SCHOOLEY CALDWELL

ARCHITECTURE. INSPIRED.

September 19, 2025 SCA 24410.00

ADDENDUM NO. 1

To the Contract Documents for:

DNR-250004 GREAT COUNCIL OBSERVATION TOWER

1587 US-68,
Xenia, OH 45385

TO ALL BIDDERS:

This Addendum supplements and amends the original Bidding Documents, shall be taken into account in preparing bids, and shall become a part of the Contract Documents.

The following documents are a part of and are issued with this Addendum and are attached to this Addendum.

Pre-Bid Meeting Agenda
Pre-Bid Sign-In Sheet
Geotechnical Report
Sheet G1 – Index and Symbols
Sheet T-G2 – Code Analysis – Tower
Sheet M-AD1 – Floor Plan Demolition
Sheet M-AD2 – Elevation Demolition
Sheet M-A1 – Floor Plans and Interior Elevations
Sheet M-A3 – Exterior Elevations and Building Sections
Sheet R-A1 – Floor Plan
Sheet T-A1 – Tower Floor Plan
Sheet R-S4 – Foundation Plan
Sheet T-S4 – Foundation Plan and Details
Sheet P101 – First Floor Plan – Plumbing
Sheet P501 – Details – Plumbing
Sheet E002 – Site Plan – Electrical
Sheet E201 – Floor Plan – Electrical
Sheet E701 – Diagrams – Electrical

CONTRACT REQUIREMENTS

ITEM 1 – SECTION 00 31 32 – GEOTECHNICAL DATA

Add attached geotechnical report to contracting requirements in the project manual.

SPECIFICATIONS

ITEM 2 – SECTION 07 41 13 – MANUFACTURED ROOF PANELS

Delete this section from the Project Manual.

ITEM 3 – SECTION 09 96 00 – HIGH PERFORMANCE COATINGS

The coating system noted in 2.03E and 3.09B, Aliphatic Polyester Polyurethane, is intended for surfaces to be painted/coated in the stair railing system.

300 Marconi Boulevard
Columbus, Ohio 43215

T 614 628.0300
F 614 628.0311

schooleycaldwell.com

DRAWINGS

ITEM 4 G1 – INDEX AND SYMBOLS

Removed sheet M-A5 from index.

ITEM 5 T-G2 – CODE ANALYSIS - TOWER

Revised occupancy to B use.

Removed Floor Occupancy Schedule.

ITEM 6 M-AD1 – FLOOR PLAN DEMOTLITION

Added light fixtures for demolition to reflected ceiling plan.

ITEM 7 M-AD2 – ELEVATION DEMOTLITION

Added note for light fixture for demolition to reflected ceiling plan.

ITEM 8 M-A1 – FLOOR PLANS AND INTERIOR ELEVATIONS

Revised casework keynote to manufactured metal casework.

ITEM 9 M-A3 – EXTERIOR ELEVATIONS AND BUILDING SECTIONS

Revised roof keynote to indicate synthetic shake shingles.

ITEM 10 M-A5 – INTERIOR DETAILS

Sheet removed from project.

ITEM 11 R-A1 – FLOOR PLAN

Added Window Type C to sheet.

Added window tag and dimensions to Reflected Ceiling Plan.

ITEM 12 T-A1 – TOWER FLOOR PLAN

Revised layout of platform decking to coordinate with floor joist orientation.

ITEM 13 T-S4 – FOUNDATION PLAN & DETAILS

Adjusted angles and dimensions at gap in circular curb.

Added leave-outs at elevation 100’-0” at 8’-0” c/c maximum.

ITEM 14 R-S4 – FOUNDATION PLAN

Added footing step at south wall of restroom building to accommodate utility lines.

Added note and detail associated with footing step.

ITEM 15 P101 – FIRST FLOOR PLAN PLUMBING

Added General sheet note to read, “IT IS THE DESIGN INTENT THAT EACH RESTROOM'S WATER SUPPLY SHALL BE ABLE TO BE SHUT DOWN INDEPENDENTLY FOR WINTERIZATION. PROVIDE SHUT OFF VALVES AND AIR COMPRESSOR FITTINGS AS NECESSARY.”

Revised keynote 7.

Revised keynote 8.

ITEM 16 P501 – DETAILS - PLUMBING

Revised Domestic Isometric 5.

ITEM 17 E002 – SITE PLAN - ELECTRICAL

Revised keynote 10.

Revised keynote 11.

Revised keynote 19.

ITEM 18 E201 – FLOOR PLAN - ELECTRICAL

Added Keynote note 8 to read, “APPROXIMATE LOCATION OF OWNER COMMUNICATION EQUIPMENT. STUB CONDUITS UP IN CORNER OF ROOM. CONFIRM EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.”

ITEM 19 E701 – DIAGRAMS - ELECTRICAL

Revised keynote 5.

QUESTIONS

ITEM 20 Q: SHEET M-A5 INDICATES PLASTIC LAMINATE CABINETS AND COUNTERTOPS. THERE IS NO SPECIFICATION FOR PLASTIC LAMINATE CASEWORK, BUT THERE IS A 123100 SPEC FOR METAL CASEWORK WITH STAINLESS STEEL COUNTERTOPS. CAN YOU CONFIRM WHICH IS CORRECT AND PROVIDE REVISED SPECS OR PLANS TO MATCH?

A: 12 31 00 Manufactured Metal Casework with stainless steel counter tops is the correct spec. The section details on M-A5 are now removed from the set.

ITEM 21 Q: WILL GEOTECHNICAL REPORTS BE PROVIDED?

A: Yes, please see attached in Addendum 001.

ITEM 22 Q: PLEASE CLARIFY THAT ALL STRUCTURAL STEEL FRAMING AND STAIRS & RAILS ARE TO BE GALVANIZED.

A: Correct, all structural steel framing, stair treads, stair framing, stringers and rails are galvanized. Refer to spec section 05 12 00 Strucutral Steel Framing, 05 50 00 Metal Fabrications, 05 51 13 Exterior Steel Winder Stair, 05 52 13 Exterior Railings, and 09 96 00 High Performance Paint.

ITEM 23 Q: PLEASE CLARIFY IF THE STRUCTURAL STEEL AND STAIRS & RAILS GET THE TNEMEC FINISH.

A: The stair treads do not receive paint. However, structural framing, stringers, rails, etc do receive the high performance paint.

ITEM 24 Q: SHOULD THE ELECTRICAL CONTRACTOR INSTALL TWO (2) EMPTY 4" PVC CONDUITS UNDERGROUND FROM THE NEW POLE TO THE TRANSFORMER FOR AES POWER PRIMARY FEEDERS?

A: See revised drawings for Addendum 001.

ITEM 25 Q: NOTE 10 ON DRAWING E002 STATES: “PROVIDE 3#600 KCMIL, 4"C FROM PANEL ‘TR’ UNDERGROUND TO NEW UTILITY POLE AND UP POLE TO TRANSFORMERS. PROVIDE 6' EXTRA CONDUCTORS FOR UTILITY COMPANY CONNECTION.” ON THE ONE-LINE DIAGRAM IT SAYS TO PROVIDE TWO (2)

SETS OF 3#250 KCMIL IN 3" CONDUIT FROM PAD TRANSFORMER TO PANEL TR. THESE TWO NOTES APPEAR TO CONFLICT. SHOULD THE ELECTRICAL CONTRACTOR INSTALL A THIRD 4" CONDUIT FROM PANEL "TR" TO THE NEW POLE CONTAINING THE (3) 600 KCMIL CONDUCTORS, AS DESCRIBED IN NOTE 10, OR SHOULD WE FOLLOW THE ONE-LINE AND PROVIDE TWO SETS OF 3#250 KCMIL IN 3" CONDUIT FROM THE PAD TRANSFORMER TO PANEL TR?

A: See revised drawings for Addendum 001.

ITEM 26 Q: WITH A 400AMP SERVICE IS A CT CABINET NEEDED, OR CAN WE USE A LINE VOLTAGE METER?

A: Electrical contractor to verify requirements with AES Power.

ITEM 27 Q: PLEASE CONFIRM IF OUR STEEL FABRICATOR IS NOT AISC CERTIFIED, THAT WE CAN HIRE A THIRD PARTY WHO IS AISC CERTIFIED TO MEET THE REQUIREMENT.

A: According to 05 12 00 section 1.06: Fabricator Qualifications: A qualified fabricator with not less than (10) years of successful experience in comparable installation projects and employing personnel skilled in the fabrication processes and operations indicated.

ITEM 28 Q: WHO IS TO PAY FOR BUILDING PERMITS?

A: Per 01 11 00 Building permit(s) are submitted and paid by the Architect.

ITEM 29 Q: WILL THE OWNER PAY FOR ANY TAP FEES?

A: An allowance for aid to construction will be set up in the project for the contractor to pay water and sanitary tap fees.

ITEM 30 Q: ARE WE ABLE TO LEAVE ANY DIRT SPOILS ONSITE?

A: DNR does not want the spoils. Please remove from site.

ITEM 31 Q: WHEN IS THE EXPECTED START DATE? IS THERE A CONSTRUCTION SCHEDULE FOR THIS PROJECT? (NTP DATE, COMPLETION DATE, ETC.)?

A: Anticipated Notice to Proceed date 11/25/2025; Substantial Completion 283 calendar days; Final Completion 343 calendar days; Ribbon cutting on Labor Day 2026.

ITEM 32 Q: HOW MANY LAYERS OF SHINGLES SHOULD WE FIGURE THERE TO BE ON THE DEMO? NOTE 8 M-AD1.

A: We believe there to only be one layer, but we have not been on the roof to confirm.

ITEM 33 Q: WHERE DOES SPEC SECTION 07 41 13 GO AT? APPEARS BOTH BUILDINGS GET THE SYNTHETIC SLATE SHINGLES.

A: This was a holdover from a previous iteration in this project and has since been removed from the project, we will delete those pages from the spec.

ITEM 34 Q: PAGE M-A1 STATES TUCKPOINT CRACKED CMU AS NEEDED – HOW MUCH OF THIS SHOULD BE FIGURED?

A: There is approximately 50 sf of existing CMU that needs to be tuckpointed.

ITEM 35 Q: SPEC SECTION 07 10 00 – YOU ARE INTENDING THIS TO JUST BE INSTALLED BELOW GRADE AT THE NEW RESTROOM AND NOT AT THE EXISTING BUILDING CORRECT?

A: We would want that on both buildings since they're both going to get that concrete faced panel foundation insulation and some other work necessitated digging around there anyway.

ITEM 36 Q: THE BOARD AND BATTEN GOING ON BOTH BUILDINGS – APPEARS THIS IS GOING TO GO INTO RIGID INSULATION AND CMU. ARE YOU WANTED TO PUT FURRING STRIPS ON THE WALL WITH A PLYWOOD TO ALLOW US TO ATTACH THE SIDING TO IT?

A: We would not need the plywood sheathing. There would be metal Z-girts that retain the foam panels and the fiber cement can screw straight into those girts.

ITEM 37 Q: WHAT SIZE ANCHOR BOLTS ARE YOU LOOKING FOR TO ATTACH THE WOOD DOUBLE TOP PLATE ON THE NEW RESTROOM BUILDING? 24” OC?

A: Please refer to details 8, 9, and 10 on sheet R-S6.

ITEM 38 Q: IN DETAIL 2 / T-S4 IT CALLS FOR SIZES THAT ARE BY THE CLADDING DESIGNER, AND ALSO FOR CLADDING BY OTHERS. IS THIS BY OTHERS OR TO BE INCLUDED IN THE GENERAL CONTRACTORS BASE BID?

A: As stated on General Structural Note, #17-D on Sheet T-S2, the steel cladding and connections is a deferred submittal requiring that components be designed by a professional engineer hired by the contractor.

ITEM 39 Q: CAN ADDITIONAL INFORMATION BE ADDED FOR THE ALUMINUM WINDOWS ON THE RESTROOM BUILDING? SOMETHING SIMILAR TO A WINDOW TYPES SCHEDULE AS SHOWN ON M-A1 FOR THE GARAGE BUILDING WOULD BE HELPFUL.

A: Additional window information has been added to updated sheet R-A1 - Floor Plan

ITEM 40 Q: CAN THE OVERHEAD SECTIONAL GARAGE DOORS BE ADDED TO THE DOOR SCHEDULE FOR THE GARAGE BUILDING?

A: Overhead garage doorsM100B and M100C are already included in the door schedule on sheet M-A1.

ITEM 41 Q: WHO IS RESPONSIBLE FOR BUILDERS RISK FOR THIS PROJECT?

A:.The contractor is responsible for providing builder’s risk insurance per section 10.4 of the General Conditions 00 72 13 of the project manual.

ITEM 42 Q: FINISH LEGEND CALLS OUT PT-1, PT-2, & PT-3, BUT THE FINISH SCHEDULE ONLY SHOWS PT-1. ARE ANY OF THE OTHER PAINTS USED ON THIS PROJECT?

A: Yes, not all paints are on all finish schedules please refer to the schedule for each building.

ITEM 43 Q: SPECIFICATIONS & FINISH LEGEND CALLS FOR ROOF TO BE PLASTIC SYNTHETIC SHINGLES BUT ELEVATIONS & ROOF PLAN CALL FOR COMPOSITE SHINGLES. PLEASE CONFIRM WHICH IS CORRECT?

A: Spec is correct, this is a typo on the drawings/schedule it will read "Synthetic Shake Shingles" per the spec section verbiage.

ITEM 44 **Q: SITE PLAN E002- NOTE 6. PROVIDE TELECOM PATHWAYS WITH 4-CELL FABRIC INNERDUCT WITHIN CONDUIT. EQUAL TO MAXCELL DIRECT BURIED, PER DETAIL 2/E501. THERE IS NO MENTION OF QUANTITY OF CONDUITS. - HOW MANY RUNS ARE WE TO INSTALL?**

A: See revised drawings for Addendum 01.

ITEM 45 **Q: SITE PLAN E002- NOTE 8. INCOMING TELECOM DUCT BANKS SHALL TURN UP WITHIN MAINTENANCE BUILDING, WORKSHOP #105. REFER TO E101 FOR EQUIPMENT LOCATION WITHIN ROOM. -THERE IS NO NOTE OR MENTION OF EQUIPMENT ON E101. WHERE ARE WE TO BRING CONDUITS UP?**

A: See revised drawings for Addendum 01.

ITEM 46 **Q: SITE PLAN E002- NOTE 11. PROVIDE 3#3/0, 1#6(G)-2"C FROM PANEL "TR" UNDERGROUND TO PANEL "GP" DIAGRAMS- ELECTRICAL E701- NOTE 6. PROVIDE 3#250KCMIL (AL), 1#2(G)-3"C. FROM PANEL "TR" IN RESTROOM PLUMBING CHASE TO PANEL "GP" IN GARAGE. WHICH ONE ARE WE TO FOLLOW FOR INSTALLATION? OR IS THIS TO OUR DISCRETION?**

A: See revised drawings for Addendum 01.

ITEM 47 **Q: SITE PLAN E002- NOTE 10. PROVIDE 3#600KCMIL, 4"C FROM PANEL "TR" UNDERGROUND TO NEW UTILITY POLE AND UP POLE TO TRANSFORMERS. PROVIDE 6' EXTRA CONDUCTORS FOR UTILITY COMPANY CONNECTION. THEN WE JUMP DOWN TO NOTES 19.20. 21. THEY TELL SOMETHING DIFFERENT. 19 - APPROXIMATE LOCATION OF NEW AES POWER COMPANY TRANSFORMER. COORDINATE WITH AES POWER AND PROVIDE TRANSFORMER PAD TO AES STANDARD. 20 - PROVIDE TWO (2) 4" PVC CONDUITS UNDERGROUND FOR AWS POWER PRIMARY FEDERS. 21 - METER AND CT CABINET LOCATION ON SIDE OF RESTROOM. CONTRACTOR TO PROVIDE PER AES STANDARDS. THEN WE HAVE THIS, DIAGRAMS-ELECTRICAL E701- NOTE 5. FROM TRANSFORMER, PROVIDE (2 SETS) 3#250KCMIL (AL), 1#1(G), 3"C FROM POWER COMPANY PAD MOUNTED TRANSFORMER TO PANEL "TR".**

CAN WE GET CLARIFICATION ON WHAT THEY WANT? OR IS THIS TO OUR DISCRETION?

A: See revised drawings for Addendum 01.

ITEM 48 **Q: M-AD1 NOTE 4. REMOVE ALL EXISTING ELECTRICAL PANELS, LIGHTING, WIRING, AND DEVICES. THERE ARE NO LIGHTS, DEVICES, OR PANELS MARKED OR LABELED FOR US TO MAKE AN ACCURATE COUNT FOR THE DEMO OF THIS JOB. CAN WE GET CLARIFICATION?**

A: See updated sheets M-AD1 and M-AD2. There are four existing light fixtures on the interior, 2 light fixtures on the exterior, one panel located between the garage doors, and numerous outlets throughout the space (roughly 12). To note, these are all non-functioning as there is currently no electric at the existing garage.

