ADDENDUM NUMBER TWO

To the Drawings and Project Manual Dated:

SEPT 29, 2025

Entitled:

Indiana University
Launch Accelerator for Biosciences
1302 Indiana Ave.
Indianapolis, IN 46202

Prepared By:

BSA
175 S. Rangeline Rd., Suite 200
Carmel, IN 46032

_____

Addendum Dated: OCT 21, 2025

IU Project #: 20250072
BSALS Project #: 00360481

CONTRACTOR QUESTIONS

1. See attached list of bidder questions with design team responses.

CHANGES TO THE PROJECT MANUAL

2. Section 316000
    a. In Part 3, 3.1-B, the allowable bearing pressure should read 6000 PSF in lieu of 5000 PSF.

CHANGES TO THE DRAWINGS

3. Sheet C110
    a. Revise the project narrative under section A3 as shown on the clouded portion of the attached revised drawing.
    b. Revise the references to the BMP to indicate a Storm Settler SSET-6 unit in sections C2 and C3 as shown on the clouded portion of the attached revised drawing.
4. Sheet C300
    a. Revise the spot grades in the entry plaza area as shown on the clouded portion of the attached revised drawing.
    b. Revise the stoop locations for the doors as shown on the clouded portion of the attached revised drawing.
5. Sheet C310
    a. Revise the diversion structure detail as shown on the clouded portion of the attached revised drawing.
6. Sheet C400
    a. Revise the gas meter location as shown on the clouded portion of the attached revised drawing.
    b. Revise note #28 as shown on the clouded portion of the attached revised drawing.
7. Sheet C500
    a. Revise the MEP yard layout as shown on the clouded portion of the attached revised drawing.
    b. Add speed tables at pedestrian crossings as shown on the clouded portion of the attached revised drawing.
    c. Revise the notes as shown on the clouded portion of the attached revised drawing.
8. Sheet C510
    a. Add the concrete speed table detail as shown on the clouded portion of the attached revised drawing.
9. Sheet LA100
    a. Replace sheet
10. Sheet Figure 1
    a. Replace Sheet
11. Sheet Figure 2

a. Replace Sheet
12. Sheet Figure 3
    a. Replace Sheet
13. Sheet Figure 4
    a. Replace Sheet
14. Sheet Figure 5
    a. New Sheet
15. Sheet Figure 6
    a. New Sheet
16. Sheet Figure 7
    a. New Sheet
17. Sheet Figure 8
    a. New Sheet
18. Sheet Figure 9
    a. New Sheet
19. Sheet Figure 10
    a. New Sheet
20. Sheet Figure 11
    a. New Sheet
21. Sheet S007
    a. Add base plate detail TYPE 7 for a round column as shown on the clouded portion of the attached revision drawing.
22. Sheet S110A
    a. Add footing steps along the west face of the building to accommodate a water line, per the clouded portion of the attached revision drawing.
    b. Add a row to the base plate schedule for the 24 inch diameter column as shown on the clouded portion of the attached revision drawing.
23. Sheet S110B
    a. Modify column sizes at C.4/15 and D15 as shown on the clouded portion of the attached revision drawing.

END OF ADDENDUM NUMBER TWO

Attachments: C110, C300, C310, C400, C500, C510, LA100, Figure 1 through 11, S007, S110A, S110B, Bidder RFI responses

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SITE NAME

The area scheduled for construction is known as "Launch Accelerator for Biosciences" (hereinafter referred to as the "Project")

PROJECT LOCATION

LAT: 39.7848094 LONG: -86.1811584

OWNER'S INFORMATION

P.K. Patel
Indiana University
Director of Engineering
ppatel@indiana.edu
(812) 855-7894

OPERATOR'S INFORMATION

Todd France
F.A. Wilhelm
3914 Prospect Street
Indianapolis, IN 46203
toddfrance@fawilhelm.com
(317) 524-9025

NOTICE OF INTENT

All parties defined as owners must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOI's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an owner is defined as any party meeting either of the following requirements:

1) The party has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.

2) The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

A1 - INDEX OF LOCATION OF REQUIRED PLAN ELEMENTS

Refer to this sheet for the location of all required plan elements. Included for reference is the construction drawing sheet list for location of specific plan items

SHEET #	SHEET NAME
1 of 3,3 of 3	ATLAS/NSPS LAND TITLE SURVEY
C001	PROJECT INFORMATION SHEET
C100's	STORMWATER POLLUTION PREVENTION PLANS
C110	STORMWATER POLLUTION PREVENTION NOTES
C200	SITE DEMOLITION PLAN
C300's	SITE GRADING & DRAINAGE PLAN
???	SITE IMPROVEMENT PLAN
???	SITE LANDSCAPE PLAN

A2 - VICINITY MAP

Refer to Project Information Sheet - Sheet C001

A3 - PROJECT NARRATIVE

The project consists of the construction a new building (Launch Accelerator for Bioscience), new parking, green space and A BMP Storm Settler SSET-6, manufactured by Storm Trap. Stormwater runoff fro the site will drain to the Indianapolis storm sewer system then ultimately to Fall Creek.

A4 - LATITUDE AND LONGITUDE TO THE NEAREST (15) SECONDS

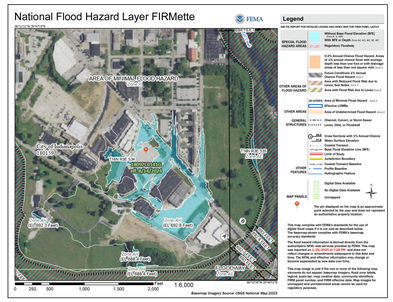
LAT: 39.7848094 LONG: -86.1811584

A5 - LEGAL DESCRIPTION OF THE PROJECT SITE

Section: 34
Township: 16 NORTH,
Range: 3 EAST
Civil Township: CENTER

A6 - 11X17-INCH PLAT SHOWING BUILDING LOT NUMBERS/BOUNDARIES AND ROAD LAYOUT/NAMES

Refer to Land Title Survey plan - Sheet 1 of 2 & Sheet 2 of 2



A8 - LAND USE OF ALL ADJACENT PROPERTIES

North: Parking Lot
South: Field
East: Manufacturing Building
West: Higher Educational Building

A9 - IDENTIFICATION OF A U.S. EPA APPROVED OR ESTABLISHED TMDL

Fall Creek Escherichia Coli (E. coli), Pathogens TMDL 2004-03-31

A10 - IDENTIFICATION OF ALL RECEIVING WATERS

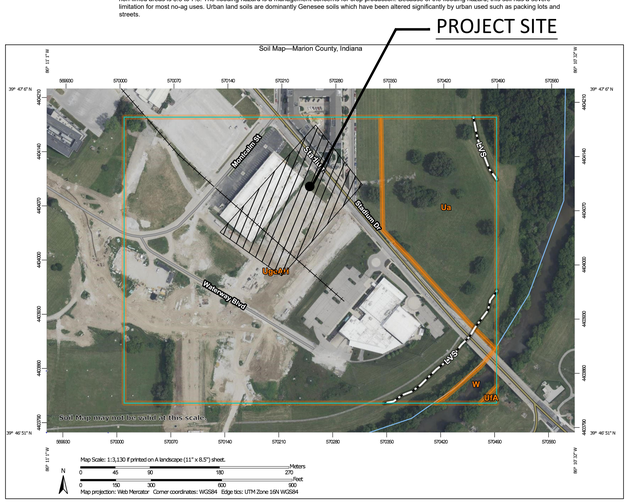
Fall Creek, City of Indianapolis storm sewer system.

A11 - IDENTIFICATION OF DISCHARGES TO A WATER ON THE CURRENT 303(d) LIST OF IMPAIRED WATERS AND POLLUTANT(S) FOR WHICH IT IS IMPAIRED

Fall Creek Discharge: E.Coli, PCBs

A12 - A SOILS MAP OF THE PREDOMINATE SOIL TYPES

Urban Land Genesee Complex soils are well drained, have seasonal high watertable at 4.0 to 6.0 ft and are on floodplains. Slopes are0 to 2 percent. The native vegetation is hardwoods. The surface layer is silt loam and has moderate organic matter content (2.0 to 4.0 percent). Permeability is moderate (0.6 to 2 in/hr) in the most restrictive layer above 60 inches. Available water capacity is high (11.6 inches in the upper 60 inches). The PH of the surface layer in non-limed areas is 6.6 to 7.8. The flooding hazard is a management concerns for crop production. Because of the flooding hazard, this soil has a severe limitation for most no-ag uses. Urban land soils are dominantly Genesee soils which have been altered significantly by urban uses such as packing lots and streets.



Map Unit Symbol	Map Unit Name	Acres in AOI
UgeAH	Urban land-Genesee complex, 0 to 2 percent slopes, frequently flooded, brief duration	35.4

A13 - IDENTIFICATION AND LOCATION OF ALL KNOW WETLANDS, LAKES, AND WATER COURSES ON OR ADJACENT TO THE PROJECT SITE

No Wetlands have been identified on or adjacent to the site. Fall creek is located to the south and White River is located to the west of the site.

A14 - IDENTIFICATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS OR AUTHORITIES THAT REQUIRED FOR CONSTRUCTION ACTIVITIES

Indiana Department of Environmental Management (IDEM) - Construction Stormwater General Permit (CSGP)

A15 - IDENTIFICATION AND DELINEATION OF EXISTING COVER, INCLUDING NATURAL BUFFERS

Approximate area of existing vegetative cover are as shown on the Topographic Survey plan - Sheet 1 of 2 & Sheet 2 of 2 and Demolition Plan C200. The site includes open lot with grass and gravel.

A16 - EXISTING SITE TOPOGRAPHY AT INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS

Refer to Topographic Survey plan - Sheet 1 of 2 & Sheet 2 of 2

A17 - LOCATION(S) WHERE RUN-OFF ENTERS THE PROJECT SITE

See general areas where run-off enters the site on Site Grading & Drainage Plan. Refer to C300.

A18 - LOCATION(S) WHERE RUN-OFF DISCHARGES FROM THE PROJECT SITE PRIOR TO LAND DISTURBANCE

Refer to Topographic plan - Sheet 1 of 2 & Sheet 2 of 2. Existing stormwater runoff from the site drains into the Indianapolis storm sewer system then ultimately to Fall Creek.

A19 - LOCATION OF ALL EXISTING STRUCTURES ON THE PROJECT SITE

Refer to Topographic plan - Sheet 1 of 2 & Sheet 2 of 2

A20 - EXISTING PERMANENT RETENTION OR DETENTION FACILITIES, INCLUDING MANMADE WETLAND, DESIGNED FOR THE PURPOSE OF STORMWATER MANAGEMENT

N/A

Refer to Topographic Survey plan - Sheet 1 of 2 & Sheet 2 of 2.

A21 - LOCATION WHERE STORMWATER MAY BE DIRECTLY DISCHARGED INTO GROUND WATER SUCH AS ABANDONED WELLS, SINKHOLE, OR KARST FEATURES

N/A

A22 - SIZE OF THE PROJECT AREA EXPRESSED IN ACRES

3.27 Acres.

A23 - TOTAL EXPECTED LAND DISTURBANCE EXPRESSED IN ACRES

2.89 Acres.

A24 - PROPOSED FINAL TOPOGRAPHY

Refer to Grading and Drainage Plan, Sheet C300.

A25 - LOCATION AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS

Approximate boundaries of disturbed areas are as identified on the Stormwater Pollution Prevention Plan, Sheet C100.

A26 - LOCATION, SIZE AND DIMENSIONS OF ALL STORMWATER DRAINAGE SYSTEM SUCH AS CULVERTS, STORMWATER SEWER, AND CONVEYANCE CHANNELS

Location and size of stormwater systems. Refer to Grading and Drainage Plan, Sheet C300.

A27 - LOCATION, OF SPECIFIC POINTS STORMWATER AND NON-STORMWATER DISCHARGES WILL LEAVE THE PROJECT SITE.

Refer to Grading and Drainage Plan, Sheet C300. Stormwater will dischare to the City of Indianpolis storm sewer, then to Fall Creek. There areno proposed non-storm discharges from the site.

A28 - LOCATION OF ALL PROPOSED SITE IMPROVEMENTS, INCLUDING ROADS, UTILITIES, LOT DELINEATION AND IDENTIFICATION, PROPOSED STRUCTURES AND COMMON AREAS.

Refer to Site Improvement Plan, Sheet C500.

A29 - LOCATION, OF ALL ON-SITE AND OFF-SITE SOIL STOCKPILES AND BORROW AREAS

Excess soil shall be immediately stockpiled, surrounded with silt fence, and seeded where indicated in grading plan in accidence with all applicable laws. No topsoil stockpiles are anticipated for this project. All demolished materials and excavated soils shall be removed and legally disposed of off-site at a commercial landfill at the end of construction unless noted otherwise.

A30 - CONSTRUCTION SUPPORT ACTIVITIES THAT ARE EXPECTED TO BE PART OF THE PROJECT.

Construction Entrance Stone, Construction Entrance Mat, Concrete Cleanout, Silt Fence, Inlet Protection, Dewatering Bag, Construction Storage Area and Soil Stock Pile.

A31 - LOCATION, OF ANY IN-STREAM ACTIVITIES THAT ARE PLANNED FOR THIS PROJECT INCLUDING BUT NO LIMITED TO STREAM CROSSINGS AND PUMPS AROUNDS

No in-stream activities are planned for this project.

B1 - DESCRIPTION OF THE POTENTIAL POLLUTANT GENERATING SOURCES AND POLLUTANTS INCLUDING ALL POTENTIAL NON-STORMWATER DISCHARGES:

The following potential pollutant sources may be associated with construction activities on site.

1. Material storage areas
2. Construction waste material
3. Fuel storage areas and fueling areas
4. Exposed soils
5. Leaking Vehicles and equipment
6. Sanitary waste from temporary toilet falsities
7. Litter
8. Windblown dust
9. Soil tracking off site from construction equipment

The following materials may be staged or stored on site at various points during construction.

1. Structural backfill
2. Pavement base stone
3. HDPE, PVC, RCP, or Ductile iron pipe
4. Precast concrete, HDPE, or PVC drainage and sanitary structures
5. Riprap
6. Staging of existing decorative stone from existing rain gardens through coordination of the MS4

B2 - STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS

Construction entrance will be in place prior to any site construction demolition. Entrances are shown on the Erosion Control Plan. Refer to Erosion Control Plans for Dentlis, installation and maintenance specifications.

B3 -SPECIFICATION FOR TEMPORARY AND PERMANENT STABILIZATION TEMPORARY SURFACE STABILIZATION SPECIFICATIONS.

Surface stabilization is required on any bare or thinly vegetated areas. Temporary surface stabilization must follow the Construction Stormwater General Permit 3.4 Stabilization Requirement - for temporary stabilization, stabilization must be initiation by the end of the seventh day for areas left idle. Stabilization activity must be completed within 14 days after initiation.

PERMANENT SURFACE STABILIZATION SPECIFICATIONS

1. Loosen lawn area to a minimum depth of 6 inches. Mix soil amendments and fertilizers with topsoil at rates specified. Organic soil amendments such as peat, compost, or manure shall be applied at 2" depth evenly over soil and incorporated into the top 6" ff topsoil. Provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 square feet of lawn area and not less that 4 percent phosphoric acid and 2 percent potassium. At least 50 percent of nitrogen to be organic form. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
2. Fertilizer for lawns: provide a fast release fertilizer with a composition of 1 lb per 1,000 spare feet of actual nitrogen, 4 percent phosphorous, and 2 percent potassium by weight.
3. Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous and potassium made up of a composition by weight of 5 percent.
4. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Limit fine grading to areas that can be planted within immediate future. Remove trash, debris, stones larger than 1 inch diameter, and other objects that may inter with planting or maintenance operations. Sow seed using a spreader of seeding machine. Do not seed when wind velocity exceeds 5 miles per hour.
5. Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to each other.
6. Rake seed lightly into top ¼ inch of soil, roll lightly, and water with a fine spray.
7. Install erosion control blankets as indicated on the Erosion Control Plan.
8. Protect seeded areas against erosion by spreading clean, seed-free straw mulch after completion of spreading operations. Spread uniformly to form a continuous blanket not less that 1-1/2 inches loose measurements over seeded areas.
9. Water newly planted lawn areas and keep moist until new grass is established. Immediately repair any lawn areas disturbed by construction activities including tree and shrub installation.
10. Refer to the Permanent Seeding Details within the Erosion Control Detail Sheet,for timing of permanent seeding, grass seed specifications and mulching specifications.
11. In areas to get landscape beds apply mulch in lieu of seeding. Mulch is to be properly anchored or covered with blanket. Refer to C110 for installation, maintenance, and specification.

B4 - SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

Some run-off is proposed across the parking lot which will transition into a shallow concentrated flow profile after 100ft of distance but still in a sheet flow across the parking lot. No swales are proposed. Silt fence is to be located at edge of parking lot before entering the detention basin. Inlet protection measures will also be installed in all inlets in the parking lot. Refer to Stormwater Pollution Prevention Plan for locations and C111 for specifications, installation, and maintenance procedures.

B5 - SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS

Sheet flow areas will be protected by seed and mulch or hydro seeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 4:1 (horizontal to vertical). Silt fencing will be utilized to prevent sedimentation from leaving the site. Refer to the Stormwater Pollution Prevention Plan for locations and C111 for specifications, installation, and maintenance procedures.

B6 - RUNOFF CONTROL MEASURES

A permanent underground stormwater detention system is proposed .

B7 - STORMWATER OUTLET PROTECTION MEASURES

The detention system will discharge directly into the city storm sewer.

B8 - GRADE STABILIZATION STRUCTURE LOCATIONS

Silt fence will be installed around the perimeter of the site.

B9 - DEWATERING APPLICATIONS AND MANAGEMENT METHODS:

1. Shall not cause erosion from the discharge. Dewatering water shall discharge to stable, erosion- resistant surfaces, such as but not limited to, clean stone or well-vegetated grassy areas;
2. Shall not have a discharge with a visible sheen, foam, and/or pollutants at a level that requires additional treatment and/or an alternate permit;
3. Shall route dewatering water through a sediment control (e.g., sediment trap or basin, pumped water filter bag) designed to prevent discharges with visual turbidity;
4. Shall not be placed on steep surfaces; and
5. Shall not use the receiving water or MS4 as part of the treatment area.

B10 - MEASURES UTILIZED FOR WORK WITHIN WATERBODIES:

N/A

B11 - MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE:
Refer to sheets C111 for specifications, installation, & maintenance procedures for proposed maintenance guides for stormwater quality measures including silt fence, inlet basket, concrete washout, rip-rap outlet protection, mulching, and construction entrance

Inspection Schedule/Reporting
All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rianfall of 0.5 inch or greater. Where sites have been final or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g. site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at least once every month.

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, this SWPPP, and the Project.

Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether the site was in compliance or identify and incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local governing authority.

Construction Entrance
Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking daily. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWPPP.

Material Storage Inspections
Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely by the subject project are considered to be part of the project and must be included in the erosion control plans and site inspection reports.

Soil Stabilization Inspections
Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

Erosion and Sediment Control Inspections
All controls should be inspected at least once every seven (7) calendar days unless noted otherwise and following any storm event of 0.5 inch or greater. The construction entrance must be inspected daily. The following is a list of inspection/maintenance practices that will be used for specific controls:
1. Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored.
2. Inlet Protection: If silt fence inlet protection is to be used, sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.
3. Mulching: Inspect for thin or bare spots caused by natural decomposition or weather-related events. Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection.
4. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of the fence.
5. Stabilized Construction Entrance: Periodic re-grading and top dressing with additional stone.
6. Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish a watering and fertilizing schedule.
7. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter.

In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to user of public street.

Modifications/Revisions to SWPPP
Based on inspection results, any necessary modification to this SWPPP shall be implemented within seven (7) calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions within seven (7) calendar days of the inspection.

It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more control than were originally planned. Fore example, localized concentrations of surface runoff or unusually steep areas could required additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved. Contractors and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update this SWPPP in order to accomplish the intended goals.

Notice of Termination
Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

All permittees must submit a NOT within thirty (30) days after one or more of the following conditions have been met:
1. Final stabilization has been achieved on all portions of the site for which the permittee was responsible.
2. Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.
3. In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.

B12 - SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES

Pre-construction Activity
1. The exact locations of all existing utilities within the project limits are to verified prior to construction.
2. Schedule pre-construction meeting with local stormwater authority 48 hours prior to start of construction.
3. Install protection fencing for existing trees to remain in place within the project limits

Construction Site Access
1. Install gravel construction entrance
2. Post the NOI and contact information at the construction entrance. NOI to remain posted for duration of the project.
3. Install construction staging pads, fueling station, material storage areas, concrete washout, construction parking areas, and stabilize construction routes

Perimeter Controls
1. Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed.

Initial Land Clearing and Grading Activities
1. Add protection measures to existing inlets.
2. Strip the topsoil.

Secondary Land Grading Activities
1. Begin site grading/construction of detention basins and remove unneeded excess earth.
2. Complete the cut and fills on the site. Final grade and seed the basin slopes. Stabilize slopes with erosion control blanket.
3. Install storm sewer system and install inlet protection immediately upon complete of the inlet and install rip-rap outlet protection prior to installing outlets.

Surface Stabilization
1. Apply temporary seeding or mulch and stabilize slopes in areas where rough grading has been completed.
2. Apply permanent seeding or mulch and stabilize slopes in areas where final grading has been completed.

Building Construction
1. Prior to building construction. Install stone surface for paved areas.
2. Building pads left dormant for more than 10 days, must be temporarily seeded.
3. Start building construction. Install staging area for building materials and stabilize.

Final Shaping/Landscaping
1. Utilize topsoil salvage in applicable areas and apply permanent seeding.
2. Apply permanent seeding around the perimeter of the site.
3. Complete utility installation, curbs, paving, and building construction.
4. Install landscaping plant material and stabilize all disturbed areas.
5. Remove all erosion and sediment control practices when areas have a uniform grass cover.

B13 - PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL RESIDENTIAL BUILDING LOTS REGULATED UNDER THE PROPOSED PROJECT:

The site is not currently subdivided, therefore the entire site is on this plan's Erosion Control Plan.

B14 - MATERIAL HANDLING AND SPILL PREVENTION AND SPILL RESPONSE PLAN MEETING THE REQUIREMENTS IN 327 IAC 2-6.1:

Solid Waste Disposal
No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to construction activity, must be collected in containers or closed dumpster's. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.

Hazardous Waste
Wherever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.

Use containment berms in fueling and maintenance areas and where potential for spills is high.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

Dust Control/Off-Site Vehicle Tracking
During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should stabilized to reduce dust.

Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked onto existing street. If sediment escapes the construction site, off-site accumulations of sediment must be removed a frequency sufficient to minimize off-site impacts.

B15 - MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY:

Sanitary/Septic
Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.

Water Source
Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

Equipment Fueling and Storage Areas
Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.

Equipment wash-down (except wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.

Hazardous Material Storage
Chemicals, paint, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resalable, store the products in a clearly labeled, waterproof container). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local regulations.

As may be required by federal, state or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill and Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

Material Handling and Spill Prevention
Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spill to the local governing authority. The SWPPP must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications minimize the possibility of future occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.

Concrete Washout
All concrete truck waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes. See location of washout on SWPPP.

Spill Response Plan
Minor - Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc. can be controlled by the first responder at the discovery of the spill.
- Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
- Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly.

Semi-Significant Spills - Approximately ten gallons or less of pollutant with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:
- Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
- Use absorbent material to clean-up spills and dispose of properly. Spills on impervious surfaces should be disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.
- Contact 911 if the spill could be a safety issue
- Contact supervisors and designated site inspectors, including MS4 personnel, immediately.
- Contaminated solids are to be removed to an approved landfill.

Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals, or has the potential for surface or groundwater pollution.
- Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater System.
- Immediately contact the local Fire Department at 911 to report any hazardous material spill.
- Contact supervisors and designated site inspectors immediately. Governing authorities, including MS4 personnel, responsible for stormwater facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible.
- As soon as possible but within 2 hours of discovery, contact the local agency responsible for spill management. The following information should be noted for future reports to the agency:
  - Name, address, and phone number of person making the spill report
  - The location of the spill
  - The time of the spill
  - Identification of the spilled substance
  - Approximate quantity of the substance that has been spilled or may be further spilled
  - The duration and source of the spill
  - Name and location of the damaged waters
  - Name of spill response organization
  - What measures were taken in the spill response
  - Other information that may be significant

Additional regulations or requirements may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is give by the appropriate agency.

C1 - DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE

The proposed land use is for education and research. The pollutants and sources of each pollutant normally expected from this type of land use are:

Pollutant Source: Passenger vehicles, delivery vehicles.
Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.

Pollutant Source: Building
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.

Pollutant Source: Trash Dumpster
Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), uneaten food products, bacteria.

Pollutant Source: Parking Lot
Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing, and patching), pavement de-icing materials, paint fragments from parking stall striping, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.

Pollutant Source: Lawn and Landscape Areas
Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)

C2 - DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES

3

Off-Site Water Quality Measure
The primary BMP for the project is a Storm Settler SSET-6 as manufactured by Storm Trap. The detained run-off leaving the project is connected to the storm sewer. Maintenance of this unit is to be handled by the owner.

