

Consulting Engineers

Brownsburg Community School Corporation **2025 Cardinal Elementary School & Delaware Trail Elementary School Central Plant Upgrades**

DATE: December 8, 2025

This Addendum issued prior to bidding, alters, amends, corrects or clarifies the Proposal Documents to the extent stated herein and does hereby become a part of the Proposal Documents, and will become a part of the Contract Documents of the successful bidder.

GENERAL

A. GENERAL (N/A)

- 1. Pre-Bid walkthrough agenda with updates is included within this Addendum for reference.
- 2. Sign in sheet from the walkthrough is included within this Addendum for reference.
- 3. Refer to existing roof warranty information included within this addendum. Contractor shall ensure that all work done upon the roof shall not void the roof manufacturer's warranty.
- 4. Refer to attached BCSC calendars(2025-2026 & 2026-2027) for additional reference.

B. DRAWINGS

- 1. TITLE SHEET
 - 1) Updated to reflect Structural drawing addition see Structural below.

STRUCTURAL

A. SPECIFICATIONS (N/A)

B. DRAWINGS

- 1. Drawing: S101 Chiller Support Framing Plan and Details
 - Sheet added to Set.

PLUMBING

A. SPECIFICATIONS

- 1. 22 11 24 Domestic Water Packaged Booster Pumps
 - a. Add this Section in its entirety.
- 2. 22 34 00 Electric Domestic Water Heaters
 - a. Add Lochinvar as approved equal.
- 3. 22 34 00 Gas-Fired Domestic Water Heaters
 - a. Add Lochinvar as approved equal.

D&A# 25075 1 ADDENDUM NO. 1

B. DRAWINGS

- 1. P-200 OVERALL GROUND FLOOR PLAN PLUMBING ALTERNATE
 - a. Revise Detail A to show TMV-B.
- 2. P-301 ENLARGED MECHANICAL ROOM PLAN PLUMBING
 - a. Clarify size of new floor sink.
- 3. P-401 DETAILS AND SCHEDULES PLUMBING
 - a. Add floor sink to plumbing schedule.

MECHANICAL

A. SPECIFICATIONS (N/A)

B. DRAWINGS

- 1. Drawing M301 Enlarged Plan Mechanical
 - a. Delete the plan note reference to existing high and low louvers. Delete motorized dampers. Louvers to be blanked off.
 - b. For clarification, under the Alternate bid to replace the hydronic piping mains running within the mechanical room, existing pipe hangars may be reused. Contractor shall ensure that existing beam clamps, all thread rod, and nuts are safely secured and in satisfactory condition. Report any discovered deficiencies to Engineer.
- 2. Drawing M320 Enlarged Plan Mechanical
 - a. Add the following to General Note 2, "Roofing system is a Seaman Corp. FiberTite Room Membrane. Installed 2022/2023."

ELECTRICAL

A. SPECIFICATIONS (N/A)

B. DRAWINGS (N/A)

- 1. Drawing E301 Ground Floor Plan Electrical
 - a. Revise Plan Note (9) and (10) as indicated.
 - b. Revise boiler circuitry to include 208V circuit for base bid and 480V circuit for alternate bid as indicated.
- 2. Drawing E601 Schedules Electrical
 - a. Update panelboard directories for boiler alternate bid as indicated.
 - b. Update motor starter and VFD schedule as indicated.

END OF ADDENDUM



D&A# 25075-A1.2 Date: 12/04/2025 Time: 10:00 AM

PRE-BID MEETING ATTENDEES

25075 - 2025 Cardinal/Delaware Trail Elementary School Central Plant Upgrades

PLEASE PRINT Name	Company	Phone	E-Mail
Mike East	R.E. Dimond and Associates, Inc.	317-634-4672	mike.east@redimond.com
Kenney McKinney	BCSC	, kmc	kmckinney@brownsburg.k12.in.us
Josh Burns	Sun Electric	812-350-4004	JBurns Osmolectric inc. net
Steve olshin	BBC Pungt Equipment	317-636-1111	Solshin OBBeaung, Lorn
Josh Kaufman	Frontline	812-581-0359	SKAUFMAN @ Frontline-LLC.Co
Term Ben	Huston Electric	765-422-4350	Hestock terry BeHistonales
JESSE HERRAMAN	SEXSON MRHAMCAL	817-438-CAB	Neckaman & Sex son Norton col ren
Jason Bakelining	Miller - Ends	317-496-4651	J Bockelman & Willer-Fab. 60
Jeremey Boney	IRISH MECHANICAL	317-294-9875	, boner @ 1715 hmechankal
STEVE SITKOWSKI	HILL MECHANICAL	317-741-3578	STEVEN. SITKOWSKI & HILLGAR
Steve Cais	KOONTE-NAGNER	574-012-8968	Scrola DENSENICES. COM
Tim Ras	ERMCO	317-605-0524	Thoop Emcacan
BRADO STOOPS	EAMCO 732 North Capitol Avenue, Ind 317-634-4672 Phone 9 3	732 North Capitol Avenue, Indianapolis IN 46204 37-579-8939 317-634-4672 Phone y 317-638-8725 Fax	B Straps@ Educto. Or



RE: Pre-Bid Meeting

Meeting Date: December 4, 2025 10:00 AM

Project: 2025 Cardinal & Delaware Trail Elementary Schools Central Plant Upgrades

INTRODUCTIONS

Owner: Brownsburg Community School Corporation

Kenney McKinney - Energy Management Supervisor

Bret Daghe – Project Manager

Regan Huff – Operations Coordinator

Engineer: Mike East, R.E. Dimond

DESCRIPTION OF PROJECT

1. Demolition:

- a. Remove boilers, venting, boiler pumps, building hydronic hot water pumps, expansion tank, air separator, all associated hot water loop piping within boiler room back to locations shown, including chemical treatment and boiler plant controls complete. Salvage Honeywell central plant controller for reuse.
- b. Remove heat exchanger pumps, plate and frame heat exchanger, all respective piping noted within boiler room and plant controls complete. Salvage Honeywell central plant controller for reuse.
- c. Remove water cooled chillers, chilled water primary and secondary pumps, cooling towers, condenser water pumps, all related piping back to locations shown within chiller room, boiler room and mechanical yard, including indoor sump tank, expansion tank, air separator, chemical treatment and chilled water plant controls complete. Remove section of existing metal screen wall system on the roof. Salvage Honeywell central plant controller for reuse.
- d. Remove domestic electric water heaters, and the associated piping back to locations shown for replacement within the schools.

2. New work:

- a. Install new boilers, boiler primary loop pumps, associated piping, and controls.
- b. Install new chillers, chiller primary loop pumps, secondary loop pumps, associated piping, and controls. Provide new refrigerant monitor system. Install chiller support steel on roof level.
- c. Install new heating hot water building loop pumps, air separator, expansion tank(salvaged), associated piping and controls.
- d. Install building water domestic water system and reconnect to building water distribution system.

- e. Install building water softener system and reconnect to building water distribution system, including hydronic make-up water stations for hydronic hot water, and chilled water.
- f. Provide electrical service for all new equipment.
- g. Provide boiler e-stop system.
- Alternate Bid: Install new domestic electric water heaters and accessories within the schools.

B. Schedule:

- 1. Mobilization, early demolition(heat exchanger, select boilers, respective pumps and piping), shop drawings, heating water temporary isolation valves: Spring 2026.
- 2. Start of School: Wednesday, July 29, 2026.
- 3. **Heating Water System Substantial Completion**: July 22, 2026.
- 4. **Fall Break:** Monday October 12 –October 23, 2026.
- 5. Chiller Water Shutdown: November 1, 2026.
- 6. **Thanksgiving Break:** Wednesday, November 25 Friday November 27, 2026.
- 7. **Winter Break**: December 21, **2026** January 4, 2026.
- 8. **Domestic water softener and water heater systems Substantial Completion**: January 4, **2027**
- 9. **Spring Break**: Monday, March 29 Friday, April 9, 2026.
- 10. Chilled Water System Substantial Completion: Friday March 28, 2027

CONTINGENCY ALLOWANCE

1. A Contingency Allowance of \$125,000 shall be included in the Base Bid amount. Refer to 01 21 10 Allowances.

ALTERNATES

2. Equipment manufacturers, piping replacement, and electric water heater replacement. Refer to 01 23 00 Alternates.

BID DUE DATE

- 1. Bids will be due at 10:00 a.m. local time on Thursday, December 18, 2025 at the offices of the Brownsburg Community School Corporation, Entry 7, 310 Stadium Drive.
- 2. The bids will be **publicly** opened and taken under advisement for review and recommendation by the **Owner**.

INSTRUCTION TO BIDDERS

- 1. Take note of the public bidding requirements in the Instructions to Bidders and in the Supplementary Conditions to the General Conditions.
- 2. It is asked that all questions and /or requests be addressed directly to the Project Engineer in writing, by e-mail. The answers, qualifications, or information noted during this meeting or during phone conversations that differ from the bidding documents are not to be considered official unless noted in an Addendum.
- 3. Questions and clarifications must be submitted in writing to Mike East (mike.east@redimond.com) no later than **3:00 p.m. on Monday, December 15, 2025.**
- 4. A Bid Security of **5%** or a certified check made out to **Brownsburg Community School Corporation** for **5%** of the bid amount is required with the bid.
- 5. Items bidders must consider when preparing their bid.
 - a. A Performance and Payment Bond of **100% included in** the contractor's bid is required.

- b. The successful bidder must provide a Certificate of Insurance with BCSC listed as the additional insured.
- c. Other paperwork required by the successful bidder includes, a signed e-verify form (provided by BCSC), W-9, Escrow Agreement (provided by BCSC), contractor's contact list, schedule of values and a project schedule.
- d. All contractors and sub-contractors for IDOA Public Works projects valued at over \$150,000 MUST be pre-qualified through the Public Works Certification Board. Please go to http://www.in.gov/idoa/2486.htm for applications or to see a list of pre-qualified contractors.
- e. The school corporation's tax-exempt number will be provided to the successful bidders.
- 6. For consideration, a Bid Form must be submitted in duplicate, sealed in an envelope, and delivered to the BCSC Central Administration Building by the designated time. The clock in the board room will be used as the "official" clock for determining when receipt of bids will be closed. Email submissions are not permitted.
- 7. Bids must be submitted on the State Board of Accounts Form 96-Revised and Supplementary Bid Form provided in the project manual. Bids must be provided in duplicate, placed in a sealed envelope with the title of the project clearly written on the front.
- 8. Bids shall be guaranteed for 60 days.

CONTRACT INFORMATION

1. The Owner/Contractor Agreement will be AIA document A101 2017 Edition.

PROJECT SCHEDULE:

- 1. Mobilization, early demolition(respective pumps and piping), shop drawings, heating water temporary isolation valves for heat pump loop: Summer 2025.
- 2. Start of School: Thursday, July 30, 2025.
- 3. Fall Break: Monday October 13 Friday October 24, 2025.
- 4. Heating Water System Substantial Completion: Monday, October 20, 2025.
- 5. Chiller Water Shutdown: November 1, 2024.
- 6. Thanksgiving Break: Wednesday, November 26 Friday November 28, 2025.
- 7. Winter Break: Monday December 22, 2025 Monday January 5, 2026.
- 8. Domestic water softener system Substantial Completion: January 30, 2026
- 9. Spring Break: Monday, March 23 Friday, April 3, 2026.
- 10. Chilled Water System Substantial Completion: Friday March 27, 2026

A. Phasing

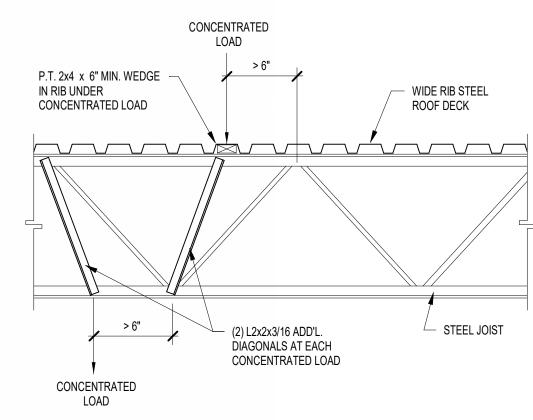
- 1. Work is to be executed selectively in the boiler room so that the chilled water system remains operational through the heating water system renovation scope.
- 2. The work scope is to be divided according to the following guideline. See paragraph B above for specific dates.
 - 1) Heating water system shall be operational by beginning of heating season, **2026**.
 - 2) Water softener operational at end of January **2027**.
 - 3) Chilled water system operational beginning of cooling season, 2027.

- 1. Contractor will be able to begin preparation of submittals and project planning **immediately** upon receiving the "Notice to Proceed". A pre-construction meeting will be required with the Owner and Engineer before construction work can begin.
- 2. Project Substantial Completion date shall be on or before March 27, 2027.
- 3. BCSC will provide Contractor with school hours, and schedule of breaks and holidays, as soon as they are available.
- 4. Contractors will have access to the building during the school day provided that work is not being done within the classrooms, preventing students from freely moving through the building, or nor disrupting teacher instruction.