END OF DOCUMENT

Ohio Department of Natural Resources
Pre-Bid Meeting Agenda

Project: DNR-250004
Facility: Great Council Observation Tower
Date/Time: September 17, 2025 at 9:00 AM
Location: Great Council State Park, 1587 US-68, Xenia, OH 45385

1. INTRODUCTION
    a. All attendees shall sign the attendance sheet.
    b. Any questions about the plans and specifications should be directed to A/E Project Manager:
        Tyler Young
        Email: tyoung@schooleycaldwell.com
    c. All statements made by the A/E, Owner, or its representatives are not binding. Any and all changes to the Procurement Documents will be made by written addendum.
    d. If substantive questions are raised during the pre-bid meeting which are not addressed in the Procurement Documents, the A/Ewill prepare an Addendum clarifying, expanding, or correcting the Procurement Documents in response to any issues identified at the pre-bid meeting and furnish it to all plan holders of record.
    e. If subsequent to the award of any Contract, there is a need to interpret, enforce or otherwise
    f. resolve any ambiguity, inconsistency, error or omission in the Contract Documents or between the Contract Documents and applicable laws, such interpretation, enforcement or resolution will be made with a preference to accomplishment of the purpose of the Contract, without additional cost to the Owner, if by any reasonable inference, the basis for such action could have been raised and resolved at the pre-bid meeting.
2. PROJECT OVERVIEW
    a. The project comprises two new structures and the renovation of an existing structure: 1) a new observation tower; 2) a new restroom building; 3) renovation of an existing garage into a maintenance building. The tower will be steel-framed and approximately 48’ in height; the restroom building will be CMU bearing wall with spread footings and wood roof framing; the maintenance building will receive new exterior finishes over existing structure. The restroom building provides men’s and women’s restrooms as well as a single-use enclosed ADA-compliant restrooms for visitors.
    b. OFCC is contracting authority and handles most of the paperwork; ODNR is project Owner.
    c. Contractor will be required to use OAKS.
3. DELIVERY METHOD
    a. General Contracting
4. NOTICE TO BIDDERS
    a. Bid Opening: October 01, 2025, at 2:00 pm
    b. Bids will be posted by 5:00 pm the day of opening on Bid Express. Bidders are not required to attend the official Bid Opening.
    c. Plans and Specifications are available for download from Bid Express.
    d. Review contracts and estimated costs:
        General Contract: $4,215,000

5. SUBMITTING A BID
    a. The Contractor is responsible for delivering the bid by the time specified in Bid Express, https://bidexpress.com on the electronic Bid Form in Bid Express.
    b. Note: The Bidder will need to allow several days to receive electronic signature from Bid Express if they have not used Bid Express prior.

6. BID SCHEDULE
    a. Bid Item and Alternate Descriptions - Section 011000 - Summary
    b. Addenda - Each Bidder shall bear the responsibility to satisfy himself/herself that the bid is responsive to all Addenda issued. The contractor shall acknowledge any addendum in the appropriate location on Bid Express. Failure to receive or acknowledge any Addenda shall not release the Bidder from all obligations contained in such Addenda.
    c. The contractor shall not modify anything on the bid schedule as this may be cause for rejection of bid.

7. CONSTRUCTION SCHEDULE
    a. Anticipated Notice to Proceed Date is 11/25/2025
    b. Substantial Completion: 283 Calendar Days
    c. Final Completion: 343 Calendar Days
    d. Milestone Dates: Anticipated ODNR Controlling Board approval on 11/10/2025
    e. Anticipated Date of Substantial Completion of All Work on 09/04/2026
    f. Anticipated Punch List Complete/Final Closeout Docs Submitted on 10/05/2027

8. BIDDING AND CONTRACTING REQUIREMENTS
    a. Instructions to Bidders - Refer to Document 00 21 13 in Project Manual
        1) Questions regarding bidding and contracting requirements should be directed to OFCC Project Coordinator, Gary Kubicki, at 614-296-2017 or Gary.kubicki@ofcc.ohio.gov.
        2) Bid award threshold is 10% above estimate.
        3) Requests for Interpretation (RFI's) must be submitted 7 Days before bid opening.
        4) All questions asked during the meeting are to be submitted formally in a RFI to ensure inclusion in future Addenda.
        5) Substitutions - All bids will be evaluated based on the standard referenced in the documents. Substitution Requests must be submitted 10 days before bid opening.
            i. Refer to General Conditions and Instructions to Bidders for substitution request requirements. Proposed substitutions must include side-by-side comparison with specs of basis of design to be considered by A/E.
            ii. If the A/E approves the Proposed Substitution, the A/E shall issue an Addendum.
        5) Bid Package Checklist - The following items are the minimum that are to be included in the proposal package.
            i. Form of Bid
            ii. Bid Security Form (Bid Bond or Cashier's Check) – Original to OFCC within three days of bid
            iii. Cert. of Compliance showing Surety is licensed to do business in Ohio
            iv. Power of Attorney for Surety Form uploaded
            v. Proposed EDGE Certified Business/ EDGE Program Commitment - 3 days after request by AE or OFCC
            vi. Bidder Qualifications - 3 days after request by AE or OFCC

vii. Entire original hardcopy bid package to be submitted to Gary Kubicki, OFCC, within 3 days after bid opening. Refer to bid documents for OFCC address.

9. REQUIRED CONDITIONS PRECEDENT
    a. EDGE – refer to handout
    b. DFSWP
    c. EEO
    d. Insurance Certificate
    e. Insurance Policies
    f. Original of Bond
    g. Builder's Risk Insurance Certificate and policy
    h. Workers Compensation Certificate
    i. Standard Affirmation and Disclosure (Executive Order 2022-02D)
    j. Certificate of Good Standing (Foreign Corporation Only)
    k. Power of Atty. Designating State of Ohio as Bidders Agent for accepting service of summons (Non-Resident of State Individuals Only)

10. WAGES AND HOURS
    a. This is a state of Ohio Prevailing Wage Project and any questions should be directed to OFCC Project Coordinator, Gary Kubicki, at 614-296-2017 or Gary.kubicki@ofcc.ohio.gov.

11. EDGE AFFIDAVIT - SECTION 00 45 39
    a. Refer to section to assist contractor in submitting required certificate with bid.
        1) This project has a 5% EDGE Participation goal minimum.
        2) If bidder does not commit to the published EDGE goal the Bidder will need to seek a waiver and demonstrate that good faith efforts were exhausted to reach that goal. A waiver is extremely difficult to obtain. It is best to select Option A on Bid Express to meet or exceed the goal.
        3) Refer to EDGE handout (attached) for additional information and resources.

12. SAFETY
    a. Contractor shall design and implement its own safety program.

13. SCOPE OF WORK
    a. Contract Documents
        1) Refer to documents for full scope.

14. WORK OR SERVICES BY OTHERS
    a. Construction Testing to be performed by Owner's consultant.
    b. Building special inspections by Owner/Engineer.

15. PERMITS
    a. Review permits and responsibility.
        1) OEPA Plan Approval by A/E
        2) USACE ARPA Permits and Real Estate Approval by A/E
        3) OSHPO Concurrence by A/E
        4) USFWS Coordination by A/E
        5) Building Permit by A/E (Current partial permit approval, truss shop drawings, roof product data, and filter platform shop drawings required for full approval)

16. PROJECT RESTRICTIONS/SITE USAGE (Refer to General Conditions)
    a. Construction Trailer for Onsite Progress Meetings
    b. Unless waived by the Contracting Authority in writing, the Contractor shall provide continuous supervision at the Site by a competent superintendent when any Work is being performed, and the Contractor's superintendent shall not be involved with any work other than the Project.
    c. Coordinate any planned interruption to service with Owner/Engineer
    d. Contractor shall prepare and submit a Site Utilization Plan for approval
    e. Job Storage
    f. Staging/Laydown Areas
    g. Parking
    h. Work Hours – TBD
    i. Protection of Existing Utilities
    j. Noise and Vibrations
    k. Dust & Fume Control
    l. Demolition Waste
17. COMMON BIDDER PITFALLS (that will delay contracting process or possibly cause rejection)
    a. Not submitting original bond within 3 days of bid date.
    b. EDGE Option A, B or C is not selected on the EDGE Commitment page in the Bid Form.
    c. Bidder fails to enter a $ amount, "no change", or $0 for All Alternates in the Bid Form
    d. Company name on Bid Form or Bond does not match the S.O.S. Business Filings.
    e. Expired Certificates (EEO, Workers Comp., Drug Free)
    f. Bidder is not responsive to the time sensitive nature of the Bidder's Qualifications Request or Notice of Intent to Award submittal requirements.
18. VISIT PROJECT SITE
    a. Bidders are welcome to walk the site and areas of work in advance of submitting bids.
19. Required Documents to be submitted.
    a. Please refer to the compliance checklist:
       Bond – Original must be submitted to ODNR within three days of bid.
    b. Items needed to issue the NOIA:
        i. W-9
        ii. Bidder Qualifications
        iii. Certificate of Compliance issued by the Ohio Department of Insurance – Needed within 10 days of the NOIA
        iv. Workers Compensation Certificate
        v. EEO certificate
        vi. Drug Free Safety Workplace certificate
        vii. Liability Insurance Certificate & Policy
        viii. Builder's Risk Certificate & Policy
        ix. Certificate of Good Standing (if required)
        x. Power of Attorney (if required)
        xi. Contractor License (if required)
        xii. Financial Statement (if required)

CTL Engineering, Inc.
2860 Fisher Road, P.O. Box 44548, Columbus, Ohio 43204-3538
Phone: 614/276-8123 • Fax: 614/276-6377
Email: ctl@ctleng.com

June 9, 2025

Schooley Caldwell & Associates
300 Marconi Blvd., Suite 100
Columbus, OH 43215

Attention: Mr. Philip Sour, RA
Senior Associate / Project Architect

Reference: **Geotechnical Exploration Report**
ODNR Great Council Observation Tower and Restroom Facility
Xenia, Greene County, Ohio
CTL Project No. 25050027COL

Dear Mr. Sour:

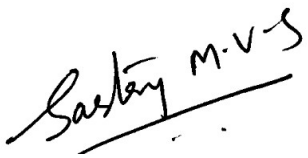
CTL Engineering, Inc. (CTL) has completed the geotechnical exploration report for the above referenced project. We are providing an electronic version (PDF file) of the report via email.

As the design of the project progresses, and if the proposed development differs from the assumptions made in this report, CTL should be provided this information for our review and our report revised and/or amended, if necessary.

Thank you for the opportunity to be of service to you on this project. If you have any questions, please contact me at our office.

Respectfully Submitted,

CTL ENGINEERING, INC.



Sastry Malladi, P.E.
Project Engineer

GEOTECHNICAL EXPLORATION REPORT

OHIO DEPARTMENT NATURAL RESOURCES
GREAT COUNCIL OBSERVATION TOWER AND RESTROOM FACILITY
XENIA, GREENE COUNTY, OHIO

CTL PROJECT NO. 25050027COL

PREPARED FOR:

SCHOOLEY CALDWELL & ASSOCIATES
300 MARCONI BLVD., SUITE 100
COLUMBUS, OH 43215

PREPARED BY:

CTL ENGINEERING, INC.
2860 FISHER ROAD
COLUMBUS, OHIO 43204

June 9, 2025

TABLE OF CONTENTS

I. PROJECT INFORMATION

The project site is located within the property located at street address 1569 U.S. Route 68 in Xenia, Greene County, Ohio. It is understood that the Ohio Department Natural Resources (ODNR) is planning on constructing a new observation tower and a new restroom facility at the Great Council State Park. Project information was provided to CTL Engineering, Inc. (CTL) by Schooley Caldwell & Associates (SCA) in a document prepared by SMBH, Inc. titled, "Subsurface Investigation & Report Requirements for Structural Design Information" (dated 4/15/2025), which included information about the restroom facility as well as a site plan prepared by The Kleingers Group.

Based on the provided project information, the new restroom building will be a one-story, slab on grade structure with column loads in the range of 20 kips and load bearing wall loads in the range of 2 kips per linear foot (klf). The floor live load for interior slab on grade will be in the range of 100 pounds per square foot (psf). Finalized design details (finished floor elevation, site grading) for the restroom facility were not available to CTL; therefore, for the purpose of this report, CTL assumes this building will have a finished floor elevation (FFE) of 846.0 feet. At the time this report, specific details regarding the observation tower were not provided to CTL. The concept plan is understood to be preliminary and will be revised upon further design development. CTL's services were performed in accordance with its proposal number 25050031COLP, dated May 2, 2025.

II. SUBSURFACE EXPLORATION

A total of five (5) soil test borings, identified in *Table 1* below, were drilled for this project. The approximate locations of the test borings are shown on the Boring Location Plans in *Appendix A* with the test borings coordinates and corresponding surface elevations shown on Test Boring Records in *Appendix B*. A summary of the test boring locations, ground surface elevations and coordinates along with their depths are presented below in *Table 1*.

Table 1. Boring Type, Elevation, Locations, and Depths

Boring No.	Approximate Ground Surface Elevation (feet)	Approximate Latitude (degrees)	Approximate Longitude (degrees)	Borehole Depth (feet)
B-01-25	842.5	39.72805	-83.93852	10.0
B-02-25	844.5	39.72801	-83.93872	50.0
B-03-25	845.5	39.72805	-83.93877	50.0
B-04-25	845.5	39.72799	-83.93898	20.0
B-05-25	845.0	39.72804	-83.93912	20.0

The number of test borings and their locations were determined by SCA, with the termination depths of the test borings determined by CTL. The locations of the test borings were determined in the field by CTL personnel using measurements from existing site features. Test boring coordinates were obtained using a handheld GPS unit. Ground surface elevations at the boring locations were interpolated from topographic

elevation contour lines obtained from the Greene County GIS website (*https://gis.greenecountyohio.gov/gims/*); therefore, the coordinates and elevations should be considered approximate.

The test borings were drilled and sampled by a CTL drill crew on May 15, 2025 and May 16, 2025, utilizing 3-¼ inch inside diameter (I.D.) hollow-stem augers powered by a track-mounted drill rig. Split-barrel (spoon) samples and Standard Penetration Tests (SPTs) were performed in the test borings using a 140-pound automatic hammer falling 30 inches to drive a 2-inch O.D. split barrel sampler for 18 inches. The automatic hammer was calibrated at an energy ratio of 79.3 percent.

The soil materials recovered from the split spoon samples obtained during the drilling operations were preserved in glass jars with sealed lids, visually classified in the field, and delivered to CTL's soil laboratory for visual classification, testing and analysis. The samples were tested for moisture content and representative samples were subjected to laboratory testing including Atterberg Limits, grain size distribution, and hand penetrometer.

Drilling, sampling, field and laboratory testing were performed according to standard geotechnical engineering practices and current ASTM procedures. Results from field and laboratory tests are shown on the enclosed Test Boring Records in *Appendix B* of this report. The results of the laboratory tests are presented in *Appendix C* of this report.

III. FINDINGS

A. Observations

The project site is located within the property located at street address 1569 U.S. Route 68 in Xenia, Greene County, Ohio. More specifically, the project site is located approximately 500 feet to the southwest of the currently/soon-to-be constructed museum building located at 1587 U.S. Route 68 in Xenia, Greene County, Ohio. A site reconnaissance was performed by CTL personnel on May 8, 2025. The site is currently covered predominately by mowed grass, concrete and asphalt pavement, medium to large trees, and an existing single-story, two-bay garage. The topography of the site is generally flat with ground surface elevations ranging from about 842± feet to 846± feet above mean sea level (AMSL). A review of historic aerial imagery shows that up until 2024 a residential building was located within the project site. Details regarding the vertical and horizontal extent of the demolition below the ground surface and subsequent activities performed to attain its present condition within the project site are not known at the date of this report.

B. Geology

According to the Ohio Department of Natural Resources (ODNR) Physiographic Regions of Ohio Map (1998), the project site lies within the glaciated Southern Ohio Loamy Till Plain Physiographic Region. This physiographic region is

described as Wisconsinan-age till, outwash, and loess over Lower Paleozoic-age carbonate rocks.

According to the Web Soil Survey, *United States Department of Agriculture, Natural Resources Conservation Service*, the following soil unit and its properties are identified within the project area and are described in *Table 2*.

Table 2. Soil Survey Soil Types and Properties

Soil Unit Name	Soil Unit Symbol	Percentage of Project Site	Risk of Corrosion to Concrete	Risk of Corrosion to Steel
Eldean silt loam, 2 to 6 percent slopes	EmB	29	Low	High
Eldean silt loam, 2 to 6 percent slopes, moderately eroded	EmB2	71	Low	High

Geologic mapping (Surficial Geology of the Ohio Portions of the Springfield 30 x 60 Minute Quadrangle, *ODNR Division of Geological Survey*, 2005) indicates that the overburden soils are mapped to consist of primarily Wisconsinan-aged sand and gravel underlain by sedimentary bedrock. However, layers of Wisconsinan-aged glacial till may be present at various depths. According to the mapping of bedrock geology in the area, (Reconnaissance Bedrock Geology of the Xenia, Ohio, Quadrangle*, ODNR Division of Geological Survey*, *1994*), the surficial soil deposits on the site are underlain by the Ordovician-age sedimentary rock formation identified as the Ordovician Undivided Formation. This formation is described as gray shale with interbedded dolomite and limestone with thicknesses varying from thin to medium.

