ADDENDUM NO. 1

March 18, 2022

WESTCHESTER INTERMEDIATE SCHOOL ADDITIONS AND RENOVATIONS
Chesterton, IN 46304

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated March 1, 2022 by Gibraltar Design. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 1-1 through ADD 1-4 and attached Addendum No. 1 from Gibraltar Design dated March 16, 2022 and consisting of 4 pages, Specification Section 08 71 00 - Door Hardware, and 48 drawings.

A. SPECIFICATION SECTION 00 00 20 - TABLE OF CONTENTS

1. **Add:**

   a. Specification Section 08 71 00 Door Hardware

B. SPECIFICATION SECTION 00 31 00 - BID FORM

1. **Replace:**

   a. Specification Section 00 31 00 - Bid Form with the attached revised section.

C. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

3.02 General Requirements:

1. **PROVIDED BY ALL CONTRACTORS AS APPLICABLE**

   a. **Replace:**

      Specification Section 01 52 60 Rubbish Container in its entirety.

D. BID CATEGORY NO. 1 - GENERAL TRADES

1. **Delete**:

   a. Specification Section 05 40 00 Cold Formed Metal Framing in its entirety.

2. **Delete**:

   a. Specification Section 10 26 00 Wall Protection in its entirety.

3. **Add:**

   a. Specification Section 08 71 00 Door Hardware

4. **Revise:**

   a. Clarification No. 13:
   The **Bid Category No. 2 Contractor** is responsible for cutting in openings (include demolition and removal) in existing masonry walls where mechanical openings or louvers require a steel lintel; this work shall be coordinated with the **Bid Category No. 2 Contractor**. Also include patch and repair of the masonry to match adjacent masonry. Coordinate all work with the **Bid Category No. 12 Contractor**.

5. **Add:**

   a. Clarification No. 27:
   The **Bid Category No. 1 Contractor** is responsible to provide full protection of the existing terrazzo flooring in the Corridors with a layer of Rosin Paper under a Masonite Board or equal for the duration of each phase. Reference the Guideline Schedule/Phasing plan for these dates. At the end of each phase, and at the direction of the Construction Manager, the **Bid Category No. 1 Contractor** shall fully remove the floor protection and thoroughly clean the terrazzo flooring.

E. BID CATEGORY NO. 2 - MASONRY

1. **Revise:**

   a. Clarification No. 4:
   The **Bid Category No. 2 Contractor** is responsible for cutting in openings (include demolition and removal) in existing masonry walls where mechanical openings or louvers require a steel lintel. Also include patch and repair of the masonry to match adjacent masonry. Coordinate all work with the **Bid Category No. 12 Contractor**.

2. **Revise:**

   a. Clarification No. 6:
   Regarding Specification Section 07 21 27 Enclosed Cavity Foam Insulation, and Specification Section 07 72 31 Air Infiltration Barrier; the **Bid Category No. 2 Contractor** shall provide all Foam Insulation attached to or within the masonry walls. The **Bid Category No. 5 Contractor** shall provide all Foam Insulation attached to or within the metal stud walls system. The **Bid Category No. 3 Contractor** shall provide all other Foam Insulation included in this section.

F. BID CATEGORY NO. 3 - ROOFING/METAL COMPOSITES

1. **Delete:**

   a. Clarification No. 3:
   The **Bid Category No. 1 Contractor** is responsible for cutting in openings (include demolition and removal) in existing masonry walls where mechanical openings or louvers require a steel lintel; this work shall be coordinated with the **Bid Category No. 3 Contractor**. Also include patch and repair of the masonry to match adjacent masonry. Coordinate all work with the **Bid Category No. 12 Contractor**.

2. **Revise:**

   a. Clarification No. 4:
   Regarding Specification Section 07 21 27 Enclosed Cavity Foam Insulation, and Specification Section 07 72 31 Air Infiltration Barrier; the **Bid Category No. 2 Contractor** shall provide all Foam Insulation attached to or within the masonry walls. The **Bid Category No. 5 Contractor** shall provide all Foam Insulation attached to or within the metal stud walls system. The **Bid Category No. 3 Contractor** shall provide all other Foam Insulation included in this section.

G. BID CATEGORY NO. 4 - ALUMINUM ENTRANCES AND GLAZING

1. **Add:**

   a. Specification Section 08 71 00 Door Hardware

H. BID CATEGORY NO. 5 - METAL STUDS/DRYWALL AND ACOUSTICS

1. **Add:**

   a. Specification Section 05 40 00 Cold Formed Metal Framing in its entirety.

2. **Add:**

   a. Specification Section 10 26 00 Wall Protection in its entirety.

I. BID CATEGORY NO. 12 -HVAC

1. **Revise:**

   a. Clarification No. 4:
   The **Bid Category No. 2 Contractor** is responsible for cutting in openings (include demolition and removal) in existing masonry walls where mechanical openings or louvers require a steel lintel; this work shall be coordinated with the **Bid Category No. 2 Contractor**. Also include patch and repair of the masonry to match adjacent masonry. Coordinate all work with the **Bid Category No. 12 Contractor**.

J. SPECIFICATION SECTION 01 23 00 - ALTERNATES

1. **Replace:**

   a. Specification Section 01 23 00 Alternates with the attached revised section

K. SPECIFICATION SECTION 01 32 00 - SCHEDULES AND REPORTS

1. **Add:**

   a. Attached Guideline Schedule and Phasing Plans

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96

Format (Revised 2013)
(Amended for DSC)

Westchester Intermediate School Additions and Renovations

Duneland School Corporation
Chesterton, IN

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year):_____

BIDDER (Firm) _____

Address _____ P.O. Box _____

City/State/Zip _____

Telephone Number: _____ Email Address: _____

Person to contact regarding this Bid_____

Pursuant to notices given, the undersigned offers to furnish labor and/or materials necessary to complete the public works project of:

_____
Insert Category No. (s) and Name(s)

Of public works project, ***Westchester Intermediate School Additions and Renovations***, in accordance with Plans and Specifications prepared by ***Gibraltar Design, 9102 N. Meridian St., Ste. #300, Indianapolis, IN 46260***, as follows:

BASE BID

For the sum of _____
(Sum in words)

_____DOLLARS ($_____)
(Sum in figures)

The undersigned acknowledges receipt of the following Addenda:
Receipt of Addenda No. (s) _____

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference YES _____ NO_____

Has visited the jobsite YES _____ NO_____

The Bidder has reviewed the Guideline Schedule in Section 01 32 00 and the intent Of the schedule can be met.

YES _____ NO_____

Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6.

YES _____ NO_____

The Skillman Corporation's diversity initiative is to create a program to encourage, assist and measure the active participation of Minority- Owned, Women-Owned, Veteran – Owned and Disabled Individual-Owned Businesses. The Program is to ensure that MWVDBEs are provided full and equal opportunity to participate in all Skillman Corporation's Projects.

Bidder has included:

DBE: YES _____% NO _____
MBE: YES _____% NO _____
WBE: YES _____% NO _____
VBE: YES _____% NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit bases, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin, or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(if applicable)

I, the undersigned bidder, or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

****MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE****

Alternate Bid No. 1 – Tremco TPA roofing for ALL new roofs

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 2 – Tremco TPA roofing for All existing roofs

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 3 – Entrance Canopy

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 4 – Divider curtain in Gymnasium A-113

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 5 – Epoxy terrazzo floor finish

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 6 – Schneider Electric Temperature Controls Installed by Precision Controls

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 7 – Roof Top Units Manufactured by Trane

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 8 – Chillers Manufactured by Trane

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 9 – Air Handling Units Manufactured by Trane

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 10 – Chemical Water Treatment Manufactured by H-O-H

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 11 – Fire Alarm System Manufactured by Notifier

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. 12 – Emergency Generator Manufactured by Caterpillar

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

PART II

(For projects of $150,000 or more – IC 36-1-12-4)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?_____If so, where and why?

_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and addresses of each subcontractor, equipment to be used by the subcontractor, and whether you will required a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed Project? Any equipment used by subcontractors may also be required to be listed by the governmental unit.

5. Have you into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which corroborate the process listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Dated at _____this _____ day of _____, 20

_____
(Name of Organization)

By

_____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) SS:
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named

_____

Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____,

_____
(Title)

_____
Notary Public

My Commission Expires: _____

County of Residence: _____

END OF SECTION 00 31 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including amended General Conditions and other Division 1 Specification Sections, apply to work of this Section.

1.02 PURPOSE

A. The Bids for the Alternates described herein are required in order for the Owner to obtain information necessary for the proper consideration of the Project in its entirety.

1.03 ALTERNATES

A. Definitions: Alternates are defined as alternate products, materials, equipment, installations or systems for the Work, which may, at Owner's option and under terms established by Instructions to Bidders, be selected and recorded in the Owner-Contractor Agreement to either supplement or displace corresponding basic requirements of Contract Documents. Alternates may or may not substantially change scope and general character of the Work; and must not be confused with "allowances", "unit prices", "change orders", "substitutions", and other similar provisions.

1.04 SCHEDULE OF ALTERNATES

A. ALTERNATE NO. 1: State the cost to provide new Tremco TPA roofing for ALL new roofs as indicted on the Contract Documents.

B. ALTERNATE NO. 2: State the cost to provide new Tremco TPA roofing at portions of the existing roof membrane as indicated on the Contract Documents.

C. ALTERNATE NO. 3: State the cost to provide the new entrance canopy in its entirety located between Units F and H, as indicated on the Contract Documents.

D. ALTERNATE NO. 4: State the cost to provide a divider curtain in Gymnasium A-113.

E. ALTERNATE NO. 5: State the cost to provide epoxy terrazzo floor finish in new corridors in lieu of LVT floor finish as indicated on the Contract Documents.

F. ALTERNATE NO. 6: State the cost to provide Schneider Electric Controls installed by Precision Controls as indicated on the Mechanical Drawings and Specifications if not already included in your Base Bid.

G. ALTERNATE NO. 7: State the cost to provide Roof Top Units manufactured by Trane as indicated on the Mechanical Drawings and Specifications if not already included in your Base bid.

H. ALTERNATE NO. 8: State the cost to provide Chillers manufactured by Trane as indicated on the Mechanical Drawings and Specifications if not already included in your Base Bid.

I. ALTERNATE NO. 9: State the cost to provide Air Handling Units manufactured by Trane as indicated on the Mechanical Drawings Specifications if not already included in your Base Bid.

J. ALTERNATE NO. 10: State the cost to provide Chemical Water Treatment manufactured by H-O-H. as indicated on the Plumbing Drawings and Specifications if not already included in your Base Bid.

K. ALTERNATE NO. 11: State the cost to provide Fire Alarm System manufactured by Notifier as indicated on the Electrical Drawings and Specifications if not already included in your Base Bid.

L. ALTERNATE NO. 12: State the cost to provide Emergency Generator manufactured by Caterpillar as indicated on the Electrical Drawings and Specifications if not already included in your Base Bid.

PART 2 - PRODUCTS, PART 3 - EXECUTION (Not Used)

END OF SECTION 01 23 00

SECTION 01 52 60 - RUBBISH CONTAINER

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including amended General Conditions and other Division 1 Specification Sections, apply to work of this Section.

B. Masonry, Roofing, and Metal Studs & Drywall Contractors are to provide their own rubbish containers (See Section 01 56 90, Paragraph 3.01C)

1.02 RUBBISH CONTAINER

A. The **Bid Category No. 1 Contractor** shall provide three hundred (210) each 30 yarders dumpster type rubbish container for the Project waste, debris, and rubbish for all Contractors, except as specified in 1.01.B above, for the life of the Project.

B. This amount shall be listed on the Schedule of Values for approval. Any unused amounts shall be credit back to the Owner as a deductive Change Order.

C. Dispose of container contents weekly or at more frequent intervals if required by inadequate container capacity.

D. **Provide fifteen (15) one cubic yard mobile trash carts that can be used during the project by all Contractors, after the initial floors are cast.**

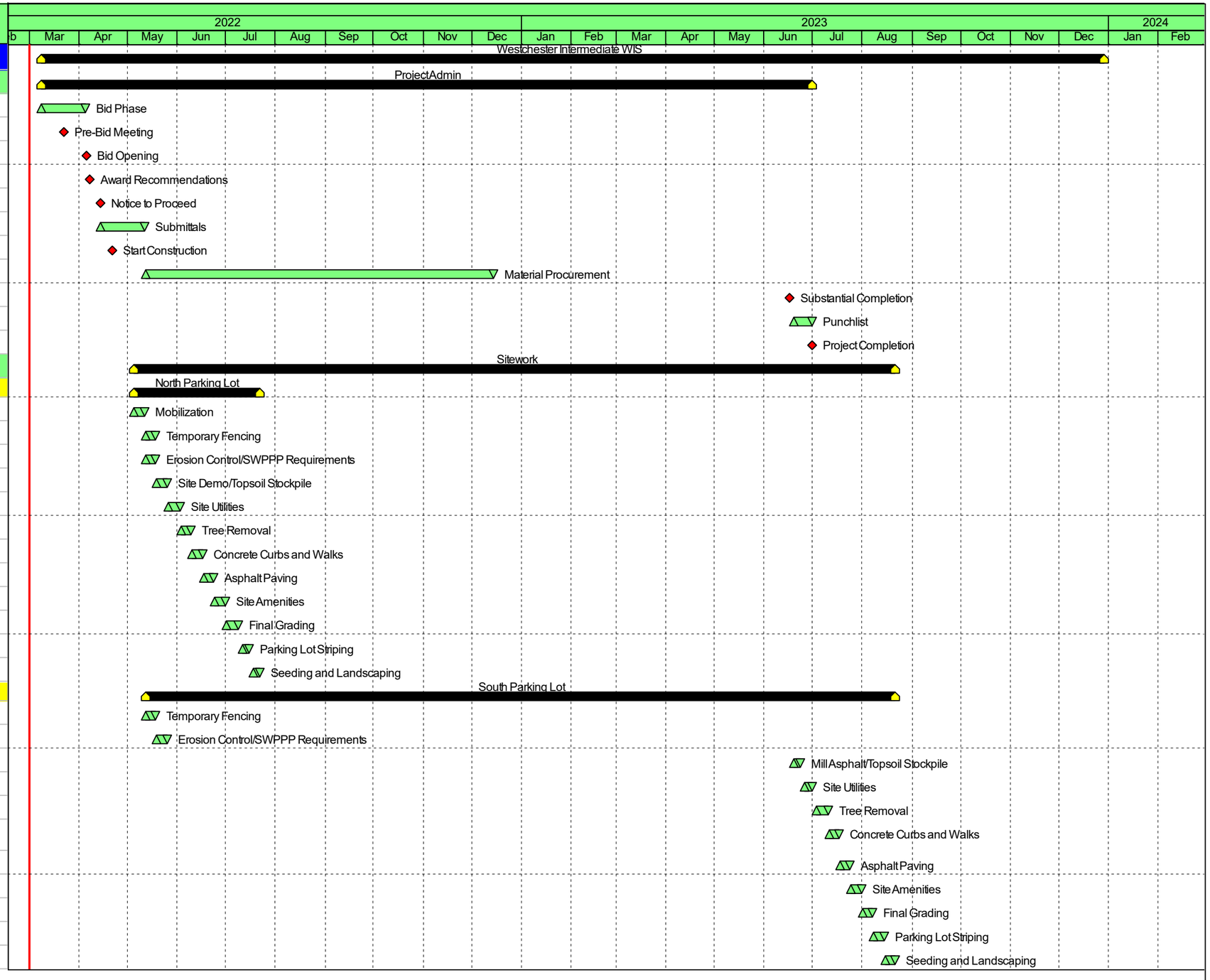
1. **The General Trades Contractor shall empty all one cubic yard trash carts at the end of the workday, regardless of the Prime Contractor filling the cart. All trash carts shall be returned to their appropriate spot upon being emptied. The General Trades Contractor will be fined $50 for every cart not emptied and returned to the original assigned location, as determined by the Construction Manager.**
2. **The Masonry, Roofing, and Drywall Contractors are not permitted to use the one cubic yard trash carts supplied by the General Trades Contractor. The Masonry and Drywall Contractors are to supply sufficient trash carts to remove their debris on a daily basis. A $50 fine will be assessed for each cart container not emptied at the end of the day, as determined by the Construction Manager.**

1.03 TRASH CHUTES

A. The **Bid Category No. 1 Contractor** shall erect a suitable, closed, relatively dust-free chutes for the use by all trades during construction above ground floor. No material or debris will be permitted to drop free.
   1. Coordinate this installation with the Construction Manager and other Contractors.

END OF SECTION 01 52 60

Activity Name	Original Duration	Start	Finish
Westchester Intermediate WIS	466	08-Mar-22	29-Dec-23
Project Admin	337	08-Mar-22	30-Jun-23
Bid Phase	20	08-Mar-22*	04-Apr-22
Pre-Bid Meeting	0	22-Mar-22	
Bid Opening	0	05-Apr-22	
Award Recommendations	0	07-Apr-22	
Notice to Proceed	0	14-Apr-22*	
Submittals	20	14-Apr-22	11-May-22
Start Construction	0	21-Apr-22	
Material Procurement	150	12-May-22	14-Dec-22
Substantial Completion	0		16-Jun-23
Punchlist	10	19-Jun-23	30-Jun-23
Project Completion	0		30-Jun-23
Sitework	330	05-May-22	21-Aug-23
North Parking Lot	55	05-May-22	22-Jul-22
Mobilization	5	05-May-22	11-May-22
Temporary Fencing	5	12-May-22	18-May-22
Erosion Control/SWPPP Requirements	5	12-May-22	18-May-22
Site Demo/Topsoil Stockpile	5	19-May-22	25-May-22
Site Utilities	5	26-May-22	02-Jun-22
Tree Removal	5	03-Jun-22	09-Jun-22
Concrete Curbs and Walks	5	10-Jun-22	16-Jun-22
Asphalt Paving	5	17-Jun-22	23-Jun-22
Site Amenities	5	24-Jun-22	30-Jun-22
Final Grading	5	01-Jul-22	08-Jul-22
Parking Lot Striping	5	11-Jul-22	15-Jul-22
Seeding and Landscaping	5	18-Jul-22	22-Jul-22
South Parking Lot	325	12-May-22	21-Aug-23
Temporary Fencing	5	12-May-22	18-May-22
Erosion Control/SWPPP Requirements	5	19-May-22	25-May-22
Mill Asphalt/Topsoil Stockpile	5	19-Jun-23	23-Jun-23
Site Utilities	5	26-Jun-23	30-Jun-23
Tree Removal	5	03-Jul-23	10-Jul-23
Concrete Curbs and Walks	5	11-Jul-23	17-Jul-23
Asphalt Paving	5	18-Jul-23	24-Jul-23
Site Amenities	5	25-Jul-23	31-Jul-23
Final Grading	5	01-Aug-23	07-Aug-23
Parking Lot Striping	5	08-Aug-23	14-Aug-23
Seeding and Landscaping	5	15-Aug-23	21-Aug-23



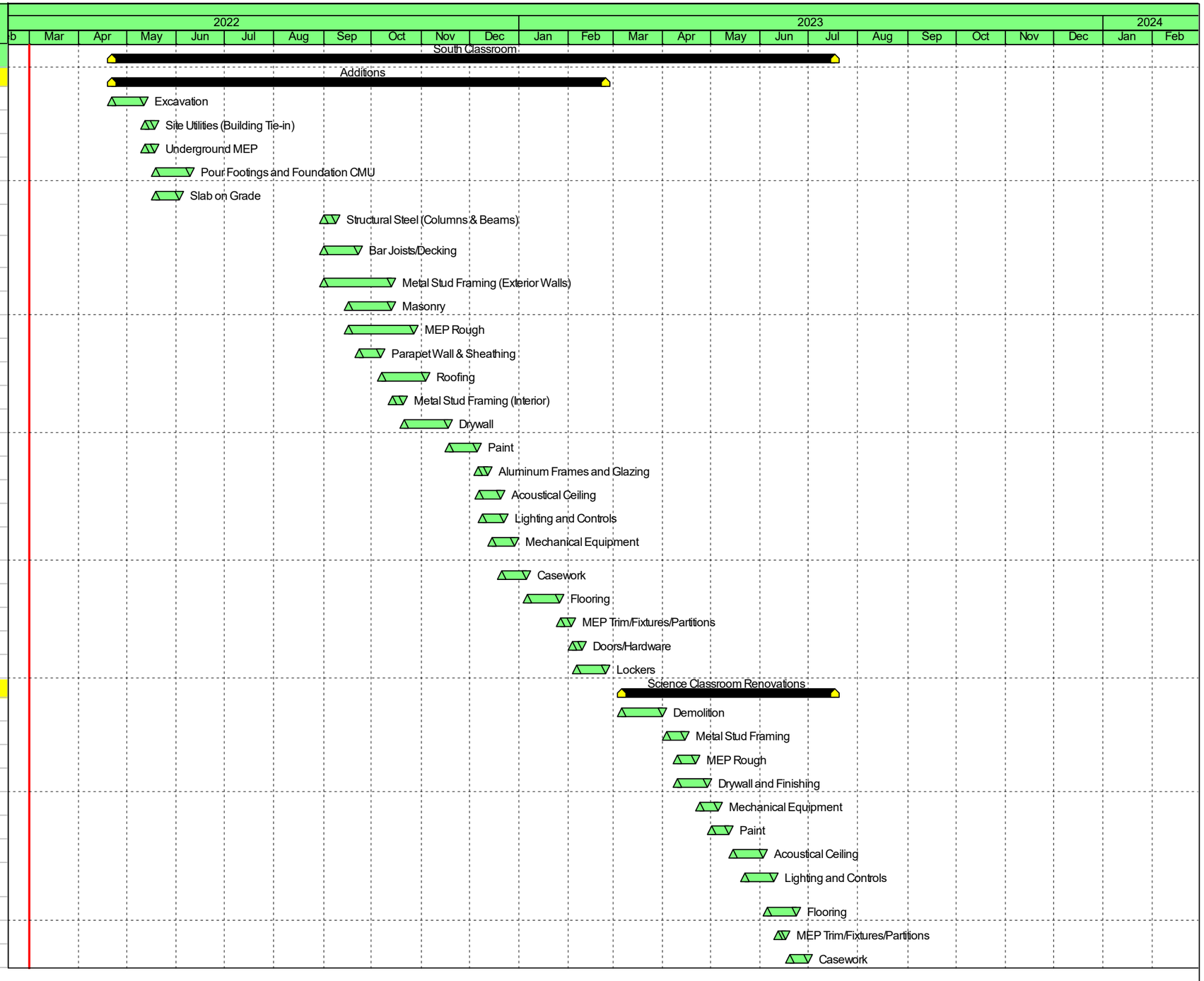
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

219091.09 Westchester Intermediate WIS

Guideline Schedule 01-Mar-22

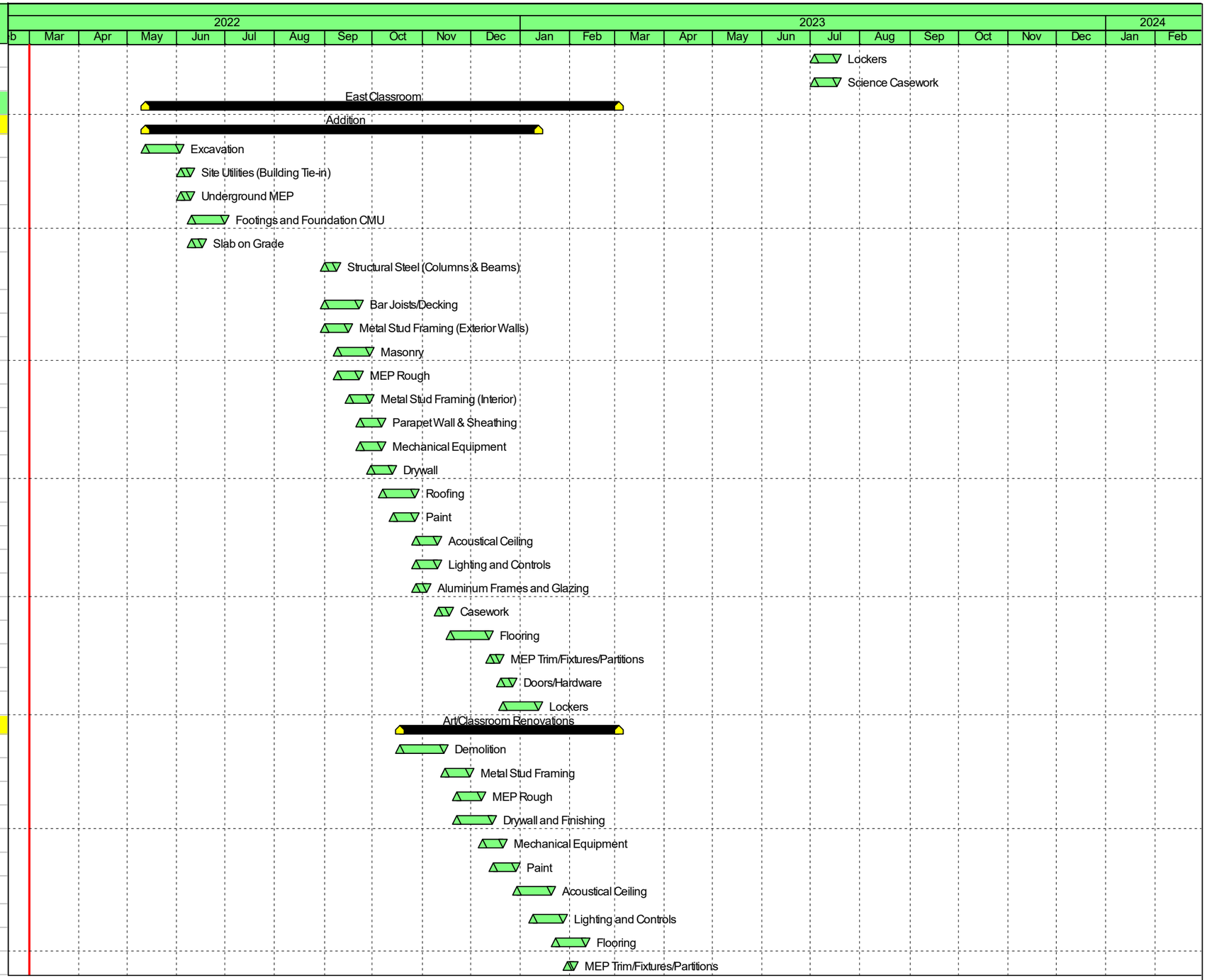
SKILLMAN

Activity Name	Original Duration	Start	Finish
South Classroom	315	21-Apr-22	17-Jul-23
Additions	215	21-Apr-22	24-Feb-23
Excavation	15	21-Apr-22	11-May-22
Site Utilities (Building Tie-in)	5	12-May-22	18-May-22
Underground MEP	5	12-May-22	18-May-22
Pour Footings and Foundation CMU	15	19-May-22	09-Jun-22
Slab on Grade	10	19-May-22	02-Jun-22
Structural Steel (Columns & Beams)	5	01-Sep-22	08-Sep-22
Bar Joists/Decking	15	01-Sep-22	22-Sep-22
Metal Stud Framing (Exterior Walls)	30	01-Sep-22	13-Oct-22
Masonry	20	16-Sep-22	13-Oct-22
MEP Rough	30	16-Sep-22	27-Oct-22
Parapet Wall & Sheathing	10	23-Sep-22	06-Oct-22
Roofing	20	07-Oct-22	03-Nov-22
Metal Stud Framing (Interior)	5	14-Oct-22	20-Oct-22
Drywall	20	21-Oct-22	17-Nov-22
Paint	10	18-Nov-22	05-Dec-22
Aluminum Frames and Glazing	5	06-Dec-22	12-Dec-22
Acoustical Ceiling	10	07-Dec-22	20-Dec-22
Lighting and Controls	10	09-Dec-22	22-Dec-22
Mechanical Equipment	10	15-Dec-22	29-Dec-22
Casework	10	21-Dec-22	05-Jan-23
Flooring	15	06-Jan-23	26-Jan-23
MEP Trim/Fixtures/Partitions	5	27-Jan-23	02-Feb-23
Doors/Hardware	5	03-Feb-23	09-Feb-23
Lockers	15	06-Feb-23	24-Feb-23
Science Classroom Renovations	95	06-Mar-23	17-Jul-23
Demolition	20	06-Mar-23	31-Mar-23
Metal Stud Framing	10	03-Apr-23	14-Apr-23
MEP Rough	10	10-Apr-23	21-Apr-23
Drywall and Finishing	15	10-Apr-23	28-Apr-23
Mechanical Equipment	10	24-Apr-23	05-May-23
Paint	10	01-May-23	12-May-23
Acoustical Ceiling	15	15-May-23	02-Jun-23
Lighting and Controls	15	22-May-23	09-Jun-23
Flooring	15	05-Jun-23	23-Jun-23
MEP Trim/Fixtures/Partitions	5	12-Jun-23	16-Jun-23
Casework	10	19-Jun-23	30-Jun-23



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Activity Name	Original Duration	Start	Finish
Lockers	10	03-Jul-23	17-Jul-23
Science Casework	10	03-Jul-23	17-Jul-23
East Classroom	205	12-May-22	03-Mar-23
Addition	169	12-May-22	12-Jan-23
Excavation	15	12-May-22	02-Jun-22
Site Utilities (Building Tie-in)	5	03-Jun-22	09-Jun-22
Underground MEP	5	03-Jun-22	09-Jun-22
Footings and Foundation CMU	15	10-Jun-22	30-Jun-22
Slab on Grade	5	10-Jun-22	16-Jun-22
Structural Steel (Columns & Beams)	5	01-Sep-22	08-Sep-22
Bar Joists/Decking	15	01-Sep-22	22-Sep-22
Metal Stud Framing (Exterior Walls)	10	01-Sep-22	15-Sep-22
Masonry	15	09-Sep-22	29-Sep-22
MEP Rough	10	09-Sep-22	22-Sep-22
Metal Stud Framing (Interior)	10	16-Sep-22	29-Sep-22
Parapet Wall & Sheathing	10	23-Sep-22	06-Oct-22
Mechanical Equipment	10	23-Sep-22	06-Oct-22
Drywall	10	30-Sep-22	13-Oct-22
Roofing	15	07-Oct-22	27-Oct-22
Paint	10	14-Oct-22	27-Oct-22
Acoustical Ceiling	10	28-Oct-22	10-Nov-22
Lighting and Controls	10	28-Oct-22	10-Nov-22
Aluminum Frames and Glazing	5	28-Oct-22	03-Nov-22
Casework	5	11-Nov-22	17-Nov-22
Flooring	15	18-Nov-22	12-Dec-22
MEP Trim/Fixtures/Partitions	5	13-Dec-22	19-Dec-22
Doors/Hardware	5	20-Dec-22	27-Dec-22
Lockers	15	21-Dec-22	12-Jan-23
Art/Classroom Renovations	95	18-Oct-22	03-Mar-23
Demolition	20	18-Oct-22	14-Nov-22
Metal Stud Framing	10	15-Nov-22	30-Nov-22
MEP Rough	10	22-Nov-22	07-Dec-22
Drywall and Finishing	15	22-Nov-22	14-Dec-22
Mechanical Equipment	10	08-Dec-22	21-Dec-22
Paint	10	15-Dec-22	29-Dec-22
Acoustical Ceiling	15	30-Dec-22	20-Jan-23
Lighting and Controls	15	09-Jan-23	27-Jan-23
Flooring	15	23-Jan-23	10-Feb-23
MEP Trim/Fixtures/Partitions	5	30-Jan-23	03-Feb-23



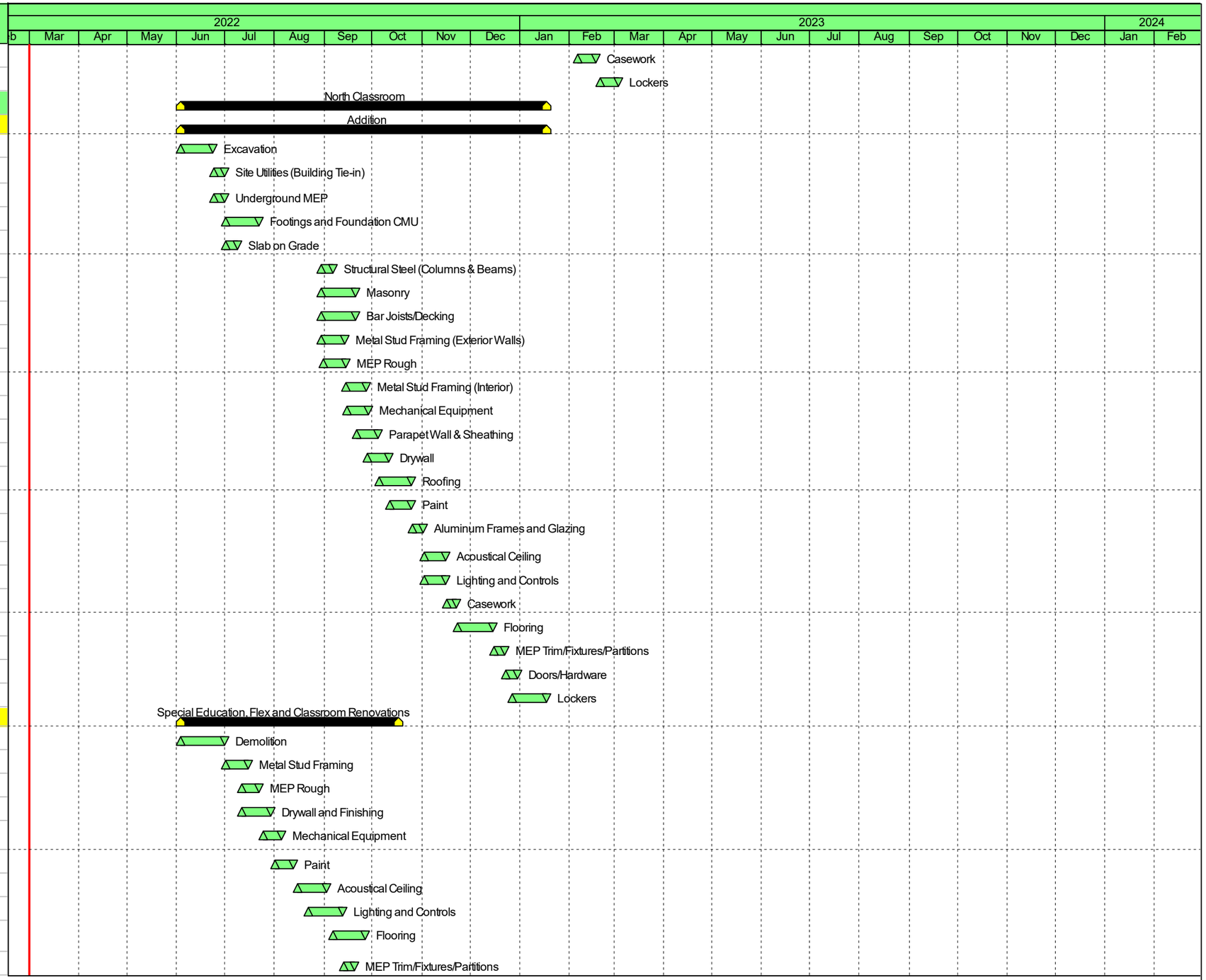
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

219091.09 Westchester Intermediate WIS

Guideline Schedule 01-Mar-22

SKILLMAN

Activity Name	Original Duration	Start	Finish
Casework	10	06-Feb-23	17-Feb-23
Lockers	10	20-Feb-23	03-Mar-23
North Classroom	157	03-Jun-22	17-Jan-23
Addition	157	03-Jun-22	17-Jan-23
Excavation	15	03-Jun-22	23-Jun-22
Site Utilities (Building Tie-in)	5	24-Jun-22	30-Jun-22
Underground MEP	5	24-Jun-22	30-Jun-22
Footings and Foundation CMU	15	01-Jul-22	22-Jul-22
Slab on Grade	5	01-Jul-22	08-Jul-22
Structural Steel (Columns & Beams)	5	30-Aug-22	06-Sep-22
Masonry	15	30-Aug-22	20-Sep-22
Bar Joists/Decking	15	30-Aug-22	20-Sep-22
Metal Stud Framing (Exterior Walls)	10	30-Aug-22	13-Sep-22
MEP Rough	10	31-Aug-22	14-Sep-22
Metal Stud Framing (Interior)	10	14-Sep-22	27-Sep-22
Mechanical Equipment	10	15-Sep-22	28-Sep-22
Parapet Wall & Sheathing	10	21-Sep-22	04-Oct-22
Drywall	10	28-Sep-22	11-Oct-22
Roofing	15	05-Oct-22	25-Oct-22
Paint	10	12-Oct-22	25-Oct-22
Aluminum Frames and Glazing	5	26-Oct-22	01-Nov-22
Acoustical Ceiling	10	02-Nov-22	15-Nov-22
Lighting and Controls	10	02-Nov-22	15-Nov-22
Casework	5	16-Nov-22	22-Nov-22
Flooring	15	23-Nov-22	15-Dec-22
MEP Trim/Fixtures/Partitions	5	16-Dec-22	22-Dec-22
Doors/Hardware	5	23-Dec-22	30-Dec-22
Lockers	15	27-Dec-22	17-Jan-23
Special Education, Flex and Classroom R	95	03-Jun-22	17-Oct-22
Demolition	20	03-Jun-22	30-Jun-22
Metal Stud Framing	10	01-Jul-22	15-Jul-22
MEP Rough	10	11-Jul-22	22-Jul-22
Drywall and Finishing	15	11-Jul-22	29-Jul-22
Mechanical Equipment	10	25-Jul-22	05-Aug-22
Paint	10	01-Aug-22	12-Aug-22
Acoustical Ceiling	15	15-Aug-22	02-Sep-22
Lighting and Controls	15	22-Aug-22	12-Sep-22
Flooring	15	06-Sep-22	26-Sep-22
MEP Trim/Fixtures/Partitions	5	13-Sep-22	19-Sep-22



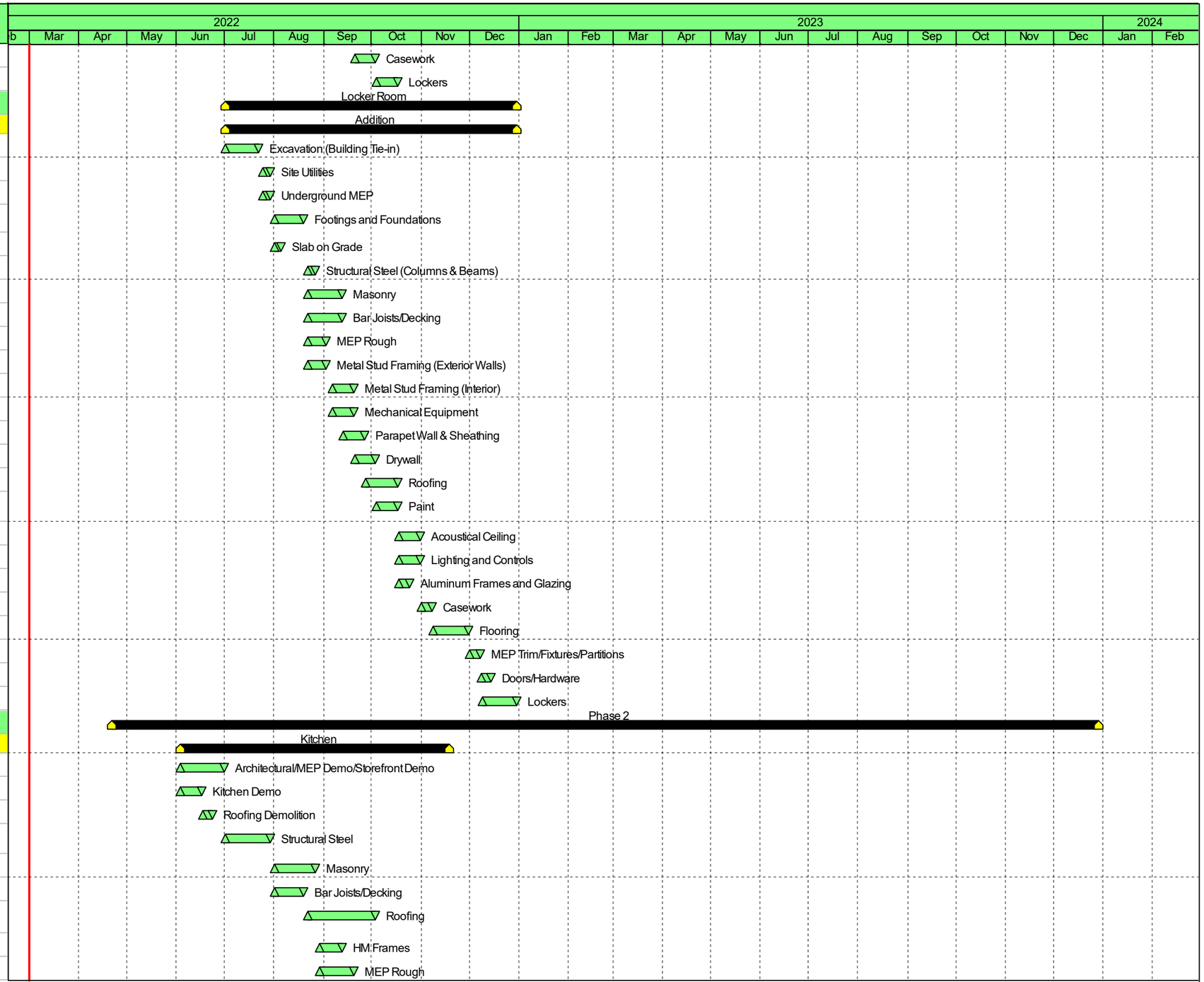
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

219091.09 Westchester Intermediate WIS

Guideline Schedule 01-Mar-22

SKILLMAN

Activity Name	Original Duration	Start	Finish
Casework	10	20-Sep-22	03-Oct-22
Lockers	10	04-Oct-22	17-Oct-22
Locker Room	126	01-Jul-22	30-Dec-22
Addition	126	01-Jul-22	30-Dec-22
Excavation (Building Tie-in)	15	01-Jul-22	22-Jul-22
Site Utilities	5	25-Jul-22	29-Jul-22
Underground MEP	5	25-Jul-22	29-Jul-22
Footings and Foundations	15	01-Aug-22	19-Aug-22
Slab on Grade	5	01-Aug-22	05-Aug-22
Structural Steel (Columns & Beams)	5	22-Aug-22	26-Aug-22
Masonry	15	22-Aug-22	12-Sep-22
Bar Joists/Decking	15	22-Aug-22	12-Sep-22
MEP Rough	10	22-Aug-22	02-Sep-22
Metal Stud Framing (Exterior Walls)	10	22-Aug-22	02-Sep-22
Metal Stud Framing (Interior)	10	06-Sep-22	19-Sep-22
Mechanical Equipment	10	06-Sep-22	19-Sep-22
Parapet Wall & Sheathing	10	13-Sep-22	26-Sep-22
Drywall	10	20-Sep-22	03-Oct-22
Roofing	15	27-Sep-22	17-Oct-22
Paint	10	04-Oct-22	17-Oct-22
Acoustical Ceiling	10	18-Oct-22	31-Oct-22
Lighting and Controls	10	18-Oct-22	31-Oct-22
Aluminum Frames and Glazing	5	18-Oct-22	24-Oct-22
Casework	5	01-Nov-22	07-Nov-22
Flooring	15	08-Nov-22	30-Nov-22
MEP Trim/Fixtures/Partitions	5	01-Dec-22	07-Dec-22
Doors/Hardware	5	08-Dec-22	14-Dec-22
Lockers	15	09-Dec-22	30-Dec-22
Phase 2	434	21-Apr-22	29-Dec-23
Kitchen	119	03-Jun-22	18-Nov-22
Architectural/MEP Demo/Storefront Demo	20	03-Jun-22	30-Jun-22
Kitchen Demo	10	03-Jun-22	16-Jun-22
Roofing Demolition	5	17-Jun-22	23-Jun-22
Structural Steel	20	01-Jul-22	29-Jul-22
Masonry	20	01-Aug-22	26-Aug-22
Bar Joists/Decking	15	01-Aug-22	19-Aug-22
Roofing	30	22-Aug-22	03-Oct-22
HM Frames	10	29-Aug-22	12-Sep-22
MEP Rough	15	29-Aug-22	19-Sep-22



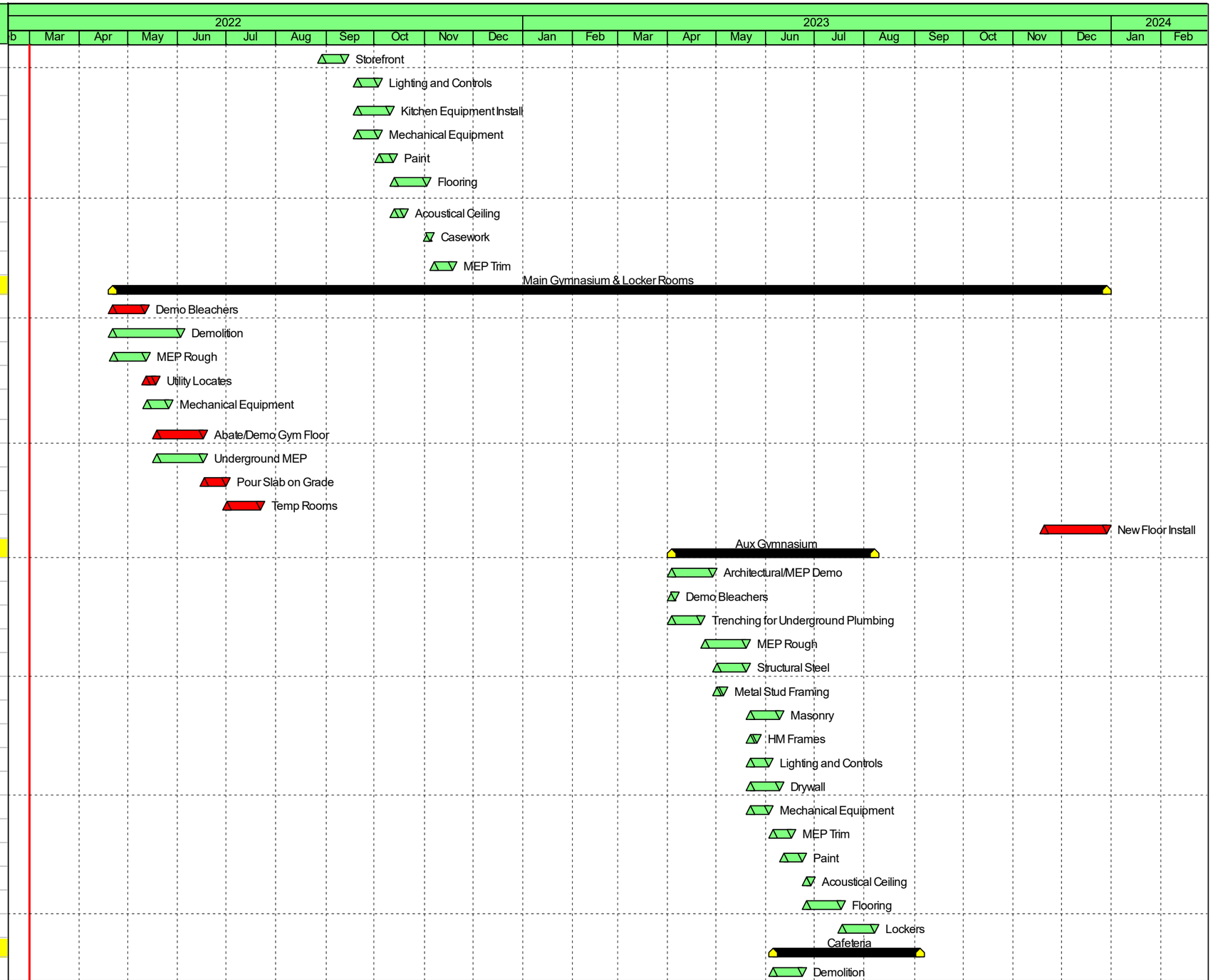
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

219091.09 Westchester Intermediate WIS

Guideline Schedule 01-Mar-22

SKILLMAN

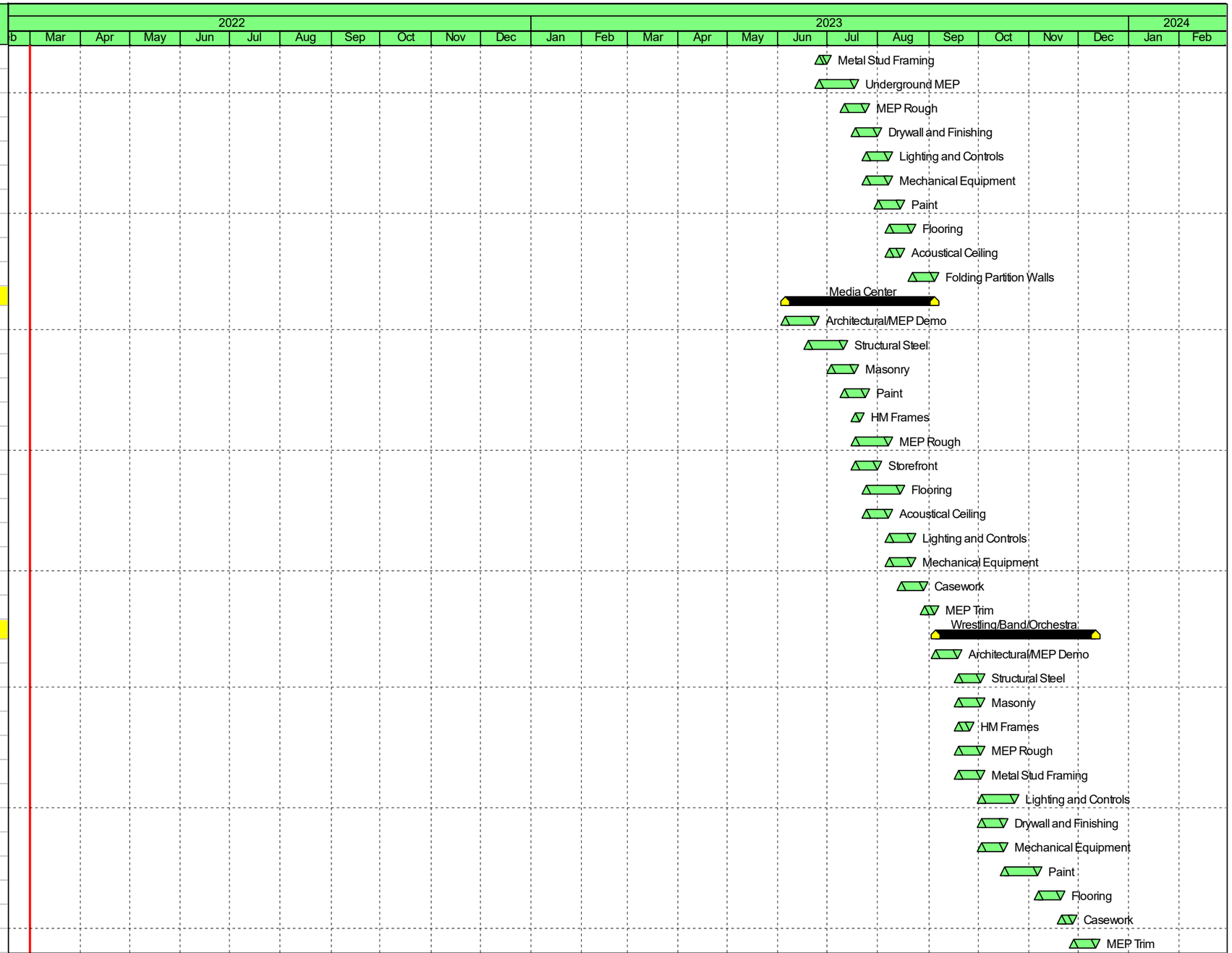
Activity Name	Original Duration	Start	Finish
Storefront	10	29-Aug-22	12-Sep-22
Lighting and Controls	10	20-Sep-22	03-Oct-22
Kitchen Equipment Install	15	20-Sep-22	10-Oct-22
Mechanical Equipment	10	20-Sep-22	03-Oct-22
Paint	7	04-Oct-22	12-Oct-22
Flooring	15	13-Oct-22	02-Nov-22
Acoustical Ceiling	5	13-Oct-22	19-Oct-22
Casework	2	03-Nov-22	04-Nov-22
MEP Trim	10	07-Nov-22	18-Nov-22
Main Gymnasium & Locker Rooms	434	21-Apr-22	29-Dec-23
Demo Bleachers	15	21-Apr-22	11-May-22
Demolition	30	21-Apr-22	02-Jun-22
MEP Rough	15	22-Apr-22	12-May-22
Utility Locates	5	12-May-22	18-May-22
Mechanical Equipment	10	13-May-22	26-May-22
Abate/Demo Gym Floor	20	19-May-22	16-Jun-22
Underground MEP	20	19-May-22	16-Jun-22
Pour Slab on Grade	10	17-Jun-22	30-Jun-22
Temp Rooms	15	01-Jul-22	22-Jul-22
New Floor Install	30	20-Nov-23	29-Dec-23
Aux Gymnasium	90	03-Apr-23	07-Aug-23
Architectural/MEP Demo	20	03-Apr-23	28-Apr-23
Demo Bleachers	3	03-Apr-23	05-Apr-23
Trenching for Underground Plumbing	15	03-Apr-23	21-Apr-23
MEP Rough	20	24-Apr-23	19-May-23
Structural Steel	15	01-May-23	19-May-23
Metal Stud Framing	5	01-May-23	05-May-23
Masonry	15	22-May-23	09-Jun-23
HM Frames	5	22-May-23	26-May-23
Lighting and Controls	10	22-May-23	02-Jun-23
Drywall	15	22-May-23	09-Jun-23
Mechanical Equipment	10	22-May-23	02-Jun-23
MEP Trim	10	05-Jun-23	16-Jun-23
Paint	10	12-Jun-23	23-Jun-23
Acoustical Ceiling	3	26-Jun-23	28-Jun-23
Flooring	15	26-Jun-23	17-Jul-23
Lockers	15	18-Jul-23	07-Aug-23
Cafeteria	65	05-Jun-23	04-Sep-23
Demolition	15	05-Jun-23	23-Jun-23



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

SKILLMAN

Activity Name	Original Duration	Start	Finish
Metal Stud Framing	5	26-Jun-23	30-Jun-23
Underground MEP	15	26-Jun-23	17-Jul-23
MEP Rough	10	11-Jul-23	24-Jul-23
Drywall and Finishing	10	18-Jul-23	31-Jul-23
Lighting and Controls	10	25-Jul-23	07-Aug-23
Mechanical Equipment	10	25-Jul-23	07-Aug-23
Paint	10	01-Aug-23	14-Aug-23
Flooring	10	08-Aug-23	21-Aug-23
Acoustical Ceiling	5	08-Aug-23	14-Aug-23
Folding Partition Walls	10	22-Aug-23	04-Sep-23
Media Center	65	05-Jun-23	04-Sep-23
Architectural/MEP Demo	15	05-Jun-23	23-Jun-23
Structural Steel	15	19-Jun-23	10-Jul-23
Masonry	10	03-Jul-23	17-Jul-23
Paint	10	11-Jul-23	24-Jul-23
HM Frames	3	18-Jul-23	20-Jul-23
MEP Rough	15	18-Jul-23	07-Aug-23
Storefront	10	18-Jul-23	31-Jul-23
Flooring	15	25-Jul-23	14-Aug-23
Acoustical Ceiling	10	25-Jul-23	07-Aug-23
Lighting and Controls	10	08-Aug-23	21-Aug-23
Mechanical Equipment	10	08-Aug-23	21-Aug-23
Casework	10	15-Aug-23	28-Aug-23
MEP Trim	5	29-Aug-23	04-Sep-23
Wrestling/Band/Orchestra	70	05-Sep-23	11-Dec-23
Architectural/MEP Demo	10	05-Sep-23	18-Sep-23
Structural Steel	10	19-Sep-23	02-Oct-23
Masonry	10	19-Sep-23	02-Oct-23
HM Frames	5	19-Sep-23	25-Sep-23
MEP Rough	10	19-Sep-23	02-Oct-23
Metal Stud Framing	10	19-Sep-23	02-Oct-23
Lighting and Controls	15	03-Oct-23	23-Oct-23
Drywall and Finishing	10	03-Oct-23	16-Oct-23
Mechanical Equipment	10	03-Oct-23	16-Oct-23
Paint	15	17-Oct-23	06-Nov-23
Flooring	10	07-Nov-23	20-Nov-23
Casework	5	21-Nov-23	27-Nov-23
MEP Trim	10	28-Nov-23	11-Dec-23



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

219091.09 Westchester Intermediate WIS

Guideline Schedule 01-Mar-22

SKILLMAN

NEW ACEL LANE

TICKETS/ CONCESSION/ ATHLETIC STORAGE

± 130 CAR DOUBLE QUEUE (GRADES 5-8)

NEW DECEL LANE

EXISTING WALKS

NEW WALKS

Future Bid Package

SB

SHOT PUT

DETENTION

VISITOR/STAFF PARKING

IS

GATED

SERVICE

CONC

PRESS BOX

TICKETS

GATED

NEW DECEL LANE

BUS IN/OUT

EVENT PARKING

BUS PARKING (25)

RCVG

ETENTION

CAR IN/OUT

NEW ACEL LANE

Trailer Compound /Staging Area

MS

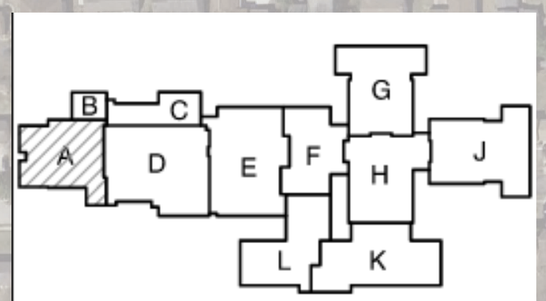
VISITOR PARKING

EXISTING WALKS

Stone Access Road

S 11TH ST

S 5TH ST

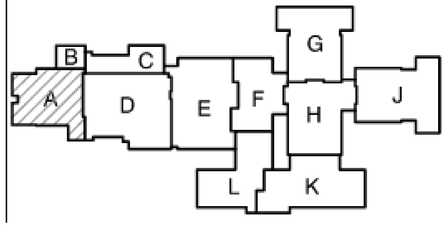


NORTH

Phasing Plan 3/18/22
OVERALL SITE PLAN
Westchester Intermediate/Middle School

GIBRALTAR DESIGN

The SKILLMAN Corporation
Project Administration
Construction Management



Addition G
June 2022 - January 2023

Special Education, Flex and Classrooms
June 2022 - October 2022

Wrestling and Band
Sept 23 - December '23

Applied Skills, Health and Admin/Office
Dec '22 - May '23

Locker Room Addition
July 2022 - December 2022

Main Gymnasium and Small Locker Rooms
April 2022 - December 2023

Cafeteria
June '23 - Aug '23

Media Center
June 2023-
Sept 2023

Art and Classrooms
October 2022 - March 2023

Addition J
May 2022 - January 2023

Clinic, Aux Gym, Choir and Orchestra
April 2023 - August 2023

Kitchen
June 2022 - November 2022

Science Classrooms
March 2023 - July 2023

Additions L & K
April 2022 - February 2023

Zones
April 2022 - December 2023
April 2022 - February 2023
May 2022 - January 2023
June 2022 - January 2023
June 2022 - October 2022
June 2022 - November 2022
July 2022 - December 2022
October 2022 - March 2023
December 2022 - May 2023
March 2023 - July 2023
April 2023 - August 2023
June 2023 - August 2023
June 2023 - September 2023
September 2023 - December 2023

ADDENDUM ONE

Addendum One (AD.01) to the drawings and specifications prepared by Gibraltar Design for **Westchester Intermediate School Additions and Renovations** for Duneland School Corporation, Chesterton, Indiana.

All Contractors bidding on this project shall read all of the items covered below and shall comply with all of the requirements as set forth, including any necessary refinements or additions generated by this Addendum and required by the intent of the original contract documents. All Contractors shall acknowledge on their bid form that they have received this Addendum and include the appropriate content of same within their bid proposal.

SPECIFICATIONS

1. **Specification Section 08 71 00 Door Hardware**
   A. Add Specification Section 08 71 00, Door Hardware, included in this Addendum, to the Project Manual.
2. **Specification Section 12 35 53 Science Laboratory Casework & Equipment**
   A. Add Paragraph 2.7 A.3 to read: "Kewaunee Scientific Corporation, Statesville, North Carolina."

DRAWINGS

3. **Civil Sheets: (15 Total)**
   C-1.2, C-1.3, C-2.0, C-2.1, C-3.0, C-3.1, C-3.2, C-3.3;
   C-4.0, C-4.1, C-4.2, C-4.3; C-4.4, C-5.0 and C-5.1
   A. Replace Civil Drawing Sheets listed above with fifteen (15) revised full size drawings included in this Addendum.
4. **Sheets S-001, S-103, S-104, S-105, S-107, S-109**
   A. Refer to six (6) revised full size drawings, included in this Addendum, for revisions.
5. **Sheets S-200 thru S-208**
   A. Refer to nine (9) revised, full-size drawings included in this Addendum, for revisions.
6. **Sheets S-411, S-412 and S-413**
   A. Refer to three (3) revised, full-size drawings included in this Addendum, for revisions.
7. **Sheets S-420 and S-421**
   A. Refer to two (2) revised, full-size drawings included in this Addendum, for revisions.
8. **Sheet A-801**
   A. Change Plan Note 6 to read: "Not Used".
   B. In the following rooms, provide "RF3" in lieu of "CT": A-114, A-115.
   C. In the following rooms, provide "B3" in lieu of "TB1": A-114, A-115.

D. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

9. Sheets A-802 and A-803

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

10. Sheet A-804

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In Rooms E-116, E-117, E-118, E-119, E-120, E-121, E-122, E-123, E-124, E-125 and E-126, provide "QT" in lieu of "PT".

D. In the following rooms, provide "RF3" in lieu of "CT": E-102 and E-103.

E. In the following rooms, provide "B3" in lieu of "TB1": E-102 and E-103.

11. Sheet A-805

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

12. Sheet A-806

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In the following rooms, provide "RF3" in lieu of "CT": G-123 and G-125.

D. In the following rooms, provide "B3" in lieu of "TB1": G-123 and G-125.

13. Sheet A-807

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In the following rooms, provide "RF3" in lieu of "CT": H-127.

D. In the following rooms, provide "B3" in lieu of "TB1": H-127.

E. In the following rooms, provide "B3" in lieu of "B1": H-110, H-111, H-112.

F. In the following rooms, provide "RF3" in lieu of "LVT1": H-110, H-111, H-112.

14. Sheet A-808

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In the following rooms, provide "RF3" in lieu of "CT": J-113, J-115.

D. In the following rooms, provide "B3" in lieu of "TB1": J-113, J-115.

15. Sheet A-809

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In the following rooms, provide "RF3" in lieu of "CT": K-109.

D. In the following rooms, provide "B3" in lieu of "TB1": K-109.

16. Sheet A-810

A. Change Plan Note 6 to read: "Not Used".

B. Change Plan Note 24 to read: "Paint bottom and face of bulkhead, P4".

C. In the following rooms, provide "RF3" in lieu of "CT": L-119, L-120.

D. In the following rooms, provide "B3" in lieu of "TB1": L-119, L-120.

E. In Extended Learning L-112, change Plan Note 6 to Plan Note 7.

17. Sheet PD103

A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:

1. Added Note 4 to sinks in Art Room ED-116.
2. Added Notes 1 and 4 to fixtures in STEM ED-117.
3. Added Note 4 to sink in Choir ED-121.
4. Added Sheet Note 19 and showed existing piping.
5. Added Note 1 and 2 to fixtures in Toilet ED-103.
6. Added Note 4 to sink in Girls Locker Room ED-110.

18. Sheet PD104

A. Refer to revised, full-size drawing included in this Addendum, for notes added to sanitary piping in Boiler Room EE-06.

19. Sheet PD107

A. Refer to revised, full-size drawing included in this Addendum, for notes added to Toilet EH-112 and EH-113.

20. Sheet PD005

A. Refer to revised, full-size drawing included in this Addendum, for note added to existing piping.

21. Sheet P-104

A. Refer to revised, full-size drawing included in this Addendum, for vent added for greasy waste line.

22. Sheet P-204

A. Refer to revised, full-size drawing included in this Addendum, for 4" VTR added in Receiving E-128.

23. Sheets FP-004 and FP-005

A. Refer to two (2) revised, full-size drawings included in this Addendum, for Sheet Note 1 added to note routing of fire protection piping is conceptual.

24. Sheets FP-105

A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:

1. Sheet Note 1 added to note routing of fire protection piping is conceptual.
2. Added conceptual routing of fire protection piping in chase between Toilet H-123 and H-124.

25. Sheet FP-106

A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:

1. Sheet Note 1 added to note routing of fire protection piping is conceptual.
2. Added conceptual routing of fire protection piping in chase between Toilet J-119 and J-120.

26. Sheet EL-105

A. Refer to revised, full-size drawing included in this Addendum, for lighting revised in Rooms F-103, F-104, F-105 and F-106 from recessed to pendant style fixtures.

27. Sheet EP-105

A. Replace Sheet EP-105 with full-size drawing included in this Addendum. Fire alarm devices have been added.

28. Sheet E604

A. Refer to revised, full-size drawing included in this Addendum, for fume hood circuit added to Panel PP-6 for Science H-118.

