A D D E N D U M N O. 2

Penn High School Fieldhouse

Penn-Harris-Madison School Corporation
Mishawaka, Indiana

Project No. 222130.00

Index of Contents

Addendum No. 2, 16 items, 5 pages
New Project Manual Section: 26 33 23 – Battery Inverter Equipment
Revised Drawing Sheets: C2.2, C3.2, C3.3, C3.3A, C4.1, C4.2, S-004, S-11A, S-11B, S-11C, S-12B, S-522, A-11B, A-12B, AC12B, AQ71A, AQ71B, AQ751, MV102, MV202, M-601, M-602, EP11C, EP12A, EP12C, ET11B, ET12B, E-601, E-602, T-001, T-11A, T-11B, T-11C, T-12B, and T-503

February 1, 2024

I hereby certify that this Addendum was prepared by me or under my direct supervision and that I am a duly registered Architect/Engineer under the Laws of the State of Indiana.

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS

Paul A. Miller, License No. AR10800161
Expiration Date: 12/31/2025

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2 to Drawings and Project Manual, dated January 10, 2024, for the Penn High School Fieldhouse for Penn-Harris-Madison School Corporation, 55900 Bittersweet Road, Mishawaka, Indiana 46545; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana.
This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. PROJECT MANUAL, TABLE OF CONTENTS

A. Book 3, Page 00 01 10-2, DIVISION 26: Add Section 26 33 23 – Battery Inverter Equipment.

ITEM NO. 2. NEW PROJECT MANUAL SECTION

A. New Project Manual Section 26 33 23 – Battery Inverter Equipment is included with and hereby made a part of this Addendum.

ITEM NO. 3. PROJECT MANUAL, SECTION 04 20 00 – UNIT MASONRY

A. Add 2.6, B., 5., b., as follows:

"b. "Medium Ironspot 46 Velour", by Endicott Clay Products Company."

ITEM NO. 4. PROJECT MANUAL, SECTION 08 71 00 – DOOR HARDWARE

A. Article 3.05: Hardware Group 14: Delete Door No. B211.

B. Article 3.05: Add new Hardware Group No. 14A as follows:

Hardware Group No.**14A**
For use on Door #(s):
B211
Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	**EA**	**HINGE**	**5BB1 SIZE, QTY, NRP AS REQ'D (SEE SPECS)**	**652**	**IVE**
1	**EA**	**STOREROOM LOCK**	**L9080BDC 03A**	**626**	**SCH**
1	**EA**	**PERMANENT CORE**	**MARSHALL BEST SECURITY, 7-PIN, SMALL FORMAT INTERCHANGEABLE CORE**	**626**	**MAR**
1	**EA**	**SURFACE CLOSER**	**4040XP REG**	**689**	**LCN**

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	**EA**	**KICK PLATE**	**8400 10" X 1 1/2" LDW B-CS**	**630**	**IVE**
1	**EA**	**WALL STOP**	**WS406/407CVX**	**630**	**IVE**
3	**EA**	**SILENCER**	**SR64**	**GRY**	**IVE**
1	**EA**	**DOOR CONTACT**	**679 SERIES**	**BLK**	**SCE**

ITEM NO. 5. PROJECT MANUAL, SECTION 08 87 23 – SAFETY AND SECURITY FILM

A. Replace 2.3, A., as follows:

"A. 3M Safety S140 (SH14CLARL): Optically clear polyester film with a durable acrylic abrasion resistant coating over one surface and a pressure sensitive adhesive over the other. The adhesive is pressure-activated, not water-activated, and forms a physical bond, not chemical bond, to the glass. The film may be laminated to other clear polyester film layers to achieve the desired thickness of the film.

1. Physical / Mechanical Performance Properties:
   a. Film Color: Clear.
   b. Thickness: Nominal 14 mils.
   c. Tensile Strength (ASTM D 882): 25,000 psi.
   d. Break Strength (ASTM D 882) (Per Inch Width): 350 lbs.
2. Uniformity: No noticeable pin holes, streaks, thin spots, scratches, banding or other optical defects.
3. Variation in Total Transmission across the Width: Less than 2 percent over the average at any portion along the length.
4. Identification: Labeled as to Manufacturer as listed in this Section.
5. Solar Performance Properties: Film applied to 1/4 Inch thick clear glass.
   a. Visible Light Transmission (ASTM E 903): 85 percent.
   b. Ultraviolet Transmission (ASTM E 903): Less than 1 percent.
6. Impact Resistance for Safety Glazing: Tested on 1/4 inch annealed glass.
   a. Safety Rating (CPSC 16 CFR, Part 1201): Category II (400 ft.-lbs).
7. Impact Resistance and Pressure Cycling:
   a. Film shall pass impact of Medium Large Missile "C" and withstand subsequent pressure cycling (per ASTMs E 1996 and E 1886) at +/- 50 psf Design Pressure with use of 3M Impact Protection Adhesive attachment system.
8. Forced Entry Protection: Independent lab testing according to UL 972 protocol (Multiple Impact Test).
   a. Annealed Glass (1/4 inch) - Pass."

ITEM NO. 6. PROJECT MANUAL, SECTION 09 67 66 – FLUID-APPLIED ATHLETIC FLOORING

A. Article 1.1, A., 1: Change "(PRF)" to "(UF)." Therefore, matching the List of Finishes.

ITEM NO. 7. PROJECT MANUAL, SECTION 10 14 23 – INTERIOR PANEL SIGNS

A. Add 2.6, A. 5., as follows:

"5. Location: Vinyl letters are to be located on the glass transoms."

ITEM NO. 8. PROJECT MANUAL, SECTION 11 52 13 – FRONT PROJECTION SCREENS

A. Replace second 2.3, A., as follows:

"B. Surface-Mounted, Metal Encased, Electrically Operated Screens: Motor-in-roller units designed and fabricated for surface mounting on wall or at ceiling, fabricated from formed steel sheet not less than 0.027 inch thick or aluminum extrusions; with flat back design and vinyl covering or baked-enamel finish. Provide units with end caps and universal mounting brackets, finished to match end caps.

1. Products:
   a. Da-Lite Screen Co., Inc.; Cosmopolitan Electrol.
   b. Draper Inc.; Targa.
   c. Alltec Screens; a brand of Altec Pro.
   d. Stewart Filmscreen Corporation; Model A ElectriScreen.

B. Replace 2.4, K., 1., as follows:

"1. Mounting Accessories: Provide manufacturer's heavy steel extension wall bracket to mount screen 6 inches from wall where wall mounting is indicated."

C. Delete 2.4, K., 2., in its entirety.

ITEM NO. 9. PROJECT MANUAL, SECTION 12 24 13 – ROLLER WINDOW SHADES

A. Add 2.3, C., as follows:

"C. Light-Blocking Fabric: Opaque fabric, stain and fade resistant.

2. Shade Band Material: Polyester-cotton blend, 13.5 oz./sq.yd. min., .025 inches thick mm. Fire rating: NFPA 701. Green Spec. Listed.
3. Color: As selected by A/E from manufacturer's full range.
4. Location: Shades where indicated on interior window/opening locations.

ITEM NO. 10. PROJECT MANUAL, SECTION 12 48 26.01 – ENTRANCE CARPET TILE

A. Article 2.2, A., 1: Add "two-color" between "Provide" and "school" at beginning of sentence.

ITEM NO. 11. PROJECT MANUAL, SECTION 12 66 00 – TELESCOPING STANDS

A. Replace 2.5, A., 1., as follows:

"1. Material: Molded polyethylene plastic with contour seat surface.

1. Colors: Three colors will be selected as indicated on Drawings. Custom color to match school colors required.
2. Graphics: Colored seating layout shall be arranged in text graphic as indicated on Drawings.

ITEM NO. 12. PROJECT MANUAL, SECTION 13 34 19 – METAL BUILDING SYSTEMS

A. Replace 2.3, D., 1., as follows:

"1. Metal Roof Panel Assemblies:

a. R-Value: R-30 total.
   1) 6 inch batt insulation between purlins.
   2) 3.5 inch batt insulation over the purlins with thermal break."

B. Replace 2.6, B., 3., as follows:

"3. Location: Wall Insulation only."

C. Replace 2.6, D., as follows:

"D. Roof Liner Insulation Retaining System: Liner system that permanently supports insulation and allows full depth and insulation width between and above purlins as indicated herein.
1. Roof liner system shall provide an OSHA compliant fall arrest system and protection from falling objects.
2. Manufacturer's standard polyethylene vapor retarder liner fabric, white.
   a. Fabric liner composed of woven high-density polyethylene coated on both sides with polyethylene.
   b. ASTM C1136, Types I through Type VI.
   c. Perm Rating: Maximum of 0.02 per ASTM E96.
   d. Surface Burning: Flame Spread Index of 0 and Smoke Development Indiex of less than 50, per ASTM E84.
   e. Manufacturer's standard double sided tape and patch tape as required.
3. Galvanized metal support straps (bands).
   a. Coated steel, width 1.0 inch, structural steel Grade 50 per ASTM C 653, exposed color, white.
   b. Provide gridwork of steel retainer straps engineered for compliance with fall arrest system and insulation loading.
4. Metal Building Insulation, two layers.
   a. Batt Insulation, ASTM C991, Type 1.
   b. Surface Burning: Flame Spread Index less than 25 and Smoke Development Index less than 50 per ASTM E84.
   c. Unfaced.
   d. Thermal Resistance, total: R-30.
   e. Thickness over purlins 3.5 inches.
   f. Thermal Breaks: Extruded or expanded polystyrene thermal spacer blocks.
   g. Insulation hangers: Manufacturer's standard as required.
5. Fasteners: Manufacturer's standard, color matched to liner system with sealing washers.
6. Manufacturers:
   a. "Simple Save System" by Thermal Design.
   b. "ProLiner Branded Liner System by Therm-All.
   c. "Energy Saver FP" by Silvercote Envelope Solutions."

ITEM NO. 13. <u>PROJECT MANUAL, SECTION 26 05 26 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS</u>

A. Add 1.3, B., 1., f., as follows:

"d. Ground rings."

B. Add 3.5, K., as follows:

"K. Ground Ring: Install a grounding conductor, electrically connected to each building structure ground rod and to each steel column, extending around the perimeter of building.
1. Install tinned-copper conductor not less than No. 2/0 AWG for ground ring and for taps to building steel.
2. Bury ground ring not less than 24 inches from building foundation."

ITEM NO. 14. PROJECT MANUAL, SECTION 28 31 11 – DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

A. Article 2.1, A: Delete subparagraphs 1, 2, 3, 4, 5, and 6, in their entirety.

B. Add new subparagraph 2.1, A., 1., as follows:

"1. Simplex, a part of Johnson Controls."

ITEM NO. 15. ACCEPTABLE MANUFACTURERS

The following manufacturers are to be considered acceptable manufacturers (suppliers and fabricators) for the Sections of the Specifications listed. Listed manufacturers are required to bid on products equal in type and design, size, function, and quality to that originally specified. Final decision as to equality of products specified versus those proposed shall be made by the Architect.

Section 08 45 13 – Structured-Polycarbonate-Panel Assemblies
- Major Industries/Kingspan, Wausau, Wisconsin
- Duo-Gard, Canton, Michigan

ITEM NO. 16. REVISED DRAWING SHEETS

A. Drawing Sheets: C2.2, C3.2, C3.3, C3.3A, C4.1, C4.2, S-004, S-11A, S-11B, S-11C, S-12B, S-522, A-11B, A-12B, AC12B, AQ71A, AQ71B, AQ751, MV102, MV202, M-601, M-602, EP11C, EP12A, EP12C, ET11B, ET12B, E-601, E-602, T-001, T-11A, T-11B, T-11C, T-12B, and T-503 have been revised, dated 2/1/24, and is included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

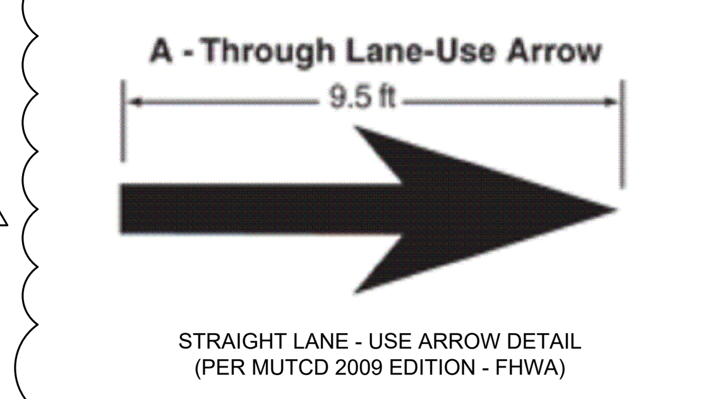
END OF ADDENDUM

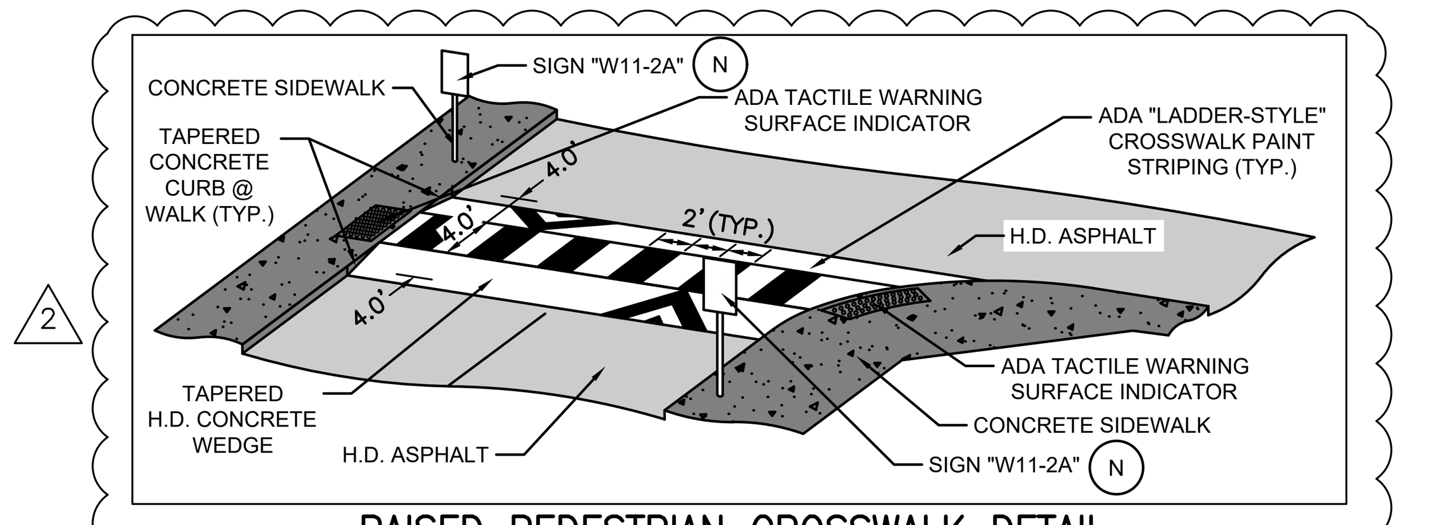
PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.

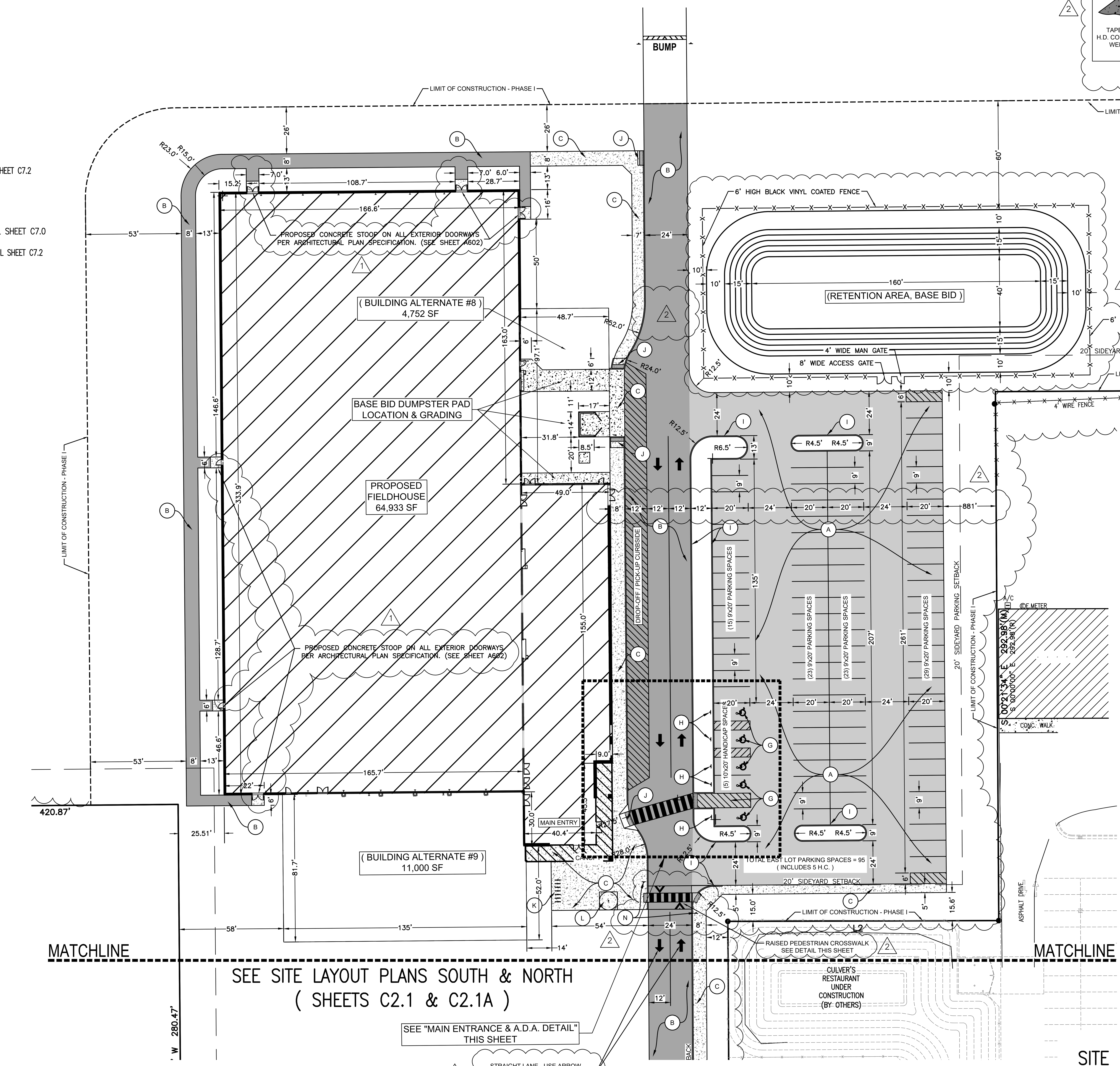
KEYNOTES:

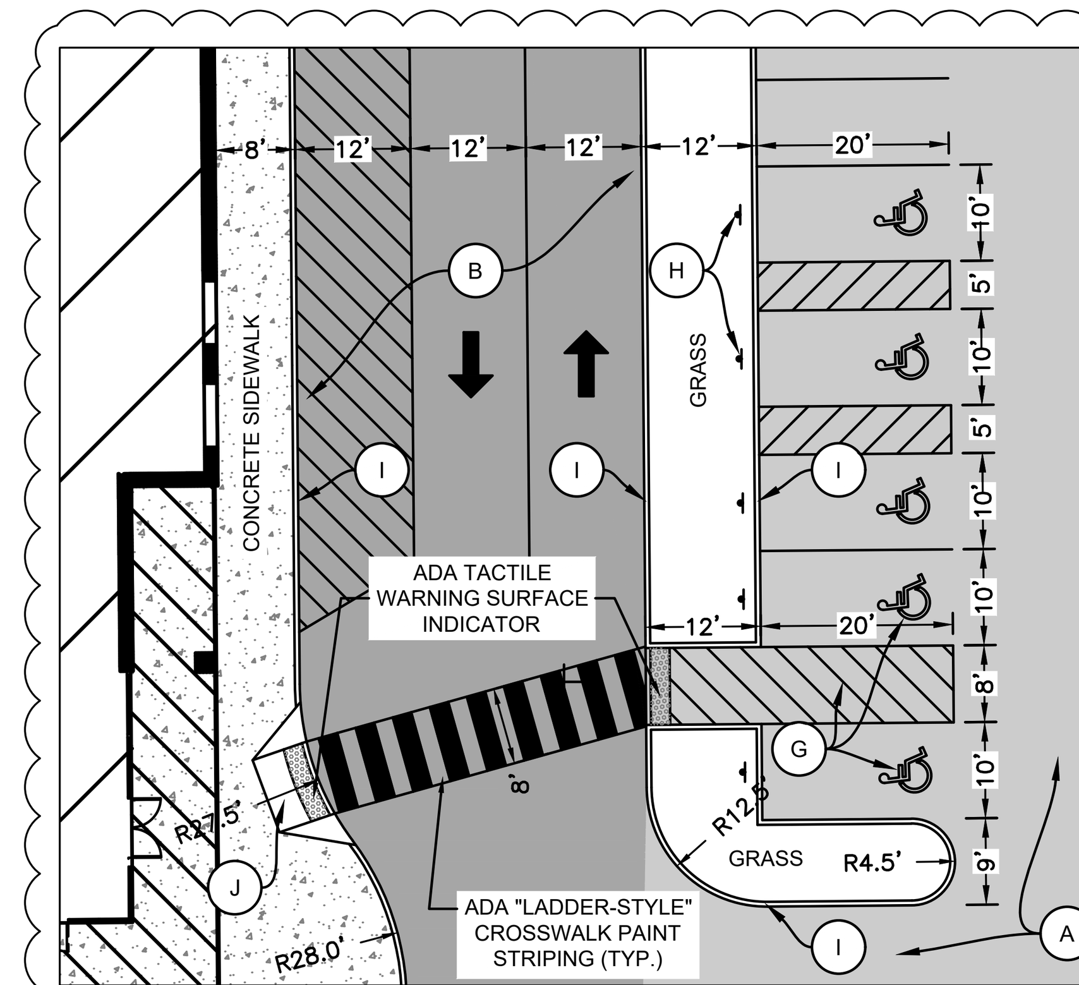
- (A) PROPOSED STANDARD DUTY HMA PAVEMENT (SEE SHEET C7.1)
- (B) PROPOSED HEAVY DUTY HMA PAVEMENT (SEE SHEET C7.1)
- (C) PROPOSED CONCRETE SIDEWALK
- (F) ADA PAVEMENT MARKINGS AND SIGN/POST. SEE DETAILS SHEET C7.1
- (G) ADA PAVEMENT MARKINGS PER ADA STANDARDS AND SPECIFICATIONS. SEE DETAIL SHEET C7.2
- (H) ADA PARKING SIGNAGE. SEE DETAIL SHEET C7.1
- (I) STANDARD UPRIGHT CONCRETE CURB. SEE DETAIL SHEET C7.0
- (J) PROPOSED CONCRETE ADA HANDICAP RAMP AND SIDEWALK AT CURB. SEE DETAIL SHEET C7.0
- (K) PROPOSED 14 STALL SURFACE MOUNTED "HITCH POST" BICYCLE RACK. SEE DETAIL SHEET C7.2
- (L) PROPOSED FLAGPOLE. SEE ARCHITECTURAL PLANS FOR DETAILS.
- (M) PROPOSED SITE LIGHTING. SEE ARCHITECTURAL PLANS FOR DETAILS.
- (N) PROPOSED SIGN. "W11-2A" – RAISED PEDESTRIAN CROSSING





RAISED PEDESTRIAN CROSSWALK DETAIL
N.T.S.





MAIN ENTRANCE & A.D.A. DETAIL
1" = 20'

PROPOSED LEGEND

- PROPOSED INLET
- PROPOSED CLEAN OUT
- PROPOSED HYDRANT
- PROPOSED LIGHT
- PROPOSED MANHOLE
- PROPOSED VALVE
- PROPOSED POLE
- PROPOSED CATCH BASIN
- PROPOSED END SECTION
- (100.00) PROPOSED ELEVATION
- TW TOP OF WALK
- TS BOTTOM OF CURB
- TP TOP OF PAVEMENT
- TC TOP OF CURB
- BC BOTTOM OF CURB
- W PROPOSED WATER
- E PROPOSED ELECTRIC
- G PROPOSED GAS LINE
- T PROPOSED TELEPHONE
- PROPOSED CONTOUR

EXISTING LEGEND

- SET P.K. NAIL
- FOUND IRON
- (M) MEASURED DISTANCE
- (R) RECORD DISTANCE
- SET FLUSH, 5/8" CAPPED REBAR IN. REG. F-0044 MI. REG. #22436
- PINE TREE
- BUSH
- TREE
- FOUNTAIN/IRR.
- BOLLARD/POLE
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- SIGN
- WELL
- VALVE
- FIRE HYDRANT
- CURB INLET
- DRYWELL
- SANITARY MANHOLE
- STORM MANHOLE
- CLEAN-OUT
- FIBER OPTIC MANHOLE
- GAS METER
- WATER MANHOLE
- END SECTION
- ELEC. VAULT
- ELEC. TRANSFORMER
- PHONE VAULT
- SPOT ELEVATION
- SOIL BORING
- WATER METER
- CABLE PED.
- PHONE PED.
- ELEC. PED.
- MAILBOX
- A/C UNIT
- EX. ELEVATION
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- ELECTRIC
- ELECTRIC
- PHONE
- GAS
- CABLE TV
- WATER
- FIBER OPTIC
- STORM LINE
- SANITARY LINE

ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

RYAN W. CLUSSMAN REGISTERED No. PE11900018 STATE OF INDIANA PROFESSIONAL ENGINEER
02/01/24

SCALE 1" = 30'

SITE LAYOUT PLAN – NORTH

PETITIONER:
PENN HARRIS MADISON SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259-7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:
DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234-4003
ATTN: MICHAEL DANCH

DATE	DRAWN BY:
01/10/24	ASM
SCALE	CHECKED BY:
1" = 30'	MJD
FILE #	PROJ. MANGR:
230228.5	MJD

REVISIONS

DATE	BY	
1/26/24	ASM	ADDENDUM #1
2/01/24	ASM	ADDENDUM #2

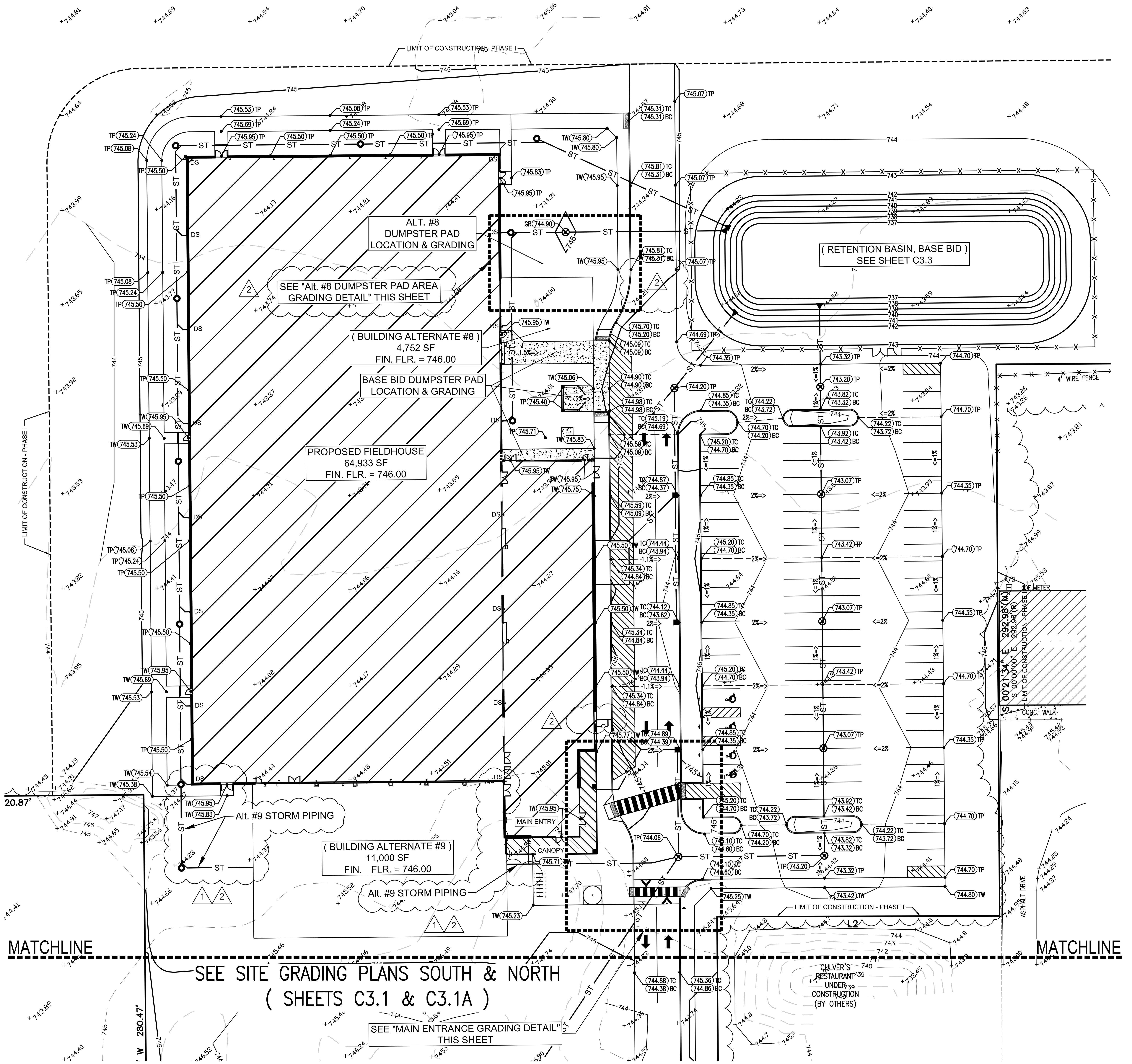
SHEET C2.2

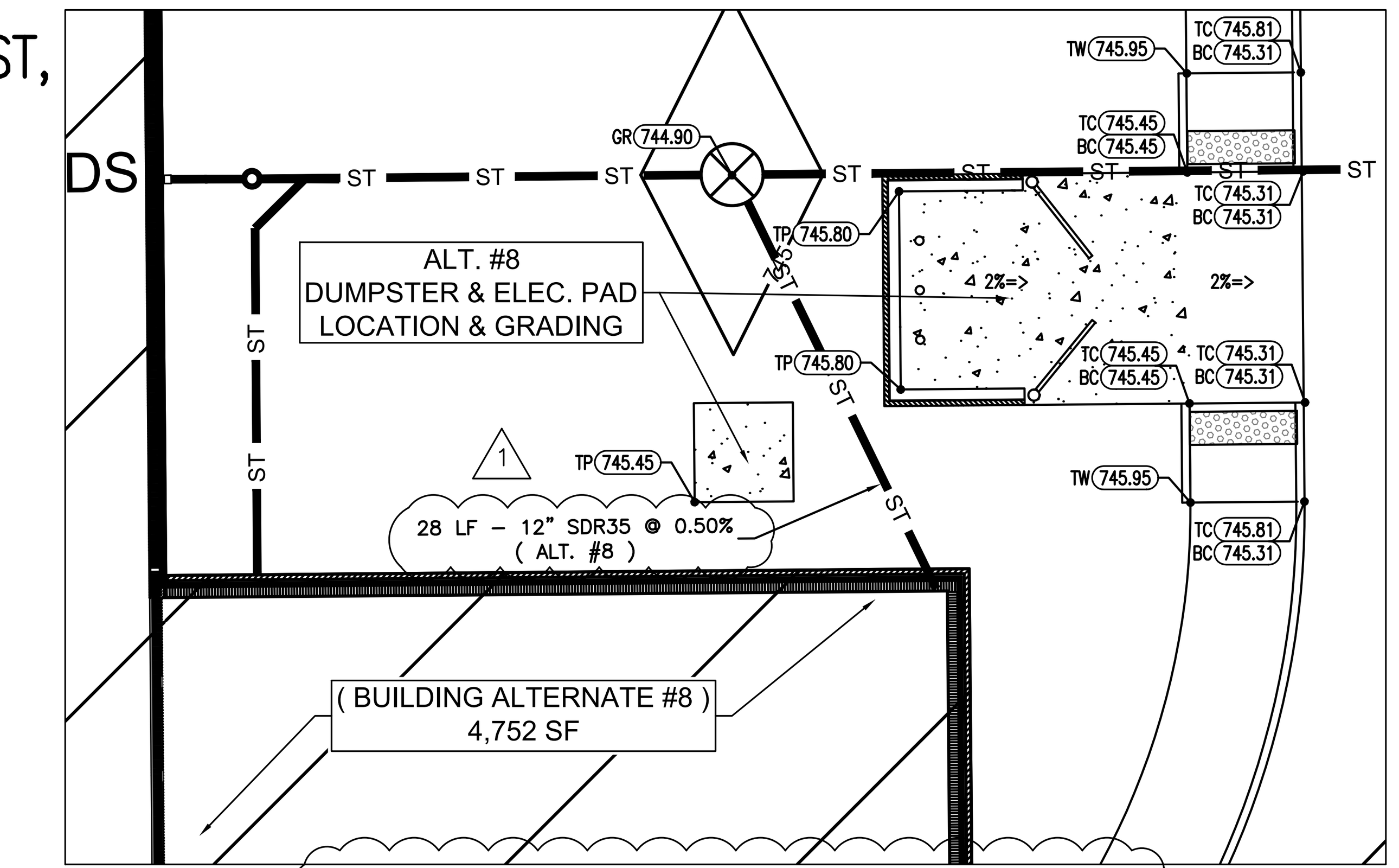
Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects • Land Planners
Office: (574)234-4003 • Fax: (574)234-4119
1643 Commerce Drive • South Bend, IN 46628

© Copyright 2023 Danch, Harner & Associates, Inc.

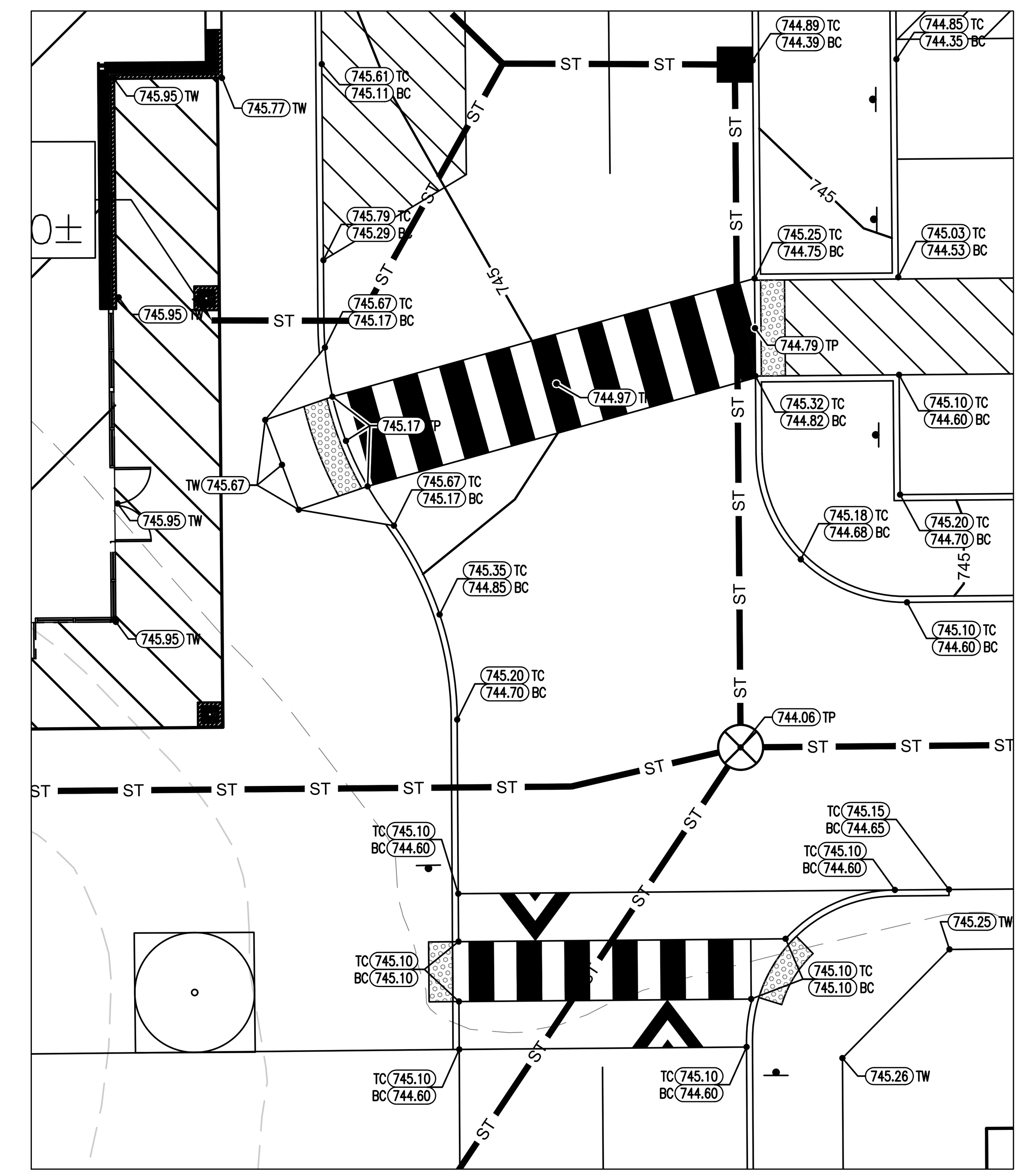
PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.





ALT. #8 DUMPSTER PAD AREA GRADING DETAIL
1" = 10'



MAIN ENTRANCE GRADING DETAIL
1" = 10'

PROPOSED LEGEND

Symbol	Description
■	PROPOSED INLET
○	PROPOSED CLEAN OUT
	PROPOSED HYDRANT
□•□	PROPOSED LIGHT
●	PROPOSED MANHOLE
	PROPOSED VALVE
	PROPOSED POLE
⊗	PROPOSED CATCH BASIN
▶	PROPOSED END SECTION
(100.00)	PROPOSED ELEVATION
TW	TOP OF WALK
TS	BOTTOM OF CURB
TP	TOP OF PAVEMENT
TC	TOP OF CURB
BC	BOTTOM OF CURB
—W—	PROPOSED WATER
—E—	PROPOSED ELECTRIC
—G—	PROPOSED GAS LINE
—T—	PROPOSED TELEPHONE
	PROPOSED CONTOUR

EXISTING LEGEND

△ SET P.K. NAIL
● FOUND IRON
(M) MEASURED DISTANCE
(R) RECORD DISTANCE
○ SET FLUSH, 5/8" CAPPED REBAR IN. REG. F-0044 MI. REG. #22436

PINE TREE	GAS METER	SOIL BORING	
BUSH	WATER MANHOLE	WATER METER	
TREE	END SECTION	CABLE PED.	
FOUNTAIN/IRR.	ELEC. VAULT	PHONE PED.	
BOLLARD/POLE	ELEC. TRANSFORMER	ELEC. PED.	
LIGHT POLE	PHONE VAULT	MAILBOX	
UTILITY POLE	SPOT ELEVATION	A/C UNIT	
GUY ANCHOR			
SIGN	EX. ELEVATION		
WELL	WIRE FENCE		
VALVE	CHAIN LINK FENCE		
FIRE HYDRANT	WOOD FENCE		
CURB INLET	ELECTRIC		
DRYWELL	ELECTRIC		
SANITARY MANHOLE	PHONE		
STORM MANHOLE	GAS		
CLEAN-OUT	CABLE TV		
FIBER OPTIC MANHOLE	WATER		
	FIBER OPTIC		
	STORM LINE		
	SANITARY LINE		

N

SCALE 1" = 30' (0, 30, 60, 90)

RYAN W. CLUSSMAN, REGISTERED, No. PE11900018, STATE OF INDIANA, PROFESSIONAL ENGINEER
02/01/24

(BASE BID & ALT. #8)
SITE GRADING PLAN – NORTH

ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

PETITIONER:
PENN HARRIS MADISON SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259-7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:
DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234-4003
ATTN: MICHAEL DANCH

DHA Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects • Land Planners
Office: (574)234-4003 / (800)594-4003 • Fax: (574)234-4119
1643 Commerce Drive • South Bend, IN 46628

DATE	DRAWN BY:
01/10/24	ASM
SCALE 1" = 30'	CHECKED BY: MJD
FILE # 230228.5	PROJ. MANGR: MJD

REVISIONS

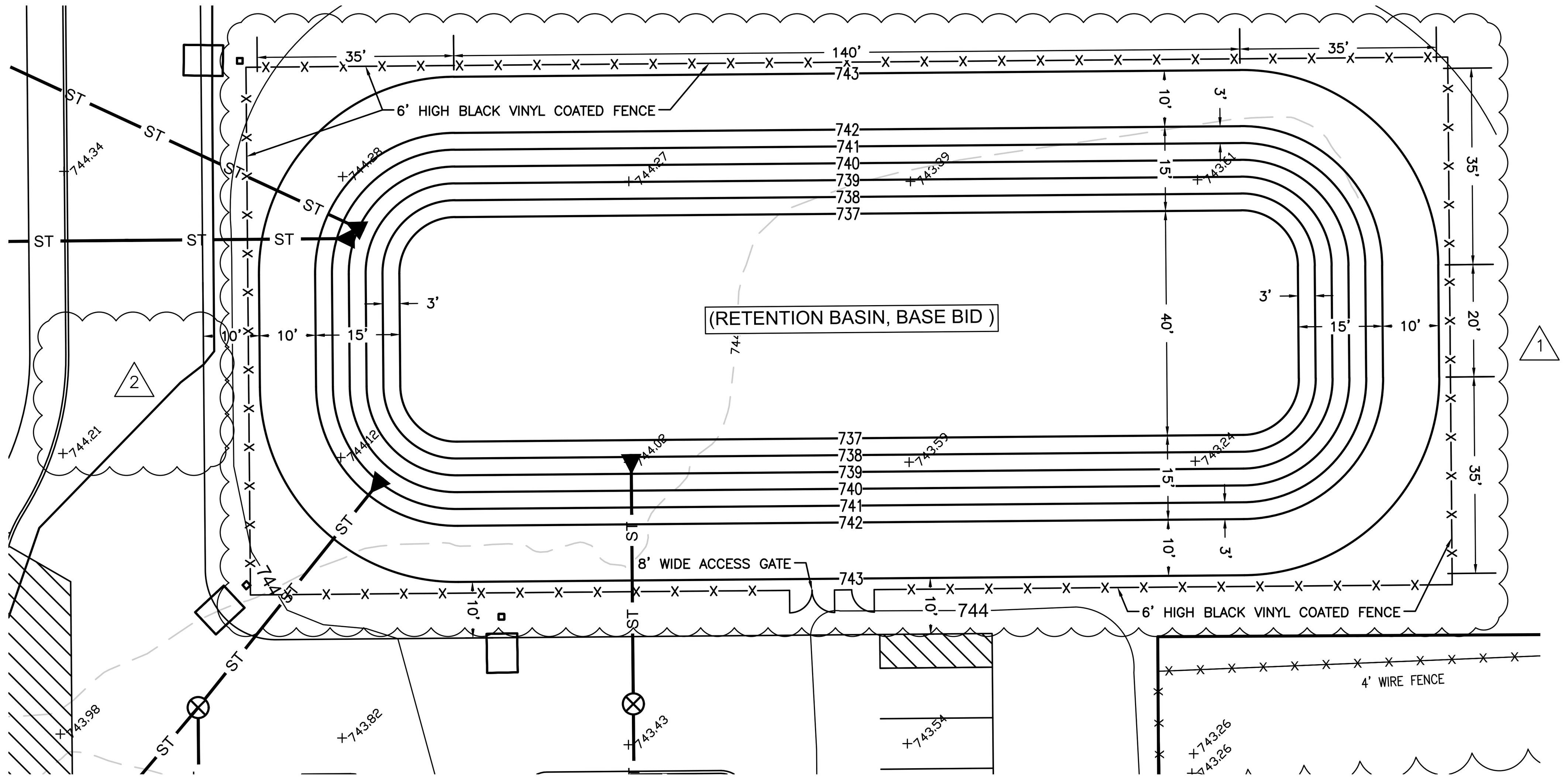
DATE	BY	
1/26/24	ASM	ADDENDUM #1
2/01/24	ASM	ADDENDUM #2

SHEET C3.2

© Copyright 2023 Danch, Harner & Associates, Inc.

PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.