Mapping of the bedrock topography (Bedrock Topography of the Xenia, Ohio, Quadrangle, *ODNR Division of Geological Survey*, 1999), indicates the bedrock surface elevation in the vicinity of the project area is approximately between 600± feet to 610± feet above mean sea level (AMSL). Based on this mapping and the existing ground surface elevations ranging approximately from 840± feet to 845± feet within the project area, the estimated depth to the bedrock surface ranges from approximately 230± feet to 245± feet below ground surface (bgs).

It should be noted that the bedrock surface elevations in the referenced mapping was determined from individual data points in the vicinity of the project site. Therefore, the previously stated estimated depths and elevations to the bedrock surface could have a significant disparity from the actual depths and elevations to the bedrock surface within the project limits.

According to the mapping of karst features (Karst Interactive Map, *ODNR Division of Geological Survey*, date accessed June 4, 2025), there are no mapped karst features in the general vicinity of the project area. Additionally, karst features were not observed at the ground surface during our field exploration.

According to the mapping of historic and active mines (Mines of Ohio, *ODNR Division of Mineral Resources*, date accessed June 4, 2025), there are no documented mines in the general vicinity of the project area.

C. Subsurface Conditions

A general description of the soils encountered during our subsurface exploration is presented below. Further details of the subsurface conditions encountered during CTL's geotechnical exploration are presented in the Test Boring Records in *Appendix B*. Results of the soil laboratory tests are presented in *Appendix C*.

1. Surficial Materials

At the ground surface, four (4) of the five (5) test boring encountered approximately eight (8) to nine (9) inches of topsoil. Test boring B-01-25 encountered approximately two (2) inches of asphalt at the ground surface.

2. Fill Materials

Beneath the surficial materials, fill material was encountered in one test boring (B-02-25), which consisted of fine-grained, cohesive soil extending down to a depth of about 3.0 feet bgs.

The fine-grained, cohesive fill soil was described as stiff, brown lean clay (CL) containing rock and brick fragments as well as organic roots. The SPT N_{60}-value determined within this fine-grained fill soil was 13 blows per foot (bpf) with a moisture content value of 26 percent.

The N_{60}-value is the SPT blow count corrected for the hammer efficiency delivered by the hammer system utilized, normalized to 60 percent efficiency in bpf.

3. Subsurface Materials

Below the surficial and/or fill materials, the test borings encountered predominately coarse-grained, granular soils prior to reaching the boring termination depths. However, fine-grained, cohesive soils were encountered immediately beneath the surficial material in some of the test borings.

The coarse-grained, granular soils were described as medium dense to very dense, brown and gray silty sand (SM), clayey sand (SC), well-graded sand (SW), well-graded sand with silt (SW-SM), poorly graded sand with silt (SP-SM), clayey gravel (GC), poorly graded gravel with silt (GP-GM), and well-graded gravel with silt (GW-GM). SPT N_{60}-values determined within these coarse-grained soils ranged from 11 bpf to 69 bpf with the moisture content values ranging from 3 to 28 percent.

The fine-grained, cohesive soils were described as stiff, brown lean clay (CL). SPT N_{60}-values determined within the fine-grained soils ranged from 13 bpf to 15 bpf with moisture content values of 19 percent.

4. Results of Laboratory Tests

Selected soil samples were tested in the laboratory for index properties including Atterberg Limits and grain size distribution. The results of the soil laboratory tests are presented in *Appendix C* and are summarized in *Table 3*.

Table 3. Summary of Soil Classification Index Test Results

Boring No.	Sample No.	Depth (feet)	USCS	LL	PI	Gr (%)	Sand (%)	Silt (%)	Clay (%)
B-01-25	SS-1	1.0 – 2.5	SM	18	3	13	58	21	8
B-02-25	SS-2	3.5 – 5.0	GC	31	13	57	25	11	7
B-02-25	SS-3	6.0 – 7.5	GP-GM	NP	NP	59	32	7	2
B-02-25	SS-6	18.5 – 20.0	SW-SM	NP	NP	24	68	6	2
B-02-25	SS-7	23.5 – 25.0	SP-SM	NP	NP	9	82	7	2
B-02-25	SS-9	33.5 – 35.0	GW-GM	NP	NP	47	42	8	3
B-03-25	SS-1	1.0 – 2.5	CL	34	17	0	16	52	32
B-03-25	SS-2	3.5 – 5.0	GC	46	31	47	26	13	14
B-03-25	SS-3	6.0 – 7.5	GP-GM	NP	NP	48	42	8	2
B-03-25	SS-5	13.5 – 15.0	SW-SM	NP	NP	21	70	7	2
B-03-25	SS-8	28.5 – 30.0	SW-SM	NP	NP	43	48	7	2
B-04-25	SS-1	1.0 – 2.5	SC	31	15	31	40	18	11
B-04-25	SS-2	3.5 – 5.0	SC	44	27	27	36	18	19
B-05-25	SS-1	1.0 – 2.5	CL	38	20	0	15	51	34
B-05-25	SS-3	6.0 – 7.5	GC	29	8	57	26	12	5

SS-# = Split Spoon Sample Number
LL = Liquid Limit
PI = Plasticity Index
Silt Fraction (particle size < 0.075 mm
Clay Fraction (particle size < 0.005 mm)
Gr/Sa = Gravel and Sand

5. Groundwater

Groundwater was encountered in two (2) of the five (5) test borings. *Table 4* shows the depth at which groundwater was encountered, if any, and the borehole cave-in depth.

Table 4. Groundwater and Borehole Cave-in Depths

Boring No.	Approximate Ground Surface Elevation (feet)	Groundwater (feet)		Borehole Cave-In Depth (feet)
		During Drilling	At Completion	
B-01-25	842.5	None	None	7.2
B-02-25	844.5	28.0	28.0	18.0
B-03-25	845.5	28.0	28.0	17.9
B-04-25	845.5	None	None	13.0
B-05-25	845.0	None	None	14.2

It should be noted that the groundwater depths encountered during this subsurface exploration may not be a reliable indication of long-term

groundwater levels. Fluctuations in the level of the groundwater table (or saturated soils/perched water levels) will occur due to seasonal variances in rainfall, drainage, types of soils present and other factors. We caution that groundwater can be perched at various elevations above the general static groundwater level after periods of rainfall, especially in the lower elevations and natural drainage paths of the site.

IV. DISCUSSION AND EVALUATION

Based on the proposed development as described in this report; the results of the sampling, field and laboratory testing; our analysis and evaluation of the data, and CTL's experience with previous projects in the area; the site is generally suitable for the proposed development. However, conditions were encountered which pose a concern from a geotechnical engineering and construction standpoint. These concerns and their implications are addressed below.

A. Construction over Non-Engineered Fill and Utilities

Our experience indicates that new structures often perform poorly and exhibit cracking when constructed over non-engineered fill, underground pipes, buried utilities, or other structures. The cracking is typically located in the area immediately over these aforementioned areas, resulting from variable support conditions. It is essential to the adequate performance of the proposed building, pavements, and tower as well as related infrastructure that the site be prepared properly to provide relatively uniform subgrade support.

Additionally, CTL recommends that existing utility pipes, if any, that are to be abandoned be removed entirely, or after determining their limits, grouted full to prevent potential collapse so that they will not serve as conduits for subsurface erosion. This erosion could result in the formation of voids or depressions in addition to the collapse of the pipes due to their deterioration, with adverse effects on pavements. Any voids or depressions that are created as a result of the demolition and/or removal of the structures and/or vegetation should be backfilled with suitable engineered fill.

B. Reuse of Excavated Materials as Engineered Fill

CTL assumes that engineered fill used on this site will probably be from on-site excavated materials. Excavated soils designated for use as engineered fill must meet the requirements given in *Section V.A Site Preparation and Earthwork Recommendations* of this report. In order to meet these requirements, the on-site plastic soils may require moisture conditioning by mechanical means (disking and aerating) and/or by chemical modification. The typical chemical admixture for modifying moderately to highly plastic soils is quicklime while Portland cement is used for silty, sandy soils. Depending on the time of year the surficial soils are excavated, they may exhibit natural moisture contents above the material's estimated optimum moisture content, and as a result, may require some drying

before being used as engineered fill. Especially if the site preparation takes place during periods of wet weather, typically between the months of October and May.

C. Subgrade Stability

Subgrade instability may be encountered, especially in areas where surface water drainage is poor and the moisture contents of the near surface materials are significantly above the materials' Optimum Moisture Content as defined by ASTM D698 standard method. Depending on how much newly-placed fill is required to raise existing grades to the proposed finish subgrade design elevations, it may affect how the exposed subgrade soil is handled to achieve a suitable subgrade for the intended purpose.

In addition, during the time of year construction is performed, the influence of weather conditions on subgrade instability can be significant, particularly during the periods of the year when precipitation events are more frequent and temperatures are lower. In addition, soils that contain a high silt content, typically near or greater than 50 percent have a narrow moisture range in which they can be compacted to the recommended relative density and remain stable.

If unstable soils are identified during proof rolling, the following options to stabilize the soils may be considered. Please note, these options are meant as guidelines and not intended to be an absolute solution for every situation encountered. Also, the recommended subgrade treatments may vary by location and for the end use such as the building, light and heavy pavement subgrade, hardscape and landscape areas. **The Geotechnical Engineer should be consulted for each area identified as being unstable and a location specific plan of action be established.** The following provide options for addressing these conditions.

1. Drying of the underlying soils can be accomplished by disking the moist soils and allowing the soil to dry. This method is only practical in less than severe cases that exhibit minimal instability initially. The soils must be recompacted once dried.

2. Undercutting the unstable soils to an acceptable depth, typically one to several feet and backfilling with approved engineered fill consisting of the following:

    - on-site or borrowed soils with moisture contents within ±3% of its optimum moisture content as defined by ASTM D698 standard method. In severe cases, a geotextile fabric may be required between underlying weak soils and new engineered fill. However, the use of a geotextile will more than likely conflict with the installation of underground utilities
    - borrowed crushed aggregate, typically conforming to the material gradation requirements of a well-graded dense aggregate (ASTM D2940).

3. Alternatively, the use of a chemical additive such as lime or Portland cement may be applied to the unstable soils. For the moderately plastic clay soils encountered at this site, CTL recommends lime be used to stabilize the unstable soil. Typically, the application rate of 4 to 6 percent may be used. Chemical stabilization work should not be performed during wet or unsuitable weather as well as in temperatures less than 40 degrees Fahrenheit. Alternative application rates may be considered if field verification of subgrade stability is performed. It is recommended that an experienced contractor who specializes in chemical stabilization be consulted for the subgrade treatments.

D. Undocumented Fill Materials

On-site materials consisting of undocumented fill materials were encountered in test boring B-02-25 down to about 3.0 feet bgs. It should be noted that other locations within the project site may also contain undocumented fill materials to varying depths/elevations. Where encountered, these fill materials should be evaluated for their suitability to support the proposed structures.

In addition, re-use of the fill materials should be evaluated during construction by the Geotechnical Engineer or his designated representative due to the possible variability of in-place existing fill or possible fill materials. Fill materials that contain high percentages of debris and/or organics are considered unsuitable. Additionally, fill materials that are moderately to highly plastic (Liquid Limits greater the 45 and/or Plasticity Indices greater than 25) are considered unsuitable and need to be chemically modified for re-use as engineered fill.

V. ANALYSES AND RECOMMENDATIONS

Recommendations provided in the following paragraphs are based upon the assumption that subsurface conditions encountered during construction are similar to those encountered in the drilled and sampled test borings. Therefore, subsurface conditions should be observed and approved during construction by the Geotechnical Engineer or his/her designated representative. In the event that subsurface conditions in these areas differ from those encountered in the test borings, modifications should be made to the recommendations stated in this report.

It is understood that the new restroom building will be a one-story, slab on grade structure supported by cast-in-place spread foundations with column loads in the range of 20 kips and load bearing wall loads in the range of 2 kips per linear foot (klf). The floor live load for interior slab on grade will be in the range of 100 pounds per square foot (psf). Finalized design details (finished floor elevation, site grading) for the restroom facility were not available to CTL; therefore, for the purpose of this report, CTL assumes this building will have a finished floor elevation (FFE) of 846.0 feet. Specific details regarding the observation tower were not provided to CTL; therefore, CTL assumes that the observation tower will be supported on a drilled shaft (pier) foundation.

The design information provided by the design team (architect, structural engineer and civil engineer) provides a basis for CTL's recommendations, and has a direct impact on the recommendations presented. If changes to the design information presented in this report are made including construction sequencing/schedules, or additional information is available, CTL should be provided this information for our review, and if necessary, revised and/or additional recommendations can be provided.

A. Site Preparation and Earthwork

The following are general recommendations for site preparation based on the conditions encountered, and the anticipated construction schedule; several site preparation options previously presented may be utilized and should be considered.

1. All hardscape, topsoil and unsuitable materials (mulch, vegetation, etc.) should be removed from the proposed construction limits. Topsoil may be stockpiled for reuse in landscaping.

2. Any existing underground utilities located within the construction limits should be removed or relocated, as necessary, to allow construction and operation of new structures. All underground utilities should be removed from the building construction limits, if any.

   Existing utility pipes that are to be abandoned should be removed entirely followed by backfilling with properly placed and compacted engineered fill, or after determining their limits, grouted full to prevent potential collapse so that they will not serve as conduits for subsurface erosion.

3. Subsequent to the removal of existing utilities, topsoil, and unsuitable soil removal and prior to any fill placements, all exposed soil surfaces should be compacted with a smooth-drum roller and proofrolled with an approved tandem-axle truck in the presence of the Geotechnical Engineer or his/her qualified designated representative. Soft or loose soils, wherever encountered, should be mechanically aerated, dried and recompacted or otherwise improved as directed by the Geotechnical Engineer or his qualified designated representative.

4. During earthwork operations, maintain positive surface drainage at the end of each workday to prevent water from ponding on the surface of the exposed soils during construction and as part of final grading. The accumulation of precipitation, absorption of water, and heavy construction traffic may result in the softening of the exposed soils, and as a result, severely reducing the shear strength and therefore stability of the subgrade soils. Contact the Geotechnical Engineer should the subgrade soils become excessively wet, dry, or frozen.

5. Engineered fill material required for this project may consist of on-site excavated soils provided that the Liquid Limit (LL) does not exceed 45, the

Plasticity Index (PI) does not exceed 25, a maximum dry density of at least 100 pcf, a maximum particle size of 3 inches, and that proper moisture content is maintained during their placement. Topsoil and organically contaminated soils are considered unsuitable for engineered fill.

6. Engineered fill placement should extend beyond the limits of the proposed building areas a minimum horizontal distance equal to the height of fill or 5 feet, whichever is greater.

7. Temporary excavations more than 4 feet in depth should be sloped, benched or shored in accordance with OHSA regulations. Excavation sidewalls should be laid back at a slope rate no steeper than 1H:1V (Horizontal to Vertical). Excavation sidewalls may exhibit cave-in particularly if sand or granular soils or soft, loose soils are encountered.

8. Isolated zones or pockets of trapped water may be encountered at shallow depths in isolated locations. If groundwater is encountered, temporary dewatering will be required and sidewall cave-in should be anticipated. Benching of excavation sidewalls or other means may be required.

B. Building Foundation Support Recommendations

At or near the assumed foundation bearing elevation (elevation 842.0 feet), the test borings (B-04-25 and B-05-25) encountered medium dense clayey sand soils. Additional foundation recommendations for the spread foundations are presented in the following paragraphs.

1. It is assumed that full-time quality assurance/quality control testing and observation will be performed during all earthwork activities.

2. CTL recommends that all foundation bearing surfaces be observed and approved by the Geotechnical Engineer or their designated representative.

3. The proposed restroom building at this site may be supported by spread foundations consisting of isolated column footings and/or continuous wall footings bearing onto competent native soil. If soft to marginal medium stiff, plastic soils or very loose to loose, granular soils are encountered at the bottom of excavation, these soils should be undercut, removed and replaced with lean concrete or engineered fill placed up to the proposed foundation bearing elevation. CTL recommends that all bearing surfaces be observed and approved by the Geotechnical Engineer or his/her designated representative.

4. Spread footings constructed as recommended in this report may be proportioned for a maximum net allowable foundation pressure **not exceeding 2,000 pounds per square foot (psf)**. The bearing pressure would apply to the total design loads.

5. Settlement of footings supported as recommended may vary across site due to variation in soil compositions, void ratio and loading. However, it is anticipated that the total settlements and differential settlements will be within typical tolerable limits (1-inch total and ½-inch differential).

6. Minimum widths for individual columns and continuous wall footings should be 24 and 18 inches, respectively. Minimum widths are considered advisable to provide a margin of safety against local or punching shear failure.