Pages 1 through 4, inclusive, Specification Section 08 71 00, and Forty-Eight (48) Full-Size Drawings, constitute the total makeup of **Addendum One**.

GIBRALTAR DESIGN

Y:\21-141 Duneland SC - Westchester Intermediate School Additions and Renovations\Specs\Addendum ONE\AD01.doc

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware for:

a. Swinging doors.

2. Electronic access control system components, including:

a. Electronic access control devices.

3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.
4. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
3. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
4. Division 26 sections for connections to electrical power system and for low-voltage wiring.

5. Division 28 sections for coordination with other components of electronic access control system.

1.03 REFERENCES

A. UL - Underwriters Laboratories

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Key Systems and Nomenclature

C. ANSI - American National Standards Institute

1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.04 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 requirements.
2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

B. Action Submittals:

1. Product Data: Technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:
   1) Details of interface of electrified door hardware and building safety and security systems.
   2) Schematic diagram of systems that interface with electrified door hardware.
   3) Point-to-point wiring.
   4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.

    a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:

    a. Door Index; include door number, heading number, and Architects hardware set number.
    b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
    c. Quantity, type, style, function, size, and finish of each hardware item.
    d. Name and manufacturer of each item.
    e. Fastenings and other pertinent information.
    f. Location of each hardware set cross-referenced to indications on Drawings.
    g. Explanation of all abbreviations, symbols, and codes contained in schedule.
    h. Mounting locations for hardware.
    i. Door and frame sizes and materials.
    j. Name and phone number for local manufacturer's representative for each product.
    k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.
    l. Submittal Sequence: After field verifying existing conditions, submit door hardware schedule, including and noting any adjustments required based on field verification of existing conditions, concurrent with submissions of Product Data, Samples, and Shop Drawings; Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:

    a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
    b. Use ANSI/BHMA A156.28 “Recommended Practices for Keying Systems” as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
    c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
    d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
    e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
        1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.

C. Informational Submittals:

1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product data for electrified door hardware:

a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.

3. Certificates of Compliance:

a. UL listings for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.

4. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Factory order acknowledgement numbers (for warranty and service)
d. Name, address, and phone number of local representative for each manufacturer.
e. Parts list for each product.
f. Final approved hardware schedule, edited to reflect conditions as-installed.
g. Final keying schedule
h. Copies of floor plans with keying nomenclature
i. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
j. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.05 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies:

1. Furnish finish hardware to comply with the requirements of laws, codes, ordinances, and regulations of the governmental authorities having jurisdiction where such requirements exceed the requirements of the Specifications.

2. Furnish finish hardware to comply with the requirements of the regulations for public building accommodations for physically handicapped persons of the governmental authority having jurisdiction and to comply with Americans with Disabilities Act.
3. Provide hardware for fire rated openings in compliance with NFPA 80 and state and local building code requirements. Provide only hardware that has been tested and listed by UL for types and sizes of doors required and complies with requirements of door and door frame labels.

B. Supplier:

1. Mechanical Hardware

   a. Shall be an established firm dealing in contract builders' hardware. Distributor must have adequate inventory, qualified personnel on staff and be located within 100 miles of the project. The distributor must be a factory-authorized dealer for all materials required. The supplier shall be or have in employment an Architectural Hardware Consultant (AHC).
   b. Door Hardware distributor/supplier listed on the Bid Form shall be a factory authorized distributor for the hardware specified. This requirement will not be allowed to be med by a non-factory authorized dealer subcontracting to a factory authorized dealer. Any submitted bid that attempts to circumvent this requirement will be considered non-response and will be removed from consideration.

2. Electrified Hardware:

   a. Shall be an experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials. The supplier must be a factory-authorized distributor for all materials required.
   b. Shall prepare data for electrified door hardware, including shop drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this project.
   c. Shall have experience in providing consulting services for electrified door hardware installations.

C. Installer Qualifications:

1. Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.

D. Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
2. Can provide installation and technical data to Architect and other related subcontractors.
3. Can inspect and verify components are in working order upon completion of installation.
4. Capable of producing wiring diagrams.
5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.

E. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

F. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

G. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

H. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in “REFERENCES” article, herein.

I. Field Verification Conference

1. To ensure design intent can be met after verification of existing conditions, conduct an onsite door by door review of the submittal
2. Conduct the meeting with the architect and the owner to complete a final verification of how each door will function, including product to be supplied.

J. Keying Conference

1. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

    a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
    b. Preliminary key system schematic diagram.
    c. Requirements for key control system.
    d. Requirements for access control.
    e. Address for delivery of keys.

2. Attendees of Keying Conference: Owner, Contractor, Architect, Installer, Owner’s security consultant and Supplier’s Architectural Hardware Consultant.

K. Pre-installation Conference

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.

L. Coordination Conferences:

1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

1. Deliver each article of hardware in manufacturer's original packaging.

C. Project Conditions:

1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

D. Protection and Damage:

1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

E. Deliver keys to Owner by registered mail or overnight package service.

1.07 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, access control, and keying with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.08 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.

a. Closers:
1) Mechanical: 30 years**.**

b. Automatic Operators: 2 years.
c. Exit Devices:
1) Mechanical: 3 years.
2) Electrified: 1 year.

d. Locksets:
1) Mechanical: 3 years; Schlage ND series, 10 years
2) Electrified: 1 year.

e. Continuous Hinges: Lifetime warranty.
f. Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.09 MAINTENANCE

A. Maintenance Tools: Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to insure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: “No Substitute.”

1. Where “No Substitute” is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as “Scheduled Manufacturer” or “Acceptable Manufacturers” in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.

C. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
2. Use materials which match materials of adjacent modified areas.
3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Ives 5BB series.
2. Acceptable Manufacturers and Products: Hager BB series (ECBB series not approved), McKinney TA/T4A series (MacPro series not approved).

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:

a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

3. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:

    a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
    b. Interior: Heavy weight, steel, 5 inches (127 mm) high

4. 2 inches or thicker doors:

    a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
    b. Interior: Heavy weight, steel, 5 inches (127 mm) high

5. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
6. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
7. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

    a. Steel Hinges: Steel pins
    b. Non-Ferrous Hinges: Stainless steel pins
    c. Out-Swinging Exterior Doors: Non-removable pins
    d. Out-Swinging Interior Lockable Doors: Non-removable pins
    e. Interior Non-lockable Doors: Non-rising pins

8. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.

2.04 CONTINUOUS HINGES

A. Aluminum Geared

1. Manufacturers:

    a. Scheduled Manufacturer: Ives.
    b. Acceptable Manufacturers: Pemko, Select.

2. Requirements:

    a. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
    b. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
    c. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
    d. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
    e. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
    f. Install hinges with fasteners supplied by manufacturer.
    g. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 ELECTRIC POWER TRANSFER

A. Manufacturers:

a. Scheduled Manufacturer: Von Duprin EPT-10.
b. Acceptable Manufacturers: Precision EPT-12C, Securitron CEPT-10.

B. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires sufficient to accommodate electric function of specified hardware.

C. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

2.06 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Burns, Rockwood.

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.07 COORDINATORS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.
2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers, surface vertical rod exit device strikes or other stop mounted hardware. Factory-prepared coordinators for vertical rod devices as specified.

2.08 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage L9000 series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3 hour fire doors.
2. Indicators: Where specified, provide indicator window measuring a minimum 2 inch x 1/2 inch with 180 degree visibility. Provide messages color-coded with full text and/or symbols, as scheduled, for easy visibility.

    a. Inside Security Indicator: Provide indicator above cylinder or thumbturn for visibility during lockdown that identifies the outside trim as locked/unlocked status of the door.
    b. Outside Status Indicator: Provide indicator above cylinder for visibility that identifies the outside trim as locked/unlocked status of the door.
    c. Outside Occupancy Indicator: Provide indicator above cylinder or emergency release for visibility while operating the lock that identifies an occupied/unoccupied status of the lock or latch.

3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to “KEYING” article, herein.
5. Verify lock functions with owner prior to ordering.
6. Install thumb turns so they are in vertical position when doors are unlocked and in horizontal position when doors are locked.
7. Install thumb turns so they are in vertical position when doors are unlocked and in horizontal position when doors are locked.
8. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
9. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
10. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.
11. Provide motor based electrified locksets with electrified options as scheduled in the hardware sets and comply with the following requirements:

    a. Universal input voltage – single chassis accepts 12 or 24V DC to allow for changes in the field without changing lock chassis.
    b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case
    c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.
    d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate “hot levers” in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
    e. Request to Exit Switch (RX) –
        1) Modular Design – provide electrified locks capable of using, adding, or changing a modular RX switch without opening the lock case.
        2) Monitoring – where scheduled, provide a request to exit (RX) switch that detects rotation of the inside lever.

    f. Door Position Sensor (DPS) –

1) Monitoring – where scheduled, provide a door position sensor (DPS) switch that detects the position of the door in relation to the frame.

g. Connections – provide quick-connect Molex system standard.

12. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.

a. Lever Design: Schlage 06N
b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.09 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage ND series.
~~2.~~ Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3 hour fire doors.
2. Cylinders: Refer to “KEYING” article, herein.
3. Verify lock functions with owner prior to ordering.
4. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
5. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
6. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

a. Lever Design: Schlage Rhodes
b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.10 AUXILIARY LOCKS

A. Deadlocks:

1. Manufacturers and Products:

a. Scheduled Manufacturer and Product: Schlage L400 series.
b. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

2. Requirements:

a. Provide mortise deadlock series conforming to ANSI/BHMA A156 and function as specified.
b. Cylinders: Refer to “KEYING” article, herein.
c. Provide deadlocks with standard 2-3/4 inches (70 mm) backset. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
d. Provide manufacturer’s standard strike.

2.11 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Von Duprin 99/33A series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to “KEYING” article, herein.
3. Verify exit device functions with owner prior to ordering.
4. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
5. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
6. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer’s approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Concealed Vertical Cable Exit Devices: provide cable-actuated concealed vertical latch system in two-point for non-rated or fire rated wood doors up to a 90 minute rating and less bottom latch (LBL) configuration for non-rated or fire rated wood doors up to 20 minute rating. Vertical rods not permitted.

    a. Cable: Stainless steel with abrasive resistant coating. Conduit and core wire ends snap into latch and center slides without use of tools.
    b. Wood Door Prep: Maximum 1 inch x 1.1875 inch x 3.875 inches top latch pocket and 1 inch x 1.1875 inch x 5 inches bottom latch pocket which does not require the use of a metal wrap or edge for non-rated or fire rated wood doors up to a 45 minute rating.
    c. Latchbolts and Blocking Cams: Manufactured from sintered metal low carbon copper-infiltrated steel, with molybdenum disulfide low friction coating.

d. Top Latchbolt: Minimum 0.38 inch (10 mm) and greater than 90 degree engagement with strike to prevent door and frame separation under high static load.
e. Bottom Latchbolt: Minimum of 0.44 inch (11 mm) engagement with strike.
f. Product Cycle Life: 1,000,000 cycles.
g. Latch Operation: Top and bottom latch operate independently of each other. Top latch fully engages top strike even when bottom latch is compromised. Separate trigger mechanisms not permitted.
h. Latch release does not require separate trigger mechanism.
i. Cable and latching system characteristics:
    1) Installed independently of exit device installation, and capable of functioning on door prior to device and trim installation.
    2) Connected to exit device at single point in steel and aluminum doors, and two points for top and bottom latches in wood doors.
    3) Bottom latch height adjusted, from single point for steel and aluminum doors and two points for wood doors, after system is installed and connected to exit device, while door is hanging
    4) Bottom latch position altered up and down minimum of 2 inches (51 mm) in steel and aluminum doors without additional adjustment. Bottom latch deadlocks in every adjustment position in wood doors.
    5) Top and bottom latches in steel and aluminum doors and top latch in wood doors may be removed while door is hanging.

16. Top latch mounting: double or single tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
17. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

    a. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.12 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Von Duprin 6000 Series.
2. Acceptable Manufacturers and Products: Folger Adam 300 Series, HES 1006 Series.

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary-resistant.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.13 PASSIVE INFRARED MOTION SENSORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage SCAN II Series.

2. Acceptable Manufacturers and Products: RCI 915 Series, Securitron XMS Series, Security Door Controls MD-31D Series.

B. Requirements:

1. Provide motion sensors as specified in hardware groups.

2.14 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage or Von Duprin PS900 series
2. Acceptable Manufacturers and Products: No Substitutions

B. Requirements:

1. Provide power supplies, recommended and approved by manufacturer of electrified locking component, for operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring power supply.
2. Provide appropriate quantity and size of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide appropriate option boards for power supplies necessary for proper operation of the electrified locking components as recommended by the manufacturer of the electrified locking components with consideration for each electrified component used in the system.
4. Provide regulated and filtered 24 VDC power supply and UL class 2 listed.
5. Options:

    a. Provide power supply, where specified, with internal capability of charging sealed backup batteries 24 VDC, in addition to operating DC load.
    b. Provide sealed batteries for battery back-up at each power supply where specified.
    c. Provide keyed power supply cabinet.

6. Provide power supply in an enclosure, complete, and requiring 120VAC to fused input.
7. Provide power supply with emergency release terminals, where specified, that allow release of all devices upon activation of fire alarm system complete with fire alarm input for initiating “no delay” exiting mode.

2.15 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer: Schlage
2. Acceptable Manufacturers: No Substitutions – Facility Standard

B. Requirements:

1. Provide cylinders/cores, from the same manufacturer of locksets, compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder

face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.

2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. Match owner's existing system.
    b. Cylinder/Core Type: Large Format or Full Size Interchangeable Core (LFIC/FSIC).

3. Nickel silver bottom pins.
4. Replaceable Construction Cores.

    a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
        1) 2 construction control keys.
        2) 12 construction change (day) keys.

2.16 KEYING

A. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Provide keying system capable of multiplex masterkeying.
2. Permanent cylinders/cores keyed by the manufacturer according to the following key system.

    a. Keying system as directed by the Owner.
    b. Match Owner's existing system.
    c. (Great)Grand Master Key System: Cylinders/cores operated by change (day) keys and subsequent masters (including grand/great grand) keys.

3. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements shall be cause for replacement of cylinders/cores involved at no additional cost to Owner.
4. Provide keys with the following features:

    a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm).

5. Identification:

    a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication "Keying Systems and Nomenclature" for identification. Blind code marks shall not include actual key cuts.
    b. Identification stamping provisions must be approved by the Architect and Owner.
    c. Stamp keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE".
    d. Failure to comply with stamping requirements shall be cause for replacement of keys involved at no additional cost to Owner.
    e. Verify with owner if permanent cylinders/cores and/or keys are to be shipped directly to Owner or to Contractor.

6. Quantity: Furnish in the following quantities.

a. Change (Day) Keys: 3 per cylinder/core.
b. Permanent Control Keys: 3 (if required).
c. Master Keys: 6 per master.
d. Unused balance of key blanks shall be furnished to Owner with the cut keys.

2.17 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4040XP series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.18 ELECTRO-HYDRAULIC AUTOMATIC OPERATORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4600 series.
2. Acceptable Manufacturers and Products: No Substitutions – Facility Standard.

B. Requirements:

1. Provide low energy automatic operator units with hydraulic closer complying with ANSI/BHMA A156.19.
2. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.

3. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check, and opening and closing speed adjustment valves to control door
4. Provide units with on/off switch for manual operation, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay.
5. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check valve, sweep valve, latch valve to control door.
6. Provide drop plates, brackets, or adapters for arms as required for details.
7. Provide hard-wired actuator switches for operation as specified.
8. Provide weather-resistant actuators at exterior applications.
9. Provide key switches with LED's, recommended and approved by manufacturer of automatic operator as required for function described in operation description of hardware group below. Cylinders: Refer to "KEYING" article, herein.
10. Provide complete assemblies of controls, switches, power supplies, relays, and parts/material recommended and approved by manufacturer of automatic operator for each individual leaf. Actuators control both doors simultaneously at pairs. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings as directed by Architect. Locate actuators, key switches, and other controls as directed by Architect.
11. Provide units with vestibule inputs that allow sequencing operation of two units, and SPDT relay for interfacing with latching or locking devices.

2.19 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
7. Provide wire pulls of solid bar stock, diameter and length as scheduled.
8. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.20 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:

a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.21 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers: Glynn-Johnson.
2. Acceptable Manufacturers: ABH, Dorma.

B. Requirements:

1. Provide heavy duty concealed mounted overhead stop or holder as specified for exterior and interior vestibule single acting doors.
2. Provide heavy duty concealed mounted overhead stop or holder as specified for double acting doors.
3. Provide heavy or medium duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking wall, open against equipment, casework, sidelights, and where conditions do not allow wall stop or floor stop presents tripping hazard.
4. Where overhead holders are specified provide friction type at doors without closer and positive type at doors with closer.

2.22 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.23 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: Zero International.
2. Acceptable Manufacturers: National Guard, Reese.

B. Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Size of thresholds:

    a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
    b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width

4. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.24 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Rockwood, Trimco.

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.25 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer: Schlage.
2. Acceptable Manufacturers: GE-Interlogix.

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches between switch and magnetic locking device.

2.26 FINISHES

A. Provide finish for each item as indicated in the sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.

C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Where on-site modification of doors and frames is required:

1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
2. Field modify and prepare existing door and frame for new hardware being installed.
3. When modifications are exposed to view, use concealed fasteners, when possible.
4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:

a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.03 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

H. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as indicated in keying section.

I. Wiring: Coordinate with Division 26, ELECTRICAL sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Testing and labeling wires with Architect's opening number.
6. Connections to panel interface modules, controllers and gateways

J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

L. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

M. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

N. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

O. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

P. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

Q. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

R. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.04 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant: Engage qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.05 FIELD INSPECTIONS:

A. Fire Door Assembly Inspection and Testing: Provide functional testing and inspection of fire door assemblies in accordance with NFPA 80-2007/2010. Inspections shall be performed by individuals certified by Intertek as a Fire Door Assembly Inspector, using reporting forms provided by the Door and Hardware Institute (DHI). Alternatively, inspections may be performed by individuals acceptable to the Architect, who have knowledge and understanding of the operating components of the applicable door type, and who have experience in preparing written reports of testing and inspection results.

1. Schedule fire door assembly inspection within 90 days of Substantial Completion of the Project.
2. Submit a signed, written final report as specified in Paragraph 1.4: Submittals.
3. Contractor shall correct all deficiencies and schedule a reinspection of fire door assemblies which were noted as deficient on the inspection report.
4. Inspector shall reinspect fire door assemblies after repairs are made.
5. Additional reinspections which are required due to incomplete repairs will be performed by the inspector at the expense of the Contractor.

B. Provide inspection of required egress door assemblies by a qualified person in accordance with NFPA 101.

1. Schedule egress door assembly inspection within 90 days of Substantial Completion of the Project for the required openings.
2. Submit a signed, written final report as specified in Paragraph 1.03.E.2.
3. Correct all deficiencies and schedule a reinspection of egress door assemblies noted as deficient on the inspection report.
4. Inspector to reinspect required egress door assemblies after repairs are made.

3.06 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

   1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
   2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, Installer's Architectural Hardware Consultant must examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.07 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.08 DEMONSTRATION

A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.09 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier’s responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in

a hardware set should be scheduled with the appropriate additional hardware required for proper application

C. Hardware items are referenced in the following hardware. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets:

68390 OPT0250754 Version 1

HARDWARE GROUP NO. 01

For use on Door #(s):
H-109A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PASSAGE SET	L9010 06N	612	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 02

For use on Door #(s):
E-111A F-131A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PASSAGE SET	L9010 06N	612	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 03

For use on Door #(s):
A-105A A-107A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	CLASSROOM DEAD LOCK	L463T	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	PUSH PLATE	8300 10" 4" X 16"	630	IVE
1	EA	PULL PLATE	8302 10" 4" X 16"	630	IVE
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA (MOUNT ON PULL SIDE OF DOOR)	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 04

For use on Door #(s):
E-120A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PUSH PLATE	8300 10" 4" X 16"	US10	IVE
1	EA	PULL PLATE	8302 10" 4" X 16"	US10	IVE
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 05

For use on Door #(s):

D-105A	D-106A	F-128A	F-129A	G-121A	G-122A
H-123A	H-124A	J-119A	J-120A		

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PRIVACY LOCK	L9040 06N L583-363	612	SCH
1	EA	OH STOP	90S	612	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	GASKETING	488SCL PSA	CL	ZER

HARDWARE GROUP NO. 06

For use on Door #(s):

A-102A	A-110A	D-139A	D-146A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PRIVACY LOCK	L9040 06N L583-363	612	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	GASKETING	488SCL PSA	CL	ZER

HARDWARE GROUP NO. 07

For use on Door #(s):

E-107A	E-108A	E-119A	K-124A	K-125A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PRIVACY LOCK	L9040 06N L583-363	612	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
1	EA	GASKETING	488SCL PSA	CL	ZER

HARDWARE GROUP NO. 08

For use on Door #(s):

F-106A	F-119A	H-104A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06N L583-363	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 09

For use on Door #(s):

A-101A	A-109A	C-106A	D-107A	D-108A	D-111A
D-119A	D-138A	D-143A	D-145A	E-121A	F-104A
F-108A	H-105A	H-107A	K-118A	K-121A	K-122A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06N L583-363	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 10

For use on Door #(s):

D-104A	D-104B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	OFFICE/ENTRY LOCK	L9050T 06N L583-363	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 11

For use on Door #(s):
A-118A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	CORRIDOR LOCK	L9456T 06N L583-363	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 12

For use on Door #(s):
D-131A H-103B H-131A H-131B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 13

For use on Door #(s):
F-109A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

NOTE: VERIFY/COORDINATE PREPS ON EXISTING FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

HARDWARE GROUP NO. 14

For use on Door #(s):

D-122A	D-123A	D-142A	E-109A	E-125A	E-126A
F-103A	F-130A	G-133A	G-133B	H-110A	H-111A
H-117A	H-117B	J-126A	J-126B	J-130A	J-130B
K-117B	K-126A	K-127A			

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 15

For use on Door #(s):
C-108A C-109A C-110A D-112A D-113A D-120A
D-121A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD (CUSTOM FINISH - SATIN BRONZE, CONSULT FACTORY)		IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
1	EA	GASKETING	870AA	AA	ZER
1	EA	DOOR BOTTOM	355AA	AA	ZER
1	EA	THRESHOLD	545A	A	ZER

HARDWARE GROUP NO. 16

For use on Door #(s):
E-122A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 17

For use on Door #(s):
J-127A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 18

For use on Door #(s):
F-101A K-119B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	CLASSROOM X STORERM	ND70X80CD RHO XN12-006	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE	630	VON
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR CLOSED AND ALWAYS LOCKED FROM RECEPTION SIDE. DOOR UNLOCKED FROM CORRIDOR SIDE DURING SCHOOL HOURS AND LOCKED FROM CORRIDOR SIDE AFTER HOURS AND ON WEEKENDS.

PUSH BUTTON AT RECEPTION DESK MOMENTARILY UNLOCKS DOOR ALLOWING ENTRY. DOOR REMAINS LOCKED UPON LOSS OF POWER. DOOR CONTACT TO MONITOR DOOR POSITION. MOTION SENSOR ON PUSH SIDE SHUNTS DOOR CONTACT FOR VALID EGRESS.

HARDWARE GROUP NO. 19

For use on Door #(s):
A-117A C-107A D-125A D-132A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CONST LATCHING BOLT	FB51T/FB61T AS REQ'D	612	IVE
1	EA	CLASSROOM LOCK	L9070T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
2	EA	OH STOP	90S	612	GLY
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 20

For use on Door #(s):
H-102A H-103A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM SECURITY	L9071T 06N	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 21

For use on Door #(s):

F-118A	F-127A	F-132A	G-101A	G-102A	G-103A
G-108A	G-110A	G-118A	G-118B	H-106A	H-119A
H-120A	H-121A	J-103A	J-104A	J-105A	J-109A
J-121A	J-121B	J-122A	J-123A	J-129A	K-101A
K-102A	K-103A	K-104A	K-105A	K-111A	K-112A
K-113A	K-117A	K-130A	K-131A	K-132A	K-133A
K-134A	L-104A	L-105A	L-106A	L-109A	L-110A
L-111A	L-113A	L-114A	L-116A	L-117A	L-122A
L-123A					

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CLASSROOM SECURITY	L9071T 06N	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 22

For use on Door #(s):
F-117A F-122A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	CLASSROOM SECURITY	L9071T 06N	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	WALL STOP	WS401/402CVX	626	IVE

HARDWARE GROUP NO. 23

For use on Door #(s):
D-133A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224HD (CUSTOM FINISH - SATIN BRONZE, CONSULT FACTORY)		IVE
1	EA	CONST LATCHING BOLT	FB51T/FB61T AS REQ'D	612	IVE
1	EA	CLASSROOM SECURITY	L9071T 06N	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
2	EA	WALL STOP	WS401/402CVX	612	IVE
1	EA	MEETING STILE	328AA-S	AA	ZER
1	EA	GASKETING	870AA	AA	ZER
2	EA	DOOR BOTTOM	364AA	AA	ZER
1	EA	THRESHOLD	545A	A	ZER

HARDWARE GROUP NO. 24

For use on Door #(s):
E-127A L-102A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 25

For use on Door #(s):
D-114A D-115A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	OH STOP	90S	612	GLY
3	EA	SILENCER	SR64	GRY	IVE

NOTE: VERIFY/COORDINATE PREPS ON EXISTING FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

HARDWARE GROUP NO. 26

For use on Door #(s):

A-116A	D-134A	E-130A	G-107A	G-111A	G-119A
G-120A	G-124A	H-122A	H-125A	H-126A	J-108A
J-108B	J-116A	J-117A	K-107A	K-108A	K-120A
L-103A	L-118A	L-121A			

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 27

For use on Door #(s):
D-135A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

NOTE: VERIFY/COORDINATE PREPS ON EXISTING FRAMES. PROVIDE CORRECT STRIKES, REINFORCEMENTS, FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE AND COVER EXPOSED HOLES.

HARDWARE GROUP NO. 28

For use on Door #(s):
K-119A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	EU MORTISE LOCK	L9092TEU 06N RX DPS	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. VALID CREDENTIAL OR PUSH BUTTON AT RECEPTION DESK MOMENTARILY UNLOCKS DOOR ALLOWING ENTRY. DOOR REMAINS LOCKED UPON LOSS OF POWER. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

RX SWITCH AND DOOR CONTACT ARE INTEGRAL TO LOCK SET.

HARDWARE GROUP NO. 29

For use on Door #(s):
E-128A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	EU MORTISE LOCK	L9092TEU 06N RX DPS	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. VALID CREDENTIAL MOMENTARILY UNLOCKS DOOR ALLOWING ENTRY. DOOR REMAINS LOCKED UPON LOSS OF POWER. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

RX SWITCH AND DOOR CONTACT ARE INTEGRAL TO LOCK SET.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 30

For use on Door #(s):
A-106A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	STOREROOM LOCK	L9080T 06N	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4041 DEL SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 31

For use on Door #(s):
J-114A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4041 DEL RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 32

For use on Door #(s):
B-102A D-130A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CONST LATCHING BOLT	FB51T/FB61T AS REQ'D	612	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
2	EA	OH STOP	90S	612	GLY
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 33

For use on Door #(s):
E-131A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CONST LATCHING BOLT	FB51T/FB61T AS REQ'D	612	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	COORDINATOR	COR X FL (MB AS REQ'D)	628	IVE
2	EA	OH STOP	90S	612	GLY
2	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	US10	IVE
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 34

For use on Door #(s):
E-129A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	CONST LATCHING BOLT	FB51T/FB61T AS REQ'D	612	IVE
1	EA	STOREROOM LOCK	L9080T 06N	612	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	COORDINATOR	COR X FL (MB AS REQ'D)	628	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH MC WMS	US10	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	US10	IVE
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 35

For use on Door #(s):
E-127B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY	628	IVE
1	EA	AUTO FLUSH BOLT	FB31P/FB41P AS REQ'D	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080T 06N	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	COORDINATOR	COR X FL (MB AS REQ'D)	628	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	RAIN DRIP	142AA	AA	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 36

For use on Door #(s):
E-105A E-105B E-110A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
2	EA	RIM HOUSING	20-079	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP CUSH MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 37

For use on Door #(s):
G-100B G-106B J-100B J-106B K-100B L-107B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY	628	IVE
2	EA	DUMMY PUSH BAR	350	626	VON
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN

HARDWARE GROUP NO. 38

For use on Door #(s):
E-100A H-100B H-101B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	PANIC HARDWARE	CD-99-EO	626	VON
1	EA	MORTISE CYLINDER	26-094 XQ11-948 36-083	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 39

For use on Door #(s):
D-100A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	MORTISE CYLINDER	26-094	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS IN VESTIBULE D-100 ARE UNLOCKED AS PROGRAMMED BY ACCESS CONTROL DURING SCHOOL BUS DROP-OFF AND PICK-UP HOURS. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 40

For use on Door #(s):
F-100B L-100A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	MORTISE CYLINDER	26-094	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 41

For use on Door #(s):
D-100C

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	MORTISE CYLINDER	26-094	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS IN VESTIBULE D-100 ARE UNLOCKED AS PROGRAMMED BY ACCESS CONTROL DURING SCHOOL BUS DROP-OFF AND PICK-UP HOURS. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 42

For use on Door #(s):
F-100D L-100C

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	MORTISE CYLINDER	26-094	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 43

For use on Door #(s):
K-114B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY	628	IVE
1	EA	PANIC HARDWARE	99-L-06-WH	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4040XPT ST-3182 (MOUNT ON PULL SIDE OF DOOR)	689	LCN
1	EA	RAIN DRIP	11A (MOUNT ON PUSH SIDE OF DOOR)	A	ZER
1	EA	RAIN DRIP	142AA (MOUNT ON PUSH SIDE OF DOOR)	AA	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 44

For use on Door #(s):
F-123A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY	628	IVE
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	PANIC HARDWARE	99-EO-WH	626	VON
1	EA	PANIC HARDWARE	99-L-06-WH	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	OH STOP	100S	630	GLY
2	EA	SURFACE CLOSER	4040XPT ST-3182 (MOUNT ON PULL SIDE OF DOOR)	689	LCN
1	EA	RAIN DRIP	11A (MOUNT ON PUSH SIDE OF DOOR)	A	ZER
1	EA	RAIN DRIP	142AA (MOUNT ON PUSH SIDE OF DOOR)	AA	ZER
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	THRESHOLD	65A	A	ZER

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 45

For use on Door #(s):
C-102A C-103A C-105A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224HD (CUSTOM FINISH - SATIN BRONZE, CONSULT FACTORY)		IVE
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	PANIC HARDWARE	99-EO	612	VON
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
2	EA	RIM HOUSING	20-079	612	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
3	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
2	EA	SURFACE CLOSER	4040XP SCUSH MC WMS	US10	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	US10	IVE
1	EA	MEETING STILE	328AA-S	AA	ZER
1	EA	GASKETING	870AA	AA	ZER
1	EA	MULLION SEAL	8780NBK	BK	ZER
2	EA	DOOR BOTTOM	364AA	AA	ZER
1	EA	THRESHOLD	545A	A	ZER

HARDWARE GROUP NO. 46

For use on Door #(s):
A-100A A-108A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 47

For use on Door #(s):
F-100A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	ACTUATOR, TOUCH	8310-818T	630	LCN
1	EA	ACTUATOR, TOUCH	8310-853T	630	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-4RL [COORDINATE WITH ACCESS CONTROL PROVIDER]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

LOCKED HOURS: VALID CREDENTIAL MOMENTARILY UNLOCKS DOOR AND ACTIVATES EXTERIOR ACTUATOR. WHEN ACTIVE, PRESSING EXTERIOR ACTUATOR CYCLES AUTOMATIC OPERATOR AND MONETARILY OPENS DOOR. INTERIOR ACTUATOR ALWAYS ACTIVE.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 48

For use on Door #(s):
L-100B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	ACTUATOR, TOUCH	8310-818T	630	LCN
1	EA	ACTUATOR, TOUCH	8310-853T	630	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	AI PHONE	BY ACCESS CONTROL PROVIDER		
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-4RL [COORDINATE WITH ACCESS CONTROL PROVIDER]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

LOCKED HOURS: VALID CREDENTIAL OR AI PHONE MOMENTARILY UNLOCKS DOOR AND ACTIVATES EXTERIOR ACTUATOR. WHEN ACTIVE, PRESSING EXTERIOR ACTUATOR CYCLES AUTOMATIC OPERATOR AND MONETARILY OPENS DOOR. INTERIOR ACTUATOR ALWAYS ACTIVE.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 49

For use on Door #(s):
F-100C

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
2	EA	ACTUATOR, TOUCH	8310-853T	630	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-4RL [COORDINATE WITH ACCESS CONTROL PROVIDER]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

HARDWARE GROUP NO. 50

For use on Door #(s):
L-100D

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 TBWMS	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
2	EA	ACTUATOR, TOUCH	8310-818T	630	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-4RL [COORDINATE WITH ACCESS CONTROL PROVIDER]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL.DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

UNLOCKED HOURS: PRESSING EITHER ACTUATOR CYCLES AUTOMATIC OPERATOR AND MOMENTARILY OPENS DOOR.

LOCKED HOURS: VALID CREDENTIAL MOMENTARILY UNLOCKS DOOR AND ACTIVATES EXTERIOR ACTUATOR. WHEN ACTIVE, PRESSING EXTERIOR ACTUATOR CYCLES AUTOMATIC OPERATOR AND MONETARILY OPENS DOOR. INTERIOR ACTUATOR ALWAYS ACTIVE.

HARDWARE GROUP NO. 51

For use on Door #(s):
E-100B H-100C H-101C

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 52

For use on Door #(s):
H-112A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	PANIC HARDWARE	CD-9949-EO-LBL	626	VON
1	EA	PANIC HARDWARE	CD-9949-NL-OP-110MD-LBL	626	VON
2	EA	TRIM	550-DT	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
2	EA	MORTISE CYLINDER	26-094 XQ11-948 36-083	626	SCH
3	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER

HARDWARE GROUP NO. 53

For use on Door #(s):
D-117A D-124A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112XY EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
1	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R [COORDINATE WITH ACCESS CONTROL]	LGR	SCE
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACT TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PAD SHUNTS DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 54

For use on Door #(s):

G-100A G-106A J-100A J-106A K-100A L-107A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 55

For use on Door #(s):
C-101A E-132A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-DT 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL 24 VDC	626	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
1	EA	CREDENTIAL READER	MTB15 - BY ACCESS CONTROL PROVIDER (COORDINATE W/ HEAD END AND CREDENTIAL TYPE)	BLK	SCE
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS CAN BE LEFT UNLOCKED AS PROGRAMMED BY ACCESS CONTROL. WHEN LOCKED: VALID CREDENTIAL MOMENTARILY RETRACTS ELECTRIC LATCH ALLOWING ENTRY. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 56

For use on Door #(s):
D-100B

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
1			WEATHERSTRIP BY DOOR/FRAME SUPPLIER		
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	65A	A	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS IN VESTIBULE D-100 ARE UNLOCKED AS PROGRAMMED BY ACCESS CONTROL DURING SCHOOL BUS DROP-OFF AND PICK-UP HOURS. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

NOTE: DOORS REQUIRE SPECIAL 3/8" INCH UNDERCUT FOR ADA TYPE THRESHOLD.

HARDWARE GROUP NO. 57

For use on Door #(s):
D-100D

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-EO 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	MORTISE CYLINDER	26-094	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
2	EA	90 DEG OFFSET PULL	8190HD 12" O	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	MOUNTING PLATE	4040XP-18PA AS REQ'D	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 AS REQ'D	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 AS REQ'D	689	LCN
1	EA	MULLION SEAL	8780NBK	BK	ZER
2	EA	DOOR CONTACT	7764	628	SCE
1	EA	POWER SUPPLY	PS904 900-2RS [COORDINATE WITH ACCESS CONTROL PROVIDER]		VON
1	EA	DIAGRAM	ELEVATION		DLR
1	EA	DIAGRAM	POINT TO POINT		DLR

OPERATION: DOORS NORMALLY CLOSED AND LOCKED. DOORS IN VESTIBULE D-100 ARE UNLOCKED AS PROGRAMMED BY ACCESS CONTROL DURING SCHOOL BUS DROP-OFF AND PICK-UP HOURS. DOOR CONTACTS TO MONITOR DOOR POSITION. RX SWITCH IN EXIT DEVICE PUSH PADS SHUNT DOOR CONTACT FOR VALID EGRESS. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 58

For use on Door #(s):
H-112B J-125A J-128A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
2	EA	RIM HOUSING	20-079	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 59

For use on Door #(s):
D-137B D-150A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
2	EA	RIM HOUSING	20-079	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 60

For use on Door #(s):

G-104A	G-105A	H-112C	H-116A	H-118A	H-130A
H-132A	J-101A	J-102A	J-125B	J-128B	K-114A
K-115A					

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
2	EA	RIM HOUSING	20-079	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 61

For use on Door #(s):
F-116A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 (NRP AS REQ'D)	652	IVE
1	EA	PANIC HARDWARE	99-L-2-06	626	VON
2	EA	RIM HOUSING	20-079	626	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA	689	LCN
1	EA	WALL STOP	WS401/402CVX	626	IVE

HARDWARE GROUP NO. 62

For use on Door #(s):

A-100B	A-108B	D-128A	D-137A	D-144A

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 (NRP AS REQ'D)	639	IVE
1	EA	PANIC HARDWARE	99-L-2-06	612	VON
2	EA	RIM HOUSING	20-079	612	SCH
2	EA	PERMANENT CORE	MATCH EXISTING KEYING SYSTEM	613	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC WMS	US10	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	US10	IVE
1	EA	WALL STOP	WS401/402CVX	612	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 63

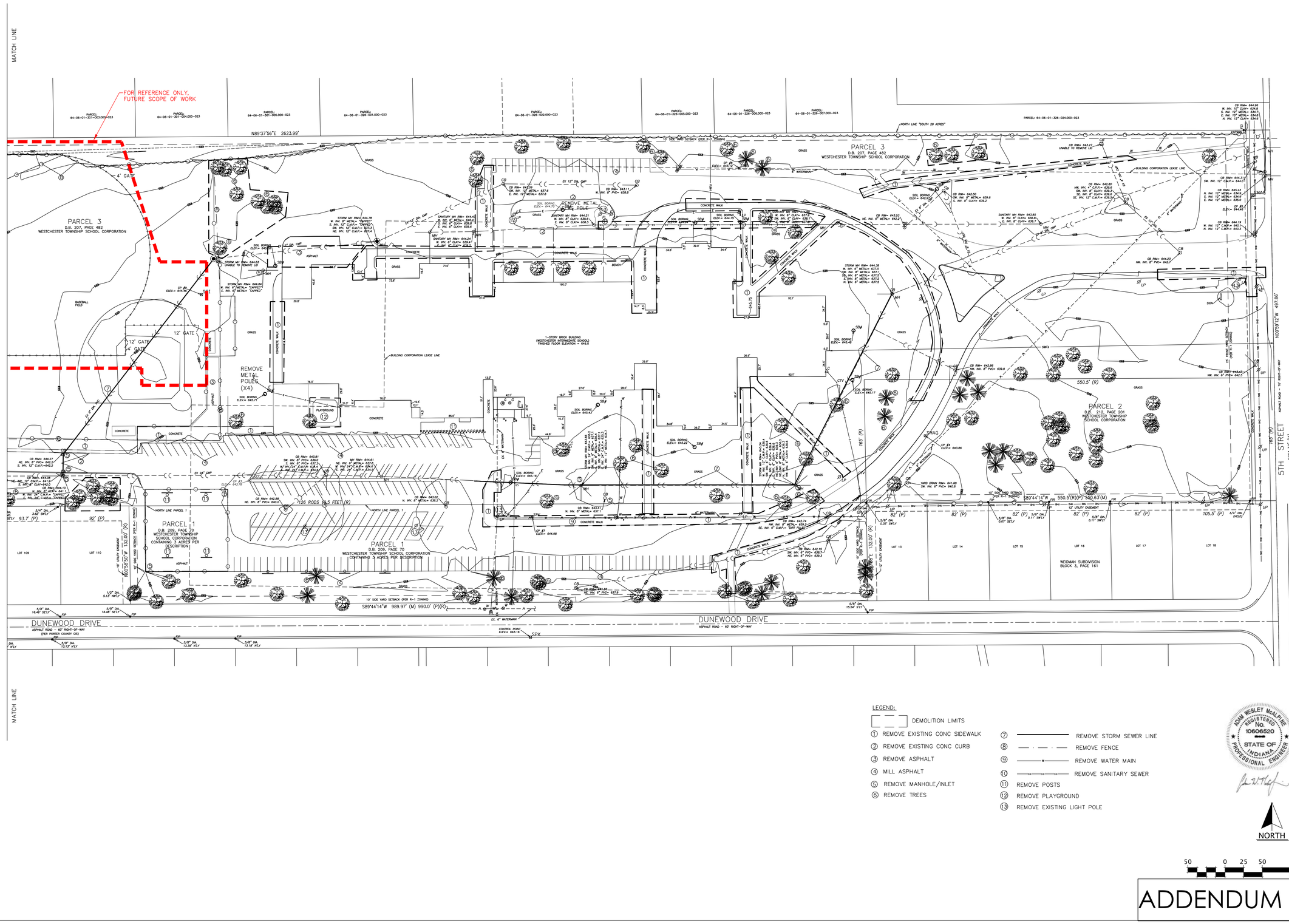
For use on Door #(s):

A-101B	A-101C	A-109B	A-109C	D-138B	D-145B
E-100B	E-100D	E-114A	E-114B	E-121B	E-121C
F-100E	F-100F	F-101C	F-101D	F-108B	F-119B
F-123B	F-123C	F-123D	F-123X	H-100A	H-100D
H-101A	H-101D	K-122B			

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	EA	NOTE	NO HARDWARE REQUIRED (BORROWED LITE)		

END OF SECTION



LEGEND:

- DEMOLITION LIMITS
- ① REMOVE EXISTING CONC SIDEWALK
- ② REMOVE EXISTING CONC CURB
- ③ REMOVE ASPHALT
- ④ MILL ASPHALT
- ⑤ REMOVE MANHOLE/INLET
- ⑥ REMOVE TREES
- ⑦ REMOVE STORM SEWER LINE
- ⑧ REMOVE FENCE
- ⑨ REMOVE WATER MAIN
- ⑩ REMOVE SANITARY SEWER
- ⑪ REMOVE POSTS
- ⑫ REMOVE PLAYGROUND
- ⑬ REMOVE EXISTING LIGHT POLE

NORTH

50 0 25 50 100

ADDENDUM #1

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

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Phone 317.580.5777 Fax 317.580.5778

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

PROJECT	21-141
DATE	03/16/22
COORDINATED BY	AWM
DRAWN BY	BPL
CHECKED BY	AWM

REVISIONS

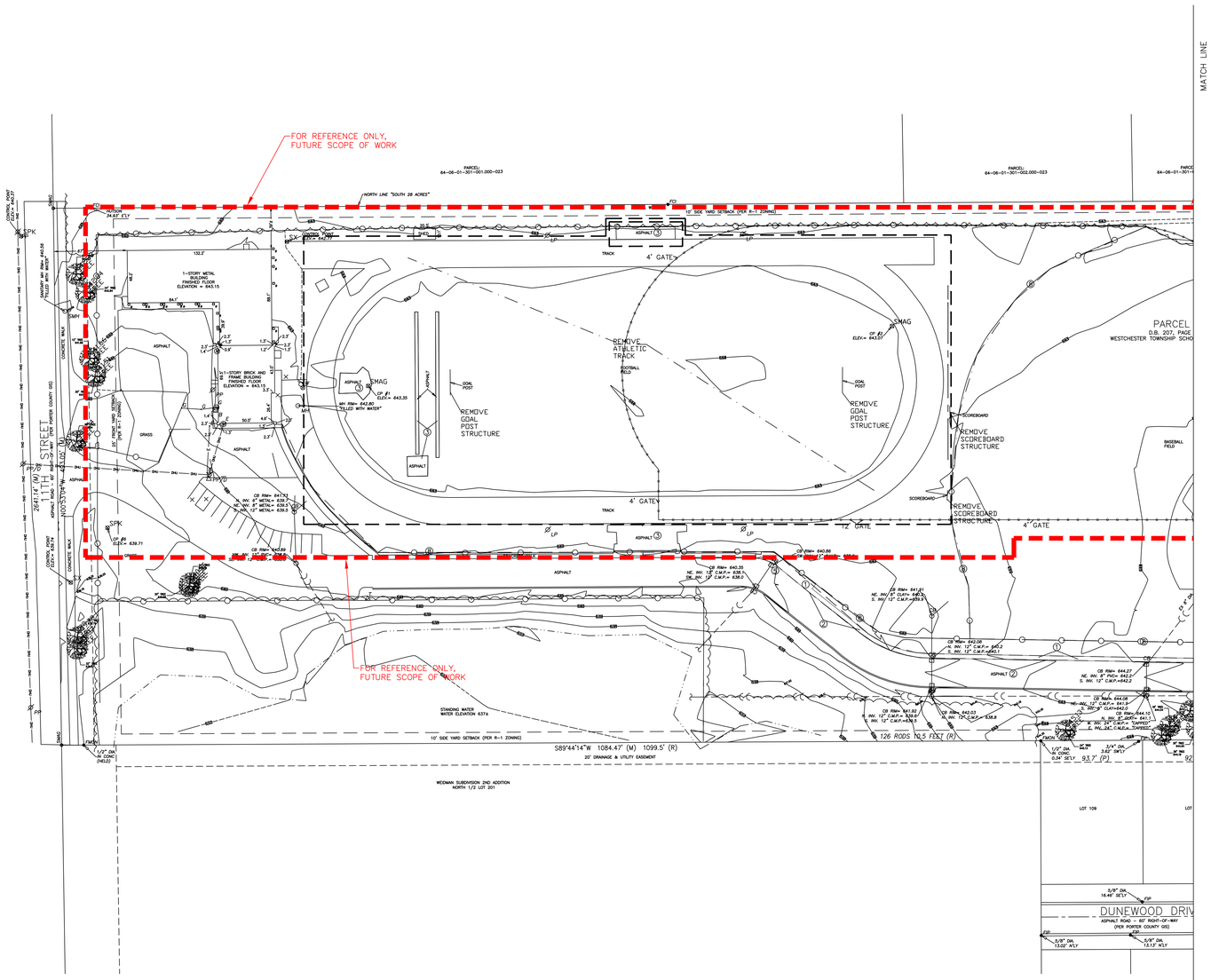
MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

TOM WESLEY McALPINE REGISTERED No. 10606520 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING
DEMOLITION PLAN 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-1.2



LEGEND:

- DEMOLITION LIMITS
- ① REMOVE EXISTING CONC SIDEWALK
- ② REMOVE EXISTING CONC CURB
- ③ REMOVE ASPHALT
- ④ MILL ASPHALT
- ⑤ REMOVE MANHOLE/INLET
- ⑥ REMOVE TREES
- ⑦ REMOVE STORM SEWER LINE
- ⑧ REMOVE FENCE
- ⑨ REMOVE WATER MAIN
- ⑩ REMOVE SANITARY SEWER
- ⑪ REMOVE POSTS
- ⑫ REMOVE PLAYGROUND

NORTH

50 0 25 50 100

ADDENDUM #1

ADAM WESLEY MCALPINE REGISTERED No. 10606520 STATE OF INDIANA PROFESSIONAL ENGINEER

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ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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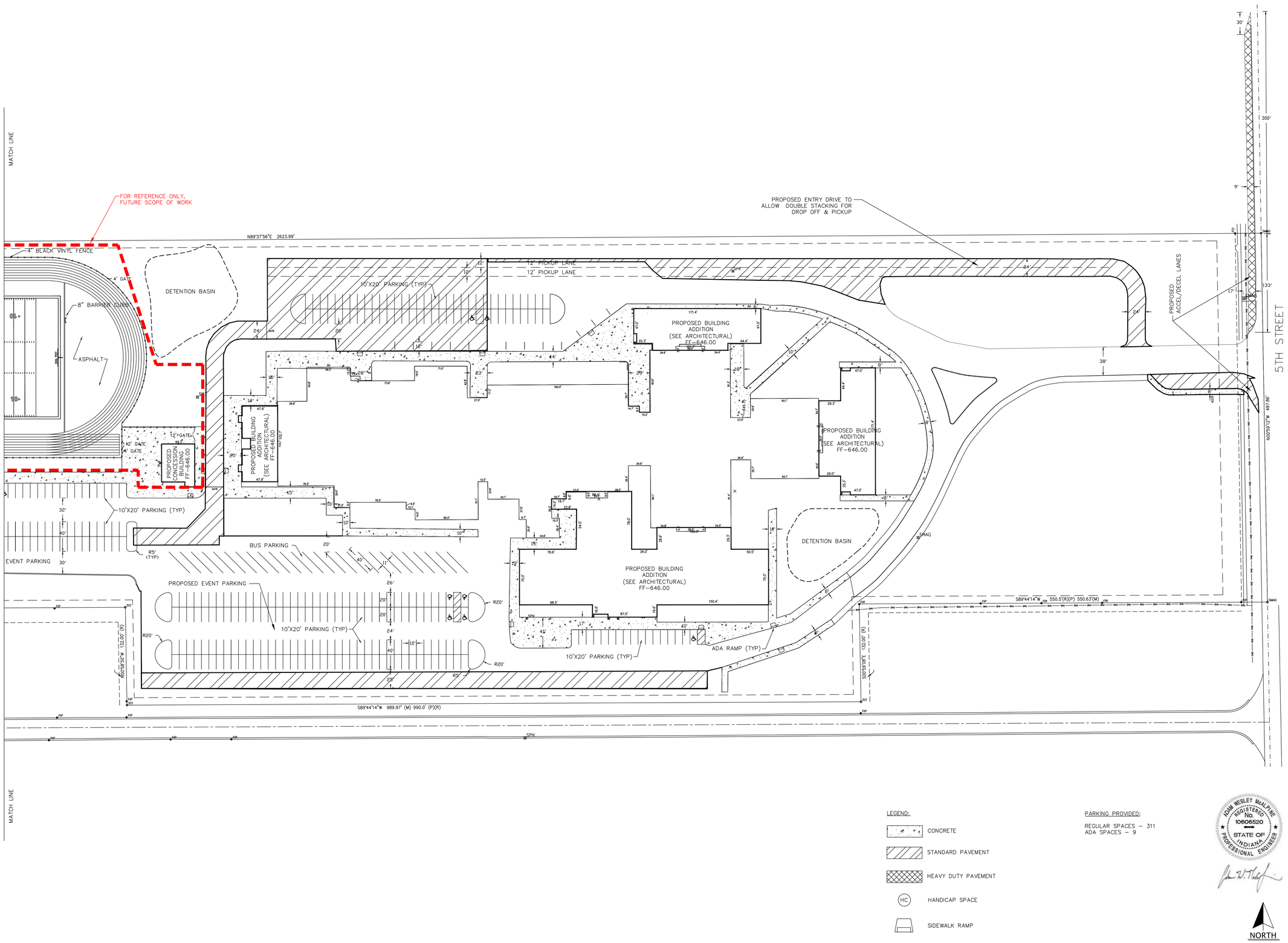
AD-1	03/16/22	ADDANDUM NO. 1

DRAWING
DEMOLITION PLAN 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET C-1.3



LEGEND:

- CONCRETE
- STANDARD PAVEMENT
- HEAVY DUTY PAVEMENT
- HC — HANDICAP SPACE
- SIDEWALK RAMP

PARKING PROVIDED:

REGULAR SPACES – 311
ADA SPACES – 9

NOTE: ALL EXISTING PAVEMENT AREAS TO BE MILLED AND RESURFACED.

NORTH

50 0 25 50 100

ADDENDUM #1

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PROJECT
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DRAWN BY	
BPL	
CHECKED BY	
AWM	

REVISIONS

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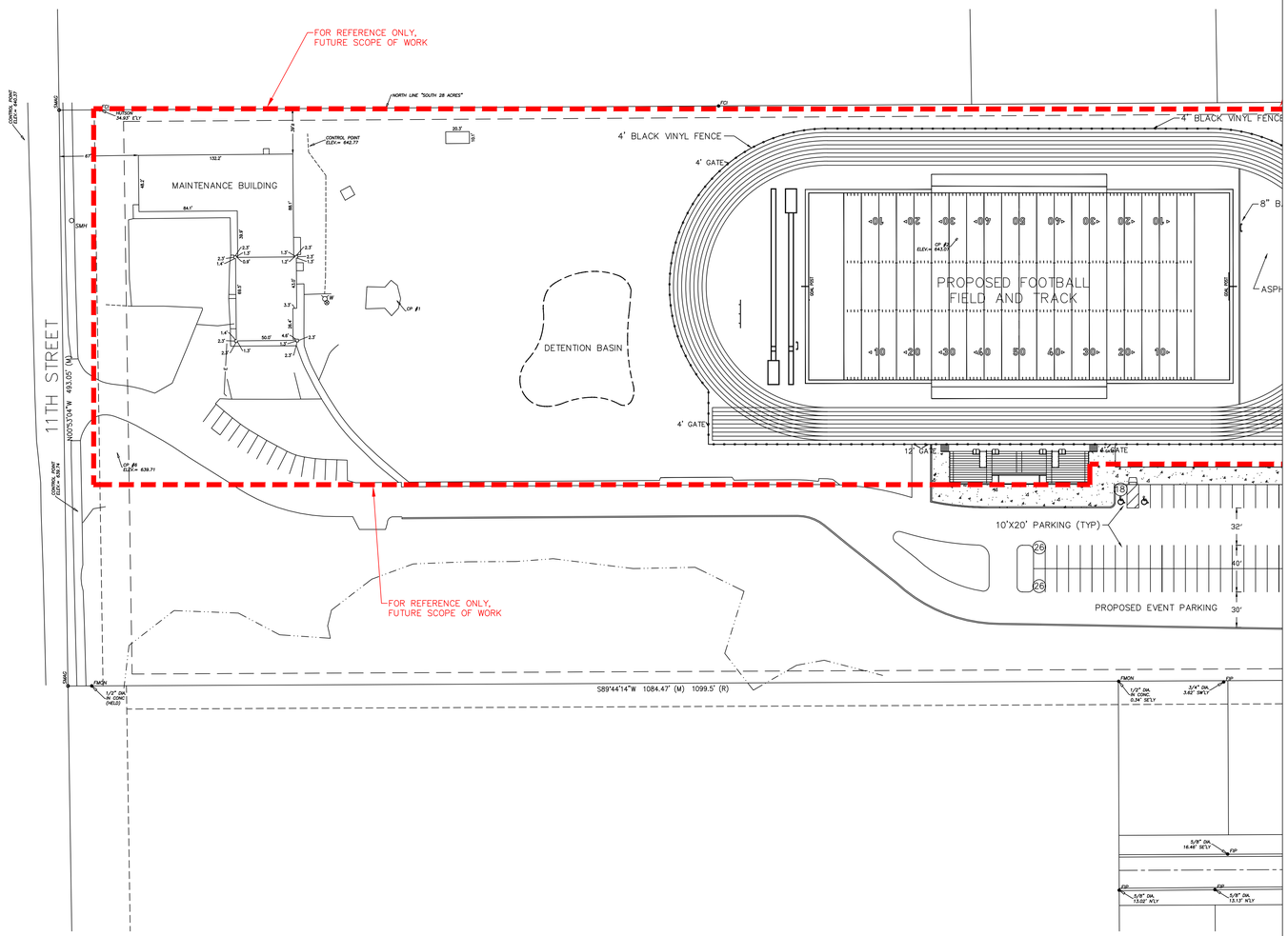
AD-1	03/16/22	ADDANDUM NO. 1

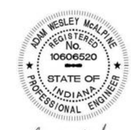
ADAM WESLEY MCALPINE REGISTERED NO. 10606520 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING
GEOMETRIC LAYOUT PLAN 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-2.0





NORTH

50 0 25 50 100

ADDENDUM #1

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ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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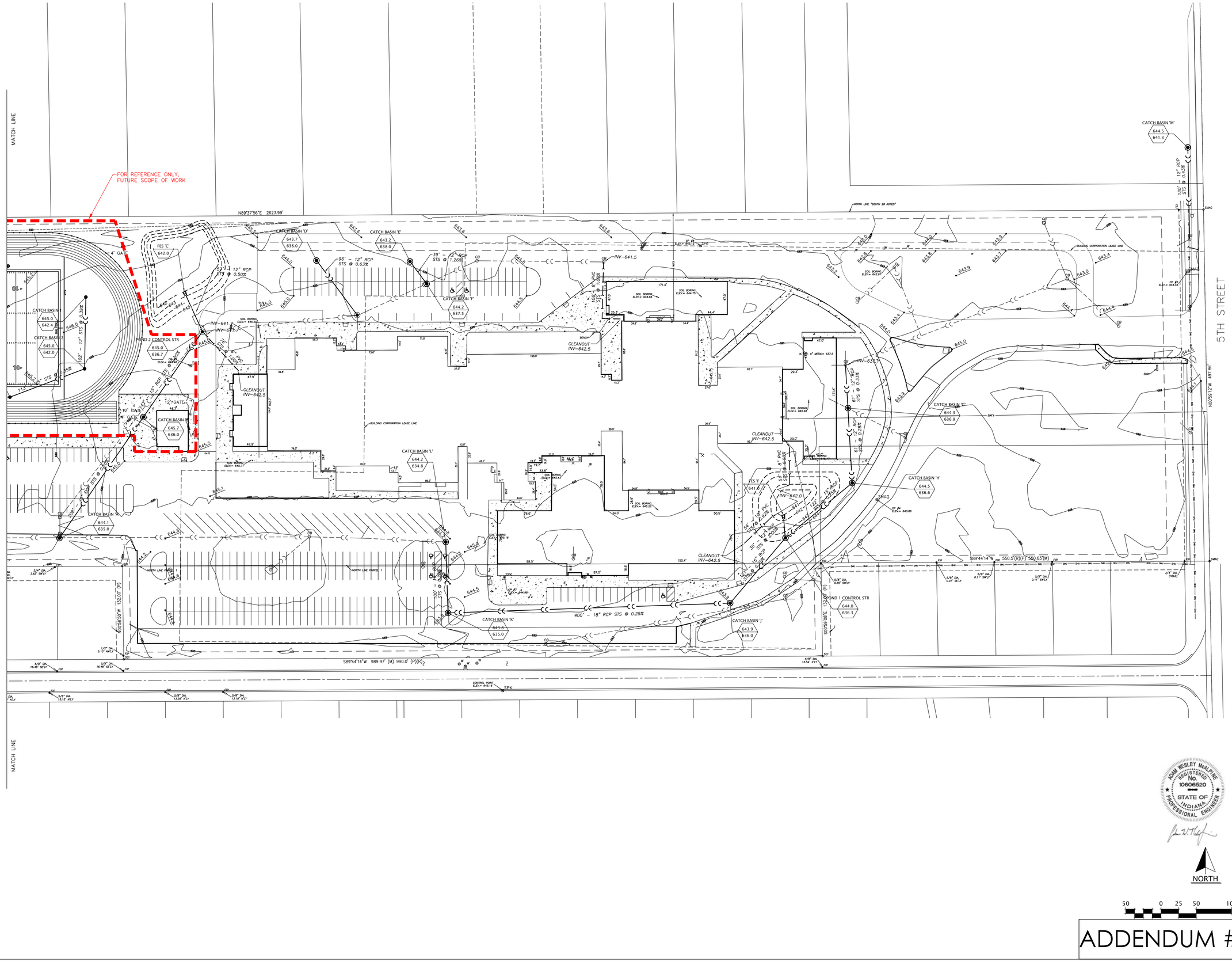
AD-1	03/16/22	ADDANDUM NO. 1

DRAWING
GEOMETRIC LAYOUT PLAN 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET C-2.1



NORTH

50 0 25 50 100

ADDENDUM #1

GIBRALTAR DESIGN
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PROJECT
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BPL	
CHECKED BY	
AWM	

REVISIONS

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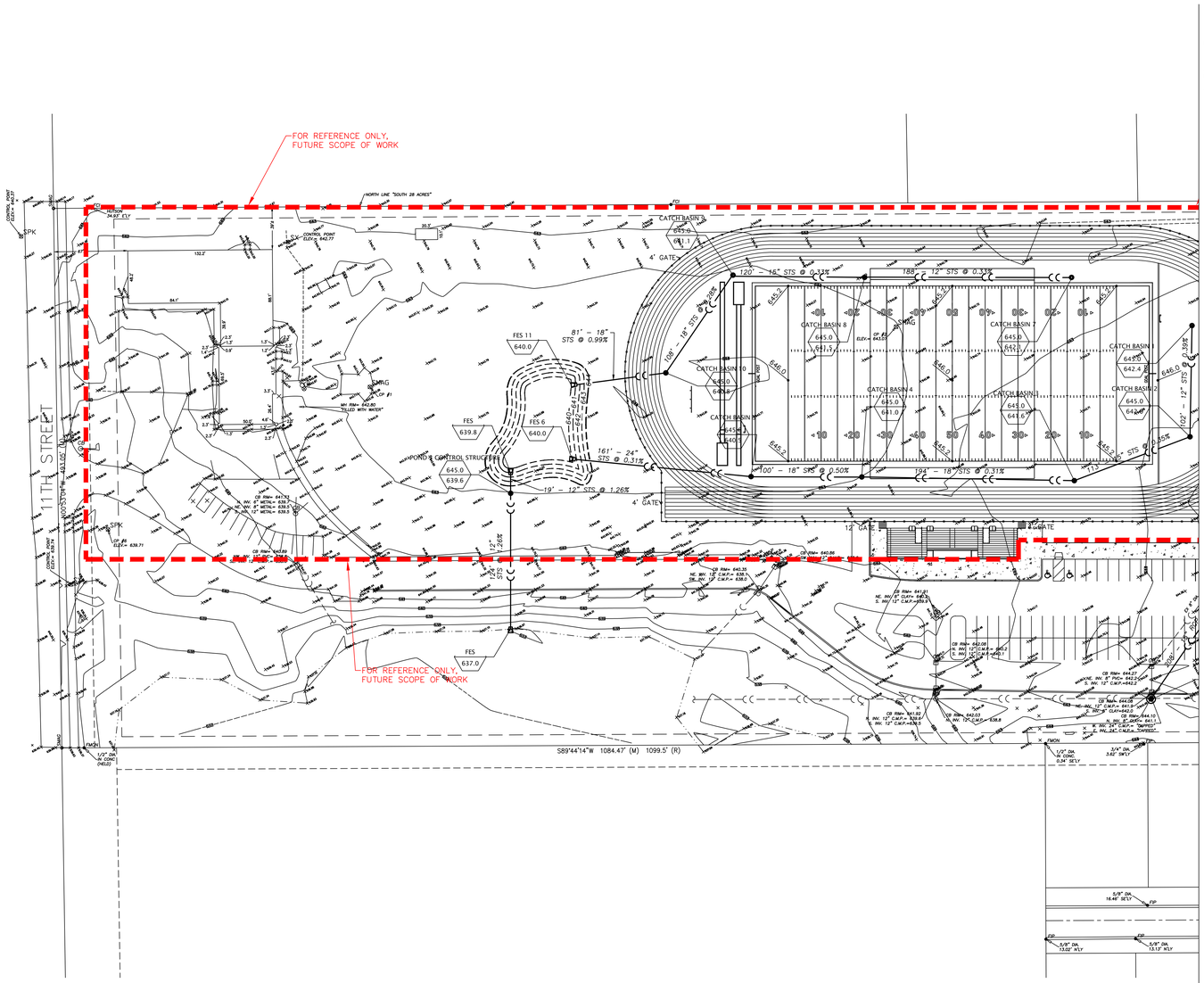
AD-1	03/16/22	ADDANDUM NO. 1

ADAM WESLEY MCALPINE REGISTERED No. 10606520 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING
STORM SEWER AND GRADING PLAN 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-3.0



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DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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PROJECT 21-141
DATE 03/16/22
COORDINATED BY AWM
DRAWN BY BPL
CHECKED BY AWM