Permanent Vegetation
Topsoil will be placed in lawn areas and seeded with grass, and graded not to exceed 3:1 slopes. Proposed landscape trees and shrubs will also be added. These bio areas will act as a natural filter strip to help improve stormwater quality. The vegetated areas will slow the velocities of stormwater runoff, reduce sediment runoff, and reduce problems associated with mud or dust from bare soils.

Good Housekeeping Measures
Good housekeeping measures such as regular street or pavement sweeping, installation of trash receptacles, and reduction in fertilizer overspray can be incorporated by the owner and/or occupant.

C3 – PLAN DETAILS FOR EACH STORMWATER MEASURES:

3

BMP- A BMP Detail Storm Settler SSET-6, manufactured by Storm Trap C420.

C4 - SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

The Contractor shall implement permanent erosion control measures as soon as it is practical. Permanent seeding or sodding shall occur when the disturbed area is at final grade. Once the project has been completed and before final approval of the project, the Contractor shall inspect all previously installed measures for compliance with the standard specifications and construction The Contractor shall remove any built-up sediment deposits and repair any measures that have failed, including reseeding or sodding any areas where surface runoff has removed the previously installed measure. All disturbed ground shall be temporarily seeded if it is left undisturbed for more than seven (7) calendar days, and any additional seeding or sodding shall be completed when the project is substantially complete.

Seed/sod shall be used in all disturbed areas for permanent storm water quality measures and placed in accordance with ISS 621. Vegetation works to reduce sediment migration by holding soil in place, as well as filtering sheet flow runoff as it moves over the vegetation. Since roadway pollutants often bind to soil particles, this keeps much of the roadway pollution on-site. Catch basins have been included within the proposed storm sewer system to collect sand and gravel from the roadway. Temporary inlet protection will prevent sediment from entering the storm sewer system during construction allowing it to operate as designed throughout construction.

One BMP (Storm Settler) will be installed on the proposed storm water system. Utilizing the BMP allows the capture of sediment and other pollutants before it leaves the project site.

C5 - DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES

Maintenance requirements for the stormwater quality measures which will remain in place after construction is complete, are described in the Operation & Maintenance Manual which is submitted under separate cover. A summary of basic maintenance is below:

On-Site Water Quality BMP

Inspections of permanent BMPs shall be performed by the BMP owner to ensure BMPs function as designed and permitted. The owner is also required to perform maintenance activities. Upon request by BNS, the owner shall self-certify, with BNS, that inspections and maintenance activities were completed at least annually, in accordance with the O&M Manual and that the BMP functions as designed and permitted. Each BMP in the system shall be considered individually for inspection, maintenance and self-certification purposes. A BMP system will have multiple BMPs for the purpose of inspection,maintenance and self-certification. Each BMP shall have access and features, such as inspection ports, clean outs,easements and drives necessary for inspection and maintenance. Easements must extend to public right-of-way for access. Routine inspections and maintenance are the responsibility of the current BMP owner. The approved O&M Manual, inspection forms and maintenance form(s) should be used as guidance for performing such activities. Completed inspection forms and maintenance records must be maintained by the current BMP owner and produced upon request by BNS within forty-eight (48) hours.

P.K. Patel
Indiana University
Director of Engineering
ppatel@indiana.edu
(812) 855-7894

Vegetation
Inspect grass and plants annually. Replace plantings as needed. Reseed as necessary to maintain a consistent-ground cover. No plant species listed on the Indiana Invasive Species Council Invasive Plant List (all Invasive Rank categories) shall be planted on the site including within any post-construction water quality or quantity feature.

C6 - ENTITY THAT WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE POST-CONSTRUCTION STORMWATER MEASURES:

Todd France
F.A. Wilhelm
3914 Prospect Street
Indianapolis, IN 46203
toddfrance@fawilhelm.com
(317) 524-9025

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175 S. Rangeline Rd, Suite 200
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500 GRISWOLD
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www.jpsconsultingengineers.com

LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE

ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	08/15/2025	CITY SUBMITTAL
2	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE
3	10/21/2025	ADDENDUM #2

REGISTERED No. PE10200271 STATE OF INDIANA PROFESSIONAL ENGINEER

Andrew D. Hutsman

STORMWATER POLLUTION PREVENTION NOTES

DATE
BSA PROJECT NO. 00360481

C110

STRUCTURE SCHEDULE

MARK	INVERT		CASTING		STRUCTURE	
	INLET	OUTLET	ELEVATION	TYPE	TYPE	DETAIL
STR-1	N 686.86 EX. NE 686.86	686.86	691.50	R-2560-E	DOGHOUSE MANHOLE	C410
STR-2	687.08	687.08	691.50	R-3286-8V	MANHOLE 60"	C410
STR-3	N 688.50 NW 687.24 SE 687.50	687.24	691.75	R1776	MANHOLE 60"	C410
STR-4	687.61	687.61	691.40	R-3286-8V	STORM INLET "TYPE A"	C410
STR-5	688.02	687.77	692.00	R-3286-8V	STORM INLET "TYPE A"	C410
STR-6	N 688.35 NE 688.18	688.18	692.50	R-3286-8V	STORM INLET "TYPE A"	C410
STR-7	687.37	687.37	691.50	R3405	MANHOLE 60"	C410
STR-8	687.47	687.47	691.50	R3405	MANHOLE 60"	C410
STR-9	NW 688.20 N 687.62	687.62	691.70	R3405	MANHOLE "TYPE B"	C410
STR-10	687.75	687.75	691.90	R3405	MANHOLE "TYPE B"	C410
STR-11	NE 689.50 W 688.00	687.92	692.90	R3405	MANHOLE "TYPE B"	C410
STR-12	688.41	688.16	691.50	R-3286-8V	STORM INLET "TYPE A"	C410
STR-13	688.62	688.62	692.75	R-3286-8V	STORM INLET "TYPE A"	C410
STR-14	689.26	689.01	692.75	R-3286-8V	STORM INLET "TYPE A"	C410
STR-15	N 689.80 NE 689.47	689.47	692.75	R-3286-8V	STORM INLET "TYPE A"	C410
STR-16	688.52	688.52	691.50	R-3286-8V	STORM INLET "TYPE A"	C410
STR-17	-	688.77	692.50	R-3286-8V	STORM INLET "TYPE A"	C410
STR-18	689.74	689.74	692.00	R3405	STORM INLET "TYPE A"	C410
STR-19	N 686.96 E 686.96	686.96	692.00	R1772	MANHOLE 60"	C410
STR-20	687.01	687.01	692.00	R1772	MANHOLE 60"	C410
TR-1	689.81	689.73	693.60	SEE DETAIL	TRENCH DRAIN	C410
TR-2	-	689.91	693.70	SEE DETAIL	TRENCH DRAIN	C410
DIV-1	687.05	E 687.05 S 687.05	692.00	R1772	MANHOLE 60"	C410
BMP-1	686.98	686.98	692.00	R1772	BMP	C420

GENERAL NOTES

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, STATE AND FEDERAL AGENCIES PRIOR TO STARTING CONSTRUCTION.

B. CONTRACTOR SHALL VERIFY LOCATION AND INVERT ELEVATIONS OF EXISTING SEWERS PRIOR TO START OF CONSTRUCTION.

C. CONTRACTOR SHALL MAINTAIN A COMPLETE AND OPERABLE UTILITY SYSTEM AT ALL TIMES.

D. CONTRACTOR SHALL INCLUDE COSTS FOR CUTTING AND PATCHING AS REQUIRED IN THEIR BID PROPOSAL TO COMPLETELY INSTALL THE WORK INDICATED.

E. CONTRACTOR SHALL INCLUDE ALL TAP FEES, PERMIT FEES AND APPLICATION FEES IN THEIR BID PROPOSAL AS NECESSARY TO COMPLETELY INSTALL THE WORK INDICATED.

F. INFORMATION SHOWN WAS OBTAINED FROM AN OWNER FURNISHED SITE SURVEY OF EXISTING CONDITIONS AND IS UNCONFIRMED. CONTRACTOR IS REQUIRED TO FIELD VERIFY THIS INFORMATION AND NOTIFY ARCHITECT OF ANY DISCREPANCIES SO MODIFICATION CAN BE MADE.

G. CONTRACTOR SHALL COORDINATE EXACT UTILITY LOCATIONS WITH THE OWNER AND LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK. UTILIZE THE INDIANA UNDERGROUND UTILITY LOCATION SERVICE AT 811 OR 800-382-5544 PRIOR TO ANY EXCAVATION ON THE SITE.

PLAN NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING STORM SEWER LOCATION, ELEVATION AND SIZE.
2. NEW INLET SUBSURFACE DRAIN.
3. 10" ROOF DRAIN. (PVC) @ 1.0% MIN. SLOPE.
4. ADJUST CASTING TO NEW GRADE.
5. NEW TRENCHDRAIN.
6. 12" ROOF DRAIN. (HDPE) @ 1.0% MIN. SLOPE.

ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	08/15/2025	CITY SUBMITTAL
2	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE
3	10/15/2025	ADDENDUM #1
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LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE

REGISTERED No. PE10200271 STATE OF INDIANA PROFESSIONAL ENGINEER

Andrew D. Swanson

SITE GRADING, DRAINAGE & UTILITY PLAN

DATE

BSA PROJECT NO. 00360481

REF. SHEET INDEX

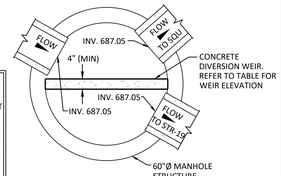
C300

1 ENLARGEMENT
SCALE: 1"=10'

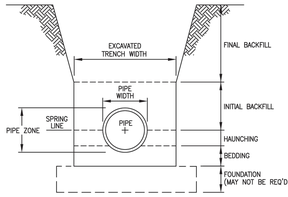
SCALE:1"=20'

STR	WEIR ELEVATION
DIV-1	687.32
--	--
--	--
--	--

NOTES:
1. REFER TO UTILITY PLAN FOR MANHOLE STRUCTURE INFORMATION. CONSTRUCT MANHOLE PER APPLICABLE MANHOLE DETAIL.
2. REFER TO UTILITY PLAN FOR PIPE SIZE AND MATERIAL.
3. MAINTAIN EXISTING SEWER FLOW AT ALL TIMES UTILIZING METHODS APPROVED BY THE SEWER UTILITY OR THE ENGINEER.



13 DIVERSION STRUCTURE WEIR DETAIL
(FOR STORMWATER QUALITY UNITS)



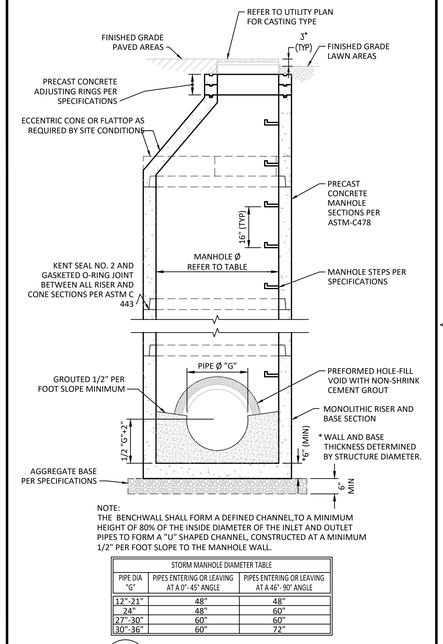
NOT TO SCALE

CITIZENS ENERGY GROUP

TERMS USED IN TRENCH DETAILS

FIGURE 100.01

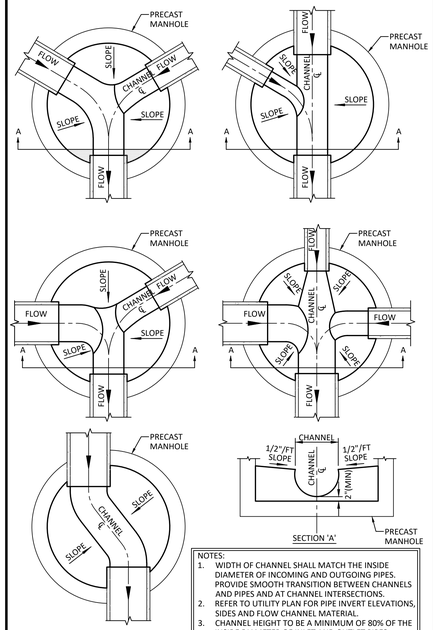
9 TRENCH DETAIL
NO SCALE



NOTE:
THE BENCHWALL SHALL FORM A DEFINED CHANNEL,TO A MINIMUM HEIGHT OF 80% OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A "U" SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/2" PER FOOT SLOPE TO THE MANHOLE WALL.

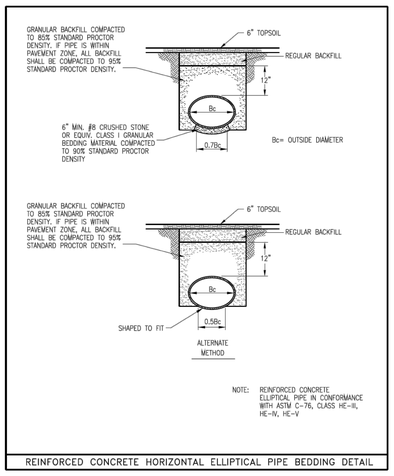
STORM MANHOLE DIAMETER TABLE		
PIPE DIA "G"	PIPES ENTERING OR LEAVING AT A 0°- 45° ANGLE	PIPES ENTERING OR LEAVING AT A 46°- 90° ANGLE
12"-21"	48"	48"
24"	48"	60"
27"-30"	60"	60"
30"-36"	60"	72"

6 STORM MANHOLE DETAIL
NO SCALE



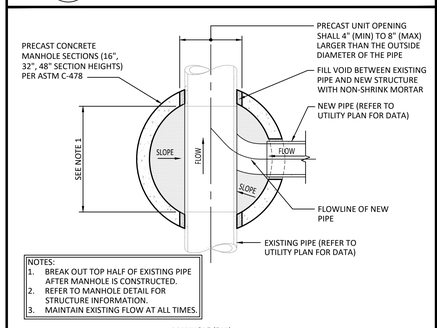
NOTES:
1. WIDTH OF CHANNEL SHALL MATCH THE INSIDE DIAMETER OF INCOMING AND OUTGOING PIPES. PROVIDE SMOOTH TRANSITION BETWEEN CHANNELS AND PIPES AND AT CHANNEL INTERSECTIONS.
2. REFER TO UTILITY PLAN FOR PIPE INVERT ELEVATIONS, SIDES AND FLOW CHANNEL MATERIAL.
3. CHANNEL HEIGHT TO BE A MINIMUM OF 80% OF THE INSIDE DIAMETER OF INLET AND OUTLET PIPES.

5 MANHOLE BENCHWALL DETAIL
NO SCALE

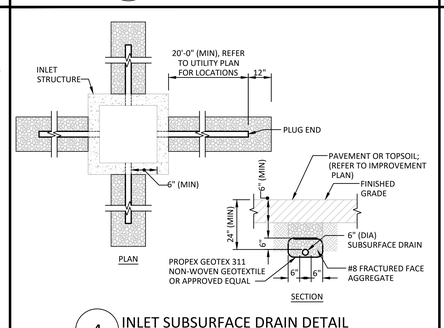


REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE BEDDING DETAIL

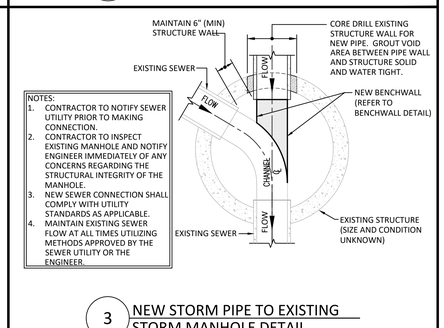
12 ELLIPTICAL PIPE (RCP) BEDDING DETAIL DETAIL
NO SCALE



NOTES:
1. BREAK OUT TOP HALF OF EXISTING PIPE AFTER MANHOLE IS CONSTRUCTED.
2. REFER TO MANHOLE DETAIL FOR STRUCTURE INFORMATION.
3. MAINTAIN EXISTING FLOW AT ALL TIMES.

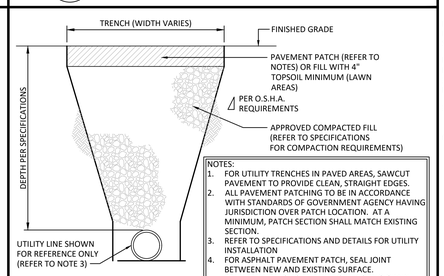


4 INLET SUBSURFACE DRAIN DETAIL
NO SCALE



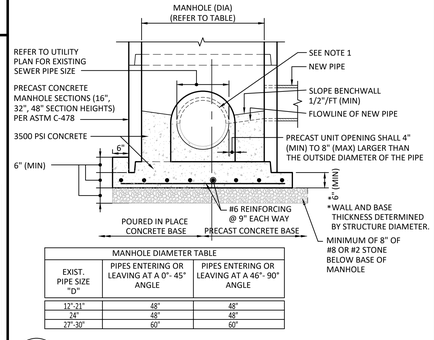
NOTES:
1. CONTRACTOR TO NOTIFY SEWER UTILITY PRIOR TO MAKING CONNECTION.
2. CONTRACTOR TO INSPECT EXISTING MANHOLE AND NOTIFY ENGINEER IMMEDIATELY OF ANY CONCERNS REGARDING THE STRUCTURAL INTEGRITY OF THE MANHOLE.
3. NEW SEWER CONNECTION SHALL COMPLY WITH UTILITY STANDARDS AS APPLICABLE.
4. MAINTAIN EXISTING SEWER FLOW AT ALL TIMES UTILIZING METHODS APPROVED BY THE SEWER UTILITY OR THE ENGINEER.

3 NEW STORM PIPE TO EXISTING STORM MANHOLE DETAIL
(FOR EXISTING STRUCTURE DIAMETERS GREATER THAN 48")



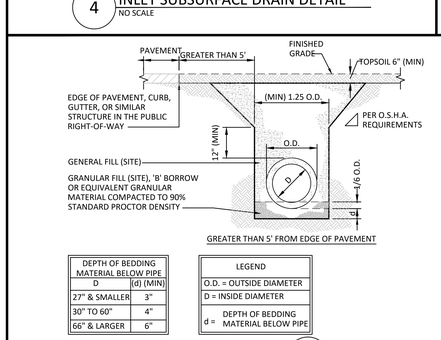
NOTES:
1. FOR UTILITY TRENCHES IN PAVED AREAS, SAWCUT PAVEMENT TO PROVIDE CLEAN, STRAIGHT EDGES.
2. ALL PAVEMENT PATCHING TO BE IN ACCORDANCE WITH STANDARDS OF GOVERNMENT AGENCY HAVING JURISDICTION OVER PATCH LOCATION AT A MINIMUM, PATCH SECTION SHALL MATCH EXISTING SECTION.
3. REFER TO SPECIFICATIONS AND DETAILS FOR UTILITY INSTALLATION
4. FOR ASPHALT PAVEMENT PATCH, SEAL JOINT BETWEEN NEW AND EXISTING SURFACE.
5. PAVEMENT PATCH SHALL MATCH EXISTING GRADE. VERIFY POSITIVE DRAINAGE ACROSS PATCH SURFACE. REPAIR IF NECESSARY.

11 UTILITY TRENCH CUT DETAIL
NO SCALE



MANHOLE DIAMETER TABLE		
EXIST. PIPE SIZE "D"	PIPES ENTERING OR LEAVING AT A 0°- 45° ANGLE	PIPES ENTERING OR LEAVING AT A 46°- 90° ANGLE
12"-21"	48"	48"
24"	48"	48"
27"-30"	60"	60"

8 NEW MANHOLE OVER EXISTING PIPE DETAIL
(FOR EXISTING PIPE DIAMETERS 8" TO 30")



DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) (MIN)
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

LEGEND
O.D. = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

NOTES:
1. ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED 6" TO 12" BALANCED LIFTS.
2. A MINIMUM OF 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.
3. BEDDING SHALL BE SHAPED TO RECEIVE THE PIPE BELL SO THAT THE PIPE BARREL IS UNIFORMLY SUPPORTED.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.

2 RIGID PIPE (RCP) BEDDING DETAIL
NO SCALE

10 PRECAST CONCRETE ADJUSTING RING DETAIL
NO SCALE

MAXIMUM PIPE INSIDE DIA.		
STRAIGHT		*SKEW/CORNER
24" WALL	36" WALL	
12"-18"	12"-24"	12"-15"

*MAXIMUM OF 2 SKEW CONNECTIONS PER STRUCTURE

7 INLET BOX DETAIL (24"x36")
NO SCALE

LEGEND
O.D. = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

NOTES:
1. ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED 6" TO 12" BALANCED LIFTS.
2. A MINIMUM OF 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.
3. BEDDING SHALL BE SHAPED TO RECEIVE THE PIPE BELL SO THAT THE PIPE BARREL IS UNIFORMLY SUPPORTED.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.

1 FLEXIBLE PIPE (PVC & HDPE) BEDDING DETAIL
NO SCALE

BSA LifeStructures
175 S. Rangeline Rd, Suite 200
Carmel, IN 46032
ph 317.819.7878 fx 317.819.7288

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LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

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4	10/21/2025	ADDENDUM #2

SITE DRAINAGE DETAILS

DATE

BSA PROJECT NO. 00360481

REF. SHEET INDEX

C310

GENERAL NOTES

A. REFER TO UTILITY DETAILS FOR NOTE REFERENCES.
B. ALL CASTINGS SHALL HAVE THE WORDS 'NO DUMPING DRAINS TO STREAM" CAST IN RAISED OR RECESSED LETTERS AT A MINIMUM OF 1" HEIGHT. A SYMBOL OF A FISH SHALL ALSO BE CAST WITH THE LETTERS.
C. CASTINGS TO BE NEENAH TYPE OR APPROVED EQUAL.
D. CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.