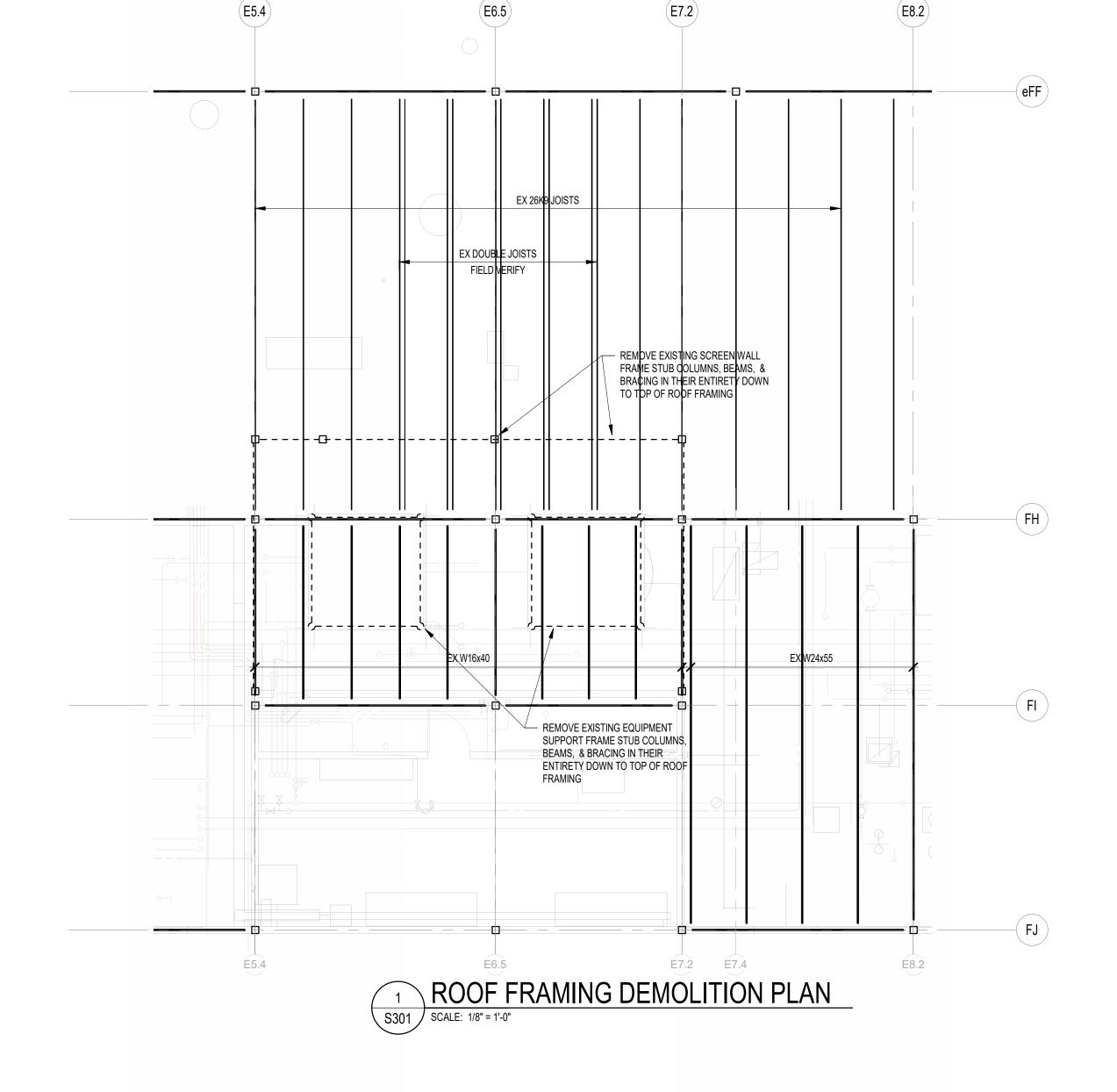
SPECIAL NOTES

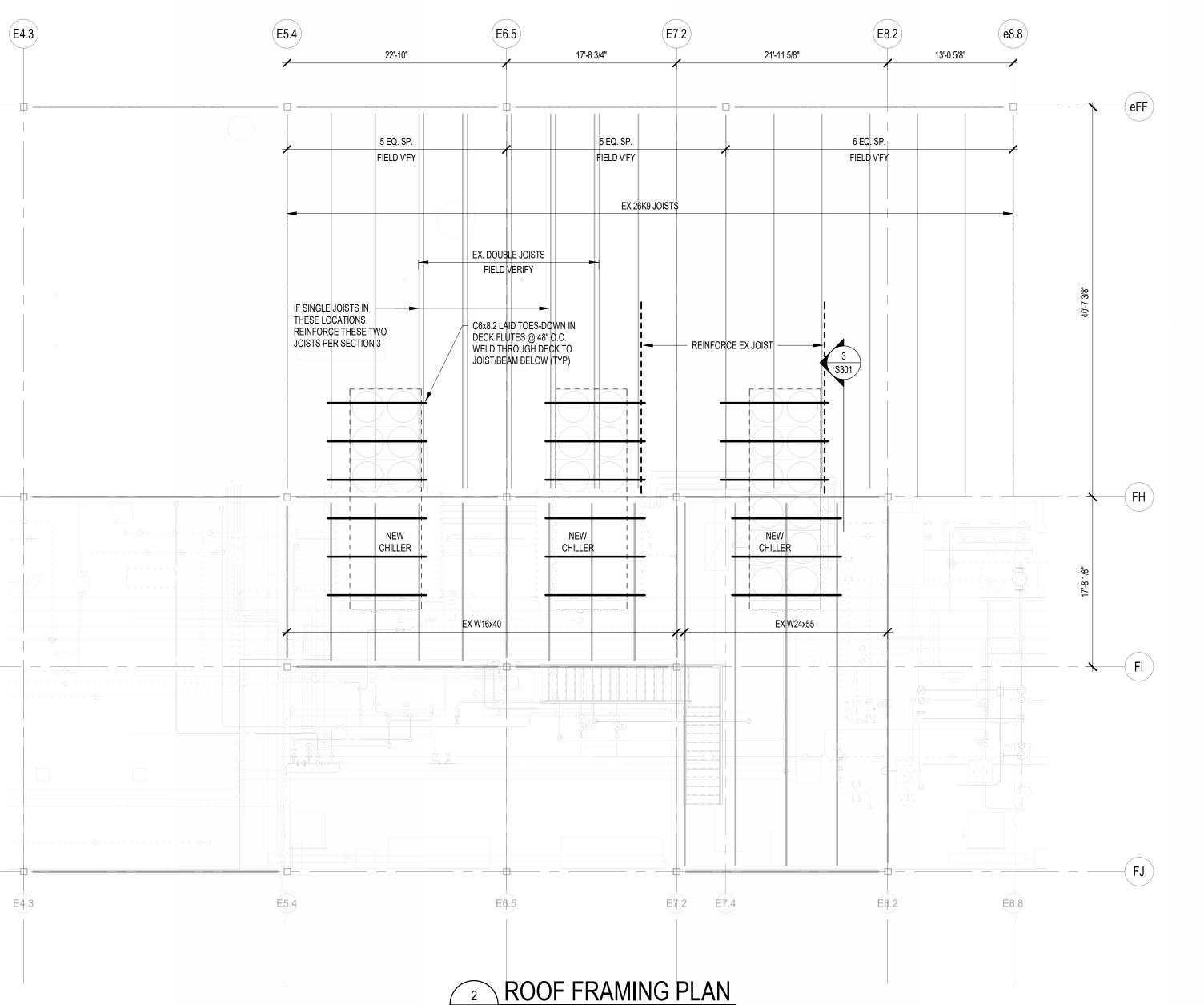
- 1. Brownsburg Community School Corporation facilities are TOBACCO FREE SITES. This means that the use of any tobacco products, including vaping, on the school property is prohibited.
- 2. Building will be occupied during the school days. All building systems shall remain online unless approved otherwise by the Owner.
- 3. No restrooms will be made available. Shirts identifying company name are required at all times.
- 4. Contractors wishing to make follow-up visits to the building must contact Kenney McKinney at (317) 435-6389 to set up a time. Do not attempt to visit the site or building without prior arrangements. Site visits will only be scheduled between 9:00am and 2:00pm Monday-Friday

CONTRACTOR / ENGINEER / OWNER NOTES



- 1. LOADS LESS THAN 100 LBS. MAY BE LOCATED ANYWHERE ALONG THE TOP OR BOTTOM CHORD OF THE JOIST WITHOUT REQUIRING REINFORCEMENT.
- 2. PROVIDE THIS DETAIL WHERE SUSPENDED EQUIPMENT, MECHANICAL UNIT, OR PIPING IMPARTS A CONCENTRATED LOAD OF BETWEEN 100 AND 400 LBS. IF THE LOAD IS APPLIED WITHIN 6" OF A TOP OR BOTTOM CHORD PANEL POINT, NO REINFORCEMENT IS REQUIRED.
- 3. NO CONCENTRATED LOADS GREATER THAN 400 LBS WILL BE ALLOWED WITHOUT THE
- WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER. 4. FOR DEEP-RIB DECK, PROVIDE DOUBLE 2x BLOCKING UNDER CONCENTRATED LOAD.
- 5. FOR DLH JOISTS, INCREASE SIZE OF ADDITIONAL REINFORCING DIAGONALS TO L21/2xL21/2x1/4.
- JOIST CONCENTRATED LOAD DETAIL S301 | SCALE: NONE





FRAMING PLAN NOTES

- 1. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
- 2. COORDINATE EXACT SIZE & LOCATION OF ANY MECHANICAL OPENINGS IN FLOOR SLAB, ROOF DECK, OR WALLS WITH THE MEP CONTRACTOR(S). LOCATION & SIZE OF ALL DUCT OPENINGS, GRILLES, ETC. SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
- 3. PROVIDE FRAMES AT ALL ROOF DRAINS, ROOF HATCHES & OTHER ROOF OPENINGS PER TYPICAL DETAILS ON \$404. COORD. EXACT NUMBER, LOCATIONS & DIMENSIONS WITH THE APPROPRIATE CONTRACTORS & THE ARCH. & MEP DWGS.
- 4. ALL EXISTING CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS, IMMEDIATELY CONTACT THE ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.

GENERAL NOTES

from the SER.

- 1. The Contractor shall be responsible for complying with all safety precautions and regulations during the work. The SER will not advise on, nor issue direction as to safety precautions and programs.
- 2. The Structural Drawings herein represent the finished structure. The Contractor shall provide all temporary guying and bracing required to erect and hold the structure in proper alignment until all Structural Work and connections have been completed. The investigation, design, safety, adequacy and inspection of the bracing, shoring, temporary supports, etc. is the sole responsibility of the Contractor.
- 3. The SER shall not be responsible for the methods, techniques and sequences of procedures to perform the Work. The supervision of the Work is the sole responsibility of the Contractor. 4. The Drawings indicate general and typical details of construction. Where conditions are not specifically shown, similar details of construction shall be used, subject to approval of the SER.
- 5. All structural systems which are to be composed of components to be field erected shall be supervised by the Supplier during manufacturing, delivery, handling, storage, and erection in accordance with the Supplier's instructions and requirements.
- 6. Loading applied to the structure during the process of construction shall not exceed the safe loadcarrying capacity of the structural members. Do not apply any construction loads until structural
- framing is properly connected together and until all permanent bracing is in place. 7. All ASTM and other referenced standards and codes are for the latest editions of these publications,
- unless noted otherwise.
- 8. Contractors shall visit the site prior to bid to ascertain conditions which may adversely affect the work 9. No structural member may be cut, notched, or otherwise reduced in strength without written direction

COORDINATION WITH OTHER TRADES

- 1. The Contractor shall coordinate and check all dimensions relating to Architectural finishes, mechanical equipment and openings, elevator shafts and overrides, etc. and notify the Architect/Engineer of any discrepancies before proceeding with any work in the area under question. 2. The Structural Drawings shall be used in conjunction with the Drawings of all other disciplines and the
- Specifications. The Contractor shall verify the requirements of other trades as to sleeves, chases, hangers, inserts, anchors, holes, and other items to be placed or set in the Structural Work. 3. There shall be no vertical or horizontal sleeves set, or holes cut or drilled in any beam or column
- unless shown on the Structural Drawings or approved in writing by the SER. 4. Mechanical and electrical openings through supported slabs and walls, 8" diameter or larger not shown on the Structural Drawings must be approved by the SER. Openings less than 8" diameter shall have
- at least 1'-0" clear between openings, unless approved in writing by the SER. 5. Verify locations and dimensions of mechanical and electrical openings through supported slabs and
- walls shown on the Structural Drawings with the Mechanical and Electrical Contract 6. Do not install conduit in supported slabs, slabs on grade, or concrete walls unless explicitly shown or
- noted on the Structural Drawings. 7. Do not suspend any items, such as ductwork, mechanical or electrical fixtures, ceilings, etc. from steel roof deck or wood roof sheathing.
- 8. The Mechanical Contractor shall verify that mechanical units supported by steel framing are capable of spanning the distance between the supporting members indicated on the Structural Drawings. The
- Mechanical Contractor shall supply additional support framing as required. 9. If the Drawings and Specifications are in conflict, the most stringent restrictions and requirements shall

EXISTING CONSTRUCTION

- 1. The contractor shall field verify the dimensions, elevations, etc. necessary for the proper construction and alignment of the new portions of the work to the existing work. The Contractor shall make all necessary measurements for fabrication and erection of the structural members. Any discrepancy shall be immediately brought to the attention of the Engineer of Record. 2. Before proceeding with any work within the existing facility, the Contractor shall familiarize himself with
 - existing structural and other conditions. Any shoring shown or noted on the Plans is a partial and schematic representation of that required. It shall be the Contractor's responsibility to provide all necessary bracing, shoring, and other safeguards to maintain all parts of the work in a safe condition during the progress of demolition and construction, and to protect from damage those portions of the existing work which are to remain. Shoring shall remain in place until the structural work is complete, has been inspected by the Testing Agency, and is certified to be in substantial compliance with the

 - A. Fire Hazard Protect existing combustibles prior to welding. Keep a separate watchman and
 - next increment. C. Do not leave the site until satisfied that no fire hazard exists.

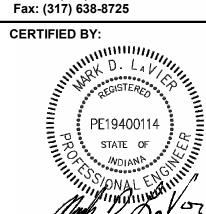
- 1. Structural steel construction shall conform to the American Institute of Steel Construction "Specification for Structural Steel Bulidings".
- 2. All structural wide flange members and channels shall be ASTM A992, Fy = 50 ksi.
- 6. Provide temporary erection guying and bracing as required.
- camber due to rolling or shop assembly be upward.
- 8. Refer to the Division 5 Structural Steel Specification of the Project Manual for structural steel surface



R.E. Dimond and Associates, Inc.

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672

Consulting Engineers



REVISIONS: DESCRIPTION DATE

P 317,423,155 50 Virginia Avenue ndianapolis, IN 46203 F 317.423.155

Contract Documents. 3. Welding to and within an existing facility presents potential hazards including:

- A. Fire Hazard Due to the existing construction and building contents. B. Structural Liquefaction - Due to welding across the full section of the structural members. Recommendations to prevent these hazards include:
- several fire extinguishers on hand. B. Structural Liquefaction - weld in small increments. Allow welds to harden before continuing to the
- D. Preference should be given to the use of beam clamps, mechanical fasteners, or bolted connections in lieu of welding within existing facilities, whenever possible. Do not field-drill existing structural members without the written permission of the Engineer of Record.