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDANDUM NO. 1

ADAM WESLEY McALPINE
REGISTERED No. 10606520
STATE OF INDIANA
PROFESSIONAL ENGINEER

NORTH

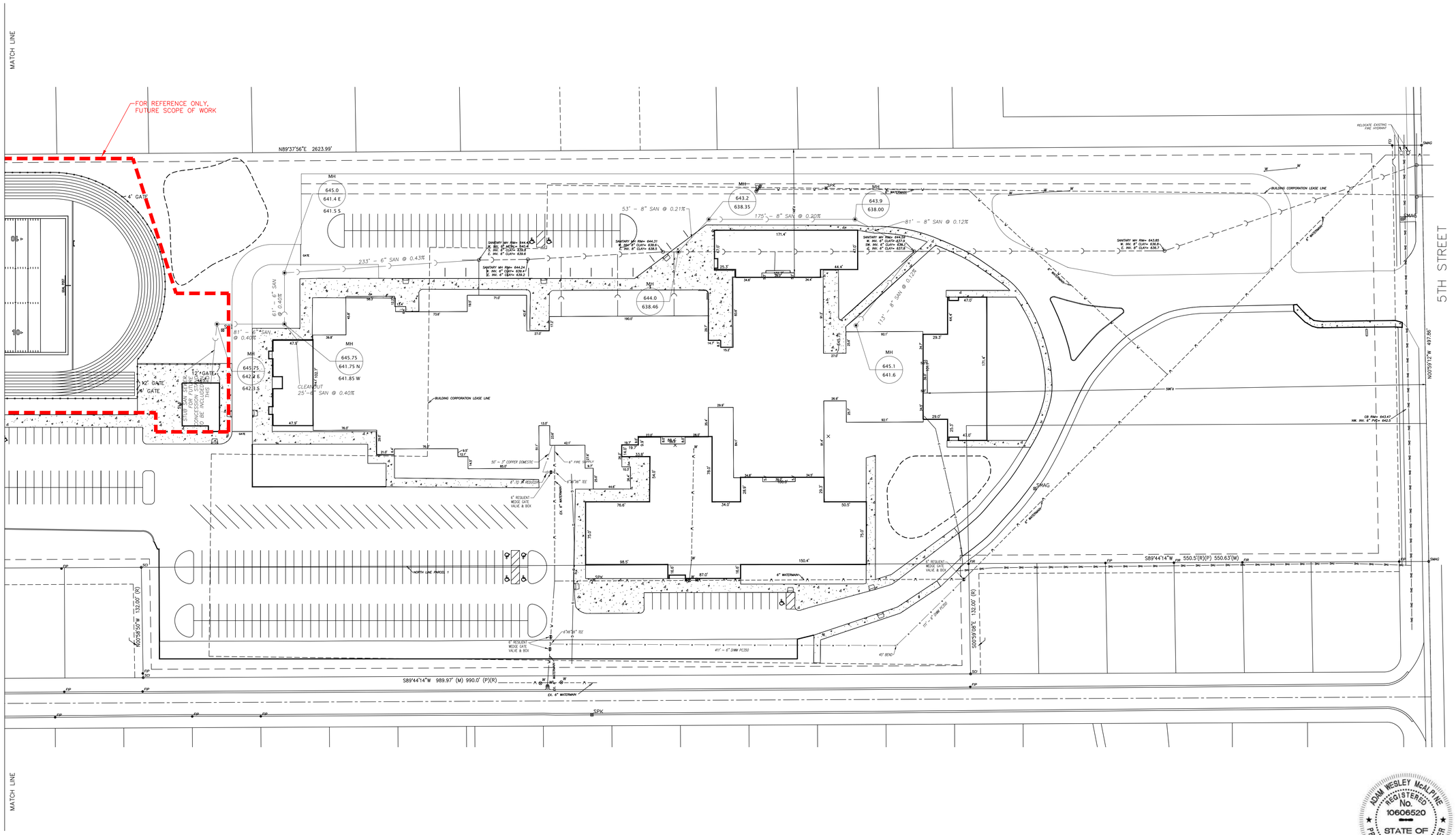
50 0 25 50 100

DRAWING
STORM SEWER AND GRADING PLAN 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

ADDENDUM #1

SHEET C-3.1



ADAM WESLEY McALPINE REGISTERED No. 10606520 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH

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ADDENDUM #1

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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PROJECT 21–141
DATE 03/16/22
COORDINATED BY AWM
DRAWN BY BPL
CHECKED BY AWM

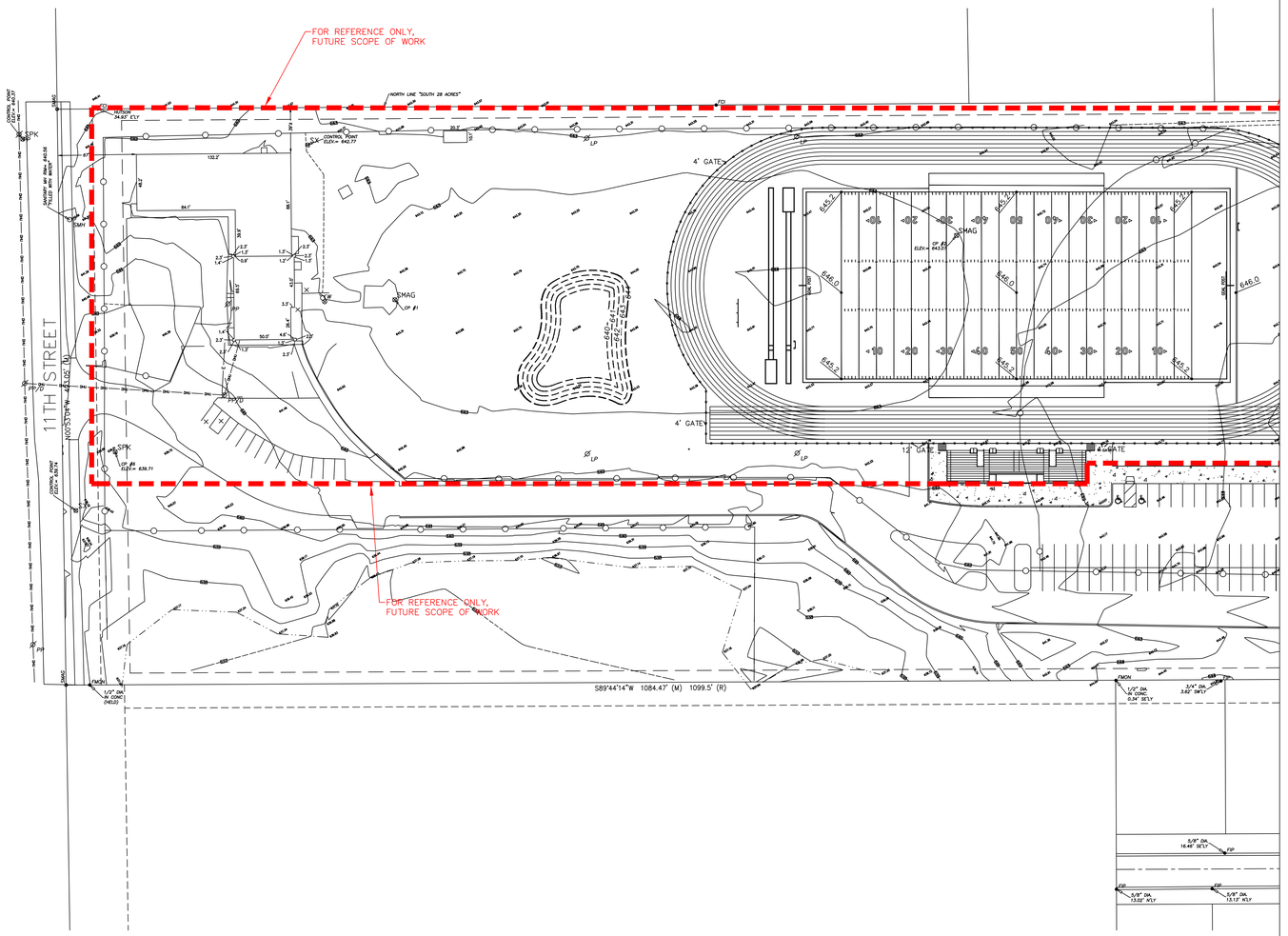
REVISIONS

MARK	DATE	ISSUED FOR
AD–1	03/16/22	ADDANDUM NO. 1

DRAWING
SANITARY SEWER AND WATER MAIN PLAN 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET C-3.2



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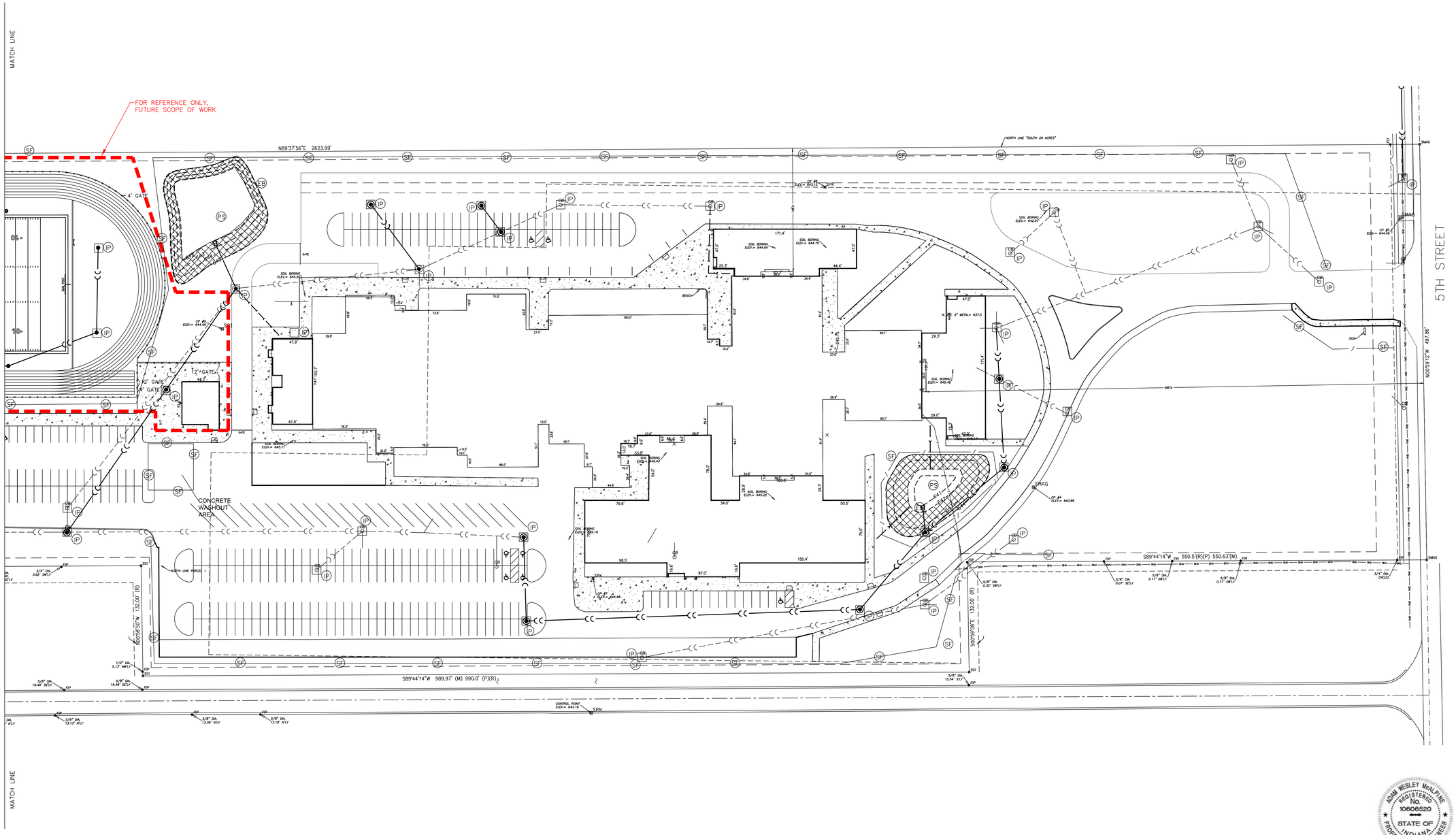
DRAWING
SANITARY SEWER AND WATER MAIN PLAN 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-3.3



LEGEND

- (SF) SILT FENCE
- (IP) INLET PROTECTION
- (EB) EROSION CONTROL BLANKET
- (TS) TEMPORARY SEEDING
- (PS) PERMANENT SEEDING

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EROSION CONTROL PLAN 1

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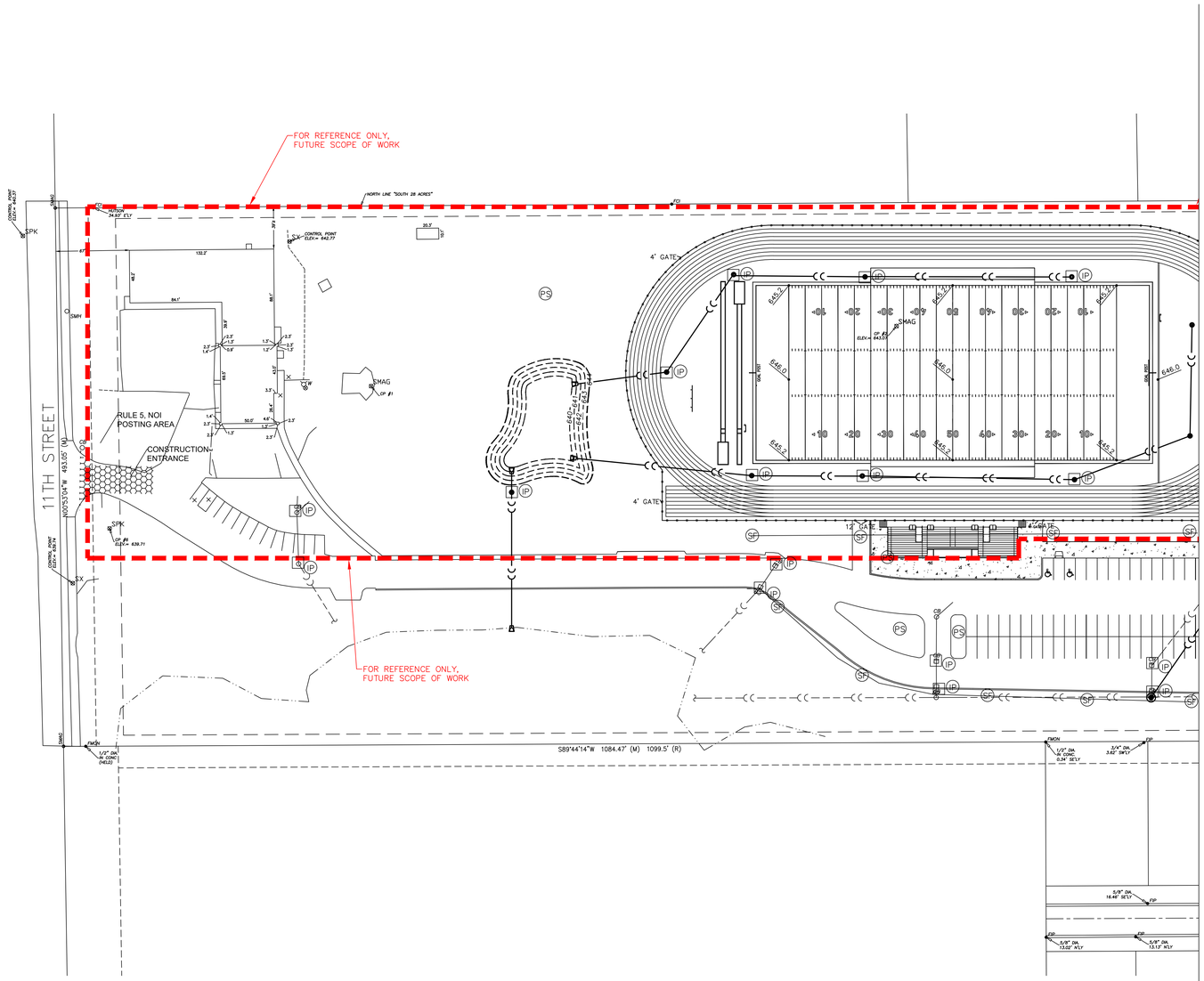
SHEET C-4.0



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EROSION CONTROL PLAN 2

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WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET C-4.1

GENERAL STORM WATER MANAGEMENT NOTES

Soil erosion and sedimentation control shall protect against loss of soil by the action of water, ice and wind.

Erosion control shall be in accordance with the Porter County Storm Water Ordinance & "The Indiana Storm Water Quality Manual".

There are two main elements for Storm Water Quality: Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management. The contractor shall provide Construction Site Stormwater Runoff Control as required and construct the Post-Construction Stormwater Management features, as needed.

The contractor shall be responsible for maintaining site conditions such that Stormwater Runoff Control is provided throughout construction. Surface water runoff management, ie: temporary ditches, swales, bypass pumping, and erosion control measures shall be constructed and maintained as required by construction activity and these items are considered incidental to the contract. These items shall be included in the base contract.

Upon the completion of the site work the contractor shall remove the Construction Site Stormwater Runoff Control measures and install any noted Post-Construction Stormwater Management measures.

Those Stormwater Runoff Control measures that will also serve in the Post-Construction Stormwater Management Plan shall have construction sediment removed and full functionality restored upon the completion of the Site construction.

Each Construction Site Stormwater Runoff Control measure shall be installed immediately following the construction of the structure or feature in which the measure is intended to protect.

The contractor is responsible for any damage and/or cleaning to the structure or feature. Corrective work incurred by the contractor shall be considered incidental to the contract.

The contractor is responsible for compliance with the StormWater Pollution Prevention Plan (SWPPP). Any fines or punitive measures incurred by the project due to failure to comply with the SWPPP are the responsibility of the contractor. These costs shall be considered incidental to the contract, and shall not be considered an extra.

During the course of construction the SWPPP may require additional erosion control measures to be installed to address site specific items not anticipated by this plan due to construction schedule or sequencing. It is not the intent of this plan to direct the schedule or sequencing beyond the general construction sequence. Any stormwater runoff control measures required due to construction methodology, sequencing, etc. are incidental to the contract. Corrective work and maintenance shall also be considered incidental, and shall not be considered an extra.

All items shown on these detail sheets are standard details and describe standard installation practices. Not all of these Stormwater Runoff Control measures will be utilized. See the erosion control plan for location and types of erosion control measures utilized. The stormwater checklist document will serve to further outline the SWPPP for this project and it is considered part of the plan documents. In the event that site conditions require additional or different erosion control measures, these details serve to describe some acceptable methods.

SUMMARY OF BASIC PRINCIPLES

1. Keep disturbed area as small as possible.

2. Stabilize and/or protect disturbed areas as soon as possible.

3. Keep storm water runoff velocities low.

4. Retain sediment within immediate construction area.

The purpose of this plan is to specify methods for construction site stormwater runoff control.

All soil erosion and sedimentation control devices shall be regularly maintained by the contractor through the duration of the project. Collected silt and sedimentation shall be removed as required to maintain the effectiveness of the silt traps or sedimentation control devices. The contractor shall replace filter materials which have become ineffective due to contamination or physical deterioration. The contractor shall inspect all stormwater runoff control devices weekly and after all storm events.

The contractor shall have a log of maintenance and inspections, to be available at the site upon request of Local and State Inspectors.

GENERAL CONSTRUCTION SEQUENCE

- Contact the underground utility protection service
- Installation work for off-site stormwater flow diversion
- Construct stabilized construction entrance
- Install silt fences as directed by erosion control plan
- Install inlet basket filter protection on all storm structures
- Initiate site demolition, pond grading,sanitary sewer, and storm sewer pipe placement and protect against sediment intrusion into the trench and pipe drainage system
- Backfill the open trenches immediately following pipe and structure placement
- Continue with grading to establish original ground conditions, incorporating temporary seeding of disturbed areas
- Install topsoil on all disturbed areas, permanent seeding and vegetation
- Remove temporary erosion control measures after areas are stabilized

POTENTIAL CONSTRUCTION POLLUTANT SOURCES

Potential pollutants that could enter the stormwater during construction include exposed soils, fuel and oil from leaking heavy equipment and vehicles. Equipment has the potential to leak fuel throughout the disturbed areas, or wherever construction is occurring. The contractors will inspect equipment before initiating construction and routinely thereafter. If leaks are discovered, they will be repaired before the equipment is used or new equipment will be brought to the site.

Bulk Fuel storage on-site can leak and thereby be a pollutant. All Fuel storage tanks shall meet the minimum requirements of the Fuel Storage requirements.

Exposed soils also have potential for being eroded by water and wind and must be prevented from entering the stormwater system. The contractor will install silt fence, riprap, and erosion control blanket in areas designated on the site development plans.

STORMWATER QUALITY CONSTRUCTION SEQUENCE

The sequence of when each measure will be implemented is summarized below.

- Silt fence must be installed prior to any construction.
- Initiate weekly Self-montoring program.
- Post the Rule 5 NOI with IDEM permit number and the Local Plan Approval Letter (NOS) at the entrance to the construction site.
- The construction entrance is to be constructed prior to construction. This can be placement of the stone drive, or the use of "mud mats".
- Inlet protection as detailed on these plans is to be installed surrounding each inlet/drywell/catch basin until work is completed and protection has been approved for removal.
- Scour protection such as Silt Dikes, Check Dams are to be installed across each swale until work is completed.
- Channel banks are to be permanently seeded and blanketed as soon as possible.
- Temporary seeding shall be placed 14 days after grading is complete or if disturbed ground is intended to be left for a period of more than 14 days.
- Stormwater outlet protection is to be constructed with completion of the storm sewer.
- Disturbed areas will be permanently seeded and mulched upon completion of project.
- Erosion control features shall be maintained until construction is complete.
- Any temporary erosion control measures are to be removed once permanent vegetative cover has been established.
- Rule 5 Notice of Termination shall be submitted.

EROSION CONTROL MEASURES

EROSION CONTROL BLANKET

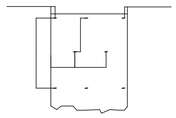
ANCHORING: Staples as recommended by the manufacturer. For North American Green use Staple pattern "B"

INSTALLATION

1. Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity).
2. Grade the site as specified in the construction plan. Add topsoil where appropriate.
3. Prepare the seedbed, fertilize (and lime, if needed), and seed the area immediately after grading.
4. Follow manufacturer's directions, lay the blankets on the seeded area such that they are in continuous contact with the soil and that the upslope or upstream ones overlap the lower ones by at least 8 in.
5. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil, and tamp down.
6. Anchor the blankets as specified by the manufacturer.

MAINTENANCE

1. During vegetative establishment, inspect after storm events for any erosion below the blanket.
2. If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
3. After vegetative establishment, check the treated area periodically.



1.15 staples per square yard
STAPLE PATTERN "B"
North American Green

RIP-RAP – SCOUR PROTECTION

MATERIAL: Hard, angular, and weather-resistant, having a specific gravity of at least 2.5
GRADATION: Well-graded stone, 50% (by weight larger than the specified d_{50}; however, the largest pieces should not exceed two times the specified d_{50}, and no more than 15% of the pieces (by weight) should be less than 3 in.
FILTER: Use geotextile fabric for stabilization and filtration or sand/gravel layer placed under all permanent riprap installations.
SLOPE: 2:1 or flatter, unless approved in the erosion and sediment control plan.
MINIMUM THICKNESS: Two times the specified d_{50} stone diameter.

SUBGRADE PREPARATION

1. Remove brush, trees, stumps, and other debris.
2. Excavate only deep enough for both filter and riprap. Over-excavation increases the amount of spoil considerably.
3. Compact any fill material to the density of the surrounding undisturbed soil.
4. Cut keyway in stable material at the base of the slope to reinforce the toe. Keyway depth should be 1 1/2 times the design thickness of the riprap and should extend a horizontal distance equal to the design thickness.
5. Smooth the graded foundation.

FILTER PLACEMENT

1. If using geotextile fabric, place it on the smoothed foundation, overlap the edges at least 12 in., and secure with anchor pins spaced every 3 ft. along the overlap.
2. If using a sand/gravel filter, spread the well-graded aggregate in a uniform layer to the required thickness (6 in. min.); if two or more layers are specified, place the layer of smaller gradation first, and avoid mixing the layers.

RIPRAP PLACEMENT

1. Immediately after installing the filter, add the riprap to full thickness in one operation. (Do not dump through chutes or use any method that causes segregation of rock sizes or that will dislodge or damage the underlying filter material.)
2. If fabric is damaged, remove the riprap and repair by adding another layer of fabric, overlapping the damaged area by 12 in.
3. Place smaller rock in voids to form a dense, uniform, well-graded mass. (Selective loading at the quarry and some hand placement may be needed to ensure an even distribution of rock material.)
4. Blend the rock surface smoothly with the surrounding area to eliminate protrusions or over-falls.

MAINTENANCE

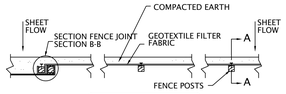
1. Inspect periodically for displaced rock material, slumping, and erosion at edges, especially down-stream or down-slope.

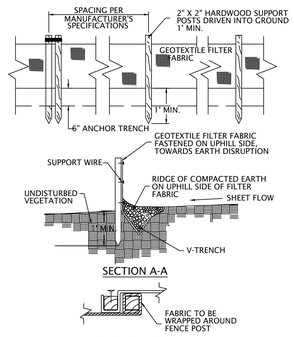
SEDIMENT CONTROL MEASURES

SILT FENCE

INSTALLATION

1. Drive stakes 1 ft. min. into ground and attach fabric to stakes with stapler.
2. Bottom of fabric shall be placed under 6 inches of compacted soil to prevent sediment flow underneath the fence.
3. Ensure that all supporting posts are on the down slope side of the fencing.





MAINTENANCE

1. Inspect after each storm event.
2. Remove built-up sediment and repair/replace the silt fence as needed.

BASKET CURB INLET PROTECTION

INSTALLATION

1. Install basket curb inlet protections as soon as inlet boxes are installed in the new development or before land disturbing activities begin in a stabilized area.
2. If necessary, adapt basket dimensions to fit inlet box dimensions, which vary according to the manufacturer and/or model.
3. Seal the side inlets on those types of inlet boxes that have them.
4. Remove the grate and place the basket in the inlet.
5. Cut and install a piece of filter fabric large enough to line the inside of the basket and extend at least 6 inches beyond the frame.
6. Replace the inlet grate, which also serves to anchor the fabric.

MAINTENANCE

1. Inspect after each storm event.
2. Remove built-up sediment and replace the geotextile fabric after each storm event.
3. Periodically remove sediment and tracked-on soil from the street (but not by flushing with water) to reduce the sediment load on this curb inlet practice.

COMMON CONCERNS

1. Sediment not removed and geotextile fabric not replaced following a storm event - results in increased sediement, tracking, traffic hazard, and excessive ponding.
2. Geotextile fabric permittivity too low - results in rapid clogging, thus severe ponding, sediment enters the drain if the fabric breaks.
3. Drainage area too large - results in sediment overload and severe ponding; sediment enters the drain if the fabric breaks.

TEMPORARY AND PERMANENT SEEDING

SITE PREPARATION

1. These installation practices are needed to control erosion, sedimentation, and water runoff, such as temporary and permanent diversions, sediment traps or basins, silt fences, and triangular silt dikes.
2. Grade the site as specified in the construction plan.

SEEDBED PREPARATION

1. Fertilize as required.
2. Work the fertilizer into the soil 2-4 in. deep with a disk or rake operated across the slope.

SEEDING

1. Select a seeding mixture and rate from the table and plant at depth and on dates shown.
2. Apply seed uniformly with a drill or cultipacker-seeder or by broadcasting, and cover to the depth shown.
3. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
4. Mulch seeded areas to increase seeding success.

MAINTENANCE

1. Inspect periodically after planting to see that vegetative stands are adequately established, re-seed if necessary.
2. Check for erosion damage after storm events and repair, reseed and mulch if necessary.
3. Topdress fall seeded wheat or rye seeding with 50 lbs./acre of nitrogen in February or March if nitrogen deficiency is apparent.

TEMPORARY SEEDING RECOMMENDATIONS

SEED SPECIES*	RATE/ACRE	PLANTING DEPTH	OPTIMUM DATES**
Wheat or rye	150 lbs.	1 to 1 1/2 in.	9/15 to 10/30
Spring oats	100 lbs.	1 in.	3/1 to 4/15
Annual ryegrass	40 lbs.	1/4 in.	3/1 to 5/1 8/1 to 9/1
German millet	40 lbs.	1 to 2 in.	5/1 to 6/1
Sudangrass	35 lbs.	1 to 2 in.	5/1 to 7/30

* Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year.
** Seeding done outside the optimum dates increases the chance of seeding failure.

PERMANENT SEEDING RECOMMENDATIONS

This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect and the tolerance of each species to shade and drought.

SEED SPECIES AND MIXTURES	RATE/ACRE	OPTIMUM SOIL pH
OPEN AND DISTURBED AREAS (REMAINING IDLE FOR MORE THAN ONE YEAR.		
1. Perennial ryegrass	35-50 lbs.	5.6 to 7.0
+ white or ladino clover	1 to 2 lbs.	
1. Kentucky bluegrass	20 lbs.	5.5 to 7.5
+ smooth bromegrass	10 lbs.	
+ switchgrass	3 lbs.	
+ timothy	4 lbs.	
+ perennial ryegrass	10 lbs.	
+ white or ladino clover	1 to 2 lbs.	

TEMPORARY CONSTRUCTION ENTRANCE/EXIT PAD

MATERIAL: 2-3 in. washed stone (INDOT CA No. 2) over a stable foundation.
THICKNESS: 12 in. minimum.
WIDTH: 20 ft. minimum or full width of entrance/exit roadway, whichever is greater.
LENGTH: 100 ft. minimum.

GEOTEXTILE FABRIC UNDERLINER: May be used under wet conditions or for soils within a high seasonal water table to provide greater bearing strength.

INSTALLATION

1. Avoid locating on steep slopes or at curves in public roads.
2. Remove all vegetation and other objectionable material from the foundation area, and grade and crown for positive drainage.
3. If slope towards the road exceeds 2%, construct a 6-8 in. high water bar (ridge) with 3:1 side slopes across the foundation area about 15 ft. from the entrance to divert runoff away from the road (Practice 3.24) see exhibit.
4. Install pipe under the pad if needed to maintain proper public road drainage.
5. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
6. Place stone to dimensions and grade shown in the erosion/sediment control plan, leaving the surface smooth and sloped for drainage.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.

MAINTENANCE

1. Inspect entrance pad and sediment disposal area weekly and after storm events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Topdress with clean stone as needed.
4. Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or basin.
5. Repair any broken road pavement immediately.

MATERIAL MANAGEMENT MEASURES (HOUSEKEEPING) SPILL PREVENTION AND CONTROL PLAN

- Only approved fuel storage tank shall be allowed on site.
- Spill Kits must be located on-site in the vicinity of the fuel storage sink.
- Mobile Fueling shall be used wheever possible.
- Fueling should take place in a central location.
- Equipment should be kept in good working order, well maintained so that breakdowns, and equipment failures are reduced.

FUEL STORAGE

- All fuel tanks on site shall have secondary containment approved by IDEM.
- No fuel tanks are to be located within 100 feet of a storm sewer inlet.
- Fuel storage system shall be kept in good working order and shall be subject to periodic IDEM inspections.
- Spill Kits must be located on-site in the vicinity of the fuel storage sink.
- Fuel tanks shall have a safety guage.

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EROSION CONTROL NOTES AND DETAILS

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET C-4.2

Section A Pre-Construction Assessment

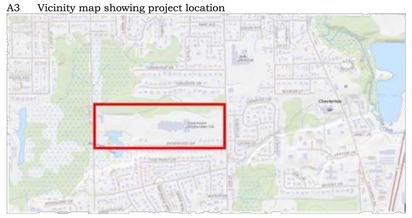
A1 Engineering plans illustrating building lot numbers/boundaries and road layout/names

See attached storm water pollution prevention plan drawings detailing the proposed Westchester School building improvements, internal drive, and storm sewer system layout.

A2 Narrative describing project nature and purpose

The proposed project entails four (4) building additions to the existing school building to modernize and expand capacity of the school. Improvements will also be made to the athletic field.

A3 Vicinity map showing project location



The development is located north of Dunewood Drive, west of Fifth Street and east of Eleventh Street.

A4 Legal description of the project site

See Westchester plat for legal description of property.

A5 Location of all lots and proposed site improvements

The location of proposed site work is illustrated on the attached storm water pollution prevention plan drawings.

A6 Hydrologic unit code

8-digit Hydrologic Unit ID:	04040001
11-digit Hydrologic Unit ID:	04040001060
14-digit Hydrologic Unit ID:	04040001060040
Subwatershed Name, 14-digit Hydrologic Unit:	Little Calumet River-Burns Ditch Outlet
Area (Acres):	6853.5
Non-Contributing Portion of 14-digit HU (Acres):	0
GlobalID:	{C23D34F6-8D41-4A35-85AD-172A73C4593B}

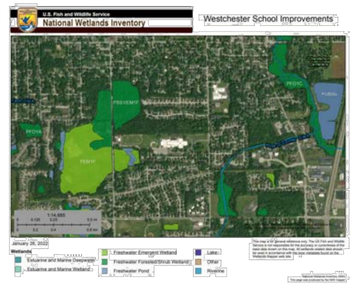
A7 Notation of any State or Federal water quality permits

An IDEM Rule 5 Permit for erosion and sediment control is required for the demolition work. There are no other required water quality permits from State or Federal regulatory agencies.

A8 Specific points where stormwater discharge will leave the site

Stormwater runoff from the project site will be intercepted and filtered at the project perimeter during construction to capture potential pollutants. The site terrain is generally flat with a slight pitch to the south and west towards the marsh on the adjacent property. A storm sewer outlet will discharge all water into this marsh area.

A9 Location and name of all wetlands, lakes, and water courses on and adjacent to the site



The proposed development is located within an urban area of Chesterton and there are no water bodies or wetlands located within the nearby vicinity of the project site. The map above provided by U.S. Fish and Wildlife Service depicts the absence of wetlands within the project area.

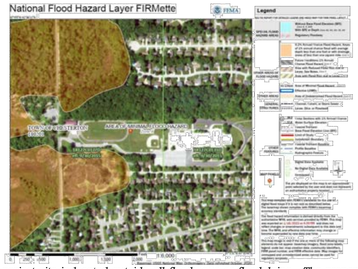
A10 Identify all receiving waters

Stormwater runoff from the project site drains west into Peterson Ditch and then empties into the East Arm of the Little Calumet River which flows into Lake Michigan.

A11 Identification of potential discharges to groundwater

The potential discharges to groundwater include possible spills from the construction equipment used for construction activities. Contractor shall follow proper protocols for refueling vehicles and spill containment.

A12 100-Year floodplains, floodways, and floodway fringes



The project site is located outside all floodways or floodplains. The property is situated in Flood Zone X and is classified as an area of minimal flood hazard.

A13 Pre-construction and post-construction estimate of peak discharge

The flow rate estimates of the proposed development site for pre and post land conditions are based on rational method computations (Q=CIA).

Pre-Construction
Q = CIA
C = 0.15 (flat, undeveloped land)
I = 7.68 inches/hour (15-minute time of concentration)
A = 1.04 acres
Q = (0.15)(7.68)(1.04)
Q = 1.20 cfs

Post-Construction
Q = CIA
C = 0.83 (composite runoff)
I = 9.00 inches/hour (10-minute time of concentration)
A = 1.04 acres
Q = (0.83)(9.00)(1.04)

Q = 7.77 cfs

A14 Adjacent land use, including upstream watershed

North – Small Forest, residential homes
East – Roadway, residential homes
South – Roadway and residential homes
West – Roadway, protected wetland

A15 Locations and approximate boundaries of all disturbed areas

The locations and boundaries of all disturbed areas have been indicated on the storm water pollution prevention plan site plan drawing.

A16 Identification of existing vegetative cover

The existing vegetative cover consists of a mostly grass lawn areas with occasional mature trees.

A17 Soil map including description and limitations

The site soils are classified as Martinsville loam (MfA) and Whitaker loam (Wt).

A18 Locations, size and dimensions of proposed storm water systems

The locations, sizes, and dimensions of the proposed storm sewer systems are indicated on the engineering plans.

A19 Plan for any off-site construction activities associated with the project

There are no off-site construction activities associated with the project.

A20 Locations of proposed soil stockpiles, borrow and/or disposal areas

The topsoil will be stockpiled in the central portion of the project site and surrounded by temporary silt fencing.

A21 Existing site topography at an interval appropriate to show detailed drainage patterns

The site topography is shown on the storm water pollution prevention plan site drawings. The land is generally flat with a slight pitch to the southwest.

A22 Proposed final topography at an interval appropriate to show detailed drainage patterns

The final topography of the development site is illustrated on the grading plan. The site will drain south into a detention basin via storm sewer pipes and grass swales.

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No.
10606520
STATE OF
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PROFESSIONAL ENGINEER

ADDENDUM #1

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PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

PROJECT 21-141
DATE 03/16/22
COORDINATED BY AWM
DRAWN BY EPL
CHECKED BY AWM

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
EROSION CONTROL NARRATIVE 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-4.3

Section B Construction Assessment

B1 Description of potential pollutant sources associated with the construction activities

The potential pollutant sources associated with the proposed construction activities include but are not limited to: construction debris, dust, soil, dirt and sediment, concrete compounds, asphalt compounds, petroleum products including fuel, oil and grease, and exhaust emissions.

B2 Sequence describing storm water quality measure implementation relative to land disturbing activities

The sequence of storm water quality measure implementation has been described within the attached drawings.

B3 Stable construction entrance locations and specifications

The construction entrance location along with specifications for construction have been described within the attached drawings.

B4 Sediment control measures for sheet flow areas

Silt fence perimeter protection will help contain sediment on site and within the construction limits. Inlet protection devices will be installed at internal inlets to prevent sediment from entering the drainage system.

B5 Sediment control measures for concentrated flow areas

The project site is relatively flat and concentrated flow areas are not anticipated.

B6 Storm sewer inlet protection measure locations and specifications

The inlet protection locations along with specifications for construction have been described within the attached drawings.

B7 Runoff control measures

The runoff control measures for the project will consist of topsoil ground stabilization and seeding upon completion of all grading activities.

B8 Stormwater outlet protection specifications

The stormwater outlet will be protected with piled riprap as illustrated in the drawings.

B9 Grade stabilization structure locations and specifications

There are no grade stabilization structures associated with the project.

B10 Location, dimension, specifications, and construction details of each storm water quality measure

The stormwater quality measures include the water quality detention basin area. Additional information regarding location and dimension are detailed on the drawings.

B11 Temporary surface stabilization methods appropriate for each season

The temporary and permanent surface stabilization methods have been described within the storm water pollution prevention plan drawings.

B12 Permanent surface stabilization specifications

The temporary and permanent surface stabilization methods have been described within the storm water pollution prevention plan drawings.

B13 Material handling and spill prevention plan

The material handling and spill prevention plan have been described within the storm water pollution prevention plan drawings.

B14 Monitoring and maintenance guidelines for each proposed pollution prevention measure

The monitoring and maintenance guidelines have been described within the storm water pollution prevention plan drawings.

B15 Erosion and sediment control specifications for individual building lots

The proposed development will occur between building lots. However, there is no distinction between the two sites in terms of erosion and sediment control.

Section C Post-Construction Assessment

C1 Description of pollutants and their sources associated with the proposed land use

The future land use will continue to be a school building with on-site athletic fields and parking. Potential pollutants may include herbicides, fertilizers, and oil runoff.

C2 Sequence describing storm water quality measure implementation

Post-construction maintenance activities are described in the O&M manual.

C3 Description of proposed post-construction storm water quality measures

Post construction storm water quality measures include the northwest and southeast water detention basins as well as the appropriate stormwater infrastructure shown in drawings.

C4 Location, dimensions, specifications, and construction details of each storm water quality measure

The details regarding the post construction water quality measures are detailed in the project drawings.

C5 Description of maintenance guidelines for proposed post-construction water quality measures

Maintenance guidelines for all post-construction water quality measures are described in the O&M manual.

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PROJECT
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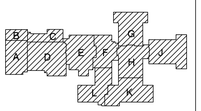

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PROJECT 21-141
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REVISIONS

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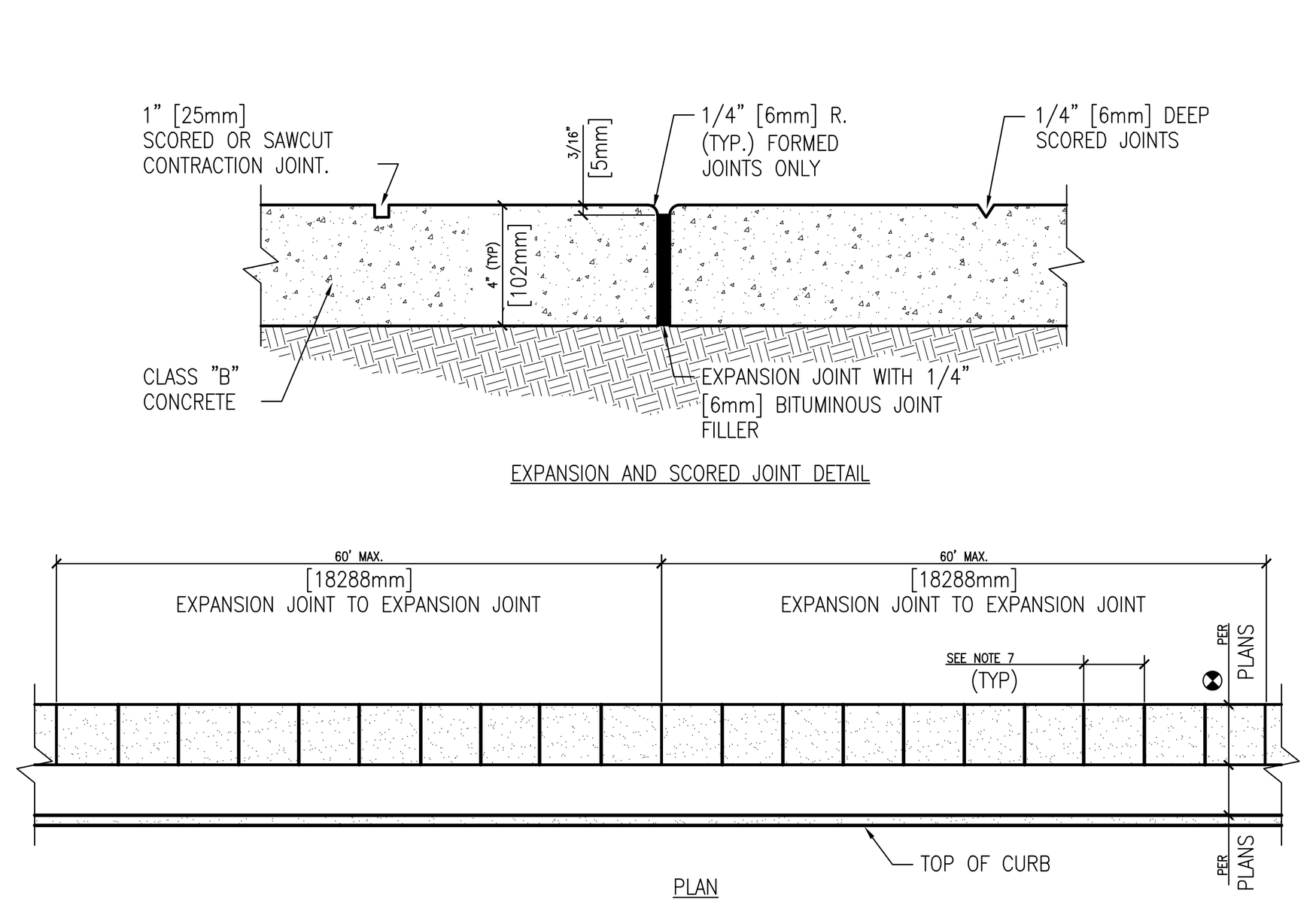
AD-1	03/16/22	ADDANDUM NO. 1

DRAWING
EROSION CONTROL NARRATIVE 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-4.4

ADDENDUM #1

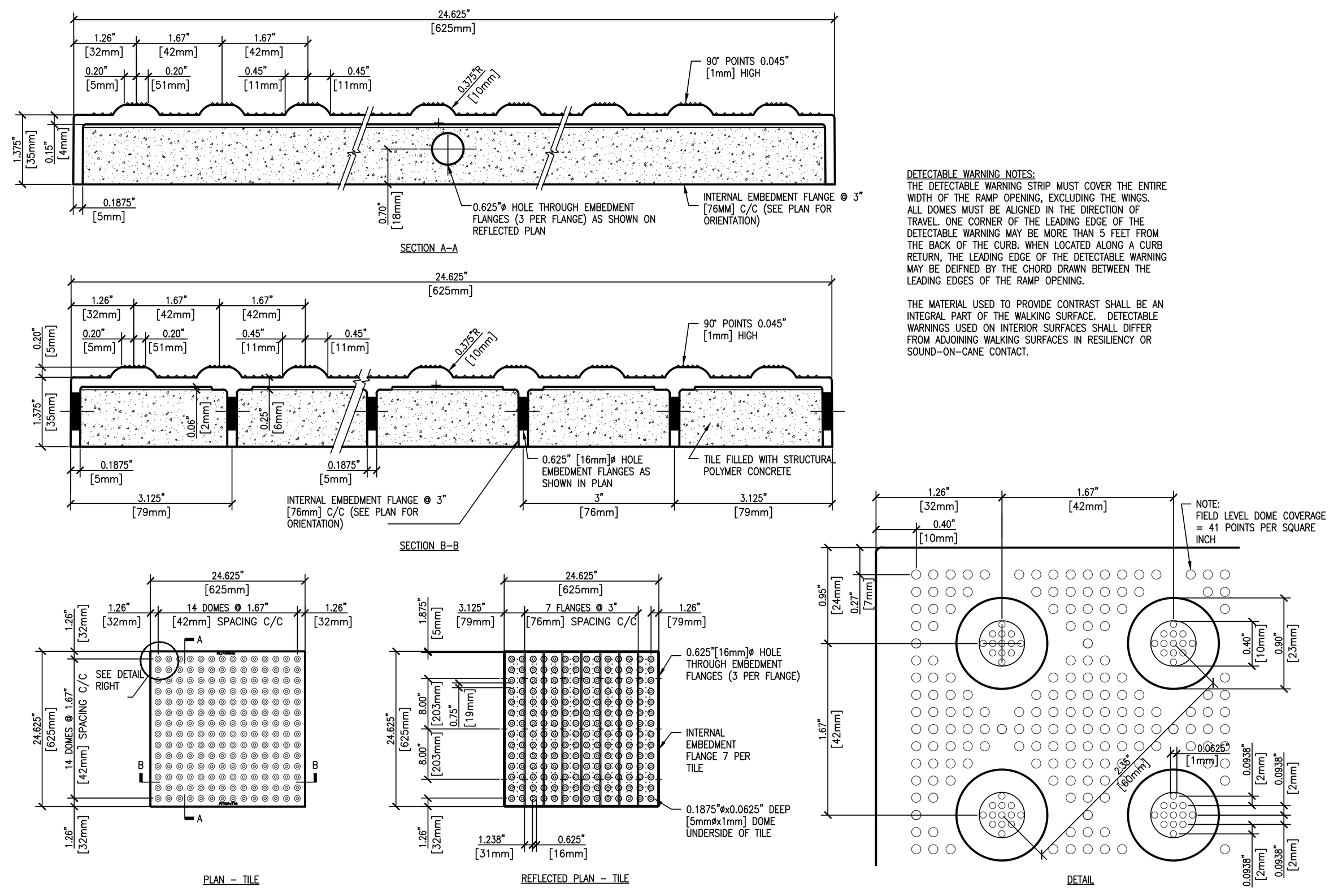


NOTES:

1. EXPANSION JOINTS SHALL BE LOCATED WHERE SIDEWALK ABUTS CONCRETE DRIVEWAYS, CURB OR OTHER ADJACENT STRUCTURES.
2. ONE-HALF INCH BITUMINOUS JOINT FILLER SHALL BE INSTALLED AT EXPANSION JOINT LOCATIONS AND SHALL EXTEND THE FULL DEPTH OF THE CONCRETE.
3. 1" DEEP CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF APPROXIMATELY 15' [4572mm] OR AT A SPACING THAT MATCHES THE ADJACENT CURB.
4. FORMED CONTRACTION JOINTS SHALL BE FINISHED WITH A TOOL HAVING A 1/4" [6mm] RADIUS.
5. SCORED JOINTS SHALL BE 1/4" [6mm] DEEP AND PLACED AT THE SPACING INDICATED FOR THE WIDTH OF SIDEWALK OR MATCH SCORED JOINTS OF ADJACENT CURB.
6. CONCRETE SHALL BE FINISHED BY MEANS OF A FLOAT, STEEL TROWELLED AND BROOMED WITH A FINE BRUSH IN A TRANSVERSE DIRECTION.
7. 1/4" DEEP SCORED JOINTS (TYP) SPACED AT 6' [1829mm] OR EQUAL TO SIDEWALK WIDTH.
8. SIDEWALK SHALL HAVE A MAXIMUM 2% CROSS SLOPE.

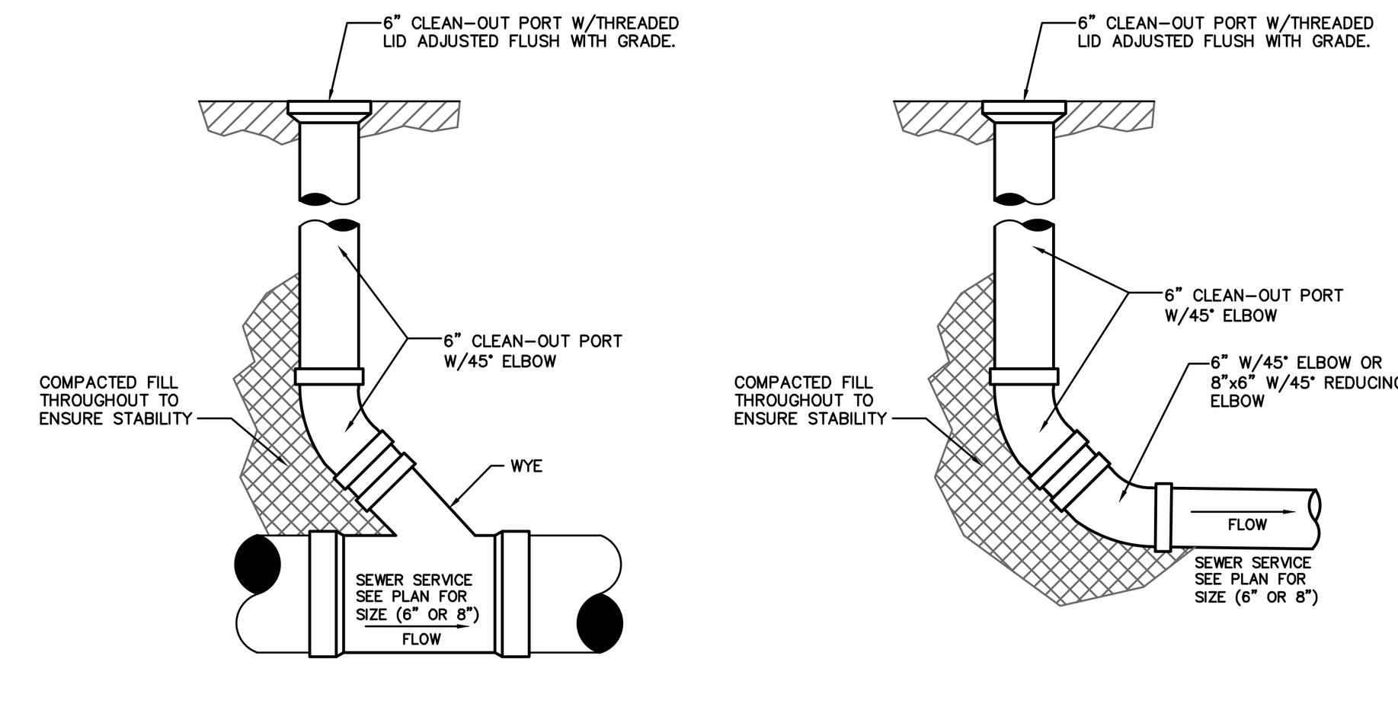
CONCRETE SIDEWALK

NOT TO SCALE



TRUNCATED DOME TACTILE – WARNING STRIP

NOT TO SCALE



CLEAN-OUT

NOT TO SCALE

SPECIFICATIONS FOR SANITARY SEWER AND WATER MAINS

1. All sanitary sewer pipe , branches, and fittings shall conform to the following, Poly-vinyl chloride, SDR 26 (ASTM D-3034), with push-on rubber gasket joints (ASTM C-3212).

2. All sanitary sewer manholes shall be standard 48" diameter precast concrete units (ASTM C-478) conforming with the standard detail sheets of these plans. Mortar joints are not allowed on manholes, all joints must be rubber gaskets.

3. The completed sanitary sewer system shall be tested for infiltration and shall have a maximum infiltration of 3 gallons per hour per 100 feet of sewer pipe. Mandrel testing shall be performed on all P.V.C. materials placed. The Contractor shall be responsible for supplying testing materials and appurtenances.

4. All water main pipe shall be Ductile Iron Pipe (AWWA PC350) with bell and spigot push-on rubber gasket joints (AWWA CIII). All water main pipe shall be installed with a minimum cover of 5.0 feet from the top of the curb to the top of the pipe. All water mains shall be chlorinated at the time of installation and shall be subject to a test for pressure and purity. All fire hydrants, tees, bends and fittings shall be suitable harnessed or thrust blocked with concrete.

5. All improvements installed across paved or future paved areas, driveways and sidewalks shall backfilled with graded stone aggregate to the subgrade line. Compaction shall be done in 8" maximum depth lifts to 95% maximum density.

6. Care should be taken in parkway areas to assure compaction acceptable for the stability of proposed driveways and sidewalks. While special backfill is not required, it shall be the responsibility of the contractor to protect against substantial future settlement of backfilled areas.

7. Air pressure test shall be performed on all completed Sanitary Manholes and existing manholes where the proposed sanitary system will connect to, in accordance with ASTM C 1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test. The tests shall be conducted prior to backfill to demonstrate the integrity of the installed materials. The manhole shall pass if the test time meets or exceeds the required minimum test times as specified in ASTM C 1244-93 for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury. If the manhole fails the initial test, necessary repairs shall be made, and the test shall be repeated. The contractor shall be responsible for supplying all testing materials and appurtenances.

8. Deflection tests shall be performed on all flexible pipe materials placed. The contractor shall be responsible for supplying testing materials and appurtenances. The tests shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.

9. All sewers shall be laid at least 10 feet (3.0 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

10. No sanitary sewer manhole shall be within eight (8) feet of a water main as measured from the outside edge of the sanitary sewer manhole to the outside edge of the water main.

SPECIFICATIONS FOR STORM SEWERS

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of Porter County, Indiana.

2. All storm sewer pipe, branches and fittings shall conform to either of the following: Poly Vinyl Chloride Pipe (AASHTO M252), Polyethelene Pipe (ASHTO M252 or AASHTO M294), Concrete Pipe (AASHTO M170).

3. All storm sewer manholes shall conform to either of the following :
(A) Standard precast concrete units (ASTM C-478) and/or (B) Poly-Vinyl Chloride (PVC) Structure Nyloplast or equal conforming with the standard detail sheet of these plans. Mortar joints are not allowed on manholes, all joints must be rubber gaskets.

4. All improvements installed across paved or future paved areas driveways, and sidewalks shall backfilled with graded stone aggregate to the subgrade line. Compaction shall be done in 8" maximum depth lifts to 95% maximum density.

5. Care should be taken in parkway areas to assure compaction acceptable for the stability of proposed driveways and sidewalks. While special backfill is not required, it shall be the responsibility of the contractor to protect against substantial future settlement of backfilled areas.

6. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Owner with one reproducible drawing certified by a Professional Engineer or Land Surveyor and 2 copies thereof prior to and as a condition of the final acceptance.

7. All sewers shall be laid at least 10 feet (3.0 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

8. No storm sewer manhole shall be within eight (8) feet of a water main as measured from the outside edge of the sanitary sewer manhole to the outside edge of the water main.

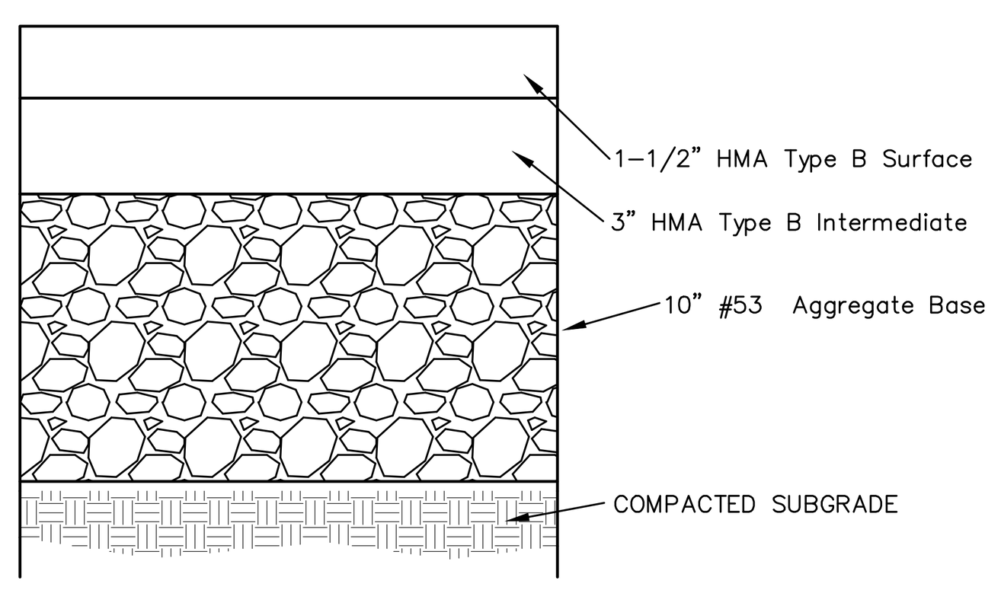
GENERAL SPECIFICATIONS

1. In areas of unsuitable soil, the contractor shall be responsible removal, replacement, and disposal of the soil.

2. Replacement and addition of structural soil under roads, pavement and building shall be done in lifts not to exceed 8-inches, with a required compaction of at least 95% of their maximum dry density can be obtained, in accordance with the Indiana Department of Transportation Standard Specifications.

3. The contractor shall provide full depth saw cuts where existing pavement, concrete or asphalt is to be removed. The contractor shall provide adequate compacted material/gravel at saw cut edge to shore up and prevent the degradation of existing pavement to remain. Damage to existing pavement will be repaired at the contractor's expense.

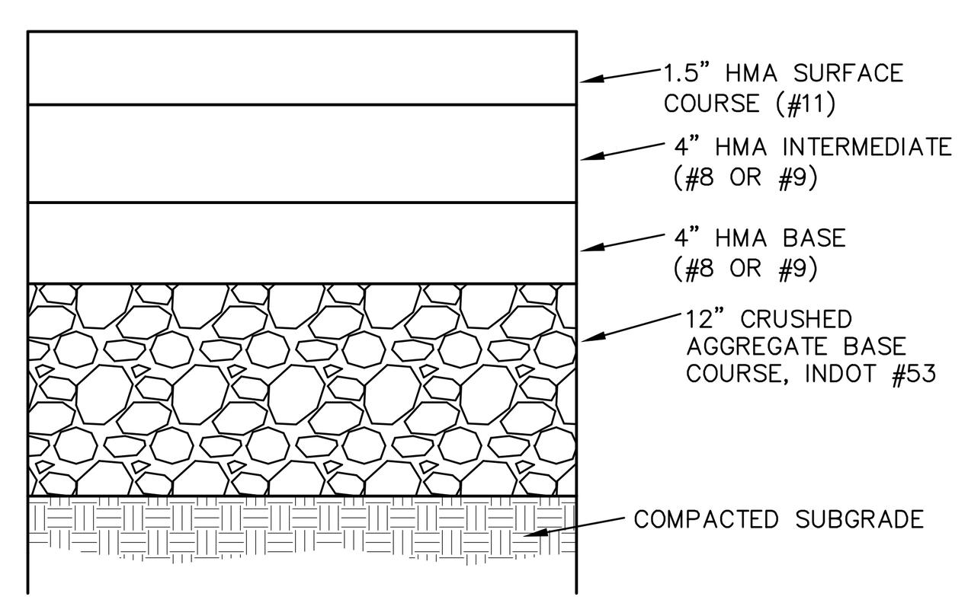
4. The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5. A research project sponsored by the Architectural and Transportation Barriers Compliance Board (Access Board) conducted tests with persons with disabilities and concluded that a higher coefficient of friction was needed by such persons. A static coefficient of friction of 0.6 is recommended for accessible routes and 0.8 for ramps.



NOTES:
1. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.
2. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY PONDING PROBLEMS THAT MAY OCCUR AFTER THE FINAL SURFACE IS LAID.

STANDARD DUTY ASPHALT PAVEMENT SECTION

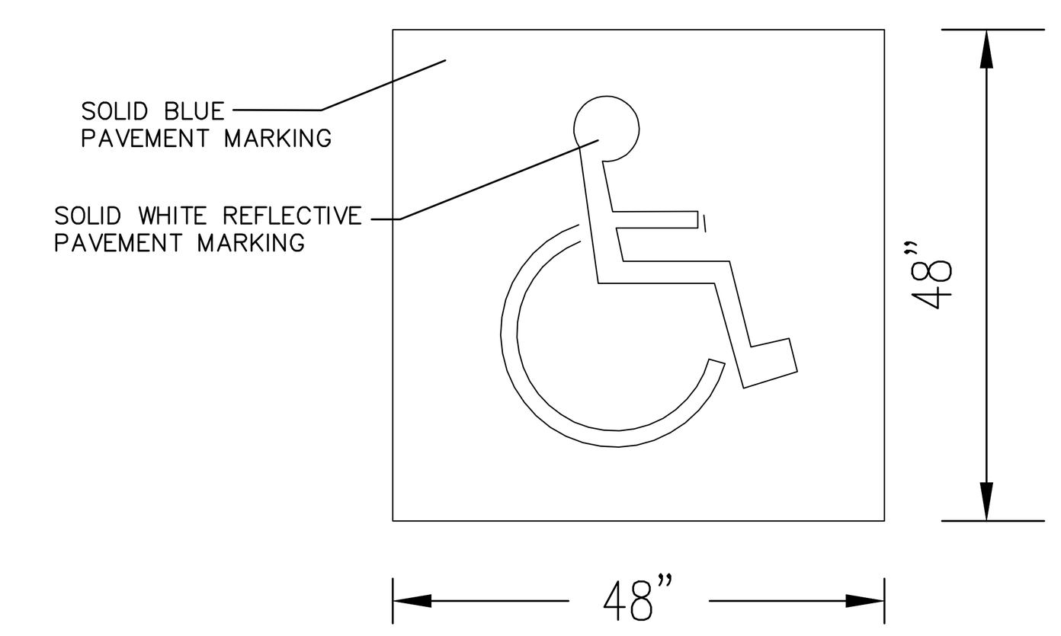
NOT TO SCALE



NOTES:
1. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.
2. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY PONDING PROBLEMS THAT MAY OCCUR AFTER THE FINAL SURFACE IS LAID.

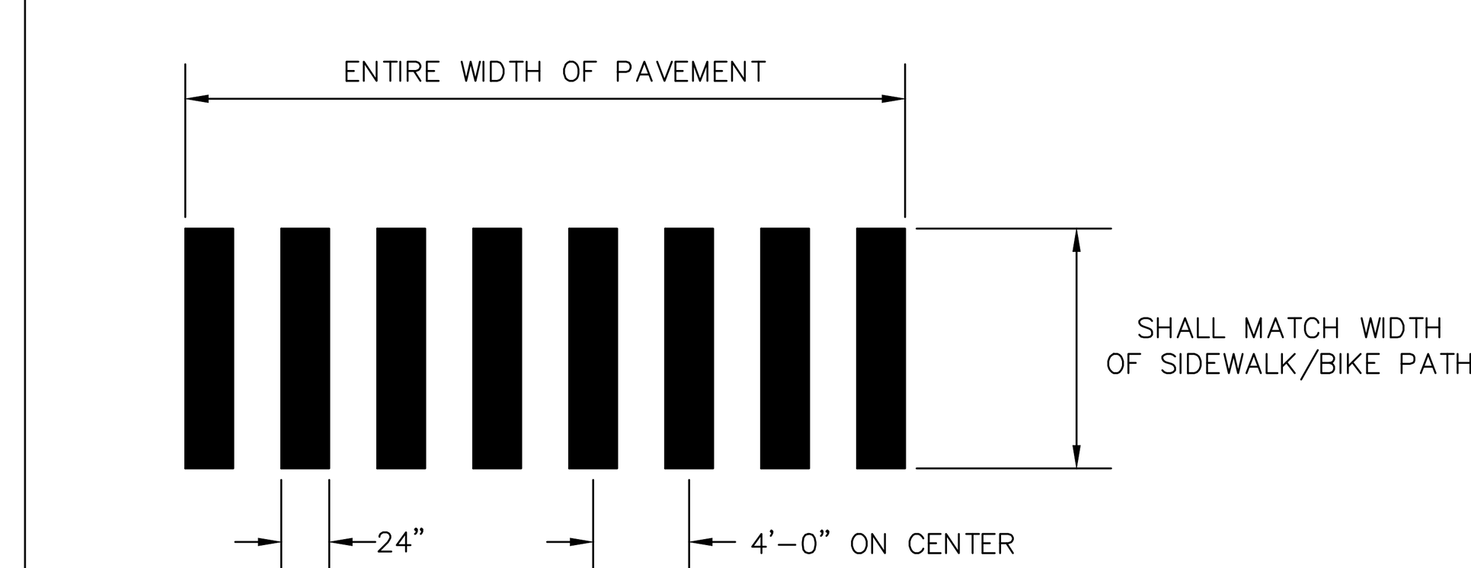
HEAVY DUTY ASPHALT PAVEMENT SECTION

(NO SCALE)



INTERNATIONAL SYMBOL FOR ACCESSIBILITY

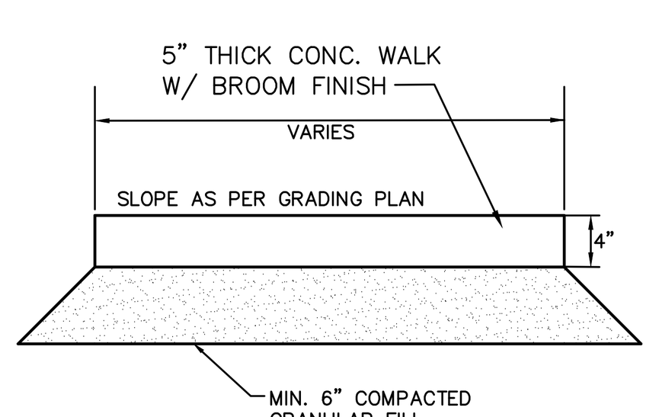
NOT TO SCALE



NOTE:
ALL PAVEMENT MARKINGS SHALL BE 2 FOOT WIDE REFLECTIVE WHITE PAINT AND SPAN ACROSS THE DRIVE LANES.