DRAINAGE CALCULATION: (RETENTION BASIN)

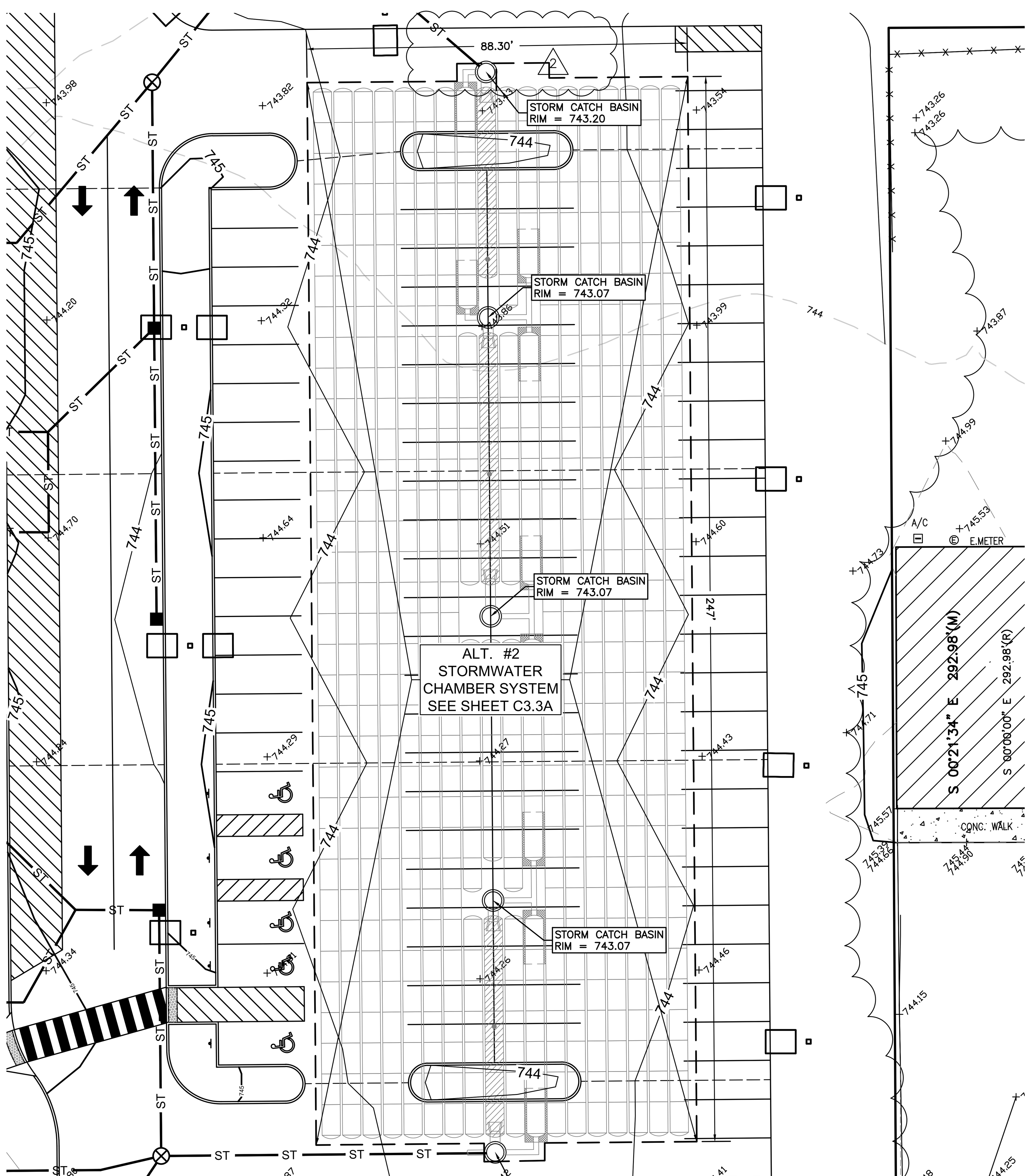
PHMSC FIELDHOUSE - FINAL SITE PLAN (PHASE 1)				
Post-Development	Area (ft²)	Area (ac)	Coefficient	Total
Impervious Surface	92,781	2.130	0.99	91,853
Building	80,685	1.852	1.00	80,685
Open Space	134,781	3.094	0.23	31,000
Total	**308,247**	**7.076**		**203,538**
		Weighted Runoff Coefficient (c) =	**0.66**	
Required Storage Calculation				
		25 year, 24 Hour Rainfall Intensity (i) =	**0.205**	
		Q (0.93 x 0.205 in/hr x 1.13 ac) =	**0.891**	ft^3/s
		Storage Required (0.215 ft^3/s x 24 h x 3600 s + 6% siltration) =	**46,260**	ft^3
Proposed Storage Calculation				
		Total Basin Inf. Surf. Area =	**27,500**	ft^2
		Basin Depth =	**5.0**	ft
		Proposed Basin	**47,129**	ft^3
		Storage Required:	**46,260**	ft^3
		Storage Provided:	**47,129**	ft^3
		Surplus Storage:	**869**	ft^3

Project:	PHMSC FIELDHOUSE - FINAL SITE PLAN (PHASE 1)	**Date:**	12/7/2023
County:	ST. JOSEPH COUNTY, INDIANA.	**Job No.:**	230228.5
City/Town:	PENN TOWNSHIP		

Proposed Retention Basin Area

Elevation	Area (Sq.Ft.)	Distance	Double Area	Volume (ft)			
737	6314.16						
738	7490.93	1	13805.09	6902.545			
739	8724.25	1	16215.18	8107.59			
740	10014.11	1	18738.36	9369.18			
741	11360.53	1	21374.64	10687.32			
742	12763.5	1	24124.03	12062.015	Top of Pond	47,129	CFT
743	17848.45	1	30611.95	15305.975	Freeboard	62,435	CFT
VOLUME RETENTION POND						**47,129**	**CFT**

BASE BID RETENTION BASIN



PROPOSED LEGEND

- PROPOSED INLET
- PROPOSED CLEAN OUT
- PROPOSED HYDRANT
- PROPOSED LIGHT
- PROPOSED MANHOLE
- PROPOSED VALVE
- PROPOSED POLE
- PROPOSED CATCH BASIN
- PROPOSED END SECTION
- (100.00) PROPOSED ELEVATION
- TW TOP OF WALK
- TS BOTTOM OF CURB
- TP TOP OF PAVEMENT
- TC TOP OF CURB
- BC BOTTOM OF CURB
- W PROPOSED WATER
- E PROPOSED ELECTRIC
- G PROPOSED GAS LINE
- T PROPOSED TELEPHONE
- PROPOSED CONTOUR

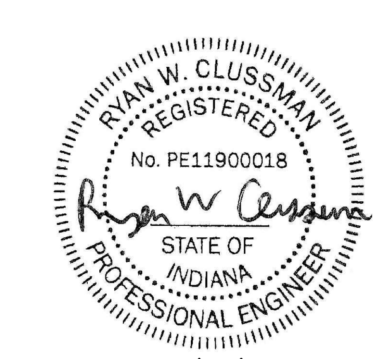
EXISTING LEGEND

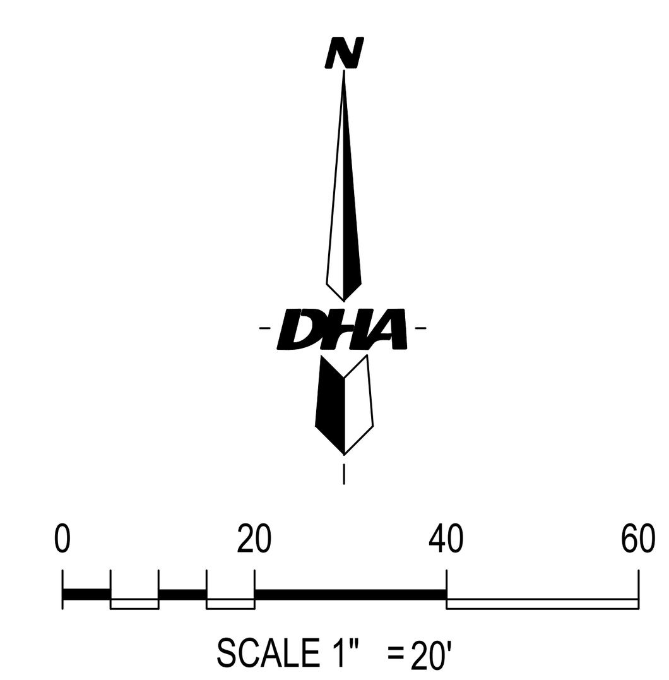
- SET P.K. NAIL
- FOUND IRON
- SET FLUSH, 5/8" CAPPED REBAR IN. REG. F-0044 MI. REG. #22436
- (M) MEASURED DISTANCE
- (R) RECORD DISTANCE
- PINE TREE
- BUSH
- TREE
- FOUNTAIN/IRR.
- BOLLARD/POLE
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- SIGN
- WELL
- VALVE
- FIRE HYDRANT
- CURB INLET
- DRYWELL
- SANITARY MANHOLE
- STORM MANHOLE
- CLEAN-OUT
- FIBER OPTIC MANHOLE
- GAS METER
- WATER MANHOLE
- END SECTION
- ELEC. VAULT
- ELEC. TRANSFORMER
- PHONE VAULT
- SPOT ELEVATION
- SOIL BORING
- WATER METER
- CABLE PED.
- PHONE PED.
- ELEC. PED.
- MAILBOX
- A/C UNIT
- EX. ELEVATION
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- ELECTRIC
- ELECTRIC
- PHONE
- GAS
- CABLE TV
- WATER
- FIBER OPTIC
- STORM LINE
- SANITARY LINE

DRAINAGE CALCULATION: (ALT. #2 - CHAMBER SYSTEM)

PHMSC FIELDHOUSE - FINAL SITE PLAN (PHASE 1)				
Post-Development	Area (ft²)	Area (ac)	Coefficient	Total
Impervious Surface	92,781	2.130	0.99	91,853
Building	80,685	1.852	1.00	80,685
Open Space	134,781	3.094	0.23	31,000
Total	**308,247**	**7.076**		**203,538**
		Weighted Runoff Coefficient (c) =	**0.66**	
Required Storage Calculation				
		25 year, 24 Hour Rainfall Intensity (i) =	**0.205**	
		Q (0.93 x 0.205 in/hr x 1.13 ac) =	**0.891**	ft^3/s
		Storage Required (0.215 ft^3/s x 24 h	**46,260**	ft^3
Proposed Storage Calculation				
		Total Basin Inf. Surf. Area =	**27,500**	ft^2
		Basin Depth =	**5.0**	ft
		Proposed Basin	**47,129**	ft^3
		Storage Required:	**46,260**	ft^3
		Storage Provided:	**47,009**	ft^3
		Surplus Storage:	**749**	ft^3

ALT. #2 RETENTION CHAMBER SYSTEM





(BASE BID & ALT. #2 RETENTION)
SITE RETENTION PLAN

Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects • Land Planners
Office: (574)234-4003 / (800)594-4003 • Fax: (574)234-4119
1643 Commerce Drive • South Bend, IN 46628

ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

PETITIONER:

PENN HARRIS MADISON
SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259-7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:

DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234-4003
ATTN: MICHAEL DANCH

DATE	DRAWN BY:
01/10/24	ASM
SCALE 1" = 20'	CHECKED BY: MJD
FILE # 230228.5	PROJ. MANGR: MJD

REVISIONS

DATE	BY	
1/26/24	ASM	ADDENDUM #1
2/01/24	ASM	ADDENDUM #2

SHEET C3.3

© Copyright 2023 Danch, Harner & Associates, Inc.

PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	AARON CHEEVER 978-302-0650 AARON.CHEEVER@ADSPIPE.COM
ADS SALES REP	SHAWN SMITH 574-276-5512 SHAWN.SMITH@ADS-PIPE.COM
PROJECT NO.	S387668

Advanced Drainage Systems, Inc.

SiteAssist® FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

PENN HIGH SCHOOL FIELD HOUSE

MISHAWAKA, IN, USA

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS.
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT

592	STORMTECH SC-740 CHAMBERS
60	STORMTECH SC-740 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
47,009	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
21920	SYSTEM AREA (ft²)
686	SYSTEM PERIMETER (ft)

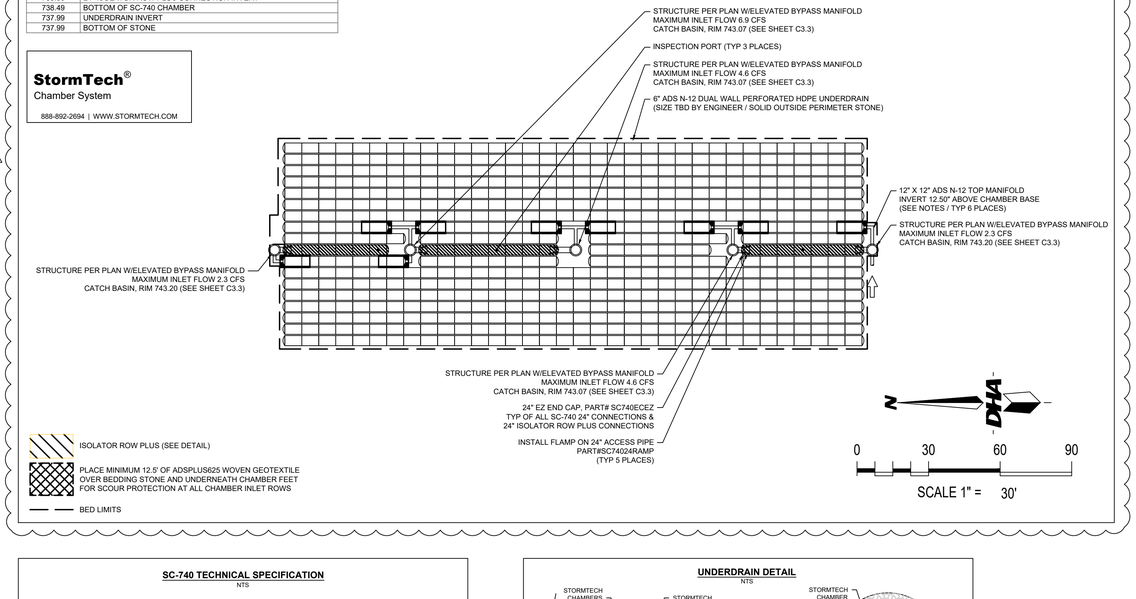
PROPOSED ELEVATIONS

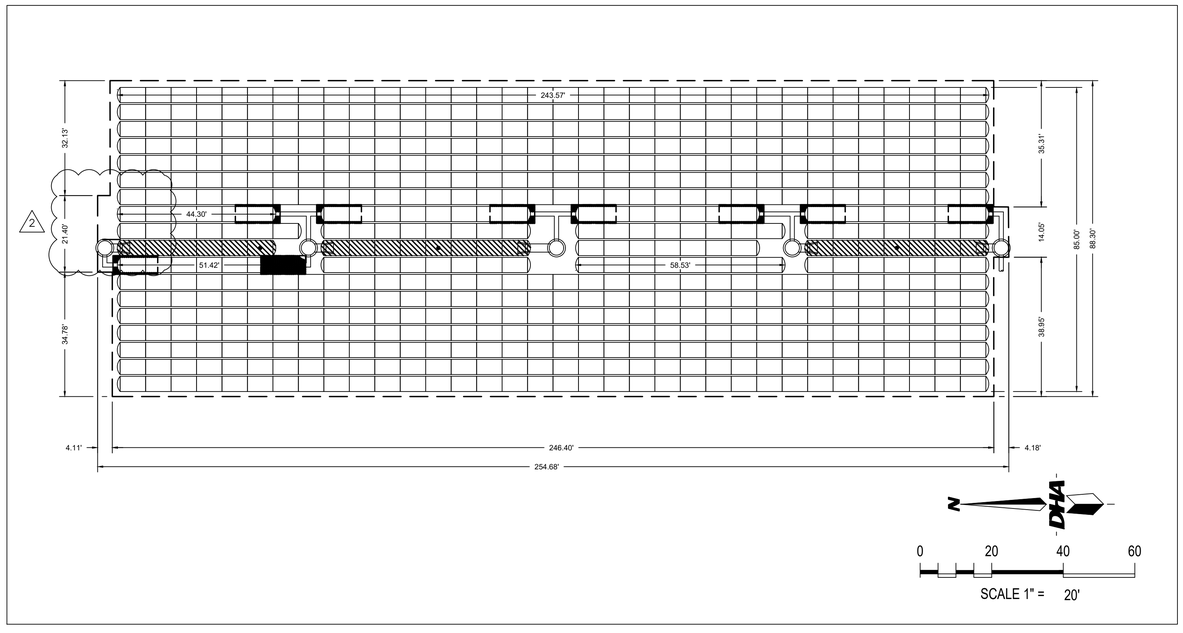
748.99	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
742.99	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
742.49	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
742.49	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
742.49	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
741.49	TOP OF STONE
740.99	TOP OF SC-740 CHAMBER
739.53	12" TOP MANIFOLD INVERT
738.59	12" BOTTOM CONNECTION INVERT
738.50	24" ISOLATOR ROW PLUS CONNECTION INVERT
738.49	BOTTOM OF SC-740 CHAMBER
737.99	UNDERDRAIN INVERT
737.99	BOTTOM OF STONE

NOTES

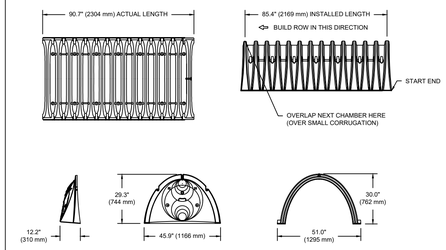
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM





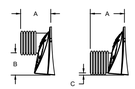
SC-740 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

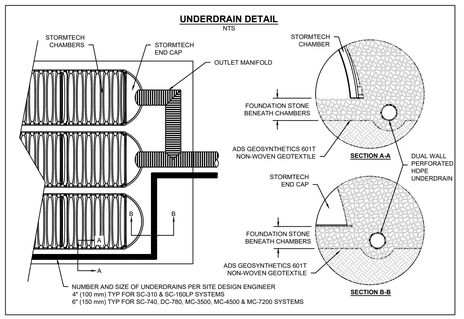
PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740ECEZ*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740ECEZ THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

UNDERDRAIN DETAIL
NTS



RYAN W. CLUESMAN
REGISTERED
No. PE11900018
STATE OF INDIANA
PROFESSIONAL ENGINEER
02/01/24

(Alt. #2)
STORMWATER CHAMBER PLAN

PETITIONER:

PENN HARRIS MADISON
SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259-7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:

DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234-4003
ATTN: MICHAEL DANCH

DATE 01/10/24	DRAWN BY: ASM	REVISIONS	
SCALE NTS	CHECKED BY: MJD	DATE	BY
FILE # 230228.5	PROJ. MANGR: MJD	2/01/24	ASM

DATE	BY	
2/01/24	ASM	ADDENDUM #2

SHEET C3.3A

Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects• Land Planners
Office: (574)234-4003 / (800)394-4003 • Fax: (574)234-4119
1643 Commerce Drive • South Bend, IN 46628

230228.5_details.dwg
2/1/2024 12:29 PM
SAM

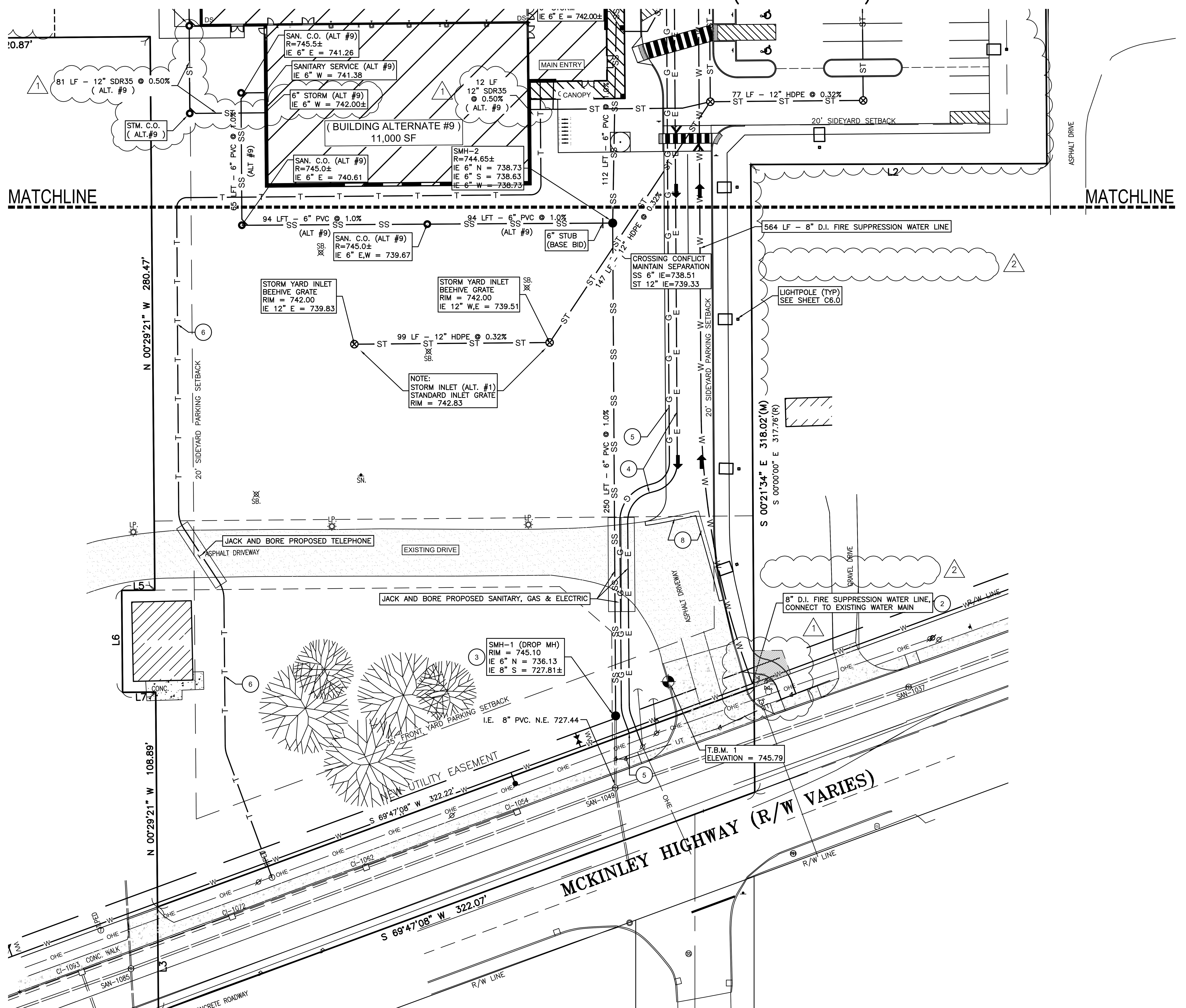
ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

© Copyright 2013 Danch, Harner & Associates, Inc.

PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.



STRUCTURE CHART

SAN–1037
RIM ELEV. = 746.07
UNABLE TO OPEN
(BROKEN LID)

SAN–1049
RIM ELEV. = 746.24
I.E. 8" PVC. N.E. 727.44
I.E. 18" PVC N.E. 726.14
I.E. 8" PVC. S.W. 726.84
I.E. 18" PVC. S.W. 726.24

SAN–1085
RIM ELEV. = 746.24
I.E. 8" PVC. N.E. 735.88
I.E. 18" PVC. N.E. 725.98
I.E. 8" PVC. S.W. 736.03
I.E. 8" PVC. S.W. 737.38
I.E. 18" PVC. S.W. 725.78

CI–1054 (FLOW LINE)
RIM ELEV. = 745.92
I.E. 12" PVC. S.W. 741.42

CI–1062 (FLOW LINE)
RIM ELEV. = 745.66
I.E. 12" PVC. N.E. 741.06
I.E. 12" PVC. S.W. 740.56

CI–1072 (FLOW LINE)
RIM ELEV. = 745.30
I.E. 12" PVC. N.E. 740.20
I.E. 18" RCP. S.W. 742.15

CI–1093 (FLOW LINE)
RIM ELEV. = 745.03
I.E. 18" RCP. N.E. 740.03
I.E. 12" PVC. S.W. 740.13
I.E. 18" RCP. S.W. 739.83

CI–1101 (FLOW LINE)
RIM ELEV. = 744.67
I.E. 18" RCP. N.E. 739.67
I.E. 18" RCP. S.W. 739.57

PROPOSED LEGEND

- PROPOSED INLET
- PROPOSED CLEAN OUT
- PROPOSED HYDRANT
- PROPOSED LIGHT
- PROPOSED MANHOLE
- PROPOSED VALVE
- PROPOSED POLE
- PROPOSED CATCH BASIN
- PROPOSED END SECTION
- (100.00) PROPOSED ELEVATION
- TW TOP OF WALK
- TS BOTTOM OF CURB
- TP TOP OF PAVEMENT
- TC TOP OF CURB
- BC BOTTOM OF CURB
- —W— PROPOSED WATER
- —E— PROPOSED ELECTRIC
- —G— PROPOSED GAS LINE
- —T— PROPOSED TELEPHONE
- PROPOSED CONTOUR

EXISTING LEGEND

- SET P.K. NAIL
- FOUND IRON
- (M) MEASURED DISTANCE
- (R) RECORD DISTANCE
- SET FLUSH, 5/8" CAPPED REBAR IN. REG. F-0044 MI. REG. #22436
- PINE TREE
- BUSH
- TREE
- FOUNTAIN/IRR.
- BOLLARD/POLE
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- SIGN
- WELL
- VALVE
- FIRE HYDRANT
- CURB INLET
- DRYWELL
- SANITARY MANHOLE
- STORM MANHOLE
- CLEAN-OUT
- FIBER OPTIC MANHOLE
- GAS METER
- WATER MANHOLE
- END SECTION
- ELEC. VAULT
- ELEC. TRANSFORMER
- PHONE VAULT
- SPOT ELEVATION
- SOIL BORING
- WATER METER
- CABLE PED.
- PHONE PED.
- ELEC. PED.
- MAILBOX
- A/C UNIT
- EX. ELEVATION
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- OHE ELECTRIC
- UGE ELECTRIC
- UT PHONE
- UG GAS
- CTV CABLE TV
- W WATER
- FO FIBER OPTIC
- STORM LINE
- SANITARY LINE

UTILITY KEYNOTES:

1. 1-1/2" COPPER DOMESTIC WATER SERVICE:
INSTALL TAP & VALVE USING METHODS AND MATERIALS PER MISHAWAKA STANDARD SPECIFICATIONS. STOP BOXES SHALL BE LOCATED BEHIND THE CURB IN LANDSCAPE ISLAND. ONE (1) MAIN METER AND SUB-METERS PER ARCHITECT'S INTERNAL PLUMBING PLAN. COORDINATE ALL ACTIVITIES WITH MISHAWAKA WATER DEPARTMENT.
2. 8" DUCTILE IRON WATER LINE FOR FIRE PROTECTION. PROVIDE 12" X 8" TAP & VALVE FROM 12" WATER MAIN. FIRE LINE TO SERVICE THE ENTIRE BUILDING. SEE ARCHITECT'S PLUMBING PLAN FOR INTERNAL SPLIT. WATER UTILITIES SHALL BE INSTALLED AND TESTED PER THE "GENERAL CONSTRUCTION SPECIFICATIONS" FOR THE MISHAWAKA UTILITIES WATER DIVISION.
3. 6" SANITARY SEWER CONNECTION:
PROVIDE A SANITARY SEWER "DROP MANHOLE" AT END OF THE EXISTING 8" SEWER EXTENSION LEADING NORTH FROM THE EXISTING SANITARY STRUCTURE #1049 LOCATED IN McKINLEY HWY. PAVEMENT.
PROVIDE 6" SDR 35 SANITARY SEWER MAIN FROM ROUTE LINE PER PLAN. INSTALL USING METHODS AND MATERIALS PER MISHAWAKA STANDARD SPECIFICATIONS. COORDINATE ALL ACTIVITIES WITH MISHAWAKA UTILITIES DEPARTMENT. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION. JACK AND BORE SANITARY SEWER UNDER THE EXISTING ASPHALT PAVED FIRE DEPARTMENT DRIVEWAY PER CITY OF MISHAWAKA STANDARD SPECIFICATIONS.
4. ELECTRIC SERVICE: "POWER CO." TO PROVIDE UNDERGROUND SERVICE VIA TRANSFORMER. CONTRACTOR TO PROVIDE AND INSTALL 4" CONDUIT TO NEW CONNECTION LOCATION. SEE ARCHITECTURAL SHEETS FOR ELECTRICAL SCHEDULES CONFIRM WITH ARCHITECT PRIOR TO WORK.
5. NATURAL GAS SERVICE: NATURAL GAS SERVICE. COORDINATE PIPING WITH NIPSCO. (1)
6. TELEPHONE SERVICE: "TELEPHONE CO." TO PROVIDE UNDERGROUND SERVICE. CONTRACTOR TO PROVIDE AND INSTALL CONDUIT WIRE TO NEW CONNECTION LOCATION AS DETERMINED BY OWNER/ARCHITECT.
7. DOWNSPOUTS ARE TO BE CONNECTED TO 12" SDR 35 STORM SEWER SYSTEM AS SHOWN IN THE PLANS AT 0.5% SLOPE MINIMUM. INSTALL CLEAN-OUTS WERE NECESSARY FOR MAINTENANCE. (1)
8. PAVEMENT PATCH PER MISHAWAKA ENGINEERING STANDARDS. SEE PAVEMENT PATCH DETAIL IV-2 ON SHEET C7.1
9. PROPOSED FIRE HYDRANT LOCATED PER MISHAWAKA FIRE DEPT. & WATER DEPT. SEE DETAIL ON SHEET C7.2 (1)

UTILITY NOTE:
CONTRACTOR TO FIELD VERIFY LOCATION, SIZE AND INVERT OF "MAPPED" EXISTING SANITARY SEWER PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION. OPEN-CUT TRENCH ALL UTILITY CONNECTIONS PER CITY OF MISHAWAKA STANDARD SPECIFICATIONS.

*EXCEPTION:
THE CONTRACTOR SHALL JACK AND BORE ANY UTILITY CROSSING UNDER THE EXISTING FIRE DEPARTMENT ACCESS DRIVE LOCATED WITHIN THE EXISTING ROADWAY EASEMENT LOCATED ON THE SOUTH SIDE OF THE SITE.

RYAN W. CLUSSMAN REGISTERED No. PE11900018 STATE OF INDIANA PROFESSIONAL ENGINEER 02/01/24

N
DHA
0 30 60 90
SCALE 1" =30'

SITE UTILITY & DRAINAGE PLAN – SOUTH

ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

TEMPORARY BENCHMARK INFORMATION:
VERTICAL DATUM ESTABLISHED BY A TWO (2) GPS OBSERVATION POST PROCESSED BY OPUS (NAVD88)

T.B.M. 1: SET CUT SQUARE IN TOP OF CURB ALONG WEST LINE OF ENTRANCE.
ELEVATION = 745.79

PETITIONER:
PENN HARRIS MADISON SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259-7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:
DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234-4003
ATTN: MICHAEL DANCH

DATE	DRAWN BY:	REVISIONS		
01/10/24	ASM	DATE	BY	
SCALE	CHECKED BY:	1/26/24	ASM	ADDENDUM #1
1" = 30'	MJD	2/01/24	ASM	ADDENDUM #2
FILE #	PROJ. MANGR:			
230228.5	MJD			

SHEET C4.1

Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects • Land Planners
Office: (574)234-4003 / (800)594-4003 • Fax: (574)234-4119
1643 Commerce Drive • South Bend, IN 46628
DHA

230228.5 SP1.dwg 2/1/2024 12:49 PM SMM

© Copyright 2023 Danch, Harner & Associates, Inc.

PHMSC FIELDHOUSE – FINAL SITE PLAN (PHASE 1)

PART OF THE SOUTHWEST, AND NORTHWEST QUARTERS OF SECTION 6, TOWNSHIP 37 NORTH, RANGE 4 EAST,
PENN TOWNSHIP, ST. JOSEPH COUNTY, INDIANA.

UTILITY KEYNOTES:

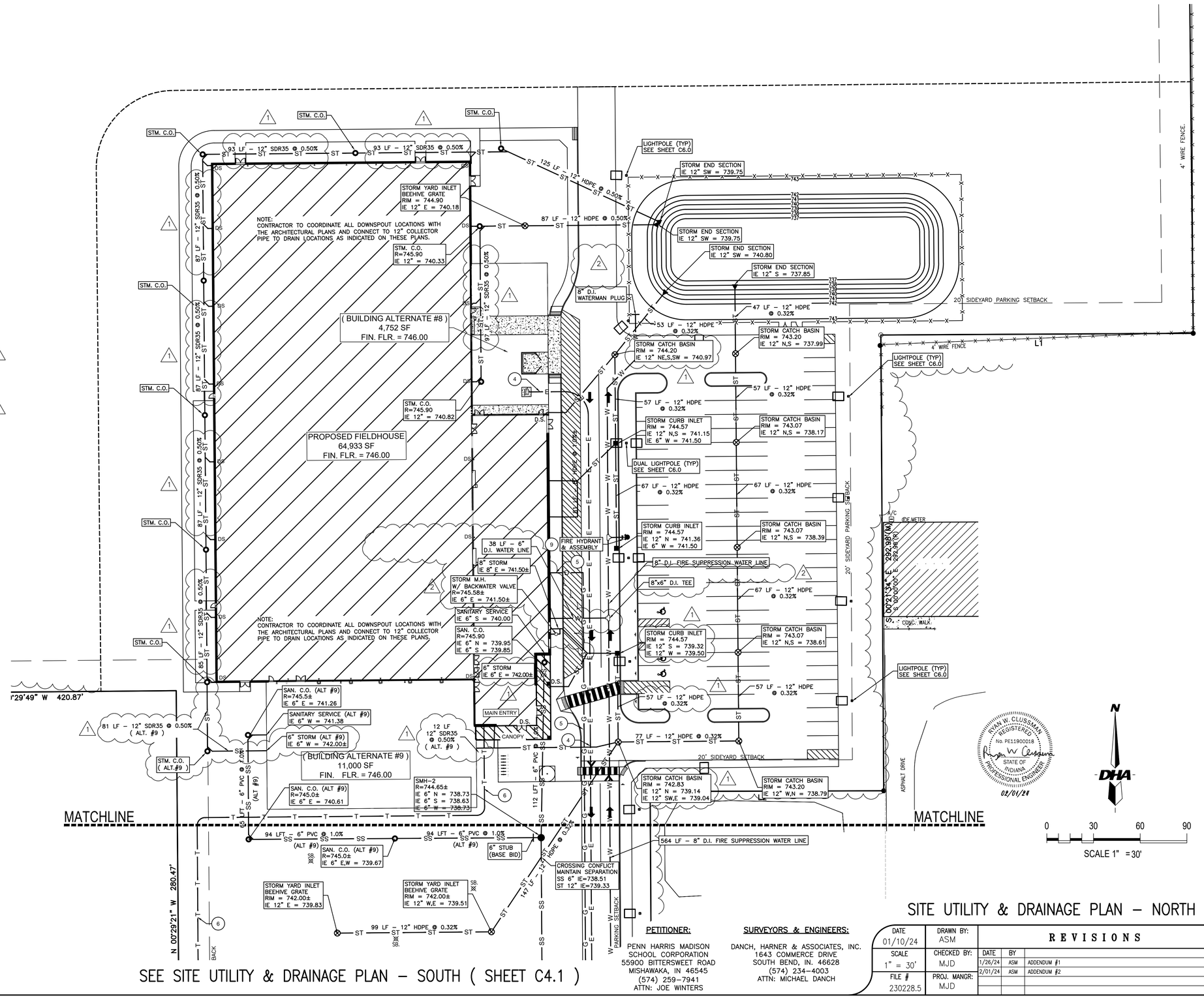
1. 1–1/2" COPPER DOMESTIC WATER SERVICE: INSTALL TAP & VALVE USING METHODS AND MATERIALS PER MISHAWAKA STANDARD SPECIFICATIONS. STOP BOXES SHALL BE LOCATED BEHIND THE CURB IN LANDSCAPE ISLAND. ONE (1) MAIN METER AND SUB–METERS PER ARCHITECT'S INTERNAL PLUMBING PLAN. COORDINATE ALL ACTIVITIES WITH MISHAWAKA WATER DEPARTMENT.
2. 8" DUCTILE IRON WATER LINE FOR FIRE PROTECTION. PROVIDE 12" X 8" TAP & VALVE FROM 12" WATER MAIN. FIRE LINE TO SERVICE THE ENTIRE BUILDING. SEE ARCHITECT'S PLUMBING PLAN FOR INTERNAL SPLIT. WATER UTILITIES SHALL BE INSTALLED AND TESTED PER THE "GENERAL CONSTRUCTION SPECIFICATIONS" FOR THE MISHAWAKA UTILITIES WATER DIVISION.
3. 6" SANITARY SEWER CONNECTION: PROVIDE A SANITARY SEWER "DROP MANHOLE" AT END OF THE EXISTING 8" SEWER EXTENSION LEADING NORTH FROM THE EXISTING SANITARY STRUCTURE #1049 LOCATED IN McKINLEY HWY. PAVEMENT. PROVIDE 6" SDR 35 SANITARY SEWER MAIN FROM ROUTE LINE PER PLAN. INSTALL USING METHODS AND MATERIALS PER MISHAWAKA STANDARD SPECIFICATIONS. COORDINATE ALL ACTIVITIES WITH MISHAWAKA UTILITIES DEPARTMENT. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION. JACK AND BORE SANITARY SEWER UNDER THE EXISTING ASPHALT PAVED FIRE DEPARTMENT DRIVEWAY PER CITY OF MISHAWAKA STANDARD SPECIFICATIONS.
4. ELECTRIC SERVICE: "POWER CO." TO PROVIDE UNDERGROUND SERVICE VIA TRANSFORMER. CONTRACTOR TO PROVIDE AND INSTALL 4" CONDUIT TO NEW CONNECTION LOCATION. SEE ARCHITECTURAL SHEETS FOR ELECTRICAL SCHEDULES CONFIRM WITH ARCHITECT PRIOR TO WORK.
5. NATURAL GAS SERVICE: NATURAL GAS SERVICE. COORDINATE PIPING WITH NIPSCO.
6. TELEPHONE SERVICE: "TELEPHONE CO." TO PROVIDE UNDERGROUND SERVICE. CONTRACTOR TO PROVIDE AND INSTALL CONDUIT WIRE TO NEW CONNECTION LOCATION AS DETERMINED BY OWNER/ARCHITECT.
7. DOWNSPOUTS ARE TO BE CONNECTED TO 12" SDR 35 STORM SEWER SYSTEM AS SHOWN IN THE PLANS AT 0.5% SLOPE MINIMUM. INSTALL CLEAN–OUTS WERE NECESSARY FOR MAINTENANCE.
8. PAVEMENT PATCH PER MISHAWAKA ENGINEERING STANDARDS. SEE PAVEMENT PATCH DETAIL IV–2 ON SHEET C7.1
9. PROPOSED FIRE HYDRANT LOCATED PER MISHAWAKA FIRE DEPT. & WATER DEPT. SEE DETAIL ON SHEET C7.2

PROPOSED LEGEND

- PROPOSED INLET
- PROPOSED CLEAN OUT
- PROPOSED HYDRANT
- PROPOSED LIGHT
- PROPOSED MANHOLE
- PROPOSED VALVE
- PROPOSED POLE
- PROPOSED CATCH BASIN
- PROPOSED END SECTION
- (100.00) PROPOSED ELEVATION
- TW TOP OF WALK
- TS BOTTOM OF CURB
- TP TOP OF PAVEMENT
- TC TOP OF CURB
- BC BOTTOM OF CURB
- W PROPOSED WATER
- E PROPOSED ELECTRIC
- G PROPOSED GAS LINE
- T PROPOSED TELEPHONE
- PROPOSED CONTOUR

EXISTING LEGEND

- △ SET P.K. NAIL
- ● FOUND IRON
- ○ SET FLUSH, 5/8" CAPPED REBAR IN. REG. F–0044 MI. REG. #22436
- (M) MEASURED DISTANCE
- (R) RECORD DISTANCE
- PINE TREE
- BUSH
- TREE
- FOUNTAIN/IRR.
- BOLLARD/POLE
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- SIGN
- WELL
- VALVE
- FIRE HYDRANT
- CURB INLET
- DRYWELL
- SANITARY MANHOLE
- STORM MANHOLE
- CLEAN–OUT
- FIBER OPTIC MANHOLE
- GAS METER
- WATER MANHOLE
- END SECTION
- ELEC. VAULT
- ELEC. TRANSFORMER
- PHONE VAULT
- SPOT ELEVATION
- SOIL BORING
- WATER METER
- CABLE PED.
- PHONE PED.
- ELEC. PED.
- MAILBOX
- A/C UNIT
- EX. ELEVATION
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- ELECTRIC
- ELECTRIC
- PHONE
- GAS
- CABLE TV
- WATER
- FIBER OPTIC
- STORM LINE
- SANITARY LINE



SITE UTILITY & DRAINAGE PLAN – NORTH

SEE SITE UTILITY & DRAINAGE PLAN – SOUTH (SHEET C4.1)

PETITIONER:
PENN HARRIS MADISON SCHOOL CORPORATION
55900 BITTERSWEET ROAD
MISHAWAKA, IN 46545
(574) 259–7941
ATTN: JOE WINTERS

SURVEYORS & ENGINEERS:
DANCH, HARNER & ASSOCIATES, INC.
1643 COMMERCE DRIVE
SOUTH BEND, IN. 46628
(574) 234–4003
ATTN: MICHAEL DANCH

DATE	DRAWN BY:
01/10/24	ASM
SCALE	CHECKED BY:
1" = 30'	MJD
FILE #	PROJ. MANGR:
230228.5	MJD

REVISIONS

DATE	BY	
1/26/24	ASM	ADDENDUM #1
2/01/24	ASM	ADDENDUM #2

SHEET C4.2

Danch, Harner & Associates, Inc.
Land Surveyors • Professional Engineers
Landscape Architects• Land Planners
Office: (574)234–4003 / (800)984–4003 • Fax: (574)234–4119
1643 Commerce Drive • South Bend, IN 46628

ANY INFORMATION ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM OR CORPORATION OR ANY OTHERS ON EXTENSION OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADOPTION BY THE ENGINEER, ARCHITECT OR SURVEYOR FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER, ARCHITECT OR SURVEYOR.

ALL UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION MAY BEGIN.

© Copyright 2023 Danch, Harner & Associates, Inc.

230228.5 SP1.dwg
2/2/2024 12:49 PM SMM

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

Special Inspection

1. Special Inspection is a mandatory requirement of the General Contractor for verifying conformance of the indicated construction. Special Inspection is required in addition to all material tests and inspections identified elsewhere in the Construction Documents.
2. The Owner shall employ independent agency(ies) or individual(s) to provide Special Inspection for items as indicated on the drawings.
3. The Special Inspector shall be a qualified person, who shall demonstrate competence, to the satisfaction of the Building Official and the SEOR, for inspection of each particular type of construction or operation requiring Special Inspection.
4. "Periodic" Special Inspection is defined as the part-time or intermittent observation of work requiring Special Inspection by an approved Special Inspector who is present in the area where the work has been or is being performed and at the completion of the work.
5. Continuous Special Inspection is defined as the full-time observation of work requiring Special Inspection by an approved Special Inspector who is present in the area where the work is being performed.
6. The General Contractor shall coordinate Special Inspection requirements w/ the Owner's Special Inspector & shall submit to the SEOR for review, a minimum of 14 days prior to commencement of construction of elements requiring special inspection, the following:
   a. Name(s), address(es), telephone number(s), email address(es), and statement(s) of qualifications of all Special Inspector(s) to be engaged on the project.
   b. A listing of all items to receive Special Inspection, designation whether inspection will be continuous or periodic and the name of the individual that will be performing inspection for each item.
7. The Contractor shall coordinate with the Special Inspector sufficiently in advance of work requiring Special Inspection and shall provide access to the site and to the Construction Documents (current drawings and specifications) for the Special Inspector to carry out the required operations.
8. The Special Inspector shall observe the work requiring Special Inspection for conformance to the Construction Documents. All non-conforming work shall be brought to the immediate attention of the Contractor for correction, then if uncorrected, to the immediate attention of the Owner, Architect, & SEOR.
9. The Special Inspector shall submit periodic progress reports to the Owner, Architect, SEOR & Contractor identifying all Special Inspection operations performed. Reports shall be submitted no more than 7 days following each Special Inspection operation. Reports shall identify the item(s) inspected and an indication of whether the inspected items were in conformance with the Construction Documents.
10. At the completion of all work requiring Special Inspection, the Special Inspector shall submit a final signed report to the Owner, Architect, SEOR & Contractor stating whether the work requiring Special Inspection was, to the best of the Special Inspector's knowledge, in conformance with the Construction Documents.
11. Failure to perform Special Inspection for the indicated construction or failure to correct non-conforming work shall constitute a basis for rejection of the work and removal and replacement by the General Contractor at no additional cost to the Owner, including, but not limited to:
    a. The cost of removal and replacement of all work for which Special Inspection was required but not performed, including the cost of testing and Special Inspection for the replacement work.
    b. The cost of all related work made necessary by the removal and replacement of the uninspected work per item a above.
    c. The cost for design professional's services related to all work for which Special Inspection was required but not performed and services related to the replacement work.
12. Provide Special Inspection for the following construction:
    a. Concrete Construction
    b. Foundation Walls and Pits
    c. Soils and Earthwork
    d. Masonry Construction
    e. Steel Construction
    f. Steel Deck

Special Inspection Services Schedule - Concrete Construction

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Material Testing	Test	Reference cast-in-place concrete specification for extent of testing required.	-	-
Quality Control	Inspection	Verify that quality control testing is provided in accordance with the project requirements.	Y	Periodic
Reinforcing Steel	Inspection	Inspection of reinforcing steel, including prestressing tendons (when used) and placement as follows:	Y	
		Verify that reinforcement surfaces are free of excess rust or other coating that may adversely affect bonding capacity. If oiling of forms is required, verify that it is applied before reinforcing is placed.	Y	Periodic
		Verify reinforcing bars for compliance with Contract Documents and approved shop drawings as follows:		
		Material grade, size, quantity, spacing, and layering; bars are adequately tied and supported on chairs or bolsters; proper hook type and location; splice locations and required length of lap; proper clearance and cover requirements from concrete surfaces; sufficient spacing between reinforcement for concrete placing; verify that unscheduled/additional reinforcing bars shown on plan, in detail, or specified in notes are provided and are in compliance with Contract Documents and approved shop drawings.	Y	Periodic
		Mechanical splices:		
		(Tension and/or compression) on the project. Verify compliance with specifications and conformance with the manufacturer's recommendations for installation. Verify that the manufacturer is present for the first installation of each type of splice on the project.	N	Continuous
		Verify that welded wire reinforcement is composed of flat sheets, has proper wire gauge and spacing, is properly supported, and is properly lapped.	Y	Periodic
		Inspect headed stud shear reinforcement to ensure that it conforms to the project requirements:		
		Review type and spacing; verify that reinforcing is adequately supported to resist displacement of shifting during concrete placement; verify welding of reinforcement is performed according to AWS requirements and that it is inspected by the testing laboratory.	Y	Periodic
Cast-In-Place Bolts & Anchor Rods	Inspection	Inspect bolts and anchor rods to be cast in concrete prior to placement of concrete for size, quantity, location, position and embedment. Inspect during placement for proper concrete consolidation around bolts and anchors.		
		20% of bolts and/or anchor rods.	Y	Periodic
Concrete Mix Design	Inspection	Review and become familiar with the mix designs specified on the project. Verify mix design provided by the Contractor is consistent with project specifications at location indicated. Review concrete batch tickets to proper mix ID, type of concrete and strength for the placement location. Verify that water added at site (if permitted), does not exceed that allowed by the mix design.	Y	Periodic
Inspection of Formed Area	Inspection	Verify that all debris and foreign matter have been removed before concrete is placed.	Y	Periodic
Formwork	Inspection	Inspect formwork for shape, location and dimensions of the concrete member being formed. Verify formwork used in compliance with the specifications and approval shop drawings (when required).	Y	Periodic
Material Sampling and Testing	Test	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Y	Continuous
Concrete Placement	Inspection	Inspect concrete placement for the proper application techniques as follows:		
		Verify the concrete is not over 90 minutes old at time of placement; hot-weather or cold-weather techniques are being applied as required; concrete being deposited in uniform, that the vertical drop does not exceed six feet, and that concrete is not permitted to drop freely over reinforcement causing segregation, concrete is properly vibrated; embedded items and reinforcing steel are not adversely altered during placement. Note that if anything was displaced or otherwise altered during placement; verify that there are no cold joints within the area of the pour.	Y	Continuous
Curing and Protection	Inspection	Verify the curing process is as specified in the Contract Documents and that any curing compound used is applied in accordance with manufacturer's printed application instructions.	Y	Periodic
Construction Joints	Inspection	Verify that location of vertical and horizontal construction joints for compliance with the construction joint location plan submitted by the Contractor to Engineer of Record. Verify that reinforcement, dowels, keys, and bulkheads at construction joints are in conformance with the Contract Documents.	Y	Periodic

Special Inspection Services Schedule - Foundation Walls and Pits

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Concrete Placement	Inspection	The inspector must be present full-time during the entire placement of the first 2 shallow foundation concrete pours and then must be present at the start of 50% of the other concrete pours.	Y	Periodic
Formwork	Inspection	Verify that forms are plumb and straight, braced against movement, and lubricated for removal.	Y	Periodic
Dimensions	Inspection	Verify wall/pit dimensions.	Y	Periodic
Embedded Items	Inspection	Verify anchor rods and/or dowels are installed with the embedment and projected lengths and in accordance with the Contract Documents.	Y	Periodic
Reinforcement	Inspection	Verify pit/wall reinforcement prior to placement of concrete.	Y	Periodic
Waterstops	Inspection	Verify water stops are properly installed and anchored into position prior to placement of concrete.	Y	Periodic
Backfill Operations	Inspection	Verify that foundation and pit walls with uneven backfill conditions are not backfilled until floor construction at top of wall is complete or temporary bracing is provided in accordance with the Contract Documents.	Y	Periodic
Concrete	Inspection	Verify concrete placement as outlined in this inspection plan.	Y	Periodic

Special Inspection Services Schedule - Soils and Earthwork

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Footing Subgrade	Test	Reference earthwork specification for extent of testing required.	Y	Periodic
Compaction of Soils	Test	Reference earthwork specification for extent of testing required.	Y	Periodic
Controlled Strucural Fill	Test	Reference earthwork specification for extent of testing required.	Y	Periodic
Foooting Subgrade Material	Inspection	Inspect soils below foundations and slabs for adequate compaction and bearing capacity prior to placement of concrete.	Y	Periodic
Excavation	Inspection	Verify excavations are extended to the proper depth and have reached proper material.	Y	Periodic
Classification of Controlled Fill	Inspection	1. Inspect placement, lift thickness and compaction of controlled fill. 2. Verify extent and slope of fill placement.	Y	Periodic
Use of Proper Materials	Inspection	Verify use of proper materials, densities and lift thickness during placement and compaction of controlled fill.	Y	Continuous
Observation of Subgrade	Inspection	Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.	Y	Periodic