STRUCTURAL STEEL NOTES

- 3. All plates, bars, angles, and rods shall be ASTM A572, Grade 50 unless noted. 4. All rectangular, square, and round structural tube members shall be ASTM A500, Grade C, Fy = 50 ksi
- 5. Details for design, fabrication and erection of all structural steel shall be in accordance with the latest AISC Standards, unless otherwise noted or specified.
- 7. Fabricate simple span beams not specifically noted to receive camber so that after erection, any minor
- preparations and prime painting requirements.

KEYPLAN

DRAWN BY: DESIGNED BY: CHECKED BY: REFER TO DRAWING 11/26/2025 2023061 SHEET DESCRIPTION:

STRUCTURAL PLANS NOTES, & DETAILS

SHEET NUMBER:

S301

	EWH-A ELECTRIC WATER HEATER EWH-B ELECTRIC WATER HEATER EWH-C ELECTRIC WATER							
		ALTERNAT	E PLUM	BING E	QUIPN	MENT	SCHEDULE	
MADK	SPECIFICATION	MANUFACTURER	ELEC	CTRICAL D	ATA	GAS		
NO.		& MODEL NO.	LOAD	VOLTS	PHASE	LOAD (BTU)	CAPACITY	REMARKS
EWH-A		A.O. SMITH DEL-10	2 KW	208	1 PH	-	8 GPH @100°Δt, 10 GALLONS STORAGE.	-
EWH-B		A.O. SMITH DEN-30	6 KW	208	3 PH	-	24 GPH @100°Δt, 30 GALLONS STORAGE.	-
EWH-C	ELECTRIC WATER HEATER	A.O. SMITH DEL-40	10 KW	208	3 PH	-	41 GPH @100°Δt, 40 GALLONS STORAGE.	-
TMV-B	THERMOSTATIC MIXING VALVE	LAWLER #801	-	-	-	-	17 GPM @ 5 PSI DROP	-
CP-C	CIRCULATION PUMP (120°F WATER)	GRUNDFOS #UPS 15-58FS	1/8 HP	115	1 PH	-	1.0 GPM @ 15' TDH	AQUASTAT SET POINT ON: 110°F OFF: 117°F
ET-C	EXPANSION TANK (HOT WATER)	THERM-X-TROL #ST-12C-DD	-	-	-	-	TANK VOLUME = 6.4 GALLONS ACCEPTANCE FACTOR = 0.50	-

RENOVATION LEGEND:

WORK TO BE INSTALLED

WORK TO REMAIN

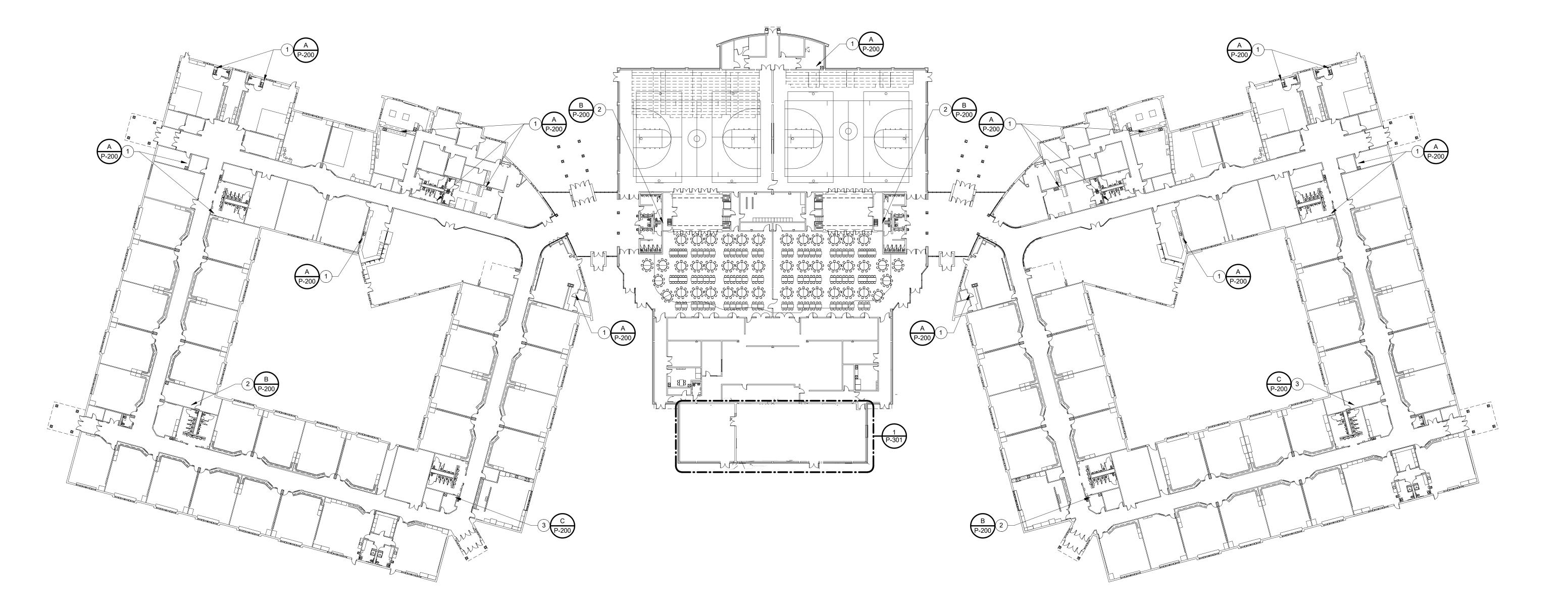
GENERAL NOTES:

1. REFER TO SHEET PM001 FOR ADDITIONAL GENERAL NOTES.

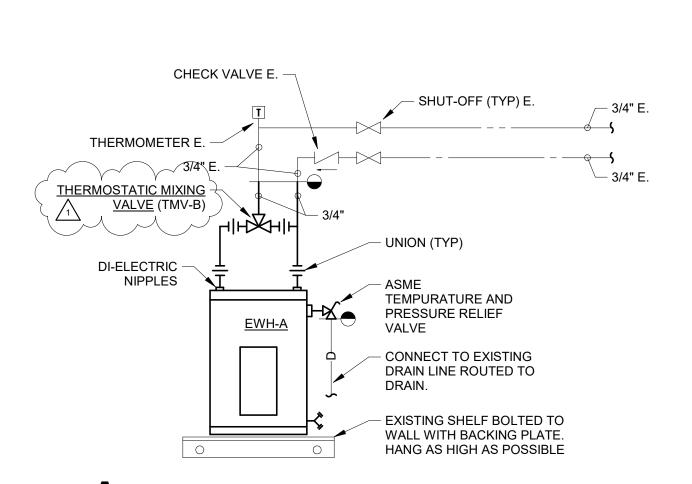
PLAN NOTES:

REMOVE AND REPLACE WATER HEATER AND THERMOSTATIC MIXING VALVE ABOVE CEILING.

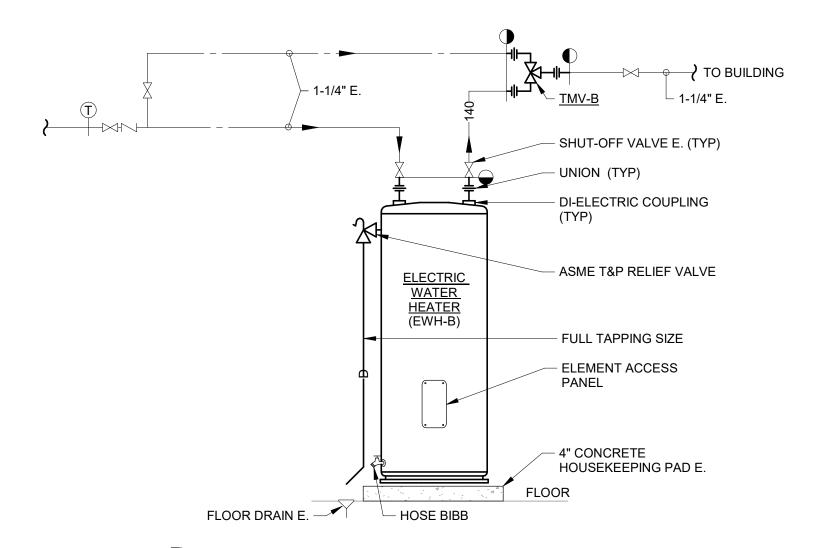
- REMOVE AND REPLACE WATER HEATER AND THERMOSTATIC MIXING VALVE IN THIS ROOM.
- 3. REMOVE AND REPLACE WATER HEATER, THERMOSTATIC MIXING VALVE, AND CIRCULATION PUMP IN THIS ROOM.



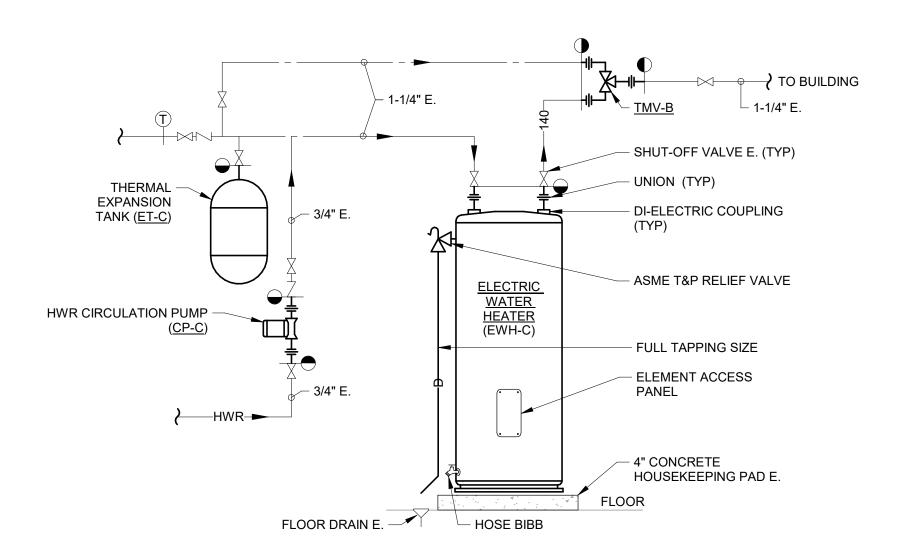
OVERALL GROUND FLOOR PLAN - PLUMBING - ALTERNATE SCALE: 1/32" = 1'-0"



A ELECTRIC WATER HEATER A SCALE: NONE



B ELECTRIC WATER HEATER B SCALE: NONE



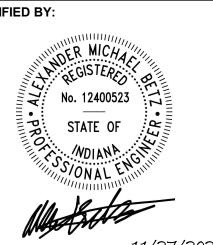
C ELECTRIC WATER HEATER C



R.E. Dimond and Associates, Inc.

Consulting Engineers

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672 Fax: (317) 638-8725 **CERTIFIED BY:**



DEVISIONS.

	REVISIONS	5:
NO.	DESCRIPTION	DATE
1	ADDENDUM 01	12/8/2

CARDINAL-DELAWARE ELEMENTARY
CENTRAL PLANT UPGRADES

DESIGNED BY: DRAWN BY:

CHECKED BY:

SHEET DESCRIPTION: OVERALL GROUND FLOOR PLAN -**PLUMBING -ALTERNATE**

REFER TO DRAWING

11/26/2025

SHEET NUMBER:

P-200

UNION, AND DIRT LEG.

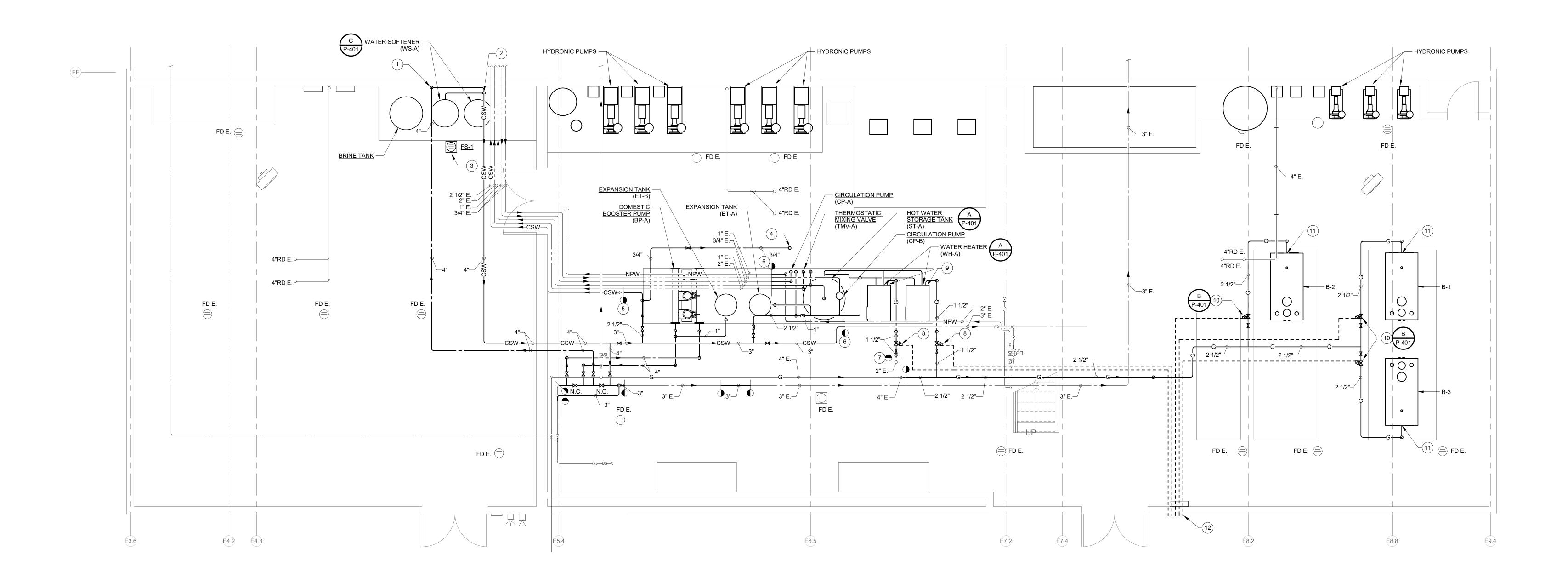
10. PRESSURE REGULATING VALVE SIZED FOR 4,000,000 BTU AT 2PSI INLET AND 11" W.C. OUTLET. PROVIDE VENT PIPING AND ROUTE AS SHOWN.

