TO:

- 013
- C
- 27' - 2 1/4"
- 108B
- SILL
- 19' - 2"
- SILL
- 10' - 8"
- PLAN

WHERE FLOOR IS TRANSITIONING TO A DIFFERENT MATERIAL, INSTALL

- 32' - 0 1/4"
- 10' - 3"
- I-4

GENERAL NOTES:

CONSTRUCTION. IT IS IMPORTANT FOR THE CONTRACTOR TO VERIFY

FIELD DIMENSIONS AND CONDITIONS BEFORE EXECUTION OF THE

NEW MATERIALS AND EQUIPMENT TO COMPLETE ALL WORK SHOWN ON

FOR A COMPLETE INSTALLATION EVEN THOUGH NEITHER SHOWN ON

PLANS OR CALLED OUT IN SPECIFICATIONS.

A TRANSITION STRIP.

THE SITE AND DISPOSED OF IN A LEGAL MANNER. SURFACES IN THE

CONDITION AT THE END OF EACH WORK DAY.

OR REQUIRED FOR NEW AND RENOVATION CONSTRUCTION WHETHER

OR NOT IT IS SPECIFICALLY NOTED, INCLUDING, BUT NOT LIMITED TO,

8' - 9"
- 3' - 6"
- 3' - 4" +/-
- 3' - 1"
- 3' - 2"
- 2' - 9"
- 8"
- 1' - 7"
- 1" - 7"
- 045
- I-3*
- 028
- 028
- I-5
- 135 SF
- 104
- 138 SF
- 136 SF
- 112C
- 111A
- 011
- 006
- 005
- 004
- 004
- 003
- 002
- 001
- SURFACE MOUNTED FIRE EXTINGUISHER CABINET, PER SPECS.
- SEMI RECESSED FIRE EXTINGUISHER CABINET, PER SPECS.
- EXPANSION JOINT FLOOR F01, PER SPECS.
- EXPANSION JOINT INTERIOR WALL AND CEILINGS W01, PER SPECS.
- NEW METAL CAGING AROUND SERVER AND FIBER OPTIC. SEE
  DETAILS ON SHEET A7.1 AND SPECIFICATIONS.
- FIBER OPTIC IS TO BE REMOVED AND REPLACED BY OWNER.
- BOLLARD. SEE DETAILS ON 2/A2.0.
- MATERIAL LIFT. PER MANUFACTURERS REQUIREMENTS, SEE
  SHEET A8.1 AND SPECS FOR DETAIL.
- FOR STRUCTURAL FRAMING, SEE STRUCTURAL DRAWINGS.
- NEW LAVATORY AND FIXTURES, OWNER FURNISHED CONTRACTOR
  INSTALLED.
- NEW WATER CLOSET, OWNER FURNISHED CONTRACTOR
  INSTALLED.

SYMBOL LEGEND:

NEW CONSTRUCTION KEYNOTE LEGEND:

NO. DESCRIPTION

001 SURFACE MOUNTED FIRE EXTINGUISHER CABINET, PER SPECS.
002 SEMI RECESSED FIRE EXTINGUISHER CABINET, PER SPECS.
003 EXPANSION JOINT FLOOR F01, PER SPECS.
004 EXPANSION JOINT INTERIOR WALL AND CEILINGS W01, PER SPECS.
005 NEW METAL CAGING AROUND SERVER AND FIBER OPTIC. SEE
  DETAILS ON SHEET A7.1 AND SPECIFICATIONS.
006 FIBER OPTIC IS TO BE REMOVED AND REPLACED BY OWNER.
007 BOLLARD. SEE DETAILS ON 2/A2.0.
012 MATERIAL LIFT. PER MANUFACTURERS REQUIREMENTS, SEE
  SHEET A8.1 AND SPECS FOR DETAIL.
026 METAL STAIRS TO BE PAINTED. PNT-5.028 NEW LAVATORY AND FIXTURES, OWNER FURNISHED CONTRACTOR
  INSTALLED.
030 NEW SHOWER AND FIXTURES, OWNER FURNISHED CONTRACTOR
  INSTALLED.
033 TYP. WALL MOUNTED HAND RAILING ADD BLOCKING AS REQUIRED.042 ROOF DRAIN PLUMBING CHASE, VERIFY IN FIELD.045 DOWNSPOUT NOZZLE.

NOTES:

- FIRE RATING: NA
- STC RATING: NA
- MATERIALS LIFT. PER MANUFACTURERS REQUIREMENTS, SEE
  SHEET A8.1 AND SPECS FOR DETAIL.

DATE: MAY 27, 2016

Printed On:
1. THE INTENT OF THE DRAWINGS IS TO PROVIDE INFORMATION FOR CONSTRUCTION. IT IS IMPORTANT FOR THE CONTRACTOR TO VERIFY FIELD DIMENSIONS AND CONDITIONS BEFORE EXECUTION OF THE WORK. CONTACT THE ARCHITECT SHOULD DISCREPANCIES EXIST.

2. CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO COMPLETE ALL WORK SHOWN ON PLANS, CALLED FOR IN SPECIFICATION, OR REASONABLY IMPLIED FOR A COMPLETE INSTALLATION EVEN THOUGH NEITHER SHOWN ON PLANS OR CALLED OUT IN SPECIFICATIONS.

3. WHERE CARPET IS TRANSITIONING TO EXISTING FLOOR FINISH THAT IS ANYTHING OTHER THAN CARPET, INSTALL A TRANSITION STRIP.
GENERAL RECOMMENDATIONS

ALL ITEMS THAT ARE TO THE DOOR, ALL PLASTER CEILINGS TOWER THAN 10 FEET HIGH SHALL BE CONSTRUCTED WITH THE CEILING BOARD OR CONFIRMATION OF THE CEILING SYSTEM, WHICH IS TO BE A STRUCTURAL BOX.

ALL MAIN BRACE TO BE MEASURED TO 1/4 INCH.

ALL ENDS SEE LIFE CANNOT BE SUPPORTED, EXCEPT WITHOUT BENDINGS SECLUSION.

THESE RECOMMENDATIONS AND INSTRUCTIONS ARE SUPPOSED TO BE USED TO BUILD, AND ON THE USE OF THE DESIGN WITHOUT THE RECOMMENDATIONS AND INSTRUCTIONS, THIS DOCUMENT IS HELD TO

ALL FIRE PROTECTION AND LIGHTING ARE TO BE PERMITTED ATINCE FOR THREE PERMITS. THREE PERMITS PROVIDED BY THE PERMITS.?

THESE RECOMMENDATIONS ARE INTENDED FOR SUSPENDED CEILINGS INCLUDING GRID, PANEL OR TILE, LIGHT FIXTURE & AIR TERMINALS WEIGHING NO MORE THAN 1.8 LBS. PER SQUARE FOOT.

ALL MAIN BEAMS ARE TO BE HEAVY DUTY (HD).

ALL CROSS TEES SHALL BE CAPABLE OF CARRYING THE DESIGN LOAD WITHOUT EXCEEDING DEFLECTION EQUAL TO 1/360 OF ITS SPAN.

LATERAL FORCE BRACING IS THE USE OF VERTICAL STRUTS (COMPRESSION POSTS) AND SPLAY WIRES.

RIGID BRACING MAY BE USED IN LIEU OF SPLAY WIRES.

MUSEUM OF THE ROCKIES
NEW COLLECTIONS + STORAGE FACILITY

LEGAL OBSTRUCTIONS

HANGER WIRES (TYP.)

