



ROGER L. DONALDSON, AIA P.L.C.
ARCHITECT

FOREST HILLS NATURE CENTER3
PAGE 2 OF 2

Project #24-43

- a. Modified drawings to show circuit designation for mechanical equipment GFU-1.
- b. Modified drawings to show carbon monoxide detector in mechanical room.

END OF ADDENDUM #3

**SECTION 00 41 13
BID PROPOSAL FORM**

BIDDERS NAME: _____
LEGAL ADDRESS: _____

TELEPHONE NO.: _____
FACSIMILE NO.: _____
EMAIL ADDRESS: _____
CONTACT NAME: _____
CONTACT MOBILE PHONE _____

PROPOSAL FOR: ALL TRADES CONSTRUCTION WORK
PROJECT NAME: **GRATIOT-ISABELLA RESD
NEW NATURE CENTER
ROGER L. DONALDSON, AIA P.L.C.
PROJECT #24-43 - FOREST HILLS NATURE CENTER
11297 N. RICH RD
ALMA, MICHIGAN 48801**

PROPOSAL

In response to your invitation to bid, the undersigned submits the following offer to enter into a contract with you and extends this offer for 90 calendar days subsequent to the opening of bids. This offer has been prepared after our examination of the complete plans and specifications, together with their related documents, and our examination of the site and conditions surrounding the construction of the proposed work including the availability of materials, equipment and labor. Included in this offer are all costs necessary to complete the ALL CONSTRUCTION WORK in accordance with the contract documents prepared by Roger L. Donaldson, AIA P.L.C. within the time set forth herein for the sum of:

**Bids Due – May 26, 2026 - 2:00 pm pm local time
GRATIOT-ISABELLA RESD – 1131 E. CENTER, ITHACA, MI 48847**

ADDENDUM SCHEDULE:

The above proposed bids and schedule includes the following addenda:

No. 1 dated _____ No. 2 dated _____ No. 3 dated _____

BID PROPOSALS:

Contractor shall submit a separate Proposal Number for all Trades for that Project Work is to be performed. Contractor is not required to submit a proposal for each project.

**PROJECT #24-43 - NEW NATURE CENTER
FOREST HILLS NATURE CENTER - PHASE 1**

Provide all work for New Nature Center and Demolition of 2 existing structures and related Work:

\$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

The undersigned hereby agrees to complete the above buildings area work within ____ calendar days.

**PROJECT #24-43 - NEW NATURE CENTER
FOREST HILLS NATURE CENTER – PHASE 2**

Provide all work for additional classrooms and hallway for New Nature Center and related Work:

\$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

The undersigned hereby agrees to complete the above buildings area work within ____ calendar days.

**GRATIOT-ISABELLA RESD
NEW NATURE CENTER - FOREST HILLS NATURE CENTER
ROGER L DONALDSON, AIA P.L.C.
PROJECT #24-43**

**PROJECT #24-43 - NEW NATURE CENTER
FOREST HILLS NATURE CENTER – COMBINED PHASE 1 & PHASE 2**

Provide all work for New Nature Center and Demolition of 2 existing structures and related Work:

\$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

The undersigned hereby agrees to complete the above buildings area work within ____ calendar days.

Alternates

**ALTERNATE #1 PROJECT #24-43 - NEW NATURE CENTER
ALTERNATE #1 – ASPHALT SHINGLES**

Provide Asphalt Shingles, and related work as shown,

(Add/Deduct) \$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

If awarded this Alternate the undersigned hereby agrees to complete

the work within ____ (additional / decreased) calendar days,

**ALTERNATE #2 PROJECT #24-43 - NEW NATURE CENTER
ALTERNATE #2 – GEOTHERMAL SYSTEM**

Provide all work for providing a Design/Build Geothermal System instead of Propane & Cooling Tower

(Add/Deduct) \$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

If awarded this Alternate the undersigned hereby agrees to complete

the work within ____ (additional / decreased) calendar days,

**ALTERNATE #3 PROJECT #24-43 - NEW NATURE CENTER
ALTERNATE #3– NEW WELL**

Provide alternate pricing for providing and installing a new well, pump, piping, pressure tank, and all associated accessories for the building.

(Add/Deduct) \$ _____

_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

If awarded this Alternate the undersigned hereby agrees to complete

the work within ____ (additional / decreased) calendar days,

FORFEITURE OF BID SECURITY

If within the 90 days this offer is valid, a letter is sent notifying the undersigned of the acceptance of this proposal, the undersigned agrees to deliver within the 10 succeeding days surety bonds in the form specified or will forfeit the enclosed certified or cashier's check or bid bond which accompanies this proposal.

FEE FOR CHANGES IN THE WORK

The undersigned hereby agrees to perform all additional changes in the work ordered by the Owner on the basis of reasonable expenditures, plus reasonable allowance of said cost for overhead and profit. Cost shall be limited to the following: Cost of materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; bond premiums; rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change.

The undersigned hereby agrees to charge the following fees, based on a mark-up percentage of the actual cost for overhead and profit combined, as stated hereinafter:

- For all additional work performed by the contractor's own forces, a fee of 5% percent of the actual cost as defined above.

- For all additional work subcontracted by the contractor, a fee of 5% percent of the subcontract sum for management, overhead and profit.

JOB CONTROL AND COORDINATION

If awarded the All Trades Construction Work Contract, the undersigned will assume control of the site and will coordinate the work of all the trades. All costs of controlling the site and coordinating the work of the subcontractors are included in this proposal.

SUBCONTRACTOR LISTING

The following is a list of the subcontractor(s) that will be performing work or manufacturer supplying material(s) on this project:

- Excavation _____
- Building Structures _____
- Concrete _____
- Mechanical _____
- Plumbing _____
- Electrical _____
- Fire Alarm _____

REGULATORY REQUIREMENTS

It is the Contractor's responsibility to confirm that all subcontractors are properly licensed and that all necessary permits are obtained before starting work.

The Owner reserves the right to reject any subcontractor not considered competent to prosecute the work. The Owner representative (s) may request the removal of any contracted person who is deemed unfit to perform the specified work in a competent and professional manner.

The site will be available for the contractor will have full access to the building, 24 hours a day..

The contractor will take every precaution to minimize the migration of dust and debris and to minimize noise where possible. The corridors will remain free of stored materials and debris during business hours. The Contractor will remove all debris created by this contract from the premises at the end of each workday.

If awarded this Contract, the undersigned agrees to commence work immediately upon receipt of Notice to Proceed.

In submitting this Proposal, it is understood that the right is reserved by the Owner to reject any and all Proposals.

The Owner reserves the right to accept or reject all alternates or to accept any one or more alternates without accepting those remaining.

TIME OF COMPLETION

1. Completion in general is defined as all work required and included in the Bid Documents, Specifications, Drawings, Federal and State Regulations, including clean-up, restoration, acceptable visual inspections, completion of change orders approved by the Owner, Architect and Contractor and do not add days to the construction calendar.
2. The Contractor agrees that by submitting a Bid, for base bid, to complete the project within the stipulated number of day to complete using regular and premium work hours as required to complete the project.
3. Contractor realizes he may need to work multiple shifts, weekends and holidays. Any premium wages are included in his Bid.
4. Days are noted as calendar days.
5. The Contractor has full access to the site during all hours.