Special Inspection Services Schedule - Masonry Construction

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Material Testing	Test	Reference masonry specification for extent of testing required.	-	-
Quality Control	Inspection	Verify that quality control testing is provided in accordance with the project requirements.	Y	Periodic
Materials	Inspection	Verify the materials are stored properly before placement in the structure.	Y	Periodic
Wall Locations	Inspection	Verify the wall locations and thickness.	Y	Periodic
Control Joints	Inspection	Verify the proper installation of control joints, type and location.	Y	Periodic
Openings	Inspection	Verify the proper installation of structural elements around openings including lintels, sills, and door or window jambs including masonry unit type and reinforcement.	Y	Periodic
Connections	Inspection	Verify the masonry is properly connected to the supporting structure(s).	Y	Periodic
Reinforcing Steel	Inspection	Inspection of reinforcing steel and placement as follows:		
		Verify that reinforcement surfaces are free of excess rust or other coatings that may adversely affect bonding capacity.	Y	Periodic
		Verify reinforcing bars and horizontal joint reinforcement for compliance with Contract Documents and approved shop drawings as follows:		
		Material grade, size, quantity, spacing, and layering; bars are adequately tied and supported on chairs and centered as required; proper hook type and location; splice locations and required length of lap; proper clearance and cover requirements from masonry surfaces; sufficient spacing between reinforcement for grout placement; verify that unscheduled/additional reinforcing bars shown on plan, in details, or specified in notes are provided and are in compliance with Contract Documents and approved shop drawings.	Y	Periodic
Embedded Items	Inspection	Inspect embedded items to be cast in masonry prior to placement of grout for size, quantity, location, position and embedment. Inspect during placement for proper grout consolidation embedded items.	Y	Periodic
Mortar and Grout	Inspection	Inspect the mortar and grout used on the project as follows:		
		Verify that mortar and grout materials comply with the Contract Documents and approved submittals.	Y	Periodic
		Site-mixed mortar: Verify the mortar is mixed in accordance with specified proportions.	Y	Periodic
		Bag-mixed mortar: Verify the mortar is mixed in accordance to the manufacturer's instructions.	Y	Periodic
		Verify proper mortar placement.	Y	Periodic
		Grout bag mix: Verify that the grout is mixed according to the manufacturer's instructions.	Y	Periodic
		Ready-mix grout: Verify the mix number and grout strength.	Y	Periodic
		Prior to any grouting procedure, inspect the grout space to verify that it is clean and that cleanouts, if required, are in place and conform to requirements of the Contract Documents.	Y	Periodic
		Verify the proper grout placement and consolidation.	Y	Continuous
		Verify that grout testing is performed in accordance with the Contract Documents.	Y	Periodic
Protection	Inspection	Verify the proper construction techniques are followed for protection of masonry during hot-weather and/or cold-water construction.	Y	Periodic

Special Inspection Services Schedule - Steel Construction

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Fabricator Quality Control Process	Inspection	Verify the Fabricator meets AISC certified fabricator requirement listed in the project specifications.	Y	One-Time
Quality	Inspection	Visually inspect steel as it is reviewed for possible damage in shipping, workmanship, and piece marking.	Y	Periodic
Mill Test Reports	Inspection	Review certified mill test reports and identification markings on wide-flange shapes, high-strength bolts, nuts and welding electrodes.	Y	Periodic
Welded Connections	Inspection	Inspect field welded connections as follows:		
		Inspect 100% of complete joint penetration field welds. Ultrasonic testing of all complete penetration welds.	Y	Continuous
		Inspect 100% of partial joint penetration field welds.	Y	Continuous
		Inspect 100% of multi-pass fillet field welds.	Y	Continuous
		Inspect 100% of fillet field welds in lateral-load-resisting braced frames and moment frames.	Y	Continuous
		Inspect 10% of other fillet field welds.	Y	Periodic
		Perform pre-welding inspections to verify that materials (i.e. strucural steel, weld filler material, etc.), welding procedures, and welding personnel qualifications are appropriate.	Y	Periodic
		Visually inspect field welds according to AWS D1.1/D1.1M.	Y	Periodic
		Verify welding procedures are in accordance with AWS requirements.	Y	Periodic
		Inspect pre-heat, post-heat and surface preparation between passes.	Y	Periodic
		Verify size and length of fillet welds.	Y	Periodic
		Verify that welds are clean; welder identification is legible; size, length and location of welds; verify that welds meet acceptance criteria; placement of reinforcement fillets; removal of backing bars and weld tabs as required; and repair activities.	Y	Periodic
Bolted Connections	Inspection	Inspect bolted connections as follows:		
		Inspect 100% of all pre-tensioned and slip-critical bolted connections.	N	Continuous
		Inspect 100% of bolted connections in lateral-load-resisting braced frames and moment frames.	Y	Periodic
		Inspect 20% of all other bolted connections.	Y	Continuous
		For slip-critical bolted connections, verify installation is performed in accordance with one of the following methods:	N	
		Turn-of-nut: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."	N	
		Calibrated wrench: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."	N	
		Twist-off tension control bolt: ASTM F 1852.	N	
		Direct-tension control bolt: ASTM F 1852.	N	
		For all bolted connections, verify quantity, size and grade of bolts, required surface preparation and proper fit-up of connected elements.	Y	Periodic
Members Sizes and Grade	Inspection	Verify that steel member sizes and steel grade conform to the Contract Documents and approved shop drawings.	Y	Periodic
Steel Framing, Details and Connectors	Inspection	Inspect steel frame for compliance with Structural drawings, including bracing, member configuration and connection details as follows:		
		Check the installation of base plates for proper leveling and verify proper grout type and installation procedures are followed.	Y	Periodic
		Inspect 100% of beam and girder construction and assemblies.	Y	Periodic
		Inspect 100% of all braced frame and moment frame assemblies.	Y	Continuous
		Inspect 100% of the column splices and base joints for verification that gaps in contact bearing do not exceed 1/16 inch. Gaps greater than 1/16 inch shall be reported to the Engineer of Record for assessment.	N	Continuous
Composite Beam Shear Connectors	Test	Inspect composite steel beam shear connectors as follows:		
		Observe the welding of shear connectors. Inspect studs for full 360 degree flash.	Y	Continuous
		Inspect size, number, positioning and welding of shear connectors.	Y	Continuous
		Ring test 100% of shear connectors with a 3 lb hammer.	Y	Periodic
		Bend test all questionable studs to 15 degrees.	Y	Continuous
Grating	Inspection	Inspect steel grating as follows:		
		Visually inspect the grating for damage during shipping.	N	Periodic
		Verify that the grating depth, type of properties, and finish comply with the Contract Documents and/or approved shop drawings.	N	Periodic
		Verify all grating attachment to the supporting concrete, steel, and/or masonry as specified in the Contract Documents and/or approved shop drawings.	N	Periodic

Special Inspection Services Schedule - Steel Deck

Referenced Standards per IBC, Chapter 17

Verification and Inspection Task	Test / Inspection	Description of Test / Inspection	Applicable to Project (Y/N)	Frequency
Quality	Inspection	Visually inspect the deck prior to installation for damage.	Y	Periodic
Deck Material	Inspection	Verify that the deck depth, gauge, type, properties, and finish comply with the Contract Documents.	Y	Periodic
Deck Attachment	Inspection	Verify that the deck attachment to the supporting steel is as specified in the Contract Documents.	Y	Periodic
Deck Support	Inspection	Verify that the proper deck support is used around openings.	Y	Periodic
Deck Accessories	Inspection	Verify that deck accessories are being installed according to the Contract Documents and approved shop drawings.	Y	Periodic

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT
63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com

Construction Documents

TROY A. MADLEM REGISTERED No. PE10100188 STATE OF INDIANA PROFESSIONAL ENGINEER

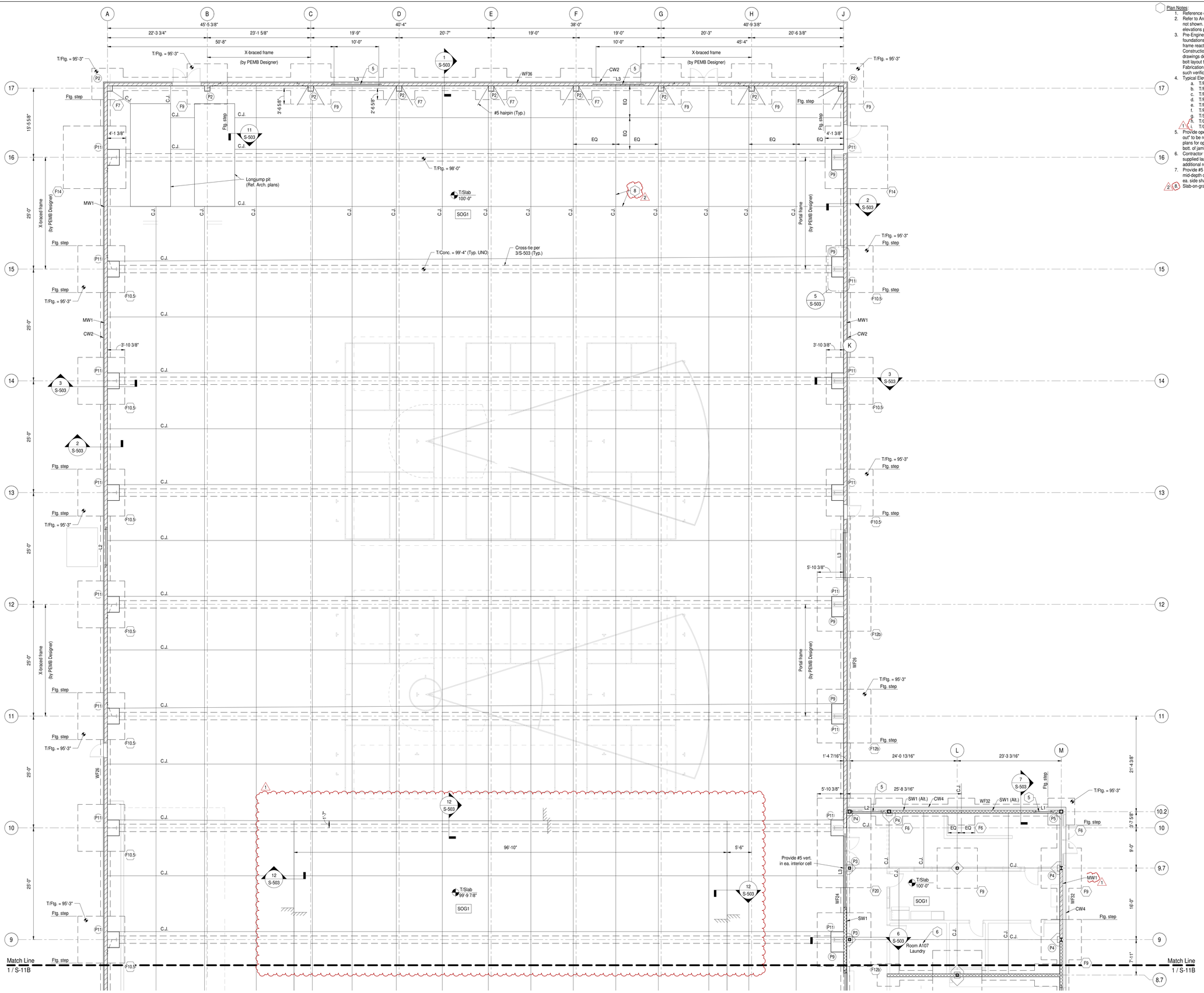
PROJECT MANAGER: JAA
DRAWN BY: TCM
PROJECT NUMBER: 22130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	02/01/2024

Special Inspections

S-004

C:\Users\tmadlem\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMadlem.rvt
2/1/2024 12:40:19 PM



NORTH

1 Foundation Plan - Unit A
Scale: 1/8" = 1'-0"

Plan Notes:

1. Reference elevation = 100'-0" (746.00' NAVD88).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction.
3. Pre-Engineered Metal Building (PEMB) foundations depicted are based on preliminary frame reactions and require verification prior to Construction. Contractor shall submit PEMB shop drawings depicting column reactions and anchor bolt layout to SEOR for verification of sizing. Fabrication shall not proceed prior to completion of such verification by SEOR.
4. Typical Elevations (UNO):
   a. T/Flg. @ ext. walls = 98'-0".
   b. T/Flg. @ int. shearwalls = 99'-4".
   c. T/Flg. @ ext. columns = 98'-0".
   d. T/Flg. @ int. columns = 99'-4".
   e. T/Pedestal (WF & HSS) = 99'-4".
   f. T/Pedestal (PEMB) = 100'-0".
   g. T/Slab = 100'-0".
   h. T/Conc. wall (Typ.) = 99'-4".
   i. T/Conc. wall (PEMB) = 100'-0".
5. Provide opening as indicated w/ masonry "knock-out" to be removed for future opening. Ref. Arch. plans for opening height. Provide #4 dowels to bott. of jamb & top of foundation @ 4'-0" max. spa.
6. Contractor to coord. housekeeping pad w/ Owner-supplied laundry equipment. Ref. Arch. for additional requirements.
7. Provide #5 hairpins as noted on plan. Project into mid-depth of slab @ 1:1 slope. Minimum leg length ea. side shall be 4'-0".
8. Slab-on-grade control joints designated w/ 'C.J.'.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

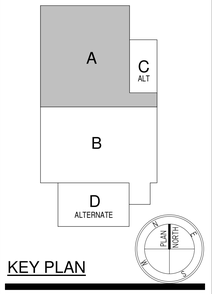
FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT
63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com



KEY PLAN

Construction Documents

TROY A. MADLEM
REGISTERED
No. PE10100188
STATE OF INDIANA
PROFESSIONAL ENGINEER

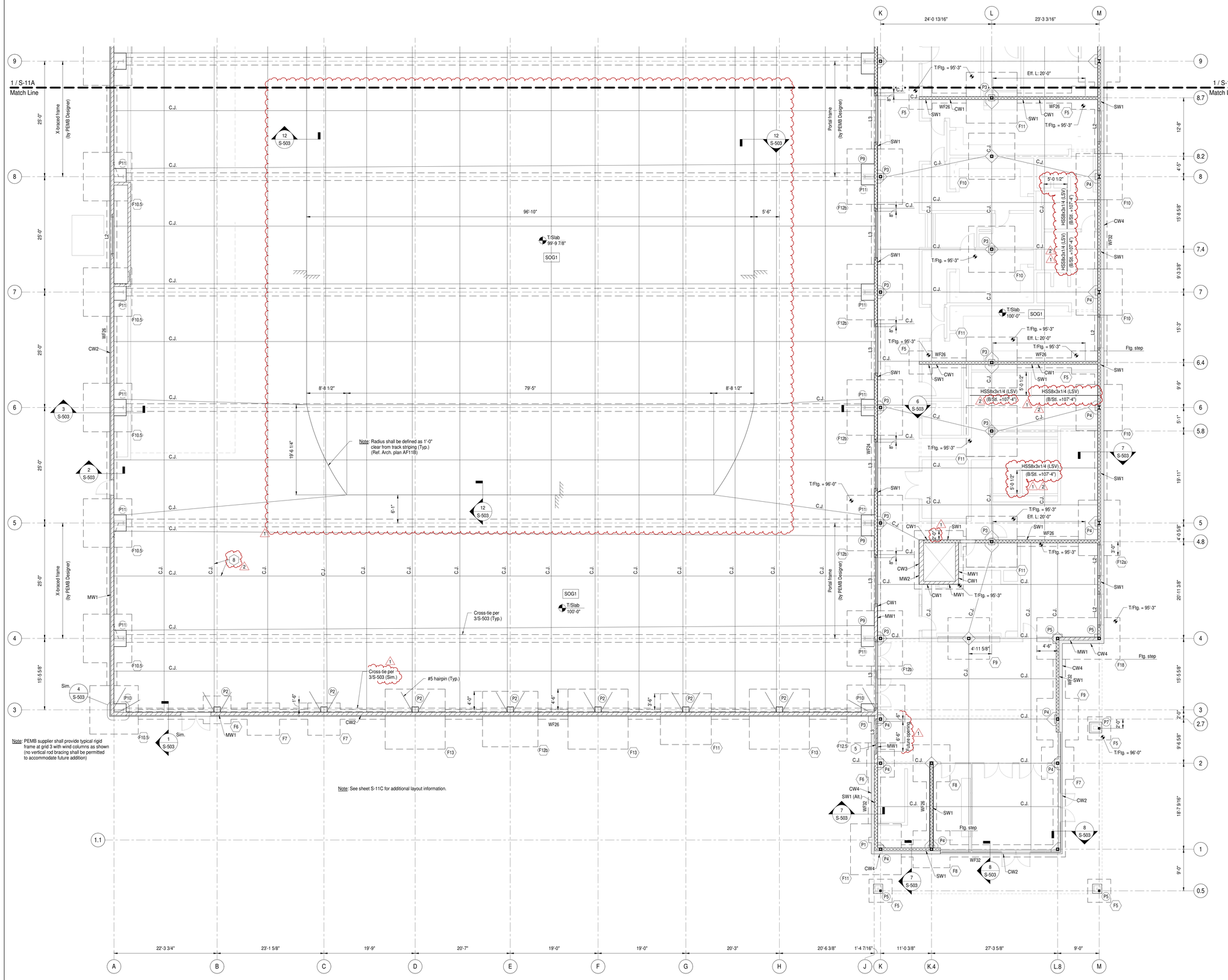
PROJECT MANAGER: JAA
DRAWN BY: TCM
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01/26/2024
2	Addendum #2	02/01/2024

Foundation Plan - Unit A

S-11A

C:\Users\tcmadlem\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMadlem.rvt
2/1/2024 12:40:20 PM



NORTH

1 Foundation Plan - Unit B
Scale: 1/8" = 1'-0"

Plan Notes:

1. Reference elevation = 100'-0" (746.00' NAVD88).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction.
3. Pre-Engineered Metal Building (PEMB) foundations depicted are based on preliminary frame reactions and require verification prior to Construction. Contractor shall submit PEMB shop drawings depicting column reactions and anchor bolt layout to SEOR for verification of sizing. Fabrication shall not proceed prior to completion of such verification by SEOR.
4. Typical Elevations (UNO):
   a. T/Ftg. @ ext. walls = 98'-0".
   b. T/Ftg. @ int. shearwalls = 99'-4".
   c. T/Ftg. @ ext. columns = 98'-0".
   d. T/Ftg. @ int. columns = 99'-4".
   e. T/Pedestal (WF & HSS) = 99'-4".
   f. T/Pedestal (PEMB) = 100'-0".
   g. T/Slab = 100'-0".
   h. T/Conc. wall (Typ.) = 99'-4".
   i. T/Conc. wall (PEMB) = 100'-0".
5. Provide opening as indicated w/ masonry "knock-out" to be removed for future opening. Ref. Arch. plans for opening height. Provide #4 dowels to bott. of jamb & top of foundation @ 4'-0" max. spa.
6. Contractor to coord. housekeeping pad w/ Owner-supplied laundry equipment. Ref. Arch. for additional requirements.
7. Provide #5 hairpins as noted on plan. Project into mid-depth of slab @ 1:1 slope. Minimum leg length ea. side shall be 4'-0".
8. Slab-on-grade control joints designated w/ 'C.J.'.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING

STRENGTH | TRUST | COMMITMENT

63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com

A | C ALT | B | D ALTERNATE

KEY PLAN

Construction Documents

TROY A. MALDEN REGISTERED No. PE10100188 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JAA

DRAWN BY: TCM

PROJECT NUMBER: 222130.00

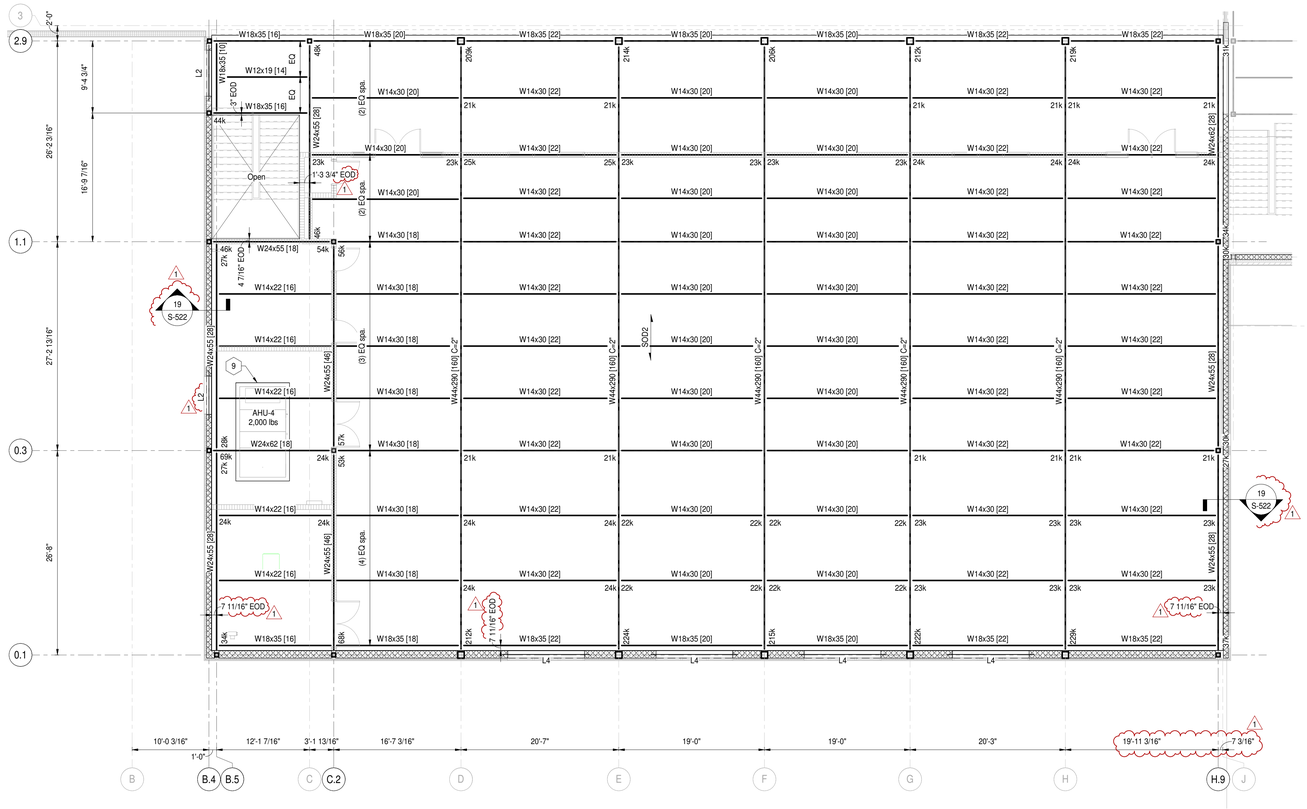
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01/26/2024
2	Addendum #2	02/01/2024

Foundation Plan - Unit B

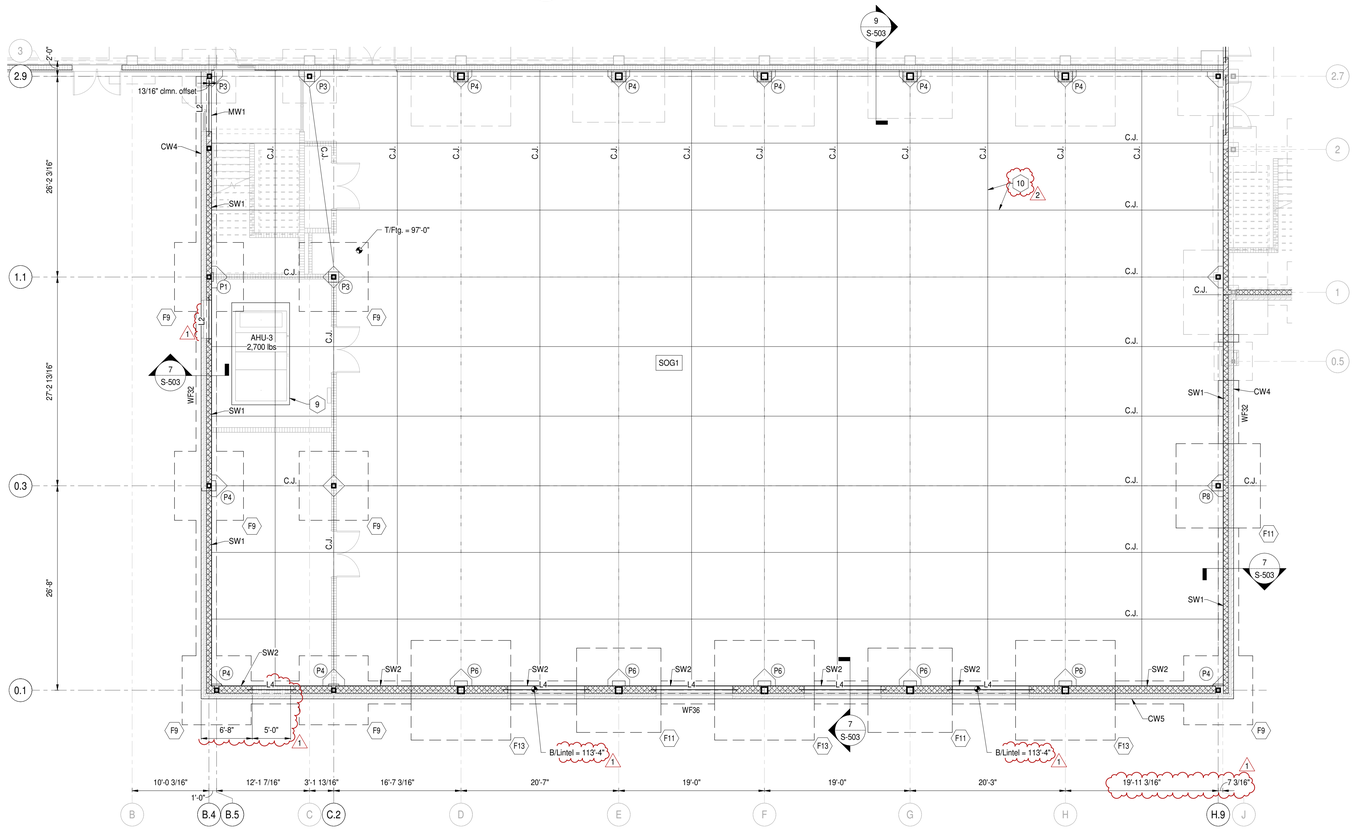
S-11B

C:\Users\tcmalden\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMalden.rvt
2/1/2024 12:40:21 PM



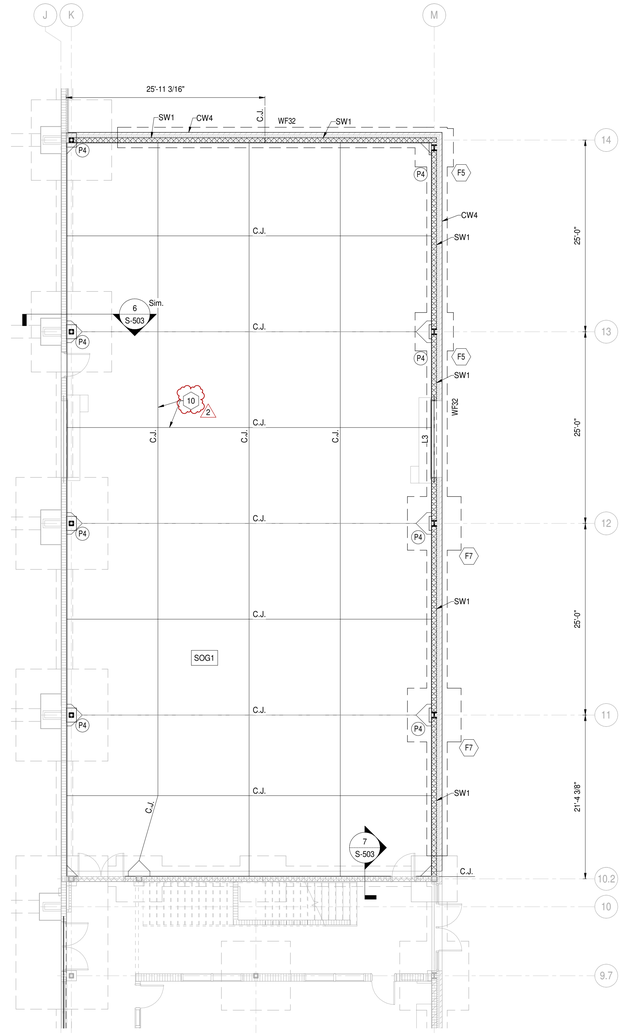
NORTH

3 Second Floor Framing Plan Alternates - Unit D
Scale: 1/8" = 1'-0"



NORTH

2 Foundation Plan Alternates - Unit D
Scale: 1/8" = 1'-0"



NORTH

1 Foundation Plan Alternates - Unit C
Scale: 1/8" = 1'-0"

Plan Notes:
1. Reference elevation = 100'-0" (746.00' NAVD88).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction and notify Architect & SEOR of any discrepancies.
3. All walls shall be laid out from the arch. drawings.
4. All contractor's shall coord. their work w/ all disciplines to avoid conflicts & identify all req'd materials and work.
5. Coord. exact size & location of all mech. openings in floor slabs, roof decks & walls w/ the Mech. Contractor. Location & size of all duct openings, louvers, etc. shall be verified prior to construction.
6. Provide channel frames at all supported slab openings and angle frames at all roof openings per typical details.
7. Horiz. & diag. bridging for steel joists shall be designed, located & provided by joist supplier in accordance w/ 'SJI' requirements. All diag. bridging shall be coordinated w/ mech. plans to avoid conflicts w/ duct runs.
8. T/Steel Elev. = 114'-8 1/2" UNO.
9. Contractor to coord. housekeeping pad w/ Owner-supplied laundry equipment. Ref. Arch. for additional requirements.
10. Slab-on-grade control joints designated w/ 'C.J.'.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT
63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com

A | C ALT | B | D ALTERNATE

KEY PLAN

Construction Documents

TROY A. MADLEM — REGISTERED — No. PE10100188 — STATE OF INDIANA — PROFESSIONAL ENGINEER

PROJECT MANAGER: JAA
DRAWN BY: TCM
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01/26/2024
2	Addendum #2	02/01/2024

Foundation & Framing Plan - Alternates

S-11C

C:\Users\tmadlem\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMadlem.rvt
2/1/2024 12:40:23 PM

1 Second Floor Framing Plan - Unit B
Scale: 1/8" = 1'-0"

Plan Notes:

1. Reference elevation = 100'-0" (746.00' NAVD88).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction and notify Architect & SEOR of any discrepancies.
3. All walls shall be laid out from the arch. drawings.
4. All contractor's shall coord. their work w/ all disciplines to avoid conflicts & identify all req'd materials and work.
5. Coord. exact size & location of all mech. openings in floor slabs, roof decks & walls w/ the Mech. Contractor. Location & size of all duct openings, louvers, etc. shall be verified prior to construction.
6. Provide channel frames at all supported slab openings and angle frames at all roof openings per typical details.
7. Horiz. & diag. bridging for steel joists shall be designed, located & provided by joist supplier in accordance w/ 'SJI' requirements. All diag. bridging shall be coordinated w/ mech. plans to avoid conflicts w/ duct runs.
8. T/Steel Elev. @ H.C. Planks (SOD3) = 114'-4" UNO.
9. T/Steel Elev. @ Composite Slab (SOD1) = 114'-11" UNO.
10. T/Steel Elev. @ Roof Deck (D1) = 112'-0" UNO.
11. Housekeeping pad (See typ. detail). Ref. Mech. plans for location & extents.
12. Noted partition support is part of Alternate construction (omit from base bid). 1

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

PENN HARRIS MADISON
SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT
63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com

KEY PLAN

Construction Documents

TROY A. MADLEM
No. PE10100188

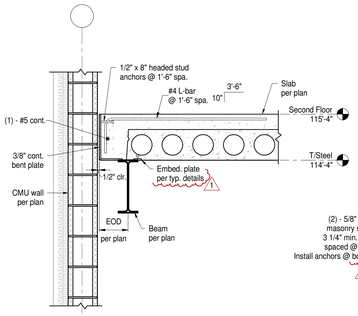
PROJECT MANAGER: JAA
DRAWN BY: TCM
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.△	DESCRIPTION	DATE
1	Addendum #1	01/26/2024
2	Addendum #2	02/01/2024

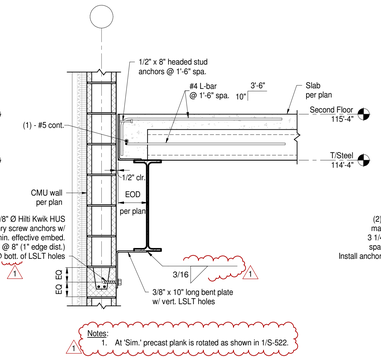
Second Floor Framing Plan - Unit B

S-12B

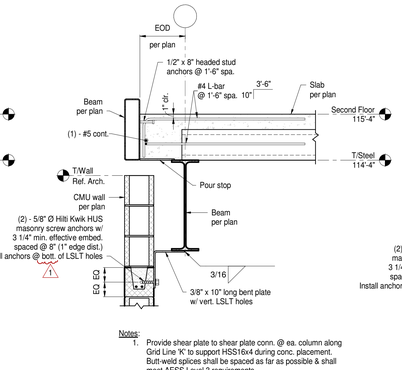
C:\Users\tcmadlem\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMadlem.rvt
2/1/2024 12:40:25 PM



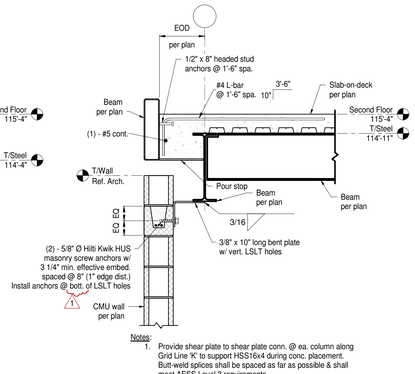
1 Section
Scale: 3/4" = 1'-0"



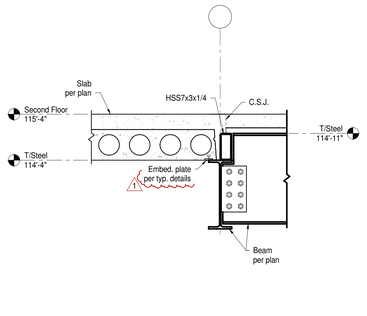
2 Section
Scale: 3/4" = 1'-0"



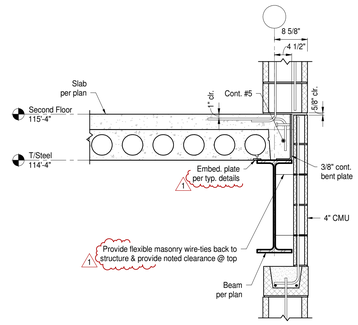
3 Section
Scale: 3/4" = 1'-0"



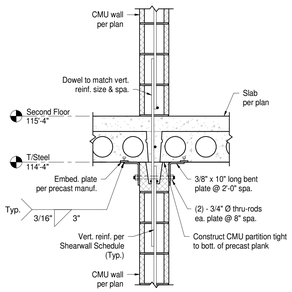
4 Section
Scale: 3/4" = 1'-0"



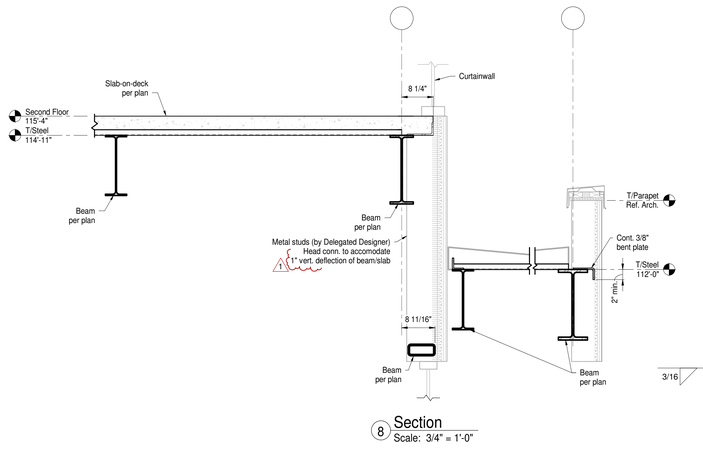
5 Section
Scale: 3/4" = 1'-0"



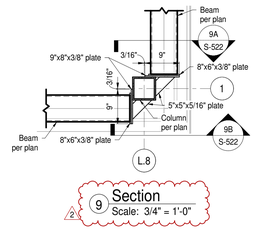
6 Section
Scale: 3/4" = 1'-0"



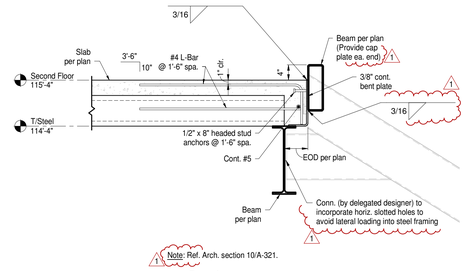
7 Section
Scale: 3/4" = 1'-0"



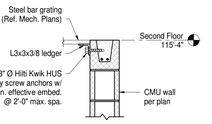
8 Section
Scale: 3/4" = 1'-0"



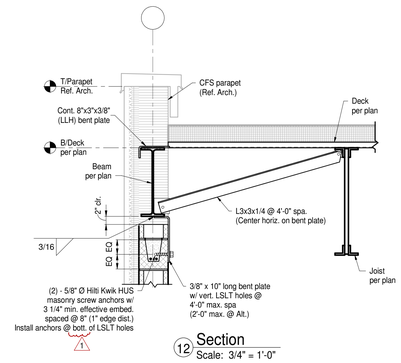
9 Section
Scale: 3/4" = 1'-0"



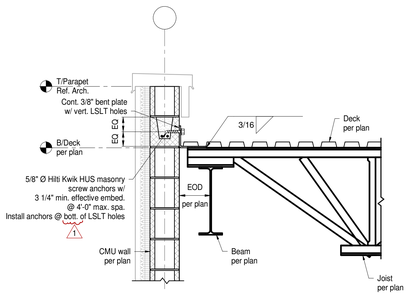
10 Section
Scale: 3/4" = 1'-0"



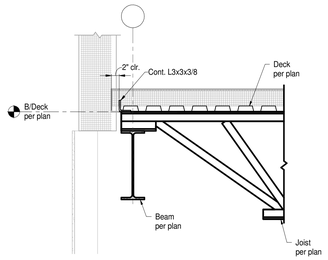
11 Section
Scale: 3/4" = 1'-0"



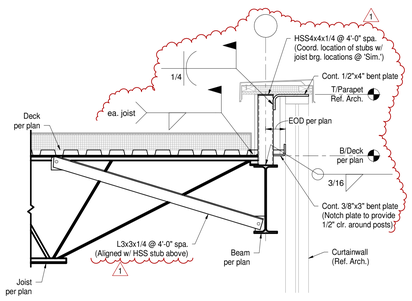
12 Section
Scale: 3/4" = 1'-0"



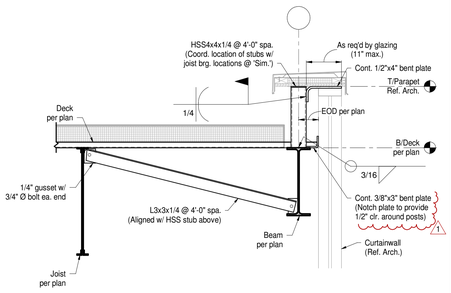
13 Section
Scale: 3/4" = 1'-0"



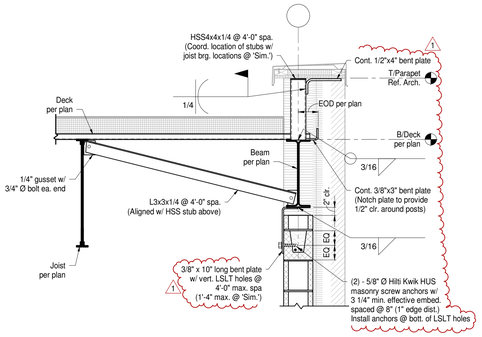
14 Section
Scale: 3/4" = 1'-0"



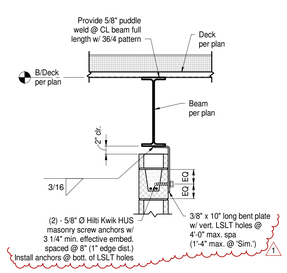
15 Section
Scale: 3/4" = 1'-0"



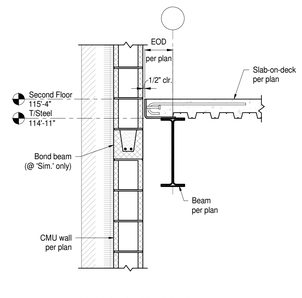
16 Section
Scale: 3/4" = 1'-0"



17 Section
Scale: 3/4" = 1'-0"



18 Section
Scale: 3/4" = 1'-0"



19 Section
Scale: 3/4" = 1'-0"

Not Used

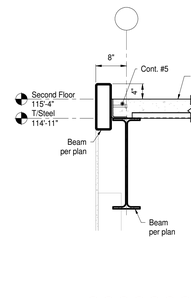
20 Section (Alt)
Scale: 3/4" = 1'-0"

Not Used

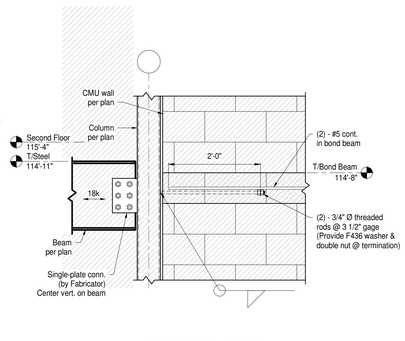
21 Section (Alt)
Scale: 3/4" = 1'-0"

Not Used

22 Section (Alt)
Scale: 3/4" = 1'-0"



23 Section
Scale: 3/4" = 1'-0"



24 Section
Scale: 3/4" = 1'-0"

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

CONSULTANT

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT

63501 Beech Rd. Wakarusa, IN 46573
contactus@MagnusEng.com
www.MagnusEng.com

Construction Documents

TYLER J. MADDEN REGISTERED No. PE10100188 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: JAA

DRAWN BY: TCM

PROJECT NUMBER: 222130.00

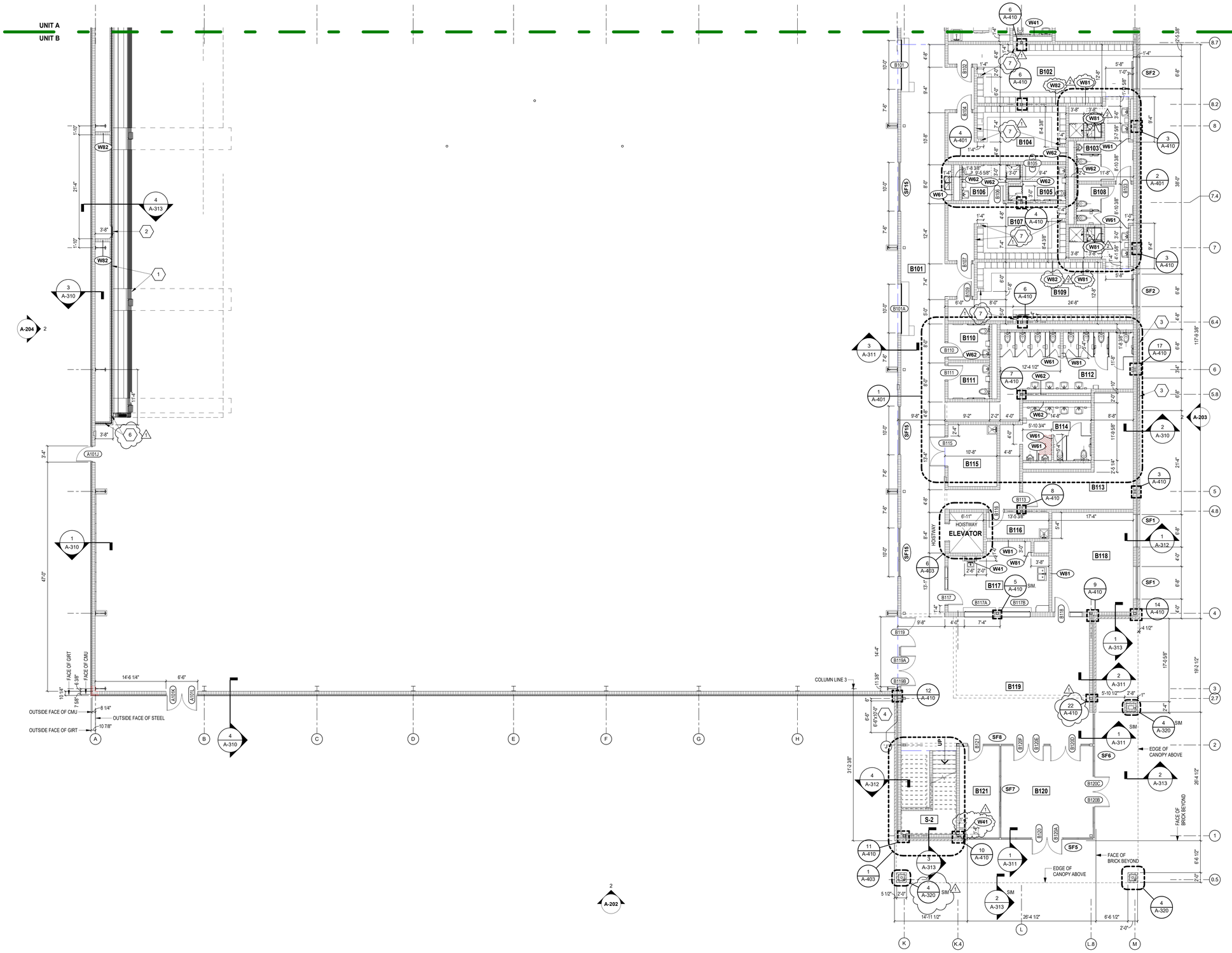
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01/26/2024
2	Addendum #2	02/01/2024

Steel Framing Details

S-522

C:\Users\tcmadden\Documents\2023_PHS Field House_Struct_RVT23_Central_TylerMadden.rvt
2/1/2024 12:40:28 PM



FIRST FLOOR ARCHITECTURAL PLAN - UNIT B

SCALE: 1/8" = 1'-0"

C:\Users\alampkins\Documents\2023_Arch_222130.00_alampkinsLdZJ5.rvt
2/1/2024 3:57:59 PM

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
D. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
E. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A-502.
F. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
G. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
H. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
I. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
J. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
K. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
L. REFER TO MASTER/CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
M. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING A001 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NOTE: ALL INTERIOR WALLS ARE TO BE TYPE 82 (W82) UNLESS INDICATED OTHERWISE.