CONTINENTAL CROSSWALK DETAIL

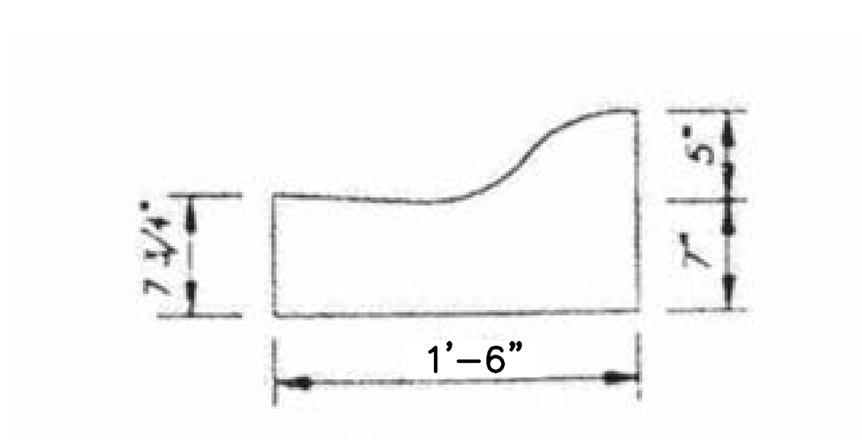
NO SCALE



TYPE C

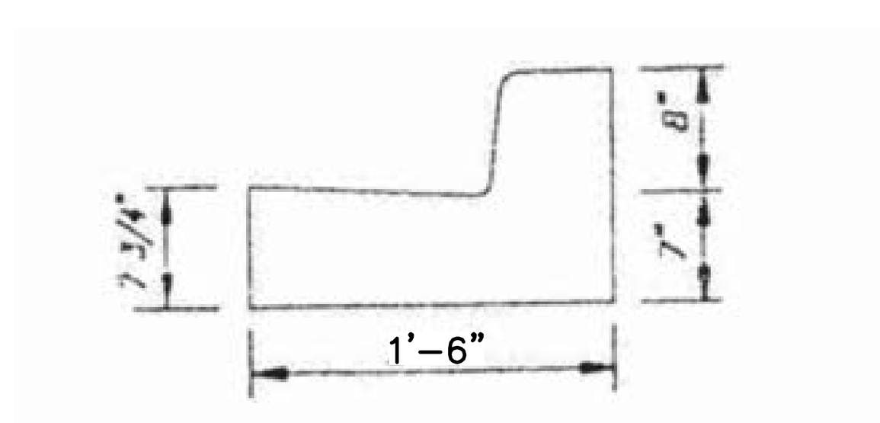
SIDEWALK CROSS-SECTION

NOT TO SCALE



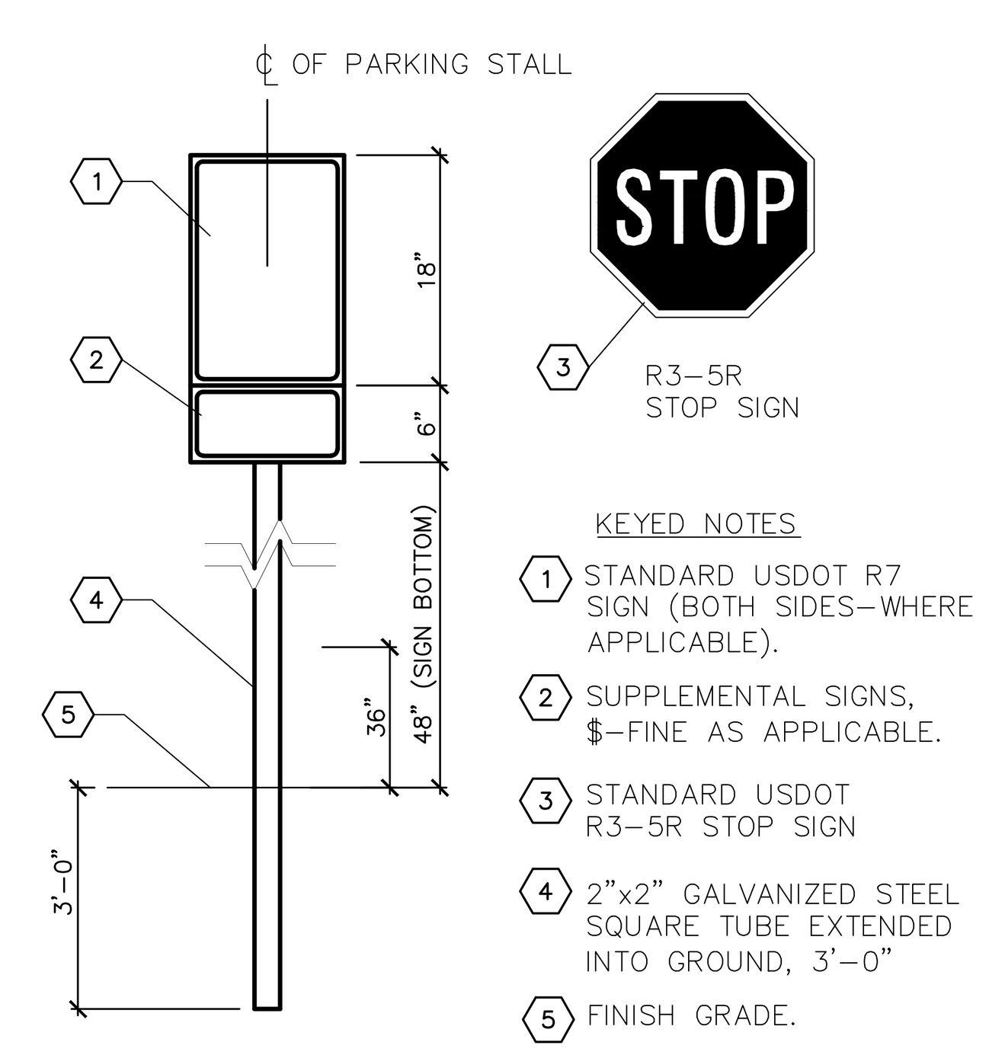
CONCRETE ROLL CURB AND GUTTER

NOT TO SCALE



COMBINED CONCRETE HIGH BACK CURB AND GUTTER

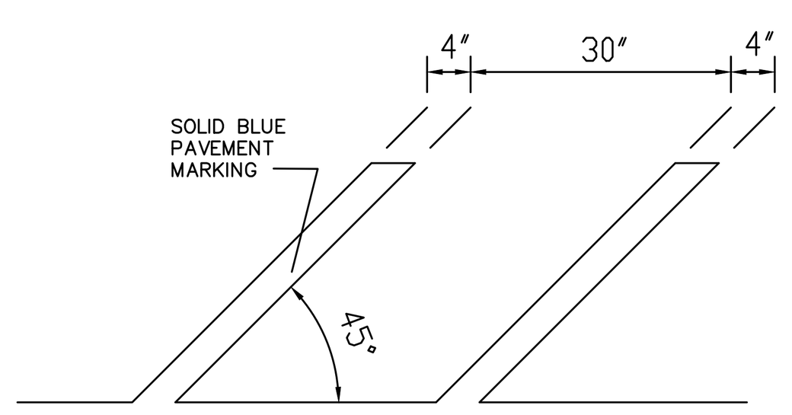
NOT TO SCALE



KEYED NOTES
1. STANDARD USDOT R7 SIGN (BOTH SIDES-WHERE APPLICABLE).
2. SUPPLEMENTAL SIGNS, $-FINE AS APPLICABLE.
3. STANDARD USDOT R3-5R STOP SIGN
4. 2"x2" GALVANIZED STEEL SQUARE TUBE EXTENDED INTO GROUND, 3'-0"
5. FINISH GRADE.

SIGN AND POST (FREE STANDING)

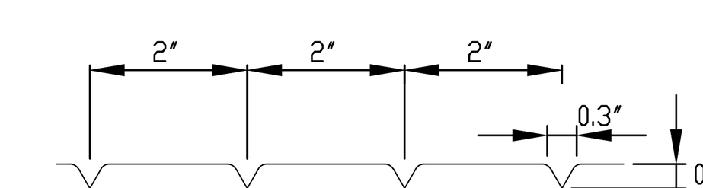
NOT TO SCALE



NOTE:
USE 4" SOLID WHITE PAVEMENT MARKING FOR REGULAR PARKING

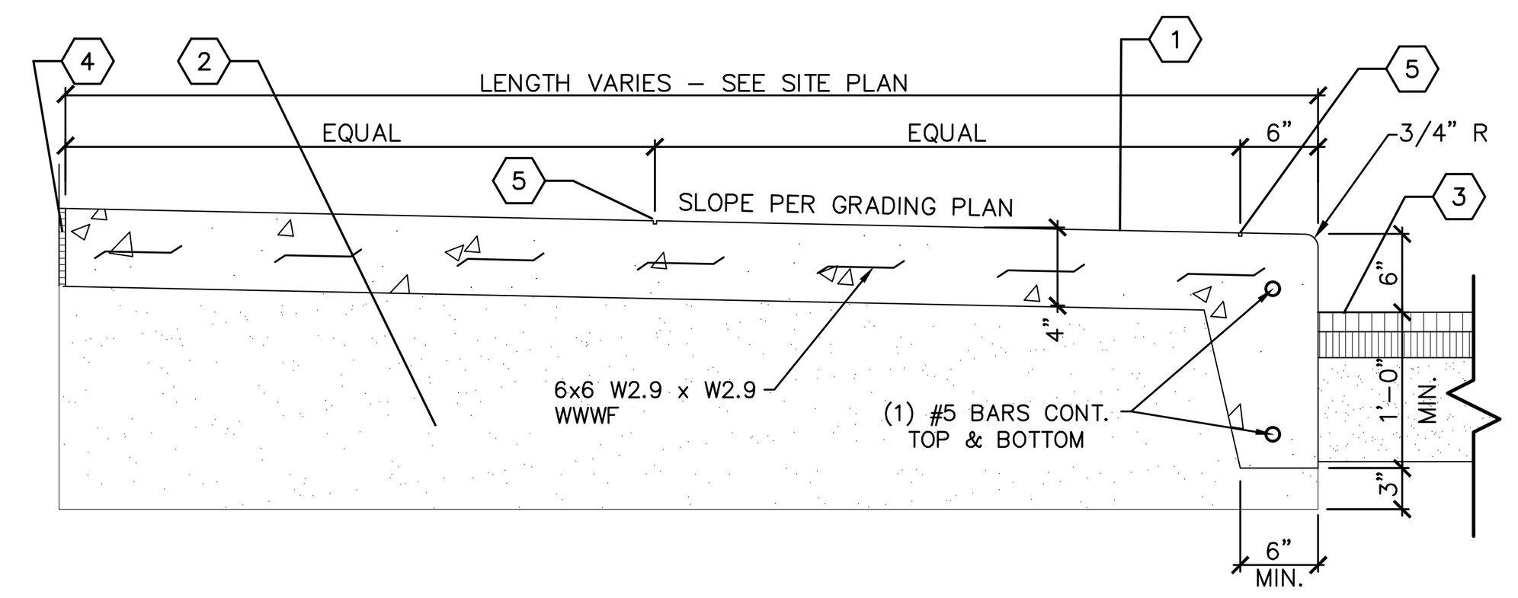
ACCESSIBILITY AND PARKING STRIPING DETAIL

NOT TO SCALE



DETAIL OF RAMP GROOVES

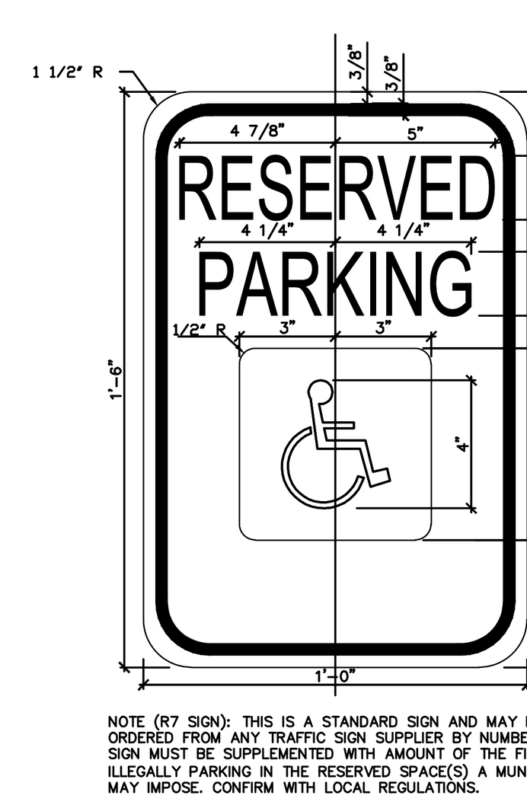
NOT TO SCALE



KEYED NOTES
1. 4" THICK CONC. BROOM FINISH WITH 6X6 W2.9XW2.9 WWWF
2. 6" COMPACTED GRANULAR FILL
3. PROPOSED PAVEMENT
4. COMPRESSIBLE FILLER (3/4" MAXIMUM). CUT BACK AND PROVIDE SEALANT, TYPICAL, AT ALL JOINTS WITH FILLER. (BUTTING BUILDING ONLY)
5. 1/4" TOOLED JOINT (SEE TYPICAL SIDEWALK DETAIL)

TYPICAL PERIMETER SIDEWALK

NOT TO SCALE



ACCESSIBILITY SIGNAGE

NOT TO SCALE

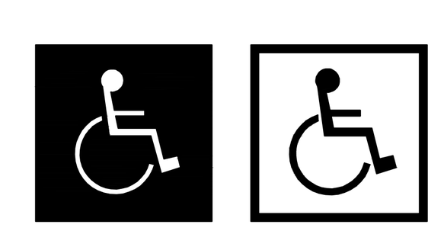
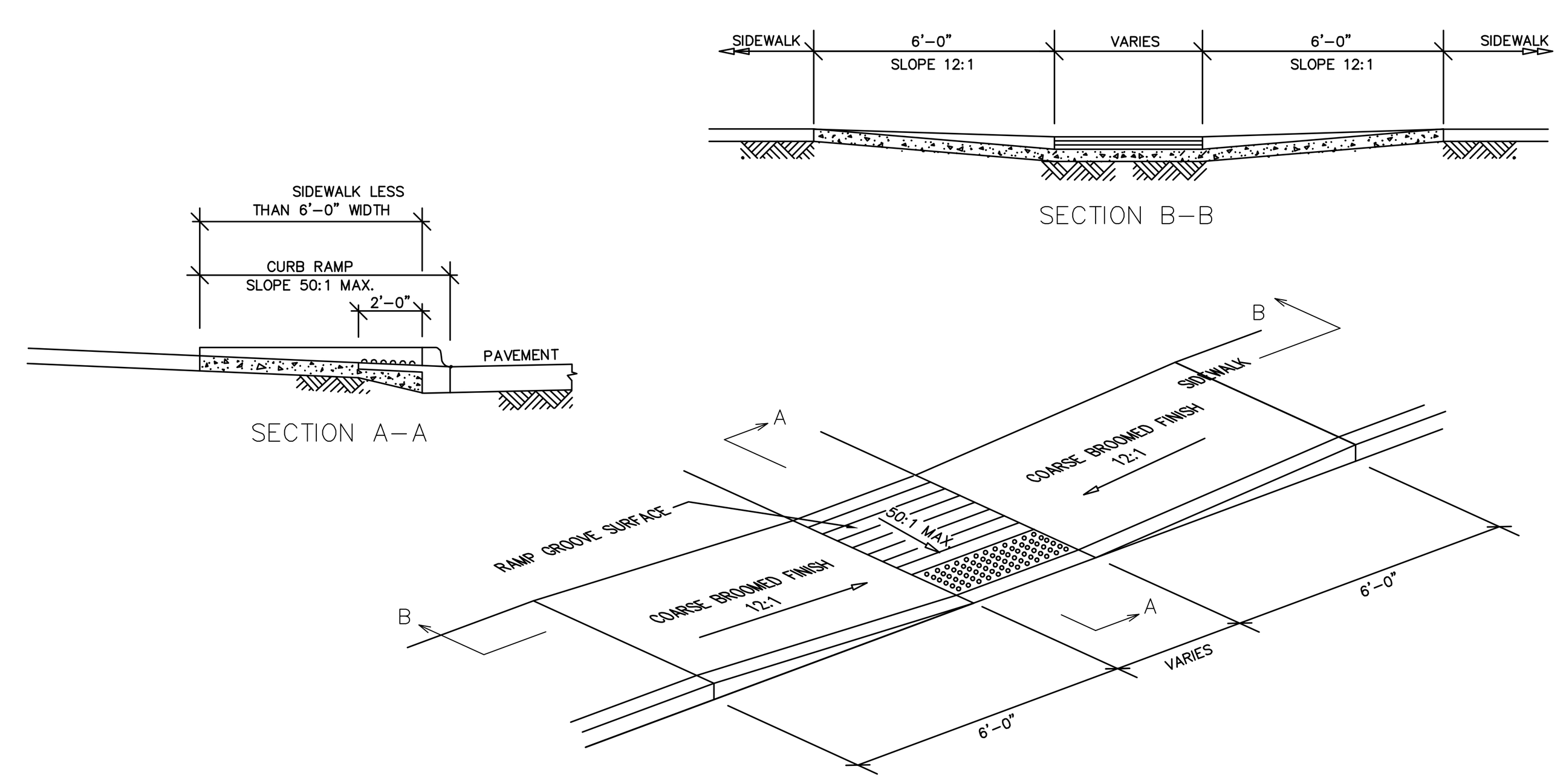


Figure 4b
INTERNATIONAL SYMBOL OF ACCESSIBILITY DISPLAY CONDITIONS

NOT TO SCALE



HANDICAP RAMP TYPE B

NOT TO SCALE

ADDENDUM #1

GIBRALTAR DESIGN

ARCHITECTURE ENGINEERING INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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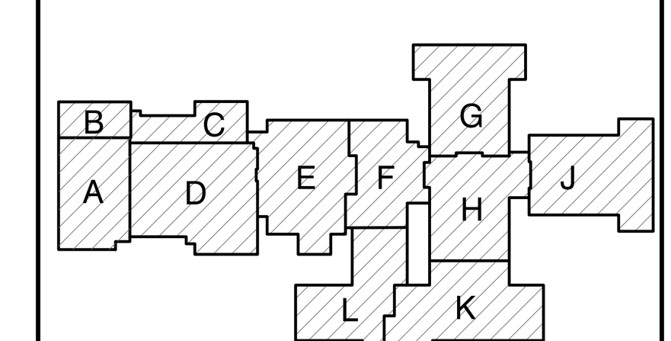

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REGISTERED
No. 10606520
STATE OF INDIANA
PROFESSIONAL ENGINEER

PROJECT	21-141
DATE	03/16/22
COORDINATED BY	AWM
DRAWN BY	BPL
CHECKED BY	AWM

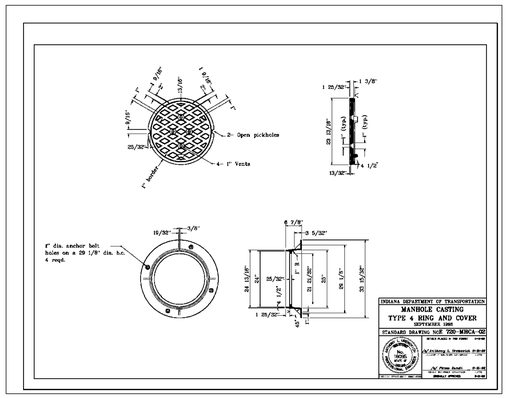
REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

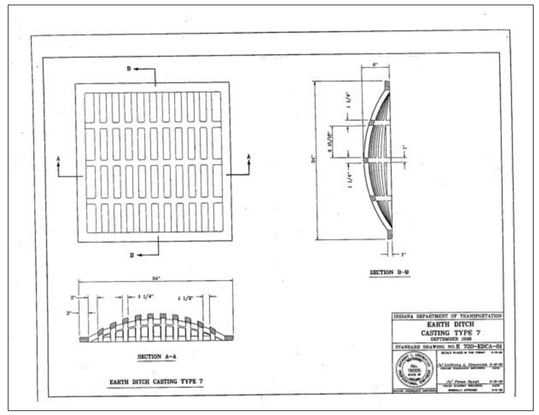
DRAWING
DETAILS & SPECIFICATIONS 1

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

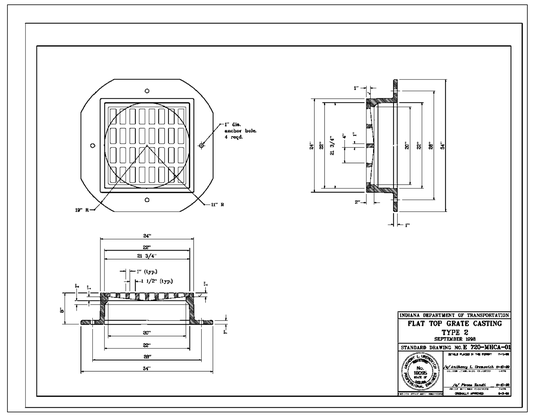
SHEET
C-5.0



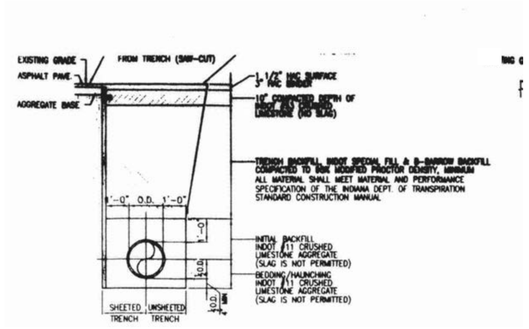
MANHOLE CASTING
NOT TO SCALE



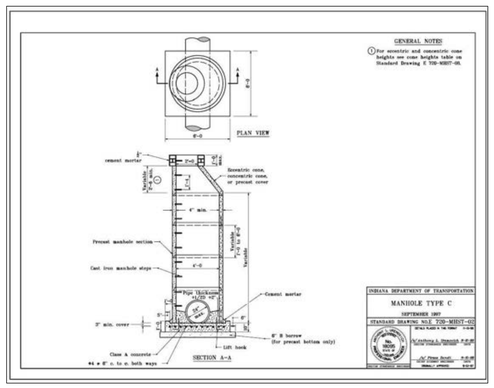
EARTH DITCH CASTING
NOT TO SCALE



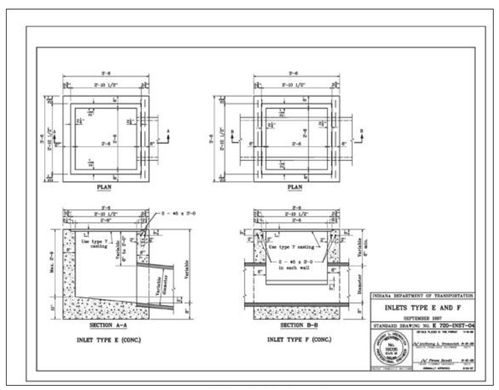
FLAT TOP GRATE CASTING
NOT TO SCALE



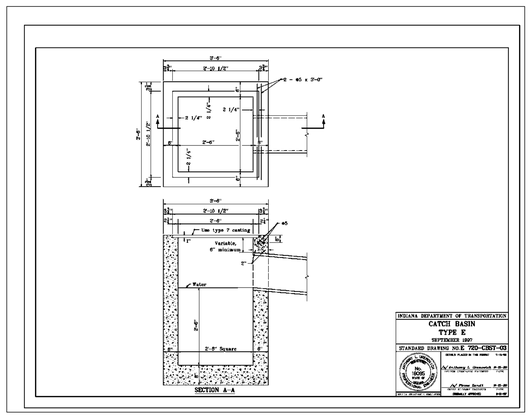
PIPE BEDDING DETAIL
FOR TRENCH IN PAVED AREAS
NOT TO SCALE



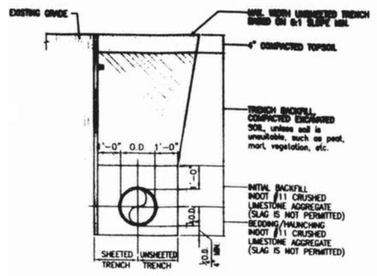
TYPE C SANITARY SEWER MANHOLE
NOT TO SCALE



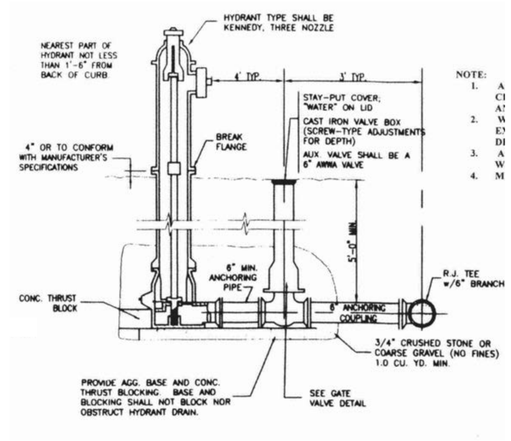
INLETS, TYPE E & F
NOT TO SCALE



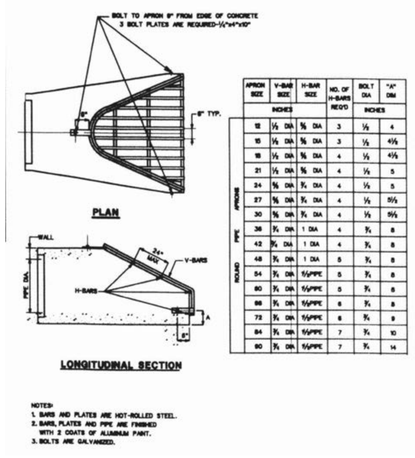
CATCH BASIN, TYPE E
NOT TO SCALE



PIPE BEDDING DETAIL
FOR TRENCH IN GRASS AREAS
NOT TO SCALE

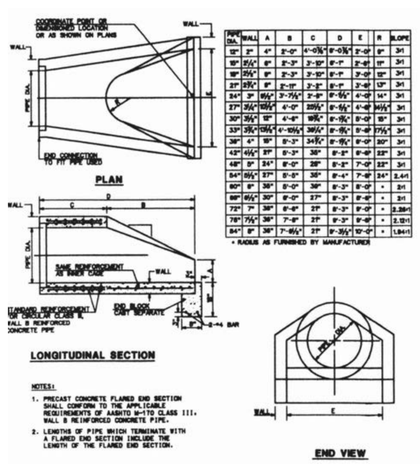


FIRE HYDRANT ASSEMBLY
NOT TO SCALE



APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA	"A" DIM
	INCHES			INCHES	
12	½ DIA	⅝ DIA	3	½	4
15	½ DIA	⅝ DIA	3	½	4½
18	½ DIA	⅝ DIA	4	½	4½
21	½ DIA	⅝ DIA	4	½	5
24	⅝ DIA	¾ DIA	4	½	5
27	⅝ DIA	¾ DIA	4	½	5½
30	⅝ DIA	¾ DIA	4	½	5½
36	¾ DIA	1 DIA	4	¾	8
42	¾ DIA	1 DIA	4	¾	8
48	¾ DIA	1 DIA	5	¾	8
54	¾ DIA	5/8"PIPE	5	¾	8
60	¾ DIA	5/8"PIPE	5	¾	8
66	¾ DIA	5/8"PIPE	6	¾	8
72	¾ DIA	5/8"PIPE	6	¾	9
84	¾ DIA	5/8"PIPE	7	¾	10
90	¾ DIA	5/8"PIPE	7	¾	14

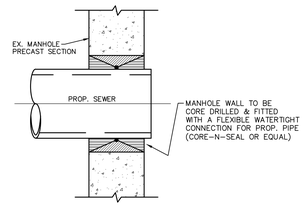
GRATING DETAIL
NOT TO SCALE



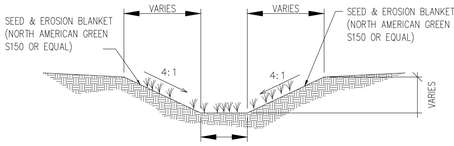
PIPE DIA.	WALL	A	B	C	D	E	R	SLOPE
12"	2"	4"	2'-0"	4'-0⅞"	0'-0⅞"	2'-0"	9"	3:1
15"	2½"	6"	2'-3"	3'-10"	0'-1"	2'-6"	11"	3:1
18"	2½"	6"	2'-3"	3'-10"	0'-1"	3'-0"	13"	3:1
21"	2½"	6"	2'-3"	3'-10"	0'-1"	3'-6"	15"	3:1
24"	3"	6½"	2'-7½"	3'-8"	0'-1½"	4'-0"	18"	3:1
27"	3½"	6½"	4'-0"	3'-5½"	0'-1½"	4'-6"	20½"	3:1
30"	3½"	8"	4'-6"	4'-0½"	0'-1½"	5'-0"	23"	3:1
33"	3½"	8½"	4'-10½"	3'-5½"	0'-1½"	5'-6"	25½"	3:1
36"	4"	10"	5'-3"	3'-5½"	0'-1½"	6'-0"	28"	3:1
42"	4½"	11"	6'-3"	3'-8"	0'-1½"	7'-0"	33"	3:1
48"	5"	12"	7'-0"	3'-8"	0'-1½"	8'-0"	38"	3:1
54"	5½"	13"	8'-0"	3'-8"	0'-1½"	9'-0"	43"	3:1
60"	6"	14"	8'-9"	3'-8"	0'-1½"	10'-0"	48"	3:1
66"	6½"	15"	9'-6"	3'-8"	0'-1½"	11'-0"	53"	3:1
72"	7"	16"	10'-3"	3'-8"	0'-1½"	12'-0"	58"	3:1
78"	7½"	17"	11'-0"	3'-8"	0'-1½"	13'-0"	63"	3:1
84"	8"	18"	11'-9"	3'-8"	0'-1½"	14'-0"	68"	3:1

* RADIUS AS FURNISHED BY MANUFACTURER

PRECAST CONCRETE END SECTION
NOT TO SCALE



PIPE CONNECTION DETAIL
TO EXISTING MANHOLE
NOT TO SCALE



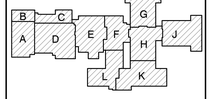
VEGETATED SWALE DETAIL
NOT TO SCALE

ADDENDUM #1

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

MCALPINE CONSULTING LLC
398 East 400 North
Valparaiso, IN 46383
Phone: 219.252.9647
E-Mail: mcalpine.consulting@yahoo.com

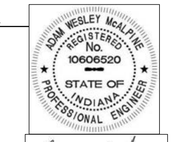


GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-141
DATE 03/16/22
COORDINATED BY AWM
DRAWN BY BPL
CHECKED BY AWM

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	A ADDANDUM NO. 1



DRAWING
DETAILS & SPECIFICATIONS 2

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C-5.1

COLD-FORMED (LIGHT GAUGE) METAL FRAMING NOTES

1. All cold-formed steel framing members, their design, fabrication, and erection shall conform to the "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" of the latest edition of the AISI.
2. All framing members shall be formed from steel conforming to ASTM A653, with a minimum yield strength as follows:
   - A) 12, 14 & 16 gauge members: Fy=50ksi
   - B) 18, 20 gauge members: Fy=33ksi
3. All framing members shall be galvanized with a G60 coating meeting the requirements of ASTM A653, unless otherwise indicated.
4. Members shall be the Manufacturer's standard 'C'-Shaped studs/joists of the size, flange width, and gauge indicated. All members shall have a minimum flange lip return of 1/2" and satisfy the minimum properties in accordance with the Steel Stud Manufacturers Association (SSMA).
5. The gauge of all tracks shall match the gauge of the associated stud or joist, unless otherwise noted.
6. All welding shall be in accordance with AWS Specification D1.3. No welding of members less than 14 gauge in thickness is permitted without the approval of the SER. All welding shall be performed by certified welders. All welds shall be touched up with zinc rich paint in accordance with ASTM A780.
7. Provide bridging for all load-bearing studs at a maximum spacing of 48" on center.
8. Provide bridging for all non load-bearing curtain wall studs at a maximum spacing of 54" o.c. Locate one row of bridging within 18" of the top track when a single deep-leg deflection track is utilized.
9. Provide bridging for joists and rafters at midspan and at a maximum spacing of 6'-0" o.c., unless noted otherwise. All bridging shall be installed prior to the application of any loading. Connect bridging to each member by clip angles, or other approved method per the Manufacturer's requirements.
10. Provide web stiffeners at joist and rafter bearings in accordance with the Manufacturer's requirements.
11. All axially-loaded studs shall have full bearing against the track web, prior to stud and track alignment. Splices in axially loaded studs are not permitted.
12. Provide the Manufacturer's standard track, clip angles, bracing, reinforcement, fasteners, and accessories as recommended by the Manufacturer for the application indicated and as needed to provide a complete framing system. Unless otherwise indicated, install the metal framing system in accordance with the Manufacturer's shop drawings, written instructions and recommendations.
13. Install supplementary framing, blocking, and bracing in metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with the stud manufacturer's recommendations and industry standards in each case, considering weight or loading resulting from the item supported.
14. All field-cutting of studs must be done by sawing or shearing. Torch-cutting of cold-formed members is not allowed.
15. No notching or coping of studs is allowed, unless explicitly shown on the design or shop drawings. All field-cut holes must be reinforced.
16. The Framing Contractor is to ensure punch out alignment when assembling lateral bracing/bridging and field-cutting studs to length. Lateral bracing/bridging must be installed at the time the wall is erected.
17. Temporary bracing shall be provided and remain in place until work is completely stabilized.
18. Use a minimum of three studs at the corners of all exterior walls.
19. Use a minimum of three studs at the intersections and corners of all load-bearing walls.
20. All headers and built-up beams must be constructed of UNPUNCHED material only. Install insulation in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.
21. Shop drawings: Show layout, spacings, sizes, thicknesses, types of cold-formed metal framing, and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.
22. For cold-formed metal framing indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer (SSE) responsible for their preparation.
23. Structural Performance: Provide cold-formed metal framing capable of withstanding design loads within limits and under conditions indicated.
    - A) Design Loads: Reference the Design Criteria Notes.
    - B) Deflection Limits: Design framing systems to withstand design loads without deflections greater than the following:
      1. Wall Framing: Horizontal deflection of 1/240 of the wall height for walls with flexible finishes, e.g. metal siding, wood siding, EIFS, etc.
      2. Wall Framing: Horizontal deflection of 1/360 of the wall height for walls with cementitious finishes, e.g. cement plaster.
      3. Wall Framing: Horizontal deflection of 1/600 of the wall height for walls with masonry veneer finishes.
      4. Floor Joist Framing: Vertical deflection of 1/480 of the span under live load. Limit deflection under total load (dead + live) to 1/360 of the span.
      5. Roof Framing: Vertical deflection of 1/360 of the span under live/snow load. Limit deflection under total load (dead + live/snow) to 1/240 of the span.
24. Design framing systems to provide for movement of framing members without damage or overstressing, sheathing failure, undue strain on fasteners and anchors, or other detrimental effects when subject to an ambient temperature change of not less than 120 degrees F.
25. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows: Upward and downward movement of 3/4 inch.
26. Design exterior non load-bearing curtain wall framing to accommodate horizontal deflection without regard for contribution or sheathing materials.

SPECIALTY STRUCTURAL ENGINEERING (SSE)

1. A Specialty Structural Engineer is defined as a Professional Engineer licensed in the State of Indiana, not the Structural Engineer of Record, who performs Structural Engineering functions necessary for the structure to be completed and who has shown experience and/or training in the specific speciality.
2. It is the Specialty Structural Engineer's responsibility to review the Construction Drawings and Specifications to determine the appropriate scope of engineering.
3. It is the intent of the Drawings and Specifications to provide sufficient information for the Specialty Structural Engineer (SSE) to perform his design and analysis. If the SSE determines there are details, features, or unanticipated project limits which conflict with the engineering requirements as described in the project documents, the SSE shall in a timely manner, contact the Structural Engineer of Record for resolution of conflicts.
4. The Specialty Structural Engineer (SSE) shall forward documents to the Structural Engineer of Record for review. Such documents shall bear the stamp of the SSE and include:
   - A) Drawings introducing engineering input, such as defining the configuration or structural capacity of structural components and/or their assembly into structural systems.
   - B) Calculations.
   - C) Computer printouts which are an acceptable substitute for manual calculations provided they are accompanied by sufficient design assumptions and identified input and output information to permit their proper evaluation. Such information shall bear the stamp of the Specialty Engineer as an indication that said engineer has accepted responsibility for the results.
5. Contractors are referred to the specific technical specification sections and the structural drawings for those elements requiring Specialty Structural Engineering. Examples of components requiring Specialty Structural Engineering include, but are not limited to the following:
   - A) Shoring and Bracing Systems.
   - B) Structural Steel Connections.
   - C) Steel Joist Systems.
   - D) Steel Stairs.
6. When modifications are proposed to elements under the design and certification of the Specialty Structural Engineer (SSE), written authorization by the SSE must be obtained and submitted to the Engineer of Record for review, prior to performing the proposed modification.

STEEL DECK NOTES

1. All steel deck material, fabrication and installation shall conform to the Steel Deck Institute "SDI SHORT FORM SPECIFICATIONS" and "SDI CODE OF STANDARD PRACTICE," current edition, unless noted.
2. Provide members for deck support at all deck span changes. Provide L3x3x3/16 deck support at all columns where required.
3. All deck shall be provided in a minimum of 3-span lengths where possible.
4. All welding of steel deck shall be in conformance with AWS Specification D1.3. Provide welding washers for all floor decks less than 22 gauge in thickness.
5. Mechanical fasteners may be used in lieu of welding, providing fasteners meet, or exceed the strength of specified welds. Submit fastener design data to the Structural Engineer of Record for review.
6. Substitution of fiber secondary reinforcement for welded wire fabric on supported slabs is prohibited.
7. Do not suspend any items, such as ductwork, mechanical and electrical fixtures, ceilings, etc. from steel deck.
8. Roof deck sidelaps shall be attached at ends of cantilevers and at a maximum spacing 12" o.c. from cantilevered roof deck ends. The roof deck must be completely fastened to the supports and at the sidelaps before any load is applied to the cantilever.
9. Submit shop drawings for review of general conformance to design concept in accordance with Specifications in the Project Manual. Erection drawings shall show type of deck, shop finish, accessories, method of attachment, edge details, deck openings and reinforcement, and sequence of installation.
10. Installation holes shall be sealed with a closure plate 2 gauges thicker than deck and mechanically fastened to deck. Steel deck holes visible from below will be rejected. Deck units that are bent, warped, or damaged in any way which would impair the strength and appearance of the deck shall be removed from the site.
11. Where gauge metal pourstops are indicated, supply pourstops designed to meet, or exceed the gauges listed in the SDI Pourstop Selection Table (min. 18 ga.) as required for slab depth, concrete weight, and cantilever distance, unless noted otherwise.
12. The Erector shall shim between parallel roof beams and joists with differential mill and induced cambers for level deck bearing.

STEEL CONNECTION NOTES

1. Typical beam-to-beam and beam-to-column connections shall be bearing type using A325 bolts, unless noted otherwise.
2. Shop connections unless otherwise shown, may be either bolted or welded. All field connections shall be bolted unless otherwise shown on the Structural Drawings.
3. Connections shall be designed by the Steel Fabricator to support the reactions shown on the framing plan(s). Simple span connections without reactions listed on the Structural Drawings shall be designed by the Steel Fabricator in accordance with Table 3-6 of the AISC "Manual of Steel Construction, 14th Edition". For composite beams where reactions are not indicated, design connections for 75% of the Maximum Total Uniform Load ASD value for the applicable beam size and span given in Table 3-6. For non-composite beams, design connections for 50% of the tabulated ASD value.
4. Submit calculations for connections not detailed on the Structural Drawings and not covered by the AISC Tables, including but not limited to:
   - A) Column Splices.
   - B) Moment Connections.
   - C) Bracing Connections including Collectors and Drag Struts.
   - D) Skewed Shear Connections.
5. All beam-to-beam connections shall be double angle, unless shown or noted otherwise.
6. All beam-to-column connections shall be at the column centerline, unless noted otherwise. Shear tab connections to tubes are permitted unless otherwise noted or detailed.
7. Typical beam-to-beam, and beam-to-column field-bolted connections may be tightened to the snug-tight condition, unless otherwise shown or noted.
8. Bolted connections in moment frames, bracing connections, hangers and stub columns, crane connections, and those designated PT (pretensioned) on the Drawings shall be pretensioned joints utilizing tension-control (TC) bolts or direct tension indicators. Holes for PT bolts shall be 1/16" larger than the bolt diameter. All pretensioned joints must be inspected by the Testing Agency.
9. Connect bracing members for two components of stress unless otherwise approved by the Structural Engineer of Record. Provide a minimum 2-bolt or welded field connection.
10. Locate centerlines of all vertical bracing members on column centerlines in vertical plane and on column and beam centerlines in horizontal plane, unless otherwise shown on the Structural Drawings.
11. All welding shall be in conformance with AWS D1.1, using E70XX electrodes, unless shown or noted otherwise. Welding, both shop and field, shall be performed by welders certified for the weld types and positions involved according to the current edition of AWS D1.1. Perform all AESS welds with care to provide a clean, uniform appearance.
12. Backup bars required for welded connections shall be continuous.
13. Holes in steel shall be drilled or punched. All slotted holes shall be provided with smooth edges. Burning of holes in structural steel shall not be allowed without approval of the Structural Engineer of Record.
14. The minimum thickness of all connection material shall be 5/16" unless noted.
15. Continuous bent plate and angle closures, roof edges, diaphragm chords, etc. around perimeter of the floor and roof, as well as around openings shall be welded with a minimum 1/4" fillet weld x 3" long at 12" o.c., top & bottom, unless noted otherwise. Butt weld joints in continuous diaphragm chord for continuity. For continuous perimeter angles and bent plates perpendicular to and connected to the top chords of joists, provide a minimum 3" of 1/4" weld at each joist. Continuous angle and bent plate closures may be shop-applied to the supporting structural members only when requested and approved by Structural Engineer of Record.
16. Where steel beams are called to have wood nailers supporting wood floor or roof framing, provide 1/2" diameter carriage bolts spaced at 24" on center and staggered each side of the beam web, unless noted otherwise. Carriage bolts may be over-tightened to compress the rounded head in the nailer to facilitate installation of continuous band/rim joists, rafters, trusses, etc.
17. A qualified independent Testing Agency shall be retained to perform inspection and testing of structural steel field weldaments as follows:

WELD INSPECTION SCHEDULE

WELD TYPE	VT	MT	UT	PT	CRT	COMMENTS
FILLET (SINGLE PASS)	25%	-	-	-	-	ROOT PASS AND FINISHED WELD
FILLET (MULTIPLE PASS)	50%	25%	-	-	-	
FLARE BEVEL/ FLARE V	25%	-	-	-	-	
GROOVE (PARTIAL PENETRATION)	100%	-	100%	-	-	REFERENCE NOTE 'E' BELOW
GROOVE (FULL PENETRATION)	100%	-	100%	-	-	ALL FULL PENETRATION WELDS

- A) Test procedures:
  - VT = Visual Test (inspection)
  - MT = Magnetic Particle Test: ASTM E109, cracks or incomplete fusion or penetration not acceptable.
  - UT = Ultrasonic Test: ASTM E164.
  - PT = Penetrant Test: ASTM E165.
  - RT = Radiographic Test: ASTM E94 and ASTM E142, min. quality level 2-21.
- B) Acceptance standards in AWS D1.1 shall be followed for each test procedure.
- C) Test procedures may be substituted to meet feasibility requirements of test based upon weld geometry or other factors with the approval of the Structural Engineer of Record.
- D) Samples shall occur at random locations; additional tests may be required at locations noted on the Drawings.
- E) Groove welds include square, bevel, V, U, and J grooves including single and double pass types.
- F) Partial penetration square groove welds at end seal plates of tubular members do not require inspection.
- G) Weld Procedure Specifications (WPS) shall be produced and maintained in accordance with AWS D1.1. The independent Testing Agency shall have access to all WPS's during the course of testing and inspection.
- H) For highly-restrained welded joints, especially in thick plates and/or heavy structural shapes, details the welds so that shrinkage occurs as much as possible in the direction the steel was rolled. Refer to the AISC Manual for preferred welded-joint arrangements that reduce the possibility for lamellar tearing. Members scheduled to receive highly-restrained connections shall be tested by the independent Testing Agency by Ultrasonic Testing prior to commencing welding.
- I) In addition to inspection requirements for fillet welds in Table above, 100% of field welding of diagonal bracing members to gusset plates shall be visually inspected (VT).

STEEL JOIST NOTES

1. All steel joists shall be designed, fabricated, and erected in accordance with SJI Standard Specifications.
2. Joist bridging (if shown) is schematically indicated. Provide all bridging necessary to conform to SJI Specifications.
3. The ends of all bridging lines terminating at walls or beams shall be anchored to the wall or beam.
4. Joist bridging and connections shall be completely installed prior to placing any construction loads on the joists. Construction loading shall not exceed the joist design load.
5. All roof joists shall be capable of resisting the net uplift a noted on the Structural Drawings (min. 15 psf net). Provide an additional row of continuous horizontal bottom chord bridging at the first panel point location at each end of all roof joists.
6. Special joists (SP) shall be designed for the load designations specified on the Structural Drawings. Designs shall properly account for the distribution of concentrated loads, live loads, and for the effect of openings. Designs are to meet the requirements of SJI.
7. Joists shall meet the following deflection criteria per SJI. Maximum live load deflection shall not exceed:
   - A) Roofs without suspended ceilings: L/240
   - B) Roof with suspended ceilings: L/360
   - C) Floors: L/360
8. The Joist Manufacturer shall submit calculations for all special joists to Structural Engineer of Record for record purposes prior to fabrication. These calculations shall bear the seal and signature of a Professional Engineer registered in the State of Indiana.
9. Joists on column centerlines shall have extended bottom chord connections for erection stability, unless otherwise noted. Do not connect bottom chord extensions, unless otherwise noted or shown.
10. Joists on, or near column centerlines shall have field-bolted connections for erection stability, unless otherwise noted.
11. The Joist Manufacturer shall coordinate with the Structural Steel Fabricator for the design of all connections to support columns, beams, bearing seats, etc. prior to submittal of shop drawings.
12. Where a joist is part of a moment-resisting frame, delay the connection of the bottom chord to the column until all dead loads have been placed. All field-bolted and field-welded connections in moment-resisting frames shall be inspected per AWS and AISC requirements.
13. The Joist Manufacturer shall furnish evidence that the joist meets or exceeds the specified minimum moment of inertia (Ix) listed on the Plans. Where a minimum Ix value is not specified, the Ix value can be that required to meet the specified loading and deflection criteria.
14. All steel joists shall be furnished with standard SJI camber, unless noted otherwise.
15. All items suspended from joists such as catwalks, basketball goals, operable partitions, etc. should be installed after all dead loads of roofing, flooring, ceilings, etc. are installed.
16. All joists shall be shop primed in accordance with SJI requirements, unless note otherwise. Color to match structural steel primer, unless approved in writing.
17. Provide sloped bearing ends where joist slope exceeds 1/4" per foot.
18. Do not field cut or alter joists without the written approval of the Joist Manufacturer.

STEEL STAIRS

1. Refer to the Design Criteria notes for live load and handrail requirements.
2. All stair designs shall be provided by the Stair Manufacturer/Fabricator's Specialty Structural Engineer and shall be stamped by a Professional Engineer registered in the State of Indiana. Stair designs shall be in accordance with all applicable code provisions of the IBC.
3. The Stair Manufacturer/Fabricator's Specialty Structural Engineer shall provide the Structural Engineer of Record with drawings showing location, direction and magnitudes of all stair load reactions on the building structure for approval, prior to fabrication.
4. The Stair Manufacturer/Fabricator shall coordinate the transition between the supported structural floor slab and the stair structure with the Structural Steel Fabricator, prior to fabrication.
5. Refer to the Architectural Drawings for stair width, rise, run, tread and riser geometry, handrail and guardrail design, shaft wall construction, etc.

GENERAL NOTES

1. The Contractor shall be responsible for complying with all safety precautions and regulations during the work. The Structural Engineer of Record will not advise on, nor issue direction as to safety precautions and programs.
2. The Structural Drawings herein represent the finished structure. The Contractor shall provide all temporary guying and bracing required to erect and hold the structure in proper alignment until all Structural Work and connections have been completed. The investigation, design, safety, adequacy and inspection of erection bracing, shoring, temporary supports, etc. is the sole responsibility of the Contractor.
3. The Structural Engineer of Record (SER) shall not be responsible for the methods, techniques and sequences are not specifically shown, similar details of construction shall be used, subject to approval of the SER.
4. Drawings indicate general and typical details of construction. Where conditions are not specifically shown, similar details of construction shall be used, subject to approval of the Structural Engineer of Record.
5. All structural systems which are to be composed of components to be field erected shall be supervised by the Supplier during manufacturing, delivery, handling, storage, and erection in accordance with the Supplier's instructions and requirements.
6. Loading applied to the structure during the process of construction shall not exceed the safe load-carrying capacity of the structural members. The live loading used in the design of this structure are indicated in the "Design Criteria Notes." Do not apply any construction loads until structural framing is properly connected together and until all temporary bracing is in place.
7. All ASTM and other referenced standards and codes are for the latest editions of these publications, unless otherwise noted.
8. Shop drawings and other items shall be submitted to the Structural Engineer of Record (SER) for review prior to fabrication. All Shop Drawings shall be reviewed by the Contractor before submittal. The SER's review is to be fore conformance with the design concept and general compliance with the relevant Contract Documents. The SER's review does not relieve the Contractor of the sole responsibility to review, check, and coordinate the Shop Drawings prior to submission. The Contractor remains solely responsible for errors and omissions associated with the preparation of Shop Drawings as they pertain to member sizes, details, dimensions, etc.
9. Submit Shop Drawings in the form of blueline/blackline prints (min. 2 sets/ max. 5 sets) and one reproducible blackline or sepia copy. In no case shall reproductions of the Contract Documents be used as shop drawings. As a minimum, submit the following items for review.
   - A. Concrete Mix Design(s).
   - B. Reinforcing Steel Shop Drawings.
   - C. Structural Steel Shop Drawings.
   - D. Steel Joist Shop Drawings.
   - E. Steel Deck Shop Drawings.
   - F. Cold-Formed Steel Framing Systems.
   - G. Existing Framing Shoring Systems.

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10. Resubmitted Shop Drawings: Resubmitted shop drawings are reviewed only for responses to comments made in the previous submittal.
11. When calculations are included in the submittals for components of work designed and certified by a Specialty Structural Engineer (SSE), the review by the Structural Engineer of Record (SER) shall be for conformance with the relevant Contract Documents. The SER's review does not relieve the SSE from responsibility for the design of the system(s) and the coordination with the elements of the structure under the certification of the SER, or other SSE's. The SER's review does not constitute a warranty of the accuracy or completeness of the SSE's design.
12. Contractors shall visit the site prior to bid to ascertain conditions which may adversely affect the work or cost thereof.
13. No structural member may be cut, notched, or otherwise reduced in strength without written direction from the Structural Engineer of Record.
14. When modifications are proposed to structural elements under the design and certification of a Specialty Structural Engineer (SSE), written authorization by the SSE must be obtained and submitted to the Structural Engineer of Record for review, prior to performing the proposed modification.

MINIMUM COVER FOR REINFORCEMENT

	MINIMUM COVER
SUSPENDED SLABS AND JOISTS	
TOP & BOTTOM BARS FOR DRY CONDITIONS:	
#11 BARS & SMALLER	3/4"
#14 & #18 BARS	1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, OR WEATHER, AND OVER OR IN CONTACT WITH SEWAGE AND FOR BOTTOMS BEARING ON WORK MAT, OR SLABS SUPPORTING EARTH COVER:	
#5 BARS & SMALLER	1 1/2"
#6 THROUGH #18 BARS	2"
BEAMS & COLUMNS, FORMED	
FOR DRY CONDITIONS:	
STIRRUPS, SPIRALS & TIES	1 1/2"
PRINCIPAL REINFORCEMENT	2"
EXPOSED TO EARTH, WATER, SEWAGE, OR WEATHER:	
STIRRUPS & TIES	2"
PRINCIPAL REINFORCEMENT	2 1/2"
WALLS	
FOR DRY CONDITIONS:	
#11 BARS & SMALLER	3/4"
#14 & #18 BARS	1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, SEWAGE, WEATHER, OR IN CONTACT WITH GROUND	2"
FOOTINGS & BASE SLABS	
AT FORMED SURFACES & BOTTOMS BEARING ON CONCRETE WORK MAT	2"
AT UNFORMED SURFACES & BOTTOMS IN CONTACT WITH EARTH	3"
TOP OF FOOTINGS	SAME AS SLABS
OVER TOP OF PILES	2"

POST-INSTALLED DOWELS & ANCHOR BOLTS/RODS

1. All reinforcing steel and threaded rod anchors to be installed in a 2-part chemical anchoring system shall be treated as follows:
   - A. Drill holes larger than bar or rod to be embedded. Coordinate hole diameter with Manufacturer's recommendations.
   - B. Holes must be cleaned and prepared in accordance with Manufacturer's recommendations.
   - C. When reinforcing steel is encountered during drilling for installation of anchors; stop drilling, use a sensor to locate the reinforcing in the surrounding area and install anchor(s) as close as possible to the original location. Contact the Structural Engineer of Record (SER) for direction when the revised location is more than 2" from the original location, or when the original function of the anchorage is significantly altered. When in doubt, contact the SER for direction.
   - D. Drill the hole a minimum of 15 bar diameters or as shown on the plans.
   - E. Use a 2-part adhesive anchoring system, Hilti HY-200, or approved equal.
   - F. For anchorage into hollow substrate, use Hilti HY-270, or approved equal.
   - G. Reinforcing steel dowels shall be ASTM A615, Grade 60, unless noted.
   - H. Anchor rods shall be Hilti HAS-V-36, unless noted. Provide finish as noted on the Drawings. If not noted, provide hot-dip galvanized finish for interior applications. Provide stainless steel finish for all exterior applications, unless noted.
2. When column anchor bolts have been omitted, or damaged by construction operations, the Contractor must obtain the written approval of the Structural Engineer of Record prior to repair or replacement.
   - A. As a precaution, the affected column must be guyed and braced after repair for the balance of the erection period.
   - B. As an alternate to guying and bracing, the Contractor may at his option, employ a testing agency to perform a tensile pull test to confirm the strength for the repaired or replaced anchor bolt. The tensile proof load must exceed 1.33 x the design load of the original anchor without causing distress of the anchor bolt or the surrounding concrete. Reference the following table for the minimum proof loads:

3/4" diameter:	12.8 kips
7/8" diameter:	17.4 kips
1" diameter:	22.7 kips
1 1/8" diameter:	28.8 kips
1 1/4" diameter:	35.6 kips

     Note: Values listed above are for ASTM F-1554, Grade 36 material. When higher grade or strength materials are specified, refer to the AISC Steel Design Guide 1, Table 3.1 for minimum allowable loads to be multiplied by 1.33.
   - C. When affected anchor bolts are part of a fixed moment resisting column base, such as those in moment-resisting space frames, canopies, or fixed-base installations, the repaired anchor bolts must be proof-loaded, or the affected column footing and/or pier replaced in its entirety.
   - D. When affected anchor bolts are part of a braced frame the affected column footing and/or pier must be replaced in its entirety.
   - E. Prior to erection, the controlling Contractor must provide written notification to the Steel Erector if there has been a repair, replacement or modification of the anchor bolts for that column.

DESIGN CRITERIA

1. DESIGN STANDARDS: The intended design standards and/or criteria are as follows:

General	The 2014 Indiana Building Code (2012 International Building Code (IBC) with Indiana Amendments)
Concrete	ACI 318
Masonry	ACI 530
Steel	AISC Manual, Allowable Stress Design (ASD)
Steel Joists/Girders	Steel Joist Institute
Steel Deck	Steel Deck Institute
Cold-Formed Metal	AISI-ASD
Wood Framing	NDS
Wood Trusses	TPI
Glu-Lam Construction	AITC

   All referenced standards and codes, as well as ASTM numbers, are for the editions of these publications referenced in the Building Code listed above, unless otherwise noted.
2. DEAD LOADS: Gravity Dead Loads used in the design of the structure are as computed for the materials of construction incorporated into the building, including but not limited to walls, floors, ceilings, stairways, fixed partitions, finishes, cladding and other similar architectural and structural items, as well as mechanical, electrical and plumbing equipment and fixtures, and material handling and fixed service equipment, including the weight of cranes.
3. LIVE LOADS: Gravity live loads used in the design of the structure meet, or exceed the following table (IBC 2012, 1607.1):

OCCUPANCY OR USE	UNIFORM (PSF)	CONCENTRATED (LB) [Note #1]
A. Schools		
1. Classrooms	40	
2. First Floor Corridors	100	
3. Corridors Above 1st Floor	80	

   Note #1: Unless otherwise noted, the indicated concentrated load has been assumed to be uniformly distributed over an area of 30" x 30".
4. LIVE LOAD REDUCTION: Live load reductions in accordance with IBC 1607.9 have been used with the following exceptions:
   - A. Heavy live loads in excess of 100 PSF have not been reduced except for members supporting 2 or more floors have been reduced by a maximum of 20%.
   - B. The live load in passenger car garages have not been reduced except for members supporting 2 or more floors have been reduced by a maximum of 20%.
   - C. Live loads of 100 PSF or less for public assembly occupancies have not been reduced.
   - D. Live loads for roof members have not been reduced.
   - E. Live loads for the design of one-way slabs have not been reduced.
5. PARTITION ALLOWANCE: a uniform partition allowance of 15 PSF has been used to account for the load of all floors where partition locations are subject to change, unless the specified live load exceeds 80 PSF.
6. COLLATERAL LOAD: Unless otherwise noted, a minimum uniform collateral load of 10 PSF has been used to account for ductwork, ceilings, sprinklers, lighting, etc. The collateral load is in addition to the weight of mechanical units, larger piping (greater than 4" diameter) and suspended fixtures or equipment that have been specifically accounted for in the design.
7. COLLATERAL LOAD ABOVE CORRIDORS & MECHANICAL ROOMS: A minimum uniform collateral load of 20 PSF has been used to account for large ductwork, sprinkler mains, concentrations of piping, and electrical distribution above corridors and mechanical rooms. The collateral load is in addition to the weight of mechanical units and larger piping (greater than 4" diameter) and suspended fixtures or equipment that have been specifically accounted for in the design.
8. CONCENTRATED LOADS:
   All single panel points of the lower chord of exposed roof trusses or any point along the primary structural members supporting roofs over manufacturing, commercial storage and warehousing, and commercial garage floors shall be capable of carrying safely a suspended concentrated load of not less than 2000 LBS in addition to dead load.
   All single panel points of the lower chord of exposed roof trusses or any point along the primary structural members supporting roofs over all other occupancies shall be capable of carrying safely a suspended concentrated load of not less than 200 LBS in addition to dead load, unless noted.
9. ROOF LIVE/SNOW LOADS: Gravity Live Loads used in the design of the roof structure meet or exceed the following table:

A. Snow Load	
Ground Snow Load, Pg	20 PSF
Flat Roof Snow Load, Pf	14 PSF
Low Slope Minimum Snow Load, Pm	20 PSF
Exposure Factor, Ce	1.0
Risk Category (IBC Table 1604.5)	II
Snow Importance Factor, Is	1.0
Thermal Factor, Ct	1.0
B. Minimum Roof Live Load	20 PSF
C. Overhang Eaves & Projections	28 PSF

   1. Sloped roof snow loads calculated in accordance with Section 7.4, ASCE 7.
   2. Unbalanced roof snow loads calculated in accordance with Section 7.6, ASCE 7. Specialty Structural Engineers must consider unbalanced snow loads in the design of pre-engineered trusses, frames, skylights, curtain walls, cold-formed metal framing, canopies, etc.
   3. Drift loads calculated in accordance with Section 7.7, ASCE 7.
   4. Roofs used for roof gardens or assembly purposes have been designed for a minimum live load of 100 PSF.
10. LATERAL LOADS: Lateral loads were computed using the following criteria:

A. Wind Load	
Ultimate Design Wind Speed, Vult	120 MPH
Nominal Design Wind Speed, Vasd	90 MPH
Wind Exposure Category	C
Risk Category (IBC Table 1604.5)	III
Internal Pressure Coefficient, GCpi	± 0.18
B. Seismic Load	
Site Classification	B
Risk Category (IBC Table 1604.5)	III
Seismic Importance Factor, Ie	1.0
Mapped Spectral Response Acceleration, Ss	0.115g
Mapped Spectral Response Acceleration, S1	0.062g
Design Spectral Response Acceleration, Sds	0.123g
Design Spectral Response Acceleration, Sd1	0.099g
Seismic Design Category, SDC	B
Response Modification Coefficient, R	3
Seismic Response Coefficient, Cs	0.xxx
Analysis Procedure	Equivalent Lateral Force
Base Seismic Force-Resisting System (ASCE 7-10, Table 12.2-1)	xxx

11. SAFETY FACTORS: This structure has been designed with 'Safety Factors' in accordance with accepted principles of structural engineering. The fundamental nature of the 'Safety Factor' is to compensate for uncertainties in the design, fabrication, and erection of structural building components. It is intended that ' Safety Factors' be used such that the load-carrying capacity of the structure does not fall below the design load and that the building will perform under design load without distress. While the use of 'Safety Factors' implies some excess capacity beyond design load, such excess capacity cannot be adequately predicted and SHALL NOT BE RELIED UPON.
12. UPLIFT DESIGN CRITERIA: Joist and deck connections shall be capable of resisting the following NET wind uplift pressures:

WIND UPLIFT NET PRESSURE TABLE

HEIGHT	FIELD PRESSURE	PERIMETER PRESSURE
0-15'	xx PSF	xx PSF
15-30'	xx PSF	xx PSF
ABOVE 30'	xx PSF	xx PSF

NOTE: PERIMETER PRESSURE APPLIES BETWEEN ALL EXTERIOR WALLS AND xx' IN FROM THE EXTERIOR WALLS.

LINTEL SCHEDULE

1. Where lintels are not specifically shown or noted on the Structural or Architectural Drawings, provide the following lintels over all openings and recesses in both interior and exterior non-load-bearing walls.
   - A) Brick:

Masonry Opening	Angle Size
Up to 5'-0"	L4x4x5/16
Over 5'-0" & up to 7'-0"	L6x4x5/16
Over 7'-0"	L7x4x3/8

     All angles are LLV (long leg vertical), unless noted otherwise. Provide 1" of bearing per foot of span each end with minimum 8". All lintels in exterior walls are to be hot-dip galvanized.
   - B) Block: For openings up to 8'-0" long exposed in the finished room, use lintel block filled with grout. Grout all exposed joints and reinforce as follows:
     - 1) For 6" thick block: 1 - #5 bar
     - 2) For 8" thick block: 2 - #5 bars
     - 3) For 10" thick block: 2 - #6 bars
     - 4) For 12" thick block: 2 - #6 bars
   - C) Block: For openings over 8'-0" & up to 12'-0" long exposed in the finished room, use lintel block filled with grout. Grout all exposed joints and reinforce per the "Long Masonry Lintel Detail" on the Typical Masonry Detail Drawing.
   - D) Block (stack bond openings over 4'-0"): See framing plans for steel beam lintels. Where not shown on plan, the criteria in the following table shall be used. Contact Structural Engineer of Record for lintels not shown on plan which do not meet this criteria. See architectural drawings for opening quantities, sizes, locations, heights of wall above, etc.

Block 't'	LINTEL	WIDTH OF OPENING	MAX. ALLOW. HEIGHT OF CMU ABOVE LINTEL
6"	C8x11.5 w/ CONTIN. PL 3/8 x 5	≤ 8'-0"	30'-0"
		≤ 12'-0"	8'-0"
8"	W8x13 w/ CONTIN. PL 3/8 x7	≤ 8'-0"	30'-0"
		≤ 12'-0"	8'-0"
10"	W8x13 w/ CONTIN. PL 3/8 x 9	≤ 8'-0"	25'-0"
		≤ 12'-0"	8'-0"
12"	W8x28 w/ CONTIN. PL 3/8 x11	≤ 8'-0"	40'-0"
		≤ 12'-0"	18'-0"

REINFORCED MASONRY NOTES

1. All construction of reinforced masonry walls to be in accordance with the Building Code Requirements for Concrete Masonry Structures (ACI 530) and Commentary.
   - A) f'm = 2000 PSI
   - B) Maximum height of masonry lift: 5'-0"
   - C) Maximum height of grout lift: 5'-0"
   - D) See Specifications for additional masonry wall information.
2. CONCRETE BLOCK: Minimum compressive test strength on the net cross-sectional area: 2800 PSI.
3. MORTAR: Type S required.
4. GROUT: ASTM C476, 2500 PSI with a slump of 8" min. and 11" max.
5. REINFORCING: fy = 60000 PSI with a min. lap of 48 bar diameters.

