ADDENDUM TWO

West Campus Maintenance Building Addition – 2026
2101 E. Coliseum Blvd
Fort Wayne, IN 46805

MARTINRILEY architects/engineers
221 West Baker Street
Fort Wayne, Indiana 46802
260-422-7994

Commission No.: F25111

Addendum Date: 9 April 2026

Conditions: The following clarifications, amendments, additions, deletions, revisions and modifications are a part of the contract documents and change the original documents only in the manner and to the extent stated.

Copies of the Addendum shall be bound with all contract sets of drawings and specifications.

CLARIFICATIONS:

- The 13'-1" ± labeled as **"eave height"** is actually the knee of the column and beam structure. The eave height has been labeled on the drawings. Refer to revisions.
- **Ceco Building Systems and Varco Pruden** are allowable building system substitutions for Nucor. **Bidders using these manufacturers certify that the product meets or exceeds** building requirements in the specifications and can match/meet or exceed the existing building in color, finish, profiles, and quality.
- **All drawings have been stamped** by respective architects and engineers. All sheets have been reissued due to this. Stamps are **not clouded** as revisions.

Contractor Question #1

Does the owner happen to have the original Nucor drawings for the existing building? Any specifications on the existing siding or structural load calculations would be greatly appreciated?

Refer to added specification section.

Contractor Question #2

What are the deflection/sidesway requirements?

Specification section 13 3419, Metal Building Systems, clearly list l/180 for roof and wall members; this would include drift.

Contractor Question #3

The existing building columns are at floor level with standard Nucor bolt patterns. Can the addition building columns be at floor level with standard Nucor bolt patterns?

1) The bottom of base plate may be founded at floor level (reference elevation 100'-0" = top of pedestal) overall height must match architectural requirements and elevations. Originally, 1 1/2" grout pads were specified to allow for proper leveling. If grout pads are omitted, tops of pedestals must be level.

2) As stated on sheet S001, Structural Steel Notes, note #20, "METAL BUILDING SYSTEM MANUFACTURER MUST DESIGN BASE PLATES FOR FRAMES AND COLUMNS BASED ON THE ANCHOR BOLT SIZES AND SPACING IN BOTH ORTHOGONAL DIRECTIONS PROVIDED IN THESE DRAWINGS.".

Contractor Question #4

Spec section: 31 2323-1 – GeoFoam. Do you have a location on drawings where you would want this?

No geofoam for this project. Item 1.04 C. should be omitted in its entirety.

Contractor Question #5

The print shows 2- new 3 way switches on addition. Are they wanting the new lights to be connected to the old lights and 3 way for both sides?

Per note 1 on E101, extend the existing circuit. Clarification added to drawing.

Contractor Question #6

Do bollards need to be 8'? typical height is 7' because the poles come to the fab shop at 21'. Price is going to triple for 8' poles. Reference S402 detail 10.

Bollards revised to 7' height. Refer to updated drawing.

Contractor Question #7

The demolition plan shows that we are to remove only the north 20' of existing fence. The east and south sides remain in place. The site layout plan if calling for all new fence. Are we to remove all of the existing fence and replace with new or leave the east and south sides of existing fence and just add on the new fence along the new addition?

Refer to revised drawings. The east and south sides of the existing fence are to remain. New portions are at the north and northeast sections.

Contractor Question #8

The site layout plan does not show any gates being installed. Should there be some gates to allow access into this area? If so where and what size of gates would be required?

Existing north gate to be salvaged and reinstalled. Refer to revised drawing. Stretches of new fencing still required at each side of gate as needed. Field verify sizes.

Contractor Question #9

On sheet C800 detail 1 there is a note at the top that points to the top rail and says 1 5/8" o.d. top and bottom rail. The existing fence has bottom tension wire and not bottom rail. Should we install bottom tension wire to match the existing or install bottom rail?

Install bottom tension wire to match existing. See revised drawing.

Contractor Question #10

Are there any soil boring available for this project?

Yes, refer to attached geotechnical report.

Contractor Question #11

Typical Stone Road Section 2/C-800 does not specify what type of recycled base is to be use. Is the intent to use 24" of #53 rcycled base and 3" of #53 limestone surface? If not, please clarify what should be used for this section

This detail has been revised to read: 6-8" of top #73 stone over 4-8" base of #2 stone.

Contractor Question #12

What type of subgrade separation fabric is to be used for Typical Stone Road Section 2 / C-800?

This detail has been revised to remove the subgrade separation fabric.

Contractor Question #13

Is #53 limestone acceptable for the granular base in the slab on grade?

Yes, #53 must be used under the slab per specs.

CHANGES TO THE DRAWINGS:

- **REMOVE AND REPLACE** all sheets in the set. Changes on these sheets include:
  - **MODIFY** all references to "eave height" on to read as 115'-1"± rather than 113'1" ±
  - **REMOVE** "SOUTH WALL" from room finish schedule
  - **REVISE** foundation details on wall sections for clarity on A401 and S402
  - **CLARIFICATION** on A101 Room Schedule
  - **REVISE** C800 per the answered questions above
  - **REVISE** work description notes to clarify gate and fencing on C101 and C200
  - **REVISE** note 1 on E101
  - **ADD** stamps to all drawings

CHANGES TO THE SPECIFICATIONS:

- **ADD** Section *00 3100 Available Project Information* to the project manual. Existing pre-engineered metal building drawings from previous project are included in this section. These are for reference only.
- **MODIFY** the certification page to include signatures and registration numbers.
- **MODIFY** Section 31 2323 to omit Item 1.04 C. in its entirety.

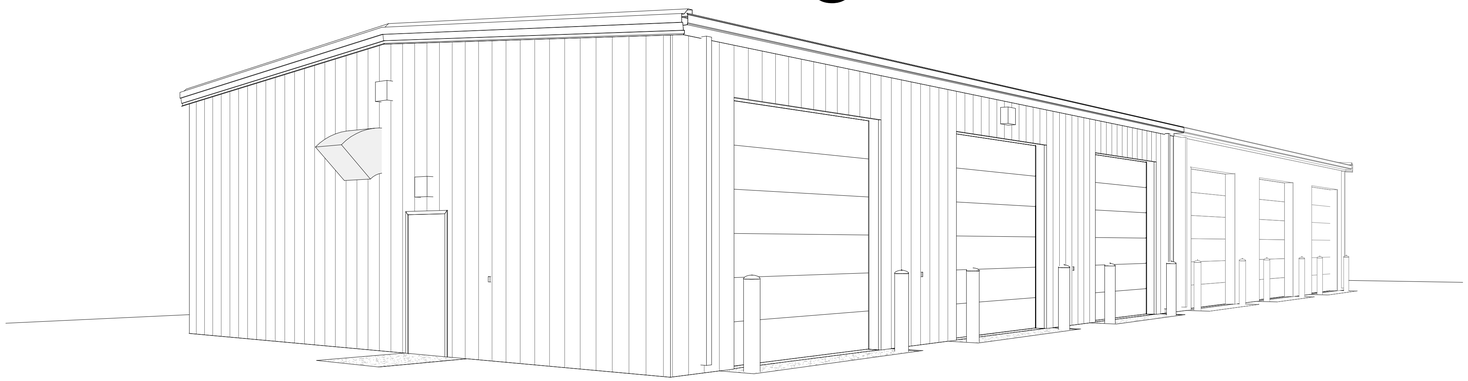
ATTACHMENTS:

F25111 - C.20.10211 W Campus Maintenance Building Addition - 2026 - Combined Drawing Set 2026-04-09.pdf
Section 31 2323.pdf
Certification Sheet.pdf
00 3100-RIB-Available Project Information-04-01-2026.pdf
Geotech Report - PFW Maintenance Building Addition - Fort Wayne, IN.pdf

END OF ADDENDUM NUMBER TWO
W:\2025 Projects\F25111 PFW W Main Add\Project Management\05-Bidding

New Construction and Renovation Work For:

C.20.10211 PFW West Campus Maintenance Building Addition - 2026



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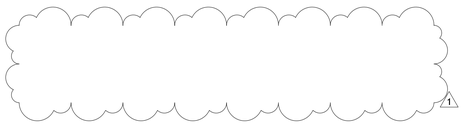


SYMBOLS KEY

EARTHWORK: EARTH/ UNDISTURBED FILL; EARTH/ COMPACTED FILL; GRANULAR FILL; SAND

WOOD: LUMBER; FINISH WOOD; WOOD BLOCKING; PLYWOOD

CONCRETE: CONCRETE

GLASS: GLASS; GLASS BLOCK

MASONRY: CONCRETE MASONRY UNIT; BRICK

INSULATION: BATT/LOOSE INSULATION; RIGID INSULATION

METALS: STEEL; ALUMINUM

NORTH ARROW

ELEVATION TARGET
EL = 8' - 0" A.F.F.

COLUMN CENTERLINE

BUILDING SECTION — 1 / A401

WALL SECTION — 1 / A410

DETAIL SECTION — 1 / A410

L0001 F — ASBESTOS BUILDING MATERIAL TEST LOCATION
DENOTES PROJECT COMMISSION NUMBER/TEST CLT NUMBER
DENOTES APPLICATION OF BUILDING MATERIAL ASSEMBLY AS ROOF (SUB)MEMBRANE OR FLASHING

L0001 M — NON-ASBESTOS BUILDING MATERIAL TEST LOCATION
DENOTES PROJECT COMMISSION NUMBER/TEST CLT NUMBER
DENOTES APPLICATION OF BUILDING MATERIAL ASSEMBLY AS ROOF (SUB)MEMBRANE OR FLASHING

WORK DESCRIPTION NOTE

DEMO WORK DESCRIPTION NOTE

ENLARGED PLAN DETAIL — 1 / A410 — SHEET

INTERIOR ELEVATION — DETAIL A610 — SHEET

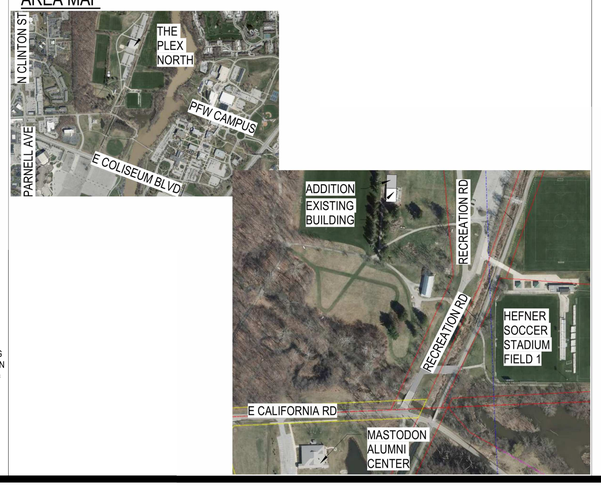
BUILDING ELEVATION — 1 / A210 — SHEET

OFFICE 104 — ROOM NAME / ROOM NUMBER

DETAIL DESCRIPTION NOTES

WINDOW OR ROOF AREA

AREA MAP



INDEX OF DRAWINGS

ARCHITECT
JACK E. DANIEL
REGISTERED
No. AR00910026
STATE OF INDIANA
ARCHITECT
04/08/2026
JACK E. DANIEL

ENGINEER
JEREMY L. BRICKEY
REGISTERED
No. 10809052
04/07/2026
STATE OF INDIANA
PROFESSIONAL ENGINEER
JEREMY L. BRICKEY

ENGINEER
RONALD P. SCHEELE
REGISTERED
No. 10403287
STATE OF INDIANA
PROFESSIONAL ENGINEER
RONALD SCHEELE

ENGINEER
RYAN MICHAEL WALKER
REGISTERED
No. 12501064
STATE OF INDIANA
PROFESSIONAL ENGINEER
04/08/2026
RYAN WALKER

REVISION		DATE
1	Addendum 2	2026-04-09

MARTIN RILEY
architects • engineers
221 West Baker Street
Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

DATE: 2026-03-13
SET NUMBER: BID SET

COMMISSION NO. F25111

C.20.10211 PFW West Campus Maintenance Building Addition - 2026

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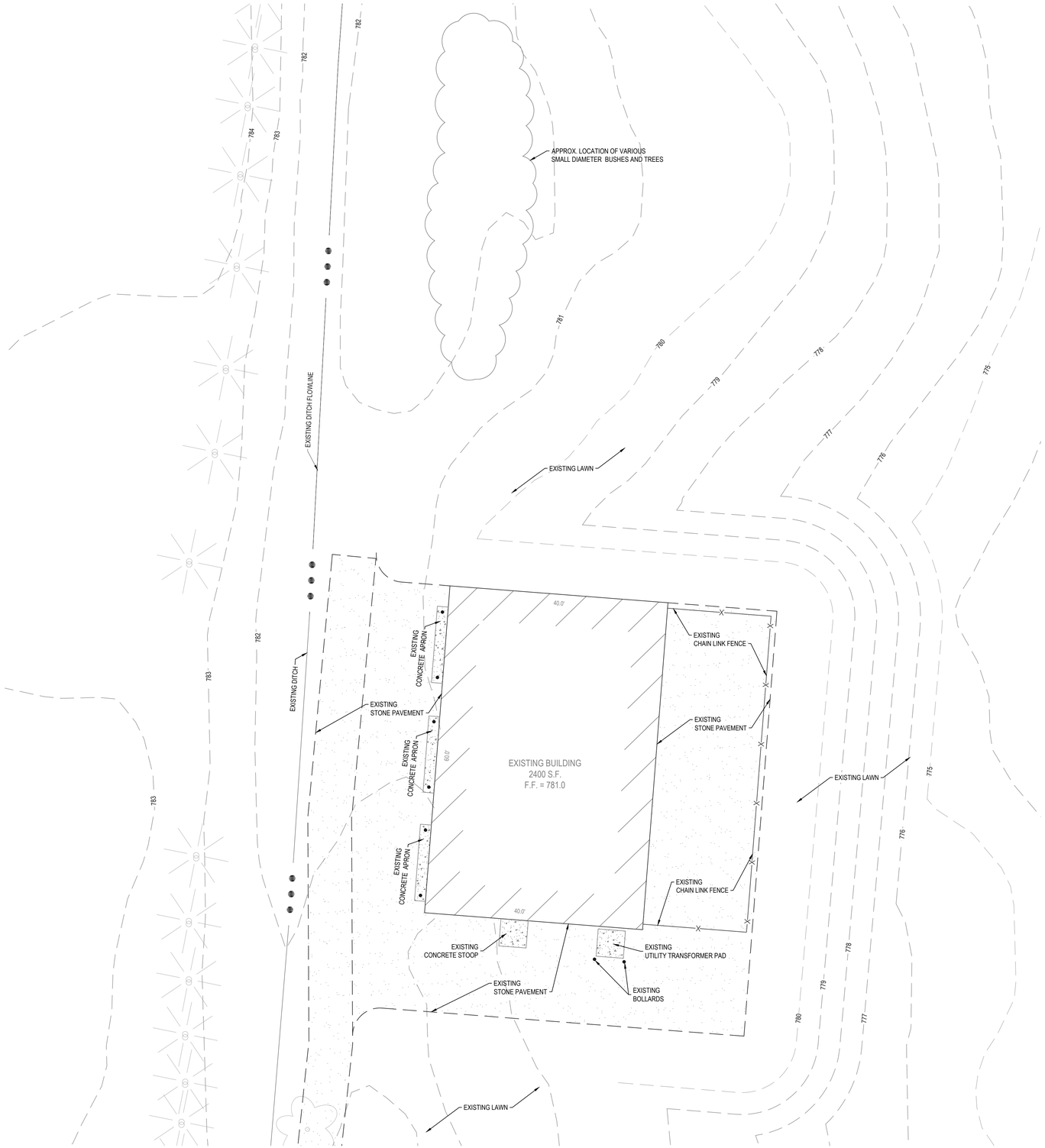

Existing Site Plan

1" = 10'

General Topographic Notes:

THE UNDERGROUND UTILITY LOCATIONS WERE ESTABLISHED BY FIELD OBSERVATIONS, UTILITY MAPS, AND/OR UTILITY MARKERS. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

Legend:

- EXISTING STONE PAVEMENT SECTION
- PROPOSED GRAVEL PAVEMENT SECTION
- EXISTING CONCRETE SURFACE
- XXX - EXISTING MAJOR CONTOUR
- XXX - EXISTING MINOR CONTOUR

New Construction and Renovation Work For:

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MARTIN RILEY
architects · engineers

221 West Baker Street
Fort Wayne, Indiana 46802

pho 260.422.7994
fax 260.426.2067

JEREMY L. BRICKER
REGISTERED
No.10809052
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISION:	DATE:

DRAWN BY:	DRT	REVIEWED BY:	JLB
COMMISSION NUMBER:	F25111	DATE:	2026-04-09

C100

EXISTING SITE PLAN

Demolition Plan

1" = 10'

General Demoiltion Notes

1. **LITTERING STREETS-** THE CONTRACTOR SHALL REMOVE ANY DEMOLITION DEBRIS OR MUD FROM ANY STREET, ALLEY, RIGHT OF WAY RESULTING FROM THE EXECUTION OF THE DEMOLITION WORK. LITTERING OF THE SITE SHALL NOT BE PERMITTED. ALL WASTE MATERIALS SHALL BE PROMPTLY REMOVED FROM THE SITE.

2. **STREET CLOSURES-** IF IT SHOULD BECOME NECESSARY TO CLOSE ANY TRAFFIC OR PARKING LANES, CONTRACTOR SHALL BE RESPONSIBLE TO ACQUIRE NECESSARY PERMITS AND PLACE ADEQUATE BARRICADES AND WARNING SIGNS AS REQUIRED BY THE CITY OF FORT WAYNE and/or ALLEN COUNTY. STREET OR LANE CLOSURES SHALL BE COORDINATED WITH THE APPROPRIATE JURISDICTIONAL AUTHORITY.

3. **GENERAL PROTECTION- WHERE APPLICABLE**

   A. SIDEWALKS- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PUBLIC SIDEWALKS, IF SCHEDULED TO REMAIN, ABUTTING OR ADJACENT TO THE PROJECT SITE. REPAIR OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE WORK (REPLACEMENT PER THE CITY OF FORT WAYNE and/or ALLEN COUNTY STANDARDS).

   B. PEDESTRIAN ACCESS/ VEHICULAR TRAFFIC- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND CONSTRUCT NECESSARY WARNING SIGNS, BARRICADES FENCING OR TEMPORARY ACCESS AS DIRECTED BY OWNER OR LOCAL AUTHORITY.

   C. DEMOLITION HOURS- CONTRACTOR SHALL COMPLY WITH ANY RESTRICTIONS TO WORKING HOURS AS DIRECTED BY LOCAL AUTHORITY.

   D. NOISE POLLUTION- ALL CONSTRUCTION EQUIPMENT SHALL BE IN GOOD REPAIR AND ADEQUATELY MUFFLED, OR AS DIRECTED BY LOCAL AUTHORITY

   E. DUST CONTROL- THE CONTRACTOR SHALL TAKE APPROPRIATE ACTIONS TO MINIMIZE ATMOSPHERIC POLLUTION. SUCH PRECAUTIONS SHALL INCLUDE, BUT NOT LIMITED TO, USE OF WATER OR CHEMICALS FOR DUST CONTROL IN THE DEMOLITION OF BUILDING STRUCTURES, PAVING OR CLEARING OF LAND AND AS REQUIRED BY LOCAL AUTHORITY. OPEN-BODY TRUCKS LIKELY OF CREATING AIRBORNE DUSTS SHALL BE COVERED.

4. **REQUIREMENTS FOR THE REDUCTIONS OF FIRE HAZARDS-** THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AND MAINTAINING THE CORRECT TYPE AND CLASS OF FIRE EXTINGUISHER ON SITE. NO MATERIAL OBSTRUCTIONS OR DEBRIS SHALL BE PLACED OR ALLOWED TO ACCUMULATE WITHIN 15 FEET OF ANY FIRE HYDRANT.

5. **PROTECTION OF PUBLIC UTILITIES-** THE CONTRACTOR SHALL NOT DAMAGE EXISTING FIRE HYDRANTS, TRAFFIC SIGNALS, POWER POLES, TELEPHONE POLES, FIRE ALARM BOXES, WIRE CABLES AND/ OR UNDERGROUND UTILITIES TO REMAIN OR OTHER APPURTENANCES IN THE VICINITY OF THE SITE.

6. **PROTECTION OF ADJACENT PROPERTIES-** THE CONTRACTOR SHALL NOT DAMAGE OR CAUSE TO BE DAMAGED ANY PUBLIC RIGHT-OF WAY, STRUCTURES, PARKING LOTS, DRIVES, STREETS, SIDEWALKS, UTILITIES, LAWNS OR ANY OTHER PROPERTY ADJACENT TO THE PROJECT SITE.

7. **GENERAL DEMOLITION NOTE-** THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION AND SHALL INSPECT THE SITE FOR ITS CHARACTER AND THE TYPE OF IMPROVEMENTS TO BE DEMOLISHED. THE DEMOLITION LIMITS SHALL BE RELEASED TO THE CONTRACTOR UPON AWARD OF CONTRACT AND NOTICE TO PROCEED. THE CONTRACTOR SHALL HAVE FULL CONTROL OF DEMOLITION PROGRESS AND CLEARANCE OF THE SITE, SUBJECT TO THE PROJECT MANUAL AND SPECIFICATIONS.

Typical Site Demolition Notes

1. REMOVE PORTION OF CHAN LINK FENCE IN ITS ENTIRETY. REMOVE AND PROTECT EXISTING FENCE GATE FOR REUSE. ⚠1
2. CLEARING AND GRUBBING, TOPSOIL REMOVAL.

Note: ALL DEMOLISHED MATERIAL FROM CONSTRUCTION ACTIVITIES SHALL BE REMOVED OFF-SITE AND DISPOSED OF IN A LEGAL MANNER.

Legend

D14 - - - - - - - - - EXISTING FENCING/ GATES TO BE REMOVED

▨ - TOP SOIL REMOVAL

——— - - - ——— CONSTRUCTION LIMITS

New Construction and Renovation Work For:

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MARTIN RILEY
architects · engineers

221 West Baker Street
Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

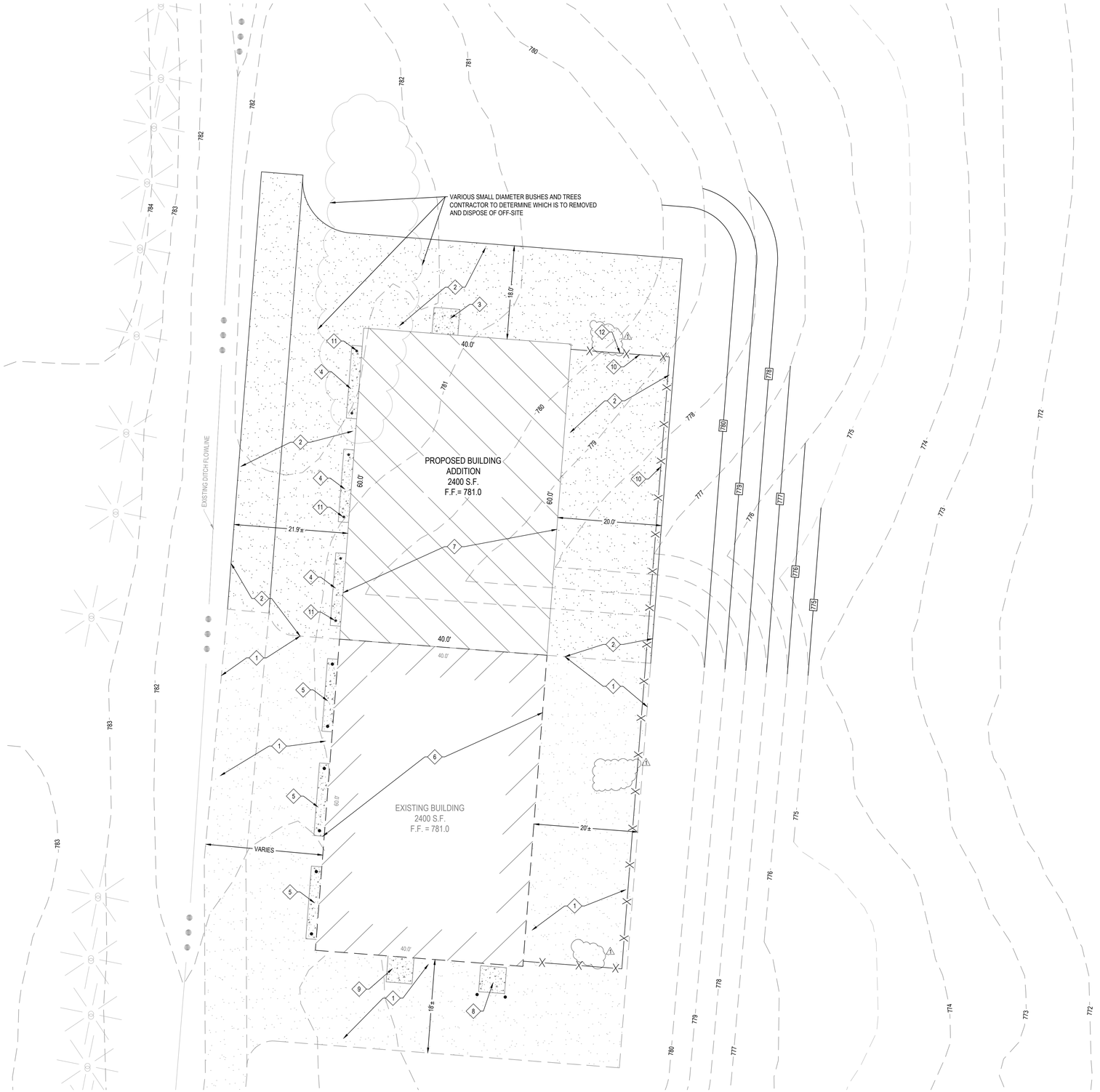
JEREMY L. BRYAN — REGISTERED — No.10809052 — STATE OF INDIANA — PROFESSIONAL ENGINEER

REVISION:	DATE:
⚠1 Addendum 2	2026-04-09

DRAWN BY:	DRT	REVIEWED BY:	JLB
COMMISSION NUMBER:	F25111	DATE:	2026-04-09

C101

DEMOLITION PLAN



Site Layout Plan

1" = 10'

General Construction Notes

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH STATE, COUNTY AND LOCAL CODES INCLUDING ALL AMENDMENTS.
2. ALL PERMITTING FEES SHALL BE PAID FOR BY THE CONTRACTOR.
3. CONTRACTOR SHALL PROTECT ALL ADJACENT IMPROVEMENTS, BUILDINGS, INFRASTRUCTURE, PAVEMENTS, PAVEMENT MARKINGS, WALKS, GRASS, ETC DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED/ REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
4. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL PLACE APPROPRIATE EROSION CONTROL MEASURES TO ENSURE NO SEDIMENT LEAVES THE SITE OR ENTERS ON-SITE OR PUBLIC STORM SYSTEMS (SEE C900).
5. CONTRACTOR TO MATCH CONSTRUCTION LIMITS TO EXISTING GRADES AND PROVIDE POSITIVE DRAINAGE TO EXISTING DRAINAGE PATHS/ SYSTEMS.
6. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BY PLACING TOPSOIL, IF REQUIRED, GRADING TO ESTABLISH POSITIVE DRAINAGE, SEEDING AND MULCH.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL TRADES, LOCAL /COUNTY JURISDICTIONS AND UTILITIES.

Legend:

- EXISTING STONE PAVEMENT SECTION
- PROPOSED GRAVEL PAVEMENT SECTION
- EXISTING CONCRETE SURFACE
- PROPOSED CONCRETE PAVEMENT SECTION
- XXX - EXISTING MAJOR CONTOUR
- XXX - EXISTING MINOR CONTOUR
- XXX - PROPOSED MAJOR CONTOUR
- XXX - PROPOSED MINOR CONTOUR

Typical Site Work Description Notes

1. EXISTING STONE PAVEMENT.
2. PROPOSED GRAVEL PAVEMENT- SEE DETAIL 2/C800.
3. PROPOSED CONCRETE STOOP - SEE STRUCTURAL PLAN
4. PROPOSED CONCRETE APRON W/ BOLLARDS- SEE STRUCTURAL PLAN
5. EXISTING CONCRETE APRON W/ BOLLARDS
6. EXISTING BUILDING
7. PROPOSED BUILDING ADDITION
8. EXISTING UTILITY TRANSFORMER PAD
9. EXISTING CONCRETE STOOP
10. CHAIN LINK FENCE - HEIGHT TO MATCH EXISTING - SEE DETAIL 1/C800
11. STEEL BOLLARD (TYP)- SEE ARCHITECTURAL PLAN
12. ⚠1 EXISTING FENCE GATE TO BE REINSTALLED. INFILL WITH NEW FENCING AS NEEDED ON BOTH SIDES OF THE GATE. CONTRACTOR TO FIELD VERIFY.

Construction Traffic Entrance

1"= 120'

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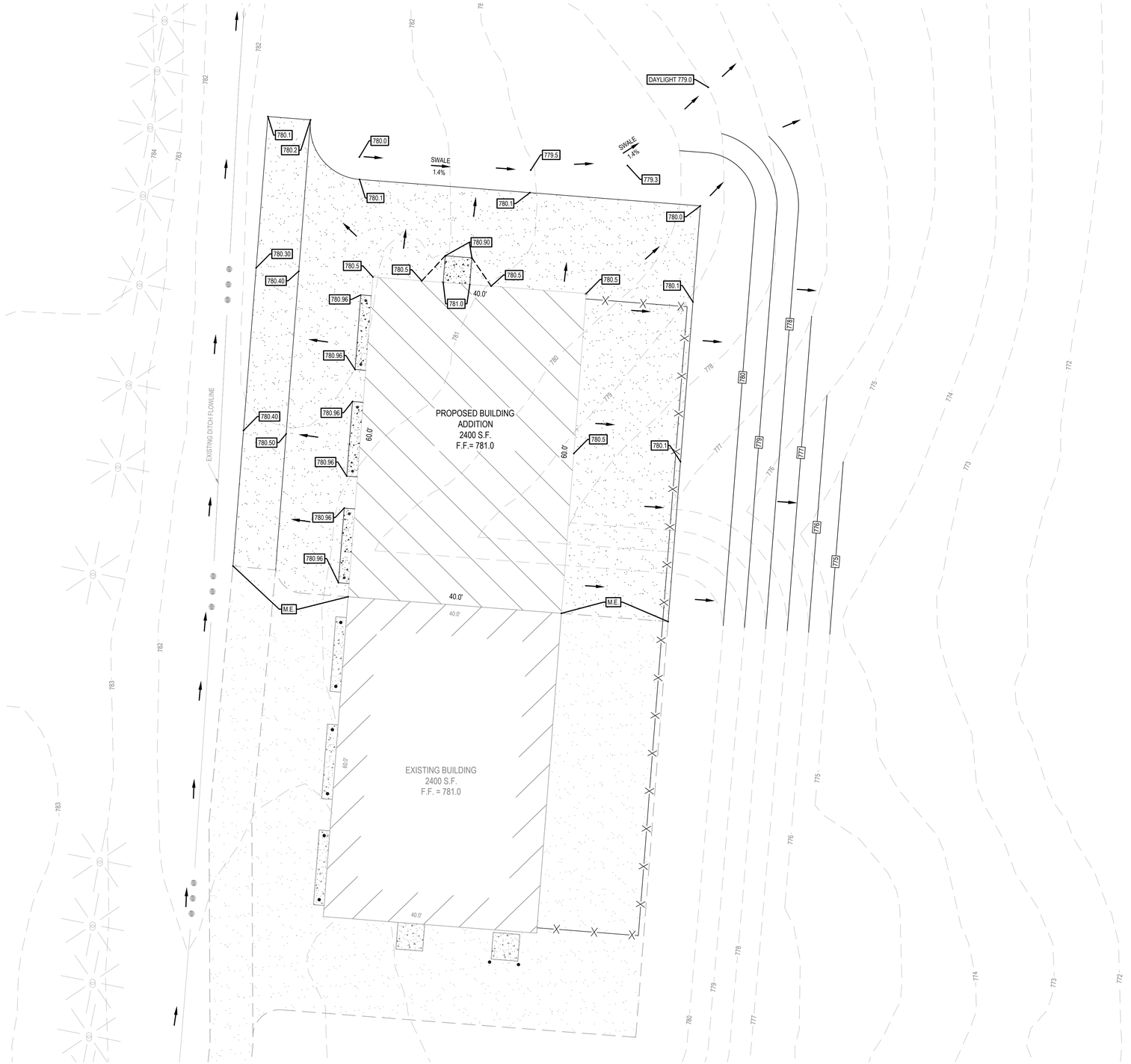
C200

SITE LAYOUT PLAN



General Grading and Drainage Notes

1. SLOPE FOR BANK SLOPES AND OF SWALES ARE NOT TO EXCEED 4:1 UNLESS OTHERWISE NOTED.
2. ALL GRADE SWALES ARE TO HAVE A 2 FOOT WIDE FLAT BOTTOM SECTION.
3. ALL GRADING AND/OR EARTH MOVING WORK DONE ON SITE, SHALL BE DONE IN COMPLIANCE WITH ALL STATE AND LOCAL CODES AND REQUIREMENTS.
4. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT EACH POINT OF ENTRY TO OR EXIT FROM THE WORK SITE PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY ON THE PROPOSED WORK SITE.
5. ALL LAND ALTERATION WHICH STRIPS THE LAND OF EXISTING VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY WHICH WILL MINIMIZE SOIL EROSION.
6. TOPSOIL SHALL BE REMOVED FROM ALL AREAS WHERE PERMANENT STRUCTURES ARE TO BE CONSTRUCTED AND SHALL BE STOCKPILED FOR FUTURE USE. TOPSOIL SHALL NOT BE USED FOR FILL UNDER ANY CONSTRUCTION AREA.
7. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES UNLESS OTHERWISE NOTED.