HANGER WIRE THRU CTR & (4) HANGER WIRES SPLAYED IN (4)

THE ORIGINAL ARE AT THE CENTER OF THE INDICATED WALL.

THE STRUCTURE ABOVE. THESE WIRE MUST BE TAUT.

THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.

SUSPENDED CEILING BRACING

LATERAL FORCE BRACING

CEILINGS CONSTRUCTED OF LATH AND PLASTER OR GYPSUM BOARD, SCREW OR NAIL ATTACHED TO WALL LINE

BE EXEMPT FROM THE LATERAL FORCE BRACING REQUIREMENTS.

THESE RECOMMENDATIONS ARE INTENDED FOR SUSPENDED CEILINGS INCLUDING GRID, PANEL OR TILE, LIGHT FIXTURE & AIR TERMINALS WEIGHING NO MORE THAN 1.8 LBS. PER SQUARE FOOT.

ALL WIRE TIES ARE TO BE THREE TIGHT TURNS AROUND ITSELF WITHIN THREE INCHES. TWELVE GAUGE 2" LATERAL FORCE BRACING @ 12'-0" O.C. EACH WAY. BEGIN 2'-0" THRESHOLD ACROSS EACH WALL.

ALL MAIN T BAR

WALL MOLDING DET

CLG. BRACING DET

LATERAL FORCE BRACING

HANGER AND PERIMETER WIRES MUST BE PLUMB WITHIN 1 IN 6 UNLESS COUNTER SLOPING WIRES ARE USED.

DIAGRAM ACoustical CEILING DETAIL

DIAGRAM ACOUSTICAL CEILING DETAIL

LATERAL FORCE BRACING SHALL BE CLOSED ON CENTER AND BEGIN NO FARTHER THAN 6 FEET FROM PERIMETER WALLS.

PERIMETER WIRES MUST BE NESTED OUTSIDE OF THE CONNECTORY BUT THE VERTICAL STRUTS TO SUSPENDED CEILINGS

USE "BREC2" CLIPS ON ALL FOUR WALLS IN LIEU OF STABILIZER BARS TO PREVENT THE ENDS OF THE MAIN BEAMS AT PERIMETER WALLS FROM SPREADING OPEN DURING A SEISMIC EVENT. PERIMETER WIRES SHALL NOT BE USED IN LIEU OF SPREADER BARS.

VOLTAGE TIERING IS AN ACCEPTABLE ALTERNATIVE TO SPREADER BARS.

LIGHT FIXTURES WEIGHING LESS THAN 10 POUNDS SHALL HAVE ONE 12 GAUGE HANGER WIRE CONNECTED FROM THE FIXTURE TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.

LIGHT FIXTURES WEIGHING MORE THAN 56 LBS. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE. THESE WIRES MUST BE TAUT.

CEILINGS WITHOUT RIGID BRACING, SPRINKLER HEAD PENETRATIONS SHALL HAVE A 2 INCH OVERSIZE FOR CEILING AREAS EXCEEDING 2500 SQUARE FEET, A SEISMIC SEPARATION JOINT OR FULL HEIGHT WALL PARTITION THAT BREAKS THE CEILING SHALL BE PROVIDED UNLESS ANALYSES ARE PERFORMED OF THE CEILING & LIGHT TERMINAL ENDS OF EACH MAIN BEAM AND CROSS TEE MUST BE SUPPORTED WITHIN 8 INCHES OF EACH WALL WITH A PERIMETER WIRE.

THE LAYOUT AND LOCATION OF THE SEISMIC SEPARATION JOINT SHALL BE PER THE DESIGNER OF RECORD.

FOR CEILINGS LESS THAN 1,000 SQUARE FEET PROVIDED THEY ARE SURROUNDED BY FOUR WALLS AND BRACED TO STRUCTURE.

LATERAL FORCE BRACING SHALL BE 12 FEET ON CENTER (MAX) AND BEGIN NO FARTHER THAN 6 FEET FROM ROOF FRAMING OR CEILING.

USE "BREC2" CLIPS IN LIEU OF STABILIZER BARS TO PREVENT THE ENDS OF THE MAIN BEAMS AT PERIMETER WALLS FROM SPREADING OPEN DURING A SEISMIC EVENT. PERIMETER WIRES SHALL NOT BE USED IN LIEU OF SPREADER BARS.

WIRE TYING IS AN ACCEPTABLE ALTERNATIVE TO SPREADER BARS.

LATERAL FORCE BRACING

MATERIALS SUCH AS METAL STUD (25 GAUGE) OR 7/8"-26 GA FURRING HAT CHANNELS @ 2'-0" O.C. (FOR GYP. MAY BE USED IN LIEU OF SPREADER BARS.

LIGHT FIXTURES WEIGHING MORE THAN 56 LBS. SHALL HAVE TWO 12 GAUGE WIRES ATTACHED AT OPPOSING CORNERS FROM EACH OTHER AND AT AN ANGLE NOT EXCEEDING 45° FROM THE PLANE OF THE CEILING.

FOR ACOUSTIC TILES, CROSS TEE (FOR ACoustical TILES)

MAIN RUNNER TEES (FOR WALL MOLDING)

BERC2 CLIPS WITH 3/4" CLEARANCE ON UNATTACHED ENDS.
DOOR DETAILS

HEAD DETAIL OF OH DOOR @ EXTERIOR ICF WALL

HEAD DETAIL @ COILING DOOR AND STUD WALL

HEAD DETAIL OF OH DOOR @ ICF WALL

HEAD DETAIL OF HM DOOR @ E.J.

HM DOOR HEAD DETAIL (JAMB SIM) @ EXTERIOR ICF WALL

HM FRAME HEAD DETAIL (JAMB SIM) @ ICF WALL

JAMB DETAIL @ OH DOOR @ EXTERIOR ICF WALL

JAMB DETAIL @ COILING DOOR AND STUD WALL

JAMB DETAIL @ SECTION DOOR @ ICF WALL

JAMB DETAIL OF HM DOOR @ E.J.

SILL DETAIL @ HM DOOR & E.J.

SILL DETAIL @ HM FRAME @ ICF WALL

HM FRAME ASSEMBLY

ICF BLOCK

METAL PANEL SIDING

CORNER BEAD

METAL CORNER GUARD

4" X 4" X 3/16" STEEL ANGLE. PAINT.

ICF BLOCK

METAL PANEL SIDING

COILING DOOR ASSEMBLY PER SPECS

5/8" GYPSUM WALL BOARD INSULATION, SEE WALL TYPE

6" METAL STUD, SEE STRUCTURAL

6" BUILDING SEPARATION JOINT

EXPANSION JOINT F01, PER SPECS

CORNER BEAD

METAL CORNER GUARD

4" X 4" X 3/16" STEEL ANGLE. PAINT.

ICF BLOCK

METAL PANEL SIDING

COILING DOOR ASSEMBLY, PER SPECS

5/8" GYPSUM WALL BOARD INSULATION, SEE WALL TYPE

6" METAL STUD

BLOCKING, FIRE RATE WHERE APPLICABLE

EXPANSION JOINT W01, PER SPECS

NEW STRUCTURAL LINTEL PER STRUCTURAL, PAINT TO MATCH WALL

CUT EXISTING WALL AT NEW OPENING

6" BUILDING SEPARATION JOINT

EXPANSION JOINT F01, PER SPECS

CUT OUT ICF AFTER CONCRETE HAS CURED.