SIGNATURE

The bidder declares the following legal status in submitting this proposal: (check one)

- A Corporation (INC or LLC) organized and existing under the laws of the state of Michigan,
- A Partnership,
- An Individual doing business as _____.

Respectfully submitted,

By: _____

Title: _____

Date: _____

Fed. Employer Identification No.: _____

State License No.: _____

END OF SECTION 00 41 13



ROGER L. DONALDSON, AIA P.L.C.
ARCHITECT

Member
International Code Council
American Institute of Architects
Association of Licensed Architects
National Fire Protection Association
National Frame Builders Association
Construction Specifications Institute
National Council of Architectural Registration Boards

NEW NATURE CENTER
GRATIOT-ISABELLA RESD
FOREST HILL HATURE CENTER
11297 N. RICH ROAD
ALMA, MICHIGAN 48801

ARCHITECTS PROJECT #24-43

DATE: May 19, 2026

Questions & Answers

The following clarifications, modifications and/or revisions to the above project shall be considered a part of the original specifications:

1. What is the project Schedule
Response: Plan on Starting by August. Project is likely a 12-18 month project depending on product delivery schedules.
2. Is this a “Buy America” project?
Response: No

3. Who will be responsible for contacting and payment for the power company to relocate the existing Power Pole(s)?
Response: Contractor or Electrical Contractor
4. Do you have a preference for a well drilling contractor, I assume this is by GC?
Response: Owner has used Trayers out of Vestaburg, but not mandatory to use them.

5. Are there any Liquidated Damages on the project?
Response: No
6. Builders Risk to be by Contractor or the owner?
Response: By Contractor
7. What are the requirements for temp power on the buildings
Response: 240/120 volt, single phase, 100 amps to the granary building plus whatever power is required for new construction.
8. Has consumers energy been contacted for power removal/temp power?
Response: Not for temporary power
9. Is contractor to pay for temp power? If so, what are the past couple months of usage on buildings so they can be calculated into price?
Response: Yes
10. Is there an asbestos report or does contractor need to include report and allowance for abatement?
Response: Provide an \$10,000 Allowance for the report and any abatements that is required.
11. To confirm only bonds on project are 100% Performance & Payment and 5% Bid Bond?
Response: Refer to Section 00 52 24 AIA A101- Exhibit A for insurance and bond requirements.

12. On the Forest Hills Nature Center the plans call for 84’7” trusses in 1 piece. Both of my truss suppliers I work with can’t/won’t make them or ship them. Wondering how you want me to approach that.

4787 Tartan Lane

Holt, Michigan 48842-1935

RogerAIA@comcast.net
email

(517) 694-0011
voice

D E S I G N I N G A B E T T E R F U T U R E



Response: We can accept 2-piece trusses, piggyback trusses may be used the top over 2x4 purlins as directed by the Truss Engineer.

13. The exterior walls call for 7/16 OSB with Rigid R5 insulation or zip. My zip options are R3.6 or R6.6. which would you prefer?

Response: Code minimum is R-5, so we need to use the R6.6.

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14. I see in Specification Section 84200-Aluminum Glass Doors it appears Cross Aluminum is a sole supplier. Will any other Door Suppliers be considered as equal such as Specialite, Vale Doors, Kawneer, or Tubelite?

Response: Main Entrance Door to be Cross, Kawneer, Tubelite, SpecialLite or Vale

15. Regarding the FRP Doors called out in the door schedule, I am not seeing a FRP Door specification. Will Specialite or Vale Doors be viable suppliers for the FRP Doors.

Response: Yes, Special Lite is basis of design, Spec to be issued with Addendum #1.

16. At Doors 118A and 201, a hollow metal door frame is called for. Shouldn't these door frames be Aluminum, typical to the rest of the FRP Door /aluminum frames in the door schedule?

Response: FRP Door in AL frame.

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17. Confirm requirements / responsibility for third party testing, commissioning, etc. Or if any scope will be owner direct.

Response: Contractor is responsible

18. Confirm whether Owner or Contractor carries geotechnical/testing agency costs, including SME observations, proofrolling, compaction testing, and special inspections.

Response: Owner has paid for test to date; Contractor will include cost for during construction

19. Clarify base-bid assumptions for unsuitable soils, undercutting, existing fill removal, proofrolling, engineered fill, and unit prices/allowances.

Response: See Section 00 31 32 - Geotechnical Data

20. Confirm all allowances to include in base bid, including testing, inspections, controls, signage, utility work, or owner-directed items.

Response: Contractor is responsible

21. Confirm responsibility for temporary utilities, temporary heat, snow removal, site access, staging, fencing, and site security.

Response: Contractor is responsible

22. Identify existing utilities to remain, be relocated, abandoned in place, or removed; provide a utility responsibility matrix.

Response: Utility is shown on the Site Civil sheets developed by KEBS, sheets 1 through 9

23. Confirm demolition scope for existing Nature Center and adjoining/northern storage or ancillary building, including foundations, slabs, utilities, septic, salvage, disposal, and restoration.

Response: Contractor to remove all and restore surfaces with grass seeding. Existing Septic field may be abandoned in place.



24. Confirm whether hazardous material testing has been completed. Age and condition of existing buildings and infrastructure isn't clear from documents included.
Response: No testing has been completed. Provide an \$10,000 Allowance for the report and any abatements that is required.
25. Clarify asphalt shingle alternate scope, including underlayment, ice/water shield, flashing, gutters, fascia/trim, snow guards, roof penetrations, warranty, and structural/loading changes.
Response: See Section 07 31 13 Asphalt Shingles.
26. Clarify propane provider scope and cost responsibility, including tank lease/purchase, pad/protection, trenching/backfill, regulator, piping limits, coordination, startup, and initial fuel fill.
Response: The propane provider shall provide and install the propane tank, regulator, piping, and all associated accessories between the tank and regulator. Tank to be filled full.
27. Confirm well provider scope and cost responsibility, including pressure tank, piping/accessories between well and pressure tank, controls, power, startup, and where plumbing scope begins.
Response: The well drilling contractor is responsible for extending a new 2" water line from the existing well to the new building. The contractor is responsible for providing and installing the piping, pressure tank, and all associated accessories. Plumbing contractors scope starts after the pressure tank. See Addendum #1, Note added to Sheet C-400
28. Confirm water filter and water softener basis of design and whether an addendum will be issued before bid; if not, provide required allowance.
Response: Provide \$40,000 allowance for equipment and labor to install water filter and water softener.
29. Confirm Owner vs Contractor responsibility for access control software, credentials, programming, cloud/subscription fees, commissioning, and training.
Response: Contractor to furnish and install all equipment, wiring, and conduit and to coordinate integration into the RESD's existing multi-building system. New software for this building, commissioning and training are to be provided by the contractor. Coordinate programming with owner. All costs associated with this project are to be included in the bid.
30. Can you please specify the window materials, or is there a desired manufacturer
Response: Anderson "A" Series, Spec to be issued with Addendum #1.
31. Can you please specify the desired fence around the electrical equipment.
Response: See KEBS Drawings, Sheet 9, "TYPICAL WOOD SCREEN FENCE ELEVATION"
32. Will there be a landscaping plan, or should we include an allowance?
Response: By Owner
33. Is there a spec for the exterior signage, or is this owner provided?
Response: By Owner
34. Is this a prevailing wage project?
Response: No
35. The wood door veneer sates cut red oak, but this cut is not available in red oak. Only plain sliced is available for this door is that acceptable?
Response: Yes, plain sliced is acceptable
36. Door 118A - Reads FRP to HM but is an AL callout on drawing, Please Confirm the correct door type.
Response: FRP Door in AL frame.