1. CMU WALL AND TELESCOPING BLEACHERS (ALTERNATE)
2. 2'-0" x 4'-0" ACCESS PANEL (ALTERNATE)
3. RECESS BRICK 1" - SEE ELVATIONS
4. KNOCK-OUT PANEL. PROVIDE BACKER ROD / SEALANT JOINTS AT JAMBS SIMILAR TO 2-A502
5. ROOF HATCH AND LADDER - SEE 1-AR101
6. PROVIDE ALUMINUM GUARDRAIL AT THE TOP OF THE MASONRY CHASE - SEE 4/A-313. ALTERNATE
7. 6'-8" HIGH WALL

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54,239 SF
B101	CORRIDOR	1,163 SF
B102	LOCKER ROOM #1	399 SF
B103	SHOWER	184 SF
B104	DRESSING ROOM #1	261 SF
B105	TOILET	74 SF
B106	TOILET	75 SF
B107	DRESSING ROOM #2	270 SF
B108	SHOWER	184 SF
B109	LOCKER ROOM #2	401 SF
B110	TOILET	63 SF
B111	TOILET	63 SF
B112	GIRLS RESTROOM	388 SF
B113	FIRE RISER	304 SF
B114	BOYS RESTROOM	270 SF
B115	STORAGE	127 SF
B116	CUSTODIAN	68 SF
B117	CONCESSION	263 SF
B118	OFFICE	341 SF
B119	LOBBY	1,039 SF
B120	VESTIBULE	369 SF
B121	SRO OFFICE	157 SF
S-2	STAIR	115 SF

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

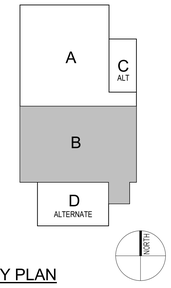
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

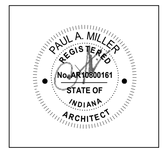
317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

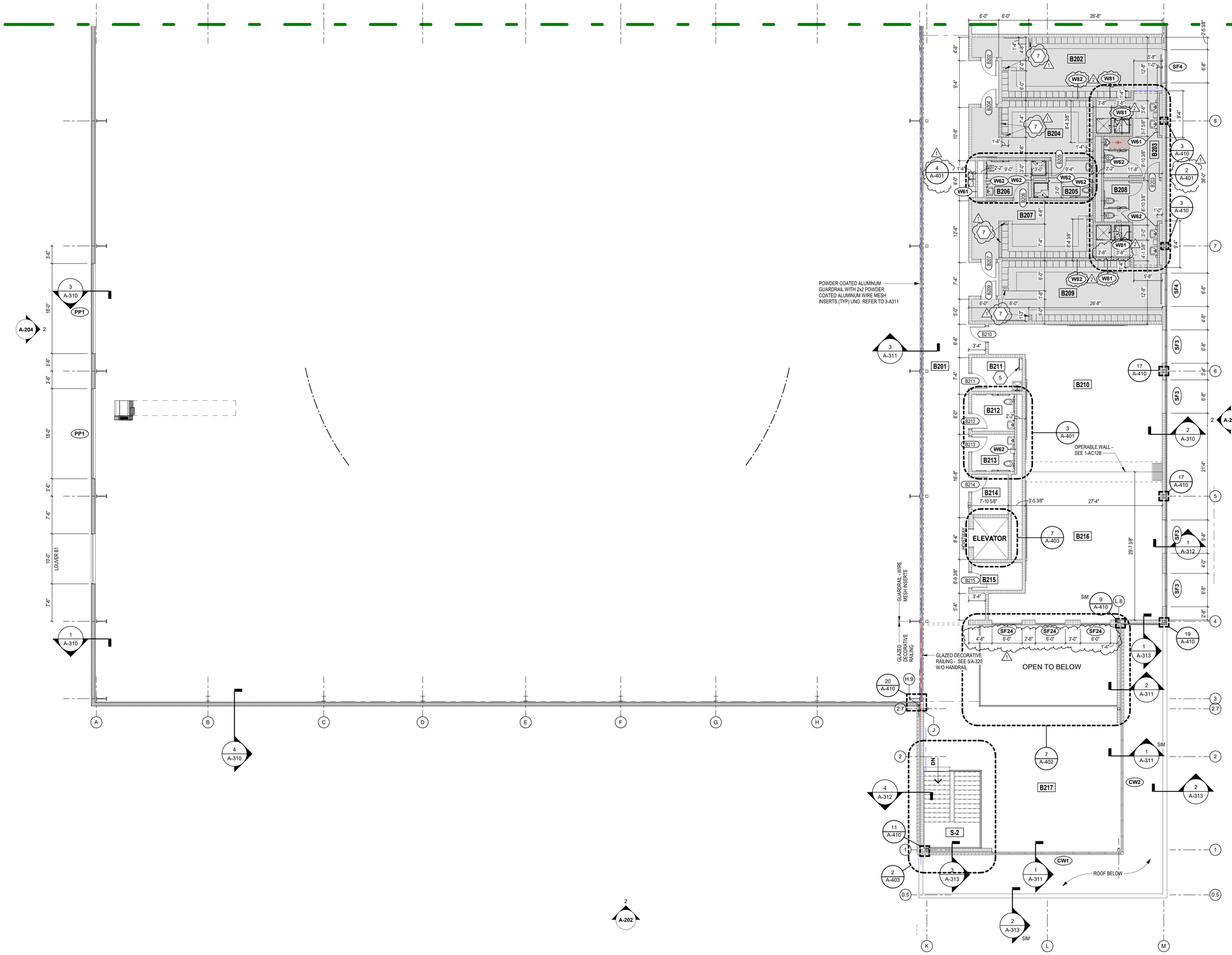


PROJECT MANAGER: MKS
DRAWN BY: KT
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

FIRST FLOOR ARCHITECTURE PLAN - UNIT B

A-11B



SECOND FLOOR ARCHITECTURAL PLAN - UNIT B

SCALE: 1/8" = 1'-0"

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
D. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
E. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A-502.
F. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
G. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
H. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
I. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
J. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
K. PROVIDE WOOD BLOCKING AS REQUIRED: WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
L. REFER TO MASTER/CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
M. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING A301 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NOTE: ALL INTERIOR WALLS ARE TO BE TYPE 82 (W82) UNLESS INDICATED OTHERWISE.

1. CMU WALL AND TELESCOPING BLEACHERS (ALTERNATE)
2. 2'-0" x 4'-0" ACCESS PANEL (ALTERNATE)
3. RECESS BRICK 1" - SEE ELVATIONS
4. KNOCK-OUT PANEL. PROVIDE BACKER ROD / SEALANT JOINTS AT JAMBS SIMILAR TO 2-A502
5. ROOF HATCH AND LADDER - SEE 1-AR101
6. PROVIDE ALUMINUM GUARDRAIL AT THE TOP OF THE MASONRY CHASE - SEE 4/A-313. ALTERNATE
7. 6'-8" HIGH WALL

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54,239 SF
A201	CORRIDOR	341 SF
A202	MECHANICAL	873 SF
B201	CORRIDOR	1,444 SF
B202	LOCKER ROOM #3	399 SF
B203	SHOWER	194 SF
B204	DRESSING ROOM #3	261 SF
B205	TOILET	74 SF
B206	TOILET	75 SF
B207	DRESSING ROOM #4	270 SF
B208	SHOWER	194 SF
B209	LOCKER ROOM #4	402 SF
B210	CLASSROOM	842 SF
B211	CUSTODIAN	67 SF
B212	TOILET	63 SF
B213	TOILET	63 SF
B214	ELECTRICAL / TECHNOLOGY	58 SF
B215	ELEVATOR EQUIPMENT	55 SF
B216	CLASSROOM	840 SF
B217	COMMONS	984 SF
S-2	STAIR	175 SF

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

A
C ALT
B
D ALTERNATE
NORTH

KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MKS

PROJECT NUMBER: 222130.00

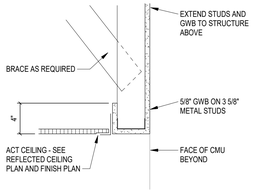
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

SECOND FLOOR ARCHITECTURE PLAN - UNIT B

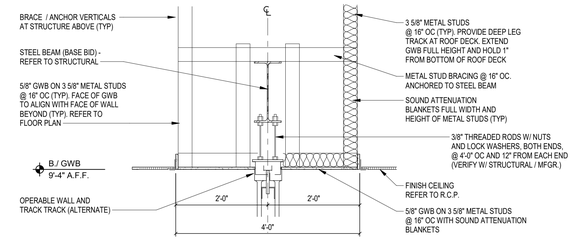
A-12B

C:\Users\slampkins\Documents\2023_Arch_222130.00_slampkinsLJZJ5.rvt
2/1/2024 3:58:07 PM



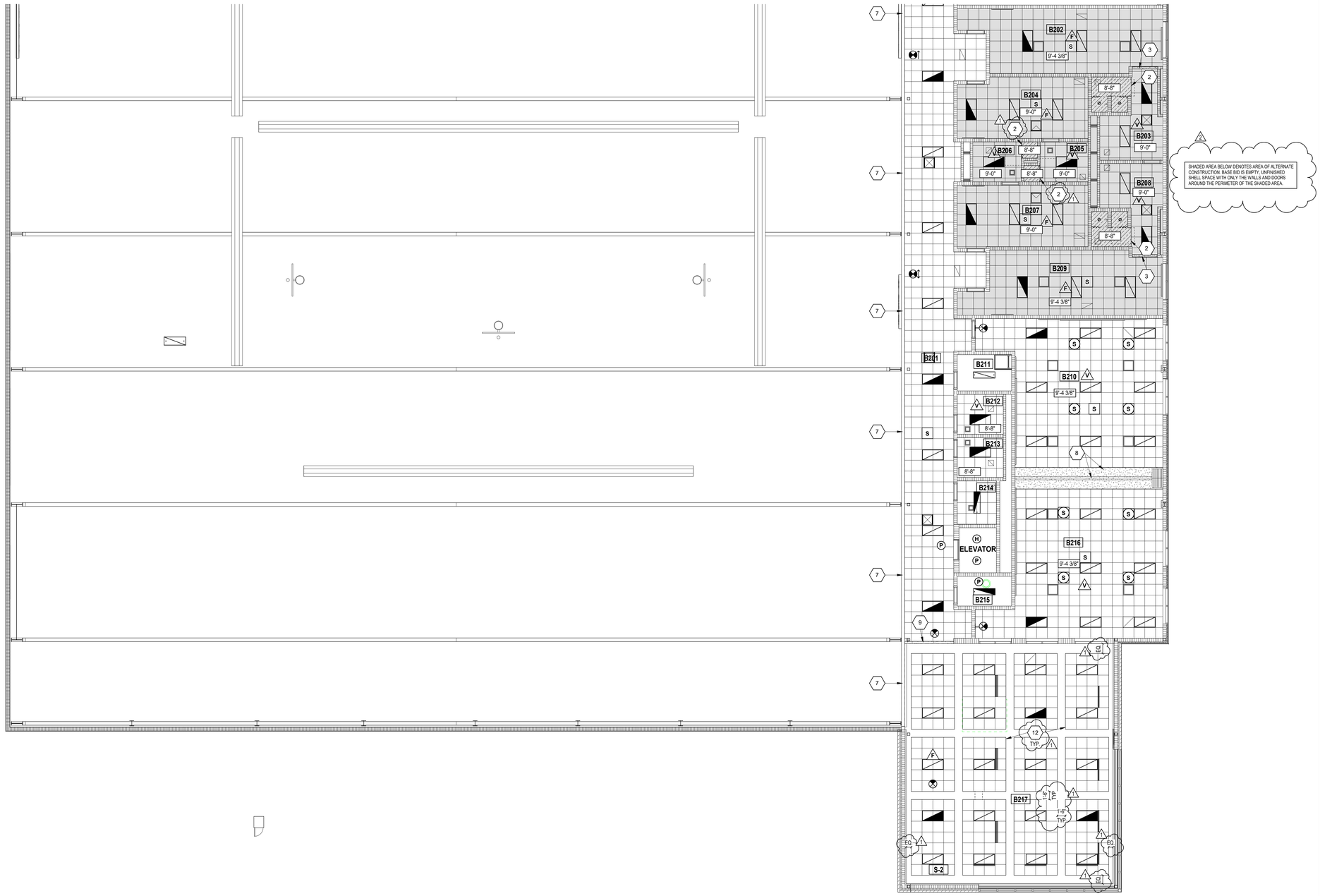
2 BULKHEAD

SCALE: 1 1/2" = 1'-0"



1 BULKHEAD (ALTERNATE)

SCALE: 3/4" = 1'-0"



100 SECOND FLOOR CEILING PLAN - UNIT B

SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN NOTES

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAIL ??-A9.1.

B. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK

REFLECTED CEILING NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. GWB BULKHEAD AT 9'-7" A.F.F. - SEE 1-AC11A
2. INTERIOR FINISH SYSTEM (IFS) CEILING - SEE 1-AC11B
3. GWB BULKHEAD AT 9'-7" A.F.F. - SEE 2-AC11B
4. GWB BULKHEAD AT 9'-7" A.F.F. - SEE 3-AC11B
5. GWB BULKHEAD AT 9'-8" A.F.F. AND GUARDRAIL - SEE 11-A521
6. GWB BULKHEAD AT 9'-11 " A.F.F. - SEE 1-AC11A
7. GWB BULKHEAD AT 9'-0" A.F.F. - SEE 2-AC12A
8. GWB BULKHEAD AT 9'-4" A.F.F. AND OPERABLE WALL (ALTERNATE) - SEE 1-AC12B
9. GWB BULKHEAD AT 9'-0" A.F.F. - SEE 2-AC12B
10. GWB BULKHEAD AT 10'-0 3/8" A.F.F. - SEE SECTION 3-A404.
11. GWB CEILING AT UNDERSIDE OF STAIR - SEE 5-A404
12. PROVIDE 4" PERIMETER TRIM AROUND CLOUDS

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A201	CORRIDOR	341 SF
A202	MECHANICAL	873 SF
B201	CORRIDOR	1,444 SF
B202	LOCKER ROOM #3	399 SF
B203	SHOWER	184 SF
B204	DRESSING ROOM #3	261 SF
B205	TOILET	74 SF
B206	TOILET	75 SF
B207	DRESSING ROOM #4	270 SF
B208	SHOWER	184 SF
B209	LOCKER ROOM #4	402 SF
B210	CLASSROOM	842 SF
B211	CUSTODIAN	67 SF
B212	TOILET	63 SF
B213	TOILET	63 SF
B214	ELECTRICAL / TECHNOLOGY	58 SF
B215	ELEVATOR EQUIPMENT	55 SF
B216	CLASSROOM	940 SF
B217	COMMONS	984 SF
S-2	STAIR	175 SF

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- XX'-XX" — INDICATES CEILING HEIGHT
- X1 XX'-XX" — INDICATES ACOUSTIC PANEL CEILING TYPE AND HEIGHT. REFER TO PROJECT MANUAL FOR "TYPE"
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- CLOCK - REFER TO TECHNOLOGY DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- IC — RECESSED CEILING SPEAKER
- M — MOTION DETECTOR
- CEILING MOUNTED EXIT LIGHT
- CAM — CEILING MOUNTED CAMERA
- W — WIRELESS ACCESS POINT (WAP)
- CJ — CONTROL JOINT IN GYPSUM BOARD CEILING OR BULKHEAD
- S — SOUND REINFORCEMENT SPEAKER
- H — FIRE ALARM HEAT DETECTOR
- F — FIRE ALARM HORN STROBE
- FS — FIRE ALARM SPEAKER STROBE
- V — FIRE ALARM STROBE
- P — FIRE ALARM SMOKE DETECTOR
- OCCUPANCY SENSOR
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING EXTERIOR FINISH SYSTEM (E.F.S.) EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.)
- INTERIOR FINISH SYSTEM (I.F.S.)
- METAL SOFFIT PANELS

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

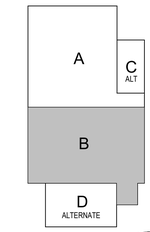
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. AR 10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MKS

PROJECT NUMBER: 222130.00

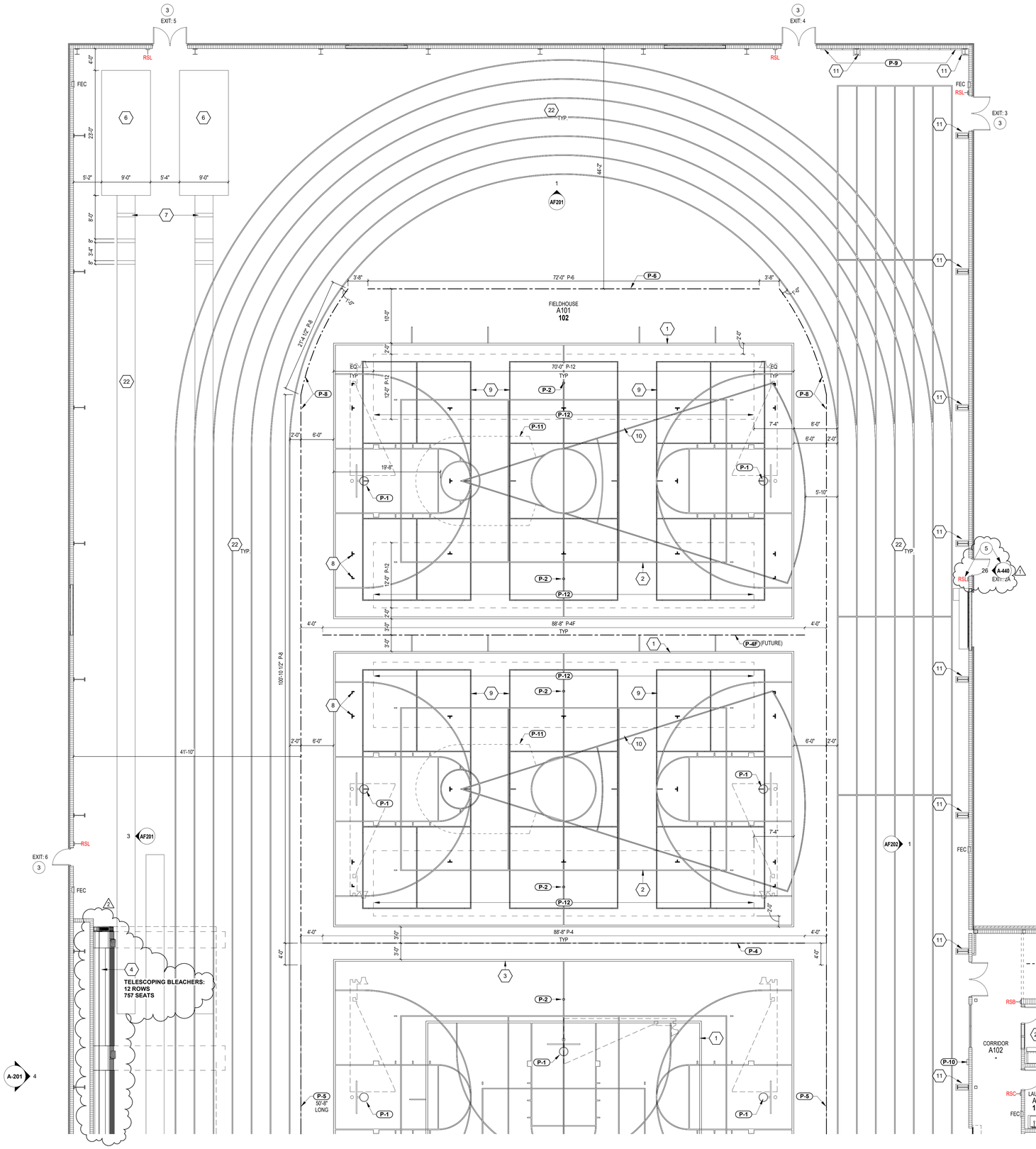
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

SECOND FLOOR REFLECTED CEILING PLAN - UNIT B

AC12B

C:\Users\stampkins\Documents\2023_Arch_222130.00_stampkinsLiZJ5.rvt
2/1/2024, 3:58:14 PM



COURTS ARE NUMBERED SOUTH TO NORTH

PE EQUIPMENT CONTROLS OPERATION FOR MULTIPLE EQUIPMENT:

1. COURT 1: EAST AND WEST BASKETBALL GOALS (TOTAL OF 2)
2. COURT 2: EAST AND WEST BASKETBALL GOALS (TOTAL OF 2)
3. COURT 3: EAST AND WEST BASKETBALL GOALS (TOTAL OF 2)
4. COURT 4: EAST AND WEST BASKETBALL GOALS (TOTAL OF 2)
5. COURTS 1 & 2: EAST AND WEST BASKETBALL GOALS (TOTAL OF 4)
6. COURTS 3 & 4: EAST AND WEST BASKETBALL GOALS (TOTAL OF 4)
7. COURTS 1 THROUGH 4: EAST AND WEST BASKETBALL GOALS (TOTAL OF 8)
8. COURTS 1 & 2: MAIN COURT BASKETBALL GOALS (TOTAL OF 2)
9. TRACK: ALL INSIDE TRACK CURTAINS (TOTAL OF 8)
10. TRACK: EAST AND WEST TRACK CURTAINS (TOTAL OF 6)
11. TRACK: NORTH AND SOUTH TRACK CURTAINS (TOTAL OF 2)
12. COURTS 2 & 3: GYM DIVIDER CURTAIN (TOTAL OF 1)
13. COURTS 1 THROUGH 4: GYM DIVIDER CURTAIN AND CURTAINS AT SIDELINES (TOTAL OF 3)
14. COURT 3: BATTING CAGES (TOTAL OF 2)
15. COURT 4: BATTING CAGES (TOTAL OF 2)
16. COURTS 3 & 4: ALL BATTING CAGES (TOTAL OF 4)
17. COURTS 3 & 4: ALL THROWING CAGES (TOTAL OF 2)

NOTE: THIS IS IN ADDITION TO INDIVIDUAL OPERATION

1 FIRST FLOOR EQUIPMENT PLAN - UNIT A

SCALE: 1/8" = 1'-0"

C:\Users\alampkins\Documents\2023_Arch_222130.00_alampkins_LZJ5.rvt
2/1/2024 3:58:32 PM

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54,239 SF
A102	CORRIDOR	328 SF
A103	CORRIDOR	296 SF
A104	TRAINING	416 SF
A105	ELECTRICAL	182 SF
A106	TOILET	81 SF
A107	LAUNDRY	144 SF
S-1	STAIR	81 SF

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE. REFER TO DETAIL 7 & 8/AQ751 FOR STANDARD COUNTERTOP DETAILS. (1)
B. HIDDEN LINES (- - - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (- - - -) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. (TB) INDICATES 4' HIGH TACK BOARD, LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
D. (MB) INDICATES 4' HIGH MARKER BOARD, LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
E. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
F. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
G. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
H. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
I. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
J. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
K. REFER TO LIST OF FINISHES FOR COLOR SELECTIONS.
L. REFER TO AQ752 FOR COURT LAYOUTS AND GRAPHICS.
M. FOR LOCKER TYPES, REFER TO 5/AQ751.
N. P-X INDICATES ATHLETIC EQUIPMENT. REFER TO SCHEDULE IN DRAWING MANUAL.
O. (FEC) INDICATES RECESSED FIRE EXTINGUISHER CABINET. REFER TO DETAIL 6/AQ751. (X)

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 MAIN BASKETBALL COURT MARKINGS, SEE DETAIL 1/AQ752.
2 MAIN VOLLEYBALL COURT MARKINGS, SEE DETAIL 4/AQ752.
3 CROSSCOURT BASKETBALL MARKINGS; LINES SHALL BE 1 INCH AND NO CENTER CIRCLE IS REQUIRED.
4 [ALTERNATE] TELESCOPING BLEACHERS, SHOWN IN CLOSED POSITION. REFER TO 9/AQ751 FOR BLEACHER GRAPHIC.
5 POLE VAULT VAULTING BOX. REFER TO ATHLETIC EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
6 LONG JUMP WITH PIT FILL AND MLRSAF-5 COVER. REFER ATHLETIC EQUIPMENT FOR ADDITIONAL INFORMATION.
7 UNIFIED TAKEOFF LINE PAINT, 10' DISTANCE FROM PIT
8 TENNIS COURT MARKINGS (TOTAL OF 2), SEE DETAIL 3/AQ752.
9 PICKLEBALL COURT MARKINGS (TOTAL OF 3 PER COURT), SEE DETAIL 5/AQ752.
10 SHOT PUT SECTOR MARKINGS (TOTAL OF 2), SEE DETAIL 6/AQ752.
11 WRAP PRE-ENGINEERED BUILDING MAIN FRAMES WITH WALL PADDING (P-8). REFER TO DETAIL 1/A-11A FOR MORE INFORMATION
12 TOILET PARTITIONS TO BE SUPPORTED BY THREADED RODS AND HUNG FROM STEEL TUBE ABOVE, SEE DETAIL 1/AQ751
13 [ALTERNATE] OPERABLE WALL, REFER TO 1/AC128
14 ALL WORK ASSOCIATED WITH THE WRESTLING AND DANCE TWO-STORY ADDITION AT "UNIT D" SHALL BE AN ALTERNATE.
15 ALL WORK ASSOCIATED WITH THE STORAGE ROOM ONE-STORY ADDITION AT "UNIT C" SHALL BE AN ALTERNATE.
16 SCORER'S TABLE TO BE LOOSE EQUIPMENT (BY OWNER)
17 INTERIOR SCOREBOARD (TYPE 1), REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION
18 INTERIOR SCOREBOARD (TYPE 2 – COMPETITION COURT), REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION
19 COMMERCIAL LAUNDRY EQUIPMENT (WASHER AND DRYER) SHALL BE LOOSE EQUIPMENT (BY OWNER).
20 ICE MACHINE SHALL BE LOOSE EQUIPMENT (BY OWNER).
21 HYDRO SOAKING TUBS SHALL BE LOOSE EQUIPMENT (BY OWNER).
22 REFER TO FINISH PLANS FOR TRACK AND EVENT MARKINGS
23 PROVIDE A MOP HOLDER (MH) AT MOP SINK.
24 PROVIDE LADDER TO ROOF HATCH, SEE DETAIL 1/AR101
25 SOLID SURFACE COUNTER (SSM-1) TO CONTINUE ACROSS COILING DOOR OPENING; RADIUS OUTSIDE CORNERS
26 PROVIDE SHELF ON TOP OF ALL METAL LOCKERS IN LOCKER ROOM. REFER TO DETAIL 2/AQ751
27 ALL WORK AND EQUIPMENT WITHIN THIS ROOM SHALL BE AN ALTERNATE. THEREFORE, TO BE COMPLETED AT A LATER DATE.
28 SSM-1 LAVATORY SHELF ABOVE SINKS, SEE DETAIL 6/A-401
29 INSTALL WIRE MESH PARTITIONS 9'-0" WIDE WITH LOCKABLE DOOR AND THE DEPTH OF THE LOCKER SHELF. THIS WILL SECURE THE OWNER'S AIR CLEANER PLACED ON TOP OF THE SHELF.
30 [UNIT D ALTERNATE] PROVIDE 6'H WALL PADDING (P-9) AS SHOWN AROUND PILASTERS AND PERIMETER OF ROOM. PROVIDE MITER CORNERS AT PILASTERS. PROVIDE PREMOLDED INSERTS TO ACCOMMODATE ELECTRICAL DEVICES. ADJUST HEIGHT OF PADDING TO ACCOMMODATE WINDOWS. STOP PADDING AT HOLLOW METAL DOOR FRAMES.
31 OVERHEAD SHORT THROW PROJECTOR, REFER TO TECHNOLOGY DRAWINGS.
32 INSTALL CONCRETE LOCKER BENCHES WITH TWO-TIER METAL ATHLETIC LOCKERS ABOVE, REFER TO DETAILS 2 & 5/AQ751. NOTES AT LOCKERS INDICATE LOCKER NUMBERING.
33 BUILT-IN LOCKER ADA BENCH ALONG THIS RUN OF LOCKERS, REFER TO DETAIL 3/AQ751
34 WALL MOUNTED MONITOR, REFER TO TECHNOLOGY.
35 [UNIT D ALTERNATE] PROJECTION SCREEN – 165" DIAGONAL (80-1/2"H X 140" W) – ELECTRICALLY X OPERATED.
36 [UNIT D ALTERNATE] UNFRAMED MIRROR. MIRRORS SHALL VERTICAL JOINTS AT 4' O.C. AND MOUNTED AT 24" A.F.F. WITH TOP AT 7'-4".
39 REFER TO 8/AQ761 FOR ISLAND DETAIL
40 REFRIGERATOR SHALL BE LOOSE EQUIPMENT (BY OWNER).
41 VENDING MACHINES SHALL BE LOOSE EQUIPMENT (BY OWNER)
42 INSTALL DEDICATION PLAQUE, SEE DETAIL 6/A-401
43 (ALTERNATE) REFER TO 6/AQ761 FOR ISLAND DETAIL AND 5/AQ761 FOR ELEVATION AT WEST WALL (1)

SIGNAGE GENERAL NOTES

A. REFER TO BUILDING ELEVATIONS FOR ADDITIONAL BUILDING LETTERS
B. (RS..) LETTERS ADJACENT TO ENTRY INDICATES ROOM SIGNAGE AND "..." FOR SIGN TYPE. REFER TO SHEET AQ752 FOR SIGNAGE TYPES, DETAILS, AND ADDITIONAL INFORMATION
C. REFER TO MOUNTING HEIGHTS DRAWINGS FOR ADDITIONAL INFORMATION
D. OWNER TO APPROVE ALL DISIGNATION AND ROOM NUMBERING SYSTEM PRIOR TO FABRICATION
E. MAXIMUM CAPACITY SIGN TO BE TYPE K ON AQ752 AND LOCATED AS INDICATED ON PLAN
F. SIGN TO HAVE 1/2" RADIUS CORNERS, TYPICAL ALL SIGNS ALL DIMENSIONS INDICATED ARE TYPICAL PER SIGN TYPE, UNLESS OTHERWISE NOTED.
G. ALL DIMENSIONS INDICATED ARE TYPICAL PER SIGN TYPE, UNLESS OTHERWISE NOTED.
H. REFER TO PLAN FOR EXTERIOR DOOR NUMBERS
I. ALL EXTERIOR DOORS TO RECIEVE INTERIOR EXIT SIGN TYPE "L" WITH NUMBERS COREESPONDING TO EXTERIOR DOOR NUMBER, OWNER SHALL APPROVE OF EXTERIOR DOOR NUMBERING SCHEME PRIOR TO FABRICATION
J. LOCAL FIRE CHIEF TO VERIFY MAXIMUM CAPACITY SIGNAGE PRIOR TO FABRICATION, SEE PLAN FOR LOCATIONS
K. INCREASE SIGN SIZE IF REQUIRED TO ACCOMMODATE SIGN COPY & GRAPHICS.

SIGNAGE PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET) (X)

1 THIS SIGN SHALL BE PART OF UNIT "D" ALTERNATE.
2 THIS SIGN SHALL BE PART OF UNIT "C" ALTERNATE.
3 EXTERIOR DOOR NUMBERS (HELVETICA MEDIUM) SHALL BE 10" VERTICAL LETTERS ON GLASS TRANSOMS.
4 INCLUDE DIRECTIONAL ARROW ALONG WITH TEXT, POINTING TOWARDS DOOR.
5 UNDER UNIT C ALTERNATE, THIS SIGNAGE IS NOT REQUIRED, SEE A/AQ71C FOR UNIT C ALTERNATE SIGNAGE. (1)

EQUIPMENT ROOM TAG LEGEND

TRAINING A104 117 — SIGN COPY; CONSTRUCTION DOCUMENTS (REFERENCE ONLY); OWNER/ SIGNAGE ROOM NUMBER

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

A | C ALT | B | D ALTERNATE

NORTH

KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MKS

DRAWN BY: AML

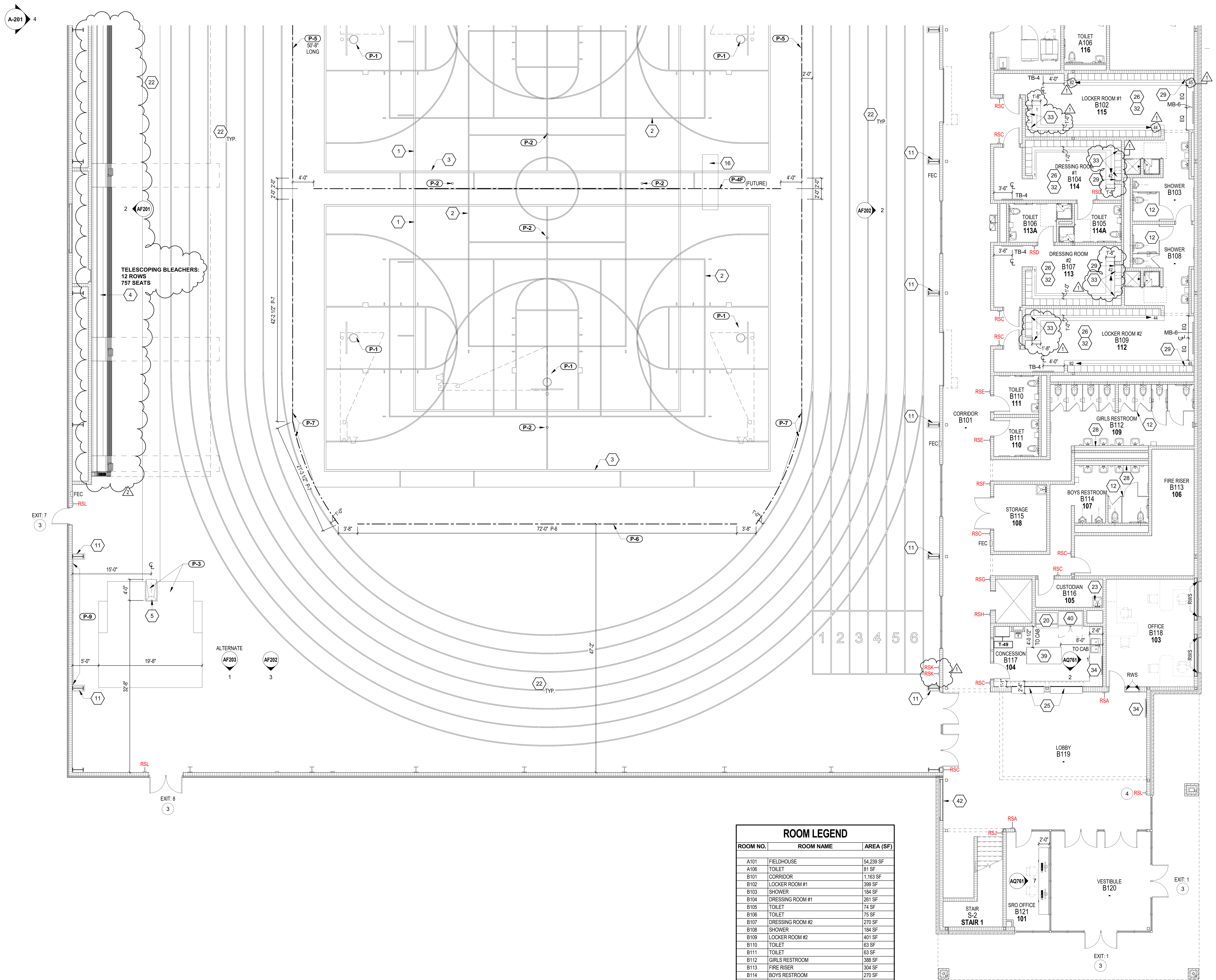
PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

FIRST FLOOR EQUIPMENT PLAN - UNIT A

AQ71A



1 **FIRST FLOOR EQUIPMENT PLAN - UNIT B**

SCALE: 1/8" = 1'-0"

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54,239 SF
A106	TOILET	81 SF
B101	CORRIDOR	1,163 SF
B102	LOCKER ROOM #1	399 SF
B103	SHOWER	184 SF
B104	DRESSING ROOM #1	261 SF
B105	TOILET	74 SF
B106	TOILET	75 SF
B107	DRESSING ROOM #2	270 SF
B108	SHOWER	184 SF
B109	LOCKER ROOM #2	401 SF
B110	TOILET	63 SF
B111	TOILET	63 SF
B112	GIRLS RESTROOM	388 SF
B113	FIRE RISER	304 SF
B114	BOYS RESTROOM	270 SF
B115	STORAGE	127 SF
B116	CUSTODIAN	68 SF
B117	CONCESSION	263 SF
B118	OFFICE	341 SF
B119	LOBBY	1,039 SF
B120	VESTIBULE	369 SF
B121	SRO OFFICE	157 SF
S-2	STAIR	115 SF

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE. REFER TO DETAIL 7 & 8/AQ751 FOR STANDARD COUNTERTOP DETAILS.
B. HIDDEN LINES (- - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (– – –) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. (TB) INDICATES 4' HIGH TACK BOARD, LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
D. (MB) INDICATES 4' HIGH MARKER BOARD, LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
E. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
F. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
G. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
H. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
I. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
J. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
K. REFER TO LIST OF FINISHES FOR COLOR SELECTIONS.
L. REFER TO AQ752 FOR COURT LAYOUTS AND GRAPHICS.
M. FOR LOCKER TYPES, REFER TO 5/AQ751.
N. P-X INDICATES ATHLETIC EQUIPMENT, REFER TO SCHEDULE IN PROJECT MANUAL.
O. (FEC) INDICATES RECESSED FIRE EXTINGUISHER CABINET, REFER TO DETAIL 6/AQ751.

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 MAIN BASKETBALL COURT MARKINGS, SEE DETAIL 1/AQ752.
2 MAIN VOLLEYBALL COURT MARKINGS, SEE DETAIL 4/AQ752.
3 CROSSCOURT BASKETBALL MARKINGS; LINES SHALL BE 1 INCH AND NO CENTER CIRCLE IS REQUIRED.
4 [ALTERNATE] TELESCOPING BLEACHERS, SHOWN IN CLOSED POSITION. REFER TO 9/AQ751 FOR BLEACHER GRAPHIC.
5 POLE VAULT VAULTING BOX. REFER TO ATHLETIC EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
6 LONG JUMP WITH PIT FILL AND MLRSAF-5 COVER. REFER ATHLETIC EQUIPMENT FOR ADDITIONAL INFORMATION.
7 UNIFIED TAKEOFF LINE PAINT, 1M DISTANCE FROM PIT
8 TENNIS COURT MARKINGS (TOTAL OF 2), SEE DETAIL 3/AQ752.
9 PICKLEBALL COURT MARKINGS (TOTAL OF 3 PER COURT), SEE DETAIL 5/AQ752.
10 SHOT PUT SECTOR MARKINGS (TOTAL OF 2), SEE DETAIL 6/AQ752.
11 WRAP PRE-ENGINEERED BUILDING MAIN FRAMES WITH WALL PADDING (P-9). REFER TO DETAIL 1/A-11A FOR MORE INFORMATION
12 TOILET PARTITIONS TO BE SUPPORTED BY THREADED RODS AND HUNG FROM STEEL TUBE ABOVE, SEE DETAIL 1/AQ751
13 [ALTERNATE] OPERABLE WALL, REFER TO 1/AC12B
14 ALL WORK ASSOCIATED WITH THE WRESTLING AND DANCE TWO-STORY ADDITION AT “UNIT D” SHALL BE AN ALTERNATE.
15 ALL WORK ASSOCIATED WITH THE STORAGE ROOM ONE-STORY ADDITION AT “UNIT C” SHALL BE AN ALTERNATE.
16 SCORER’S TABLE TO BE LOOSE EQUIPMENT (BY OWNER)
17 INTERIOR SCOREBOARD (TYPE 1), REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION
18 INTERIOR SCOREBOARD (TYPE 2 – COMPETITION COURT), REFER TO INTERIOR ELEVATIONS FOR MOUNTING HEIGHTS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION
19 COMMERCIAL LAUNDRY EQUIPMENT (WASHER AND DRYER) SHALL BE LOOSE EQUIPMENT (BY OWNER).
20 ICE MACHINE SHALL BE LOOSE EQUIPMENT (BY OWNER).
21 HYDRO SOAKING TUBS SHALL BE LOOSE EQUIPMENT (BY OWNER).
22 REFER TO FINISH PLANS FOR TRACK AND EVENT MARKINGS
23 PROVIDE A MOP HOLDER (MH) AT MOP SINK.
24 PROVIDE LADDER TO ROOF HATCH, SEE DETAIL 1/AR101
25 SOLID SURFACE COUNTER (SSM-1) TO CONTINUE ACROSS COILING DOOR OPENING; RADIUS OUTSIDE CORNERS
26 PROVIDE SHELF ON TOP OF ALL METAL LOCKERS IN LOCKER ROOM, REFER TO DETAIL 2/AQ751
27 ALL WORK AND EQUIPMENT WITHIN THIS ROOM SHALL BE AN ALTERNATE. THEREFORE, TO BE COMPLETED AT A LATER DATE.
28 SSM-1 LAVATORY SHELF ABOVE SINKS, SEE DETAIL 6/A-401
29 INSTALL WIRE MESH PARTITIONS 24” WIDE WITH LOCKABLE DOOR AND THE DEPTH OF THE LOCKER SHELF. THIS WILL SECURE THE OWNER’S AIR CLEANER PLACED ON TOP OF THE SHELF.
30 [UNIT D ALTERNATE] PROVIDE 6'H WALL PADDING (P-9) AS SHOWN AROUND PILASTERS AND PERIMETER OF ROOM. PROVIDE MITER CORNERS AT PILASTERS. PROVIDE PREMOLDED INSERTS TO ACCOMMODATE ELECTRICAL DEVICES. ADJUST HEIGHT OF PADDING TO ACCOMMODATE WINDOWS. STOP PADDING AT HOLLOW METAL DOOR FRAMES.
31 OVERHEAD SHORT THROW PROJECTOR, REFER TO TECHNOLOGY DRAWINGS.
32 INSTALL CONCRETE LOCKER BENCHES WITH TWO-TIER METAL ATHLETIC LOCKERS ABOVE, REFER TO DETAILS 2 & 5/AQ751. NOTES AT LOCKERS INDICATE LOCKER NUMBERING.
33 BUILT-IN LOCKER ADA BENCH ALONG THIS RUN OF LOCKERS, REFER TO DETAIL 3/AQ751
34 WALL MOUNTED MONITOR, REFER TO TECHNOLOGY.
35 [UNIT D ALTERNATE] PROJECTION SCREEN – 165” DIAGONAL (80-1/2”H X 140” W) – ELECTRICALLY X OPERATED.
36 [UNIT D ALTERNATE] UNFRAMED MIRROR. MIRRORS SHALL VERTICAL JOINTS AT 4’ O.C. AND MOUNTED AT 24” A.F.F. WITH TOP AT 7’-4”.
39 REFER TO 8/AQ761 FOR ISLAND DETAIL
40 REFRIGERATOR SHALL BE LOOSE EQUIPMENT (BY OWNER).
41 VENDING MACHINES SHALL BE LOOSE EQUIPMENT (BY OWNER).
42 ~~INSTALL DEDICATION PLAQUE, SEE DETAIL ON AQ753~~
43 [ALTERNATE] REFER TO 6/AQ761 FOR ISLAND DETAIL AND 5/AQ761 FOR ELEVATION AT WEST WALL

SIGNAGE GENERAL NOTES

A. REFER TO BUILDING ELEVATIONS FOR ADDITIONAL BUILDING LETTERS
B. (RS_) LETTERS ADJACENT TO ENTRY INDICATES ROOM SIGNAGE AND "__" FOR SIGN TYPE. REFER TO SHEET AQ752 FOR SIGNAGE TYPES, DETAILS, AND ADDITIONAL INFORMATION
C. REFER TO MOUNTING HEIGHTS DRAWINGS FOR ADDITIONAL INFORMATION
D. OWNER TO APPROVE ALL DISIGNATION AND ROOM NUMBERING SYSTEM PRIOR TO FABRICATION
E. MAXIMUM CAPACITY SIGN TO BE TYPE K ON AQ752 AND LOCATED AS INDICATED ON PLAN
F. SIGN TO HAVE 1/2" RADIUS CORNERS, TYPICAL ALL SIGNS ALL DIMENSIONS INDICATED ARE TYPICAL PER SIGN TYPE, UNLESS OTHERWISE NOTED.
G. ALL DIMENSIONS INDICATED ARE TYPICAL PER SIGN TYPE, UNLESS OTHERWISE NOTED.
H. REFER TO PLAN FOR EXTERIOR DOOR NUMBERS
I. ALL EXTERIOR DOORS TO RECIEVE INTERIOR EXIT SIGN TYPE "L" WITH NUMBERS COREESPONDING TO EXTERIOR DOOR NUMBER, OWNER SHALL APPROVE OF EXTERIOR DOOR NUMBERING SCHEME PRIOR TO FABRICATION
J. LOCAL FIRE CHIEF TO VERIFY MAXIMUM CAPACITY SIGNAGE PRIOR TO FABRICATION, SEE PLAN FOR LOCATIONS
K. INCREASE SIGN SIZE IF REQUIRED TO ACCOMMODATE SIGN COPY & GRAPHICS.

SIGNAGE PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 THIS SIGN SHALL BE PART OF UNIT "D" ALTERNATE.
2 THIS SIGN SHALL BE PART OF UNIT "C" ALTERNATE.
3 EXTERIOR DOOR NUMBERS (HELVETICA MEDIUM) SHALL BE 10" VERTICAL LETTERS ON GLASS TRANSOMS.
4 INCLUDE DIRECTIONAL ARROW ALONG WITH TEXT, POINTING TO EXIT
5 UNDER UNIT C ALTERNATE, THIS SIGNAGE IS NOT REQUIRED. SEE A/AQ71C FOR UNIT C ALTERNATE SIGNAGE.