REINFORCING PER STRUCT.

CORNER BEAD

GYPSUM WALL BOARD, PER SPECS

WRAP JAMB IN METAL, BREAK METAL EXISTING WALL.

NEW CONCRETE SLAB

PER STRUCT

CUT OUT ICF AFTER CONCRETE HAS CURED.

REINFORCING PER STRUCT.

DOOR SLAB PER SCHEDULE

DOOR FRAME PER SCHEDULE

DROP BOTTOM

ASSEMBLY

SAW CUT CONTROL JOINT

CORNER BEAD

GYPSUM WALL BOARD, PER SPECS

WRAP JAMB IN METAL, BREAK METAL EXISTING WALL.

NEW CONCRETE SLAB

PER STRUCT

CUT OUT ICF AFTER CONCRETE HAS CURED.

REINFORCING PER STRUCT.

DOOR SLAB PER SCHEDULE

DOOR FRAME PER SCHEDULE

DROP BOTTOM
### Heat Recovery Ventilator Schedule

<table>
<thead>
<tr>
<th>Mark</th>
<th>Mfr.</th>
<th>Model</th>
<th>HUB</th>
<th>Base</th>
<th>Climate</th>
<th>Sensible HP</th>
<th>Sensible CFM</th>
<th>Total CFM</th>
<th>Leaving Air Temp WB/DB (F)</th>
<th>Exhaust Temp WB/DB (F)</th>
<th>Total Temp WB/DB (F)</th>
<th>Difference Temp WB/DB (F)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRV-1</td>
<td>RENNA</td>
<td>HE2XINH</td>
<td>1.5</td>
<td>HUB</td>
<td>200</td>
<td>1,040</td>
<td>1,040</td>
<td>76.3/58</td>
<td>70/58</td>
<td>71%</td>
<td>75%</td>
<td>40,722</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Unit selected for 5,000 ft elevation.
- Provide unit with double wall construction, motized outside air, and alarm output for BMS system.

---

### Mechanical Piping Material Schedule

<table>
<thead>
<tr>
<th>System</th>
<th>Location</th>
<th>Material</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Pump Supply &amp; Return</td>
<td>ASU</td>
<td>Steel</td>
<td></td>
</tr>
</tbody>
</table>

---

### Electrical Wall Heater Schedule

<table>
<thead>
<tr>
<th>Mark</th>
<th>Mfr.</th>
<th>Model</th>
<th>Type</th>
<th>Area</th>
<th>Serviced</th>
<th>Capacity</th>
<th>Voltage</th>
<th>Phase</th>
<th>N</th>
<th>H-1</th>
<th>H-2</th>
<th>H-3</th>
<th>H-4</th>
<th>H-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAREL</td>
<td>CH01V2001</td>
<td>Wall Mount, Stand Alone</td>
<td>101</td>
<td>5.5</td>
<td>1.8</td>
<td>110</td>
<td>1</td>
<td>SEE NOTES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Provide humidifier with recessed mounting frame, relay to allow unit to be controlled by BMS, and unit mounted disconnect.

---

### Air Separator Schedule - 30% P.G.

<table>
<thead>
<tr>
<th>Mark</th>
<th>Mfr.</th>
<th>Model</th>
<th>Pressure Drop (inWC)</th>
<th>Area (SQFT)</th>
<th>Capacity (BTU/HR)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-1</td>
<td>TACO</td>
<td>VR30</td>
<td>240</td>
<td>360</td>
<td>30</td>
<td>SEE NOTES</td>
</tr>
</tbody>
</table>

**Notes:**
- Provide humidifier with recessed mounting frame, relay to allow unit to be controlled by BMS, and unit mounted disconnect.

---

### Cased Refrigerant Coil Schedule (R410a)

<table>
<thead>
<tr>
<th>Mark</th>
<th>Mfr.</th>
<th>Model</th>
<th>Area</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Capacity</th>
<th>Efficiency</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COOK</td>
<td>PR-20</td>
<td>2.18</td>
<td>36.5</td>
<td>32&quot;X32&quot;</td>
<td>1,040</td>
<td>477</td>
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### Duct Mounted Electric Heater Schedule

<table>
<thead>
<tr>
<th>Mark</th>
<th>Mfr.</th>
<th>Model</th>
<th>Type</th>
<th>Area</th>
<th>Serviced</th>
<th>Capacity</th>
<th>Voltage</th>
<th>Phase</th>
<th>N</th>
<th>EDH-1</th>
<th>EDH-2</th>
<th>EDH-3</th>
<th>EDH-4</th>
<th>EDH-5</th>
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<tbody>
<tr>
<td>1</td>
<td>CAREL</td>
<td>CH05V2001</td>
<td>Wall Mount, Stand Alone</td>
<td>101</td>
<td>5.5</td>
<td>1.8</td>
<td>110</td>
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<td></td>
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</tr>
</tbody>
</table>

**Notes:**
- Provide humidifier with recessed mounting frame, relay to allow unit to be controlled by BMS, and unit mounted disconnect.

---

### Roof Intake & Exhaust Hood Schedule

| Mark | Mfr. | Model | Function | Dia (IN) | DIA (FT) | 69.5 | 29.3 | 16.8 | 0.03 | 12X12 | DUCT | ALUMINUM | BY ARCH | SEE NOTES |
|------|------|-------|---------|---------|---------|-------|-------|-------|-------|-------|-------|----------|---------|---------|-------|

**Notes:**
- Provide humidifier with recessed mounting frame, relay to allow unit to be controlled by BMS, and unit mounted disconnect.

---

### Electrical Coordination

- Use the MFT Coordination Schedule on Sheet F-6 for Sections when coordinating with other contractors who have a different shop drawing. Tie-ins to ensure that all:
  - Electrical displacements
  - Motor starters
  - Variable frequency drives
  - Electrical accessories

Air plenum of the approved size and that installation has been coordinated.

---

### Freeze Protection

THE HYDRONIC HEATING SYSTEM SHALL BE FROZEN PROTECTED WITH A 30% PROPYLENE GLYCOL SOLUTION.

**Notes:**
- All equipment and piping shall be insulated and freeze protected.
- All units and packages shall be freeze protected.
**HEAT PUMP LOOP DDC POINTS LIST**

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>DESCRIPTION</th>
<th>TAG</th>
<th>STATUS</th>
<th>INT TYP</th>
<th>FUNCTION</th>
<th>OUT</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPR-1 SUP</td>
<td>SUPPLY TEMP</td>
<td>E.</td>
<td>1</td>
<td>-</td>
<td>0-10V</td>
<td></td>
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<tr>
<td>HPR-1 INS</td>
<td>OUTSIDE TEMP</td>
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<td>1</td>
<td>-</td>
<td>0-10V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPR-1 INT</td>
<td>RETURN TEMP</td>
<td>E.</td>
<td>1</td>
<td>-</td>
<td>0-10V</td>
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<tr>
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<td>EXT TEMP</td>
<td>E.</td>
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<td>-</td>
<td>0-10V</td>
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**HEAT PUMP LOOP SEQUENCE OF OPERATIONS**

**GENERAL:**

The heat pump water loop supplies energy to heat pump heating equipment. The heated water is circulated through the museum's existing heat pump loop to provide heating and cooling to the museum.

**SYSTEM FUNCTIONALITY:**

- **Supply:** The basic pump and variable speed circulator with external speed control and logic.
- **Function:** The pump controls the flow of water through the heat exchanger. The variable speed circulator provides the necessary flow to the heat pump heating equipment.
- **Connectivity:** The system is connected to the supply and return sides of the heat pump heating equipment.