37. Door 201 - Reads FRP to HM but is an AL callout on drawing. Please Confirm the correct door type.

Response: FRP Door in AL frame.

38. Door 113 shows 1 hour rating but that is actually 114. Please confirm which door is fire rated.

Response: Yes, Door 113 should be 1 hour rated.

39. What finish level of concrete polishing is required.

Response: Class B "salt & pepper", Level 3 (gloss) finish, Spec to be issued with Addendum #1.

40. Will the ductwork (spiral) be painted?

Response: No, exposed

41. Will the T&G need to be stained and finished?

Response: Yes

42. Will the exposed trusses need and stain and finish?

Response: Yes

43. What will be the finish on the FRP doors?

Response: FRP Doors are prefinished

44. Door #118A and 201 – Frames and door slab styles do not match.

Response: FRP Doors in AL frames

45. We would like to know if there is a spec for 27 0000 or bid category or if the owner installs this. We need clarification on the key notes for Print E-500.

Response: Keynotes #9, 10 added, Sheet E-500 Reissued with Addendum #1.

46. I can't find the thickness of the Tectum ceiling panels, can you please provide that information?

Response: Tectum Pinnacle Panels are standard 1" Thick.

Issued with Addendum #3:

47. Are the Tectum panels natural and getting painted or are they factory white? Are the panels square edge or beveled?

Response: The Tectum Finale PB panels come standard with beveled edges and have 26 available colors to select from..

48. What is the Occupancy Type and Number for the project.

Response: Occupancy Type: E-Educational, Combined Phase 1 and 2 Occupancy of 250.

49. Specs reference Fire suppression.

Response: No Fire Suppression is required.

50. A1.1 references section 6/A3.3. This detail does not exist on sheet A3.3.

Response: Section 6/A3.3 is shown on Sheet A3.2.

51. A1.1 references section 5/A3.1, but no detail exist

Response: Section 5/A3.1 is shown on Sheet 3.2, Detail 5/A3.2

52. Addendum sheet A3.3 shows a blow-up on the outside wall, but not detail is referenced

Response: Typical Exterior wall, Detail 1/A5.1

53. Is there a detail for the canopy columns



Response: Not show, basic 8" Concrete Masonry base with stone veneer finish and limestone cap. Steel Column to extend to top of Concrete Foundation Pier.

54. Frame elevation IX – Does not match the building elevations

Response: Elevation does not show the perimeter frame that is shown on Elevation IX.

-
55. FrIs the clerestory opening shown on A2.1 West Elevation to be storefront?

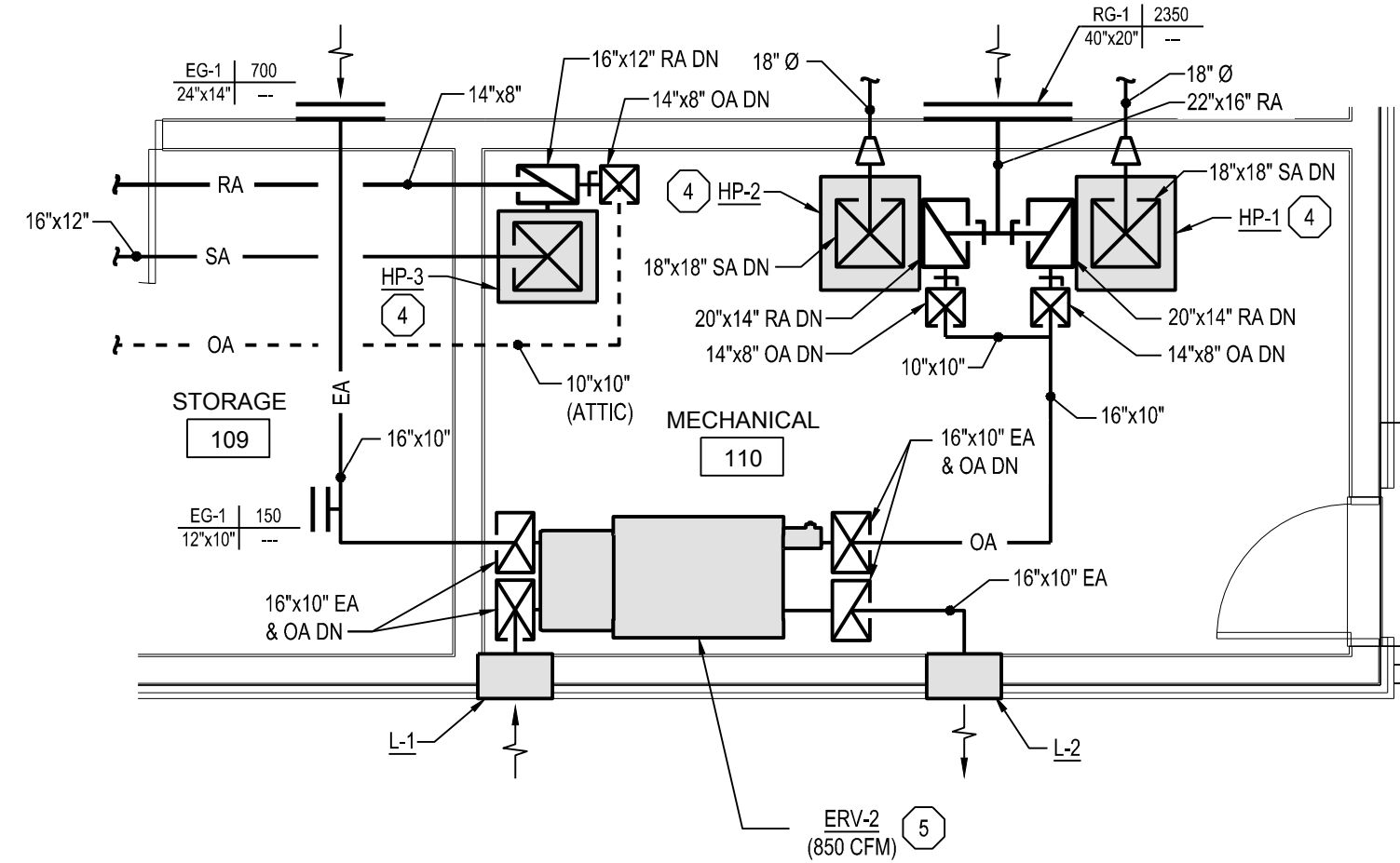
Response: Windows to match the fixed windows below, Anderson Series "A" Stationary or equal.