Legend:

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- PROPOSED GRAVEL PAVEMENT SECTION
- EXISTING CONCRETE SURFACE
- PROPOSED CONCRETE PAVEMENT SECTION
- XXX - EXISTING MAJOR CONTOUR
- XXX - EXISTING MINOR CONTOUR
- XXX - PROPOSED MAJOR CONTOUR
- XXX - PROPOSED MINOR CONTOUR
- XXX.X - PROPOSED SPOT ELEVATION
- M.E. - MATCH EXISTING ELEVATION
- DRAINAGE FLOW DIRECTION ARROW

NORTH

Grading Plan

1" = 10'

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PROFESSIONAL ENGINEER

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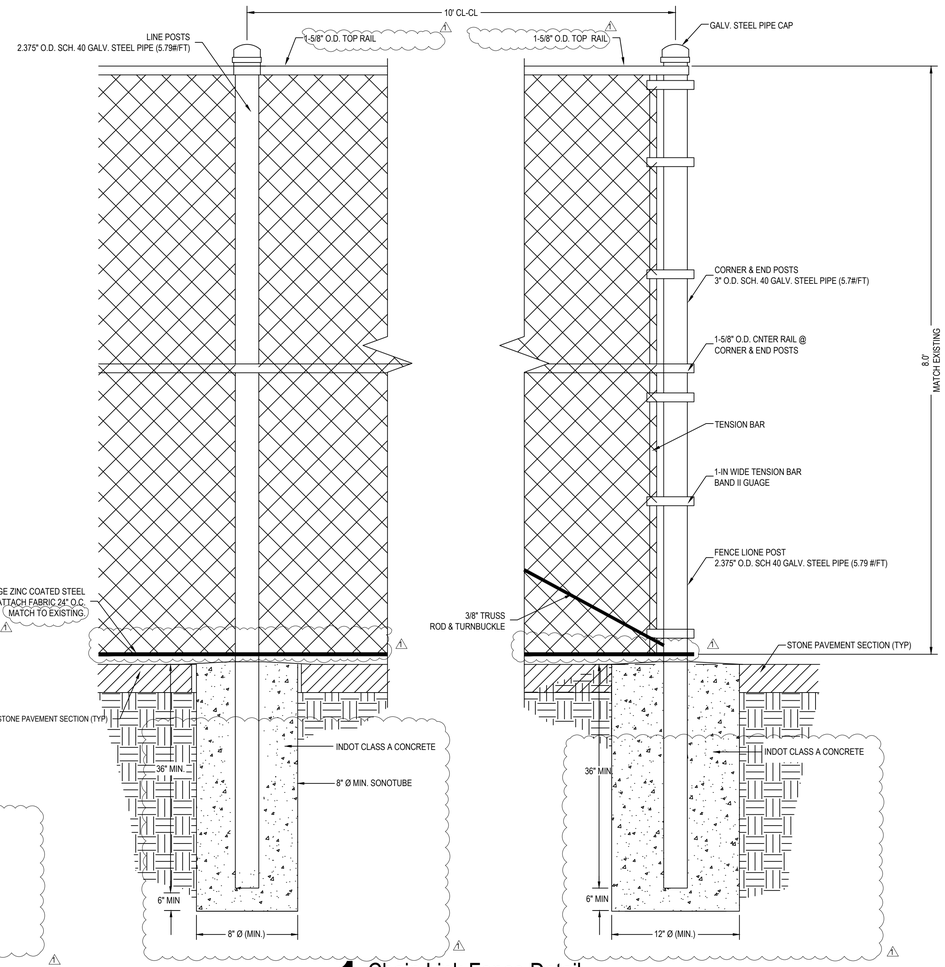
C300

GRADING PLAN



1 Chain Link Fence Detail
NTS

2 Typical Stone Parking Section
NTS

Site Details
NTS

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JEREMY L. BRIDGE
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1 Addendum 2	2026-04-09

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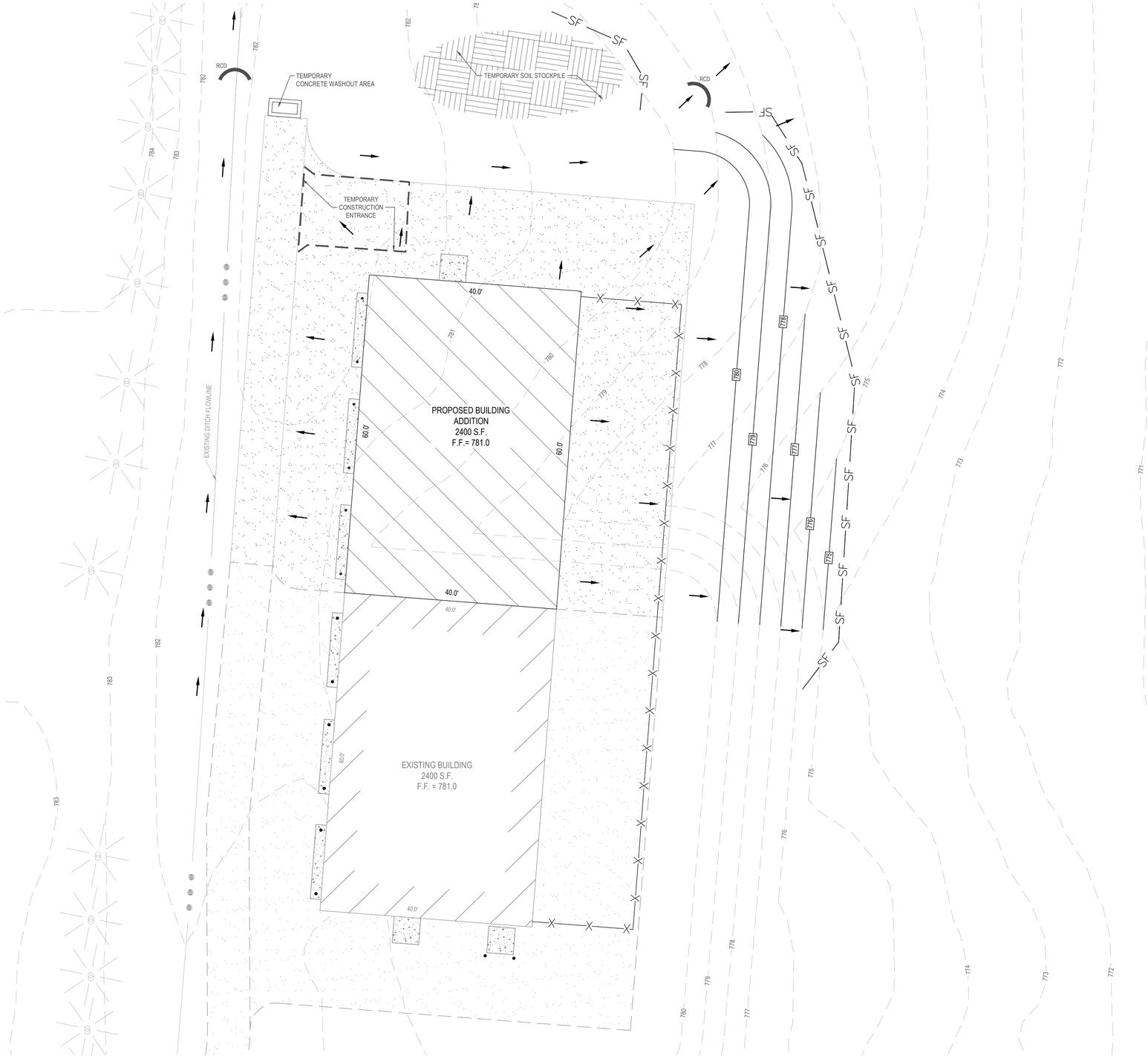
C800

SITE DETAILS



Erosion Control Plan

1" = 10'

General Erosion Control Notes

1. THE ROADWAYS AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE KEPT CLEAN OF SEDIMENT AND OTHER DEBRIS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING SAID POLLUTANTS FROM ROADWAYS AS NECESSARY. THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIALS IN THE STREET.
2. ALL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS SOON AS APPLICABLE. CONTROL MEASURES SHALL MEET OR EXCEED THOSE SHOWN IN "THE INDIANA STORMWATER QUALITY MANUAL". NOTE: ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.
3. THE CONTRACTOR SHALL MAINTAIN AND INSPECT ALL EROSION CONTROL MEASURES UNTIL THE PROJECT IS TURNED OVER TO THE OWNER. THE CONTRACTOR SHALL REVIEW THE EROSION CONTROL MEASURES AT LEAST ONCE A WEEK AND WITHIN 1 BUSINESS DAY FOLLOWING EACH STORM EVENT OF 1/2" OR MORE. CORRECTIVE MEASURES ARE TO BE TAKEN IF ANY MEASURE IS IN NEED OF REPAIR OR FAILING TO ACHIEVE THE DESIRED EFFECT. THE CONTRACTOR SHALL KEEP A LOG OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES PERFORMED. THE LOG SHALL BE AVAILABLE FOR REVIEW BY A REPRESENTATIVE OF THE CITY OF FORT WAYNE, ALLEN COUNTY AND ANY OTHER AGENCY HAVING JURISDICTION. THE OWNER WILL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF THE PERMANENT MEASURES ONLY AFTER ALL CONSTRUCTION IS COMPLETE.
4. NO SEDIMENT SHALL BE ALLOWED TO LEAVE THE SITE. ANY ADDITIONAL MEASURES REQUIRED TO ACCOMPLISH THIS TASK SHALL BE IMPLEMENTED IMMEDIATELY. THE CONTRACTOR SHALL RECTIFY ANY DAMAGES DO TO SEDIMENTS OR EROSION TO ADJACENT PROPERTIES.
5. THE CONTRACTOR SHALL USE WATER TRUCKS AND OTHER REASONABLE METHODS TO REDUCE AIRBORNE AND WIND EROSION.
6. CONTRACTOR SHALL ENSURE WASTES OR UNUSED CONSTRUCTION MATERIALS, GARBAGE, DEBRIS, CLEANING WASTES OR WASTE WATER, ARE NOT CARRIED OFF BY RUNOFF FROM SITE BUT DISPOSED OF IN A PROPER MANNER. TRASH AND DEBRIS LEFT FROM THE CONSTRUCTION ACTIVITY SHALL BE PICKED UP AT THE END OF EACH WORK DAY.
7. CONTRACTOR SHALL INSTALL, IDENTIFY BY SIGN AND MAINTAIN CONCRETE WASHOUT AREA(S).

EC Sequencing and Staging Notes

1. A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER SILT FENCE AND ROCK CHECK DAMS FOR EXISTING DRAINAGE OUTLET (WHERE APPLICABLE) SHALL BE INSTALLED PRIOR TO BEGINNING OTHER EARTH DISTURBING ACTIVITIES.
2. WHENEVER POSSIBLE, EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO PERFORMING OTHER EARTH DISTURBING ACTIVITIES.
3. MINIMIZE EROSION FROM EXPOSED AREAS BY PROVIDING AND MAINTAINING TEMPORARY OR PERMANENT STABILIZATION MEASURES. EROSION CONTROL MEASURES TO PROTECT EXPOSED AREAS SHALL BE INSTALLED AT THE END OF EACH WORK DAY.
4. AREAS TO BE PAVED SHALL BE STABILIZED WITH STONE COVER. THE TEMPORARY STONE COVER SHALL BE EQUIVALENT TO THE PROPOSED STONE BASE MATERIAL.
5. ALL AREAS TO REMAIN UNWORKED FOR MORE THAN 7 DAYS SHALL BE STABILIZED BY COVERING OR BY EQUIVALENT EROSION CONTROL MEASURES.
6. FOR AREAS TO BE PERMANENTLY SEEDED, COMPLETE SEEDING WITHIN 24 HOURS OF REACHING FINAL GRADE. SEE EROSION CONTROL SPECIFICATIONS FOR TEMPORARY SEEDING

Legend:

- EXISTING STONE PAVEMENT SECTION
- PROPOSED GRAVEL PAVEMENT SECTION
- EXISTING CONCRETE SURFACE
- PROPOSED CONCRETE PAVEMENT SECTION
- RCD - ROCK CHECK DAM PROTECTION
- CONCRETE WASHOUT
- TEMPORARY CONSTRUCTION ENTRANCE
- SF - PERIMETER SEDIMENT CONTROL SILT FENCE, FILTER SOCK OR APPROVED EQUAL
- TEMPORARY SOIL STOCKPILE
- DRAINAGE FLOW DIRECTION ARROW

New Construction and Renovation Work For:

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Fort Wayne, IN 46805-1499

PURDUE UNIVERSITY FORT WAYNE

MARTINRILEY architects·engineers

221 West Baker Street pho 260.422.7994
Fort Wayne, Indiana 46802 fax 260.426.2067

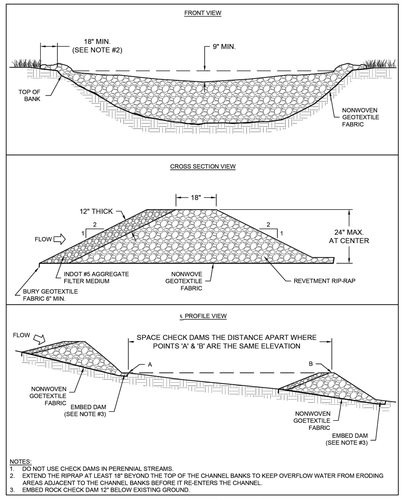
JEREMY L. BRICKEL REGISTERED No.10809052 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISION: DATE:

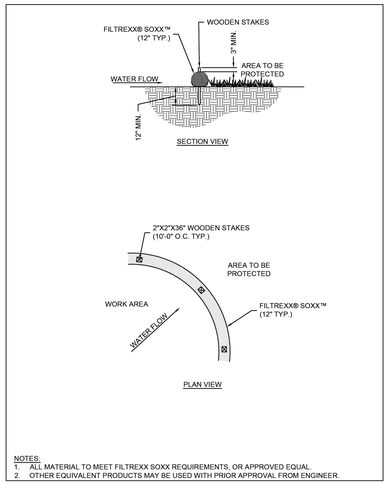
DRAWN BY: DRT
REVIEWED BY: JLB
COMMISSION NUMBER: F25111
DATE: 2026-04-09

C900

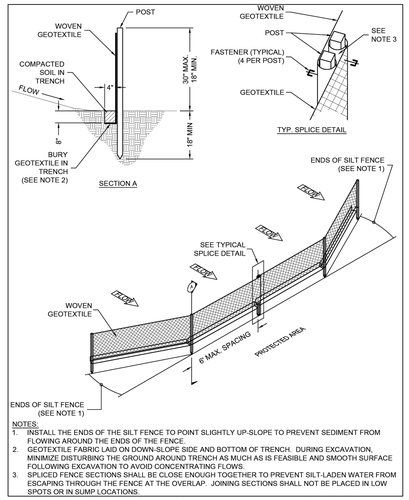
EROSION CONTROL PLAN



Temporary Rock Check Dam



Perimeter Protection - Temporary Silt Fence



Perimeter Protection - Temporary Silt Fence

SILT FENCE

SPECIFICATIONS

Note: Silt fence is not recommended for use as a diversion and should not be used across a stream, channel, ditch, swale, or anywhere that concentrated flow is anticipated.

Drainage Area
- Limited to one-quarter acre per 100 linear feet of fence.
- Further restricted by slope steepness (see Table 1).

Effective Life
- Six months (maximum).

Location
- Installed parallel to the slope contour.
- Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow sediment pool.
- Accessible for maintenance (removal of sediment and silt fence repair).

Spacing

Table 1- Slope Steepness Restrictions

Trench
- Depth: eight inches minimum.
- Width: four inches minimum.
- After installing fence, backfill with soil material and compact (to bury and anchor the lower portion of the fence fabric).

***Note:** An alternative to trenching is to use mechanical equipment to plow in the silt fence.*

Materials and Silt Fence Specifications
- Fabric – woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.

***Table 2- Geotextile Fabric Specifications for Silt Fence** (minimum)*

- Height: a minimum of 18 inches above ground level (30 inches maximum).
- Reinforcement: fabric securely fastened to posts with wood lathe.
- Support Posts
  - 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
- Spacing
  - Eight feet maximum if fence is supported by wire mesh fencing.
  - Six feet maximum for extra-strength fabric without wire backing.

INSTALLATION

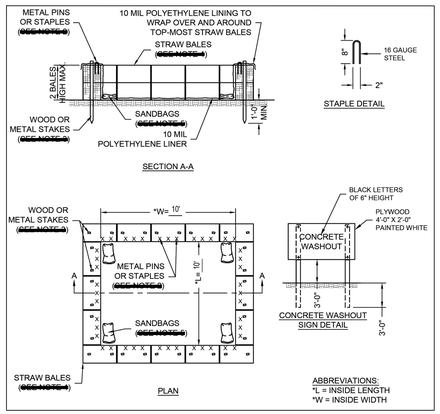
Prefabricated silt fence (see Exhibits 1, 2, and 3)
- Lay out the location of the fence so that it is parallel to the *contour* of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).
- Excavate an eight-inch deep by four-inch wide trench along the entire length of the fence line (see Exhibit 2). Installation by plowing is also acceptable.
- Install the silt fence with the filter fabric located on the up-slope side of the excavated trench and the support posts on the down-slope side of the trench.
- Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 12 inches of the filter fabric should extend into the trench. (If it is necessary to join the ends of two fences, use the wrap joint method shown in Exhibit 3.)
- Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up-slope side of the trench.
- Backfill the trench with soil material and compact it in place.

***Note:** If the silt fence is being constructed on-site, attach the filter fabric to the support posts (refer to Tables 1 and 2 for spacing and geotextile specifications) and attach wooden lathe to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following steps 1 through 6 above.*

MAINTENANCE
- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. **NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.**
- Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.

NOTE:
FILTER TUBE/ FILTER SOCKS MAY BE SUBSTITUTED

Sediment Barriers & Filters



Temporary Concrete Washout

CONCRETE WASHOUT

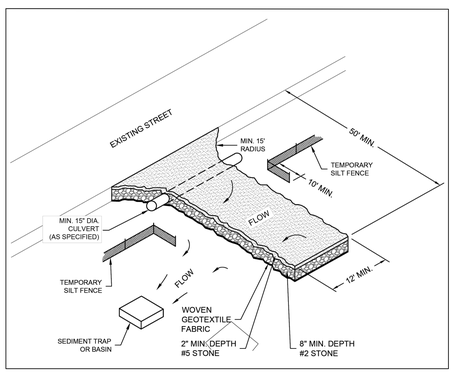
SPECIFICATIONS

Location
- Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.
- To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from adjacent land areas.
- Locate in areas that provide easy access for concrete trucks and other construction equipment.
- Locate away from construction traffic to reduce the potential for damage to the system.

ABOVE GRADE SYSTEM
- A system designed and built above grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanout periods. The size of the containment system may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the berm or containment system.
- The system design may utilize an earthen berm, straw bales, sandbags, or other acceptable barriers that will maintain its shape and integrity and support the polyethylene lining.
- Include a minimum four-inch freeboard as part of the design.

Washout Procedures
- Do not leave excess mud in the chutes or hopper after the pour. Every effort should be made to empty the chutes and hopper at the pour. The less material left in the chutes and hopper, the quicker and easier the cleanout. Small amounts of excess concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.
- At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.
- Remove as much mud as possible when washing out.
- Stop washing out in an area if you observe water running off the designated area or if the containment system is leaking or overflowing and ineffective.
- Do not back flush equipment at the project site. Back flushing should be restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency arises, back flush should only be performed with the permission of an on-site manager for the project.
- Do not use additives with wash water. Do not use solvents or acids that may be used at the target plant.

Materials
- Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining (designed and installed systems).
- Signage.
- Orange safety fencing or equivalent.
- Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile soil material, or other appropriate materials that can be used to construct a containment system (above grade systems).
- Metal pins or staples at a minimum of six inches in length, sandbags, or alternative fastener to secure polyethylene lining to the containment system.
- *Non-collapsing and non-water holding cover for use during rain events (optional).*



Temporary Construction Entrance

TEMPORARY CONSTRUCTION INGRESS/ EGRESS PAD

SPECIFICATIONS

Location
- Avoid locating on steep slopes or at curves in public roads.

Dimensions

SITES LESS THAN (2) ACRES
- Width: 12 feet minimum or full width of entrance/exit drive, whichever is greater.
- Length: 50 feet minimum or full length of drive, whichever is greater.
- Thickness – (6") six inches minimum.

SITES (2) ACRES AND GREATER
- Width: 20 feet minimum or full width of entrance/exit drive, whichever is greater.
- Length: 150 feet minimum or full length of drive, whichever is greater.
- Thickness – (8") eight inches minimum.

Materials
- One to two and one-half inch diameter washed aggregate (INDOT CA No. 2).
- One-half to one and one-half inch washed aggregate (INDOT CA No. 53).
- Geotextile fabric underlayment (SEE SPECS) FOR separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions OR soils with a seasonal high water table limitation).

INSTALLATION
- Remove all vegetation and other objectionable material from the foundation area.
- Grade the foundation and crown for positive drainage.If the slope of the construction entrance is toward a public road and exceeds two percent, construct an eight inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area 15 feet +/- from the entrance to divert runoff away from the road
- Install a culvert pipe under the pad if needed to maintain proper public road drainage.
- When wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
- Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction drawings, provide surface smooth and sloped for drainage.
- Top-dress the drive with washed aggregate (INDOT CA No.53).
- Where existing grade will allow, divert all storm water runoff and drainage from the temporary construction ingress/egress pad to a sediment trap or basin.

MAINTENANCE
- Inspect daily.
- Reshape pad as needed for drainage and runoff control.
- Top-dress with clean aggregate as needed.
- Immediately remove mud and sediment tracked or washed onto public roads.
- FLUSHING SHOULD ONLY BE USED IF THE WATER FROM THE CONSTRUCTION DRIVE CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

Site Access and Preparation

NORTH

Erosion Control Details

NTS

New Construction and Renovation Work For:

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PURDUE UNIVERSITY FORT WAYNE

MARTIN RILEY architects·engineers

221 West Baker Street
Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

REGISTERED PROFESSIONAL ENGINEER — JEREMY L. BRICKER — REGISTERED No.10809052 — STATE OF INDIANA

REVISION:	DATE:

DRAWN BY:	DRT	REVIEWED BY:	JLB
COMMISSION NUMBER:	F25111	DATE:	2026-04-09

C901

EROSION CONTROL DETAILS

Demolition Notes

1 DEMOLISH WALL IN ITS ENTIRETY. WALL/DOOR DEMOLITION TO OCCUR AFTER NEW WALLS HAVE BEEN CONSTRUCTED.

2 REMOVE ROOF FASCIA , PREP FOR CONSTRUCTION

3 EXISTING SLAB TO REMAIN, PROTECT AS NECESSARY DURING CONSTRUCTION

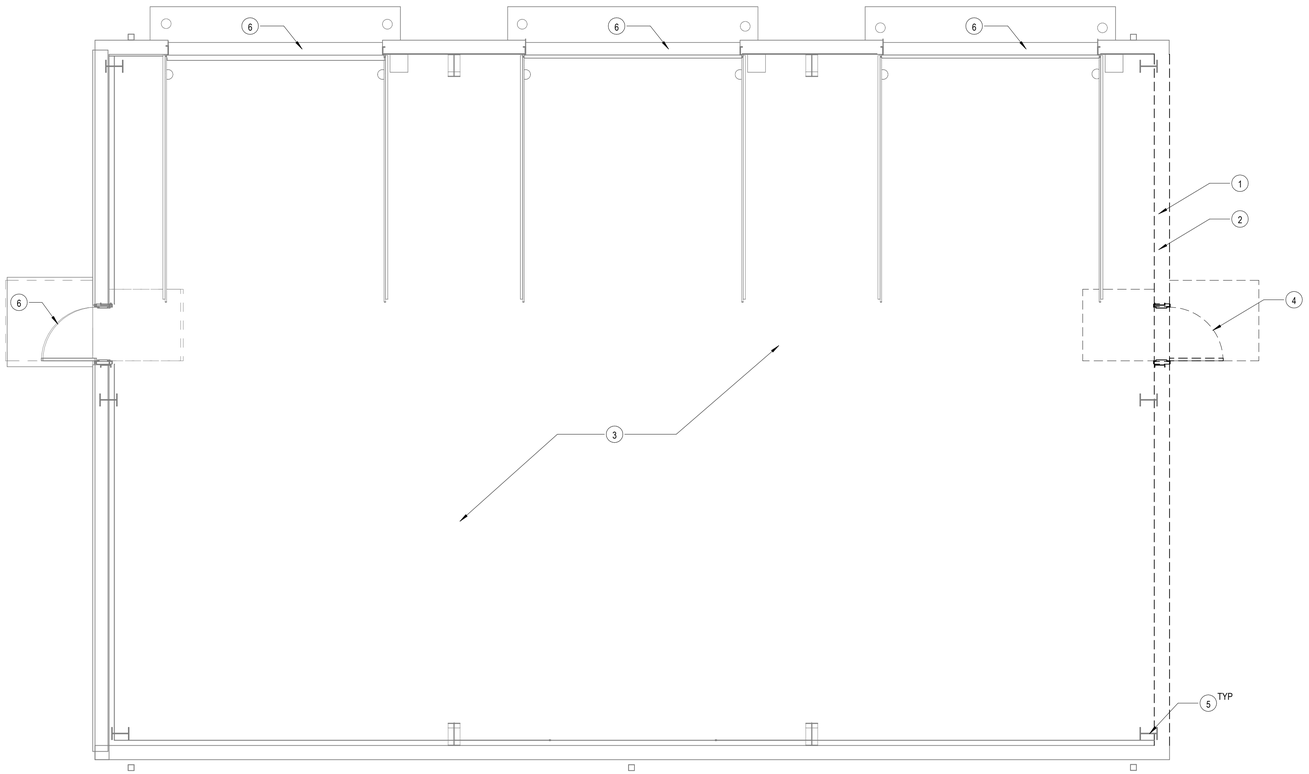
4 SALVAGE DOOR AND HARDWARE FOR REUSE IN NEW WALL. REFER TO A101

5 ALL STRUCTURAL FRAMING TO REMAIN. PROTECT AS NEEDED DURING CONSTRUCTION. TOUCH UP PAINT AS NEEDED

6 DOORS TO REMIAN. PROTECT AS NECESSARY DURING CONSTRUCTION

General Demolition Notes

1. THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL ITEMS REMOVED FROM THE BUILDING. ITEMS NOT WANTED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE DISPOSED OF LEGALLY OFF SITE.
2. FAILURE OF AFFECTED TRADES TO RECOGNIZE DEMOLITION AS A COMPONENT OF A SYSTEM SHALL NOT BE CAUSE FOR AN EXTRA.
3. ALL EXISTING CONSTRUCTION SHOWN IS FOR REPRESENTATION PURPOSES ONLY. CONTRACTOR TO FIELD VERIFY CONDITIONS AND ALL EXISTING CONSTRUCTION TO BE DEMOLISHED.
4. CONTRACTOR SHALL REMOVE ALL INCIDENTAL ITEMS SURFACE MOUNTED TO WALLS, INCLUDING BUT NOT LIMITED TO EMERGENCY LIGHTS, SIGNAGE, ELECTRICAL COMPONENTS, ETC.
5. CONTRACTOR SHALL PATCH AND REPAIR ANY WALLS, FLOORS AND CEILINGS AFFECTED BY DEMOLITION.
6. DISCONNECT AND COMPLETELY REMOVE ALL CONDUIT, WIRE BOXES, ETC TO BE RENDERED OBSOLETE BY THIS WORK, UNLESS OTHERWISE NOTED. REMOVE WIRE & CONDUIT BACK TO ITS SOURCE.
7. MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY DEMOLITION WORK. VERIFY THAT EQUIPMENT TO REMAIN IS FUNCTIONAL AFTER DEMOLITION.
8. CONTRACTOR SHALL DESIGN AND PROVIDE ALL TEMPORARY SHORING NECESSARY TO COMPLETE THE WORK.
9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REWORK TO ACCOMPLISH THIS PROJECT AS SET FORTH IN THESE DOCUMENTS. THE CONTRACTOR SHALL TAKE INTO CONSIDERATION ALL SHEETS TO DETERMINE THE FULL SCOPE OF DEMOLITION AND REWORK REQUIRED.
10. PREPARE ALL SALVAGED MATERIALS FOR RE-INSTALLATION. PROVIDE ANY REQUIRED FASTENERS, ACCESSORIES OR OTHER COMPONENTS FOR INSTALLATION.



NORTH

1 First Floor
1/4" = 1'-0"

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fax 260.426.2067

JACK E. DANIEL REGISTERED No. AR20910026 STATE OF INDIANA ARCHITECT

04/08/2026

REVISION: DATE:

DRAWN BY: PJ
REVIEWED BY: JEF
COMMISSION NUMBER: F25111
DATE: 2026-03-13

D101

DEMOLITION PLAN

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Concrete Notes

1. DESIGN COMPLIES WITH THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)", LATEST EDITION AND "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350)", LATEST EDITION.

2. CONCRETE CONSTRUCTION MUST BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301)", LATEST EDITION AND "SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS (ACI 117)", LATEST EDITION.

3. WHEN CONDITIONS ARE SUCH THAT THE AMBIENT TEMPERATURE MAY BE EXPECTED TO BE 40°F OR LESS, WORK MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE "GUIDE TO COLD WEATHER CONCRETING (ACI 306R)," LATEST EDITION.

4. WHEN CONDITIONS ARE SUCH THAT THE AMBIENT TEMPERATURE MAY BE EXPECTED TO BE 80°F OR HIGHER, WORK MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE "GUIDE TO HOT WEATHER CONCRETING (ACI 305R)," LATEST EDITION.

5. CONCRETE TO BE NORMAL WEIGHT CONCRETE COMPLYING WITH THE FOLLOWING REQUIREMENTS:
   1. FOUNDATIONS:
      a. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, f'_c = 4000 psi
      b. MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO, w/cm = 0.50
      c. AIR-ENTRAINED WITH 5% AIR CONTENT (+/- 1.5%)
   2. EXTERIOR EXPOSED SLABS, WALLS, PIERS, PEDESTALS AND COLUMNS:
      a. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, f'_c = 5000 psi
      b. MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO, w/cm = 0.45
      c. AIR-ENTRAINED WITH 5% AIR CONTENT (+/- 1.5%)
   3. INTERIOR SLABS, WALLS, PIERS, PEDESTALS AND COLUMNS:
      a. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, f'_c = 4000 psi
      b. MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO, w/cm = 0.50

6. THE CONTRACTOR MUST SUBMIT CONCRETE MIX DESIGNS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO PLACEMENT OF ANY CONCRETE STRUCTURES.

7. THE CONTRACTOR SHALL TAKE SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY. SAMPLES FOR STRENGTH TESTS TO BE TAKEN NOT LESS THAN ONCE PER DAY, NOR LESS THAN ONCE FOR EACH 150 yd^3 OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 ft^2 OF SURFACE AREA FOR SLABS OR WALLS. THREE 4x8-INCH CYLINDERS SHALL BE TESTED AT SEVEN DAYS AND 28 DAYS FOR EACH SAMPLE TAKEN.

8. REINFORCING BARS TO BE DEFORMED BARS COMPLYING WITH THE REQUIREMENTS OF ASTM A615, GRADE 60.

9. WELDED WIRE REINFORCEMENT TO BE PLAIN WIRE COMPLYING WITH THE REQUIREMENTS OF ASTM A1064.

10. DETAILS AND DETAILING OF CONCRETE REINFORCEMENT MUST BE IN ACCORDANCE WITH THE "ACI DETAILING MANUAL," REPORTED BY ACI COMMITTEE 315. THE CONTRACTOR MUST SUBMIT REINFORCEMENT SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.

11. PLACEMENT OF REINFORCEMENT BARS IN FOOTINGS, WALLS AND COLUMNS TO BE EVENLY SPACED WITHIN THE STRUCTURE. DRIVING OR PUSHING DOWELS INTO WET CONCRETE IS PROHIBITED.

12. CONCRETE COVER FOR REINFORCEMENT MUST NOT BE LESS THAN THE FOLLOWING:
    a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.......3"
    b. CONCRETE EXPOSED TO EARTH OR WEATHER:
       » #6 THROUGH #18 BARS.......2"
       » #5 BAR, W31 OR D31 WIRE, AND SMALLER.......1 1/2"
    c. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
       • SLABS, WALL, JOISTS:
         » #14 BAR AND #18 BARS.......1 1/2"
         » #11 BAR AND SMALLER.......3/4"
       • BEAMS, COLUMNS:
         » PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS.......1 1/2"

13. CONTINUOUS UNCOATED REINFORCEMENT OF DEFORMED BARS NOT LARGER THAN #11 MAY BE LAPPED AT SPLICES. THE MINIMUM LAP LENGTH MUST BE AS REQUIRED FOR CLASS A OR CLASS B SPLICE, BUT NOT LESS THAN 12 INCHES (f_c' = 4000 psi).
    a. CLASS A SPLICE = $(1.0)l_d$
       • #6 AND SMALLER BARS AND DEFORMED WIRES.......$38d_b$
       • #7 AND LARGER BARS.......$47d_b$
    b. CLASS B SPLICE = $(1.3)l_d$
       • #6 AND SMALLER BARS AND DEFORMED WIRES.......$49d_b$
       • #7 AND LARGER BARS.......$62d_b$

14. CONCRETE FOUNDATIONS MUST NOT BE PLACED ON FROZEN GROUND SURFACE OR PLACED IN WATER. THE CONTRACTOR SHALL USE A DEWATERING POINT SYSTEM, AS NECESSARY.

15. ALL NORMAL STRENGTH CONCRETE MUST BE MAINTAINED ABOVE 50°F AND IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS AFTER PLACEMENT BEFORE ANY EXTERNAL LOADS CAN BE APPLIED.

16. CONCRETE NOTED AS HIGH-EARLY STRENGTH MUST BE MAINTAINED ABOVE 50°F AND IN A MOIST CONDITION FOR A MINIMUM OF THREE DAYS AFTER PLACEMENT BEFORE ANY EXTERNAL LOADS CAN BE APPLIED.

17. THE CONTRACTOR IS RESPONSIBLE TO DESIGN, FURNISH AND PLACE ALL TEMPORARY OR PERMANENT SHORING AND/OR BRACING TO PROTECT EXCAVATIONS, EXISTING STRUCTURES, AND UTILITIES ADJACENT TO THE SITE. DETAILED INFORMATION ON FORMWORK FOR CONCRETE IS GIVEN IN THE "GUIDE TO FORMWORK FOR CONCRETE," REPORTED BY ACI COMMITTEE 347.

18. THE CONTRACTOR MUST PROVIDE ALL NECESSARY TEMPORARY SHORING REQUIRED TO RETAIN THE STABILITY OF THE STRUCTURE WHILE REPAIRS AND REHABILITATION TAKE PLACE.

19. THE CONTRACTOR MUST PROVIDE ALL NECESSARY LABOR AND MATERIALS FOR UNDERPINNING REQUIREMENTS WHEN PLACING FOOTINGS NEXT TO OR BELOW EXISTING ADJACENT STRUCTURES, AS APPLICABLE.

20. NEATLY FORMED EARTH TRENCHES MAY BE PERMITTED FOR CASTING SPREAD FOOTINGS AND GRADE BEAMS WHERE SOIL CONDITIONS DO NOT REQUIRE FORMWORK. THE CONTRACTOR MUST VERIFY SOIL CONDITIONS WITH A LICENSED GEOTECHNICAL ENGINEER AND OBTAIN APPROVAL BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. THE CONTRACTOR MUST PLACE THESE STRUCTURES NEATLY WITHIN ACI 301 DIMENSION TOLERANCES, WITHOUT CONCRETE OVERPOUR SHELVES, AND SUCH THAT ALL REINFORCEMENT COVER AND SPACING REQUIREMENTS ARE PROVIDED.

21. EARTH FORMED CONTINUOUS STRIP FOOTINGS ARE PROHIBITED.

22. SLOPE SLABS DOWN 1/4 INCH PER FOOT (2% SLOPE) TO ALL FLOOR DRAINS.

23. PROVIDE 2 - #4 x 3'-0" TOP AND BOTTOM AT 45° ANGLE AT ALL REENTRANT CORNERS IN CONCRETE SLAB. PROVIDE THE BOTTOM LAYER OF REINFORCEMENT FOR SLABS GREATER THAN OR EQUAL TO SIX INCHES THICK.

24. PROVIDE 4 - #4 x 3'-0" AT ONE INCH CLEAR FROM TOP OF SLAB AT ALL DISCONTINUOUS CONTRACTION OR CONSTRUCTION JOINTS.

25. APPROVED POST-INSTALLED ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) AND ARE NOT BE USED IN CONCRETE WITH A STRENGTH GREATER THAN 8000 PSI WITHOUT TESTING TO VERIFY ACCEPTABLE PERFORMANCE.

26. POST-INSTALLED EXPANSION ANCHORS MUST MEET THE ASSESSMENT CRITERIA OF ACI 355.2. EXPANSION ANCHORS TO BE PLATED CARBON STEEL, TORQUE CONTROLLED SLEEVE-TYPE OR STUD-TYPE, MECHANICAL EXPANSION ANCHORS APPROVED FOR USE IN HARDENED, CRACKED AND UNCRACKED NORMAL WEIGHT CONCRETE.

27. POST-INSTALLED SCREW ANCHORS MUST MEET THE ASSESSMENT CRITERIA OF ACI 355.2. SCREW ANCHORS TO BE PLATED CARBON STEEL WITH HARDENED THREADS APPROVED FOR USE IN HARDENED, CRACKED AND UNCRACKED NORMAL WEIGHT CONCRETE.

28. POST-INSTALLED ADHESIVE ANCHORS MUST MEET THE ASSESSMENT CRITERIA OF ACI 355.4. ADHESIVE ANCHORS TO BE APPROVED FOR USE IN HARDENED, CRACKED AND UNCRACKED NORMAL WEIGHT CONCRETE. THE ADHESIVE ANCHOR SYSTEM WILL CONSIST OF HIGH-STRENGTH STRUCTURAL ADHESIVE, ANCHOR ELEMENTS (CONTINUOUSLY THREADED RODS OR DEFORMED STEEL REINFORCING BARS), AND NORMAL WEIGHT CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION.

29. CONTRACTION JOINTS TO BE LOCATED ALONG COLUMN LINES, WITH INTERMEDIATE JOINTS LOCATED AT EQUAL SPACES BETWEEN COLUMN LINES, UNLESS OTHERWISE NOTED. CONTRACTION JOINT SPACING MUST NOT EXCEED 30 TIMES THE SLAB THICKNESS, UNLESS OTHERWISE APPROVED BY THE ENGINEER OF RECORD.

30. ISOLATION JOINTS MUST BE PLACED BETWEEN THE SLAB AND ADJOINING BUILDING ELEMENTS AS DETAILED AND OTHERWISE NOTED. ISOLATION JOINTS TO BE PLACED AT JUNCTIONS WITH WALLS, COLUMNS, EQUIPMENT FOUNDATIONS, FOOTINGS, OR OTHER POINTS OF RESTRAINT SUCH AS DRAINS, MANHOLES, SUMPS, AND STAIRWAYS.

31. EXPANSION AND ISOLATION JOINT MATERIAL TO BE PREFORMED, FLEXIBLE CLOSED CELL FOAM PLANK THE FULL THICKNESS OF THE SLAB.

32. VAPOR BARRIER TO BE ASTM E1745, CLASS A PLASTIC SHEET VAPOR BARRIER WITH A MINIMUM THICKNESS OF 15 MILS AND JOINT LAPPED NOT LESS THAN SIX INCHES, UNLESS OTHERWISE SPECIFIED BY ARCHITECTURAL SPECIFICATIONS.

33. PROVIDE MINIMUM R-7.5 EXTRUDED POLYSTYRENE INSULATION FOR ALL FOUNDATIONS BETWEEN TEMPERED AND UNCONDITIONED SPACES IN COMPLIANCE WITH ASHRAE STANDARD 90.1

Structural Steel Notes

1. STRUCTURAL STEEL TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS", AND AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

2. DETERMINE, FURNISH, AND INSTALL ALL TEMPORARY SUPPORTS, SUCH AS TEMPORARY GUYS, BEAMS, FALSEWORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION. THESE TEMPORARY SUPPORTS MUST BE SUFFICIENT TO SECURE THE BARE STRUCTURAL STEEL FRAMING OR ANY PORTION THEREOF AGAINST LOADS THAT ARE LIKELY TO BE ENCOUNTERED DURING ERECTION, INCLUDING THOSE DUE TO WIND AND THOSE THAT RESULT FROM ERECTION OPERATIONS.