**OPERATION:**

1. The system starts with the supply pump and variable speed circulator.
2. The pump provides the necessary flow to the heat exchanger.
3. The variable speed circulator adjusts the flow to maintain the desired temperature setpoint.

**CONTROL POINTS:**

- **Supply:** The basic pump and variable speed circulator with external speed control and logic.
- **Function:** The pump controls the flow of water through the heat exchanger. The variable speed circulator provides the necessary flow to the heat pump heating equipment.
- **Connectivity:** The system is connected to the supply and return sides of the heat pump heating equipment.

**OPERATION:**

1. The system starts with the supply pump and variable speed circulator.
2. The pump provides the necessary flow to the heat exchanger.
3. The variable speed circulator adjusts the flow to maintain the desired temperature setpoint.

**MECHANICAL - HEAT PUMP WATER LOOP DIAGRAM AND CONTROLS**
**GENERAL DDC POINTS LIST**

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>HARDWARE POINTS</th>
<th>SOFTWARE POINTS</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
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**HUMIDIFIER DDC POINTS LIST**

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>HARDWARE POINTS</th>
<th>SOFTWARE POINTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**HUMIDIFIER SEQUENCE OF OPERATIONS**

**GENERAL**

The humidifier controls the humidity of the space which they are installed.

Space Relative Humidity Setpoint:

When the space relative humidity drops below the space humidity setpoint the unit shall operate to maintain the space relative humidity.

In addition to the space humidity status, the humidifier alarm contacts shall generate an alarm if the humidifier is not functioning as required.

**PRECISION HVAC UNIT DDC POINTS LIST**

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>HARDWARE POINTS</th>
<th>SOFTWARE POINTS</th>
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**ELECTRIC HEATER DDC POINTS LIST**

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<th>POINT NAME</th>
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<th>SOFTWARE POINTS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
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</table>

**ELECTRIC HEATER SEQUENCE OF OPERATIONS**

**GENERAL**

Electric heating devices assembled in a heat that include a motorized damper and an electric heat controller with limit switches for protection. The electric heat controller receives input from the space humidity that it is required to protect.

The wall heater shall be controlled to operate when the space temperature drops below the space temperature setpoint.

The space temperature setpoint (50F) should be set for electric heaters to avoid overheating.

**FAN WALL-HEATER CONTROL DIAGRAM**

**HUMIDIFIER SEQUENCE OF OPERATIONS**

**GENERAL**

The humidifiers control the humidity of the space which they are installed.

Space Relative Humidity Setpoint:

When the space relative humidity drops below the space humidity setpoint the unit shall operate to maintain the space relative humidity.

In addition to the space humidity status, the humidifier alarm contacts shall generate an alarm if the humidifier is not functioning as required.

**ELECTRIC WALL-HEATER CONTROL DIAGRAM**

**GENERAL**

Electric heating devices assembled in a heat that include a motorized damper and an electric heat controller with limit switches for protection. The electric heat controller receives input from the space humidity that it is required to protect.

The wall heater shall be controlled to operate when the space temperature drops below the space temperature setpoint.

The space temperature setpoint (50F) should be set for electric heaters to avoid overheating.

**FAN WALL-HEATER CONTROL DIAGRAM**

**GENERAL**

Electric heating devices assembled in a heat that include a motorized damper and an electric heat controller with limit switches for protection. The electric heat controller receives input from the space humidity that it is required to protect.

The wall heater shall be controlled to operate when the space temperature drops below the space temperature setpoint.

The space temperature setpoint (50F) should be set for electric heaters to avoid overheating.
GENERAL MECHANICAL NOTES

A.) It shall be the responsibility of the mechanical contractor to coordinate the routing of all ductwork and piping with all other trades.

B.) It shall be the responsibility of the mechanical contractor to review drawings for all disciplines and provide all labor and materials required for a complete installation.

C.) Coordinate the installation of grilles, registers, and diffusers with the architectural reflected ceiling plans and the electrical lighting plans.

D.) Verify the location of all thermostats and sensors with the engineer and architect prior to installation. Install top of thermostats 48" above finished floor per ADA requirements.

E.) Provide and install seismic bracing for all equipment, ductwork, and piping per the requirements of the International Building Code.

F.) Flexible ductwork from branch ducts to grilles, registers, and diffusers shall be limited to 5' max.

G.) Provide and install fire, smoke, and combination smoke/fire dampers where ductwork passes through fire rated assemblies.

H.) Seal all duct and pipe penetrations through fire rated assemblies with a UL approved fire stop system.

I.) Provide access doors to allow service and inspection of equipment, valves, dampers, and devices installed above non-removable ceilings.

J.) Provide flush cup remote damper actuators for balance dampers installed in inaccessible locations.

KEY NOTES:

1. Fan coil unit FC-1 room controller
2. Fan coil unit FC-2 room controller
3. Fan coil unit FC-3 room controller
4. Fan coil unit FC-4 room controller
5. Fan coil unit FC-5 room controller
6. Fan coil unit FC-6 room controller
7. Fan coil unit FC-7 room controller
8. BMS temp sensor for heater EWH-1
9. BMS temp sensor for heater EWH-2
10. BMS temp sensor for heater EWH-3
11. Fan coil unit FC-8 room controller
12. BMS temp sensor for heater EWH-5
13. Precision HVAC unit HVAC-1 temp sensor
14. Precision HVAC unit HVAC-1 humidity sensor
GENERAL MECHANICAL NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE ROUTING OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) COORDINATE THE INSTALL OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.

D.) VERIFY THE LOCATION OF ALL THERMOSTATS AND SENSORS WITH THE ENGINEER AND ARCHITECT PRIOR TO INSTALLATION. INSTALL TOP OF THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.

E.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

F.) FLEXIBLE DUCTWORK FROM BRANCH DUCTS TO GRILLES, REGISTERS AND DIFFUSERS SHALL BE LIMITED TO 5FT MAX.

G.) PROVIDE AND INSTALL FIRE, SMOKE AND COMBINATION SMOKE/FIRE DAMPERS WHERE DUCTWORK PASSES THROUGH FIRE RATED ASSEMBLIES.

H.) SEAL ALL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.

I.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

J.) PROVIDE FLUSH CUP REMOTE DAMPER ACTUATORS FOR BALANCE DAMPERS INSTALLED IN IN-ACCESSIBLE LOCATIONS.
GENERAL MECHANICAL NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE ROUTING OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) COORDINATE THE INSTALL OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.

D.) VERIFY THE LOCATION OF ALL THERMOSTATS AND SENSORS WITH THE ENGINEER AND ARCHITECT PRIOR TO INSTALLATION.

E.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

F.) FLEXIBLE DUCTWORK FROM BRANCH DUCTS TO GRILLES, REGISTERS AND DIFFUSERS SHALL BE LIMITED TO 5FT MAX.

G.) PROVIDE AND INSTALL FIRE, SMOKE AND COMBINATION SMOKE/FIRE DAMPERS WHERE DUCTWORK PASSES THROUGH FIRE RATED ASSEMBLIES.

H.) SEAL ALL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.

I.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

J.) PROVIDE FLUSH CUP REMOTE DAMPER ACTUATORS FOR BALANCE DAMPERS INSTALLED IN IN-ACCESSIBLE LOCATIONS.
NOTES

A.) THESE FIRE PROTECTION DRAWINGS ARE TO SERVE AS A PERFORMANCE SPECIFICATION FOR THE INTENDED FIRE PROTECTION DESIGN AND HYDRAULIC CALCULATION TO BE CARRIED OUT BY THE CONTRACTOR.