11. CONNECT 2 1/2" GAS PIPING TO BOILER. PROVIDE SHUT-OFF, UNION,

12. TERMINATE VENT PIPING THROUGH EXTERIOR WALL. PROVIDE VENT

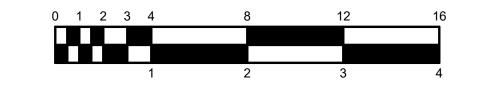
TERMINATE VENT THROUGH EXTERIOR WALL.

SCREEN AS REQUIRED TO PROTECT VENT.



ENLARGED MECHANICAL ROOM PLAN - PLUMBING

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





R.E. Dimond and Associates, Inc.

Consulting Engineers

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672 Fax: (317) 638-8725

CERTIFIED BY:

11/27/2025

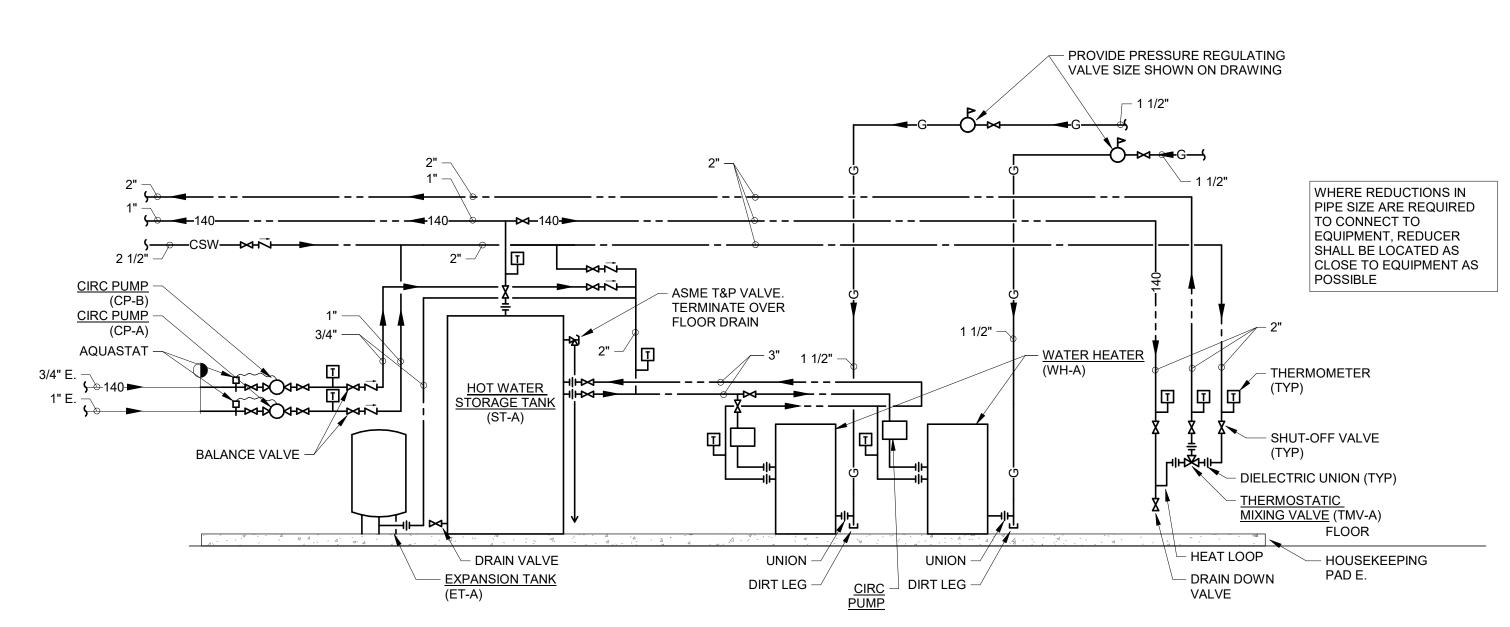
REVISIONS: DESCRIPTION DATE ADDENDUM 01

ENLARGED MECHANICAL ROOM PLAN - PLUMBING

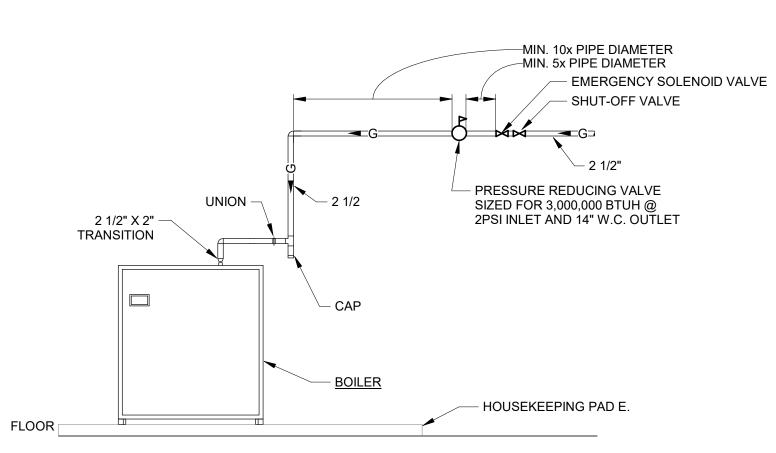
P-301

	FIXTURE ROUGH- MARK NO. FIXTURE DESCRIPTION HYD-1 NON-FREEZE ROOF HYDRANT		DULE	& MO	UNTIN	NG HE	EIGHTS
	FIXTURE DESCRIPTION	CW	HW	TRAP	w	٧	MOUNTING HEIGHTS
HYD-1	NON-FREEZE ROOF HYDRANT	3/4"	-	-	-	-	MOUNT TO ROOF. FAUCET TO BE AT 24" A.F.F.

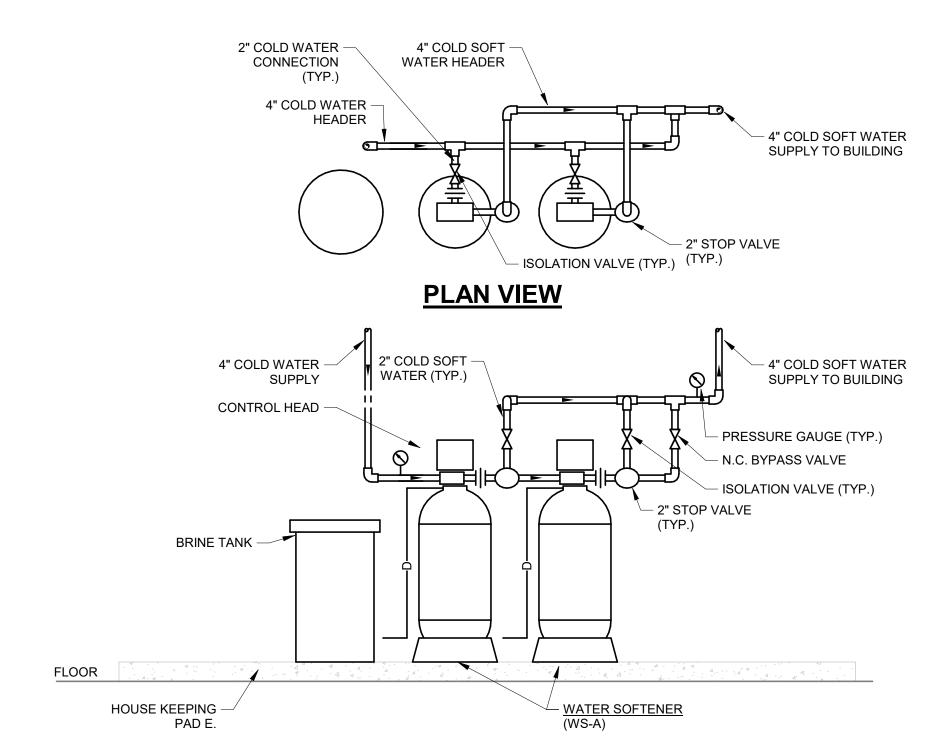
		PLUM	IBING E	EQUIPM	ENT S	CHE	DULE	
MARK	SPECIFICATION	MANUFACTURER	ELEC	CTRICAL D	ATA	GAS		
NO.	NAME	& MODEL NO.	LOAD	VOLTS	PHASE	LOAD (BTU)	CAPACITY	REMARKS
BP-A	TRIPLEX DOMESTIC BOOSTER PUMP	FRANKLIN ELECTRIC #20VR02	(3) 5 HP	480	3 PH	-	110 GPM PER PUMP, BOOST TO 80 PSI, 2 PROGRESSIVE, 1 STANDBY	INCOMING PRESSURE 48 PSI
WH-A	GAS FIRED WATER HEATER	A.O. SMITH PWH0650NP	1/2 HP	120	1 PH	650,000	772 GPH @100°Δt	2-1/2" WATER CONNECTIONS, 1-1/2" GAS CONNECTION, 8" VEN AND FLUE.
ST-A	HOT WATER STORAGE TANK	A.O. SMITH TJVT-500A	-	-	-	-	TANK VOLUME = 500 GALLONS, 3" TANK CONNECTIONS	-
TMV-A	THERMOSTATIC MIXING VALVE	LAWLER #804	-	-	-	-	50 GPM @ 5 PSI DROP	MOUNT AT 24" A.F.F.
CP-A	CIRCULATION PUMP (120°F WATER)	GRUNDFOS MANGNA 3 #40-80 GF	1/6 HP	115	1 PH	-	12 GPM @ 15' TDH	-
СР-В	CIRCULATION PUMP (140°F WATER)	GRUNDFOS #UPS 15-58FS	1/8 HP	115	1 PH	-	1.0 GPM @ 15' TDH	AQUASTAT SET POINT ON: 130°I OFF: 137°F
ET-A	EXPANSION TANK (HOT WATER)	THERM-X-TROL #ST-80VC	-	-	-	-	TANK VOLUME = 53 GALLONS ACCEPTANCE FACTOR = 0.66	-
ET-B	EXPANSION TANK (BOOSTED WATER)	WELL-X-TROL #WX-404C	-	-	-	-	TANK VOLUME = 68 GALLONS ACCEPTANCE = 34 GALLONS	-
WS-A	DUPLEX PROGRESSIVE WATER SOFTENER	FRANKLIN WATER TREATMENT #FWT2 QC-450	2 0 A	115	1 PH		113 GPM @ 25 PSI DROP PER TANK, 420,000 GRAINS/150 LBS. 2" METER	20 GPM BACKWASH, PROVIDE BRINE JANK
FS-1 1	FLOOR SINK	JAY R. SMITH #3120Y-13	-	-	-	-	4" OUTLET	-



A WATER HEATER DIAGRAM



B BOILER GAS PIPE CONNECTION SCALE: NONE



C WATER SOFTENER DIAGRAM



R.E. Dimond and Associates, Inc.

Consulting Engineers

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672 Fax: (317) 638-8725



11/27/2025 **REVISIONS:**

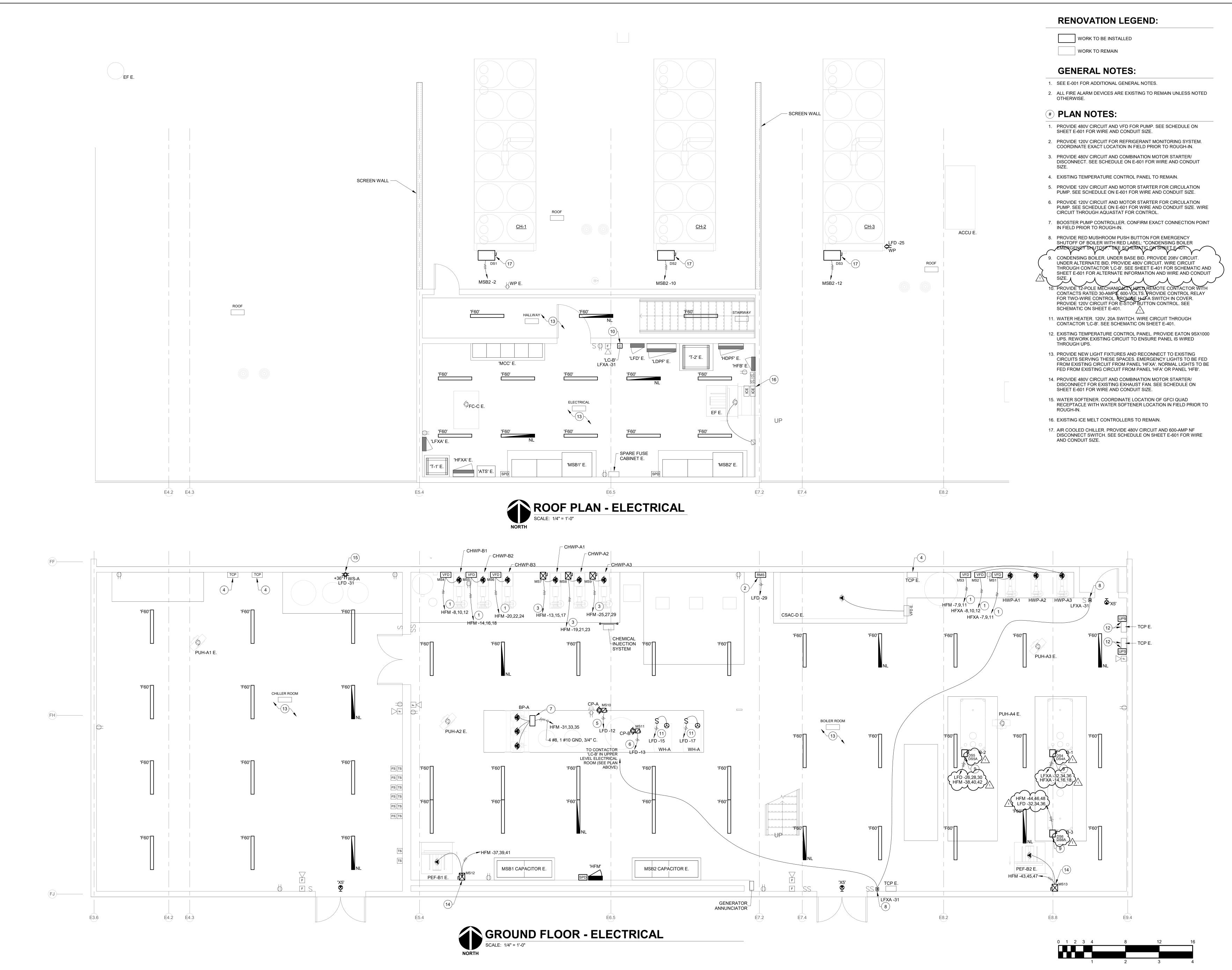
DESCRIPTION DATE ADDENDUM 01

KEYPLAN

DESIGNED BY: DRAWN BY: SCALE: REFER TO DRAWING SHEET DESCRIPTION:

> DETAILS & SCHEDULES -**PLUMBING**

P-401



R.E. Dimond and Associates, Inc.