3. STRUCTURAL STEEL SHOP-STANDARD MATERIAL TO BE AS FOLLOWS:
   a. W AND WT-SHAPES TO BE ASTM A992
   b. M, S, MT, ST-SHAPES TO BE ASTM A36
   c. HP-SHAPES TO BE ASTM A36
   d. L-SHAPES TO BE ASTM A36
   e. C AND MC-SHAPES TO BE ASTM A36
   f. HSS-SHAPES TO BE ASTM A500, GRADE B
   g. PIPE TO BE ASTM A53, GRADE B
   h. PLATES AND BARS TO BE ASTM A36
   i. ALL-THREAD ROD TO BE ASTM A36
   j. ANCHOR RODS TO BE ASTM F1554, GRADE 36
   k. HEADED STUDS TO BE TYPE B WITH MINIMUM TENSILE STRENGTH, F_u = 65 ksi, AND MINIMUM YIELD STRENGTH, F_y = 51 ksi.

4. HIGH-STRENGTH BOLTS SHALL MEET THE MATERIAL STRENGTHS OF ANSI/AISC 360 SPECIFICATION GROUP A. DOCUMENTATION TO BE PROVIDED BY THE CONTRACTOR TO PROVE THE QUALITY OF THE BOLTS AND THREADED PARTS.

5. ALL WELDING MUST BE IN ACCORDANCE WITH THE AWS D1.1 "STRUCTURAL WELDING CODE - STEEL" PUBLISHED BY THE AMERICAN WELDING SOCIETY. ELECTRODES FOR WELDED JOINTS MUST COMPLY WITH THE REQUIREMENTS OF TABLE 3.1 OF AWS D1.1. ALL WELDING TO BE COMPLETED BY QUALIFIED WELDERS CONFORMING TO THE AMERICA WELDING SOCIETY STANDARDS.

6. THE STEEL FABRICATOR MUST DESIGN AND SUPPLY APPROPRIATE PRODUCTS FOR ALL STEEL AND METAL ITEMS NOT SPECIFICALLY DETAILED ON DRAWINGS. ALL DESIGNS, METHODS, AND MATERIALS MUST COMPLY WITH THE AISC "STEEL CONSTRUCTION MANUAL", CURRENT EDITION

7. FABRICATION "SHOP" DRAWINGS TO BE SUPPLIED BY THE CONTRACTOR. ALL SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

8. ALL BOLTED CONNECTIONS TO BE SNUG-TIGHTENED JOINTS PER "THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", UNLESS NOTED OTHERWISE.

9. BOLTED CONNECTIONS INDICATED AS PRE-TENSIONED TO BE FASTENED BY MEANS OF THE TURN-OF-NUT METHOD, UNLESS NOTED OTHERWISE.

10. SIMPLE SHEAR CONNECTIONS TO BE DESIGNED BY THE FABRICATOR'S ENGINEER FOR THE REACTION LISTED IN THE DRAWINGS. IF NO REACTION IS PROVIDED, THE FABRICATOR'S ENGINEER MUST DESIGN THE CONNECTION FOR AT LEAST 50% OF THE SUPPORTED BEAM'S UNIFORM LOAD CONSTANT, W_c/Ω_b, DIVIDED BY THE SPAN LENGTH, L, AS TABULATED IN THE CURRENT EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL", PART 3, "MAXIMUM TOTAL UNIFORM LOAD TABLES".

11. SIMPLE SHEAR CONNECTIONS, NOT SHOWN IN THE DRAWINGS, TO BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL", PART 10, "DESIGN OF SIMPLE SHEAR CONNECTIONS".
    a. FOR SHEAR END-PLATE OR DOUBLE-ANGLE CONNECTIONS, OFFSET HOLES OR ADD ADDITIONAL ROWS OF BOLTS AS REQUIRED TO COMPLY WITH OSHA SAFETY BOLTING REQUIREMENTS.
    b. THE MINIMUM LENGTH OF CONNECTING ANGLES OR PLATES TO BE GREATER THAN THE SUPPORTED BEAM 'T' DIMENSION DIVIDED BY TWO.

12. HORIZONTAL AND VERTICAL BRACING CONNECTIONS TO BE DESIGNED BY THE FABRICATOR'S ENGINEER FOR THE AXIAL LOAD (COMPRESSION OR TENSION) LISTED IN THE DRAWINGS. IF NO LOAD IS PROVIDED, THE FABRICATOR'S ENGINEER MUST DESIGN THE BRACING CONNECTION FOR 100% OF THE BRACING MEMBER'S AVAILABLE STRENGTH IN AXIAL TENSION (ASD), AS GIVEN IN THE CURRENT EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL", PART 5.

13. HORIZONTAL AND VERTICAL BRACING CONNECTIONS, NOT SHOWN IN THE DRAWINGS, MUST BE DETAILED BY THE FABRICATOR IN ACCORDANCE WITH THE CURRENT EDITION OF AISC "STEEL CONSTRUCTION MANUAL", AND AISC 360, AS APPLICABLE.
    a. GUSSET PLATES TO BE SIZED TO ACCOMMODATE REQUIRED LOADS. AS A MINIMUM, GUSSETS TO BE 3/8 INCH THICK.
    b. AS A MINIMUM, THE WELD BETWEEN THE GUSSET PLATE AND THE SUPPORT TO BE SIZED AS $(5/8)t_p$.
    c. AS A MINIMUM, 3/4-INCH DIAMETER BOLTS TO BE UTILIZED FOR BOLTED CONNECTIONS. IF A BOLT IS CHOSEN WITH A NOMINAL DIAMETER GREATER THAN ONE INCH, INCREASE THE SPACING BETWEEN BOLTS TO A MINIMUM OF 3d.
    d. ACTUAL LOAD REQUIREMENTS MAY DICTATE THAT MORE BOLTS ARE REQUIRED. A MINIMUM OF TWO BOLTS SHALL BE UTILIZED.

14. FABRICATE AND ERECT ALL BEAMS WITH THE MILL CAMBER UP.

15. ALL STRUCTURAL STEEL TO BE CLEANED AND PREPARED FOR THE SPECIFIED COATING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF SSPC-SP2, UNLESS OTHERWISE SPECIFIED BY THE COATING SYSTEM MANUFACTURER.

16. STRUCTURAL STEEL MEMBERS COMPLETELY ENCLOSED IN THE BUILDING ENVELOPE TO BE SHOP COATED WITH THE FABRICATOR'S STANDARD SHOP PAINT APPLIED TO A MINIMUM DRY-FILM THICKNESS OF TWO MILS.

17. STRUCTURAL STEEL MEMBERS ON THE EXTERIOR OF THE BUILDING, EXPOSED TO SOIL, OR OTHERWISE EXPOSED TO CONDITIONS PROMOTING CORROSION TO BE, AT A MINIMUM, PROPERLY PRIMED WITH RUST INHIBITING PRIMER AND PAINTED. REFER TO ARCHITECTURAL DOCUMENTS FOR ADDITIONAL REQUIREMENTS OF EXPOSED STEEL.

18. THE CONTRACTOR THAT PERFORMS TOUCH-UP AND FIELD PAINTING IS RESPONSIBLE FOR ALL TOUCH-UP OF ABRASIONS CAUSED BY HANDLING AFTER PAINTING.

19. NON-SHRINK GROUT USED FOR SETTING AND FINISHING COLUMN BASE PLATES AND EQUIPMENT BASES TO BE A COMMERCIALLY PRE-MIXED AND BAGGED NON-METALLIC PRODUCT, AS APPROVED BY OWNER, CONTAINING, AS PART OF THE MIX, AN ADDITIVE TO COUNTERACT SHRINKAGE AND SETTLEMENT OF THE GROUT. NON-SHRINK GROUT SHALL REQUIRE ONLY THE ADDITION OF MIXING WATER FOR USE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.

20. **METAL BUILDING SYSTEM MANUFACTURER MUST DESIGN BASE PLATES FOR FRAMES AND COLUMNS BASED ON THE ANCHOR BOLT SIZES AND SPACING IN BOTH ORTHOGONAL DIRECTIONS PROVIDED IN THESE DRAWINGS.**

Soil Notes

1. FOUNDATIONS ARE DESIGNED FOR A MINIMUM BEARING CAPACITY OF 3000 psf FOR SPREAD FOOTINGS AND 2500 psf FOR STRIP FOOTINGS.

2. SLABS-ON-GROUND ARE DESIGNED FOR A MODULUS OF SUBGRADE REACTION OF 125 lb/in^3.

3. INSPECTION AND TESTING OF SUBGRADES AND GRADES FOR EXCAVATIONS, FILL, FOUNDATIONS, SLABS-ON-GROUND, AND PAVEMENT MUST BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING, OR REPRESENTATIVE.

4. FILL SELECTION, PLACEMENT, AND COMPACTION MUST BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING, OR REPRESENTATIVE.

5. ALL SUBGRADES AND GRADES MUST BE:
   a. FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIALS, AND
   b. INSPECTED AND APPROVED BY QUALIFIED ENGINEERING PERSONNEL UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING.

6. REMOVE ALL ORGANIC FILL AND SOFT SOILS COMPONENTS. PREPARATION OF THE SUBGRADES AFTER STRIPPING VEGETATION, ORGANIC OR OTHER UNSUITABLE MATERIALS TO CONSIST OF:
   a. PROOF-ROLLING TO DETECT SOFT, WET YIELDING SOILS OR OTHER UNSTABLE MATERIALS THAT MUST BE UNDERCUT,
   b. SCARIFYING THE TOP SIX TO EIGHT INCHES,
   c. RECOMPACTION TO THE MINIMUM IN-SITU DENSITY REQUIRED FOR THE MATERIAL IN PLACE.

7. IN UNDERCUT AND FILL AREAS, THE COMPACTED FILL MUST EXTEND:
   a. A MINIMUM OF ONE FOOT BEYOND THE EDGE OF THE FOUNDATION OR PAVEMENT AT GRADE AND DOWN TO COMPACTED FILL SUBGRADE ON A MINIMUM 1H:2V (HORIZONTAL : VERTICAL) SLOPE,
   b. ONE FOOT ABOVE FOOTING GRADE OUTSIDE THE BUILDING, AND
   c. TO FLOOR SUBGRADE INSIDE THE BUILDING.

8. FILL MUST BE PLACED AND COMPACTED ON A MINIMUM 5H:1V (HORIZONTAL : VERTICAL) SLOPE, OR MUST BE STEPPED OR BENCHED AS REQUIRED TO FLATTEN IF NOT SPECIFICALLY APPROVED BY QUALIFIED PERSONNEL UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING.

9. COMPACTED FILL MATERIALS MUST BE FREE OF DELETERIOUS, ORGANIC OR FROZEN MATTER AND MUST HAVE A MAXIMUM LIQUID LIMIT (ASTM D-423) AND PLASTICITY INDEX (ASTM D-424) OF 30 AND 10, RESPECTIVELY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES. ALL FILL MATERIALS SHOULD BE APPROVED BY A QUALIFIED SOILS ENGINEER PRIOR TO PLACEMENT. COMPACTED FILL SHOULD HAVE A MAXIMUM THREE-INCH PARTICLE SIZE DIAMETER UNLESS SPECIFICALLY APPROVED BY A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING. ALL FILL MATERIALS MUST BE TESTED AND APPROVED PRIOR TO PLACEMENT. IF THE FILL IS TO PROVIDE NON-FROST SUSCEPTIBLE CHARACTERISTICS, IT MUST BE CLASSIFIED AS A CLEAN GW, GP, SW, OR SP PER THE UNIFIED SOILS CLASSIFICATION SYSTEM (ASTM D-2487).

10. BASE COURSES PLACED UNDER SLABS-ON-GROUND, PAVEMENT, AND STOOPS MUST BE CLEAN, DENSELY-GRADED, GRANULAR MATERIAL WITH A BALANCED FINE CONTENT. BASE COURSE MATERIAL MUST MEET THE LOCAL DEPARTMENT OF TRANSPORTATION (DOT) APPROVED ROAD BASE MATERIAL WITH 100% PASSING THE 1 1/2-INCH SIEVE, 15% TO 55% PASSING THE No. 4 SIEVE, AND LESS THAN 10% PASSING THE No. 200 SIEVE. MATERIAL PASSING THE No. 200 SIEVE MUST BE CLEAN, GRANULAR FILL WITH LESS THAN 3% CLAY OR FRIABLE PARTICLES.

11. EXTERIOR/UNHEATED AREA PAVEMENT, PLACED DIRECTLY UPON SOILS SUBJECT TO HEAVING AND SUBSEQUENT SETTLEMENT DUE TO FREEZE/THAW CYCLES, TO BE LIMITEDLY UNDERCUT OF FROST SUSCEPTIBLE MATERIALS TO A DEPTH OF ONE TO TWO FEET BELOW THE SLAB AND REPLACED WITH WELL GRADED, PROPERLY PLACED AND COMPACTED GRANULAR SOILS.

12. THE DENSITY OF STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES MUST MEET THE FOLLOWING REQUIREMENTS:
    a. FOUNDATION SUBGRADES TO BE COMPACTED TO AN IN-SITU DENSITY OF 95% OR MORE OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY (ASTM D-1557).
    b. SLABS-ON-GROUND AND PAVEMENT SUBGRADES SHALL BE COMPACTED TO A MINIMUM IN-SITU DENSITY OF 95% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY (ASTM D-1557).
    c. THE MOISTURE CONTENT TO BE ± 2% OF OPTIMUM WHEN PLACED AND COMPACTED.
    d. FILL TO BE PLACED IN LAYERS WITH A MAXIMUM LOOSE THICKNESS OF EIGHT INCHES UNLESS SPECIFICALLY APPROVED BY PERSONNEL UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING, TAKING INTO CONSIDERATION THE TYPE OF MATERIALS AND COMPACTION EQUIPMENT BEING USED.
    e. COMPACTION EQUIPMENT MUST BE APPROVED BY PERSONNEL UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING, WHO IS ALSO PERFORMING THE INSPECTION OF FILL PLACEMENT AND COMPACTION TO ENSURE THAT IT IS SUITABLE FOR THE TYPE OF MATERIAL BEING COMPACTED.

13. EXCAVATION, FILLING, SUBGRADE AND GRADE PREPARATION MUST BE PERFORMED IN A MANNER AND SEQUENCE THAT WILL PROVIDE DRAINAGE AT ALL TIMES. PRECIPITATION, SPRINGS AND SEEPAGE WATER ENCOUNTERED SHALL BE PUMPED OR DRAINED TO PROVIDE SUITABLE WORKING PLATFORM AND SHOULD BE CALLED TO THE SOIL ENGINEER'S ATTENTION.

14. EXCAVATION SLOPES SHOULD BE MAINTAINED WITHIN ALL REQUIREMENTS SET-FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA), BUT SPECIFICALLY SECTION 1926 SUBPART "P - EXCAVATIONS"

15. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION AND PROVIDE ALL PROTECTION REQUIRED SO AS TO SAFEGUARD EXISTING UTILITIES.

16. NON-STRUCTURAL FILL ADJACENT TO STRUCTURAL FILL MUST BE PLACED IN UNISON TO PROVIDE LATERAL SUPPORT. BACKFILL ALONG BUILDING WALLS MUST BE PLACED AND COMPACTED WITH CARE TO ENSURE EXCESSIVE UNBALANCED LATERAL PRESSURES DO NOT DEVELOP. THE TYPE OF FILL MATERIALS PLACED ADJACENT TO BELOW GRADE WALLS (i.e., BASEMENT WALLS AND RETAINING WALLS) MUST BE PROPERLY TESTED AND APPROVED BY A REGISTERED PROFESSIONAL ENGINEER, EXPERIENCED IN SOILS ENGINEERING, OR REPRESENTATIVE, WITH CONSIDERATION FOR THE LATERAL EARTH PRESSURE USED IN THE WALL DESIGN.

General Notes

1. ALL CONSTRUCTION MUST COMPLY WITH THE PROVISIONS OF THE CURRENTLY ADOPTED IBC, OSHA, AND ALL STATE AND LOCAL CODES AND THEIR SUPPLEMENTS. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL OR OTHER GOVERNING BODIES' CODES. ADDITIONALLY, ALL WORK MUST BE COMPLETED IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS OR GUIDELINES AND CONFORM WITH AIA DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION".

2. THE CONTRACTOR MUST SUPPLY ALL MATERIAL SAFETY DATA SHEETS (MSDS) FOR CHEMICALS BROUGHT ONTO THE SITE.

3. SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS ARE NOT PART OF THE CONTRACT DOCUMENTS. THE DESIGN PROFESSIONAL OF RECORD'S REVIEW AND APPROVAL OF SUCH SUBMITTALS IS STRICTLY FOR THE LIMITED PURPOSE OF CHECKING FOR COMPLIANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. REVIEW OF SUCH SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF THE EQUIPMENT OR SYSTEMS, ALL OF WHICH REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. THE DESIGN PROFESSIONAL OF RECORD'S REVIEW OF THE CONTRACTOR'S SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS UNDER AIA DOCUMENT A201, SECTIONS 3.3, 3.5, AND 3.12 OF AIA A201. THE DESIGN PROFESSIONAL OF RECORD'S REVIEW DOES NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OR OF ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES. THE DESIGN PROFESSIONAL OF RECORD'S APPROVAL OF A SPECIFIC ITEM DOES NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

4. THE CONTRACTOR'S SUBMITTAL OF SHOP DRAWINGS, SAMPLES, AND SIMILAR SUBMITTALS REPRESENTS TO THE OWNER AND DESIGN PROFESSIONAL OF RECORD THAT THE CONTRACTOR HAS (1) REVIEWED AND APPROVED THEM, (2) DETERMINED AND VERIFIED MATERIALS, FIELD MEASUREMENTS AND FIELD CONSTRUCTION CRITERIA RELATED THERETO, OR WILL DO SO, AND (3) CHECKED AND COORDINATED THE INFORMATION CONTAINED WITHIN SUCH SUBMITTALS WITH THE REQUIREMENTS OF THE WORK AND OF THE CONTRACT DOCUMENTS.

5. THE CONTRACTOR MUST FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING/PREVIOUSLY PHASED WORK PRIOR TO THE START OF FABRICATION AND CONSTRUCTION. NOTIFY DESIGN PROFESSIONAL OF RECORD OF ANY DISCREPANCIES.

6. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF EXISTING WALL AND/OR FACE OF NEW FRAMING. STRUCTURAL STEEL FRAMING DIMENSIONS ARE CENTER LINE DIMENSIONS.

7. INDICATED DIMENSIONS ARE TAKEN FROM CASUAL FIELD OBSERVATIONS AND EXISTING DRAWINGS. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY DESIGN PROFESSIONAL OF RECORD OF ANY DISCREPANCIES. ALL CHANGES TO THE WORK MUST BE APPROVED BY THE DESIGN PROFESSIONAL OF RECORD AND OWNER PRIOR TO PROCEEDING.

8. THE CONTRACTOR MUST SECURE ALL NECESSARY LOCAL PERMITS REQUIRED FOR IT'S WORK.

9. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ANY UTILITIES IN THE VICINITY OF THE CONSTRUCTION (UNDERGROUND OR OTHERWISE) AND MUST COMPLETE THE CONSTRUCTION IN A MANNER WHICH WILL PREVENT DAMAGE TO THEM. SHOULD ANY DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR MUST REPAIR THE DAMAGE AT ITS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.

10. COORDINATE ALL WORK WITH MECHANICAL, ELECTRICAL, CIVIL, STRUCTURAL, ARCHITECTURAL DRAWINGS AND TRADES. VERIFY EXACT SIZE AND LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS REQUIRED OF THESE AND OTHER TRADES.

11. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION EFFORTS OF ALL SUB-CONTRACTORS. FAILURE TO ANTICIPATE CHANGES OR MODIFICATIONS MUST NOT BE THE BASIS FOR ADDITIONAL COST REQUESTS.

12. CONTRACTORS MUST COORDINATE THEIR WORK WITH THE OTHER TRADES. EXTRAS WILL NOT BE GIVEN FOR FORESEEABLE WORK COORDINATION.

13. REFER TO EQUIPMENT SCHEDULES AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.

14. PROTECT ALL EQUIPMENT, BUILDING, AND PAVEMENTS, NEW AND EXISTING, FROM DEBRIS AND DAMAGE. FINAL CLEAN-UP OF ALL EQUIPMENT, BUILDINGS AND PAVEMENTS MUST BE COMPLETED PRIOR TO SUBSTANTIAL COMPLETION.

15. PROVIDED CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE AND DO NOT INDICATE THE METHOD(S) OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES (BRACING, SHORING, ETC.). OBSERVATION VISITATIONS CONDUCTED BY THE ENGINEER OR THE ENGINEER'S REPRESENTATIVE(S) DO NOT INCLUDE INSPECTION OF PROTECTIVE MEASURES OR CONSTRUCTION PROCEDURES.

Structural Design Criteria

1. RISK CATEGORY II:
   a. SNOW IMPORTANCE FACTOR, I_s = 1.00
   b. ICE IMPORTANCE FACTOR - THICKNESS, I_i = 1.00
   c. ICE IMPORTANCE FACTOR - WIND, I_w = 1.00
   d. SEISMIC IMPORTANCE FACTOR, I_e = 1.00

2. FLOORS, ROOFS, AND OTHER SIMILAR SURFACES ARE DESIGNED TO SUPPORT SAFELY THE LISTED UNIFORMLY DISTRIBUTED LIVE LOAD (psf) OR THE CONCENTRATED LOAD (lbs), WHICHEVER PRODUCES THE GREATER LOAD EFFECTS.

3. ROOF LIVE LOAD, L_r = 20 psf / 300 lbs

4. ROOF DEAD LOAD, D = 15 psf

5. ROOF COLLATERAL LOAD = 5 psf

6. FLOOR LIVE LOAD, L:
   a. LIGHT STORAGE = 125 psf
   b. TRUCK/HEAVY EQUIPMENT = H15-44

7. CONCENTRATED LOADS ON FLOORS, ROOFS, AND SIMILAR SURFACES ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED OVER AN AREA 2.5 ft x 2.5 ft.

8. CONCENTRATED LOADS ON STAIR TREADS ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED OVER AN AREA 2 in x 2 in.

9. GROUND SNOW LOAD, p_g = 20 psf

10. MINIMUM UNIFORM SNOW LOAD, $p_m = I_s p_g$ = 20 psf

11. SNOW EXPOSURE FACTOR, C_e = 1.0

12. THERMAL FACTOR, C_t = 1.0

13. FLAT ROOF SNOW LOAD, $p_f = (0.7)C_eC_tI_sp_g$ = 14 psf

14. ROOF SLOPE FACTOR, C_s = 1.0

15. SLOPED ROOF SNOW LOAD, $p_s = C_sp_f$ = 14 psf

16. UNBALANCED SNOW LOAD, DRIFTING SNOW LOAD, AND SLIDING SNOW LOAD PER ASCE 7-10.

17. DESIGN WIND SPEED, V = 115 mph

18. WIND EXPOSURE CATEGORY C

19. INTERNAL PRESSURE COEFFICIENT, GC_{pi} = +/- 0.18

20. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
    a. SHORT PERIODS, S_S = 0.116g
    b. 1-SECOND PERIODS, S_1 = 0.061g

21. SITE CLASS D

22. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
    a. SHORT PERIODS, S_{DS} = 0.124g
    b. 1-SECOND PERIODS, S_{D1} = 0.097g

23. SEISMIC DESIGN CATEGORY B

24. THE BASIC LATERAL AND VERTICAL SEISMIC FORCE-RESISTING SYSTEM SHALL CONFORM TO A STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE, EXCLUDING CANTILEVER COLUMN SYSTEMS.

25. RESPONSE MODIFICATION COEFFICIENT, R = 3

26. SEISMIC ANALYSIS BY EQUIVALENT LATERAL FORCE PROCEDURE.

New Construction and Renovation Work For:
C.20.10211 PFW West Campus
Maintenance Building Addition - 2026

2101 E. Coliseum Blvd.
Fort Wayne, IN 46805-1499

PURDUE UNIVERSITY FORT WAYNE

MARTINRILEY architects-engineers

221 West Baker Street
Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

JEREMY L. BRICKEY
REGISTERED
No.10809052
04/07/2026
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISION:	DATE:

DRAWN BY:	NMS	REVIEWED BY:	JLB
COMMISSION NUMBER:	F25111	DATE:	2026-03-13

S001

STRUCTURAL SPECIFICATIONS

F25111 C.20.10211 PFW West Campus Maintenance Building Addition -
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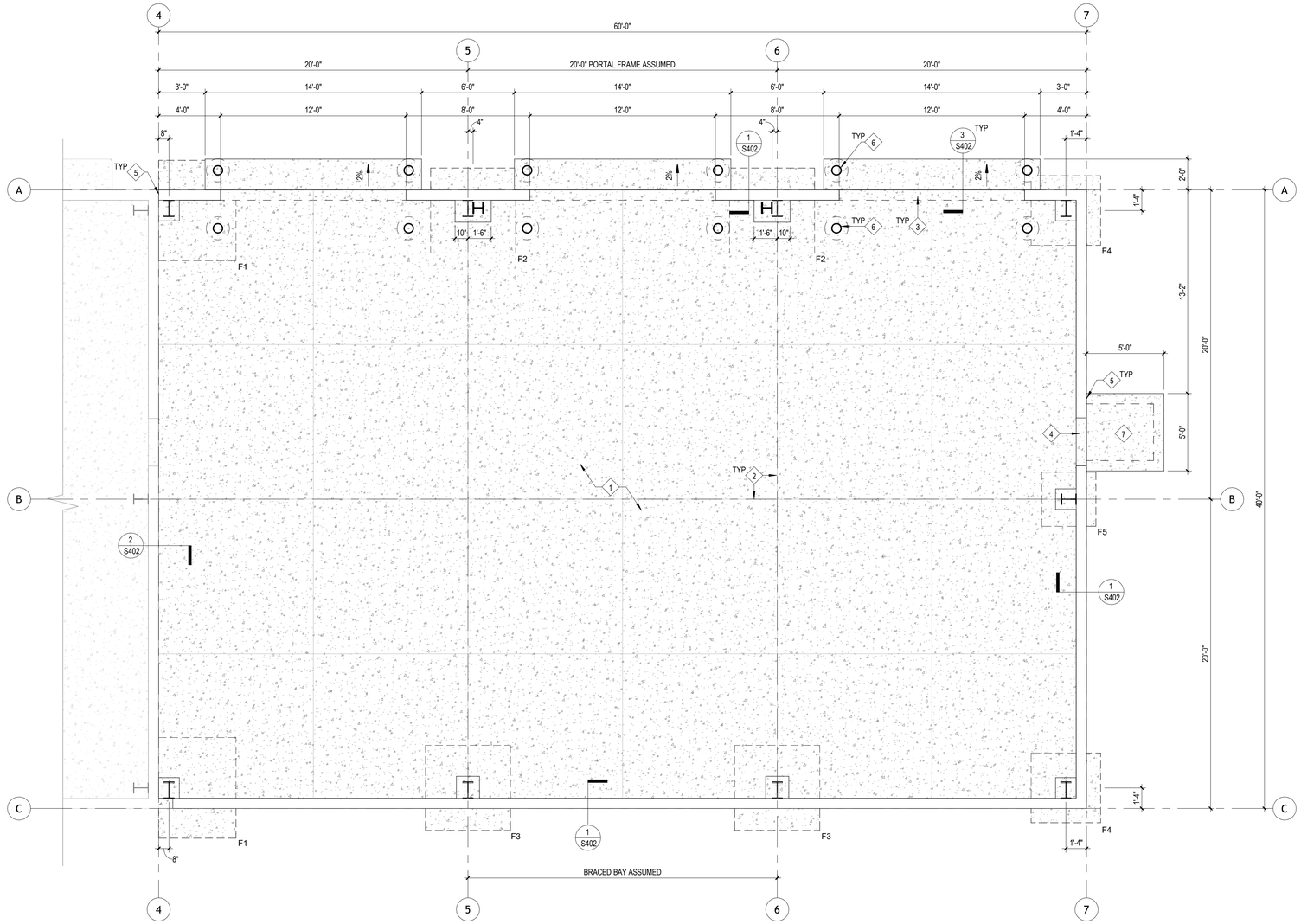
SD/DD/CD



NORTH

1 Foundation Plan

1/4" = 1'-0"

Work Description Notes

1. PROVIDE AND PLACE SIX INCH THICK CONCRETE SLAB. REINFORCE SLAB WITH 6x6 - W1.4xW1.4 WELDED WIRE REINFORCEMENT (WWR) PLACED WITH 1 1/2" TO 2" OF COVER
2. PLACE SAWCUT CONTRACTION JOINTS IN ACCORDANCE WITH DETAIL 9/S402
3. FORM OPENING, PLACE REINFORCEMENT AND ISOLATION JOINT IN ACCORDANCE WITH DETAIL 3/S401
4. FORM OPENING, PLACE REINFORCEMENT AND ISOLATION JOINT IN ACCORDANCE WITH DETAIL 4/S401
5. DRILL-IN AND ANCHOR WITH ADHESIVE (3) #4 x 1'-6" DOWELS INTO HARDENED CONCRETE WITH SIX INCH EMBEDMENT. PLACE ONE DOWEL AT TOP, BOTTOM, AND CENTER OF GRADE BEAM IN ACCORDANCE WITH ADHESIVE MANUFACTURER'S SPECIFICATIONS
6. PROVIDE AND INSTALL PROTECTIVE BOLLARD. SEE DETAIL 10/S402
7. PROVIDE AND PLACE FOUR INCH THICK CONCRETE STOOP. REINFORCE WITH 6x6 - W1.4x1.4 WELDED WIRE REINFORCEMENT (WWR) PLACED IN TOP THIRD OF SLAB DEPTH. SEE DETAIL 4/S402

Foundation Plan Notes

1. PLAN REFERENCE ELEVATIONS:
   a. TOP OF CONCRETE SLAB = 100'-0".
   b. TOP OF FOOTING = 96'-6".
   c. TOP OF PEDESTALS = 100'-0".
   d. TOP OF GRADE BEAM = 100'-0".
2. FINISH GRADE MUST BE COMPLETED SUCH THAT THE BOTTOM OF FOUNDATIONS ARE LOCATED A MINIMUM OF 3'-0" BELOW FINISH GRADE.
3. CENTER ALL FOOTINGS ON WALL, PEDESTAL, PIER OR COLUMN ABOVE, UNLESS OTHERWISE INDICATED.
4. WHERE COLUMN FOOTINGS INTERSECT FOUNDATION WALL FOOTINGS, EXTEND ALL WALL REINFORCEMENT DOWELS DOWN TO BOTTOM LAYER OF COLUMN FOOTING REINFORCEMENT.
5. WHERE FOUNDATION WALL INTERSECTS COLUMN PEDESTAL, EXTEND ALL LONGITUDINAL FOUNDATION WALL REINFORCEMENT THROUGH COLUMN PEDESTAL.
6. WHERE FOUNDATION WALL FOOTING INTERSECTS COLUMN FOOTING, EXTEND ALL LONGITUDINAL STEM WALL FOOTING REINFORCEMENT THROUGH COLUMN FOOTING.
7. SLAB-ON-GROUND TO BE PLACED OVER AN APPROVED VAPOR BARRIER AND MINIMUM SIX INCH COMPACTED CLEAN GRANULAR BASE COURSE BEARING ON A SUITABLY PREPARED SUBGRADE.
8. STOOPS TO BE PLACED OVER A MINIMUM FOUR INCH WELL COMPACTED CLEAN GRANULAR BASE COURSE BEARING ON A SUITABLY PREPARED SUBGRADE.
9. SPREAD BARS 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 LARGE OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT, DISTRIBUTING ONE HALF OF THIS REINFORCEMENT EACH SIDE OF THE OPENING (CLASS B TENSION LAP SPLICED). HOLES LARGER THAN 12 INCHES IN ANY DIRECTION SHALL HAVE 1 - #5 x 4'-0" DIAGONAL BARS IN BOTH FACES AT EACH CORNER (SEE DETAIL 6/S402).
10. ALL OPENINGS THROUGH WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE DRAWINGS MUST BE LOCATED BY THE CONTRACTOR AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS BE REVIEWED BY THE ENGINEER OF RECORD BEFORE THE CONCRETE IS PLACED.
11. **SPREAD FOOTING AND PEDESTAL SIZES ARE BASED ON GENERALLY ACCEPTED ENGINEERING PRINCIPLES, ASSUMED BRACED BAY LOCATIONS, AND SPECIFIED DESIGN LOADS. CONTRACTOR MUST COORDINATE FOUNDATION DESIGN PRESENTED HERE WITH FINAL REACTIONS PROVIDED BY THE METAL BUILDING SYSTEM MANUFACTURER CHOSEN BY CONTRACTOR.**

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C.20.10211 PFW West Campus Maintenance Building Addition - 2026

2101 E. Coliseum Blvd.
Fort Wayne, IN 46805-1499

PURDUE UNIVERSITY FORT WAYNE

MARTIN RILEY architects·engineers

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pho 260.422.7994
fax 260.426.2067

JEREMY L. BRICKER
REGISTERED
No. 10809052
04/07/2026
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISION: DATE:

DRAWN BY: NMS
REVIEWED BY: JLB
COMMISSION NUMBER: F25111
DATE: 2026-03-13

S101

FOUNDATION PLANS

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026\26 4:54:13 PM
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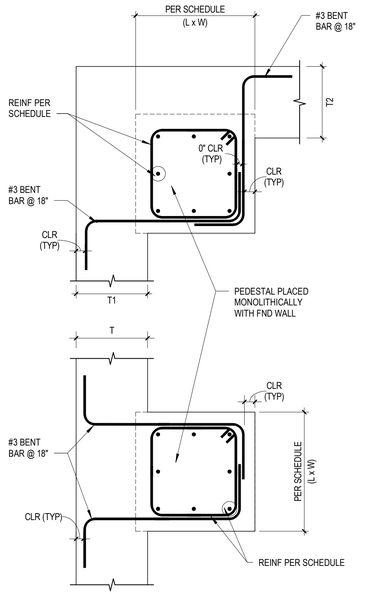
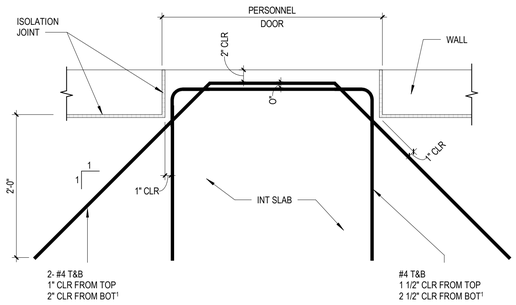
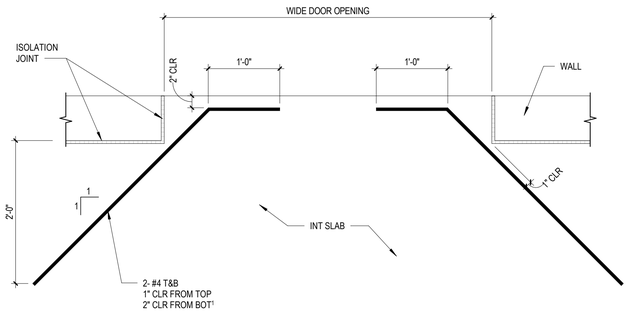


5 Typical Pedestal Tie-Backs
1" = 1'-0"



1. PROVIDE BOTTOM REINFORCEMENT FOR SLABS GREATER THAN OR EQUAL TO 6" THICK.
2. STOP DOOR JAMB ABOVE SLAB AND DO NOT ATTACH/ANCHOR TO THE SLAB.
3. POUR SLAB DOWN TO TOP OF FOUNDATION WALL AS REQUIRED.

4 Slab at Reinforcement at Personnel Door Opening
1" = 1'-0"

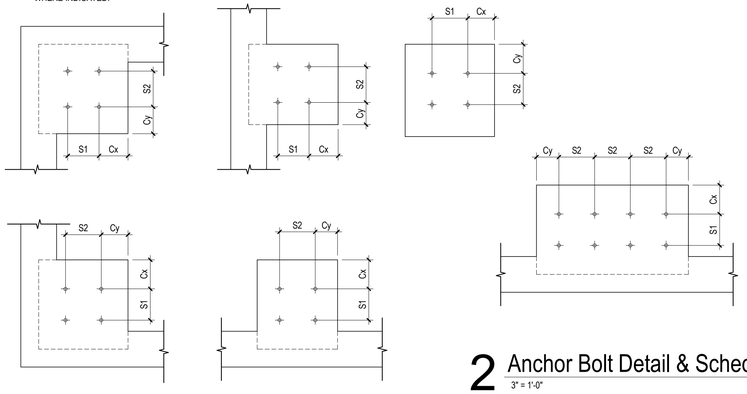


1. PROVIDE BOTTOM REINFORCEMENT FOR SLABS GREATER THAN OR EQUAL TO 6" THICK.
2. STOP DOOR JAMB ABOVE SLAB AND DO NOT ATTACH/ANCHOR TO THE SLAB.
3. POUR SLAB DOWN TO TOP OF FOUNDATION WALL AS REQUIRED.