B.) IT SHALL BE THE RESPONSIBILITY OF THE FIRE PROTECTION CONTRACTOR TO FIELD COORDINATE THE INSTALLATION OF THE FIRE PROTECTION SYSTEM WITH ALL OTHER TRADES AND TO RESOLVE ANY AND ALL CONFLICTS.

C.) PROVIDE SEISMIC BRACING OF ALL EQUIPMENT AND PIPING AS REQUIRED BY LOCAL CODES.

D.) CONTRACTOR IS TO BE RESPONSIBLE FOR FEES AND PERMIT COSTS RELATED TO INSTALLING THE SYSTEM.

E.) THE CONTRACTOR SHALL PROVIDE ALL REQUIRED INCIDENTAL DEVICES, VALVES, SWITCHES, PIPING, ETC., TO ACHIEVE A COMPLETE SYSTEM.

F.) PROVIDE SPRINKLER GUARDS ON HEADS WHERE SUBJECT TO DAMAGE.

G.) PROVIDE SPRINKLER DEFLECTOR SHIELDS WHERE REQUIRED.

H.) PROVIDE EXTRA SPRINKLER HEADS UNDER PROVISIONS OF NFPA 13. PROVIDE SUITABLE WRENCHES FOR EACH TYPE OF HEAD. PROVIDE A METAL STORAGE CABINET IN THE FIRE RISER ROOM.

I.) ALL PIPING THAT IS EXPOSED MUST BE PAINTED TO MATCH SURROUNDINGS.

J.) DRY PIPE ALARM CHECK VALVE: PROVIDE DRY PIPE ALARM CHECK VALVE ASSEMBLY, TRIM, VALVES, DRAINS, PRESSURE GAUGES, FLOW/PRESSURE SWITCHES, ETC. FOR A COMPLETE INSTALLATION.

K.) FIRE DEPARTMENT CONNECTION: PROVIDE FREE-STANDING, UL LISTED, PEDESTAL TYPE, CHROMED DOUBLE-CLAPPER, SIAMESE FIRE DEPARTMENT CONNECTION AND AUTO BALL DRIP ASSEMBLY WHERE INDICATED ON THE PLANS.

L.) BACKFLOW PREVENTER: PROVIDE UL APPROVED, DOUBLE CHECK VALVE, BACKFLOW PREVENTER, AND DETECTOR-CHECK WATER METER ON INCOMING FIRE SERVICE LINE IN ACCORDANCE WITH LOCAL REGULATIONS.

M.) POST INDICATOR VALVE: PROVIDE UL LISTED POST INDICATOR TYPE VALVE ON FIRE PROTECTION WATER SERVICE MAIN. ADJUSTABLE, CAST IRON BODY, VERTICAL POST WITH OPERATING WRENCH.

O.) FLUSH ENTIRE PIPING SYSTEM OF FOREIGN MATTER. PIPING SHALL BE ARRANGED TO PROVIDE COMPLETE SYSTEM DRAINAGE. PROVIDE ALL NECESSARY AUXILIARY DRAIN COMPONENTS PERTAINING TO SPRINKLER SYSTEM. WHEN INDICATED ON FIRE ALARM DRAWINGS, PROVIDE MONITOR SWITCHES ON ALL CONTROL, ZONE AND SERVICE VALVES, WHICH ARE NORMALLY OPEN. WIRING FROM MONITOR SWITCHES TO SUPERVISORY ALARM SYSTEM TO BE INSTALLED UNDER DIVISION 16 OF THE CONTRACT.

Q.) ALL PIPING SHALL BE TESTED WITH A HYDROSTATIC TEST OF NOT LESS THAN 1360 KPA (200 PSIG) AND ANY LEAKS FOUND SHALL BE CORRECTED. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEM SHALL BE TESTED IN THE DEPARTMENT IN STRICT ACCORDANCE WITH NFPA.
A.) THESE FIRE PROTECTION DRAWINGS ARE TO SERVE AS A PERFORMANCE SPECIFICATION FOR THE INTENDED FIRE PROTECTION DESIGN AND HYDRAULIC CALCULATION TO BE CARRIED OUT BY THE CONTRACTOR.

B.) IT SHALL BE THE RESPONSIBILITY OF THE FIRE PROTECTION CONTRACTOR TO FIELD COORDINATE THE INSTALLATION OF THE FIRE PROTECTION SYSTEM WITH ALL OTHER TRADES AND TO RESOLVE ANY AND ALL CONFLICTS.

C.) PROVIDE SEISMIC BRACING OF ALL EQUIPMENT AND PIPING AS REQUIRED BY LOCAL CODES.

D.) CONTRACTOR IS TO BE RESPONSIBLE FOR FEES AND PERMIT COSTS RELATED TO INSTALLING THE SYSTEM.

E.) THE CONTRACTOR SHALL PROVIDE ALL REQUIRED INCIDENTAL DEVICES, VALVES, SWITCHES, PIPING, ETC., TO ACHIEVE A COMPLETE SYSTEM.

F.) PROVIDE SPRINKLER GUARDS ON HEADS WHERE SUBJECT TO DAMAGE.

G.) PROVIDE SPRINKLER DEFLECTOR SHIELDS WHERE REQUIRED.

H.) PROVIDE EXTRA SPRINKLER HEADS UNDER PROVISIONS OF NFPA 13. PROVIDE SUITABLE WRENCHES FOR EACH TYPE OF HEAD. PROVIDE A METAL STORAGE CABINET IN THE FIRE RISER ROOM.

I.) ALL PIPING THAT IS EXPOSED MUST BE PAINTED TO MATCH SURROUNDINGS.

J.) DRY PIPE ALARM CHECK VALVE: PROVIDE DRY PIPE ALARM CHECK VALVE ASSEMBLY, TRIM, VALVES, DRAINS, PRESSURE GAUGES, FLOW/PRESSURE SWITCHES, ETC. FOR A COMPLETE INSTALLATION.

K.) DRY PIPE AIR COMPRESSOR: PROVIDE A SMALL MAINTENANCE AIR COMPRESSOR APPROPRIATE FOR THE DRY PIPE SYSTEM SIZE. STRAP COMPRESSOR TO RISER PIPE AND CONNECT TO ALARM VALVE WITH AIR MAINTENANCE VALVE ASSEMBLY.

L.) FIRE DEPARTMENT CONNECTION: PROVIDE FREE-STANDING, UL LISTED, PEDESTAL TYPE, CHROMED DOUBLE-CLAPPER, SIAMESE FIRE DEPARTMENT CONNECTION AND AUTO BALL DRIP ASSEMBLY WHERE INDICATED ON THE PLANS.

M.) BACKFLOW PREVENTER: PROVIDE UL APPROVED, DOUBLE CHECK VALVE, BACKFLOW PREVENTER, AND DETECTOR-CHECK WATER METER ON INCOMING FIRE SERVICE LINE IN ACCORDANCE WITH LOCAL REGULATIONS.

N.) POST INDICATOR VALVE: PROVIDE UL LISTED POST INDICATOR TYPE VALVE ON FIRE PROTECTION WATER SERVICE MAIN. ADJUSTABLE, CAST IRON BODY, VERTICAL POST WITH OPERATING WRENCH.