○ PLAN NOTES

1. NATURAL GAS SERVICE.
2. GAS METER.
3. ELECTRICAL FEED. NEW 4'-6" WIDE x 2'-6" DEPTH POWER DUCTBANK REFER TO ELECTRICAL PLANS FOR MORE INFORMATION.
4. (2) 4" TELECOMMUNICATION CONDUITS.
5. NEW 8" WATER LINE.
6. NEW 8" FIRE PROTECTION LINE.
7. NEW 4" DOMESTIC WATER LINE.
8. POST INDICATOR VALVE (PIV).
9. FIRE DEPARTMENT CONNECTION (FDC). TWO 2 ½" STANDARD SIAMESE CONNECTIONS.
10. NEW 6" SANITARY SEWER (PVC-SDR 35) SANITARY LINE REQUIRED A 10-GAUGE TRACER WIRE ON TO OF THE LATERAL CONNECTION POINT. ANY PART OF THE SANITARY LATERAL WITH 5 FEET FROM CONCRETE OR PAVED AREA MUST BE BACKFILLED WITH GRANULAR MARTIAL.
11. LATERAL TO MANHOLE CONNECTION MUST BE MADE PER INTERNAL DROP MANHOLE CONNECTION REFER TO FIGURE C300.04.
12. NEW EXTERIOR CLEANOUT.
13. NEW CLEANOUTS. BUILDING, CLEANOUTS PER FIGURE 400.09 ARE REQUIRED BETWEEN 18 TO 16 INCHES FROM THE BUILDING EXTERIOR. IF CLEANOUTS IS LOCATED WITHIN A CONCRETE/PAVED AREA, THEN CLEANOUT SHOULD BE INSTALLED WITH HEAVY DUTY CASTING/LID PER FIGURE 400.10.
14. WATER AND SEWER CROSSING, MINIMUM 18" CLEARANCE.
15. CONTRACTOR TO FIELD VERIFY EXISTING STORM SEWER LOCATION, ELEVATION AND SIZE.
16. COORDINATE SIZE, LOCATION AND ELEVATION OF PIPING WITH PLUMBING PLANS.
17. REROUTE ELECTRIC FEED TO ESKENAZI ARTS BUILDING.
18. NEW FIRE HYDRANT.
19. MEDIUM VOLTAGE PAD MOUNTED SWITCH GEAR.
20. DUMPSTER AND RECYCLE BIN.
21. NEW 3000 GALLON BULK NITROGEN TANK.
22. (4) 4" TELECOMMUNICATION CONDUITS.
23. REROUTE ELECTRIC FEED TO ESKENAZI ARTS BUILDING.
24. NEW LIGHT POLE BASE. REFER TO ELECTRICAL PLANS FOR FIXTURE INFORMATION.
25. SITE LIGHT BOLLARD. REFER TO ELECTRICAL PLANS FOR MORE INFORMATION.
26. REFER TO SEWER MAIN EXTENSION PLANS BY STRUCTURE POINT FOR CONTINUATION.
27. NEW ELECTRIC FEED. ADDITIONAL INFORMATION WILL BE PROVIDED IN FUTURE BID PACKAGE.
28. COORDINATE SIZE, QUANTITY AND LOCATION OF TELECOMMUNICATION CONDUITS WITH ICT PLANS

4

BSA LifeStructures
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LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS
BP1-CD: SITE AND FOUNDATION PACKAGE

ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	08/15/2025	CITY SUBMITTAL
2	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE
3	10/15/2025	ADDENDUM #1
4	10/21/2025	ADDENDUM #2

REGISTERED No. PE10200271 STATE OF INDIANA PROFESSIONAL ENGINEER
ANDREW D. SWANSON

SITE UTILITY PLAN

DATE
BSA PROJECT NO. 00360481

REF. SHEET INDEX

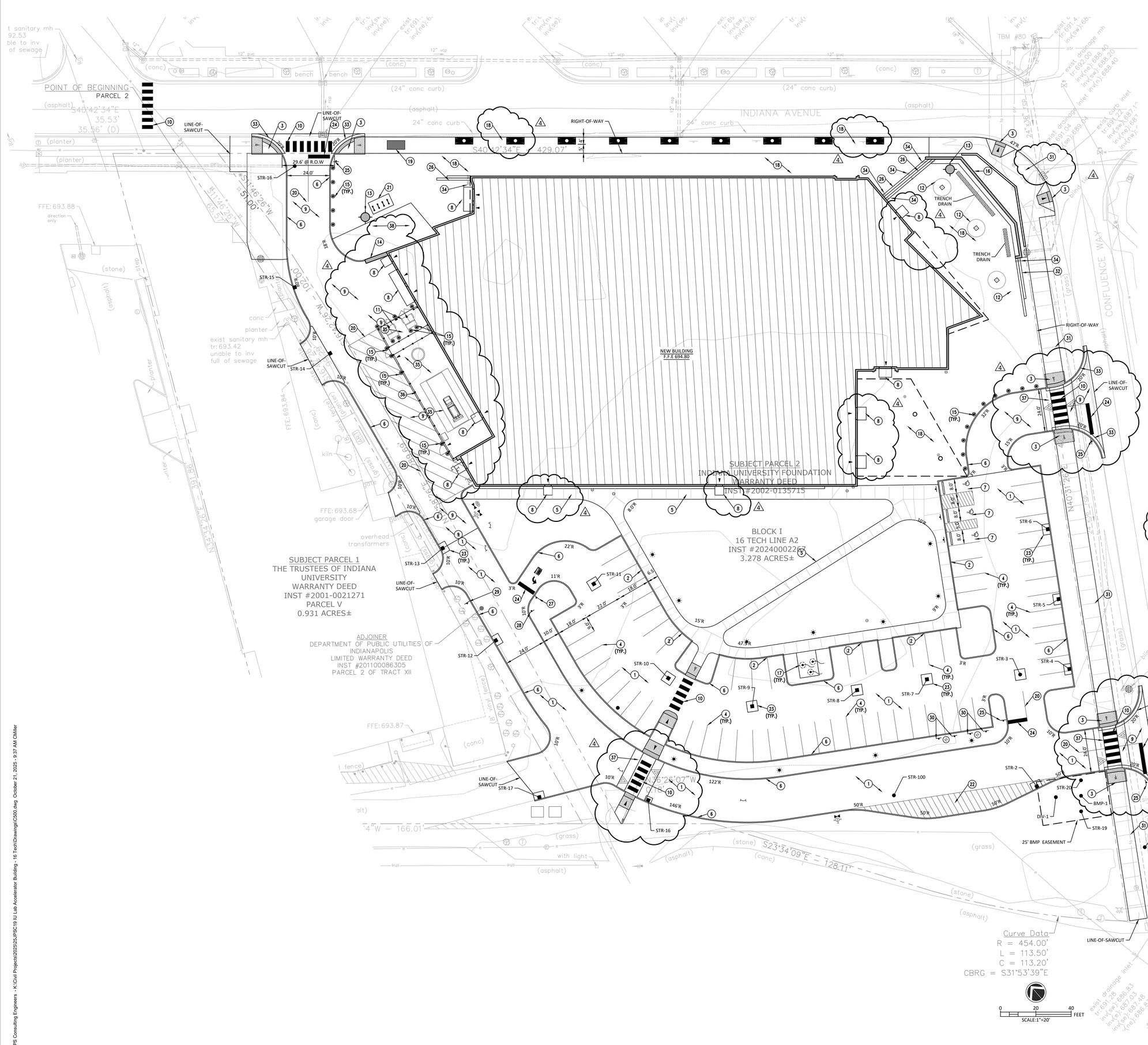
C400

SANITARY STRUCTURE SCHEDULE

MARK	INVERT		CASTING	
	INLET	OUTLET	ELEVATION	TYPE
STR-100	688.01	687.91	692.40	R1772
STR-101	686.20	686.10	693.10	R1772
STR-102	684.43	684.33	692.65	R1772
-	-	-	-	-

1 ENLARGEMENT
SCALE: 1"=10'

0 20 40 FEET
SCALE:1"=20'



GENERAL NOTES

A. REFER TO IMPROVEMENT DETAILS FOR NOTE REFERENCES.

○ PLAN NOTES

1. ASPHALT PAVEMENT.
2. CONCRETE CURB AND WALK.
3. ACCESSIBLE RAMP.
4. 4" WIDE PAINTED PARKING STRIPE.
5. CONCRETE WALK.
6. STRAIGHT CONCRETE CURB.
7. ACCESSIBLE PARKING SPACE.
8. CONCRETE STOOP.
9. 6" CONCRETE PAVEMENT. REFER TO PAVEMENT TYPES & THICKNESS DETAIL FOR CONCRETE IN RIGHT OF WAY.
10. PAINTED CROSSWALK STRIPING.
11. WASTE CONTAINER PAD AND ENCLOSURE.
12. TREE GRATE. REFER TO LANDSCAPE PLAN.
13. SCULPTURE WITH LIGHTING. REFER TO BID PACKAGE 3 LANDSCAPE PLANS.
14. SITE RETAINING WALL.
15. NEW BOLLARD. REFER TO LANDSCAPE PLANS.
16. MONUMENT SIGNAGE AND INTEGRAL RETAINING WALL.
17. FLAGPOLE BASE.
18. ACID ETCH/ INTEGRAL CONCRETE WALK AND BASE. REFER TO LANDSCAPE PLAN.
19. BUS STOP. REFER TO ARCHITECTURAL PLANS.
20. 4" WIDE PAINTED ROAD STRIPING.
21. IU STANDARD BIKE RACK.
22. 4" WIDE PAINTED BUS PARKING STRIPE.
23. CONCRETE INLET COLLAR.
24. 2' PAINTED STOP BAR.
25. TRAFFIC SIGN.
26. CONCRETE STAIR WITH HANDRAIL.
27. STOP SIGN, AND NO RIGHT TURN.
28. NO RIGHT TURN.
29. NO LEFT TURN.
30. (4) EV SPOTS (2) CHARGERS.
31. 8' CONCRETE WALK.
32. DISAPPEARING CONCRETE STAIRS. REFER TO LANDSCAPE PLAN.
33. COMBINED CONCRETE CURB AND GUTTER IN THE RIGHT OF WAY. A ROLL CURB OR ALTERNATIVE TRANSITION MAY BE REQUIRED ACROSS THE ENTRANCES WITH THE APPROPRIATE CASTING FOR THE STRUCTURE ALONG INDIANA AVENUE.
34. HANDRAIL. REFER TO LANDSCAPE PLAN FOR MORE INFORMATION.
35. 8" CONCRETE PAVEMENT.
36. NEW ALUMINUM LOUVERED SCREEN WALL. REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION.
37. NEW CONCRETE SPEED TABLE.
38. NEW PLANTING BED. REFER TO LANDSCAPE PLAN FOR MORE INFORMATION.

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ANDREW D. ZURMAN
REGISTERED
No. PE10200271
STATE OF INDIANA
PROFESSIONAL ENGINEER

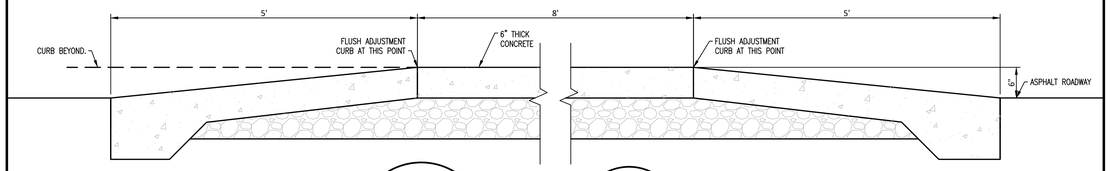
SITE IMPROVEMENT PLAN

DATE

BSA PROJECT NO. 00360481

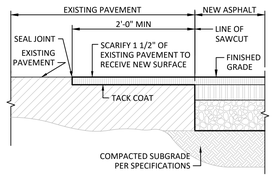
REF. SHEET INDEX

C500



17 CONCRETE SPEED TABLE DETAIL

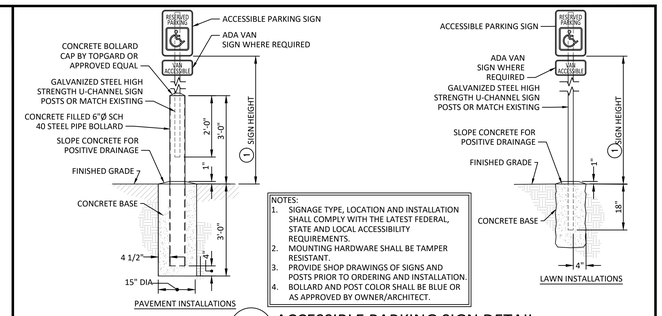
SCALE: 1"=1'



NOTE:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.
2. REPAIR DAMAGED OR FAILING PAVEMENT PRIOR TO APPLICATION OF NEW SURFACE.
3. REFER TO SPECIFICATIONS FOR HOT ASPHALTIC MIX REQUIREMENTS.

11 NEW ASPHALT PAVEMENT TO EXISTING ASPHALT PAVEMENT DETAIL

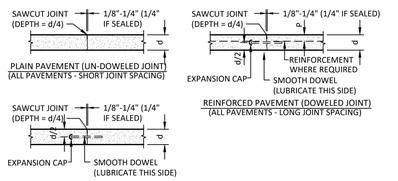
NO SCALE



NOTES:
1. SIGNAGE TYPE, LOCATION AND INSTALLATION SHALL COMPLY WITH THE LATEST FEDERAL, STATE AND LOCAL ACCESSIBILITY REQUIREMENTS.
2. MOUNTING HARDWARE SHALL BE TAMPER RESISTANT.
3. PROVIDE SHOP DRAWINGS OF SIGNS AND POSTS PRIOR TO ORDERING AND INSTALLATION.
4. BOLLARD AND POST COLOR SHALL BE BLUE OR AS APPROVED BY OWNER/ARCHITECT.

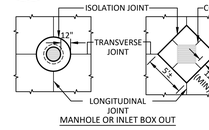
7 ACCESSIBLE PARKING SIGN DETAIL

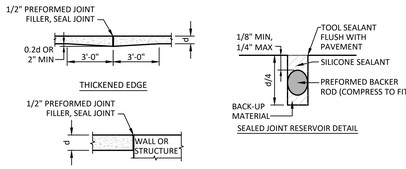
NO SCALE



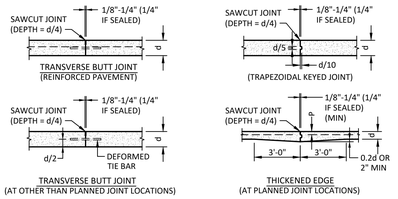
CONTROL JOINT DETAILS

(LONGITUDINAL OR TRANSVERSE JOINTS)



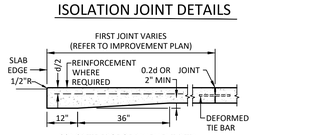


ISOLATION JOINT DETAILS



CONSTRUCTION JOINT DETAILS

NOTES:
1. REFER TO IMPROVEMENT PLAN FOR PAVEMENT THICKNESS (d).
2. REFER TO TABLE FOR DEFORMED STEEL TIE BAR SIZE.
3. DISCONTINUE DISTRIBUTED STEEL REINFORCEMENT AT JOINTS.
4. REFER TO SPECIFICATIONS FOR CONCRETE AND JOINT REQUIREMENTS.
5. ALL CONCRETE PAVEMENT SHALL BE PLACED ON A COMPACTED AGGREGATE FILL THAT IS A MINIMUM DEPTH EQUAL TO THE THICKNESS OF THE CONCRETE PAVEMENT.



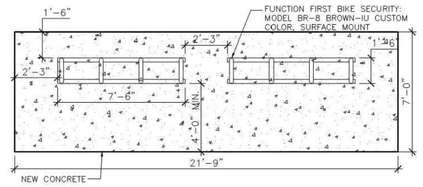
JOINT SPACING AND REINFORCEMENT REQUIREMENTS

PAVEMENT THICKNESS (D)	MAXIMUM JOINT SPACING	REINFORCEMENT REQUIRED IF JOINT L TO W RATIO EXCEEDS	MINIMUM REINFORCING COVER (P)	* MINIMUM REINFORCING SIZE (IF REQUIRED)	DOWEL OR TIE BAR SIZE @ 12" O.C.
6"	14'	1.25	2.5"	#4 @ 18"	3/4" x 1'-0"
7"	15'	1.25	2 3/4"	#4 @ 15"	7/8" x 1'-2"
8"	16'	1.25	3"	#4 @ 13"	1" x 1'-2"
9"	16'	1.25	3 1/4"	#4 @ 12"	1" x 1'-4"
10"	16'	1.25	3 1/2"	#4 @ 11"	1" x 1'-6"

* ALL REINFORCEMENT DOWELS SHALL BE EPOXY COATED 60 KSI

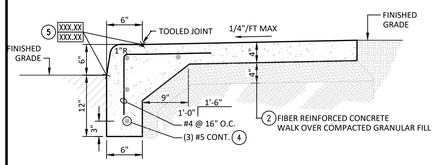
16 CONCRETE PAVEMENT DETAIL

NO SCALE



10 IU STANDARD BIKE RACK LAYOUT DETAIL

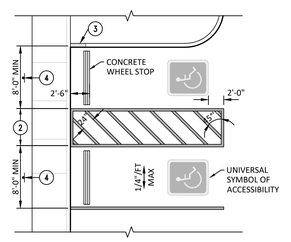
NO SCALE



NOTES:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.
2. REFER TO SPECIFICATIONS FOR CONCRETE AND JOINT REQUIREMENTS.
3. REFER TO IMPROVEMENT PLAN FOR WALK WIDTH AND JOINT PATTERN.
4. END CONTINUOUS REBAR AT ISOLATION/CONSTRUCTION JOINTS. PLACE (3) #5x12 SMOOTH DOWELS (DO NOT OVERLAP).
5. LOCATION OF CURB AND GUTTER ELEVATIONS. REFER TO GRADING PLAN.

9 CONCRETE CURB AND WALK DETAIL

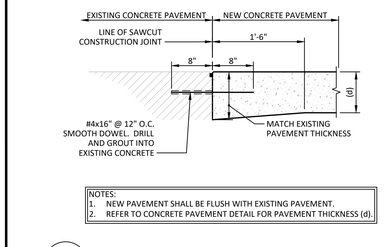
NO SCALE



NOTES:
1. ACCESSIBLE SPACE DIMENSIONS SHALL COMPLY WITH FEDERAL, STATE OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
2. ACCESS AISLE SHALL BE 5'-0" FOR CARS AND 8'-0" FOR VANS. REFER TO SITE IMPROVEMENT PLAN.
3. WHEN CURB IS ADJACENT TO PEDESTRIAN TRAFFIC, PAINT TOP AND SIDES OF CURB YELLOW IN LOCATIONS WHERE CURB HEIGHT IS BETWEEN 0" AND 6". PER SPECIFICATION, APPLY SILICA SAND TO WET PAINT TO PROVIDE A NON-SLIP SURFACE.
4. ACCESSIBLE PARKING SIGN (REFER TO ACCESSIBLE PARKING SIGN DETAIL). SIGN SHALL BE LOCATED 12" BEHIND FACE OF CURB, OR 12" BEHIND BACK OF PAVEMENT.
5. BLUE MARKINGS SHALL BE USED FOR PARKING SPACES FOR PERSONS WITH DISABILITIES. COLOR SHALL BE FEDERAL STANDARD 595 COLOR FS 35180.

6 ACCESSIBLE PARKING SPACE DETAIL

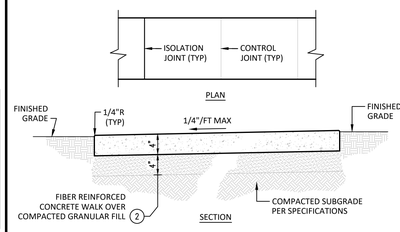
NO SCALE



NOTES:
1. NEW PAVEMENT SHALL BE FLUSH WITH EXISTING PAVEMENT.
2. REFER TO CONCRETE PAVEMENT DETAIL FOR PAVEMENT THICKNESS (d).

3 NEW CONCRETE PAVEMENT TO EXISTING CONCRETE PAVEMENT DETAIL

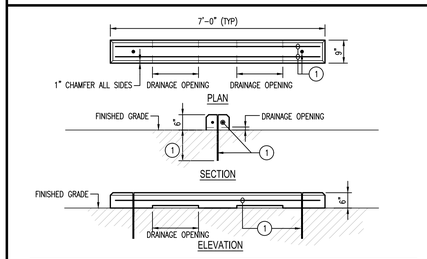
NO SCALE



NOTES:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.
2. REFER TO SPECIFICATIONS FOR CONCRETE AND JOINT REQUIREMENTS.
3. REFER TO IMPROVEMENT PLAN FOR WALK WIDTH AND JOINT PATTERN.

2 CONCRETE WALK DETAIL

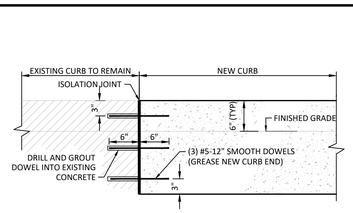
NO SCALE



NOTES:
1. REFER TO SPECIFICATIONS FOR WHEEL STOP DIMENSIONS AND ANCHOR PIN & REINFORCING REQUIREMENTS.
2. ANCHOR PIN SHALL BE SET ¾" (MIN) BELOW THE TOP OF THE WHEEL STOP. FILL VOID WITH SEALANT.

15 PRECAST CONCRETE WHEEL STOP DETAIL

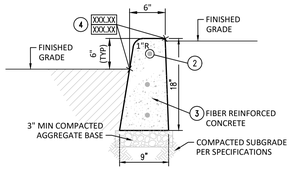
NO SCALE



NOTE:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.

13 NEW CONCRETE CURB TO EXISTING CONCRETE CURB DETAIL

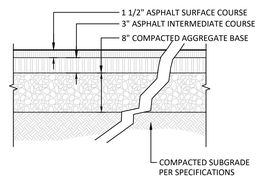
NO SCALE



NOTES:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.
2. (3) #5x18" SMOOTH DOWELS REQUIRED AT ALL ISOLATION JOINTS.
3. REFER TO SPECIFICATIONS FOR CONCRETE AND JOINT REQUIREMENTS.
4. LOCATION OF CURB AND GUTTER ELEVATIONS. REFER TO GRADING PLAN.

8 STRAIGHT CONCRETE CURB DETAIL

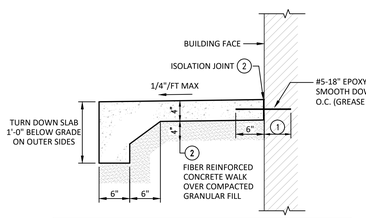
NO SCALE



NOTE:
1. WHEN CONSTRUCTION OCCURS WITHIN PUBLIC RIGHT-OF-WAY, THE WORK SHALL COMPLY WITH THE GOVERNING AGENCY REQUIREMENTS.
2. REFER TO SPECIFICATIONS FOR AGGREGATE GRADATION AND HOT ASPHALTIC MIX REQUIREMENTS.

5 ASPHALT PAVEMENT DETAIL

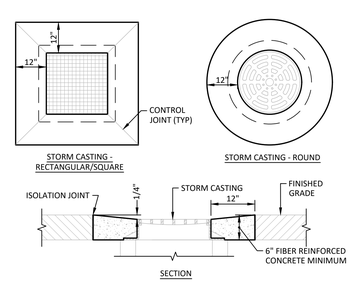
NO SCALE



NOTES:
1. REFER TO STRUCTURAL PLANS FOR FOUNDATION WALL THICKNESS. SET EMBED DEPTH PER STRUCTURAL ENGINEER.
2. REFER TO SPECIFICATIONS FOR CONCRETE AND JOINT REQUIREMENTS.
3. REFER TO IMPROVEMENT PLAN FOR STOOP WIDTH AND JOINT PATTERN.
4. REFER TO GRADING PLAN FOR STOOP ELEVATION.

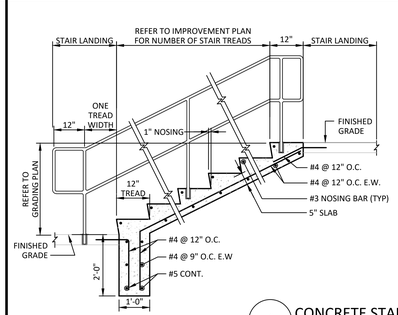
14 CONCRETE STOOP DETAIL

NO SCALE

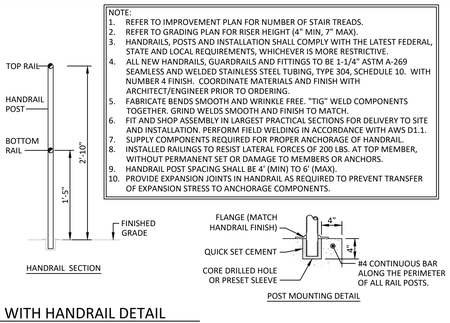


12 CONCRETE INLET COLLAR DETAIL

NO SCALE

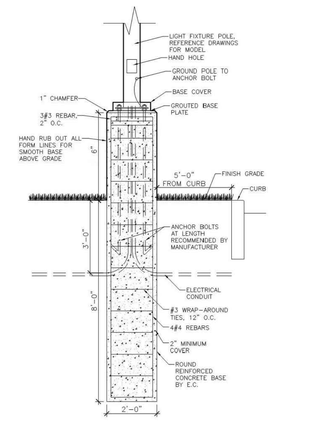


NOTE:
1. REFER TO IMPROVEMENT PLAN FOR NUMBER OF STAIR TREADS.
2. REFER TO GRADING PLAN FOR RISER HEIGHT (4" MIN, 7" MAX).
3. HANDRAILS, POSTS AND INSTALLATION SHALL COMPLY WITH THE LATEST FEDERAL, STATE AND LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
4. ALL NEW HANDRAILS, GUARDRAILS AND FITTINGS TO BE 1-1/4" ASTM A-269 SEAMLESS AND WELDED STAINLESS STEEL TUBING, TYPE 304, SCHEDULE 10. WITH NUMBER 4 FINISH. COORDINATE MATERIALS AND FINISH WITH ARCHITECT/ENGINEER PRIOR TO ORDERING.
5. FABRICATE BENDS SMOOTH AND WRINKLE FREE. "TIG" WELD COMPONENTS TOGETHER. GRIND WELDS SMOOTH AND FINISH TO MATCH.
6. FIT AND SHOP ASSEMBLY IN LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE AND INSTALLATION. PERFORM FIELD WELDING IN ACCORDANCE WITH AWS D1.1.
7. SUPPLY COMPONENTS REQUIRED FOR PROPER ANCHORAGE OF HANDRAIL.
8. INSTALLED RAILINGS TO RESIST LATERAL FORCES OF 200 LBS. AT TOP MEMBER, WITHOUT PERMANENT SET OR DAMAGE TO MEMBERS OR ANCHORS.
9. HANDRAIL POST SPACING SHALL BE 4' (MIN) TO 6' (MAX).
10. PROVIDE EXPANSION JOINTS IN HANDRAIL AS REQUIRED TO PREVENT TRANSFER OF EXPANSION STRESS TO ANCHORAGE COMPONENTS.