EQUIPMENT ROOM TAG LEGEND

TRAINING — SIGN COPY
A104 — CONSTRUCTION DOCUMENTS (REFERENCE ONLY)
117 — OWNER/ SIGNAGE ROOM NUMBER

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

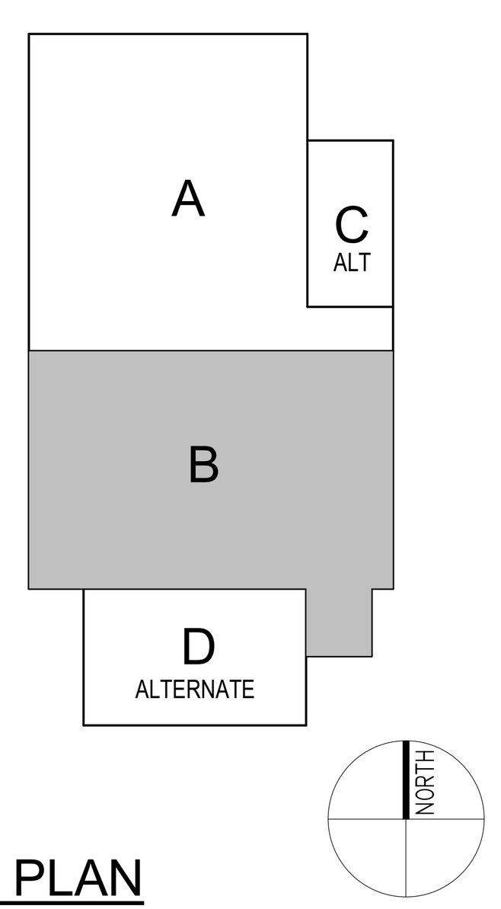
12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

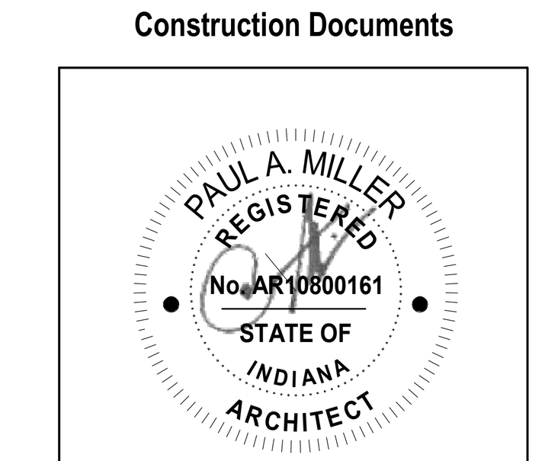
FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

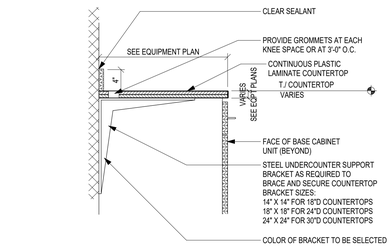


PROJECT MANAGER: MKS
DRAWN BY: AML
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

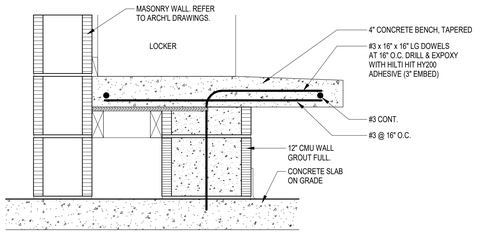
REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

FIRST FLOOR EQUIPMENT PLAN - UNIT B

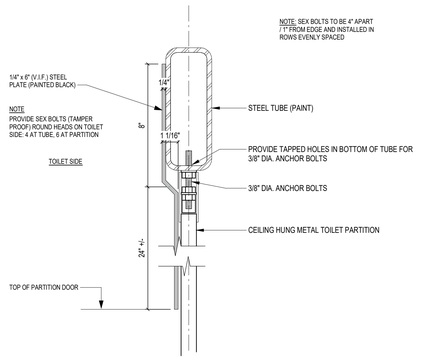
AQ71B



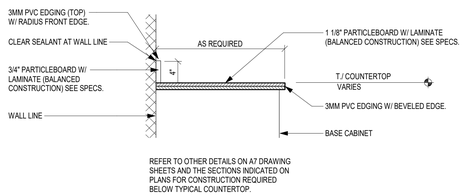
7 KNEE SPACE
SCALE: 1" = 1'-0"



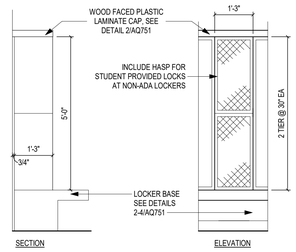
4 REBAR AT CONCRETE BENCH
SCALE: 1 1/2" = 1'-0"



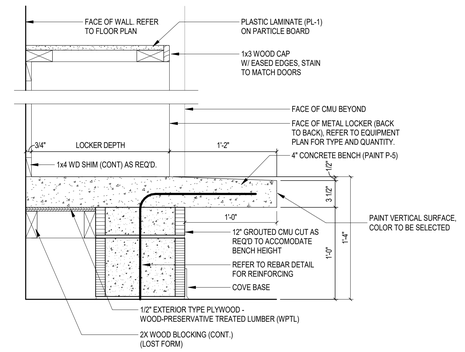
1 TOILET PARTITION BRACING PLATE
SCALE: 3" = 1'-0"



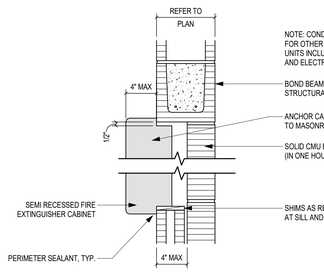
8 TYPICAL COUNTERTOP
SCALE: 1" = 1'-0"



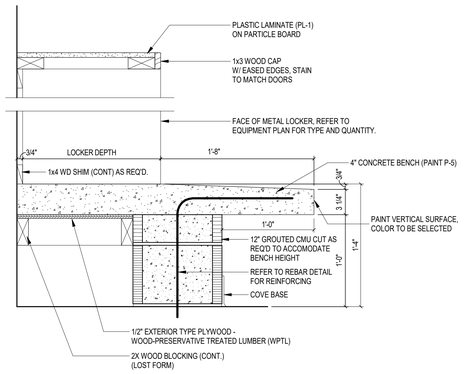
5 LOCKER DETAIL
SCALE: 1/2" = 1'-0"



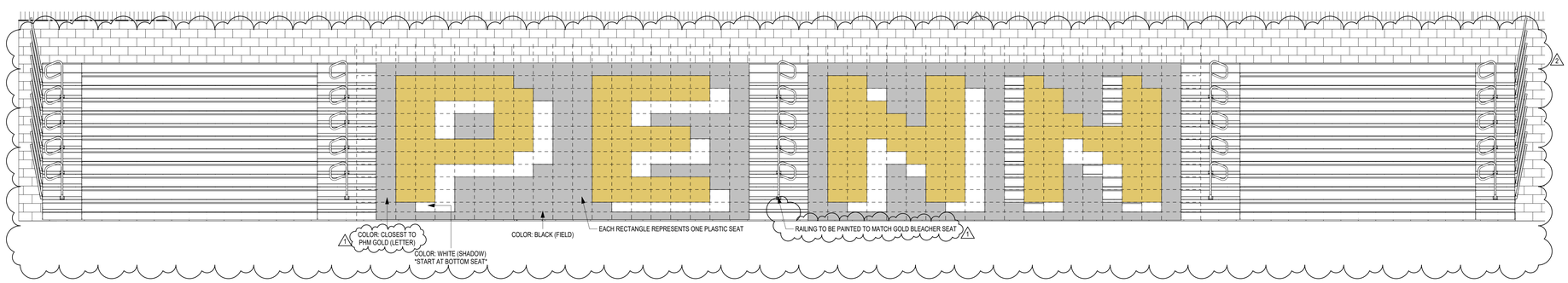
2 TYP. LOCKER BENCH AND TOP
SCALE: 1 1/2" = 1'-0"



6 FIRE EXTINGUISHER CABINET (FEC)
SCALE: 1 1/2" = 1'-0"



3 ADA LOCKER BENCH AND TOP
SCALE: 1 1/2" = 1'-0"



9 BLEACHER GRAPHIC DETAIL
SCALE: 1/4" = 1'-0"

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

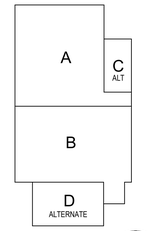
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

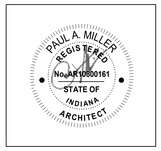
317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents



PROJECT MANAGER: MKS

DRAWN BY: CLP

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	2-1-24

EQUIPMENT DETAILS

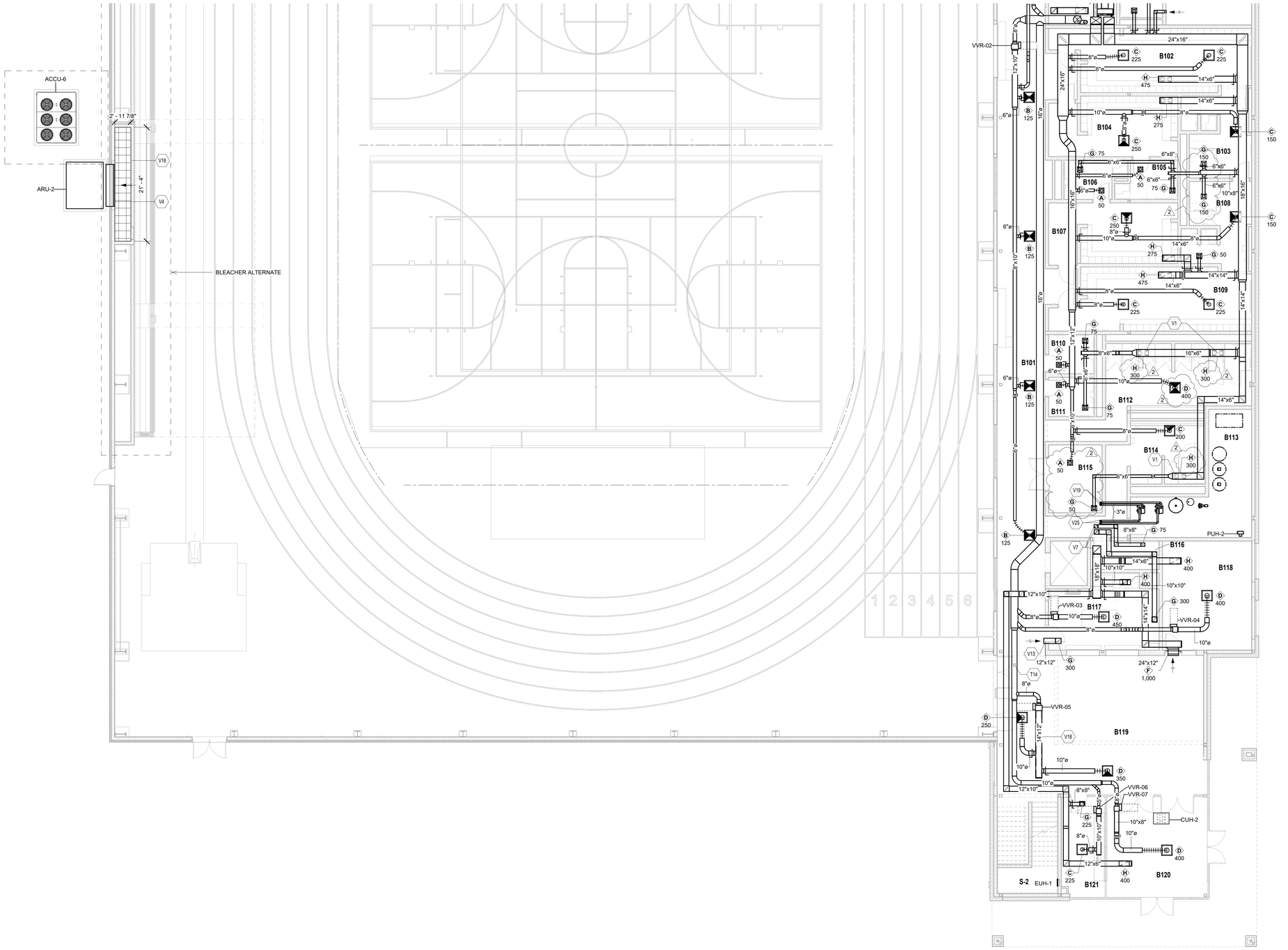
AQ751

C:\Users\alamp\kml\Documents\2023_Arch_222130.00_alamp&kml_LZJ5.rvt
2/1/2024 3:57:51 PM

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54239 SF
A102	CORRIDOR	328 SF
A105	ELECTRICAL	182 SF
A106	TOILET	81 SF
A107	LAUNDRY	144 SF
B101	CORRIDOR	1163 SF
B102	LOCKER ROOM #1	399 SF
B103	SHOWER	184 SF
B104	DRESSING ROOM #1	261 SF

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
B105	TOILET	74 SF
B106	TOILET	75 SF
B107	DRESSING ROOM #2	270 SF
B108	SHOWER	184 SF
B109	LOCKER ROOM #2	401 SF
B110	TOILET	63 SF
B111	TOILET	63 SF
B112	GIRLS RESTROOM	388 SF
B113	FIRE RISER	304 SF

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
B114	BOYS RESTROOM	270 SF
B115	STORAGE	127 SF
B116	CUSTODIAN	68 SF
B117	CONCESSION	263 SF
B118	OFFICE	341 SF
B119	LOBBY	1039 SF
B120	VESTIBULE	369 SF
B121	SRO OFFICE	157 SF
S-2	STAIR	115 SF



UNIT B - FIRST FLOOR VENTILATION PLAN

SCALE: 1/8" = 1'-0"

VENTILATION PLAN GENERAL NOTES

A. ALL DUCTWORK, PIPING AND VALVES SHALL BE CONCEALED ABOVE THE CEILING AND WITHIN WALLS, UNLESS OTHERWISE NOTED.
B. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS RELATED TO EQUIPMENT QUALITY, CONSTRUCTION AND FINISH OF MATERIALS.
C. ARRANGE DUCTWORK, PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OBSTRUCTIONS.
D. SEAL DUCT PENETRATIONS THROUGH THE FLOOR AND/OR WALLS IN ACCORDANCE WITH MECHANICAL CODE AND SMACNA REQUIREMENTS. SEAL DUCT PENETRATIONS THROUGH FIRE RATED FLOORS AND/OR WALLS WITH A MATERIAL HAVING SAME FIRE RATING AS THE WALL AND/OR FLOOR.
E. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
F. ALL RECTANGULAR SHEET METAL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. ALL ROUND DUCT SIZES SHOWN ARE INSIDE DIAMETERS.
G. PROVIDE BALANCING DAMPER AT EACH DUCT BRANCH, SERVING DIFFUSER, GRILLE AND REGISTER.
H. INSTALL WALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC. 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS.
I. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
J. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, FIRE PROTECTION AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.
L. ALL RETURN/EXHAUST AIR DUCT ABOVE LOCKERS/SHOWER AREAS SHALL BE MADE OF ALUMINUM IN ACCORDANCE WITH SMACNA REQUIREMENTS.

VENTILATION PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

T14 APPROXIMATE LOCATION OF DUCT STATIC PRESSURE SENSOR. SENSOR PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH ALL TRADES.
V1 PROVIDE VOLUME DAMPER IN VERTICAL DUCTWORK TO AIR DEVICE.
V4 SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLE PROVIDED BY AIR ROTATION UNIT MANUFACTURER. CONTRACTOR SHALL PROVIDE INTERCONNECTING DUCTWORK BETWEEN DIFFUSER/GRILLE AND AIR ROTATION UNIT. PAINT DIFFUSER AND GRILLE PROVIDED BY MANUFACTURER. COORDINATE FINAL COLOR WITH ARCHITECT.
V7 DUCT ROUTED UP TO FLOOR ABOVE. COORDINATE WITH STRUCTURAL IN AREA.
V13 AIR TRANSFER WALL OPENING LOCATED ABOVE THE CEILING. COORDINATE EXACT LOCATION WITH ALL TRADES. END OF DUCT OPEN TO SPACE.
V16 ALTERNATE: CONTRACTOR SHALL PROVIDE McNICHOLS BAR GRATING STANDARD DUTY WELDED, GALVANIZED STEEL HOT DIPPED 1" x 1/8" RECTENGULAR BAR ABOVE OPENING CHASE (OR EQUAL). SUPPORT WEIGHT OF GRATE AS REQUIRED. COORDINATE WITH ARCHITECTURAL & STRUCTURAL.
V18 DUCTWORK PROVIDED WITH INTERNAL LINED INSULATION. REFER TO SPECIFICATIONS.
V19 PROVIDE AND INSTALL 3" EXHAUST VENT WITH A MINIMUM 1/4 INCH PER FOOT PITCH UPWARDS PER MANUFACTURERS REQUIREMENTS (FOR EACH WATER HEATER). COORDINATE FINAL VENT DIAMETER WITH APPROVED SUBMITTALS. EXHAUST VENT MUST BE 3 FEET ABOVE THE COMBUSTION AIR INLET, AND 2 FEET ABOVE ANY HIGHER PORTION OF THE BUILDING WITHIN 10 FEET. ROUTE FLUE UP THROUGH FLOOR ABOVE, TRANSITION DUCTWORK IN CHASE AS REQUIRED. TERMINATE DUCT WITH SUPPORT COLLAR, ROOF FLASHING, AND VELOCITY CONE.
V25 PROVIDE AND INSTALL 3" COMBUSTION AIR INLET PER MANUFACTURER REQUIREMENTS (FOR EACH WATER HEATER). COORDINATE FINAL VENT DIAMETER WITH APPROVED SUBMITTALS. ROUTE COMBUSTION AIR DUCT UP THROUGH FLOOR ABOVE, TRANSITION DUCTWORK IN CHASE AS REQUIRED. TERMINATE COMBUSTION AIR INLET WITH GOOSENECK. REFER TO DETAIL. PIPE SIZE AND INSTALLATION PER MANUFACTURERS REQUIREMENTS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

A
C ALT
B
D ALTERNATE

NORTH

KEY PLAN

Construction Documents

MARK Z. HOPE REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS
DRAWN BY: DJA
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	1-01-24

FIRST FLOOR VENTILATION PLAN - UNIT B

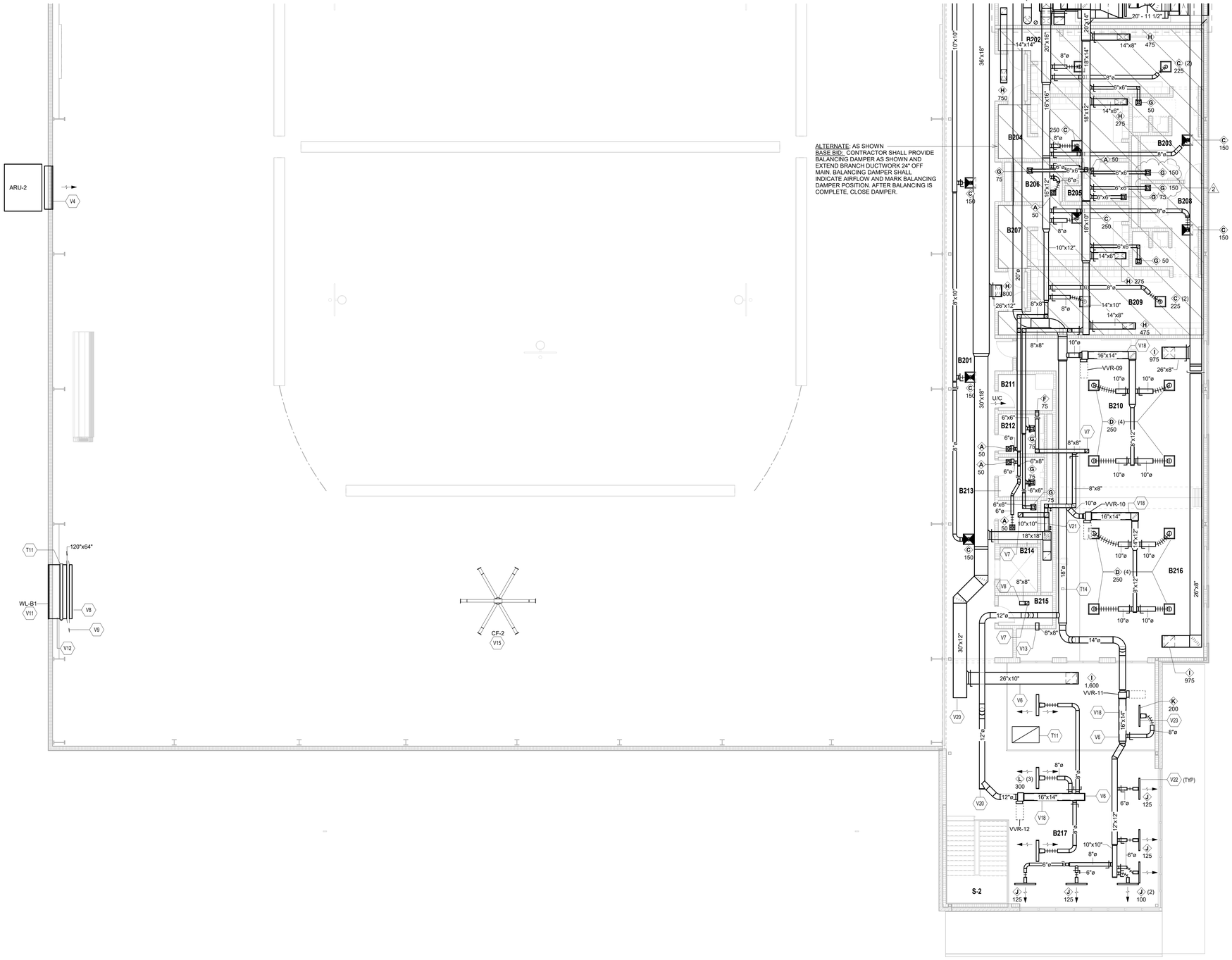
MV102

C:\Users\darnold\Documents\2023_MECH_222130.00_darnoldYA4F2F.rvt
2/1/2024 11:39:12 AM

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54239 SF
A201	CORRIDOR	341 SF
A202	MECHANICAL	873 SF
B201	CORRIDOR	1444 SF
B202	LOCKER ROOM #3	399 SF
B203	SHOWER	184 SF
B204	DRESSING ROOM #3	261 SF
B205	TOILET	74 SF
B206	TOILET	75 SF

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
B207	DRESSING ROOM #4	270 SF
B208	SHOWER	184 SF
B209	LOCKER ROOM #4	402 SF
B210	CLASSROOM	842 SF
B211	CUSTODIAN	67 SF
B212	TOILET	63 SF
B213	TOILET	63 SF
B214	ELECTRICAL / TECHNOLOGY	58 SF
B215	ELEVATOR EQUIPMENT	55 SF

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
B216	CLASSROOM	840 SF
B217	COMMONS	984 SF
S-2	STAIR	175 SF



UNIT B - SECOND FLOOR VENTILATION PLAN

SCALE: 1/8" = 1'-0"

VENTILATION PLAN GENERAL NOTES

A. ALL DUCTWORK, PIPING AND VALVES SHALL BE CONCEALED ABOVE THE CEILING AND WITHIN WALLS, UNLESS OTHERWISE NOTED.
B. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS RELATED TO EQUIPMENT QUALITY, CONSTRUCTION AND FINISH OF MATERIALS.
C. ARRANGE DUCTWORK, PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OBSTRUCTIONS.
D. SEAL DUCT PENETRATIONS THROUGH THE FLOOR AND/OR WALLS IN ACCORDANCE WITH MECHANICAL CODE AND SMACNA REQUIREMENTS. SEAL DUCT PENETRATIONS THROUGH FIRE RATED FLOORS AND/OR WALLS WITH A MATERIAL HAVING SAME FIRE RATING AS THE WALL AND/OR FLOOR.
E. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
F. ALL RECTANGULAR SHEET METAL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. ALL ROUND DUCT SIZES SHOWN ARE INSIDE DIAMETERS.
G. PROVIDE BALANCING DAMPER AT EACH DUCT BRANCH, SERVING DIFFUSER, GRILLE AND REGISTER.
H. INSTALL WALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC., 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS.
I. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
J. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, FIRE PROTECTION AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.
L. ALL RETURN/EXHAUST AIR DUCT ABOVE LOCKERS/SHOWER AREAS SHALL BE MADE OF ALUMINUM IN ACCORDANCE WITH SMACNA REQUIREMENTS.

VENTILATION PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

T11 RELIEF CONTROL DAMPER PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR, CALIBRATED AND SET TO MAINTAIN A SLIGHT POSITIVE PRESSURE WITHIN THE SPACE. TEST AND CALIBRATE RELIEF CONTROL DAMPER PRIOR TO CONSTRUCTION SUBSTANTIAL COMPLETION.

T14 APPROXIMATE LOCATION OF DUCT STATIC PRESSURE SENSOR. SENSOR PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH ALL TRADES.

V4 SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLE PROVIDED BY AIR ROTATION UNIT MANUFACTURER. CONTRACTOR SHALL PROVIDE INTERCONNECTING DUCTWORK BETWEEN DIFFUSER/GRILLE AND AIR ROTATION UNIT. PAINT DIFFUSER AND GRILLE PROVIDED BY MANUFACTURER. COORDINATE FINAL COLOR WITH ARCHITECT.

V6 PAINT DUCTWORK TO COLOR SELECTED BY THE ARCHITECT/ENGINEER. CLEAN AND PREPARE DUCTWORK TO ENSURE PAINT ADHERES TO DUCTWORK.

V7 DUCT ROUTED UP TO FLOOR ABOVE. COORDINATE WITH STRUCTURAL IN AREA.

V8 END OF DUCT OPENING TO SPACE. OPENING TO BE PROTECTED WITH BIRDSCREEN.

V9 BAROMETRIC RELIEF DAMPER. CALIBRATED AND SET TO MAINTAIN A SLIGHT POSITIVE PRESSURE WITHIN THE SPACE. TEST AND CALIBRATE RELIEF DAMPER PRIOR TO CONSTRUCTION SUBSTANTIAL COMPLETION.

V11 INSULATED SHEET METAL PLENUM MOUNTED BEHIND WALL LOUVER. TRANSITION BOTTOM OF DUCT AT A SLOPE DOWNWARD TO WALL LOUVER. SEAL ALL SEAMS AND EDGES WATER TIGHT. WRAP PLENUM WITH INSULATION. REFER TO DETAIL.

V12 INSTALL DRIP PAN UNDER WALL LOUVER. PAN SHALL BE SEALED WATER TIGHT. DRIP PAN TO EXTEND A MINIMUM OF 8" BEYOND DUCTWORK.

V13 AIR TRANSFER WALL OPENING LOCATED ABOVE THE CEILING. COORDINATE EXACT LOCATION WITH ALL TRADES. END OF DUCT OPEN TO SPACE.

V15 COORDINATE THE INSTALLATION OF THE HVLS FANS WITH ALL TRADES. PROPER CLEARANCES SHALL BE ADHERED TO. REFER TO MANUFACTURER'S REQUIREMENTS FOR REQUIRED CLEARANCES. THE FAN SHALL BE SUPPORTED AND BRACED FROM STRUCTURED STEEL MEMBERS. SUPPORT AND/OR BRACING FROM THE LIGHT GAUGE ROOF PURLINS IS PROHIBITED.

V18 DUCTWORK PROVIDED WITH INTERNAL LINED INSULATION. REFER TO SPECIFICATIONS.

V20 CAP DUCT AIR TIGHT FOR FUTURE ADDITION.

V21 TRANSITION DUCTWORK IN AREA WITHIN CHASE.

V22 LINEAR DIFFUSER SHALL BE IN THE POSITION TO PROVIDE AIRFLOW IN THE HORIZONTAL DIRECTION.

V23 LINEAR DIFFUSER SHALL BE IN THE POSITION TO PROVIDE AIRFLOW IN THE DOWNWARD DIRECTION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

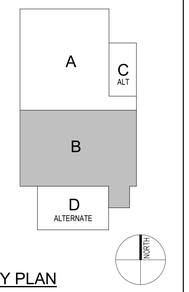
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

MARK Z. HOOF REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS

DRAWN BY: DJA

PROJECT NUMBER: 222130.00

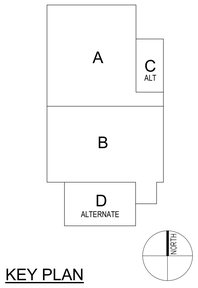
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	1-01-24

SECOND FLOOR VENTILATION PLAN - UNIT B

MV202

C:\Users\darnoldt\Documents\2023_MECH_222130.00_darnoldtYAF2F.rvt
2/1/2024 11:39:43 AM



AIR ROTATION UNIT SCHEDULE

IDENTITY			SUPPLY FAN	SUPPLY FAN				MOTOR			ELECTRICAL				COOLING								DX COIL		HEATING					UNIT SIZE (IN)			NOTES
MARK	LOCATION	AREA SERVED	EQUIPMENT NOMINAL (CFM)	MIN OSA (CFM)	TSP (IN-WG)	FAN RPM	DRIVE	BHP	HP	VFD	MCA	MOCP	VOLT.	PH	TOT. CAP. (BTU/H)	SENS. CAP. (BTU/H)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	APD (IN-WG)	FACE VEL. (FPM)	REFRIG.	SST (°F)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	EAT DB (°F)	LAT DB (°F)	DESCRIPTION	L	W	H	
ARU-1	OUTSIDE	FIELDHOUSE	20000	10000	2.50	1375	DIRECT	12.6	20	Yes	36 A	40 A	460 V	3	787	544	81	68	59	59	0.33	409	R-410A	45	1800	1458	35	100	GAS FIRED HEATING COIL	83	105	329	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
ARU-2	OUTSIDE	FIELDHOUSE	20000	10000	2.70	1375	DIRECT	12.6	20	Yes	36 A	40 A	460 V	3	787	544	81	68	59	59	0.33	409	R-410A	45	1800	1458	35	100	GAS FIRED HEATING COIL	83	105	329	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

NOTES:
1 BASIS OF DESIGN: JOHNSON AIR ROTATION.
2 REFER TO PLANS & SCHEMATIC SHEETS FOR UNIT LAYOUT DETAILS.
3 REFER TO SPECIFICATION SECTION 237413.
4 FACTORY MOUNTED VARIABLE FREQUENCY CONTROLLER (VFC) SHALL BE PROVIDED ON THE SUPPLY FAN(S).

NOTES:
5 MAXIMUM COOLING COIL FACE VELOCITY SHALL BE 500 FPM.
6 MAXIMUM FILTER FACE VELOCITY SHALL BE 500 FPM.
7 PROVIDE CONVENIENCE OUTLET AND LIGHTS ON A SEPARATE CIRCUIT.
8 SINGLE-POINT POWER CONNECTION.
9 INCLUDE FACTORY MOUNTED DISCONNECT SWITCH.

NOTES:
10 2" MERV 8 FILTERS.
11 FACTORY MOUNTED OUTSIDE AND RETURN AIR DAMPERS SIZED FOR 100% AIRFLOW.
12 MAXIMUM NOISE LEVEL SHALL BE 70 dBA WHEN STANDING 10' AWAY AT GROUND LEVEL.
13 STAINLESS STEEL HEAT EXCHANGER.
14 20:1 TURN DOWN - GAS HEATER.
15 CUSTOM COLOR AS SELECTED BY THE ARCHITECT/ENGINEER.

AIR HANDLING UNIT SCHEDULE

IDENTITY					SUPPLY FAN	SUPPLY FAN					MOTOR		EXHAUST FAN					MOTOR		ELECTRICAL		COOLING								DX COIL		HEATING						HOT WATER COIL				UNIT SIZE (IN)			OPER. WT (LB)	NOTES
MARK	MFG	MODEL	LOCATION	AREA SERVED	EQUIPMENT NOMINAL (CFM)	OUTSIDE AIR (CFM)	TYPE	ESP (IN-WG)	FAN RPM	DRIVE	HP	VFD	AIRFLOW (CFM)	TYPE	ESP (IN-WG)	FAN RPM	DRIVE	HP	VFD	VOLT.	PH	TOT. CAP. (BTU/H)	SENS. CAP. (BTU/H)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	APD (IN-WG)	FACE VEL. (FPM)	REFRIG.	SST (°F)	CAP. (BTU/H)	EAT DB (°F)	LAT DB (°F)	DESCRIPTION	APD (IN-WG)	FACE VEL. (FPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FLOW (GPM)	L	W	H		
AHU-1	TRANE	CSAA025	MECHANICAL ROOM	COMMONS	8500	1950	PLENUM	2.50	1753	DIRECT	15	Yes								460 V	3	304	217	77.2	64.3	52.5	51.3	0.61	410	R-410A	45	319	55	90	HEATING HOT WATER	0.08	421	180	140	1.73	16.0	133	80	56	2396	1,2,3,4,5,7,8,9,10,12
AHU-2	TRANE	CSAA010	MECHANICAL ROOM	LOCKERS	4750	4750	PLENUM	1.50	2563	DIRECT	7.5	Yes	5,700	PLENUM	1.5	2256	DIRECT	5	Yes	460 V	3	185	132	77.1	64.6	53.0	52.2	0.66	407	R-410A	45	217	46	95	HEATING HOT WATER	0.11	445	180	140	1.10	11.0	199	67	87	3603	1,3,4,5,6,7,8,10,11,12,13
AHU-3	TRANE	CSAA021	MECHANICAL ROOM	WRESTLING	8000	2800	PLENUM	0.80	2110	DIRECT	15	Yes								460 V	3	311	210	78.6	65.3	56.4	54.3	0.55	456	R-410A	45	502	46	104	HEATING HOT WATER	0.12	403	180	140	0.28	25.0	135	80	56	2463	1,2,3,4,5,6,7,8,10
AHU-4	TRANE	CSAA017	MECHANICAL ROOM	DANCE	6000	1350	PLENUM	0.80	1433	DIRECT	5	Yes								460 V	3	142	116	76.8	64.0	53.8	52.1	0.44	439	R-410A	45	258	55	95	HEATING HOT WATER	0.10	480	180	140	2.88	13.0	133	72	45	1803	1,2,3,4,5,6,7,8,10

NOTE:
1 REFER TO SPECIFICATION SECTION 23 73 13.
2 FACTORY MOUNTED VARIABLE FREQUENCY CONTROLLER (VFC) SHALL BE PROVIDED ON SUPPLY FAN. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR VFC'S.
3 REFER TO PLANS & SCHEMATIC SHEETS FOR UNIT LAYOUT DETAILS.
4 PROVIDE FACTORY MOUNTED CONVENIENCE OUTLETS AND INTERNAL LIGHTS AT EACH ACCESS DOOR. PROVIDE CONVENIENCE OUTLET AND LIGHTS ON SEPARATE CIRCUIT.
5 SINGLE POINT ELECTRICAL CONNECTION TO UNITS.
6 INSTALL HEATING COIL IN RE-HEAT POSITION.

NOTE:
7 MAXIMUM FILTER FACE VELOCITY SHALL BE 550 FPM.
8 MAXIMUM COOLING COIL FACE VELOCITY SHALL BE 550 FPM.
9 UNIT SHALL INCLUDE FACTORY MOUNTED BELLMOUTH FITTINGS.
10 INCLUDE FACTORY MOUNTED RETURN AND OUTSIDE AIR DAMPERS.
11 FIELD MOUNTED VARIABLE FREQUENCY CONTROLLER (VFC) SHALL BE PROVIDED ON SUPPLY/EXHAUST FAN. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR VFC'S.
12 PROVIDE WITH SCCR RATING OF 10KAIC OR ABOVE.
13 MINIMUM OF 3325 SUPPLY CFM & MINIMUM 4000 EXHAUST CFM

AIR-TO-AIR ENERGY RECOVERY EQUIPMENT SCHEDULE

IDENTITY DATA			AREA SERVED	SUPPLY AIR DATA										EXHAUST AIR DATA										APD in-(wg)	HEAT WHEEL ELECTRICAL			NOTES
				AIR FLOW		SUMMER				WINTER				AIR FLOW		SUMMER				WINTER								
						EAT (°F)		LAT (°F)		EAT (°F)		LAT (°F)				EAT (°F)		LAT (°F)		EAT (°F)		LAT (°F)						
TAG	MFG	MODEL		CFM IN	CFM OUT	DB	WB	DB	WB	DB	WB	DB	WB	CFM IN	CFM OUT	DB	WB	DB	WB	DB	WB	DB	WB		V	PH	Hz	
AHU-2	TRANE	CSAA010	LOCKERS	4,750	5,004	88.1	72.7	77.1	64.6	-2	-3	51.2	42.3	5,935	5,700	74	61.7	82.9	68.8	72	55	24	23.2	1.00	460	3	60	1,3,4,5,6,7,8,10,11,12,13

AIR-COOLED CONDENSING UNIT SCHEDULE

IDENTITY DATA				LOCATION	PERFORMANCE DATA				COMPRESSOR DATA			CONDENSER FAN DATA	ELECTRICAL DATA			NOTES
MARK	MANUFACTURER	TONNAGE	WEIGHT (LBS)		CAPACITY (TONS)	REFRIG TYPE	SAT. CONDENSER TEMP	AMBIENT TEMP	QTY	MCA	MOCP	QTY	VOLT	PH	FREQ	
ACCU-1	TRANE	30 TON	1,936	ROOF	383.2	R410A	43 °F	95 °F	2	63	80	3	460	3	60	1,2,3,4,6,7,9
ACCU-2	TRANE	15 TON	705	ROOF	184.5	R410A	45 °F	95 °F	2	32	40	2	460	3	60	1,2,3,4,6,7,9
ACCU-3	TRANE	20 TON	771	OUTSIDE	286.9	R410A	45 °F	95 °F	2	40	50	2	460	3	60	1,2,3,5,6,7,8
ACCU-4	TRANE	25 TON	1,921	OUTSIDE	316.2	R410A	45 °F	95 °F	1	52	70	3	460	3	60	1,2,3,5,6,7,8
ACCU-5	TRANE	60 TON	3,462	OUTSIDE	786.9	R410A	45 °F	95 °F	4	120	125	6	460	3	60	1,2,3,5,6,7,8
ACCU-6	TRANE	60 TON	3,462	OUTSIDE	786.9	R410A	45 °F	95 °F	4	120	125	6	460	3	60	1,2,3,5,6,7,8

NOTE:
1 REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
2 INCLUDE THE FOLLOWING ACCESSORIES, HIGH AMBIENT UNLOADER PRESSURE STAT, PROTECTIVE COIL GUARDS COMPLETELY AROUND ENTIRE UNIT, PHASE LOSS/VOLTAGE PROTECTION AND VIBRATION ISOLATORS.
3 UNIT SHALL INCLUDE FROST PREVENTION DEVICE TO BE INSTALLED AT COIL.
4 UNIT SHALL BE INSTALLED ON ROOF SUPPORT RAILS WITH VIBRATION ISOLATORS. COORDINATE EXACT LOCATION IN FIELD.

NOTE:
5 UNIT SHALL BE INSTALLED ON 6" CONCRETE HOUSEKEEPING PAD WITH VIBRATION ISOLATORS. COORDINATE EXACT LOCATION IN FIELD.
6 INSTALL REFRIGERANT PIPING SIZES AND QUANTITIES PER MANUFACTURERS REQUIREMENTS.
7 SINGLE POINT POWER CONNECTION.
8 PROVIDE COMPRESSOR BLANKETS FOR SOUND ATTENUATION.
9 PROVIDE WITH SCCR RATING OF 10KAIC OR ABOVE.

HEATING BOILER SCHEDULE

TAG	TYPE	MANUF.	MODEL	HEAT EXCHANGER CRITERIA & PERFORMANCE									DESIGN & RATED HEATING PERFORMANCE						FUEL			ELECTRICAL CRITERIA & PERFORMANCE				WEIGHT (LBS)	NOTES
				SOLUTION TYPE	(%)	HHS FLOW			EWT (°F)	LWT (°F)	WPD		CAPACITY		MAXIMUM			DESIGN EFFICIENCY (%)	TYPE	MIN (IN.WC)	MAX (IN.WC)	SINGLE POINT					
						DESIGN (GPM)	MIN (GPM)	MAX (GPM)			DESIGN (FT.HD)	MAX (FT.HD)	DESIGN (MBH)	MIN (%)	TEMP (°F)	RISE (°F)	PRESSURE (PSIG)					SERVICE (VOLTS)	(HZ)	(PH)	FLA (AMPS)		
BLR-1	CONDENSING BOILER	AERCO	BMK 1500	WATER	100	75	25	250	140	180	5	10	1,500	5	190	130	160	96.8	FM	4	14	120	60	1	16	1,610	1,2,3,4
BLR-2	CONDENSING BOILER	AERCO	BMK 1500	WATER	100	75	25	250	140	180	5	10	1,500	5	190	130	160	96.8	FM	4	14	120	60	1	16	1,610	1,2,3,4

NOTES:
1 REFER TO PROJECT MANUAL SECTION.
2 SINGLE POINT POWER CONNECTION
3 ELECTRICAL REQUIREMENTS VARY BY UNIT MANUFACTURER.
4 PROVIDE DEDICATED 120V POWER CONNECTION FOR CONTROL PANEL.

VAV TERMINAL UNIT SCHEDULE

IDENTITY DATA				AIR FLOW (CFM)		SOUND			HEATING				HOT WATER COIL					UNIT	NOTES
MARK	MFG	MODEL	INLET SIZE	MIN FLOW	MAX FLOW	NC RAD	NC DISCH	ATTEN	CAP. (BTU/H)	EAT (°F)	LAT (°F)	DESCRIPTION	EWT (°F)	LWT (°F)	APD (IN-WG)	WPD (FT-WG)	FLOW (GPM)	WT (LB)	
VVR-01	TRANE	VCWF08	8"	500	250	27	20	Yes	21690	55	97	HEATING HOT WATER	180	144	0.28	0.13	1.25	31	1,2,3,4,5,6,7,8,9
VVR-02	TRANE	VCWF10	10"	625	313	24	22	Yes	31500	55	102	HEATING HOT WATER	180	130	0.19	0.27	1.25	42	1,2,3,4,5,6,7,8,9
VVR-03	TRANE	VCWF08	8"	450	225	26	20	Yes	19110	55	95	HEATING HOT WATER	180	142	0.20	0.09	1.00	31	1,2,3,4,5,6,7,8,9
VVR-04	TRANE	VCWF08	8"	400	200	26	20	Yes	19110	55	95	HEATING HOT WATER	180	142	0.20	0.09	1.00	31	1,2,3,4,5,6,7,8,9
VVR-05	TRANE	VCWF10	10"	600	300	24	22	Yes	26030	55	103	HEATING HOT WATER	180	130	0.18	0.27	1.25	42	1,2,3,4,5,6,7,8,9
VVR-06	TRANE	VCWF06	6"	225	113	26	20	Yes	12520	55	106	HEATING HOT WATER	180	130	0.16	0.17	0.50	28	1,2,3,4,5,6,7,8,9
VVR-07	TRANE	VCWF08	8"	400	200	26	20	Yes	19110	55	99	HEATING HOT WATER	180	142	0.20	0.09	1.00	31	1,2,3,4,5,6,7,8,9
VVR-08	TRANE	VCWF10	12"	900	450	24	23	Yes	39150	55	100	HEATING HOT WATER	180	135	0.28	0.51	1.75	42	1,2,3,4,5,6,7,8,9
VVR-09	TRANE	VCWF12	12"	1000	500	26	21	Yes	46670	55	98	HEATING HOT WATER	180	133	0.23	0.24	2.00	53	1,2,3,4,5,6,7,8,9
VVR-10	TRANE	VCWF12	12"	1000	500	26	21	Yes	46670	55	98	HEATING HOT WATER	180	133	0.23	0.24	2.00	53	1,2,3,4,5,6,7,8,9
VVR-11	TRANE	VCWF12	12"	900	450	26	21	Yes	45060	55	100	HEATING HOT WATER	180	134	0.22	0.24	2.00	53	1,2,3,4,5,6,7,8,9
VVR-12	TRANE	VCWF12	12"	900	450	25	21	Yes	45060	55	101	HEATING HOT WATER	180	135	0.20	0.24	2.00	53	1,2,3,4,5,6,7,8,9
VVR-13	TRANE	VCWF12	12"	1000	500	26	21	Yes	46670	55	95	HEATING HOT WATER	180	133	0.23	0.18	2.00	53	1,2,3,4,5,6,7,8,9

NOTE:
1 REFER TO SPECIFICATION SECTION 233600.
2 HEATING COIL DESIGN BASED ON HIGH-EFFICIENCY, HOT WATER COIL, UNLESS OTHERWISE NOTED.
3 PROVIDE NUMBER OF COIL ROWS AS REQUIRED TO MEET MBH. COILS MAY REQUIRE 4-ROW.
4 UNIT MANUFACTURER SHALL PROVIDE REQUIRED HANGING BRACKETS TO PROPERLY SUPPORT UNIT.
5 UNIT SELECTION MUST ALLOW FOR A MINIMUM OF 0.40" DOWNSTREAM STATIC PRESSURE.
6 COILS SHALL BE SELECTED WITH 10' WPD MAXIMUM.

NOTE:
7 DIVISION 26 CONTRACTOR TO SUPPLY 120/1 POWER TO EACH VAV TERMINAL. DIVISION 23 CONTRACTOR TO PROVIDE TRANSFORMER AND DISCONNECT. DISCONNECT TO BE TOTALLY ENCLOSED EXTERNAL FROM VAV CONTROL PANEL BOX. DISCONNECT SHALL DE-ENERGIZE ALL POWER IN CONTROL PANEL.
8 NOISE LEVELS ARE NOT TO EXCEED 20 NC
9 PROVIDE FACTORY-MOUNTED AND PRE-PROGRAMMED, PRESSURE-INDEPENDENT, BACNET DDC CONTROLLER WITH AIRFLOW MEASUREMENT

CABINET UNIT HEATER SCHEDULE

IDENTITY DATA					LOCATION		UNIT DIMENSIONS			FAN DATA		HEATING PERFORMANCE				HW COIL				ELECTRICAL DATA			NOTES
MARK	MFG	MODEL	WEIGHT (LBS)	TYPE	#	NAME	W	L	H	CFM	HP	HEAT SOURCE	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	FLOW (GPM)	EWT (°F)	LWT (°F)	WPD (FT)	VOLTS	PH	FREQ	
CUH-1	TRANE	FFHB0201	78	VERTICAL RECESSED	A104	TRAINING	25"	35"	10"	300	0.05	HOT WATER	16,240	60	110	0.5	180	115	1.4	277 V	1	60	1,2,4,5,6
CUH-2	TRANE	FFHB0601	128	HORIZONTAL CEILING RECESSED	B120	VESTIBULE	25"	35"	10"	600	0.1	HOT WATER	36,940	60	116.8	1.5	180	130.7	2.8	277 V	1	60	1,2,3,5,6,7

NOTE:
1 COLOR TO BE AS SPECIFIED BY ARCHITECT.
2 INCLUDE FACTORY MOUNTED DISCONNECT.
3 UNIT SCHEDULED WITH BOTTOM STAMPED INLET AND OUTLET.
4 UNIT SCHEDULED WITH FRONT STAMPED INLET AND OUTLET.

NOTE:
5 UNIT FURNISHED WITH ADJUSTABLE LOUVER FIN DIFFUSERS TO PROVIDE DIRECTIONAL AIR FLOW CONTROL.
6 LOW VOLTAGE WALL MOUNTED 2-STAGE TEMPERATURE SENSOR BY THE TCC.
7 SUPPORT HEATER FROM STRUCTURE ABOVE WITH MINIMUM OF FOUR (4), 3/8" DIAMETER THREADED RODS AND VIBRATION ISOLATORS.

ELECTRIC UNIT HEATER SCHEDULE

IDENTITY DATA			FAN DATA		HEATING PERFORMANCE			ELECTIC HEAT		ELECTRICAL DATA			NOTES
MARK	MFG	MODEL	CFM	HP	HEAT SOURCE	EAT (°F)	LAT (°F)	kW	NO. OF CONTOL STEPS	VOLTS	PH	FREQ	
EUH-1	TRANE	UHAA021ATAD	175	0	ELECTRIC	60	100	2	1	208 V	1	60	1,2,3,4
EUH-2	TRANE	UHAA041ATAD	175	0	ELECTRIC	60	100	4	1	208 V	1	60	1,2,3,4

NOTE:
1 HORIZONTAL RECESSED UNIT
2 ELECTRIC HEAT WITH INTERNAL THERMOSTAT.
3 INCLUDE FACTORY MOUNTED DISCONNECT
4 PROVIDED WITH BUILT-IN THERMOSTAT.

GRAVITY VENTILATOR SCHEDULE

IDENTITY DATA				LOCATION	MAX VELOCITY	MINIMUM FREE AREA	MAX AIRFLOW	THROAT SIZE		OVERALL SIZE			DAMPER MOTOR OPERATED	DRIP PAN	WEIGHT (LBS)	NOTES
MARK	MANUFACTURER	MODEL	TYPE					W	L	W	L	H				
RV-A1	GREENHECK	FGR	EXHAUST AIR	ROOF	1000 FPM	5.3 SF	5200 CFM	18"	42"	32"	63"	28"	NO	NO	81	1,2,3,4,5
RV-B1	GREENHECK	FGR	RELIEF AIR	ROOF	590 FPM	14.5 SF	8500 CFM	36"	58"	62"	75"	31"	YES	YES	168	1,2,3,4,5,6
RV-D1	GREENHECK	FGR	RELIEF AIR	ROOF	600 FPM	10.0 SF	6000 CFM	30"	48"	34"	63"	28"	YES	YES	89	1,2,3,4,5,6

NOTE:
1 REFER TO PROJECT MANUAL SECTION 233723
2 HOODS TO BE MOUNTED ON MINIMUM 12" HIGH ROOF CURB.
3 COLOR SHALL BE PROVIDED FROM MANUFACTURER'S FULL RANGE OF COLORS AS SELECTED BY ARCHITECT/ENGINEER.
4 UNITS TO BE PROVIDED WITH A HINGE BASE KIT.
5 CONTROL DAMPER PROVIDED BY TEMPERATURE CONTROL CONTRACTOR WHERE REQUIRED.
6 DRIP PAN TO EXTEND A MINIMUM OF 6" ON EACH SIDE OF HOOD

PROPELLER UNIT HEATER SCHEDULE

IDENTITY DATA			FAN DATA			HEATING PERFORMANCE				HW COIL				ELECTRICAL DATA			NOTES
MARK	MFG	MODEL	CFM	QTY	HP	HEAT SOURCE	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	FLOW (GPM)	EWT (°F)	LWT (°F)	WPD (FT)	VOLTS	PH	FREQ	
PUH-1	TRANE	UHS-024	450	1	0.05	HOT WATER	20,570	60	109	2	180	160	0.01	120 V	1	60	1,2,3,4
PUH-2	TRANE	UHS-018	395	1	0.05	HOT WATER	15,430	60	102	1.5	180	160	0.01	120 V	1	60	1,2,3,4
PUH-3	TRANE	UHS-018	395	1	0.05	HOT WATER	15,430	60	102	1.5	180	160	0.01	120 V	1	60	1,2,3,4
PUH-4	TRANE	UHS-018	395	1	0.05	HOT WATER	15,430	60	102	1.5	180	160	0.01	120 V	1	60	1,2,3,4
PUH-5	TRANE	UHS-036	550	1	0.05	HOT WATER	30,850	60	119	3	180	160	0.01	120 V	1	60	1,2,3,4
PUH-6	TRANE	UHS-036	550	1	0.05	HOT WATER	30,850	60	119	3	180	160	0.01	120 V	1	60	1,2,3,4

NOTE:
1 SUPPORT HEATER FROM STRUCTURE ABOVE WITH A MINIMUM OF (2) 3/8" DIAMETER THREADED RODS
2 UNIT FURNIISHED WITH ADJUSTABLE LOUVER FIN DIFFUSES TO PROVIDE DIRECTIONAL AIR FLOW CONTROL.
3 INCLUDE FACTORY MOUNTED DISCONNECT
4 REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.