O.) FLUSH ENTIRE PIPING SYSTEM OF FOREIGN MATTER. PIPING SHALL BE ARRANGED TO PROVIDE COMPLETE SYSTEM DRAINAGE. PROVIDE ALL NECESSARY AUXILIARY DRAIN VALVES AS REQUIRED.

P.) CONTRACTOR TO FURNISH ALL FIRE ALARM SYSTEM COMPONENTS PERTAINING TO SPRINKLER SYSTEM. WHEN INDICATED ON FIRE ALARM DRAWINGS, PROVIDE MONITOR SWITCHES ON ALL CONTROL, ZONE AND SERVICE VALVES, WHICH ARE NORMALLY OPEN. WIRING FROM MONITOR SWITCHES TO SUPERVISORY ALARM SYSTEM TO BE INSTALLED UNDER DIVISION 16 OF THE CONTRACT.

Q.) ALL PIPING SHALL BE TESTED WITH A HYDROSTATIC TEST OF NOT LESS THAN 1360 KPA (200 PSIG) AND ANY LEAKS FOUND SHALL BE CORRECTED. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AND FIRE DEPARTMENT IN STRICT ACCORDANCE WITH NFPA.
PLUMBING FIXTURE SCHEDULE

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<tr>
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<td>BR</td>
<td>4</td>
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<tr>
<td>3</td>
<td>JR Smith</td>
<td>IR</td>
<td>4</td>
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PLUMBING PIPING MATERIAL SCHEDULE

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<th>DESCRIPTION</th>
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<tr>
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<td>COPPER</td>
<td>HOT WATER HEATER</td>
<td>ELECTRIC</td>
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<td>CW</td>
<td>PVC</td>
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<td>STORAGE</td>
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ELECTRIC DOMESTIC WATER HEATER SCHEDULE

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<th>DESCRIPTION</th>
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<th>INSTALLATION</th>
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<th>PRESSURE</th>
<th>VOLTAGE</th>
<th>PHASE</th>
<th>INSTALLER</th>
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<tr>
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GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.

E.) PROVIDE HAMMER ARRESTORS FOR ALL FLUSH VALVE TYPE FIXTURES AND QUICK CLOSING VALVES.

F.) PROVIDE AND INSTALL TRAP SEALS AND TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS. INSTALL TRAP PRIMER IN A RECESSED VALVES BOX IN AN ACCESSIBLE LOCATION.

G.) PROVIDE ACCESS DOOR FOR INSPECTION AND SERVICE OF EQUIPMENT AND VALVES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

H.) INSTALL ALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

I.) INSTALL FLOOR DRAIN STRAINERS FLUSH AND LEVEL WITH FINISHED FLOOR.

J.) INSTALL ALL EXPOSED PIPING BELOW LEVEL 1 - PLUMBING & PIPING PLAN

M) INSTALL WATER METER IN THIS LOCATION. SEE DIV 221116 FOR ADDITIONAL INFO.

N) INSTALL BTU METER IN THIS LOCATION. MOUNT BTU COMPUTER IN MECHANICAL ROOM. SEE DIV 230520 FOR ADDITIONAL INFO.

O) INSTALL 3" HPR PIPING AT THIS LOCATION.

P) INSTALL 3" HPS PIPING AT THIS LOCATION.
GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.
B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.
E.) PROVIDE HAMMER ARRESTORS FOR ALL FLUSH VALVE TYPE FIXTURES AND QUICK CLOSING VALVES.
F.) PROVIDE AND INSTALL TRAP SEALS AND TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS. INSTALL TRAP PRIMER IN A RECESSED VALVES BOX IN AN ACCESSIBLE LOCATION.
G.) PROVIDE ACCESS DOOR FOR INSPECTION AND SERVICE OF EQUIPMENT AND VALVES INSTALLED ABOVE NON-REMOVABLE CEILINGS.
H.) INSTALL ALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
I.) INSTALL FLOOR DRAIN STRAINERS FLUSH AND LEVEL WITH FINISHED FLOOR.
GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.

E.) ALL BELOW SLAB VENT PIPING SHALL BE 2" MINIMUM.

F.) PROVIDE AND INSTALL TRAP SEALS AND TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS. INSTALL TRAP PRIMERS IN A RECESSED VALVES BOX IN AN ACCESSIBLE LOCATION.

G.) PROVIDE HAMMER ARRESTORS FOR ALL FLUSH VALVE TYPE FIXTURES AND QUICK CLOSING VALVES.

H.) PROVIDE AND INSTALL ACCESS DOOR FOR INSPECTION AND SERVICE OF EQUIPMENT AND VALVES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

I.) INSTALL ALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

J.) INSTALL FLOOR DRAIN STRAINERS FLUSH AND LEVEL WITH FINISHED FLOOR.
GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL APPROVED FIRE STOP SYSTEM.

E.) PROVIDE BRAZED CONNECTIONS FOR ALL FLUSH VALVE TYPE FAUCETS AND SHOWER HEADS.

F.) PROVIDE AND INSTALL TRAP SEALS AND TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS. INSTALL TRAP PRIMERS IN A RECESSED VALVES BOX IN AN ACCESSIBLE LOCATION.

G.) PROVIDE ACCESS DOOR FOR INSPECTION AND SERVICE OF EQUIPMENT AND VALVES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

H.) INSTALL ALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

I.) INSTALL FLOOR DRAIN STRAINERS FLUSH AND LEVEL WITH FINISHED FLOOR.
**Electrical Symbol Legend: 1-Lines**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>Switchsymbol, 1-line, for use when phase of number of wires cannot be shown. Only used for single-phase circuits.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Switchsymbol, 2-line, for use when phase of number of wires cannot be shown. Only used for 3-phase circuits.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Overload protection device, variable frequency drive.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Overload protection device, fixed motor.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Smoke detector &quot;B&quot; indicates beam smoke detector.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Toggle switch (mount at 46&quot; aff. uno.).</td>
</tr>
</tbody>
</table>

**Electrical Symbol Legend: Power Plans**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
</tr>
<tr>
<td>![Symbol]</td>
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</tr>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Panel and circuit energizing distribution center for power supply (branch circuit, feeder, subpanel, main panel, combination panel, main breaker panel).</td>
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**Electrical Symbol Legend: Lighting Plans**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>Switch for use with general lighting.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Overhead fluorescent fixture.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Wall mounted switch.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Outdoor lighting.</td>
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</tbody>
</table>

**Electrical Symbol Legend: System Plans**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>Switch for use with general lighting.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Overhead fluorescent fixture.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Wall mounted switch.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Outdoor lighting.</td>
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</tbody>
</table>
**LUMINAIRE SCHEDULE**