GENERAL NOTES

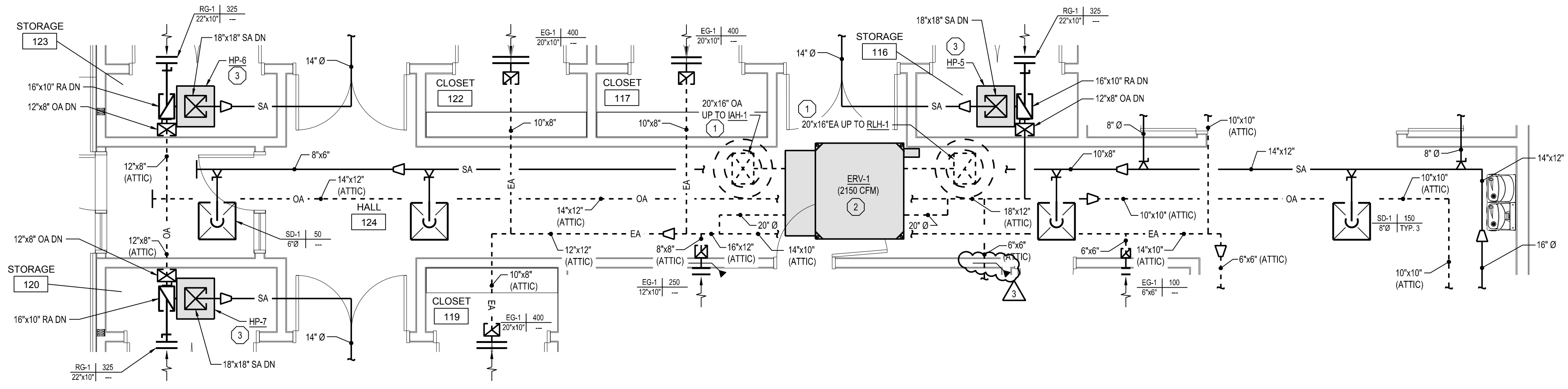
1. ALL ASSOCIATED ENERGY RECOVERY VENTILATION DUCTWORK SHALL BE INSULATED.

HVAC KEY NOTES

1. INSTALL INTAKE/RELIEF AIR HOOD AND ASSOCIATED CURB ON ROOF AT LOCATION SHOWN. INTAKE AIR HOOD SHALL BE INSTALLED AT LEAST 10' AWAY FROM BUILDING AND PLUMBING EXHAUST/VENT TERMINATIONS.
2. INSTALL ENERGY RECOVERY VENTILATOR IN ATTIC AT LOCATION SHOWN. ASSOCIATED OUTSIDE AIR AND EXHAUST DUCTWORK SHALL BE INSULATED AND ROUTED THROUGH THE ATTIC FROM THE ENERGY RECOVERY VENTILATOR TO THE ASSOCIATED EXHAUST GRILL/HEAT PUMP. COORDINATE THE INSTALLATION ATTIC ACCESS WITH GENERAL TRADES CONTRACTOR PRIOR TO CONSTRUCTION. COORDINATE THE UNIT SIZE AND CLEARANCES WITH THE GENERAL TRADES CONTRACTOR PRIOR TO THE TRUSSES BEING ORDERED TO CONFIRM THERE IS ADEQUATE SPACE AND SUPPORT FOR THE UNIT WITHIN THE TRUSS WEBBING.
3. INSTALL WATER SOURCE HEAT PUMP AT LOCATION SHOWN. LINE THE FIRST 10' OF SUPPLY AND RETURN DUCTWORK. PROVIDE AND INSTALL UNIT ON 3" TALL CUSTOM SUPPORT STAND BUILT OUT OF 1-1/2"x1-1/2" ANGLE IRON WELDED TOGETHER. SUPPORT STAND SHALL NOT INTERFERE WITH UNIT ACCESS OR DUCT/PIPE CONNECTIONS.
4. INSTALL WATER SOURCE HEAT PUMP ON 4" CONCRETE PAD AT LOCATION SHOWN. LINE THE FIRST 10' OF SUPPLY AND RETURN DUCTWORK.
5. INSTALL ENERGY RECOVERY VENTILATOR AT LOCATION SHOWN IN ATTIC. MOUNT TO EXTERIOR WALL.



2 HVAC ENLARGEMENT - 110 MECHANICAL
SCALE: 1/4" = 1'-0"



1 HVAC ENLARGEMENT - 124 HALL
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION
1	08/09/2008	ADDITIONAL #1
2	10/21/2008	SHEET RE-DESIGNED
3	10/29/2008	Revised and Fan Revamp
4		
5		
6		
7		
8		
9		
10		