4 CONCRETE STAIR WITH HANDRAIL DETAIL

NO SCALE



1 IU STANDARD LIGHT POLE BASE DETAIL

NO SCALE

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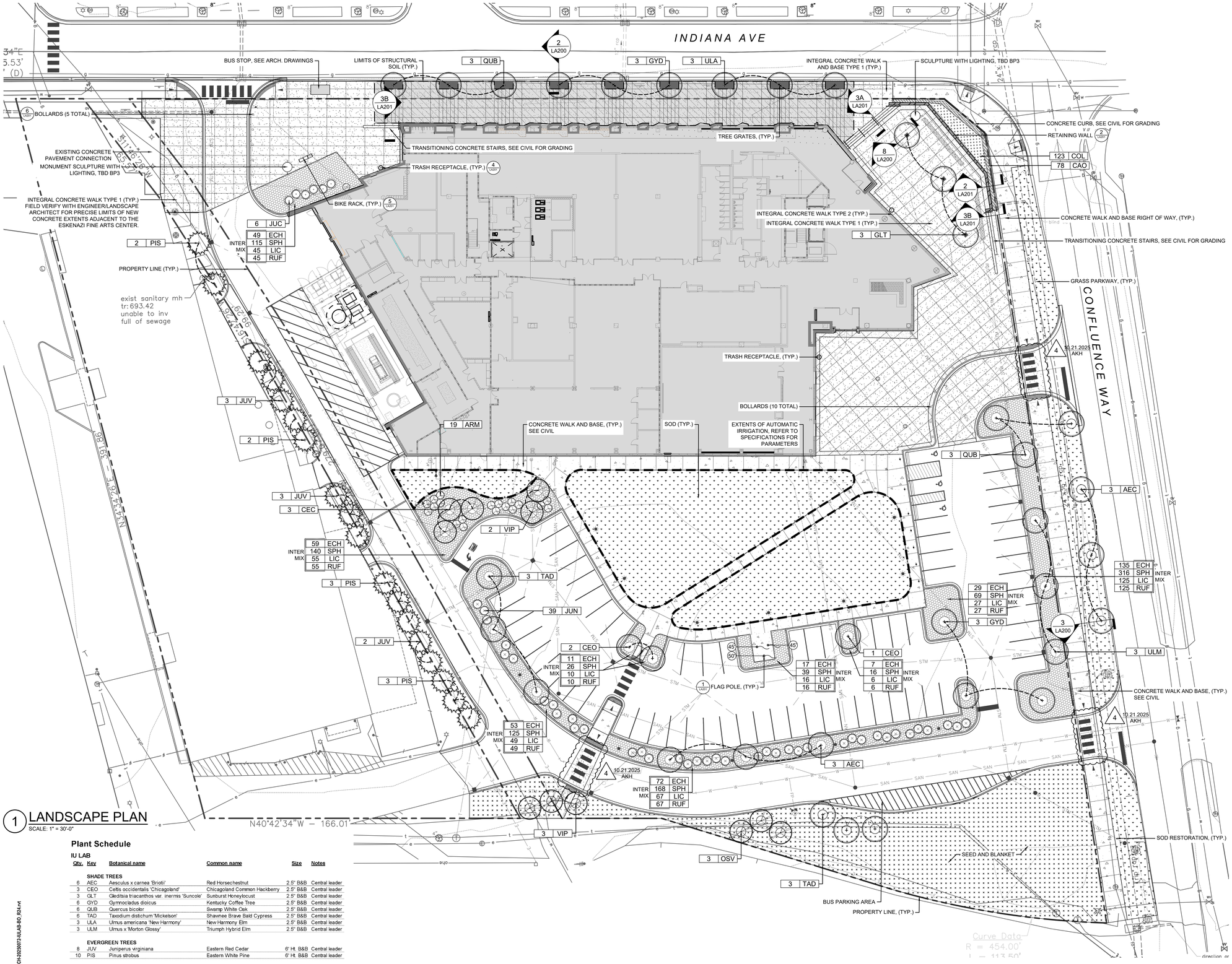
SITE IMPROVEMENT DETAILS

DATE

BSA PROJECT NO. 00360481

REF. SHEET INDEX

C510



1 LANDSCAPE PLAN
SCALE: 1" = 30'-0"

Scale: 1 inch = 20 feet

LEGEND:

- PROPERTY LINE
- EXISTING BUILDING
- BUILDING
- WALL
- CONCRETE WALK AND BASE
- INTEGRAL CONCRETE WALK AND BASE TYPE 1
- INTEGRAL CONCRETE WALK AND BASE TYPE 2
- STRUCTURAL SOIL
- BIKE RACKS
- TRASH RECEPTACLE
- 4'x10' TREE GRATE
- BOLLARD
- FLAG POLE
- SCULPTURE
- 2'x2' PAVING STONE TREE GRATE
- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- SOD
- SEED AND BLANKET
- PERENNIAL / GROUNDCOVER AREAS
- EXTENTS OF SPRAY IRRIGATION

1. WHERE NEW LANDSCAPE IS SHOWN, THE CONTRACTOR SHALL EXCAVATE MIN. 30" AND ADD NEW PLANTING SOIL

Plant Schedule

IU LAB

Qty.	Key	Botanical name	Common name	Size	Notes
		SHADE TREES			
6	AEC	Aesculus x carnea 'Briotii'	Red Horsechestnut	2.5" B&B	Central leader
3	CEO	Celtis occidentalis 'Chicagoland'	Chicagoland Common Hackberry	2.5" B&B	Central leader
3	GLT	Gleditsia triacanthos var. inermis 'Suncole'	Sunburst Honeylocust	2.5" B&B	Central leader
6	GYD	Gymnocladus dioicus	Kentucky Coffee Tree	2.5" B&B	Central leader
6	QUB	Quercus bicolor	Swamp White Oak	2.5" B&B	Central leader
6	TAD	Taxodium distichum 'Mickelson'	Shawnee Brave Bald Cypress	2.5" B&B	Central leader
3	ULA	Ulmus americana 'New Harmony'	New Harmony Elm	2.5" B&B	Central leader
3	ULM	Ulmus x 'Morton Glossy'	Triumph Hybrid Elm	2.5" B&B	Central leader
		EVERGREEN TREES			
8	JUV	Juniperus virginiana	Eastern Red Cedar	6' Ht. B&B	Central leader
10	PIS	Pinus strobus	Eastern White Pine	6' Ht. B&B	Central leader
		ORNAMENTAL TREES			
3	CEC	Cercis canadensis	Eastern Redbud	8' Ht. B&B	Multi-stem
3	OSV	Ostrya virginiana	American Hophornbeam	8' Ht. B&B	Single stem
5	VIP	Viburnum prunifolium	Blackhaw Viburnum (tree form)	8' Ht. B&B	Multi-stem
		EVERGREEN SHRUBS			
6	JUC	Juniperus chinensis 'Sea Green'	Sea Green Juniper	#3 Cont.	5' o.c.
39	JUN	Juniperus chinensis var. sargentii 'Viridis'	Green Sargent Juniper	#5 Cont.	5' o.c.
		DECIDUOUS SHRUBS			
19	ARM	Aronia melanocarpa 'Morton'	Iroquois Beauty Chokeberry	24" B&B	4' o.c.
		PERENNIALS			
432	ECH	Echinacea pallida	Pale Purple Coneflower	#1 Cont.	18" o.c.
78	CAO	Callirhoe involucrata	Purple Poppy Mallow	#1 Cont.	18" o.c.
123	COL	Coreopsis lanceolata	Sand Coreopsis	#1 Cont.	18" o.c.
400	LIC	Liatris cylindracea	Cylindrical Blazing Star	#1 Cont.	18" o.c.
400	RUF	Rudbeckia ful var. speciosa	Showy Black-eyed Susan	#1 Cont.	18" o.c.
		ORNAMENTAL GRASSES			
1,014	SPH	Sporobolus heterolepis	Prairie Dropseed	#1 Cont.	24" o.c.

LANDSCAPE SHEET INDEX					
SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE	SHEET ISSUE DESCRIPTION	CURRENT REVISION DATE	CURRENT REVISION
LA100	LANDSCAPE PLAN	10/21/2025	BP1-ADDENDUM 2	10/21/2025	4
LA200	LANDSCAPE DETAILS				
LA201	SITE DETAILS				
3 SHEETS					

BSA

SWITCH PLACEHOLDER FAMILY
TYPE FOR CORRECT BSA OFFICE

SMITHGROUP

500 GRISWOLD
SUITE 1700
DETROIT, MI 48226
313.983.3600
smithgroup.com

LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE

ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
4	10/21/2025	BP1-ADDENDUM 02
3	10/15/2025	BP1-ADDENDUM 01
2	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE

STEPHEN J. LEKAN
REGISTERED
No. LA22100005
STATE OF
INDIANA
LANDSCAPE ARCHITECT
EXP: 12/31/25

LANDSCAPE PLAN

DATE
BSA PROJECT NO. 00360481

REF: SHEET INDEX

LA100

9/19/2025 4:29:47 PM
Autodesk Docs://00360481 - IU Launch Accelerator for Biosciences/ARCH-20250073-BSLAB-BO_R24.rvt

SHEET INDEX - ARCHITECTURAL / INTERIOR FINISH

SHEET NUMBER	SHEET NAME	SHEET ISSUE DATE	SHEET ISSUE DESCRIPTION	CURRENT REVISION DATE	CURRENT REVISION
VIMS					
FIGURE 1	TITLE SHEET AND GENERAL NOTES	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 2	VIMS MEMBRANE AND COLLECTION PIPE LAYOUT (FOUNDATION)	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 3	FIRST FLOOR VIMS PIPE RISER & TEST PIN LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 4	SECOND FLOOR VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 5	THIRD FLOOR VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 6	FOURTH FLOOR VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 7	FIFTH FLOOR VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 8	PENTHOUSE FLOOR VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 9	ROOF VIMS PIPE RISER LAYOUT	10/21/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 10	VIMS DETAIL MEMBRANE	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2
FIGURE 11	VIMS DETAIL PIPING & MISC	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE	10/21/2025	2

NOTICE FOR CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND ALL LOCAL AND STATE REGULATIONS.

THE OWNER AND THE VIMS DESIGNER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR CONTRACTORS' AND SUBCONTRACTORS' COMPLIANCE WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND ALL LOCAL AND STATE REGULATIONS.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE VIMS DESIGNER HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, E CEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE VIMS DESIGNER.

IN CASE OF CONFLICT BETWEEN THESE PLANS AND OTHER SITE DESIGN DOCUMENTS AND OR MANUFACTURER SPECIFICATIONS REQUIREMENTS, THE APPROPRIATE PARTIES COMPANIES WITH CONFLICTING DOCUMENTATION SHALL CONFER TO DETERMINE A MUTUALLY AGREED UPON SOLUTION.

NOTES

I. APPLICABILITY

A. GENERAL

1. A PASSIVE VAPOR INTRUSION MITIGATION SYSTEM (VIMS) SHALL BE INSTALLED AND WILL INCLUDE A VOC-ATTENUATING MEMBRANE (15-MIL THICKNESS WITH EVOH CORE), OR EQUIVALENT, UNDERLAIN BY A LOW-PROFILE VAPOR COLLECTION SYSTEM VENTED AT THE ROOF.
2. VIMS DETAILS PRESENTED IN THESE PLANS AND SPECIFICATIONS SHALL BE UTILI ED IN THE CONSTRUCTION OF THE BUILDING DESIGNATED ON PLANS. THE BASIS OF DESIGN IS THE INSTALLATION OF A SUBSLAB MEMBRANE AND ANY ASSOCIATED VENTING MATERIALS AS DESCRIBED IN THESE PLANS. MANUFACTURER REFERENCE TO THESE PRODUCTS IS PROVIDED BELOW AS APPROVED PROVIDERS OF THE MEMBRANE ARE MATERIAL ONLY AND MAY BE SUBSTITUTED FOR EQUIVALENT PRODUCTS IF APPROVED BY THE VIMS DESIGNER.
   - [1] STEGO INDUSTRIES LLC, SAN CLEMENTE, CA (877) 464-7834
   - [2] W.R. MEADOWS, INC., HAMPSHIRE, IL (847) 214-2100
   - [3] VIAFLE , SIOU FALLS, SD (605) 335-0174
   - [4] RADONAWAY, WARD HILL, MA (800) 767-3703
   - [5] ISI BUILDING PRODUCTS, EAST PEORIA, IL (866) 698-6562
   - [6] LAND SCIENCE A DIVISION OF REGENESIS, SAN CLEMENTE, CA (949) 481-8118
3. THE VIMS MEMBRANE WILL ALSO SERVE AS A MOISTURE-BLOCKING MEMBRANE AND WILL REPLACE ANY VAPOR OR MOISTURE BARRIER SPECIFIED IN THE STRUCTURAL DETAILS.E CEPT FOR THE ELEVATOR PIT. INSTALLATION OF A MOISTURE OR VAPOR BARRIER BETWEEN THE VIMS MEMBRANE AND BUILDING FLOOR SLAB MAY VOID THE WARRANTY PROVIDED BY THE VIMS MEMBRANE MANUFACTURER.

B. SYSTEM COMPONENTS

1. THE VIMS CONSTRUCTION SHALL CONSIST OF, BUT NOT BE LIMITED TO, THE FOLLOWING
   - a) SUPPLY AND INSTALL MINIMUM 4-INCH LAYER OF AGGREGATE BENEATH FOUNDATION SLAB
   -) SUPPLY AND INSTALL LOW PROFILE VAPOR COLLECTION PIPING AND ASSOCIATED FITTINGS
   - c) SUPPLY AND INSTALL 4-INCH PVC CONVEYANCE PIPING
   - d) SUPPLY AND INSTALL 4-INCH PVC TRANSITION PIPING
   - e) SUPPLY AND INSTALL 15-MIL VOC-ATTENUATING MEMBRANE
   - f) PERFORM SMOKE TESTING OF THE VIMS MEMBRANE
   - g) SUPPLY AND INSTALL SCH. 40 PVC VERTICAL VENT RISER PIPING, SAMPLE PORTS WITH FITTINGS (QTY 1 PER CONVEYANCE TRUNKLINE)
   - h) COMPLETE CONNECTION OF VERTICAL VENT RISER PIPING TO ROOF AS APPROPRIATE
   - i) INSTALL ROOF-MOUNTED VENTILATORS
2. ALL MATERIALS ARE TO BE DELIVERED TO THE PROJECT SITE IN THEIR ORIGINAL UNBROKEN PACKAGES BEARING THE MANUFACTURER'S LABEL SHOWING BRAND, WEIGHT, VOLUME, BATCH NUMBER, AND DATE. MATERIALS ARE TO BE STORED AT THE PROJECT SITE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

II. VAPOR INTRUSION MITIGATION SYSTEM

A. VAPOR COLLECTION AND VENT SYSTEM

A.1 AGGREGATE LAYER

1. A MINIMUM 4-INCH LAYER OF GRAVEL AGGREGATE SHALL BE PROVIDED BENEATH THE FOUNDATION SLAB. AGGREGATE SHALL BE VIRGIN MATERIAL AS DOCUMENTED WITH A LETTER FROM THE QUARRY PROVIDED TO THE DESIGNER IN ADVANCE OF IMPORT. THE AGGREGATE LAYER SHALL BE FINE TO MEDIUM AGGREGATE AND CONTAIN NO MORE THAN 5 FINES (I.E., 5 FINES PASSING 200 SIEVE). THE GRADATION OF THE AGGREGATE PLACED BELOW THE MEMBRANE SHALL MEET THE FOLLOWING SPECIFICATIONS OR AS SPECIFIED IN THE GEOTECHNICAL REPORT IF APPROVED BY THE VIMS DESIGNER

GRAVEL		
	Percent Passing	
Sieve	3/4" GRAVEL	3/8" GRAVEL
1-1 2"	100	-
1"	95–100	-
3 4"	90-100	100
3 8"	20-55	70-95
No.4	0-10	0-25
No. 8	0-5	0-10
ASTM C 131 Test Grading	B	C

2. THE AGGREGATE WILL BE PLACED 2 INCHES ABOVE AND 1 INCH BELOW THE VAPOR COLLECTION PIPING AS SHOWN IN PLAN SHEET DETAILS.
3. ANY AGGREGATE REMOVED DURING PLACEMENT OF UTILITIES MUST BE PLACED BACK TO LEVEL GRADE AND COMPACTED AS SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS. UTILITIES PLACED IN THE AGGREGATE LAYER MAY NOT BE LARGER THAN 1-INCH IN DIAMETER. UTILITIES LARGER THAN 1-INCH IN DIAMETER MUST BE BURIED INTO THE SUBGRADE SUCH THAT NO MORE THAN 1 INCH OF THE AGGREGATE LAYER IS AFFECTED.
4. THE SUBGRADE UNDER THE AGGREGATE SHALL BE ROLLED SMOOTH AND MOISTURE CONDITIONED AS NECESSARY TO ACHIEVE THE COMPACTION SPECIFIED IN THE GEOTECHNICAL ENGINEER'S SPECIFICATION.

A.2 SUB-SLAB VAPOR COLLECTION PIPING

1. SUB-SLAB LOW PROFILE VAPOR COLLECTION PIPING SHALL BE COMPRISED OF 1-FOOT WIDE BY 1-INCH-THICK CORRUGATED HDPE PIPING WRAPPED IN GEOTE TILE OR EQUIVALENT AS APPROVED BY THE VIMS DESIGNER (SEE DETAILS ON PLANS).
2. VAPOR COLLECTION PIPING SHALL BE INSTALLED AT LOCATIONS SHOWN ON PLANS AND PLACED WITHIN THE MINIMUM 4-INCH AGGREGATE LAYER. LOW PROFILE VAPOR COLLECTION PIPING SHALL BE PLACED SUCH THAT NO AREA BENEATH THE SLAB FOUNDATION IS MORE THAN 10 FEET FROM THE VAPOR COLLECTION PIPING AND THE PIPING IS NO CLOSER THAN 12 INCHES FROM SURFACES THAT REPRESENT SIDES OF THE SOIL GAS COLLECTION PLENUM.
3. VAPOR COLLECTION PIPING SHALL BE TRANSITIONED TO 4-INCH SOLID SCHEDULE 40 PVC CONVEYANCE PIPING TO THE VENT RISERS, CONNECTING TO SCH. 40 PVC ELBOWS (OR EQUIVALENT) TURNING UP THROUGH THE FLOOR SLAB ADJACENT TO FOUNDATION FOOTINGS AND STRUCTURAL COLUMNS. ALL TRANSITION PIPING SHALL BE IN PLACE PRIOR TO POURING FOUNDATION GRADE BEAMS OR FOOTINGS WHEN POURED SEPARATELY FROM THE FLOOR SLAB. THE PIPING TRANSITIONS SHALL BE ACCOMPLISHED IN COMPLIANCE WITH ALL APPLICABLE BUILDING CODES AND WITH THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER AND OR BUILDING OFFICIAL. (SEE DETAIL PLANS).

A.3 ABOVE SLAB VAPOR COLLECTION RISER

1. TRANSITION PIPING THROUGH THE FLOOR SHALL BE CONNECTED EITHER TO
   - RISERS OF EQUAL OR GREATER CROSS-SECTIONAL AREA E TENDING UP THE ENTIRE BUILDING HEIGHT OR
   - CONNECTED TO A 4-INCH RISER SEGMENT FITTED WITH A 4-INCH SHUTOFF VALVE AND THEN MANIFOLDED WITH ONE OTHER 4-INCH SEGMENT FOLLOWED BY A CONNECTION TO A 6-INCH RISER E TENDING THE REMAINING HEIGHT OF THE BUILDING.
2. VENT RISER TO THE ROOF SHALL BE COMPRISED OF SCH. 40 PVC PIPE. RISER PIPING SHALL BE LOCATED WITHIN THE WALLS CHASES OR INSTALLED ADJACENT TO INTERIOR SUPPORT COLUMNS (SEE DETAIL PLANS AND REFER TO ARCHITECTURAL SCHEMATICS)
3. THE RISER PIPE TO THE ROOF SHALL BE FULLY SUPPORTED THROUGH THE ENTIRE HEIGHT OF THE BUILDING WITH PIPE CLAMPS OR SIMILAR, SUCH THAT NO DOWNWARD FORCE (DUE TO THE WEIGHT OF THE RISER PIPE) IS E ERTED ON THE SUBSLAB VENTING SYSTEM.
4. IF INSTALLED IN AN INTERIOR WALL, AN 8" 8" MEDIUM SECURITY ACCESS PANEL SHALL BE INSTALLED BETWEEN 2 AND 5 FEET ABOVE THE FLOOR SLAB IN ORDER TO ACCESS THE VENT SYSTEM FOR AIR FLOW RATE MONITORING (SEE DETAILS ON PLANS).
5. A 304 STAINLESS STEEL HE REDUCING BUSHING (MNPT FNPT, 1 2" 1 4") SHALL BE TAPPED INTO THE PIPING AND SEALED PERMANENTLY FOR GAS-TIGHT APPLICATIONS. A QUICK-CONNECT COUPLER SHALL BE INSTALLED IN THE BUSHING AND SEALED WITH TEFLON TAPE TO ALLOW FOR REMOVAL DURING MONITORING (SEE DETAIL ON PLANS).
6. THE RISER PIPES SHALL BE EQUIPPED WITH SHUTOFF VALVES TO ALLOW FOR SHUTOFF OF AIR FLOW ABOVE THE VALVE DURING SAMPLING OR IN THE EVENT THAT THE PASSIVE SYSTEM IS CONVERTED TO AN ACTIVE SYSTEM. THIS VALVE SHALL BE INSTALLED INLINE ABOVE THE ROOF LINE (SEE DETAIL ON PLANS).
7. PLACARDS SHALL BE INSTALLED ON EACH VENT RISER APPRO IMATELY EVERY 5 FEET AND AT ANY E POSED RISER PIPING (SEE DETAIL PLANS).
8. A VIMS MEMBRANE IDENTIFICATION SIGN SHALL BE INSTALLED IN UTILITY AND MECHANICAL ROOMS (SEE DETAIL PLANS). THIS SIGN IS TO BE PLACED ON THE WALLS AT EYE LEVEL AND SHALL NOT BE COVERED OVER. THE LOCATION OF THIS NOTIFICATION WILL BE DETERMINED BY THE CONTRACTOR, OWNER, OR BUILDING OFFICIAL.

A.4 PASSIVE VENTILATOR

1. A PASSIVE VENTILATOR CAPABLE OF 26 CFM WITH A 4 MPH WIND SHALL BE INSTALLED AT THE TOP OF EACH VENT RISER PIPE ABOVE THE ROOF LINE. THE VENTILATORS SHALL INCLUDE BASES, REDUCING COUPLINGS, AND ALL OTHER REQUIRED ACCESSORIES FOR A SECURE CONNECTION TO THE VENT RISER PIPING.
2. THE AURA AV ROOF VENT IS AN ACCEPTABLE PASSIVE VENTILATOR (SEE DETAIL PLANS). THESE PRODUCTS ARE MANUFACTURED BY ACTIVE VENTILATION PRODUCTS, INC., 1-800-247-3463 WWW.ROOFVENTS.COM.
3. THE PASSIVE VENTILATORS SHALL BE INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARDS AS RECOMMENDED BY THE MANUFACTURER.
4. RISER PIPES SHALL TERMINATE A MINIMUM OF 24 INCHES ABOVE THE ROOF-LINE, EQUIPPED AND BRACED APPROPRIATELY IN ACCORDANCE WITH APPLICABLE BUILDING CODES (SEE DETAIL PLANS).
5. ROOF-MOUNTED VENTILATORS SHALL BE LOCATED AT A DISTANCE OF NOT LESS THAN 15 FEET FROM ANY BUILDING AIR INTAKE.

B. VIMS MEMBRANE

B.1 MATERIALS

1. THE VIMS MEMBRANE SHALL CONSIST OF A VOC-ATTENUATING MULTI-LAYERED BARRIER MANUFACTURED USING HIGH QUALITY VIRGIN-GRADE PLASTIC E TRUDED RESINS, ALONG WITH EMBEDDED VAPOR-PIN (OR EQUIVALENT) PORTS LOCATED AS SHOWN ON PLANS.
2. INSTALLATION OF THE MEMBRANE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE VIMS DESIGNER.

B.2 MEMBRANE INSTALLATION

1. THE VIMS MEMBRANE SHALL CONSIST OF A VOC-ATTENUATING MEMBRANE AS APPROVED BY THE VIMS DESIGNER. THE MEMBRANE SHALL HAVE A THICKNESS OF 15 MILS WITH EVOH CORE, OR EQUIVALENT, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE VIMS DESIGNER.
2. THE VIMS MEMBRANE SHALL BE PLACED BENEATH THE FLOOR SLAB, FOOTINGS, AND TRENCHES IN ACCORDANCE WITH THESE PLANS AND DETAILS. THE VIMS MEMBRANE SHALL NOT BE PLACED ON TOP OF ANY CONCRETE PIERS OR E TENDED REBAR.
3. SEAMS SHALL BE OVERLAPPED A MINIMUM OF 12 INCHES AND SEALED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN THESE PLANS (SEE DETAIL PLANS).
4. THE ELEVATOR PIT WILL BE SEALED FOR PROTECTION AGAINST WATER INGRESS BY THE CONTRACTOR RESPONSIBLE FOR WATERPROOFING AND IS THEREFORE OUTSIDE THE SCOPE OF THESE SPECIFICATIONS.