CONCRETE REINFORCING

1. Reinforcement, other than cold drawn wire for spirals and welded wire fabric, shall have deformed surfaces in accordance with ASTM A305.
2. Reinforcing steel shall conform to ASTM A615, Grade 60, unless noted.
3. Welded wire fabric shall conform to ASTM A1064, unless noted.
4. Where hooks are indicated, provide standard hooks per ACI and CRSI for all bars unless other hook dimensions are shown on the plans or details.
5. Reinforcement in footings, walls and beams shall be continuous. Lap bars a minimum of 40 diameters, unless noted otherwise.
6. Reinforcement shall be supported and secured against displacement in accordance with the CRSI 'Manual of Standard Practice'.
7. Details of reinforcing steel fabrication and placement shall conform to ACI 315 'Details and Detailing of Concrete Reinforcement' and ACI 315R 'Manual of Engineering and Placing Drawings for Reinforced Concrete Structures', unless otherwise indicated.
8. Spread reinforcing steel around small openings and sleeves in slabs and walls, where possible, and where bar spacing will not exceed 1.5 times the normal spacing. Discontinue bars at all large openings where necessary, and provide an area of reinforcement, equal to the interrupted reinforcement, in full length bars, distributing one-half each side of the opening. Where shrinkage and temperature reinforcement is interrupted, add (2) #5 x opening dimension + 4'-0" on each side of the opening. Provide #5 x 4'-0" long diagonal bars in both faces, at each corner of openings larger than 12" in any direction.
9. Provide standees for the support of top reinforcement for footings, pile caps, and mats.
10. Provide individual high chairs with support bars, as required for the support of top reinforcement for supported slabs. Do NOT provide standees.
11. Provide snap-on plastic space wheels to maintain required concrete cover for vertical wall reinforcement.
12. Where walls sit on column footings, provide dowels for the wall. Dowels shall be the same size and spacing as the vertical wall reinforcement, unless noted otherwise, with lab splices as shown on the application sections. Install dowels in the footing forms before concrete is placed. Do NOT stick dowels into footings after concrete is placed.
13. Field bending of reinforcing steel is prohibited, unless noted on drawings.
14. Minimum concrete cover over reinforcing steel shall be as follows, unless noted otherwise on plan, section or note:

COORDINATION WITH OTHER TRADES

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

EXISTING CONSTRUCTION

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

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3. The Contractor shall submit for the Structural Engineer of Record's review, a "Proposed Shoring Plan," including, but not limited to: plans, sections, details, notes, description of proposed sequence of work, and calculations prepared by, or under the supervision of a Specialty Structural Engineer (SSE). The SSE shall be registered in the State where the project is located.
4. Welding to and within an existing facility presents potential hazards including:
   - A. Fire Hazard - Due to the existing construction and building contents.
   - B. Structural Liquefaction - Due to welding across the full section of the structural members.

   Recommendations to prevent these hazards include:
   - A. Fire Hazard - Protect existing combustibles prior to welding. Keep a separate watchman and several fire extinguishers on hand.
   - B. Structural Liquefaction - weld in small increments. Allow welds to harden before continuing to the next increment.
   - C. Do not leave the site until satisfied that no fire hazard exists.
   - D. Preference should be given to the use of beam clamps, mechanical fasteners, or bolted connections in lieu of welding within existing facilities, whenever possible. Do not field-drill existing structural members without the written permission of the Structural Engineer of Record.

FOUNDATIONS

1. Proofroll slab on grade areas with a medium-weight roller or other suitable equipment to check for pockets of soft material hidden beneath a thin crust of better soil. Any unsuitable materials thus exposed should be removed and replaced with compacted, engineered fill as outlined in the specifications. Proofrolling operations shall be monitored by the Geotechnical Testing Agency.
2. All engineered fill beneath slabs and over footings should be compacted to a dry density of at least 93% of the Modified Proctor maximum dry density (ASTM D-1557). All fill which shall be stressed by foundation loads shall be approved granular materials compacted to a dry density of at least 95% (ASTM D-1557). Coordinate all fill and compaction operations with the Specifications and the Subsurface Investigation.
3. Compaction shall be accomplished by placing fill in approximate 8" lifts and mechanically compacting each lift to at least the specified minimum dry density. For large areas of fill, field density tests shall be performed for each 3,000 square feet of building area for each lift as necessary to insure adequate compaction is being achieved.
4. Column footings and wall footings to bear on firm natural soils or well-compacted engineered fill with allowable bearing pressures of 1,500 PSF for column and wall footings respectively, as outlined in the Subsurface Investigation Report.

   It is essential that the foundations be inspected to insure that all loose, soft, or otherwise undesirable material (such as organics, existing uncontrolled fill, etc.) is removed and that the foundations will bear on satisfactory material. The Geotechnical Testing Agency shall inspect the subgrade and perform any necessary tests to insure that the actual bearing capacities meet or exceed the design capacities. The Geotechnical Testing Agency shall verify the bearing capacity at each spread column footing and every 10 feet on center for strip footings prior to placement of concrete.
5. Place footings the same day the excavation is performed. If this is not possible, the footings shall be adequately protected against any detrimental change in condition, such as from disturbance, rain, or freezing.
6. It is the responsibility of the Contractor and each Sub-Contractor to verify the location of all utilities and services shown, or not shown; and establish safe working conditions before commencing work.
7. The Contractor shall layout the entire building and field verify all dimensions prior to excavation.
8. For information regarding subsurface conditions, refer to the Subsurface Investigation & Foundation Recommendation Report prepared by Alt & Witzig Engineering, Inc., A&W Project No. 21SB0077, dated October, 2021.

GLOSSARY OF TERMS

1. Bracing: Providing stability against unintended movement or motion.
2. Building Component Safety Information (BCSI): The jointly produced WTCA/TPI "Guide to Good Practice for Handling, Installing, and Bracing of Metal Plate Connected Wood Trusses."
3. Building Designer: Engineer of Record responsible for the design of the Building Structural System (BSS) as described in the Building Structural System Design Documents (BSSDS).
4. Building Structural System: The completed combination of Structural Elements, trusses, connections and systems, which serve to support the building's self weight, the applicable live load(s), and environmental loads, such as those caused by snow, wind and earthquakes.
5. Building Structural System Design Documents: Written, graphic and pictorial architectural structural documents, specifications and addenda prepared and assembled for the overall structural design of the Building Structural System, which are part of the Construction Documents.
6. Ceiling Diaphragm: The horizontal or sloped structural system defined by the ceiling plane acting to transmit lateral forces to vertical resisting elements.
7. Clinched Nail: A nail selected to be longer than the member it is driven through and which is bent back the dimension of its excess length.
8. Connectors and Connections: Fasteners that join two or more members together, including: nails, metal plates or truss plates, truss and joists hangers, screws, and bolts.
9. Construction Documents: Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of the project, including architectural, structural, mechanical, electrical, and plumbing drawings and specifications.
10. Construction Loading: The loads from workers and building materials on an unfinished structure, for example, when builders stack bundles of panel sheathing or gypsum board on trusses for temporary storage.
11. Continuous Lateral Bracing: Members installed at right angles to a chord or web member of a truss to provide stability to the truss. They must be properly restrained to prevent the simultaneous buckling of the truss members due to laterally imposed loads and the accumulation of buckling forces. See Lateral Bracing.

STRUCTURAL STEEL NOTES

1. Structural steel construction shall conform to the American Institute of Steel Construction "Specification for Structural Steel Buildings".
2. All structural wide flange members shall be ASTM A992, Fy=50 ksi
3. All plates, channels, bars, angles, and rods shall be ASTM A36, unless noted.
4. All rectangular structural tube members shall be ASTM A500, Grade C, Fy = 50 ksi unless noted.
5. All round structural tube members shall be ASTM A500, Grade C, Fy = 46 ksi unless noted.
6. All structural pipe members shall be ASTM A53,Grade B, Fy=35 ksi unless noted.
7. Details for design, fabrication and erection of all structural steel shall be in accordance with the latest AISC Standards, unless otherwise noted or specified.
8. Provide temporary erection guying and bracing as required.
9. Unless otherwise shown or noted on the Drawings, provide 8" minimum bearing each end for all loose lintels and beams.
10. For loose lintels, masonry shelf angles and other such items generally not shown on the Structural Drawings, refer to the Architectural Drawings. See general notes on lintels this sheet for sizes, reinforcing, etc.
11. Steel columns below grade shall be encased in a minimum of 4" concrete or painted with 2 coats of asphaltum paint, unless otherwise shown.
12. Fabricate simple span beams not specifically noted to receive camber so that after erection, any minor camber due to rolling or shop assembly be upward.
13. Refer to the Division 5 Structural Steel Specification of the Project Manual for structural steel surface preparations and prime painting requirements.
14. The Erector shall shim between parallel roof beams and joists with differential mill and induced cambers for level deck bearing.
15. Provide cap plates/end plates to close off exposed, open ends of all tubular members, unless noted. Seal weld with partial penetration square groove welds for watertight condition.

CAST IN PLACE CONCRETE

1. Details of fabrication of reinforcement, handling and placing of the concrete, construction of forms and placement of reinforcement not otherwise covered by the Plans and Specifications, shall comply with the ACI Code requirements of the latest revised date.
2. Cold weather concreting shall be in accordance with ACI 306. Cold weather is defined as a period when for more than 3 successive days the average daily air temperature drops below 40F and stays below 50F. The Contractor shall maintain a copy of this publication on site.
3. Hot weather concreting shall be in accordance with ACI 305. Hot weather is defined as any combination of the following conditions that tends to impair the quality of the freshly mixed or hardened concrete: high ambient temperature, high concrete temperature, low relative humidity, wind speed, or solar radiation The Contractor shall maintain a copy of this publication on site.
4. A certified Testing Agency shall be retained to perform industry standard testing including measurement of slump, air temperature, concrete cylinder testing, etc. to ensure conformance with the Contract Documents. Submit reports to Architect/Engineer.
5. Finishing of Slabs: After screeding, bull floating and floating operations have been completed, apply final finish as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual.

A. Floor Slabs	Hard Trowel Finish
B. Ramps, Stairs, & Sidewalks	Broom Finish
C. Surfaces to Receive Topping Slab	Float Finish
D. Surfaces to receive thick-set mortar beds or similar cementitious materials	Float Finish
E. Driving Surfaces	Rough Swirl Finish

   Sample Finishes: See Specifications for sample and mockup requirements, if any.

   Floor Tolerances: See the Specifications for specified Ff and Fl tolerances. Ff and Fl testing shall be performed by the Testing Agency in accordance with ASTM E-1155. Results, including acceptance or rejection of the work will be provided to the Contractor and the Architect/Engineer within 48 hours after data collection. Remedies for out-of-tolerance work shall be in accordance with the Specifications. When approved by the Structural Engineer of Record, measurement of the gaps beneath a 10-foot straight edge may be used in lieu of Ff and Fl testing. Approval must be obtained in writing prior to the beginning of concrete operations.
6. Finishing of Formed Surfaces: Finish formed surfaces as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual.

A. Sides of Footings & Pile Caps	Rough Form Finish
B. Sides of Grade Beams	Rough Form Finish
C. Surfaces not exposed to public view	Rough Form Finish
D. Surfaces exposed to public view	Smooth Form Finish

7. The Contractor shall consult with the Structural Engineer of Record before starting concrete work to establish a satisfactory placing schedule and to determine the location of construction joints so as to minimize the effects of shrinkage in the floor system.
8. Sawn or tooled control/contraction joints shall be provided in all slabs on grade. For a framed structure, joints shall be located on all column lines. If the column spacing exceeds 20'-0", provide intermediate joints. Exterior slabs, and interior slabs without column shall have joints spaced a maximum of 15'-0" apart. Layout joints so that maximum aspect ratio (ratio of long side to short side) does not exceed 1.5.
9. Where vinyl composition tile, vinyl sheets goods, thin-set epoxy terrazzo, or other similar material is the specified finish floor material, the Contractor shall coordinate the locations of control/contraction and construction joints with the Finish Flooring Contractor. Submit a dimensioned plan showing joint locations and proposed sequence of floor pours.
10. Unless specifically noted on the Plans, composite and non-composite supported slabs on metal deck, and supported cast-in-place concrete slabs do not require sawn control joints.
11. Joints in slabs to receive a finished floor may remain unfilled, unless required by the finish flooring contractor. All exposed slabs shall be filled with sealant specified in Division 7, or as follows: All slabs in industrial, manufacturing, or warehouse applications subject to wheeled traffic shall be filled with specified epoxy resin sealant, all other joints shall be filled with specified elastometric sealant. Defer filling of joints as long as possible, preferably a minimum of 4 to 6 weeks after the slab has been cured. Prior to filling, remove all debris from the slab joints, the fill in accordance with the manufacturer's recommendations.
12. Refer to the Architectural Drawings for locations and details of reveals (1" maximum depth) in exposed walls.
13. Refer to the Architectural Drawings for chamfer requirements for corners of concrete. Where not indicated, provide 3/4" chamfers on exposed corners of concrete, except those abutting masonry.
14. Refer to the Architectural Drawings for exact locations and dimensions of recessed slabs, ramps, stairs, thickened slabs, etc. Slope slabs to drains where shown on the Architectural and Plumbing Drawings.
15. Sidewalks, drives, exterior retaining walls, and other site concrete are not indicated on the Structural Drawings. Refer to the Site/Civil and Architectural Drawings for locations, dimensions, elevations, jointing, and finish details.

CONCRETE MIX CLASSES

FOOTINGS, FOUNDATION WALLS, PIERS, & GRADE BEAMS	
COMPRESSIVE STRENGTH	4000 PSI
MAXIMUM WATER/CEMENT RATIO	0.45
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
INTERIOR CONCRETE SLABS	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	517 LB/CU YD
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
PROVIDE ELEMENT 5 SYSTEM (INTERNAL CURE & CATALYST) PER PLAN NOTE ON FOUNDATION PLAN	
EXTERIOR CONCRETE SUBJECT TO FREEZE-THAW	
COMPRESSIVE STRENGTH	4500 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	564 LB/CU YD
AIR CONTENT	6 ± 1 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
COARSE AGGREGATE	CRUSHED STONE
LIGHTWEIGHT CONCRETE SUSPENDED SLABS	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	650 LB/CU YD
AIR CONTENT	6 ± 1 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
LIGHTWEIGHT AGGREGATE MUST BE PRE-SOAKED TO SATURATED-SURFACE-DRY (SSD) CONDITION PRIOR TO MIXING.	
LEAN CONCRETE FILL	
COMPRESSIVE STRENGTH	2000 PSI
MAXIMUM WATER/CEMENT RATIO	0.65
AIR CONTENT	OPTIONAL
WATER-REDUCING ADMIXTURE	NOT REQUIRED
SLUMP	4" TO 7"
INTERIOR TOPPING SLAB	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	517 LB/CU YD
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
THE CONTRACTOR SHALL CONSIDER THE EFFECTS OF CAMBER AND TOLERANCE ON THE MINIMUM TOPPING THICKNESS AND LIMIT THE SIZE OF LARGE AGGREGATE ACCORDINGLY.	

1. SLUMP:

MIXES CONTAINING TYPE A WRDA	5" MAXIMUM
MIXES CONTAINING MID-RANGE WRDA	5 - 6 1/2"
MIXES CONTAINING HIGH-RANGE WRDA	5 - 8"

2. SPECIFIED MINIMUM CEMENTITIOUS MATERIAL CONTENTS ARE BASED ON THE USE OF WATER REDUCING ADMIXTURES.
3. INCLUDE AN AIR-ENTRAINING ADMIXTURE FOR ALL CONCRETE EXPOSED TO FREEZING AND THAWING IN SERVICE AND FOR ALL CONCRETE EXPOSED TO COLD WEATHER DURING CONSTRUCTION, BEFORE ATTAINING ITS SPECIFIED DESIGN COMPRESSIVE STRENGTH. REF. ACI 306 FOR DEFINITION OF COLD WEATHER.
4. CLASS C FLY ASH MAY BE USED AS A CEMENT SUBSTITUTE WITH A MAXIMUM 20% SUBSTITUTION RATE ON A POUND-PER-POUND BASIS.
5. SLAG CEMENT MAY BE USED AS A SUBSTITUTE FOR PORTLAND CEMENT WITH A MAXIMUM 50% SUBSTITUTION RATE ON A POUND-PER-POUND BASIS WITH THE EXCEPTION OF CLASS E CONCRETE, WHICH SHALL BE LIMITED TO 30%.
6. WHEN SLAB CEMENT AND FLY ASH ARE USED IN THE SAME CONCRETE MIX, THE MAXIMUM SUBSTITUTION RATES SHALL COMPLY WITH THE FOLLOWING:

PORTLAND CEMENT/SLAG/FLY ASH RATIO:	
CLASS E EXTERIOR CONCRETE	70% / 20% / 10%
ALL OTHER CLASSES	50% / 30% / 20%

7. FOR CONCRETE TO BE CAST DURING COLD WEATHER, THE MAXIMUM SUBSTITUTION RATE FOR SLAG CEMENT SHALL BE 30%. IF SLAG CEMENT AND FLY ASH ARE USED IN THE SAME MIX, THE MAXIMUM SUBSTITUTION RATES SHALL COMPLY WITH A RATIO OF PORTLAND CEMENT/SLAG/FLY ASH OF 70% / 20% / 10%.
8. PROPORTION CONCRETE MIXES TO PROVIDE WORKABILITY AND CONSISTENCY TO PERMIT CONCRETE TO BE WORKED READILY INTO THE CORNERS AND ANGLES OF THE FORMS AND AROUND REINFORCEMENT BY THE METHODS OF PLACEMENT AND CONSOLIDATION TO BE EMPLOYED, WITHOUT SEGREGATION AND EXCESSIVE BLEEDING.
9. ADJUSTMENTS TO THE APPROVED MIX DESIGNS MAY BE REQUESTED BY THE CONTRACTOR WHEN JOB CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT. THESE REVISED MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO USE.

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

WESTCHESTER
INTERMEDIATE
SCHOOL -
ADDITIONS &
RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE
PE10606154

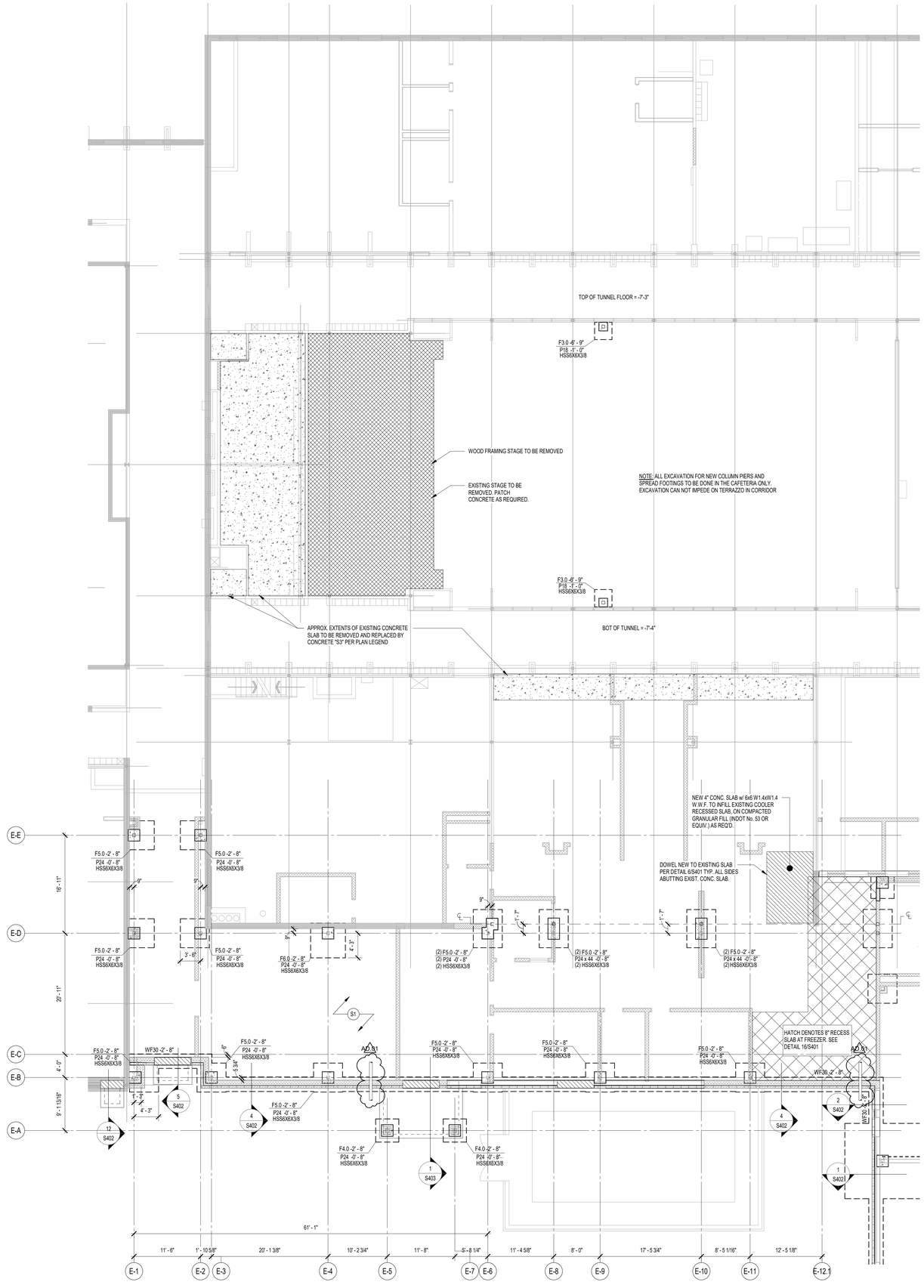
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
STRUCTURAL NOTES

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
S001



1 FOUNDATION PLAN - UNIT E
1/8" = 1'-0"

CONCRETE PIER SCHEDULE

PIER MARK	PIER SIZE		PIER REINFORCING			
			VERTICALS	TIES-SIZE & SPA.[3]	DETAIL	CRITICAL HEIGHT
P24	2' - 0"	2' - 0"	(8) #6	#4 @ 12" O.C.	B	≤ 2' - 8"
			(4) #8	#4 @ 12" O.C.	A	> 2' - 8"
P24 x 44	2' - 0"	3' - 8"	(12) #7	#4 @ 12" O.C.	C	≤ 2' - 8"
			(8) #9	#4 @ 12" O.C.	E	> 2' - 8"

1. PROVIDE MIN. 1 ½" CLEAR TO PIER TIES.

2. "CRITICAL HEIGHT" DENOTES THE HEIGHT ABOVE WHICH LARGER DIAMETER VERTICALS WITH FEWER TIES MAY BE USED. REF. FOUNDATION PLAN(S) FOR TOP OF PIER & FOOTING ELEVS.

3. REF. "TYPICAL CONCRETE PIER REINFORCING" ON FOUNDATION DETAIL SHEET FOR FURTHER INFORMATION ON TIE SPACING.

4. VERTICAL DOWELS ARE TO FUNCTION AS PIER VERTICALS FOR PIERS LESS THAN OR EQUAL TO 5' - 0" HIGH. PROVIDE SEPARATE DOWELS & VERTICALS FOR PIERS GREATER THAN OR EQUAL TO 5' - 0" HIGH, UNLESS APPROVED.

5. CONTACT THE STRUCTURAL ENGINEER FOR DIRECTION IF COLUMN ANCHOR RODS FOUL WITH PIER TIES OR VERTICALS.

6. MIN. HEIGHT OF PIERS: #6 VERTICALS = 2' - 0", #7 VERTICALS = 2' - 8".

DETAIL "A"	DETAIL "B"	ALT. DETAIL "B"	DETAIL "C"	DETAIL "E"
(1) SET	(2) SETS	(3) SETS	(3) SETS	(2) SETS

WALL FOOTING SCHEDULE

FTG. MARK	FOOTING SIZE		FOOTING REINFORCING	
	WIDTH	DEPTH	LONGITUDINAL	TRANSVERSE
WF24	2'-0"	1'-0"	(2) #5 x CONTINUOUS	#4 x 1'-6" @ 96" O.C.
WF30	2'-6"	1'-2"	(3) #5 x CONTINUOUS	#4 x 2'-0" @ 96" O.C.
WF42	3'-6"	1'-2"	(4) #5 x CONTINUOUS	#5 x 3'-0" @ 12" O.C.

1. CENTER FOOTINGS BENEATH WALLS, U.N.O.

FOUNDATION PLAN NOTES

1. REF. S001 FOR STRUCTURAL NOTES, DESIGN DATA & SCHEDULES.

2. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.

3. COORDINATE EXACT SIZE & LOCATION OF ALL MECHANICAL OPENINGS IN FOUNDATION WALLS WITH THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS.

4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FINISH FLOOR ELEVATION 0'-0" (U.S.G.S. 646.0). REF. CIVIL DWGS.

5. REF. ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

6. REF. S400 & S401 FOR TYPICAL FOUNDATION DETAILS.

7. NOTE: PERIMETER WALL AND COLUMN FOOTINGS SHALL BE LOWERED AND/OR SLEEVED TO PASS BELOW PLUMBING LINES (I.E. SANITARY & STORM SEWERS, WATER LINES, ETC.) SHOWN ON THE PLUMBING DRAWINGS. PROVIDE FOOTING STEPS AS REQUIRED PER THE TYPICAL DETAILS ON S400.

8. ALL SLAB RECESSES SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS. COORDINATE DEPTHS OF ALL SLAB RECESSES WITH THE ARCHITECTURAL DRAWINGS AND/OR THE FLOORING SUPPLIER.

9. COORDINATE REINFORCING DOWELS FOR CMU VERTICAL REINFORCING WITH REINF. NOTED ON PLANS & SECTIONS.

10. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.

11. COLUMN FOOTINGS SUPPORTING MORE THAN ONE COLUMN SHALL BE CENTERED AT THE MIDPOINT BETWEEN THE COLUMNS, UNLESS NOTED OTHERWISE ON PLAN.

12. COLUMN FOOTINGS, TRENCH FOOTINGS AND WALL FOOTINGS SHALL BEAR ON APPROVED SOIL. UNDERCUT AS REQ'D TO SUITABLE BEARING MATERIAL AS DETERMINED BY THE GEOTECHNICAL TESTING AGENCY. REF. TYPICAL FOOTING UNDERCUT DETAILS S400. UNDERCUTTING TO SUITABLE BRG. MATERIAL IS NOT REQUIRED FOR GRADE BEAMS. REFERENCE ELEVATIONS IN PARENTHESES (-XX'-x") FOR APPROXIMATE ELEVATION TO SUITABLE BEARING STRATA TO BE USE FOR BIDDING PURPOSES.

13. PROVIDE CONTINUOUS 4" H. x W. VARIES CONCRETE CURB ON ACOUSTIC ISOLATION SLABS IN MECHANICAL ROOMS. CURBS TO SURROUND ALL PENETRATIONS THRU SLAB INCLUDING COLUMNS, PIPES, SUMP PITS, ETC.

14. ALL EX. CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFO. SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS IMMEDIATELY CONTACT ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.

15. PROVIDE THICKENED SLAB UNDER ALL INTERIOR CMU WALLS WITHOUT FOOTINGS. SEE DETAILS ON S401 FOR THICKENED SLAB DETAIL. LAYOUT THICKENED SLABS FROM DIMENSIONS ON THE ARCHITECT FLOOR PLANS.

16. PROVIDE CONTROL/CONTRACTION JOINTS IN SLABS ON GRADE (REF. THE TYPICAL DETAILS ON SHEET S400). ALL JOINTS IN SLABS TO RECEIVE THIN OR THICK-SET TERRAZZO, CERAMIC OR PORCELAIN TILE, VINYL-COMPOSITION TILE (VCT) OR VINYL SHEET GOODS, EPOXY OR SIMILAR THIN-FILM FINISH FLOORING SHALL BE CAREFULLY COORDINATED WITH THE FLOORING CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SLAB JOINT LAYOUT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACING SLABS.

17. WHERE PIERS OCCUR WITHIN A LARGER ARCH. PILASTER OR COLUMN ENCLOSURE (FOR EG. P24's WITHIN 40" SQUARE CANOPY PILASTERS) PROVIDE PIER REINF. CAGE CENTERED ON THE GRID INTERSECTION. FORM OVERALL PIER TO PROFILE OF THE ARCHITECTURAL PILASTER OR COLUMN ENCLOSURE. LAYOUT PILASTERS FROM DIMENSIONS ON THE ARCHITECTURAL PLANS & DETAILS.

18. FOR ARCHITECTURAL PILASTERS NOT SUPPORTING STEEL COLUMNS, CONSTRUCT AS FULLY-GROUTED MASONRY PIERS OR CAST-IN-PLACE CONCRETE PIERS REINF'D W/ #5 VERTICAL REINFORCING AT 12" O.C. ALL FACES, AT CONTRACTOR'S OPTION.

19. AT ALL LOCATIONS WHERE NEW FOOTINGS ARE TO BE INSTALLED IN EXISTING SPACES REMOVED EXISTING CONCRETE SLABS AND OR FOUNDATION WALLS / WALL FOOTINGS AS REQUIRED. NEW SLABS TO BE DOWELED TO EXISTING PER DETAIL 6/S401.

20. PLAN LEGEND:

F.F. DENOTES FINISH FLOOR

T/'X' DENOTES TOP OF FTG., GRADE BEAM, SLAB, PIER, ETC.

B/'X' DENOTES BOTTOM OF FTG., GRADE BEAM, ETC.

C.J. DENOTES SLAB ON GRADE CONTROL/CONTRACTION JOINT

WF30 -20'-0" DENOTES WALL FOOTING MARK & TOP OF FOOTING ELEVATION (SEE WALL FOOTING SCHEDULE)

S1 DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) & E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S2 DENOTES NEW 6" CONC. SLAB w/ NEW CONC. SLAB w/ 6x6 W2.9xW2.9 W.W.F. & E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S3 DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) OVER 15-MIL VAPOR BARRIER T/CONC. = MATCH EXISTING

SE DENOTES EXISTING SLAB ON GRADE

DENOTES PIPE PENETRATION THROUGH FOUNDATION WALL. COORDINATE EXACT LOCATION & INVERT ELEVATION w/ APPROPRIATE TRADE. LOWER BOTTOM OF FOOTING & PROVIDE SLEEVE THROUGH FOUNDATION WALL PER TYPICAL DETAIL ON S400.

DENOTES WALL FOOTING WITH STEPS, REF. TYP. DETAIL ON S400

1'-2 5/8" MIN. 1'-4 1/2" 1'-4 1/2" MIN. 1'-5 3/4"

DENOTES COLUMN SIZE (REF. FRAMING PLANS FOR STUB COL'S NOT ON FDNS)

F5.0 -6'-8" P24 -0'-8" HSS6x6x3/8

DENOTES COLUMN FOOTING MARK & TOP OF FTG. ELEVATION (SEE FTG. SCHED.)

DENOTES PIER MARK & TOP OF PIER ELEVATION (SEE PIER SCHED.)

COLUMN FOOTING

CONCRETE PIER

STEEL COLUMN

COLUMN FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE			REINFORCING (EACH WAY)
	WIDTH	LENGTH	DEPTH	
F3.0	3'-0"	3'-0"	1'-2"	(4) #5 x 2'-6"
F4.0	4'-0"	4'-0"	1'-2"	(4) #5 x 3'-6"
F5.0	5'-0"	5'-0"	1'-2"	(5) #5 x 4'-6"
F6.0	6'-0"	6'-0"	1'-2"	(6) #5 x 5'-6"
F7.0	7'-0"	7'-0"	1'-2"	(7) #5 x 6'-6"
F8.0	8'-0"	8'-0"	1'-2"	(7) #6 x 7'-6"
F12.0	12'-0"	12'-0"	1'-10"	(10) #7 x 11'-6"
F13.0	13'-0"	13'-0"	2'-0"	(12) #7 x 12'-6"

NOTES:

1. CENTER FOOTINGS BENEATH COLUMNS, U.N.O.
2. ALL FOOTINGS MUST BE BOARD-FORMED, UNLESS APPROVED.
3. INCREASE FOOTING DEPTH WHERE REQ'D TO ENCASE COLUMN ANCHOR RODS

NOTE: WF STEEL COLUMN SHOWN, TUBES, PIPES, C.I.P. CONCRETE, PRECAST & MASONRY COLUMNS SIM.

DEPTH PER SCHED. F.F. SEE NOTE #3

LENGTH PER SCHED. EQ EQ EQ WIDTH PER SCHED. EQ SEE NOTE #2

GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE16606154 STATE OF INDIANA PROFESSIONAL ENGINEER

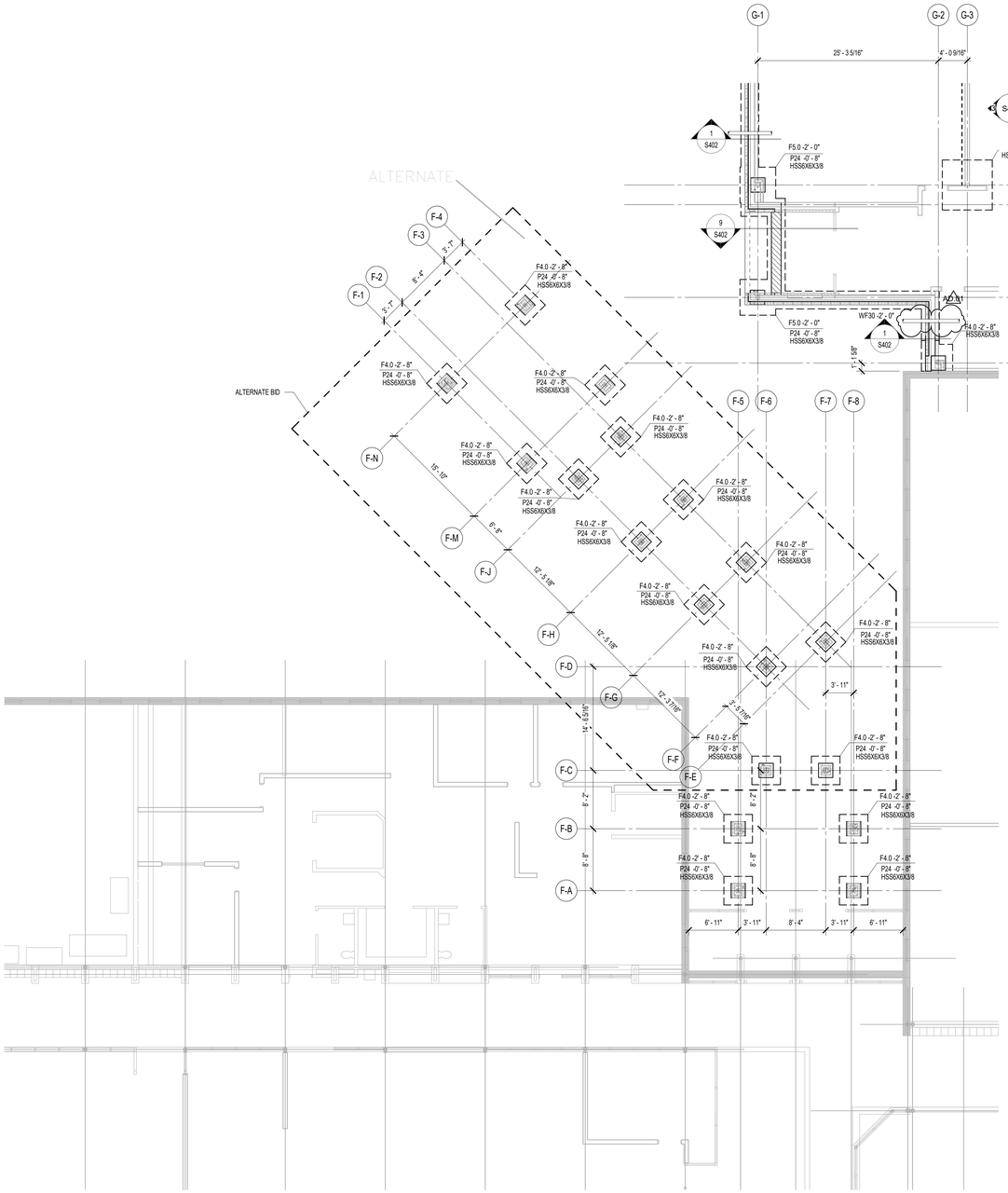
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
FOUNDATION PLAN - UNIT E

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
E
S103



1 FOUNDATION PLAN - UNIT F
1/8" = 1'-0"

CONCRETE PIER SCHEDULE

PIER MARK	PIER SIZE		PIER REINFORCING			
			VERTICALS	TIES-SIZE & SPA.[3]	DETAIL	CRITICAL HEIGHT
P24	2' - 0"	2' - 0"	(8) #6	#4 @ 12" O.C.	B	≤ 2' - 8"
			(4) #8	#4 @ 12" O.C.	A	> 2' - 8"
P24 x 44	2' - 0"	3' - 8"	(12) #7	#4 @ 12" O.C.	C	≤ 2' - 8"
			(8) #9	#4 @ 12" O.C.	E	> 2' - 8"

1. PROVIDE MIN. 1 ½" CLEAR TO PIER TIES.

2. "CRITICAL HEIGHT" DENOTES THE HEIGHT ABOVE WHICH LARGER DIAMETER VERTICALS WITH FEWER TIES MAY BE USED. REF. FOUNDATION PLAN(S) FOR TOP OF PIER & FOOTING ELEV'S.

3. REF. "TYPICAL CONCRETE PIER REINFORCING" ON FOUNDATION DETAIL SHEET FOR FURTHER INFORMATION ON TIE SPACING.

4. VERTICAL DOWELS ARE TO FUNCTION AS PIER VERTICALS FOR PIERS LESS THAN OR EQUAL TO 5' - 0" HIGH. PROVIDE SEPARATE DOWELS & VERTICALS FOR PIERS GREATER THAN OR EQUAL TO 5' - 0" HIGH, UNLESS APPROVED.

5. CONTACT THE STRUCTURAL ENGINEER FOR DIRECTION IF COLUMN ANCHOR RODS FOUL WITH PIER TIES OR VERTICALS.

6. MIN. HEIGHT OF PIERS: #6 VERTICALS = 2' - 0", #7 VERTICALS = 2' - 8".

DETAIL "A"	DETAIL "B"	ALT. DETAIL "B"	DETAIL "C"	DETAIL "E"
(1) SET	(2) SETS	(3) SETS	(3) SETS	(2) SETS

WALL FOOTING SCHEDULE

FTG. MARK	FOOTING SIZE		FOOTING REINFORCING	
	WIDTH	DEPTH	LONGITUDINAL	TRANSVERSE
WF24	2'-0"	1'-0"	(2) #5 x CONTINUOUS	#4 x 1'-6" @ 96" O.C.
WF30	2'-6"	1'-2"	(3) #5 x CONTINUOUS	#4 x 2'-0" @ 96" O.C.
WF42	3'-6"	1'-2"	(4) #5 x CONTINUOUS	#5 x 3'-0" @ 12" O.C.

1. CENTER FOOTINGS BENEATH WALLS, U.N.O.

FOUNDATION PLAN NOTES

1. REF. S001 FOR STRUCTURAL NOTES, DESIGN DATA & SCHEDULES.

2. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.

3. COORDINATE EXACT SIZE & LOCATION OF ALL MECHANICAL OPENINGS IN FOUNDATION WALLS WITH THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS.

4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FINISH FLOOR ELEVATION 0'-0" (U.S.G.S. 646.0). REF. CIVIL DWGS.

5. REF. ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

6. REF. S400 & S401 FOR TYPICAL FOUNDATION DETAILS.

7. NOTE: PERIMETER WALL AND COLUMN FOOTINGS SHALL BE LOWERED AND/OR SLEEVED TO PASS BELOW PLUMBING LINES (I.E. SANITARY & STORM SEWERS, WATER LINES, ETC.) SHOWN ON THE PLUMBING DRAWINGS. PROVIDE FOOTING STEPS AS REQUIRED PER THE TYPICAL DETAILS ON S400.

8. ALL SLAB RECESSES SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS. COORDINATE DEPTHS OF ALL SLAB RECESSES WITH THE ARCHITECTURAL DRAWINGS AND/OR THE FLOORING SUPPLIER.

9. COORDINATE REINFORCING DOWELS FOR CMU VERTICAL REINFORCING WITH REINF. NOTED ON PLANS & SECTIONS.

10. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.

11. COLUMN FOOTINGS SUPPORTING MORE THAN ONE COLUMN SHALL BE CENTERED AT THE MIDPOINT BETWEEN THE COLUMNS, UNLESS NOTED OTHERWISE ON PLAN.

12. COLUMN FOOTINGS, TRENCH FOOTINGS AND WALL FOOTINGS SHALL BEAR ON APPROVED SOIL. UNDERCUT AS REQ'D TO SUITABLE BEARING MATERIAL AS DETERMINED BY THE GEOTECHNICAL TESTING AGENCY. REF. TYPICAL FOOTING UNDERCUT DETAILS S400. UNDERCUTTING TO SUITABLE BRG. MATERIAL IS NOT REQUIRED FOR GRADE BEAMS. REFERENCE ELEVATIONS IN PARENTHESES (-XX'-X") FOR APPROXIMATE ELEVATION TO SUITABLE BEARING STRATA TO BE USE FOR BIDDING PURPOSES.

13. PROVIDE CONTINUOUS 4" H. x W. VARIES CONCRETE CURB ON ACOUSTIC ISOLATION SLABS IN MECHANICAL ROOMS. CURBS TO SURROUND ALL PENETRATIONS THRU SLAB INCLUDING COLUMNS, PIPES, SUMP PITS, ETC.

14. ALL EX. CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFO. SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS IMMEDIATELY CONTACT ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.

15. PROVIDE THICKENED SLAB UNDER ALL INTERIOR CMU WALLS WITHOUT FOOTINGS. SEE DETAILS ON S401 FOR THICKENED SLAB DETAIL. LAYOUT THICKENED SLABS FROM DIMENSIONS ON THE ARCHITECT FLOOR PLANS.

16. PROVIDE CONTROL/CONTRACTION JOINTS IN SLABS ON GRADE (REF. THE TYPICAL DETAILS ON SHEET S400). ALL JOINTS IN SLABS TO RECEIVE THIN OR THICK-SET TERRAZZO, CERAMIC OR PORCELAIN TILE, VINYL-COMPOSITION TILE (VCT) OR VINYL SHEET GOODS, EPOXY OR SIMILAR THIN-FILM FINISH FLOORING SHALL BE CAREFULLY COORDINATED WITH THE FLOORING CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SLAB JOINT LAYOUT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACING SLABS.

17. WHERE PIERS OCCUR WITHIN A LARGER ARCH. PILASTER OR COLUMN ENCLOSURE (FOR EG. P24's WITHIN 40" SQUARE CANOPY PILASTERS) PROVIDE PIER REINF. CAGE CENTERED ON THE GRID INTERSECTION. FORM OVERALL PIER TO PROFILE OF THE ARCHITECTURAL PILASTER OR COLUMN ENCLOSURE. LAYOUT PILASTERS FROM DIMENSIONS ON THE ARCHITECTURAL PLANS & DETAILS.

18. FOR ARCHITECTURAL PILASTERS NOT SUPPORTING STEEL COLUMNS, CONSTRUCT AS FULLY-GROUTED MASONRY PIERS OR CAST-IN-PLACE CONCRETE PIERS REINF'D W/ #5 VERTICAL REINFORCING AT 12" O.C. ALL FACES, AT CONTRACTOR'S OPTION.

19. AT ALL LOCATIONS WHERE NEW FOOTINGS ARE TO BE INSTALLED IN EXISTING SPACES REMOVED EXISTING CONCRETE SLABS AND OR FOUNDATION WALLS / WALL FOOTINGS AS REQUIRED. NEW SLABS TO BE DOWELED TO EXISTING PER DETAIL 6/S401.

20. PLAN LEGEND:

F.F.	DENOTES FINISH FLOOR
T/'X'	DENOTES TOP OF FTG., GRADE BEAM, SLAB, PIER, ETC.
B/'X'	DENOTES BOTTOM OF FTG., GRADE BEAM, ETC.
C.J.	DENOTES SLAB ON GRADE CONTROL/CONTRACTION JOINT
WF30 -20'-0"	DENOTES WALL FOOTING MARK & TOP OF FOOTING ELEVATION (SEE WALL FOOTING SCHEDULE)
S1	DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) & E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.
S2	DENOTES NEW 6" CONC. SLAB w/ NEW CONC. SLAB w/ 6x6 W2.9xW2.9 W.W.F., & E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.
S3	DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) OVER 15-MIL VAPOR BARRIER T/CONC. = MATCH EXISTING
SE	DENOTES EXISTING SLAB ON GRADE
	DENOTES PIPE PENETRATION THROUGH FOUNDATION WALL. COORDINATE EXACT LOCATION & INVERT ELEVATION w/ APPROPRIATE TRADE. LOWER BOTTOM OF FOOTING & PROVIDE SLEEVE THROUGH FOUNDATION WALL PER TYPICAL DETAIL ON S400.
1'F-8" 1'F-0"	DENOTES WALL FOOTING WITH STEPS, REF. TYP. DETAIL ON S400

DENOTES COLUMN SIZE (REF. FRAMING PLANS FOR STUB COL'S NOT ON FDNS)

F5.0 -4'-8" P24 -0"-8" HSS6x6x3/8

DENOTES COLUMN FOOTING MARK & TOP OF FTG. ELEVATION (SEE FTG. SCHED.)

DENOTES PIER MARK & TOP OF PIER ELEVATION (SEE PIER SCHED.)

COLUMN FOOTING

CONCRETE PIER

STEEL COLUMN

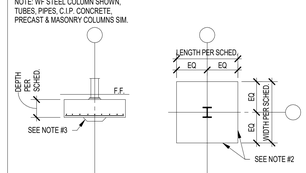
COLUMN FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE			REINFORCING (EACH WAY)
	WIDTH	LENGTH	DEPTH	
F3.0	3'-0"	3'-0"	1'-2"	(4) #5 x 2'-6"
F4.0	4'-0"	4'-0"	1'-2"	(4) #5 x 3'-6"
F5.0	5'-0"	5'-0"	1'-2"	(5) #5 x 4'-6"
F6.0	6'-0"	6'-0"	1'-2"	(6) #5 x 5'-6"
F7.0	7'-0"	7'-0"	1'-2"	(7) #5 x 6'-6"
F8.0	8'-0"	8'-0"	1'-2"	(7) #6 x 7'-6"
F12.0	12'-0"	12'-0"	1'-10"	(10) #7 x 11'-6"
F13.0	13'-0"	13'-0"	2'-0"	(12) #7 x 12'-6"

NOTES:

1. CENTER FOOTINGS BENEATH COLUMNS, U.N.O.
2. ALL FOOTINGS MUST BE BOARD-FORMED, UNLESS APPROVED.
3. INCREASE FOOTING DEPTH WHERE REQ'D TO ENCASE COLUMN ANCHOR RODS

NOTE: WF STEEL COLUMN SHOWN, TUBES, PIPES, C.I.P. CONCRETE, PRECAST & MASONRY COLUMNS SIM.



GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
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Phone 317.580.5777 Fax 317.580.5778

PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

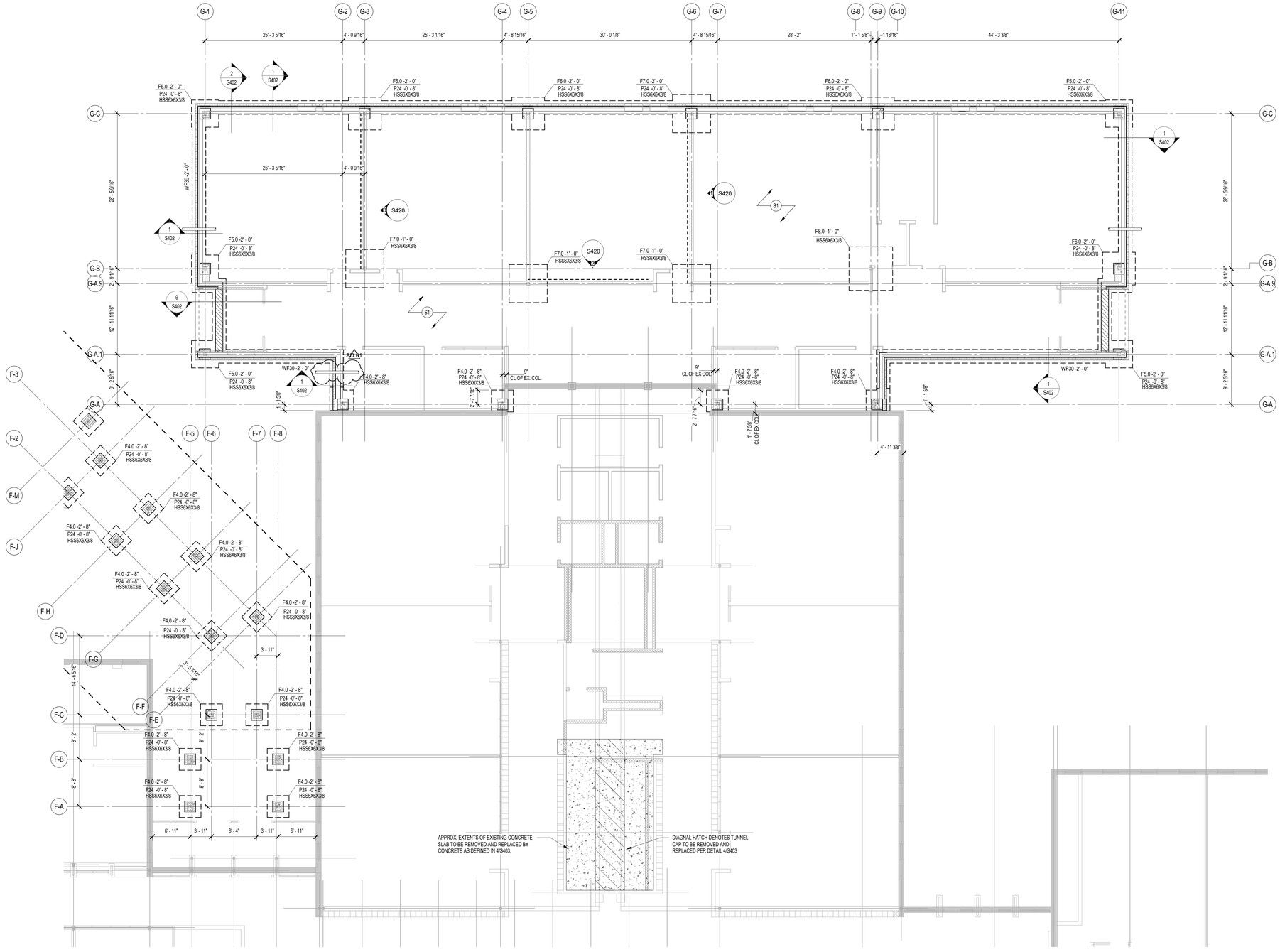
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
FOUNDATION PLAN - UNIT F

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
F
S104



1 FOUNDATION PLAN - UNIT G
1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. REF. S001 FOR STRUCTURAL NOTES, DESIGN DATA & SCHEDULES.

2. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.

3. COORDINATE EXACT SIZE & LOCATION OF ALL MECHANICAL OPENINGS IN FOUNDATION WALLS WITH THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS.

4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FINISH FLOOR ELEVATION 0'-0" (U.S.G.S. 646.0). REF. CIVIL DWGS.

5. REF. ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

6. REF. S400 & S401 FOR TYPICAL FOUNDATION DETAILS.

7. NOTE: PERIMETER WALL AND COLUMN FOOTINGS SHALL BE LOWERED AND/OR SLEEVED TO PASS BELOW PLUMBING LINES (I.E. SANITARY & STORM SEWERS, WATER LINES, ETC.) SHOWN ON THE PLUMBING DRAWINGS. PROVIDE FOOTING STEPS AS REQUIRED PER THE TYPICAL DETAILS ON S400.

8. ALL SLAB RECESSES SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS. COORDINATE DEPTHS OF ALL SLAB RECESSES WITH THE ARCHITECTURAL DRAWINGS AND/OR THE FLOORING SUPPLIER.

9. COORDINATE REINFORCING DOWELS FOR CMU VERTICAL REINFORCING WITH REINF. NOTED ON PLANS & SECTIONS.

10. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.

11. COLUMN FOOTINGS SUPPORTING MORE THAN ONE COLUMN SHALL BE CENTERED AT THE MIDPOINT BETWEEN THE COLUMNS, UNLESS NOTED OTHERWISE ON PLAN.

12. COLUMN FOOTINGS, TRENCH FOOTINGS AND WALL FOOTINGS SHALL BEAR ON APPROVED SOIL. UNDERCUT AS REQ'D TO SUITABLE BEARING MATERIAL AS DETERMINED BY THE GEOTECHNICAL TESTING AGENCY. REF. TYPICAL FOOTING UNDERCUT DETAILS S400. UNDERCUTTING TO SUITABLE BRG. MATERIAL IS NOT REQUIRED FOR GRADE BEAMS. REFERENCE ELEVATIONS IN PARENTHESES (-XX'-X") FOR APPROXIMATE ELEVATION TO SUITABLE BEARING STRATA TO BE USE FOR BIDDING PURPOSES.

13. PROVIDE CONTINUOUS 4" H. x W. VARIES CONCRETE CURB ON ACOUSTIC ISOLATION SLABS IN MECHANICAL ROOMS. CURBS TO SURROUND ALL PENETRATIONS THRU SLAB INCLUDING COLUMNS, PIPES, SUMP PITS, ETC.

14. ALL EX. CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFO. SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS IMMEDIATELY CONTACT ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.

15. PROVIDE THICKENED SLAB UNDER ALL INTERIOR CMU WALLS WITHOUT FOOTINGS. SEE DETAILS ON S401 FOR THICKENED SLAB DETAIL. LAYOUT THICKENED SLABS FROM DIMENSIONS ON THE ARCHITECT FLOOR PLANS.

16. PROVIDE CONTROL/CONTRACTION JOINTS IN SLABS ON GRADE (REF. THE TYPICAL DETAILS ON SHEET S400). ALL JOINTS IN SLABS TO RECEIVE THIN OR THICK-SET TERRAZZO, CERAMIC OR PORCELAIN TILE, VINYL-COMPOSITION TILE (VCT) OR VINYL SHEET GOODS, EPOXY OR SIMILAR THIN-FILM FINISH FLOORING SHALL BE CAREFULLY COORDINATED WITH THE FLOORING CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SLAB JOINT LAYOUT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACING SLABS.

17. WHERE PIERS OCCUR WITHIN A LARGER ARCH. PILASTER OR COLUMN ENCLOSURE (FOR EG. P24's WITHIN 40" SQUARE CANOPY PILASTERS) PROVIDE PIER REINF. CAGE CENTERED ON THE GRID INTERSECTION. FORM OVERALL PIER TO PROFILE OF THE ARCHITECTURAL PILASTER OR COLUMN ENCLOSURE. LAYOUT PILASTERS FROM DIMENSIONS ON THE ARCHITECTURAL PLANS & DETAILS.

18. FOR ARCHITECTURAL PILASTERS NOT SUPPORTING STEEL COLUMNS, CONSTRUCT AS FULLY-GROUTED MASONRY PIERS OR CAST-IN-PLACE CONCRETE PIERS REINF'D W/ #5 VERTICAL REINFORCING AT 12" O.C. ALL FACES, AT CONTRACTOR'S OPTION.

19. AT ALL LOCATIONS WHERE NEW FOOTINGS ARE TO BE INSTALLED IN EXISTING SPACES REMOVED EXISTING CONCRETE SLABS AND OR FOUNDATION WALLS / WALL FOOTINGS AS REQUIRED. NEW SLABS TO BE DOWELED TO EXISTING PER DETAIL 6/S401.

20. PLAN LEGEND:

F.F. — DENOTES FINISH FLOOR

T/'X' — DENOTES TOP OF FTG., GRADE BEAM, SLAB, PIER, ETC.

B/'X' — DENOTES BOTTOM OF FTG., GRADE BEAM, ETC.

C.J. — DENOTES SLAB ON GRADE CONTROL/CONTRACTION JOINT

WF30 -20'-0" — DENOTES WALL FOOTING MARK & TOP OF FOOTING ELEVATION (SEE WALL FOOTING SCHEDULE)

S1 — DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) &
E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT &
E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S2 — DENOTES NEW 6" CONC. SLAB w/ NEW CONC. SLAB w/ 6x6 W2.9xW2.9 W.W.F. &
E5 INTERNAL CURE ADMIXTURE @ 4 OZ/CWT &
E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S3 — DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) OVER 15-MIL VAPOR BARRIER T/CONC. = MATCH EXISTING

SE — DENOTES EXISTING SLAB ON GRADE

DENOTES PIPE PENETRATION THROUGH FOUNDATION WALL. COORDINATE EXACT LOCATION & INVERT ELEVATION w/ APPROPRIATE TRADE. LOWER BOTTOM OF FOOTING & PROVIDE SLEEVE THROUGH FOUNDATION WALL PER TYPICAL DETAIL ON S400.

1'-2 5/8" / 1'-4 1/2" / 1'-5 3/4" — DENOTES WALL FOOTING WITH STEPS, REF. TYP. DETAIL ON S400

DENOTES COLUMN SIZE (REF. FRAMING PLANS FOR STUB COL'S NOT ON FDNS)

F5.0 -4'-8" / P24 -0'-8" / HSS6x6x3/8 — DENOTES COLUMN FOOTING MARK & TOP OF FTG. ELEVATION (SEE FTG. SCHED.) / DENOTES PIER MARK & TOP OF PIER ELEVATION (SEE PIER SCHED.)

COLUMN FOOTING / CONCRETE PIER / STEEL COLUMN

GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE — PE10606154 — STATE OF INDIANA — REGISTERED PROFESSIONAL ENGINEER

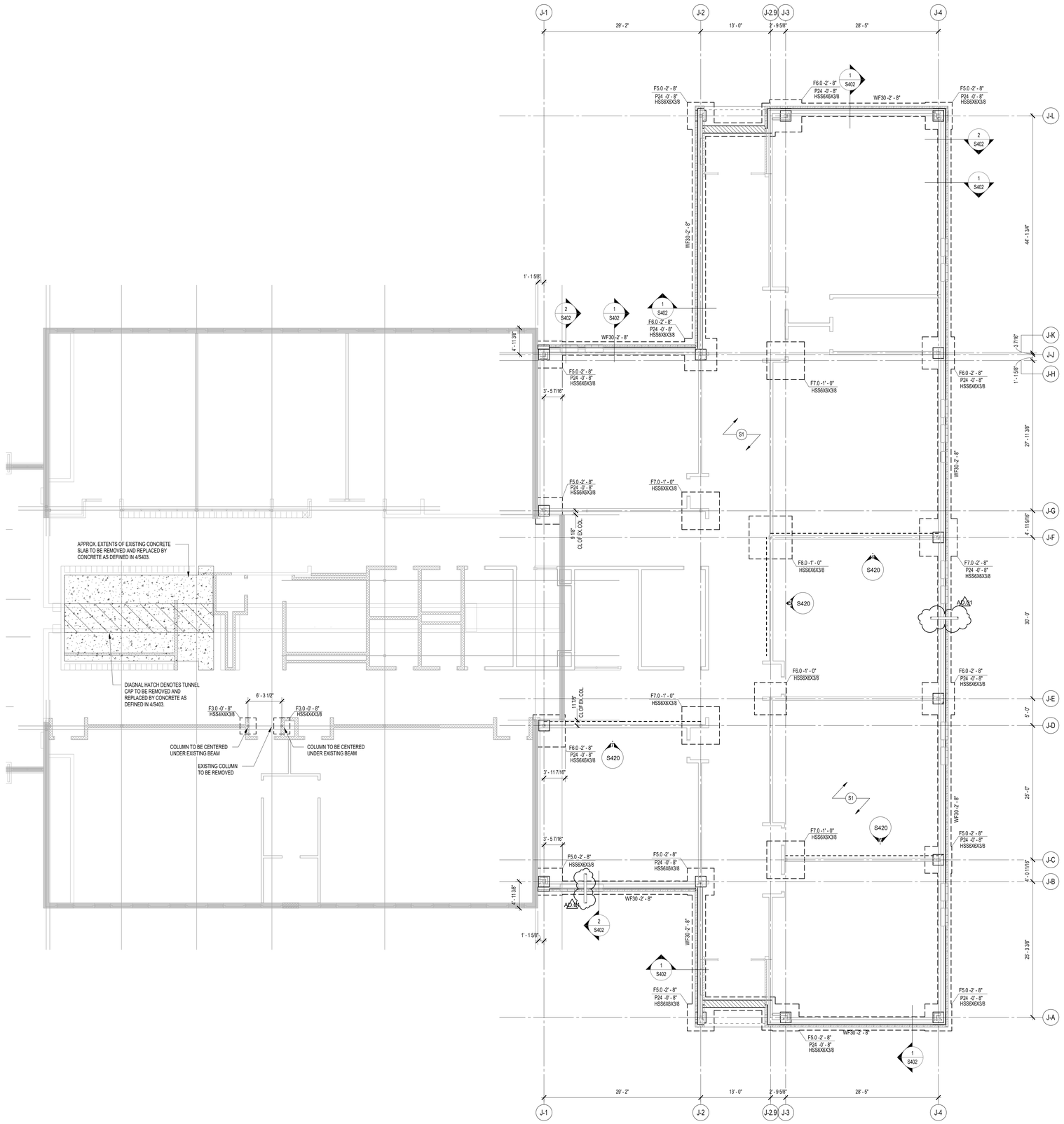
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
FOUNDATION PLAN - UNIT G

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
G
S105



1 FOUNDATION PLAN - UNIT J
1/8" = 1'-0"

CONCRETE PIER SCHEDULE

PIER MARK	PIER SIZE		PIER REINFORCING			
			VERTICALS	TIES-SIZE & SPA.[3]	DETAIL	CRITICAL HEIGHT
P24	2' - 0"	2' - 0"	(8) #6	#4 @ 12" O.C.	B	≤ 2' - 8"
			(4) #8	#4 @ 12" O.C.	A	> 2' - 8"
P24 x 44	2' - 0"	3' - 8"	(12) #7	#4 @ 12" O.C.	C	≤ 2' - 8"
			(8) #9	#4 @ 12" O.C.	E	> 2' - 8"

1. PROVIDE MIN. 1 ½" CLEAR TO PIER TIES.
2. "CRITICAL HEIGHT" DENOTES THE HEIGHT ABOVE WHICH LARGER DIAMETER VERTICALS WITH FEWER TIES MAY BE USED. REF. FOUNDATION PLAN(S) FOR TOP OF PIER & FOOTING ELEV'S.
3. REF. 'TYPICAL CONCRETE PIER REINFORCING' ON FOUNDATION DETAIL SHEET FOR FURTHER INFORMATION ON TIE SPACING.
4. VERTICAL DOWELS ARE TO FUNCTION AS PIER VERTICALS FOR PIERS LESS THAN OR EQUAL TO 5' - 0" HIGH. PROVIDE SEPARATE DOWELS & VERTICALS FOR PIERS GREATER THAN OR EQUAL TO 5' - 0" HIGH, UNLESS APPROVED.
5. CONTACT THE STRUCTURAL ENGINEER FOR DIRECTION IF COLUMN ANCHOR RODS FOUL WITH PIER TIES OR VERTICALS.
6. MIN. HEIGHT OF PIERS: #6 VERTICALS = 2' - 0", #7 VERTICALS = 2' - 8".

DETAIL "A"	DETAIL "B"	ALT. DETAIL "B"	DETAIL "C"	DETAIL "E"
(1) SET	(2) SETS	(3) SETS	(3) SETS	(2) SETS

WALL FOOTING SCHEDULE

FTG. MARK	FOOTING SIZE		FOOTING REINFORCING	
	WIDTH	DEPTH	LONGITUDINAL	TRANSVERSE
WF24	2'-0"	1'-0"	(2) #5 x CONTINUOUS	#4 x 1'-6" @ 96" O.C.
WF30	2'-6"	1'-2"	(3) #5 x CONTINUOUS	#4 x 2'-0" @ 96" O.C.
WF42	3'-6"	1'-2"	(4) #5 x CONTINUOUS	#5 x 3'-0" @ 12" O.C.