7. Exterior footings should be constructed at a minimum depth of 36 inches below the lowest adjacent exterior grade to offset the effects of frost penetration. Interior footings, if any, in areas of controlled temperature may be constructed at shallower depths below the floor slab provided that the foundation soils exhibit adequate capacity.

8. Protect foundation support materials exposed in open excavations from freezing weather, severe drying, and water accumulation.

9. Remove any soils that become unsuitable due to exposure prior to concrete placement.

10. Excavate only the footings that can be placed with concrete the same day. Otherwise place a "lean" concrete mud-mat over the bearing soils if the excavations must remain open overnight or for an extended period of time.

11. Foundation concrete should completely fill the opened excavation. Forming the foundations and then backfilling the space behind the forms tends to allow moisture to penetrate and soften bearing level materials which may result in poor foundation performance.

C. Building Floor Slab Considerations

For the proposed new restroom facility building, CTL is assuming an FFE of 846.0 feet with corresponding estimated finish subgrade elevation of 845.0 feet (concrete on aggregate base is approximately 12 inches thick). CTL has assumed that concrete slab on grade will be floated, i.e. it will not be tied structurally into building frame. Additional floor slab considerations are presented in the following paragraphs.

1. The over-excavation of unsuitable material, if any, should be replaced with properly placed and compacted, non-expansive engineered fill.

2. The floor slab may be designed using a modulus of subgrade reaction value not exceeding 100 pci.

3. Place a minimum 4-inch layer of clean, compacted gravel or crushed stone such as No. 57 stone beneath the slab to enhance support and provide a working base.

4. Keep the crushed stone or gravel moist, but not wet, immediately prior to grade slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.

5. Provide joints in the slabs around columns and along footing supported walls.

6. A plastic vapor barrier with suitable tear and puncture resistance should be placed between the subgrade and the overlying granular base to limit moisture intrusion. A nominal sand layer may be used as an intermediate protective layer between the vapor barrier and the granular base.

D. Observation Tower Foundation Support

It is assumed that drilled shaft (pier) foundations will be utilized for support of the proposed observation tower. The borings performed within the tower limits (B-02-25 and B-03-25) encountered predominantly coarse-grained, granular soil materials prior to reaching the boring termination depth.

The pier foundations should be spaced no closer than 3 pier diameters (center-to-center) to avoid group interactions and to avoid damaging previously installed piers. We also recommend that the concrete and steel reinforcement placement be observed and tested to evaluate the quality of the concrete and conformance to the project plans and specifications.

Additional recommendations for drilled pier foundations are provided in the following paragraphs:

1. The drilled pier base should extend down into the dense to very dense native soils and may be proportioned using allowable end bearing capacity as shown in *Table 5*. The recommended allowable bearing capacity value was computed based on a factor of safety of 3.0.

Table 5. Drilled Pier Allowable End Bearing Capacity

Elevation (feet)	Allowable End Bearing Capacity (ksf)
At or below 10.0 feet	3.0
At or below 17.0 feet	10.5
At or below 32.0 feet	15.0
At or below 42.0 feet	20.0

2. Groundwater or seepage water may be encountered during excavation or construction of a drilled pier foundations. If groundwater is encountered, then concrete placement will likely require tremie methods.

3. Considering the granular soils encountered at this site, casing will likely be required during installation to prevent soil cave-in, minimize water seepage into the hole, and to protect the Geotechnical Engineer/Inspector during cleaning and observation. The casing may be removed once concrete placement is complete. OSHA and ADSC safety regulations should be followed during installation and observation.

4. Although cobbles and boulders were not encountered in the test borings, it is not uncommon to encounter cobbles and boulders in these types of soil deposits, and therefore, should be expected during the installation of the pier foundation.

5. The drilled pier may be designed using the parameters derived from test boring B-03-25, which is presented in *Table 6*. Downward and uplift values were computed using a factor of safety of 2.0 for soils. Skin Friction, Cohesion and Passive Earth Pressure should be ignored in the upper 3 feet.

Table 6. Summary of Soil Parameters

Parameters	Depth (feet)				
	0.0 – 5.5	**5.5 – 17.0**	**17.0 – 32.0**	**32.0 – 42.0**	**42.0-50.0**
Allowable Downward Friction, psf	490 *(1)*	800	1,290	1,280	1,200
Allowable Uplift Friction, psf	330 *(1)*	530	870	850	800
Cohesion, psf	180	---	---	---	---
Ultimate soil strain at 50% of ultimate compression, ε_{50}	0.007	---	---	---	---
Total Unit Weight, pcf	122	128	130	132	140
Angle of Internal Friction, Degrees	24	36	37	38	40
At Rest Pressure Coefficient, Ko	0.59	0.41	0.40	0.38	0.36
Active Pressure Coefficient, Ka	0.42	0.26	0.25	0.24	0.22
Passive Pressure Coefficient, Kp	2.37 *(1)*	3.85	4.02	4.20	4.60
Undrained Shear Strength, psf	1,813	---	---	---	---

(1) Skin Friction, Cohesion and Passive Earth Pressure should be ignored in the upper 3 feet.

E. Pavement Subgrade Considerations

The subgrade of paved areas should be observed and approved by the Geotechnical Engineer. Soil materials encountered with a maximum dry weight of less than 100 pounds per cubic foot and contain construction debris or organics greater than 4 percent by volume are unsuitable for use in the upper 24 inches of subgrade. These materials should be replaced with suitable engineered fill as

described in this report.

An evaluation and analysis of the existing subgrade conditions was performed based on the results of the test borings performed. We have assumed that the pavement surface elevation will match the existing ground surface elevation with a subgrade elevation of approximately 12 inches below existing ground surface. The subgrade evaluation and analysis identified the location in the area of B-01-25, B-02-25, and B-03-25 as requiring improvement due to unstable subgrades based on the conditions encountered at the date of our exploration and the assumed site grading. The unstable conditions were identified by considering the locations, N_{60}-values, results of laboratory tests, and the moisture content of the materials at or near the estimated pavement subgrade elevation. The surficial plastic clay soils encountered at each test boring exhibited moisture contents that may exceed the upper boundary for the acceptable moisture content range per ASTM D698.

CTL recommends the pavement subgrade material be disked and dried then recompacted in the upper 18 inches in accordance with this report. The disking, drying and recompacting should extend to at least 3 feet beyond the edge of the pavement areas.

Based on the results of the subgrade analysis and our experience with similar projects, CTL recommends an estimated CBR value of 4.0 be used for pavement design assuming the subgrade is properly prepared in accordance with the recommendations presented in this report.

Surficial soils will be affected by their moisture contents. Therefore, it is recommended that any surface and subsurface water be permanently and quickly drained from the area to limit the weakening of the subgrade soil used for pavement support. Without drainage, any modification/stabilization procedure that is undertaken should be considered temporary.

It is recommended that a drainage system be designed to permanently dewater the subbase aggregate and associated subgrade soils and direct the water into the site's storm sewer system or away from any buildings and pavement. Finger drains should be installed in the area of the catch basins.

F. Seismic Site Class

In accordance with the Section 1613.2 of the 2024 Ohio Building Code (OBC) and ASCE/SEI 7-22, the selection of the "Site Class" requires the soil properties be checked in the upper 100 feet. Based upon the N_{60} values to the drilled depths of the test borings and published geologic mapping of the area, a Site Class "D" is recommended for the seismic design of the project. Should a significant benefit in the design of the structure require the determination of the on-site subsurface shear wave velocity for a higher site class designation (e.g. Site Class C), CTL should be consulted for additional discussions on performing shear wave testing for the site in order to possibly achieve a higher Site Class designation. Given a

Site Class "D" and the geographic location of the project site, the design parameters shown in *Table 7* may be utilized.

Table 7. Summary of Site-Specific Seismic Coefficients

ASCE/SEI 7-22 Parameter	Value
Short Period Spectral Response Acceleration, PGA_M	0.10g
Short Period Spectral Response Acceleration, S_S	0.19g
1-second Period Spectral Response Acceleration, S_1	0.077g

VI. CHANGED CONDITIONS

The evaluations, conclusions, and recommendations in this report are based on our interpretation of the field and laboratory data obtained during the exploration, our understanding of the project and our experience with similar sites and subsurface conditions using generally accepted geotechnical engineering practices. Although individual test borings are representative of the subsurface conditions at the boring locations on the dates drilled, they are not necessarily representative of the subsurface conditions between boring locations or subsurface conditions during other seasons of the year.

In the event that changes in the project are proposed, additional information becomes available, or if it is apparent that subsurface conditions are different from those provided in this report, CTL should be notified so that our recommendations can be modified, if required.

VII. TESTING AND OBSERVATION

During the design process, it is recommended that CTL work with the project designers to confirm that the geotechnical recommendations are properly incorporated into the final plans and specifications, and to assist with establishing criteria for the construction observation and testing.

CTL is not responsible for independent conclusions, opinions and recommendations made by others based on the data and recommendations provided in this report. It is recommended that CTL be retained to provide construction quality control services on this project. If CTL is not retained for these services, CTL shall assume no responsibility for compliance with the design concepts or recommendations provided.

VIII. CLOSING

The report was prepared by CTL Engineering, Inc. (Consultant) solely for the use of the Client in accordance with an executed contract. The Client's use of or reliance on this report is limited by the terms and conditions of the contract and by the qualifications and limitations stated in the report. It is also acknowledged that the Client's use of and reliance of this report is limited for reasons which include: actual site conditions that may

change with time; hidden conditions, not discoverable within the scope of the assessment, may exist at the site; and the scope of the investigation may have been limited by time, budget and other constraints imposed by the Client.

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

This geotechnical report does not address the environmental conditions of the site. The Consultant is not responsible for consequences or conditions arising from facts that were concealed, withheld, or not fully disclosed at the time the assessment was conducted.

To the fullest extent permitted by law, the Consultant and Client agree to indemnify and hold each other, and their officers and employees harmless from and against claims, damages, losses and expenses arising out of unknown or concealed conditions. Furthermore, neither the Consultant nor its employees shall be liable to the Owner in an amount in excess of the available professional liability insurance coverage of the Consultant. In addition, Client and Consultant agree neither shall be liable for any special, indirect or consequential damages of any kind or nature.

The Consultant's services have been provided consistent with its professional standard of care. No other warranties are made, either expressed or implied.

Respectfully Submitted,

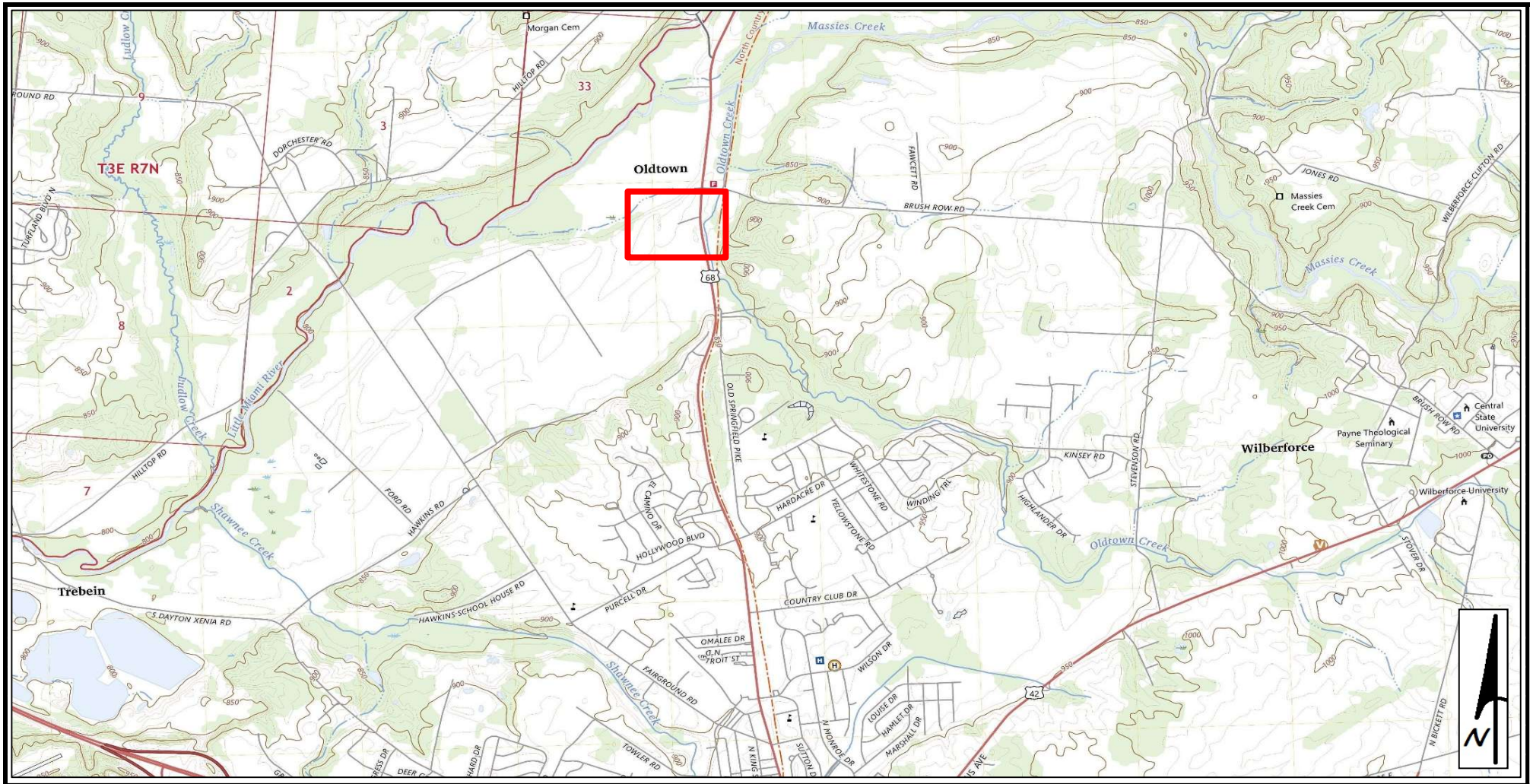
CTL ENGINEERING, INC.