B.3 PENETRATION SEALS

1. WHERE UTILITIES, VENT LINES, PIPING, ELECTRICAL CONDUITS, VAPOR-PINS ETC. PENETRATE THE VIMS MEMBRANE, A PIPE BOOT, OR EQUIVALENT SEAL AND FORM, SHALL BE PROVIDED TO CREATE A GAS-TIGHT SEAL AROUND THE PENETRATION IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS SHOWN ON DETAIL PLANS.
2. WHERE PENETRATIONS SUCH AS ELECTRICAL UTILITY CONDUITS, PLUMBING PIPING, ETC., ARE CONCENTRATED, A CONCRETE PENETRATION BANK WILL BE CONSTRUCTED TO SECURE THE PENETRATIONS IN PLACE. THE PENETRATION BANK SHALL BE CONSTRUCTED USING A MINIMUM THICKNESS OF 12 INCHES OF NON-SHRINK GROUT E TENDING A MINIMUM OF 8 INCHES FROM ANY PENETRATION, ALLOWING FOR A MINIMUM 6-INCH ATTACHMENT OF THE VIMS MEMBRANE, SIMILAR TO AN ATTACHMENT TO AN INTERIOR FOOTING. THE TOP OF THE PENETRATION BANK SHALL BE BELOW THE BOTTOM OF THE SLAB. PENETRATIONS SHALL NOT BE IN CONTACT WITH ADJACENT PENETRATIONS OR OTHER OBJECTS TO ALLOW PROPER SEALING AROUND THE ENTIRE PENETRATION CIRCUMFERENCE. A LIQUID SEALANT WITHIN A FORM MAY ALTERNATIVELY BE USED ACCORDING TO MANUFACTURER SPECIFICATIONS (SEE DETAIL PLANS).

C. QUALITY ASSURANCE

1. THE VIMS SUBCONTRACTOR SHALL BE E PERIENCED WITH VOC-ATTENUATING MEMBRANE INSTALLATION. THE VIMS SUBCONTRACTOR RETAINED BY THE OWNER FOR THE PERFORMANCE OF THIS SCOPE OF WORK IS TO BE TRAINED AND E PERIENCED WITH THE INSTALLATION OF SIMILAR PRODUCTS.
2. A PRE-INSTALLATION CONFERENCE SHALL BE HELD PRIOR TO THE APPLICATION OF THE VIMS MEMBRANE TO COORDINATE PROPER SUBSTRATE AND INSTALLATION CONDITIONS AND PROCEDURES. THE VIMS SUBCONTRACTOR, SITE SUPERINTENDENT, THE FOUNDATION SUBCONTRACTOR, SUBSLAB UTILITY CONTRACTORS, AND THE VIMS DESIGNER SHALL BE PRESENT AT THIS MEETING.
3. THE INSTALLATION OF THE VIMS MEMBRANE SHALL BE CLOSELY MONITORED BY THE VIMS DESIGNER OR DESIGNATED REPRESENTATIVE. INSPECTIONS SHALL TYPICALLY BE PERFORMED PRIOR TO, DURING, AND SUBSEQUENT TO THE INSTALLATION OF THE VAPOR COLLECTION PIPING AND APPLICATION OF THE VIMS MEMBRANE. IT IS THE RESPONSIBILITY OF THE VIMS SUBCONTRACTOR TO NOTIFY THE OWNER AND VIMS DESIGNER WITHIN 72 HOURS OF BEGINNING ANY PORTION OF THIS WORK.
4. ALL SURFACES TO RECEIVE THE VIMS MEMBRANE TERMINATIONS SHALL BE INSPECTED AND APPROVED BY THE VIMS SUBCONTRACTOR FOR THE PERFORMANCE OF THIS SCOPE OF WORK AND BY THE VIMS DESIGNER PRIOR TO COMMENCING WORK.
5. PRIOR TO PLACING THE FLOOR SLAB OVER THE MEMBRANE, THE VIMS DESIGNER SHALL INSPECT AND APPROVE THE MEMBRANE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. CONSTRUCTION OF THE FLOOR SLAB SHALL NOT PROCEED WITHOUT WRITTEN CERTIFICATION OF THE SUCCESSFUL INSTALLATION BY THE VIMS SUBCONTRACTOR.

D. SUBMITTALS

1. THE VIMS SUBCONTRACTOR SHALL SUBMIT ANY UPDATES OR REVISIONS TO THE MANUFACTURER'S MATERIAL DATA AND RECOMMENDED INSTALLATION PROCEDURES TO THE VIMS DESIGNER FOR REVIEW AND APPROVAL AT LEAST ONE WEEK PRIOR TO THE CONSTRUCTION OF THE VIMS MEMBRANE.
2. THE VIMS SUBCONTRACTOR SHALL SUBMIT REPRESENTATIVE SAMPLES OR MANUFACTURER'S PRODUCT SPECIFICATIONS OF THE FOLLOWING TO THE VIMS DESIGNER FOR APPROVAL
   - VOC-ATTENUATING MEMBRANE
   - AGGREGATE MATERIAL
   - LOW PROFILE VAPOR COLLECTION PIPING
3. AT THE COMPLETION OF INSTALLATION, THE VIMS SUBCONTRACTOR SHALL SUBMIT A LETTER TO THE VIMS DESIGNER AND TO THE OWNER CERTIFYING THAT VIMS INSTALLATION WAS COMPLETED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AS WELL AS MANUFACTURER SPECIFICATIONS.

E. WARRANTY

1. KERAMIDA RECOMMENDS THE OWNER OBTAIN A WARRANTY FOR THE VIMS MEMBRANE. THE MANUFACTURER PROVIDES PRODUCT AND OR SYSTEM WARRANTIES FOR THE VIMS MEMBRANE OF NOT LESS THAN 2 YEARS FROM THE DATE OF INSTALLATION.
2. THE VIMS MANUFACTURER MAY REQUIRE SUBMITTAL OF DESIGN DOCUMENTS, ENVIRONMENTAL REPORTS, GEOTECHNICAL REPORTS, OR OTHER DOCUMENTATION FOR REVIEW PRIOR TO ISSUING A WARRANTY, AND ADDITIONAL COSTS MAY APPLY. PLEASE CONTACT THE SELECTED MANUFACTURER FOR WARRANTY TERMS AND CONDITIONS AND ADDITIONAL INFORMATION.
3. MANUFACTURERS' E TENDED WARRANTIES MUST BE REQUESTED BY THE OWNER PRIOR TO VIMS INSTALLATION BID REQUESTS.

F. JOB CONDITIONS

1. WORK IS TO BE PERFORMED ONLY WHEN E ISTING AND FORECASTED WEATHER CONDITIONS ARE WITHIN THE MANUFACTURER'S RECOMMENDATIONS FOR THE MATERIAL AND PRODUCTS USED. THE APPLICATION OF THE VIMS MEMBRANE SHALL BE SUSPENDED IF THE AMBIENT TEMPERATURE FALLS BELOW 40 F OR ABOVE 110 F, OR DURING PERIODS OF PRECIPITATION. APPLICATION OF THE VIMS MEMBRANE MAY BE PERFORMED BELOW 40 F, BUT ONLY WITH WRITTEN PERMISSION FROM THE VIMS DESIGNER AND MATERIAL MANUFACTURER.
2. ALL PLUMBING, ELECTRICAL, MECHANICAL, AND STRUCTURAL ITEMS THAT ARE LOCATED BENEATH OR THAT PASS THROUGH THE VIMS MEMBRANE SHALL BE POSITIVELY SECURED IN THEIR PROPER POSITIONS AND APPROPRIATELY PROTECTED PRIOR TO INSTALLATION OF VIMS MEMBRANE.
3. THE VIMS MEMBRANE SHALL BE INSTALLED BEFORE PLACEMENT OF REINFORCING STEEL.
4. REINFORCING STEEL, PIPING, FORMS, ETC. SHALL NOT BEAR DIRECTLY ON THE MEMBRANE, AND EQUIPMENT SHALL NOT BE DRIVEN OVER THE MEMBRANE WITHOUT PRIOR APPROVAL FROM THE VIMS DESIGNER AND MANUFACTURER.
5. STAKES USED TO SECURE THE CONCRETE FORMS SHALL NOT PENETRATE THE VIMS MEMBRANE AFTER IT HAS BEEN INSTALLED. IF STAKES NEED TO PUNCTURE THE MEMBRANE AFTER IT HAS BEEN INSTALLED, THE VIMS DESIGNER AND INSTALLER SHOULD BE NOTIFIED, AND NECESSARY REPAIRS NEED TO BE MADE BY THE VIMS SUBCONTRACTOR.
6. FIELD SITUATIONS NOT SPECIALLY DETAILED SHALL BE HANDLED PER THE INTENT OF THESE PLANS AND SPECIFICATIONS WITH THE APPROVAL OF THE VIMS DESIGNER. THE APPLICATOR CONTRACTOR MAY SUBMIT SHOP DRAWINGS FOR ALTERNATIVE METHODS. SEE STRUCTURAL FOUNDATION PLANS FOR COMPLETE DEPTHS AND DETAILS OF FOOTING. DEPTHS OF FOOTINGS SHOWN IN THESE PLANS ARE GENERALI ED, ACTUAL FOOTING DEPTHS MAY VARY.
7. APPROPRIATE CARE SHALL BE E ERCISED TO PROTECT THE VIMS MEMBRANE AND PREVENT PENETRATIONS SUBSEQUENT TO ITS APPLICATION. THE VIMS MEMBRANE SHALL BE PROTECTED FROM EQUIPMENT TRAFFIC, LIMITED LIGHT PEDESTRIAN TRAFFIC, AND BE KEPT FREE OF DIRT AND DEBRIS. TO THE E TENT POSSIBLE, UNTIL THE FLOOR SLAB IS POURED. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE VIMS MEMBRANE IS NOT PENETRATED AFTER THE COMPLETION OF THE INSTALLATION.

G. INSTALLATION

G.1 VAPOR COLLECTION PIPING INSTALLATION

1. VAPOR COLLECTION PIPING SHALL BE CONNECTED TO PROVIDE A GAS-TIGHT SEAL AT ALL CONNECTIONS AND FITTINGS AND SHALL BE CONSTRUCTED OF MATERIALS THAT COMPLY WITH THE UNIFORM PLUMBING AND MECHANICAL CODES. ALL JOINTS SHALL BE TIGHTLY SEALED WITH APPROVED MATERIALS. ANY GLUE OR SOLVENT USED TO SEAL THE PIPING MUST BE LOW VOC.
2. PLACEMENT OF AGGREGATE ABOVE THE PIPING SHALL NOT BEGIN BEFORE THE VIMS DESIGNER HAS INSPECTED THE GRADE AND ALIGNMENT OF THE PIPING, THE BEDDING OF THE PIPING, AND THE JOINTS BETWEEN THE PIPING. ALL PIPING LOCATED WITHIN THE AGGREGATE LAYER SHALL BE PROTECTED FROM PHYSICAL DAMAGE.
3. SOLID RISER PIPE VERTICAL STACK PIPE SHALL BE LOCATED WITHIN THE WALLS CHASES OR SHALL BE SIMILARLY PROTECTED FROM PHYSICAL DAMAGE. DAMAGE INCURRED DURING CONSTRUCTION OR OCCUPANCY COULD AFFECT SYSTEM PERFORMANCE.

G.2 VIMS MEMBRANE INSTALLATION

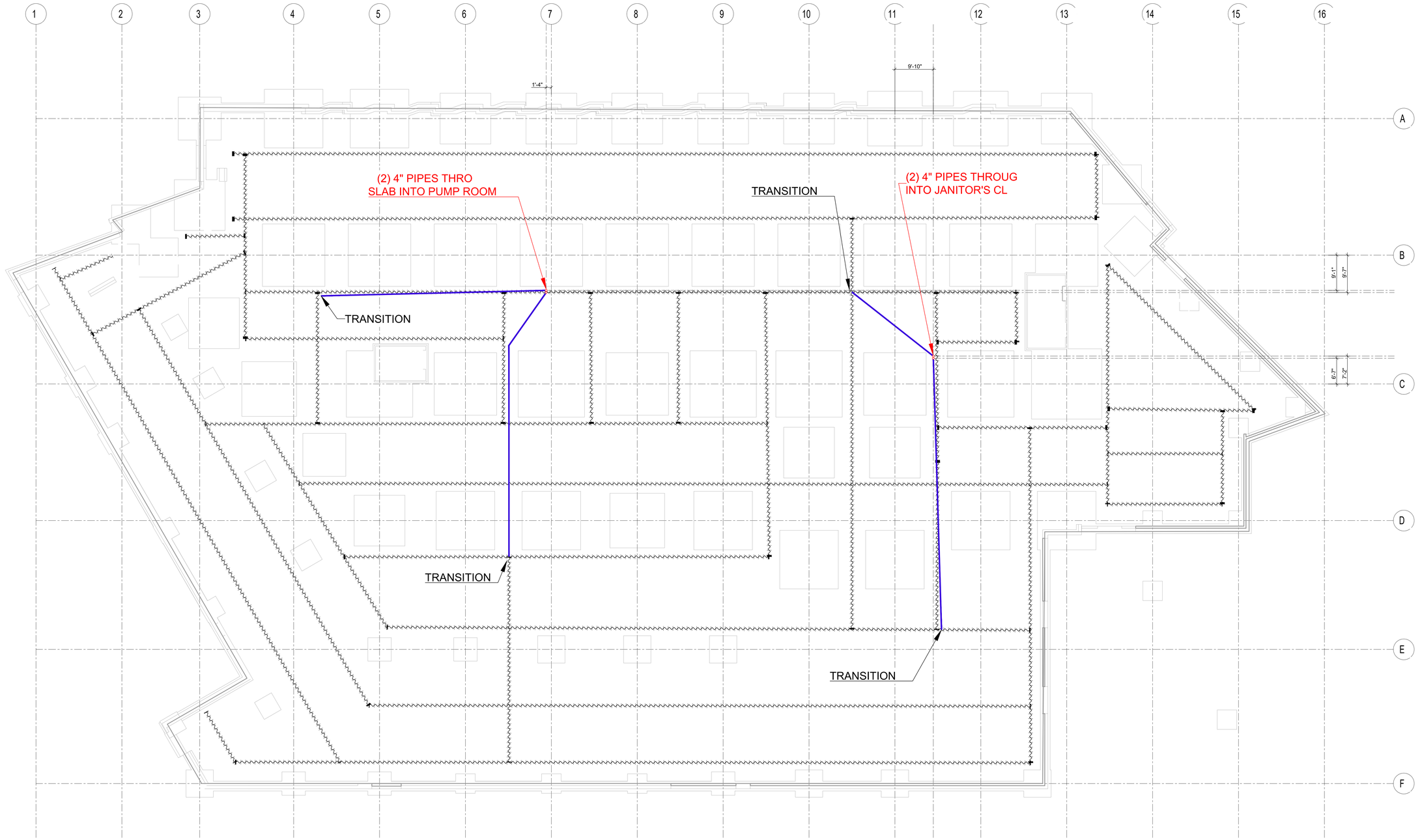
1. THE SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED BY THE GRADING CONTRACTOR AS SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS. THE FINISHED SURFACE SHALL BE SMOOTH, UNIFORM, AND FREE OF DEBRIS AND STANDING WATER. FINAL SUBGRADE INSPECTION PREPARATION SHALL NOT PRECEDE THE VIMS INSTALLATION BY MORE THAN 72 HOURS.
2. THE AGGREGATE LAYER SHALL BE MOISTURE CONDITIONED AND COMPACTED AS SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS.
3. IF THE VIMS MEMBRANE IS TO BE PLACED ON A CONCRETE SURFACE, CONCRETE SURFACES SHALL BE LIGHT BROOM FINISHED OR SMOOTHED, FREE OF ANY DIRT, DEBRIS, LOOSE MATERIAL, RELEASE AGENTS, OR CURING COMPOUNDS. ALL VOIDS MORE THAN 1 4-INCH IN WIDTH SHALL BE PROPERLY FILLED WITH NON-SHRINK GROUT OR AS SPECIFIED IN THE PROJECT PLANS AND SPECIFICATIONS. MASONRY JOINTS SHALL BE STRUCK SMOOTH WITH A METAL TROWEL.
4. ALL VIMS MEMBRANE PENETRATIONS SHALL BE PREPARED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. HOLLOW CONDUIT STAKES SHALL NOT BE USED.
5. TRENCHES SHALL BE CUT OVERSI E AS NECESSARY TO ACCOMMODATE THE INSTALLATION OF THE VIMS MEMBRANE.
6. THE WALLS OF FOOTING OR UTILITY TRENCHES SHALL BE SMOOTH AND FREE OF ROOTS OR PROTRUDING ROCKS.
7. IF ORGANIC MATERIALS WITH POTENTIAL FOR GROWTH (E.G., SEEDS OR GRASSES) ARE PRESENT WITHIN THE SUBGRADE, THE GENERAL CONTRACTOR SHALL APPLY A SOIL STERILANT AT THE MANUFACTURER'S RECOMMENDED RATE PRIOR TO THE INSTALLATION OF THE VIMS MEMBRANE.
8. THE VIMS MEMBRANE SHALL FIRST BE LAID ON THE AGGREGATE LAYER IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S SPECIFICATIONS. ALL SEAMS SHALL BE OVERLAPPED A MINIMUM OF 12 INCHES. ANY OPEN UTILITY OR OTHER TRENCH PRESENT AT THE TIME OF APPLICATION SHALL HAVE THE VIMS MEMBRANE E TENDING AT LEAST 12 INCHES ONTO THE ADJOINING SUBGRADE. THE VIMS MEMBRANE SHALL BE IN INTEGRAL CONTACT WITH ALL INTERIOR FOUNDATION CORNERS.

G.3 SEALING PENETRATIONS

1. ALL PENETRATIONS SHALL BE CLEANED AND PREPARED TO PROVIDE PROPER ADHESION OF THE VIMS MEMBRANE MANUFACTURER RECOMMENDED SEALING PRODUCTS TO PROVIDE A VAPOR TIGHT SEAL.
2. ALL PENETRATIONS SHOULD BE SECURED PRIOR TO INSTALLATION OF THE VIMS MEMBRANE SYSTEM. PENETRATIONS SHALL NOT BE IN CONTACT WITH ADJACENT PENETRATIONS OR OTHER OBJECTS TO ALLOW PROPER SEALING AROUND THE ENTIRE PENETRATION CIRCUMFERENCE. WHERE PENETRATIONS SUCH AS ELECTRICAL CONDUITS, PLUMBING PIPING, ETC., ARE CONCENTRATED, A CONCRETE PENETRATION BANK IS TO BE CONSTRUCTED PRIOR TO VIMS MEMBRANE PLACEMENT. THE CONCRETE PENETRATION BANK WILL CONSIST OF A MINIMUM THICKNESS OF 12 INCHES OF NON-SHRINK GROUT, E TENDING A MINIMUM OF 8 INCHES BEYOND THE EDGE OF EACH PENETRATION TO ALLOW FOR ATTACHMENT OF THE VIMS MEMBRANE. A LIQUID SEALANT WITHIN A FORM, OR EQUIVALENT, MAY ALTERNATIVELY BE USED ACCORDING TO MANUFACTURER SPECIFICATIONS (SEE DETAIL PLANS).
3. THE VIMS MEMBRANE SHALL BE CUT AROUND PENETRATIONS SO THAT IT LIES FLAT ON THE SUBGRADE. THERE SHOULD NOT BE A GAP LARGER THAN 1 8-INCH BETWEEN THE MEMBRANE AND THE PENETRATION (SEE DETAIL PLANS).

H. INSPECTIONS

1. THE INSPECTION OF ALL VAPOR CONTROL MEASURES SHALL BE PERFORMED BY THE VIMS DESIGNER, AT A MINIMUM, INSPECTION SHALL TAKE PLACE AT THE FOLLOWING STAGES OF THE INSTALLATION, AS DEEMED NECESSARY BY THE VIMS DESIGNER
   - AFTER THE INSTALLATION OF THE LOW-PROFILE VENT PIPING AND PRIOR TO THE INSTALLATION OF THE AGGREGATE LAYER ABOVE THE VENT PIPING
   - PERIODICALLY DURING THE INSTALLATION OF THE VIMS MEMBRANE
   - DURING SMOKE TESTING
   - AFTER INSTALLATION OF THE VIMS MEMBRANE, REINFORCING STEEL, AND ALL FOUNDATION FORM WORK. BUT PRIOR TO AND THROUGHOUT THE PLACEMENT OF CONCRETE FOR THE FLOOR SLAB
   - DURING AND AT THE COMPLETION OF THE VERTICAL VENT RISER PIPING AND ROOF VENT INSTALLATION.
2. FINAL SUBGRADE INSPECTION PREPARATION SHALL NOT PRECEDE THE VIMS INSTALLATION BY MORE THAN 72 HOURS.
3. FIELD QUALITY CONTROL IS A VERY IMPORTANT PART OF ALL APPLICATIONS. THE VIMS SUBCONTRACTOR SHALL CHECK HIS OWN WORK FOR ALL-AROUND GOOD WORKMANSHIP.
4. EACH COMPLETED AREA OF VIMS MEMBRANE SHALL BE SMOKE TESTED AT THE COMPLETION OF THE INSTALLATION I



LOW-PROFILE VENT

4" SCH 40 CONVEYANCE PIPING

4" PIPE TURN UP THROUGH FLOOR

SEE VIMS DETAIL PIPING & MISC FOR TRANSITION DETAILS

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LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

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INDIANA
PROFESSIONAL ENGINEER

9/29/2025

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IN Radon Mitigation Number RTM00924

VIMS MEMBRANE AND COLLECTION PIPE LAYOUT (FOUNDATION)

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FIGURE 2

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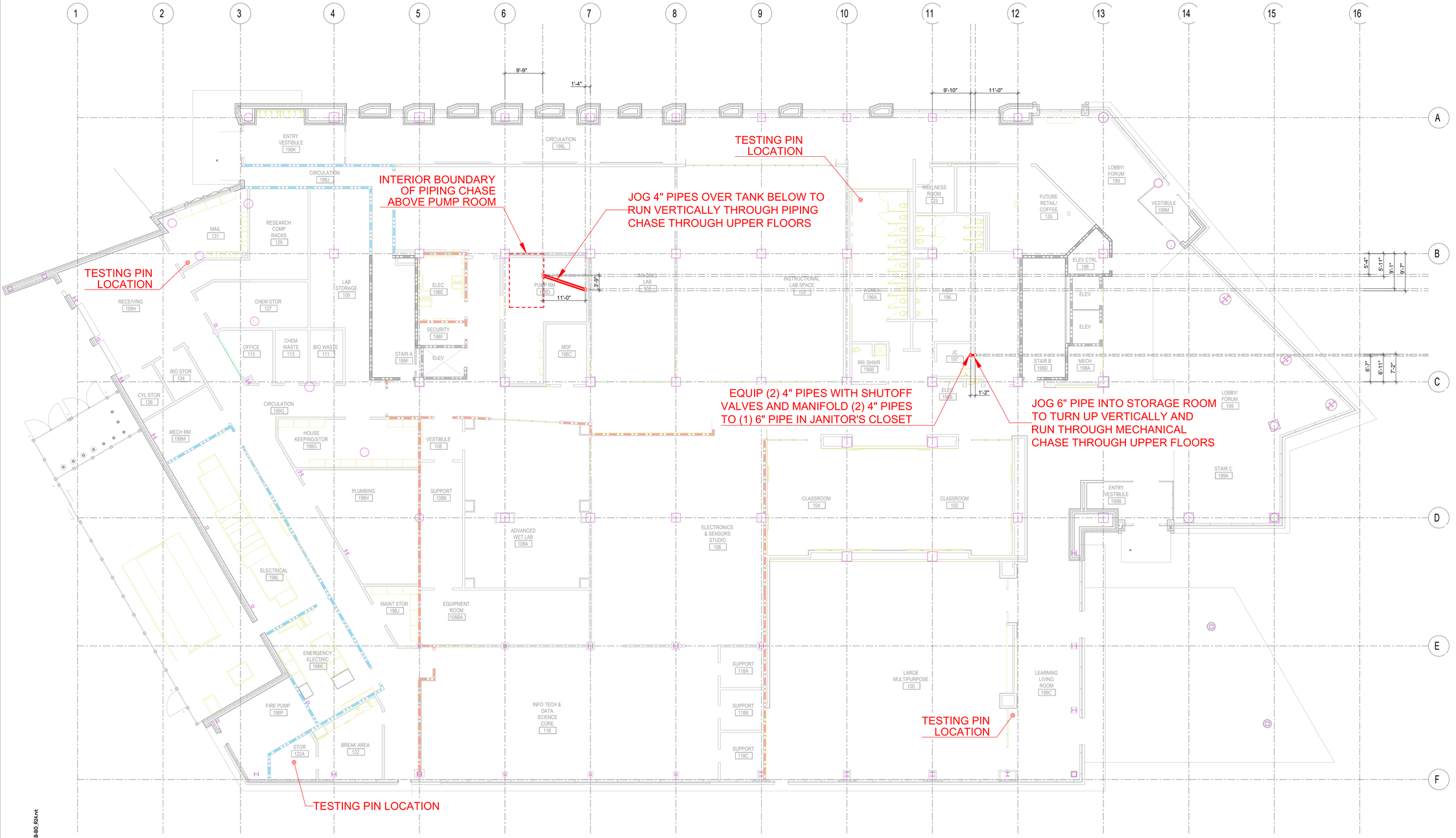