Consulting Engineers

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672

Fax: (317) 638-8725 **CERTIFIED BY:**

No. 12200363 STATE OF

11/27/2025

REVISIONS: DESCRIPTION DATE ADDENDUM 01

CARDINAL-DELAWARE ELEMENTARY
CENTRAL PLANT UPGRADES

DESIGNED BY: DRAWN BY: SCALE: REFER TO DRAWING

11/26/2025 SHEET DESCRIPTION: **GROUND FLOOR**

PLAN - ELECTRICAL

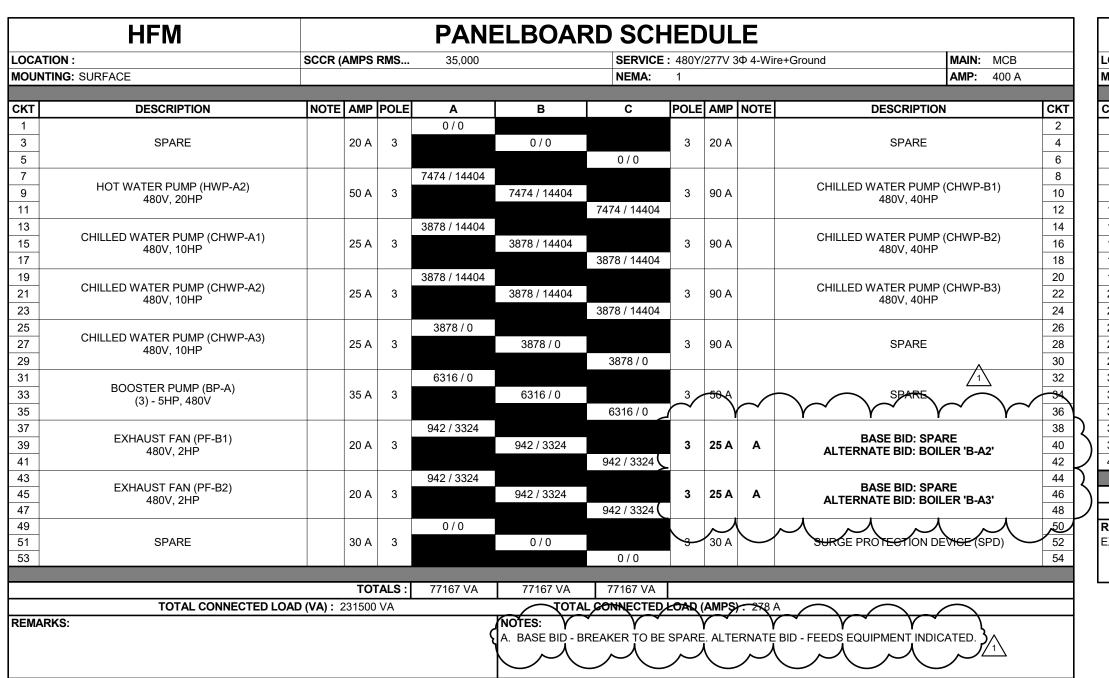
SHEET NUMBER:

E-301

	INTERIOR LIGHT FIXT	JRE SC	CHEC	DUL	E.				
MARK	DESCRIPTION	MOUNTING	WATTS	CRI	COLOR	LUMENS	VOLTS	MANUFACTURER(S)	MARK
F60	4-FOOT LENSED INDUSTRIAL, FORMED STEEL HOUSING, WHITE FINISH, SEMI-FROST ACRYLIC DIFFUSER.	SURFACE/ CHAIN HUNG	48 W	80	4000K	5000		COLUMBIA MPS SERIES LITHONIA ZL1D SERIES METALUX SNLED SERIES	F60
X5	CAST ALUMINUM EXIT SIGN, BRUSHED FACE, BLACK HOUSING, SELF POWERED, SELF DIAGNOSTIC.	UNIVERSAL	5 W	80	RED	N/A		DUAL-LITE SE SERIES SURE-LITES CX SERIES LITHONIA LE SERIES	X5

	MC	OTOR START	ER/VFD & DISCONNECT SCHED	DULE		
STARTER	LOAD	WIRING	DISCONNECT	ENCLOSURE	PANEL	CIRCUIT
DS1	AIR-COOLED CHILLER (CH-1)	SEE SHEET E-501.	600A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 3R	MSB2	2
DS2	AJR-COOLED-CHILLER (CH-2)	SEE SHEET E-501.	600A 3-ROLE, 480V, HEAVY-DUTY, NON-EUSIBLE	NEMA 3R	MSB2	10
DS3Y DS4	BOILER (B-A1) - BASE BID	SEE SMEET E-50 Y. 4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE 30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	MSB2\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	32,34,36
DS4A	BOILER (B-A1) - ALTERNATE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	HFXA	14,16,18
DS5	BOILER (B-A2) - BASE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	LFD	26,28,30
DS5A DS6	BOILER (B-A2) - ALTERNATE BID BOILER (B-A3) - BASE BID	4 #10, 1 #10 GND, 3/4" C. 4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE 30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1 NEMA 1	HFM LFD	38,40,42 32,34,36
DS6A	BOILER (B-A3) - ALTERNATE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	HFM	44,46,48
MS1/ MS2	HOT WATER PUMP (HWP-A1)	3 #8, 1 # 1 0 GND, 3/ 4 \ C.	20 HP, 480V B-PHASE VARIABLE PREQUENCY DRIVE	NEMA(1	HFXA	7,9,11
MS2 MS3	HOT WATER PUMP (HWP-A2) HOT WATER PUMP (HWP-A3)	3 #8, 1 #10 GND, 3/4" C. 3 #8, 1 #10 GND, 3/4" C.	20 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE 20 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM HFM	8,10,12 7,9,11
MS4	CHILLED WATER PUMP (CHWP-B1)	3 #3, 1 #8 GND, 1-1/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	8,10,12
MS5	CHILLED WATER PUMP (CHWP-B2)	3 #3, 1 #8 GND, 1-1/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	14,16,18
MS6 MS7	CHILLED WATER PUMP (CHWP-B3) CHILLED WATER PUMP (CHWP-A1)	3 #3, 1 #8 GND, 1-1/4" C. 3 #10, 1 #10 GND, 3/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE 10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1 NEMA 1	HFM HFM	20,22,24
MS8	CHILLED WATER PUMP (CHWP-A1)	3 #10, 1 #10 GND, 3/4" C.	10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	19,21,23
MS9	CHILLED WATER PUMP (CHWP-A3)	3 #10, 1 #10 GND, 3/4" C.	10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	25,27,29
MS10	CIRCULATION PUMP (CP-A)	2 #12, 1 #12 GND, 3/4" C.	1/2 HP, 120V, 1P, MANUAL STARTER WITH PILOT LIGHT	NEMA 1	LFD	12
MS11 MS12	CIRCULATION PUMP (CP-B) EXHAUST FAN (PF-B1)	2 #12, 1 #12 GND, 3/4" C. 3 #12, 1 #12 GND, 3/4" C.	1/2 HP, 120V, 1P, MANUAL STARTER WITH PILOT LIGHT 2 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1 NEMA 1	LFD HFM	13 37,39,41
MS13	EXHAUST FAN (PF-B2)	3 #12, 1 #12 GND, 3/4" C.	2 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	43,45,47

STARTER	LOAD	WIRING	DISCONNECT	ENCLOSURE	PANEL	CIRC
DS1	AIR-COOLED CHILLER (CH-1)	SEE SHEET E-501.	600A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 3R	MSB2	2
DS2	AJR-COOLED-CHILLER (CH-2)	SEE SHEET E-501.	600A 3-ROLE, 480V, HEAVY-DUTY, NON-EUSIBLE	NEMA 3R	M S B2	1
DS3	AIR-COOLED CHILLER (CH-3)	SEE SMEET E-50V.	600A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA R	MSB2	1:
DS4	BOILER (B-A1) - BASE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	LFXA	32,34
DS4A	BOILER (B-A1) - ALTERNATE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	HFXA	14,16
DS5	BOILER (B-A2) - BASE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	LFD	26,28
DS5A	BOILER (B-A2) - ALTERNATE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	HFM	38,40
DS6	BOILER (B-A3) - BASE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 240V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	LFD	32,34
DS6A	BOILER (B-A3) - ALTERNATE BID	4 #10, 1 #10 GND, 3/4" C.	30A, 3-POLE, 480V, HEAVY-DUTY, NON-FUSIBLE	NEMA 1	HFM	44,46
MS1/ MS2	HOT WATER PUMP (HWP-A1)	3 #8, 1 # 1 0 GND, 3/ 4 (C.	20/HP, 480V/B-PHASE VARIABLE PREQUENCY DRIVE	√ NEMA√1	→ HFXA	7.9
MS2	HOT WATER PUMP (HWP-A2)	3 #8, 1 #10 GND, 3/4" C.	20 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	MEMA 1	THEXA V	8,10
MS3	HOT WATER PUMP (HWP-A3)	3 #8, 1 #10 GND, 3/4" C.	20 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	7,9
MS4	CHILLED WATER PUMP (CHWP-B1)	3 #3, 1 #8 GND, 1-1/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	8,10
MS5	CHILLED WATER PUMP (CHWP-B2)	3 #3, 1 #8 GND, 1-1/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	14,1
MS6	CHILLED WATER PUMP (CHWP-B3)	3 #3, 1 #8 GND, 1-1/4" C.	40 HP, 480V, 3-PHASE VARIABLE FREQUENCY DRIVE	NEMA 1	HFM	20,2
MS7	CHILLED WATER PUMP (CHWP-A1)	3 #10, 1 #10 GND, 3/4" C.	10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	13,1
MS8	CHILLED WATER PUMP (CHWP-A2)	3 #10, 1 #10 GND, 3/4" C.	10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	19,2
MS9	CHILLED WATER PUMP (CHWP-A3)	3 #10, 1 #10 GND, 3/4" C.	10 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	25,2
MS10	CIRCULATION PUMP (CP-A)	2 #12, 1 #12 GND, 3/4" C.	1/2 HP, 120V, 1P, MANUAL STARTER WITH PILOT LIGHT	NEMA 1	LFD	1:
MS11	CIRCULATION PUMP (CP-B)	2 #12, 1 #12 GND, 3/4" C.	1/2 HP, 120V, 1P, MANUAL STARTER WITH PILOT LIGHT	NEMA 1	LFD	1
MS12	EXHAUST FAN (PF-B1)	3 #12, 1 #12 GND, 3/4" C.	2 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	37,3
MS13	EXHAUST FAN (PF-B2)	3 #12, 1 #12 GND, 3/4" C.	2 HP, 480V, 3-PHASE FVNR, COMBINATION STARTER/DISCONNECT	NEMA 1	HFM	43,4



	HFB		PAN	ELBOAF	RD SCH					
OCATIO	ON:	SCCR (AMPS RMS	EXISTIN	G	SERVICE	: 480Y	/277V 3Ф 4-Wire+	Wire+Ground MAIN: MLO		
MOUNTI	NG: SURFACE	,			NEMA:	1		AMP : 125 A		
СКТ	DESCRIPTION	NOTE AMP POLE	A	В	С	POL F	AMP NOTE	DESCRIPTION	СК	
1	LIGHTING - BOILER ROOM	20 A 1	0/0	В	Ü	1	20 A	POLE LIGHTING	2	
3	LIGHTING - HALLWAY 399B	20 A 1	0,70	0 / 0		1	20 A	POLE LIGHTING	4	
5	LIGHTING - KITCHEN	20 A 1		0,70	0/0	1	20 A	POLE LIGHTING	6	
7	LIGHTING - KITCHEN	20 A 1	0/0		0 / 0	1	20 A	HALLWAY LIGHTING	8	
9	LIGHTING - 12-FOOT BLUE POLES	20 A 1	0,0	0 / 0		1	20 A	LIGHTING CONTACTOR POWER	10	
11	LIGHTING - 12-FOOT GREEN POLES	20 A 1		0,70	0/0	1	20 A	BOILER ROOM - WALL PACK LIGHTING	12	
13	ICE MELT CONTROLLERS	20 A 1	0/0			1	20 A	SPARE	14	
15	SPARE	20 A 1		0/0		1	20 A	SPARE	16	
17	ICE MELT CONTROLLERS	20 A 1			0/0	1	20 A	SPARE	18	
19	LIGHTING - BOILER ROOM	20 A 1	0/0			1	20 A	SPARE	20	
21	SPARE	20 A 1		0/0		1	20 A	SPARE	22	
23	SPARE	20 A 1			0/0	1	20 A	SPARE	24	
25	SPARE	20 A 1	0/0			1	20 A	SPARE	26	
27	SPARE	20 A 1		0/0		1	20 A	SPARE	28	
29	SPARE	20 A 1			0/0	1	20 A	SPARE	30	
31	PROVISION	1	0/0			1		PROVISION	32	
33	PROVISION	1		0/0		1		PROVISION	34	
35	PROVISION	1			0/0	1		PROVISION	36	
37	PROVISION	1	0/0			1		PROVISION	38	
39	PROVISION	1		0/0		1		PROVISION	40	
41	PROVISION	1			0/0	1		PROVISION	42	
		TOTALS:	0 VA	0 VA	0 VA	T				
	TOTAL CONNECTED LO				CONNECTED	LOAD	(AMPS): 0 A			
EMAR		· ·		NOTES:						
XISTIN	G GE A-SERIES PANELBOARD									