1. CENTER FOOTINGS BENEATH WALLS, U.N.O.

FOUNDATION PLAN NOTES

1. REF. S001 FOR STRUCTURAL NOTES, DESIGN DATA & SCHEDULES.
2. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
3. COORDINATE EXACT SIZE & LOCATION OF ALL MECHANICAL OPENINGS IN FOUNDATION WALLS WITH THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FINISH FLOOR ELEVATION 0'-0" (U.S.G.S. 646.0). REF. CIVIL DWGS.
5. REF. ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
6. REF. S400 & S401 FOR TYPICAL FOUNDATION DETAILS.
7. NOTE: PERIMETER WALL AND COLUMN FOOTINGS SHALL BE LOWERED AND/OR SLEEVED TO PASS BELOW PLUMBING LINES (I.E. SANITARY & STORM SEWERS, WATER LINES, ETC.) SHOWN ON THE PLUMBING DRAWINGS. PROVIDE FOOTING STEPS AS REQUIRED PER THE TYPICAL DETAILS ON S400.
8. ALL SLAB RECESSES SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS. COORDINATE DEPTHS OF ALL SLAB RECESSES WITH THE ARCHITECTURAL DRAWINGS AND/OR THE FLOORING SUPPLIER.
9. COORDINATE REINFORCING DOWELS FOR CMU VERTICAL REINFORCING WITH REINF. NOTED ON PLANS & SECTIONS.
10. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.
11. COLUMN FOOTINGS SUPPORTING MORE THAN ONE COLUMN SHALL BE CENTERED AT THE MIDPOINT BETWEEN THE COLUMNS, UNLESS NOTED OTHERWISE ON PLAN.
12. COLUMN FOOTINGS, TRENCH FOOTINGS AND WALL FOOTINGS SHALL BEAR ON APPROVED SOIL. UNDERCUT AS REQ'D TO SUITABLE BEARING MATERIAL AS DETERMINED BY THE GEOTECHNICAL TESTING AGENCY. REF. TYPICAL FOOTING UNDERCUT DETAILS S400. UNDERCUTTING TO SUITABLE BRG. MATERIAL IS NOT REQUIRED FOR GRADE BEAMS. REFERENCE ELEVATIONS IN PARENTHESES (-XX'-X") FOR APPROXIMATE ELEVATION TO SUITABLE BEARING STRATA TO BE USE FOR BIDDING PURPOSES.
13. PROVIDE CONTINUOUS 4" H. x W. VARIES CONCRETE CURB ON ACOUSTIC ISOLATION SLABS IN MECHANICAL ROOMS. CURBS TO SURROUND ALL PENETRATIONS THRU SLAB INCLUDING COLUMNS, PIPES, SUMP PITS, ETC.
14. ALL EX. CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFO. SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS IMMEDIATELY CONTACT ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.
15. PROVIDE THICKENED SLAB UNDER ALL INTERIOR CMU WALLS WITHOUT FOOTINGS. SEE DETAILS ON S401 FOR THICKENED SLAB DETAIL. LAYOUT THICKENED SLABS FROM DIMENSIONS ON THE ARCHITECT FLOOR PLANS.
16. PROVIDE CONTROL/CONTRACTION JOINTS IN SLABS ON GRADE (REF. THE TYPICAL DETAILS ON SHEET S400). ALL JOINTS IN SLABS TO RECEIVE THIN OR THICK-SET TERRAZZO, CERAMIC OR PORCELAIN TILE, VINYL-COMPOSITION TILE (VCT) OR VINYL SHEET GOODS, EPOXY OR SIMILAR THIN-FILM FINISH FLOORING SHALL BE CAREFULLY COORDINATED WITH THE FLOORING CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SLAB JOINT LAYOUT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACING SLABS.
17. WHERE PIERS OCCUR WITHIN A LARGER ARCH. PILASTER OR COLUMN ENCLOSURE (FOR EG. P24's WITHIN 40" SQUARE CANOPY PILASTERS) PROVIDE PIER REINF. CAGE CENTERED ON THE GRID INTERSECTION. FORM OVERALL PIER TO PROFILE OF THE ARCHITECTURAL PILASTER OR COLUMN ENCLOSURE. LAYOUT PILASTERS FROM DIMENSIONS ON THE ARCHITECTURAL PLANS & DETAILS.
18. FOR ARCHITECTURAL PILASTERS NOT SUPPORTING STEEL COLUMNS, CONSTRUCT AS FULLY-GROUTED MASONRY PIERS OR CAST-IN-PLACE CONCRETE PIERS REINF'D W/ #5 VERTICAL REINFORCING AT 12" O.C. ALL FACES, AT CONTRACTOR'S OPTION.
19. AT ALL LOCATIONS WHERE NEW FOOTINGS ARE TO BE INSTALLED IN EXISTING SPACES REMOVED EXISTING CONCRETE SLABS AND OR FOUNDATION WALLS / WALL FOOTINGS AS REQUIRED. NEW SLABS TO BE DOWELED TO EXISTING PER DETAIL 6/S401.
20. PLAN LEGEND:

F.F. — DENOTES FINISH FLOOR

T/'X' — DENOTES TOP OF FTG., GRADE BEAM, SLAB, PIER, ETC.

B/'X' — DENOTES BOTTOM OF FTG., GRADE BEAM, ETC.

C.J. — DENOTES SLAB ON GRADE CONTROL/CONTRACTION JOINT

WF30 -20'-0" — DENOTES WALL FOOTING MARK & TOP OF FOOTING ELEVATION (SEE WALL FOOTING SCHEDULE)

S1 — DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) & E5 INTERNAL CURE ADMIXTURE @ 4.0Z/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S2 — DENOTES NEW 6" CONC. SLAB w/ NEW CONC. SLAB w/ 6x6 W2.9xW2.9 W.W.F. & E5 INTERNAL CURE ADMIXTURE @ 4.0Z/CWT & E5 CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S3 — DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) OVER 15-MIL VAPOR BARRIER T/CONC. = MATCH EXISTING

SE — DENOTES EXISTING SLAB ON GRADE

DENOTES PIPE PENETRATION THROUGH FOUNDATION WALL. COORDINATE EXACT LOCATION & INVERT ELEVATION w/ APPROPRIATE TRADE. LOWER BOTTOM OF FOOTING & PROVIDE SLEEVE THROUGH FOUNDATION WALL PER TYPICAL DETAIL ON S400.

DENOTES WALL FOOTING WITH STEPS, REF. TYP. DETAIL ON S400

T/F -2'-0" / T/F -4'-0" — T/F -4'-0" / T/F -5'-4"

DENOTES COLUMN SIZE (REF. FRAMING PLANS FOR STUB COL'S NOT ON FDNS)

F5.0 -4'-8" / P24 -0'-8" / HSS6X6X3/8 — DENOTES COLUMN FOOTING MARK & TOP OF FTG. ELEVATION (SEE FTG. SCHED.); DENOTES PIER MARK & TOP OF PIER ELEVATION (SEE PIER SCHED.)

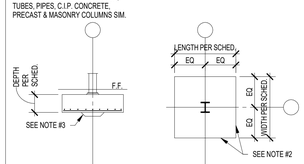
COLUMN FOOTING; CONCRETE PIER; STEEL COLUMN

COLUMN FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE WIDTH	LENGTH	DEPTH	REINFORCING (EACH WAY)
F3.0	3'-0"	3'-0"	1'-2"	(4) #5 x 2'-6"
F4.0	4'-0"	4'-0"	1'-2"	(4) #5 x 3'-6"
F5.0	5'-0"	5'-0"	1'-2"	(5) #5 x 4'-6"
F6.0	6'-0"	6'-0"	1'-2"	(6) #5 x 5'-6"
F7.0	7'-0"	7'-0"	1'-2"	(7) #5 x 6'-6"
F8.0	8'-0"	8'-0"	1'-2"	(7) #6 x 7'-6"
F12.0	12'-0"	12'-0"	1'-10"	(10) #7 x 11'-6"
F13.0	13'-0"	13'-0"	2'-0"	(12) #7 x 12'-6"

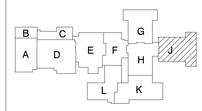
NOTES:
1. CENTER FOOTINGS BENEATH COLUMNS, U.N.O.
2. ALL FOOTINGS MUST BE BOARD-FORMED, UNLESS APPROVED.
3. INCREASE FOOTING DEPTH WHERE REQ'D TO ENCASE COLUMN ANCHOR RODS

NOTE: WF STEEL COLUMN SHOWN, TUBES, PIPES, C.I.P. CONCRETE, PRECAST & MASONRY COLUMNS SIM.



GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE — REGISTERED — PE10606154 — STATE OF INDIANA — PROFESSIONAL ENGINEER

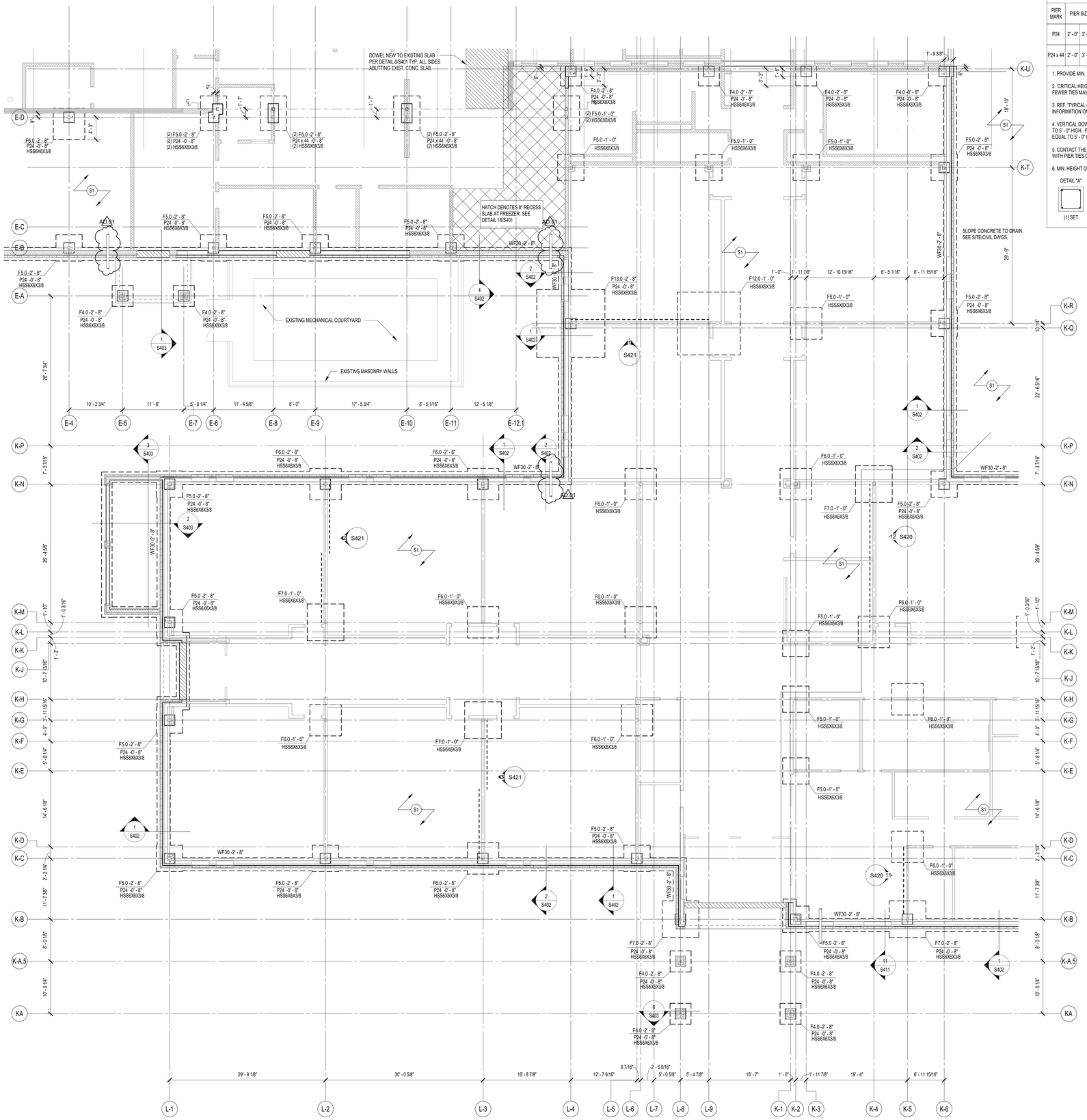
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
FOUNDATION PLAN - UNIT J

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
J
S107



1 FOUNDATION PLAN - UNIT L
1/8" = 1'-0"

CONCRETE PIER SCHEDULE

PIER MARK	PIER SIZE	PIER REINFORCING			
		VERTICALS	TIES-SIZE & SPA.[1]	DETAIL	CRITICAL HEIGHT
P24	2' - 0"	(6) #6	#4 @ 12" O.C.	B	≤ 2' - 8"
	2' - 0"	(4) #8	#4 @ 12" O.C.	A	> 2' - 8"
P24 x 44	2' - 0"	(12) #7	#4 @ 12" O.C.	C	≤ 2' - 8"
	3' - 8"	(8) #9	#4 @ 12" O.C.	E	> 2' - 8"

1. PROVIDE MIN. 1 ½" CLEAR TO PIER TIES.
2. 'CRITICAL HEIGHT' DENOTES THE HEIGHT ABOVE WHICH LARGER DIAMETER VERTICALS WITH FEWER TIES MAY BE USED. REF. FOUNDATION PLAN(S) FOR TOP OF PIER & FOOTING ELEV'S.
3. REF. 'TYPICAL CONCRETE PIER REINFORCING' ON FOUNDATION DETAIL SHEET FOR FURTHER INFORMATION ON TIE SPACING.
4. VERTICAL DOWELS ARE TO FUNCTION AS PIER VERTICALS FOR PIERS LESS THAN OR EQUAL TO 5' - 0" HIGH. PROVIDE SEPARATE DOWELS & VERTICALS FOR PIERS GREATER THAN OR EQUAL TO 5' - 0" HIGH, UNLESS APPROVED.
5. CONTACT THE STRUCTURAL ENGINEER FOR DIRECTION IF COLUMN ANCHOR RODS FOUL WITH PIER TIES OR VERTICALS.
6. MIN. HEIGHT OF PIERS: #6 VERTICALS = 2' - 0", #7 VERTICALS = 2' - 8".

DETAIL "A"	DETAIL "B"	ALT. DETAL "B"	DETAIL "C"	DETAIL "E"
(1) SET	(2) SETS	(3) SETS	(3) SETS	(2) SETS

WALL FOOTING SCHEDULE

FTG. MARK	FOOTING SIZE		FOOTING REINFORCING	
	WIDTH	DEPTH	LONG/TUDINAL	TRANSVERSE
WF24	2'-0"	1'-0"	(2) #5 x CONTINUOUS	#4 x 1'-6" @ 96" O.C.
WF30	2'-6"	1'-2"	(3) #5 x CONTINUOUS	#4 x 2'-0" @ 96" O.C.
WF42	3'-6"	1'-2"	(4) #5 x CONTINUOUS	#5 x 3'-0" @ 12" O.C.

1. CENTER FOOTINGS BENEATH WALLS, U.N.O.

FOUNDATION PLAN NOTES

1. REF. S001 FOR STRUCTURAL NOTES, DESIGN DATA & SCHEDULES.
2. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
3. COORDINATE EXACT SIZE & LOCATION OF ALL MECHANICAL OPENINGS IN FOUNDATION WALLS WITH THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FINISH FLOOR ELEVATION 0'-0" (U.S.G.S. 646.0). REF. CIVIL DWGS.
5. REF. ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
6. REF. S400 & S401 FOR TYPICAL FOUNDATION DETAILS.
7. NOTE: PERIMETER WALL AND COLUMN FOOTINGS SHALL BE LOWERED AND/OR SLEEVED TO PASS BELOW PLUMBING LINES (I.E. SANITARY & STORM SEWERS, WATER LINES, ETC.) SHOWN ON THE PLUMBING DRAWINGS. PROVIDE FOOTING STEPS AS REQUIRED PER THE TYPICAL DETAILS ON S400.
8. ALL SLAB RECESSES SHALL BE LOCATED PER THE ARCHITECTURAL DRAWINGS. COORDINATE DEPTHS OF ALL SLAB RECESSES WITH THE ARCHITECTURAL DRAWINGS AND/OR THE FLOORING SUPPLIER.
9. COORDINATE REINFORCING DOWELS FOR CMU VERTICAL REINFORCING WITH REINF. NOTED ON PLANS & SECTIONS.
10. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.
11. COLUMN FOOTINGS SUPPORTING MORE THAN ONE COLUMN SHALL BE CENTERED AT THE MIDPOINT BETWEEN THE COLUMNS, UNLESS NOTED OTHERWISE ON PLAN.
12. COLUMN FOOTINGS, TRENCH FOOTINGS AND WALL FOOTINGS SHALL BEAR ON APPROVED SOIL. UNDERCUT AS REQ'D TO SUITABLE BEARING MATERIAL AS DETERMINED BY THE GEOTECHNICAL TESTING AGENCY. REF. TYPICAL FOOTING UNDERCUT DETAILS S400. UNDERCUTTING TO SUITABLE BRG. MATERIAL IS NOT REQUIRED FOR GRADE BEAMS. REFERENCE ELEVATIONS IN PARENTHESES (-XX'-X") FOR APPROXIMATE ELEVATION TO SUITABLE BEARING STRATA TO BE USE FOR BIDDING PURPOSES.
13. PROVIDE CONTINUOUS 4" H. x W. VARIES CONCRETE CURB ON ACOUSTIC ISOLATION SLABS IN MECHANICAL ROOMS. CURBS TO SURROUND ALL PENETRATIONS THRU SLAB INCLUDING COLUMNS, PIPES, SUMP PITS, ETC.
14. ALL EX. CONSTRUCTION SHOWN IN PLAN AND/OR SECTION WAS DERIVED FROM EXISTING DRAWINGS AND MUST BE FIELD VERIFIED. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN INFO. SHOWN ON THE DRAWINGS AND ACTUAL CONDITIONS IMMEDIATELY CONTACT ARCHITECT/ENGINEER FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.
15. PROVIDE THICKENED SLAB UNDER ALL INTERIOR CMU WALLS WITHOUT FOOTINGS. SEE DETAILS ON S401 FOR THICKENED SLAB DETAIL. LAYOUT THICKENED SLABS FROM DIMENSIONS ON THE ARCHITECT FLOOR PLANS.
16. PROVIDE CONTROL/CONTRACTION JOINTS IN SLABS ON GRADE (REF. THE TYPICAL DETAILS ON SHEET S400). ALL JOINTS IN SLABS TO RECEIVE THIN OR THICK-SET TERRAZZO, CERAMIC OR PORCELAIN TILE, VINYL-COMPOSITION TILE (VCT) OR VINYL SHEET GOODS, EPOXY OR SIMILAR THIN-FILM FINISH FLOORING SHALL BE CAREFULLY COORDINATED WITH THE FLOORING CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SLAB JOINT LAYOUT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACING SLABS.
17. WHERE PIERS OCCUR WITHIN A LARGER ARCH. PILASTER OR COLUMN ENCLOSURE (FOR EG. P24's WITHIN 40" SQUARE CANOPY PILASTERS) PROVIDE PIER REINF. CAGE CENTERED ON THE GRID INTERSECTION. FORM OVERALL PIER TO PROFILE OF THE ARCHITECTURAL PILASTER OR COLUMN ENCLOSURE. LAYOUT PILASTERS FROM DIMENSIONS ON THE ARCHITECTURAL PLANS & DETAILS.
18. FOR ARCHITECTURAL PILASTERS NOT SUPPORTING STEEL COLUMNS, CONSTRUCT AS FULLY-GROUTED MASONRY PIERS OR CAST-IN-PLACE CONCRETE PIERS REINF'D W/ #5 VERTICAL REINFORCING AT 12" O.C. ALL FACES, AT CONTRACTOR'S OPTION.
19. AT ALL LOCATIONS WHERE NEW FOOTINGS ARE TO BE INSTALLED IN EXISTING SPACES REMOVED EXISTING CONCRETE SLABS AND OR FOUNDATION WALLS / WALL FOOTINGS AS REQUIRED. NEW SLABS TO BE DOWELED TO EXISTING PER DETAIL 6/S401.
20. PLAN LEGEND:

F.F. DENOTES FINISH FLOOR

T/'X' DENOTES TOP OF FTG., GRADE BEAM, SLAB, PIER, ETC.

B/'X' DENOTES BOTTOM OF FTG., GRADE BEAM, ETC.

C.J. DENOTES SLAB ON GRADE CONTROL/CONTRACTION JOINT

WF30 -20'-0" DENOTES WALL FOOTING MARK & TOP OF FOOTING ELEVATION (SEE WALL FOOTING SCHEDULE)

S1 DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) & ES INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & ES CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

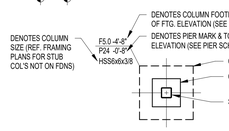
S2 DENOTES NEW 6" CONC. SLAB w/ NEW CONC. SLAB w/ 6x6 W2.9xW2.9 W.W.F. & ES INTERNAL CURE ADMIXTURE @ 4 OZ/CWT & ES CATALYST SPRAYED ON BETWEEN 800-1,000 SF/GAL OVER 15-MIL VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL (NO. 53 STONE OR APPROVED EQUIVALENT). T/CONC. = 0'-0" U.N.O.

S3 DENOTES NEW 4" CONC. SLAB w/ "FIBERFORCE 300" FIBERS @ 1.5 LB/C.Y. (OR EQUAL) OVER 15-MIL VAPOR BARRIER T/CONC. = MATCH EXISTING

SE DENOTES EXISTING SLAB ON GRADE

DENOTES PIPE PENETRATION THROUGH FOUNDATION WALL. COORDINATE EXACT LOCATION & INVERT ELEVATION w/ APPROPRIATE TRADE. LOWER BOTTOM OF FOOTING & PROVIDE SLEEVE THROUGH FOUNDATION WALL PER TYPICAL DETAIL ON S400.

DENOTES WALL FOOTING WITH STEPS, REF. TYP. DETAIL ON S400



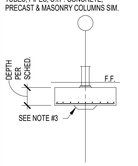
COLUMN FOOTING SCHEDULE

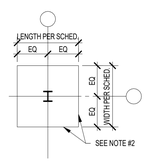
FOOTING MARK	FOOTING SIZE			REINFORCING (EACH WAY)
	WIDTH	x LENGTH	x DEPTH	
F3.0	3'-0"	3'-0"	1'-2"	(4) #5 x 2'-6"
F4.0	4'-0"	4'-0"	1'-2"	(4) #5 x 3'-6"
F5.0	5'-0"	5'-0"	1'-2"	(5) #5 x 4'-6"
F6.0	6'-0"	6'-0"	1'-2"	(6) #5 x 5'-6"
F7.0	7'-0"	7'-0"	1'-2"	(7) #5 x 6'-6"
F8.0	8'-0"	8'-0"	1'-2"	(7) #6 x 7'-6"
F12.0	12'-0"	12'-0"	1'-10"	(10) #7 x 11'-6"
F13.0	13'-0"	13'-0"	2'-0"	(12) #7 x 12'-6"

NOTES:

1. CENTER FOOTINGS BENEATH COLUMNS, U.N.O.
2. ALL FOOTINGS MUST BE BOARD-FORMED, UNLESS APPROVED.
3. INCREASE FOOTING DEPTH WHERE REQ'D TO ENCASE COLUMN ANCHOR RODS

NOTE: WF STEEL COLUMN SHOWN, TUBES, PIPES, C.I.P. CONCRETE, PRECAST & MASONRY COLUMNS SIM.





GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
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Phone 317.580.5777 Fax 317.580.5778

PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

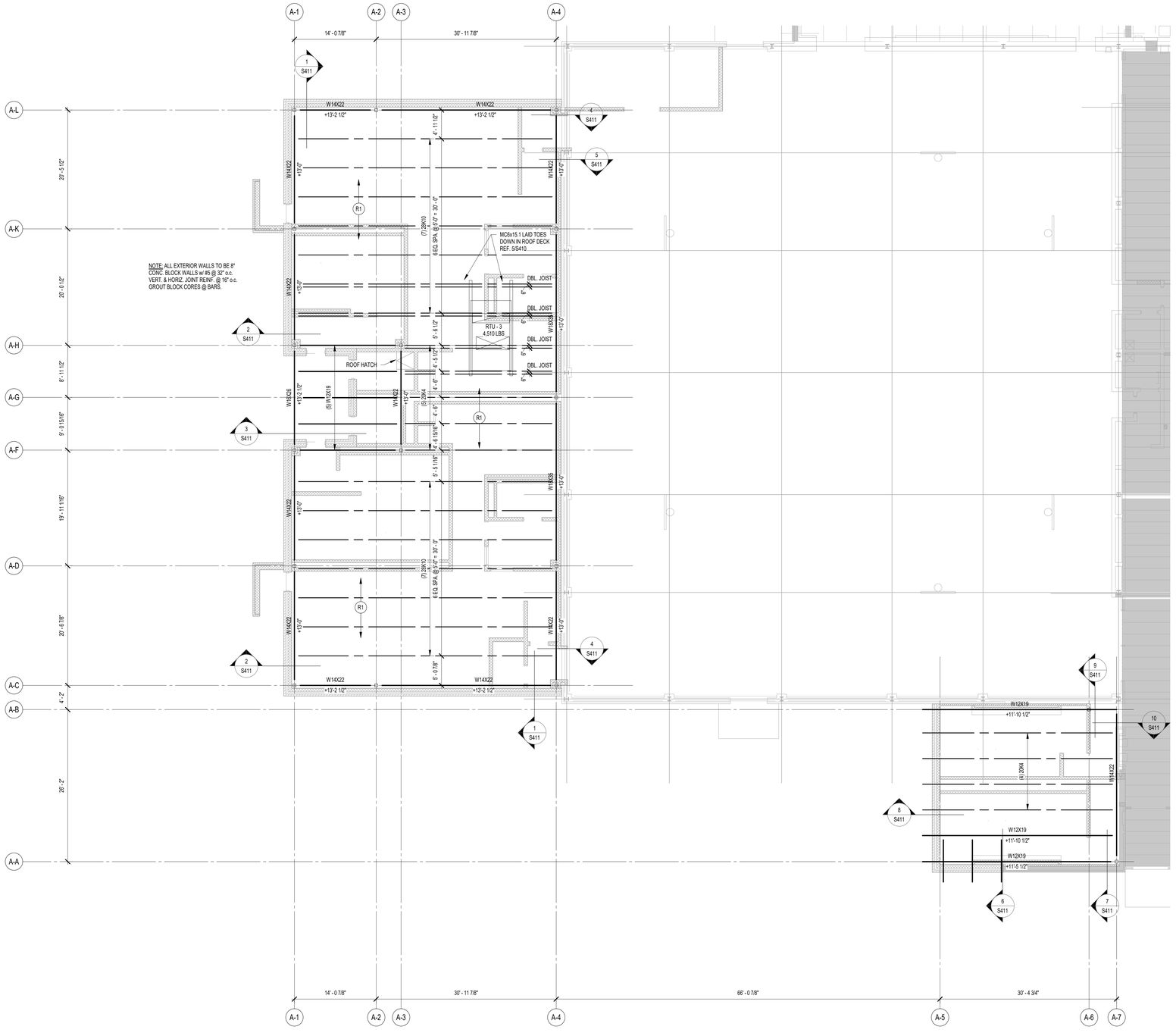
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
FOUNDATION PLAN - UNIT L

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
L
S109



1 ROOF FRAMING PLAN - UNIT A
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
2. REF. THE S410 & S430 SERIES FOR TYPICAL FRAMING AND MASONRY DETAILS.
3. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FIN. FLOOR ELEVATION =0'-0". COORD. USGS ELEVATION WITH CIVIL DWGS.
5. SEE FOUNDATION PLANS FOR SIZES OF STEEL COLUMNS SUPPORTED ON FOUNDATIONS.
6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
7. ALL WALLS SHALL BE LAID OUT FROM THE ARCHITECTURAL DRAWINGS.
8. REF. ARCH. DRAWINGS. FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
9. COORDINATE EXACT SIZE & LOCATION OF ANY MECHANICAL OPENINGS IN FLOOR SLAB, ROOF DECK, OR WALLS WITH THE MEP CONTRACTOR(S). LOCATION & SIZE OF ALL DUCT OPENINGS, GRILLES, ETC. SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
10. ALL ELEVATIONS SHOWN ON PLAN INDICATE TOP OF STEEL BEAM UNLESS NOTED OTHERWISE.
11. PROVIDE FRAMES AT ALL ROOF DRAINS, ROOF HATCHES & OTHER ROOF OPENINGS PER TYPICAL DETAILS ON S410. COORD. EXACT NUMBER, LOCATIONS & DIMENSIONS WITH THE APPROPRIATE CONTRACTORS & THE ARCH. & MEP DWGS.
12. PROVIDE CMU REINFORCING AS NOTED ON PLANS. IF NOT SHOWN ON PLANS OR DETAILS, MINIMUM CMU WALL REINFORCING TO BE #5 VERTS @ 48" O.C. PROVIDE OPEN-CORE BOND BEAMS AT TOPS OF WALLS, AT CHANGES IN CMU THICKNESS, AND WHERE INDICATED ON PLANS & SECTIONS (10'-0" O.C. MAX VERTICAL SPACING). PROVIDE 1/2 OF INTERRUPTED VERTICALS AT JAMBS OF OPENINGS AND PROVIDE ADDITIONAL VERT'S. AT ENDS OF WALLS.
13. ALL MASONRY BOND BEAMS, OTHER THAN BOND BEAM LINTELS OVER OPENINGS, SHALL BE "OPEN-CORE" BOND BEAMS TO ALLOW VERTICAL REINFORCING TO PASS THROUGH, UNLESS NOTED OTHERWISE.
14. REF. ARCH. DWGS. FOR MASONRY CONTROL & EXPANSION JOINT LOCATIONS.
15. ALL HORIZONTAL AND DIAGONAL BRIDGING FOR STEEL JOISTS SHALL BE DESIGNED, LOCATED & PROVIDED BY THE JOIST SUPPLIER PER SJI SPECIFICATIONS.
16. FOR ESTIMATING AND BIDDING PURPOSES ONLY, ASSUME AN ADDITIONAL 1/2" THICKNESS OF CONCRETE WILL BE NECESSARY FOR ALL ELEVATED SLABS ON METAL DECK. THE INTENT OF THIS REQUIREMENT IS TO ACCOUNT FOR ANTICIPATED DEAD LOAD DEFLECTIONS IN THE SUPPORTING STRUCTURE. THE FINISHED SLAB SHALL MEET THE FLATNESS REQUIREMENTS DEFINED IN THE SPECIFICATION.
17. ALL EXISTING FRAMING (JOIST SUPPORT BY LOAD-BEARING WALLS, CMU ABOVE NEW OPENINGS, ETC.) IS TO BE SHORED DURING DEMOLITION OF EXISTING CONSTRUCTION AND INSTALLATION OF ALL NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING DESIGN AND IMPLEMENTATION.
18. PLAN LEGEND:

A2/ S411

F.F. DENOTES FIN. FLOOR

T/'X' DENOTES TOP OF STEEL, SLAB, ETC.

B/'X' DENOTES BOTTOM OF LINTEL, ETC.

R1 DENOTES 1½", 20 GA. GALV. & PRIME-PAINTED WIDE RIB STEEL ROOF DECK. REF. DETAIL 2/S404.

DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S405.

DENOTES BEAM-THRU-BEAM MOMENT CONNECTION. REF. DETAILS ON S404.

DENOTES BRACED FRAME OR KICKER LOCATION

DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

18. WIDE-FLANGE BEAM & GIRDER NOTATION:

BEAM REACTIONS SHOWN IN KIPS TO BE USED FOR DESIGN OF SHEAR CONNECTION BY STEEL FABRICATOR'S SSE (ALLOWABLE STRESS DESIGN / LOADS UNFACTORED).

REF. THE STEEL CONNECTION NOTES ON S001 FOR DESIGN OF CONNECTIONS AT BEAMS & GIRDERS WITH NO REACTION SHOWN. THE MIN. SHEAR CONNECTION DESIGN LOAD SHALL BE 15 KIPS.

W16x31

STEEL BEAM SIZE

GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

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PROJECT
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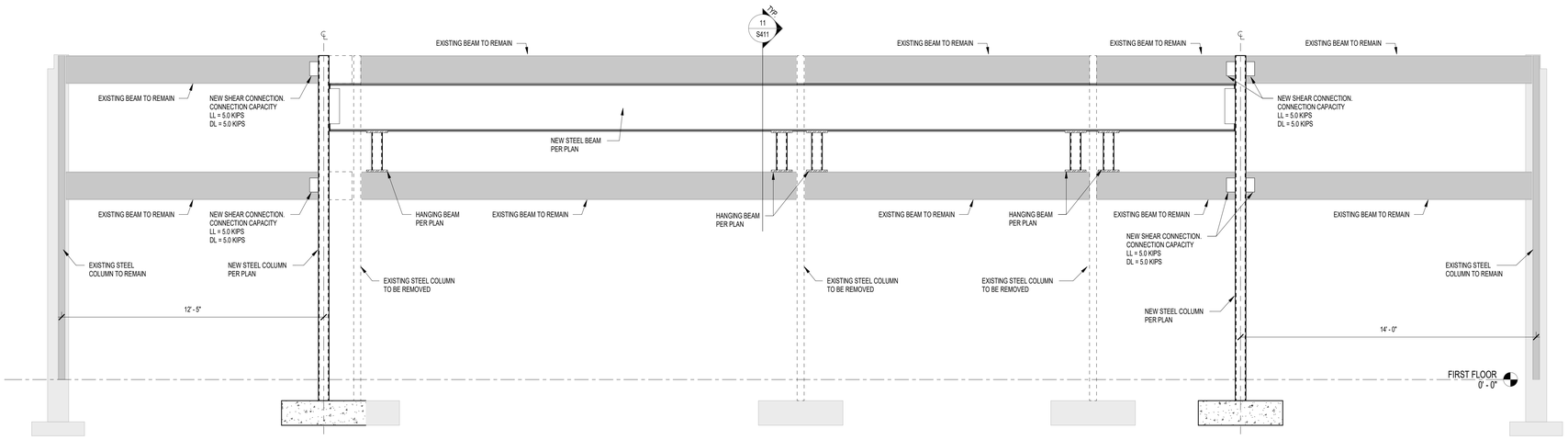
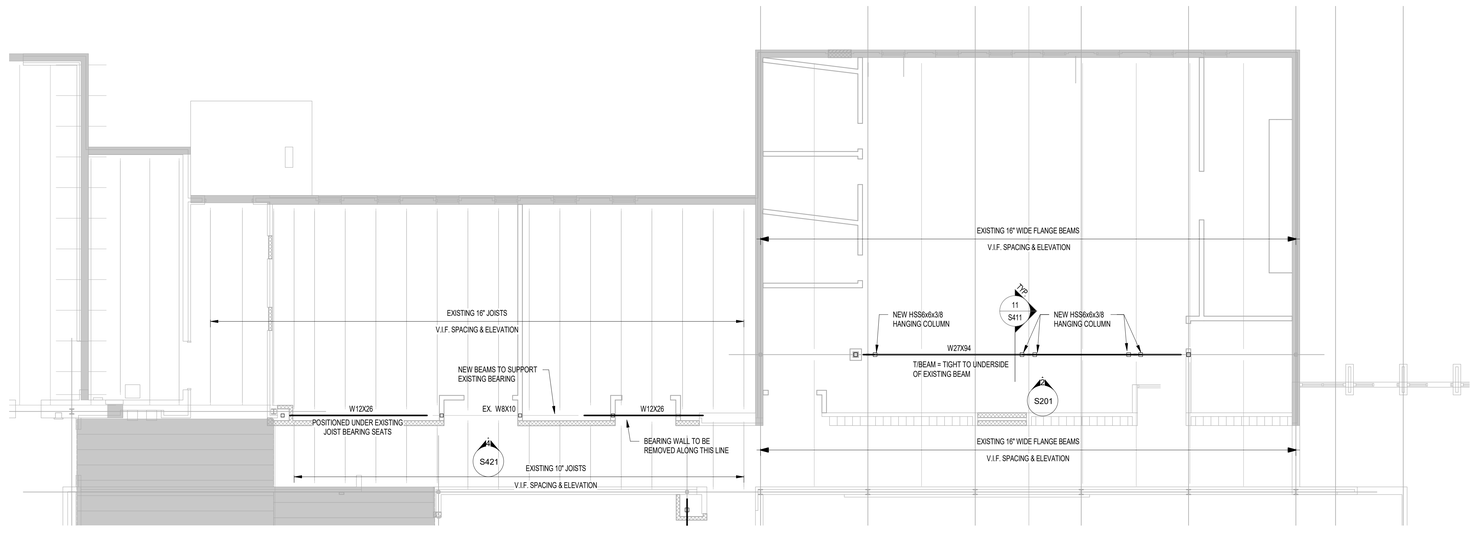
DRAWING
ROOF FRAMING PLAN - UNIT A

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
A
S200



2 FRAMING ELEVATION
3/8" = 1'-0"



1 ROOF FRAMING PLAN - UNIT C
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
2. REF. THE S410 & S430 SERIES FOR TYPICAL FRAMING AND MASONRY DETAILS.
3. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FIN. FLOOR ELEVATION =0'-0". COORD. USGS ELEVATION WITH CIVIL DWGS.
5. SEE FOUNDATION PLANS FOR SIZES OF STEEL COLUMNS SUPPORTED ON FOUNDATIONS.
6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
7. ALL WALLS SHALL BE LAID OUT FROM THE ARCHITECTURAL DRAWINGS.
8. REF. ARCH. DRAWINGS. FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
9. COORDINATE EXACT SIZE & LOCATION OF ANY MECHANICAL OPENINGS IN FLOOR SLAB, ROOF DECK, OR WALLS WITH THE MEP CONTRACTOR(S). LOCATION & SIZE OF ALL DUCT OPENINGS, GRILLES, ETC. SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
10. ALL ELEVATIONS SHOWN ON PLAN INDICATE TOP OF STEEL BEAM UNLESS NOTED OTHERWISE.
11. PROVIDE FRAMES AT ALL ROOF DRAINS, ROOF HATCHES & OTHER ROOF OPENINGS PER TYPICAL DETAILS ON S410. COORD. EXACT NUMBER, LOCATIONS & DIMENSIONS WITH THE APPROPRIATE CONTRACTORS & THE ARCH. & MEP DWGS.
12. PROVIDE CMU REINFORCING AS NOTED ON PLANS. IF NOT SHOWN ON PLANS OR DETAILS, MINIMUM CMU WALL REINFORCING TO BE #5 VERTS @ 48" O.C. PROVIDE OPEN-CORE BOND BEAMS AT TOPS OF WALLS, AT CHANGES IN CMU THICKNESS, AND WHERE INDICATED ON PLANS & SECTIONS (10'-0" O.C. MAX VERTICAL SPACING). PROVIDE 1/2 OF INTERRUPTED VERTICALS AT JAMBS OF OPENINGS AND PROVIDE ADDITIONAL VERT'S. AT ENDS OF WALLS.
13. ALL MASONRY BOND BEAMS, OTHER THAN BOND BEAM LINTELS OVER OPENINGS, SHALL BE "OPEN-CORE" BOND BEAMS TO ALLOW VERTICAL REINFORCING TO PASS THROUGH, UNLESS NOTED OTHERWISE.
14. REF. ARCH. DWGS. FOR MASONRY CONTROL & EXPANSION JOINT LOCATIONS.
15. ALL HORIZONTAL AND DIAGONAL BRIDGING FOR STEEL JOISTS SHALL BE DESIGNED, LOCATED & PROVIDED BY THE JOIST SUPPLIER PER SJI SPECIFICATIONS.
16. FOR ESTIMATING AND BIDDING PURPOSES ONLY, ASSUME AN ADDITIONAL 1/2" THICKNESS OF CONCRETE WILL BE NECESSARY FOR ALL ELEVATED SLABS ON METAL DECK. THE INTENT OF THIS REQUIREMENT IS TO ACCOUNT FOR ANTICIPATED DEAD LOAD DEFLECTIONS IN THE SUPPORTING STRUCTURE. THE FINISHED SLAB SHALL MEET THE FLATNESS REQUIREMENTS DEFINED IN THE SPECIFICATION.
17. ALL EXISTING FRAMING (JOIST SUPPORTED BY LOAD-BEARING WALLS, CMU ABOVE NEW OPENINGS, ETC.) IS TO BE SHORED DURING DEMOLITION OF EXISTING CONSTRUCTION AND INSTALLATION OF ALL NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING DESIGN AND IMPLEMENTATION.
18. PLAN LEGEND:

AD-0.1

F.F. DENOTES FIN. FLOOR

T/'X' DENOTES TOP OF STEEL, SLAB, ETC.

B/'X' DENOTES BOTTOM OF LINTEL, ETC.

R1 DENOTES 1½", 20 GA. GALV. & PRIME-PAINTED WIDE RIB STEEL ROOF DECK. REF. DETAIL 2/S404.

DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S405.

DENOTES BEAM-THRU-BEAM MOMENT CONNECTION. REF. DETAILS ON S404.

DENOTES BRACED FRAME OR KICKER LOCATION

DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

18. WIDE-FLANGE BEAM & GIRDER NOTATION:

BEAM REACTIONS SHOWN IN KIPS TO BE USED FOR DESIGN OF SHEAR CONNECTION BY STEEL FABRICATOR'S SSE (ALLOWABLE STRESS DESIGN / LOADS UNFACTORED).

REF. THE STEEL CONNECTION NOTES ON S001 FOR DESIGN OF CONNECTIONS AT BEAMS & GIRDERS WITH NO REACTION SHOWN. THE MIN. SHEAR CONNECTION DESIGN LOAD SHALL BE 15 KIPS.

W16x31

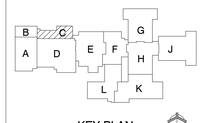
STEEL BEAM SIZE

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

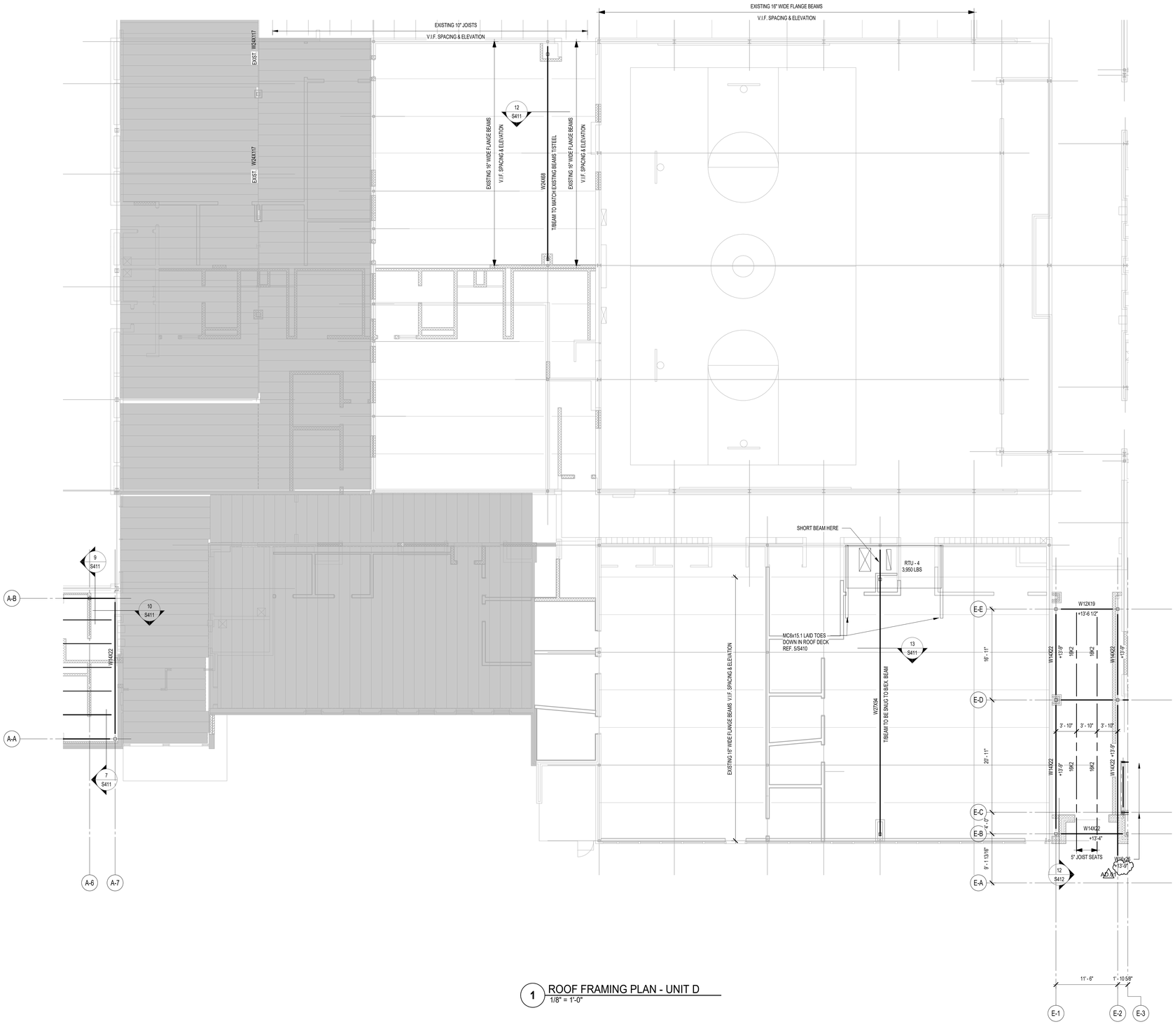
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT C

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
C
S201



1 ROOF FRAMING PLAN - UNIT D
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
2. REF. THE S410 & S430 SERIES FOR TYPICAL FRAMING AND MASONRY DETAILS.
3. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FIN. FLOOR ELEVATION +0'-0". COORD. USGS ELEVATION WITH CIVIL DWGS.
5. SEE FOUNDATION PLANS FOR SIZES OF STEEL COLUMNS SUPPORTED ON FOUNDATIONS.
6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
7. ALL WALLS SHALL BE LAID OUT FROM THE ARCHITECTURAL DRAWINGS.
8. REF. ARCH. DRAWINGS. FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
9. COORDINATE EXACT SIZE & LOCATION OF ANY MECHANICAL OPENINGS IN FLOOR SLAB, ROOF DECK, OR WALLS WITH THE MEP CONTRACTOR(S). LOCATION & SIZE OF ALL DUCT OPENINGS, GRILLES, ETC. SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
10. ALL ELEVATIONS SHOWN ON PLAN INDICATE TOP OF STEEL BEAM UNLESS NOTED OTHERWISE.
11. PROVIDE FRAMES AT ALL ROOF DRAINS, ROOF HATCHES & OTHER ROOF OPENINGS PER TYPICAL DETAILS ON S410. COORD. EXACT NUMBER, LOCATIONS & DIMENSIONS WITH THE APPROPRIATE CONTRACTORS & THE ARCH. & MEP DWGS.
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18. PLAN LEGEND

AD-S1/1

F.F. DENOTES FIN. FLOOR

T/'X' DENOTES TOP OF STEEL, SLAB, ETC.

B/'X' DENOTES BOTTOM OF LINTEL, ETC.

R1 DENOTES 1½", 20 GA. GALV. & PRIME-PAINTED WIDE RIB STEEL ROOF DECK. REF. DETAIL 2/S404.

DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S405.

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DENOTES BRACED FRAME OR KICKER LOCATION

DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

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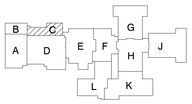
GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

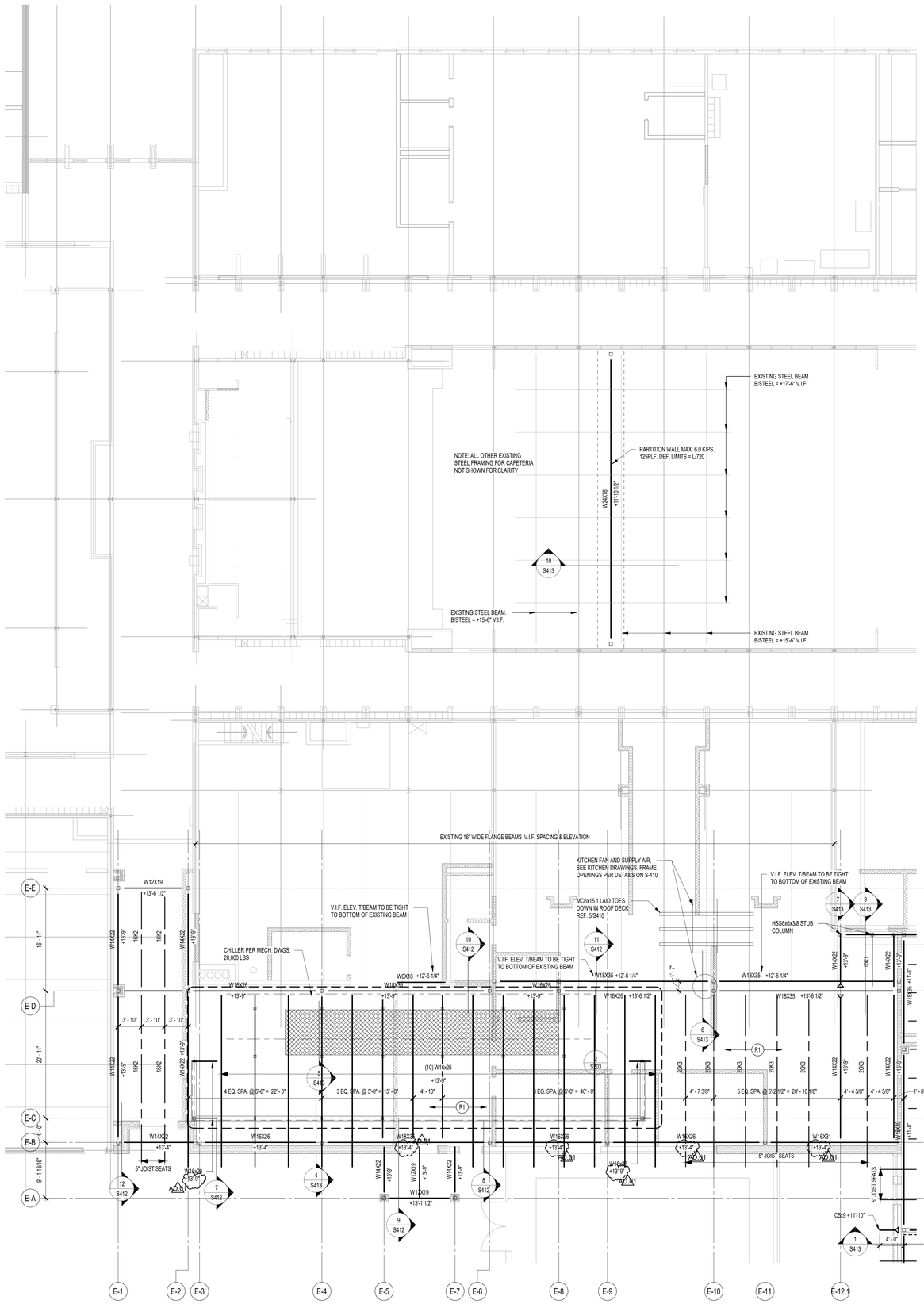
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT D

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
D
S202



1 ROOF FRAMING PLAN - UNIT E
1/8" = 1'-0"

2 RTU PLATFORM FRAMING
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
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4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FIN. FLOOR ELEVATION +0'-0". COORD. USGS ELEVATION WITH CIVIL DWGS.
5. SEE FOUNDATION PLANS FOR SIZES OF STEEL COLUMNS SUPPORTED ON FOUNDATIONS.
6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHEMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
7. ALL WALLS SHALL BE LAID OUT FROM THE ARCHITECTURAL DRAWINGS.
8. REF. ARCH. DRAWINGS. FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
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10. ALL ELEVATIONS SHOWN ON PLAN INDICATE TOP OF STEEL BEAM UNLESS NOTED OTHERWISE.
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12. PROVIDE CMU REINFORCING AS NOTED ON PLANS. IF NOT SHOWN ON PLANS OR DETAILS, MINIMUM CMU WALL REINFORCING TO BE #5 VERTS @ 48" O.C. PROVIDE OPEN-CORE BOND BEAMS AT TOPS OF WALLS, AT CHANGES IN CMU THICKNESS, AND WHERE INDICATED ON PLANS & SECTIONS (10'-0" O.C. MAX VERTICAL SPACING). PROVIDE 1/2 OF INTERRUPTED VERTICALS AT JAMBS OF OPENINGS AND PROVIDE ADDITIONAL VERT'S. AT ENDS OF WALLS.
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AD.01

17. ALL EXISTING FRAMING (JOIST SUPPORTED BY LOAD BEARING WALLS, CMU ABOVE NEW OPENINGS, ETC.) IS TO BE SHORED DURING DEMOLITION OF EXISTING CONSTRUCTION AND INSTALLATION OF ALL NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING DESIGN AND IMPLEMENTATION.
18. PLAN LEGEND:

F.F.	DENOTES FIN. FLOOR
T/'X'	DENOTES TOP OF STEEL, SLAB, ETC.
B/'X'	DENOTES BOTTOM OF LINTEL, ETC.
←(R1)→	DENOTES 1½", 20 GA. GALV. & PRIME-PAINTED WIDE RIB STEEL ROOF DECK. REF. DETAIL 2/S404.
▷──	DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S405.
●──	DENOTES BEAM-THRU-BEAM MOMENT CONNECTION. REF. DETAILS ON S404.
— — — —	DENOTES BRACED FRAME OR KICKER LOCATION
☒ ⊗⊗⊗⊗	DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

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REF. THE STEEL CONNECTION NOTES ON S001 FOR DESIGN OF CONNECTIONS AT BEAMS & GIRDERS WITH NO REACTION SHOWN. THE MIN. SHEAR CONNECTION DESIGN LOAD SHALL BE 15 KIPS.

GIBRALTAR
DESIGN
ARCHITECTURE · ENGINEERING · INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE
PE10606154

REVISIONS

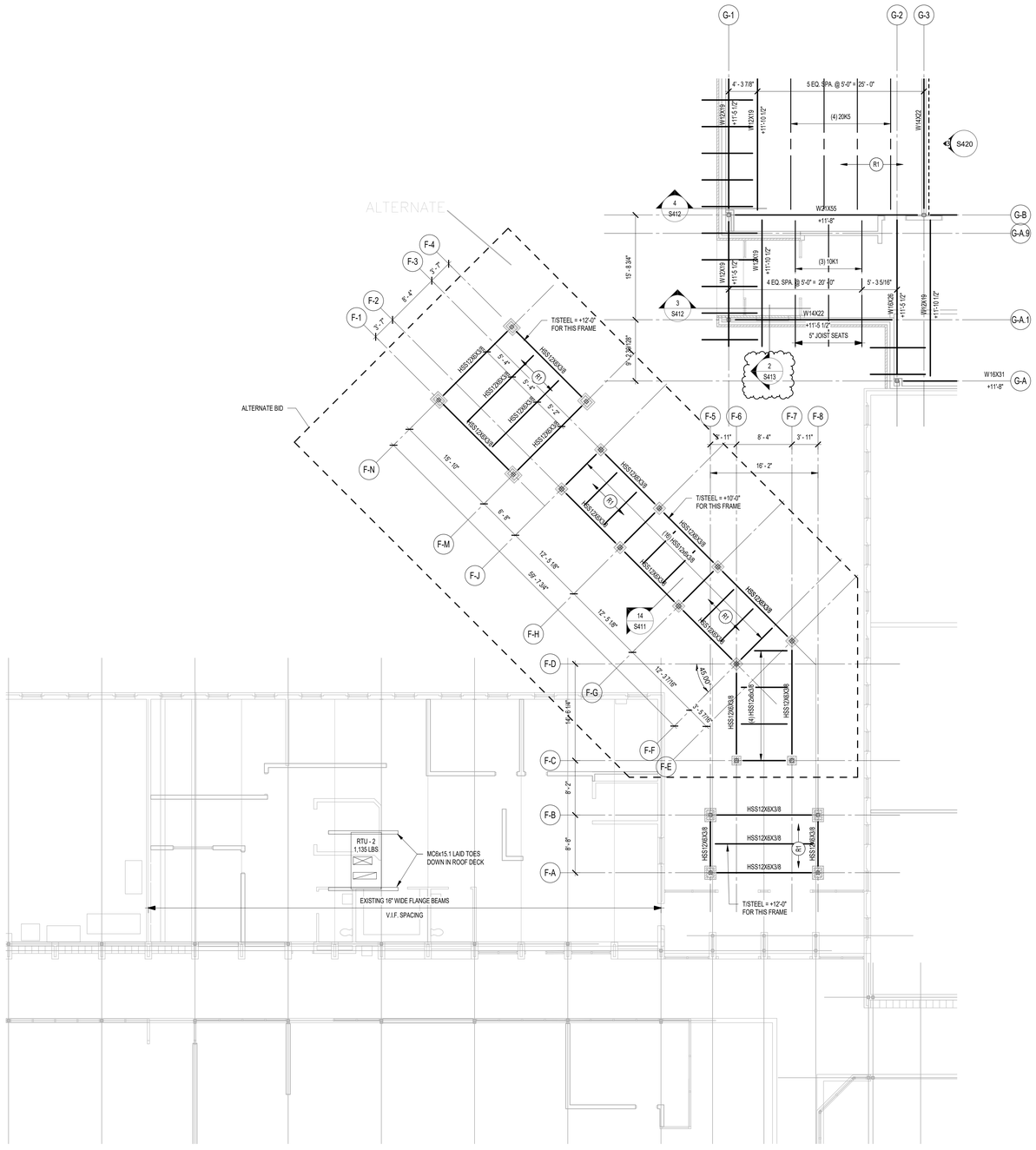
MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT E

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

E

SHEET
S203



1 ROOF FRAMING PLAN - UNIT F
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
2. REF. THE S410 & S430 SERIES FOR TYPICAL FRAMING AND MASONRY DETAILS.
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18. PLAN LEGEND:

AD-S1.1

F.F. DENOTES FIN. FLOOR

T/'X' DENOTES TOP OF STEEL, SLAB, ETC.

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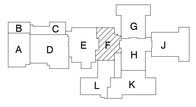
GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
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Phone 317.580.5777 Fax 317.580.5778

PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

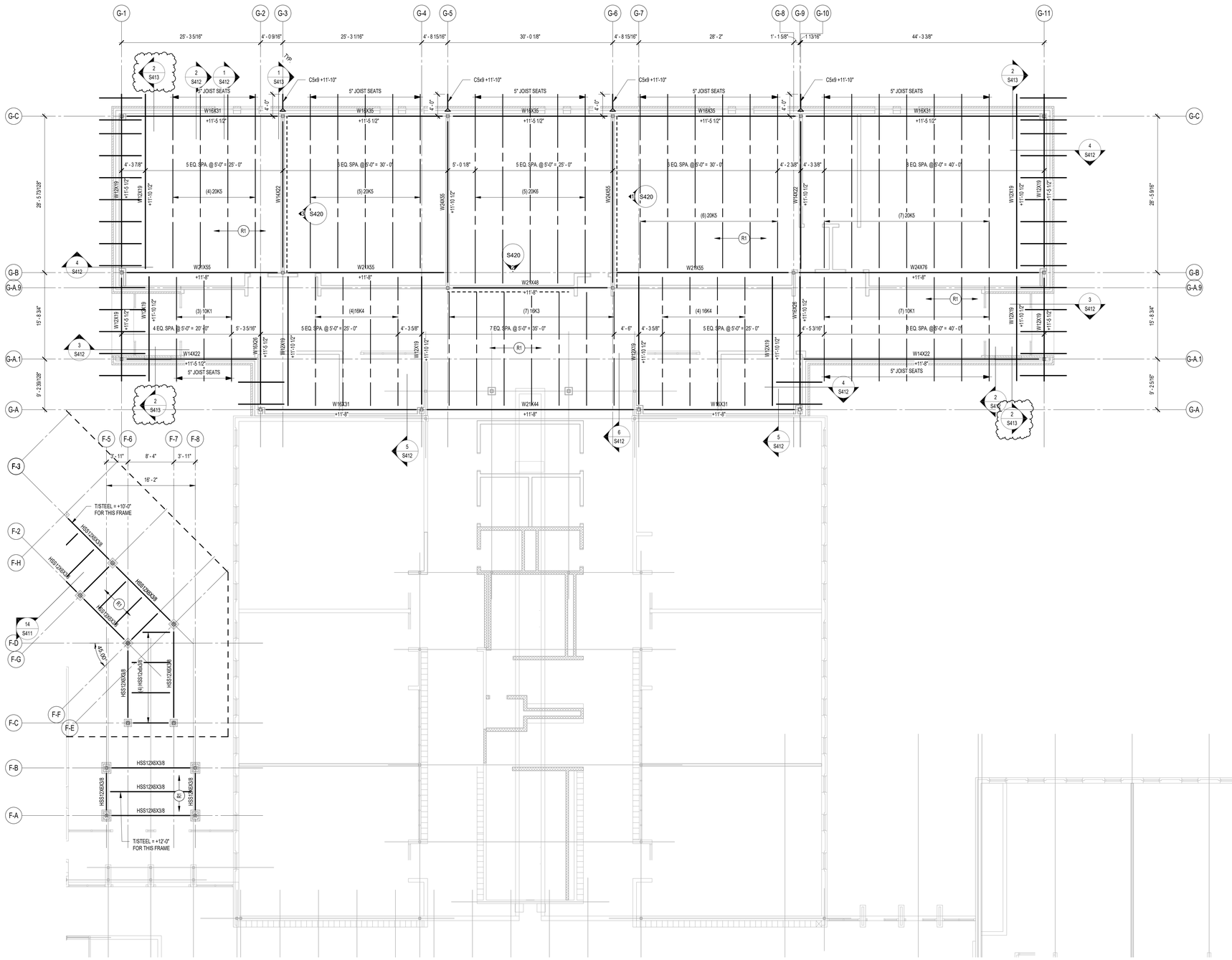
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT F

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
F
S204



1 ROOF FRAMING PLAN - UNIT G
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
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6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
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10. ALL ELEVATIONS SHOWN ON PLAN INDICATE TOP OF STEEL BEAM UNLESS NOTED OTHERWISE.
11. PROVIDE FRAMES AT ALL ROOF DRAINS, ROOF HATCHES & OTHER ROOF OPENINGS PER TYPICAL DETAILS ON S410. COORD. EXACT NUMBER, LOCATIONS & DIMENSIONS WITH THE APPROPRIATE CONTRACTORS & THE ARCH. & MEP DWGS.
12. PROVIDE CMU REINFORCING AS NOTED ON PLANS. IF NOT SHOWN ON PLANS OR DETAILS, MINIMUM CMU WALL REINFORCING TO BE #5 VERTS @ 48" O.C. PROVIDE OPEN-CORE BOND BEAMS AT TOPS OF WALLS, AT CHANGES IN CMU THICKNESS, AND WHERE INDICATED ON PLANS & SECTIONS (10'-0" O.C. MAX VERTICAL SPACING). PROVIDE 1/2 OF INTERRUPTED VERTICALS AT JAMBS OF OPENINGS AND PROVIDE ADDITIONAL VERT'S. AT ENDS OF WALLS.
13. ALL MASONRY BOND BEAMS, OTHER THAN BOND BEAM LINTELS OVER OPENINGS, SHALL BE "OPEN-CORE" BOND BEAMS TO ALLOW VERTICAL REINFORCING TO PASS THROUGH, UNLESS NOTED OTHERWISE.
14. REF. ARCH. DWGS. FOR MASONRY CONTROL & EXPANSION JOINT LOCATIONS.
15. ALL HORIZONTAL AND DIAGONAL BRIDGING FOR STEEL JOISTS SHALL BE DESIGNED, LOCATED & PROVIDED BY THE JOIST SUPPLIER PER SJI SPECIFICATIONS.
16. FOR ESTIMATING AND BIDDING PURPOSES ONLY, ASSUME AN ADDITIONAL 1/2" THICKNESS OF CONCRETE WILL BE NECESSARY FOR ALL ELEVATED SLABS ON METAL DECK. THE INTENT OF THIS REQUIREMENT IS TO ACCOUNT FOR ANTICIPATED DEAD LOAD DEFLECTIONS IN THE SUPPORTING STRUCTURE. THE FINISHED SLAB SHALL MEET THE FLATNESS REQUIREMENTS DEFINED IN THE SPECIFICATION.
17. ALL EXISTING FRAMING (JOIST SUPPORTED BY LOAD-BEARING WALLS, CMU ABOVE NEW OPENINGS, ETC.) IS TO BE SHORED DURING DEMOLITION OF EXISTING CONSTRUCTION AND INSTALLATION OF ALL NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING DESIGN AND IMPLEMENTATION.
18. PLAN LEGEND:

AD-0.1

F.F. DENOTES FIN. FLOOR

T/'X' DENOTES TOP OF STEEL, SLAB, ETC.

B/'X' DENOTES BOTTOM OF LINTEL, ETC.

R1 DENOTES 1½", 20 GA. GALV. & PRIME-PAINTED WIDE RIB STEEL ROOF DECK. REF. DETAIL 2/S404.

DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S405.

DENOTES BEAM-THRU-BEAM MOMENT CONNECTION. REF. DETAILS ON S404.

DENOTES BRACED FRAME OR KICKER LOCATION

DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

18. WIDE-FLANGE BEAM & GIRDER NOTATION:

BEAM REACTIONS SHOWN IN KIPS TO BE USED FOR DESIGN OF SHEAR CONNECTION BY STEEL FABRICATOR'S SSE (ALLOWABLE STRESS DESIGN / LOADS UNFACTORED).

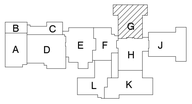
REF. THE STEEL CONNECTION NOTES ON S001 FOR DESIGN OF CONNECTIONS AT BEAMS & GIRDERS WITH NO REACTION SHOWN. THE MIN. SHEAR CONNECTION DESIGN LOAD SHALL BE 15 KIPS.

GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

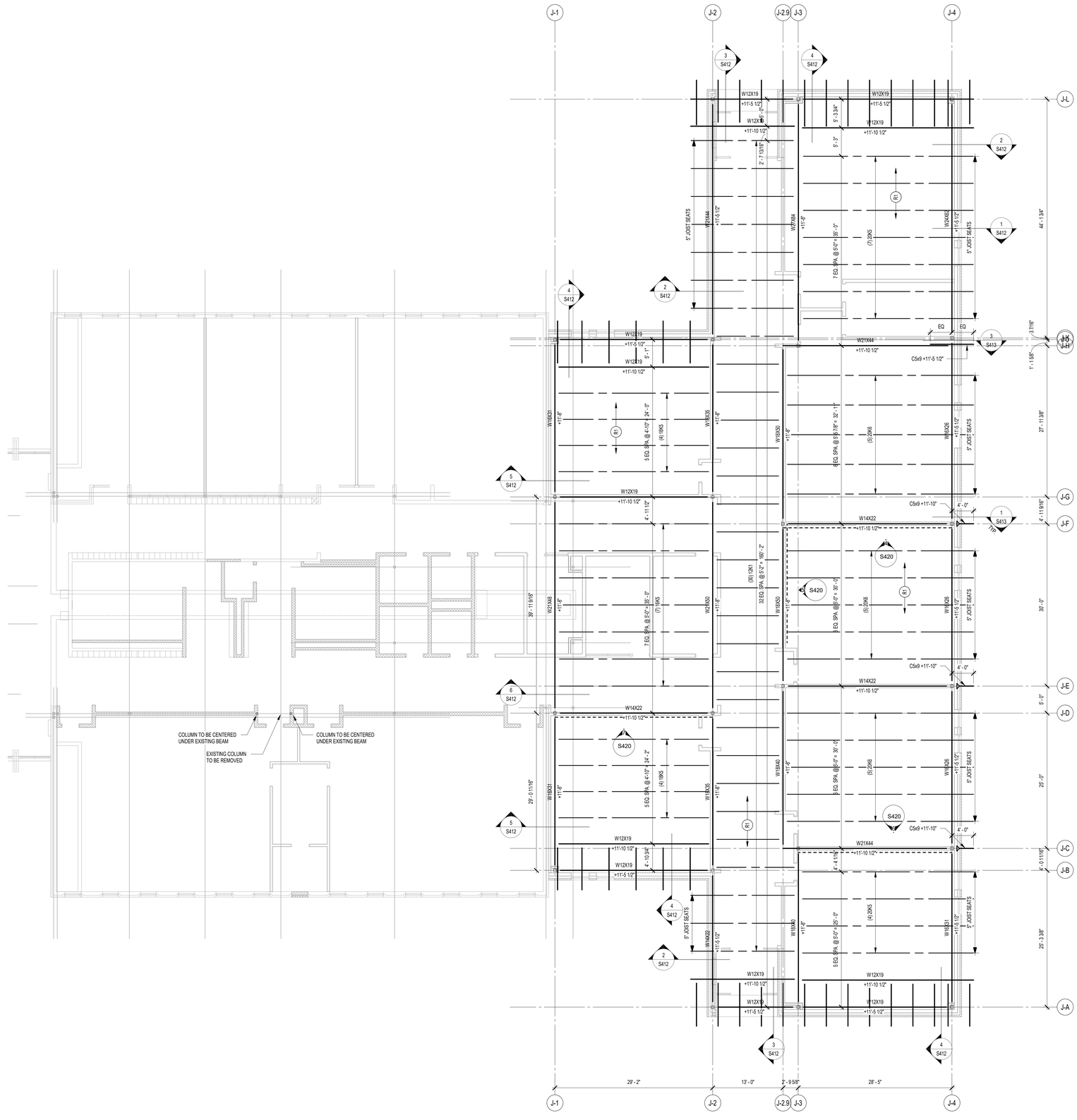
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT G

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
G
S205



1 ROOF FRAMING PLAN - UNIT J
1/8" = 1'-0"

FRAMING PLAN NOTES

1. REF. S001 & S002 FOR STRUCTURAL NOTES, DESIGN DATA, SCHEDULES & LEGENDS.
2. REF. THE S410 & S430 SERIES FOR TYPICAL FRAMING AND MASONRY DETAILS.
3. ALL CONTRACTORS ARE REQUIRED TO COORDINATE THEIR WORK WITH ALL DISCIPLINES TO AVOID CONFLICTS. THE MECHANICAL, ELECTRICAL, AND PLUMBING ASPECTS ARE NOT IN THE SCOPE OF THESE DRAWINGS. THEREFORE, ALL REQUIRED MATERIALS AND WORK MAY NOT BE INDICATED.
4. ALL ELEVATIONS ARE REFERENCED FROM THE FIRST FLOOR FIN. FLOOR ELEVATION +0'-0". COORD. USGS ELEVATION WITH CIVIL DWGS.
5. SEE FOUNDATION PLANS FOR SIZES OF STEEL COLUMNS SUPPORTED ON FOUNDATIONS.
6. INSTALL CONTINUOUS ANGLES AT ALL PERIMETER ROOF EDGES. SEE DETAIL 3/S-410 FOR ATTACHMENT TO BEAM AND FOR ALL CONDITIONS NO SPECIFICALLY DEFINED IN FRAMING SECTIONS.
7. ALL WALLS SHALL BE LAID OUT FROM THE ARCHITECTURAL DRAWINGS.
8. REF. ARCH. DRAWINGS. FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
9. COORDINATE EXACT SIZE & LOCATION OF ANY MECHANICAL OPENINGS IN FLOOR SLAB, ROOF DECK, OR WALLS WITH THE MEP CONTRACTOR(S). LOCATION & SIZE OF ALL DUCT OPENINGS, GRILLES, ETC. SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
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AD-0.1

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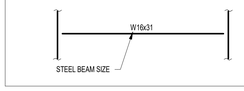
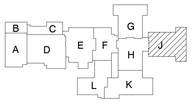


GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE
PE10606154
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISIONS

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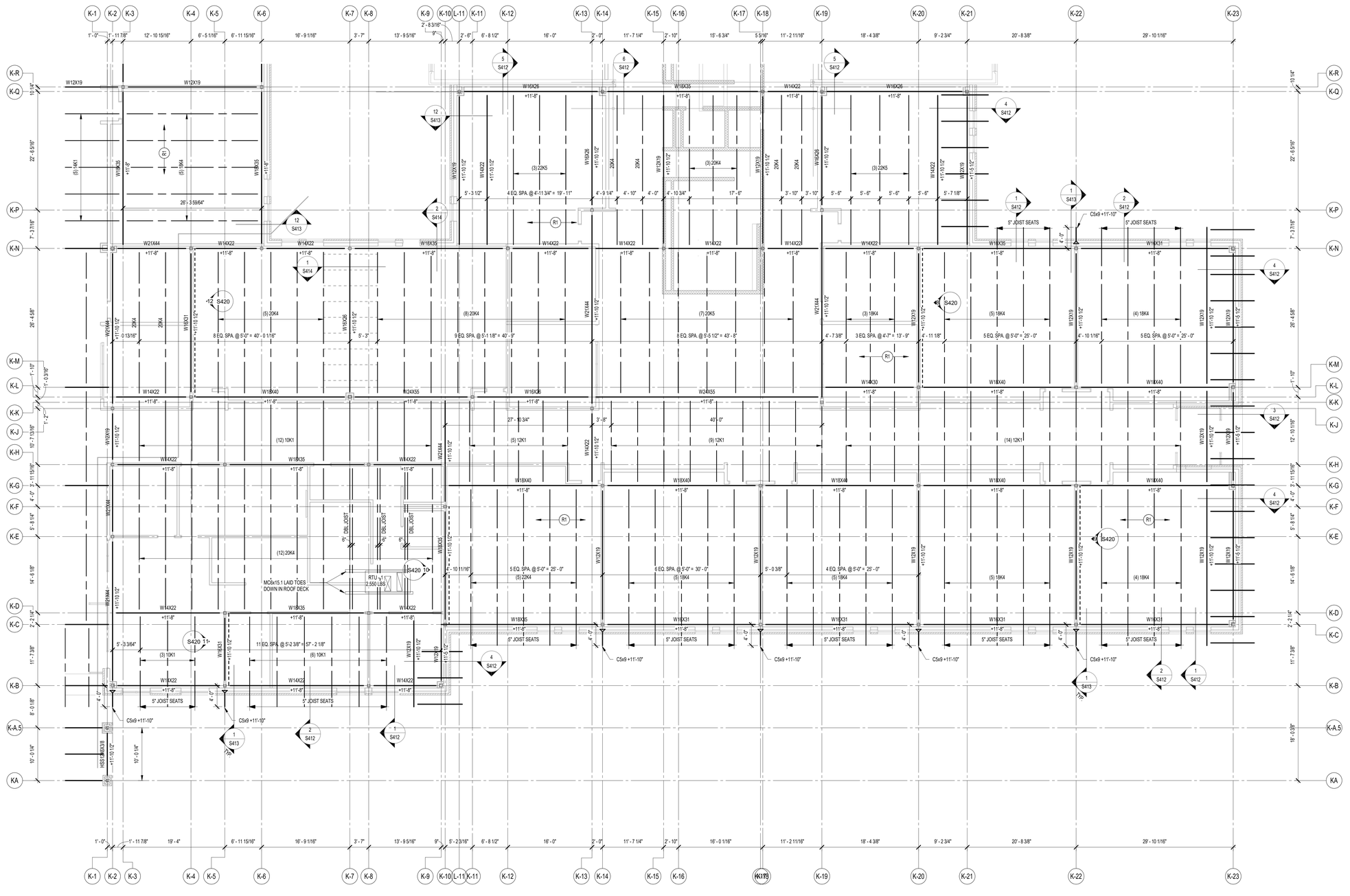
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT J

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
J
S206



FRAMING PLAN NOTES

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AD.01

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⊠ DENOTES APPROX. LOCATION OF OPENING IN DECK/SLAB. REF. DETAILS ON S410 FOR TYPICAL OPENING FRAMES. FOR MULTIPLE CLOSELY SPACED OPENINGS, TREAT AS ONE LARGE OPENING.

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1 ROOF FRAMING PLAN - UNIT K
1/8" = 1'-0"

GIBRALTAR
DESIGN
ARCHITECTURE · ENGINEERING · INTERIOR DESIGN

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
JMS
DRAWN BY
JMS
CHECKED BY
SAC

SCOTT A. CLORE
PE10606154

REVISIONS

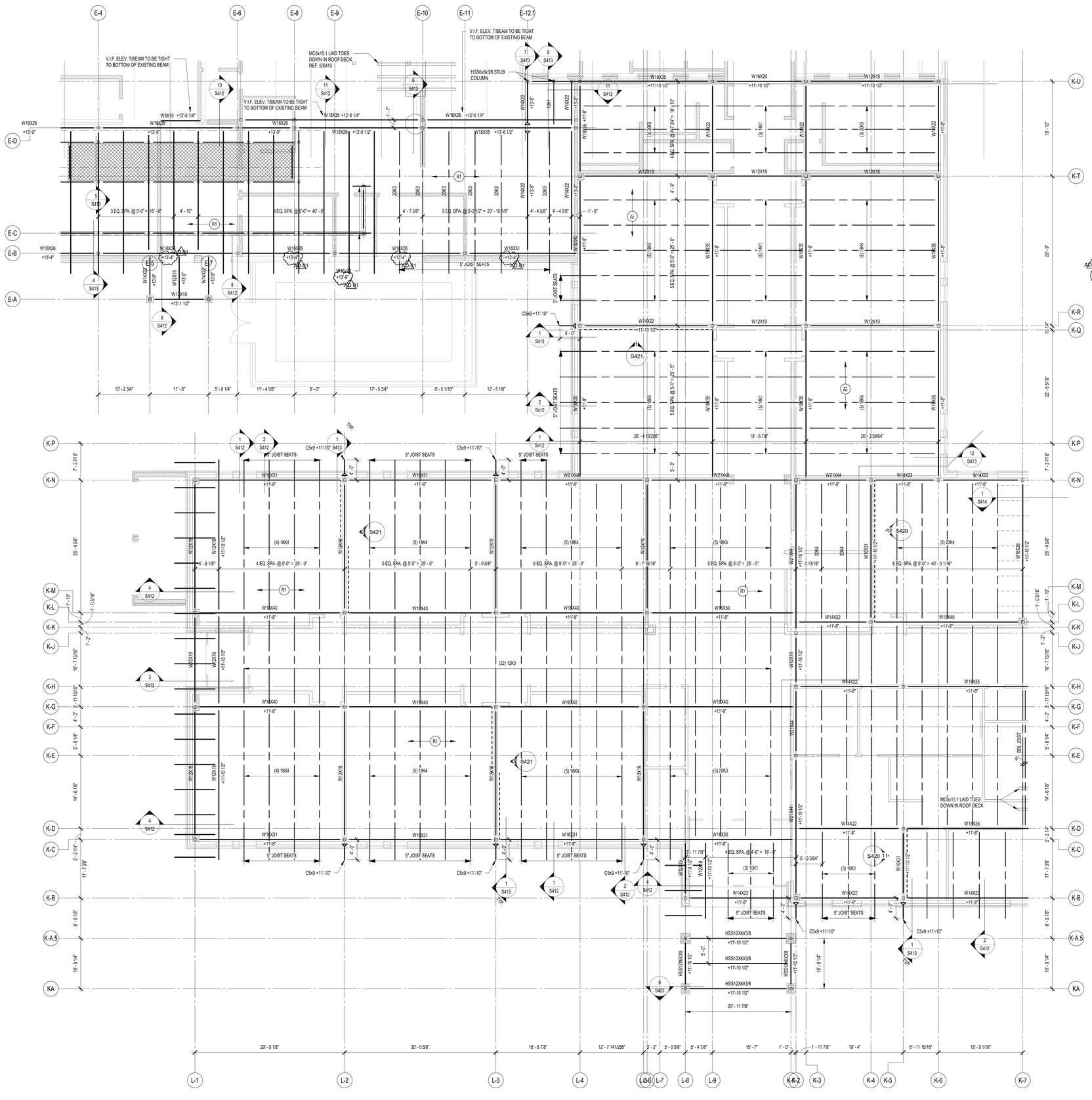
MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
ROOF FRAMING PLAN - UNIT K

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

K

SHEET
S207



1 ROOF FRAMING PLAN - UNIT L
1/8" = 1'-0"

FRAMING PLAN NOTES

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W16x31
STEEL BEAM SIZE

GIBRALTAR DESIGN
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN

PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

KEY PLAN

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9102 N. Meridian St., Ste. 300
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PROJECT 21116
DATE 3-3-2022
COORDINATED BY JMS
DRAWN BY JMS
CHECKED BY SAC

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

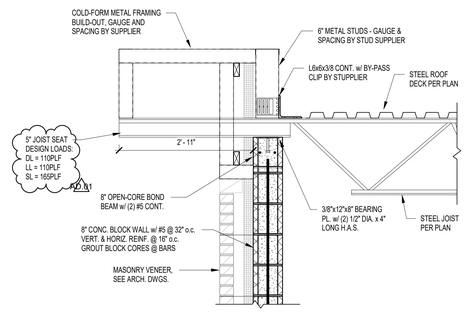
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

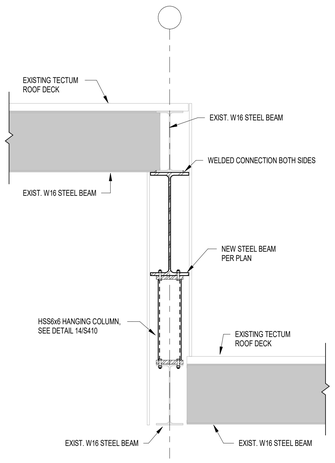
DRAWING
ROOF FRAMING PLAN - UNIT L

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

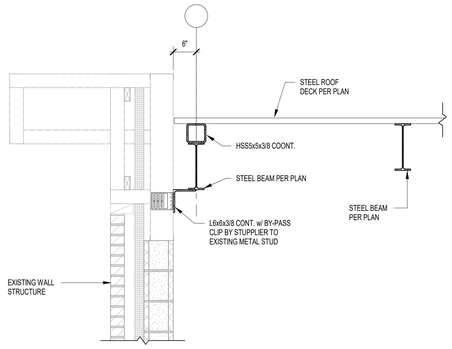
SHEET
L
S208



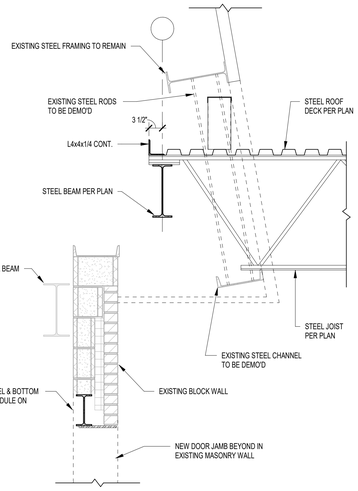
8 FRAMING SECTION
3/4" = 1'-0"



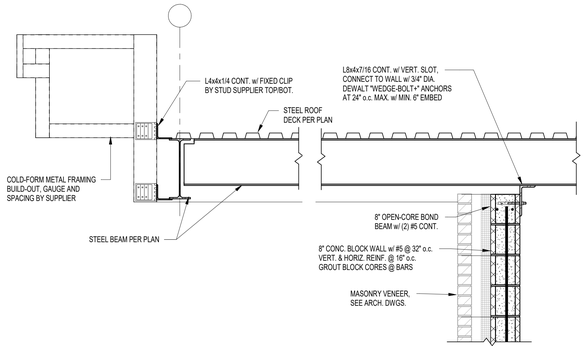
11 FRAMING SECTION
3/4" = 1'-0"



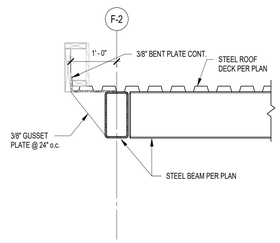
7 FRAMING SECTION
3/4" = 1'-0"



4 FRAMING SECTION
3/4" = 1'-0"



3 FRAMING SECTION
3/4" = 1'-0"



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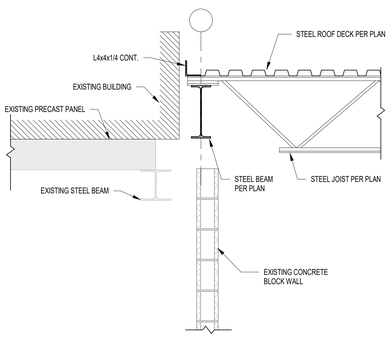

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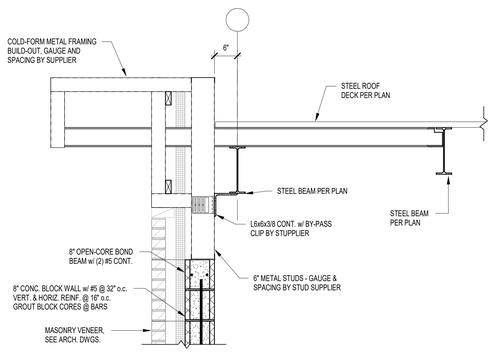

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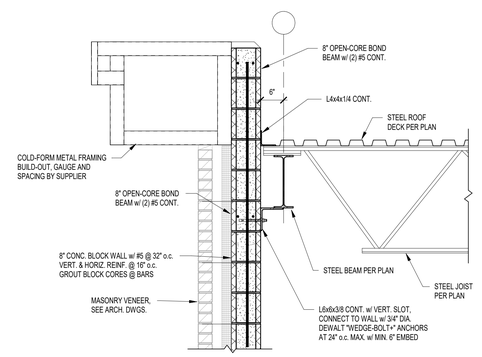

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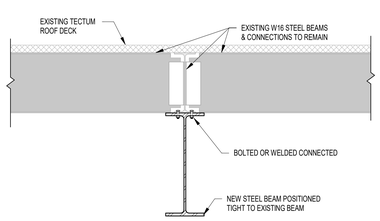

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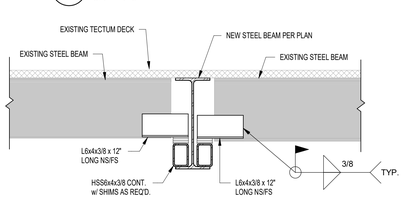

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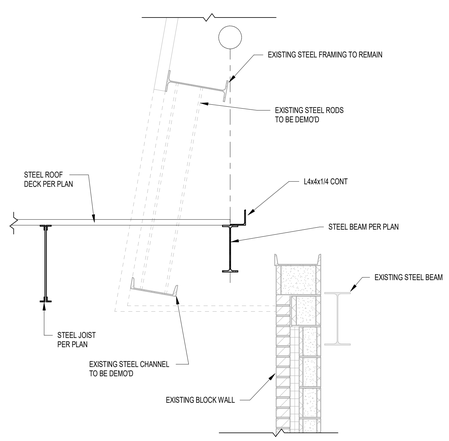
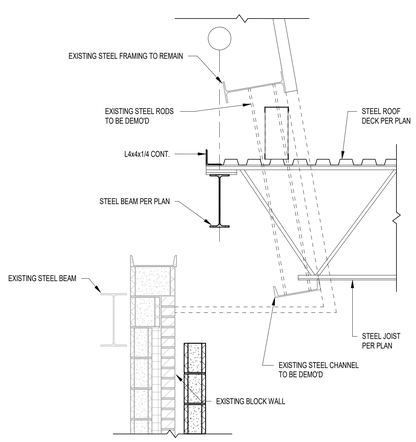
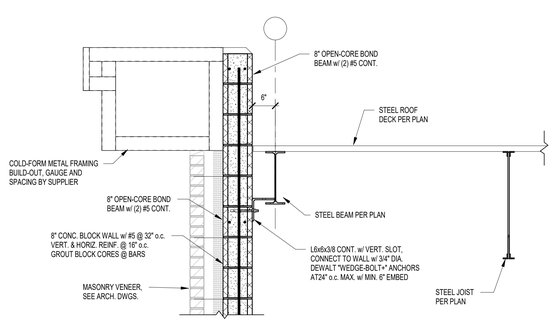
3/4" = 1'-0"



9 FRAMING SECTION
3/4" = 1'-0"



5 FRAMING SECTION
3/4" = 1'-0"



1 FRAMING SECTION
3/4" = 1'-0"

GIBRALTAR DESIGN
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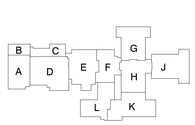
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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DRAWN BY
Author
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Checker

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

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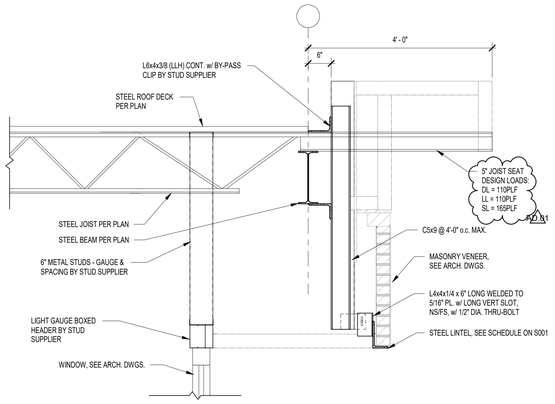
S411



12 FRAMING SECTION
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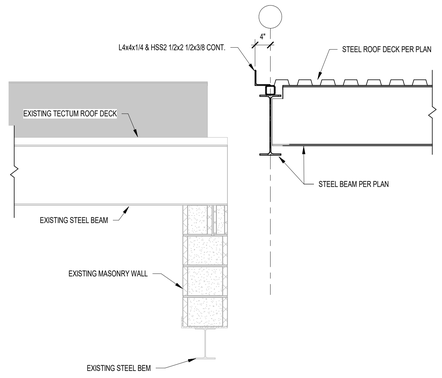

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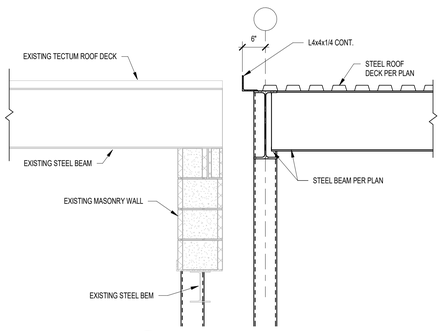

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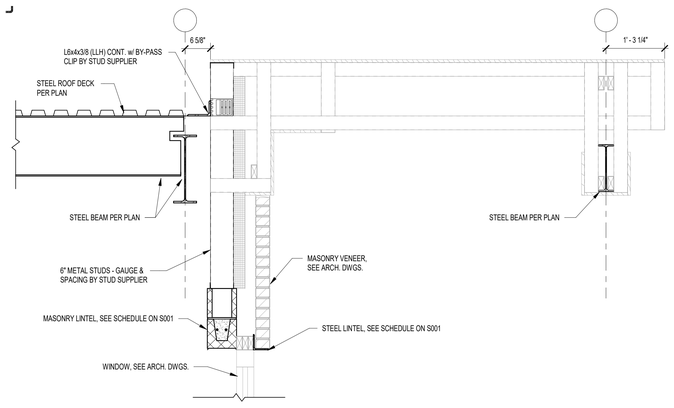

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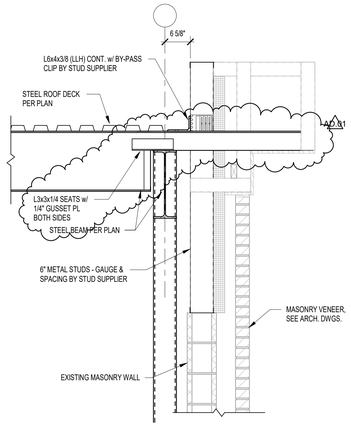
3/4" = 1'-0"



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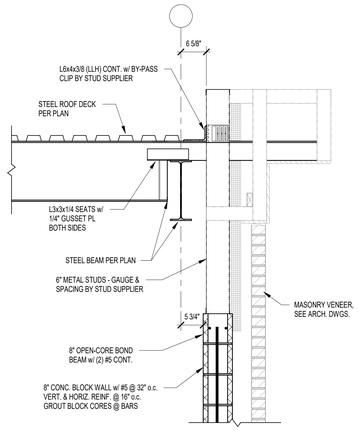
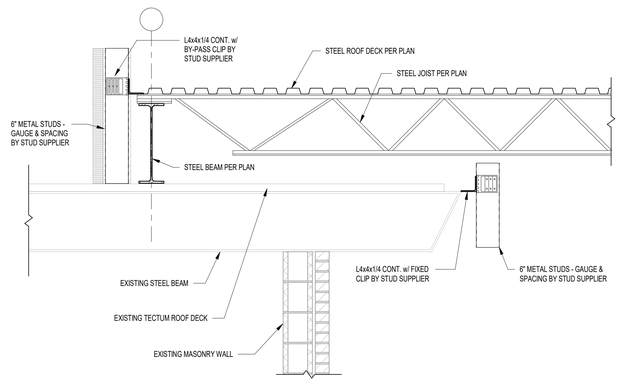


7 FRAMING SECTION
3/4" = 1'-0"



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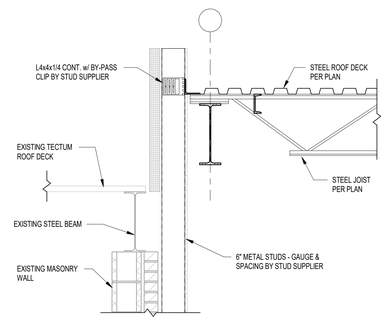
3/4" = 1'-0"



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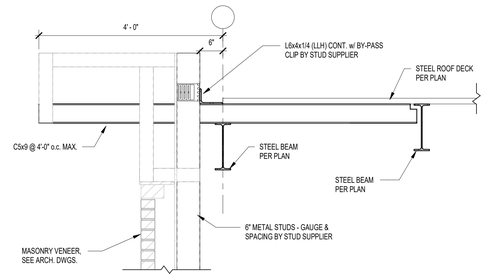
3/4" = 1'-0"



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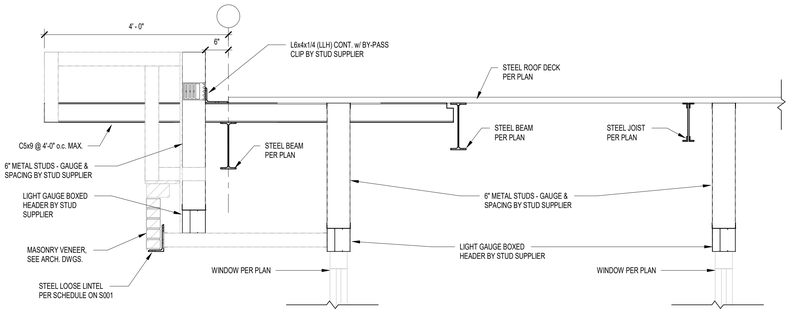
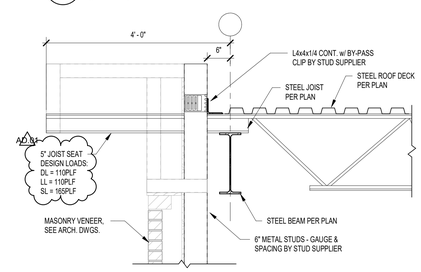


3 FRAMING SECTION
3/4" = 1'-0"



2 FRAMING SECTION
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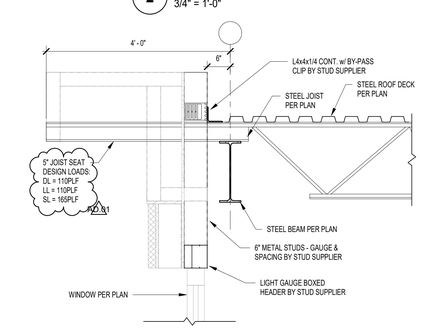

1 FRAMING SECTION
3/4" = 1'-0"

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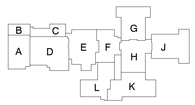

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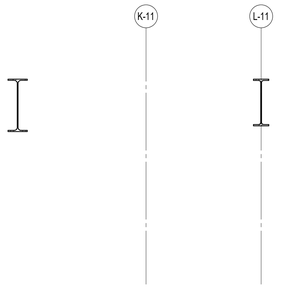
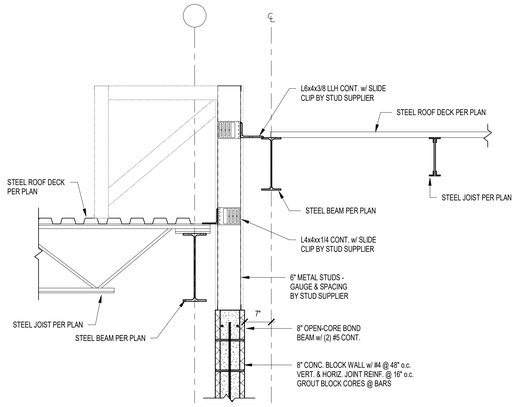


12 FRAMING SECTION
3/4" = 1'-0"



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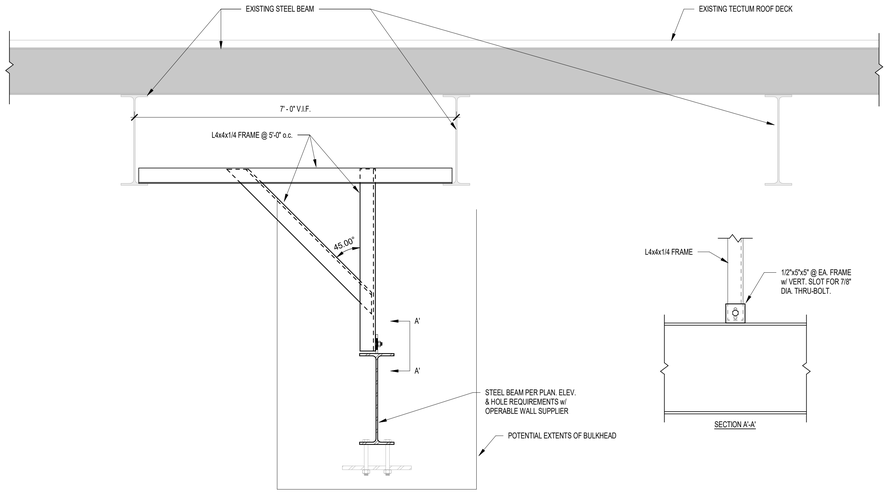

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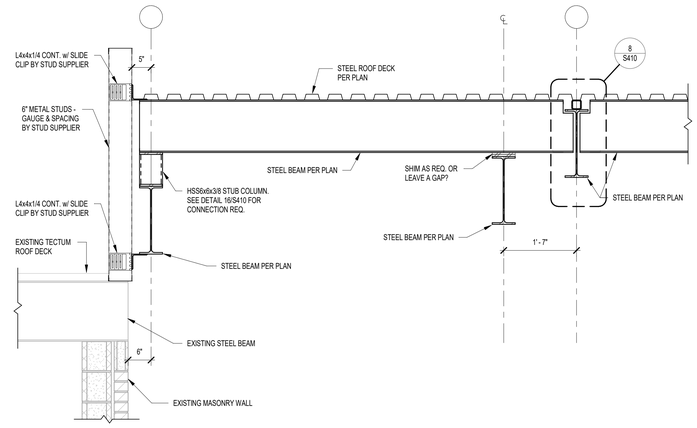
3/4" = 1'-0"



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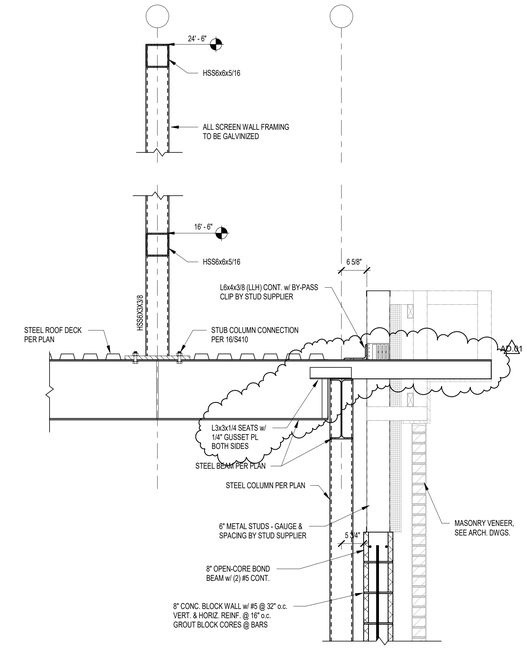
3/4" = 1'-0"



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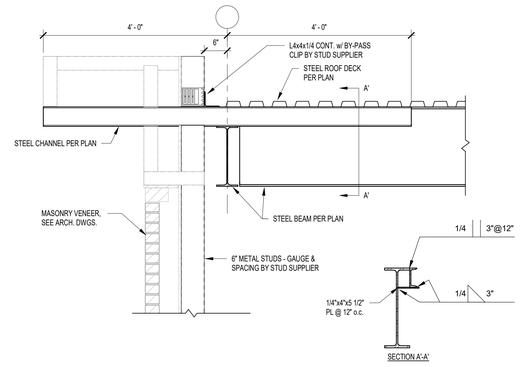
3/4" = 1'-0"



3 FRAMING SECTION
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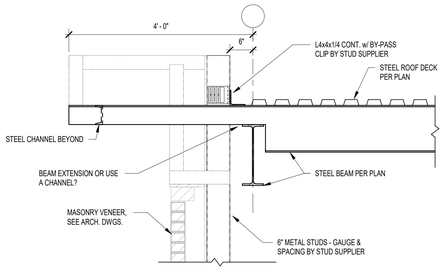
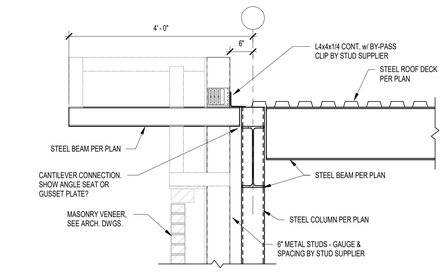
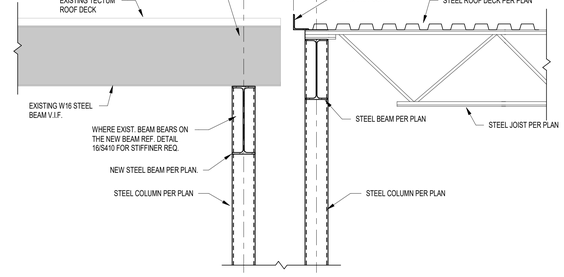


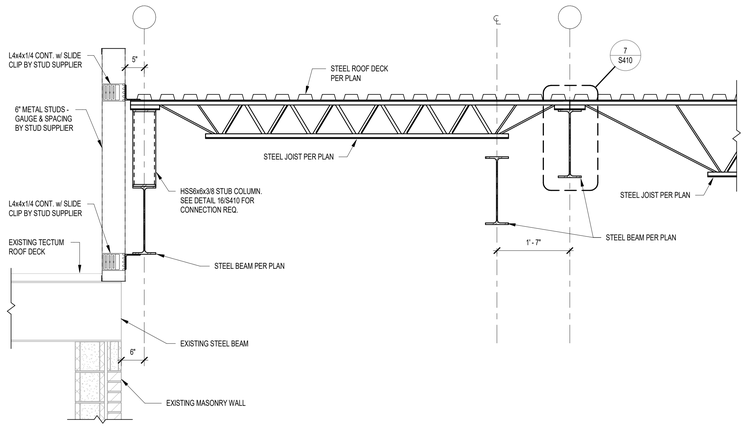
2 FRAMING SECTION
3/4" = 1'-0"



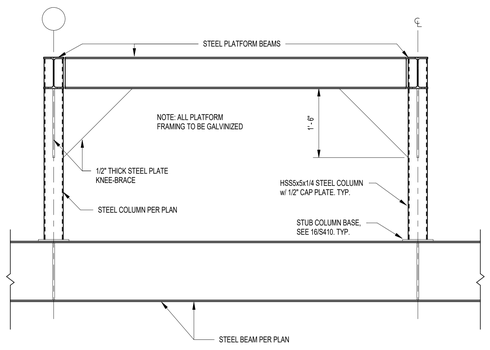
1 FRAMING SECTION
3/4" = 1'-0"



6 FRAMING SECTION
3/4" = 1'-0"



9 FRAMING SECTION
3/4" = 1'-0"



5 FRAMING SECTION
3/4" = 1'-0"

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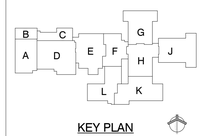

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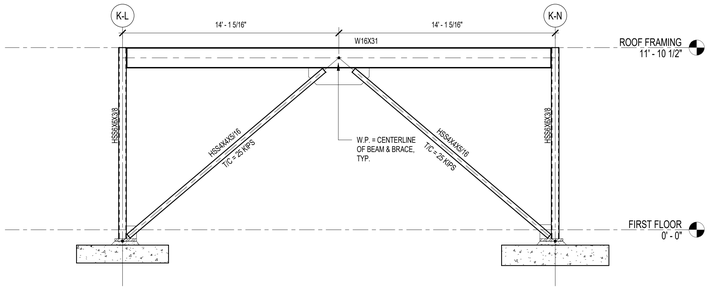
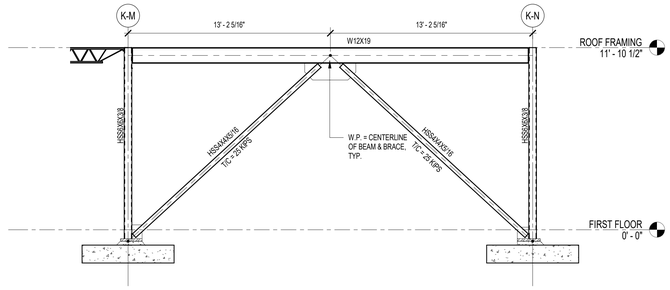


12 BRACING ELEVATION - COLUMN LINE K-4
1/4" = 1'-0"



8 BRACING ELEVATION - COLUMN LINE K-20
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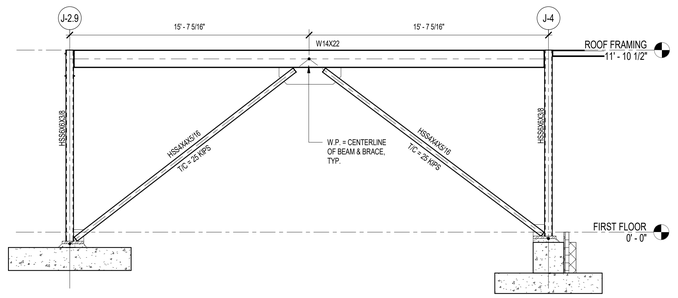
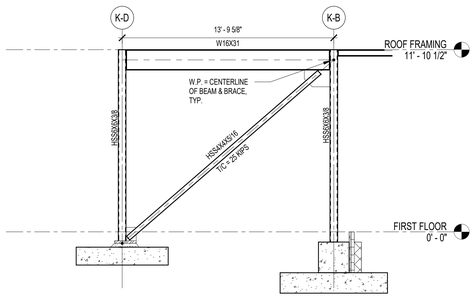
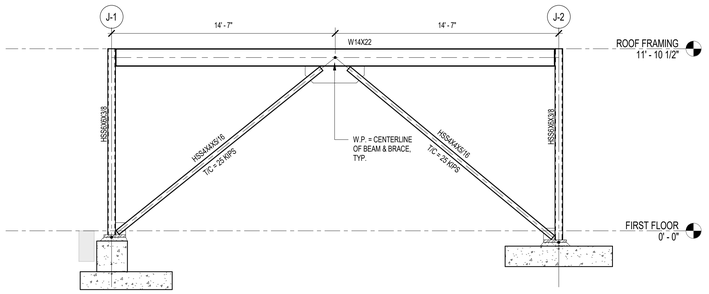


4 BRACING ELEVATION - COLUMN LINE J-F
1/4" = 1'-0"



11 BRACING ELEVATION - COLUMN LINE K-5
1/4" = 1'-0"



7 BRACING ELEVATION - COLUMN LINE J-D
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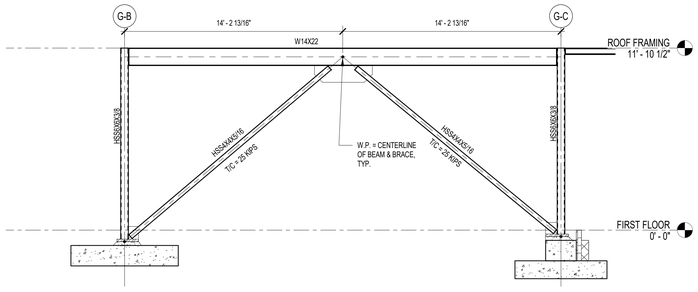
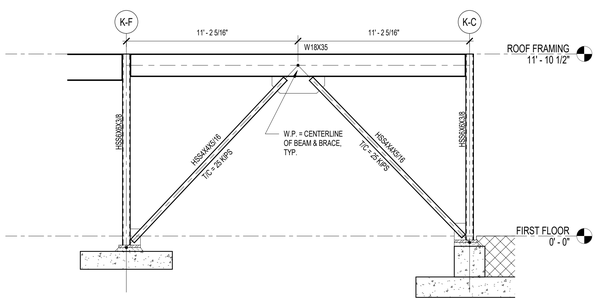


3 BRACING ELEVATION - COLUMN LINE G-3
1/4" = 1'-0"



10 BRACING ELEVATION - COLUMN LINE K-10
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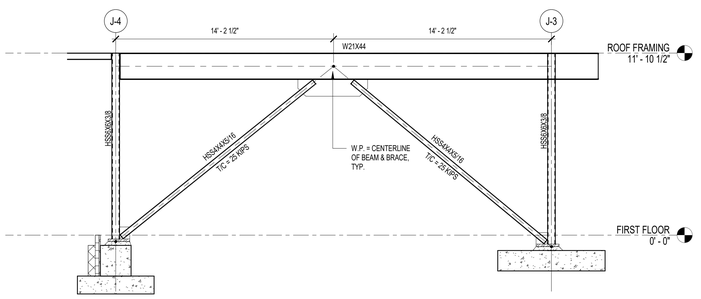

6 BRACING ELEVATION - COLUMN LINE J-C
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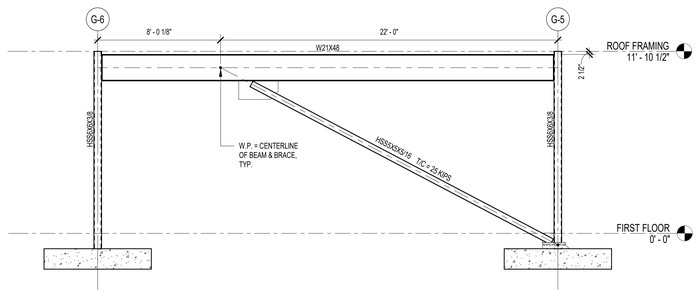

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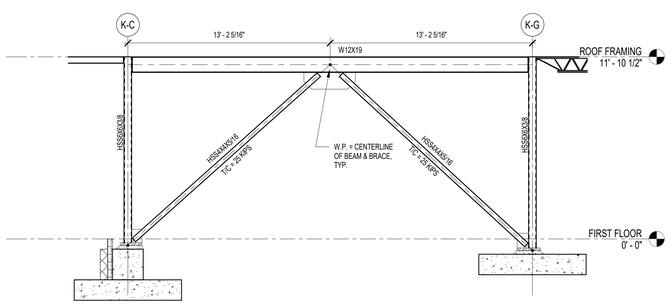
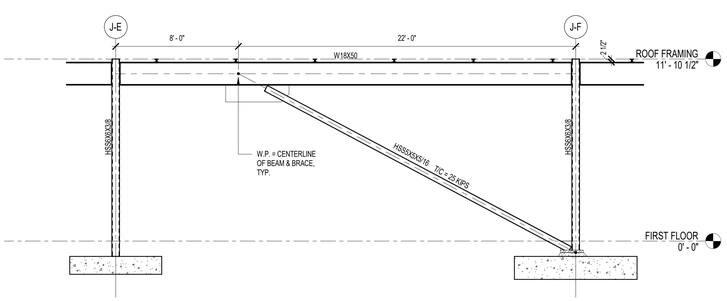
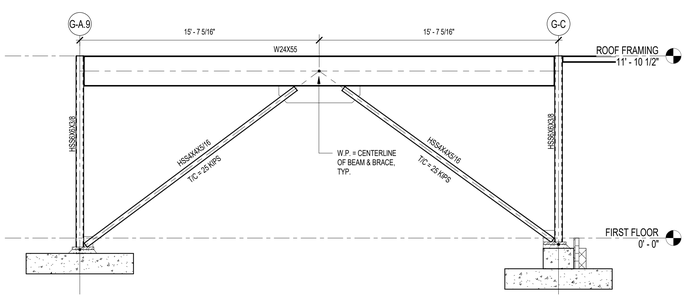
1/4" = 1'-0"



9 BRACING ELEVATION - COLUMN LINE K-22
1/4" = 1'-0"



5 BRACING ELEVATION - COLUMN LINE J-2.9
1/4" = 1'-0"



1 BRACING ELEVATION - COLUMN LINE G-6
1/4" = 1'-0"

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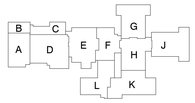
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
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Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21116
DATE
3-3-2022
COORDINATED BY
Designer
DRAWN BY
Author
CHECKED BY
Checker

SCOTT A. CLORE
REGISTERED
PE10606154
STATE OF INDIANA
PROFESSIONAL ENGINEER

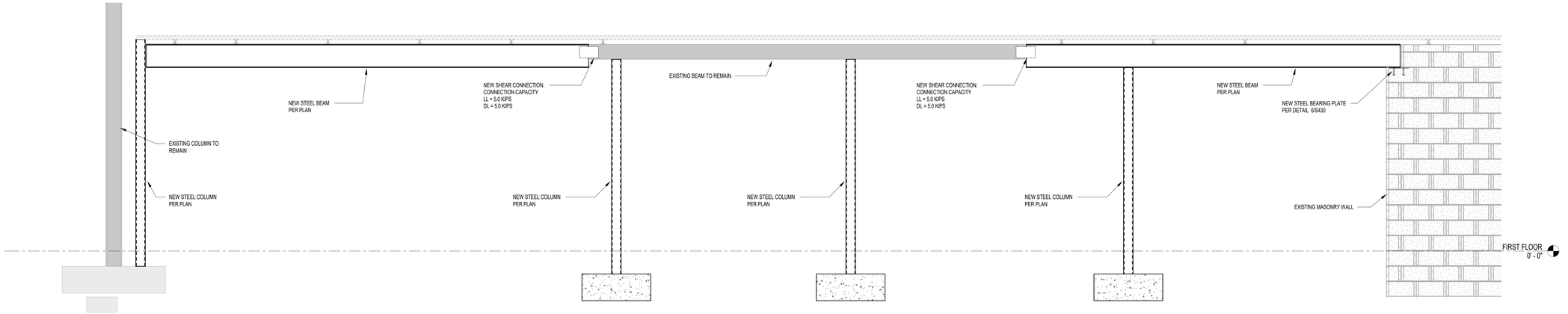
REVISIONS

MARK	DATE	ISSUED FOR
AD-0.1	3/16/2022	ADDENDUM #1

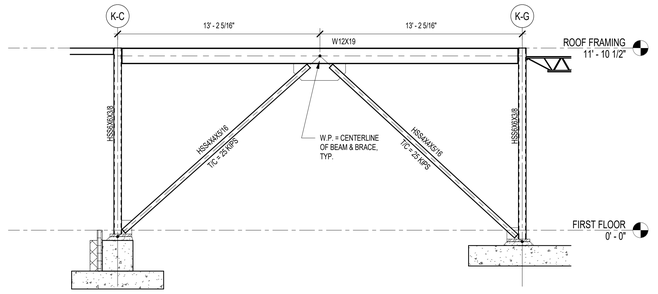
DRAWING
STEEL FRAMING ELEVATIONS

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
S420

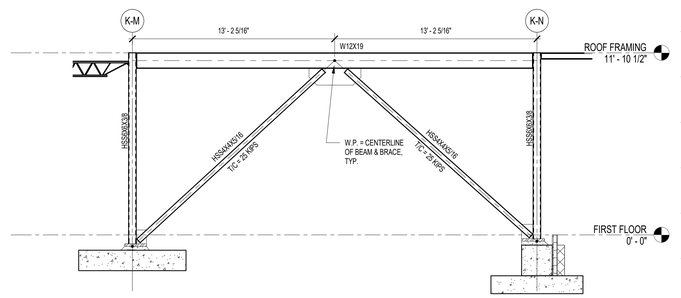


4 FRAMING ELEVATION
1/2" = 1'-0"

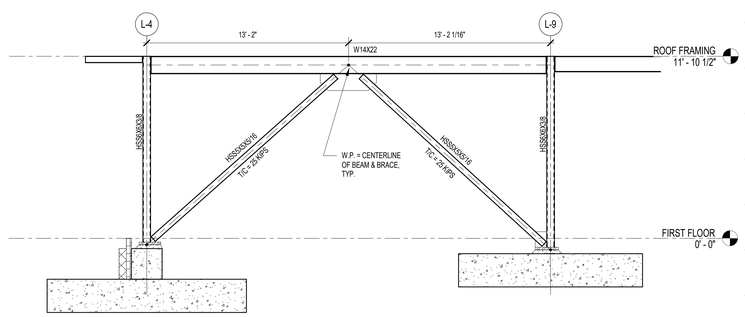


3 BRACING ELEVATION - COLUMN LINE L-3
1/4" = 1'-0"

ADD'M



2 BRACING ELEVATION - COLUMN LINE L-2
1/4" = 1'-0"



1 BRACING ELEVATION - COLUMN LINE K-S
1/4" = 1'-0"

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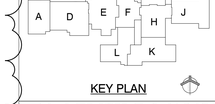
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS
DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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PROJECT 21116
DATE 3-3-2022
COORDINATED BY Designer
DRAWN BY Author
CHECKED BY Checker

SCOTT A. CLORE REGISTERED PE10606154 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

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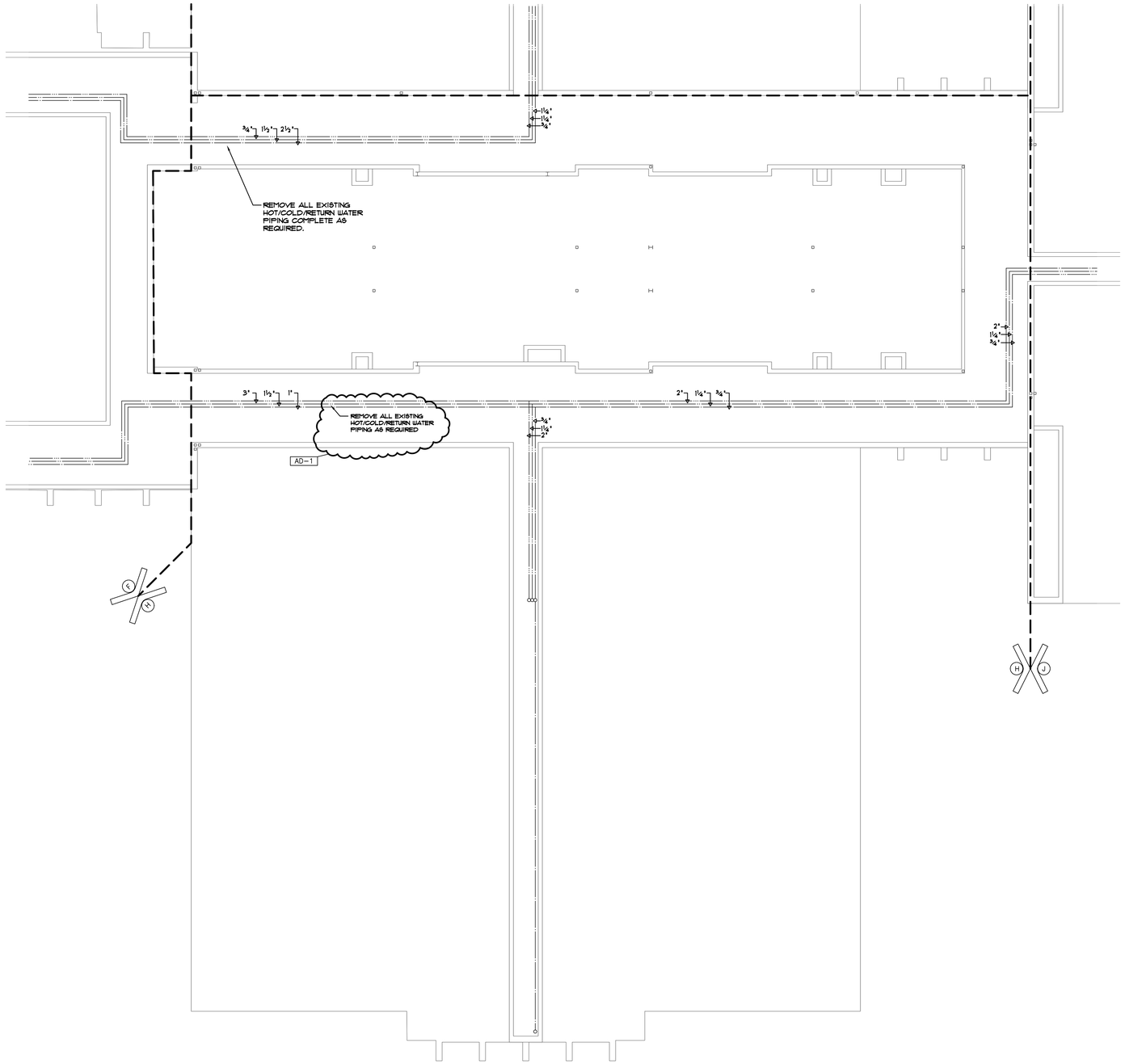
AD-0.1	3/16/2022	ADDENDUM #1

DRAWING
STEEL FRAMING ELEVATIONS

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
S421



UNIT "H" PLUMBING TUNNEL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

NORTH

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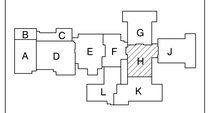
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
DRAWN BY AUTHOR
CHECKED BY DJ

DAVID G. JANNEY
REGISTERED
NO. 10302590
STATE OF INDIANA
PROFESSIONAL ENGINEER

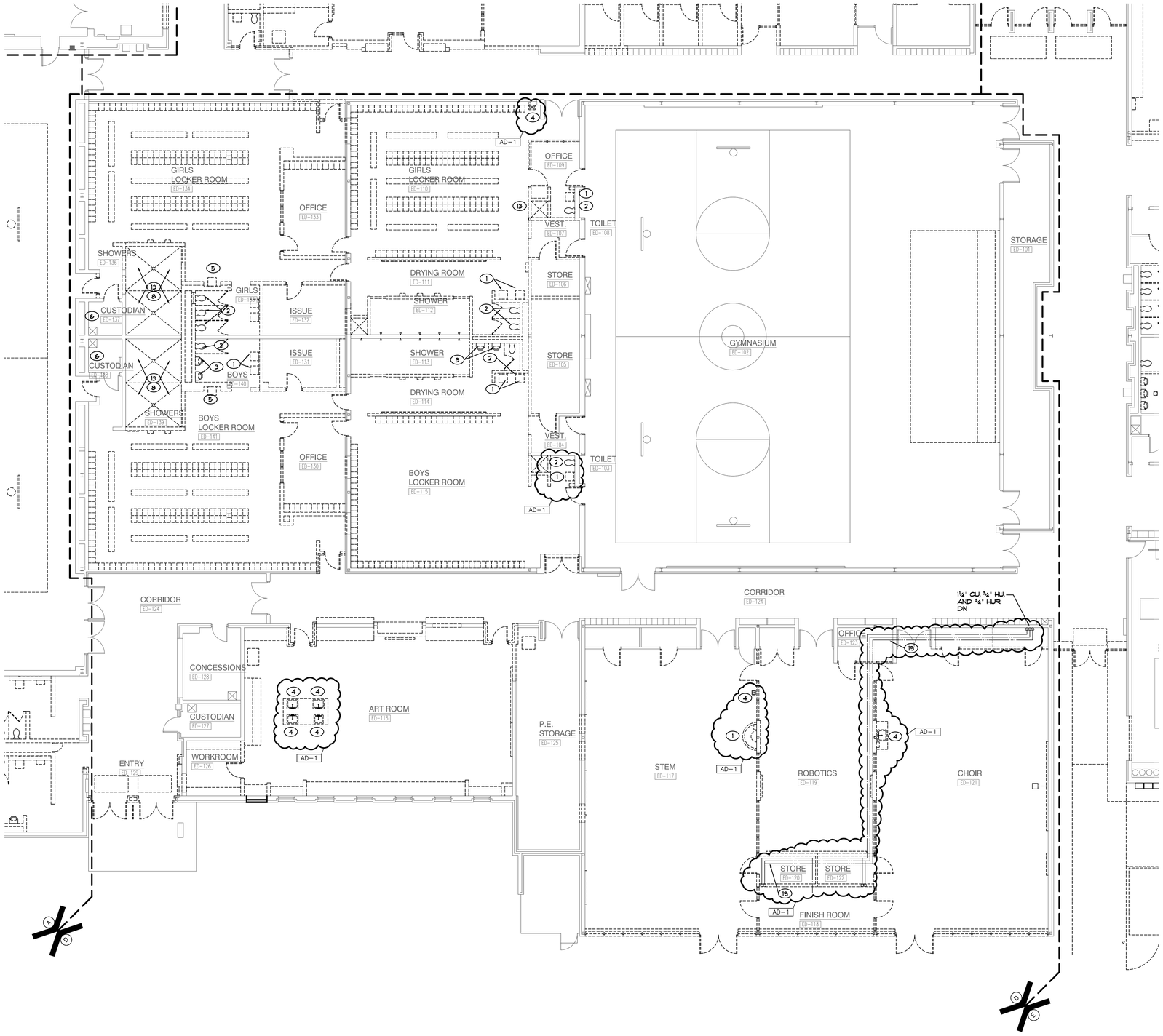
REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
UNIT "H" PLUMBING TUNNEL DEMOLITION PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
H
PD005



SHEET NOTES

1. REMOVE EXISTING LAVATORY AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
2. REMOVE EXISTING WATER CLOSET AND FLUSH VALVE AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
3. REMOVE EXISTING URINAL AND FLUSH VALVE AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
4. REMOVE EXISTING SINK AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
5. REMOVE EXISTING ELECTRIC WATER COOLER AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
6. REMOVE EXISTING MOP BASIN AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
7. REMOVE EXISTING GILLCOCK AND ALL ASSOCIATED COLD WATER PIPING COMPLETE AS REQUIRED.
8. REMOVE EXISTING FLOOR DRAIN AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
9. REMOVE EXISTING FLOOR SINK AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
10. REMOVE EXISTING GAS WATER HEATER AND ALL ASSOCIATED COLD/HOT/RETURN WATER PIPING, FLUES, GAS PIPING, ELECTRICAL CONNECTIONS, ETC. COMPLETE AS REQUIRED.
11. REMOVE EXISTING ELECTRIC HOT WATER RETURN PUMP AND ALL ASSOCIATED ELECTRICAL CONNECTIONS, VALVES, ETC. COMPLETE AS REQUIRED.
12. REMOVE EXISTING TEMPERED WATER MIXING VALVE AND ALL ASSOCIATED HOT/COLD/TEMPERED WATER PIPING COMPLETE AS REQUIRED.
13. REMOVE EXISTING SHOWER AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
14. REMOVE EXISTING ROOF DRAIN AND ALL ASSOCIATED STORM PIPING COMPLETE AS REQUIRED.
15. REMOVE EXISTING ROOF DRAIN OVERFLOW AND ALL ASSOCIATED OVERFLOW STORM PIPING COMPLETE AS REQUIRED.
16. REMOVE GREASE TRAP AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
17. REMOVE EXISTING EMERGENCY SHOWER/EYEWASH AND MIXING VALVE AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
18. REMOVE, PROTECT AND REINSTALL EXISTING ELECTRIC WATER COOLER. ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
19. REMOVE EXISTING ALL HOT/COLD/RETURN WATER PIPING COMPLETE AS REQUIRED.

AD-1

UNIT "D" PLUMBING FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

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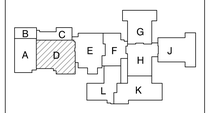
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
DRAWN BY MDG/JM
CHECKED BY DJ

REGISTERED PROFESSIONAL ENGINEER — DAVID G. JANNEY — NO. 10302590 — STATE OF INDIANA

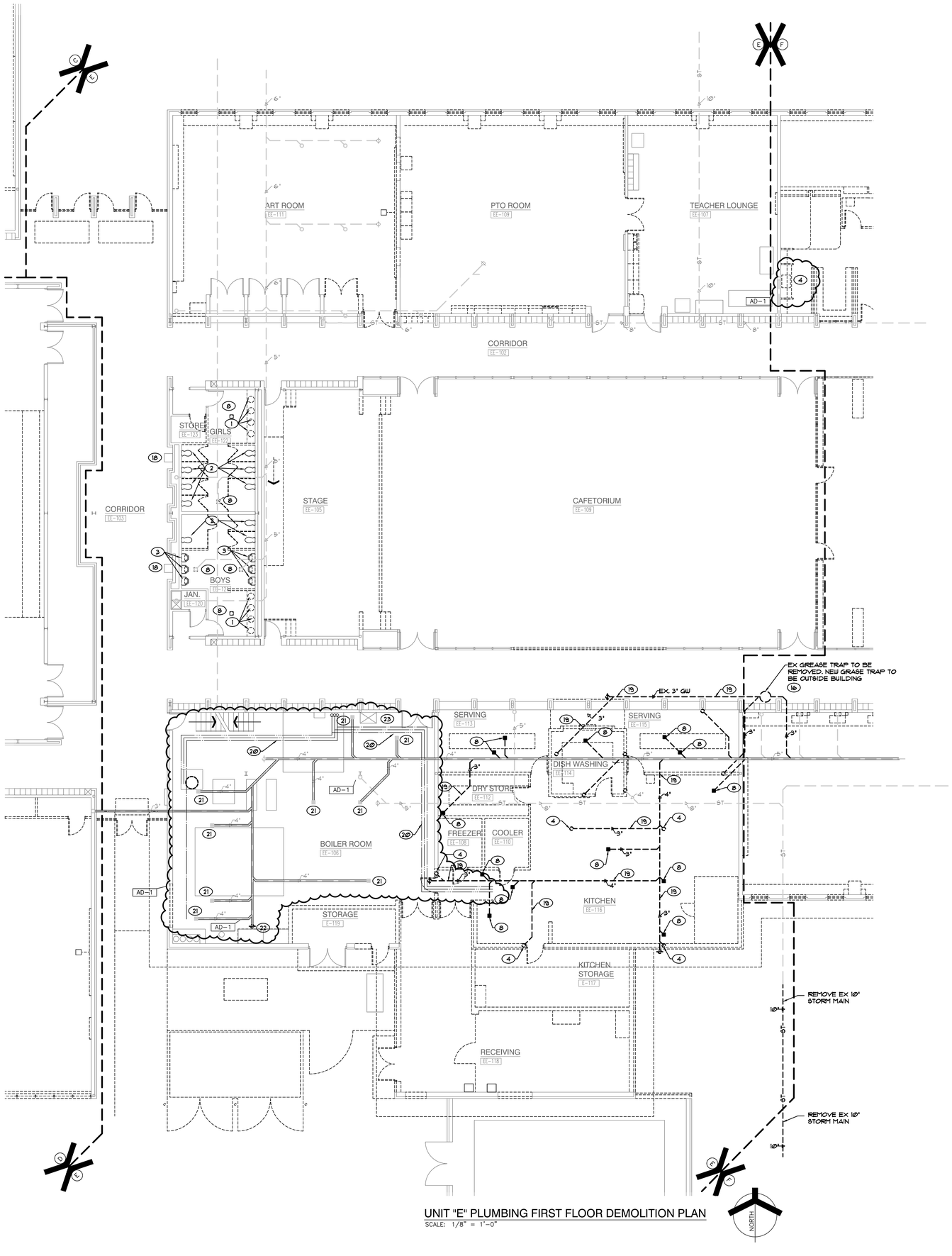
REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
UNIT "D" PLUMBING FIRST FLOOR DEMOLITION PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
PD103



UNIT "E" PLUMBING FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REMOVE EXISTING LAVATORY AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
2. REMOVE EXISTING WATER CLOSET AND FLUSH VALVE AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
3. REMOVE EXISTING URINAL AND FLUSH VALVE AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
4. REMOVE EXISTING SINK AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
5. REMOVE EXISTING ELECTRIC WATER COOLER AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
6. REMOVE EXISTING MOP BASIN AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
7. REMOVE EXISTING SILLCOCK AND ALL ASSOCIATED COLD WATER PIPING COMPLETE AS REQUIRED.
8. REMOVE EXISTING FLOOR DRAIN AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
9. REMOVE EXISTING FLOOR SINK AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
10. REMOVE EXISTING GAS WATER HEATER AND ALL ASSOCIATED COLD/HOT/RETURN WATER PIPING, FLUES, GAS PIPING, ELECTRICAL CONNECTIONS, ETC. COMPLETE AS REQUIRED.
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16. REMOVE GREASE TRAP AND ALL ASSOCIATED VENT PIPING AND CAP EXISTING SANITARY BELOW FLOOR AIR/WATERTIGHT COMPLETE AS REQUIRED.
17. REMOVE EXISTING EMERGENCY SHOWER/EYEWASH AND MIXING VALVE AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
18. REMOVE, PROTECT AND REINSTALL EXISTING ELECTRIC WATER COOLER, ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
19. REMOVE EXISTING BELOW GRADE SANITARY PIPING COMPLETE AS REQUIRED.
20. REMOVE EXISTING ALL HOT/COLD/RETURN WATER PIPING COMPLETE AS REQUIRED.
21. EXISTING FLOOR DRAIN TO REMAIN. PROTECT FROM DAMAGE OR BLOCKAGE DURING CONSTRUCTION.
22. REMOVE EXISTING FLOOR CLEAN OUT TO PERMIT CONNECTION OF NEW WORK. SEE SHEET P-104.
23. EXISTING MOP BASIN TO REMAIN. PROTECT FROM DAMAGE OR BLOCKAGE DURING CONSTRUCTION.