ELECTRICAL SYMBOLS LEGEND

OUTLETS	FIXTURES	SERVICE and EQUIPMENT
<ul style="list-style-type: none"> ⊕ SINGLE RECEPTACLE (120 VOLT) ⊕ DUPLEX RECEPTACLE ⊕ EMERGENCY RECEPTACLE ⊕ DOUBLE DUPLEX RECEPTACLE ⊕ FLUSH FLOOR BOX ⊕ SURFACE FLOOR BOX ⊕ SPECIAL EQUIPMENT RECEPTACLE ⊕ TELEPHONE OUTLET ▽ DATA OUTLET ▽ TELEPHONE / DATA OUTLET ■ POWER POLE ⊕ JUNCTION BOX ⊕ WALL JUNCTION BOX ⊕ PULL (JUNCTION) BOX ⊕ UNDERFLOOR JUNCTION BOX ⊕ CEILING MOUNTED WIFI 	<ul style="list-style-type: none"> □ LIGHT FIXTURE — STRIP FIXTURE ⊕ EMERGENCY LIGHT FIXTURE ⊕ IN-GRADE LIGHT FIXTURE ⊕ SPOTLIGHT (number of heads shown) ⊕ EXIT SIGN (face & direction as shown) ⊕ WALL MOUNT LIGHT FIXTURE ⊕ CEILING LIGHT FIXTURE ⊕ TRACK & FIXTURE ⊕ STREET TYPE POLE FIXTURE ⊕ POLE MOUNTED LIGHT FIXTURE ⊕ EXTERIOR WALL MOUNT LIGHT FIXTURE ⊕ WALLPACK LIGHT FIXTURE ⊕ SPECIAL PURPOSE LIGHT FIXTURE ⊕ HIGH BAY LIGHT FIXTURE ⊕ EMERGENCY EGRESS LIGHT FIXTURE (number of heads shown) ⊕ DOCK LIGHT FIXTURE 	<ul style="list-style-type: none"> TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION VFD VARIABLE FREQUENCY DRIVE T TRANSFORMER F FUSED DISCONNECT SWITCH M MAGNETIC STARTER COMB. STARTER PANELBOARD, SURFACE MOUNTED PANELBOARD, FLUSH MOUNTED WEATHERHEAD UTILITY METER, AS REQUIRED DIGITAL EQUIPMENT METER, AS REQUIRED CURRENT TRANSFORMERS GENERATOR, KW SHOWN TELEPHONE TERMINAL BOARD GROUND CONNECTION PER N.E.C. WIREWAY TRANSFER SWITCH ENCLOSED CIRCUIT BREAKER CAPACITOR
<ul style="list-style-type: none"> ⊕ SINGLE-POLE SWITCH ⊕ THREE-WAY SWITCH ⊕ FOUR-WAY SWITCH ⊕ SWITCH WITH PILOT LIGHT ⊕ THERMAL OVERLOAD SWITCH ⊕ MANUAL MOTOR SWITCH ⊕ KEY SWITCH ⊕ TIME SWITCH ⊕ DIMMER SWITCH 	<ul style="list-style-type: none"> — CONDUIT INSTALLED (by E.C.) — CONDUIT INSTALLED (by others) — CONDUIT STUB UP — CONDUIT STUB DOWN — HOME RUN (with circuit numbers) — END OF CONDUIT RUN — END OF CONDUIT RUN, CAP AND STAKE — *CONDUIT RUN CONTINUES* INDICATION — FLEXIBLE PIGTAILS/CONNECTIONS — WIREMOLD AS SPECIFIED — PLUGMOLD AS SPECIFIED — BUS DUCT — UNDERFLOOR DUCT 	<ul style="list-style-type: none"> ⊕ THERMOSTAT ⊕ HUMIDISTAT ⊕ PHOTOCELL (voltage as required) ⊕ TIME CLOCK (24 hour U.O.N.) ⊕ PUSHBUTTON STATION (number of buttons indicated) ⊕ CONTROL TRANSFORMER ⊕ LIGHTING CONTACTOR ⊕ IRRIGATION CONTROLLER (120 volt xVxV connection by x/C) ⊕ WALL MOUNT DUAL TECHNOLOGY SENSOR ⊕ OCCUPANCY SENSOR / PHOTOCELL ⊕ ULTRASONIC SENSOR - 360° - 2 CIRCUIT ⊕ DUAL TECHNOLOGY SENSOR - 360° - 1000 SQ FT ⊕ DUAL TECHNOLOGY SENSOR - 360° - 500 SQ FT ⊕ SWITCH STYLE OCCUPANCY SENSOR ⊕ POWER PACK ⊕ DIGITAL TIME SWITCH
<ul style="list-style-type: none"> ⊕ SINGLE PHASE MOTOR ⊕ THREE PHASE MOTOR ⊕ RESISTANCE HEATER, KW SHOWN ⊕ PIPE TRACE HEATER ⊕ ELECTRIC UNIT HEATER ⊕ ELECTRIC WATER HEATER 	<ul style="list-style-type: none"> ⊕ SPEAKER ⊕ WALL MOUNTED SPEAKER ⊕ WALL MOUNTED SPEAKER / CLOCK COMBO ⊕ SINGLE FACE CLOCK ⊕ DUAL FACE CLOCK ⊕ VIDEO INPUT ⊕ AUDIO / VIDEO INPUT ⊕ BELL ⊕ VOLUME CONTROL ⊕ BUZZER ⊕ CHIME ⊕ TELEVISION OUTLET ⊕ MICROPHONE OUTLET ⊕ INTERCOM OUTLET ⊕ CAMERA ⊕ DOOR CONTACT ⊕ MOTION DETECTOR ⊕ BEAM DETECTOR ⊕ KEY PAD ⊕ SECURITY SYSTEM CONTROL PANEL ⊕ CCTV CONTROL PANEL ⊕ CARD READER ⊕ STUDENT STATION ⊕ ADMINISTRATION STATION ⊕ TEACHER STATION ⊕ GLASS BREAK ⊕ AI PHONE 	<ul style="list-style-type: none"> ⊕ FIRE ALARM ⊕ SMOKE DETECTOR ⊕ HEAT DETECTOR ⊕ DUCT SMOKE DETECTOR ⊕ DUCT SMOKE DETECTOR ⊕ HORN ⊕ HORN & LIGHT ⊕ SPEAKER ⊕ SPEAKER & LIGHT ⊕ PULL STATION ⊕ FIRE ALARM CONTROL PANEL ⊕ ANNUNCIATOR PANEL ⊕ END OF LINE DEVICE ⊕ REMOTE INDICATING LIGHT, WALL MTD. ⊕ REMOTE INDICATING LIGHT, CLG. MTD. ⊕ MAGNETIC DOOR HOLDER ⊕ FIREFIGHTER COMMUNICATION JACK ⊕ FLOW SWITCH (furnished by FP/C) ⊕ TAMPER SWITCH (furnished by FP/C) ⊕ VISUAL ONLY UNIT ⊕ FIRE CONTROL POWER SUPPLY ⊕ MONITOR MODULE ⊕ CONTROL MODULE ⊕ CARBON MONOXIDE DETECTOR
<ul style="list-style-type: none"> ⊕ NURSE CALL ⊕ NURSE CALL CONTROLLER ⊕ MASTER STATION ⊕ EMERGENCY PULL STATION ⊕ EMERGENCY PUSH STATION ⊕ CODE BLUE STATION ⊕ PENDENT INTERFACE ⊕ BED / LIGHT INTERFACE ⊕ SINGLE BED STATION ⊕ DUAL BED STATION ⊕ DOME LIGHT ⊕ STAFF REGISTER STATION ⊕ STAFF STATION ⊕ DUTY STATION 	<ul style="list-style-type: none"> ⊕ SOUND and SIGNAL ⊕ CAMERA ⊕ DOOR CONTACT ⊕ MOTION DETECTOR ⊕ BEAM DETECTOR ⊕ KEY PAD ⊕ SECURITY SYSTEM CONTROL PANEL ⊕ CCTV CONTROL PANEL ⊕ CARD READER ⊕ STUDENT STATION ⊕ ADMINISTRATION STATION ⊕ TEACHER STATION ⊕ GLASS BREAK ⊕ AI PHONE 	<ul style="list-style-type: none"> ⊕ FIRE ALARM ⊕ SMOKE DETECTOR ⊕ HEAT DETECTOR ⊕ DUCT SMOKE DETECTOR ⊕ DUCT SMOKE DETECTOR ⊕ HORN ⊕ HORN & LIGHT ⊕ SPEAKER ⊕ SPEAKER & LIGHT ⊕ PULL STATION ⊕ FIRE ALARM CONTROL PANEL ⊕ ANNUNCIATOR PANEL ⊕ END OF LINE DEVICE ⊕ REMOTE INDICATING LIGHT, WALL MTD. ⊕ REMOTE INDICATING LIGHT, CLG. MTD. ⊕ MAGNETIC DOOR HOLDER ⊕ FIREFIGHTER COMMUNICATION JACK ⊕ FLOW SWITCH (furnished by FP/C) ⊕ TAMPER SWITCH (furnished by FP/C) ⊕ VISUAL ONLY UNIT ⊕ FIRE CONTROL POWER SUPPLY ⊕ MONITOR MODULE ⊕ CONTROL MODULE ⊕ CARBON MONOXIDE DETECTOR
<ul style="list-style-type: none"> ⊕ DEMOLITION NOTE ⊕ PLAN NOTE ⊕ ADDENDUM NOTE 		