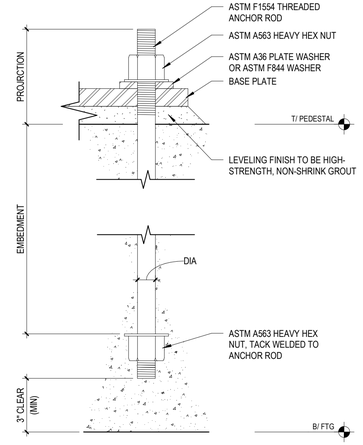
3 Slab Reinforcement at Wide Door Opening
1" = 1'-0"

ANCHOR BOLT/ROD SCHEDULE[1,2,3,6]												
COLUMN LOCATION	FOOTING MARK	DIAMETER	Cx	Cy	S1	S2	EMBED	PROJ[6]	GRADE, F_y	WASHER[7,8]	GRT PAD[4]	REMARKS
A-4, C-4	F1	3/4"	5 1/2"	5 1/2"	5"	5"	9"	4"	55 ksi	1/4" x 2"	1 1/2"	ECCENTRIC FOOTING
A-5, A-6	F2	3/4"	6 1/2"	6 1/2"	5"	5", 5", 5"	9"	4"	55 ksi	1/4" x 2"	1 1/2"	MAIN FRAME & PORTAL FRAME ANCHORAGE
C-5, C-6	F3	3/4"	6 1/2"	6 1/2"	5"	5"	9"	4"	55 ksi	1/4" x 2"	1 1/2"	
A-7, C-7	F4	3/4"	5 1/2"	5 1/2"	5"	5"	9"	4"	55 ksi	1/4" x 2"	1 1/2"	
B-7	F5	3/4"	5 1/2"	5 1/2"	5"	5"	9"	4"	55 ksi	1/4" x 2"	1 1/2"	

1. ANCHOR BOLT SIZES AND SPACING ARE BASED ON GENERALLY ACCEPTED ENGINEERING PRINCIPLES IN ACCORDANCE WITH ACI 318, ASSUMED BRACED BAY LOCATIONS, AND SPECIFIED DESIGN LOADS. CONTRACTOR MUST COORDINATE ANCHOR BOLT DESIGN PRESENTED HERE WITH FINAL BASE PLATES AND ANCHOR LOCATIONS PROVIDED BY THE METAL BUILDING SYSTEM MANUFACTURER CHOSEN BY CONTRACTOR.
2. FOUNDATION CONTRACTOR MUST MAINTAIN ALL DIMENSION TOLERANCES SHOWN WITHIN +/- 1/8".
3. ANCHOR BOLTS/RODS SHALL BE SET WITH A TEMPLATE TO ASSIST WITH PROPER PLACEMENT. ANCHOR BOLT SPACING (S1 & S2) AND EDGE DISTANCES (Cx & Cy) PER SCHEDULE.
4. LEVELING NUTS AND WASHERS SHALL NOT BE USED TO SUPPORT ANY COLUMN DURING ERECTION. IF GROUTING IS DELAYED UNTIL AFTER STEEL ERECTION, THE BASE PLATE MUST BE PROPERLY SHIMMED.
5. GROUT SHALL BE NON-METALLIC, HIGH-STRENGTH, NON-SHRINK GROUT CONFORMING TO ASTM C1107.
6. ANCHOR BOLT/ROD THREAD LENGTH TO BE 1/2 INCH LESS THAN THE SPECIFIED PROJECTION (THREAD LENGTH = PROJECTION - 1/2").
7. ANCHOR BOLT/ROD NUTS SHALL BE DRAWN DOWN TIGHT, PER ANSI A10.13 SECTION 9.6.
8. WASHER PLATES ARE NOT REQUIRED TO BE WELDED TO THE BASE PLATE, UNLESS NOTED OTHERWISE.
9. CIRCULAR OR SQUARE WASHERS MEETING THE WASHER SIZE REQUIREMENTS ARE ACCEPTABLE. ASTM F844 (USS STANDARD) WASHERS MAY BE USED IN PLACE OF FABRICATED PLATE WASHERS WHERE INDICATED.

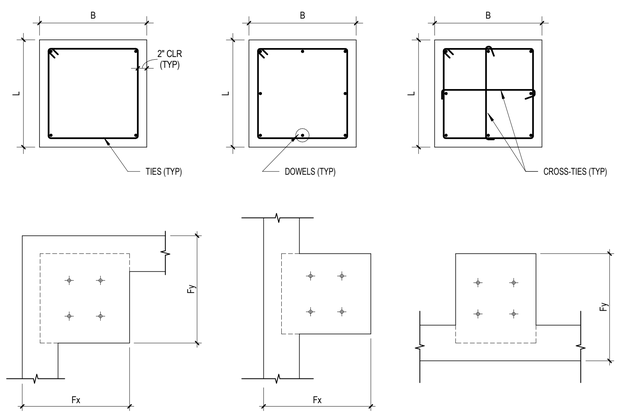


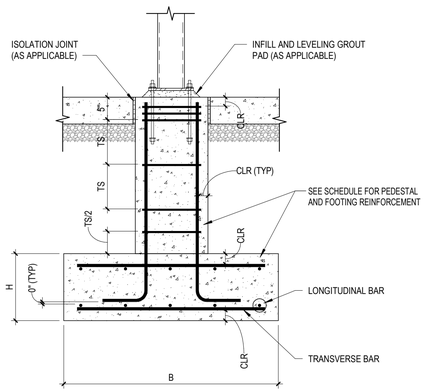
2 Anchor Bolt Detail & Schedule
3" = 1'-0"



COLUMN LOCATION	FOOTING MARK	PEDESTAL[4,6,8]								FOOTING[1]					
		L x B	TYPE[5]	Fx[7]	Fy[7]	TIES[2,3]	CROSS-TIES[2,3]	DOWELS[2]	T/ PEDESTAL	L	B	H	T/ FTG	REINFORCEMENT[1,8]	REMARKS[2,8]
A-4, C-4	F1 (ECCENTRIC FOOTING)	16" x 16"	CORNER	1'-4"	2'-0"	#3 @ 8"	N/A	8 - #4	100'-0"	5'-0"	6'-6"	1'-0"	96'-6"	5 - #5 TRANS T&B 5 - #5 w/ 180° HOOK END @ PEDESTAL SIDE, LONG T&B	PEDESTAL LOCATED AT EDGE OF FOOTING AND CENTERED ALONG DIMENSION 'B'. PEDESTAL CENTERED AT 8" OFF OF COLUMN LINE 4 AND 1'-4" OFF OF COLUMN LINE A & C
A-5, A-6	F2	18" x 28"	EDGE	N/A	2'-1"	#3 @ 8"	#3 @ 8"	14 - #4	100'-0"	5'-6"	5'-6"	1'-0"	96'-6"	5 - #5 EW BOT	COMBINED MAIN FRAME AND PORTAL FRAME CENTERED AT 1'-4" OFF OF COLUMN LINE A & 4" OFF OF LINES 5 & 6
C-5, C-6	F3	18" x 18"	EDGE	N/A	2'-1"	#3 @ 8"	#3 @ 8"	8 - #4	100'-0"	5'-6"	5'-6"	1'-0"	96'-6"	5 - #5 EW BOT	CENTERED AT 1'-4" OFF OF COLUMN LINE C
A-7, C-7	F4	16" x 16"	CORNER	2'-0"	2'-0"	#3 @ 8"	N/A	8 - #4	100'-0"	4'-6"	4'-6"	1'-0"	96'-6"	4 - #5 EW BOT	CENTERED AT 1'-4" OFF OF COLUMN LINES A, C, AND 7
B-7	F5	16" x 16"	EDGE	2'-0"	N/A	#3 @ 8"	N/A	8 - #4	100'-0"	3'-6"	3'-6"	1'-0"	96'-6"	3 - #5 EW BOT	CENTERED ON COLUMN LINE B AND 1'-4" OFF OF LINE 7

1. SPREAD FOOTING AND PEDESTAL SIZES ARE BASED ON GENERALLY ACCEPTED ENGINEERING PRINCIPLES, ASSUMED BRACED BAY LOCATIONS, AND SPECIFIED DESIGN LOADS. CONTRACTOR MUST COORDINATE FOUNDATION DESIGN PRESENTED HERE WITH FINAL REACTIONS PROVIDED BY THE METAL BUILDING SYSTEM MANUFACTURER CHOSEN BY CONTRACTOR.
2. SEE SHEET S001 FOR MINIMUM CONCRETE COVERAGE REQUIREMENTS. REINFORCEMENT SHALL BE PLACED EQUALLY SPACED ACROSS THE SECTION IN DIRECTION INDICATED (TRANSVERSE OR LONGITUDINAL). THE TRANSVERSE DIRECTION IS PARALLEL TO THE BREADTH OF THE FOOTING AND THE LONGITUDINAL DIRECTION IS PARALLEL TO THE LENGTH OF THE FOOTING.
3. STANDARD HOOKS AND MINIMUM BEND DIAMETERS SHALL BE IN ACCORDANCE WITH ACI 318, CHAPTER 7 - DETAILS OF REINFORCEMENT.
4. TIES SHALL BE LOCATED NOT MORE THAN ONE-HALF A TIE SPACING (TS) ABOVE THE TOP OF FOOTING. AT LEAST TWO #4 TIES OR THREE #3 TIES SHALL BE DISTRIBUTED WITHIN FIVE INCHES OF THE TOP OF PEDESTAL. CROSS-TIES ARE REQUIRED FOR LONGITUDINAL BARS FARTHER THAN SIX INCHES CLEAR ON EACH SIDE ALONG THE PERIMETER TIE FROM A LATERALLY SUPPORTED BAR (SEE SECTION DETAILS BELOW).
5. PEDESTALS TO BE CENTERED ON FOOTING, UNLESS OTHERWISE DETAILED OR NOTED.
6. PEDESTAL TYPES REFER TO EDGE, CORNER, OR CENTER, AS INDICATED AND OTHERWISE SHOWN ON FOUNDATION PLANS AND GENERALLY DETAILED BELOW.
7. PEDESTALS ARE TO BE BUILT MONOLITHICALLY AND TIED TO FOUNDATION WALL IN ACCORDANCE WITH PEDESTAL TIE-BACK DETAIL.
8. DISTANCES Fx AND Fy REFER TO THE OVERALL FOUNDATION BREADTH OR LENGTH, RESPECTIVELY. DIMENSIONS SHOWN INCLUDE BOTH THE FOUNDATION WALL AND PEDESTAL, AS APPLICABLE.
9. BTM = BOTTOM. TRANS = TRANSVERSE. LONG = LONGITUDINAL. T&B = TOP AND BOTTOM. CNTR = CENTER. EW = EACH WAY. CONT = CONTINUOUS. B = BREADTH. L = LENGTH.





1 Pedestal & Footing Schedule
3/4" = 1'-0"

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pho 260.422.7994
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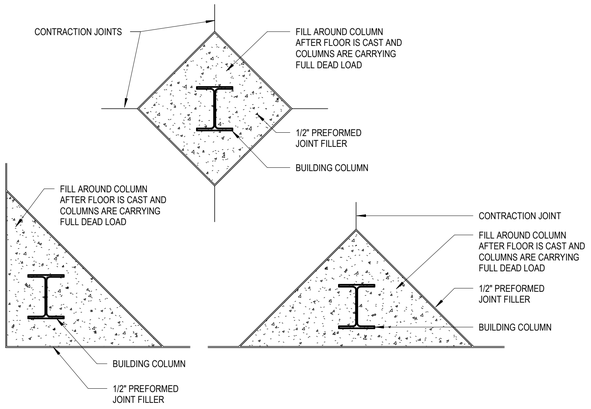
JEREMY L. BRINKLEY
REGISTERED
No. 10809052
04/07/2026
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISION:	DATE:

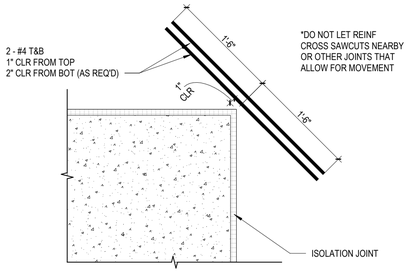
DRAWN BY:	NMS	REVIEWED BY:	JLB
COMMISSION NUMBER:	F25111	DATE:	2026-03-13

S401

FOUNDATION DETAILS



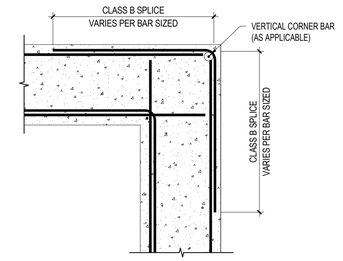
8 Typical Column Isolation Joints
3/4" = 1'-0"



7 Slab Reinforcement at Reentrant Corner
1" = 1'-0"

1. PROVIDE REINFORCEMENT AT BOTH FACES OF WALL OR TOP AND BOTTOM OF SLAB OR TURN DOWN FOR CONCRETE THICKNESSES GREATER TO OR EQUAL THAN SIX INCHES.
2. DETAIL APPLIES TO HOLES GREATER THAN 12 INCHES IN ANY DIRECTION.

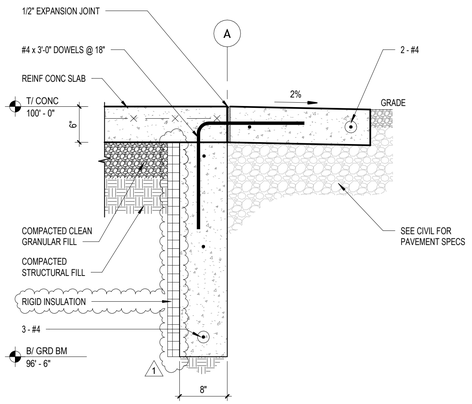
6 Typical Concrete Penetrations Reinforcement
1/4" = 1'-0"



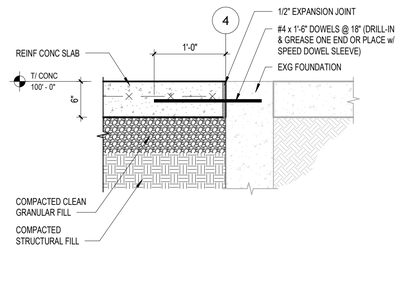
1. HORIZONTAL CORNER BAR SAME SIZE AND SPACING AS HORIZONTAL REINFORCEMENT
2. HORIZONTAL CORNER BARS REQUIRED ALONG EACH FACE OF STRUCTURE WHEN DETAILED WITH TWO OR MORE LAYERS OF HORIZONTAL REINFORCEMENT
3. SINGLE LAYER REINFORCEMENT IS SIMILAR
4. TYPICAL FOR CONCRETE WALLS, GRADE BEAMS, AND FOUNDATIONS

5 Typical Concrete Corner Reinforcement
3/4" = 1'-0"

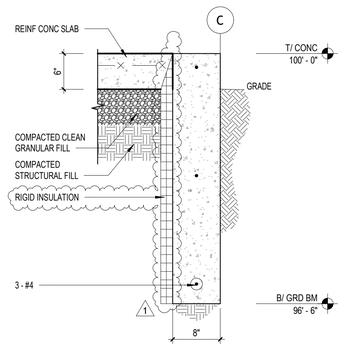
4 Typical Stoop
1" = 1'-0"



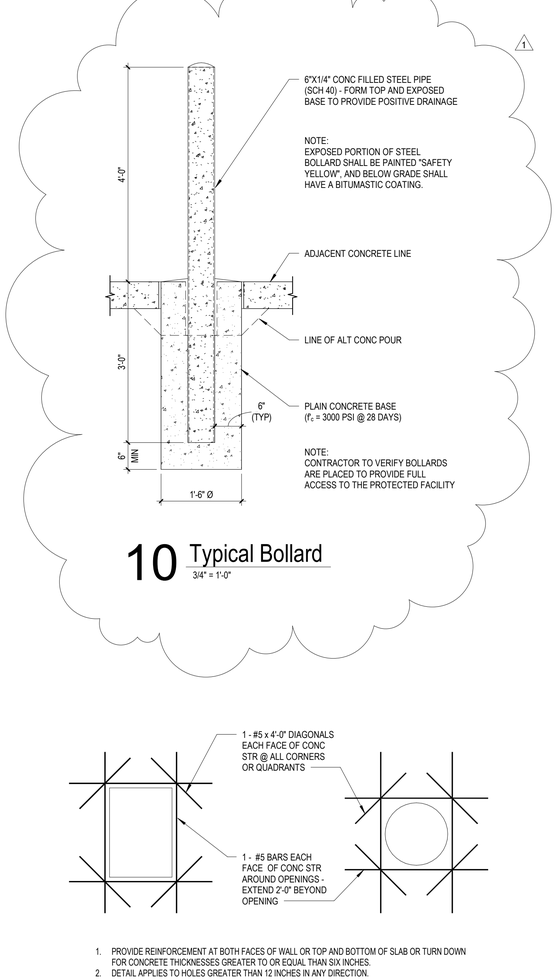
3 Foundation/Apron at Overhead Doors
1" = 1'-0"



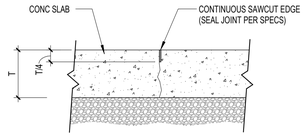
2 Slab Addition Construction Joint
1" = 1'-0"



1 Typical Grade Beam
1" = 1'-0"



10 Typical Bollard
3/4" = 1'-0"



1. FOR INDUSTRIAL USE SLABS, FILL SAWN JOINT WITH SEMIRIGID EPOXY OR POLYUREA FILLER.

9 Typical Sawcut Contraction Joint
1" = 1'-0"

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1	Addendum 2	2026-04-09

DRAWN BY: NMS
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S402

FOUNDATION DETAILS

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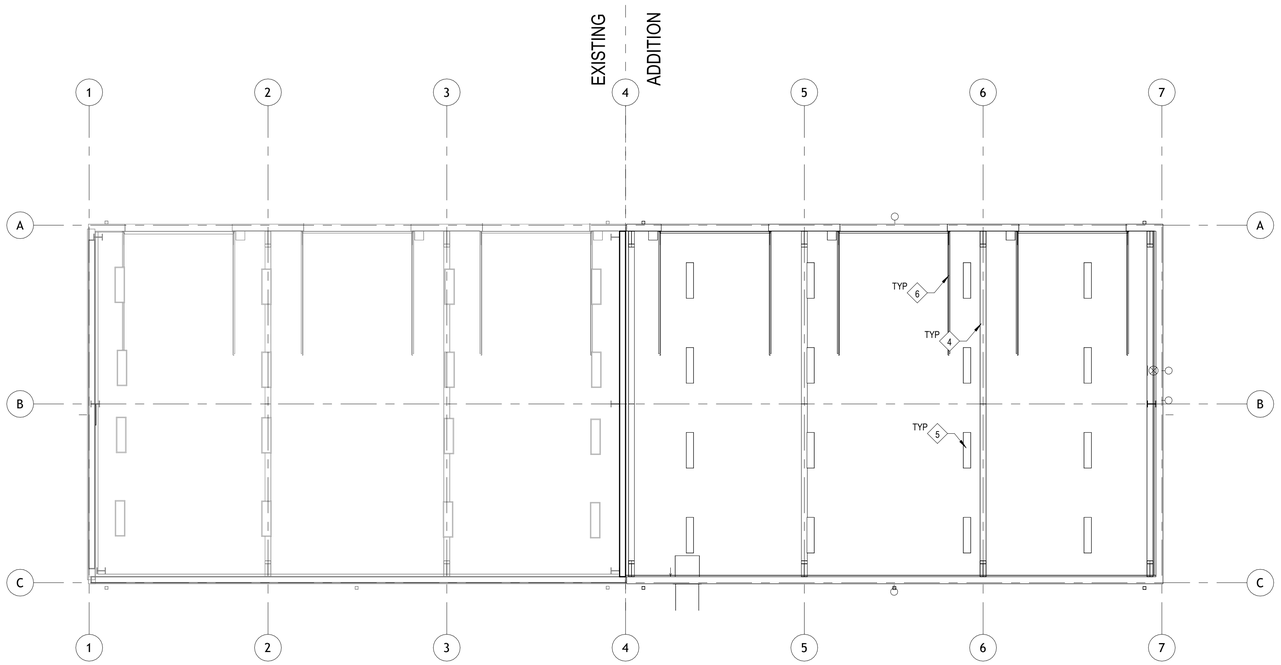


NORTH

2 Reflected Ceiling Plan

1/8" = 1'-0"

Reflected Ceiling Plan Legend

- SUPPLY AIR
- RETURN AIR
- SUPPLY AIR
- EXHAUST
- RECESSED/CEILING MOUNTED DOWNLIGHT
- SUSPENDED LINEAR FIXTURE
- EXIT LIGHT FIXTURE

General Notes

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL OR OTHER GOVERNING BODIES' CODES. ADDITIONALLY, WORK SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS OR GUIDELINES.
2. ALL DIMENSIONS ARE TO THE FACE OF MASONRY, FACE OF EXISTING WALL AND/OR FACE OF NEW FRAMING UNLESS NOTED OTHERWISE.
3. INDICATED DIMENSIONS ARE TAKEN FROM CASUAL FIELD OBSERVATIONS AND EXISTING DRAWINGS. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES. ALL CHANGES TO THE WORK SHALL BE APPROVED BY THE ARCHITECT AND OWNER PRIOR TO PROCEEDING.
4. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CONSTRUCTION EFFORTS OF ALL SUB-CONTRACTORS. FAILURE TO ANTICIPATE CHANGES OR MODIFICATIONS SHALL NOT BE THE BASIS FOR ADDITIONAL COST REQUESTS.
5. REFER TO FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
6. CONTRACTOR TO PROVIDE EITHER 2x WOOD BLOCKING INFILL OR METAL BACKING PLATES FOR THE SUPPORT OF ALL WALL MOUNTED EQUIPMENT INCLUDING CABINETRY, TOILET ACCESSORIES, ETC. AS REQUIRED TO ALLOW FOR PROPER ATTACHMENT. CONTRACTOR TO FIELD VERIFY THE SCOPE OF WORK.

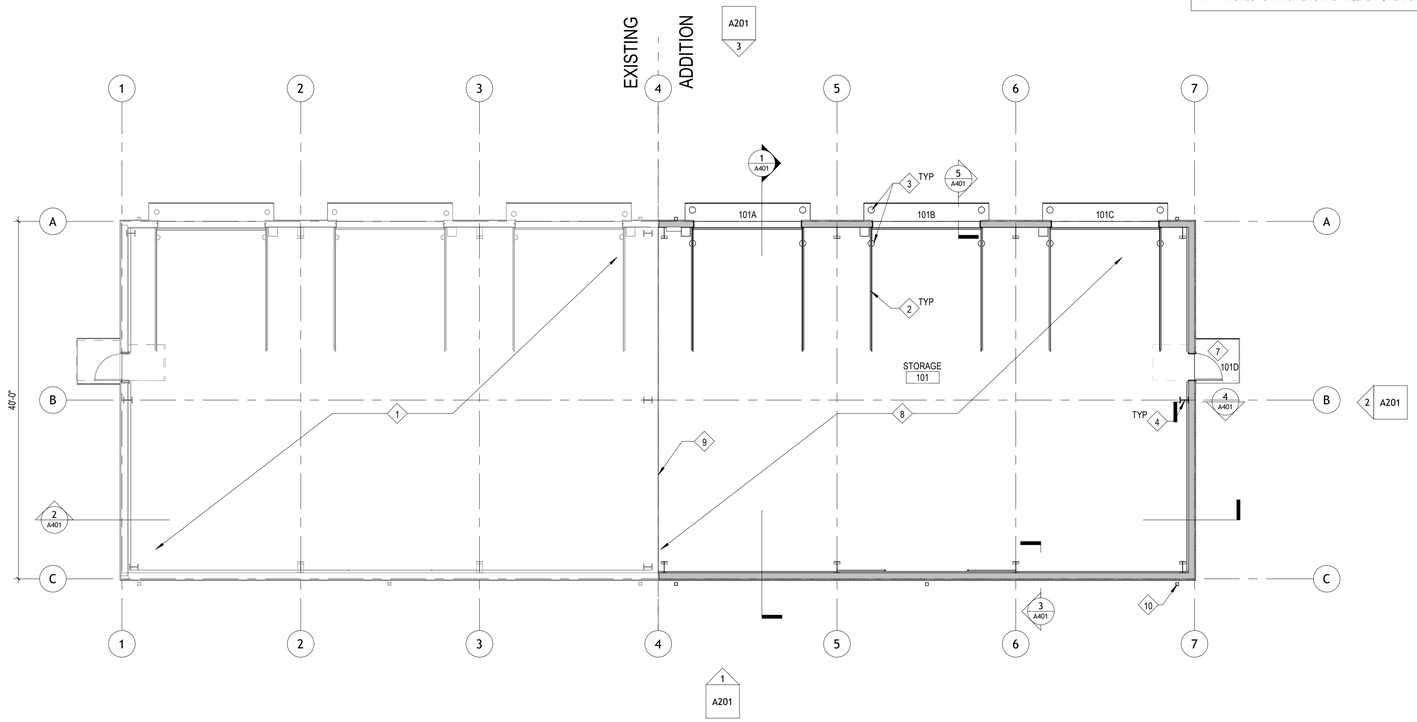
Work Description Notes

1	EXISTING TO REMAIN
2	DOOR TRACK ABOVE
3	PROVIDE PIPE BOLLARDS AT EXTERIOR AND INTERIOR OF OVERHEAD DOORS. REFER TO STRUCTURAL.
4	PRE-ENGINEERED METAL BUILDING (PEMB) STRUCTURE BY OTHERS.
5	LIGHT FIXTURE, REFER TO ELECTRICAL.
6	CONTRACTOR TO COORDINATE HEIGHT AND ANGLE OF OVERHEAD DOOR TRACKS TO AVOID CONFLICT
7	CONCRETE STOOP, REFER TO STRUCTURAL
8	NEW CONCRETE SLAB. REFER TO STRUCTURAL
9	1/2" EXPANSION JOINT, REFER TO STRUCTURAL
10	4" x 6" PRE-FINISHED METAL DOWNSPOUT TYP. TURN OUT ON PRECAST SPLASH BLOCK

Room Schedule

Room Number	Room Name	Floor Finish	Base Finish	Wall Finish				Ceiling Finish	Comments
				North	South	East	West		
101	STORAGE	CONC-1	PEMB	LINER PANEL	N/A [1]	LINER PANEL	LINER PANEL	EXPOSED	1

COMMENTS:
1. FINISHES TO MATCH EXISTING IN QUALITY, PERFORMANCE, AND APPEARANCE.



NORTH

1 First Floor

1/8" = 1'-0"

FINISH LEGEND

NOTE: ALL PRODUCTS ARE BASIS OF DESIGN. ALTERNATIVE PRODUCTS MAY BE SUBMITTED FOR CONSIDERATION AND APPROVAL.

A. CEILING
   1. EXPOSED STRUCTURE AND VAPOR RETARDER.

B. BASE
   1. BASE, PEMB MANUFACTURER TO PROVIDE, TO MATCH EXISTING PORTION.

M. MISCELLANEOUS
   1. SEALED CONCRETE, ASHFORD FORMULA, CLEAR
   2. LINER PANEL, PEMB MANUFACTURER TO PROVIDE, TO MATCH EXISTING PORTION.

PT. PAINT
   1. METAL FRAMING: SHERWIN WILLIAMS (1) COAT PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER (2) COATS PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY
      a. COLOR: TO MATCH EXISTING
      b. FINISH: TO MATCH EXISTING
   2. H.M. DOOR FRAME: SHERWIN WILLIAMS (1) COAT PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER (2) COATS PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY

NOTE: PAINT FRAME AS NEEDED FROM DEMOLITION/SALVAGE/REINSTALLATION PROCESS
   a. COLOR: TO MATCH EXISTING
   b. FINISH:TO MATCH EXISTING

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pho 260.422.7994
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JACK E. DANIEL REGISTERED No. AR00010026 STATE OF INDIANA ARCHITECT

04/08/2026

REVISION:		DATE:
1	Addendum 2	2026-04-09

DRAWN BY: PJ
REVIEWED BY: JEF
COMMISSION NUMBER: F25111
DATE: 2026-03-13

A101

FLOOR PLAN

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026
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SD/DD/CD

Door & Frame Schedule

Door Number	Leaf Count	Door					Frame		Door Head	Door Jamb	Door Sill	Hardware	Remarks
		Material	Elevation	Size (Each Leaf) Width	Height	Thickness	Material	Elevation					
101A		STL	OHD	12' - 0"	12' - 0"	0' - 2"	STL	-	5/A201	4/A201	-	-	1
101B		STL	OHD	12' - 0"	12' - 0"	0' - 2"	STL	-	5/A201	4/A201	-	-	1
101C		STL	OHD	12' - 0"	12' - 0"	0' - 2"	STL	-	5/A201	4/A201	-	-	1
101D	1	WD	F	3' - 0"	7' - 0"	0' - 1 3/4"	HM	1	7/A201	6/A201	8/A201	1	2

REMARKS

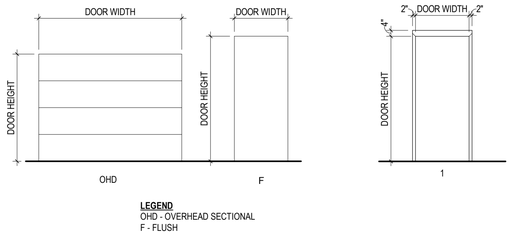
1. BASIS OF DESIGN TO MATCH EXISTING DOORS
2. EXISTING DOOR REINSTALLED IN NEW WALL. REPAIR AS NEEDED.

GENERAL NOTES

1. PAINT HOLLOW METAL DOOR, FRAMES AND HOLLOW METAL WINDOW FRAMES IN ALL ROOMS WHERE WORK IS BEING PERFORMED
2. PROVIDE SEALANT BETWEEN DOOR FRAMES AND ADJACENT SURFACE, PAINT OR COLOR TO MATCH
3. FIELD VERIFY ALL EXISTING CONDITIONS
4. PROVIDE STEEL LINTELS AND INFILL MASONRY AS REQUIRED FOR NEW OPENINGS AND OPENING MODIFICATIONS, SEE STRUCTURAL
5. PROVIDE DOOR SILENCERS AT NEW AND EXISTING DOOR LOCATIONS SCHEDULED
6. FILL AND SAND ANY HOLES IN HOLLOW METAL DOORS AND FRAMES
7. PROVIDE BLANK TRIMS FOR DOORS AS REQUIRED
8. PROVIDE DOOR SIGNAGE IN AREAS OF WORK. REFER TO DETAILS AND FINISH SCHEDULE
9. ALL WOOD DOORS TO BE SOLID CORE; ALL METAL DOORS BETWEEN SPACES WITH A TEMPERATURE DELTA GREATER THAN 10°F TO BE INSULATED
10. REFER TO FP001 CLEAN AGENT FIRE PROTECTION NOTES FOR WORK SCOPE AT DOORS PROVIDING ACCESS TO SEALED ROOMS

HARDWARE

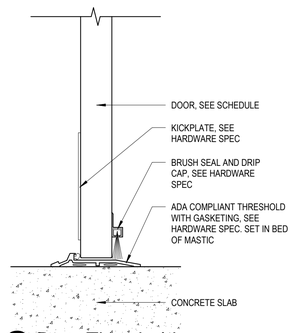
1. HARDWARE FROM EXISTING DOOR TO BE SALVAGED AND REUSED AT NEW OPENING LOCATION. REPAIR AND REPLACE COMPONENTS IF NEEDED.



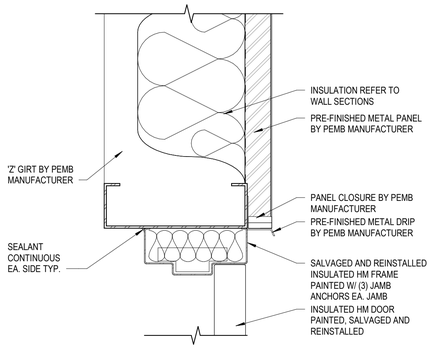
LEGEND
OHD - OVERHEAD SECTIONAL
F - FLUSH

Work Description Notes

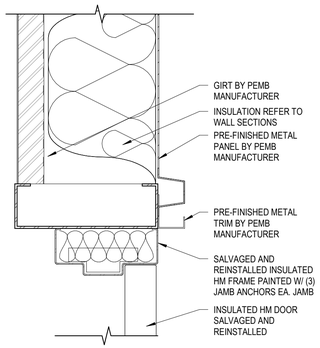
1. PRE-FINISHED CORNER TRIM, TYP.
2. 4" x 6" PRE-FINISHED METAL DOWNSPOUT TYP. TURN OUT ON PRECAST SPLASH BLOCK
3. 6" x 6" PRE-FINISHED METAL GUTTER
4. 24 GA. STANDING SEAM PRE-FINISHED METAL ROOFING
5. PRE FINISHED RAKE TRIM, TYP.
6. PROVIDE MANUFACTURER'S STANDARD EXPANSION JOINT, DETAILS, AND FLASHING AT CONNECTION POINT BETWEEN NEW AND EXISTING WALL AND ROOF CONSTRUCTION
7. ALTERNATE: MECHANICAL VENTILATOR SYSTEM. REFER TO M101.



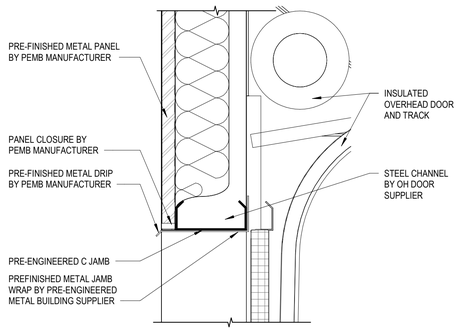
8 Door Threshold
3" = 1'-0"



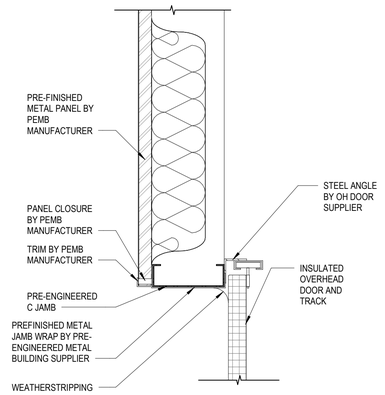
7 Head Detail
3" = 1'-0"



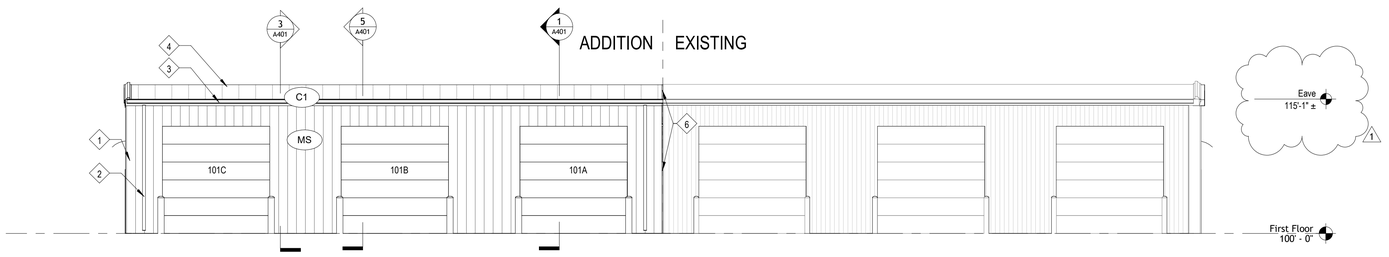
6 Jamb Detail
3" = 1'-0"



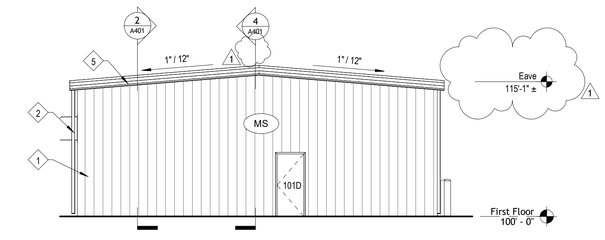
5 OH Door Head Detail
1 1/2" = 1'-0"



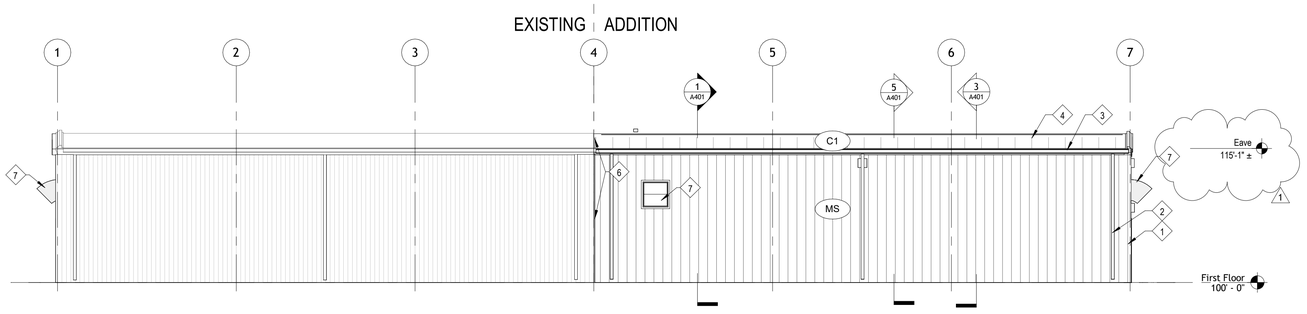
4 OH Door Jamb Detail
1 1/2" = 1'-0"



3 North Elevation
1/8" = 1'-0"



2 East Elevation
1/8" = 1'-0"



1 South Elevation
1/8" = 1'-0"

Exterior Materials & Finish Schedule

Mark	Spec. Section	Description	Finish Type & Color	Model/BOD	Comments
C1	07 6200	26 GA. PRE-FINISHED METAL FLASHING AND COPING	SELECTED FROM MANUFACTURER'S FULL RANGE OF COLORS TO MATCH EXISTING PORTION	NUCOR	1
MS	13 3419	26 GA. PRE-FINISHED METAL SIDING	SELECTED FROM MANUFACTURER'S FULL RANGE OF COLORS TO MATCH EXISTING PORTION	NUCOR	1

GENERAL NOTES:
1. REFER TO SPECIFICATION SECTIONS LISTED FOR MORE INFORMATION ON INSTALLATION, ADDITIONAL NOTES, AND ACCESSORIES
2. MANUFACTURERS LISTED ABOVE ARE BASIS OF DESIGN (BOD)
3. REFER TO WALL SECTIONS AND DETAILS FOR SYSTEM COORDINATION AND TRANSITIONS
4. INSTALL AS DEPICTED ON ELEVATIONS. REFER TO PLANS AND SECTIONS FOR DETAILS
5. SUBMIT SAMPLES OR COLOR SELECTION GUIDE TO ARCHITECT FOR FINAL SELECTION

COMMENTS:
1. COLOR, STYLE, THICKNESS, FINISH, AND OTHER PROPERTIES OF NEW MATERIAL TO MATCH EXISTING. ALL PRODUCTS ARE BASIS OF DESIGN, ALTERNATIVE PRODUCTS MAY BE SUBMITTED FOR CONSIDERATION AND APPROVAL.