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FIRST FLOOR VIMS PIPE RISER & TEST PIN LAYOUT

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FIGURE 3

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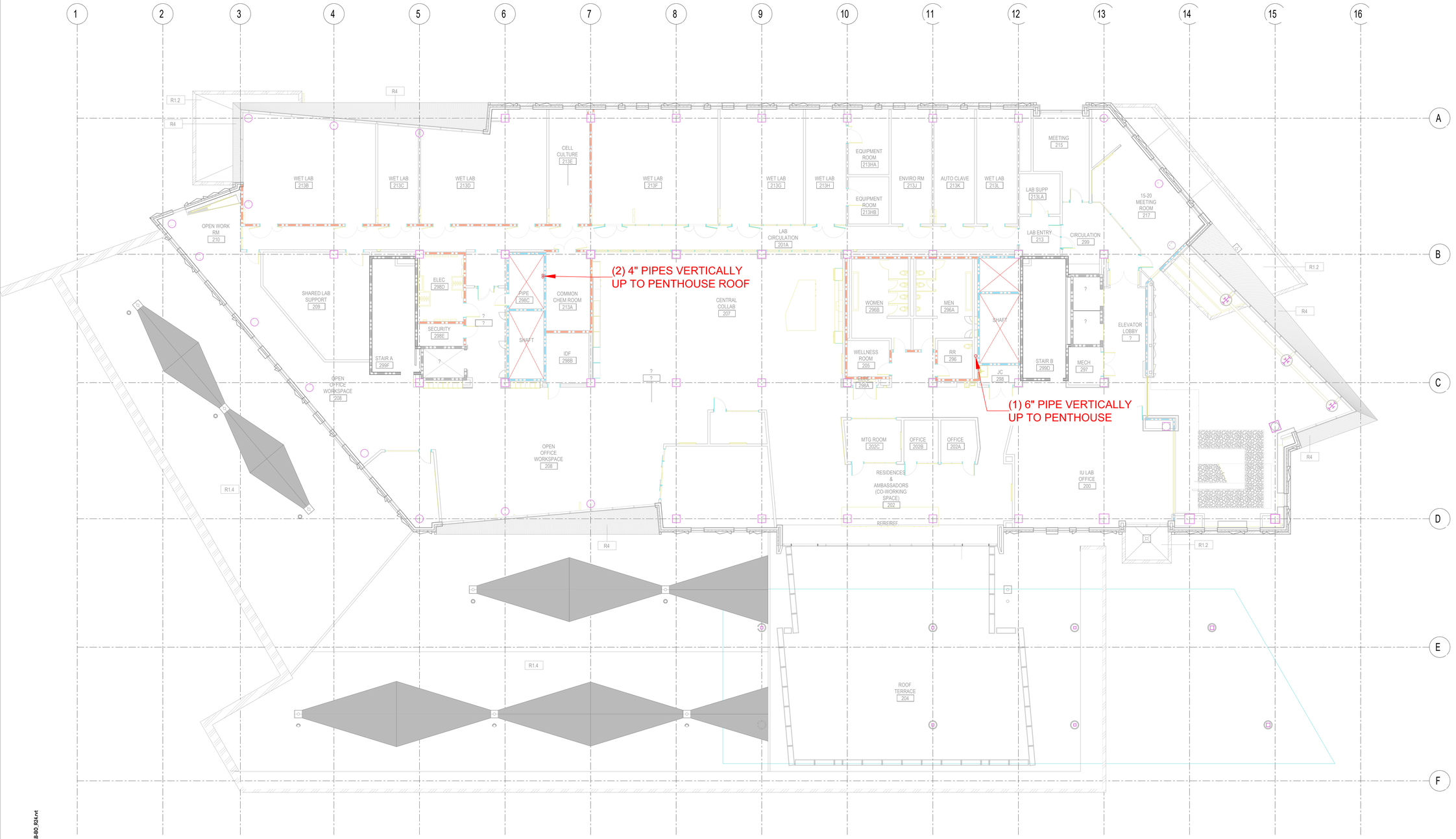

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SECOND FLOOR VIMS PIPE RISER LAYOUT

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FIGURE 4

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THIRD FLOOR VIMS PIPE RISER LAYOUT

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FIGURE 5

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FOURTH FLOOR VIMS PIPE RISER LAYOUT

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FIGURE 6

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FIFTH FLOOR VIMS PIPE RISER LAYOUT

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FIGURE 7

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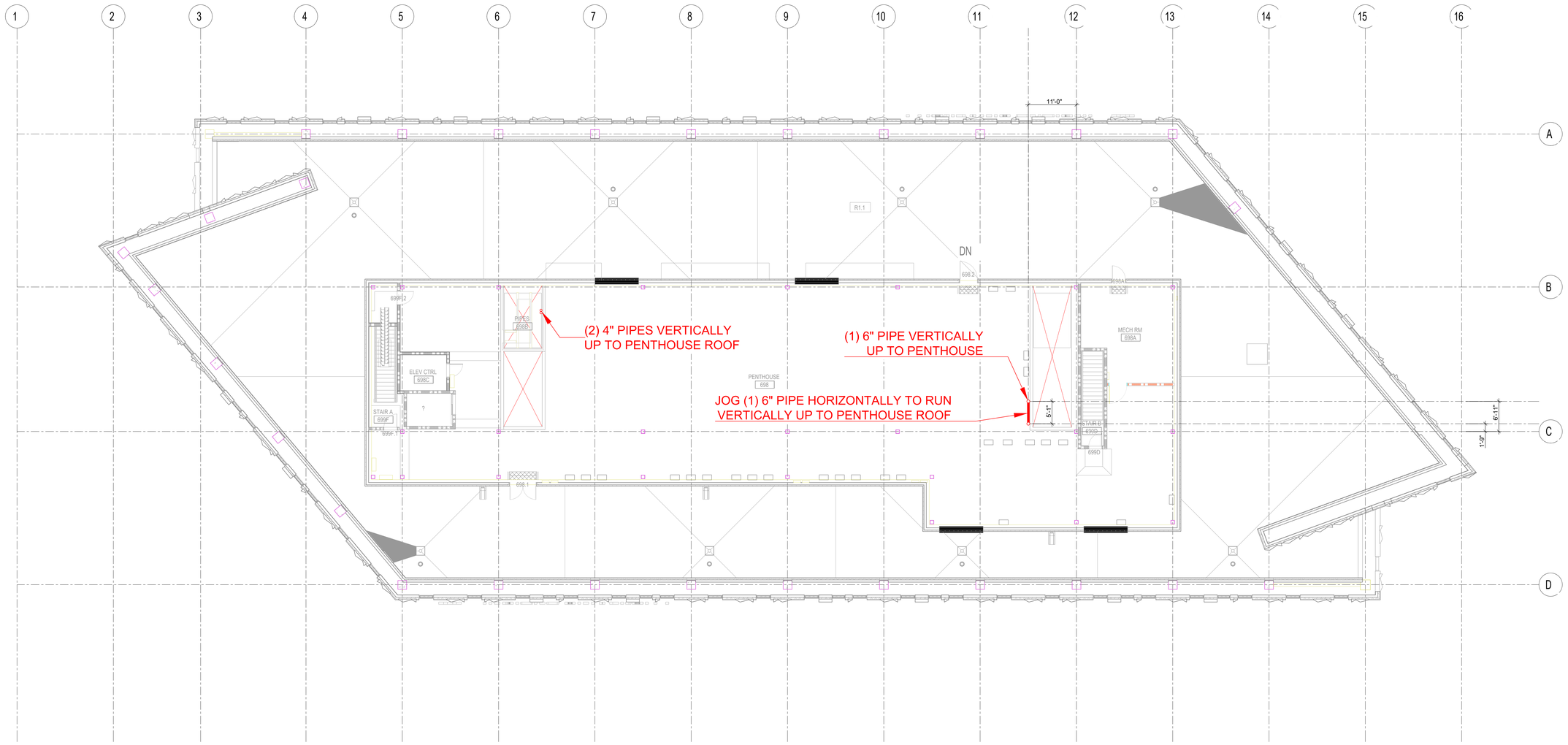

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PENTHOUSE FLOOR VIMS PIPE RISER LAYOUT

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FIGURE 8

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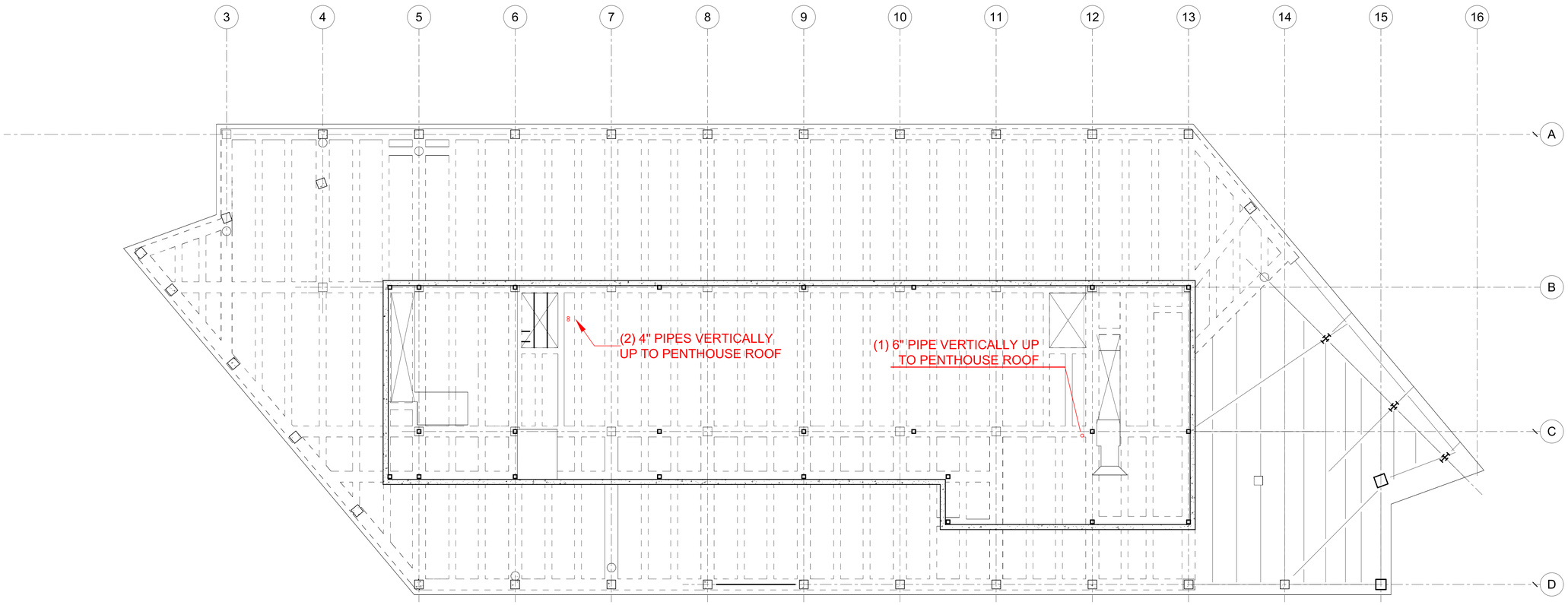

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ROOF VIMS PIPE RISER LAYOUT

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FIGURE 9

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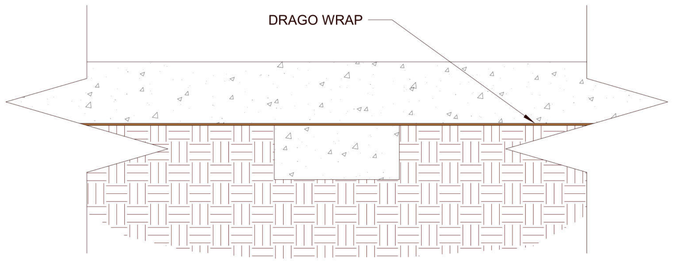

DRAGO® WRAP		
OVER TWO-POUR GRADE BEAM (NO IMPEDIMENT)		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	22 FEBRUARY 2022

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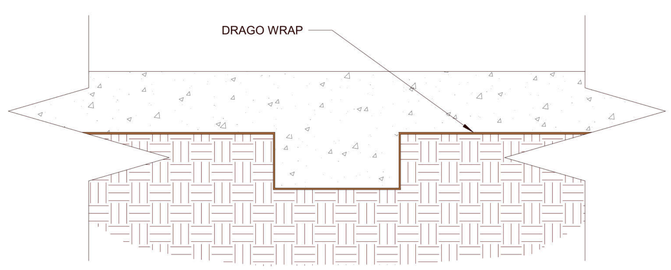

DRAGO® WRAP		
ENCAPSULATING MONOLITHICALLY-POURED INTERIOR GRADE BEAM		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	22 FEBRUARY 2022

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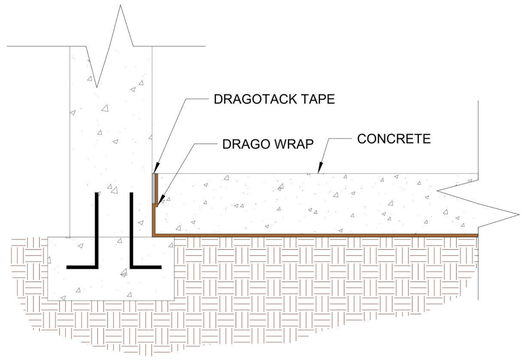

DRAGO® WRAP		
PERIMETER WALL SEAL TO SLAB AT SLAB ELEVATION WITH DRAGOTACK® TAPE		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	22 FEBRUARY 2022

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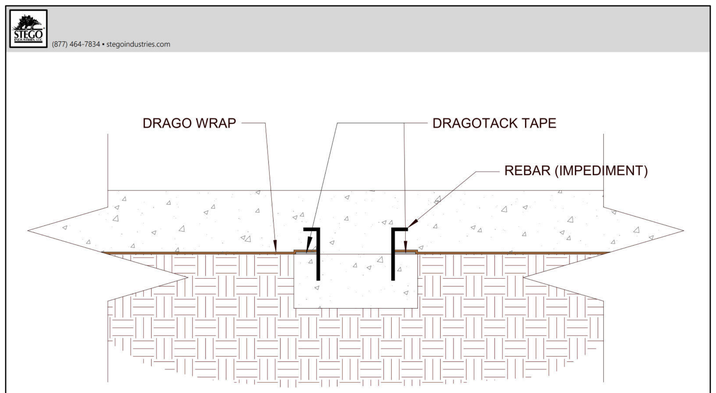

DRAGO® WRAP		
OVER TWO-POUR GRADE BEAM, SEALED AT IMPEDIMENT WITH DRAGOTACK® TAPE		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	22 FEBRUARY 2022

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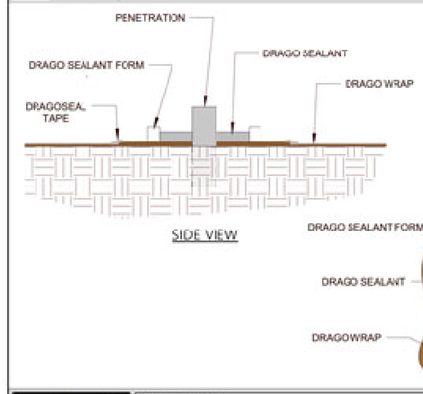

DRAGO® WRAP		
PENETRATION SEALED WITH DRAGOSEAL™ TAPE, DRAGO® SEALANT, AND DRAGO® SEALANT FORM		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	27 JANUARY 2022

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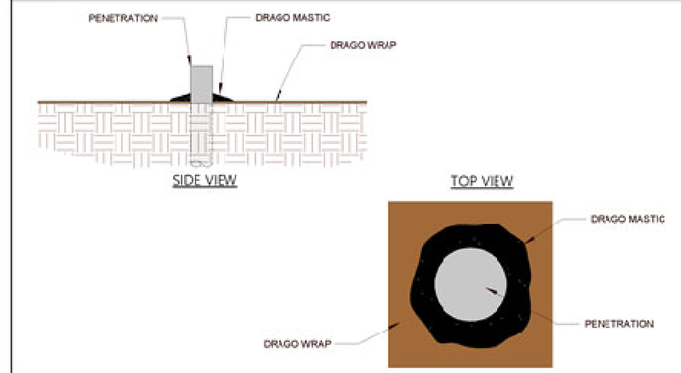

DRAGO® WRAP		
PENETRATION SEALED WITH DRAGO® MASTIC		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	7 AUGUST 2023

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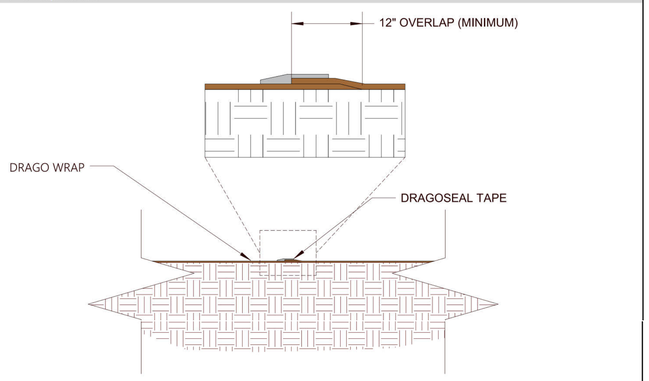

DRAGO® WRAP		
OVERLAP WITH DRAGOSEAL® TAPE		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	22 FEBRUARY 2022

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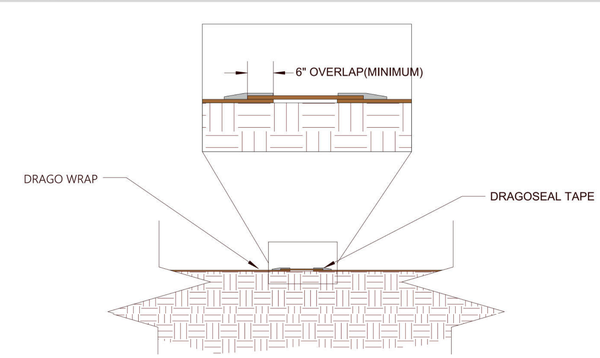

DRAGO® WRAP		
OVERLAP REPAIR OF DAMAGED AREA WITH DRAGOSEAL® TAPE		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	21 MARCH 2022

Conceptual Field Illustrations are drawings prepared by Stego Industries, LLC and intended to illustrate potential installation or repair details. These illustrations are not design documents and must be reviewed and approved by the appropriate design professional prior to utilization. Likewise, in no way do these illustrations waive the requirements of the Contract Documents or supersede local code requirements. A Conceptual Field Illustration that does not comply with the applicable version of ASTM E1643 and the installation instructions of the products under consideration, by definition, is not a Stego recommendation; rather, it is merely an example of a potential way to complete the work.

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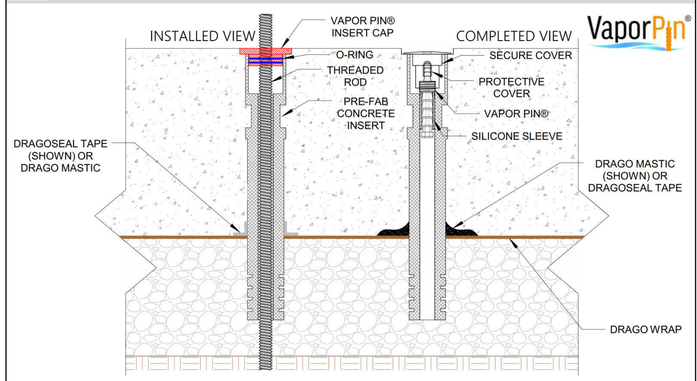

DRAGO® WRAP		
VAPOR PIN INSERT, SEALED WITH DRAGOSEAL® TAPE OR DRAGO® MASTIC		
CONCEPTUAL FIELD ILLUSTRATION		
PAGE 1 OF 1	NOT TO SCALE	19 MAY 2022

Conceptual Field Illustrations are drawings prepared by Stego Industries, LLC and intended to illustrate potential installation or repair details. These illustrations are not design documents and must be reviewed and approved by the appropriate design professional prior to utilization. Likewise, in no way do these illustrations waive the requirements of the Contract Documents or supersede local code requirements. A Conceptual Field Illustration that does not comply with the applicable version of ASTM E1643 and the installation instructions of the products under consideration, by definition, is not a Stego recommendation; rather, it is merely an example of a potential way to complete the work.

BSA LifeStructures
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SUITE 1700
DETROIT, MI 48226
313.983.3600
smithgroup.com

KERAMIDA

LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE

ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
2	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE
3	10/21/2025	ADDENDUM 2

STATE OF INDIANA · MICHAEL J. DEVRI · PE 10000147 · INDIANAPOLIS, INDIANA · PROFESSIONAL ENGINEER

9/29/2025

NRPP Mitigation ID 10995-RMS
IN Radon Mitigation Number RTM00924

VIMS DETAIL MEMBRANE

DATE	REF: SHEET INDEX
BSA PROJECT NO.	00360481

FIGURE 10

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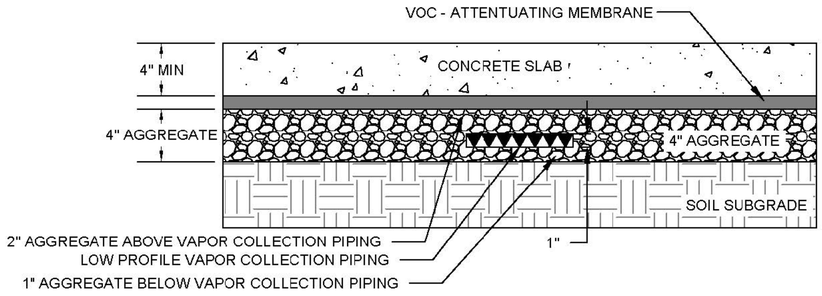
Autodesk Docs://00360481 - IU Launch Accelerator for Biosciences/ARCH-20250973-BLAB-BO_R24.rvt



SUB-SLAB VENT SYSTEM

Hex Reducing Bushing: 304 Stainless Steel, 1/2 in x 1/4 in Fitting Pipe Size, Male NPT x Female NPT

Item # **1RRP6** Mfr. Model # **1RRP6**
UNSPSC # **40142305** Catalog Page # **2785**

Country of Origin Taiwan. Country of Origin is subject to change.

The 304 stainless steel construction for this GRAINGER APPROVED hex reducing bushing features a chromium nickel materi View More

Inline Coupler: Chrome Plated CA360 Brass, 1/4 in Pipe Size, Coupler x MNPT, Shut-off, PMC12

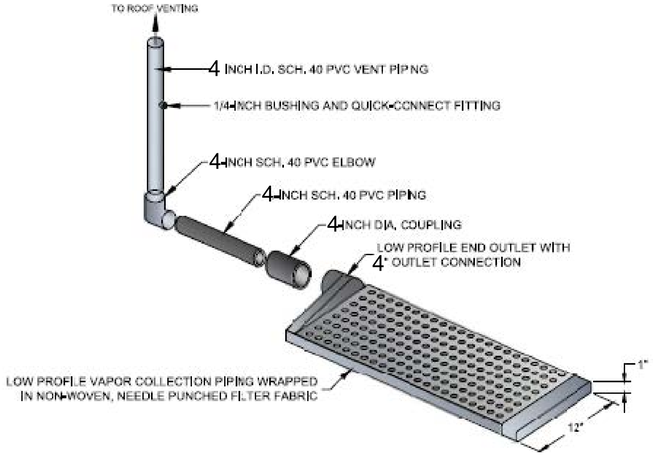
Item # **2YCW8** Mfr. Model # **MCD1004**
UNSPSC # **40142610** Catalog Page # **N/A**

Country of Origin USA. Country of Origin is subject to change.

Chrome-Plated Brass Push-Button Tube Fittings

• Max. pressure: 250 psi Temp. ran View More

VENT PIPE SAMPLE PORT



12-INCH LOW PROFILE VENT PIPING

VAPOR

SUB-SLAB VENT PIPE
IF DAMAGED,
IMMEDIATELY
NOTIFY

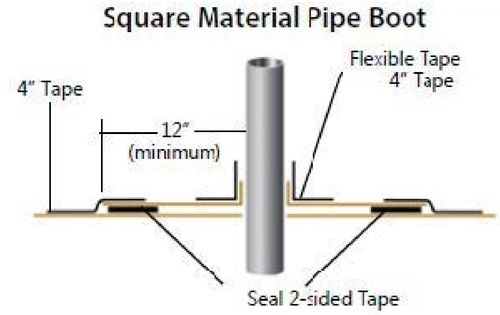
BUILDING OWNER

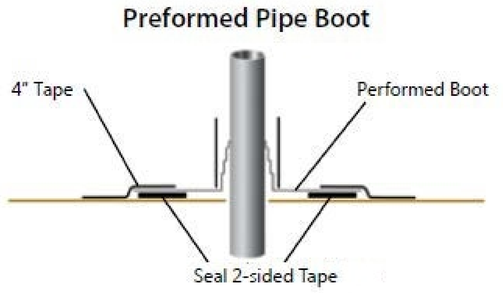
VENT RISER LABEL

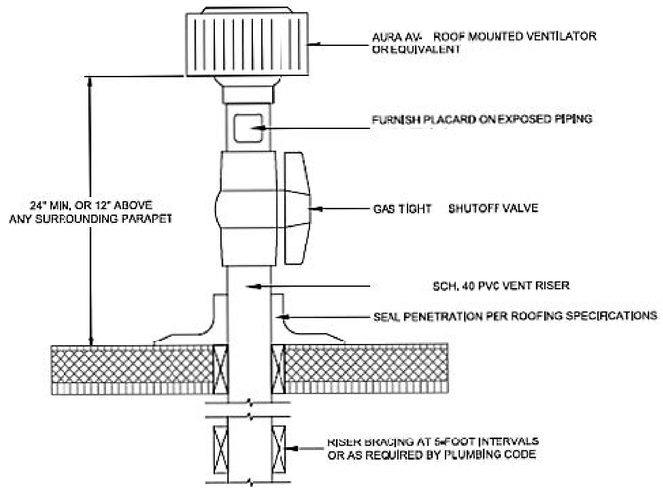
WARNING

THIS BUILDING IS PROTECTED WITH A VAPOR MITIGATION SYSTEM. ANY PROPOSED PENETRATION OR ALTERATION OF FLOOR SLAB REQUIRES NOTIFICATION OF THE OWNER AND INSPECTION BY A QUALIFIED VIMS MEMBRANE DESIGNER.