GENERAL ELECTRICAL NOTES:

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NEC, AND ALL STATE AND LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND CONNECTIONS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND EQUIPMENT DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER, CONDUITS, CABLETRAY, AND OTHER COMPONENTS AS SHOWN ON THE EQUIPMENT PROVIDER DRAWINGS FOR INSTALLATION OF SYSTEM.
4. "BACK TO BACK" OR THROUGH THE WALL BOXES SHALL NOT BE USED.
5. INSTALL HANDLE LOCK-ON ON ALL CIRCUIT BREAKERS CONTROLLING NIGHT LIGHT, EMERGENCY LIGHT AND EXIT LIGHT CIRCUITS.
6. ALL RECEPTACLES SHALL BE HARD USE, SPECIFICATION GRADE.
7. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY APPLICABLE CODES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER TYPE SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, PER CODE OR PROVIDED WITH A GFCI BREAKER.
9. ALL CONDUCTORS SHALL BE COPPER, ALUMINUM WIRES SHALL NOT BE USED.
10. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR POWER FEEDS AND 1" FOR DATA FEEDS.
11. FINAL CONNECTION TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.
12. 120/208VAC CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC, COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
13. PROVIDE EQUIPMENT GROUNDING CONDUCTORS FOR ALL POWER AND LIGHTING CIRCUITS.
14. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM. ALL CONTROL CONDUCTORS SHALL BE 14 AWG MINIMUM OR AS SPECIFIED BY MANUFACTURER.
15. DEDICATED NEUTRAL SHALL BE PROVIDED FOR ALL CIRCUITS. SHARED NEUTRALS ARE NOT ALLOWED.
16. BASIS OF DESIGN IS FOR A COMPLETE ELECTRICAL SYSTEM, INSTALLED PER CODE REQUIREMENTS.
17. PROVIDE AN UNSWITCHED HOT TO ALL EMERGENCY BATTERY PACKS, LIGHTING INVERTERS AND EMERGENCY LIGHTING UNITS AHEAD OF AN LIGHTING CONTROLS FROM THE BRANCH CIRCUIT SERVING LIGHTING IN THE SURROUNDING AREA.
18. ALL RECEPTACLES IN GARAGE AREA SHALL BE MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.

ABBREVIATIONS LEGEND

A ACU- AFF AHJ AIC AS ATB	AMPS ABOVE COUNTER AIR CONDITIONING UNIT ABOVE FINISHED FLOOR AUTHORITY HAVING JURISDICTION AIR HANDLING UNIT AMPS INTERRUPTING CAPACITY ABOVE SHELF AUTOMATIC TRANSFER SWITCH	GC GFI GND	GENERAL CONTRACTOR GROUND FAULT INTERRUPTER GROUND	P P. PB PNL PRV- PVC PWR	POLE PUMP PULL BOX PANEL POWER ROOF VENTILATOR POLY VINYL CHLORIDE POWER
B- BC BLDG	BOILER BELOW COUNTER BUILDING	IG IMC	ISOLATED GROUND INTERMEDIATE METAL CONDUIT	RECEPT RGC RTU	RECEPTACLE RIGID GALVANIZED STEEL CONDUIT ROOF TOP UNIT
CHLR- CND (C) CKT CKT BKR CT- CU- CUH-	CHILLER CONDUIT CIRCUIT CIRCUIT BREAKER COOLING TOWER CONDENSING UNIT CABINET UNIT HEATER	JB	JUNCTION BOX	LC LT LTG LT FLEX	TEMPERATURE CONTROL CONTRACTOR TAMPER PROOF RECEPTACLE TAMPER PROOF SWITCH TYPICAL
DFU- DISC DWG DWH-	DUCT FURNACE DISCONNECT DRAWING DOMESTIC WATER HEATER	MC MCC MIN MLO MT MTD MTG MJAU-	MECHANICAL CONTRACTOR MOTOR CONTROL CENTER MINIMUM MAIN LUG ONLY MOUNT MOUNTED MOUNTING MAKE-UP AIR UNIT	UF UH- UL UNO	UNDER FLOOR UNIT HEATER UNDERWRITERS' LABORATORIES, INC. UNLESS NOTED OTHERWISE
EBB- EC EF- EM EMT EWC FFS FLS- FU-	ELECTRIC BASEBOARD ELECTRICAL CONTRACTOR EXHAUST FAN EMERGENCY ELECTRICAL METALLIC TUBING ELECTRIC WATER COOLER EXISTING	NC NIC NL NO NTS	NORMALLY CLOSED NOT IN CONTRACT NIGHT LIGHT NORMALLY OPEN NOT TO SCALE	V VL W W/ W/O WP	VOLTS VERIFY LOCATION WITH OWNER WATTS WITH WITHOUT WEATHER PROOF TRANSFORMER
FLA FLEX FLR FLUOR FSES FFS FU-	FULL LOAD AMPS FLEXIBLE CONDUIT FLOOR FLUORESCENT FOOD SERVICE EQUIP. SUPPLIER FIRE/SMOKE FURNACE				