New Construction and Renovation Work For:

C.20.10211 PFW West Campus Maintenance Building Addition - 2026

2101 E. Coliseum Blvd.
Fort Wayne, IN 46805

PURDUE UNIVERSITY FORT WAYNE

MARTIN RILEY architects·engineers
221 West Baker Street
Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

JACK E. DANIEL REGISTERED No. AR00010026 STATE OF INDIANA ARCHITECT
04/08/2026

REVISION:		DATE:
1	Addendum 2	2026-04-09

DRAWN BY: PJ
REVIEWED BY: JEF
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A201

BUILDING ELEVATIONS

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026
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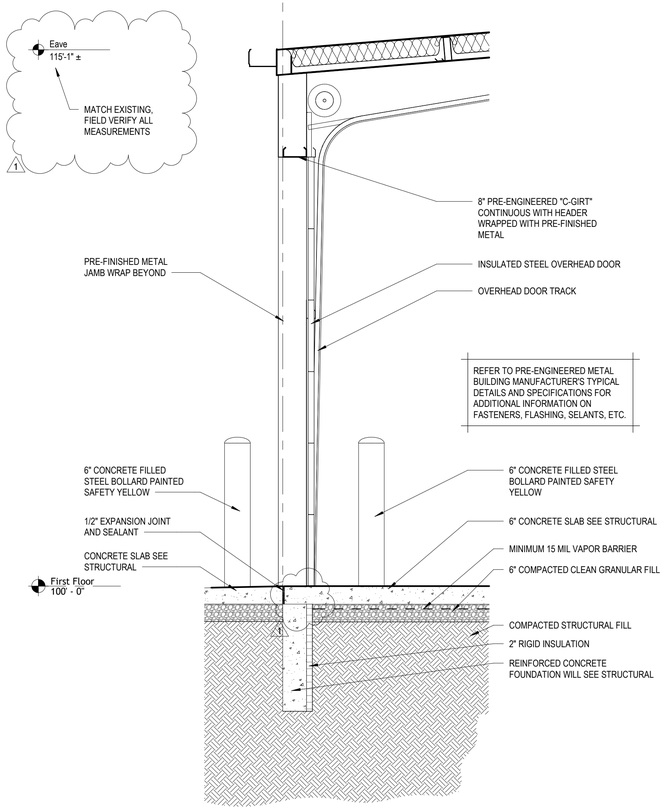
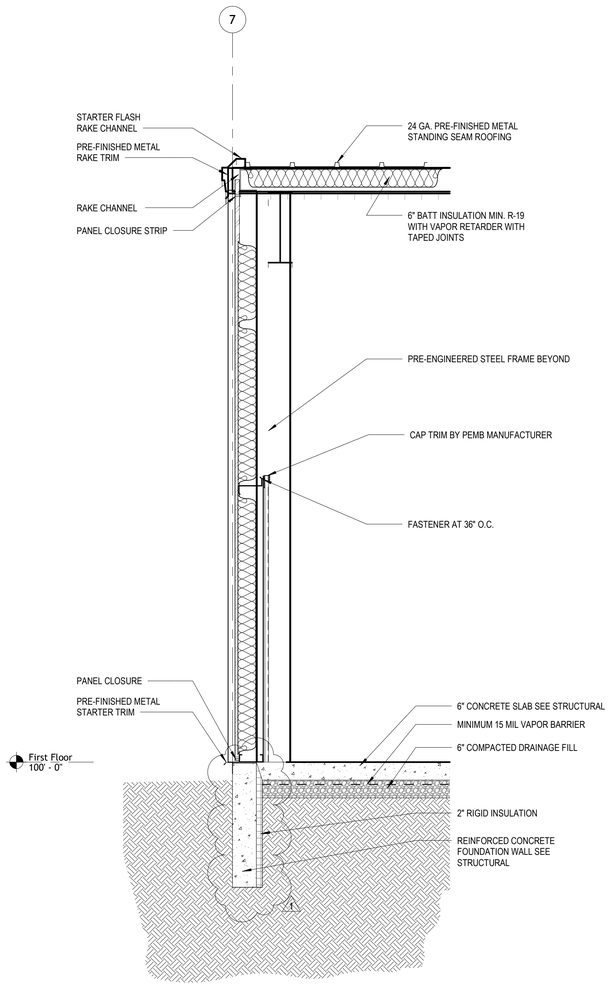
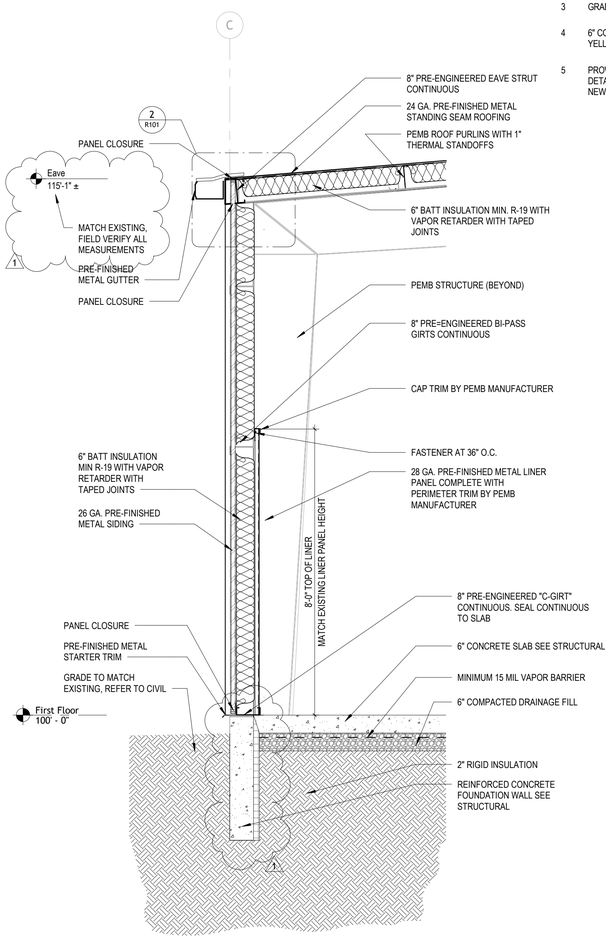


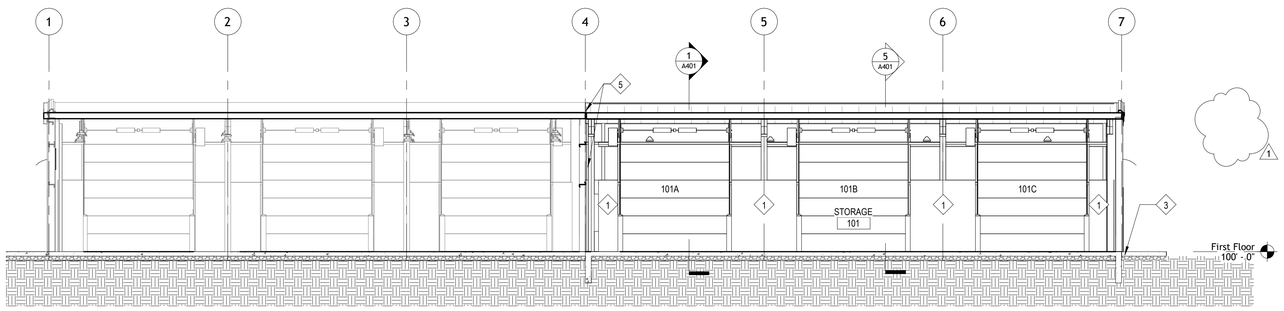
5 Typical Wall Section at Overhead Door
1/2" = 1'-0"



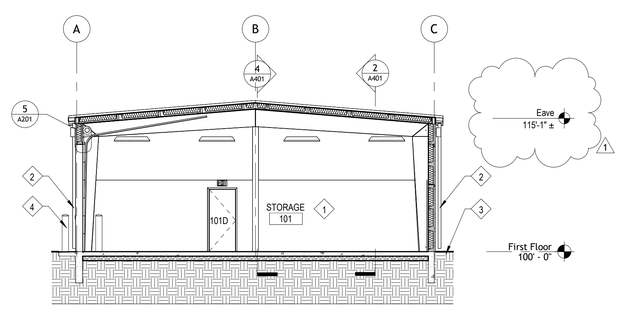
4 Typical Wall Section at Rake
1/2" = 1'-0"



3 Typical Wall Section at Eave
1/2" = 1'-0"



2 Building Section - North
1/8" = 1'-0"



1 Building Section - East
1/8" = 1'-0"

Work Description Notes

1. 28 GA. PRE-FINISHED METAL LINER PANEL COMPLETE WITH PERIMETER TRIM BY PEMB MANUFACTURER, COLOR TO MATCH EXISTING
2. 4" x 6" PRE-FINISHED METAL DOWNSPOUT TYP. (4) PLACES TURN OUT ON PRECAST SPLASH BLOCK
3. GRADE TO MATGCH EXISTING, REFER TO CIVIL
4. 6" CONCRETE FILLED STEEL BOLLARD PAINTED SAFETY YELLOW
5. PROVIDE MANUFACTURER'S STANDARD EXPANSION JOINT, DETAILS, AND FLASHING AT CONNECTION POINT BETWEEN NEW AND EXISTING WALL AND ROOF CONSTRUCTION

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MARTIN RILEY architects·engineers
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Fort Wayne, Indiana 46802
pho 260.422.7994
fax 260.426.2067

JACK E. DANIEL REGISTERED No AR00910026 STATE OF INDIANA ARCHITECT
04/09/2026

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1	Addendum 2	2026-04-09

DRAWN BY:	PJ	REVIEWED BY:	JEF
COMMISSION NUMBER:	F25111	DATE:	2026-03-13

A401

BUILDING SECTIONS

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026
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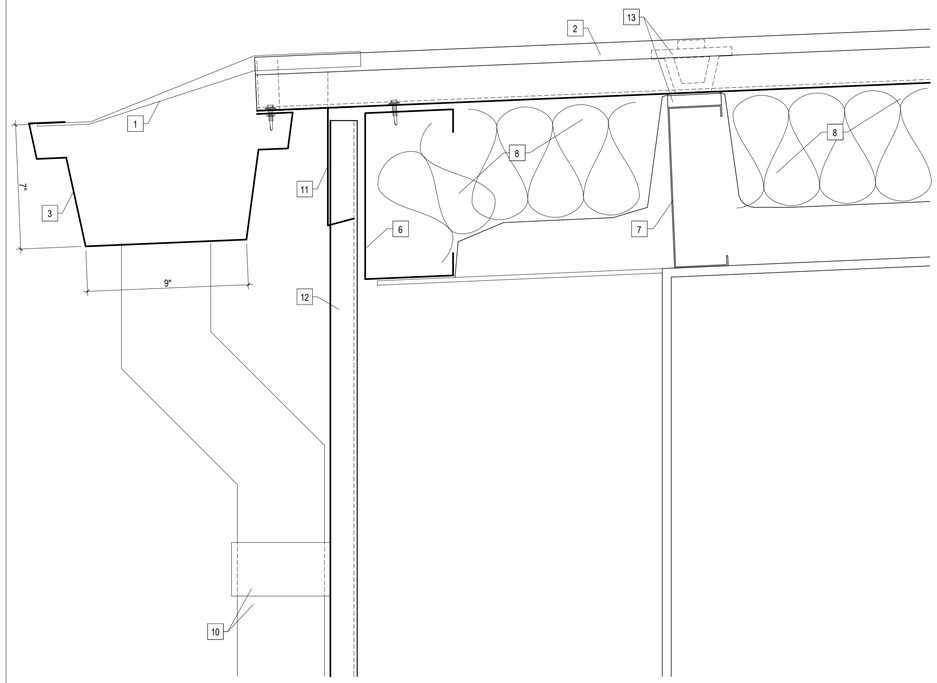
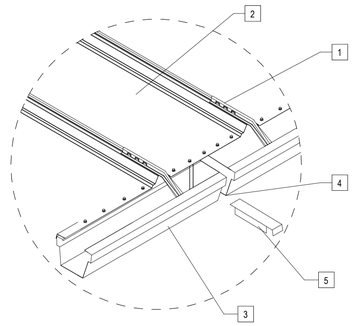
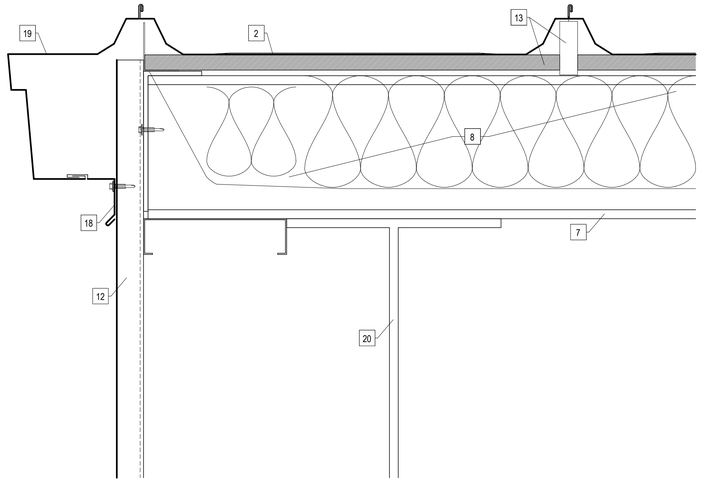


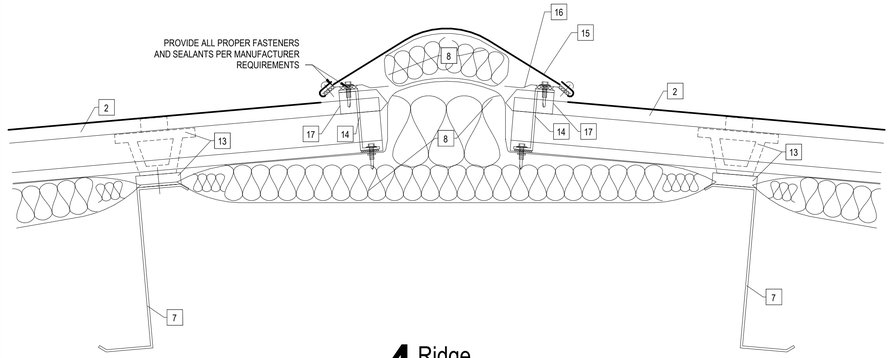
6 Gutter
3" = 1'-0"



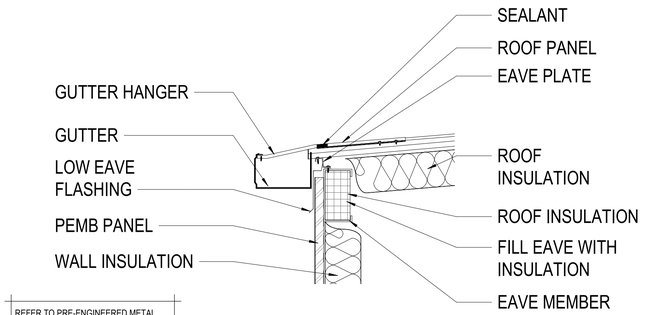
5 Gutter Expansion Joint
1 1/2" = 1'-0"



3 Rake Edge
3" = 1'-0"

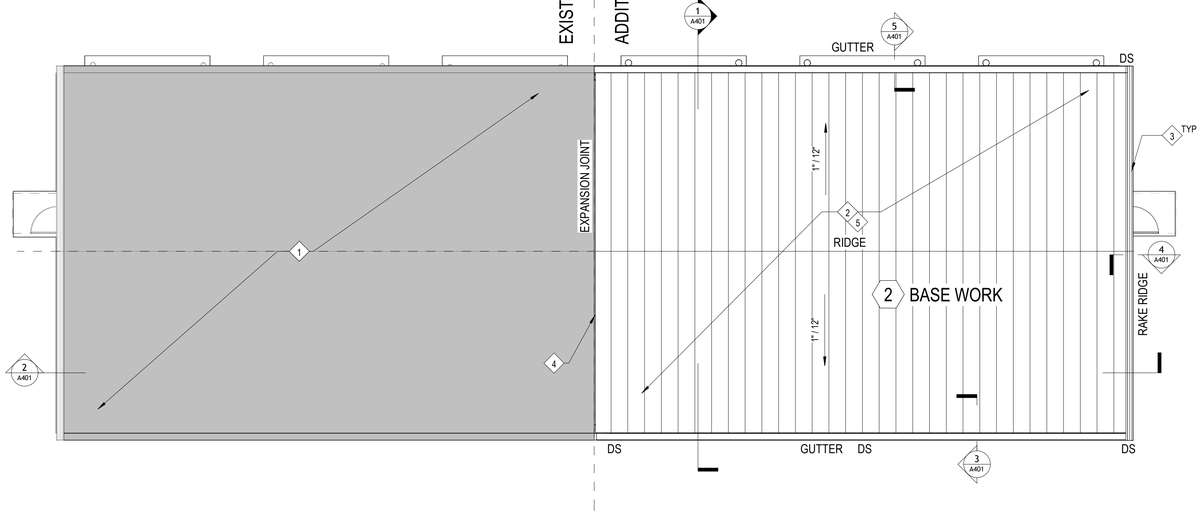


4 Ridge
3" = 1'-0"



REFER TO PRE-ENGINEERED METAL BUILDING MANUFACTURER'S TYPICAL DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON FASTENERS, FLASHING, SELANTS, ETC.

2 On - Slope Gutter Detail
1" = 1'-0"



NORTH

1 Roof Plan
1/8" = 1'-0"

Work Description Notes

1 NO WORK AND OR MATERIALS TO BE STORED OR PERFORMED IN THIS AREA

2 NEW MANUFACTURER'S 24" WIDE 24 GA GALVALUME TRAPEZOIDAL STRUCTURAL STANDING SEAM METAL ROOF, PANEL CLIP AND THERMAL BLOCKS OVER PURLINS AND OVER BLANKET INSULATION (R-19) WITH VINYL VAPOR RETARDER, AREA <2>

3 NEW MANUFACTURER'S PREFINISHED RAKE TRIM, AREA <2> - SEE DETAIL 3/R101

4 PROVIDE MANUFACTURER'S STANDARD EXPANSION JOINT, DETAILS, AND FLASHING AT CONNECTION POINT BETWEEN NEW AND EXISTING WALL AND ROOF CONSTRUCTION

5 PROVIDE NEW 20 YEAR MANUFACTURER'S WARRANTY AND 2 YEAR CONTRACTOR'S WARRANTY, AREA <2>

Detail Work Description Notes

1 NEW ROOFING MANUFACTURER GUTTER STRAP

2 NEW MANUFACTURERS STRUCTURAL STANDING SEAM METAL ROOF PANEL WITH NEW WMP50 VAPOR RETARDER FACTORY APPLIED TO NEW R19 BLANKET INSULATION

3 NEW PRE-MANUFACTURED GUTTER SYSTEM

4 NEW MANUFACTURER'S GUTTER END CAP

5 NEW MANUFACTURER'S GUTTER EXPANSION JOINT COVER TRIM

6 NEW EAVE STRUT - SEE STRUCTURAL DRAWINGS

7 NEW ROOF PURLIN - SEE STRUCTURAL DRAWINGS

8 NEW R-19 BLANKET INSULATION WITH VAPOR RETARDER AT MAIN BUILDING. COLD STORAGE BUILDING DOES NOT REQUIRE INSULATION

9 NEW R-30 BLANKET INSULATION

10 NEW 5" X 5" PREFINISHED GI DOWNSPOUTS WITH DOWNSPOUTS STRAPS MECHANICALLY ATTACHED AT THE TOP, MIDDLE AND BOTTOM OF DOWNSPOUT

11 NEW MANUFACTURERS EAVE FLASHING TRIM WITH CLOSURE AT NEW METAL WALL PANEL - EXTEND CLOSURE UP INTO PANEL RIBS

12 NEW MANUFACTURERS PREFINISHED GI CORRUGATED WALL PANEL OR INSULATED METAL WALL PANEL, REFER TO WALL SECTIONS AND SPECIFICATIONS

13 NEW HIGH PANEL CLIPS AND THERMAL BLOCKS

14 NEW MANUFACTURERS "Z" PURLIN

15 NEW MANUFACTURERS RIDGE COVER

16 NEW ROOFING MANUFACTURING CORRUGATION METAL PANEL PLUG

17 NEW LOCK SEAM PLUG

18 NEW MANUFACTURERS RAKE CLOSURE PIECE - INSTALL PER MANUFACTURER REQUIREMENTS

19 NEW MANUFACTURERS STANDARD 24 GA PREFINISHED GI RAKE EDGE FLASHING

20 NEW STRUCTURAL SYSTEM - SEE STRUCTURAL FOR MORE INFORMATION

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R101

ROOF PLAN

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026b26 12:52:14 PM
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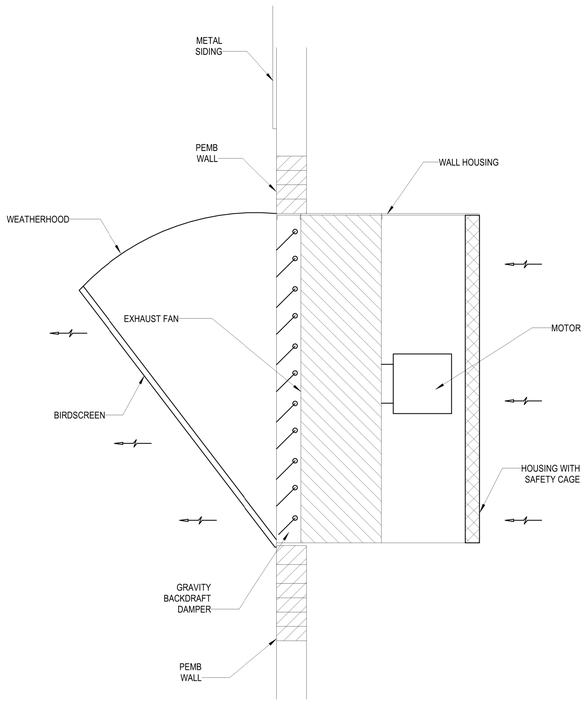
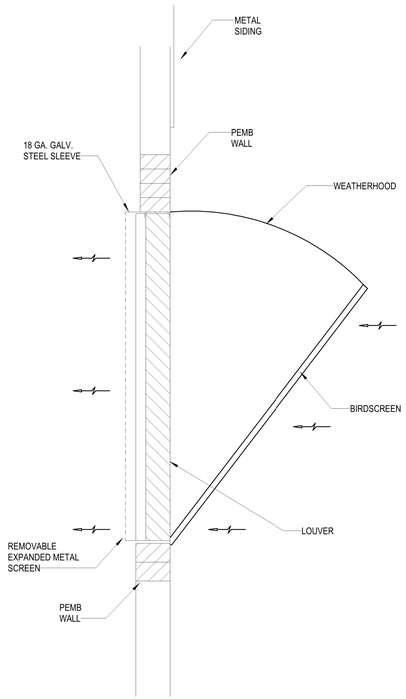


3 Sidewall Exhaust Fan Detail
NTS



2 Intake Louver Detail
NTS

General Conditions Note

ALL CONTRACTORS, BY MAKING THEIR BID, REPRESENT THAT THEY HAVE **READ AND UNDERSTAND** THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE ENTIRE CONSTRUCTION DOCUMENT SET FOR GUIDANCE ON DIMENSIONS, HEIGHTS, DETAILING, ETC. AND INSTALL THEIR WORK SO AS NOT TO INTERFERE WITH THE INSTALLATION OF ANOTHER DISCIPLINE'S WORK OR THE **GENERAL INTENT** OF THE CONSTRUCTION DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE SPECIFICATIONS AND/OR DRAWINGS, THE ARCHITECT SHALL DETERMINE WHICH INFORMATION GOVERNS

ALL TRADES NOTE: IN REFERRING TO THIS SHEET YOU ACKNOWLEDGE:

1. REVIEWING THE **ENTIRE** DRAWING SET INCLUDING ALL 'G', 'C', 'D', 'S', 'A', 'R', 'P', 'M', AND 'E' SERIES
2. COORDINATE WITH THE GENERAL TRADES CONTRACTOR OR CONSTRUCTION MANAGER FOR EXACT DETAILING, HEIGHTS, ETC. **PRIOR** TO INSTALLING WORK

MECHANICAL - LOUVER & GRAVITY VENTILATOR SCHEDULE

TAG	SERVING	MANUFACTURER	MODEL	FPM	CFM	FREE AREA (SF)	WIDTH (IN)	HEIGHT (IN)	MATERIAL	NOTES
LV-1	101 STORAGE	GREENHECK	EHH-601	909	2120	2.3	28	28	ALUMINUM	1, 2, 3

NOTES:
1. PROVIDE WITH WEATHERHOOD AND BIRDSCREEN.
2. LOUVER AND WEATHERHOOD COLOR BY ARCHITECT FROM STANDARD COLOR RANGE. PROVIDE ARCHITECT WITH COLOR SAMPLES.
3. COORDINATE INSTALLATION LOCATION TO AVOID STRUCTURAL MEMBERS.

MECHANICAL - EXHAUST FAN SCHEDULE

TAG	SERVING	MANUFACTURER	MODEL	FAN TYPE	CFM	SONES	ESP	HP	VOLTAGE	PH	HZ	MCA	MOCP	NOTES
EF-1	101 STORAGE	GREENHECK	AER-24	WALL MOUNT	4240	22	.39	3/4	208	1	60	7.5	15	1, 2, 3

NOTES:
1. PROVIDE WITH DISCONNECT SWITCH, GRAVITY BACKDRAFT DAMPER, AND WEATHERHOOD WITH BIRDSCREEN.
2. FAN TO BE CONTROLLED BY ON/OFF SWITCH. SWITCH LOCATION TO BE COORDINATED WITH OWNER.
3. COORDINATE INSTALLATION LOCATION TO AVOID STRUCTURAL MEMBERS.

General Mechanical Notes

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL CODES & AMENDMENTS.
2. SEE SPECIFICATION BOOK FOR ADD'TIONAL REQUIREMENTS.
3. PROVIDE MATERIALS NECESSARY TO MAKE REQUIRED SYSTEMS AND FEATURES COMPLETE AND FUNCTIONAL; INCLUDING BUT NOT LIMITED TO: ALL FITTINGS, TRANSITIONS, HARDWARE, TEMPORARY CONNECTIONS AND SUPPORTS.
4. DRAWING ORGANIZATION IS NOT TRADE SPECIFIC AND IS NOT INTENDED FOR DIVISION OF WORK AMONG SUBCONTRACTORS. THE GENERAL CONTRACTOR IS RESPONSIBLE TO PROPERLY DISSEMINATE WORK ON ALL SHEETS AND COORDINATE WITH EVERY SUBCONTRACTOR IN ORDER TO PROVIDE A COMPLETE PROJECT.
5. PROTECT ALL EQUIPMENT AND FINISHES, NEW AND EXISTING, FROM DUST DEBRIS AND DAMAGE. FINAL CLEAN-UP SHALL BE PERFORMED TO PROVIDE A CLEAN, DUST FREE ENVIRONMENT TO THE OWNER. REFER TO MANUFACTURER'S SPECIFICATIONS FOR EQUIPMENT INSTALLATION REQUIREMENTS.
6. EQUIPMENT, PIPING, AND DUCTWORK LAYOUTS ARE SCHEMATIC IN NATURE. CONTRACTOR MUST ADJUST TO FIELD CONDITIONS AND COORDINATE WITH OTHER TRADES DURING CONSTRUCTION BY ADDING OFFSETS AND ELBOWS WHERE REQUIRED. PRIOR TO INSTALLATION, THE ENGINEER MUST APPROVE ALL PROPOSED MODIFICATIONS TO DUCTWORK LAYOUT AND DESIGN.
7. REFERENCE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, TYPICAL.
8. PROVIDE TESTING, ADJUSTING, AND BALANCING OF ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH SPECIFICATIONS. FINAL REPORT SHALL BE PROVIDED TO OWNER & ENGINEER.
9. RECORD DRAWINGS, OPERATING MANUALS, AND MAINTENANCE MANUALS SHALL BE PROVIDED TO OWNER & ARCHITECT PER ASHRAE 90.1 2007.
10. MECHANICAL SYSTEMS SHALL NOT BE USED DURING CONSTRUCTION FOR HEATING, COOLING, OR VENTILATION.

Mechanical Legend

SEE TITLE SHEET FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.

COMPONENTS SHOWN IN GRAY ARE EXISTING OR SPECIFIED IN OTHER VIEWS.

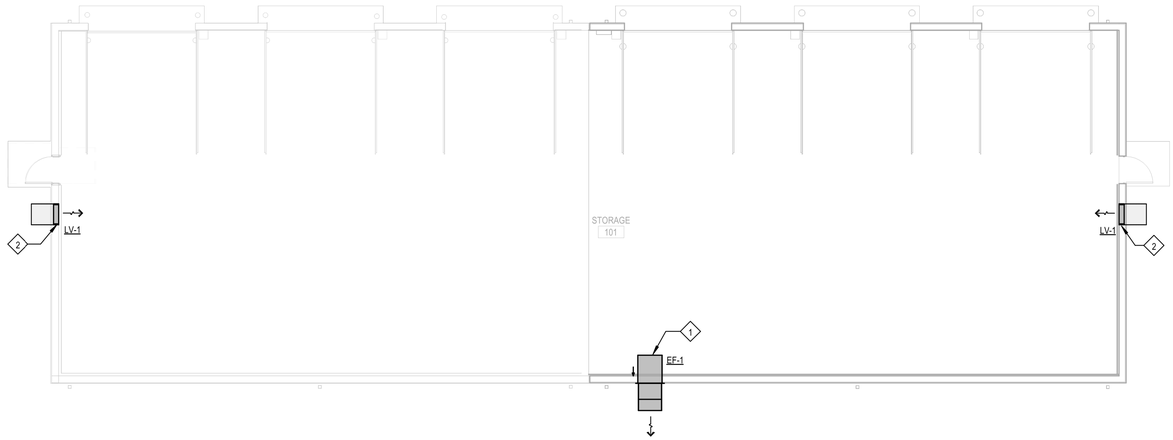
XX-1 SCHEDULED ITEM

DIRECTION OF AIRFLOW

Work Description Notes

1 EXHAUST FAN TO HAVE GRAVITY BACKDRAFT DAMPER. SEE DETAIL 1.

2 INTAKE LOUVER TO HAVE WEATHER HOOD. SEE DETAIL 2.



NORTH

1 Mechanical Plan - Alternate
1/8" = 1'-0"

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PURDUE UNIVERSITY FORT WAYNE

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pho 260.422.7994
fax 260.426.2067

RYAN MICHAEL WALKER REGISTERED No. 12501064 STATE OF INDIANA PROFESSIONAL ENGINEER 04/08/2024

REVISION: DATE:

DRAWN BY: RMW
REVIEWED BY: EB
COMMISSION NUMBER: F25111
DATE: 2026-03-13

M101

MECHANICAL PLAN - ALTERNATE

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026
2026 1:23:56 PM
C:\Users\rwalker\Documents\F25111 - PFW W Main Add - MEP_awalker4CHFI_rvt
Project Status

LIGHTING FIXTURE SCHEDULE

TAG	MFG	MODEL	DESCRIPTION	MAX WATTS	MOUNTED	NOTES	ACCEPTABLE MFG/MODEL	ACCEPTABLE MFG/MODEL
			4' INDUSTRIAL W/ 20% UPLIGHT, CHAIN HUNG					
ER	DUALLITE	EVO D B	EMERGENCY REMOTE HEAD	2	CEILING/WALL		LITHONIA	COOPER
EX	DUALLITE	EVC U R W D4	LED COMBO EXIT SIGN	5	CEILING/WALL		LITHONIA	COOPER
L01	COLUMBIA LIGHTING	PEL2-40LH-FAW-EU	2FT HIGH BAY LED FIXTURE	49	SURFACE/SUSPENDED		LITHONIA	COOPER
L02	HUBBELL	PVL3-180L-304K7-U-DBT	LED WALLPACK	28	WALL		LITHONIA	COOPER

General Conditions Note

ALL CONTRACTORS, BY MAKING THEIR BID, REPRESENT THAT THEY HAVE **READ AND UNDERSTAND** THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE ENTIRE CONSTRUCTION DOCUMENT SET FOR GUIDANCE ON DIMENSIONS, HEIGHTS, DETAILING, ETC. AND INSTALL THEIR WORK SO AS NOT TO INTERFERE WITH THE INSTALLATION OF ANOTHER DISCIPLINE'S WORK OR THE **GENERAL INTENT** OF THE CONSTRUCTION DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE SPECIFICATIONS AND/OR DRAWINGS, THE ARCHITECT SHALL DETERMINE WHICH INFORMATION GOVERNS

ALL TRADES NOTE: IN REFERRING TO THIS SHEET YOU ACKNOWLEDGE:

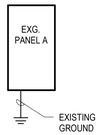
1. REVIEWING THE **ENTIRE** DRAWING SET INCLUDING ALL 'G', 'C', 'D', 'S', 'A', 'R', 'P', 'M', AND 'E' SERIES
2. COORDINATE WITH THE GENERAL TRADES CONTRACTOR OR CONSTRUCTION MANAGER FOR EXACT DETAILING, HEIGHTS, ETC. **PRIOR** TO INSTALLING WORK

Work Description Notes

1. WIRE TO AND EXTEND EXISTING LIGHTING CIRCUITS IN PANEL A. NEW 3-WAY SWITCHING TO MATCH EXISTING LIGHTING CIRCUITS
2. WIRE TO EXISTING EXTERIOR LIGHTING CIRCUIT
3. WIRE TO AVAILABLE CIRCUIT BREAKER IN EXISTING PANEL A

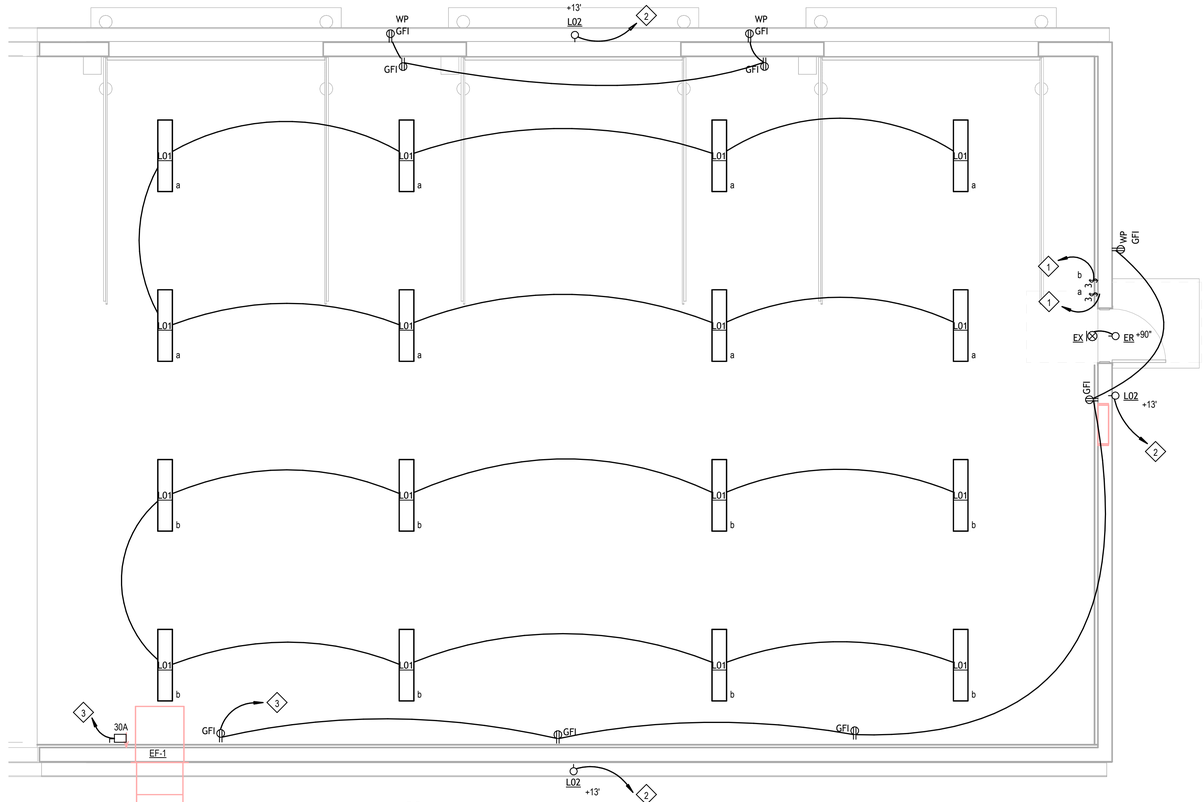
General Electrical Notes

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL CODES & AMENDMENTS.
2. SEE SPECIFICATION BOOK FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE EVERYTHING NECESSARY TO MAKE REQUIRED SYSTEMS AND FEATURES COMPLETE AND FUNCTIONAL; INCLUDING BUT NOT LIMITED TO: FITTINGS, ADAPTERS, WIRE, BOXES, RACEWAY, HARDWARE, TEMPORARY CONNECTIONS AND SUPPORTS.
4. DRAWING ORGANIZATION IS NOT TRADE SPECIFIC AND IS NOT INTENDED FOR DIVISION OF WORK AMONG SUBCONTRACTORS. THE GENERAL CONTRACTOR IS RESPONSIBLE TO PROPERLY DISSEMINATE WORK ON ALL SHEETS AND COORDINATE WITH EVERY SUBCONTRACTOR IN ORDER TO PROVIDE A COMPLETE PROJECT.
5. ELECTRICAL DRAWINGS ARE SCHEMATIC IN NATURE. ALL DEVICES AND EQUIPMENT ARE SHOWN IN APPROXIMATE LOCATIONS. CONTRACTORS TO COORDINATE THEIR WORK WITH ALL OTHER TRADES ON SITE. EXTRAS WILL NOT BE GIVEN FOR FORESEEABLE WORK COORDINATION.
6. PROTECT ALL EQUIPMENT AND FINISHES, NEW AND EXISTING, FROM DUST DEBRIS AND DAMAGE. FINAL CLEAN-UP SHALL BE PERFORMED TO PROVIDE A CLEAN, DUST FREE ENVIRONMENT TO THE OWNER.
7. EXCEPT WHERE NOTED OTHERWISE, SIZE BRANCH CIRCUIT CONDUCTORS WITHIN THE FOLLOWING MAXIMUM LENGTH LIMITS: (MEASURE TO THE CENTER OF THE LOAD FOR LIGHTING AND MOST REMOTE OUTLET FOR RECEPTACLE CIRCUITS). MINIMUM CONDUCTOR SIZE FOR 120V 20A CIRCUIT: 65 FEET - #12, 110 FEET - #10, 165 FEET - #8, 270 FEET - #6
8. PROVIDE ADDITIONAL DERATING PER NEC SECTION 310 FOR ALL HOME RUNS WITH MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A SINGLE RACEWAY.
9. SHARING OF NEUTRALS SHALL NOT BE PERMITTED.
10. PROVIDE BACKBOX AND 3/4" CONDUIT TO ATTIC WITH PULL WIRE FOR ALL TELEPHONE/DATA/AUDIO OUTLETS.