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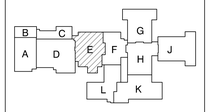
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
DRAWN BY MDG/JM
CHECKED BY DJ

REGISTERED DAVID G. JANNEY NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

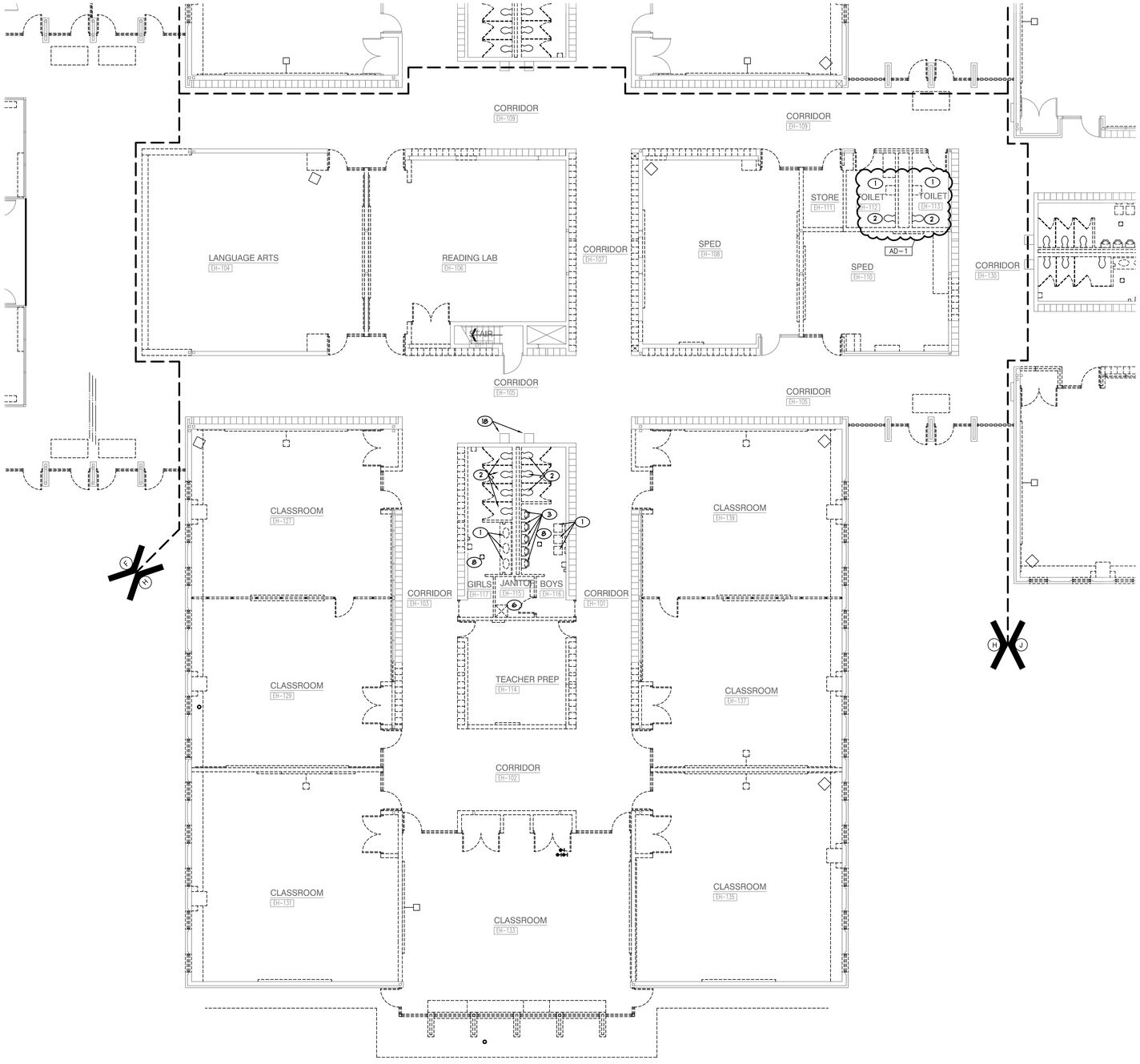
REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
UNIT "E" PLUMBING FIRST FLOOR DEMOLITION PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
E
PD104



UNIT "H" PLUMBING FIRST FLOOR DEMOLITION PLAN

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

NORTH

SHEET NOTES

1. REMOVE EXISTING LAVATORY AND FAUCET AND ALL ASSOCIATED HOT/COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
2. REMOVE EXISTING WATER CLOSET AND FLUSH VALVE AND ALL ASSOCIATED COLD WATER, SANITARY AND VENT PIPING COMPLETE AS REQUIRED.
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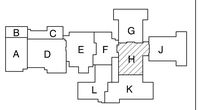
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



KEY PLAN

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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
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CHECKED BY DJ

DAVID G. JANNEY REGISTERED NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

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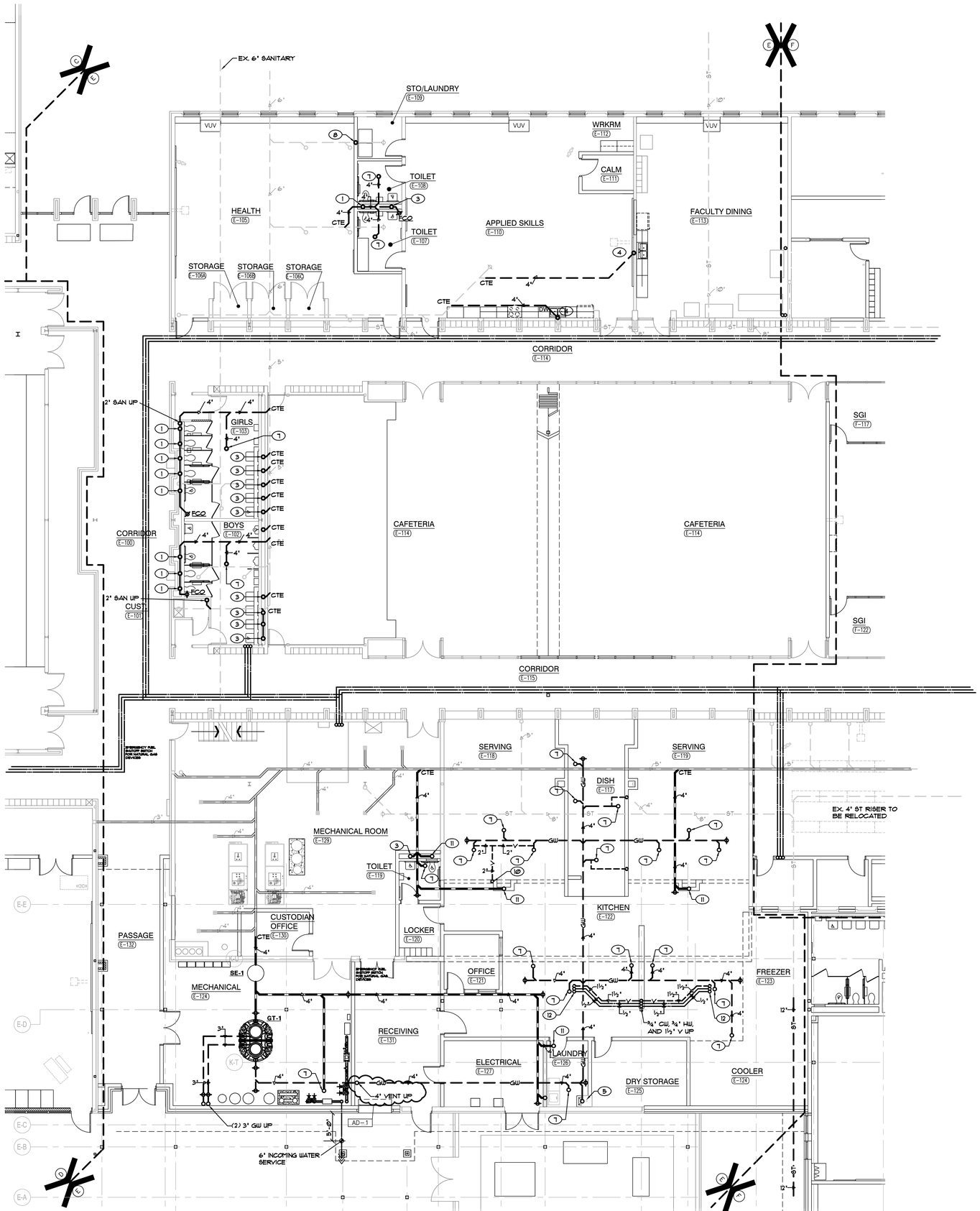
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
UNIT "H" PLUMBING FIRST FLOOR DEMOLITION PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
H
PD107



UNIT "E" PLUMBING UNDERFLOOR PLAN

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

SHEET NOTES

1. 4" SANITARY UP TO WATER CLOSET
2. 1½" SANITARY UP TO URINAL
3. 1½" SANITARY UP TO LAVATORY
4. 2" SANITARY UP TO SINK
5. 4" SANITARY UP TO MOP BASIN
6. 1½" SANITARY UP TO ELECTRIC WATER COOLER
7. 4" SANITARY UP TO FLOOR DRAIN/FLOOR SINK
8. 2" SANITARY UP TO PLUMBER'S BOX
9. 2" SANITARY UP TO EMERGENCY SHOWER
10. 2" VENT UP.
11. 1½" SANITARY UP TO KITCHEN EQUIPMENT.
12. ½" CW, ½" HW, 1½" VENT UP TO KITCHEN EQUIPMENT.

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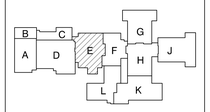
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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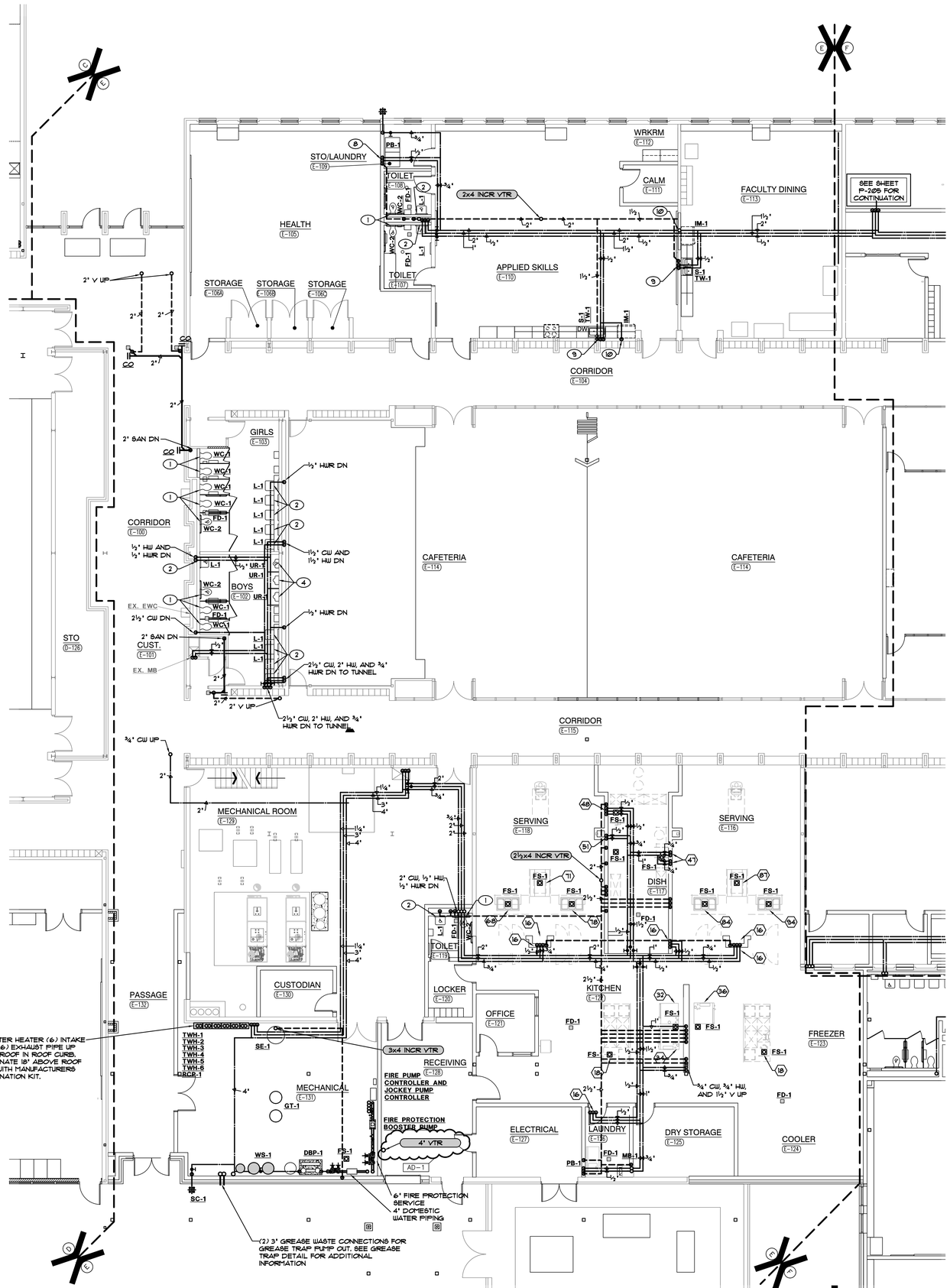
DRAWING
UNIT "E" PLUMBING UNDERFLOOR PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
E
P-104



UNIT "E" PLUMBING FIRST FLOOR PLAN

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

SHEET NOTES

1. 1½" CW, 4" SANITARY, AND 2" V DOWN TO WATER CLOSET.
2. ½" CW, ½" HW, 1½" SANITARY AND 1½" V DOWN TO LAVATORY.
3. ¾" DN TO BILLCOCK.
4. ¾" CW, 2" SANITARY AND 1½" V DOWN TO URINAL.
5. ½" CW, ½" HW, 4" SANITARY, AND 2" V DOWN TO MOP BASIN.
6. ½" CW, 1½" SANITARY, AND 1½" V DOWN TO ELECTRIC WATER COOLER.
7. ¾" CW, ¾" HW, 4" SANITARY, AND 2" V DOWN TO SHOWER.
8. ½" CW, ½" HW, 4" SANITARY, AND 2" V DOWN TO PLUMBERS BOX.
9. ½" CW, ½" HW, 2" SANITARY AND 1½" V DOWN TO SINK.
10. ½" CW DOWN TO ICE MAKER.

PLUMBING KITCHEN EQUIPMENT SCHEDULE

CONN. NO.	CONNECT TO	COLD WATER	HOT WATER	WASTE	FLOOR DRAINS	REMARKS
2	WALK-IN COOLER COIL	-	-	-	FD-1	-
7	WALK IN FREEZER COIL	-	-	-	FD-1	-
14	ISLAND WORKTABLE W/ 2 COMP SINK	-	-	-	FS-1	-
15	WALL MOUNT HAND SINK	-	-	1½"	-	-
16	HAND SINK FAUCET	½"	½"	-	-	-
17	ISLAND WORKTABLE W/PREP SINK	-	-	-	FS-1	-
18	SPLASH MOUNT FAUCET	½"	½"	-	-	-
19	GARBAGE DISPOSAL SYSTEM	½"	-	2"	-	-
32	COMBI OVEN/STEAMER	¾"	-	-	FS-1	-
34	COMBI OVEN/STEAMER	¾"	-	-	FS-1	-
36	COMBI OVEN/STEAMER	¾"	-	-	FS-1	-
38	COMBI OVEN/STEAMER	¾"	-	-	FS-1	-
45	THREE COMPARTMENT SINK	-	-	-	FS-1	-
47	SPLASH MOUNT FAUCET	¾"	¾"	-	-	-
48	SPLASH MOUNT PRE RINSE FAUCET	½"	½"	-	-	-
49	GARBAGE DISPOSAL SYSTEM	½"	-	2"	-	-
52	DISH MACHINE W/ BOOSTER HEATER	½"	½"	-	FS-1	-
68	DROP-IN HOT/COLD WELL UNIT	-	-	-	FS-1	-
71	DROP-IN COLD WELL UNIT	-	-	-	FS-1	-
78	DROP-IN HOT/COLD WELL UNIT	-	-	-	FS-1	-
84	DROP-IN HOT/COLD WELL UNIT	-	-	-	FS-1	-
87	DROP-IN COLD WELL UNIT	-	-	-	FS-1	-
94	DROP-IN HOT/COLD WELL UNIT	-	-	-	FS-1	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

THIS CONTRACTOR SHALL PROVIDE ALL ROUGH-IN AND FINAL SERVICES AND CONNECT ALL WATER LINES, WASTE LINES, INDIRECT PIPING, ETC. FOR FIXTURES AND KITCHEN EQUIPMENT ITEMS. PROVIDE AND INSTALL ALL VALVES, STOPS, TRAPS, AND PRESSURE REGULATORS NECESSARY TO CONNECT LINES. FOR FURTHER INFORMATION AND DESCRIPTION OF KITCHEN EQUIPMENT BEING SUPPLIED REFER TO ARCHITECTURAL DRAWINGS, KITCHEN EQUIPMENT DRAWINGS, AND ENLARGED KITCHEN AREA DRAWINGS.

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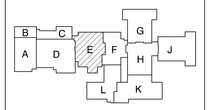
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
DRAWN BY MDG
CHECKED BY DJ

DAVID G. JANNEY
REGISTERED
NO. 10302590
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/16/22	ADDENDUM NO. 1

DRAWING
UNIT "E" PLUMBING FIRST FLOOR PLAN

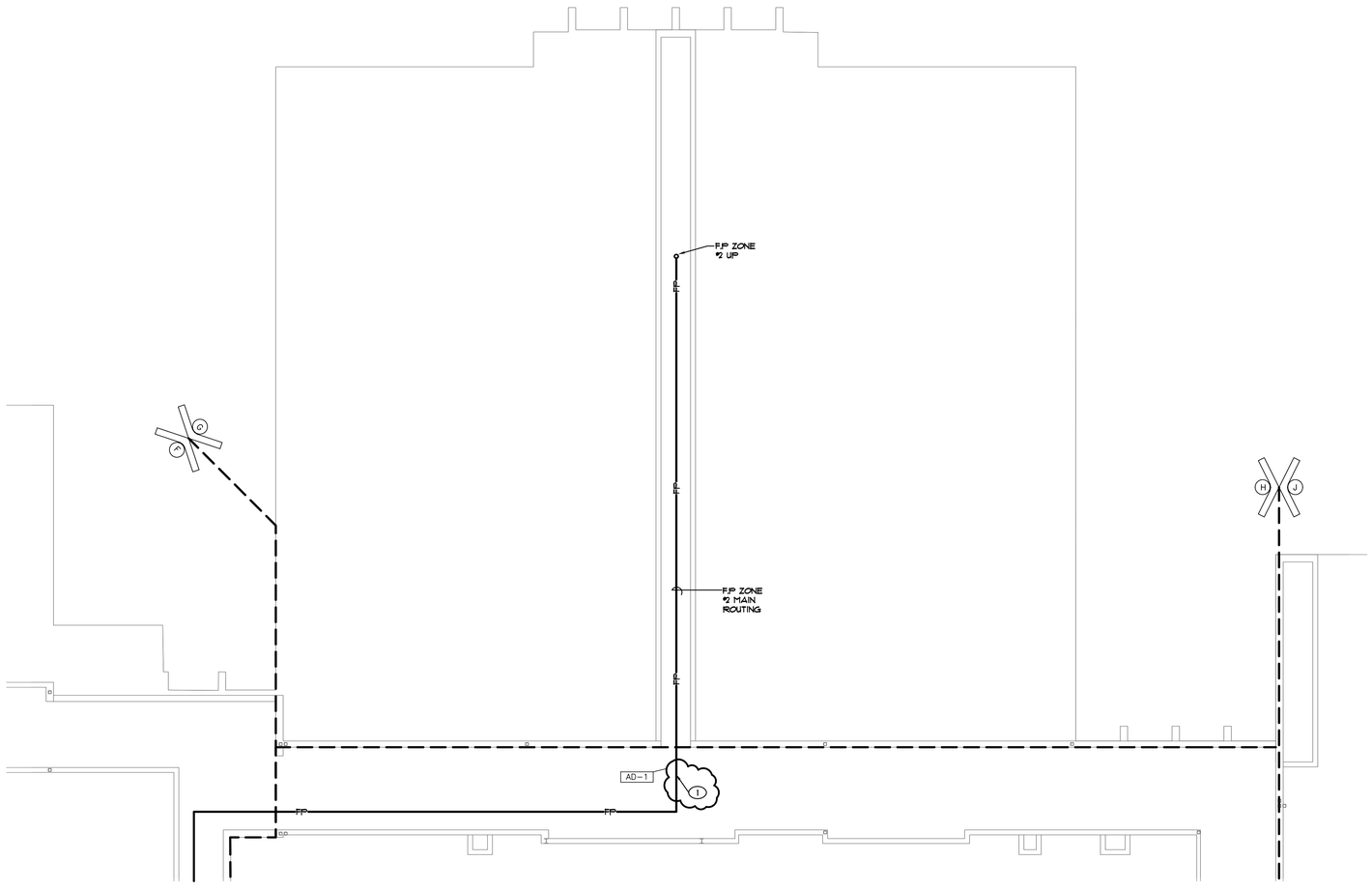
PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
E
P-204

SHEET NOTES

1. CONCEPTUAL ROUTING OF FIRE SPRINKLER MAIN THROUGH TUNNEL TO BUILDING ADDITIONS

AD–1



UNIT "G" FIRE PROTECTION TUNNEL PLAN
SCALE: 1/8" = 1'–0"

NORTH

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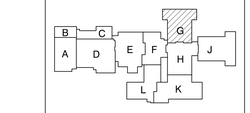

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DRAWING
UNIT "G" FIRE PROTECTION TUNNEL PLAN

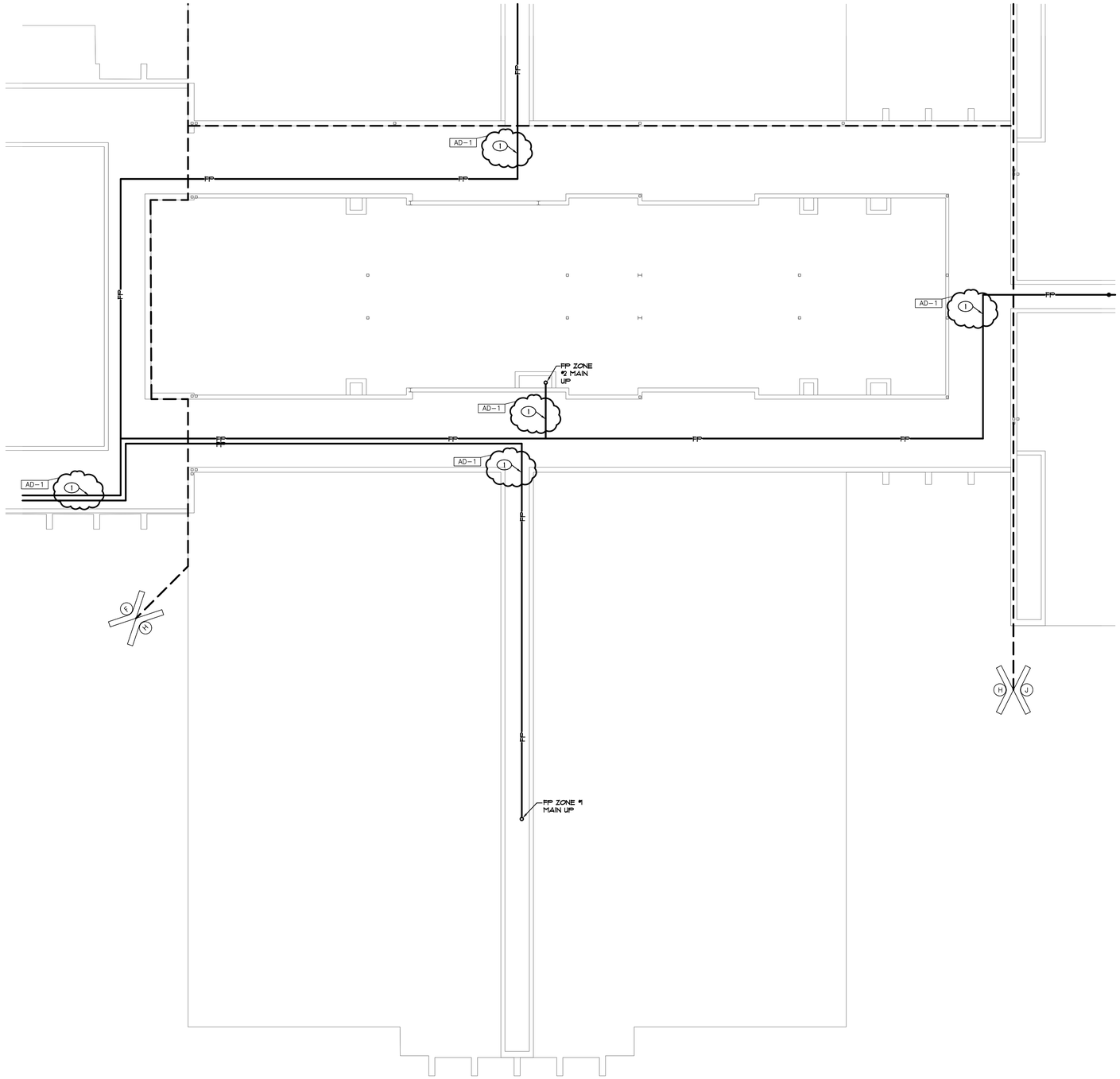
PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
FP-004

SHEET NOTES

1. CONCEPTUAL ROUTING OF FIRE SPRINKLER MAIN THROUGH TUNNEL TO BUILDING ADDITIONS

AD-1



UNIT "H" FIRE PROTECTION TUNNEL PLAN

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

NORTH

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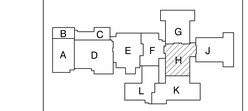
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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STATE OF INDIANA
PROFESSIONAL ENGINEER

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DRAWING
UNIT "H" FIRE PROTECTION TUNNEL PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

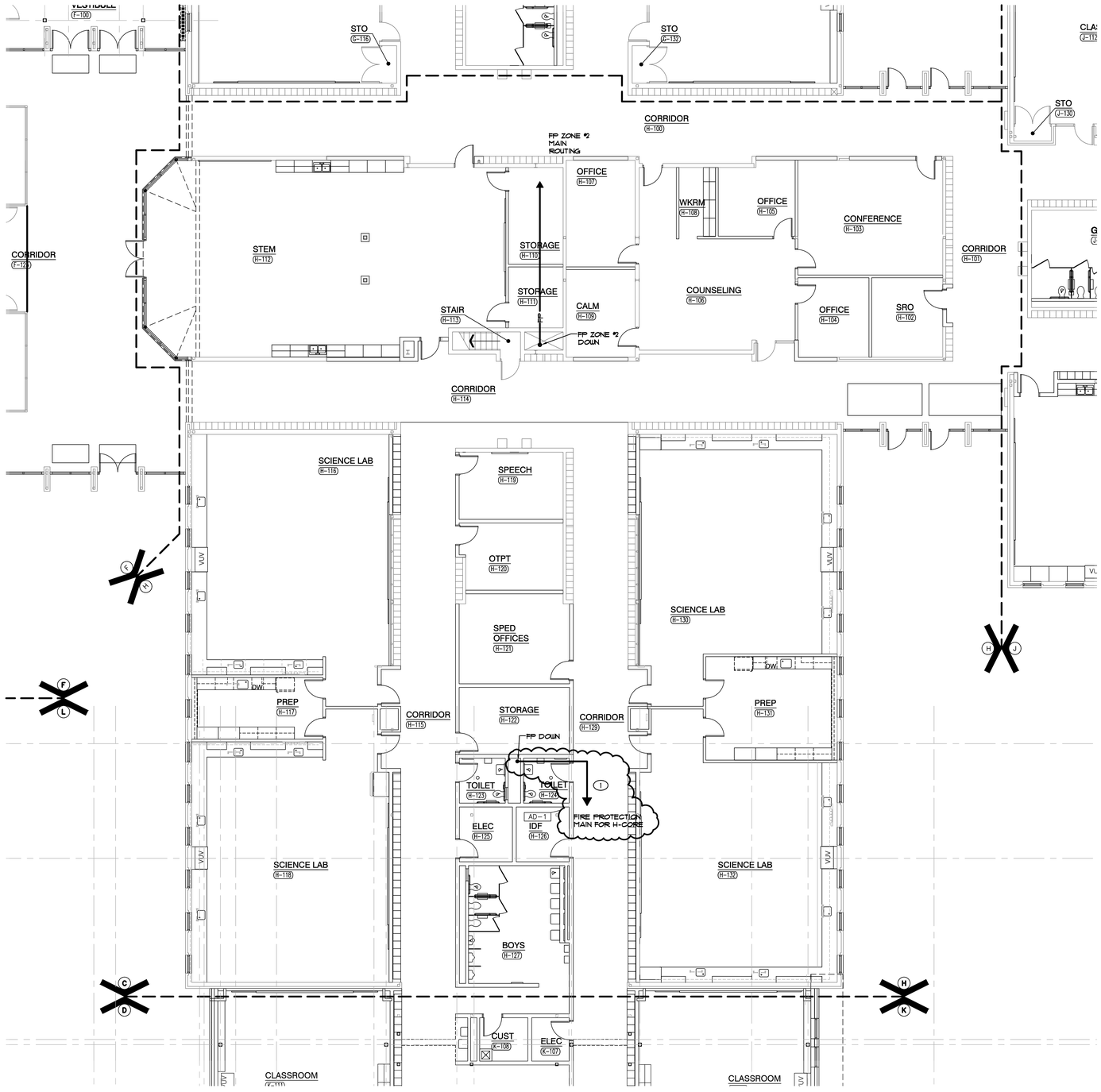
H

SHEET
FP-005

SHEET NOTES

1. CONCEPTUAL ROUTING OF FIRE SPRINKLER MAIN THROUGH TUNNEL TO BUILDING ADDITIONS

AD-1



UNIT "H" FIRE PROTECTION FIRST FLOOR PLAN

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

NORTH

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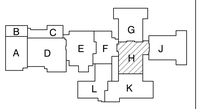
PROJECT

WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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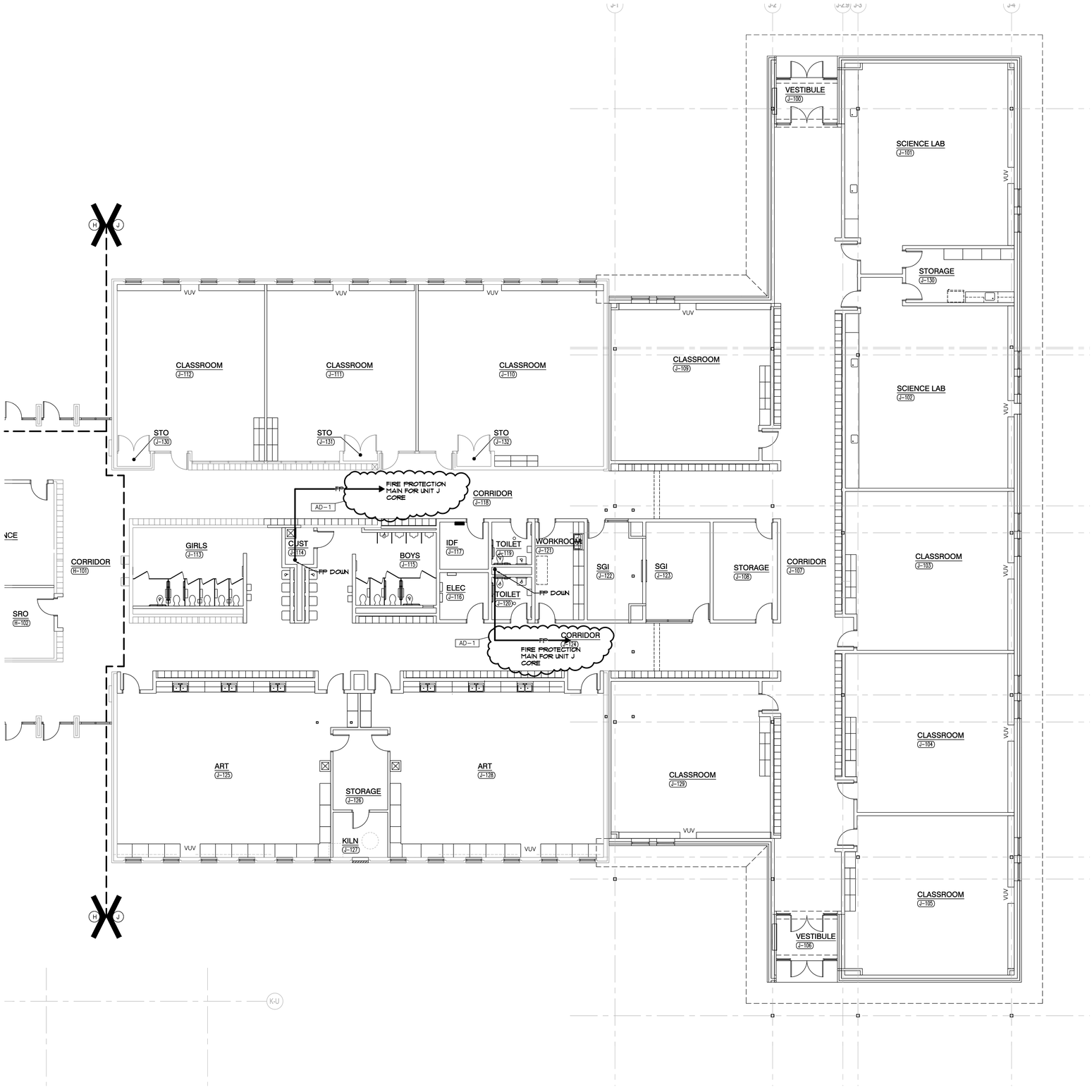
DRAWING
UNIT "H" FIRE PROTECTION FIRST FLOOR PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
H
FP-105

SHEET NOTES

1. CONCEPTUAL ROUTING OF FIRE SPRINKLER MAIN THROUGH TUNNEL TO BUILDING ADDITIONS



UNIT "J" FIRE PROTECTION FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

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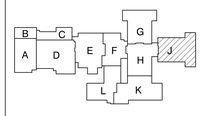
PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA



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DAVID G. JANNEY
NO. 10302590
STATE OF INDIANA

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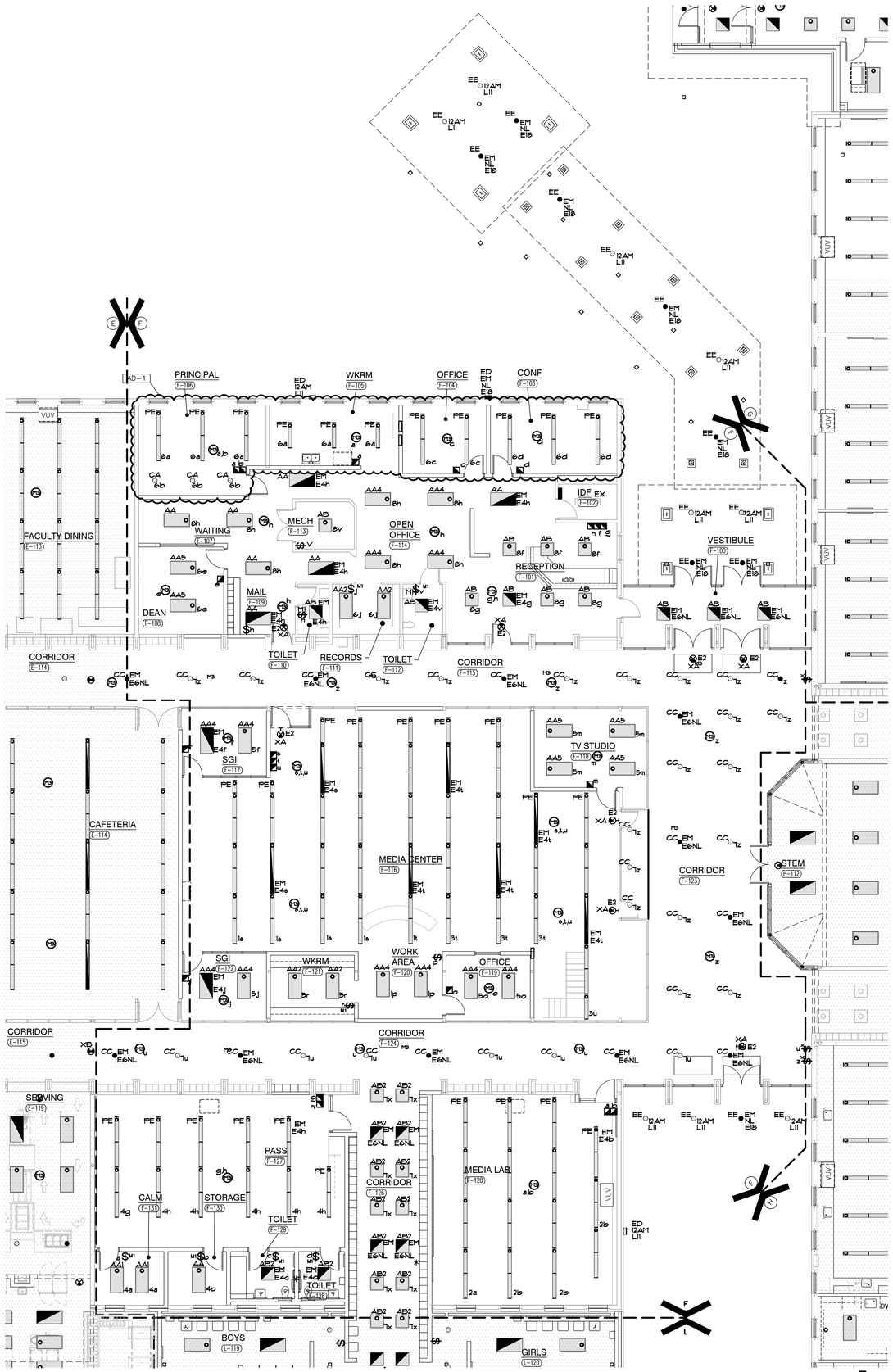
DRAWING
UNIT "J" FIRE PROTECTION FIRST FLOOR PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET J
FP-106



UNIT "F" ELECTRICAL FIRST FLOOR LIGHTING PLAN

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

GENERAL NOTES

1. CIRCUIT ALL NORMAL LIGHTING FIXTURES TO PANEL LP-1 UNLESS OTHERWISE NOTED.
2. SHADED FIXTURES, FIXTURES WITH 'EM' TAGS AND EXIT SIGNS SHALL BE PROVIDED WITH AN EMERGENCY LIFE SAFETY POWER SOURCE.
3. EXIT SIGNS SHALL BE CONNECTED TO CIRCUIT INDICATED IN EMERGENCY LIFE SAFETY PANEL EM-1.
4. FIXTURES WITH A 'NL' TAG SHALL BE CONNECTED TO THE NIGHT LIGHT CIRCUIT INDICATED IN EMERGENCY LIFE SAFETY PANEL EM-1.
5. CIRCUIT TAGS WITH AN 'E' PREFIX SHOWN WITH A SWITCH LEG SHALL BE A SWITCHED EMERGENCY FIXTURE CONNECTED TO PANEL EM-1. THE FIXTURE SHALL BE PROVIDED WITH A UL924 RATED BYPASS DEVICE TO ALLOW THE FIXTURE TO BE CONTROLLED ALONG WITH THE NORMAL FIXTURES IN THE ROOM. UPON LOSS OF POWER, THE FIXTURE SHALL BE IMMEDIATELY POWERED TO 100% REGARDLESS OF SWITCH POSITION.
6. CIRCUIT ALL NORMAL EXTERIOR LIGHTING FIXTURES ACCORDING TO PANEL 11 VIA TIMECLOCK, PHOTOCELL AND CONTACTORS.
7. EXTERIOR LIGHTING FIXTURES WITH AN 'E' PREFIX SHOWN SHALL BE ROUTED TO LIFE SAFETY PANEL 11 VIA TIMECLOCK, CONTACTORS, PHOTOCELL AND UL924 BYPASS DEVICES AS REQUIRED TO ALLOW FIXTURE TO OPERATE AND SWITCH ALONG WITH ADJACENT NORMAL LIGHTING. UPON LOSS OF POWER, THE FIXTURE SHALL BE IMMEDIATELY POWERED TO 100% REGARDLESS OF SWITCH POSITION.
8. EMERGENCY SENSING LEADS SHALL BE CONNECTED TO CONSTANT HOT FEEDS FROM NORMAL LIGHTING IN ROOM. THIS FEED SHALL BE TAKEN AHEAD OF ANY EMERGENCY SHUTDOWNS, RELAYS, CONTACTORS OR SWITCHES.
9. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED LIGHT FIXTURES.
10. ROUTE CONDUIT AS TIGHT TO THE EXPOSED CEILINGS AND STRUCTURE AS POSSIBLE TO MAXIMIZE CEILING SPACE.
11. VERIFY TEACHING SURFACE WITH OWNER'S REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION AND ADJUST SWITCHING TO PROPERLY ILLUMINATE TEACHING SURFACE. CAREFULLY COORDINATE FINAL SWITCHING WITH FINAL FURNITURE PLANS AND TEACHING WALL LOCATIONS.

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PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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REGISTERED DAVID G. JANNEY NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

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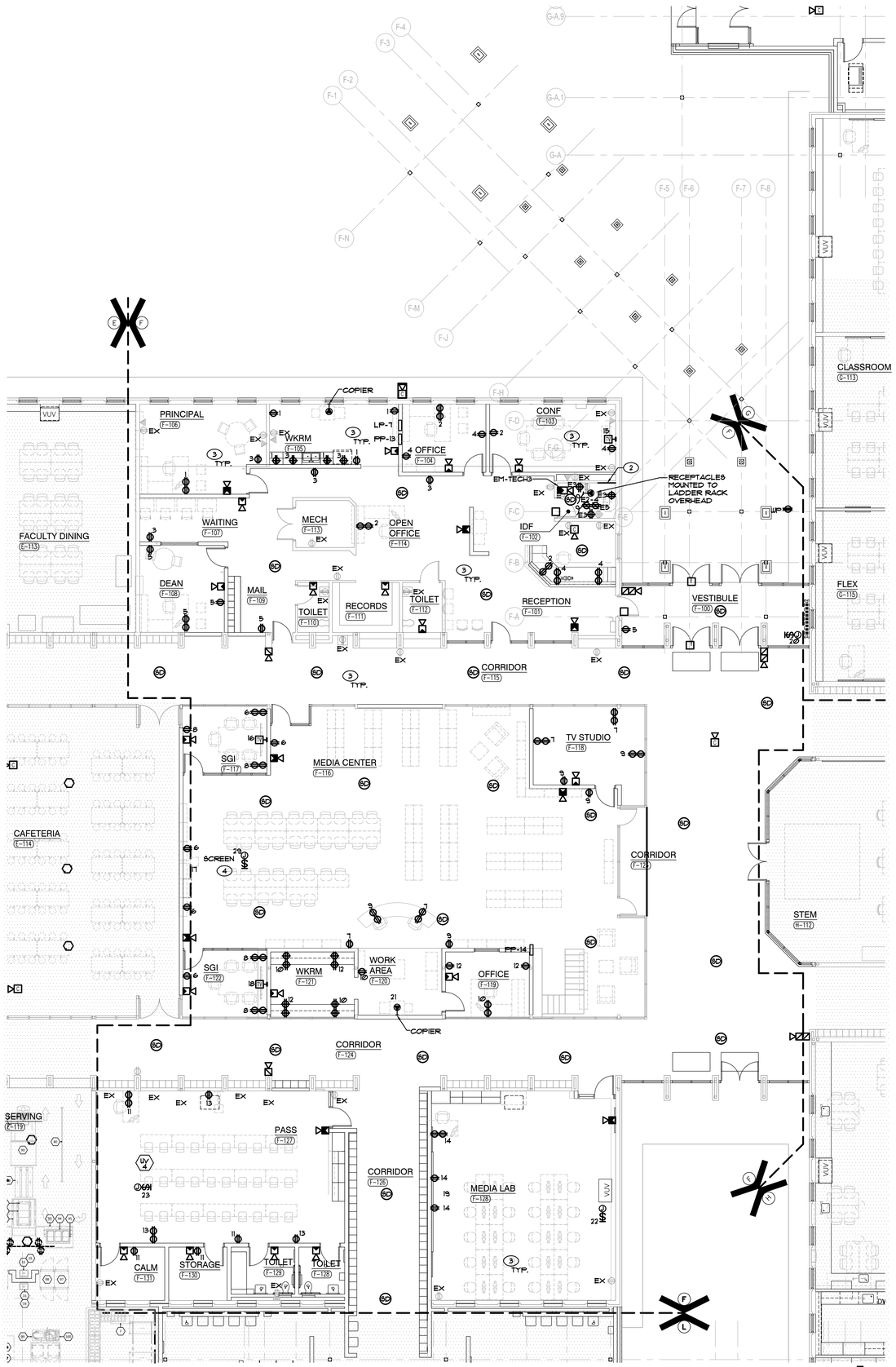
AD-1	03/15/22	ADDENDUM NO. 1

DRAWING
UNIT "F" ELECTRICAL FIRST FLOOR LIGHTING PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
F
EL105



UNIT "F" ELECTRICAL FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

AD-1
ADDENDUM #1:
REVISE THIS SHEET IN IT ENTIRETY

GENERAL NOTES

1. CIRCUIT ALL DEVICES TO PANEL FP13 UNLESS OTHERWISE NOTED.
2. REFER TO LOW VOLTAGE DRAWING FOR ROUGH-IN AND RACEWAY INFORMATION FOR ACCESS CONTROL, SOUND SYSTEMS, TECHNOLOGY SYSTEMS AND EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF DEVICES/EQUIPMENT, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS. COORDINATE AND VERIFY EXACT LOCATIONS OF ALL OF THESE ROUGH-INS AND REQUIREMENTS WITH TECH DYNE, ARCHITECT, OWNER, CONSTRUCTION MANAGER AND DIVISION 27 CONTRACTOR PRIOR TO ROUGH-IN.
3. ALL DEVICES WITH BOX BASES SHALL BE SURFACE MOUNTED TO THE EXISTING WALL. CONTRACTOR SHALL PROVIDE NEW NEATLY ROUTED SURFACE RACEWAY AND SURFACE RACEWAY BACKBOXES FOR NEW DEVICES LOCATED ON EXISTING WALLS. CONTRACTOR SHALL VERIFY EXACT ROUTING OF SURFACE RACEWAY WITH ARCHITECT PRIOR TO INSTALLATION.
4. CIRCUIT ALL DEVICES WITH A 'E' PREFIX TO NEW PANEL EM-TECH3.

SHEET NOTES

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ELECTRICAL CIRCUITING AND WIRING REQUIREMENTS.
2. TELECOM GROUNDING BUSBAR, COORDINATE FINAL LOCATION IN ROOM WITH TECHNOLOGY EQUIPMENT INSTALLER. REFER TO GROUNDING DETAIL AND GROUNDING BUSBAR DETAIL FOR ADDITIONAL INFORMATION.
3. RECONNECT EXISTING RECEPTACLES TO NEW NORMAL POWER BRANCH CIRCUITRY IN NEW PANELS INSTALLED COMPLETE AS REQUIRED. MAXIMUM 1400W PER 120 VOLT CIRCUIT. WHERE NECESSARY, DUE TO LIMITATIONS IN THE EXISTING BRANCH CIRCUITRY, THIS CONTRACTOR SHALL FURNISH AND INSTALL 20A-1 POLE CIRCUIT BREAKERS AS REQUIRED IN NEW PANEL AND EXTEND 2 #12 AND 1 #12 GRD IN 3/4" CONDUIT COMPLETE AS REQUIRED. VERIFY CONDITIONS AND REQUIREMENTS IN FIELD.
4. VERIFY REQUIREMENTS WITH MANUFACTURER FOR MOTORIZED SCREEN. PROVIDE COMPLETE WITH ASSOCIATED CONDUIT TO CONTROL STATION.

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DRAWING
UNIT "F" ELECTRICAL FIRST FLOOR POWER PLAN

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
F
EP105

LD2

TOTAL KW: 253.9 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MCB 1000
FEEDER: 3 SETS OF 4 #400 + 1 #2/0 GRD, 3"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
	100		3200			1	2	12000		225		
LP4				3500		3	4		10000			PP10
	3				2200	5	6			10000	3	
	100		4600			7	8	12120		225		
LP5				4500		9	10		10000			PP11
	3				3600	11	12			6600	3	
	100		5200			13	14	5800		100		
LP6				3300		15	16		4000			PP12
	3				3300	17	18			4600	3	
	225		15000			19	20	8133		100		
PP6				15628		21	22		8133			AH-7
	3				14428	23	24			8133	3	
	100	Ø				25	26					
PP7			Ø			27	28					SPACE
	3				Ø	29	30					
	225		16400			31	32					
PP8				16200		33	34					SPACE
	3				11600	35	36					
	225		11120			37	38			60		
PP9				10828		39	40					SPD
	3				9000	41	42				3	
			55520	53956	44128			38053	32933	29333		

A= 93,573
B= 86,889
C= 73,461
TOTAL= 253,923

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

LP4

TOTAL KW: 8.9 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD - 1 1/2"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
STEP 1 LTG/122	20	1	1200			1	2	1200		20	1	LTG/132/127
LTG/103/104/106	20	1		1200		3	4		1100		20	1	LTG/117/118
LTG/130/131	20	1			1200	5	6			1000	20	1	LTG/118
SPARE	20	1				7	8	800			20	1	LTG/119/120/121/122
SPARE	20	1				9	10		1200		20	1	MEZZ LTG
SPARE	20	1				11	12						SPACE
SPARE	20	1				13	14						SPACE
SPARE	20	1				15	16						SPACE
SPARE	20	1				17	18						SPACE
SPARE	20	1				19	20						SPACE
SPARE	20	1				21	22						SPACE
SPARE	20	1				23	24						SPACE
SPARE	20	1				25	26						SPACE
SPARE	20	1				27	28						SPACE
SPARE	20	1				29	30						SPACE
SPARE	20	1				31	32						SPACE
SPARE	20	1				33	34						SPACE
SPARE	20	1				35	36						SPACE
SPARE	20	1				37	38						SPACE
SPARE	20	1				39	40						SPACE
SPARE	20	1				41	42						SPACE
			1200	1200	1200			2000	2300	1000		

A= 3,200
B= 3,500
C= 2,200
TOTAL= 8,900

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

LP5

TOTAL KW: 12.7 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD - 1 1/2"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
LTG/112/113	20	1	1000			1	2	800		20	1	LTG/105
LTG/111/15	20	1		1000		3	4		800		20	1	LTG/104
LTG/110/117	20	1			1000	5	6			800	20	1	LTG/103
LTG/109/108	20	1	1000			7	8	800			20	1	LTG/107
LTG/123/129	20	1		1000		9	10		900		20	1	LTG/101/130
LTG/122/128	20	1			1000	11	12				20	1	SPARE
LTG/121/125	20	1	1000			13	14				20	1	SPARE
CORR LTG	20	1		800		15	16				20	1	SPARE
CORR LTG	20	1			800	17	18				20	1	SPARE
SPACE						19	20				20	1	SPARE
SPACE						21	22				20	1	SPARE
SPACE						23	24				20	1	SPARE
SPACE						25	26				20	1	SPARE
SPACE						27	28				20	1	SPARE
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			3200	2800	2800			1600	1700	800		

A= 4,600
B= 4,500
C= 3,600
TOTAL= 12,700

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

LP6

TOTAL KW: 11.8 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD - 1 1/2"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
LTG/105/133	20	1	900			1	2	900		20	1	LTG/115/118
LTG/104	20	1		800		3	4		900		20	1	LTG/131/106
LTG/103	20	1			800	5	6			800	20	1	LTG/129
LTG/102	20	1	800			7	8	900			20	1	LTG/127/107
LTG/101	20	1		800		9	10		800		20	1	LTH/125/123/119
LTG/111/112	20	1			900	11	12			800	20	1	CORR LTG
LTG/110/113	20	1	900			13	14	800			20	1	CORR LTG
SPACE						15	16				20	1	SPARE
SPACE						17	18				20	1	SPARE
SPACE						19	20				20	1	SPARE
SPACE						21	22				20	1	SPARE
SPACE						23	24				20	1	SPARE
SPACE						25	26				20	1	SPARE
SPACE						27	28				20	1	SPARE
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			2600	1600	1100			2600	1100	1600		

A= 5,200
B= 3,300
C= 3,300
TOTAL= 11,800

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP6

TOTAL KW: 46.1 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
REC/116	20	1	1400			1	2	1400		20	1	REC/116
REC/116	20	1		1400		3	4		1400		20	1	REC/116/117
REC/115	20	1			1200	5	6			1400	20	1	REC/117/118
REC/118	20	1	1200			7	8	1400			20	1	REC/118
REC/118	20	1		1400		9	10		1200		20	1	REC/118
REC/118	20	1			1000	11	12			1400	20	1	REC/114/119/120/121
REC/119/120/121	20	1	1400			13	14	1400			20	1	REC/130
REC/130	20	1		1400		15	16		1400		20	1	REC/130
REC/130	20	1			1400	17	18			1400	20	1	REC/130/131
REC/132	20	1	1200			19	20	1200			20	1	REC/132
REC/132	20	1		1200		21	22		1200		20	1	REC/132
REC/127/132	20	1			1200	23	24			1200	20	1	MONITOR/116/118
MONITOR/130/132	20	1	1200			25	26	1400			20	1	UV-4
HANDDRYER/127	30	1		1600		27	28		1400		20	1	UV-3
HANDDRYER/127	30	1			1600	29	30			1400	20	1	FC-1
RT REC	20	1	400			31	32	1400			20	1	UV-3
TEF-14	20	1		628		33	34		1400		20	1	UV-4
SPARE	20	1			628	35	36			600	20	1	MEZZ RECEPTS
RUME HOOD H-118	20	1	1000			37	38						SPACE
SPARE	20	1				39	40						SPACE
SPARE	20	1				41	42						SPACE
			7800	7628	7028			8200	8000	7400		

A= 16,000
B= 15,628
C= 14,428
TOTAL= 46,056

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

AD-1

PP7

TOTAL KW: 0.0 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD - 1 1/2"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
SPARE	20	1				1	2			20	1	SPARE
SPARE	20	1				3	4			20	1	SPARE
SPARE	20	1				5	6			20	1	SPARE
SPARE	20	1				7	8			20	1	SPARE
SPARE	20	1				9	10			20	1	SPARE
SPARE	20	1				11	12			20	1	SPARE
SPACE						13	14					SPACE
SPACE						15	16					SPACE
SPACE						17	18					SPACE
SPACE						19	20					SPACE
SPACE						21	22					SPACE
SPACE						23	24					SPACE
SPACE						25	26					SPACE
SPACE						27	28					SPACE
SPACE						29	30					SPACE
SPACE						31	32					SPACE
SPACE						33	34					SPACE
SPACE						35	36					SPACE
SPACE						37	38					SPACE
SPACE						39	40					SPACE
SPACE						41	42					SPACE
			Ø	Ø	Ø			Ø	Ø	Ø		

A= Ø
B= Ø
C= Ø
TOTAL= Ø

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP8

TOTAL KW: 37.6 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
REC/101	20	1	1200			1	2	1200		20	1	REC/100/130
REC/100/101	20	1		1200		3	4		1200		20	1	REC/102/130
REC/112	20	1			800	5	6			1200	20	1	REC/102
REC/112	20	1	1000			7	8	1400			20	1	REC/111/116
REC/110	20	1		1400		9	10		1000		20	1	REC/111
SPARE	20	1				11	12			1000	20	1	REC/109
REC/113/114/121	20	1	1000			13	14	1000			20	1	REC/109
REC/115/121/122	20	1		1200		15	16		1000		20	1	REC/107/108/123
REC/103	20	1			1000	17	18			1400	20	1	REC/125
REC/103	20	1	1000			19	20				20	1	SPARE
SPARE	20	1				21	22		1200		20	1	REC/125/128
SPARE	20	1				23	24				20	1	SPARE
SPARE	20	1				25	26	1200			20	1	REC/128
REC/128	20	1		1200		27	28		1000		20	1	REC/129
SPARE	20	1				29	30				20	1	SPARE
REC/104	20	1	1200			31	32	1000			20	1	REC/104
REC/104	20	1		1000		33	34		1200		20	1	REC/105
REC/105	20	1			1200	35	36			1200	20	1	MONITOR/101/102
MONITOR/111/112	20	1	1200			37	38	1200			20	1	MONITOR/103/110
MONITOR/125/128	20	1		1200		39	40		1200		20	1	MONITOR/103/129
MONITOR/104/105	20	1			1200	41	42			1200	20	1	SPARE
			6600	7200	4200			7000	7800	4800		

A= 13,600
B= 15,000
C= 9,000
TOTAL= 37,600

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP9

TOTAL KW: 30.9 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
UV-2	20	1	1400			1	2	600		20	1	CH-1
UV-2	20	1		1400		3	4		1400		20	1	UV-1
UV-1	20	1			1400	5	6			1400	20	1	UV-1
UV-1	20	1	1400			7	8	1400			20	1	UV-1
UV-1	20	1		1400		9	10		1400		20	1	FC-1
UV-1	20	1			1400	11	12			1400	20	1	FC-1
UV-1	20	1	1400			13	14	1400			20	1	FC-1
HAND DRY	30	1		1600		15	16		1400		20	1	UV-4
HAND DRY	30	1			1600	17	18			1400	20	1	UV-4
HAND DRY	30	1	1600			19	20				20	1	SPARE
HAND DRY	30	1		1600		21	22				20	1	SPARE
RT REC	20	1			400	23	24				20	1	SPARE
TEF-17	20	1	1920			25	26				20	1	SPARE
TEF-18	20	1		628		27	28				20	1	SPARE
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			7120	6628	4800			3400	4200	4200		

A= 11,120
B= 10,828
C= 9,000
TOTAL= 30,948

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP10

TOTAL KW: 32.8 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
REC/101	20	1	1400			1	2	1200		20	1	REC/102
REC/101/109	20	1		1200		3	4		1000		20	1	REC/103
REC/103	20	1			1200	5	6			1200	20	1	REC/104
REC/103	20	1	1200			7	8	1200			20	1	REC/104/133
REC/133	20	1		1400		9	10		1000		20	1	REC/105
REC/109/110/111	20	1			1400	11	12			1200	20	1	REC/105/106
REC/106/107/108	20	1	1200			13	14	1200			20	1	REC/112/113
REC/113/115	20	1		1200		15	16		1000		20	1	REC/112/113
REC/115	20	1			1200	17	18			1400	20	1	REC/118/117/123/125
REC/127	20	1	800			19	20	1400			20	1	REC/129/131
REC/126/127	20	1		800		21	22		1400		20	1	REC/129/131
MONITOR/101/102	20	1			1200	23	24			1200	20	1	MONITOR/103/104
MONITOR/105/127	20	1	1200			25	26	1200			20	1	MONITOR/112/113
MONITOR/129/131	20	1		1200		27	28		600		20	1	MONITOR/115
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			3800	3800	3000			6200	3000	3000		

A= 17,000
B= 10,800
C= 10,000
TOTAL= 37,800

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP11

TOTAL KW: 28.7 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 225
FEEDER: 4 #4/0 & 1 #4 GRD. - 2 1/2"C. | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
UV-2	20	1	1400			1	2	1400		20	1	UV-1
UV-1	20	1		1400		3	4		1400		20	1	UV-1
UV-1	20	1			1400	5	6			1400	20	1	UV-1
UV-1	20	1	1400			7	8	1400			20	1	UV-2
UV-1	20	1		1400		9	10		1400		20	1	UV-2
UV-1	20	1			1400	11	12			600	20	1	CH-1
FC-1	20	1	1400			13	14	1600			20	1	HAND DRY
FC-1	20	1		1400		15	16		1600		20	1	HAND DRY
RT REC	20	1			200	17	18			1600	20	1	HAND DRY
TEF-13	30	1	1920			19	20	1600			20	1	HAND DRY
SPACE						21	22		1400		20	1	FC-1
SPACE						23	24				20	1	SPARE
SPACE						25	26				20	1	SPARE
SPACE						27	28				20	1	SPARE
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			6120	4200	3000			6000	3800	3600		

A= 12,120
B= 10,000
C= 6,600
TOTAL= 28,720

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

PP12

TOTAL KW: 14.4 | ENCLOSURE: NEMA-1 | PHASE: 3Φ | VOLTAGE: 120 / 208
MOUNTING: SURFACE | BUSSING: COPPER | FAULT CURRENT RATING: 22000 AIC | MLO(AMPS): 100
FEEDER: 4 #2 & 1 #8 GRD - 1 1/2"C | LOCATION:

LOAD DESCRIPTION	C/B TRIP	C/B POLE	LOAD A	LOAD B	LOAD C	CCT. NO.	LOAD A	LOAD B	LOAD C	C/B TRIP	C/B POLE	LOAD DESCRIPTION
REC/100/112	20	1	1200			1	2	1400				REC/112
REC/118/112	20	1		1000		3	4		1400			REC/111/112
REC/100/106/107/109	20	1			1200	5	6			1200	20	1	REC/103/105/108
REC/106/107/109	20	1	1400			7	8	1200			20	1	REC/103/105/108
REC/102/104/114	20	1		1000		9	10		600		20	1	REC/101/103
REC/102/104	20	1			1000	11	12			1200	20	1	MONITOR/105/106
MONITOR/112	20	1	600			13	14				20	1	SPARE
SPACE						15	16				20	1	SPARE
SPACE						17	18				20	1	SPARE
SPACE						19	20				20	1	SPARE
SPACE						21	22				20	1	SPARE
SPACE						23	24				20	1	SPARE
SPACE						25	26				20	1	SPARE
SPACE						27	28				20	1	SPARE
SPACE						29	30				20	1	SPARE
SPACE						31	32				20	1	SPARE
SPACE						33	34				20	1	SPARE
SPACE						35	36				20	1	SPARE
SPACE						37	38				20	1	SPARE
SPACE						39	40				20	1	SPARE
SPACE						41	42				20	1	SPARE
			3200	2000	2200			2600	2000	2400		

A= 5,800
B= 4,000
C= 4,600
TOTAL= 14,400

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN
MILLIES ENGINEERING GROUP (219) 924-8400 www.milliesengineeringgroup.com

PROJECT
WESTCHESTER INTERMEDIATE SCHOOL - ADDITIONS & RENOVATIONS

DUNELAND SCHOOL CORPORATION
CHESTERTON, INDIANA

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PROJECT 21-141
DATE 02/28/22
COORDINATED BY JC
DRAWN BY MS
CHECKED BY DJ

REGISTERED DAVID G. JANNEY NO. 10302590 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR
AD-1	03/15/22	ADDENDUM NO. 1

DRAWING
ELECTRICAL PANEL SCHEDULES

PROJECT
WESTCHESTER IS - ADDITIONS & RENOVATIONS

SHEET
E-604