VIMS MEMBRANE IDENTIFICATION SIGN







ROOF PENETRATION DETAIL

TOUGH GUY Access Door: 8 in, 8 in, 8 3/8 in, 8 3/8 in, Insulated, 0.064 in Aluminum

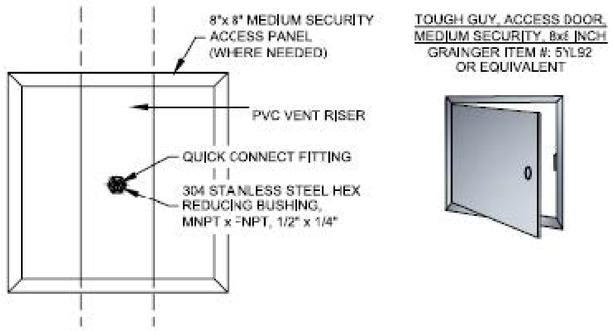
Item **2VE89**

Mfr. Model **2VE89**

GRAINGER APPROVED Access Panel: 8 in, 8 in, 8 in, 8 in, Uninsulated, ABS Plastic

Item **447P23**

Mfr. Model **34020**

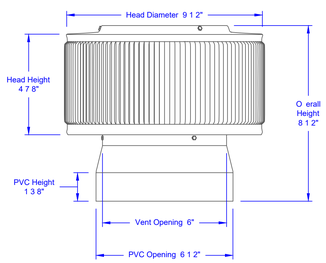


NOTES:
1. THIS IS A GENERAL DETAIL. LOCATIONS OF ACCESS DOORS TO BE DETERMINED BY OWNER AND VIMS DESIGNER.

Active Ventilation Products, Inc.
We site roof ents.com Emai

Specification Sheet 9/7/2022
Aura PVC Pipe Cap Model AV-6-PVC Diameter 6"

- Aluminum Allo 3000 Series
- Minimum Thic ness 0.025
- Designed to fit onto PVC pipes schedule 40 & 8



EXAMPLE ROOF MOUNTED VENTILATOR

BSA LifeStructures
175 S. Rangeline Rd, Suite 200
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smithgroup.com

KERAMIDA

LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS
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ISSUED / REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
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3	10/21/2025	ADDENDUM 2

STATE OF INDIANA
MICHAEL A DEVER
PE 10000147
INDIANAPOLIS INDIANA
PROFESSIONAL ENGINEER
9/29/2025

NRPP Mitigation ID 10995-RMS
IN Radon Mitigation Number RTM00924

VIMS DETAIL
PIPING & MISC

DATE REF: SHEET INDEX
BSA PROJECT NO. 00360481

FIGURE 11

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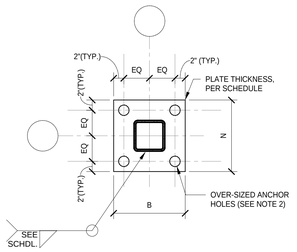

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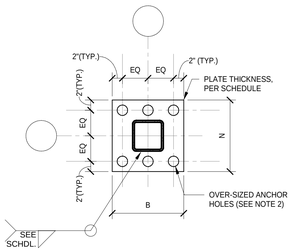
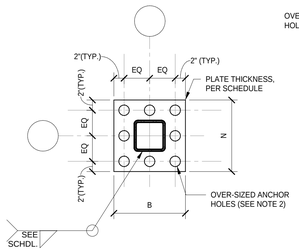


TYPE 2



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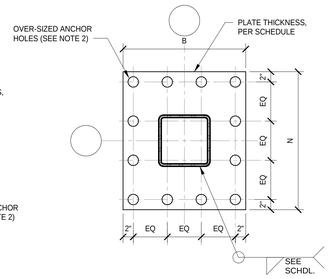
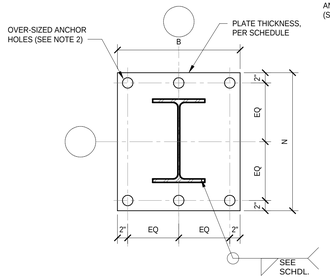
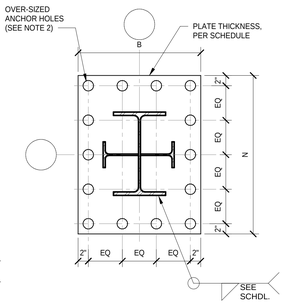


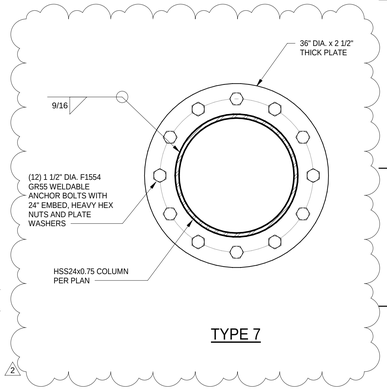
TYPE 4



TYPE 5



TYPE 6



TYPE 7

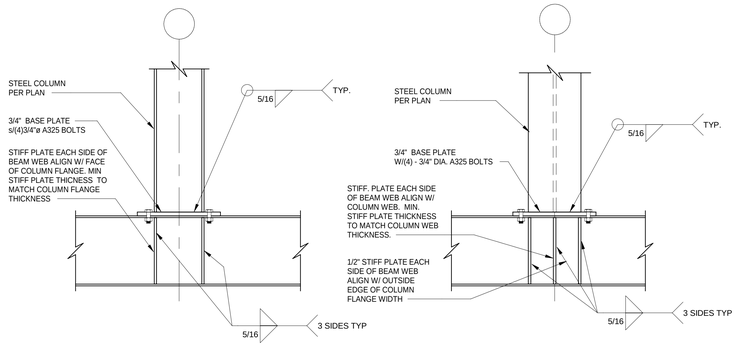
NOTES:

1. REFER TO BASE PLATE SCHEDULE FOR ALL DIMENSIONS, THICKNESSES, NUMBER AND SIZE OF ANCHORS
2. PROVIDE THE FOLLOWING ANCHOR HOLE DIAMETER BASED ON ANCHOR SIZE:

   3/4" ANCHOR = 1 5/16" HOLE
   1" ANCHOR = 1 13/16" HOLE
   1 1/4" ANCHOR = 2 1/16" HOLE
   2" ANCHOR = 3 1/4" HOLE

1 S007 TYPICAL BASE PLATE DETAILS

1" = 1'-0"



2 S007 TYPICAL TRANSFER COLUMN DETAIL

1" = 1'-0"

3 S007 TYPICAL BEAM OVER COLUMN DETAIL

1" = 1'-0"

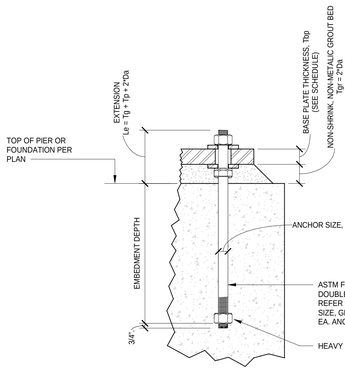
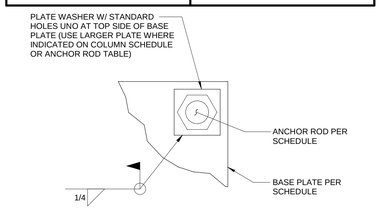


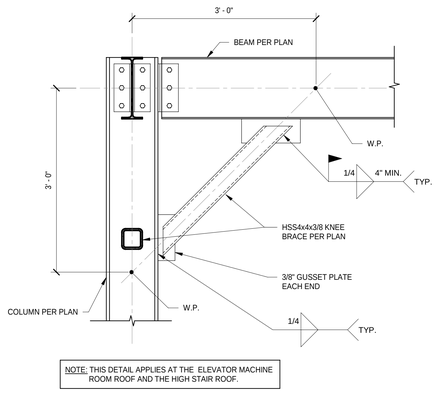
PLATE WASHER DIMENSIONS	
ANCHOR ROD DIA	REQD PLATE WASHER
<= 3/4"	1/4x2x2
1"	3/8x3x3
> 1" TO 1.5"	1/2x3-1/2x3-1/2



NOTES:
1. THIS DETAIL APPLIES AT ALL COLUMN ANCHOR RODS AT BRACED FRAMES AND MOMENT FRAMES UNO.

4 S007 TYPICAL CAST IN ANCHOR DETAIL

1 1/2" = 1'-0"



NOTE: THIS DETAIL APPLIES AT THE ELEVATOR MACHINE ROOM ROOF AND THE HIGH STAIR ROOF.

5 S007 TYPICAL KNEE BRACE DETAIL

1" = 1'-0"

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9365 Counselors Row, Suite 116
Indianapolis, IN 46240

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www.jpsconsultingengineers.com

LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE

ISSUED/REVISION SCHEDULE		
MARK	DATE	DESCRIPTION
2	10/21/2025	ADDENDUM 2
1	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE

REGISTERED PROFESSIONAL ENGINEER
No. 10302023
STATE OF INDIANA

TYPICAL STEEL COLUMN DETAILS

DATE
BSA PROJECT NO. 00360481

REF: SHEET INDEX

S007

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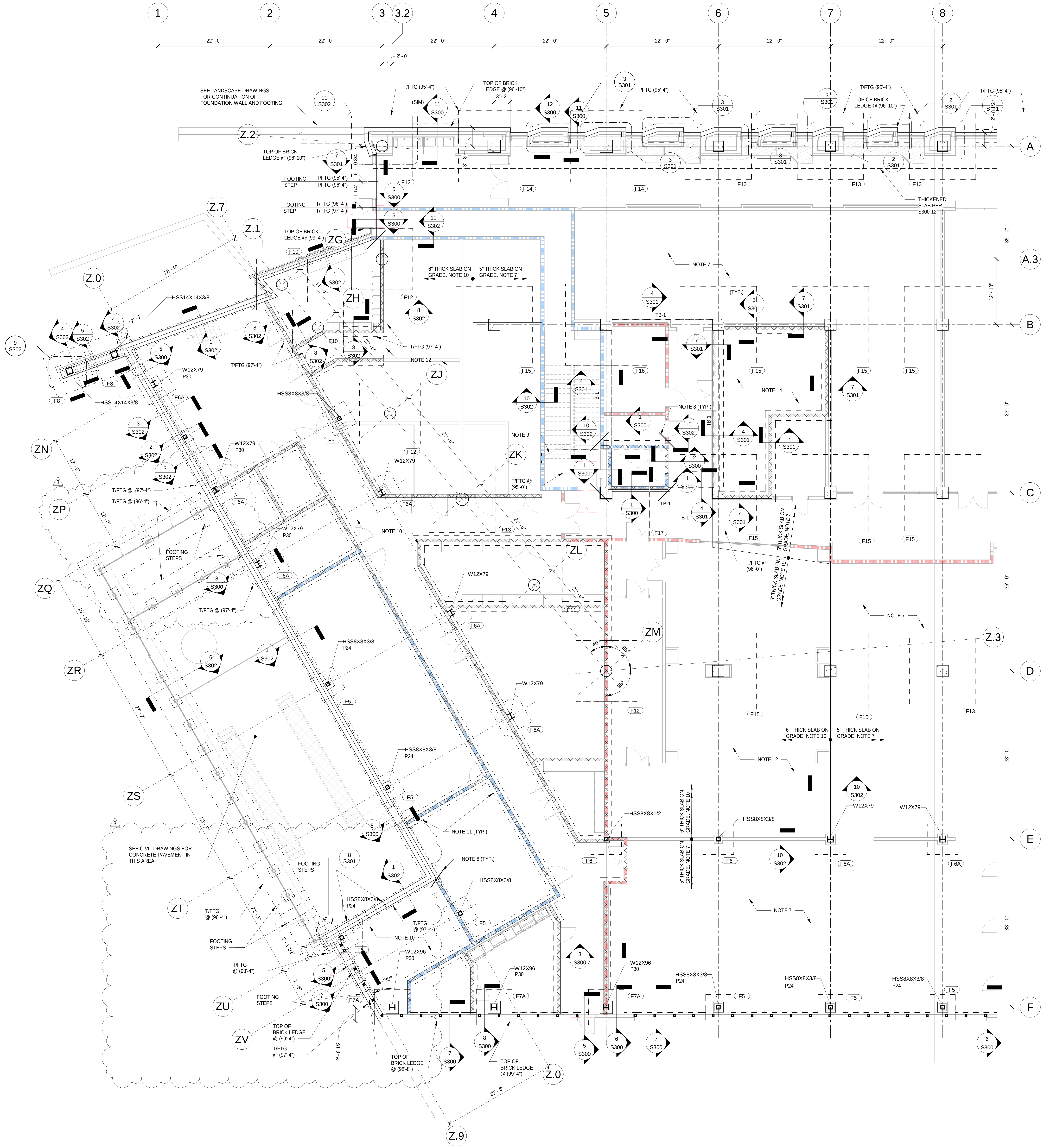


1 FOUNDATION PLAN - AREA A
S110A 1/8" = 1'-0"

STEEL BASE PLATE SCHEDULE

COLUMN SIZE	GEOMETRY LENGTH, N	GEOMETRY WIDTH, B	GEOMETRY THICKNESS, Tp	GEOMETRY TYPE	ANCHORAGE	COL TO BP WELD SIZE
HSS8x8	14	14	1	1	4 - 1" DIA. x 15" EMBED GR R1554-55	5/16
HSS10x10	16	16	1	2	6 - 1" DIA. x 15" EMBED GR R1554-55	5/16
HSS12x12	24	24	1 1/2	3	8 - 1 3/8" DIA. x 18" EMBED GR R1554-55	7/16
HSS24" DIAx0.75"	36 DIA.		2 1/2	7	12 - 1 1/2" DIA. x 24" EMBED GR 1554-55	9/16
HSS28x28	36	36	2 1/2	4	12 - 1 3/8" DIA. x 18" EMBED GR R1554-55	9/16
HSS30x30	38	38	2 1/2	4	12 - 1 3/8" DIA. x 18" EMBED GR R1554-55	9/16
W12	24	18	1 1/2	5	6 - 1" DIA. x 15" EMBED GR R1554-55	7/16
W14	24	18	1 1/2	5	6 - 1 3/8" DIA. x 18" EMBED GR R1554-55	7/16
W27 CRUCIFORM	36	36	2 1/2	6	12 - 1 3/8" DIA. x 18" EMBED GR R1554-55	9/16

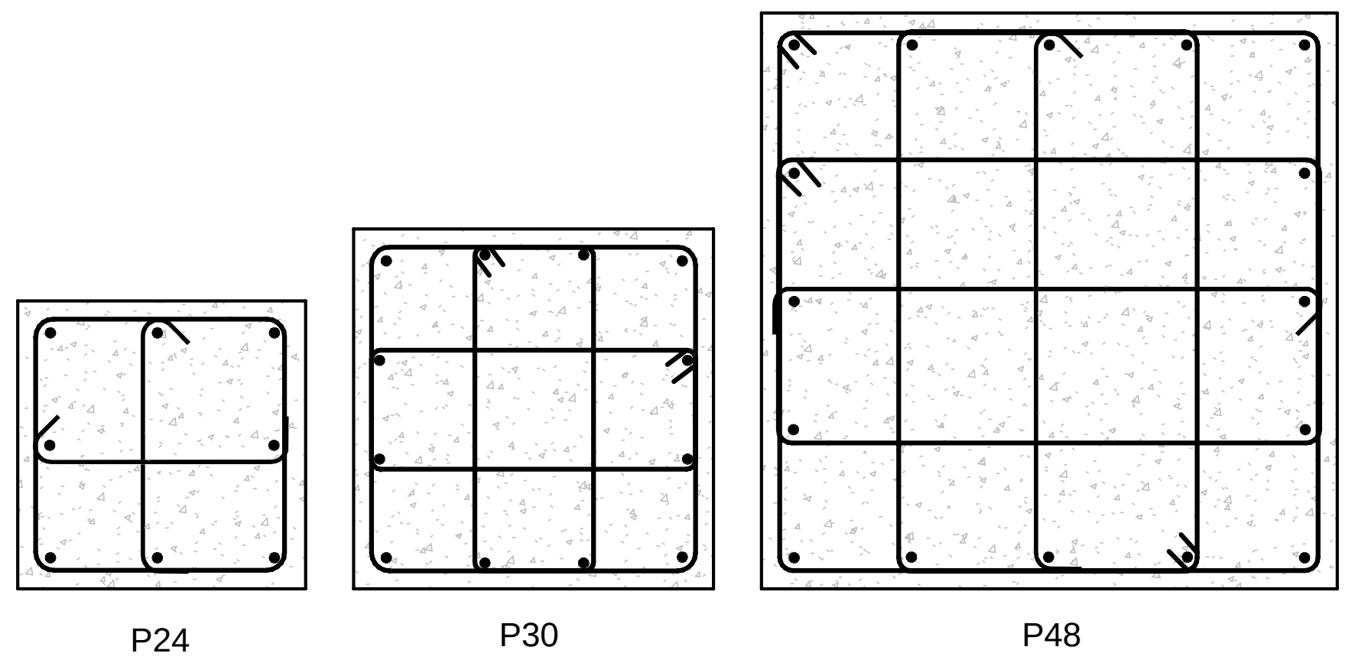
3

NOTES:

1. REFER TO GENERAL NOTES FOR INFORMATION PERTAINING TO STRUCTURAL STEEL CONSTRUCTION
2. REFER TO PLAN FOR COLUMN SIZES.
3. REFER TO TYPICAL BASE PLATE DETAIL ON SHEET S007 FOR BASE PLATE FABRICATION AND ATTACHMENT REQUIREMENTS.
4. ANCHOR LAYOUT SHALL MATCH BASE PLATE HOLE LAYOUT SHOWN IN TYPICAL BASE PLATE DETAIL AND GIVEN IN THIS SCHEDULE.
5. CONTRACTOR SHALL USE RIGID TEMPLATES TO SET ANCHORS IN CORRECT POSITION AND ELEVATION.

PIER SCHEDULE

MARK	PIER SIZE W x L	PIER VERT REINF	PIER TIES	REMARKS
P24	24" x 24"	(8)-#7	#4	NOTE 4
P30	30" x 30"	(12)-#7	#4	NOTE 4, NOTE 5
P48	48" x 48"	(16)-#9	#4	NOTE 4, NOTE 5



NOTES:
1. SPACE TIES AT 4" ON CENTER ALONG THE ANCHOR BOLT LENGTH AND AT 12" ON CENTER THEREAFTER, TYPICAL ALL PIERS.
2. TOP OF PIER ELEVATION SHALL BE 99'-4" UNLESS NOTED OTHERWISE. (SEE NOTE 5 IN REMARKS)
3. SEE PLAN FOR PIER SIZE AND LOCATION.
4. PROVIDE STANDARD HOOKS TOP AND BOTTOM FOR THE VERTICAL BARS. HOOKS CAN GO ANY DIRECTION WITHIN THE PIER. IT IS ACCEPTABLE TO OFFSET THE HOOKS VERTICALLY BY 1" TO AVOID CONGESTION IF NECESSARY.
5. WHERE NOTED IN THE REMARKS, THE TOP OF PIER ELEVATION SHALL BE AT (99'-0") UNLESS NOTED OTHERWISE ON PLAN.
6. ALTERNATE 90° & 135° HOOKS, TYPICAL.

COLUMN FOOTING SCHEDULE

MARK	FOOTING SIZE (W x L x D)	FOOTING REINFORCEMENT	REMARKS
F5	5'-0" x 5'-0" x 1'-6"	9 - #5 EW BOTTOM	
F6	6'-0" x 6'-0" x 1'-6"	12 - #5 EW BOTTOM	
F6A	6'-0" x 6'-0" x 1'-6"	12 - #5 EW TOP & BOTTOM	
F7	7'-0" x 7'-0" x 1'-6"	7 - #6 EW BOTTOM	
F7A	7'-0" x 7'-0" x 1'-6"	7 - #6 EW TOP & BOTTOM	
F8	8'-0" x 8'-0" x 1'-6"	10 - #6 EW BOTTOM	
F9	9'-0" x 9'-0" x 2'-0"	10 - #7 EW BOTTOM	
F10	10'-0" x 10'-0" x 2'-6"	12 - #7 EW BOTTOM	
F11	11'-0" x 11'-0" x 2'-6"	14 - #7 EW BOTTOM	
F12	12'-0" x 12'-0" x 2'-6"	12 - #8 EW BOTTOM	
F12A	12'-0" x 12'-0" x 2'-6"	12 - #8 EW TOP & BOTTOM	
F13	13'-0" x 13'-0" x 3'-0"	20- #7 EW BOTTOM	
F14	14'-0" x 14'-0" x 3'-0"	17 - #8 EW BOTTOM	
F15	15'-0" x 15'-0" x 3'-0"	20 - #8 EW BOTTOM	
F16	16'-0" x 16'-0" x 3'-0"	23 - #8 EW BOTTOM	
F17	17'-0" x 17'-0" x 3'-6"	24 - #8 EW BOTTOM	

NOTES:

1. ALLOWABLE SOIL (STRUCTURAL FILL) BEARING PRESSURE = 6000 PSF (UNFACTORED), UNO. IN ORDER TO OBTAIN THIS BEARING PRESSURE, THE GROUND MUST BE IMPROVED BY A RAMMED AGGREGATE PIER SYSTEM DESIGNED BY A SPECIALTY ENGINEER.

PLAN NOTES:

1. REFER TO SHEETS S001 - S013 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. TOP ALL FOOTINGS ALONG PERIMTER OF BUILDING SHALL BE AT ELEVATION (97'-4") AND INTERIOR FOOTINGS SHALL BE @ ELEVATION (98'-6') UNLESS NOTED OTHERWISE.
3. THE THE ELEVATOR PIT SHALL BE 2'-0" THICK SLAB WITH #5 @ 12" O.C. EACH WAY AT TOP AND BOTTOM. TOP OF SLAB SHALL BE AT ELEVATION (95'-0"). 2'-0" x 2'-0" x 18" DEEP SUMP PIT SHALL BE LOCATED AS SHOWN ON THE ELEVATOR MANUFACTURERS DRAWINGS. SEAL WATERTIGHT AROUND THE SLEEVE. VERIFY SIZE AND DEPTH OF ELEVATOR PIT WITH THE ELEVATOR SUPPLIER, PRIOR TO FABRICATION OR CONSTRUCTION. ELEVATOR PIT WALLS AND BASE SHALL HAVE XYPEX WATERPROOFING ADMIXTURE IN THE MIX.
4. TB-1 INDICATES A 24"x24" TIE BEAM WITH (4)-#8 CONT. AND #4 TIES AT 12" ON CENTER..
5. FOR COLUMN SCHEDULE AND DETAILS REFER TO SHEET S200.
6. FOR COLUMN FOOTING SCHEDULE REFER TO SHEET S110A.
7. THE SLAB ON GRADE SHALL BE 5" SLAB WITH 6x6-W2.1xW2.1 W.W.F. ON VAPOR BARRIER OVER 6" COMPACTED DRAINAGE FILL OVER PROOF ROLLED SUBGRADE. TOP OF SLAB SHALL BE AT ELEVATION (100'-0") UNLESS NOTED OTHERWISE.
8. AT CORNER OF ALL COLUMNS WITHOUT DIAMOND SHAPED CONTROL JOINT AND ALL CORNERS OF WALLS SHOWN ON THIS PLAN, PROVIDE (1)-#4 x 5'-0" DIAGONAL IN CENTER OF SLAB AT EVERY CORNER. TYPICAL AT COLUMNS AND WALL CORNERS.
9. THICKEN THE SLAB AT THE BASE OF ALL STAIR STRINGERS TO AN 8" SLAB WITH #4@12" ON CENTER EACH WAY MIDDLE. THE FOOTPRINT OF THE THICKENED SLAB SHALL BE 12" LARGER THAN THE FOOTPRINT OF THE BASE OF THE STAIR STRINGERS.
10. THE SLAB ON GRADE SHALL BE A 6" SLAB WITH 6x6 W2.9xW2.9 W.W.F. ON VAPOR BARRIER OVER 6" COMPACTED DRAINAGE FILL OVER PROOF ROLLED SUBGRADE. THE TOP OF SLAB SHALL BE AT ELEVATION (100'-0") UNLESS NOTED OTHERWISE.
11. PROVIDE THICKENED SLABS BELOW ALL CMU WALLS. SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
12. BRICK LEDGE ELEVATION SHALL BE AT (99'-4") UNLESS NOTED OTHERWISE.
13. ALL INTERIOR CMU WALLS SHALL HAVE #4@48" ON CENTER IN GROUTED CELLS WITH MATCHING DOWELS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR BRACING REQUIREMENTS AT THE TOPS OF CMU WALLS. CMU WALLS AROUND ELEVATOR SHAFTS SHALL HAVE #5@24" ON CENTER IN GROUTED CELLS WITH MATCHING DOWELS.
14. PROVIDE 8" SLAB ON GRADE WITH #4@12" ON CENTER EACH WAY MIDDLE OVER VAPOR BARRIER OVER 6" COMPACTED GRANULAR FILL OVER PROOF ROLLED SUBGRADE. THIS SLAB SHALL BE ISOLATED FROM THE SURROUNDING SLAB. SEE DETAILS.