EXHAUST FAN SCHEDULE

IDENTITY DATA				TYPE	PERFORMANCE DATA				ELECTRICAL DATA			SONES	CONTROLS	NOTES
MARK	MANUFACTURER	MODEL	WEIGHT (LBS)		CFM	RPM	ESP (IN-WG)	MOTOR HP	VOLTS	PH	FREQ			
EF-A1	GREENHECK	G-90-VG	29	ROOF MOUNTED	500	1185	0.13	1/10	120 V	1	60	4.7	C	1,2,4,5,6,7,8
EF-B1	GREENHECK	G-060-VG	19	ROOF MOUNTED	150	1600	0.2	1/15	120 V	1	60	4.0	A	1,2,4,5,6,7,8
EF-B2	GREENHECK	G-080-VG	28	ROOF MOUNTED	300	1290	0.2	1/10	120 V	1	60	5.3	D	1,2,4,5,6,7,8
EF-B3	GREENHECK	G-060-VG	19	ROOF MOUNTED	150	1600	0.2	1/15	120 V	1	60	4.0	C	1,2,4,5,6,7,8
EF-C1	GREENHECK	SQ-100-VG	45	INLINE	1,200	1560	0.25	1/4	120 V	1	60	9.9	C	1,2,3,4,7,8
EF-D1	GREENHECK	SQ-160-VG	147	INLINE	3,250	1200	0.25	1	208 V	3	60	14	B.1	1,2,3,4,7,8

NOTE:
1 INCLUDE DISCONNECT SWITCH.
2 INCLUDE BACKDRAFT DAMPER.
3 SUPPORT FROM STRUCTURE ABOVE WITH VIBRATION ISOLATORS.
4 REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS
5 MOUNT ON 12" HIGH ROOF CURB.
6 INSTALL DRIP PAN UNDER UNIT.
7 INCLUDE SPEED CONTROL AND FACTORY MOUNTED DISCONNECT.
8 STANDARD COLOR AS SELECTED BY ARCHITECT/ENGINEER.

NOTES:
A AUTOMATIC OCCUPIED OPEATION BY LOCAL TEMPERATURE CONTROL ZONE
B TIMER SWITCH CONTROL BY DIVISION 26
.1 WITH TIMER SWITCH
.2 WITH LIGHTS
.3 WITH LOCAL SWITCH
C AUTOMATIC OPERATION BY REVERSE ACTING THERMOSTAT
D INTERLOCK EXHAUST FAN WITH POPCORN MACHINE

HIGH VOLUME LOW SPEED CEILING FAN SCHEDULE

IDENTITY DATA				TYPE	DRIVE	LOCATION		DIA.	MAX RPM	ELECTRICAL DATA				NOTES
MARK	MANUFACTURER	MODEL	WEIGHT			#	NAME			WATTS	VOLTS	PH	FREQ	
CF-1	Big Ass Fans	PFX4-14	130 lb	HIGH VOLUME LOW SPEED	DIRECT	A101	FIELDHOUSE	14'	94	750	480 V	3	60	1,2,3,4,5,6,7,8
CF-2	Big Ass Fans	PFX4-14	130 lb	HIGH VOLUME LOW SPEED	DIRECT	A101	FIELDHOUSE	14'	94	750	480 V	3	60	1,2,3,4,5,6,7,8

NOTES:
1 REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
2 COLOR SHALL BE PROVIDED FROM MANUFACTURER'S FULL RANGE OF COLORS AS SELECTED BY ARCHITECT/ENGINEER.
3 MOUNT BOTTOM AT 10'-0" AFF.
4 VFC SHALL BE FACTORY MOUNTED TO THE MOTOR AND WALL MOUNTED CONTROLLER.

NOTES:
5 COORDINATE LOCATION OF FAN AND ALL ASSOCIATED COMPONENTS WITH ALL TRADES.
6 FANS SHALL BE INTERLOCKED TO SHUT DOWN IMMEDIATELY UPON RECEIVING A WATERFLOW SIGNAL FROM THE FIRE ALARM SYSTEM. COORDINATE WITH DIVISION 28.
7 INCLUDE WALL MOUNTED PUSH BUTTON CONTROLLERS.
8 REMOTE TOUCH SCREEN LED WALL MOUNTED SPEED CONTROLS BY UNIT MANUFACTURER. CONTROLS SHALL BE CAPABLE OF CONTROLLING ALL THREE FANS FROM A SINGLE CONTROLLER.

EXTERIOR LOUVER SCHEDULE

IDENTITY DATA MARK	MAX AIRFLOW (CFM)	TOP OF LOUVER ELEVATION	NECK SIZE	MIN FREE AREA (SF)	FREE AREA VELO. (FPM)	LOUVER TYPE	NOTES
WL-A1	8,500	25' - 4 3/4"	60"x48"	9.0	944 FPM	OUTSIDE AIR	1,2,3,4,5
WL-A2	5,000	-186' - 10 3/4"	48"x36"	5.4	926 FPM	OUTSIDE AIR	1,2,3,4,5
WL-A3	10,000	29' - 3 3/4"	120"x64"	24.0	417 FPM	RELIEF AIR	1,2,3,4,5
WL-A4	10,000	29' - 3 3/4"	120"x64"	24.0	417 FPM	RELIEF AIR	1,2,3,4,5
WL-A5	10,000	29' - 3 3/4"	120"x64"	24.0	417 FPM	RELIEF AIR	1,2,3,4,5
WL-B1	10,000	29' - 3 3/4"	120"x64"	24.0	417 FPM	RELIEF AIR	1,2,3,4,5
WL-D1	8,000	10' - 0 3/4"	60"x48"	9.0	889 FPM	OUTSIDE AIR	1,2,3,4,5
WL-D2	6,000	24' - 10 3/4"	60"x36"	6.8	889 FPM	OUTSIDE AIR	1,2,3,4,5
WL-D3	3,250	12' - 10 3/4"	60"x28"	5.3	619 FPM	EXHAUST AIR	1,2,3,4,5
WL-D4	4,750	12' - 11 3/4"	120"x28"	10.5	452 FPM	RELIEF AIR	1,2,3,4,5
WL-D5	4,750	12' - 11 3/4"	120"x28"	10.5	452 FPM	RELIEF AIR	1,2,3,4,5

NOTE:
1 REFER TO PROJECT MANUAL SECTION 089000.
2 SEAL ALL AROUND WITH SILICONE.
3 REFER TO INSTALLATION DETAILS ON ARCHITECTURAL DRAWING.
4 CUSTOM COLOR AS SELECTED BY ARCHITECT/ENGINEER.
5 COORDINATE SIZE AND LOCATION WITH ALL TRADES.

REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT THAT IS WITHIN ALTERNATES

C:\Users\darnold\Documents\2023_MECH_222130.00_darnoldYAF2F.rvt
2/1/2024 11:38:42 AM

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka,
Indiana 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 **WWW.FHAI.COM**
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204

KEY PLAN

Construction Documents

MARK Z. HOPF
REGISTERED
No. PE 12000601
STATE OF INDIANA
PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS
DRAWN BY: DJA
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: January 10, 2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1-26-24
2	Addendum #2	1-01-24

MECHANICAL SCHEDULES

M-601

DIFFUSER, REGISTER, AND GRILLE SCHEDULE

MARK	TYPE	EXAMPLE MANUFACTUER MODEL NO.	NECK SIZE	OVERALL SIZE L"xW"	MAX CORE/ NECK VEL.(FPM)	MAX. CFM	MAX. NOISE CRITERIA	FRAME/ MOUNTING	REMARKS
A	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	12"x12"	800	150	21	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
B	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	24"x24"	800	150	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
C	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	8"	24"x24"	800	300	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
D	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	10"	24"x24"	800	500	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
E	SIDEWALL-SUPPLY GRILLE	TITUS 300RL	-	SEE FLOOR PLANS FOR SIZE	500	PER PLANS	20	DUCT OR SIDEWALL: REFER TO FLOOR PLAN	45 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
F	SIDEWALL-RETURN GRILLE	TITUS 350FL	-	SEE FLOOR PLANS FOR SIZE	300	PER PLANS	20	DUCT OR SIDEWALL: REFER TO FLOOR PLAN	FIXED 35 (DEGREE) DEFLECTION BLADES
G	RETURN/AIR TRANSFER GRILLE	TITUS 355	-	12"x12"	500	450	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
H	RETURN/AIR TRANSFER GRILLE	TITUS 355	-	24"x12"	500	850	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
I	RETURN/AIR TRANSFER GRILLE	TITUS 355	-	24"x24"	500	1600	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
J	LINEAR DIFFUSER SUPPLY	TITUS FL-10	6"	48" x 2-3/4"	-	175	20	DUCT - W/ SAFETY CHAIN REFER TO FLOOR PLAN	HIGHTHROW W/INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT
K	LINEAR DIFFUSER SUPPLY	TITUS FL-10	8"	48" x 2-3/4"	-	250	20	DUCT - W/ SAFETY CHAIN REFER TO FLOOR PLAN	JETTHROW W/INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 1 SLOT
L	LINEAR DIFFUSER SUPPLY	TITUS FL-10	8"	48" x 6-1/16"	-	325	20	DUCT - W/ SAFETY CHAIN REFER TO FLOOR PLAN	HIGHTHROW W/INSULATED PLENUM 1.0" SLOT WIDTH, TOTAL OF 2 SLOT
M	SIDEWALL-SUPPLY GRILLE	TITUS 300RL	-	SEE FLOOR PLANS FOR SIZE	500	PER PLANS	20	DUCT OR SIDEWALL: REFER TO FLOOR PLAN	45 (DEGREE) DEFLECTION, UNLESS NOTED OTHERWISE ON FLOOR PLAN
N	SIDEWALL-RETURN GRILLE	TITUS 350FL	-	SEE FLOOR PLANS FOR SIZE	300	PER PLANS	20	DUCT OR SIDEWALL: REFER TO FLOOR PLAN	FIXED 35 (DEGREE) DEFLECTION BLADES

PUMP SCHEDULE

MARK	SYSTEM SERVED	TYPE	MIN FLOW GPM	GPM	HEAD FT.	MIN EFF. %	BHP@ DESIGN FLOW	SUCT. X DISCH.	IMPELLER DIAMETER	MOTOR RPM	MOTOR HP	MOTOR VOLT	MOTOR PH	MANUF.	MODEL NUMBER	WEIGHT (LBS.)	NOTES
HWP-1	PRIMARY HEATING HOT WATER	CLOSE COUPLED IN-LINE	0	75	22	52.9	0.77	NA	NA	2716	1	208	1	BELL & GOSSETT	ecocirc XL 40-200	37	1,2
HWP-2	PRIMARY HEATING HOT WATER	CLOSE COUPLED IN-LINE	0	75	22	52.9	0.77	NA	NA	2716	1	208	1	BELL & GOSSETT	ecocirc XL 40-200	37	1,2
HWP-3	SECONDARY HEATING HOT WATER	BASE MOUNTED END SUCTION	9	60	53	55.4	1.42	1.5x1.5	8.75	1800	3	208	3	BELL & GOSSETT	E-80 1.5x1.5x9.5B:182JM	180	1,3,4,5
HWP-4	SECONDARY HEATING HOT WATER	BASE MOUNTED END SUCTION	9	60	53	55.4	1.42	1.5x1.5	8.75	1800	3	208	3	BELL & GOSSETT	E-80 1.5x1.5x9.5B:182JM	180	1,3,4,5

NOTES:

1. REFER TO PROJECT MANUAL SECTION 232123.
2. PUMP CONTROLLED VIA ECM MOTOR.
3. PUMP CONTROLLED BY VARIABLE FREQUENCY CONTROLLER.
4. SECONDARY PUMPS WILL OPERATE IN PARALLEL. PUMP SHALL BE SIZED SUCH THAT IT DOES NOT RUN OFF ITS CURVE, WHEN OPERATING ALONE OUT AT THE SYSTEM CURVE.
5. SINGLE POINT POWER CONNECTION TO THE PUMP. PUMP DISCONNECT AND WIRING BETWEEN PUMP AND VFC BY DIVISION 26.

EXPANSION TANK/AIR SEPARATOR SYSTEM

MARK NO.	SYSTEM	APPROX. SYSTEM VOLUME GAL.	SYSTEM TEMP. RANGE °F MIN.	SYSTEM TEMP. RANGE °F MAX.	PRV FILL PRESSURE AT TANK PSIG	MAX. OPERATING PRESSURE PSIG RELIEF VALVE	MAX. OPERATING PRESSURE PSIG AT EXP. TANK	MIN. TANK VOLUME GAL.	MIN. ACCEPT. VOLUME GAL.	100% OPER. WEIGHT LBS.	TANK MANUFACTURER & MODEL NO.	AIR SEPARATOR SIZE	AIR SEPARATOR GPM	AIR SEPARATOR WPD	AIR SEPARATOR FLOODED WEIGHT	AIR SEPARATOR MANUFACTURER & MODEL NO.
ET-1 AS-1	HEATING HOT WATER	336	50	200	20	60	55	26	26	320	BELL & GOSSETT B110	3"	120	1.2	125 LBS	BELL & GOSSETT RL-34

NOTES:

1. AIR SEPARATOR WITH STRAINER SHALL HAVE TANGENTIAL INLET AND OUTLET.
2. REFER TO SPECIFICATION 232113.
3. EXPANSION TANKS SHALL BE SELECTED WITH 100% WATER.

VARIABLE FREQUENCY CONTROLLER SCHEDULE

MARK	EQUIPMENT SERVING	MARK SERVING	HP	SERVICE (VOLT)	SERVICE (HZ)	SERVICE (PH)	NOTES
VFC-HWP-1	HEATING HOT WATER PUMP	HWP-1	3	208	60	3	1,2,3,4,5
VFC-HWP-2	HEATING HOT WATER PUMP	HWP-2	3	208	60	3	1,2,3,4,5
VFC-AHU-2S	AHU - SUPPLY FAN	AHU-2	7.5	460	60	3	1,2,3,4,5
VFC-AHU-2E	AHU - EXHAUST FAN	AHU-2	5	460	60	3	1,2,3,4,5

2

NOTES

1. DRIVE PROVIDED AND INSTALLED BY THE DIVISION 23 - HVAC CONTRACTOR.
2. DIVISION 26 - ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING TO VFC AND FROM VFC TO MOTOR.
3. TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE ALL TEMPERATURE CONTROL WIRING.
4. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
5. PROVIDED WITH A FACTORY MOUNTED DISCONNECT.

HEATING PLANT EQUIPMENT SCHEDULE

MARK	DESCRIPTION
BF-1	EATON FLOWLINE II - FBF211XSF-DPS0304 SIDE LOOP BAG FILTER HOUSING FOR HEATING WATER SYSTEM.
CF-1	HEATING WATER CHEMICAL SHOT FEEDER, 5.0 GALLON CAPACITY.

REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT THAT IS WITHIN ALTERNATES

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

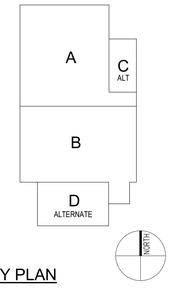
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PROJECT MANAGER: MKS

DRAWN BY: DJA

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: January 10, 2024

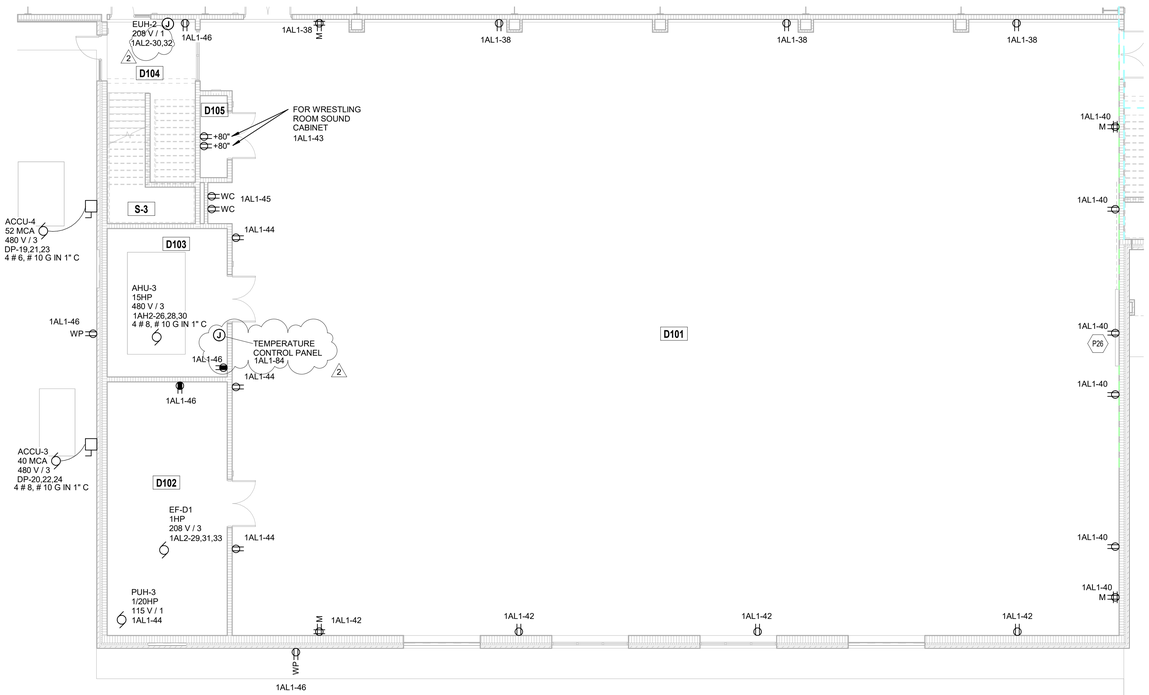
REV. NO.	DESCRIPTION	DATE
2	Addendum #2	1-01-24

MECHANICAL SCHEDULES

M-602

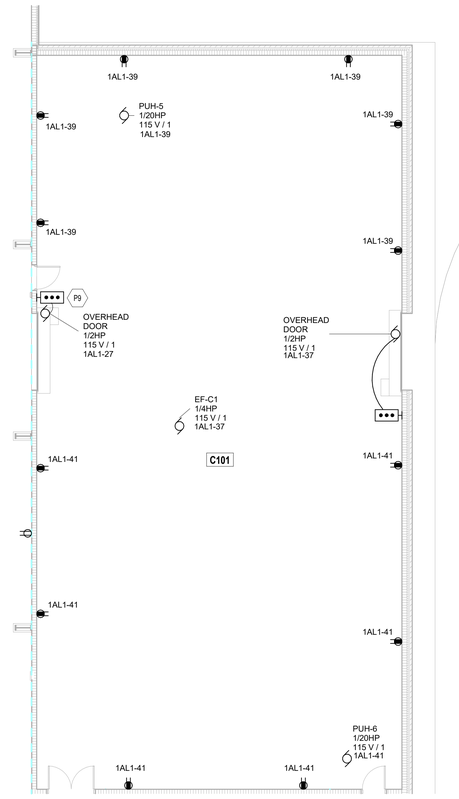
C:\Users\dernoid\Documents\2023_MECH_222130.00_dernoidYAF2F.rvt
2/1/2024 11:39:52 AM

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54239 SF
B119	LOBBY	1039 SF
S-2	STAIR	115 SF



FIRST FLOOR POWER PLAN ALTERNATE - UNIT D

SCALE: 1/8" = 1'-0"



FIRST FLOOR POWER PLAN ALTERNATE - UNIT C

SCALE: 1/8" = 1'-0"

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.

POWER PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

P9 UNDER ALTERNATE BID, PROVIDE THE PUSHBUTTON CONTROLLER FOR THE OVERHEAD DOOR ON THE UNIT C SIDE OF THE DOOR.

P26 RECEPTACLE FOR THE SCOREBOARD. REFER TO THE ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT MOUNTING HEIGHT AND LOCATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

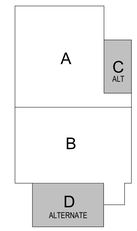
12641 McKinley Highway
Mishawaka, IN 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

100% Construction Documents

DRAWN BY: ISD

PROJECT NUMBER: 222130.00

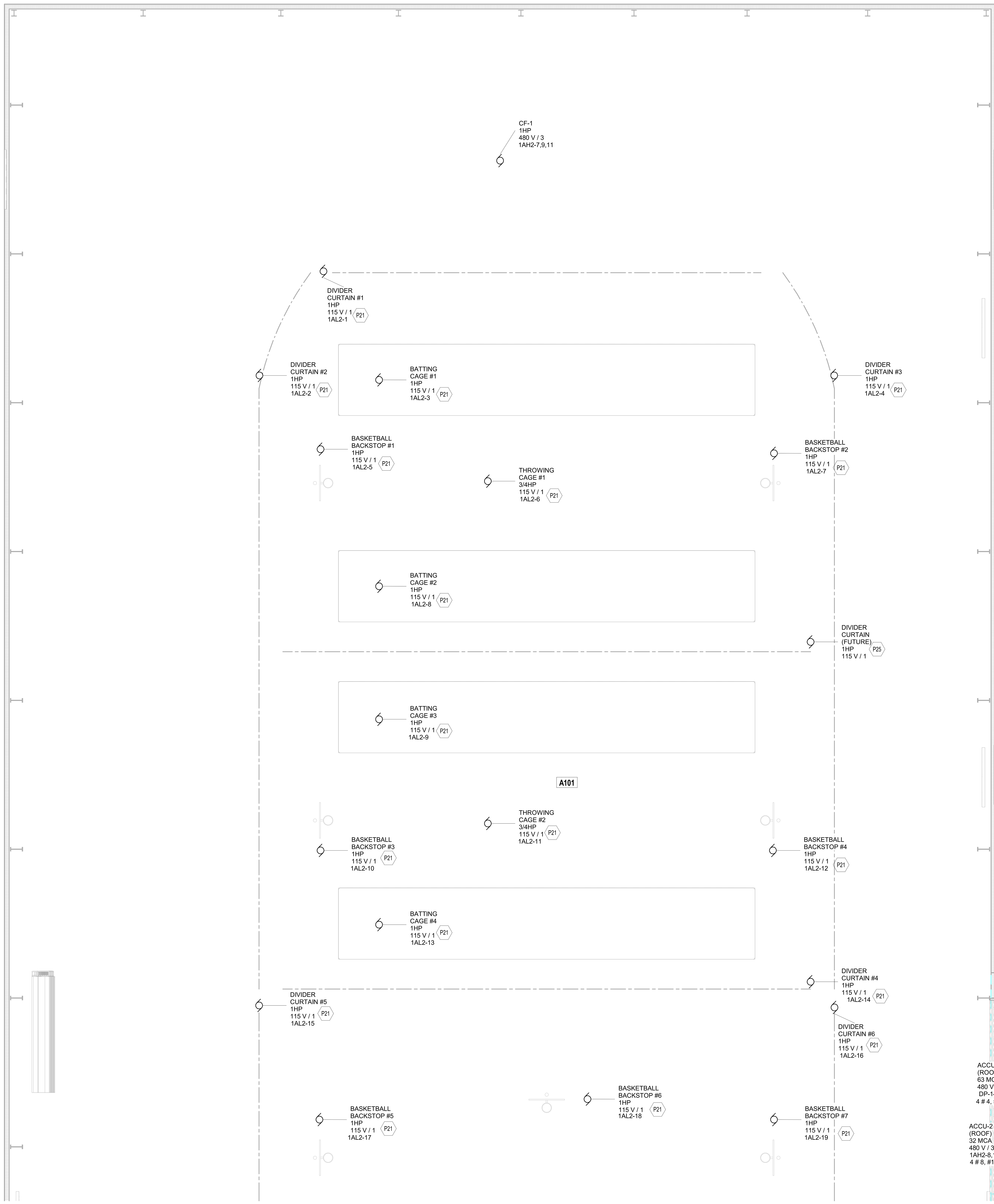
PROJECT ISSUE DATE: 01.10.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01.26.2024
2	Addendum #2	02.01.2024

FIRST FLOOR POWER PLAN ALTERNATE- UNIT C AND D

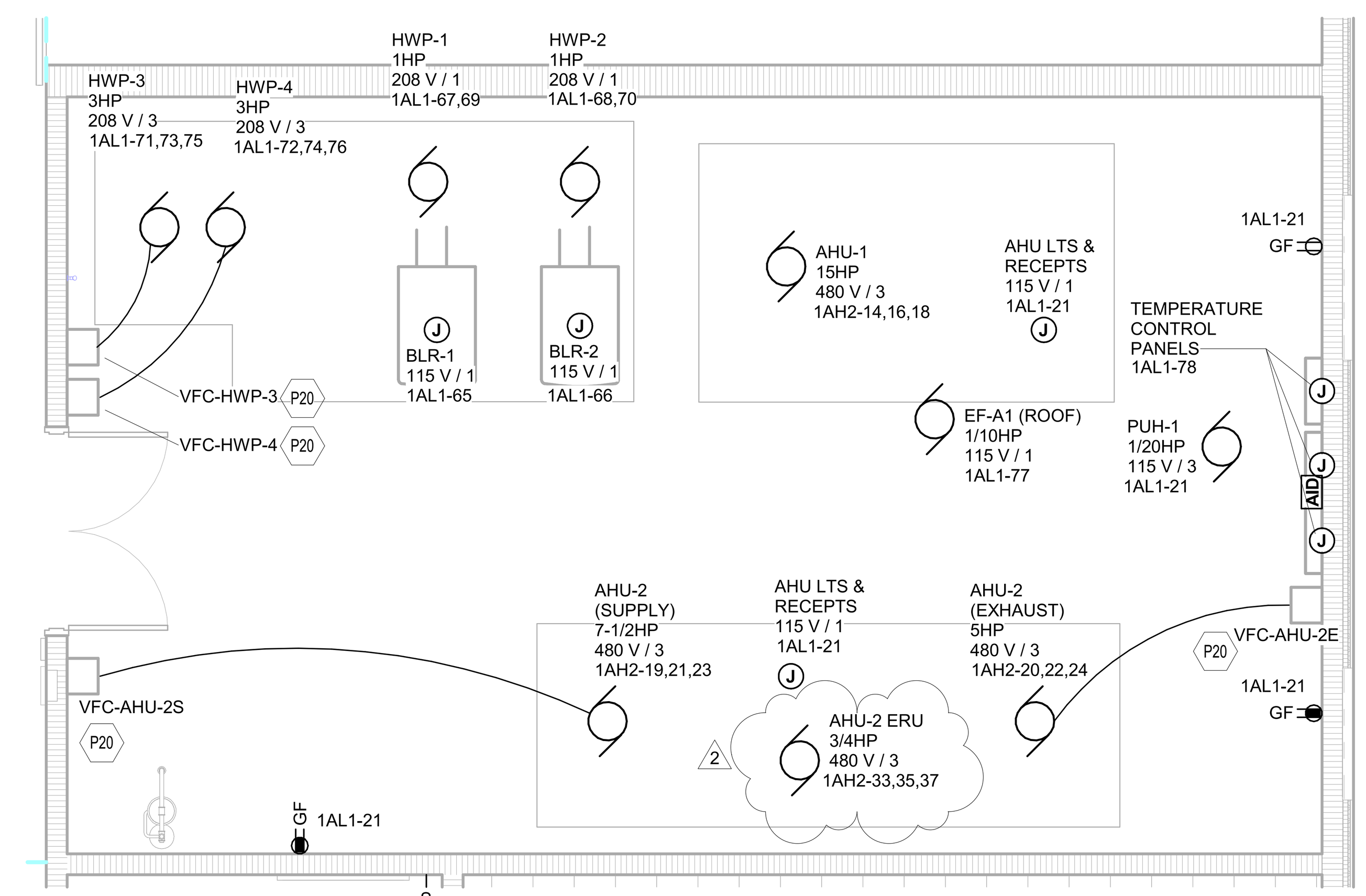
EP11C

C:\Users\dickson\Documents\2023_ELEC_222130.00_dicksonEWS2T.rvt
2/1/2024 1:18:26 PM



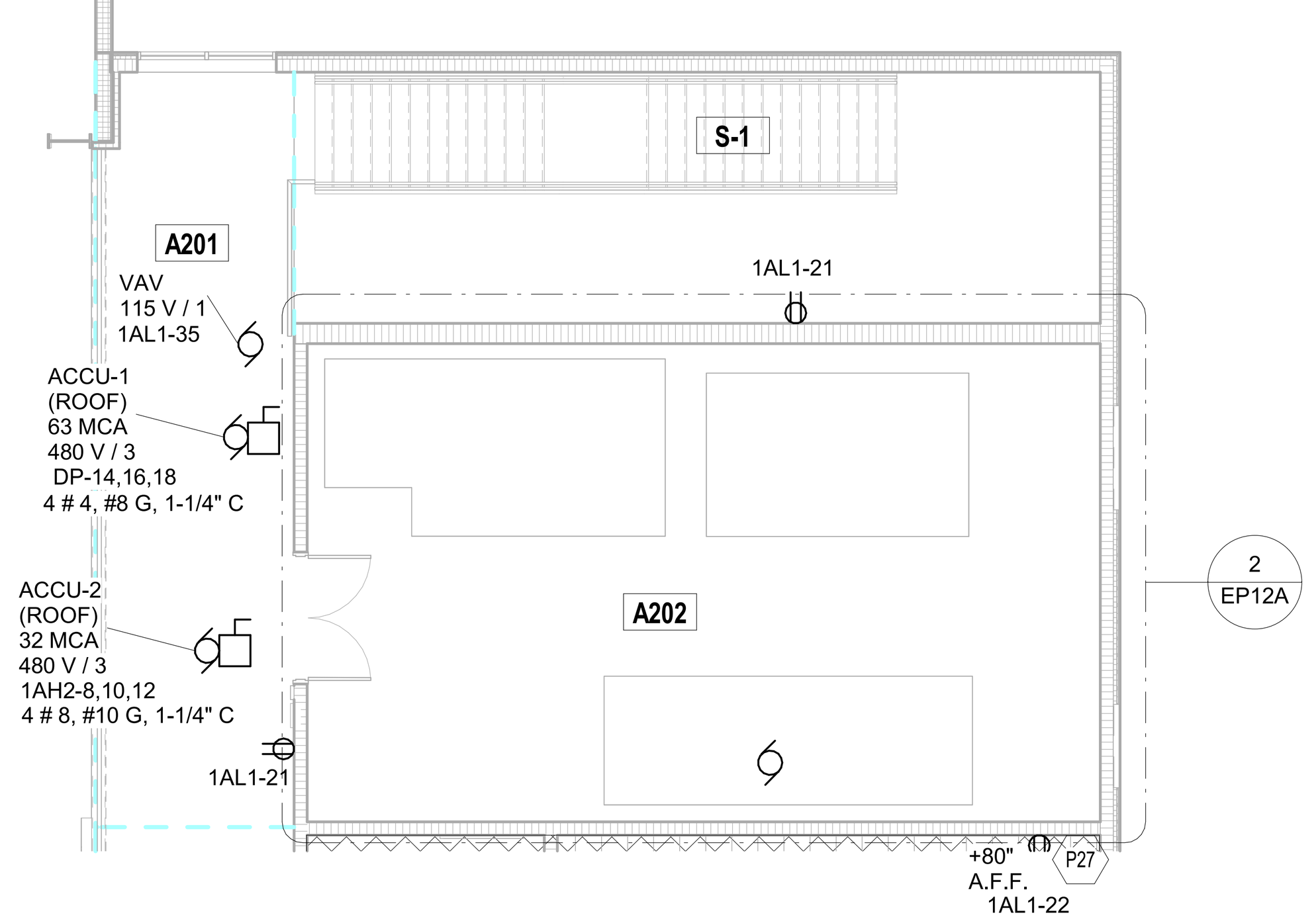
SECOND FLOOR POWER PLAN - UNIT A

SCALE: 1/8" = 1'-0"



MECHANICAL ROOM POWER PLAN

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



ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54239 SF
A102	CORRIDOR	328 SF
A201	CORRIDOR	341 SF
A202	MECHANICAL	873 SF
B201	CORRIDOR	1444 SF
B202	LOCKER ROOM #3	399 SF
S-1	STAIR	81 SF

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.

POWER PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

P20 CONNECT MECHANICAL UNIT TO VFC AT THIS LOCATION. VFC TO BE PROVIDED BY DIVISION 23 CONTRACTOR.

P21 CONNECT GYM EQUIPMENT CONTROLS MOTOR TO INDICATED CIRCUIT IN PANEL 1AL2. WIRE MOTOR THROUGH RELAY BOX LOCATED IN ELECTRICAL ROOM A105. PROVIDE WITH 2 # 10, # 10 G IN 3/4" C. PROVIDE ADDITONAL CONTROL SIGNALS FOR UP AND DOWN ADJUSTMENT PER MANUFACTURER REQUIREMENTS, MINIMUM # 10 CONDUCTORES. VERIFY INSTALLATION REQUIREMENTS WITH GYM EQUIPMENT CONTROLS MANUFACTURER.

P25 PROVIDE 3/4" EMPTY CONDUIT FROM TSC1500XL RELAY NODE TO THIS LOCATION FOR FUTURE DIVIDER CURTAIN.

P27 PROVIDE RECEPTACLE FOR AIR PURFIER UNIT AT THIS LOCATION. COORDINATE EXACT LOCATION OF RECEPTACLE WITH ARCHITECTURAL FLOORPLANS AND DETAILS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

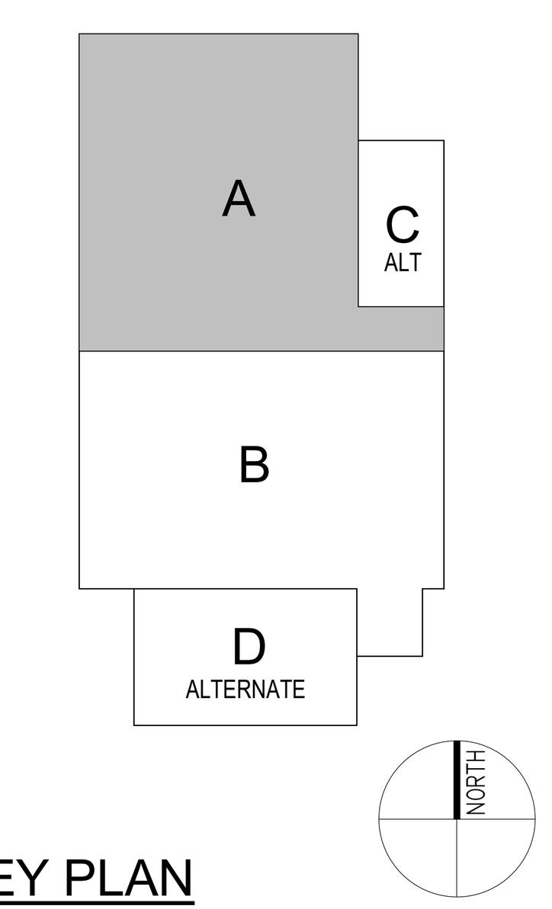
PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway
Mishawaka, IN 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

100% Construction Documents

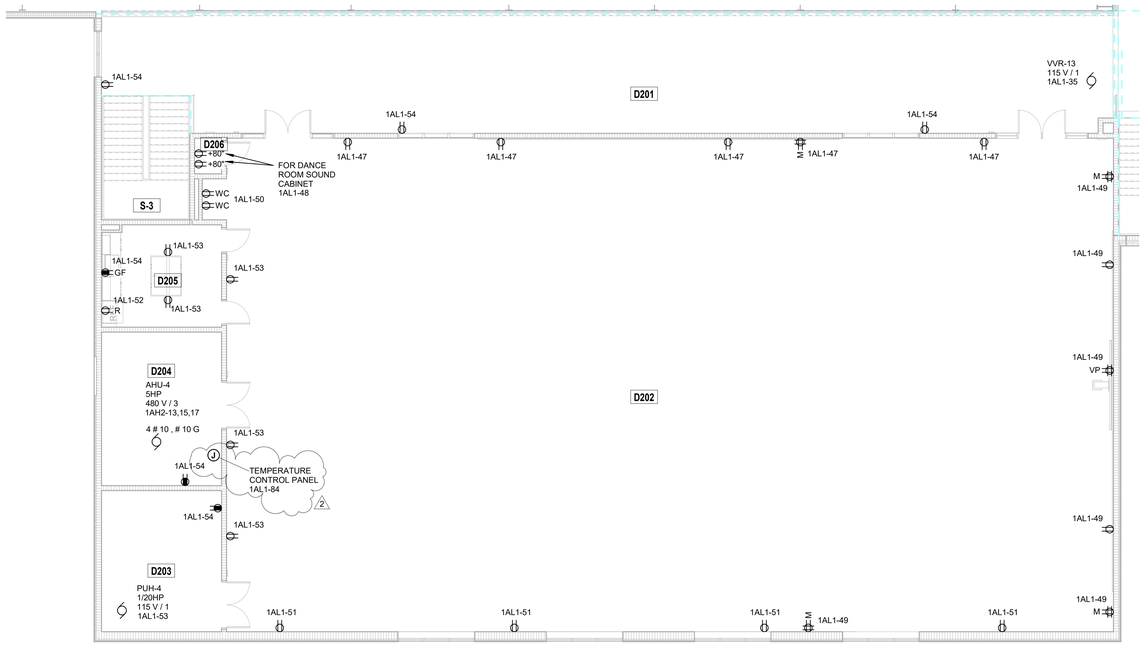
DRAWN BY: ISD
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: 01.10.2024

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	02.01.2024

SECOND FLOOR POWER PLAN - UNIT A

EP12A

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
A101	FIELDHOUSE	54239 SF
B201	CORRIDOR	1444 SF
B217	COMMONS	984 SF
S-2	STAIR	175 SF



SECOND FLOOR POWER PLAN ALTERNATE - UNIT D

SCALE: 1/8" = 1'-0"

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.

POWER PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

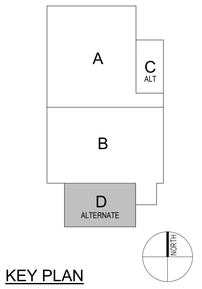
12641 McKinley Highway
Mishawaka, IN 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

100% Construction Documents

DRAWN BY: ISD

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 01.10.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01.26.2024
2	Addendum #2	02.01.2024

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

SECOND FLOOR POWER PLAN ALTERNATE - UNIT D

EP12C

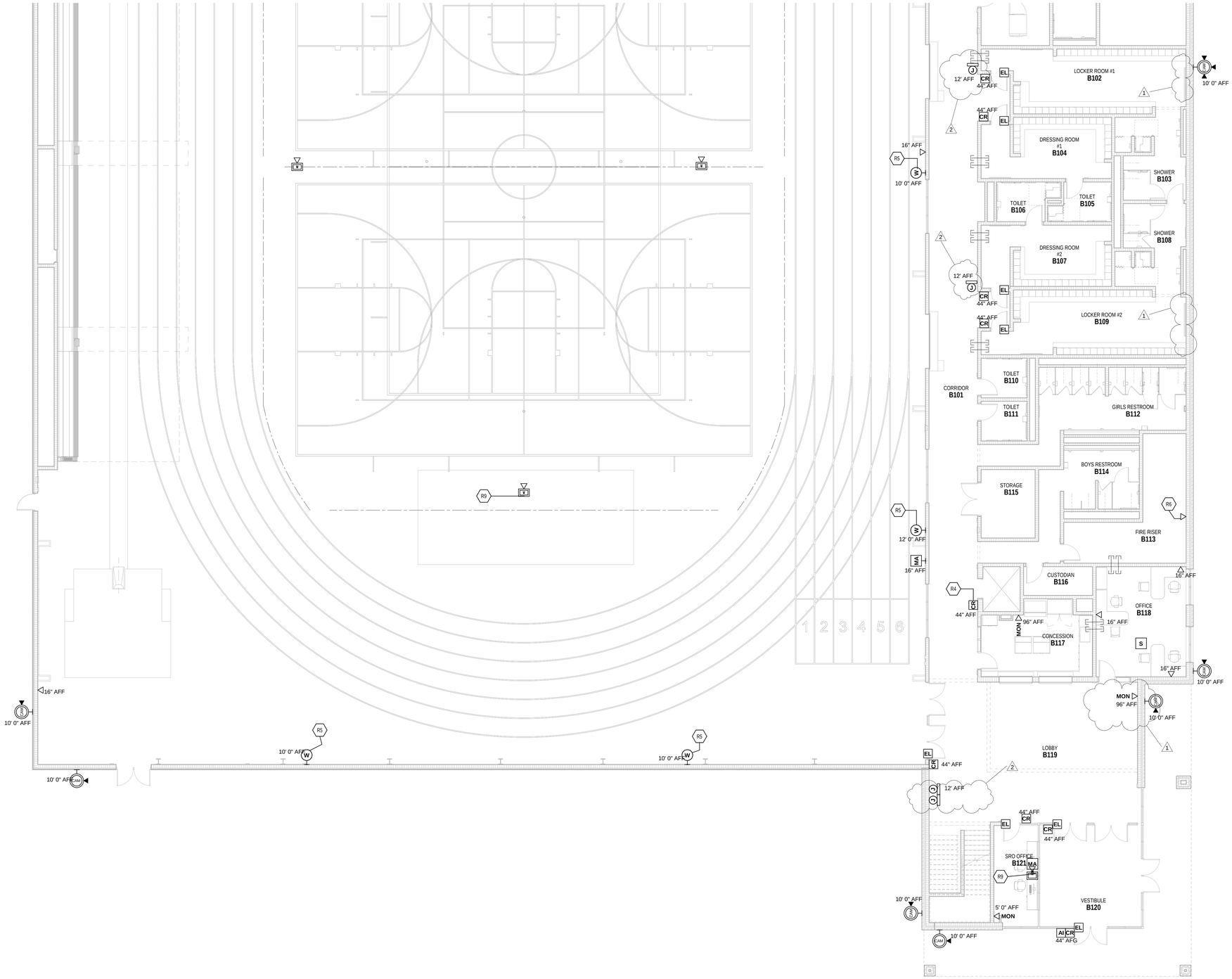
C:\Users\dickson\Documents\2023_ELEC_222130.00_dicksonEWS27.rvt
2/1/2024 1:17:24 PM

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A102	-	CORRIDOR	328 SF
A105	117B	ELECTRICAL	182 SF
A106	116	TOILET	81 SF
A107	117A	LAUNDRY	144 SF
B101	-	CORRIDOR	1163 SF
B102	115	LOCKER ROOM #1	399 SF
B103	-	SHOWER	184 SF
B104	114	DRESSING ROOM #1	261 SF
B105	114A	TOILET	74 SF
B106	113A	TOILET	75 SF
B107	113	DRESSING ROOM #2	270 SF
B108	-	SHOWER	184 SF
B109	112	LOCKER ROOM #2	401 SF

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
B110	111	TOILET	63 SF
B111	110	TOILET	63 SF
B112	109	GIRLS RESTROOM	388 SF
B113	106	FIRE RISER	304 SF
B114	107	BOYS RESTROOM	270 SF
B115	108	STORAGE	127 SF
B116	105	CUSTODIAN	68 SF
B117	104	CONCESSION	263 SF
B118	103	OFFICE	341 SF
B119	-	LOBBY	1039 SF
B120	-	VESTIBULE	369 SF
B121	101	SRO OFFICE	157 SF
S-2	STAIR 1	STAIR	115 SF



TECHNOLOGY ROUGH-IN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. DIVISION 26 CONTACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ALL DATA SLEEVES WITH PROPER BUSHINGS AS SHOWN ON THE E3 DRAWINGS AND ON ET501 DETAILS.

C. COORDINATE THE INSTALLATION OF ALL SPEAKER LOCATION ROUGH IN PLACEMENTS AND BACKBONE CONDUIT INSTALLATION WITH THE DIVISION 27 CONTRACTOR PRIOR TO INSTALLATION.