Christopher D. Carey, E.I.
Project Engineer

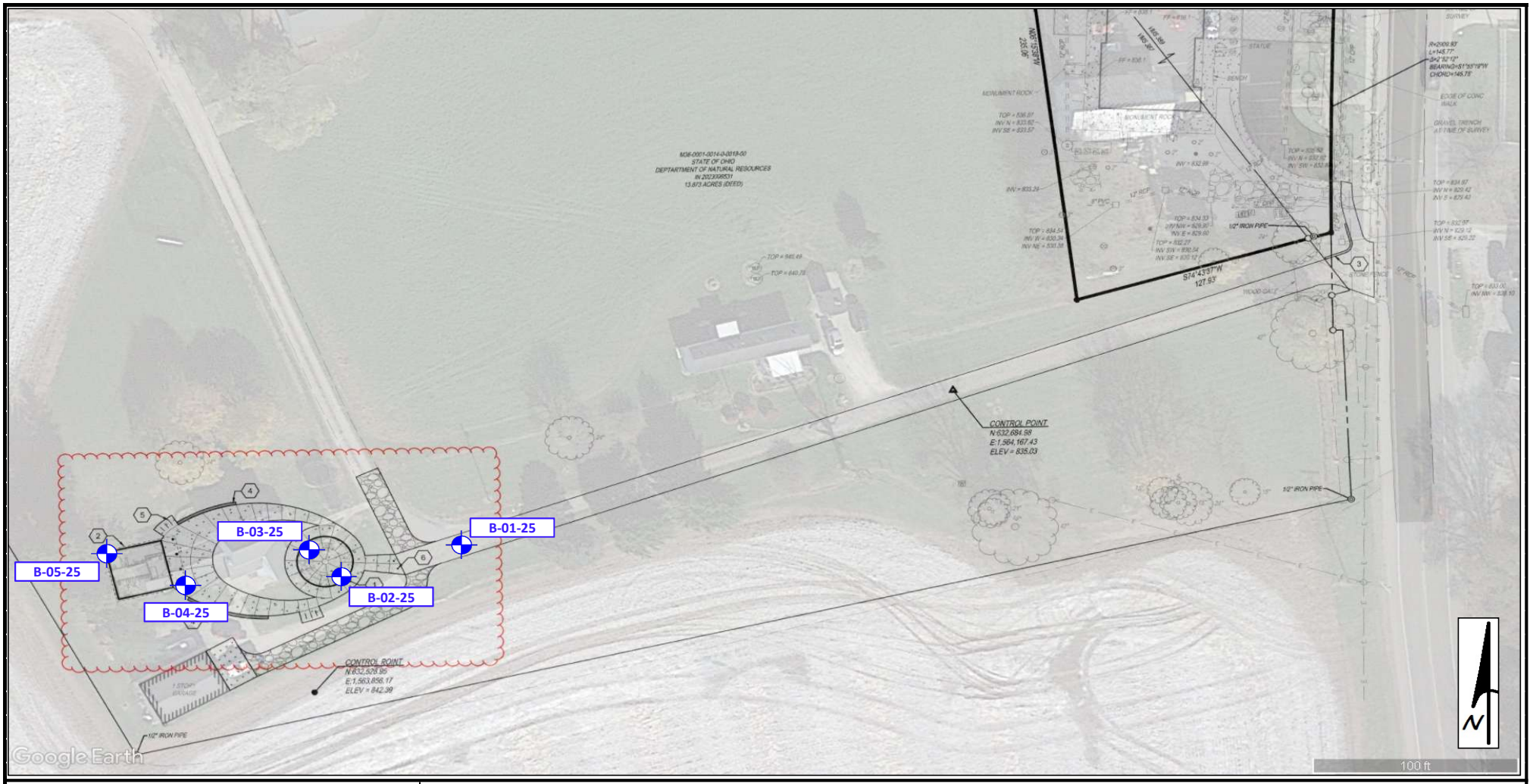
Sastry Malladi, P.E.
Project Engineer

APPENDIX A

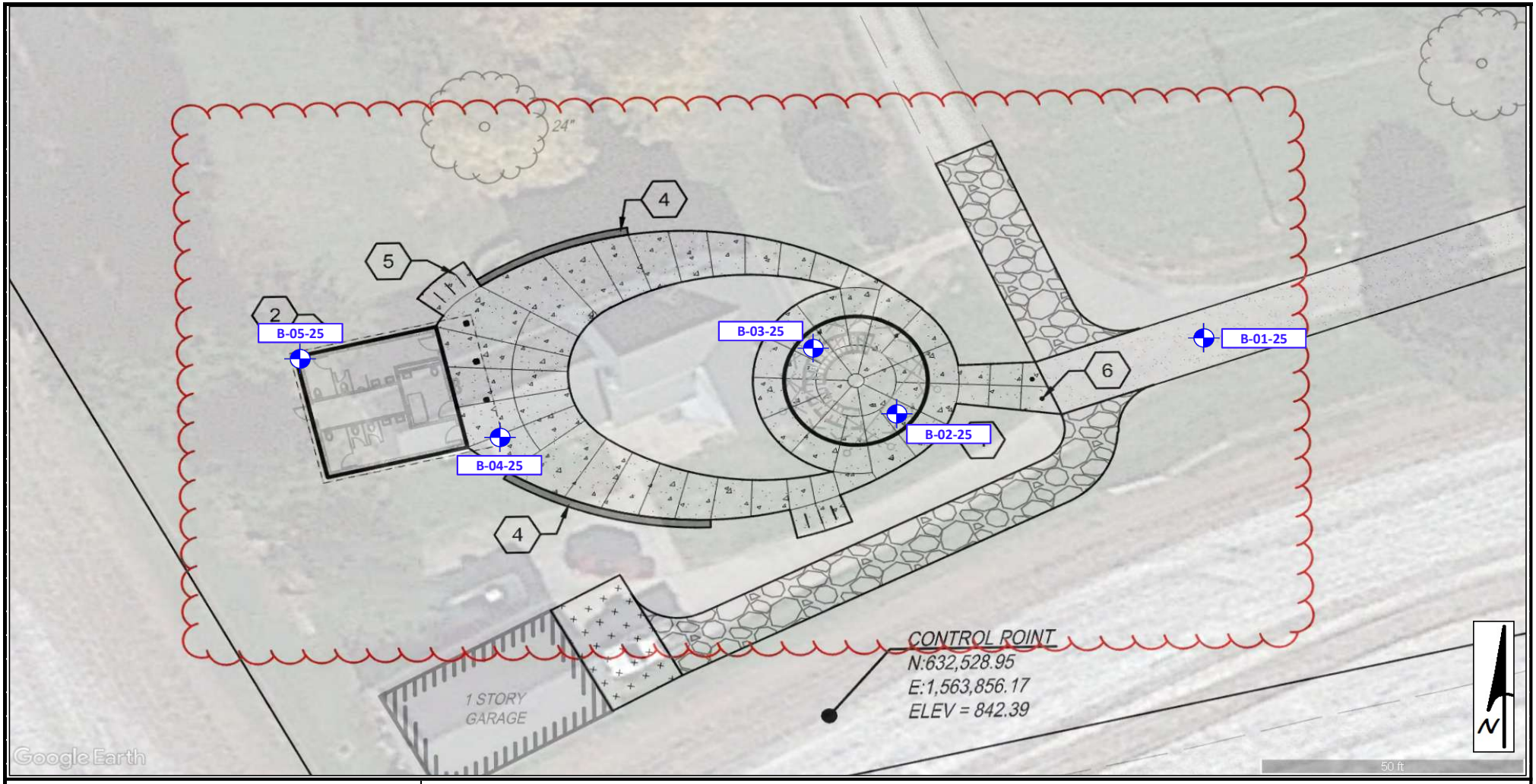
BORING LOCATION PLANS & SOIL PROFILE



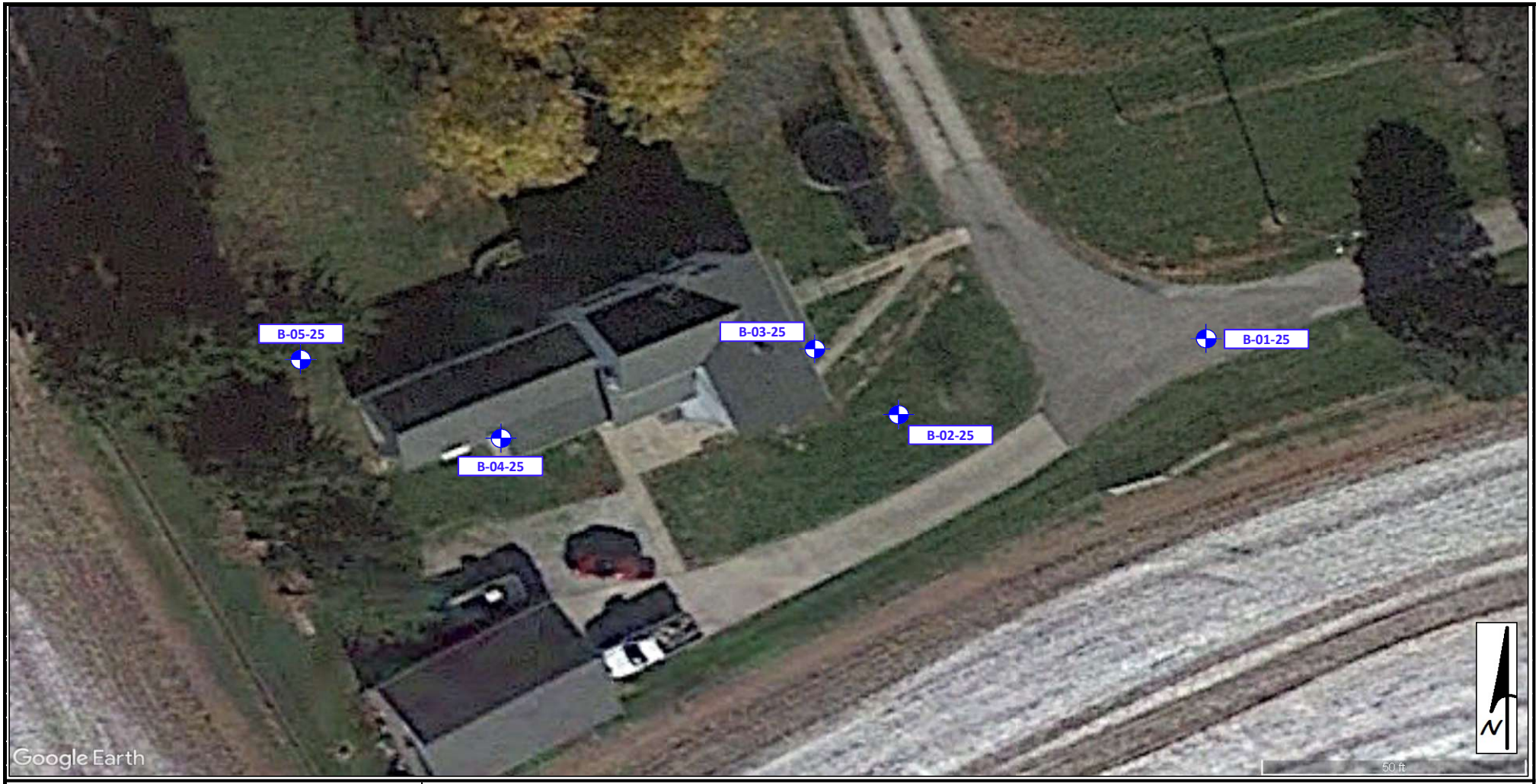
LEGEND	TOPOGRAPHIC VICINITY MAP			
Project Site	**Date** 6/3/2025	NOTE: *Xenia Quandrangle, Ohio - Greene County, 7.5-Minute Series, 2023* topographic map obtained from the USGS's website.		**Schooley Caldwell & Associates** **ODNR Great Council Observation Tower and Restroom Facility** **Xenia, Greene County, Ohio**
CTL ENGINEERING, INC. GEOTECHNICAL ENGINEERS TESTING * INSPECTION LABORATORY SERVICES	**Scale** NTS			
	Drawn By CC	**Reviewed By** SM	**Page** 1 of 4	**CTL Project No.** **25050027COL**



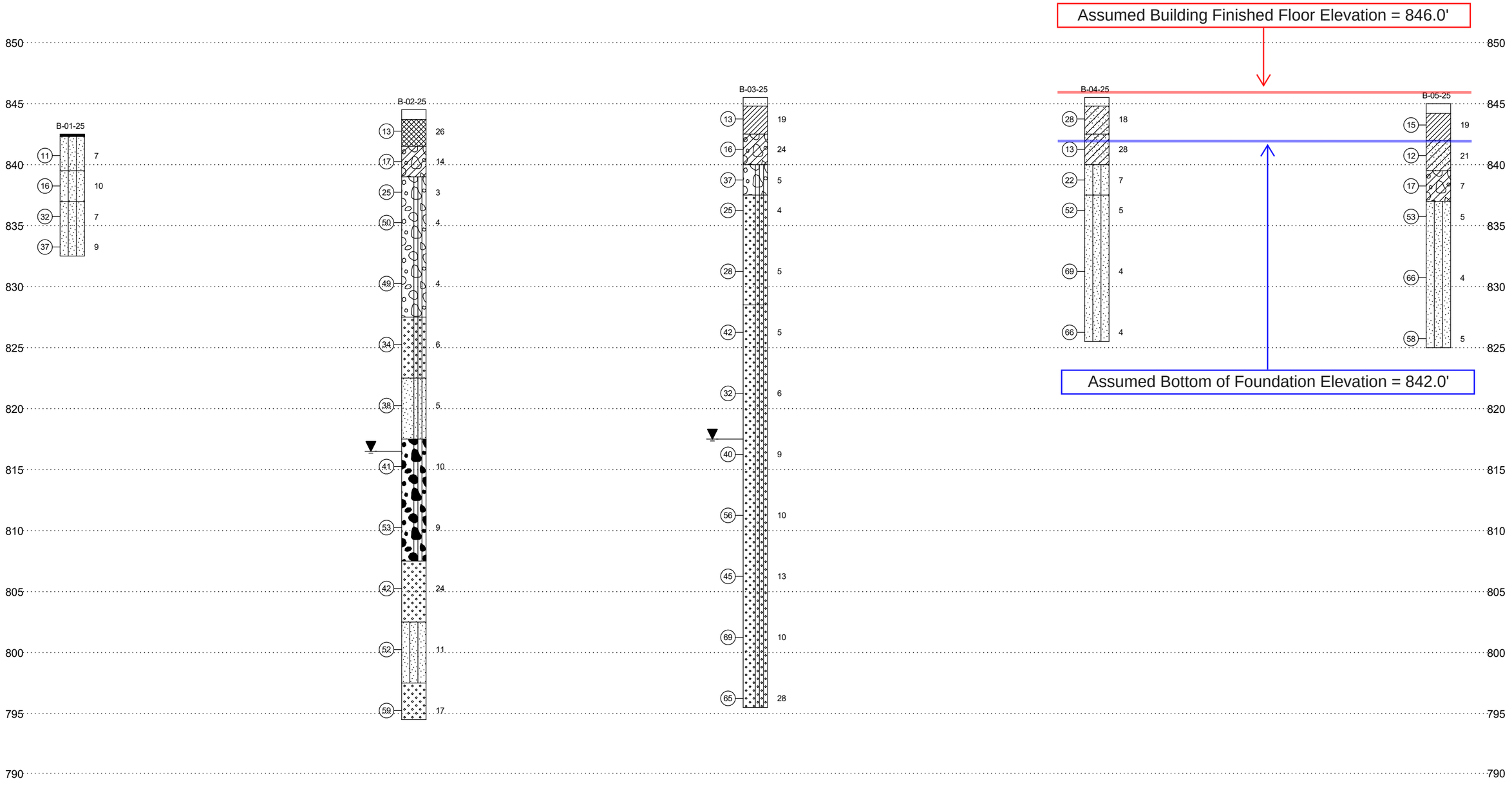
LEGEND	BORING LOCATION PLAN			
Approximate Test Boring Location	**Date** 6/3/2025	NOTE: The test boring locations were marked in the field by CTL personnel. Schooley Caldwell & Associates drawing titled "Great Council Observation Tower - Material Plan", dated 03/03/2025 was provided to CTL.		**Schooley Caldwell & Associates** **ODNR Great Council Observation Tower and Restroom Facility** **Xenia, Greene County, Ohio**
CTL ENGINEERING, INC. GEOTECHNICAL ENGINEERS TESTING * INSPECTION LABORATORY SERVICES	**Scale** As Shown			
	Drawn By CC	**Reviewed By** SM	**Page** 2 of 4	**CTL Project No.** **25050027COL**



LEGEND	BORING LOCATION PLAN			
Approximate Test Boring Location	**Date** 6/3/2025	NOTE: The test boring locations were marked in the field by CTL personnel. 2020 Aerial Imagery obtained from Google Earth© software.		**Schooley Caldwell & Associates** **ODNR Great Council Observation Tower and Restroom Facility** **Xenia, Greene County, Ohio**
CTL ENGINEERING, INC. GEOTECHNICAL ENGINEERS TESTING * INSPECTION LABORATORY SERVICES	**Scale** As Shown			
	Drawn By CC	**Reviewed By** SM	**Page** 3 of 4	**CTL Project No.** 25050027COL



LEGEND	BORING LOCATION PLAN			
Approximate Test Boring Location	**Date** 6/3/2025	NOTE: The test boring locations were marked in the field by CTL personnel. 2020 Aerial Imagery obtained from Google Earth© software.		**Schooley Caldwell & Associates** **ODNR Great Council Observation Tower and Restroom Facility** **Xenia, Greene County, Ohio**
CTL ENGINEERING, INC. GEOTECHNICAL ENGINEERS TESTING * INSPECTION LABORATORY SERVICES	**Scale** As Shown			
	Drawn By CC	**Reviewed By** SM	**Page** 4 of 4	**CTL Project No.** **25050027COL**



LEGEND

TOPSOIL, ASPHALT, GW, GP, GW-GM, GW-GC, GP-GM, GP-GC, GM, GC, GC-GM, SW, SP, SW-SM, SW-SC, SP-SM, SP-SC, SM, SC, SC-SM, ML, CL, CL-ML, OL, CH, MH, OH, PT, SHALE, SILTSTONE, LIMESTONE, FILL

GROUND WATER DURING DRILLING

GROUND WATER AT COMPLETION OF DRILLING

GROUND WATER AT "N" HOURS AFTER COMPLETION

W MOISTURE CONTENT IN PERCENT (w)

N_{60} STANDARD PENETRATION NORMALIZED TO 60% DRILL ROD ER

CTL Engineering, Inc.
2860 Fisher Road
Columbus, Ohio 43204

SOIL PROFILE

SCALE: AS SHOWN	Schooley Caldwell & Associates	
DATE: 6/3/2025	ODNR Great Council Observation Tower and Restroom Facility	
DRAWN BY: CC	Xenia, Greene County, Ohio	
REVIEWED BY: SM	PROJECT NUMBER: 25050027COL	PAGE: 1 OF 1

APPENDIX B

TEST BORING RECORDS

EXPLANATION OF TERMS AND SOIL DESCRIPTIONS
(ASTM D2487 & ASTM D2488)

CONSISTENCY AND RELATIVE DENSITY DESCRIPTIONS

Descriptors for soil consistency used in this report are based upon the Standard Penetration Test (SPT), ASTM D 1587, with the penetration (N) values corrected to N_{60} , based upon the efficiency of the SPT Hammer (Energy Ratio) used for the soil sampling.