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION AND COMMENTS	DIMMING INFO	FIXTURE MOUNTING HEIGHT	LIGHT ENGINE
LA	LITHONIA ELITE OR EQUAL	CSS-L48-AL03-MVOLT-MIN10-2T-40K-80CRI OEC4-LED-3000L4000L5000L-DIM10-MVOLT-25K40K/50K-85	4" SURFACE MOUNTED LINEAR FIXTURE.	0-10V	SURFACE MOUNTED	3000 LUMENS 25W, 4000K LED
LAEM	LITHONIA ELITE OR EQUAL	CSS-L48-AL03-MVOLT-MIN10-2T-40K-80CRI-E10W OEC4-LED-3000L4000L5000L-DIM10-MVOLT-25K40K/50K-85- O-EMG-LED	4" SURFACE MOUNTED LINEAR FIXTURE WITH 10W EMERGENCY BATTERY PACK.	0-10V	SURFACE MOUNTED	3000 LUMENS 25W, 4000K LED
LB60	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2PID-60FT-MSL8-80CRI-40K-600LMF-80CRI-40K-1300LMF-MIN1 -FL-MVOLT-NLTAIR2-APR-SAPR EX2DI-A-HE-840H0-840-XX-ACXJB-UJ-LS-1-W-SNSLM	60" SUSPENDED LINEAR FIXTURE WITH DIRECT/INDIRECT LIGHTING AND INTEGRATED SENSORS. PROVIDE REQUIRED SUSPENSION MOUNTING HARDWARE.	0-10V	REFER TO FLOOR PLAN	42000 LUMENS 396W, 4000K LED
LBEM	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2PID-XXFT-MSL4-80CRI-40K-600LMF-80CRI-40K-1300LMF-MIN1 -FL-MVOLT-1E10W/CP-NLTAIR2-APR-SAPR EX2DI-A-HE-840H0-840-XX-ACXJB-UJ-LS-1-W-FSB-SNSLM	4" SUSPENDED LINEAR FIXTURE WITH DIRECT/INDIRECT LIGHTING, INTEGRATED SENSORS, AND 10W EMERGENCY BATTERY PACK. PROVIDE REQUIRED SUSPENSION MOUNTING HARDWARE.	0-10V	REFER TO FLOOR PLAN	900 LUMENS/FT 6.6W/FT, 4000K LED
LC	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2PID-XXFT-MSL8-80CRI-40K-400LMF-80CRI-140K-1300LMF-MIN1 -FL-MVOLT-NLTAIR2-APR-SAPR EX2DI-A-HE-840-840-XX-ACXJB-UJ-LS-1-W-SNSLM	SUSPENDED LINEAR FIXTURE WITH DIRECT/INDIRECT LIGHTING AND INTEGRATED SENSORS. COORDINATE FIXTURE RUN LENGTH WITH FLOORPLAN. PROVIDE REQUIRED SUSPENSION MOUNTING HARDWARE.	0-10V	8'-6" AFF	700 LUMENS/FT 5.1W/FT, 4000K LED
LCEM	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2PID-XXFT-MSL4-80CRI-40K-400LMF-80CRI-140K-1300LMF-MIN1 -FL-MVOLT-1E10W/CP-NLTAIR2-APR-SAPR EX2DI-A-HE-840-840-XX-ACXJB-UJ-LS-1-W-FSB-SNSLM	4" SUSPENDED LINEAR FIXTURE WITH DIRECT/INDIRECT LIGHTING, INTEGRATED SENSORS AND 10W EMERGENCY BATTERY PACK. PROVIDE REQUIRED SUSPENSION MOUNTING HARDWARE.	0-10V	8'-6" AFF	700 LUMENS/FT 5.1W/FT, 4000K LED
LD	MARK ARCHITECTURAL PINNACLE OR EQUAL	SL2L-XXFT-FLP-80CRI-40K-400LMF-MIN1-MVOLT-NLTAIR2-API EV1D-A-HE-840-XX-G1-U-FSD-1-W	RECESSED LINEAR FIXTURE WITH INTEGRATED OCCUPANCY SENSORS. COORDINATE FIXTURE RUN LENGTH WITH FLOORPLAN.	0-10V	RECESSED	400 LUMENS/FT 3.14W/FT, 4000K LED
LDEM	MARK ARCHITECTURAL PINNACLE OR EQUAL	SL2L-XXFT-FLP-80CRI-40K-400LMF-MIN1-MVOLT-NLTAIR2-API -E10W/CP EV1D-A-HE-840-XX-G1-U-FSD-1-W-FSB	4" RECESSED LINEAR FIXTURE WITH INTEGRATED SENSORS AND 10W EMERGENCY BATTERY PACK.	0-10V	RECESSED	400 LUMENS/FT 3.14W/FT, 4000K LED
LE	MARK ARCHITECTURAL PINNACLE OR EQUAL	WHSPR-LCTR-2X4-80CRI-40K-3000LM-MIN1-MVOLT-SWC- NLTAIR2-PIR TR24-W-G9-UJ-DL2-1-W	RECESSED 2X4 TROFFER WITH INTEGRATED SENSORS	0-10V	RECESSED	3000 LUMENS 21W, 4000K LED
LEEM	MARK ARCHITECTURAL PINNACLE OR EQUAL	WHSPR-LCTR-2X4-80CRI-40K-3000LM-MIN1-MVOLT-SWC-E10W NLTAIR2-PIR TR24-W-G9-UJ-DL2-1-FSB-W	RECESSED 2X4 TROFFER WITH INTEGRATED SENSORS AND 10W EMERGENCY BATTERY PACK.	0-10V	RECESSED	3000 LUMENS 21W, 4000K LED
LF	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2SD-LLP-XXFT-80CRI-40K-600LMF-SCT-MIN1-FLL-MVOLT- NLTAIR2-APR EV1D-A-HE-840H0-XX-G1-U-FSD-1-W-FSB	4" SURFACE MOUNTED LINEAR FIXTURE WITH INTEGRATED OCCUPANCY SENSORS.	0-10V	SURFACE	600 LUMENS/FT 4.7W/FT, 4000K LED
LFEM	MARK ARCHITECTURAL PINNACLE OR EQUAL	S2SD-LLP-XXFT-80CRI-40K-400LMF-SCT-MIN1-FLL-MVOLT- E10W/CP-NLTAIR2-APR EV1D-A-HE-840H0-XX-G1-U-FSD-1-W-FSB	4" SURFACE MOUNTED LINEAR FIXTURE WITH INTEGRATED OCCUPANCY SENSORS AND 10W EMERGENCY BATTERY PACK.	0-10V	SURFACE	600 LUMENS/FT 4.7W/FT, 4000K LED
LG	LITHONIA H.E. WILLIAMS OR EQUAL	LDN6-40104-06-MVOLT-G21 6DR-L10-8-40-DIM-UNV-O-M-CS	6" LED DOWNLIGHT	0-10V	RECESSED	1000 LUMENS 9W, 4000K LED
LH	LUMENPULSE JESCO OR EQUAL	LATS2-A-120-L07-40K-CR90-MFR H2-L562S-4090-40D	LED TRACK LIGHTING	0-10V	SURFACE	700 LUMENS 7W, 4000K LED
LJ	LUMENWERX PINNACLE OR EQUAL	VIAWETS-D-PYC-HLO-SW-90CRI-500LMF-27K-4FT-UNV-D1 EX3-WET-N-827-XX-BOR-S-U-FSD-1	SURFACE MOUNTED WET RATED FIXTURE	0-10V	SURFACE	2000 LUMENS 23W, 2700K LED
LJ	LITHONIA NLS OR EQUAL	WDGE2-LED-P2-27K-80CRI-TFTM-MVOLT HRM-1-T4TV-16L-27K8-UNV-WM	EXTERIOR WALLPACK, 2700K COLOR TEMPERATURE FOR OUTDOOR USE.	0-10V	BUILDING MOUNTED	1847 LUMENS 19W, 2700K LED
LL	LITHONIA H.E. WILLIAMS OR EQUAL	LDN6-271104-06-MVOLT-G21 6DR-L10-8-27-DIM-UNV-RA-M-OF-CS-CS-IP	6" WET RATED LED DOWNLIGHT, 2700K COLOR TEMPERATURE FOR OUTDOOR USE.	0-10V	RECESSED	1000 LUMENS 9W, 2700K LED
XA	LITHONIA H.E. WILLIAMS OR EQUAL	LQM-S-3-G-MVOLT-EL-HO EXIT-GEM-BLK-D	LED EXIT SIGN WITH BLACK FACE AND GREEN LETTERING	0-10V	UNIVERSAL	LED
YB	LITHONIA BEGHELLI OR EQUAL	ERE-GY-T-SQ-WP BBXWSEHOB	LED BATTERY POWERED EXTERIOR EM LIGHTING	0-10V	UNIVERSAL	LED

ROGER L. DONALDSON AIA P.L.C.
ARCHITECT
4181 Tartan Lane
Highland, Michigan 48842-1935
Tel: (517) 694-0011 email: Roger@rla-consult.net

545 S. WILSON ST. ANN ARBOR, MI 48106
PHONE: (734) 487-2011
FAX: (734) 487-2012
www.matrix-engineers.com
Matrix Project No. 2020000

MATRIX
CONSULTING ENGINEERS, INC.