D. COORDINATE ALL CLOSET OR CABINET POWER NEEDS AND PLACEMENTS WITH THE DIVISION 27 CONTRACTOR PRIOR TO INSTALLATION.

ROUGH-IN PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
R4	CARD READERS WILL BE ADDED TO THE ELEVATOR. COORDINATE WITH THE TECHNOLOGY AND ELEVATOR CONTRACTORS.
R5	PROVIDE WIRE GUARDS ON ANY WALL MOUNTED EQUIPMENT FOR ADDED PROTECTION.
R6	PROVIDE 3/4" CONDUIT TO ACCESSIBLE LAY-IN CEILING FOR FIRE ALARM. VERIFY EXACT LOCATIONS WITH FIRE ALARM CONTRACTOR.
R9	ALL FLOORBOXES IN FIELDHOUSE WILL HAVE ONE EMPTY CONDUIT TO EACH BOX FOR FUTURE DATA CABLING.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

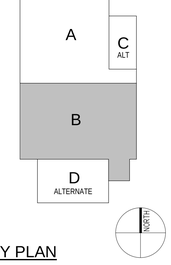
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10800 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

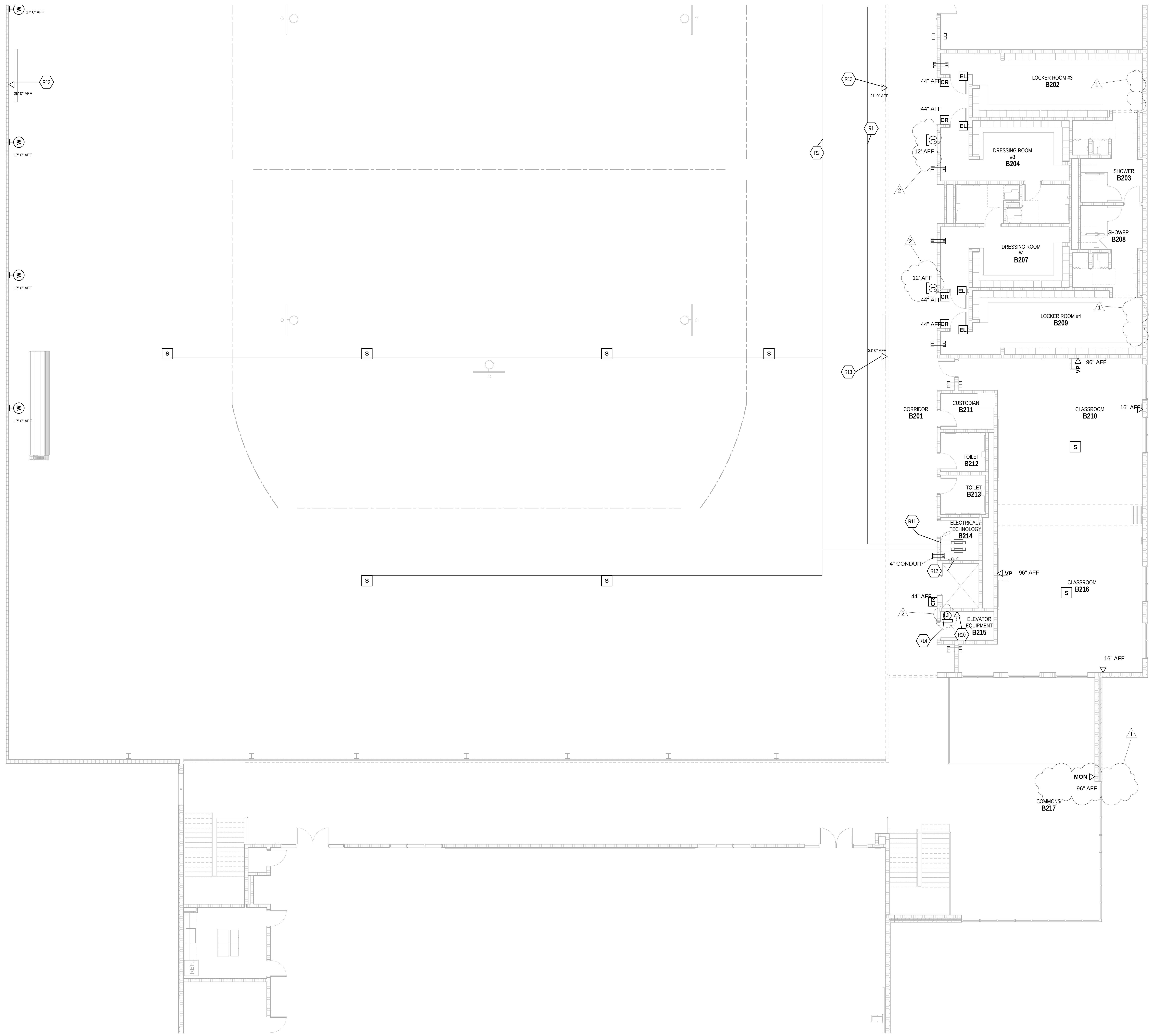
FIRST FLOOR TECHNOLOGY ROUGH-IN PLAN - UNIT B

ET11B

\\data1\ctnprofiles$\cthomas\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:48:29 AM

ROOM LEGEND			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A201	-	CORRIDOR	341 SF
A202	212	MECHANICAL	873 SF
B201	-	CORRIDOR	1444 SF
B202	211	LOCKER ROOM #3	399 SF
B203	-	SHOWER	184 SF
B204	210	DRESSING ROOM #3	261 SF
B205	210A	TOILET	74 SF
B206	209A	TOILET	75 SF
B207	209	DRESSING ROOM #4	270 SF
B208	-	SHOWER	184 SF

ROOM LEGEND			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
B209	208	LOCKER ROOM #4	402 SF
B210	207	CLASSROOM	842 SF
B211	206	CUSTODIAN	67 SF
B212	205	TOILET	63 SF
B213	204	TOILET	63 SF
B214	203	ELECTRICAL / TECHNOLOGY	58 SF
B215	202	ELEVATOR EQUIPMENT	55 SF
B216	201	CLASSROOM	840 SF
B217	-	COMMONS	984 SF
S-2	STAIR 1	STAIR	175 SF



TECHNOLOGY ROUGH-IN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. DIVISION 26 CONTACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ALL DATA SLEEVES WITH PROPER BUSHINGS AS SHOWN ON THE E3 DRAWINGS AND ON ET501 DETAILS.

C. COORDINATE THE INSTALLATION OF ALL SPEAKER LOCATION ROUGH IN PLACEMENTS AND BACKBONE CONDUIT INSTALLATION WITH THE DIVISION 27 CONTRACTOR PRIOR TO INSTALLATION.

D. COORDINATE ALL CLOSET OR CABINET POWER NEEDS AND PLACEMENTS WITH THE DIVISION 27 CONTRACTOR PRIOR TO INSTALLATION.

ROUGH-IN PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
R1	PROVIDE 2" CONDUIT PATHWAY FROM 2ND FLOOR ER TO WALL MOUNTED TR. CONDUIT TO BE SAME COLOR AS CEILING.
R2	SEE DETAIL 5/ E3.02 FOR FIELDHOUSE/ BASKETBALL COURTS SOUND SYSTEM CONDUIT RISER DIAGRAM.
R10	PROVIDE 3/4" CONDUIT TO ACCESSIBLE LAY-IN CEILING FOR ELEVATOR EQUIPMENT. VERIFY EXACT LOCATIONS WITH ELEVATOR CONTRACTOR.
R11	COORDINATE POWER NEEDS WITH TECHNOLOGY AND SOUND SYSTEM COORDINATOR.
R12	PROVIDE 2 - 4" DATA STUBS FROM 2ND FLOOR TO FIRST FLOOR.
R13	COORDINATE SCOREBOARD ROUGH IN LOCATION WITH GENERAL CONTRACTOR
R14	TECH BOX FOR ELEVATOR ACCESS CONTROL. COORDINATE WITH TECH AND ELEVATOR CONTRACTORS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

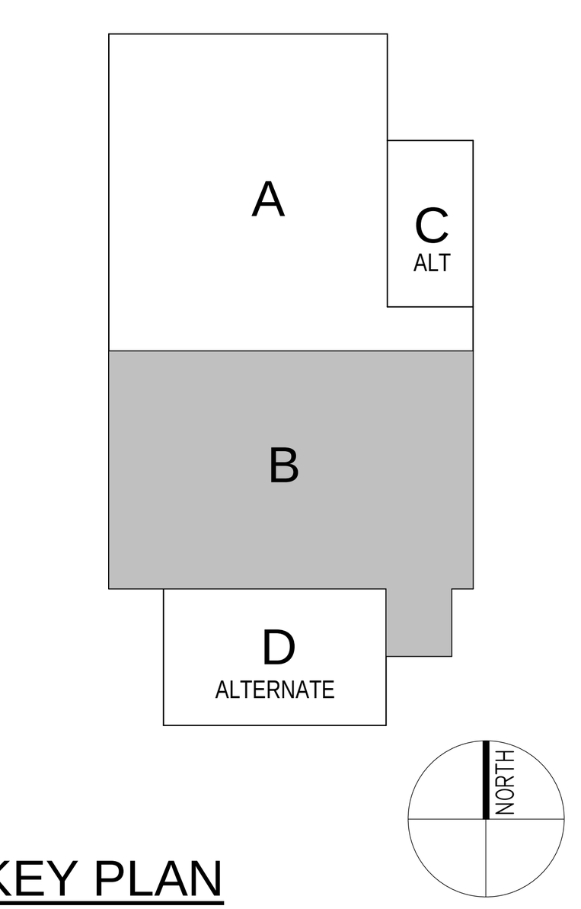
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE 11600305 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS

DRAWN BY: CDT

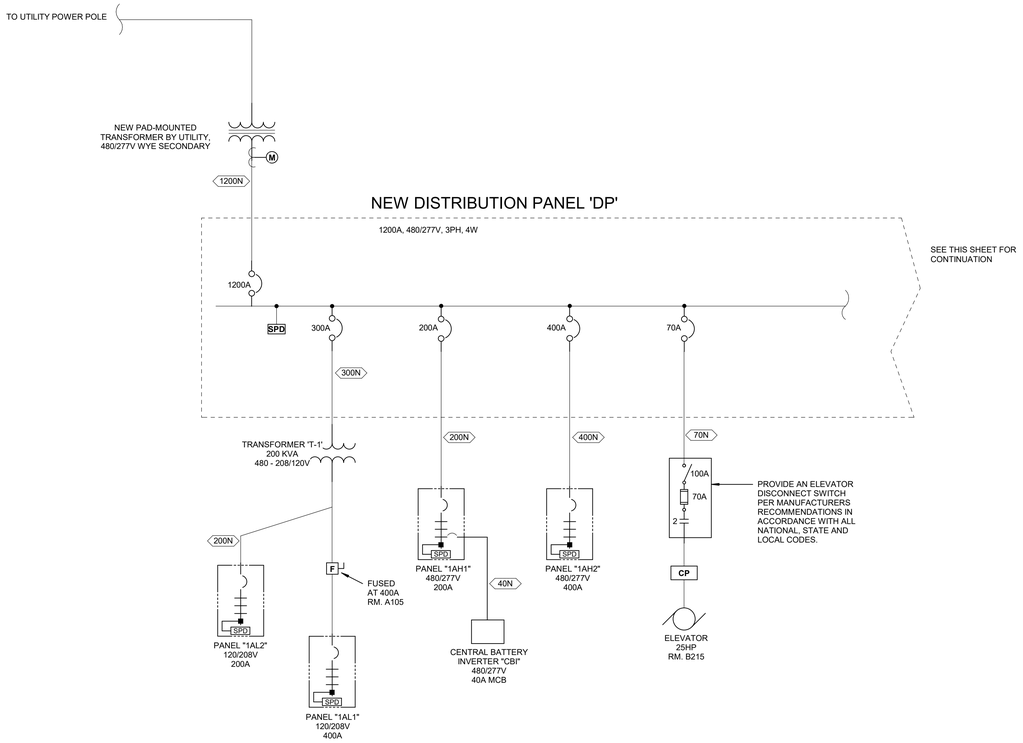
PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

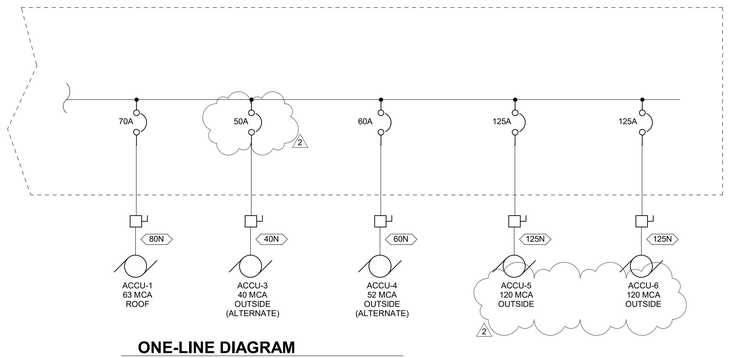
REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

SECOND FLOOR TECHNOLOGY ROUGH-IN PLAN - UNIT B

ET12B



COPPER FEEDER SCHEDULE					
SOURCE 2014 NEC T310.15(B)(16), COPPER 75C, (THHW, THW, THWN, XHHW)					
X	NO.	CONDUCTOR SIZE			CONDUIT
FEEDER	OF	PHASE	NEUTRAL	GROUND	SIZE
LEGEND	SETS	QTY	(1)	(1)	Inches
15	1	3 # 14		#14	3/4
15N	1	3 # 14	#14	#14	3/4
20	1	3 # 12		#12	3/4
20N	1	3 # 12	#12	#12	3/4
30	1	3 # 10		#10	3/4
30N	1	3 # 10	#10	#10	3/4
40	1	3 # 8		#10	3/4
40N	1	3 # 8	#8	#10	3/4
60	1	3 # 6		#10	1
60N	1	3 # 6	#6	#10	1
80	1	3 # 4		#8	1 1/4
80N	1	3 # 4	#4	#8	1 1/4
100	1	3 # 3		#8	1 1/2
100N	1	3 # 3	#3	#8	1 1/2
125	1	3 # 1		#6	2
125N	1	3 # 1	#1	#6	2
150	1	3 # 1/0		#6	2
150N	1	3 # 1/0	#1/0	#6	2
175	1	3 # 2/0		#6	2
175N	1	3 # 2/0	#2/0	#6	2
200	1	3 # 3/0		#6	2
200N	1	3 # 3/0	#3/0	#6	2
225	1	3 # 4/0		#4	2 1/2
225N	1	3 # 4/0	#4/0	#4	2 1/2
250	1	3 # 250		#4	2 1/2
250N	1	3 # 250	#250	#4	2 1/2
300	1	3 # 350		#3	3
300N	1	3 # 350	#350	#3	3
350	1	3 # 500		#3	4
350N	1	3 # 500	#500	#3	4
400	1	3 # 600		#3	4
400N	1	3 # 600	#600	#3	4
500	2	3 # 250		#2	2 1/2
500N	2	3 # 250	#250	#2	2 1/2
600	2	3 # 350		#1	3
600N	2	3 # 350	#350	#1	3
800	2	3 # 600		#1/0	4
800N	2	3 # 600	#600	#1/0	4
1000	3	3 # 400		#2/0	3
1000N	3	3 # 400	#400	#2/0	3
1200	3	3 # 600		#3/0	4
1200N	3	3 # 600	#600	#3/0	4
1600	4	3 # 600		#4/0	4
1600N	4	3 # 600	#600	#4/0	4
2000	5	3 # 600		#250	4
2000N	5	3 # 600	#600	#250	4
2500	6	3 # 600		#350	4
2500N	6	3 # 600	#600	#350	4
3000	7	3 # 600		#400	4
3000N	7	3 # 600	#600	#400	4
3300	8	3 # 600		#400	4
3300N	8	3 # 600	#600	#400	4
3700	9	3 # 600		#400	4
3700N	9	3 # 600	#600	#400	4



ONE-LINE DIAGRAM

NOT TO SCALE

LUMINAIRE SCHEDULE									
PLAN TYPE	MANUFACTURER/CATALOG	MOUNTING	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	LAMPS LUMENS	APPLIED VOLTAGE	DESCRIPTION	VA LOAD
A	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	29085 lm	277 V	TYPE 2 MEDIUM DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
B	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	29423 lm	277 V	TYPE 3 MEDIUM DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
C	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	29861 lm	277 V	TYPE 4 MEDIUM DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
D	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	21401 lm	277 V	TYPE 3 BACKLIGHT CONTROL DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
E	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	22104 lm	277 V	TYPE 4 BACKLIGHT CONTROL DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
F	LITHONIA DSX2 SERIES	30'-0" SQUARE STEEL POLE	1	219 W	LED	21594 lm	277 V	LEFT CORNER CUTOFF DISTRIBUTION, 4000K CCT, WITH MULTI-VOLT DRIVER. MOUNT TO NEW 30-FOOT SQUARE STEEL POLE, DARK BRONZE FINISH.	219 VA
LDW61	FAIL-SAFE FLD6A SERIES PHILIPS BRANDS A/E APPROVED EQUAL GOTHAM EVO SHOWER SERIES PRESCOLITE LF6LEDG4 SERIES	RECESSED	1	15 W	LED	1000 lm	277 V	6-INCH ROUND APERTURE LED SHOWER LIGHT WITH REGRESSED LENS REFLECTOR, WHITE REFLECTOR AND TRIM, SELF-FLANGED, IP65 WET LOCATION LISTED.	15 VA
LDW61X	FAIL-SAFE FLD6A SERIES PHILIPS BRANDS A/E APPROVED EQUAL GOTHAM EVO SHOWER SERIES PRESCOLITE LF6LEDG4 SERIES	RECESSED	1	15 W	LED	1000 lm	277 V	6-INCH ROUND APERTURE LED SHOWER LIGHT WITH REGRESSED LENS REFLECTOR, WHITE REFLECTOR AND TRIM, SELF-FLANGED, IP65 WET LOCATION LISTED, WITH EMERGENCY BATTERY PACK.	15 VA
LE1	LITHONIA WDGE2 SERIES	SURFACE WALL	1	32 W	LED	3200 lm	277 V	LED WALL MOUNTED ARCHITECTURAL LUMINAIRE, TYPE 3 MEDIUM DISTRIBUTION, 4000K CCT, 70 CRI, DARK BRONZE FINISH, WITH MVOLT DRIVER. MOUNT ONTO JUNCTION BOX. VANDAL RESISTANT.	32 VA
LE1X	LITHONIA WDGE2 SERIES	SURFACE WALL	1	32 W	LED	3200 lm	277 V	LED WALL MOUNTED ARCHITECTURAL LUMINAIRE, TYPE 3 MEDIUM DISTRIBUTION, 4000K CCT, 70 CRI, DARK BRONZE FINISH, WITH MVOLT DRIVER. PROVIDE WITH INTEGRAL COLD WEATHER EMERGENCY BATTERY PACK. MOUNT ONTO JUNCTION BOX. VANDAL RESISTANT.	32 VA
LF2	LITHONIA CPX SERIES	RECESSED	1	45 W	LED	3900 lm	277 V	2 BY 4-FOOT LED FLAT PANEL FIXTURE WITH SATIN WHITE LENS, ALUMINUM FRAME, 4000K, 80CRI, ADJUSTABLE LUMEN OUTPUT, 0-10VDC DIMMING, MVOLT DRIVER.	45 VA
LF2X	LITHONIA CPX SERIES	RECESSED	1	45 W	LED	3900 lm	277 V	2 BY 4-FOOT LED FLAT PANEL FIXTURE WITH SATIN WHITE LENS, ALUMINUM FRAME, 4000K, 80CRI, ADJUSTABLE LUMEN OUTPUT, 0-10VDC DIMMING, MVOLT DRIVER WITH EMERGENCY BATTERY PACK.	45 VA
LH18	LITHONIA IBG SERIES	SUSPENDED	1	192 W	LED	18000 lm	277 V	2 BY 4-FOOT LED HIGH BAY, 95% REFLECTIVE SPECULAR ALUMINUM REFLECTOR, WIDE DISTRIBUTION, FROSTED ACRYLIC LENS AND WIREGUARD, 0-10VDC DIMMING. PROVIDE WITH ALL MOUNTING HARDWARE AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION.	192 VA
LH18X	LITHONIA IBG SERIES	SUSPENDED	1	192 W	LED	18000 lm	277 V	2 BY 4-FOOT LED HIGH BAY, 95% REFLECTIVE SPECULAR ALUMINUM REFLECTOR, WIDE DISTRIBUTION, FROSTED ACRYLIC AND WIREGUARD, 0-10VDC DIMMING. PROVIDE WITH ALL MOUNTING HARDWARE AND ACCESSORIES FOR AIRCRAFT CABLE SUSPENSION. PROVIDE WITH TRANSFER DEVICE COMPATIBLE WITH EMERGENCY BATTERY INVERTER.	192 VA
LR2	METALUX WNLED SERIES DAY-BRITE OWL SERIES LITHONIA SBL SERIES COLUMBIA LAW SERIES OR A/E APPROVED EQUAL	SUSPENDED	1	48 W	LED	4000 lm	277 V	4-FOOT LED WRAP AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING. IF SUSPENDED, INSTALL AT 8-FOOT AFF WITH CONDUIT STEMS (UNO).	48 VA
LR2X	METALUX WNLED SERIES DAY-BRITE OWL SERIES LITHONIA SBL SERIES COLUMBIA LAW SERIES OR A/E APPROVED EQUAL	SUSPENDED	1	48 W	LED	4000 lm	277 V	4-FOOT LED WRAP AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING, WITH EMERGENCY BATTERY PACK. IF SUSPENDED, INSTALL AT 8-FOOT AFF WITH CONDUIT STEMS (UNO).	48 VA
LR4	METALUX WNLED SERIES DAY-BRITE OWL SERIES LITHONIA SBL SERIES HUBBELL BRANDS A/E APPROVED EQUAL	SURFACE	1	73 W	LED	7000 lm	277 V	4-FOOT WRAP LED AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING. IF SUSPENDED, INSTALL AT 8-FOOT AFF WITH CONDUIT STEMS (UNO).	73 VA
LR4X	METALUX WNLED SERIES DAY-BRITE OWL SERIES LITHONIA SBL SERIES HUBBELL BRANDS A/E APPROVED EQUAL	SURFACE	1	73 W	LED	7000 lm	277 V	4-FOOT WRAP LED AROUND FIXTURE, ACRYLIC PRISMATIC DIFFUSER, 0-10VDC DIMMING, WITH EMERGENCY TRANSFER DEVICE. IF SUSPENDED, INSTALL AT 8-FOOT AFF WITH CONDUIT STEMS (UNO).	73 VA
XC	SURE-LITES CX SERIES CHLORIDE 55 LINE SERIES LITHONIA SIGNATURE SERIES DUAL-LITE SEMPRA SERIES OR A/E APPROVED EQUAL	SURFACE CEILING	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA
XVW	SURE-LITES UX SERIES CHLORIDE 60 LINE SERIES LITHONIA LV SERIES DUAL-LITE SEWL SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM, VANDAL RESISTANT AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING, LISTED FOR WET LOCATIONS. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA
XW	SURE-LITES CX SERIES CHLORIDE 55 LINE SERIES LITHONIA SIGNATURE SERIES DUAL-LITE SEMPRA SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	277 V	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA

1. SEE SPECIFICATIONS FOR DRIVER REQUIREMENTS.
2. FOR ALL DOWNLIGHTING FIXTURES, PROVIDE REQUIRED MOUNTING HARDWARE FOR MOUNTING IN LAY-IN TYPE CEILINGS.
3. CONTRACTOR TO VERIFY TYPES AND QUANTITY OF LIGHT FIXTURES REQUIRING EMERGENCY TRANSFER DEVICES AND PROVIDE REQUIRED QUANTITY OF EMERGENCY TRANSFER DEVICES. LABOR, MATERIAL, ETC. IN THE PROJECT BID FOR FIELD INSTALLATION OF EMERGENCY TRANSFER DEVICES.
4. LIGHT FIXTURE SUBMITTALS TO INCLUDE DATA SHEETS FOR ALL FIXTURE TYPES, INCLUDING ADDITIONAL DATA SHEETS FOR BALLAST COMBINATIONS REQUIRED TO MEET THE INSTALLATION REQUIREMENTS OF THE VARIOUS FIXTURE TYPES INDICATED IN THE REMARKS COLUMN OF THE FIXTURE SCHEDULES OR ON THE DRAWINGS. SUBMITTALS SHALL ALSO INDICATE COLOR FOR ANY CUSTOM COLOR LIGHT FIXTURES.

ONE LINE DIAGRAM SYMBOLS

1AL1	MAIN LUG ONLY CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	DM	DIGITAL ELECTRONIC POWER METER	MCMC	COMBINATION MAGNETIC MOTOR STARTER WITH FUSED SWITCH	FUSED SWITCH IN SWITCHBOARD, 3P UNO	FUSED POTENTIAL TRANSFORMER
		K	KIRK KEY INTERLOCK			DISCONNECT SWITCH IN SWITCHBOARD, 3P UNO	CURRENT TRANSFORMERS, 3 UNO
		M	UTILITY METER			SPG FUSED BOLTED PRESSURE SWITCH WITH GROUND FAULT AND SINGLE PHASE PROTECTION, 3P UNO	CAPACITOR
2AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	XXXA	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SUB-FEED BREAKER, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	MCCB	COMBINATION MAGNETIC MOTOR STARTER WITH CIRCUIT BREAKER	E N TRANSFER SWITCH	EARTH GROUND
3AL1	THROUGH FEED LUGS CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	5AL1		MCMP	COMBINATION MAGNETIC MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR	DISCONNECT, 3P UNO	LA LIGHTNING ARRESTER
		SPD	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH INTEGRAL BUS CONNECTED SPD. REFER TO E8 SERIES DRAWINGSFOR PANELBOARD SCHEDULES			MOLDED CASE CIRCUIT BREAKER, 3P UNO	PLUG AND RECEPTACLE OR DRAWOUT DEVICE
4AL1	MAIN DOUBLE LUG CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	6AL1		VSC	COMBINATION MAGNETIC MOTOR STARTER WITH VARIABLE SPEED CONTROLLER	CIRCUIT BREAKER IN SWITCHBOARD, 3P UNO	POWER TRANSFORMER
		SPD	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SPD MOUNTED ADJACENT WITH CLOSED NIPPLE, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES			INSULATED CASED POWER CIRCUIT BREAKER WITH L.I.S.G. PROTECTION FEATURES, 3P UNO	
		7AL1		EO	COMBINATION MAGNETIC MOTOR STARTER WITH ELECTRONIC OVERLOADS	DRAWOUT CIRCUIT BREAKER, 3P UNO	X 3 PHASE MOTOR. X INDICATES HORSEPOWER OR KILOWATTS
						S SHUNT TRIP OPERATED CIRCUIT BREAKER	CP CONTROL PANEL FURNISHED UNDER DIVISION 25
							G GENERATOR

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

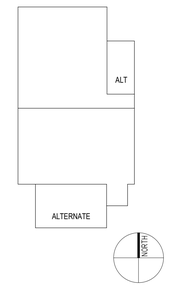
12641 McKinley Highway
Mishawaka, IN 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



100% Construction Documents

DRAWN BY: ISD

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 01.10.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01.26.2024
2	Addendum #2	02.01.2024

LUMINAIRE SCHEDULE AND RISER DIAGRAM

E-601

C:\Users\dickson\Documents\2023_ELEC_222130.00_jdickson6VSZT.rvt
2/1/2024 1:17:28 PM

Branch Panel: 1AH1

Location: ELECTRICAL A105
Supply From: DP
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 200 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	First floor lighting	20 A	1	3390...	3951...					1	20 A	Second floor lighting	2
3	Fieldhouse lighting	20 A	1			3840...	3840...			1	20 A	Fieldhouse lighting	4
5	Fieldhouse lighting	20 A	1					3840...	3840...	1	20 A	Fieldhouse lighting	6
7	Fieldhouse lighting	20 A	1	3072...	3072...					1	20 A	Fieldhouse lighting	8
9	Site lighting	20 A	1			0 VA	0 VA			1	20 A	Site lighting	10
11	Exterior lighting	20 A	1					0 VA	429 VA	1	20 A	Exterior lighting	12
13	Unit C - First Floor Lighting (NOTE 1)	--	1	--	--					1	--	Unit D - First Floor Lighting (NOTE 1)	14
15	D101 - Lighting #1 (NOTE 1)	--	1			--	--			1	--	Unit D - Second Floor Lighting (NOTE 1)	16
17	D101 - Lighting #2 (NOTE 1)	--	1					--	--	1	--	D201 - Lighting #1 (NOTE 1)	18
19	CB1	40 A	3	0 VA	--					1	--	D201 - Lighting #2 (NOTE 1)	20
21	--	--	--			0 VA							22
23	--	--	--					0 VA					24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		13485 VA		7680 VA		8109 VA					
		Total Amps:		49 A		28 A		30 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	29274 VA	125.00%	36593 VA		
				Total Conn. Load:	29274 VA
				Total Est. Demand:	36593 VA
				Total Conn.:	35 A
				Total Est. Demand:	44 A

Notes:
NOTE 1: PROVIDE CIRCUIT AS PART OF THE ALTERNATE BID.

Branch Panel: 1AH2

Location: ELECTRICAL A105
Supply From: DP
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	ARU-1	40 A	3	7479...	7479...					3	40 A	ARU-2	2
3	--	--	--			7479...	7479...			--	--	--	4
5	--	--	--					7479...	7479...	--	--	--	6
7	Field House Fans CF-1, CF-2	20 A	3	1163...	5817...					3	40 A	ACCU-2 Roof	8
9	--	--	--			1163...	5817...			--	--	--	10
11	--	--	--					1163...	5817...	--	--	--	12
13	AHU-4 Rm. D204 (NOTE 1)	20 A	3	0 VA	5817...					3	40 A	AHU-1 Rm. A202	14
15	--	--	--			0 VA	5817...			--	--	--	16
17	--	--	--					0 VA	5817...	--	--	--	18
19	AHU-2 Supply Rm. A202	20 A	3	3047...	2105...					3	20 A	AHU-2 Exhaust Rm. A202	20
21	--	--	--			3047...	2105...			--	--	--	22
23	--	--	--					3047...	2105...	--	--	--	24
25	Booster pump DWB1 Rm. B113	20 A	3	5817...	0 VA					3	40 A	AHU-3 Rm. D103 (NOTE 1)	26
27	--	--	--			5817...	0 VA			--	--	--	28
29	--	--	--					5817...	0 VA	--	--	--	30
31	CUH-2 Vest. B120	20 A	1	152 VA	152 VA					1	20 A	CUH-1 Corr. A103	32
33	AHU-2 Energy Recovery Unit - A202	20 A	3			443 VA							34
35	--	--	--					443 VA					36
37	--	--	--	443 VA									38
39													40
41													42
		Total Load:		39472 VA		39168 VA		39168 VA					
		Total Amps:		142 A		141 A		141 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	117808 VA	104.76%	123417 VA		
				Total Conn. Load:	117808 VA
				Total Est. Demand:	123417 VA
				Total Conn.:	142 A
				Total Est. Demand:	148 A

Notes:
NOTE 1: PROVIDE CIRCUIT AS PART OF THE ALTERNATE BID.

Branch Panel: 1AL1

Location: ELECTRICAL A105
Supply From: T-1
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Convenience receptacles Corr. A103, Rm. A104	20 A	1	1080...	2000...					1	20 A	Microwave and GFCI receptacles Rm. A104	2
3	Refrigerator receptacle Rm. A104	20 A	1			1000...	360 VA			1	20 A	Tub receptacles Rm. A104	4
5	Convenience receptacles Corr. A102, Rms....	20 A	1					1080...	2160...	1	20 A	Fieldhouse floor boxes Rm. A101	6
7	Fieldhouse floor boxes Rm. A101	20 A	1	1080...	1080...					1	20 A	Fieldhouse floor boxes Rm. A101	8
9	Fieldhouse receptacles Rm. A101, Exterior wall	20 A	1			1440...	540 VA			1	20 A	Fieldhouse receptacles Rm. A101, Exterior wall	10
11	Receptacles Rm. A101, Corr. B101	20 A	1					1260...	900 VA	1	20 A	Fieldhouse receptacles Rm. A101, Exterior wall	12
13	Receptacles Rms. B102-B106	20 A	1	1440...	1620...					1	20 A	Convenience receptacles Rms. B108-B112	14
15	Receptacles Rms. B113-B116, B118	20 A	1			1440...	720 VA			1	20 A	Convenience and monitor receptacles Rm. B117	16
17	Receptacles Rm. B118	20 A	1					1260...	1260...	1	20 A	Receptacles Rm. B119, Exterior walls	18
19	Receptacles Rm. B121	20 A	1	1080...	360 VA					1	20 A	Water cooler receptacles Corr. B101 (NOTE 2)	20
21	Convenience receptacles Corr. A201, Rm. A202	20 A	1			1412...	1440...			1	20 A	Receptacles Rms. B202-B206 (NOTE 1)	22
23	Receptacles Corr. B201, Rms. B207-B209 (NOT...	20 A	1					1260...	1800...	1	20 A	Convenience receptacles Corr. B201, Rms....	24
25	Receptacles Rm. B210	20 A	1	1260...	1260...					1	20 A	Receptacles Rm. B216	26
27	Overhead Door #1 - A101	20 A	1			1127...	828 VA			1	20 A	Overhead Door #2 - A101	28
29	Overhead Door #3 - A101	20 A	1					828 VA	1127...	1	20 A	Bleacher Motor #1	30
31	Elevator Sump Pump and Control Panel	20 A	1	1127...	1000...					2	20 A	EUH-1 Stair. S-2	32
33	First Floor VAVs	20 A	1			350 VA	1000...			--	--	--	34
35	Second Floor VAVs	20 A	1					250 VA	0 VA	1	20 A	Monitor receptacles - East Wall D101 (NOTE 1)	36
37	Overhead Door, Exhaust fan EF-C1 - C101 (NOT...	20 A	1	0 VA	0 VA					1	20 A	Receptacles - North Wall D101 (NOTE 1)	38
39	Receptacles #1, PUH-5 - C101 (NOTE 1)	20 A	1			0 VA	0 VA			1	20 A	Receptacles - East Wall D101 (NOTE 1)	40
41	Receptacles #2, PUH-6 - C101 (NOTE 1)	20 A	1					0 VA	0 VA	1	20 A	Receptacles - South Wall D101 (NOTE 1)	42
43	Sound Rack - D101 (NOTE 1)	20 A	1	0 VA	0 VA					1	20 A	Receptacles - West Wall D101, PUH-3 Rm. D102...	44
45	Water Coolers - D101 (NOTE 1)	20 A	1			0 VA	0 VA			1	20 A	Receptacles- D102-104 & Exterior (NOTE 1)	46
47	Receptacles - North Wall D202 (NOTE 1)	20 A	1					0 VA	0 VA	1	20 A	Sound Rack - D206 (NOTE 1)	48
49	Receptacles - East Wall D202 (NOTE 1)	20 A	1	0 VA	0 VA					1	20 A	Water Coolers - D202 (NOTE 1)	50
51	Receptacles - South Wall D202 (NOTE 1)	20 A	1			0 VA	0 VA			1	20 A	Refrigerator - D205 (NOTE 1)	52
53	Receptacles - West Wall D202, Island D205...	20 A	1					0 VA	0 VA	1	20 A	Receptacles - D101, D103-105 (NOTE 1)	54
55	Receptacles #1 - B117	20 A	1	180 VA	360 VA					1	20 A	Receptacles #2 - B117	56
57	Receptacles #3 - B117	20 A	1			360 VA	360 VA			1	20 A	Receptacles - Island B117	58
59	Receptacle - Floor Scrubber B115	20 A	1					180 VA	360 VA	1	20 A	Water cooler receptacles Corr. B101	60
61	Elevator lights, receptacle	20 A	1	288 VA	720 VA					1	20 A	IDF Backboard receptacles Rm. B214	62
63	IDF Rack receptacle Rm. B214	20 A	1			180 VA	360 VA			1	20 A	IDF Rack receptacle Rm. B214	64
65	BLR-1 Control Panel Rm. A202	20 A	1					1920...	1920...	1	20 A	BLR-2 Control Panel Rm. A202	66
67	HWP-1 Rm. A202	20 A	2	915 VA	915 VA					2	20 A	HWP-2 Rm. A202	68
69	--	--	--			915 VA	915 VA			--	--	--	70
71	HWP-3 Rm. A202	20 A	3					1272...	1272...	3	20 A	HWP-4 Rm. A202	72
73	--	--	--	1272...	1272...					--	--	--	74
75	--	--	--			1272...	1272...			--	--	--	76
77	EF-A1 Roof	20 A	1					345 VA	750 VA	1	20 A	Temperature Control Panels Rm. A202	78
79	Scoreboard receptacles	20 A	1	540 VA	1633...					1	20 A	Hot Water Return Pump HWCP-1, PUH-2 Rm....	80
81	Water Softener receptacles Rm. B113	20 A	1			360 VA	360 VA			1	20 A	Vending receptacle #1 Corr. A103 (NOTE 2)	82
83	EF-B1,B2,B3 - ROOF	20 A	1					805 VA	500 VA	1	20 A	Temperature control panels - D103, D204 (NOTE...	84
		Total Load:		22482 VA		18011 VA		22509 VA					
		Total Amps:		193 A		150 A		193 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	19864 VA	104.80%	20818 VA		
Other	6950 VA	100.00%	6950 VA	**Total Conn. Load:**	63002 VA
Receptacle	3000 VA	100.00%	3000 VA	**Total Est. Demand:**	52720 VA
Spare	500 VA	100.00%	500 VA	**Total Conn.:**	175 A
Receptacle - Convenience	32328 VA	65.47%	21164 VA	**Total Est. Demand:**	146 A
Receptacle - Special	360 VA	80.00%	288 VA		

Notes:
NOTE 1: PROVIDE CIRCUIT UNDER THE ALTERNATE BID.
NOTE 2: PROVIDE WITH 5mA GFCI BREAKER.

Branch Panel: 1AL2

Location: ELECTRICAL A105
Supply From:
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating:
Mains Type: M.C.B
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Divider Curtain #1	20 A	1	1840...	1840...					1	20 A	Divider Curtain #2	2
3	Batting Cage #1	20 A	1			1840...	1840...			1	20 A	Divider Curtain #3	4
5	Basketball Backstop #1	20 A	1					1840...	1587...	1	20 A	Throwing Cage #1	6
7	Basketball Backstop #2	20 A	1	1840...	1840...					1	20 A	Batting Cage #2	8
9	Batting Cage #3	20 A	1			1840...	1840...			1	20 A	Basketball Backstop #3	10
11	Throwing Cage #2	20 A	1					1587...	1840...	1	20 A	Basketball Backstop #4	12
13	Batting Cage #4	20 A	1	1840...	1840...					1	20 A	Divider Curtain #4	14
15	Divider Curtain #5	20 A	1			1840...	1840...			1	20 A	Divider Curtain #6	16
17	Basketball Backstop #5	20 A	1					1840...	1840...	1	20 A	Basketball Backstop #6	18
19	Basketball Backstop #7	20 A	1	1840...	1840...					1	20 A	Basketball Backstop #8	20
21	Basketball Backstop #9	20 A	1			1840...	1840...			1	20 A	Basketball Backstop #10	22
23	Divider Curtain #7	20 A	1					1840...	1840...	1	20 A	Divider Curtain #8	24
25	Divider Curtain #9	20 A	1	1840...	0 VA					1	20 A	TSC1500XL Relay Node #2 Rm. A105	26
27	TSC1500XL Master Relay Node #1 Rm. A105	20 A	1			0 VA	0 VA			1	20 A	TSC1500XL Relay Node #3 Rm. A105	28
29	EF-D1 Rm. D102 (NOTE 1)	20 A	3					0 VA	0 VA	2	25 A	EUH-2 Corr. D104 (NOTE 1)	30
31	--	--	--	0 VA	0 VA					--	--	--	32
33	--	--	--			0 VA	0 VA			1	20 A	Spare	34
35	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	36
37	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	38
39	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	40
41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	42
43	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	44
45	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	46
47	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	48
49	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	50
51	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	52
53	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	54
55	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	56
57	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	58
59	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	60
		Total Load:		16560 VA		14720 VA		14214 VA					
		Total Amps:		139 A		123 A		118 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	45494 VA	101.01%	45954 VA		
				Total Conn. Load:	45494 VA
				Total Est. Demand:	45954 VA
				Total Conn.:	126 A
				Total Est. Demand:	128 A

Notes:
NOTE 1: PROVIDE CIRCUIT UNDER THE ALTERNATE BID.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

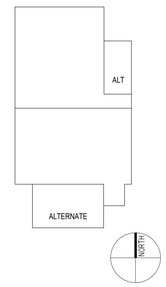
12641 McKinley Highway
Mishawaka, IN 46545

PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



100% Construction Documents

DRAWN BY: ISD

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 01.10.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	01.26.2024
2	Addendum #2	02.01.2024

PANELBOARD SCHEDULES

E-602

C:\Users\idickson\Documents\2023_ELEC_222130.00_idickonENVS2T.rvt
2/1/2024 1:17:31 PM

COMMUNICATIONS SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
	COMMUNICATIONS OUTLET. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	2
W	WALL MOUNTED COMMUNICATIONS OUTLET. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1
	MULTI CAPACITY FLOOR BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
	POKE-THRU FLOOR BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
VP	CEILING MOUNTED PROJECTOR. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-
VP	WALL MOUNTED PROJECTOR. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	8/T-501
W	CEILING MOUNTED WIRELESS ACCESS POINT. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	2 CAT6A
W	WALL MOUNTED WIRELESS ACCESS POINT. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	2 CAT6A
	CABLE TRAY	-
	LADDER TRAY	-
	CONDUIT SLEEVES BETWEEN WALLS	SHOWN ON E3 DRAWINGS
	2 (TW0) 4" CONDUIT SLEEVES BETWEEN FLOORS	-
	TELEPHONE TERMINATION BOARD	-
	TECHNOLOGY EQUIPMENT/SOUND RACK	7/T-501
	2-POST TECHNOLOGY EQUIPMENT RACK	-
	4-POST TECHNOLOGY EQUIPMENT RACK	7/T-501
CAM	OVERHEAD DOCUMENT CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	-

ACCESS CONTROL SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
ACP	ACCESS CONTROL PANEL	2/T-502
CR	CARD READER	2/T-502
EL	ELECTRONIC LATCH SET WITH ELECTRONIC POWER TRANSFER	2/T-502
	AUTOMATIC DOOR PUSHBUTTON	-
J	ABOVE CEILING WALL MOUNTED DOOR ACCESS CONTROLLER JUNCTION BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	2/T-502
	PUSH TO RELEASE BUTTON	-
ADO	AUTOMATIC DOOR OPERATOR	2/T-502
LD	LOCKDOWN BUTTON	-
AI	AIPHONE DOOR INTERCOM/CAMERA	-
MI	AIPHONE MAIN INTERCOM/CAMERA CONSOLE DESKPHONE	-

PUBLIC ADDRESS AND MASS NOTIFICATION SYSTEMS

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
	ANTENNA	-
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	3/T-502
S G	GYMNASIUM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	-
S MP	4" CEILING LOUDSPEAKER SPEAKER - CEILING MOUNTED	-
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - WALL MOUNTED	-
IC	WALL MOUNTED SPEAKER	-
S	WALL MOUNTED SPEAKER OUTLET	-
S	CEILING MOUNTED PA SPEAKER	1/T-503
S A	LINE ARRAY COLUMN SPEAKERS - WALL MOUNTED	-
	FULL RANGE CEILING SPEAKER	-
IC	CEILING MOUNTED INTERCOM SPEAKER	-
M	WALL MICROPHONE INPUT	-
M	CEILING MICROPHONE	-
A	AUX. INPUT	-
S M	MONITOR OUTPUT	-
	RECESSED JUNCTION BOX FOR SOUND SYSTEM	-
SUB	SUBWOOFER	-
MA	WALL MOUNTED MICROPHONE/AUXILIARY INPUT	1/T-503

INTERIOR VIDEO SURVEILLANCE CAMERA SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
CAM	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1/T-502
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1/T-502

EXTERIOR VIDEO SURVEILLANCE CAMERA SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNLESS NOTED OTHERWISE
W CAM	WALL MOUNTED WEATHERPROOF VIDEO SURVEILLANCE CAMERA. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	1/T-502

TELECOMMUNICATIONS 6A CABLE COLOR LEGEND

SYSTEM	TERMINATION (RJ45) PANDUIT	CABLE GENERAL	PATCH CABLE (PATCH PANEL)	PATCH CABLE (STATION)
DATA	WHITE	BLUE	BLUE	BLACK
WIRELESS	BLUE	BLUE	WHITE	WHITE
CAMERA	BLUE	BLUE	BLACK	BLACK
ACCESS	YELLOW	YELLOW	YELLOW	YELLOW
HVAC	RED	RED	RED	RED

	CONTRACTOR FURNISH	CONTRACTOR INSTALL	OWNER FURNISH	OWNER INSTALL
ACCESS CARD READERS, DOOR CONTACTS	NO	NO	YES	YES
ACCESS, SECURITY CABLING & ROUGH INS	YES	YES	NO	NO
AV PROJECTOR AND MOUNTS	YES	YES	NO	NO
AV PROJECTOR MISC. CABLING (IN WALL)	YES	YES	NO	NO
AV MONITOR PATCH CABLES	YES	YES	NO	NO
WIRELESS CLOCKS	NO	NO	YES	YES
FIBER BACKBONE	YES	YES	NO	NO
FIBER TERM AND TEST	YES	YES	NO	NO
FIBER ENCLOSER WITH LC COUPLER PANEL	YES	YES	NO	NO
NETWORK EQUIPMENT	NO	NO	YES	YES
NETWORK SFP	NO	NO	YES	YES
IDF RACKS	YES	YES	NO	NO
SOUND REINFORCEMENT	YES	YES	NO	NO
SURVEILLANCE CAMERAS	NO	NO	YES	YES
SURVEILLANCE CAMERAS CAT6A CABLING	YES	YES	NO	NO
WIRELESS ACCESS POINTS	NO	YES	YES	NO
WIRELESS ACCESS POINTS CAT6A CABLING	YES	YES	NO	NO

TECHNOLOGY GENERAL NOTES

A. THE COMMUNICATIONS CABLING CONTRACTOR(S) IS/ARE RESPONSIBLE FOR ANY ADDITIONAL CONDUIT SLEEVES, OUTLET/JUNCTION BOXES, SURFACE RACEWAY, CABLE TRAY, DOUBLE GANG SQUARE PLASTER MUD RINGS, ETC. NOT SHOWN ON THE E3 ROUGH IN DRAWINGS.

B. THE COMMUNICATIONS CABLING CONTRACTOR(S) IS/ARE RESPONSIBLE FOR COORDINATING WITH ELECTRICAL CONTRACTOR IN EXTENDING THE ELECTRICAL SERVICE FROM THE ELECTRICAL JUNCTION BOX IN THE SPACE TO ALL THE COMMUNICATIONS RACKS/CABINETS.

C. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR REPLACING/REPAIRING DAMAGED CEILING GRID/TILE AS A RESULT OF THEIR INSTALLATION.

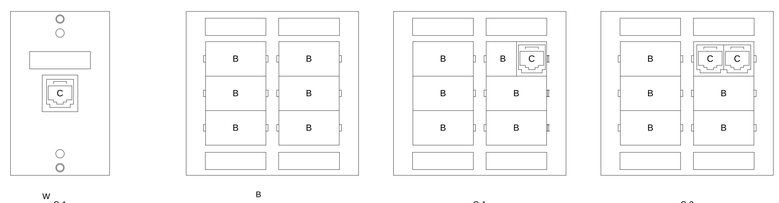
D. THE CONTRACTOR SHALL VERIFY THE SURFACE RACEWAY LOCATIONS, ROUTING, OPENINGS, ETC. WITH THE BUILDING ELECTRICAL CONTRACTOR. PROVIDE PROPER COVER PLATES FOR THE DEVICES AS REQUIRED.

E. THE COMMUNICATIONS CABLING CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THE MONITORS AND VIDEO PROJECTOR WITH THE WHITEBOARD INSTALLATION CONTRACTOR AND ELECTRICAL CONTRACTOR TO INSURE A FULL AND CLEAR PROJECTION IMAGE.

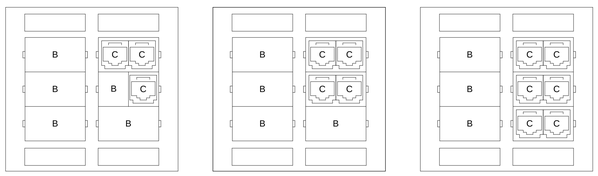
TECHNOLOGY ABBREVIATIONS

ABBREVIATIONS USED ON DRAWINGS IN GENERAL ARE LISTED BELOW.

AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
B	BLANK
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
J	JUNCTION BOX
MC/ER / MDF	MAIN CROSS-CONNECT/EQUIPMENT ROOM / MAIN DISTRIBUTION FRAME
+N	INDICATES MOUNTING HEIGHT (N) TO BOTTOM OF DEVICE FROM FINISH FLOOR UNLESS NOTED OTHERWISE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
TCP	TEMPERATURE CONTROL PANEL
TR / IDF	TELECOMMUNICATIONS ROOM / INTERMEDIATE DISTRIBUTION FRAME
T.T.B.	TELEPHONE TERMINATION BOARD
TV	TELEVISION
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VC	VOLUME CONTROL
W	WALL MOUNTED
V.I.	VIDEO INPUT LOCATION
D	DEMO TABLE
WG	WIRE GUARD
R	RELEASE
DF	DUAL FACE
WP	WEATHER PROOF
VO	VIDEO OUTPUT
PTZ	PAN TILT ZOOM
ETR	EXISTING TO REMAIN
VP	VIDEO PROJECTOR
S	SURFACE MOUNTED



WALL PLATE | BLANK TECHNOLOGY OUTLET | DATA PLATE | DATA PLATE



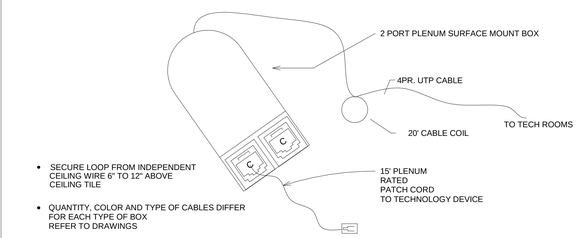
DATA PLATE | DATA PLATE | DATA PLATE

NOTE:
REFER TO AV WIRING DETAILS FOR EXACT CONFIGURATIONS OF VIDEO INPUT (V.I.), VIDEO OUTPUT (VO), AND AV CABINET LOCATIONS..