2 Electrical Riser Diagram

NTS



NORTH

1 Electrical Power Plan - First Floor

1/4" = 1'-0"

Electrical Legend

SEE TITLE SHEET FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.
SYMBOLS IN THIS LIST ARE NOT DRAWN TO SCALE
SYMBOLS IN THIS LIST, MAY NOT APPLY TO THIS PROJECT
HEIGHTS LISTED HERE APPLY UNLESS NOTED OTHERWISE
HEIGHTS ARE TO THE BOTTOM OF THE DEVICE
COMPONENTS SHOWN IN GRAY ARE EXISTING OR SPECIFIED IN OTHER VIEWS.

- HOME RUN TO PANEL & CIRCUIT NO.
- XX MARK FOR SCHEDULED ITEM
- LIGHT FIXTURE; CEILING MOUNTED
- DOWNLIGHT FIXTURE; CEILING MTD./EXTERIOR
- LIGHT FIXTURE; WALL MOUNTED.
- EMERGENCY LIGHT WALL PACK.
- $ SINGLE POLE SWITCH; +44" AFF
- $3 THREE-WAY SWITCH; +44"AFF
- $M MOTION DETECTOR SWITCH; +44" AFF
- OCCUPANCY SENSOR - WALL MOUNTED
- EXIT LIGHT; CEILING MOUNTED; NO DIRECTION
- EXIT LIGHT; CEILING MOUNTED; DIRECTIONAL
- PANEL BOARD (SURFACE MOUNT); +72" AFF
- XX SAFETY DISCONNECT SWITCH; NON FUSED, +66" AFF TO TOP
  XX DENOTES AMPERE RATING
- XX SAFETY DISCONNECT SWITCH; FUSED, +66" AFF TO TOP
  XX DENOTES AMPERE RATING
- GFI GROUND FAULT INTERRUPTER RECEPTACLE; +16" AFF
- WP GFI WEATHER PROOF GROUND FAULT INTERRUPTER RECEPTACLE; +16"

New Construction and Renovation Work for:

C.20.10211 PFW West Campus Maintenance Building Addition - 2026

2101 E. Coliseum Blvd.
Fort Wayne, IN 46805-1499

PURDUE UNIVERSITY FORT WAYNE

MARTIN RILEY architects·engineers

221 West Baker Street
Fort Wayne, Indiana 46802

pho 260.422.7994
fax 260.426.2067

REVISION:		DATE:
1	ADDENDUM 2	2026-04-09

DRAWN BY: VRK
REVIEWED BY: RPS
COMMISSION NUMBER: F25111
DATE: 2026-03-13

E101

ELECTRICAL PLAN

F25111 C.20.10211 PFW West Campus Maintenance Building Addition - 2026
5/26/26 3:48:14 PM
C:\Users\vkonwinski\Documents\F25111 - PFW W Main Add - MEP_vkonwinski@martin-riley.com.rvt
Project Status

SECTION 31 2323
FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Filling, backfilling, and compacting for building volume below grade, footings, slabs-on-grade, paving, and utilities within the building.

B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 RELATED REQUIREMENTS

A. Section 03 3000 - Cast-in-Place Concrete.

B. Section 31 1000 - Site Clearing.

C. Section 31 2200 - Grading: Site grading.

D. Section 31 2316 - Excavation: Removal and handling of soil to be re-used.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

A. See Section 01 3000 - General Requirements, for submittal procedures.

B. Product Data for Manufactured Fill.

C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.

D. Compaction Density Test Reports.

E. Testing Agency Qualification Statement.

1.05 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.

B. When fill materials need to be stored on site, locate stockpiles where indicated.
   1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
   2. Prevent contamination.
   3. Protect stockpiles from erosion and deterioration of materials.

1.06 WARRANTY

A. See Section 01 7700 Contract Close-out, for additional warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 FILL MATERIALS

A. Refer to S001

2.02 SOURCE QUALITY CONTROL

A. Refer to S001

B. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.01 EXAMINATION

A. Identify required lines, levels, contours, and datum locations.

B. Verify areas to be filled are not compromised with surface or ground water.

3.02 FILL AT SPECIFIC LOCATIONS

A. At Lawn Areas:
   1. Use general fill.
   2. Fill up to 6 inches below finish grade elevations.
   3. Fill up to subgrade elevations.
   4. Compact to 95 percent of maximum dry density.
   5. See Section 32 9119 for topsoil placement.

3.03 CLEANING

A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

West Campus Maintenance Building Addition – 2026

Purdue University
Fort Wayne, Indiana

March 13, 2026

Structural and Civil
Certified by:

_____
Name
Professional Engineer # PE10809052

Architectural
Certified by:

_____
Name
Registered Architect # AR00910026

Electrical
Certified by:

_____
Name
Professional Engineer # PE10403287

Mechanical
Certified by:

_____
Name
Professional Engineer # PE12501064

SECTION 00 3100
AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 INFORMATION PROVIDED IN THIS SECTION IS CONSIDERED BASIS OF DESIGN. SEE SECTION 01 1500 AND SECTION 01 6000 FOR SUBSTITUTIONS MADE DURING THE BIDDING PROCESS.

PART 2 PRODUCTS

2.01 REFER TO ATTACHMENTS

NUCOR BUILDING SYSTEMS
A DIVISION OF NUCOR CORPORATION

PROJECT NUMBER: W14J0464A
PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
PROJECT LOCATION: FORT WAYNE, IN 46805
CUSTOMER: STREBIG CONSTRUCTION INC.

MBMA MEMBER

IAS ACCREDITED AC472

Notes and Specifications

Building Erection Notes

1) The general contractor and/or erector is responsible to safely and properly erect the metal building system in conformance with these drawings, OSHA requirements and metal building system in conformance with these drawings, OSHA requirements and either MBMA or CSA S16 standards pertaining to proper erection. This includes, but is not limited to, the correct use of temporary guys and bracing where needed for squaring, plumbing, and securing the structural and secondary framing. Secondary wall framing members (girts or bar joists) are not designed to function as a work platform or provide safety tie-off attachment in accordance with OSHA requirements. Secondary roof framing members (purlins or bar joists) are not designed to provide safety tie-off attachment in accordance with OSHA requirements.

2) **A325 & A490 Bolt tightening requirements:**
It is the responsibility of the erector to ensure proper bolt tightness in accordance with applicable regulations. See the RCSC Specification for Structural Joints Using A325 or A490 Bolts or CAN/CSA S16 "Limit States Design of Steel Structures" for more information.
The following criteria may be used to determine the bolt tightness (i.e., "snug-tight" or "fully-pretensioned"), unless required otherwise by local jurisdiction or contract requirements:

B) All A325 bolts in primary framing (rigid frames and bracing) may be "snug-tight", except as follows:
"Fully-pretension" A325 bolts if:
a) Building supports a crane system with a capacity greater than 5 tons.
b) Building supports machinery that creates vibration, impact or stress-reversals on the connections. The Engineer-of-Record for the project should be consulted to evaluate for this condition.
c) The project site is located in a high seismic area. For IBC-based codes, "High Seismic Area" is defined as "Seismic Design Category" of "D", "E", or "F". See the "Building Loads" section of this page for the defined seismic design category for this project.
d) Any connection designated in these drawings as "A325-SC". "Slip-Critical (SC)" connections must be free of paint, oil, or other materials that reduce friction at contact surfaces. Galvanized or lightly rusted surfaces are acceptable.

C) In Canada, all A325 and A490 bolts shall be "fully pre-tensioned", except for secondary members (purlins, girts, opening framing, etc.) and flange braces.

D) Secondary members (purlins, girts, opening framing, etc.) and flange brace connections may always be "snug-tight", unless indicated otherwise in these drawings.

3) The metal building supplier shall be notified prior to any field modifications. Modifications shall be approved by the metal building supplier before work is undertaken.

4) Common Abbreviations:
a) TYP UNO – Typical Unless Noted Otherwise
b) SLV – Short Leg Vertical
c) LLV – Long Leg Vertical
d) NS & FS – Near Side and Far Side
e) O.A.L. – Overall Length
f) SIM – Similar
g) NIC – Not In Contract
h) SL – Steel Line
i) N/A – Not Applicable
j) MBS – Metal Building Supplier

5) Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded, or otherwise adequately secured.

6) Purlins and girts shall not be used as an anchorage ppoint for a fall arrest system unless written approval is obtained from the metal building supplier.

7) Purlins may only be used as a walking/working surface when installing safety systems, after all permanent bridging has been installed and fall protection is provided.

8) Construction loads may be placed only within a zone that is within 8 feet of the center line of the primary support member. CFR bundles should be placed directly over the rigid frames.

9) All lifting devices must meet OSHA or MSHA standards and in no case is it acceptable to use structural members supplied by the MBS as a spreader bar or lifting device.

General Design Notes

1) All structural steel sections and welded plate members are designed in accordance with ANSI/AISC 360 "Specifications for Structural Steel Buildings" or the CAN/CSA S16 "Limit States Design of Steel Structures", as required by the specified building code.
2) All welding of structural steel is based on either AWS D1.1 "Structural Welding Code – Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
3) All cold formed members are designed in accordance with ANSI/AISI S11 or CAN/CSA S136 "Specifications for the Design of Cold Formed Steel Structural Members", as required by the specified building code.
4) All welding of cold formed steel is based on AWS D1.3 "Structural Welding Code – Sheet Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
5) This Metal Building Supplier facility is IAS AC-472 Accredited and CAN/CSA A660 and W47.1 Certified (if applicable) for the design and manufacturing of Metal Building Systems.
6) If joists are included with this project, they are supplied as a part of the systems engineered metal building and are fabricated in accordance with the requirements of Section 1926.758 of the OSHA safety standards for *steel erection, dated January 18, 2001.*

Material Specifications

Plate and Flange Material:	
5" – 12" Wide, to 1 1/4" Th.	A529 Grade 55
Others	A572 Grade 50
Built-Up Structural Web	A1011 SS (or HSLAS Class 1) Grade 55
Hot-Rolled Structural	A36 or A572 Grade 50 or A992 Grade 50
Structural Tube	A500 Grade B (46 KSI)
Structural Pipe	A500 Grade B (42 KSI)
Cold-Formed Structural	A1011 or A1039 SS (or HSLAS Class 1) Grade 55
Classic Roof Panel	A792 Grade 80
CFR / VR16 II Roof Panel	A792 Grade 50, Class 1
All Wall Panel Profiles	A653 Grade 80, Class 1 or A792 Grade 80, Class 1
Rod Bracing	A529 Grade 50
Welds	AWS D1.1/D1.3 or CSA W59 per Building Code
High-Strength Bolts	A325 Type 1 or A490 Type 1 Heavy Hex
Machine Bolts	A307 Grade A Hex

PRIMARY AND SECONDARY STEEL PRIMER COLOR: GRAY

ROOF SHEETING, TYPE: CFR 24 GAGE, FINISH: Galvalume

ROOF PANEL CLIP TYPE: ☐N/A ☒TALL ☐SHORT ☐UTILITY ☒FIXED ☐FLOATING

THERMAL BLOCKS: ☒YES ☐NO EPS FOAM SPACER: ☐YES ☒NO

SEAMING METHOD (FOR CFR ONLY): REFER TO THE DETAIL PAGES FOR ADDITIONAL SEAMING INFORMATION
☒"ROLL LOCK"™
☒"VISE LOCK"™
☐"VISE LOCK 360"™

COMPOSITE CFR DECK, TYPE: N/A ___ GAGE, FINISH: ___

ROOF LINE TRIM, PAINTED: Undefined color B

EXTERIOR WALL SHEETING, TYPE: Reverse Classic 26 GAGE, FINISH: Undefined color C

EXTERIOR WALL CORNER TRIM FINISH: Undefined color D

EXTERIOR BASE TRIM, PAINTED: Undefined color E

FRAMED OPENING TRIM, PAINTED: Undefined color F

WALL FRAMED OPENING, SIZES:
FSW none
BSW (3) 12' x 12'
LEW (1) 3'-4" x 7'-2"
REW (1) 3'-4" x 7'-2"

INTERIOR WALL SHEETING, TYPE: Classic Liner 28 GAGE, FINISH: Polar White SP

INTERIOR CEILING LINER, TYPE: none ___ GAGE, FINISH: ___

INTERIOR WALL TRIM, PAINTED: Polar White SP

YES	NO	
☒	☐	DOWNSPOUTS PAINTED: Undefined color G GUTTERS PAINTED: Undefined color B
☐	☒	WALKDOORS, QUANTITY: ___ PAINTED: ___
☐	☒	WINDOWS: ___ PAINTED: ___
☒	☐	INSULATION (NOT BY MBS), ROOF: 6 INCH WALLS: 6 INCH
☐	☒	CRANES (SEE CRANE PLAN FOR ADDITIONAL CRANE INFORMATION)
☐	☒	MEZZANINE (SEE MEZZANINE PLAN FOR ADDITIONAL MEZZANINE INFO)
☐	☒	WALL TRANSLUCENT PANELS: ___
☐	☒	ROOF TRANSLUCENT PANELS: ___
		INSULATED PANELS YES ☐ NO ☐
☐	☒	PIPE JACKS, SIZE: ___ QU
☐	☒	ROOF FRAMED OPENINGS, SEE ROOF FRAMING PLAN FO
☐	☒	RIDGE VENTS, 10'-0" LONG X 9" THROAT. QUANTITY:

YES	NO	
☐	☒	FASCIA, PROJECTION: ___ TOP OF FASCIA HEIGHT: ___
		FACE PANEL, TYPE: ___ GAGE, FINISH: ___
		BACK PANEL, TYPE: ___ GAGE, FINISH: ___
		CAP TRIM PAINTED: ___ BASE TRIM PAINTED: ___
☐		CLOSED SYSTEM, CLEAR UNDER SOFFIT TRIM: ___
		SOFFIT PANEL, TYPE: ___ GAGE, FINISH: ___
		SOFFIT TRIM AT BUILDING LINE PAINTED: ___
☐		OPEN SYSTEM, (NO SOFFIT PANEL PROVIDED)
		CLEAR UNDER FASCIA: ___
☒		PARAPET SYSTEM
☐		STRUCTURAL PARAPET ☐ NON-STRUCTURAL PARAPET
		TOP OF PARAPET HEIGHT: ___
		BACKER PANEL, TYPE: ___ GAGE, FINISH: ___
☒	☐	CANOPY (EXPOSED BEAM), PROJECTION: ___
		AT EAVE LINE ☐ BELOW EAVE ☐
		ROOF PANEL, TYPE: ___ GAGE, FINISH: ___
		SOFFIT PANEL, TYPE: ___ GAGE, FINISH: ___
		SOFFIT TRIM AT BUILDING LINE PAINTED: ___
		CLEAR UNDER CANOPY BEAM: ___
☒	☐	EAVE EXTENSION (CONCEALED BEAM), PROJECTION: ___
		SOFFIT PANEL, TYPE: ___ GAGE, FINISH: ___
		SOFFIT TRIM AT BUILDING LINE PAINTED: ___
☒	☐	RAKE EXTENSION, PROJECTION: ___
		SOFFIT PANEL, TYPE: ___ GAGE, FINISH: ___
		SOFFIT TRIM AT BUILDING LINE PAINTED: ___
☒	☐	PARTITION WALL SHEETING
		PANEL TYPE: ___ GAGE, FINISH: ___
		PARTITION WALL TRIM COLOR: ___

■ THIS BUILDING SYSTEM DESIGN IS BASED ON UNIFORMLY APPLYING THE CONTRACT-SPECIFIED LIVE LOAD AND ROOF SNOW LOAD. IN ADDITION, THE DESIGN IS BASED ON APPLYING A CODE-DEFINED LIVE LOAD (INCLUDING APPLICABLE REDUCTIONS) AND A CODE-DEFINED SNOW LOAD (BASED ON CONTRACT-SPECIFIED GROUND SNOW) FOR ALL PARTIAL LOADING AND UNBALANCED SNOW LOAD CONDITIONS.

WINDOWS AND DOORS THAT ARE BEING PROVIDED BY OTHERS ARE ASSUMED TO MEET THE WIND LOADING REQUIREMENTS OF THE STRUCTURE AND THE OPENINGS FOR THESE MUST BE IMPACT-RESISTANT OR PROTECTED BY AN IMPACT-RESISTANT COVERING AS SPECIFIED IN THE BUILDING CODE WHEN A HIGH WIND EVENT IS ANTICIPATED.

THE METAL BUILDING SUPPLIER (MBS) DOES NOT MANUFACTURE, SUPPLY OR RECOMMEND THE USE OF SNOW GUARDS OR OTHER DEVICES INTENDED TO HOLD SNOW AND/OR ICE ACCUMULATIONS ON THE ROOF SYSTEM. IF SNOW GUARDS OR OTHER DEVICES ARE TO BE USED ON THIS PROJECT, THEY MUST BE INSTALLED UNDER THE GUIDANCE OF THE "ENGINEER OF RECORD" (NOT MBS) SO AS TO NOT EXCEED THE DESIGN ROOF SNOW LOAD ON THIS PROJECT.

X APPROVED APPROVED AS NOTED

REVISE AND RESUBMIT NOT APPROVED

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. The contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.

H2 DESIGN
ARCHITECTURE AND PLANNING
H2 DESIGN, LLC
DATE: 7/15/14 BY: Timothy A. Hamilton, AIA

BUILDING LOADS

DESIGN CODE: INBC 2008

ROOF LIVE LOAD: 20.00 PSF MBMA OCC. CLASS: II

LIVE LOAD REDUCIBLE No

GROUND SNOW LOAD: 20.0 PSF SNOW EXP. FACTOR, Ce: 1.00

SNOW IMPORTANCE FACTOR, Is: 1.00

WIND: 90 mph WIND IMPORTANCE FACTOR, Iw: 1.00

EXPOSURE: B

UL 90 Yes

Classic Roof-Const. No. 161; Classic Roof w/ Translucent Panel-Const. No. 167
CFR Roof-Const. No. 552; CFR Roof w/ Translucent Panel-Const. No. 590;
Composite CFR Roof-Const. No. 552A; VR16 II Roof-Const. No. 332.

SEISMIC INFORMATION Ss: 0.150 S1: 0.059

Design Sds/Sd1: 0.160 / 0.094 Site Class: D

Seismic Imp. Factor: 1.00 Seismic Design Category: B

Analysis Procedure: Equivalent Lateral Force Method

Basic SFRS: Not Detailed for Seismic

NOTES:
1) COLLATERAL DEAD LOADS, UNLESS OTHERWISE NOTED, ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED. WHEN SUSPENDED SPRINKLER SYSTEMS, LIGHTING, HVAC EQUIPMENT, CEILINGS, ETC., ARE SUSPENDED FROM ROOF MEMBERS, CONSULT THE M.B.S. IF THESE CONCENTRATED LOADS EXCEED 200 POUNDS, OR IF INDIVIDUAL MEMBERS ARE LOADED SIGNIFICANTLY MORE THAN OTHERS.

2) THE DESIGN OF STRUCTURAL MEMBERS SUPPORTING GRAVITY LOADS IS CONTROLLED BY THE MORE CRITICAL EFFECT OF ROOF LIVE LOAD OR ROOF SNOW LOAD, AS DETERMINED BY THE APPLICABLE CODE.

	BUILDING
ROOF DEAD (PSF):	3.00
PRI. COL. (PSF):	5.00
SEC. COL. (PSF):	5.00
SNOW Ct:	1.20
SNOW Cs:	1.00
ROOF SNOW (PSF):	16.80
WIND ENCLOSURE:	Closed
GCpi:	+/- 0.18
SEISMIC R:	3.00
SEISMIC Cs:	0.053
BASE SHEAR (KIPS):	1.70

FOR OCCUPANCY CATEGORY I OR II BUILDINGS, IBC ALLOWS FOR SINGLE STORY BUILDINGS TO HAVE NO LIMIT FOR SEISMIC STORY DRIFT. PLEASE NOTE THAT ANY INTERIOR WALLS, PARTITIONS, CEILINGS, AND EXTERIOR WALLS SHOULD BE DETAILED (BY OTHERS) TO ACCOMMODATE THIS STORY DRIFT.

ERECTION MANUALS REQUIRED (ERECTION MANUALS ARE SHIPPED WITH THE BUILDING IN A WAREHOUSE PACKING CRATE)		
☒ CFR ROOF	☒ H9700 OR ☐ H8260	☐ SINGLE CURB (H9850)
☐ CLASSIC ROOF	☐ H9420 OR ☐ H8201	☐ DOUBLE CURB (H9800)
☒ WALL SHEETING	☒ H9430 OR ☐ H8300	☐ VR16 II (H9925)

DRAWING INDEX

COVERSHEET C1
ANCHOR BOLT DRAWINGS F1, F2
COLUMN BASE REACTIONS F2
STRUCTURAL/SHEETING DRAWINGS E1, E2, E3, E4, E5, E6
DETAILS ___

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	JSA	RJM		7-7-14
PERMITS	MBS	JSA	RJM		7-7-14

NUCOR BUILDING SYSTEMS
350 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7394
PO BOX 1005, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
650 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-9492 FAX: (972) 524-9417
1050 WATER LANE, BROOMFIELD, CO 80020
PHONE: (435) 919-3100 FAX: (435) 919-3101

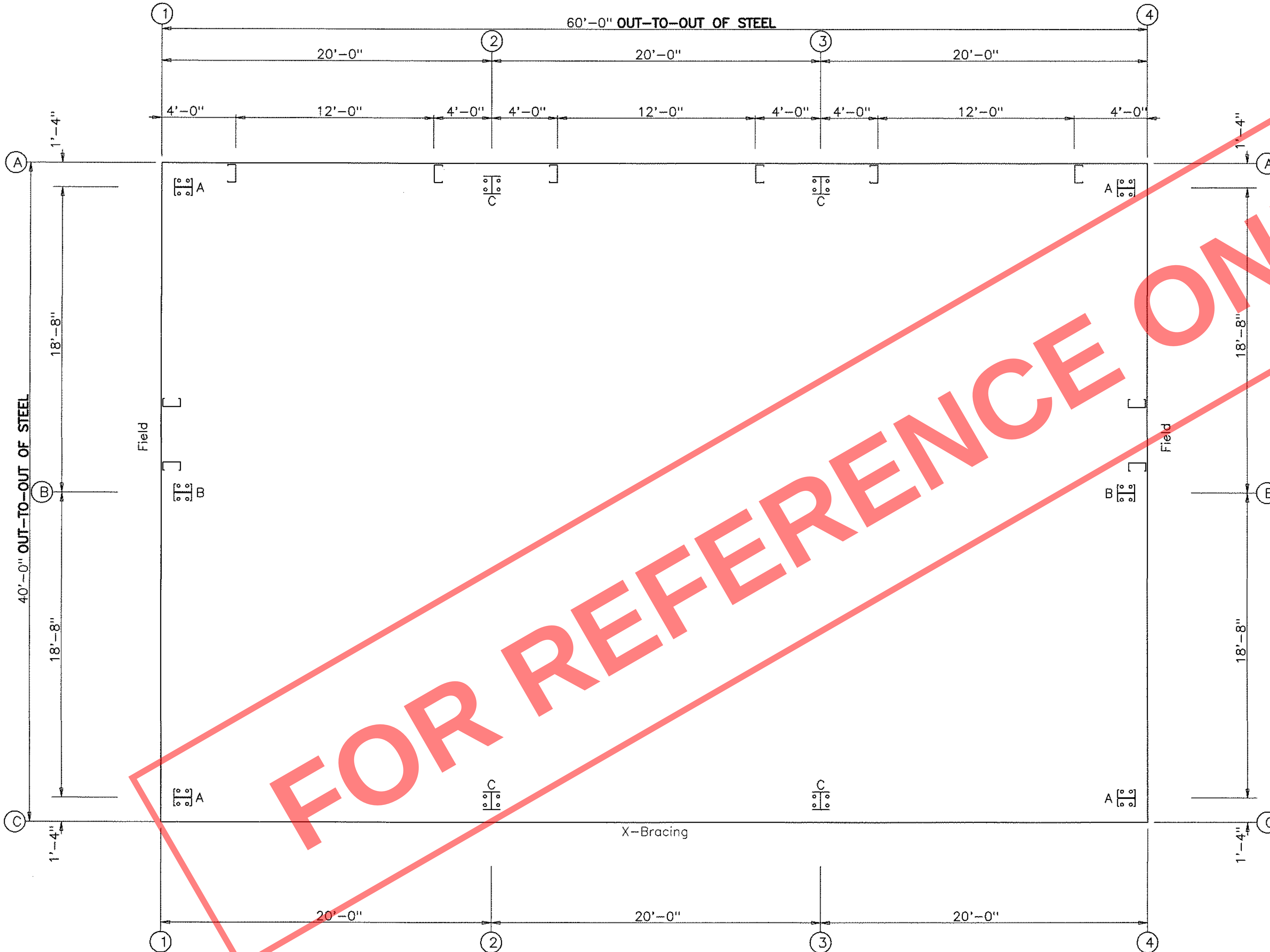
PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG. FORT WAYNE, IN 46805
CUSTOMER NAME: STREBIG CONSTRUCTION INC. FORT WAYNE, IN 46802
JOB NUMBER: W14J0464A
SHEET TITLE

RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
7/15/14

SHEET C1 of 1

ANCHOR BOLT SUMMARY

	Qty	Locate	Dia (in)	Type	Proj (in)
O	24	Endwall	3/4"	F1554	3.00
O	16	Frame	3/4"	F1554	3.00



ANCHOR BOLT PLAN
NOTE: All Base Plates @ 100'–0" (U.N.)
o **Dia=** 3/4"

ANCHOR BOLT PLAN

GENERAL NOTES

1. THE SPECIFIED ANCHOR ROD DIAMETER ASSUMES F1554 GRADE 36 UNLESS NOTED OTHERWISE. ANCHOR ROD MATERIAL OF EQUAL DIAMETER MEETING OR EXCEEDING THE STRENGTH REQUIREMENTS SET FORTH ON THESE DRAWINGS MAY BE UTILIZED AT THE DISCRETION OF THE FOUNDATION DESIGN ENGINEER. ANCHOR ROD EMBEDMENT LENGTH SHALL BE DETERMINED BY THE FOUNDATION DESIGN ENGINEER.

2. METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR PROJECT FOUNDATION DESIGN. THE FOUNDATION DESIGN IS THE RESPONSIBILITY OF A REGISTERED PROFESSIONAL ENGINEER, FAMILIAR WITH LOCAL SITE CONDITIONS.

3. ALL ANCHOR RODS, FLAT WASHERS FOR ANCHOR RODS, EXPANSION BOLTS, AS WELL AS ALL CONCRETE/MASONRY EMBEDMENT PLATES ARE NOT BY METAL BUILDING MANUFACTURER.

4. THIS DRAWING IS NOT TO SCALE.

5. FINISHED FLOOR ELEVATION = 100'–0" UNLESS NOTED OTHERWISE.

6. "SINGLE" CEE COLUMNS SHALL BE ORIENTED WITH THE "TOES" TOWARD THE LOW EAVE UNLESS NOTED OTHERWISE.

7. ANCHOR RODS ARE REQUIRED ONLY IN THE QUANTITIES SPECIFIED. BASEPLATES MAY BE FABRICATED WITH MORE HOLES THAN NEEDED FOR THIS PROJECT.

8. THE ANCHOR BOLT LOCATIONS PROVIDED BY METAL BUILDING MANUFACTURER SATISFY PERTINENT REQUIREMENTS FOR THE DESIGN OF THE MATERIALS SUPPLIED BY THE METAL BUILDING MANUFACTURER. PLEASE NOTE THAT THESE REQUIREMENTS MAY NOT SATISFY ALL ANCHOR BOLT CONCRETE EDGE DISTANCE REQUIREMENTS DEPENDING ON THE DETAILS OF THE FOUNDATION DESIGN. BECAUSE FOUNDATION DESIGN IS NOT WITHIN THE METAL BUILDING MANUFACTURER'S SCOPE OF WORK, IT IS THE RESPONSIBILITY OF THE QUALIFIED PROFESSIONAL DESIGNING THE FOUNDATION TO MAKE CERTAIN THAT SUFFICIENT CONCRETE EDGE DISTANCE IS PROVIDED FOR THE ANCHOR BOLTS IN THE DETAILS OF THE FOUNDATION DESIGN.

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	JSA	[signature]		7-7-14
PERMITS	[initials]	[initials]	[initials]		7-31-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1008, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
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1050 WATERY LANE, BRIGHAM CITY, UT 84302
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PROJECT NAME
IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805

CUSTOMER NAME
STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802

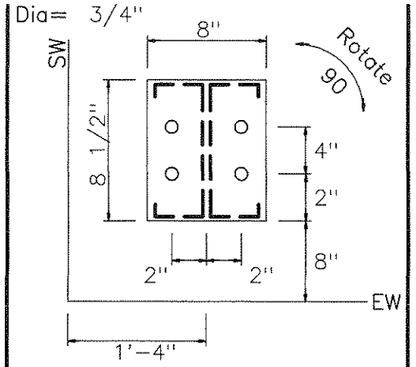
SHEET TITLE

JOB NUMBER
W14J0464A

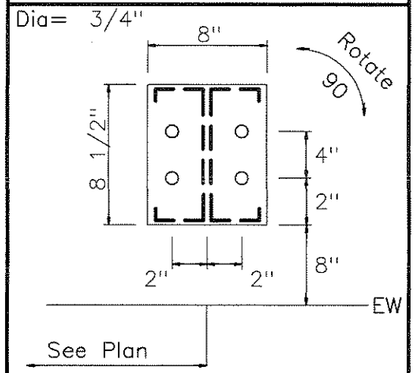
RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
[signature] 8/2/14

This seal pertains only to the materials designed and supplied by Nucor Building Systems, a division of Nucor Corporation. The drawings and the metal buildings which they represent are the product of Nucor Building Systems. The register professional engineer whose seal appears on these drawings is employed by Nucor Buildings Systems and does not serve as or represent the project engineer of record and shall not be construed as such.

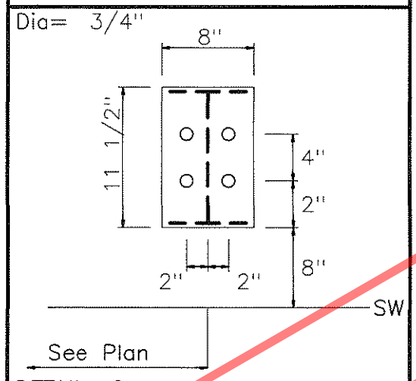
SHEET
F1 of 2



DETAIL A

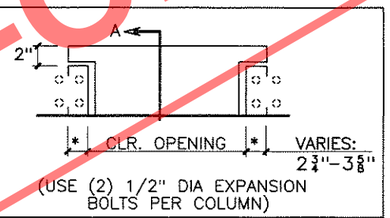


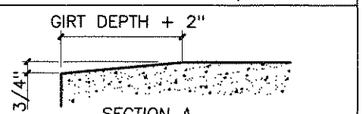
DETAIL B



DETAIL C

TYPICAL COLUMN BASE PLATE DETAIL

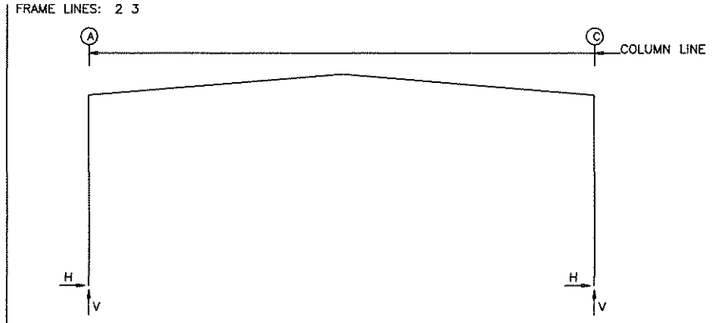




SECTION A

(RECOMMENDED)

TYPICAL OVERHEAD DOOR FRAMED OPENING



GENERAL NOTES

1. ALL LOADING CONDITIONS ARE EXAMINED. THE MAXIMUM AND MINIMUM HORIZONTAL (H) AND VERTICAL (V) REACTIONS AND THE CORRESPONDING VERTICAL (V) OR HORIZONTAL (H) REACTIONS ARE REPORTED.
2. REACTIONS ARE PROVIDED BY LOAD CASE IN ORDER TO AID THE FOUNDATION ENGINEER IN DETERMINING THE APPROPRIATE LOAD FACTORS AND COMBINATION TO BE USED WITH EITHER WORKING STRESS OR ULTIMATE STRENGTH DESIGN METHODS. WIND LOAD CASES ARE GIVEN FOR EACH PRIMARY WIND DIRECTION.
3. FOR ASCE7-10 BASED BULDING CODES THE UNFACTORED LOAD CASE REACTIONS DUE TO WIND ARE GENERATED USING ULTIMATE DESIGN WIND SPEEDS (Vult).
4. POSITIVE (+) REACTIONS ARE AS SHOWN ABOVE. FOUNDATION LOADS ARE IN OPPOSITE DIRECTIONS.
5. BRACING REACTIONS ARE IN THE PLANE OF THE BRACE WITH THE HORIZONTAL REACTION (H) ACTING AWAY FROM THE BRACED BAY AND THE VERTICAL REACTION (V) ACTING DOWNWARD.