<table>
<thead>
<tr>
<th>MARK</th>
<th>TYPE</th>
<th>DIMENSION</th>
<th>LUMPS</th>
<th>WATTS</th>
<th>DESCRIPTION</th>
<th>DIMMING</th>
<th>EMERGENCY</th>
<th>CEILING TYPE</th>
<th>VOLTS</th>
<th>MANUFACTURER</th>
<th>SERIES - PART NO.</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>STRIP / 8' LED</td>
<td>30 W</td>
<td>DESIGN DIMENSION</td>
<td>LED STRIP, COMPACT, INTEGRATED CIRCUIT</td>
<td>NO</td>
<td>NO</td>
<td>CEILING TYPE</td>
<td>277 V</td>
<td>LITHONIA</td>
<td>ZZ0140LW MPN 1040</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>STRIP / 4' LED</td>
<td>33 W</td>
<td>DESIGN DIMENSION</td>
<td>LED STRIP, COMPACT, INTEGRATED CIRCUIT</td>
<td>NO</td>
<td>NO</td>
<td>CEILING TYPE</td>
<td>277 V</td>
<td>COOPER</td>
<td>SKYRIDGE 24SR-LD2-39-C-UNV-L835-CD1 1,2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>RECESSED / 2'x2' LED</td>
<td>15 W</td>
<td>DESIGN DIMENSION</td>
<td>RECESSED 2'x2' LED TROFFER</td>
<td>NO</td>
<td>NO</td>
<td>RECESSED</td>
<td>277 V</td>
<td>METALUX</td>
<td>22SR-LD2-20-C-UNV-L835-CD1-SVPD1 1,2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>RECESSED / 2'x4' LED</td>
<td>32 W</td>
<td>DESIGN DIMENSION</td>
<td>RECESSED 2'x4' LED TROFFER</td>
<td>NO</td>
<td>NO</td>
<td>RECESSED</td>
<td>277 V</td>
<td>LITHONIA</td>
<td>WL4-30L-EZ1-LP835-N80-NESPDT7-DIM50 1,2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>EGRESS</td>
<td>18 W</td>
<td>DESIGN DIMENSION</td>
<td>WHITE THERMOPLASTIC LED EMERGENCY EGRESS COMPACT BATTERY</td>
<td>NO</td>
<td>NO</td>
<td>SURFACE</td>
<td>277 V</td>
<td>EMERGI-LITE PROVIDER</td>
<td>CPRO-1-AD 1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>F1</td>
<td>WALL BRACKET / LED</td>
<td>28 W</td>
<td>DESIGN DIMENSION</td>
<td>4' LINEAR LED WALL-MOUNT FIXTURE, 3500K, 3000 LUMENS, COMPACT, LENSED, WITH INTEGRAL OCCUPANCY SENSOR &amp; AUTO DIMMING TO 50% WHEN UNOCCUPIED.</td>
<td>NO</td>
<td>NO</td>
<td>9'-0&quot; AF</td>
<td>277 V</td>
<td>LITHONIA</td>
<td>DSXW1 LED 10C 530 40K T2M 277 PE 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G1</td>
<td>EXIT SIGN LED</td>
<td>5 W</td>
<td>DESIGN DIMENSION</td>
<td>WHITE THERMOPLASTIC LED EXIT SIGN, 90 MINUTE EMERGENCY BATTERY BACKUP, PUSH TO TEST, RED LETTERS.</td>
<td>NO</td>
<td>NO</td>
<td>UNIVERSAL</td>
<td>277 V</td>
<td>EMERGI-LITE PROVIDER</td>
<td>ELXN400 RN 1</td>
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<td></td>
</tr>
</tbody>
</table>

**NOTES:**
1. ALTERNATE FIXTURES WILL BE CONSIDERED WITH APPROVAL PRIOR TO BID ONLY. ALTERNATES MUST BE EQUAL TO SPECIFIED IN TERMS OF LUMEN OUTPUT, DIMMING CAPABILITY, AND GENERAL APPEARANCE.
2. FOR ALL FIXTURES REQUIRING DIMMING, EC IS RESPONSIBLE FOR SELECTING AND SUBMITTING APPROPRIATE DIMMING DRIVERS & ASSOCIATED PARTS FOR A FULLY FUNCTIONAL SYSTEM. SEE LIGHTING CONTROL DIAGRAMS & LIGHTING PLANS FOR MORE INFORMATION.
**Branch Panel: HV1**

<table>
<thead>
<tr>
<th>CKT</th>
<th>Circuit Description</th>
<th>Classification</th>
<th>Connected Load</th>
<th>Demand Factor</th>
<th>Estimated Demand</th>
<th>Panel Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HVAC</td>
<td></td>
<td>18717 VA</td>
<td>100.00%</td>
<td>18717 VA</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Receptacle</td>
<td></td>
<td>4860 VA</td>
<td>100.00%</td>
<td>4860 VA</td>
<td></td>
</tr>
</tbody>
</table>

**Total Load:**
- HVAC: 18717 VA
- Receptacle: 4860 VA
- Total: 23577 VA

**Total Conn.:**
- HVAC: 74 A
- Receptacle: 74 A
- Total: 148 A

**Total Est. Demand:**
- HVAC: 74 A
- Receptacle: 74 A
- Total: 148 A

---

**Branch Panel: LV1**

<table>
<thead>
<tr>
<th>CKT</th>
<th>Circuit Description</th>
<th>Classification</th>
<th>Connected Load</th>
<th>Demand Factor</th>
<th>Estimated Demand</th>
<th>Panel Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HVAC</td>
<td></td>
<td>143883 VA</td>
<td>100.00%</td>
<td>143883 VA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td></td>
<td>9331 VA</td>
<td>125.00%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Load:**
- HVAC: 143883 VA
- Lighting: 9331 VA
- Total: 153214 VA

**Total Conn.:**
- HVAC: 743 A
- Lighting: 743 A
- Total: 1486 A

**Total Est. Demand:**
- HVAC: 743 A
- Lighting: 743 A
- Total: 1486 A

---

**Branch Panel: LV2**

<table>
<thead>
<tr>
<th>CKT</th>
<th>Circuit Description</th>
<th>Classification</th>
<th>Connected Load</th>
<th>Demand Factor</th>
<th>Estimated Demand</th>
<th>Panel Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HVAC</td>
<td></td>
<td>36973 PE</td>
<td>100.00%</td>
<td>36973 PE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receptacle</td>
<td></td>
<td>1875 PE</td>
<td>100.00%</td>
<td>1875 PE</td>
<td></td>
</tr>
</tbody>
</table>