CONSULTANT

Forest Hills Nature Center
New Nature Center
1297 N Rich Rd, Alma, MI 48801
Seville Township, Gratiot County
Alma, Michigan 48801

PROJECT #24-43

NO.	DATE	DESCRIPTION
1	08/19/2025	ADDITIONAL #1
2	08/21/2025	SHEET RE-ASSIGNED
3	08/29/2025	Building and Plan Review
4		
5		
6		
7		
8		
9		
10		

ELECTRICAL - SYMBOLS, NOTES, AND ABBREVIATIONS

SHEET TITLE

E-100
SHEET NUMBER

ELECTRICAL KEY NOTES

- 1 (2) #10, (1) #10 GND, (1) 3/4" CND.
- 2 COORDINATE ATTIC ACCESS WITH CONDUITS/DUCTWORK/PIPING TO AVOID CONFLICTS WITH THE ATTIC ACCESS PANEL.
- 3 CONTRACTOR SHALL PROVIDE APPROVED FIRE STOPPING MATERIALS AT ALL WALL PENETRATIONS OF MECHANICAL ROOMS.

ROGER L. DONALDSON AIA P.L.C.
ARCHITECT
 4187 Tartan Lane
 Highland, Michigan 48842-1935
 Tel: (517) 614-0011 Fax: (517) 614-0011
 Email: Roger@RLA-architect.net

MATRIX
 CONSULTING ENGINEERS, INC.
 540 S. BURGESS ST.
 ANN ARBOR, MI 48107
 PHONE: (734) 487-2311
 FAX: (734) 487-2311
 WWW: www.matrixinc.com
 Matrix Project No. 2007000

CONSULTANT

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New Nature Center
 1297 N Rich Rd, Alma, MI 48801
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 Alma, Michigan 48801

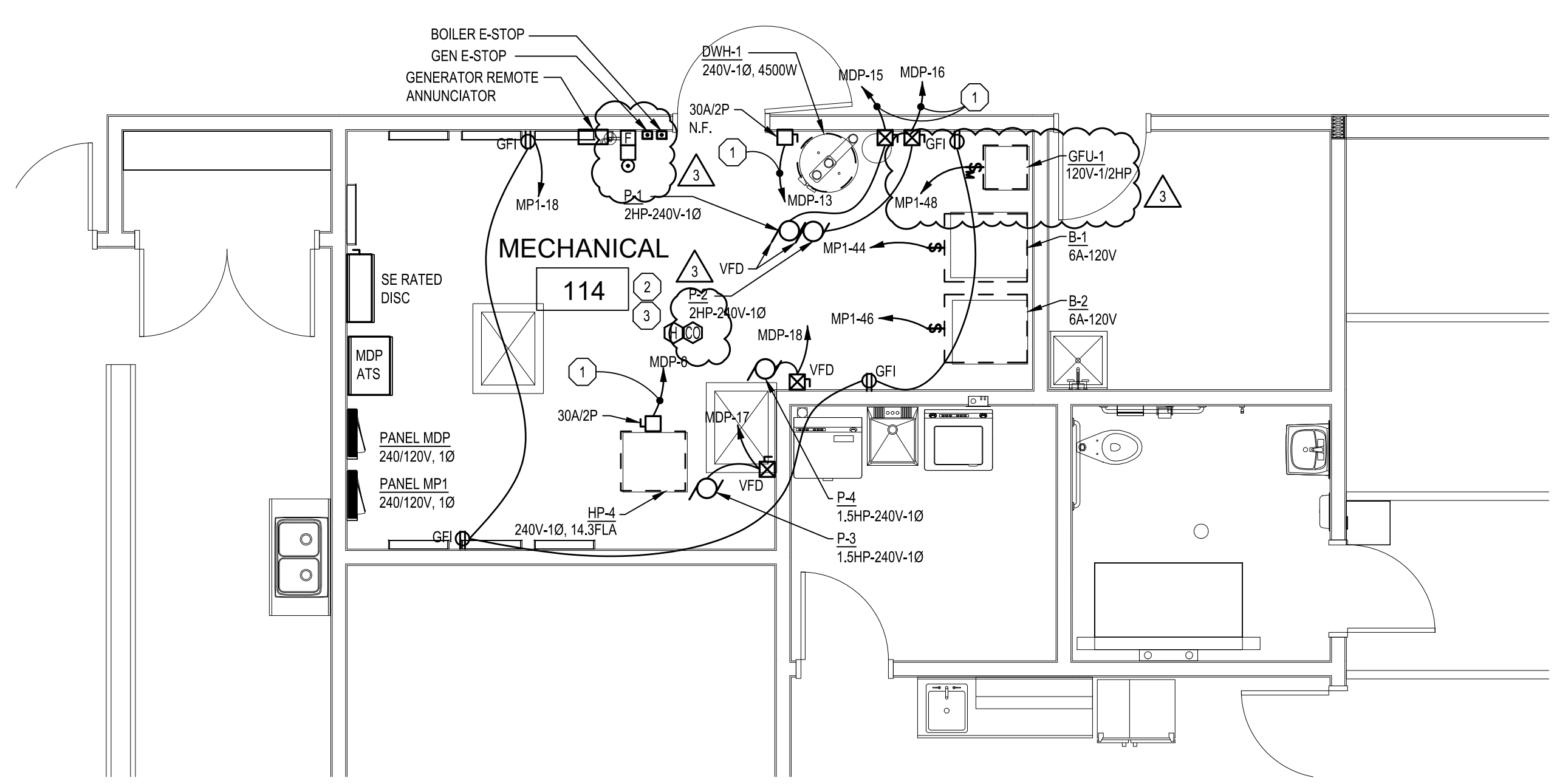
PROJECT #24-43

NO.	DATE	DESCRIPTION
1	08/07/2008	ISSUED FOR PERMIT
2	08/21/2008	SHEET RE-DESIGNED
3	09/29/2008	Revised and Final Review
4		
5		
6		
7		
8		
9		
10		

ENLARGED FLOOR PLAN - MECH ROOM - POWER NEW

SHEET TITLE

E-700
 SHEET NUMBER



**ENLARGED FLOOR PLAN
 MECHANICAL ROOM
 POWER**