****** RIGID FRAME LOAD CASE ABBREVIATIONS: ******
Wind_L1/Wind_R1: LATERAL WIND FROM THE LEFT/RIGHT, CASE 1
Wind_L2/Wind_R2: LATERAL WIND FROM THE LEFT/RIGHT, CASE 2
Wind_Ln1/Wind_Ln2: LONGITUDINAL WIND, CASE 1/2
Seismic_L/Seismic_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT
LWIND#_L#E/LWIND#_R#E: LONGITUDINAL WIND EDGE ZONES
F#UNB_SL_L/F#UNB_SL_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT
F#PAT_LL #/F#PAT_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

****** ENDWALL COLUMN LOAD CASE ABBREVIATIONS: ******
Collat: COLLATERAL LOAD
Rafter Wind_L/Rafter Wind_R: LATERAL WIND FROM THE LEFT/RIGHT
Brace Wind_L/Brace Wind_R: LATERAL WIND FROM THE LEFT/RIGHT
Wind_P/Wind_S: LONGITUDINAL WIND PRESSURE/SUCTION ON COLUMNS
Wind_Ln: LONGITUDINAL WIND SUCTION ON ROOF
Seis_L/Seis_R: LATERAL SEISMIC LOAD FROM LEFT/RIGHT
E#UNB_SL_L/E#UNB_SL_R: UNBALANCED ROOF SNOW WITH WIND FROM LEFT/RIGHT
E#PAT_LL #/E#PAT_SL #: PARTIAL LIVE/SNOW LOADING FOR CONTINUOUS BEAM SYSTEMS

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert
2*	A	0.6	1.8	0.8	2.1	3.0	8.4	2.5	7.1	-3.3	-5.2	1.2	-2.2
2*	C	-0.6	1.8	-0.8	2.1	-3.0	8.4	-2.5	7.1	-1.2	-2.2	3.3	-5.2

Frame Line	Column Line	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert
2*	A	-3.5	-3.3	1.0	-0.3	-0.5	-4.5	-0.5	-2.6	-0.5	-0.3	0.5	0.3
2*	C	-1.0	-0.3	3.5	-3.3	0.5	-4.5	0.5	-2.6	-0.5	0.3	0.5	-0.3

Frame Line	Column Line	LWIND1_L2E Horiz	LWIND1_L2E Vert	LWIND1_R2E Horiz	LWIND1_R2E Vert	LWIND2_L2E Horiz	LWIND2_L2E Vert	LWIND2_R2E Horiz	LWIND2_R2E Vert	F1UNB_SL_L Horiz	F1UNB_SL_L Vert	F1UNB_SL_R Horiz	F1UNB_SL_R Vert
2*	A	0.0	-0.7	-0.1	-0.1	0.0	-0.7	-0.1	-0.1	2.1	7.2	2.1	3.9
2*	C	0.1	-0.1	0.0	-0.7	0.1	-0.1	0.0	-0.7	-2.1	3.9	-2.1	7.2

2* Frame lines: 2 3

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind Left1 Vert	Wind Right1 Vert	Wind Left2 Vert	Wind Right2 Vert	Wind Press Horz	Wind Suct Horz	Wind Long1 Vert	Wind Long2 Vert
1	A	0.6	0.6	2.3	1.9	-1.5	-0.9	-1.5	-0.9	-0.8	1.0	-1.2	-0.7
1	B	1.0	1.1	4.3	3.6	-2.3	-2.3	-2.3	-2.3	-2.1	2.3	-2.3	-1.3
1	C	0.6	0.6	2.3	1.9	-0.9	-1.5	-0.9	-1.5	-0.8	1.0	-1.2	-0.7

Frm Line	Col Line	Seis Left Vert	Seis Right Vert	E1UNB_SL_L Horz	E1UNB_SL_L Vert	E1UNB_SL_R Horz	E1UNB_SL_R Vert	-LWIND1_L-- Horz	-LWIND1_L-- Vert	-LWIND1_R-- Horz	-LWIND1_R-- Vert	-LWIND2_L-- Horz	-LWIND2_L-- Vert
1	A	0.0	0.0	0.0	2.3	0.0	0.6	0.0	-0.3	0.0	0.0	0.0	-0.3
1	B	0.0	0.0	0.0	3.0	0.0	3.0	0.0	-0.1	0.0	-0.1	0.0	-0.1
1	C	0.0	0.0	0.0	0.6	0.0	2.3	0.0	0.0	0.0	-0.3	0.0	0.0

Frm Line	Col Line	-LWIND2_R-- Horz	-LWIND2_R-- Vert
1	B	0.0	-0.1
1	C	0.0	-0.3

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind Left1 Vert	Wind Right1 Vert	Wind Left2 Vert	Wind Right2 Vert	Wind Press Horz	Wind Suct Horz	Wind Long1 Vert	Wind Long2 Vert
4	C	0.6	0.6	2.3	1.9	-1.5	-0.9	-1.5	-0.9	-0.8	1.0	-1.2	-0.7
4	B	1.0	1.1	4.3	3.6	-2.3	-2.3	-2.3	-2.3	-2.1	2.3	-2.3	-1.3
4	A	0.6	0.6	2.3	1.9	-0.9	-1.5	-0.9	-1.5	-0.8	1.0	-1.2	-0.7

Frm Line	Col Line	Seis Left Vert	Seis Right Vert	E2UNB_SL_L Horz	E2UNB_SL_L Vert	E2UNB_SL_R Horz	E2UNB_SL_R Vert	-LWIND1_L-- Horz	-LWIND1_L-- Vert	-LWIND1_R-- Horz	-LWIND1_R-- Vert	-LWIND2_L-- Horz	-LWIND2_L-- Vert
4	C	0.0	0.0	0.0	2.3	0.0	0.6	0.0	-0.3	0.0	0.0	0.0	-0.3
4	B	0.0	0.0	0.0	3.0	0.0	3.0	0.0	-0.1	0.0	-0.1	0.0	-0.1
4	A	0.0	0.0	0.0	0.6	0.0	2.3	0.0	0.0	0.0	-0.3	0.0	0.0

Frm Line	Col Line	-LWIND2_R-- Horz	-LWIND2_R-- Vert
4	B	0.0	-0.1
4	A	0.0	-0.3

BUILDING BRACING REACTIONS

Wall Loc	Col Line	Col Line	± Reactions (k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Panel_Shear (lb/ft) Seis
L_EW	1	Bracing In Roof To Rigid Frame						
F_SW	C	2,3	3.4	2.2	1.8	1.2		
R_EW	4	Bracing In Roof To Rigid Frame						
B_SW	A	Torsional Bracing Used						

FOUNDATION DESIGN NOTE:
THE ORIENTATION OF THE ANCHOR BOLT DETAILS SHOWN ON THIS PAGE MAY NOT COINCIDE WITH THE ACTUAL COLUMN ORIENTATION SHOWN ON PAGE F1. PLEASE REFERENCE THE SIDEWALL (SW) AND ENDWALL (EW) STEEL LINES SHOWN ON THE ANCHOR BOLT DETAILS WITH THE ANCHOR BOLT PLAN ON PAGE F1 DURING LAYOUT OF COLUMN AND ANCHOR BOLT LOCATIONS.

ISSUE: ANCHOR BOLTS | DRWN MBS | CHK JSA | ENG | PE | DATE 7-7-14
PERMITS 7-7-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1000, 200 WESTSTONE RD, SWANSEA, SC 29160
PHONE: (843) 345-1000 FAX: (843) 345-2121
800 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-5407 FAX: (972) 524-5417
1050 WATERY LANE, BRIGHAM CITY, UT 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805
CUSTOMER NAME: STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802
JOB NUMBER: W14J0464A
SHEET TITLE

RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
7/7/14

SHEET F2 of 2

ROOF FRAMING PLAN

ROOF FRAMING PLAN

GENERAL NOTES

1. PLACE TAGGED END OF RAFTERS TOWARDS THE LOW EAVE.
2. STD. ROD/CABLE SIZES PER PART PREFIX ARE:

ROD		CABLE	
RDB–	= 5/8" ROD	CAA–	= 1/4" CABLE
RDC–	= 3/4" ROD	CAB–	= 3/8" CABLE
RDD–	= 7/8" ROD	CAC–	= 1/2" CABLE
RDE–	= 1" ROD		
RDF–	= 1 1/8" ROD		
RDG–	= 1 1/4" ROD		

3. PURLIN AND EAVE STRUT CONNECTIONS UTILIZE BOTH A307 AND A325 BOLTS. REFER TO THE DETAILS FOR SPECIFIC USAGE REQUIREMENTS.
4. THIS DRAWING IS NOT TO SCALE.

ISSUE	DWN	CHK	ENG	DATE
ANCHOR BOLTS	MBS	JSA	TJM	7-7-14
PERMITS	MBS	JSA		7-7-14

NUCOR BUILDING SYSTEMS
300 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1006, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
600 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 563-4417 FAX: (972) 524-4417
1050 WATERY LANE, BRIGHAM CITY, UT 84302
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PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805

CUSTOMER NAME: STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802

JOB NUMBER: W14.J0464A

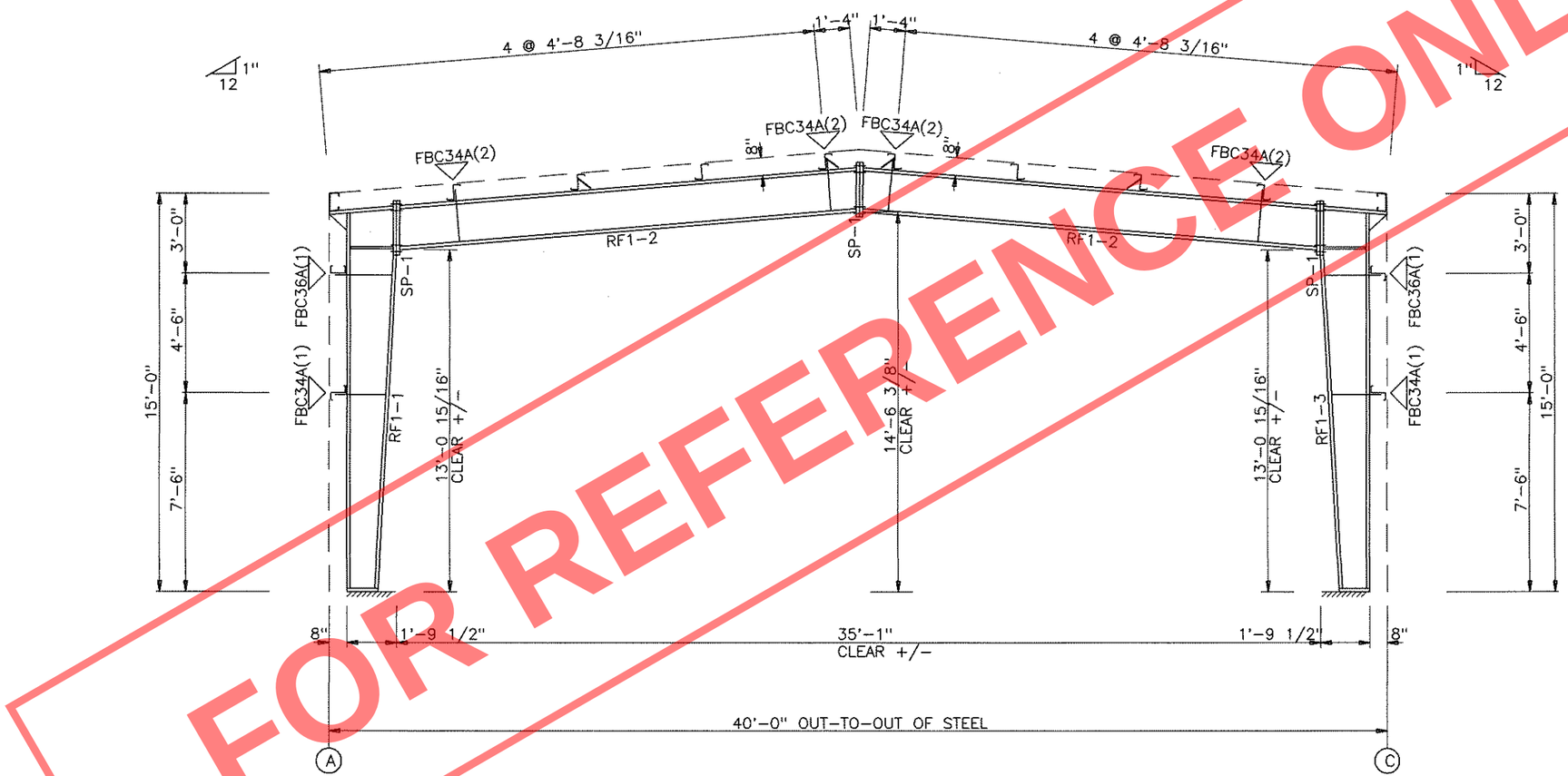
SHEET TITLE

RYAN D. OLLER
REGISTERED
No. 11300284
STATE OF INDIANA
PROFESSIONAL ENGINEER

SHEET: E1 of 6

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP–1	4	4	0	A325	0.625	2.25	6"	3/8"	1'–11 1/8"

MEMBER TABLE					
Mark	Web Depth Start/End	Web Plate Thick	Web Plate Length	Outside Flange W x Thk x Length	Inside Flange W x Thk x Length
RF1–1	11.0/21.0	0.135	153.7	5 x 1/4" x 172.0	5 x 1/4" x 154.0
	21.0/21.0	0.164	20.1	5 x 1/4" x 29.1	
RF1–2	17.0/17.0	0.135	211.8	5 x 1/4" x 210.3	5 x 1/4" x 210.3
RF1–3	21.0/21.0	0.164	20.1	5 x 1/4" x 29.1	5 x 1/4" x 154.0
	21.0/11.0	0.135	153.7	5 x 1/4" x 172.0	



RIGID FRAME ELEVATION: FRAME LINES 2 & 3

GENERAL NOTES

1. ▽ INDICATES FLANGE BRACING LOCATIONS. (1) = ONE SIDE; (2) = TWO SIDES.
2. IF FLANGE BRACING IS REQUIRED ON BOTH SIDES OF AN EXPANDABLE RIGID FRAME, THE OPPOSITE SIDE FLANGE BRACES WILL HAVE TO BE INSTALLED AT THE TIME OF FUTURE EXPANSION. THESE FLANGE BRACES HAVE BEEN PROVIDED, AS REQUIRED, FOR THIS FUTURE CONDITION.
3. RIGID FRAMES SHALL HAVE 50% OF THEIR BOLTS INSTALLED AND TIGHTENED ON BOTH SIDES OF THE WEB ADJACENT TO EACH FLANGE BEFORE THE HOISTING EQUIPMENT IS RELEASED.

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	JSA	T.J.M.		7-7-14
PERMITS	MBS	JSA			7-7-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1006, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
800 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-4400 FAX: (972) 524-4417
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PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805

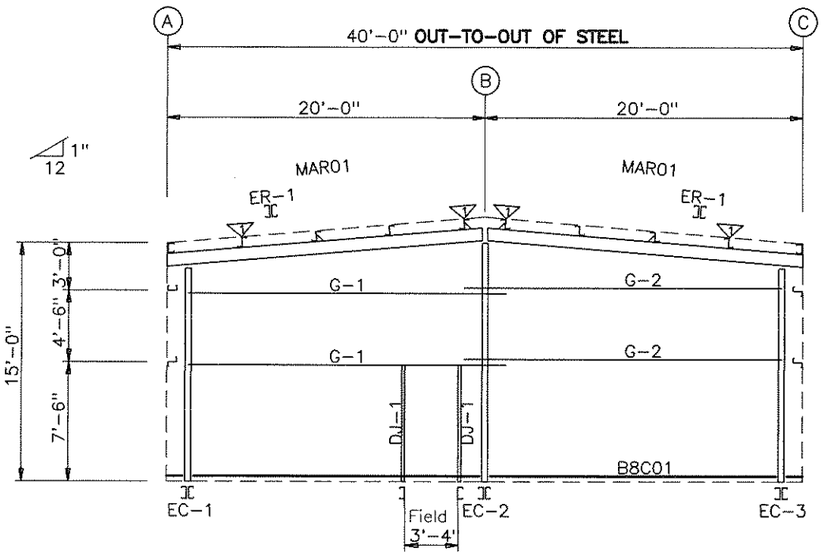
CUSTOMER NAME: STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802

JOB NUMBER: W14J0464A

SHEET TITLE

RYAN D. OLLER — REGISTERED — No. 11300284 — STATE OF INDIANA — PROFESSIONAL ENGINEER
7/7/14

SHEET: E2 of 6



GIRT LAPS

1'-3 3/4" 1'-3 3/4"

ENDWALL FRAMING: FRAME LINE 1

ENDWALL FRAMING PLAN

GENERAL NOTES

1. STD. ROD/CABLE SIZES PER PART PREFIX ARE:

ROD		CABLE	
RDB–	= 5/8" ROD	CAA–	= 1/4" CABLE
RDC–	= 3/4" ROD	CAB–	= 3/8" CABLE
RDD–	= 7/8" ROD	CAC–	= 1/2" CABLE
RDE–	= 1" ROD		
RDF–	= 1 1/8" ROD		
RDG–	= 1 1/4" ROD		

2. ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
3. FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
4. THIS DRAWING IS NOT TO SCALE.

ISSUE	DWN	CHK	ENG	P.E.	DATE
ANCHOR BOLTS	MBS	JSA	TJM		7-7-14
PERMITS	MBS	JSA	TJM		7-7-14

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PO BOX 1000, 200 WESTSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
4800 BRADFORD PKWY, TERRELL, TX 75160
PHONE: (972) 524-4407 FAX: (972) 524-5417
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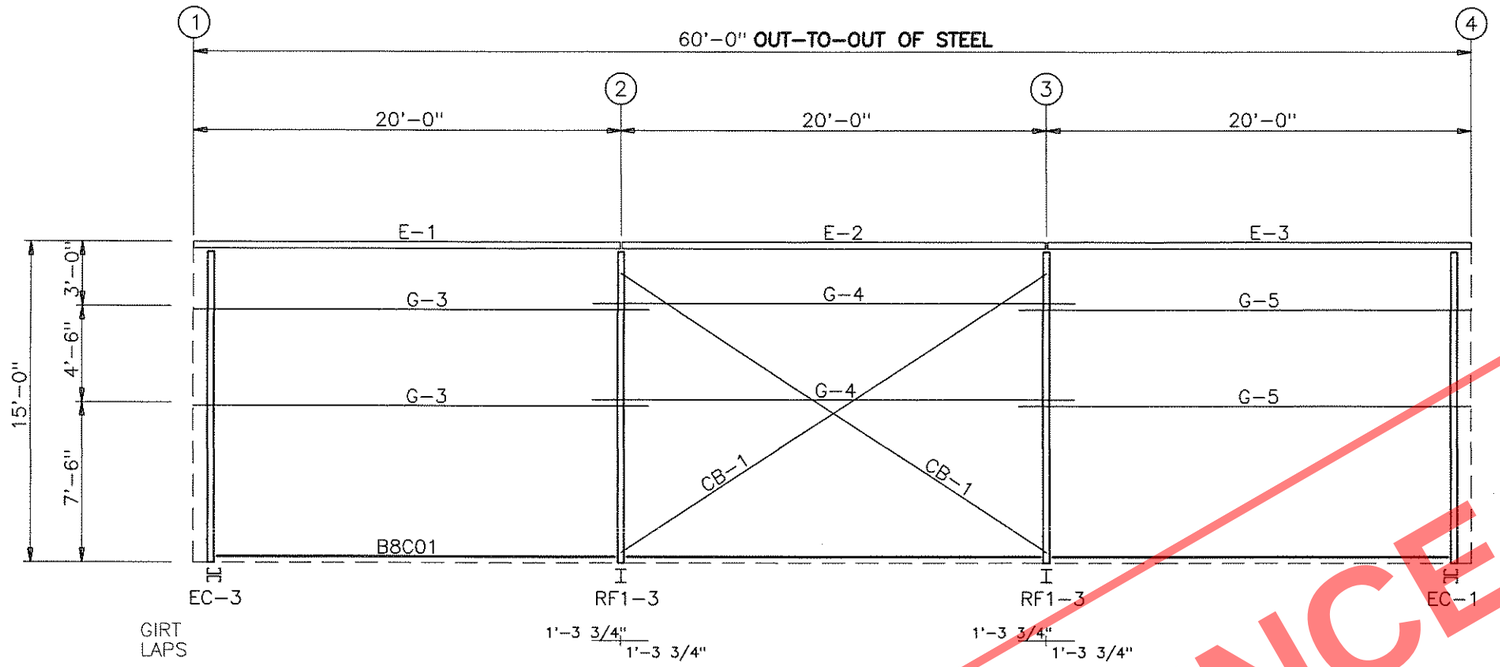
JOB NUMBER: W14J0464A

SHEET TITLE

RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
5/2/14

SHEET: E3 of 6



SIDEWALL FRAMING: FRAME LINE C

SIDEWALL FRAMING PLAN

GENERAL NOTES

1. STD. ROD/CABLE SIZES PER PART PREFIX ARE:

ROD		CABLE	
RDB–	= 5/8" ROD	CAA–	= 1/4" CABLE
RDC–	= 3/4" ROD	CAB–	= 3/8" CABLE
RDD–	= 7/8" ROD	CAC–	= 1/2" CABLE
RDE–	= 1" ROD		
RDF–	= 1 1/8" ROD		
RDG–	= 1 1/4" ROD		

2. ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
3. FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
4. THIS DRAWING IS NOT TO SCALE.

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	JSA	TJM		7-7-14
PERMITS	MBS	JSA			7-7-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1000, 2WESTSTONE RD, DENISON, TX 75020
PHONE: (903) 463-2100 FAX: (903) 463-2152
400 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-5407 FAX: (972) 524-5417
1050 WATERY LANE, BRIGHAM CITY, UT 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805

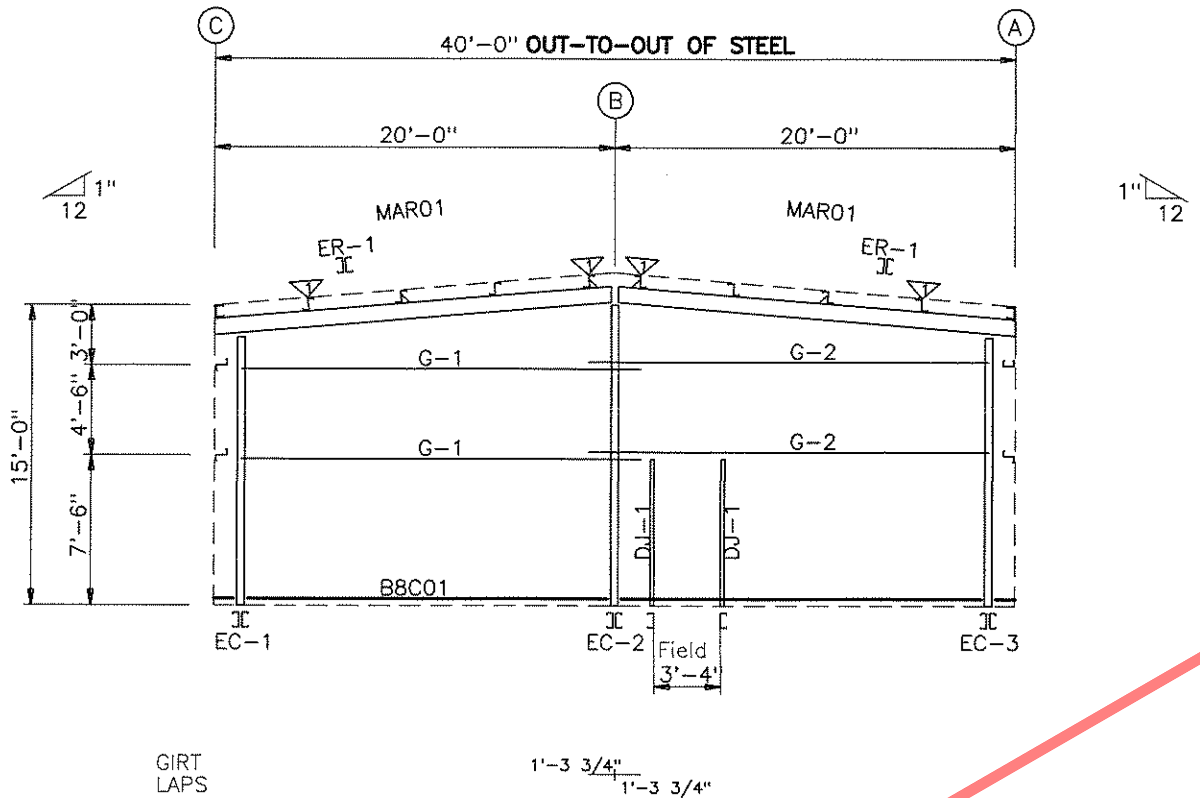
CUSTOMER NAME: STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802

JOB NUMBER: W14J0464A

SHEET TITLE

RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
7/7/14

SHEET: E4 of 6



ENDWALL FRAMING: FRAME LINE 4

ENDWALL FRAMING PLAN

GENERAL NOTES

1. STD. ROD/CABLE SIZES PER PART PREFIX ARE:

ROD		CABLE	
RDB–	= 5/8" ROD	CAA–	= 1/4" CABLE
RDC–	= 3/4" ROD	CAB–	= 3/8" CABLE
RDD–	= 7/8" ROD	CAC–	= 1/2" CABLE
RDE–	= 1" ROD		
RDF–	= 1 1/8" ROD		
RDG–	= 1 1/4" ROD		

2. ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
3. FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
4. THIS DRAWING IS NOT TO SCALE.

ISSUE	DWN	CHK	ENG	PE	DATE
ANCHOR BOLTS	MBS	JSA	TJM		7-7-14
PERMITS	MBS	JSA	TJM		7-7-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1006, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
600 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-5407 FAX: (972) 524-5417
1050 WATERY LANE, BRIGHAM CITY, UT 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

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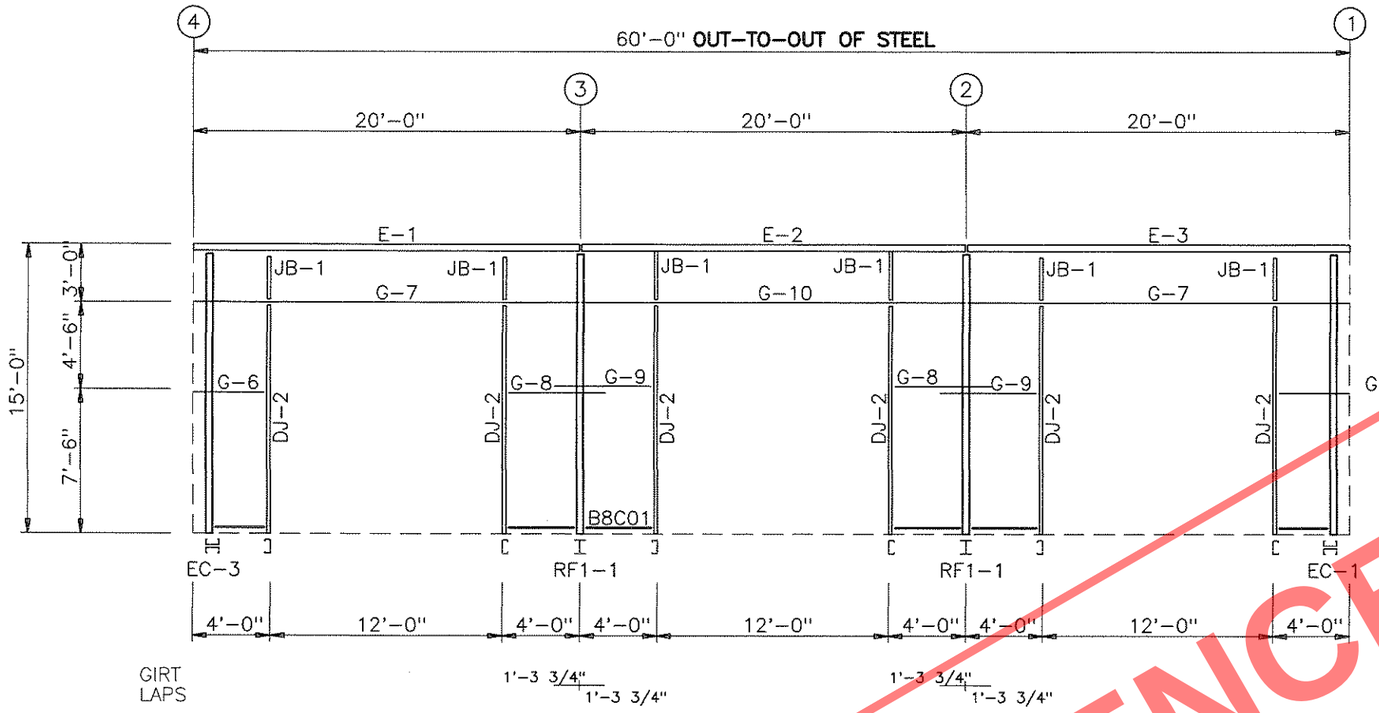
FORT WAYNE, IN 46802

JOB NUMBER
W14J0464A

SHEET TITLE

RYAN D. OLIVER REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
7/7/14

SHEET
E5 of 6



SIDEWALL FRAMING: FRAME LINE A

SIDEWALL FRAMING PLAN

GENERAL NOTES

1. STD. ROD/CABLE SIZES PER PART PREFIX ARE:

ROD		CABLE	
RDB-	= 5/8" ROD	CAA-	= 1/4" CABLE
RDC-	= 3/4" ROD	CAB-	= 3/8" CABLE
RDD-	= 7/8" ROD	CAC-	= 1/2" CABLE
RDE-	= 1" ROD		
RDF-	= 1 1/8" ROD		
RDG-	= 1 1/4" ROD		

2. ROD/CABLE BRACING THAT OCCURS IN FLUSH OR INSET GIRT CONDITIONS WILL REQUIRE FIELD SLOTTING OF GIRT WEBS TO ALLOW FOR BRACING.
3. FRAMED OPENINGS WHICH ARE FIELD LOCATED WILL REQUIRE FIELD CUTTING OF GIRTS AND SHEETING.
4. THIS DRAWING IS NOT TO SCALE.

ISSUE	DRWN	CHK'D	ENG'D	P.E.	DATE
ANCHOR BOLTS	MBS	JSA	T.JM		7-7-14
PERMITS	MBS	JSA			7-7-14

NUCOR BUILDING SYSTEMS
305 INDUSTRIAL PARKWAY, WATERLOO, IN 46793
PHONE: (260) 837-7891 FAX: (260) 837-7384
PO BOX 1004, 200 WHETSTONE RD, SWANSEA, SC 29160
PHONE: (803) 568-2100 FAX: (803) 568-2121
650 APACHE TRAIL, TERRELL, TX 75160
PHONE: (972) 524-4400 FAX: (972) 524-4417
1050 WATERY LANE, BRIGHAM CITY, UT, 84302
PHONE: (435) 919-3100 FAX: (435) 919-3101

PROJECT NAME: IPFW WEST CAMPUS MAINTENANCE BLDG.
FORT WAYNE, IN 46805

CUSTOMER NAME: STREBIG CONSTRUCTION INC.
FORT WAYNE, IN 46802

JOB NUMBER: W14J0464A

SHEET TITLE

REGISTERED No. 11300284 STATE OF INDIANA PROFESSIONAL ENGINEER
RYAN D. OLIVER
7/7/14

SHEET: E6 of 6

PART 3 EXECUTION (NOT USED)

END OF SECTION

GME TESTING

A UES Company

Geotechnical Report

GME Project No. G25-123264

Proposed Maintenance Building Addition

Near 1807 East California Road
Fort Wayne, IN

January 12, 2026

Prepared For:

Martin Riley Architects & Engineers
221 West Baker Street
Fort Wayne, IN 46802
Attn: Jessica Franke, AIA

Prepared By:

GME Testing
3517 Focus Dr
Fort Wayne, IN 46818

GME TESTING

A UES Company

January 12, 2026
G25-123264

Martin Riley Architects & Engineers
221 West Baker Street
Fort Wayne, IN 46802
Attn: Jessica Franke, AIA

REF: SUBSURFACE EXPLORATION AND RECOMMENDATIONS
Proposed Maintenance Building Addition
Near 1807 East California Road
Fort Wayne, IN 46825

Dear Jessica:

In compliance with your recent request, ***GME Testing*** is pleased to submit this report on our subsurface exploration and recommendations for the design and construction of the proposed maintenance building addition located on Purdue Fort Wayne's campus near Hefner Field in Fort Wayne, Indiana. Our services were performed in accordance with our proposal (GMEP 25-090531) dated September 30, 2025.

SITE CONDITIONS

The Site is located along the northern face of the existing maintenance building. The overall site surface condition can be characterized as relatively level (on the west side of the maintenance building) to gently sloping towards Recreation Road (on the east side of the maintenance building). Additionally, on the east side of the existing maintenance building, a paved area surrounded by a chain-link fence with miscellaneous maintenance equipment was observed. The site was generally grass-covered with sporadic areas of snow.

The Site consists of the existing maintenance building, a driveway, hardscaping areas, overhead and below-ground utilities, etc. The as-built plans for the existing building were not available at this time. It is anticipated that the existing structure is supported by conventional foundations at shallow depths and is performing well from a structural perspective. If any modifications or repairs to the existing building are required, a qualified structural engineer should be retained to assess its current structural condition.

SITE GEOLOGY

According to the USDA Web Soil Survey, near-surface soils at the site consist of Glynwood silt loam and Morley silt loam. A copy of the *Custom Soil Resource Report for Allen County, Indiana*, is included in Appendix B.

PROJECT DESCRIPTION

Based on the available information, we understand that the proposed project will consist of a building addition on the north side of the existing maintenance building. The proposed addition will be a single-story (with no basement) with a slab-on-grade interior. The addition is expected to be used as a garage and storage equipment area.

The structural loading information was unavailable at this time. However, it is anticipated that the maximum column, wall, and floor loadings will be light to moderate and may be in the range of approximately 50 kips/column, 4 kips per linear foot, and 125 psf, respectively. The structural engineer will design and detail the building slabs (i.e., thickness design, jointing, reinforcement).

No topographic data was provided, and neither the planned finished floor elevation nor the existing surface elevations were available. However, the finished floor elevation is expected to match that of the existing structure. The existing surface elevation extracted from the Allen County, Indiana GIS website is approximately El. 780, as shown on the bore logs included in Appendix B for reference only. GME Testing recommends that a professional surveyor determine and confirm the existing site surface elevations.

GME Testing should be contacted to review design information that conflicts with our stated understanding presented in this report. Based on our review of this information, we will determine whether any changes to this report or our recommendations are required.

SUBSURFACE INVESTIGATION

Our field exploration program consisted of drilling two (2) vertical soil test borings to depths of approximately 20 feet below the existing ground surface (bgs) as shown on the borehole logs. GME Testing personnel established the test boring locations in the field based on a site plan. The boring locations presented in Exhibit A and included in Appendix A of this report are approximate. Table 1 summarizes the boring designations.

Table 1: Summary of Boring Location		
Boring Number	**Latitude**	**Longitude**
B-1	41.121502	-85.118218
B-2	41.121610	-85.118106

Our subsurface exploration was performed in accordance with the Standard Penetration Test, ASTM D-1586. Representative soils collected using a split spoon sampler. Our laboratory testing program included performing **a)** visual soil classifications according to ASTM D-2487 and ASTM D-2488, **b)** natural moisture content tests according to ASTM D-2216 on all samples, and **c)** unconfined compressive strength tests with calibrated spring hand penetration tests in general accordance with ASTM D-2166.

Surficial Material: The test borings disclosed approximately 4 to 5 inches of topsoil material.

Native Soils: The native soils in boring B-1 and B-2 consisted of clay-type soils (classified as sandy silty clay and silty clay) that extended to the termination depths of the borings. The consistency of the existing clay soils encountered ranged from very stiff to hard and was characterized based on SPT N-values in accordance with ASTM D-1586. However, the soil near the surface in B-2 was classified as medium stiff. The **General Notes** sheet, which follows the boring log included in Appendix B, explains the correlations between consistency and relative density.

Groundwater Measurements: No groundwater was encountered during or after drilling in either test boring B-1 or B-2. The groundwater depths shown on the boring logs reflect groundwater levels **only** for the date on which the borings were drilled. Based upon the engineering characteristics of the encountered soils, trapped “perched” water may be experienced following heavy precipitation.

GEOTECHNICAL RECOMMENDATIONS

Our geotechnical recommendations were developed based on the soil conditions at borings B-1 and B-2 and our understanding of the proposed maintenance building addition. Any significant changes in the building addition configuration, location, loading, or assumed grades should be brought to our attention for further evaluation, as they may affect our conclusions.

Foundation Recommendations

Our findings indicate that the proposed building addition can be supported on conventional foundations, consisting of column (square type) and continuous (strip wall) footings. GME Testing recommends that all footings should bear on approved firm native soils (similar to the very stiff and hard clay soils found beneath 3.5 feet bgs) and/or engineered fill extending from the approved subgrade. The exact depth to firm suitable native soils should be determined at the time of construction by a GME Testing representative. Under no circumstances should new foundations bear on weak soils, undocumented fill materials, or existing foundation backfill material.

If any unsuitable soil is found beneath the footprint of the new addition, then conventional footings should be extended to approved firm native soils, or they may be replaced with a lean concrete mix (i.e., 2,000 psi compressive strength after 28 days). Exhibit B, included in Appendix A of this report, provides this illustration.

Conventional foundations prepared as discussed above can be designed for maximum net allowable soil bearing pressures of **3,000 pounds per square foot (psf)** for column (square type) and **2,500 psf** for wall (strip type) footings.

When using net pressure, the weight of the footing and backfill over the footing, including the weight of the floor slab, need not be considered. Hence, only loads applied at or above the finished floor must be used to dimension the footings.

New fill soil below, above, and surrounding footings shall consist of approved materials, and then placed and compacted in accordance with this report.