**Total Load:**
- HVAC: 36973 PE
- Receptacle: 1875 PE
- Total: 38848 PE

**Total Conn.:**
- HVAC: 74 A
- Receptacle: 74 A
- Total: 148 A

**Total Est. Demand:**
- HVAC: 74 A
- Receptacle: 74 A
- Total: 148 A
<table>
<thead>
<tr>
<th>MARK</th>
<th>DESCRIPTION</th>
<th>LOAD</th>
<th>VOLT PHASE</th>
<th>TYPE</th>
<th>CONTROL</th>
<th>SPIEDER</th>
<th>DISCONNECT</th>
<th>CIRCUIT INFORMATION</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC-1</td>
<td>HVAC UNIT</td>
<td>28.2 MCA</td>
<td>480 - 3</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>HVAC-2</td>
<td>HVAC UNIT</td>
<td>39.3 MCA</td>
<td>480 - 3</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>EWH-1</td>
<td>ELECTRIC WALL HEATER</td>
<td>1500 W</td>
<td>120 - 1</td>
<td>BMS</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>EWH-2</td>
<td>ELECTRIC WALL HEATER</td>
<td>4800 W</td>
<td>208 - 3</td>
<td>BMS</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>EWH-3</td>
<td>ELECTRIC WALL HEATER</td>
<td>4800 W</td>
<td>208 - 3</td>
<td>BMS</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>EWH-4</td>
<td>ELECTRIC WALL HEATER</td>
<td>4800 W</td>
<td>208 - 3</td>
<td>BMS</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>BY MANUF</td>
</tr>
<tr>
<td>HR-1</td>
<td>HEAT RECOVERY BOX</td>
<td>0.12 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-1</td>
<td>VRF FAN COIL</td>
<td>0.2 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>HR-2</td>
<td>HEAT RECOVERY BOX</td>
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<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>FC-2</td>
<td>VRF FAN COIL</td>
<td>0.2 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
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<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>HR-3</td>
<td>HEAT RECOVERY BOX</td>
<td>0.12 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-3</td>
<td>VRF FAN COIL</td>
<td>0.2 A</td>
<td>208 - 1</td>
<td>INT</td>
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<tr>
<td>HR-4</td>
<td>HEAT RECOVERY BOX</td>
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<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-4</td>
<td>VRF FAN COIL</td>
<td>0.16 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
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<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>HR-5</td>
<td>HEAT RECOVERY BOX</td>
<td>0.08 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-5</td>
<td>VRF FAN COIL</td>
<td>0.16 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
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<td>N/A</td>
<td>MSS</td>
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</tr>
<tr>
<td>HR-6</td>
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<td>0.08 A</td>
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<td>INT</td>
<td>23</td>
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<tr>
<td>FC-6</td>
<td>VRF FAN COIL</td>
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<td>INT</td>
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<td>HR-7</td>
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<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>FC-7</td>
<td>VRF FAN COIL</td>
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<td>INT</td>
<td>23</td>
<td>23</td>
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<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>HR-8</td>
<td>HEAT RECOVERY BOX</td>
<td>0.12 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-8</td>
<td>VRF FAN COIL</td>
<td>0.16 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>HR-9</td>
<td>HEAT RECOVERY BOX</td>
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<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>FC-9</td>
<td>VRF FAN COIL</td>
<td>0.16 A</td>
<td>208 - 1</td>
<td>INT</td>
<td>23</td>
<td>23</td>
<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>HR-10</td>
<td>HEAT RECOVERY BOX</td>
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<td>INT</td>
<td>23</td>
<td>23</td>
<td>SPC</td>
<td>MSS</td>
<td>20A DP ST</td>
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<tr>
<td>FC-10</td>
<td>VRF FAN COIL</td>
<td>0.2 A</td>
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<td>INT</td>
<td>23</td>
<td>23</td>
<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>VB-1</td>
<td>AHU VRF COIL KIT</td>
<td>1.3 A</td>
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<td>INT</td>
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<td>23</td>
<td>N/A</td>
<td>MSS</td>
<td>20A DP ST</td>
</tr>
<tr>
<td>H-1</td>
<td>HUMIDIFIER</td>
<td>3890 W</td>
<td>208 - 1</td>
<td>INT</td>
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**Responsibilities:**
- INTEGRAL VEHICLE EXHAUST DETECTION SYSTEM THERMOSTAT OCCUPANCY SENSOR FAN COIL UNIT CONTROLLER INTERLOCK WITH EXHAUST FAN BUILDING AUTOMATION SYSTEM

**Note:** All power wiring from starter/disconnect to equipment is by DIV 26.
GENERAL NOTES:

A. As part of this project, provide a new, addressable, voice evacuation based, fire alarm control panel. The existing panel will be replaced in State University Montana. The existing location in the main museum at the electrical closet near the main floor elevator lobby. Provide all disconnect and reconnect labor and programming to install new FACP. Provide new fire alarm devices as shown on these drawings at new addition and wire to new panel as well as wire existing wiring / devices into new panel for a fully functional system. Provide testing per specifications. Provide new remote annunciator at main main entrance. Provide exterior horn/ strobe as required. Provide exterior Knox box; verify mounting location with Fire Department.

B. See MEP Coordination Schedule for mechanical equipment feeder wire size, conduit size, disconnect/ starter size, etc.

C. Coordinate exact locations of mechanical equipment with mechanical contractor prior to rough-in.

KEY NOTES:

- Provide smart meter cabinet & meter for power, water, and heat.
- Electrical contractor to provide all control wiring. See detail 3 / sheet E0.1.
- Provide J-box flush in exterior wall and sleeve thru poured exterior wall for CCTV camera wiring.
- Electrical requirements for material lift controls will be provided during construction. Contractor shall include allowance for all controls wiring in bid.
GENERAL NOTES:
A. As part of this project, provide a new, addressable, voice evacuation based, fire alarm control panel. The existing panel will be replaced in the existing location in the main museum at the electrical closet near the main floor elevator lobby. Provide all disconnect and reconnect labor and programming to install new panel. Provide new fire alarm devices as shown on these drawings at new addition and wire to new panel as well as wire existing wiring/devices into new panel for a fully functional system. Provide testing per specifications. Provide new remote annunciator at museum main entrance. Provide exterior horn/strobe as required. Provide exterior Knox box; verify mounting location with fire department.
B. See MEP coordination schedule for mechanical equipment feeder wire size, conduit size, disconnect/starter size, etc.
C. Coordinate exact locations of mechanical equipment with mechanical contractor prior to rough-in.

KEY NOTES:
1. Provide 1 1/4" EMT, (3) #3, #8 GND for feeder.
2. Provide J-box flush in exterior wall and sleeve thru poured exterior wall for CCTV camera wiring.
3. Provide 2 1/2" schedule 40 main riser in mechanical equipment room.
LEVEL 1 LIGHTING PLAN

GENERAL NOTES:

A. FIXTURES MOUNTED DIAGONALLY ARE MOUNTED AT CEILING STRUCTURE.
B. SEE SHEET E0.2 FOR LIGHTING SCHEDULE & LIGHTING CONTROL DIAGRAM.
C. MOUNT SUSPENDED LIGHT FIXTURES IN FIRST FLOOR COLLECTIONS AT 8'-6" AFF.

KEY NOTES:

- PLEASE OFFICE OCCUPANCY & DAYLIGHTING CONTROLS ARE INTEGRAL TO FIXTURE; SEE LUMINAIRE SCHEDULE. EACH OFFICE SHALL HAVE MANUAL ON/OFF OVERRIDE SWITCH.
- ROOM CONTROLLER FOR LIGHTING IN ROOMS 102, 106, & 109. SEE DETAIL 2 / SHEET E0.2 FOR LIGHTING CONTROL DIAGRAM.

DRAWN BY: ____________________________
REVIEWED BY: ____________________________
DATE: ____________________________

MUSEUM OF THE ROCKIES
NEW COLLECTIONS + STORAGE FACILITY

SLATE#15056

LEVEL 1 KEY PLAN

LEVEL 1 LIGHTING PLAN

1/8" = 1'-0"
GENERAL NOTES:
A. Fixtures mounted diagonally are mounted at ceiling structure.
B. See Sheet E0.2 for lighting schedule & control diagram.

C. Secured Suspended light fixtures in second floor collections at 12'-0" aff.
EXPANDED METAL ON STEEL FRAMING MEZZANINE OPEN TO BELOW

COLLECTIONS

MEZZANINE

LV2-14

CCTV

BACK LOADING DOCK

MEZZANINE KEY PLAN

KEY NOTES:

1. FIXTURE OR OCCUPANCY SENSOR TO BE MOUNTED TO UNDERSIDE OF MEZZANINE.

GENERAL NOTES:

A. FIXTURES MOUNTED DIAGONALLY ARE MOUNTED AT CEILING STRUCTURE.

B. SEE SHEET E0.2 FOR LIGHTING SCHEDULE & LIGHTING CONTROL DIAGRAM.

LEVEL 2 UNDER MEZZANINE LIGHTING PLAN

MEZZANINE POWER & SYSTEMS PLAN

Material Lift Elevations

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