OCATION :	HDPF	SCCR (AMPS	RMS	EXISTING	ELBOAF				Ф 4-Wire+Gro	und	MAIN: MLO	
MOUNTING: SI	JRFACE						NEMA:	1				AMP: 400 A	
СКТ	DESCRIPTION	NOTE	AMP	POLE	Α	В	С	POLE	E AMP	NOTE	DESCRIPTION		СК
1	PROVISION			1	0/0								2
3	PROVISION			1		0/0		3	20 A		SPARE		4
5	PROVISION			1			0/0						6
7					0/0								8
9	SPARE		20 A	3		0/0		3	30 A		SPARE		10
11							0/0						12
13					5817 / 0								14
15	CSAC-D E. KITCHEN		30 A	3		5817 / 0		3	40 A		SPARE		16
17	KITCHEN						5817 / 0						18
19					0/0								20
21	SPARE		40 A	3		0/0		3	40 A		SPARE		22
23							0/0						24
25					0/0								26
27	SPARE		40 A	3		0/0		3	40 A		SPARE		28
29							0/0						30
31					0/0								32
33	SPARE		80 A	3		0/0		3	80 A		SPARE		34
35							0/0						36
37					0/0		0 / 0						38
39	SPARE		80 A	3	0,0	0/0		3	100 A		PANELBOARD 'HFI	B' F	40
41	0.711.		0071			0 / 0	0/0	Ĭ	10071		174422507445 1111	J	42
43	PROVISION			1	0/0		3,3	1			PROVISION		44
45	PROVISION			1	0,0	0/0		1			PROVISION		46
47	PROVISION			1			0/0	1			PROVISION		48
49	PROVISION			1	0/0			-					50
51	PROVISION			1		0/0		3	200 A		SPARE		52
53	PROVISION			1			0/0						54
			T01	ΓALS :	5817 VA	5817 VA	5817 VA						
	TOTAL CONNECTE	D LOAD (VA):	17451 \	√A		TOTA	L CONNECTED	LOAD	(AMPS	: 21 A			
REMARKS:	TOTAL CONNECTE	·	17451 \	VA .	5817 VA			LOAD	(AMPS)): 21 A			

	LFXA			PANE	ELBOAF	RD SCH	HED	UL	.E		
LOCATION	ON:	SCCR (AMPS	RMS	EXISTING	i	SERVICE	: 208Y/	120V 3	3Ф 4-Wir	re+Ground MAIN: MCB	
MOUNTI	NG: SURFACE	,				NEMA:	1			AMP : 200 A	_
							<u> </u>				
СКТ	DESCRIPTION	NOTE AMP		Α	В	С	POLE	AMP	NOTE	DESCRIPTION	
1	TEMPERATURE CONTROL PANEL	20 A		0/0							L
3	SPARE	20 A			0/0		3	20 A		SPARE	
5	COOLER/FREEZER LIGHTING	20 A	. 1			0/0					
7				0/0			1	20 A		SPARE	
9	COOLER/FREEZER CONDENSOR	80 A	. 3		0/0		1	20 A		CASH REGISTER - DELAWARE	
11						0/0	1	20 A		CASH REGISTER - CARDINAL	
13	SPARE	20 A	. 1	0/0			1	20 A		COOLER FAN	
15	ANSUL F.A. SYSTEM	20 A	. 1		0 / 0		1	20 A		TEMPERATURE CONTROL PANEL	
17	SPARE	20 A	. 1			0/0	1	20 A		TEMPERATURE CONTROL PANEL	
19	SPARE	20 A	. 1	0/0			1	20 A		SPARE	
21	REFERENCE MONITOR	20 A	. 1		0/0		1	20 A		SPARE	
23	SPARE	20 A	. 1			0/0	1	20 A		FIRE RISER PUMP	T
25	RECEPT - GENERATOR	20 A	. 1	0/0			1	20 A		RECEPT - GENERATOR ^	T
27					0/0		1 /	$\overline{}$		PROVISION 1	$\overline{}$
29	SPARE	40 A	. 2	,		0/0	$\overline{}$	20 A	\sim	RECEPT - BELOW PANEL	
31 C	ONTACTOR - EMERGENCY BOILER SHUTOFF	2 20 A	1	180 / 2879				•		, , ,	
33	PROVISION		1		0 / 2879		3	30 A	1	BASE BID: BOILER 'B-A1' ALTERNATE: PROVISIONS	Ī
35	PROVISION		1			0 / 2879 🕻				ALTERNATE: PROVISIONS	-
37	PROVISION		1	0/0			1	J		A A PROVISION A	\dashv
39	PROVISION	<u> </u>	1		0/0		\bigvee	<u> </u>		PROVISION	
41	PROVISION		1			0/0	1			PROVISION	
		TC	TALS:	3059 VA	2879 VA	2879 VA	Т				_
	TOTAL CONNECTED LOAD	(VA): 8816 \	/A		TOTAL	CONNECTED	HEQAD (AMPS)	24 A	$\overline{\bigcirc}$	
REMARK EXISTIN	(S: G G.E. A-SERIES PANELBOARD.			(NOTES: 1. BASE BID - PR 2. PROVIDE 20A-		BREAK	R. ALTI	ERNATI	E BID - EXISTING PROVISIONS TO REMAIN.	

	LFD			PANE	ELBOAF	RD SCH	HED	DUL	.E		
LOCATION :		SCCR (AMPS RMS EXISTING SERVICE : 208Y/120V 3Ф 4-Wire+Ground								re+Ground MAIN: MLO	
MOUN	TING: SURFACE	•				NEMA:	1			AMP: 225 A	
CKT	DESCRIPTION	NOTE AMP	POLE	Α	В	С	POLE	AMP	NOTE	DESCRIPTION	Cł
1	OUTSIDE POLE RECEPTS	20 A	1	0/0			1	20 A		SPARE	- 2
3	SPARE	20 A	1		0/0		1	20 A		SPARE	
5	SPARE	20 A	1			0/0	1	20 A		SPARE	
7	RECEPTS - ROOM 313	20 A	1	0/0			1	20 A		SPARE	
9	RECEPTS - ROOM 314	20 A	1		0/0		1	20 A		SPARE	-
11	RECEPTS - ROOM 315	20 A	1			0 / 600	1	20 A	1	CIRCULATION PUMP (CP-A)	
13	CIRCULATION PUMP (CP-B)	1 20 A	1	600 / 0			1	20 A		PROPELLER UNIT HEATER (PUH-A1)	
15	WATER HEATER (WH-A)	1 20 A	1		480 / 0		1	20 A		PROPELLER UNIT HEATER (PUH-A2)	
17	WATER HEATER (WH-A)	1 20 A	1			480 / 0	1	20 A		SPARE	
9	SPARE	20 A	1	0/0			1	20 A		SPARE ^	
1	SPARE	20 A	1		0 / 0		1	20 A		SPARE (1)	`_
23	SPARE	20 A	1			0 / 400	1	20 A		FAN COIL UNIT (FO-C) - ELEC MEZZANING	-
25	OUTDOOR RECEPT - BY CHILLER CH-3	3 20 A	1	180 / 2879							
27	SPARE	3 20 A	1		0 / 2879		3	30 A	1	BASE BID: BOILER 'B-A2' ALTERNATE BID: SPARES TO REMAIN	
29	REFRIGERANT MONITORING SYSTEM	1 20 A	1			0 / 2879			(ALTERNATE BID. SPARES TO REMAIN	
31	WATER SOFTENERS	1 20 A	1	360 / 2879							
33					0 / 2879		3	30 A	1	BASE BID: BOILER 'B-A3' ALTERNATE BID: SPARES TO REMAIN	
35	SPARE	50 A	2			0 / 2879			\	ALTERNATE BID. SPARES TO REMAIN	
37				0/0							
39	SOUTH TRASH COMPACTOR	50 A	3		0/0		3	50 A		NORTH TRASH COMPACTOR	Ψ,
41						0/0					
		TO ⁻	ΓALS :	6897 VA	6237 VA	7237 VA	Π				
	TOTAL CONNECTED LOA	D (VA) : 20372	٧A		TOTA	L CONNECTED	LOAD	(AMPS): 57 A		
	RKS: ING GE A-SERIES PANELBOARD			(NOTES: 1. CONNECT NE 2. BASE BID - PF 3. REMOVE 20A-	ROVIDE 30A-3P	BREAK	ER. AL	TERNA	TE BID - EXISTING 20A-1P BREAKERS TO REMAIN	٧.}

	HFXA				PAN	ELBOAI	RD SCH	1EC	DUL	.E			
LOCATION	ON:	SCCR (AMPS	RMS	EXISTING	 G	SERVICE	: 480Y	//277V 3	ВФ 4-Wire	e+Ground	MAIN: MCB	
MOUNTI	NG: SURFACE						NEMA:	1				AMP : 400 A	
СКТ	DESCRIPTION	NOTE	AMP	POLE	A	В	С	POLE	E AMP	NOTE	DESCRIPTION		To
1	PROVISION			1	0 / 3059								\top
3	PROVISION			1		0 / 2879		3	125 A		TRANSFORMER 'T PANELBOARD 'LFX		
5	PROVISION			1			0 / 2879				I ANELBOARD ELA	A L.	
7					7474 / 7474						LIOT WATER BUILD (U	NA/D AO)	
9	HOT WATER PUMP (HWP-A1) 480V, 20HP	1	50 A	3		7474 / 7474		3/	56-A	1_1	HOT WATER PUMP (H	IWP-AZ)	
11							7474 / 7474		\ \		γ γ	\sim \sim	*
13					0 / 3324						BASE BID: SPAR	DE	
15	RTU-A1			3		0 / 3324		3	25 A	Α	ALTERNATE BID: BOILI		
17							0 / 3324						
19					0/0						\sim	~\	1
21	BP A-1		20 A	3		0/0		3	100 A		PANELBOARD 'LE		<u> </u>
23					0.10		0/0						:
25	PANELBOARD 'HDXA'		200 A	3	0/0	0/0		3	200 A		DANEL BOARD II IC	NA.	2
27	PANELBUARD HDXA		200 A	3		070	0 / 0	3	200 A	'	PANELBOARD 'HGXA'	5XA	
31	PROVISION			1	0/0		070	1	20 A		EXIT LIGHTING	<u> </u>	
33	EM LIGHTS - MEZZANINE		20 A	1	070	0/0		1	20 A		EXIT LIGHTING		
35	NOT USABLE			1		070	0/0	1			NOT USABLE	<u>, </u>	
											30/1822		
			TOT	TALS:	21330 VA	21150 VA	21150 VA						
	TOTAL CONNECTED L	OAD (VA) : (63630 \	√A		TOTA	L CONNECTED	LOAD	(AMPS)): 77 A			
REMARK EXISTING	(S: G GE SPECTRA SERIES POWER PANELBO	ARD (APNB2	2804FH	2B)			-3P BREAKER A 0A-3P BREAKEF				BREAKER. NATE BID - PROVIDE 25A-3P BRE	EAKER.	

	LDPF				PAN	IELBOA	RD SC	HED	DUL	E						
OCATION :		SCCR (A	AMPS	RMS	EXISTI	NG	SERVIC	E: 208Y	/120V 3	4-Wire+Ground	MAIN: MCB					
OUNTING: S	SURFACE						NEMA:	1			AMP : 600 A	1				
KT	DESCRIPTION	NOTE	AMD	IDOLEI	A	В	Гс	DOL E	AMP	IOTE DESC	CRIPTION	СКТ				
1	DESCRIPTION	NOTE	AIVIF	POLE	0/0	В	C	FOLE 1	AIVIF		OVISION	2				
	PANELS 'LFA' & 'LFB'		400 A	3	070	0.70		1			OVISION	4				
3 5	PANELS LFA & LFB		400 A	3		0 / 0	0 / 0	1								
7					0/0		070	I I		PRO	PROVISION	6				
9	PANEL 'LFD'		000 4	3	070	0/0		3	200 A	DAN	PANEL 'LFE'	10				
1	FANEL LFD		200 A	, 3		070	0/0	3	200 A	TAINEL LFE	ICL LFC	12				
13					0/0		070	1		DD/	OVISION	14				
15	PROVISION		200 A	3	070	0/0		1			OVISION	16				
17	PROVISION		200 A	3		070	0 / 0	1			OVISION	18				
19					_				0/0		070	1			OVISION	20
21	PROVISION		100 A	2	2	3	070	0/0		1			OVISION	22		
23	FROVISION		100 A	3		070	0 / 0	1			OVISION	24				
23							070	1		FRO	JVISION	24				
			TOT	TALS:	0 VA	0 VA	0 VA	_								
	TOTAL CONNECTED	LOAD (VA):) VA	•		TOTA	AL CONNECTE	LOAD	(AMPS)	0 A						
EMARKS: XISTING GE	SPECTRA SERIES POWER PANELB	DARD (APNB2	806FH	2A)		NOTES:										

R.E. Dimond and Associates, Inc. Consulting Engineers

732 North Capitol Avenue Indianapolis, IN 46204 Phone: (317) 634-4672 Fax: (317) 638-8725

CERTIFIED BY:

11/27/2025 **REVISIONS:** ADDENDUM 01

NO. DESCRIPTION DATE

ARDINAL-DELAWARE ELEMENTARY CENTRAL PLANT UPGRADES

3590 HORNADAY ROAD BROWNSBURG, INDIANA 461

2025 KEYPLAN

> DRAWN BY: DESIGNED BY: SCALE: REFER TO DRAWING SHEET DESCRIPTION:

SCHEDULES -ELECTRICAL

SHEET NUMBER:





LETTER OF TRANSMITTAL

1301 N. Monree St. Bloomington, IN 47404 Phone: 812-332-4309 Fax: 812-332-8124 www.blsmroofing.com

					DATE: 7/	13/2022
TO	Etica Group				ATTENTION: Se	ean Mettert
						rownsburg Schools
					C	ardinal-Delaware Elem
					100	
We are se	ending you:	✓ <i>i</i>	Attached	✓ Electronic	Transmittal	
	Shop Drawings		Prints	Plans	Samples	Specifications
	Copy of Letter		Change Order	Under sep	arate cover via	
COPIES	SPEC	NO.			DESCRIPT	TION
1	075423	1	Fibertite 20-	Year Roof	System Warra	anty
1	075423	1	Fibertite Roc	of Maintena	ance /Manage	ment Guide
	ADE TRANSMIT	TEDbl-	<u> </u>			
THESE	ARE TRANSMITT	IED as checke	ed below:			
	For approval		Approved as sub	omitted	Resubmit	copies for approval
	✓ For your use		Approved as not	ced	Submit	copies for approval
	✓ As requested		Returned for cor	rections	Return	corrected prints
	For review and o	comment				
	FOR BIDS DUE					PRINTS RETURNED AFTER LOAN TO US
FOR BID	_				PRINTS R	RETURNED AFTER LOAN TO US
REMARKS	:					
,						
COPY TO:						
					SIGNED: ${\cal G}$	Dan Mirer





Roof System Assembly Unlimited Warranty

SEAMAN CORPORATION COMMERCIAL BUILDING ROOFING WARRANTY

WARRANTY SERIAL No.: 20221026

WARRANTED ROOF AREA: 83,600 sq. ft

EFFECTIVE DATE: 06/23/2023 EXPIRATION DATE: 06/23/2043

Building Owner: Brownsburg Community School Corporation

Building Owner Address: 310 Stadium Drive Brownsburg, IN 46112

Building / Roof Section Name: Brownsburg Community Schools- Cardinal Delaware Trail Elementary

Building Address 3590 South Hornaday Road Brownsburg, IN 46112

SEAMAN CORPORATION ("Seaman Corp.") warrants to the owner named above ("Owner") of the building described above (the "Building") that, subject to the Terms & Conditions set forth below, for a period of 20 years commencing with the Effective Date of the application of the roofing membrane, Seaman Corp. will repair leaks originating in the FiberTite® Roofing System ("Roofing System") on the Building that are attributable to the Roofing System and/or workmanship provided by a roofing applicator authorized by Seaman Corp. to install the Roofing System (an "Authorized Applicator").