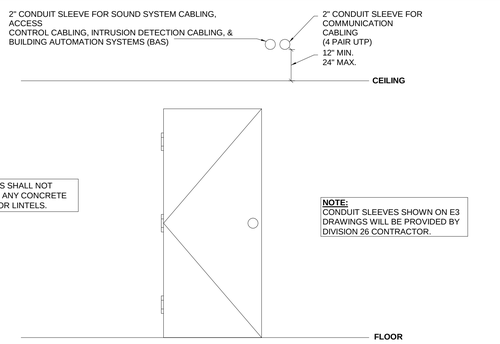
WALL PLATE CONFIGURATIONS
NO SCALE

TECHNOLOGY FACEPLATE ABBREVIATIONS

C - RJ45 DATA JACK
B - BLANK INSERT
WB - RJ-45 JACK FOR USB INTERACTIVITY
HD - RJ45 JACK FOR VIDEO
3.5mm - 3.5mm JACK
HDMI - HDMI CONNECTOR



TYPICAL ABOVE CEILING JUNCTION BOX - WIRING DETAIL
NO SCALE



NOTE: SLEEVES SHALL NOT PENETRATE IN ANY CONCRETE BOND BEAMS OR LINTELS.

NOTE:
CONDUIT SLEEVES SHOWN ON E3 DRAWINGS WILL BE PROVIDED BY DIVISION 26 CONTRACTOR.

CONDUIT SLEEVES DETAIL
NO SCALE

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

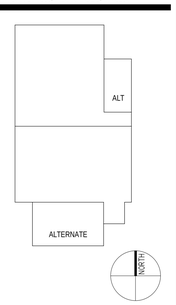
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10800 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

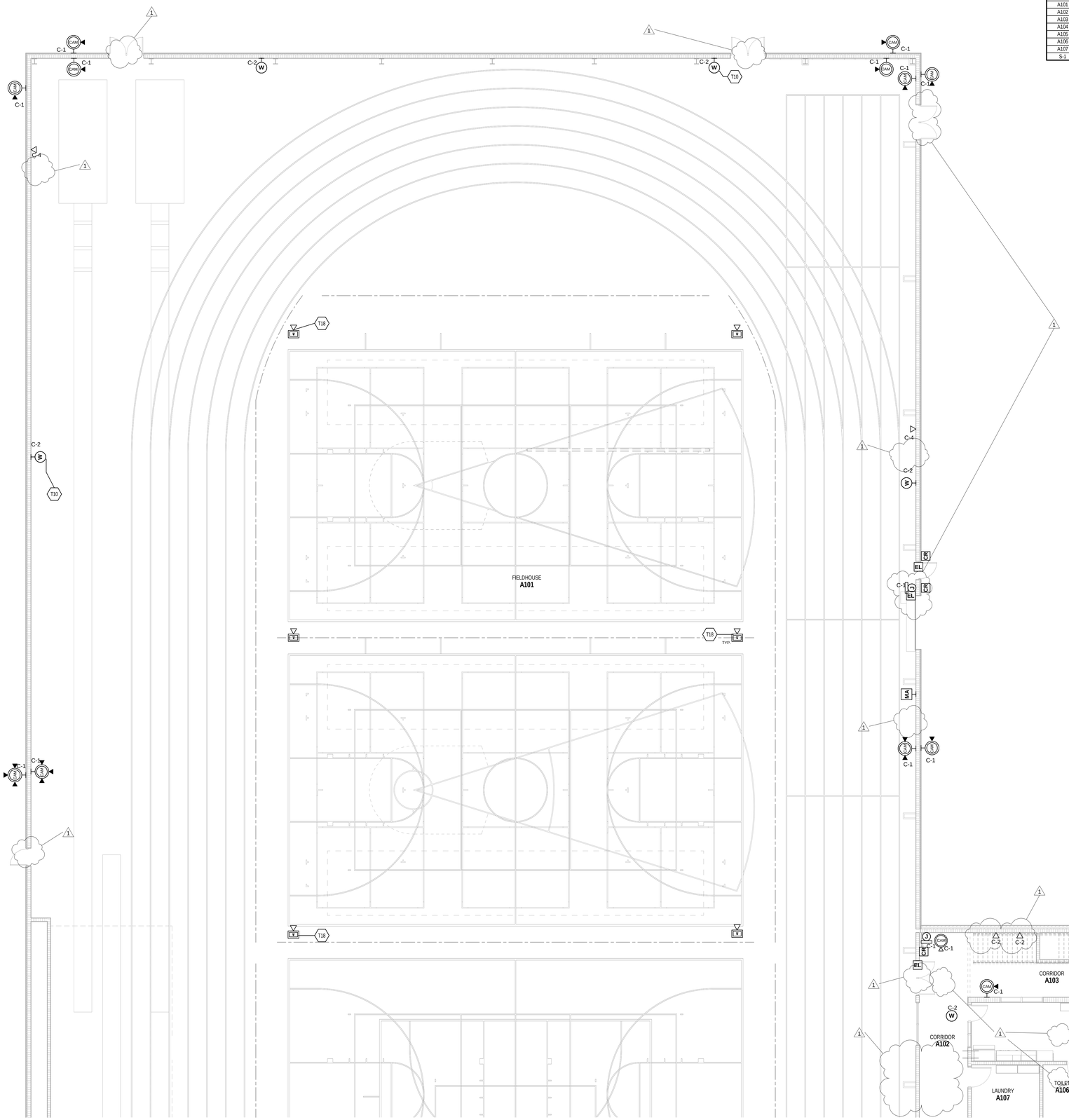
PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

TECHNOLOGY SYMBOLS & ABBREVIATIONS

T-001

\\data1\ctnprofiles$\cthomas\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:48:36 AM



ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A102	-	CORRIDOR	328 SF
A103	-	CORRIDOR	296 SF
A104	117	TRAINING	416 SF
A105	117B	ELECTRICAL	182 SF
A106	116	TOILET	81 SF
A107	117A	LAUNDRY	144 SF
S-1	STAIR 2	STAIR	81 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. CAT6A PATCH CORDS TO BE PROVIDED BY OTHERS.

C. NETWORK EQUIPMENT AND WIRELESS ACCESS POINTS TO BE PROVIDED BY OWNER. INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

D. CLASSROOM PROJECTORS AND SOUND REINFORCEMENT KITS TO BE PROVIDED TURNKEY BY THE DIVISION 27 CONTRACTOR. DIV 27 IS RESPONSIBLE FOR INSTALLATION AND TERMINATION OF ALL CONNECTIVITY WIRING NEEDED AS SHOWN ON DETAILS.

E. ACCESS CONTROL IS ROUGH-IN WIRING ONLY AS SHOWN ON DETAILS. KANTECH SYSTEM EQUIPMENT AND PROGRAMMING TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS)

F. DOOR CONTACTS AND WIRING TO BE PROVIDED BY DOOR HARDWARE 087100 CONTRACTOR.

G. VIDEO SURVEILLANCE EXAQVISION CAMERAS TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS) INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

H. FIELDHOUSE FLOOR BOXES WILL HAVE ONE EMPTY CONDUIT TO EACH ONE FOR FUTURE TECH CABLES.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T10	PROVIDE CATEGORY 6A DATA FOR WIRELESS ACCESS POINTS. PROVIDE 20FT. SLACK LOOP COILED NEATLY AND SUPPORTED ABOVE THE CEILING. TERMINATE CABLES AND TEST PER SPECIFICATIONS. NOTE LOCATION ON RECORD DRAWINGS AND MARK LOCATION ON CEILING GRID WITH BLUE DOT. SLACK LOOP NOT NECESSARY FOR LOCATIONS WITH CONDUIT SUCH AS GYMNASIUMS.
T18	ALL FLOORBOXES IN FIELDHOUSE WILL HAVE ONE EMPTY CONDUIT TO EACH BOX FOR FUTURE DATA CABLING.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

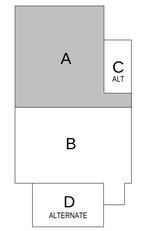
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

FIRST FLOOR TECHNOLOGY PLAN - UNIT A

T-11A

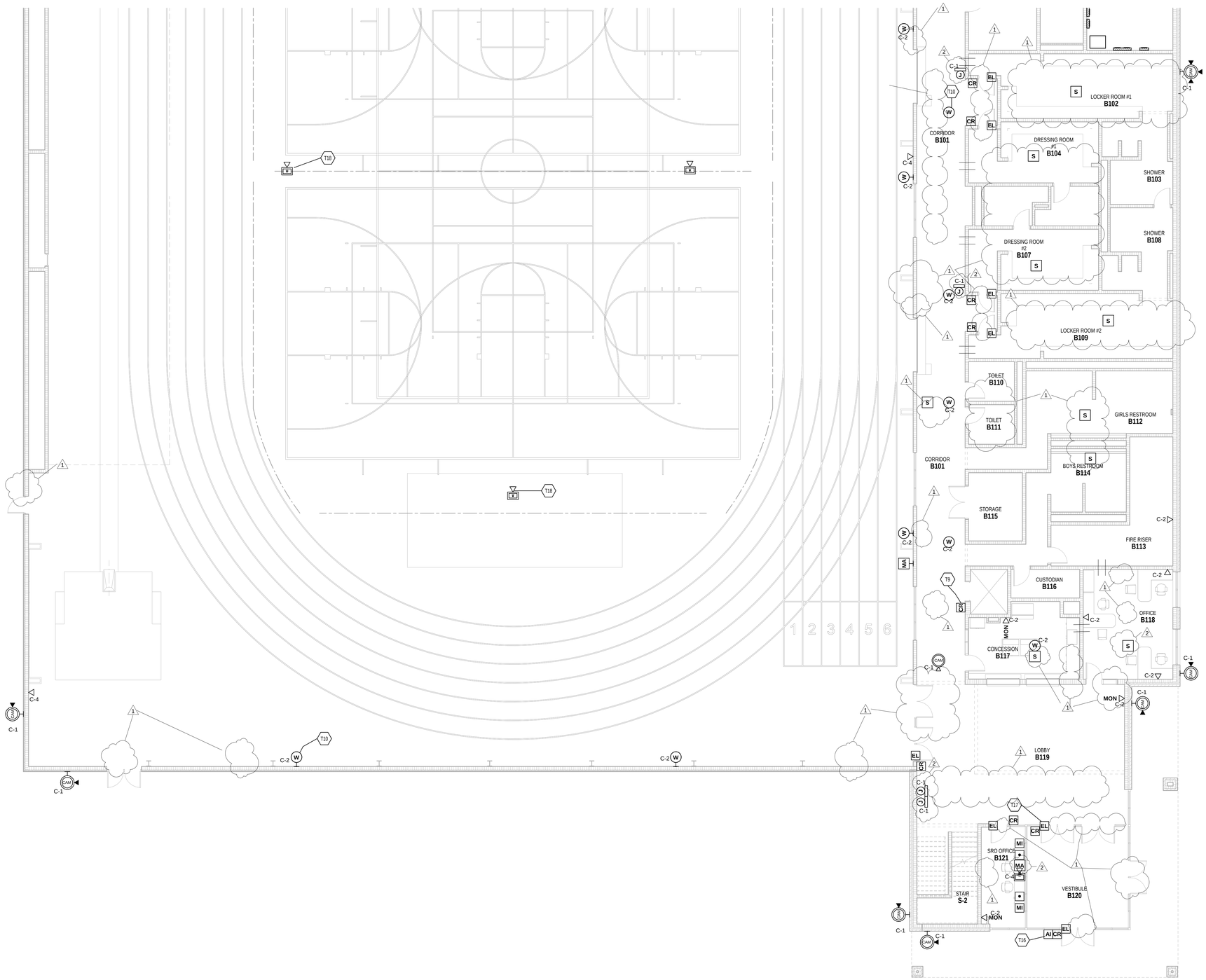
\\data1\cincinnatifiles$\thomasM\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:48:41 AM

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A102	-	CORRIDOR	328 SF
A105	117B	ELECTRICAL	182 SF
A106	116	TOILET	81 SF
A107	117A	LAUNDRY	144 SF
B101	-	CORRIDOR	1163 SF
B102	115	LOCKER ROOM #1	399 SF
B103	-	SHOWER	184 SF
B104	114	DRESSING ROOM #1	261 SF
B105	114A	TOILET	74 SF
B106	113A	TOILET	75 SF
B107	113	DRESSING ROOM #2	270 SF
B108	-	SHOWER	184 SF
B109	112	LOCKER ROOM #2	401 SF

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
B110	111	TOILET	63 SF
B111	110	TOILET	63 SF
B112	109	GIRLS RESTROOM	388 SF
B113	106	FIRE RISER	304 SF
B114	107	BOYS RESTROOM	270 SF
B115	108	STORAGE	127 SF
B116	105	CUSTODIAN	68 SF
B117	104	CONCESSION	263 SF
B118	103	OFFICE	341 SF
B119	-	LOBBY	1039 SF
B120	-	VESTIBULE	369 SF
B121	101	SRO OFFICE	157 SF
S-2	STAIR 1	STAIR	115 SF



TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. CAT6A PATCH CORDS TO BE PROVIDED BY OTHERS.

C. NETWORK EQUIPMENT AND WIRELESS ACCESS POINTS TO BE PROVIDED BY OWNER. INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

D. CLASSROOM PROJECTORS AND SOUND REINFORCEMENT KITS TO BE PROVIDED TURNKEY BY THE DIVISION 27 CONTRACTOR. DIV 27 IS RESPONSIBLE FOR INSTALLATION AND TERMINATION OF ALL CONNECTIVITY WIRING NEEDED AS SHOWN ON DETAILS.

E. ACCESS CONTROL IS ROUGH-IN WIRING ONLY AS SHOWN ON DETAILS. KANTECH SYSTEM EQUIPMENT AND PROGRAMMING TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS)

F. DOOR CONTACTS AND WIRING TO BE PROVIDED BY DOOR HARDWARE 087100 CONTRACTOR.

G. VIDEO SURVEILLANCE EXAQVISION CAMERAS TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS) INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

H. FIELDHOUSE FLOOR BOXES WILL HAVE ONE EMPTY CONDUIT TO EACH ONE FOR FUTURE TECH CABLES.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T9	PROVIDE ACCESS CONTROL ON BOTH FLOORS FOR ELEVATOR. COORDINATE WITH ELEVATOR CONTRACTOR.
T10	PROVIDE CATEGORY 6A DATA FOR WIRELESS ACCESS POINTS. PROVIDE 20FT. SLACK LOOP COILED NEATLY AND SUPPORTED ABOVE THE CEILING. TERMINATE CABLES AND TEST PER SPECIFICATIONS. NOTE LOCATION ON RECORD DRAWINGS AND MARK LOCATION ON CEILING GRID WITH BLUE DOT. SLACK LOOP NOT NECESSARY FOR LOCATIONS WITH CONDUIT SUCH AS GYMNASIUMS.
T16	PROVIDE CABLES FOR OWNER PROVIDE VIDEO ENTRY PHONE AND CALL BUTTON TO ALLOW COMMUNICATION AND DOOR RELEASE FROM SRO OFFICE AREA.
T17	TWO MAIN ENTRANCE DOORS TO HAVE BUZZ THROUGH CONTROL THAT WILL BE SEPERATELY CONTROLLED FROM THE SRO OFFICE FRONT DESK.
T18	ALL FLOORBOXES IN FIELDHOUSE WILL HAVE ONE EMPTY CONDUIT TO EACH BOX FOR FUTURE DATA CABLING.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

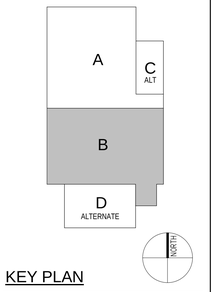
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

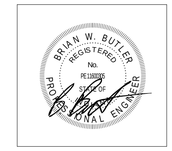
317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS



PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

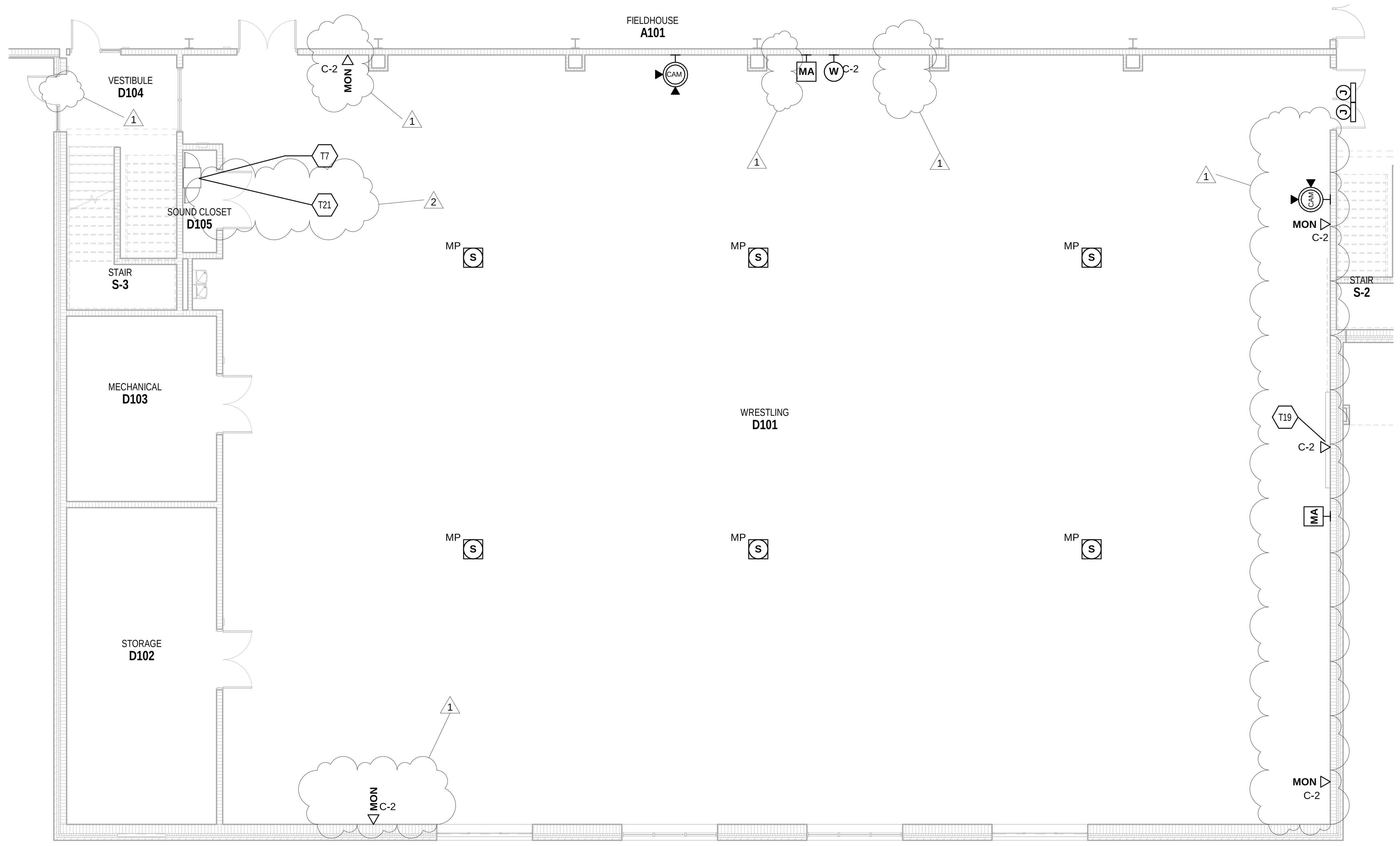
FIRST FLOOR TECHNOLOGY PLAN - UNIT B

T-11B

\\atsa1\ctriprofiles$\sthomas\My Documents\2023_TECH_222130.00_cthomas@KVK3.rvt
2/1/2024 8:48:43 AM

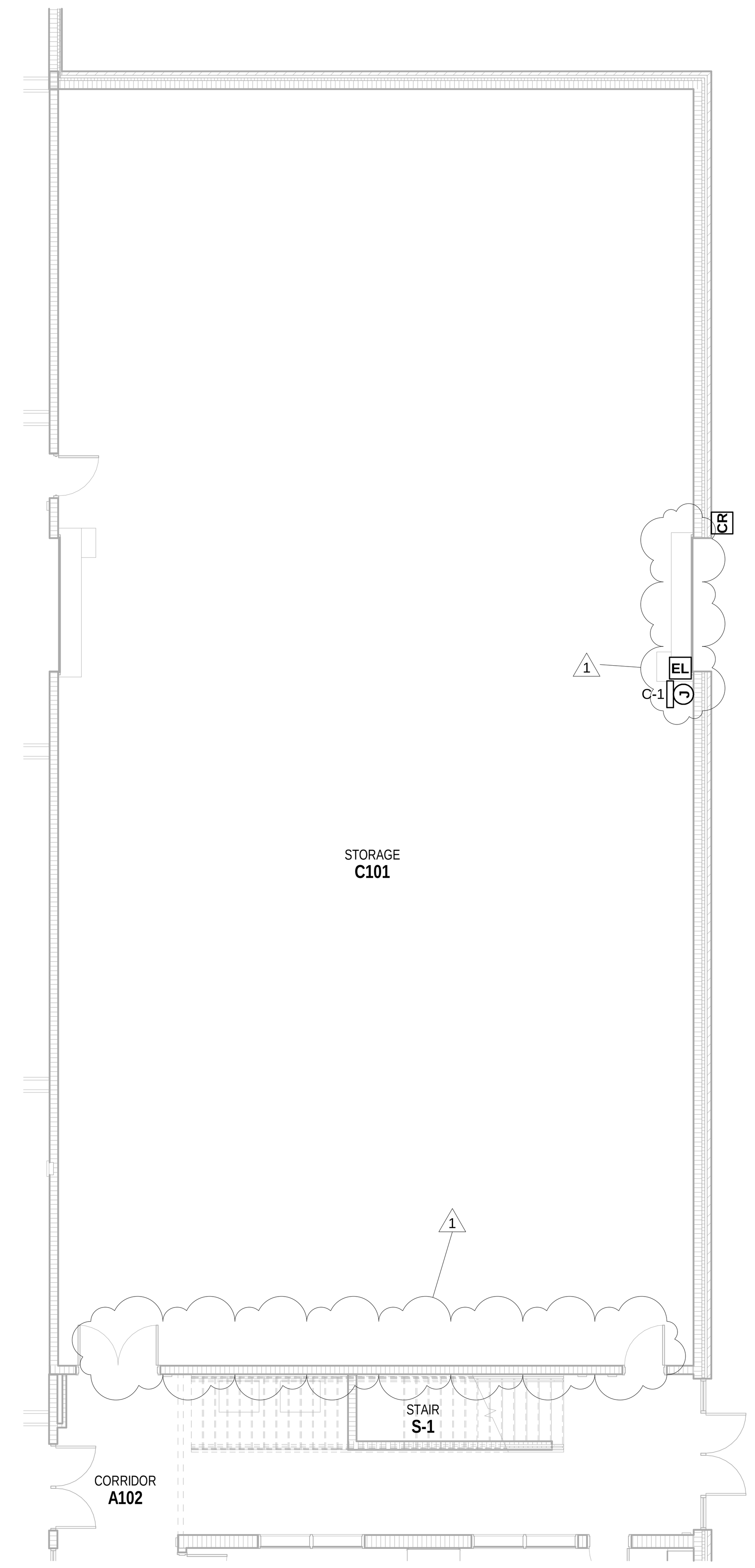
ROOM LEGEND			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A102	-	CORRIDOR	328 SF
A103	-	CORRIDOR	296 SF
A104	117	TRAINING	416 SF
B119	-	LOBBY	1039 SF
S-1	STAIR 2	STAIR	81 SF
S-2	STAIR 1	STAIR	115 SF

ROOM LEGEND			
ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)



2 FIRST FLOOR TECHNOLOGY PLAN - UNIT D ALTERNATE

SCALE: 1/8" = 1'-0"



1 FIRST FLOOR TECHNOLOGY PLAN - UNIT C ALTERNATE

SCALE: 1/8" = 1'-0"

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. CAT6A PATCH CORDS TO BE PROVIDED BY OTHERS.

C. NETWORK EQUIPMENT AND WIRELESS ACCESS POINTS TO BE PROVIDED BY OWNER. INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

D. CLASSROOM PROJECTORS AND SOUND REINFORCEMENT KITS TO BE PROVIDED TURNKEY BY THE DIVISION 27 CONTRACTOR. DIV 27 IS RESPONSIBLE FOR INSTALLATION AND TERMINATION OF ALL CONNECTIVITY WIRING NEEDED AS SHOWN ON DETAILS.

E. ACCESS CONTROL IS ROUGH-IN WIRING ONLY AS SHOWN ON DETAILS. KANTECH SYSTEM EQUIPMENT AND PROGRAMMING TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS)

F. DOOR CONTACTS AND WIRING TO BE PROVIDED BY DOOR HARDWARE 087100 CONTRACTOR.

G. VIDEO SURVEILLANCE EXAQVISION CAMERAS TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS) INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

H. FIELDHOUSE FLOOR BOXES WILL HAVE ONE EMPTY CONDUIT TO EACH ONE FOR FUTURE TECH CABLES.

TECHNOLOGY PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T7	SEE DETAIL 2/T-503 FOR WRESTLING AND DANCE ROOM SOUND SYSTEMS.
T19	COORDINATE WITH ELECTRICAL AND GENERAL CONTRACTOR ON SCOREBOARD CABLE TERMINATIONS.
T21	PROVIDE OPEN 24X24X24 DATA RACKS FOR THE SOUND SYSTEM IN THIS CLOSET.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

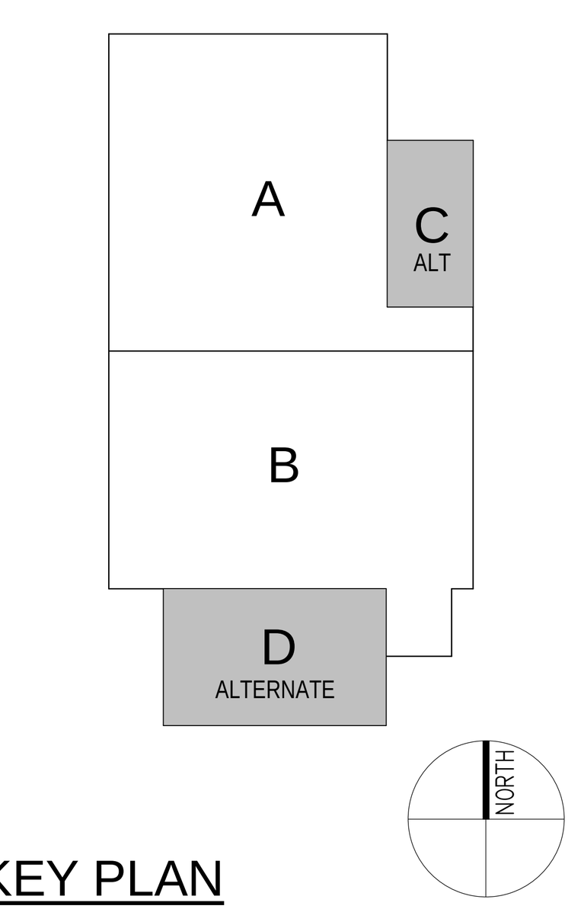
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

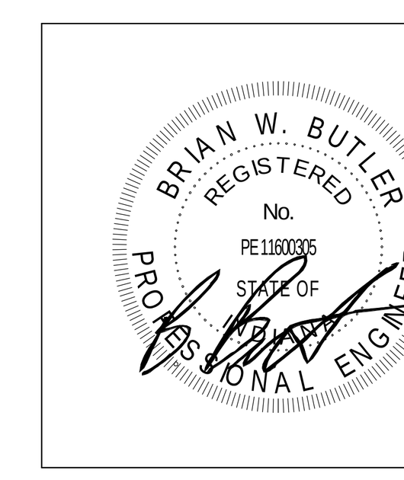
317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS



PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

FIRST FLOOR TECHNOLOGY PLAN - UNIT C & D ALT

T-11C

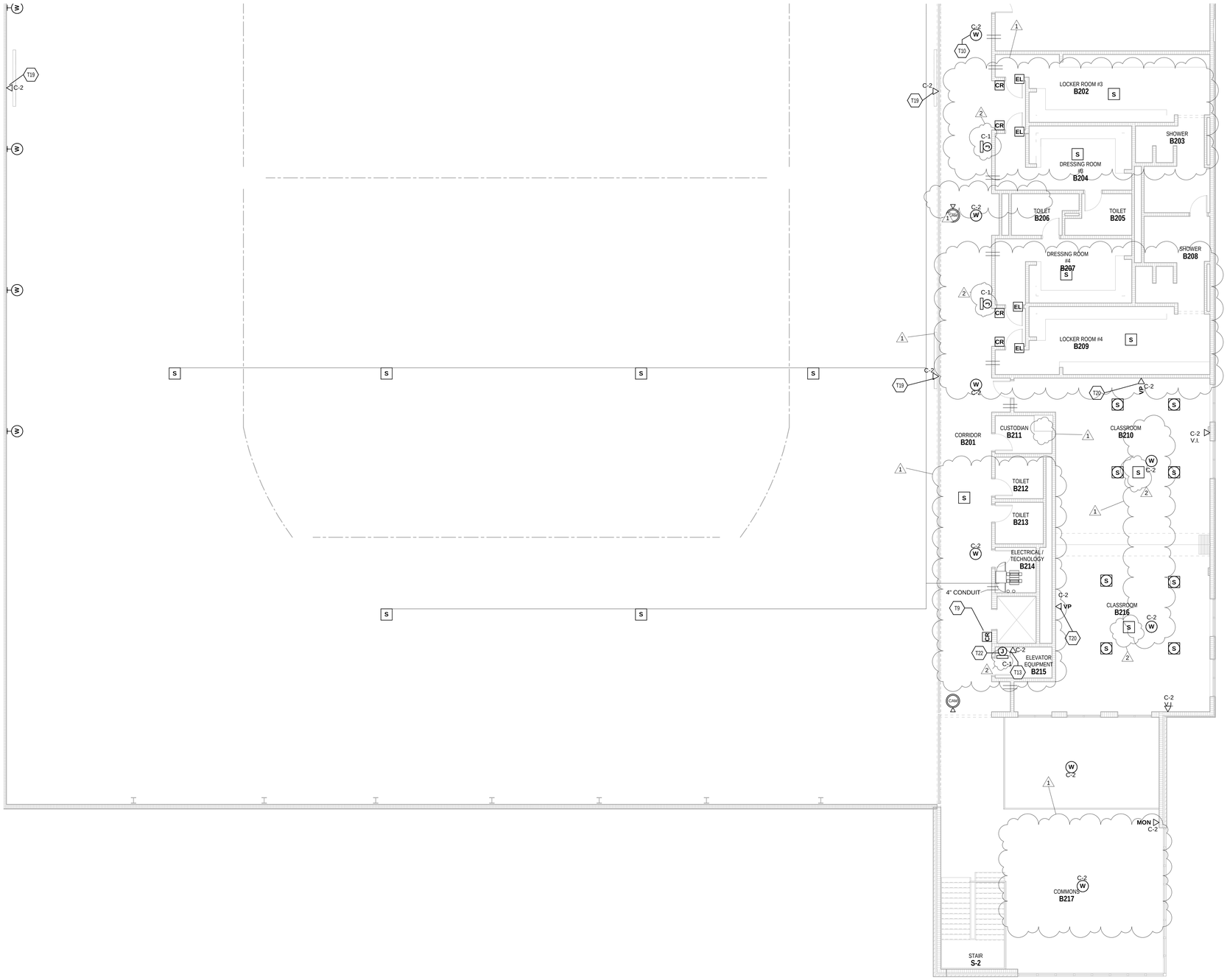
\\data1\cfrmgprofiles$\cthomas\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:48:49 AM

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
A101	102	FIELDHOUSE	54239 SF
A201	-	CORRIDOR	341 SF
A202	212	MECHANICAL	873 SF
B201	-	CORRIDOR	1444 SF
B202	211	LOCKER ROOM #3	399 SF
B203	-	SHOWER	184 SF
B204	210	DRESSING ROOM #3	261 SF
B205	210A	TOILET	74 SF
B206	209A	TOILET	75 SF
B207	209	DRESSING ROOM #4	270 SF
B208	-	SHOWER	184 SF

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
B209	208	LOCKER ROOM #4	402 SF
B210	207	CLASSROOM	842 SF
B211	206	CUSTODIAN	67 SF
B212	205	TOILET	63 SF
B213	204	TOILET	63 SF
B214	203	ELECTRICAL / TECHNOLOGY	58 SF
B215	202	ELEVATOR EQUIPMENT	55 SF
B216	201	CLASSROOM	840 SF
B217	-	COMMONS	984 SF
S-2	STAIR 1	STAIR	175 SF



TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

B. CAT6A PATCH CORDS TO BE PROVIDED BY OTHERS.

C. NETWORK EQUIPMENT AND WIRELESS ACCESS POINTS TO BE PROVIDED BY OWNER. INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR.

D. CLASSROOM PROJECTORS AND SOUND REINFORCEMENT KITS TO BE PROVIDED TURNKEY BY THE DIVISION 27 CONTRACTOR. DIV 27 IS RESPONSIBLE FOR INSTALLATION AND TERMINATION OF ALL CONNECTIVITY WIRING NEEDED AS SHOWN ON DETAILS.

E. ACCESS CONTROL IS ROUGH-IN WIRING ONLY AS SHOWN ON DETAILS. KANTECH SYSTEM EQUIPMENT AND PROGRAMMING TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS)

F. DOOR CONTACTS AND WIRING TO BE PROVIDED BY DOOR HARDWARE 087100 CONTRACTOR.

G. VIDEO SURVEILLANCE EXAQVISION CAMERAS TO BE PROVIDED BY OTHERS. (WIRELESS TECHNOLOGY SOLUTIONS) INSTALLATION, TERMINATION, LABELING AND TESTING OF CABLING BY DIVISION 27 CONTRACTOR. FIELDHOUSE FLOOR BOXES WILL HAVE ONE EMPTY CONDUIT TO EACH ONE FOR FUTURE TECH CABLES.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T9	PROVIDE ACCESS CONTROL ON BOTH FLOORS FOR ELEVATOR. COORDINATE WITH ELEVATOR CONTRACTOR.
T10	PROVIDE CATEGORY 6A DATA FOR WIRELESS ACCESS POINTS. PROVIDE 20FT. SLACK LOOP COILED NEATLY AND SUPPORTED ABOVE THE CEILING. TERMINATE CABLES AND TEST PER SPECIFICATIONS. NOTE LOCATION ON RECORD DRAWINGS AND MARK LOCATION ON CEILING GRID WITH BLUE DOT. SLACK LOOP NOT NECESSARY FOR LOCATIONS WITH CONDUIT SUCH AS GYMNASIUMS.
T13	PROVIDE CABLES FOR ELEVATOR EQUIPMENT. VERIFY EXACT LOCATION WITH ELEVATOR EQUIPMENT CONTRACTOR.
T19	COORDINATE WITH ELECTRICAL AND GENERAL CONTRACTOR ON SCOREBOARD CABLE TERMINATIONS.
T20	CLASSROOM SOUND SYSTEMS SHALL BE CONNECTED BY CABLE TO GIVE THE OPTION OF USING AS ONE OR SEPERATE SYSTEMS.
T22	TECH JUNCTION BOX FOR ELEVATOR ACCESS CONTROL. COORDINATE WITH ELEVATOR CONTRACTOR FOR REQUIREMENTS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

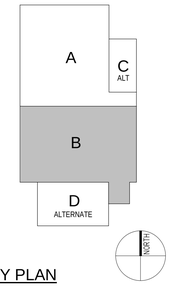
PENN-HARRIS-MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM

350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10300 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS

DRAWN BY: CDT

PROJECT NUMBER: 222130.00

PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

SECOND FLOOR TECHNOLOGY PLAN - UNIT B

T-12B

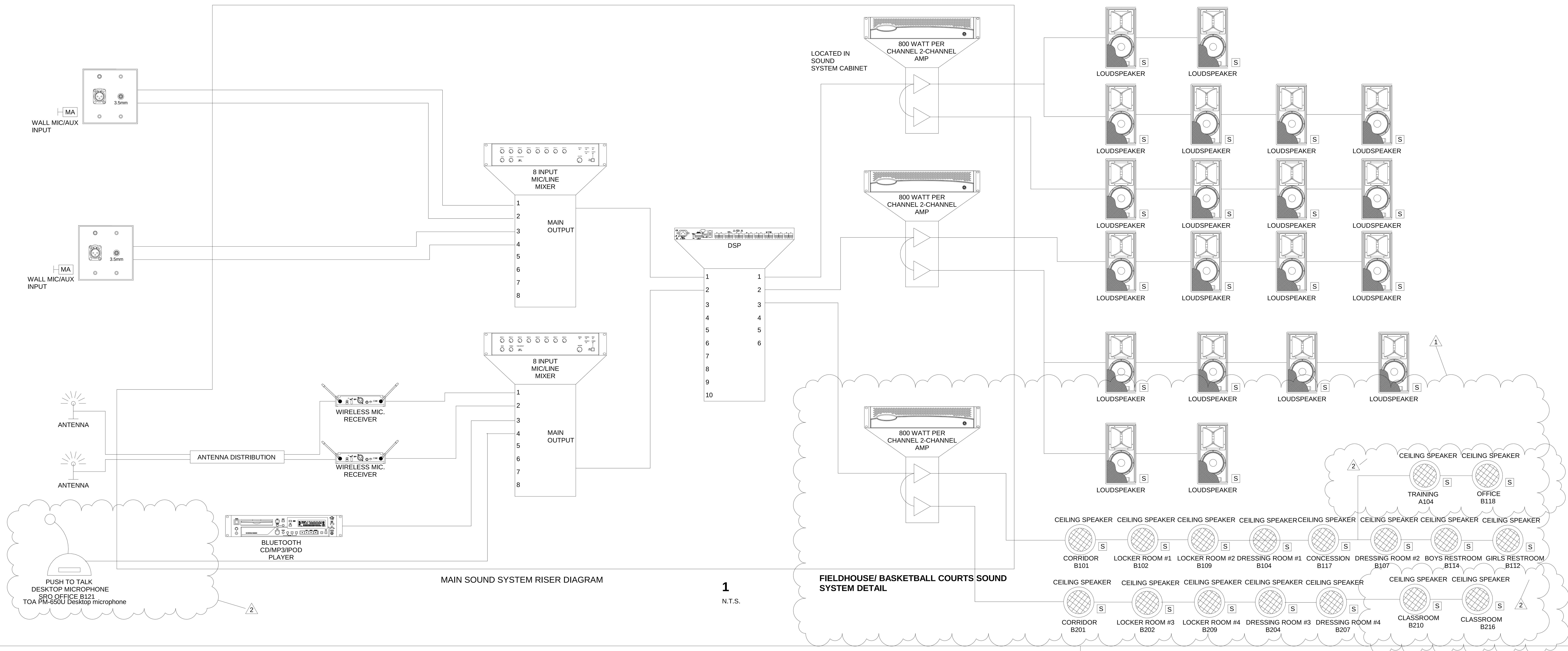
\\data1\cin\profiles$\cthomas\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:46:56 AM

COPYRIGHT 2024 BY FANNING/HOWEY ASSOCIATES, INC.

PENN HIGH SCHOOL FIELDHOUSE

12641 McKinley Highway, Mishawaka, Indiana 46545

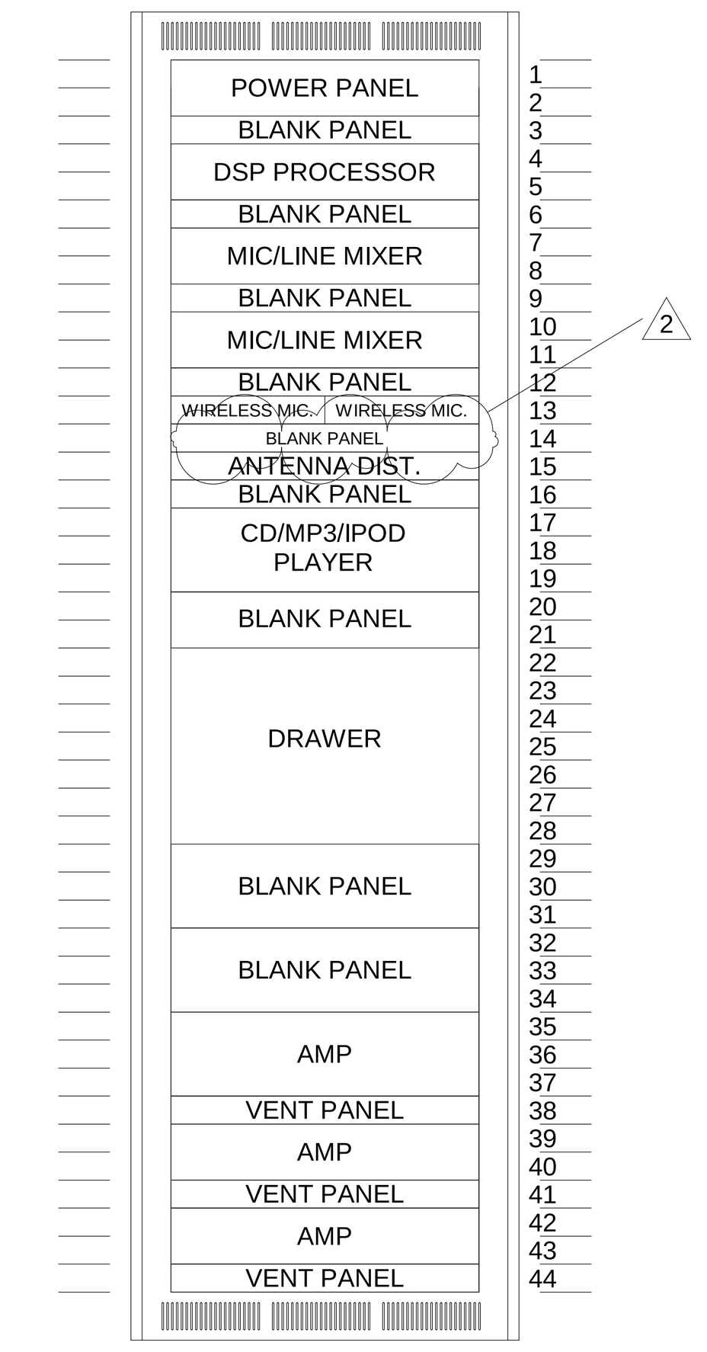
PENN-HARRIS-MADISON SCHOOL CORPORATION



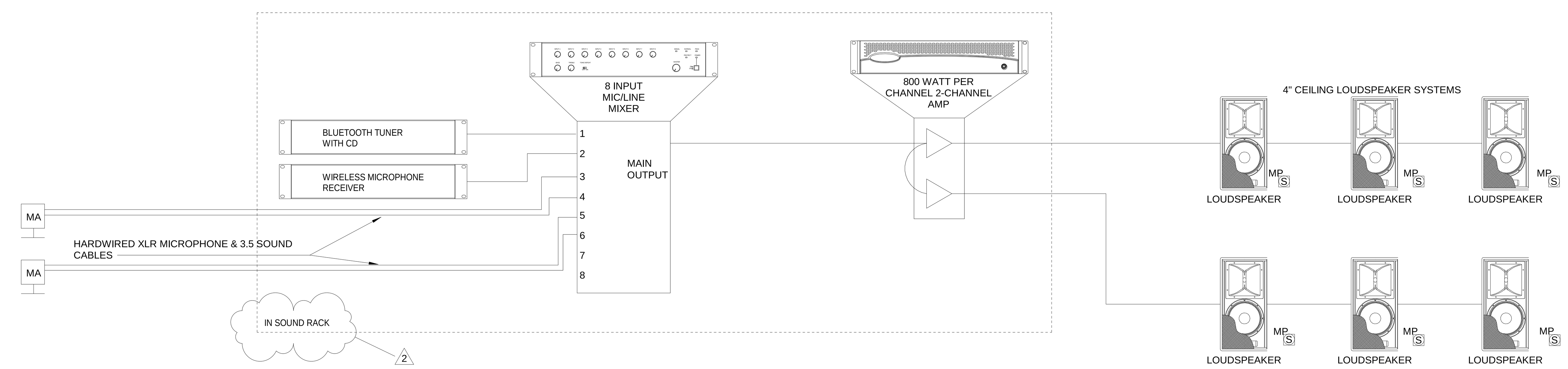
MAIN SOUND SYSTEM RISER DIAGRAM

1
N.T.S.

FIELDHOUSE/ BASKETBALL COURTS SOUND SYSTEM DETAIL



FIELDHOUSE/ BASKETBALL COURTS SOUND SYSTEM CABINET ELEVATION



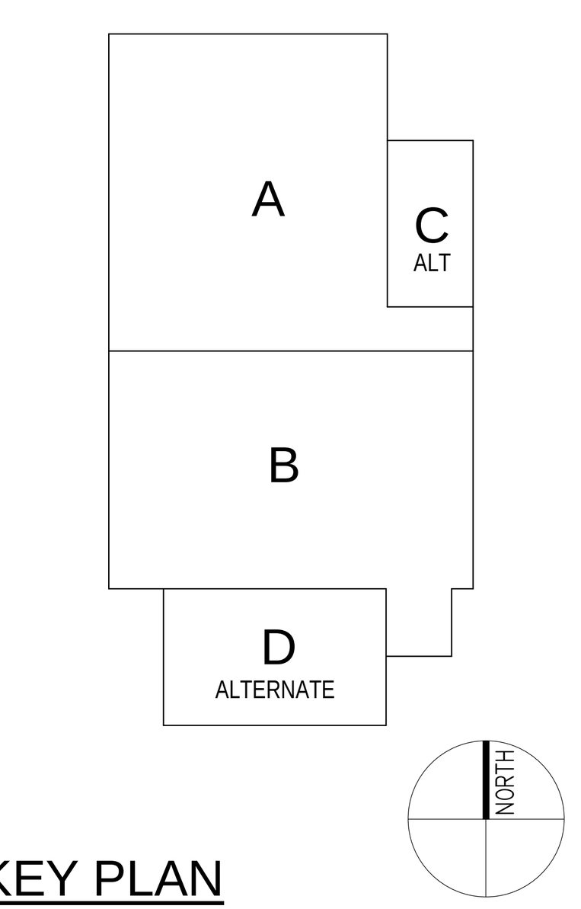
2
N.T.S.

WRESTLING & DANCE ROOMS SOUND SYSTEM

ARCHITECT

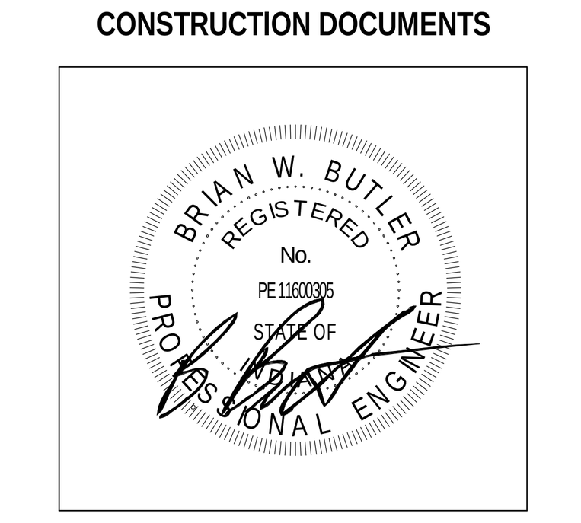
FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E NEW YORK ST #300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS



PROJECT MANAGER: MKS
DRAWN BY: CDT
PROJECT NUMBER: 222130.00
PROJECT ISSUE DATE: 1.13.2024

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	1.26.2024
2	Addendum #2	2.2.2024

TECHNOLOGY DETAILS

T-503

\\data1\diversity\ctrlprofiles$\cthomas\My Documents\2023_TECH_222130.00_cthomas6KVKJ.rvt
2/1/2024 8:49:03 AM