NON-COHESIVE SOILS [GW, GP, GM, GC, SW, SP, SM, SC]

Relative Density or Consistency	SPT-N_{60} (blows/foot, bpf)	Suitability
Very Loose	0 – 4	Poor
Loose	5 – 10	Marginal
Medium Dense	11 – 30	Satisfactory
Dense	31 - 50	Good
Very Dense	Over 50	Very Good

COHESIVE SOILS [ML, MH, CL, CH]

Stiffness or Consistency	SPT-N_{60} (blows/foot, bpf)	Suitability
Very Soft	0 – 1	Very Poor
Soft	2 – 4	Poor
Medium Stiff	5 – 8	Marginal
Stiff	9 – 15	Satisfactory
Very Stiff	16 – 30	Good
Hard	Over 30	Very Good

COMPONENT MODIFIERS

ASTM D2488 (Visual-Manual)

Modifier	% by Weight
Trace of	0 – 1
Traces of	2 – 10
Little	11 – 20
Some	21 – 35
"And"	36 – 50

ASTM D2487 (USCS)

Modifier	% by Weight
with sand or gravel	15 – 29
Sandy or Gravelly	≥ 30
with silt or clay	5 – 12
Silty or Clayey	> 12
Organic	$LL_{oven}/LL_{air} < 0.75$

Organic Soils

Modifier	% by Weight
Highly	> 10
Moderately	4 – 10
Slightly	2 – 4
Inorganic	< 2

MOISTURE DESCRIPTIONS

Terms	Non-Cohesive Soils	Cohesive Soils	Suitability
Dry	Moisture Absent	Powdery	Marginal
Damp	Some Moisture	Below Plastic Limit	Good
Moist	Damp to the Touch	Between Plastic and Liquid Limits	Marginal
Wet	Visible Water	Above Liquid Limit	Poor

PARTICLE SIZE DESCRIPTIONS

Component	USCS Particle Size
Boulders	≥ 12-in. (300 mm)
Cobbles	< 12-in. (300 mm) to 3-in. (75 mm)
Coarse Gravel	< 3-in. (75 mm) to 3/4-in. (19.05 mm)
Fine Gravel	< 3/4-in. 19.05 mm) to #4 Sieve (4.75 mm)
Coarse Sand	< #4 Sieve (4.75 mm) to #10 Sieve (2.00 mm)
Medium Sand	< #10 Sieve (2.00 mm) to #40 Sieve (0.425 mm)
Fine Sand	< #40 Sieve (0.425 mm) to #200 Sieve (0.074 mm)
Silt	< #200 Sieve (0.074 mm) to 0.005 mm
Clay	< 0.005 mm

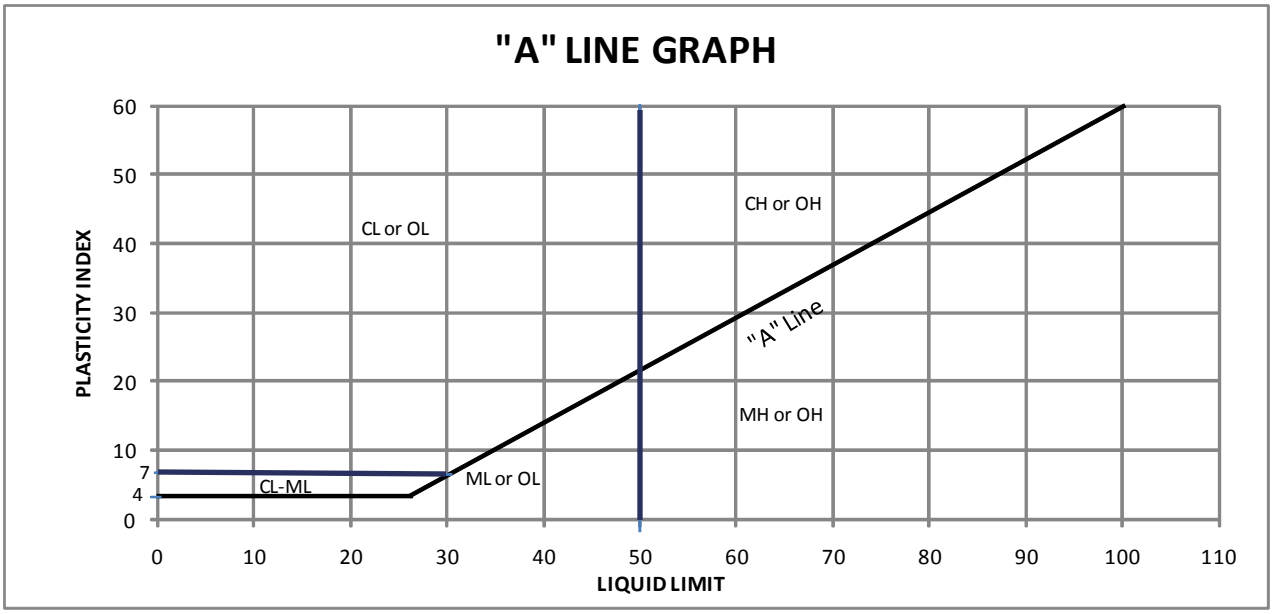
SOIL DESCRIPTIONS BASED ON THE UNIFIED SOIL CLASSIFICATION SYSTEM

ASTM D 2487 and D 2488

Major Division			Group Symbol	Letter Symbol	Group Name*
Coarse Grained Soils Less Than 50 Percent Passing the # 200 Sieve	Gravel - Percent GRAVEL > percent SAND	Gravel with < 5% Fines		GW	Well Graded GRAVEL
				GP	Poorly Graded GRAVEL
		Gravel with Between 5 and 15% Fines		GW-GM	Well Graded GRAVEL with silt
				GW-GC	Well Graded Gravel with clay
				GP-GM	Poorly Graded GRAVEL with silt
				GP-GC	Poorly Graded GRAVEL with clay
		Gravel with ≥ 15% Fines		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	Sand - Percent SAND ≥ percent GRAVEL	Sand with < 5% Fines		SW	Well Graded SAND
				SP	Poorly Graded SAND
		Sand with Between 5 and 15% Fines		SW-SM	Well Graded SAND with silt
				SW-SC	Well Graded SAND with clay
				SP-SM	Poorly Graded SAND with silt
				SP-SC	Poorly Graded SAND with clay
		Sand with ≥ 15% Fines		SM	Silty SAND
				SC	Clayey SAND
Fine Grained Soils 50 percent or more Passing the # 200 Sieve	SILT and CLAY	Liquid Limit Less Than 50		ML	SILT
				CL	Lean CLAY
				CL-ML	SILTY CLAY
				OL	Organic SILT, CLAY, or SILTY CLAY
		Liquid Limit 50 or Greater		MH	Elastic SILT
				CH	Fat CLAY
				OH	Organic SILT or CLAY
Highly Organic Soils				PT	Peat

* Additional Modifiers			
	Coarse Grained Soils	with silt or clay	5 to 12 % Silt or Clay by weight
		Silty or Clayey	more than 12 % Silt or Clay by weight
	Fine Grained Soils	with sand or gravel	15 to 29 % Sand or Gravel by weight
		Sandy or Gravelly	30 % or more Sand or Gravel by weight

"A" LINE GRAPH



TEST BORING RECORD

CLIENT	: Schooley Caldwell & Associates	BORING NO.:	**B-01-25**
PROJECT	: ODNR Great Council Observation Tower and Restroom Facility	SHEET	1 OF 1
LOCATION	: Xenia, Greene County, Ohio	DATE STARTED	: 05-16-25
PROJECT NO.	: 25050027COL	DATE COMPLETED	: 05-16-25

BORING ELEVATION	: 842.5 Feet	RIG TYPE	: CME 55	DRILLER	: Harvey
NORTHING	: 39.72805	CASING DIA.	: ---	TEMPERATURE	: 77°F
EASTING	: -83.93852	CORE SIZE	: ---	WEATHER	: Sunny
DEPTH	: 10.0 Feet	HAMMER	: Automatic		
BORING METHOD	: 3.25" I.D. HSA	ENERGY RATIO	: 79.3		

GROUNDWATER: Encountered at None At completion None ▽ Caved in at 7.2'

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
842.3		**ASPHALT (2")**	0.2										
		Medium Dense, Brown to Brown and Gray **SILTY SAND (SM)**, Damp, Trace Clay		SS-1	7 4 4	11	72	7			18	15	3
839.5			3.0										
		Medium Dense, Brown **SILTY SAND with GRAVEL (SM)**, Damp		SS-2	3 4 8	16	67	10					
837.0	5		5.5										
		Dense, Brown **SILTY SAND with GRAVEL (SM)**, Damp		SS-3	17 10 14	32	22	7					
				SS-4	7 12 16	37	56	9					
832.5	10	**BOTTOM OF BORING**	10.0										
	15												
	20												

2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT	: Schooley Caldwell & Associates	BORING NO.:	**B-02-25**
PROJECT	: ODNR Great Council Observation Tower and Restroom Facility	SHEET	1 OF 3
LOCATION	: Xenia, Greene County, Ohio	DATE STARTED	: 05-15-25
PROJECT NO.	: 25050027COL	DATE COMPLETED	: 05-15-25

BORING ELEVATION	: 844.5 Feet	RIG TYPE	: CME 55	DRILLER	: Harvey
NORTHING	: 39.72801	CASING DIA.	: ---	TEMPERATURE	: 82°F
EASTING	: -83.93872	CORE SIZE	: ---	WEATHER	: Sunny
DEPTH	: 50.0 Feet	HAMMER	: Automatic		
BORING METHOD	: 3.25" I.D. HSA	ENERGY RATIO	: 79.3		

GROUNDWATER: ▼ Encountered at 28.0' ▽ At completion 28.0' ▨ Caved in at 18.0'

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
843.7		**TOPSOIL (9")**	0.8										
		Stiff, Brown **SANDY LEAN CLAY with GRAVEL (CL)**, Moist, Contains Rock Fragments, Brick Fragments, and Roots **(FILL)**		SS-1	3 4 6	13	56	26		7.0*			
841.5			3.0										
	5	Medium Dense, Brown **CLAYEY GRAVEL with SAND (GC)**, Damp		SS-2	3 5 8	17	78	14		4.0*	31	18	13
839.0			5.5										
				SS-3	6 7 12	25	67	3			NP	NP	NP
	10	Medium Dense to Dense, Gray and Brown **POORLY GRADED GRAVEL with SILT and SAND (GP-GM)**, Dry, Contains Rock Fragments		SS-4	9 12 26	50	78	4					
	15			SS-5	27 19 18	49	89	4					
827.5			17.0										
	20	Dense, Brown and Gray **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Damp		SS-6	7 12 14	34	83	6			NP	NP	NP

Continued on next page

GTL ENGINEERING
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates

BORING NO.: **B-02-25**

PROJECT : ODNR Great Council Observation Tower and Restroom Facility

SHEET 2 OF 3

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
822.5		Dense, Brown and Gray **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Damp	22.0										
	25	Dense, Brown **POORLY GRADED SAND with SILT (SP-SM)**, Dry		SS-7	13 15 14	38	17	5			NP	NP	NP
817.5			27.0										
	30	Dense to Very Dense, Brown **WELL-GRADED GRAVEL with SILT and SAND (GW-GM)**, Wet, Contains Rock Fragments		SS-8	9 13 18	41	89	10					
	35			SS-9	11 17 23	53	83	9			NP	NP	NP
807.5			37.0										
	40	Dense, Brown **WELL-GRADED SAND (SW)**, Wet		SS-10	9 14 18	42	89	24					
802.5			42.0										
	45	Very Dense, Brown **SILTY SAND with GRAVEL (SM)**, Wet		SS-11	12 18 21	52	78	11					

Continued on next page

GTL ENGINEERING
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates

BORING NO.: **B-02-25**

PROJECT : ODNR Great Council Observation Tower and Restroom Facility

SHEET 3 OF 3

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
797.5			47.0										
		Very Dense, Brown **WELL-GRADED SAND (SW)**, Wet			24								
				SS-12	19	59	89	17					
794.5	50		50.0		26								
		BOTTOM OF BORING											
	55												
	60												
	65												
	70												

2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT	: Schooley Caldwell & Associates	BORING NO.:	**B-03-25**
PROJECT	: ODNR Great Council Observation Tower and Restroom Facility	SHEET	1 OF 3
LOCATION	: Xenia, Greene County, Ohio	DATE STARTED	: 05-15-25
PROJECT NO.	: 25050027COL	DATE COMPLETED	: 05-15-25

BORING ELEVATION	: 845.5 Feet	RIG TYPE	: CME 55	DRILLER	: Harvey
NORTHING	: 39.72805	CASING DIA.	: ---	TEMPERATURE	: 83°F
EASTING	: -83.93877	CORE SIZE	: ---	WEATHER	: Sunny
DEPTH	: 50.0 Feet	HAMMER	: Automatic		
BORING METHOD	: 3.25" I.D. HSA	ENERGY RATIO	: 79.3		

GROUNDWATER: ▼ Encountered at 28.0' ▽ At completion 28.0' ▨ Caved in at 17.9'

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
844.8		**TOPSOIL (8")**	0.7										
		Stiff, Brown **LEAN CLAY with SAND (CL)**, Moist		SS-1	3 4 6	13	100	19		4.0*	34	17	17
842.5			3.0										
		Medium Dense, Brown **CLAYEY GRAVEL with SAND (GC)**, Moist		SS-2	4 6 6	16	72	24		7.0*	46	15	31
840.0	5		5.5										
		Dense, Brown **POORLY GRADED GRAVEL with SILT and SAND (GP-GM)**, Dry		SS-3	7 12 16	37	72	5			NP	NP	NP
837.5			8.0										
	10	Medium Dense, Brown **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Dry, Contains Rock Fragments		SS-4	7 8 11	25	89	4					
				SS-5	6 10 11	28	72	5			NP	NP	NP
828.5	15		17.0										
		Dense to Very Dense, Brown **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Dry to Wet		SS-6	19 15 17	42	83	5					
	20												

Continued on next page

GTL ENGINEERING
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates

BORING NO.: **B-03-25**

PROJECT : ODNR Great Council Observation Tower and Restroom Facility

SHEET 2 OF 3

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
	25			SS-7	9 11 13	32	89	6					
	30			SS-8	11 12 18	40	72	9			NP	NP	NP
	35	Dense to Very Dense, Brown **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Dry to Wet		SS-9	11 20 22	56	78	10					
	40			SS-10	9 13 21	45	89	13					
	45			SS-11	11 22 30	69	89	10					

Continued on next page

GTL ENGINEERING
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates

BORING NO.: **B-03-25**

PROJECT : ODNR Great Council Observation Tower and Restroom Facility

SHEET 3 OF 3

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
		Dense to Very Dense, Brown **WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**, Dry to Wet		SS-12	13 21 28	65	83	28					
795.5	50	**BOTTOM OF BORING**	50.0										
	55												
	60												
	65												
	70												

GTL ENGINEERING

2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates
BORING NO.: **B-04-25**
PROJECT : ODNR Great Council Observation Tower and Restroom Facility
SHEET 1 OF 1
LOCATION : Xenia, Greene County, Ohio
DATE STARTED : 05-16-25
PROJECT NO. : 25050027COL
DATE COMPLETED : 05-16-25

BORING ELEVATION	: 845.5 Feet	RIG TYPE	: CME 55	DRILLER	: Harvey
NORTHING	: 39.72799	CASING DIA.	: ---	TEMPERATURE	: 76°F
EASTING	: -83.93898	CORE SIZE	: ---	WEATHER	: Sunny
DEPTH	: 20.0 Feet	HAMMER	: Automatic		
BORING METHOD	: 3.25" I.D. HSA	ENERGY RATIO	: 79.3		

GROUNDWATER: Encountered at None At completion None ▽ Caved in at 13.0'

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
844.8		**TOPSOIL (8")**	0.7										
		Medium Dense, Brown **CLAYEY SAND with GRAVEL (SC)**, Moist		SS-1	4 10 11	28	67	18		6.0*	31	16	15
842.5			3.0										
	5	Medium Dense, Brown **CLAYEY SAND with GRAVEL (SC)**, Moist		SS-2	5 3 7	13	89	28		7.0*	44	17	27
840.0			5.5										
		Medium Dense, Brown **SILTY SAND (SM)**, Damp		SS-3	4 7 10	22	83	7					
837.5			8.0										
	10			SS-4	11 17 22	52	78	5					
	15	Very Dense, Brown **SILTY SAND with GRAVEL (SM)**, Dry, Contains Rock Fragments		SS-5	11 22 30	69	72	4					
				SS-6	16 27 23	66	83	4					
825.5	20	**BOTTOM OF BORING**	20.0										

CTL ENGINEERING
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

TEST BORING RECORD

CLIENT : Schooley Caldwell & Associates
BORING NO.: **B-05-25**
PROJECT : ODNR Great Council Observation Tower and Restroom Facility
SHEET 1 OF 1
LOCATION : Xenia, Greene County, Ohio
DATE STARTED : 05-16-25
PROJECT NO. : 25050027COL
DATE COMPLETED : 05-16-25

BORING ELEVATION	: 845.0 Feet	RIG TYPE	: CME 55	DRILLER	: Harvey
NORTHING	: 39.72804	CASING DIA.	: ---	TEMPERATURE	: 76°F
EASTING	: -83.93912	CORE SIZE	: ---	WEATHER	: Sunny
DEPTH	: 20.0 Feet	HAMMER	: Automatic		
BORING METHOD	: 3.25" I.D. HSA	ENERGY RATIO	: 79.3		

GROUNDWATER: Encountered at None At completion None ▽ Caved in at 14.2'