Care must be taken when positioning new foundations for the proposed building addition adjacent to existing foundations to avoid overlapping zones of influence and to prevent compromising the existing foundations due to excavation below their bearing elevations. Depending on the excavation depth, proximity to the existing structure, and other factors, it may be necessary to provide bracing or shoring for the excavation sides.

Provided that our recommendations in this report and project specifications are followed, total foundation settlements should not exceed 1 inch with differential settlements of up to ½ inch.

Careful field control and proper footing proportions will contribute substantially to minimizing total and differential settlements. Therefore, it is recommended that GME Testing be retained to inspect the bottom of the footings. Field control and proper footing proportions will contribute substantially to reducing total and differential settlements.

Foundation Frost Depth

All approved foundations resting on competent-bearing soils must be protected during and post-construction.

All exterior footings and footings in unheated areas should be located at a depth of 3.5 feet below the final exterior grade for frost protection. Interior footings in heated areas can be located at nominal depths below the finished floor, provided that they bear on firm materials and provided that other recommendations in this report are followed.

Seismicity Classification

A seismic site class “D” may be applied for this project, with a seismic report included in Appendix B. The design parameters presented in Table 2 are based on this classification. The ASCE 7-10 standard utilizes a site profile extending to a depth of 100 feet for seismic site classification. Since the borings for this project did not reach that depth, the site properties below 100 feet were estimated based on our experience and understanding of the geologic conditions in the area

Table 2: Seismicity Classification Parameters	
Description	**Value**
***ASCE 7-10 Site Classification**	D
Site Latitude	41.121554
Site Longitude	-85.11813
Risk Category	III
Seismic Design Category	B
Ss	0.116g
S_1	0.061g
S_{DS}	0.123
S_{D1}	0.097

** Note: The updated ASCE 7-22 seismic classification parameters can also be available and provided, if needed, upon request.*

Ground-Supported Floor Slabs

The floor slabs should be prepared as discussed in the ***Site Subgrade Preparation Recommendations*** section of this report. A qualified structural engineer should design the floor slabs for the anticipated loadings. After the building pad is properly prepared but prior to placing concrete slabs, the subgrade should be subjected to proofrolling observation to determine if any areas that require remediation are present. The floor slabs may be constructed as slabs-on-grade, supported by natural, firm soils or well-compacted engineered fill material.

We recommend that compacted granular material be placed beneath all floor slabs consisting of approximately 6 inches or more of free-draining granular material (i.e., crushed limestone meeting INDOT No. 53 gradation requirements or fine sand and gravel with 10 percent passing the No. 200 Sieve).

The floor slab subgrade should be compacted to achieve 95 percent or more, as determined by ASTM D-1557. The slab subgrade should be adequately protected from inclement weather and disturbance by construction traffic.

The use of a vapor retarder should be considered when slabs will receive moisture-sensitive or impervious floor coverings (e.g., wood, tile, or carpet), when installed in humidity-controlled environments, or when supporting moisture-sensitive equipment. In such cases, the slab designer should refer to ACI 302 and ACI 360 for proper vapor retarder selection, placement, and related precautions.

GENERAL EARTHWORK AND CONSTRUCTION RECOMMENDATIONS

Site Preparation Recommendations

If new grade-raise fill will be planned, GME Testing should inspect the exposed subgrade before fill is placed. This is to check that all unsuitable materials, such as vegetation, topsoil, and compressible soils, have been properly removed by the earth contractor. The exposed subgrade should then be proof-rolled and approved prior to placing compacted engineered fill to restore stability and support construction.

Localized instability (e.g., pumping or yielding) may occur following the wet season, and should be corrected by aeration, compaction, or removal and replacement with engineered fill. While the subgrade soils are expected to be workable, adverse weather or heavy construction traffic may reduce workability; if so, scarification and drying may be required.

Construction traffic should be limited to designated haul routes, and grading and fill placement should be carefully performed to avoid creating unstable areas.

Engineered Fill

New, approved engineered fill materials should be compacted using suitable equipment to a dry density of 95 percent or more of the maximum density obtained in accordance with ASTM D-1557. The compaction moisture content should generally be within 2 percent of the optimum.

To achieve the recommended compaction limit of the structural fill, the fill material should be placed and compacted in layers not exceeding 8 inches in loose thickness (the loose lift thickness should be reduced to 6 inches when utilizing small hand compactors). GME Testing should be retained to provide continuous inspection and documentation of the earthwork process.

Temporary Excavations and Trenches

All excavation and trenching operations shall comply with OSHA 29 CFR 1926, Subpart P. Excavations shall be monitored by a qualified “Competent Person,” and appropriate sloping or shoring shall be provided to prevent cave-ins.

Surface Water

Maintaining positive drainage of surface water away from the structure's foundations is essential for preventing water infiltration and potential damage to the structure. Surface water, including downspout discharge, should be directed toward designated outfalls, such as streets or drainage areas, to ensure proper runoff management.

Quality Control Testing

We recommend that a GME Testing geotechnical engineer or designee be retained to continuously evaluate the footings during installation and test the subgrade and footing excavations before forming and placing steel or concrete. This is to ensure that suitable materials are present below the footings and slabs. Concrete strength and consistency tests should also be carried out in accordance with the project specifications.

GENERAL COMMENTS

This field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical investigation report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. Although individual test borings are representative of the subsurface conditions at the boring locations on the dates drilled, they are not necessarily representative of the subsurface conditions between boring locations or subsurface conditions during other seasons of the year.

The lines of demarcation shown on the logs represent approximate boundaries between the various classifications. The stratification of soils, as shown on the accompanying test borehole logs, represents the soil conditions at the drilled borehole locations, and variations may occur between the boreholes. In-situ strata changes could occur gradually or at different levels. Also, it should be noted that the boreholes depict conditions at the particular locations and times indicated.

The report was prepared by GME Testing solely for the use of the Client in accordance with an executed contract. The Client's use of or reliance on this report is limited by the terms and conditions of the contract and by the qualifications and limitations stated in the report. It is also acknowledged that the Client's use of and reliance of this report is limited for reasons which include actual site conditions that may change with time; hidden conditions, not discoverable within the scope of the assessment may exist at the site; and the scope of the investigation may have been limited by time, budget and other constraints imposed by the client.

Neither the report nor its contents, conclusions, or recommendations are intended for the use of any party other than the Client. GME Testing and the Client assume no liability for any reliance placed on this report by such party. The rights of the client under contract may not be assigned to any person or entity, without the consent of GME Testing which shall not be unreasonably withheld.

Our services have been provided consistent with its professional standards of care. No other warranties are made, either expressed or implied.

Should you have any questions related to this report, please contact us at your convenience.

Sincerely,
GME Testing

Rami M. Anabtawi, P.E., BC.GE

RAMI M. ANABTAWI
920294
REGISTERED
PROFESSIONAL
ENGINEER
STATE OF INDIANA

S M Naziur Mahmud, E.I.T.

APPENDIX A

I. FIELD EXPLORATION

Drilling and Sampling Procedures

The test borings were drilled using conventional augers to advance the holes and representative samples of the soils were obtained employing split-barrel sampling techniques in accordance with ASTM procedures D-1586-84. After completion of the borings and water level readings, the auger holes were backfilled with auger cuttings.

The description and depths of soil strata encountered and levels at which samples were recovered are indicated on the accompanying borehole log sheets in the Appendix B. In the column “Soil/Material Description” on the drill borehole log, the horizontal lines represent stratum changes. A solid line represents an observed change, and a dashed line represents an estimated change. An explanation of the symbols and terms used on the boring log sheets is given in Appendix B of this report.

Field Tests and Measurements

Standard Penetration Test: During the sampling procedures, Standard Penetration Test (SPT) was performed at regular intervals through the depth of the borings. The SPT value (“N”-value) is defined as the number of blows required to advance a 2-inch O.D., split-barrel sampler a distance of one foot by a 140-pound hammer falling 30-inches. These values provide a useful preliminary indication of the consistency or relative density of most soil deposits and are included on the Borehole Logs in Appendix B.

Water Level Measurements: Groundwater level observations were made in the boring holes during and upon completion of the boring operations. The groundwater level measurements are noted on the boring logs presented herein.

All recovered samples were returned to GME Testing laboratory for visual examination and subsequent laboratory testing.

II. LABORATORY TESTING

Selected soil samples obtained from the drilling and sampling program were tested in the laboratory to evaluate additional pertinent engineering characteristics of the foundation materials necessary in estimating the engineering properties of these materials.

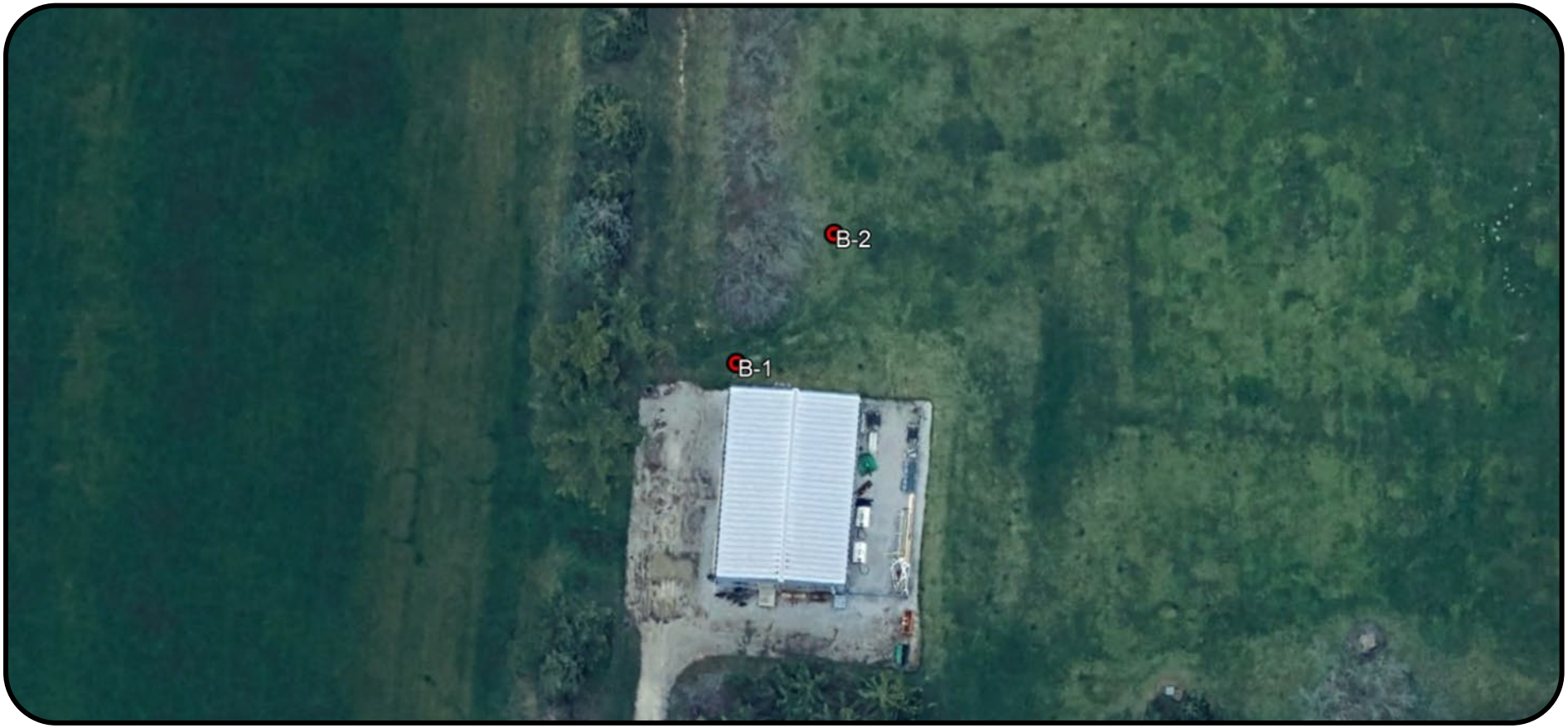
Soil Laboratory Tests and Measurements

Visual Classification: All samples were visually classified by a geotechnical engineer in general accordance with ASTM D-2488, and on the Borehole Logs, which are located in Appendix B of this report.

Moisture Content Tests: The natural moisture content of selected samples was determined by ASTM method D-2216 and is recorded on the Borehole Logs as a percentage of dry weight of soil under the “MC”.

Hand Penetration Tests: Samples of cohesive soils obtained from the split spoon sampler were tested with a calibrated hand penetrometer to aid in evaluating the soil strength characteristics. The results from this testing are tabulated on the Borehole Logs under the heading “Q_P”.

Unconfined Compressive Strength Tests: The undrained shear strengths of the cohesive soils were evaluated utilizing unconfined compressive tests on specimens obtained from the split-barrel and/or thin wall tube sampler. The values of strength tests performed on soil samples obtained from the split-barrel sampler are considered approximate recognizing that the sampler provides a representative but somewhat disturbed sample. The test results are tabulated on the Borehole Logs under the heading “Q_u”.



N

0’ 50’ 100’

GRAPHIC SCALE: 1” = 50’

LEGEND

APPROXIMATE BORING LOCATION

NOTE:

1. AERIAL IMAGE TAKEN FROM GOOGLE EARTH WITH AN IMAGE DATE OF 04/06/2024.

GME TESTING
A UES Company

EXHIBIT A

BORING LOCATION DIAGRAM
Proposed Maintenance Building Addition
Near 1807 East California Road, Fort Wayne, IN

No.	Revision Date	
		Date: 1/12/26
		Prepared By: JA
		Scale: AS NOTED
		Client: Martin Riley Architects & Engineers
		Project: G25-012742

APPENDIX B

GME TESTING
A UES Company

TEST BORING LOG

BORING NO.: B-1
SHEET 1 OF 1
GME PROJECT NO: G25-123264
STRUCTURE
DATUM :
DATE STARTED : 12-19-25
DRILLER/INSP : JS/AB

CLIENT: Martin Riley Architects & Engineers
PROJECT TYPE: Proposed Maintanence Building Addition
LOCATION: Near 1807 East California Road, Fort Wayne, IN

ELEVATION : 780.0
STATION :
OFFSET :
LINE :
DEPTH : 20.0 ft

BORING METHOD : ASTM D-1586
RIG TYPE : Skid
CASING DIA. : 3.3 in
HAMMER : Auto

LATITUDE : 41.121502
LONGITUDE : -85.118218

GROUNDWATER: ▽ Encountered at Dry ▼ At completion Dry

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6" (N)	% RECOVERY	% MOISTURE CONTENT	UNCONF. COMP., tsf	Qp (tsf)	REMARKS
779.7		±4" Brown, Clayey Sandy TOPSOIL. 0.3							
	2.5	Brown, SANDY SILTY CLAY.	SS 1	7-12-14 (26)	100	16.3		4.5+	
776.5		3.5							
	5.0		SS 2	12-17-14 (31)	100	14.1		4.5+	
	7.5	Brown, SILTY CLAY, Trace Gravel, Interbedded Sand Lenses.	SS 3	9-12-15 (27)	100	15.9	6.5	4.5+	
	10.0		SS 4	12-14-17 (31)	100	11.3	7.7	4.5+	
768.0		12.0							
	12.5								
	15.0		SS 5	9-14-20 (34)	100	20.8		4.0	
	17.5	Gray, Moist, SILTY CLAY.							
760.0	20.0	20.0	SS 6	10-17-25 (42)	100	9.6	13.1	4.5+	
		Bottom of Boring at 20.0 ft							
	22.5								
	25.0								

GME TESTING
A UES Company

TEST BORING LOG

BORING NO.: **B-2**
SHEET 1 OF 1
GME PROJECT NO: G25-123264
STRUCTURE
DATUM :
DATE STARTED : 12-19-25
DRILLER/INSP : JS/AB

CLIENT: Martin Riley Architects & Engineers
PROJECT TYPE: Proposed Maintanence Building Addition
LOCATION: Near 1807 East California Road, Fort Wayne, IN

ELEVATION	: 780.0	BORING METHOD	: ASTM D-1586	LATITUDE	: 41.12161
STATION	:	RIG TYPE	: Skid	LONGITUDE	: -85.118106
OFFSET	:	CASING DIA.	: 3.3 in		
LINE	:	HAMMER	: Auto		
DEPTH	: 20.0 ft				

GROUNDWATER: ▽ Encountered at Dry ▼ At completion Dry

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6" (N)	% RECOVERY	% MOISTURE CONTENT	UNCONF. COMP., tsf	Qp (tsf)	REMARKS
779.6		±5" Dark Brown, Sandy Silty Clayey TOPSOIL. 0.4							
	2.5	Brown, SANDY SILTY CLAY.	SS 1	4-3-4 (7)	100	14.1		4.5+	
775.0	5.0	5.0	SS 2	8-8-12 (20)	100	10.8		4.5+	
	7.5		SS 3	9-10-17 (27)	100	14.7		4.5+	
	10.0	Brown, Moist, SILTY CLAY.	SS 4	12-16-24 (40)	100	15.3	5.3	4.5+	
767.0	12.5	13.0							
	15.0		SS 5	10-16-17 (33)	100	15.0			
	17.5	Gray, Moist, SILTY CLAY, Interbedded Silt Lenses.							
760.0	20.0	20.0	SS 6	20-26-18 (44)	100	21.6			
		Bottom of Boring at 20.0 ft							
	22.5								
	25.0								

GENERAL NOTES

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the United States Soil Classification System on the basis of textural and particle size categorization, and various soil behavior and characteristics. Visual classifications should be made by appropriate laboratory testing when more exact soil identification is required to satisfy specific project applications criteria.

RELATIVE PROPORTIONS OF COHESIONLESS SOILS

Term	Defining Range by % of Weight
Trace	1-10 %
Little	11-20 %
Some	21-35 %
And	36-50 %

WATER LEVEL MEASUREMENT

NE	No Water Encountered
BF	Backfilled upon Completion

ORGANIC CONTENT BY COMBUSTION METHOD

Soil Description	LOI
w/ organic matter	4-15 %
Organic Soil (A-8)	16-30 %
Peat (A-8)	More than 30%

LABORATORY TESTS

Qp	Penetrometer Reading, tsf
Qu	Unconfined Strength, tsf
MC	Moisture Content, %
LL	Liquid Limit, %
PL	Plastic Limit, %
PI	Plastic Index
SL	Shrinkage Limit, %
pH	Measure of Soil Alkalinity/Acidity
γ	Dry Unit Weight, pcf
LOI	Loss of Ignition, %

DRILLING AND SAMPLING SYMBOLS

AS	Auger Sample
BS	Bag Sample
PID	Photo ionization Detector (Hnu meter) volatile vapor level,(PPM)
COA	Clean-Out Auger
CS	Continuous Sampling
FA	Flight Auger
HA	Hand Auger
HAS	Hollow Stem Auger
NR	No Recovery
PT	3” O.D. Piston Tube Sample
RB	Rock Bit
RC	Rock Coring
REC	Recovery
RQD	Rock Quality Designation
RS	Rock Sounding
S	Soil Sounding
SS	2”O.D. Split-Barrel Sample
2ST	2”O.D. Tin-Walled Tube Sample
3ST	3” O.D. Thin-Walled Tube Sample
VS	Vane Shear Test
DB	Diamond Bit
WS	Wash Sample
RB	Roller Bit
ST	Shelby Tube, 2” O.D. or 3” O.D.
CB	Carbide Bit
WOH	Weight of the Hammer

GRAIN SIZE TERMINOLOGY

Soil fraction	Particle size	Us standard sieve size
Boulders	larger than 75 mm	Larger than 3”
Gravel	2mm to 75 mm	#10 to 75 mm
Coarse Sand	0.425 mm to 2 mm	#40 to #10
Fine Sand	0.075mm to 0.425 mm	#200 to #40
Silt	0.002 mm to 0.075 mm	Smaller than #200
Clay	Smaller than 0.002 mm	Smaller than #200

RELATIVE DENSITY

Term	“N” Value
Very Loose	0-5
Loose	6-10
Medium Dense	11-30
Dense	31-50
Very Dense	51+

CONSISTENCY

Term	“N” Value
Very Soft	0-3
Soft	4-5
Medium Stiff	6-10
Stiff	11-15
Very Stiff	16-30
Hard	31+

PLASTICITY

Term	Plastic Index
None to Slight	0-4
Slight	5-7
Medium	8-22
High/Very High	Over 22

Note(s):
The penetration resistance, “N” Value, is the summation of the number of blows required to effect two successive 6-inch penetrations of the 2-inch split-barrel sampler. The sampler is driven with a 140-lb. weight falling 30-inches and is seated to a depth of 6-inches before commencing the standard penetration test.
Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils

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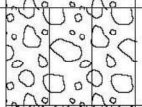
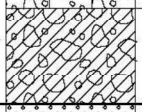
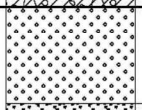
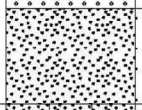
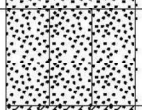
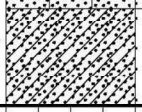
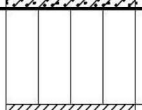
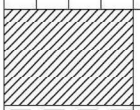
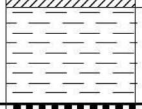
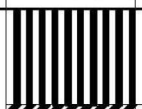
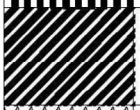
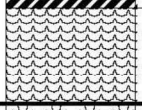
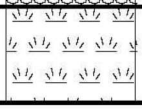
SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

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ASCE Hazards Report

Address:
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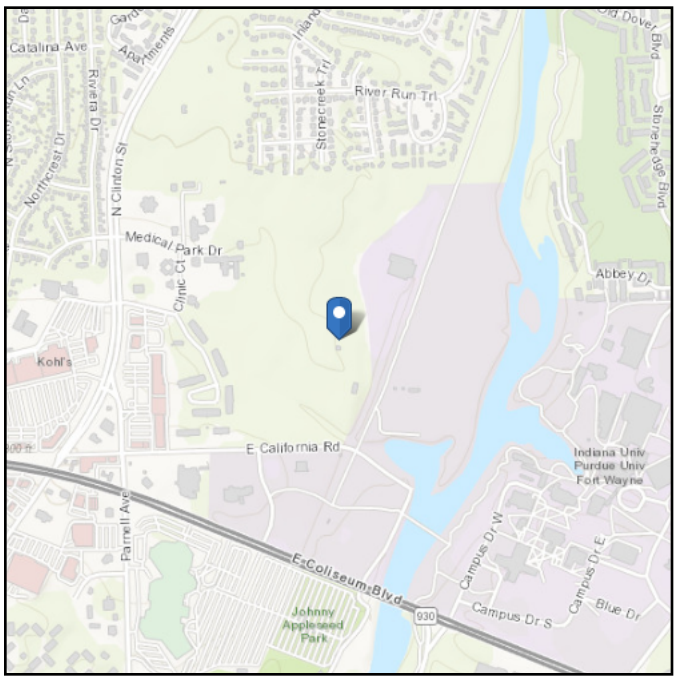
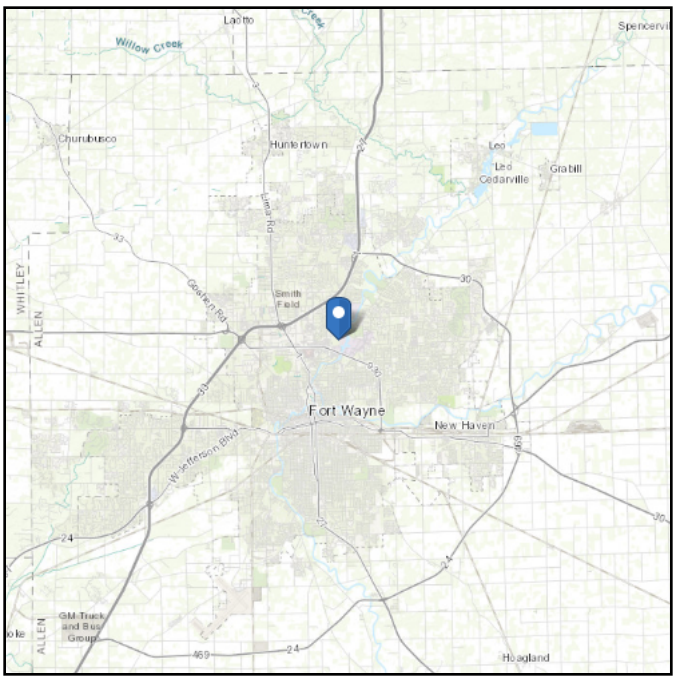
Standard:	ASCE/SEI 7-10	**Latitude:**	41.121554
Risk Category:	III	**Longitude:**	-85.11813
Soil Class:	D - Stiff Soil	**Elevation:**	780.1280434024168 ft (NAVD 88)





Seismic

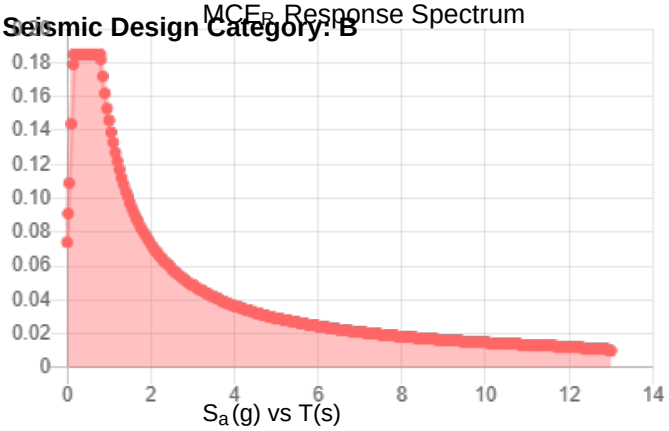
Site Soil Class: D - Stiff Soil

Results:

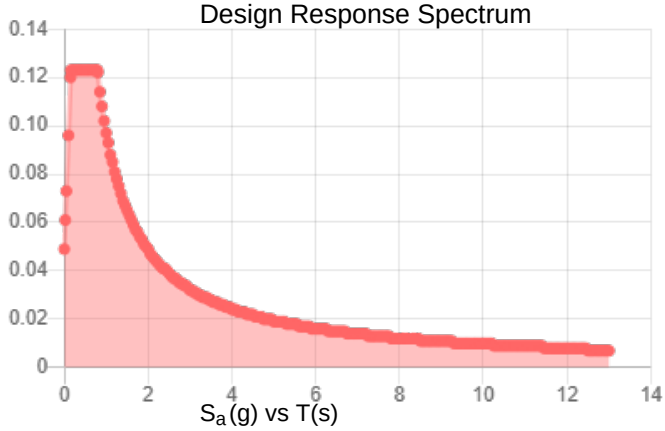
S_S :	0.116	S_{D1} :	0.097
S_1 :	0.061	T_L :	12
F_a :	1.6	PGA :	0.055
F_v :	2.4	PGA_M :	0.087
S_{MS} :	0.185	F_{PGA} :	1.6
S_{M1} :	0.146	I_e :	1.25
S_{DS} :	0.123		

Seismic Design Category: B

MCE_R Response Spectrum



Design Response Spectrum



Data Accessed: Tue Dec 23 2025

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

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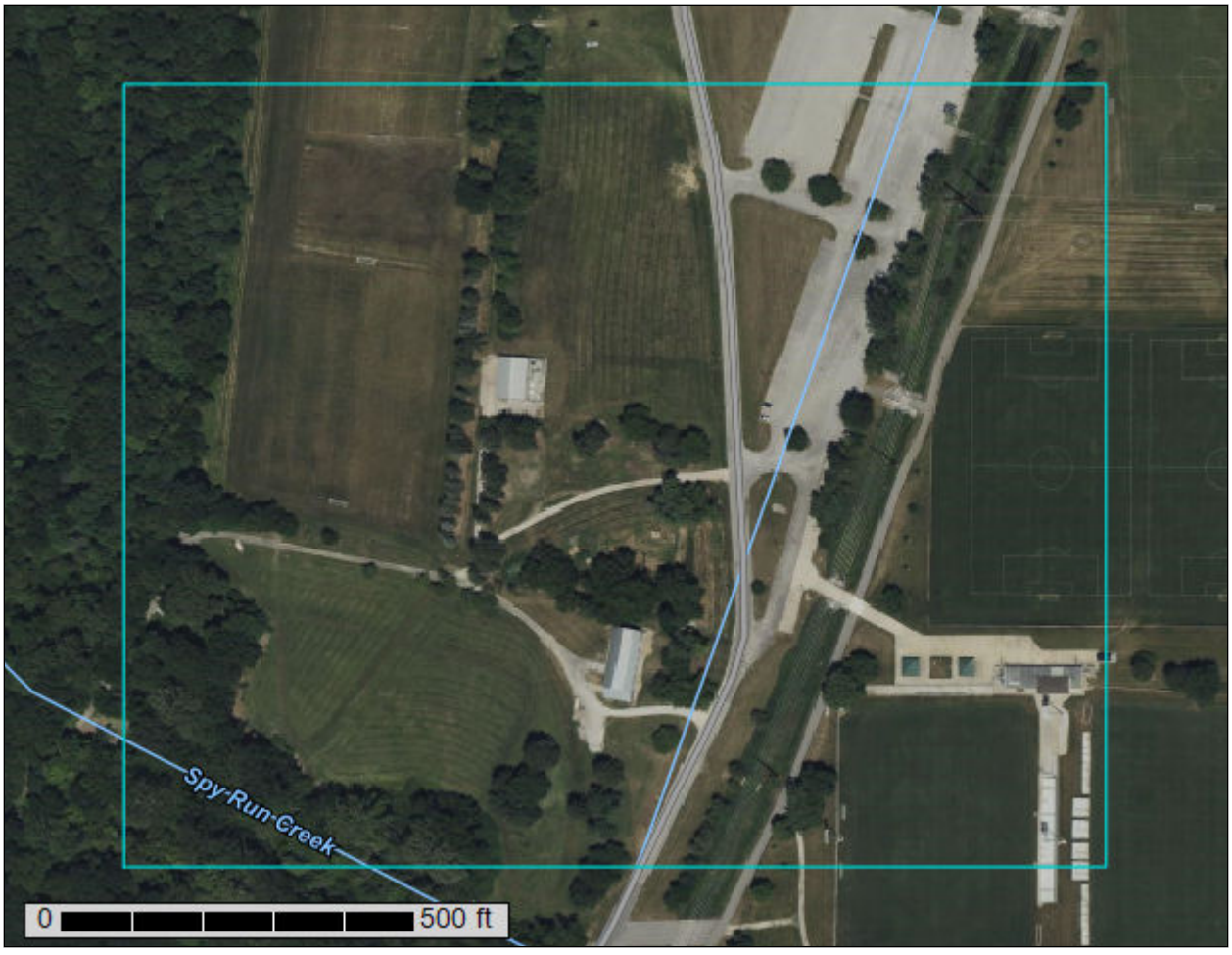
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Allen County, Indiana



December 22, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,850 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Allen County, Indiana
Survey Area Data: Version 27, Sep 17, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 18, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Es	Eel silt loam, 0 to 2 percent slopes, frequently flooded	4.0	11.3%
McA	Martinsville loam, 0 to 2 percent slopes	0.7	1.9%
MfA	Martinsville silt loam, 0 to 2 percent slopes	10.5	29.7%
MrB	Glynwood silt loam, 2 to 6 percent slopes	1.8	5.1%
MrB2	Glynwood silt loam, 2 to 6 percent slopes, eroded	9.7	27.5%
MrC2	Morley silt loam, 6 to 12 percent slopes, eroded	3.7	10.6%
RlB2	Rawson loam, 2 to 6 percent slopes, moderately eroded	1.4	4.0%
Ro	Rensselaer silt loam	3.5	9.9%
Totals for Area of Interest		**35.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a

given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Allen County, Indiana

Es—Eel silt loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2z6cw
Elevation: 440 to 1,280 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 145 to 180 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Eel, frequently flooded, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eel, Frequently Flooded

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

Ap - 0 to 9 inches: silt loam
Bw1 - 9 to 15 inches: silt loam
Bw2 - 15 to 53 inches: silt loam
Cg - 53 to 72 inches: stratified sandy loam to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 15 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Ecological site: F111XB204IN - Dry Alluvium Forest
Hydric soil rating: No

Minor Components

Genesee, occasionally flooded
Percent of map unit: 10 percent
Landform: Flood-plain steps, natural levees
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Shoals, occasionally flooded
Percent of map unit: 6 percent
Landform: Flood-plain steps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sloan, occasionally ponded
Percent of map unit: 4 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

McA—Martinsville loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 5jd3
Elevation: 600 to 1,250 feet
Mean annual precipitation: 36 to 43 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 150 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Martinsville and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Martinsville

Setting
Landform: Outwash plains, lake plains, stream terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy outwash

Typical profile

Ap - 0 to 8 inches: loam
Bt1 - 8 to 17 inches: sandy clay loam
Bt2 - 17 to 43 inches: sandy clay loam
BC - 43 to 53 inches: sandy loam
C - 53 to 80 inches: stratified sand to silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F111XA015IN - Dry Outwash Upland, F111XB404IN - Dry Outwash Upland
Hydric soil rating: No

Minor Components

Digby

Percent of map unit: 5 percent
Landform: Glacial drainage channels, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111XB403IN - Outwash Upland
Hydric soil rating: No

Haney

Percent of map unit: 5 percent
Landform: Glacial drainage channels, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111XB404IN - Dry Outwash Upland
Hydric soil rating: No

Williamstown

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear

Across-slope shape: Linear
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Wawaka

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

MfA—Martinsville silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5jd9
Elevation: 640 to 1,150 feet
Mean annual precipitation: 34 to 39 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 165 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Martinsville and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Martinsville

Setting

Landform: Outwash plains, lake plains, stream terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy outwash

Typical profile

Ap - 0 to 9 inches: silt loam
E - 9 to 13 inches: silt loam
Bt1,Bt2 - 13 to 35 inches: clay loam
BC - 35 to 48 inches: fine sandy loam
C - 48 to 58 inches: stratified silt loam to sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F111XB404IN - Dry Outwash Upland
Hydric soil rating: No

Minor Components

Rensselaer

Percent of map unit: 10 percent
Landform: Depressions
Hydric soil rating: Yes

MrB—Glynwood silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bs
Elevation: 700 to 1,000 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Glynwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood

Setting

Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 29 inches: clay
BC - 29 to 34 inches: clay loam

Cd - 34 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Minor Components

Rawson

Percent of map unit: 6 percent
Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Blount

Percent of map unit: 5 percent
Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111XB502IN - Wet Till Ridge
Hydric soil rating: No

Pewamo

Percent of map unit: 4 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111XB501IN - Till Depression
Hydric soil rating: Yes

MrB2—Glynwood silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t6lq
Elevation: 700 to 1,320 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Glynwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood

Setting

Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 25 inches: clay
BC - 25 to 29 inches: clay loam
Cd - 29 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 42 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111XE503IN - Till Ridge

Hydric soil rating: No

Minor Components

Rawson

Percent of map unit: 6 percent
Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Blount

Percent of map unit: 5 percent
Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111XB502IN - Wet Till Ridge
Hydric soil rating: No

Pewamo

Percent of map unit: 4 percent
Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111XB501IN - Till Depression
Hydric soil rating: Yes

MrC2—Morley silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2wvhb
Elevation: 660 to 1,120 feet
Mean annual precipitation: 37 to 40 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Morley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Morley

Setting

Landform: Moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Silty loess over wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 17 inches: silty clay
Bt2 - 17 to 28 inches: clay
BC - 28 to 33 inches: clay loam
Cd - 33 to 79 inches: clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 24 to 38 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Minor Components

Glynwood

Percent of map unit: 7 percent
Landform: Moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Blount

Percent of map unit: 5 percent
Landform: Moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear

Across-slope shape: Linear
Ecological site: F111XB502IN - Wet Till Ridge
Hydric soil rating: No

Pewamo

Percent of map unit: 3 percent
Landform: Moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111XB501IN - Till Depression
Hydric soil rating: Yes

RlB2—Rawson loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 5jf9
Elevation: 640 to 1,150 feet
Mean annual precipitation: 34 to 39 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 165 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Rawson and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rawson

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy outwash over clayey till

Typical profile

Ap - 0 to 7 inches: loam
E - 7 to 13 inches: loam
Bt1,Bt2 - 13 to 28 inches: sandy clay loam
2Bt3,2C - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 48 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F111XE503IN - Till Ridge
Hydric soil rating: No

Minor Components

Mermill

Percent of map unit: 3 percent
Landform: Depressions on lake plains, depressions on till plains
Hydric soil rating: Yes

Pewamo

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Ro—Rensselaer silt loam

Map Unit Setting

National map unit symbol: 5jff
Elevation: 640 to 1,150 feet
Mean annual precipitation: 34 to 39 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 165 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Rensselaer and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rensselaer

Setting

Landform: Depressions on outwash plains, depressions on stream terraces
Landform position (two-dimensional): Footslope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy outwash

Typical profile

Ap - 0 to 7 inches: silt loam
A - 7 to 14 inches: silt loam
2Bg1-2Bg3 - 14 to 42 inches: sandy clay loam
2BC - 42 to 51 inches: sandy clay loam
2C - 51 to 70 inches: stratified silt loam to sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R111XB401IN - Wet Outwash Mollisol, F111XB101IN - Lacustrine Flatwood
Hydric soil rating: Yes

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