Terms & Conditions

- 1. The Roofing System includes only FiberTite® roof membrane, and as applicable thermal barrier, vapor/air barrier, insulation, coverboard, and related accessories provided by Seaman Corp. and installed in accordance with Seaman Corp.'s technical specifications. This warranty does not cover any other products and/or services.
- 2. In order for this warranty to be effective the Roofing System shall have been installed by an Authorized Applicator and Seaman Corp shall have been inspected and approved the for warranty by executing this Warranty.
- 3. Owner shall give Seaman Corp. written notice not more than thirty (30) days after discovery of any leak in the Roofing System or within thirty (30) days after Owner should have discovered such leak in the exercise of reasonable inspections in the Roofing System. Notice shall be provided by Owner to Seaman Corp. through Seaman Corp's Online Service Request Form or in writing directed to Seaman Corp. at its corporate headquarters, to the attention of "Warranty Department." By giving such notice Owner authorizes Seaman Corp. or its agents to inspect the Roofing System and investigate the cause of the leak. Seaman Corp. shall have no obligation under this warranty if Owner fails to give timely notice as required by this Section 3.
- **4.** Owner shall give or cause to be granted to Seaman Corp. free access to the roof of the Building during regular business hours to inspect the Roofing System. The Owner shall indemnify and hold Seaman Corp. harmless for any damages or costs incurred by Seaman Corp. or its agents due to roof access delays as a result of security or other restrictions. Should the Roofing System be concealed with an overburden; i.e., garden roof, paving blocks, etc., Owner shall be responsible for all costs necessary to expose the Roofing System for Inspection and/or repair.
- 5. If, after its inspection, Seaman Corp. determines in good faith that the leak is a result of defects in the Roofing System and/or the workmanship provided by the Authorized Applicator, Seaman Corp. will repair any leaks in the Roofing System at its expense.
- 6. If, after its inspection, Seaman Corp. determines in good faith that the cause of the leak is outside of the scope of this warranty, Owner shall pay for Seaman Corp.'s investigation and inspection costs and Seaman Corp. shall advise Owner of what Seaman Corp. reasonably considers the work necessary to cause any remaining portions of this warranty to remain effective. This warranty shall automatically terminate if Owner fails to promptly make or cause to be made any such repairs or fails to pay such investigation and inspection costs.
- 7. Seaman Corp. shall have no obligation under this warranty unless and until (i) all invoices for or otherwise relating to the Roofing System including without limitation, materials, installation services, and supplies have been paid in full to the Authorized Applicator and Seaman Corp., and (ii) Seaman Corp. has inspected and approved the Roofing System for warranty by executing this Warranty.
- 8. This warranty shall not be applicable to nor shall Seaman Corp. be responsible for damage, leaks, or loss caused in whole or in part by: (a) natural disasters, including without limitation, earthquakes, hurricanes, tornadoes, winds in excess of 60 mph, hail greater than 3/4 Inch diameter, and lightning, which damages the Roofing System, or which impairs the Roofing System's ability to resist leaks, (b) acts of war or terrorism, clvil disobedience, vandalism, animals, or insects which damage the Roofing System, or which impair the ability of the Roofing System to resist leaks, (c) unauthorized alterations or repairs of the Roofing System or installation of structures, fixtures, or utilities on or through the Roofing System, (d) negligence or failure of Owner to properly maintain the Roofing System Including without limitation, failure of Owner to maintain the Roofing System in accordance with the Care & Maintenance Guidelines, (e) settling, warping, defective condition, deterioration, corrosion, or other failure of the structure or substrata to which the Roofing System is attached or the walls or mortar of the Building; (f) any chemical contaminants injurious to the Roofing System that have not been specifically approved by Seaman Corp., (g) traffic or storage of materials on the Roofing System, (h) infiltration or condensation of moisture in, through, around, or above the walls and/or other structure of the Building, (i) acts of negligence or misuse by Owner or any other party other than Seaman Corp. or the Authorized Applicator, (j) failure of any material or component not furnished by Seaman Corp., (k) the construction or design of the Building or its components, (l) a change in the use of the Building, and/or (m) loss of integrity of the Building envelope and/or structure.





Roof System Assembly Unlimited Warranty

SEAMAN CORPORATION COMMERCIAL BUILDING ROOFING WARRANTY

- 9. Seaman Corp. shall not be responsible for the cleanliness, discoloration, or change in visual appearance of the Roofing System caused by environmental conditions including, but not limited to, accumulation or streaking of dirt, pollutants or other airborne materials deposited on the Roofing System from the atmosphere, or biological agents, or from any bleed-through from which the materials the Roofing System was applied, or any change in color of the Roofing System, including but not limited to fading.
- 10. Rights under this warranty may be transferable by Owner to a third party only with the prior written consent of Seaman Corp. and the payment of the then-current transfer fees, Inspections services and subsequent repair of the Roofing System, if necessary, by the Owner. Any purported transfer in violation of this Section shall be null and void.
- 11. Failure by Seaman Corp. to enforce any of the terms or conditions in this warranty shall not be interpreted to be a waiver of any terms and conditions of this warranty. If any portion of this warranty is unenforceable under applicable law, such portion shall be deemed reformed or deleted, but only to the extent necessary to comply with such law, and the remaining provisions shall remain in full force and effect. This warranty may be amended only by a writing signed by authorized representatives of both parties.
- 12. This warranty shall be construed in accordance with, and shall be governed by, the laws of the State of Ohio without reference to its conflict of law principles and Owner agrees to submit to the exclusive jurisdiction of the appropriate state court within Wayne County, Ohio and/or the Federal Court of the Northern District of Ohio for purpose of resolving any dispute or claim arising in connection with this warranty.

EXCEPT AS SET FORTH ABOVE, SEAMAN CORP. MAKES NO REPRESENTATIONS AND WARRANTIES WHATSOEVER AND SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES OR GUARANTEES, WHETHER WRITTEN OR ORAL, EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY, NO WARRANTIES OR REPRESENTATIONS AT ANY TIME MADE BY ANY EMPLOYEE OR REPRESENTATIVE OF SEAMAN CORP. SHALL BE EFFECTIVE TO VARY OR EXPAND THE ABOVE EXPRESS WARRANTY OR ANY OTHER TERMS HEREOF. IN THE EVENT AN EXPRESS OR IMPLIED WARRANTY IS REQUIRED BY LAW DESPITE THIS DISCLAIMER, THE OWNER AGREES THAT SUCH WARRANTY AND REMEDIES FOR THE BREACH OF SUCH WARRANTY SHALL BE EXPRESSLY LIMITED TO THE TERMS OF THE WARRANTY SET FORTH ABOVE. OWNER AGREES THAT SEAMAN CORP'S OBLIGATION TO REPAIR OR REPLACE THE UNDER THE TERMS OF THE WARRANTY SET FORTH ABOVE SHALL BE OWNER'S SOLE AND EXCLUSIVE REMEDY FOR ALL LEAKS AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP, SEAMAN CORP, SHALL NOT BE LIABLE TO OWNER OR ANY OTHER PERSON OR ENTITY FOR ANY INCIDENTAL, SPECIAL, EXCEPTIONAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO, DAMAGES TO OTHER COMPONENTS OF THE ROOF, THE BUILDING OR THE CONTENTS OF THE BUILDING, OR FOR LOSS OF REVENUE OR PROFITS, LABOR COSTS, DOWNTIME, LOSS OF DATA, OR DIMINUTION IN VALUE, WHETHER BASED IN CONTRACT, TORT, WARRANTY, STRICT LIABILITY, OR ANY OTHER LEGAL OR EQUITABLE THEORY, REGARDLESS OF WHETHER SUCH DAMAGES AND/OR LOSS WERE FORESEEABLE AND WHETHER OR NOT SEAMAN CORP. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND/OR LOSS, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE. Seaman Corp. does not take any responsibility for the analysis of the architecture or engineering required to evaluate the type of Roofing System which is appropriate for the Building. Any Roofing System used for personal, family or household purposes IS NOT WARRANTED HEREUNDER.

> Seaman Corporation 1000 Venture Blvd., Wooster, OH 44691

By: James E Hoffman
Title: V.P. of Finance Date: 7-11-2013





Roof System Assembly Unlimited Warranty

SEAMAN CORPORATION COMMERCIAL BUILDING ROOFING WARRANTY Care & Maintenance Guidelines

To maintain optimum performance of the FiberTite® Roof System and maintain the Warranty, Owner must comply with the following Care & Maintenance Guidelines:

- Perform bi-annual inspections of the roof system in the spring and fall of the year, as well as immediately following any significant weather events, to make ensure the roof is free of any conditions that may cause damage to the roof system.
- 2. When performing roof maintenance inspections, check for punctures in the roof membrane, open or loose seams at the membrane overlaps and at roof penetrations (soil stacks, HVAC curbs, etc.) as well as parapet walls and/or roof edge details, caulking at membrane termination locations and surface mounted reglets, pitch pan sealants, loose fasteners both in the field of the roof as well as at wall and edge details, check drains and gutters to ensure they are unclogged and free-flowing, check for excessive areas of ponding water which may be sign of other structural issues.
- 3. In addition to the bi-annual inspections referenced above, while not required, it is suggested to maintain a service contract with a Seaman Corp. Authorized Applicator who can provide professional annual inspections and immediate corrective action for potential roof damaging problems. Seaman Corp. Authorized Applicators have the knowledge and professional service skills and abilities to mitigate roof damaging problems.
- 4. Establish and maintain a policy of restricting unauthorized people from access to the roof.
 - a. It is suggested to post the YELLOW precautionary label provided with the Warranty to roof access locations. These labels provide cautionary information to protect both the roof system and individual safety.
 - b. Installation of roof walkway and protection pads are recommended for roofs with significant foot traffic and rooftop equipment that requires frequent servicing.
- 5. Consider the roof system when new products and/or processes are added to the building operation that may cause chemical contaminant venting onto the roof. Following is a list of chemicals that can cause harm to the FiberTite roof membrane, especially if exposed for several months (Note Chemicals below are not an exhaustive list):

Acetic Acid
Benzene
Ethyl Acetate
Methyl Ethyl Ketone (MEK)
Phenol
Solvent Degreasers

Aromatic Hydrocarbons Clorox Furfural Nitric Acid Phosphoric Acid 75% Toluene

Asphalt Materials
Cooking Oil above 140°F
Gasoline
Paint Thinners
Phthalate Plasticizer Above 100°F,
Xylene

- If the building use purpose changes Consider the compatibility with the roof system. Any installation of new roof top equipment, such as air conditioning equipment, requires the service of a Seaman Corp. Authorized Applicator to install new flashings and maintain the integrity of the roof system.
- Contact the FiberTite® Technical Service Department for assistance, questions about the FiberTite® Roof, or locating a Seaman Corp. Authorized Applicator.

Seaman Corporation 1000 Venture Blvd. Wooster, Ohio 44691 800/927-8578

www.fibertite.com www.seamancorp.com



Roof Maintenance Guidelines

Seaman Corporation • 1000 Venture Blvd. • Wooster, OH 44691 www.fibertite.com

Roof Maintenance/Management

GENERAL GUIDELINES:

- 1. START A PROGRAM of periodic and systematic inspection before problems or leaks develop.
- 2. Plan and allocate appropriations in advance to meet preventative maintenance requirements. Avoid inappropriate or inadequate measures that just do something because of poor planning.
- 3. Understand the terms of your current warranty or guarantee. Weigh the expense of systematic preventative maintenance against the cost of roof replacement.
- 4. Be sure your inspection program is exhaustive and includes all types of flashing, adjoining masonry, metal and other possible sources of leaks.
- 5. Immediately repair ruptures, splits, holes or any other major membrane deficiency. Follow temporary repairs with permanent repairs as soon as possible.
- 6. Look for "tell tale signs" of a developing problem. Small cracks or blisters may be deeper than they look and allow moisture to penetrate the system. Failure to catch problems in their developmental stage is a major cause of severe deterioration.
- 7. Be sure you know the make of your current roof system, especially the susceptibility of the underlayment or insulation to damage by moisture.
- 8. If the felts or membrane are already deteriorated don't assume that they can be rejuvenated.
- 9. Shrinkage can cause stress cracks in asphalt and other coatings. Simply coating over these cracks doesn't take into account the need for reinforcement to resist the continuous stresses.
- 10. Be sure the manufacturer of your particular roof system endorses the material(s) you use.
- 11. Consult with a professional. An accredited, experienced and technically competent roofing contractor is a valuable asset.
- 12. There are no universal techniques or products to meet all conditions.



FiberTite® Maintenance Guidelines

DO:

- Train at least one individual in your maintenance department in what to look for and how to provide remedial care for your roof system. Or better yet: enlist the services of a professional roofing contractor to provide a custom maintenance program for you.
- A wise and prudent maintenance program will extend the life expectancy of ANY roof system.
- Conduct inspections no less than twice a year.
 These are usually scheduled for one in the spring and one in the fall.
- Don't ignore the building exterior. Cracks in exterior masonry walls can alert you to possible cracks in the roofing or flashing. Loose or leaky perimeter edge metal flashing can weaken the roof systems' first line of defense in a wind storm allowing wind to get under the roofing membrane and cause a possible blow off. Damaged or clogged gutters, roof drains and down spouts can cause water to back up onto, or even into your roof system.
- Inform equipment service personnel about your roof system and warn them against penetrating or dropping tools and equipment onto the roof membrane. Also let them know that should an incident occur, it's all right as long as they inform you. You may want them accompanied by a member of your own maintenance staff.
- KEEP THE ROOF CLEAN AND FREE OF ALL DEBRIS.
- Recognize that felt or fabric exposure can lead to fast deterioration.
- Open laps, blisters, excessive wrinkling or ridging is a sign of possible roof failure.
- Flashing, exposed sealants, pitch pans, gravel stops and other penetrations are the most common source of roof leaks. Pay particular attention to these items.