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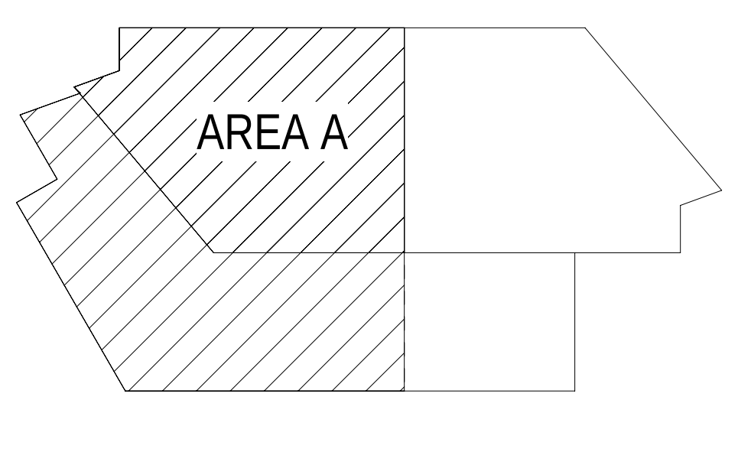
LAUNCH ACCELERATOR FOR BIOSCIENCES

INDIANAPOLIS, INDIANA

CLIENT PROJECT NO. - 20250072

CUMULATIVE DOCUMENTS

BP1-CD: SITE AND FOUNDATION PACKAGE



KEYPLAN
PROJECT NORTH

ISSUED/REVISION SCHEDULE

MARK	DATE	DESCRIPTION
3	10/21/2025	ADDENDUM 2
2	10/15/2025	BP1 Addendum 01
1	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE

No. 10302023
STATE OF INDIANA

FOUNDATION PLAN - AREA A

DATE REF: SHEET INDEX
BSA PROJECT NO. 00360481

S110A

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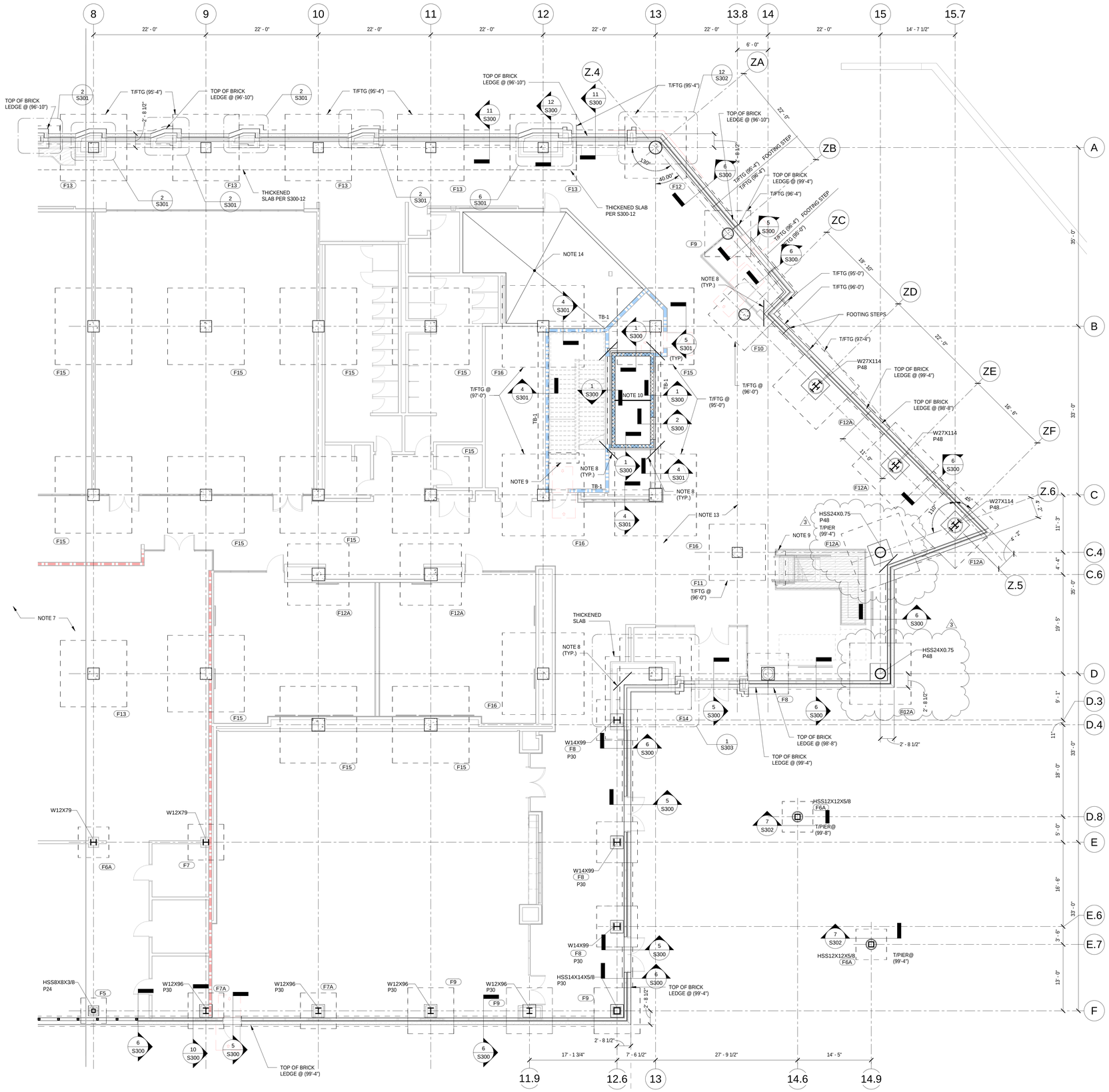

1 S110B FOUNDATION PLAN - AREA B

1/8" = 1'-0"

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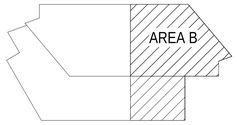


KEYPLAN
PROJECT NORTH

ISSUED/REVISION SCHEDULE

MARK	DATE	DESCRIPTION
3	10/21/2025	ADDENDUM 2
2	10/15/2025	BP1 Addendum 01
1	09/29/2025	BP1-CD: SITE AND FOUNDATION PACKAGE

PLAN NOTES:

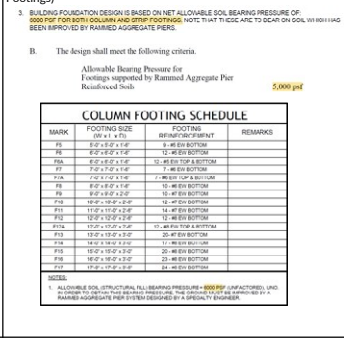
1. REFER TO SHEETS S001 - S013 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. TOP ALL FOOTINGS ALONG PERIMTER OF BUILDING SHALL BE AT ELEVATION (97'-4") AND INTERIOR FOOTINGS SHALL BE @ ELEVATION (98'-6") UNLESS NOTED OTHERWISE.
3. THE THE ELEVATOR PIT SHALL BE 2'-0" THICK SLAB WITH #5 @ 12" O.C. EACH WAY AT TOP AND BOTTOM. TOP OF SLAB SHALL BE AT ELEVATION (95'-0"), 2'-0" x 2'-0" x 18" DEEP SUMP PIT SHALL BE LOCATED AS SHOWN ON THE ELEVATOR MANUFACTURERS DRAWINGS. SEAL WATERTIGHT AROUND THE SLEEVE. VERIFY SIZE AND DEPTH OF ELEVATOR PIT WITH THE ELEVATOR SUPPLIER PRIOR TO FABRICATION OR CONSTRUCTION. ELEVATOR PIT WALLS AND BASE SHALL HAVE XYPEX WATERPROOFING ADMIXTURE IN THE MIX.
4. TB-1 INDICATES A 24"x24" TIE BEAM WITH (4)-#8 CONT. AND #4 TIES AT 12" ON CENTER.
5. FOR COLUMN SCHEDULE AND DETAILS REFER TO SHEET S200.
6. FOR COLUMN FOOTING SCHEDULE REFER TO SHEET S110A.
7. THE SLAB ON GRADE SHALL BE 5" SLAB WITH 6x6-W2.1xW2.1 W.W.F. ON VAPOR RETARDER OVER 6" COMPACTED DRAINAGE FILL OVER PROOF ROLLED SUBGRADE. TOP OF SLAB SHALL BE AT ELEVATION (100'-0") UNLESS NOTED OTHERWISE.
8. AT CORNER OF ALL COLUMNS WITHOUT DIAMOND SHAPED CONTROL JOINT AND ALL CORNERS OF WALLS SHOWN ON THIS PLAN, PROVIDE (1)-#4 x 5'-0" DIAGONAL IN CENTER OF SLAB AT EVERY CORNER. TYPICAL AT COLUMNS AND WALL CORNERS.
9. THICKEN THE SLAB AT THE BASE OF ALL STAIR STRINGERS TO AN 8" SLAB WITH #4@12" ON CENTER EACH WAY MIDDLE. THE FOOTPRINT OF THE THICKENED SLAB SHALL BE 12" LARGER THAN THE FOOTPRINT OF THE BASE OF THE STAIR STRINGERS.
10. PROVIDE HSS12x6x1/4 DIVIDER BEAM BETWEEN ELEVATORS AT EACH FLOOR LINE AND MIDWAY BETWEEN FLOORS.
11. THE BRICK LEDGE SHALL BE AT ELEVATION (99'-4") UNLESS NOTED OTHERWISE.
12. ALL INTERIOR CMU WALLS SHALL HAVE #4@48" ON CENTER IN GROUTED CELLS WITH MATCHING DOWELS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR BRACING REQUIREMENTS AT THE TOPS OF CMU WALLS. CMU WALLS AROUND ELEVATOR SHAFTS SHALL HAVE #5@24" ON CENTER IN GROUTED CELLS WITH MATCHING DOWELS.
13. AT AREAS OF TERRAZZO FLOOR, PROVIDE A 3/8" RECESSED SLAB. COORDINATE DIMENSIONS OF THE SLAB RECESS AND CONTROL JOINT LAYOUT WITH FUTURE INTERIOR PACKAGES.
14. WHERE INDICATED ON PLAN, DO NOT POUR THE SLAB ON GRADE IN THIS ROOM AT THIS TIME. THIS SLAB WILL BE POURED AS PART OF A FUTURE PROJECT ONCE THE LAYOUT OF THE ROOM AND THE UNDERSLAB INFORMATION IS KNOWN.

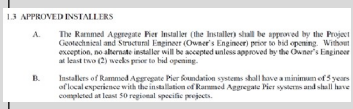
FOUNDATION PLAN - AREA B

DATE	REF: SHEET INDEX
BSA PROJECT NO.	00360481

S110B

20250072 - IU LAB - BP1 Bidder RFI's

RFI #	Bid Package	Discipline	Sheet/Spec Section	Question	Answer	Response By	Addendum
1	BE1-03A	Structural	S203, S226, 3 & 4/S202	Structural Sheets S203 to S226 show gravity and lateral beam schedules with reinforcement details, including top and bottom continuous bar lengths and arrangements for all levels from Level 02 to the Penthouse. However, the typical concrete beam details on Sheets 3 and 4/S202 show conditions for gravity and lateral beams that completely differ from those in the schedules. So, Shall we follow the top and bottom longitudinal reinforcement bar arrangements and lengths as per the beam schedule sheets (S203 to S226) and disregard the typical detail sheets? Please confirm. See attached drawing for reference.	This is not a BP-1 question. This will be clarified as the design evolves and will be included in future bid packages.	JPS	
2	BE1-31B	Civil	31 60 00	In the spec it says we have to be an approved vendor to submit a bid. It says we have to be approved by the geotech and I believe the structural engineer. Do you know how we do that?	If you have a history of completing projects of this size and scope, you would be approved for this project.	JPS	N/A
3	BE1-31B	Civil	31 60 00	The specs state that the psf is 5000 and the drawings say 6000 psf, please advise to which is the correct psf.	Please use 6000 PSF for the bearing capacity over rammed aggregate piers.	JPS	N/A
4	BE1-03A	Structural	03 10 00	Can the specific areas that will require the formed surfaces to be Class C be clarified or defined?	This is not a BP-1 question. This will be clarified as the design evolves and will be included in future bid packages.	JPS	
5	BE1-03A	Structural	03 30 00	Plan Note on 8 on sheets S106A & S106B references a 2" topping slab in the penthouse area, and references the architectural drawings to for the extents of said topping slab. There is no reference to a topping slab in the architectural drawings. Please clarify.	This is not a BP-1 question. This will be clarified as the design evolves and will be included in future bid packages.	JPS	N/A
6	BE1-32B	Landscape	C500/LA100	Looking at sheet C500 – Site Improvement Plan, the concrete walk along the north and east side of the building is Noted as Note 18. Note 18 on Sheet C500 calls for "Acid Etch / Integral Concrete Walk and Base. Refer to Landscape Plan." When I look at the Landscape Plan, Sheet LA100, it appears there are depictions of 2 types of concrete finishes in these areas, "Integral Concrete Walk and Base Type 1" and "Integral Concrete Walk and Base Type 2". Can we get more clarification to what is designed or wanted?	Addressed in Addendum		
7	BE1-32B	Landscape	C500/LA100	There is a drive entrance at the North/West Corner of the building off of Indiana Ave. On Sheet C500 the driveway is noted as Note 9 "6" Concrete Pavement" but on Sheet LA100 this area is depicted as "Integral Concrete Walk and Base Type 1". Please Clarify.	Addressed in Addendum		
8	BE1-32B	Landscape	C500/LA100	To the West of the drive entrance off of Indiana Ave, on Sheet LA100 there is sidewalk depicted as "Intregral Concrete Walk Type 1" but on Sheet C500 in this same area, there is no note of there being any work in this area. Please advise if there is to be concrete work in this area and if so, what time.	Follow Sheet LA100 - include required demolition to acceptabe connection to existing sidewalk.		
9	BE1-32B	Civil	C500	On the West side of the building on Sheet C500, there is a fenced in area. A Dumpster area that has Note 35 "8" Concrete Pavement" and Note 11 "Waste Container Pad and Enclosure" Please Clarify is this area just 8" Concrete? Also in this area, there is a larger fenced in area that appears to have a piece of equipment setting in it. There is Note 35 "8" Concrete Pavement but there is also a Note 35 pointing to what appears could be an Equipment Pad for the equipment. Please clarify this area.	The enirte MEP yard should be 8" Concrete Pavement. Refer to concrete pavement detail 16 on sheet C510.	JPS	N/A
10	BE1-32B	Civil		BE1-32B – Site Concrete bid package scope of work says we are responsible for the Integral Retaining Wall for Monument Sign. Can you confirm this bid package is only responsible for the concrete portion and the Stone Cladding and Wall Cap is by others?	Yes, Correct. Bid Package BE1-32B is only responsible for the concrete portion, the stone cladding and wall cap is by others.	FAW	N/A
11	BE1-32B	Civil	C511	On Sheet C511 for details, there are INDOT Details referenced for the ADA Ramp Detectable Warning Elements. Specifically using brick pavers for the detectable warning areas. All of the ADA Ramps appear to be in the City Right of Way. I don't believe The City of Indianapolis will allow brick pavers warning elements and requires the use of the Cast Iron ADA Warning Plates. Please advise to what we are to use.	Use Cast Iron ADA Detectable Warning Surface at ramps in the City Right of Way.	JPS	
12	BE1-32B	Civil		Please confirm the tree grates are to be furnished by others and not by Bid Package BE1-32B-Site Concrete bidders.	Yes, Correct. Bid Package BE1-32C will furnish the tree grates.	FAW	N/A
13		Civil		Soil Management Plan requires 'Site Worker adherence to the contractor's Health and Safety Plan (HASP)'. Please provide HASP for review.	See FAW's HASP		
14	BE1-31B	Civil		2.Please identify all foundation types requiring RAP Improvements (column footings, wall footings, mat foundations, tie beams, slabs on grade, thickened slabs, etc.) and please delineate bearing pressures required for each foundation type. For Reference: •Spec Section 31 60 00 / 3.1 / B: calls for 5,000 PSF for footings supported by RAP's •S001 / Earthwork Foundation Note 3: calls for 6,000 PSF for Column & Strip Footings •S110A / Column Footing Schedule: calls for 6,000 PSF (for Column Footings)  3. BUILDING FOUNDATION DESIGN IS BASED ON NET ALLOWABLE SOIL BEARING PRESSURE OF 6000 PSF FOR BOTH COLUMN AND STRIP FOOTINGS. NOTE THAT THESE ARE TO BEAR ON SOIL WHICH HAS BEEN IMPROVED BY RAMMED AGGREGATE PIERS. B. The design shall meet the following criteria. Allowable Bearing Pressure for Footings supported by Rammed Aggregate Pier Reinforced Soils 5,000 psf COLUMN FOOTING SCHEDULE MARK | FOOTING SIZE (W x L x Th) | FOOTING REINFORCEMENT | REMARKS F5 | 5'-0" x 5'-0" x 1'-6" | 9 - #6 EW BOTTOM F6 | 6'-0" x 6'-0" x 1'-6" | 12 - #6 EW BOTTOM F6A | 6'-0" x 6'-0" x 1'-6" | 10 - #5 EW TOP & BOTTOM F7 | 7'-0" x 7'-0" x 1'-6" | 7 - #6 EW BOTTOM F7A | 7'-0" x 7'-0" x 1'-6" | 7 - #5 EW TOP & BOTTOM F8 | 8'-0" x 8'-0" x 1'-6" | 10 - #6 EW BOTTOM F9 | 9'-0" x 9'-0" x 2'-0" | 10 - #7 EW BOTTOM F10 | 10'-0" x 10'-0" x 2'-0" | 12 - #7 EW BOTTOM F11 | 11'-0" x 11'-0" x 2'-6" | 14 - #7 EW BOTTOM F12 | 12'-0" x 12'-0" x 2'-6" | 12 - #8 EW BOTTOM F11a | 17'-0" x 17'-0" x 3'-0" | 17 - #8 EW TOP & BOTTOM F13 | 13'-0" x 13'-0" x 2'-0" | 20 - #7 EW BOTTOM F14 | 14'-0" x 14'-0" x 2'-0" | 11 - #8 EW BOTTOM F15 | 15'-0" x 15'-0" x 2'-0" | 20 - #8 EW BOTTOM F16 | 16'-0" x 16'-0" x 2'-0" | 23 - #8 EW BOTTOM F17 | 17'-0" x 17'-0" x 3'-0" | 24 - #8 EW BOTTOM NOTES: 1. ALLOWABLE SOIL (STRUCTURAL FILL) BEARING PRESSURE = 6000 PSF (UNFACTORED), UNO. IN ORDER TO OBTAIN THIS BEARING PRESSURE, THE GROUND MUST BE IMPROVED BY A RAMMED AGGREGATE PIER SYSTEM DESIGNED BY A SPECIALTY ENGINEER.	All footings on this project are required to bear on soil which has been approved by rammed aggregate piers. The rammed aggregate piers shall provide a net allowable bearing capacity of 6000 PSF. This applies to column footings, strip footings, elevator pits. It does not apply to tie beams or slabs on grade, nor does it apply to thickened slabs.	JPS	N/A

15	BE1-31B	Civil	31 60 00	31 60 00 / 1.3 requires Installer pre-approval.  1.3 APPROVED INSTALLERS A. The Rammed Aggregate Pier Installer (the Installer) shall be approved by the Project Geotechnical and Structural Engineer (Owner's Engineer) prior to bid opening. Without exception, no alternate installer will be accepted unless approved by the Owner's Engineer at least two (2) weeks prior to bid opening. B. Installers of Rammed Aggregate Pier foundation systems shall have a minimum of 5 years of local experience with the installation of Rammed Aggregate Pier systems and shall have completed at least 50 regional specific projects.	If they meet the qualifications of bullet point B, there is no reason they would not be accepted by the design team.	JPS	N/A
16	BE1-32C	Landscape		PER SCOPE OF WORK - Where new landscape is shown, subcontractor shall excavate MIN. 30" and add new planting soil. Is the landscape contractor to mobilize and excavate along side the earthwork contactor at the beginning of the project? How are areas that are to receive 18" of soil to be excavated? Are we excavation down to 30" or 18"? Does this include all Turf areas (Seed and Sod)	Discuss with timing of work with FAW. Review specifications for topsoil depth requirements.	Terra	
17	BE1-32C	Landscape	Tree Grates	Please provide specs for the 4 x 10 Tree Grates	Refer to site furnishing specifications	Terra	
18	BE1-32C	Landscape	Irrigation	Please provide EXACT point of connection for the irritation system tie in.	See future bid package for precise location.	Terra	
19	BE1-03A	Architectural	Waterproofing	Confirm both types of waterproofing are required.	We recommend redundant waterproofing to resolve design issues identified from the geotechnical report and structural continuity.	BSA	N/A
20	BE1-03A	Architectural	07 13 26	Please confirm IU wants a "No Dollar Limit" warranty listed in Section 071326.	NDL warranty is correct to protect IU due to soil and groundwater conditions identified from the geotechnical report and phase 2 environmental investigation.	BSA	N/A
21	BE1-32C	Landscape		Landscape plans indicate Type 1 and Type 2 Decorative Walks - however specifications only referenced ONE color. Is that going to be type 1? or type 2? and what is the other one?	Contractor shall refer to Landscape Architecture sheets for limits of integral color concrete. All associated typical concrete profile details occur on civil sheets	Terra	N/A
22	BE1-32A	Landscape		Are the retaining walls be in the structural concrete package?	No, they are to be included in the BE1-32B Site Concrete package as listed in the detailed scope breakdown.	FAW	N/A
23	BE1-32A	Civil		The scope states that detectable warning 'brick' is to be used at handicap ramps. I don't think the City of Indy allows brick anymore; it needs to be steel or plastic.	Please include cast iron dtectable warning surfaces at all ADA ramps	JPS	N/A
24				Are the flagpoles (and foundations) being installed by others?	Flagpoles and foundations to be included in BE4-32A Bid package.	FAW	N/A
25				Are the handrails at the stairs installed by others?	Site metal railings will be included in BE4-32D Bid Package.	FAW	N/A
26	BE1-31B	Civil		Can Integral Curb be placed adjacent to concrete pavements in lieu of the "Straight" Concrete Curb specified?	Yes, integral curb is acceptable.	JPS	
27	BE1-31B	Civil		Some site details indicate concrete is to have fiber, other details do not. Is fiber required in all concrete? Or none of the concrete?	Fiber mesh reinforcing should be included on all site concrte at a rate of 1.5 lbs / cubic yard of concrete per site concrete specification section 321300.	JPS	N/A
28	BE1-31B	Civil		Are D-1 joints required at the contraction joints in the concrete? Joint details 16 on sheet C510 does not have a detail for contraction joints, all of them shown are construction joints.	Control joints can be tooled or was cut. Refer to site concrete specification 321300 for additional information on control and construction joint requirements.	JPS	N/A
29	BE1-31B	Civil		The plans note that the chairback curb is to be transitioned to Roll Curb (note 33 on C500), I don't see any roll curb on the job, please advise.	Flush curb should be used at the areas where roll curb is edentified on the landscape plan.	JPS	N/A
30	BE1-31B	Civil		Shouldn't the Stoops in the 6" and 8" concrete pavement areas be the same thickness? or just 4" per the detail.... or are they even needed at the concrete pavement areas?	Yes, stoops should be the same thickness as the surrounding concrete. Refer to structural plans for the stoop detail.	JPS	N/A
31	BE1-32B	Civil		For the IU Launch Accelerator Building, can you please confirm if the civil datum is: 100'-0" is equal to the Finished Floor Elevation (F.F.E.) 694.80.	Confirmed FFE 624.8' - 100'-0"	JPS	N/A
32	BE1-32A	Civil		Can you please confirm that the Asphalt Paving contractor is responsible for furnishing and installing the stone base for the asphalt pavement? I understand contractor is responsible for fine grading.	Asphalt paving contractor is NOT responsible for furnishing and installing the stone base for the asphalt pavement, it is included in BE1-31A bid package as detailed in line item 16.	FAW	N/A
33							N/A