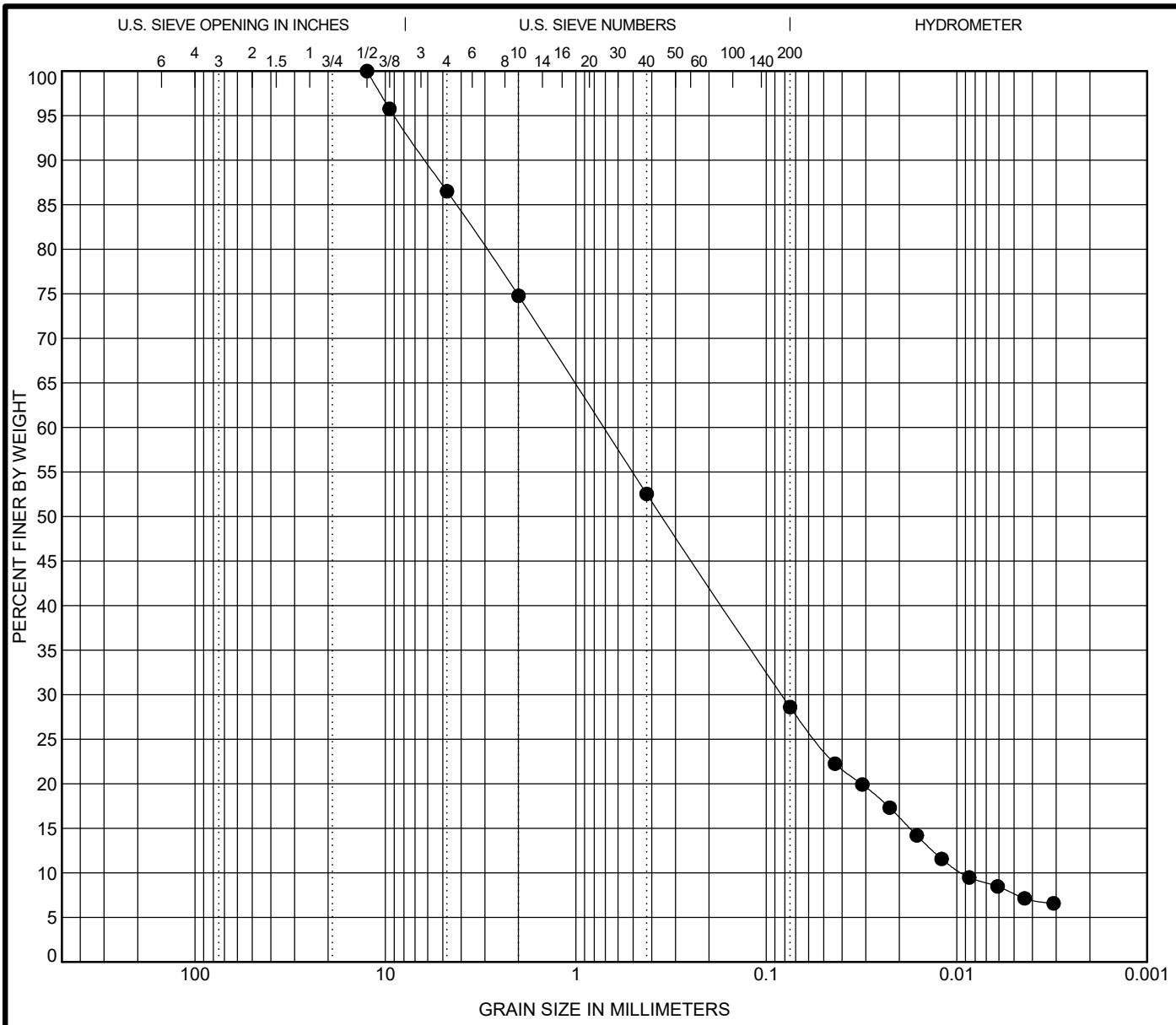
STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	STRATUM DEPTH	SAMPLE NUMBER	SPT per 6"	N_{60}	RECOVERY (%)	MOISTURE CONTENT	TOTAL UNIT WEIGHT pcf	UNCONF. COMP., ksf	ATTERBERG LIMITS LL	PL	PI
844.2		**TOPSOIL (9")**	0.8										
		Stiff, Brown **LEAN CLAY with SAND (CL)**, Moist		SS-1	3 4 7	15	89	19		5.0*	38	18	20
842.0			3.0										
	5	Medium Dense, Brown **CLAYEY SAND with GRAVEL (SC)**, Moist		SS-2	3 4 5	12	78	21		7.5*			
839.5			5.5										
		Medium Dense, Brown **CLAYEY GRAVEL with SAND (GC)**, Damp		SS-3	3 5 8	17	56	7			29	21	8
837.0			8.0										
	10			SS-4	9 22 18	53	83	5					
	15	Very Dense, Brown **SILTY SAND with GRAVEL (SM)**, Dry, Contains Rock Fragments		SS-5	12 21 29	66	39	4					
825.0	20		20.0	SS-6	11 18 26	58	78	5					
		BOTTOM OF BORING											

2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-6377
Email: ctl@ctleng.com

BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling		SPT - Standard Penetration Test
HA - Hand Auger		N_{60} - Standard Penetration Normalized to 60% Drill Rod ER

APPENDIX C

LABORATORY TEST RESULTS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-01-25**	**SS-1**	**SILTY SAND (SM)**	**7**	**18**	**15**	**3**	**1.03**	**76.47**

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-01-25**	**SS-1**	**12.5**	**0.714**	**0.354**	**0.083**	**0.009**	**13**	**58**	**21**	**8**

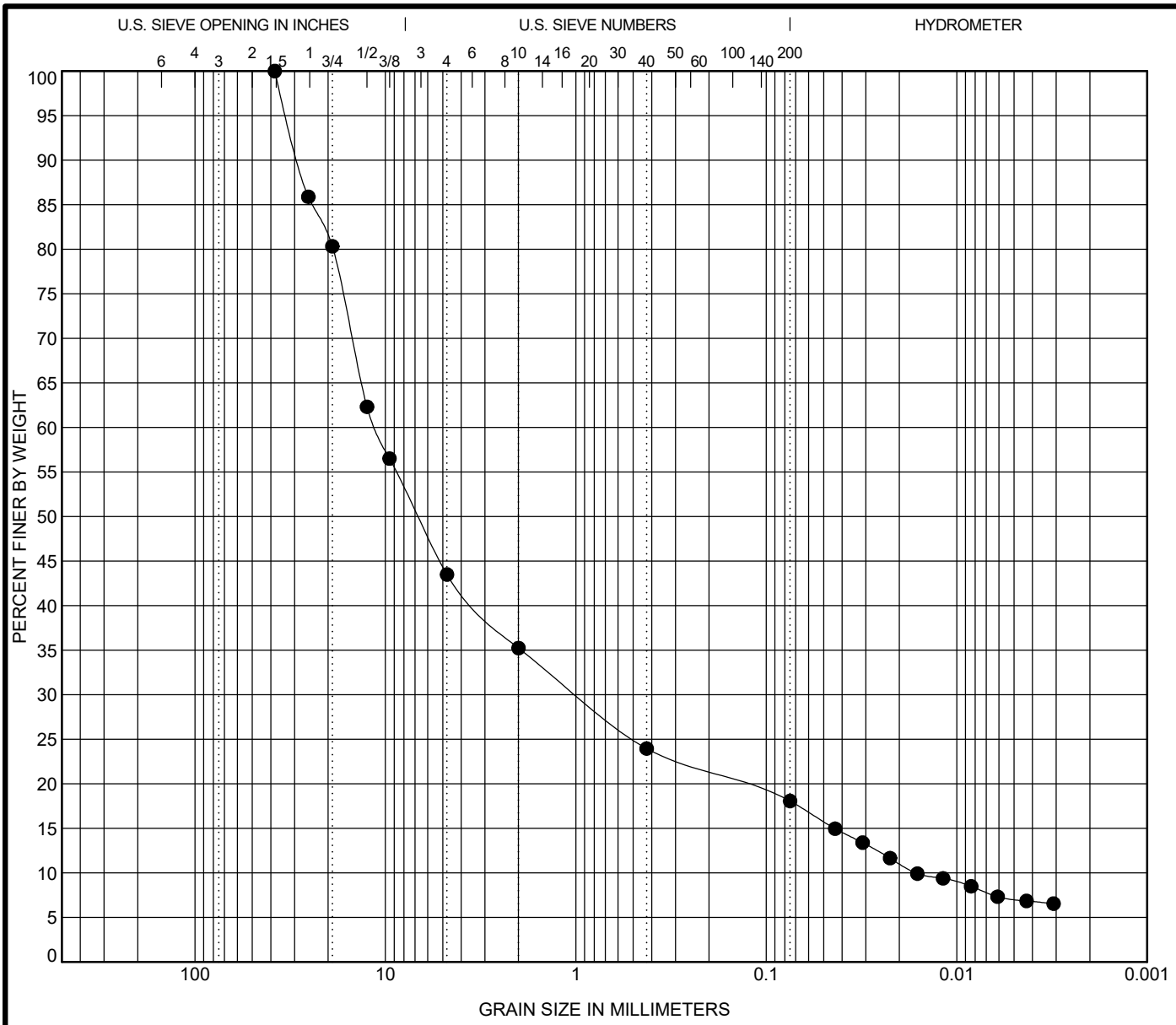
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-02-25**	**SS-2**	**CLAYEY GRAVEL with SAND (GC)**	**14**	**31**	**18**	**13**	**5.18**	**684.97**

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-02-25**	**SS-2**	**38.1**	**11.215**	**6.727**	**0.975**	**0.016**	**57**	**25**	**11**	**7**

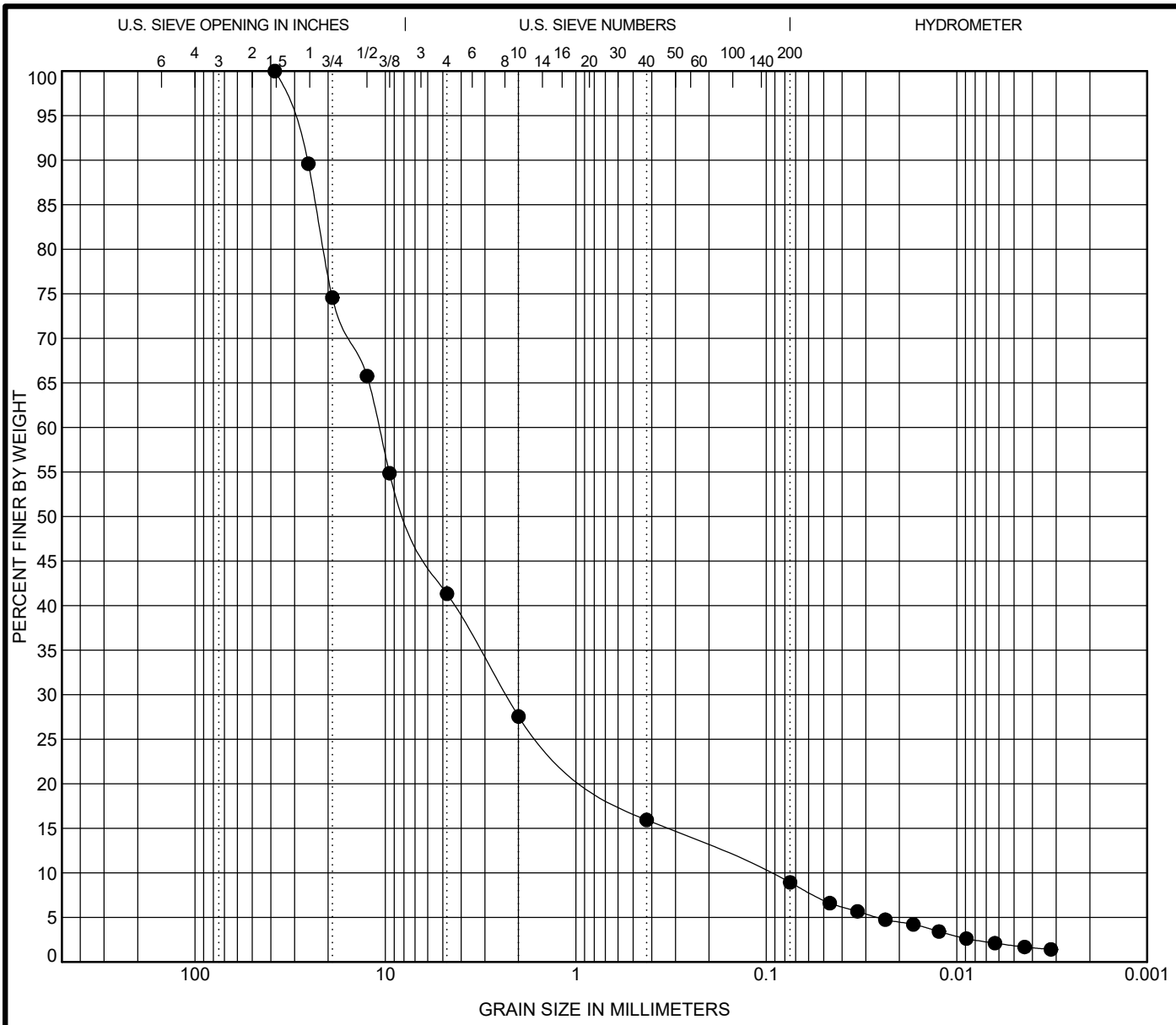
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-02-25**	**SS-3**	**POORLY GRADED GRAVEL with SILT and SAND (GP-GM)**	**6**	**NP**	**NP**	**NP**	**5.14**	**110.82**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-02-25**	**SS-3**	**38.1**	**10.826**	**7.419**	**2.333**	**0.098**	**59**	**32**	**7**	**2**

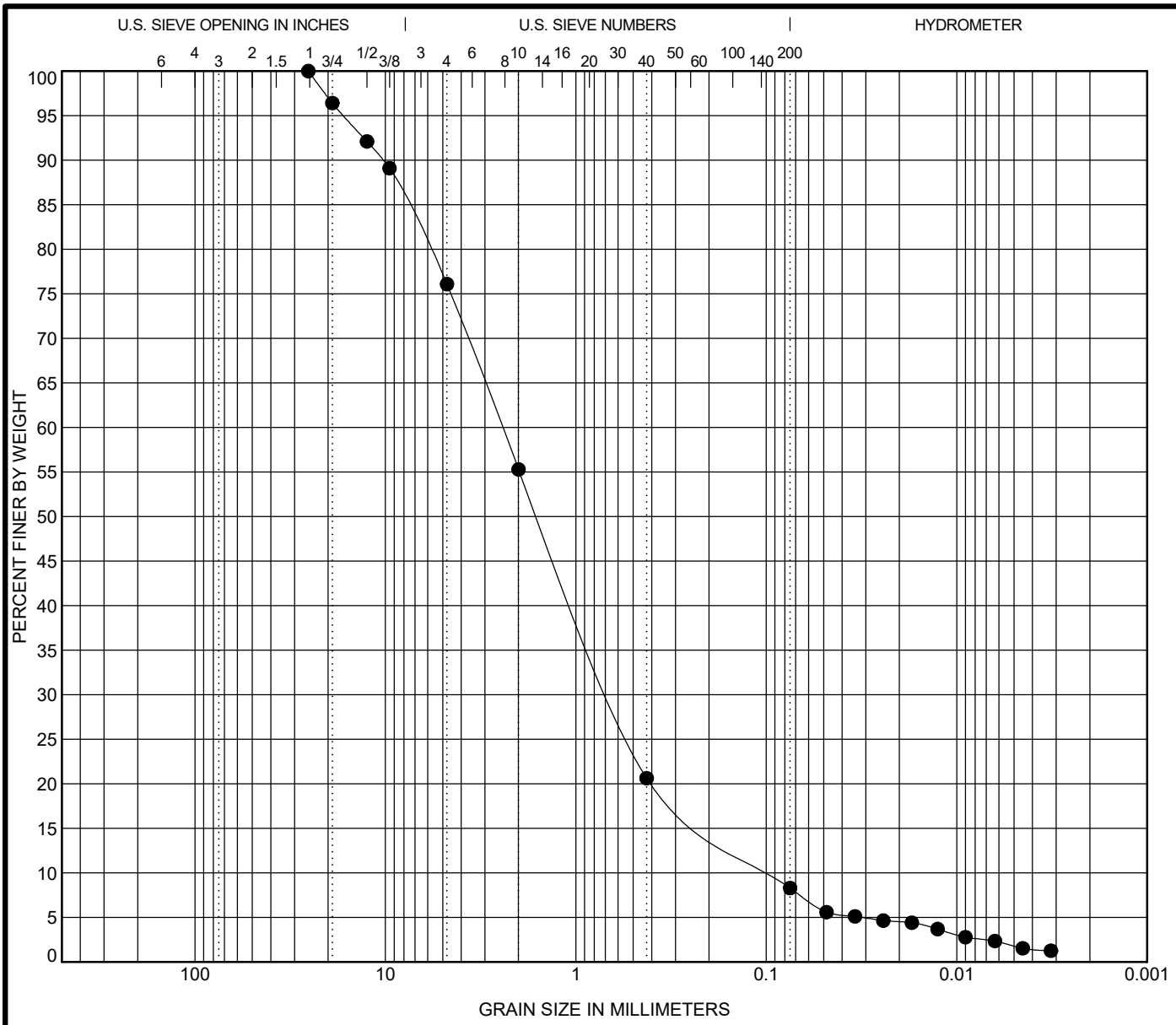
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-02-25**	**SS-6**	**WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**	**6**	**NP**	**NP**	**NP**	**1.8**	**25.53**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-02-25**	**SS-6**	**25.4**	**2.433**	**1.579**	**0.646**	**0.095**	**24**	**68**	**6**	**2**