DON'T:

- Allow unqualified personnel to maintain your roof.
- Allow traffic on your roof unless accompanied by or authorized by your informed maintenance personnel.
- Allow equipment service personnel to penetrate your roof without being certain that the penetrations will be immediately and properly flashed by a qualified roofing contractor. If your roof has a warranty, the roofing manufacturer should be notified prior to any roof alterations.
- Permit inferior products to be used.
- Be taken in by "Cure All" products that can be applied by anyone.
- Expect a manufacturer's warranty to keep the water out of your building(s). Warranties do not cover many of the problems that can develop on the roof.
- Think that the low price is always the best deal. Be aware of the definition of a "Change Order."
- Deal with firms without established credentials who won't stand behind their work and are often unavailable when you need them. Remember there are no panaceas in roofing and no product is better than the applicator.





Phone: 330-262-1111 or Toll-free: 800-927-8578 Fax: 800-649-2737



SEMI-ANNUAL MAINTENANCE INSPECTION CHECKLIST

form revised 10/27/2015

Page 1 of 3

Building:	Date:	Date of Previous Inspecti	on:
Location:	Inspected By	·	
Exterior and Interior Walls Expansion / Contraction Settlement Cracks Deterioration / Spalling Moisture Stains / Efflorescence Physical Damage Other Exterior and Interior Roof Deck Securement to Supports Expansion / Contraction Structural Deterioration Water Stains / Rusting Physical Damage Attachment of Membrane / Insulation New Equipment Alterations Other	OK PROBLEM MAJOR MINOR	Observation	
A. General Appearance Debris	OK PROBLEM MAJOR MINOR	Observation	
Other			



SEMI-ANNUAL MAINTENANCE INSPECTION CHECKLIST

Page 2 of 3

III. FLASHING CONDITION				
	OK	PROBLEM MAJOR MINOR	Observation	Date of Repair
A. Roof Perimeter Base Flashing				
Punctures or Tears	П			
Deterioration		TT.		
Blistering		HH		
-		HH		
Open Laps		HH		
Attachment				-
Ridging / Wrinkling	- 🛏	HH		
Other	_ [шш		-
B. Counter Flashing / Terminations				
Open Laps	а П			
Punctures				
Attachment	- 6	HH		
	- Ħ	HH		
Rusting	- H	HH		
Fasteners	- H	HH		7
Caulking	- H			
Other				
C. Coping				
Open Fractures				
Punctures				
Attachment		ПП		
	ΤĦ	ĦĦ		
Rusting	- H	HH		
Drainage	- H	HH		
Fasteners	- H	HH		
Caulking	= =			
Other		шш		
D. Perimeter Walls				
Mortar Joint	🔲			
Spalling				
Movement Cracks		ĦĦ		
	= =	HH		
Other	لسا ہے	ب ب		
	IO / F			
IV. ROOF PERIMETER EDGIN				Data of Danais
	OK	PROBLEM MAJOR MINOR	Observation	Date of Repair
Splitting	[
Securement	Ħ	ĦĦ		
	- H	HH		
Rusting	- H	HH		
Membrane Deterioration		HH		5
Fasteners	- -	HH		-
Punctures	⊸႘	닏닏		
Other		$ \sqcup \sqcup$		
V. ROOF PENETRATIONS				
	ОК	PROBLEM MAJOR MINOR	Observation	Date of Repair
	- 1	, mayor minok		-
A. Equipment Base Flashing				
Open Laps				
Punctures				
Attachment				
Other				



SEMI-ANNUAL MAINTENANCE INSPECTION CHECKLIST

Page 3 of 3

V. ROOF PENETRATIONS	(CONTINUED)		
	OK PROBLEM MAJOR MINOR	Observation	Date of Repair
B. Equipment Housing			
Counter Flashing	0 00		
Open Seams			
Physical Damage			
Caulking			
Drainage			
Other			
C. Equipment Operation			
Discharge of Contaminants			
Excessive Traffic Wear			
Other			
D. Roof Jacks / Vents / Drains			
Attachment			
Physical Damage			
Operational / Clogged			
Caulking			
Other			
VI. EXPANSION JOINTS	OK PROBLEM MAJOR MINOR	Observation	Date of Repair
	MAJOR MINOR	Observation	bate of Repair
Open Joints			
Punctures	U UU		
Securement	_		
Rusting			
Fasteners			
Other			
VII. PITCH POCKETS			
TILL THE THE CONTROL	OK PROBLEM MINOR	Observation	Date of Repair
Open Joints			
Sealant			
Excessive Movement			
Other			
Other			





ROOFING CONTRACTOR MATERIALS AND WORKMANSHIP WARRANTY

5 YEAR

1	Contractor:	B &L Sheet Metal & Roofing- Tecta America
2	Roof Owner:	BCSC
3	Type and Name of	Building: Reagan Elem School
	Building Location:	D. D. Branchurg IN
	Area of Roof :	65000 S.F.
4	Roofing Materials	OC Duration Shingles -"Estate Gray"
5	Warranty begins:	and expires:07/01/2028 (date) (date)
6	r: co	actor warrants to Owner that it applied the roofing materials to the above-described se with (a) the written specifications of Roofing Materials d (b) good roofing industry practices, in effect on 7/1/2023
	the date applicate will, during the te which are the rest this term of this obligation to make a or the roofing	ion commenced. Subject to the following terms, conditions and limitations, Contractor erm of this Warranty, at its expense, repair or cause to be repaired leaks in said roof sult of defects in the roofing materials or Contractor's workmanship. Upon expiration of Warranty, without notice from Owner of some defect, Contractor shall have no further ke repairs at Contractor's expense under any provision of this Warranty and Owner any further demand or claim against Contractor concerning Contractor's workmanship, materials installed, provided that Contractor promptly commences and diligently be correction and repair of all such defects covered by this Warranty which are called to ention during the term of this Warranty by Owner.

Terms, Conditions and Limitations. This warranty does not cover any leaks in the roof caused by: the acts or missions of other trades or contractors; lightning, winds of peak gust speeds of 55 m.p.h. or higher measured at 10 meters above ground, hail storm, flood, eqrthquake or other unusaual phenomenon of the elements; structural settlement; failure, movement, cracking or excess deflection of the roof deck; defects or failure of materials used as a roof substrate over which the roof system is applied; faulty condition of parapet walls, copings, chimneys, skylights, vents, supports or other parts of the building; vapor condensation beneth the roof; penetrations for pitch boxes; erosion, cracking and porosity of mortar and brick; dry rot; stoppage of roof drains and gutters; penetration of the roof from beneath by rising fasteners of any type; inadequate drainage, slope or other conditions beyond the control of

Contractor which cause ponding or standing of water; termites or other insects; rodents or other animals; fire; or harmful chemicals, oils, acids and the like that come in contact with the roofing system and cause a leak or otherwise damage the roof system. If the roof fails to maintain a water-tight condition because of damage by reason of any of the foregoing, this warranty shall immediately become null and void for the balance of its term unless such damage is repaired by Contractor at the expense of Owner.

- 8 <u>Notification by Owner.</u> During the term of this warrant, if the roof leaks, Owner must immediately notify Contractor by telephone of such leaks, and promptly confirm such telephone notice by written notice to Contractor.
- 9 Events Which May Void Warranty. This warranty shall become null and void:
 - (a) Unless Contractor receives notice from Owner in accordance with paragraph 8 above of any leaks and is provided an opportunity to inspect, and if required by the terms of this warranty, to repair the roof;
 - (b) If work is done on such roof, including, but without limitation, work in connection with flues, vents, drains, sign braces, railings, platforms or other equipment fastened to or set on the roof or if repairs or alterations are made to said roof, without first notifying Contractor in writing and giving Contractor the opportunity to make the necessary roofing application recommendations with respect thereto, which recommendations are complied with. Contractor shall be paid for time and materials expended in making recommendations or repairs occasioned by the work of others on the subject roof;
 - (c) Any area of the roof is used as a promenade, walkway or work area or is sprayed or flooded, unless such use was originally specified with a defined area and the specification is noted in paragraph 14 below.
- 10 <u>Transferability</u> This warranty shall accrue only to the benefit of the original owner named above. It is not transferable to any other person, except with the prior written consent of contractor.
- 11 No Other Warranties. No other express warranty is given by Contractor to Owner. The repair of the subject roof is the exclusive remedy. THE IMPLIED WARRANTIES, AND SPECIFICALLY THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED AND DISCLAIMED.

This warranty is separate and apart from any warranty which may be issued to Owner by Roofing Materials Manufacturer. CONTRACTOR EXPRESSLY EXCLUDES AND DISCLAIMS ANY RESPONSIBILITY TO OWNER IN CONNECTION WITH OR ATTRIBUTABLE TO ANY SUCH ROOFING MATERIALS MANUFACTURER'S WARRANTY.

12	CONSEQUENTIAL, OR OTHER DAMAGES PROFITS OR DAMAGE TO THE BUILDING BREACH OF WARRANTY, BREACH OF CON	ER NO CIRCUMSTANCES SHALL CONTRACTOR BE R PERSON FOR ANY INCIDENTAL, SPECIAL, S INCLUDING, BUT NOT LIMITED TO, LOSS OF OR ITS CONTENTS, WHETHER ARISING OUT OF NTRACT OR UNDER ANY OTHER THEORY OF LAW.
13	Payment to Contractor. This warranty shall no been paid in full for said roof in accordance applied.	ot be or become effective unless and until Contractor has e with the agreement pursuant to which said roof was
14	Additional conditions or exclusions	
	This warranty has been duly executed this 2	20th day of Jun-23 David Lee
	-,	Contractor
	_	B&L SHEET METAL AND ROOFING
		Kyle Clemons (812) 327-0102

ROOFING CONTRACTOR MATERIALS AND WORKMANSHIP WARRANTY

2 YEAR

1	Contractor:	B &L Sheet Metal & Roofing- A Tecta America Company
2	Roof Owner:	BCSC
3	Type and Name of I	Building: Cardinal- Delaware Elem School
	Building Location:	3680 Hornaday Rd, Brownsburg, IN
	Area of Roof :	83000 S.F.
4	Roofing Materials:	Fibertite PVC Fully Adhered Roof System
5	Warranty begins:	and expires:
6	roof in accordance Manufactured and	etor warrants to Owner that it applied the roofing materials to the above-described with (a) the written specifications of Roofing Materials (b) good roofing industry practices, in effect on 7/1/2023
	the date applicated Contractor will, during said roof which Upon expiration contractor and Oversanty and Oversanty and Oversactor's work	tion commenced. Subject to the following terms, conditions and limitations, aring the term of this Warranty, at its expense, repair or cause to be repaired leaks in are the result of defects in the roofing materials or Contractor's workmanship. If this term of this Warranty, without notice from Owner of some defect, Contractor her obligation to make repairs at Contractor's expense under any provision of this warranty not make any further demand or claim against Contractor concerning materials installed, provided that Contractor promptly diligently proceeds with the correction and repair of all such defects covered by this are called to Contractor's attention during the term of this Warranty by Owner.

Terms, Conditions and Limitations. This warranty does not cover any leaks in the roof caused by: the acts or missions of other trades or contractors; lightning, winds of peak gust speeds of 55 m.p.h. or higher measured at 10 meters above ground, hail storm, flood, eqrthquake or other unusaual phenomenon of the elements; structural settlement; failure, movement, cracking or excess deflection of the roof deck; defects or failure of materials used as a roof substrate over which the deflection of the roof deck; defects or failure of materials used as a roof substrate over which the roof system is applied; faulty condition of parapet walls, copings, chimneys, skylights, vents, roof system is applied; faulty condition of parapet walls, copings, chimneys, skylights, vents, supports or other parts of the building; vapor condensation beneth the roof; penetrations for pitch boxes; erosion, cracking and porosity of mortar and brick; dry rot; stoppage of roof drains and gutters; penetration of the roof from beneath by rising fasteners of any type; inadequate drainage, slope or other conditions beyond the control of

Contractor which cause ponding or standing of water; termites or other insects; rodents or other animals; fire; or harmful chemicals, oils, acids and the like that come in contact with the roofing system and cause a leak or otherwise damage the roof system. If the roof fails to maintain a water-tight condition because of damage by reason of any of the foregoing, this warranty shall immediately become null and void for the balance of its term unless such damage is repaired by Contractor at the expense of Owner.

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 - (c) Any area of the roof is used as a promenade, walkway or work area or is sprayed or flooded, unless such use was originally specified with a defined area and the specification is noted in paragraph 14 below.
- 10 <u>Transferability</u> This warranty shall accrue only to the benefit of the original owner named above. It is not transferable to any other person, except with the prior written consent of contractor.
- 11

 No Other Warranties. No other express warranty is given by Contractor to Owner. The repair of the subject roof is the exclusive remedy. THE IMPLIED WARRANTIES, AND SPECIFICALLY THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED AND DISCLAIMED.

This warranty is separate and apart from any warranty which may be issued to Owner by Roofing Materials Manufacturer. CONTRACTOR EXPRESSLY EXCLUDES AND DISCLAIMS ANY RESPONSIBILITY TO OWNER IN CONNECTION WITH OR ATTRIBUTABLE TO ANY SUCH ROOFING MATERIALS MANUFACTURER'S WARRANTY.

12	Incidental or Consequential Damages. UNDER NO CIRCUMSTANCES SHALL CONTRACTOR BE LIABLE TO OWNER OR ANY OTHER PERSON FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGE TO THE BUILDING OR ITS CONTENTS, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT OR UNDER ANY OTHER THEORY OF LAW.
13	Payment to Contractor. This warranty shall not be or become effective unless and until Contractor has been paid in full for said roof in accordance with the agreement pursuant to which said roof was applied.
14	Additional conditions or exclusions
	This warranty has been duly executed this 20th day of Jun-23
	By: David J Lee
	Contractor
	B&L SHEET METAL AND ROOFING
	Emergency Contact: Kyle Clemons (812) 327-0102