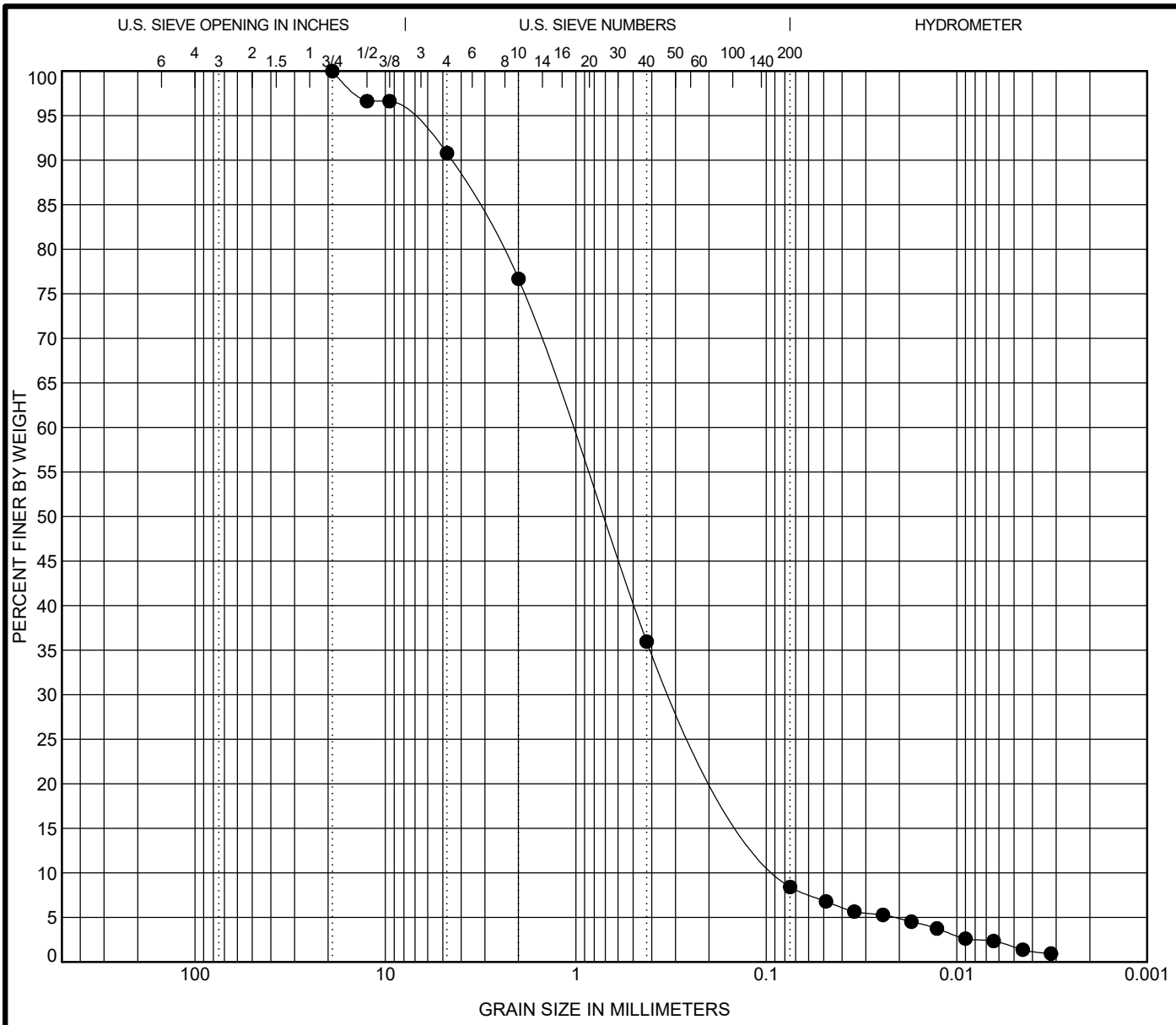
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-02-25**	**SS-7**	**POORLY GRADED SAND with SILT (SP-SM)**	**5**	**NP**	**NP**	**NP**	**0.97**	**12.8**

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-02-25**	**SS-7**	**19**	**1.06**	**0.725**	**0.292**	**0.083**	**9**	**82**	**7**	**2**

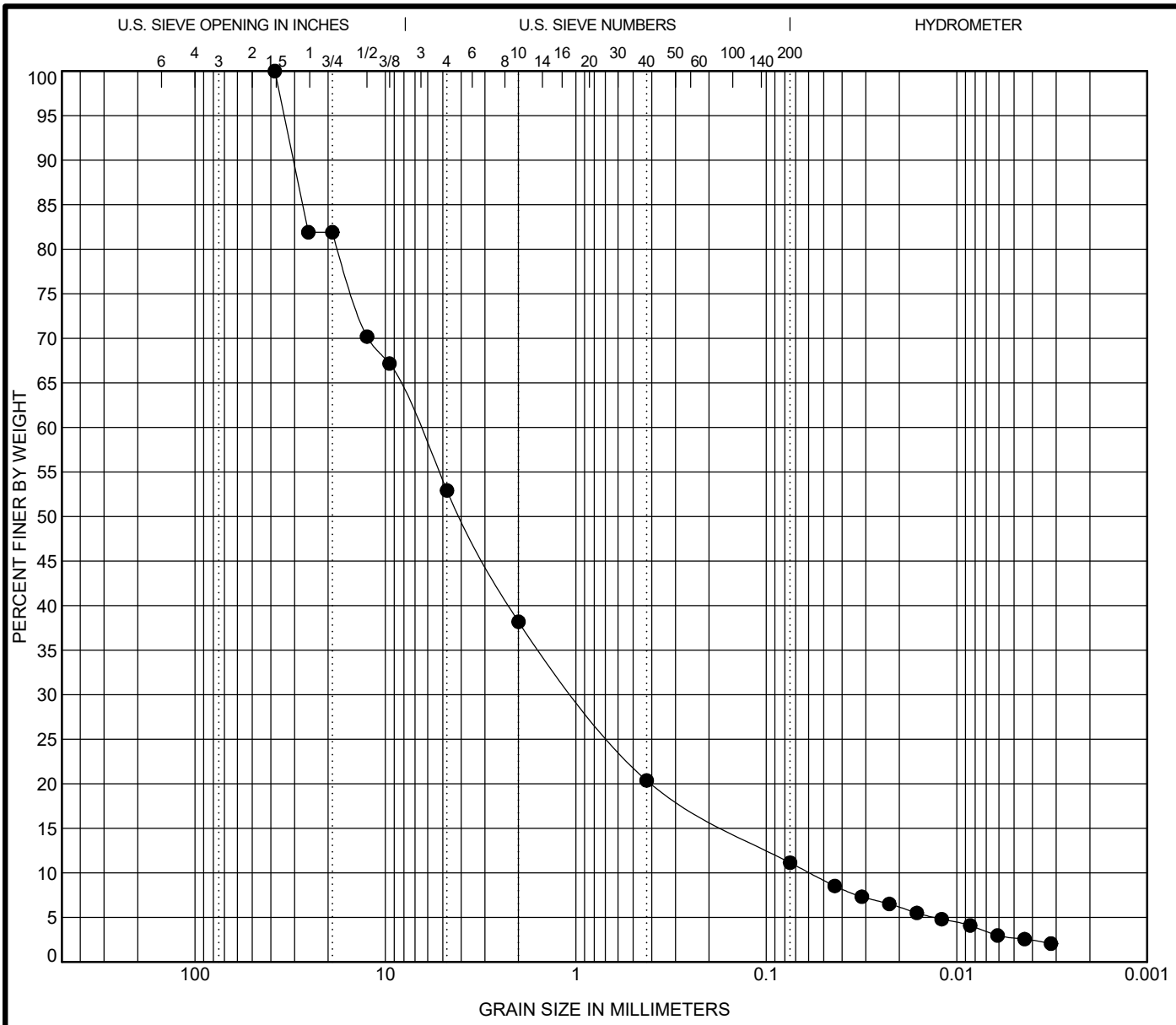
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-02-25**	**SS-9**	**WELL-GRADED GRAVEL with SILT and SAND (GW-GM)**	**9**	**NP**	**NP**	**NP**	**2.42**	**113.35**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-02-25**	**SS-9**	**38.1**	**6.711**	**4.001**	**0.982**	**0.059**	**47**	**42**	**8**	**3**

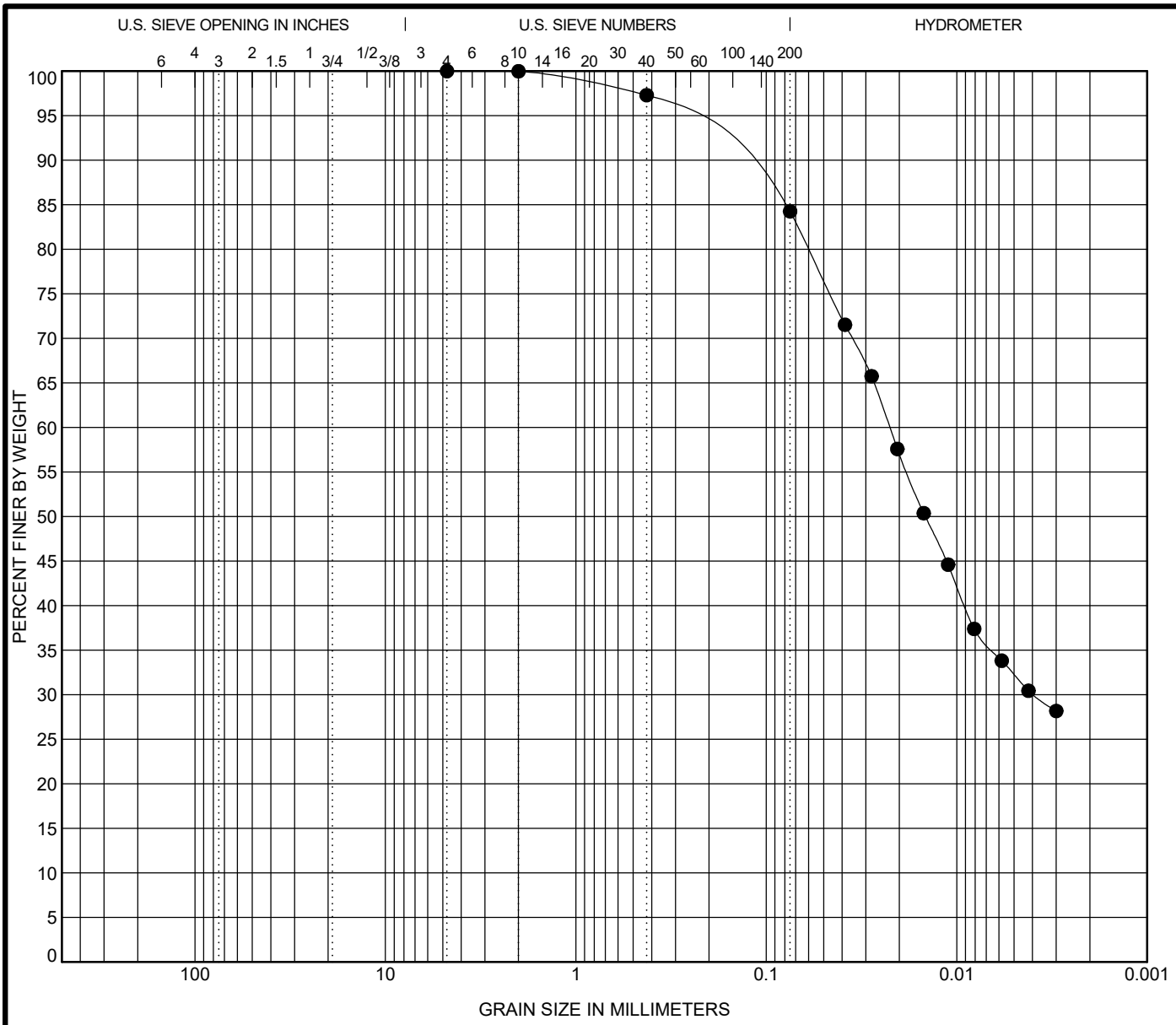
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-03-25**	**SS-1**	**LEAN CLAY with SAND (CL)**	**19**	**34**	**17**	**17**		

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-03-25**	**SS-1**	**4.75**	**0.022**	**0.015**	**0.004**		**0**	**16**	**52**	**32**

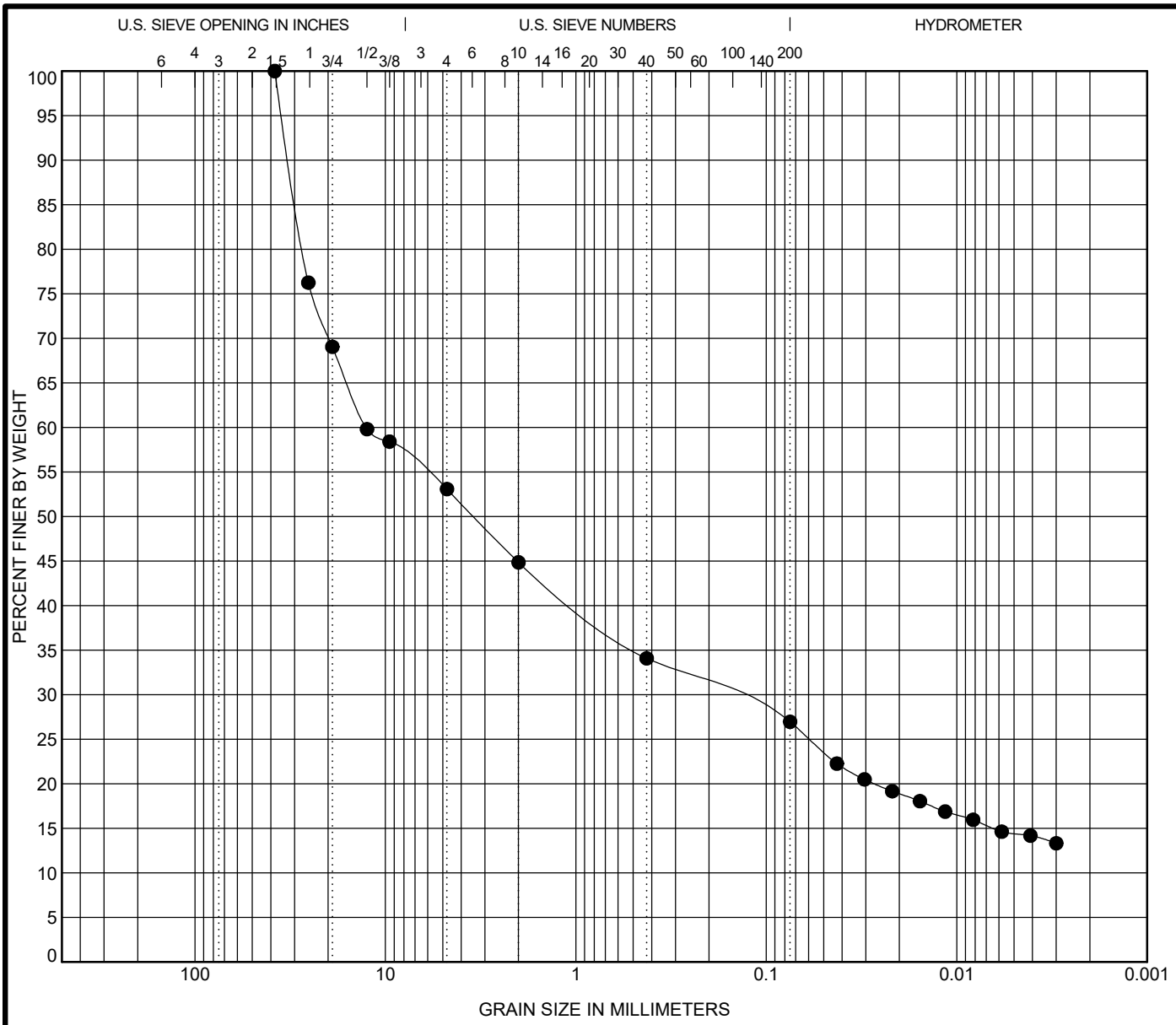
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-03-25**	**SS-2**	**CLAYEY GRAVEL with SAND (GC)**	**24**	**46**	**15**	**31**		

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-03-25**	**SS-2**	**38.1**	**12.608**	**3.436**	**0.157**		**47**	**26**	**13**	**14**

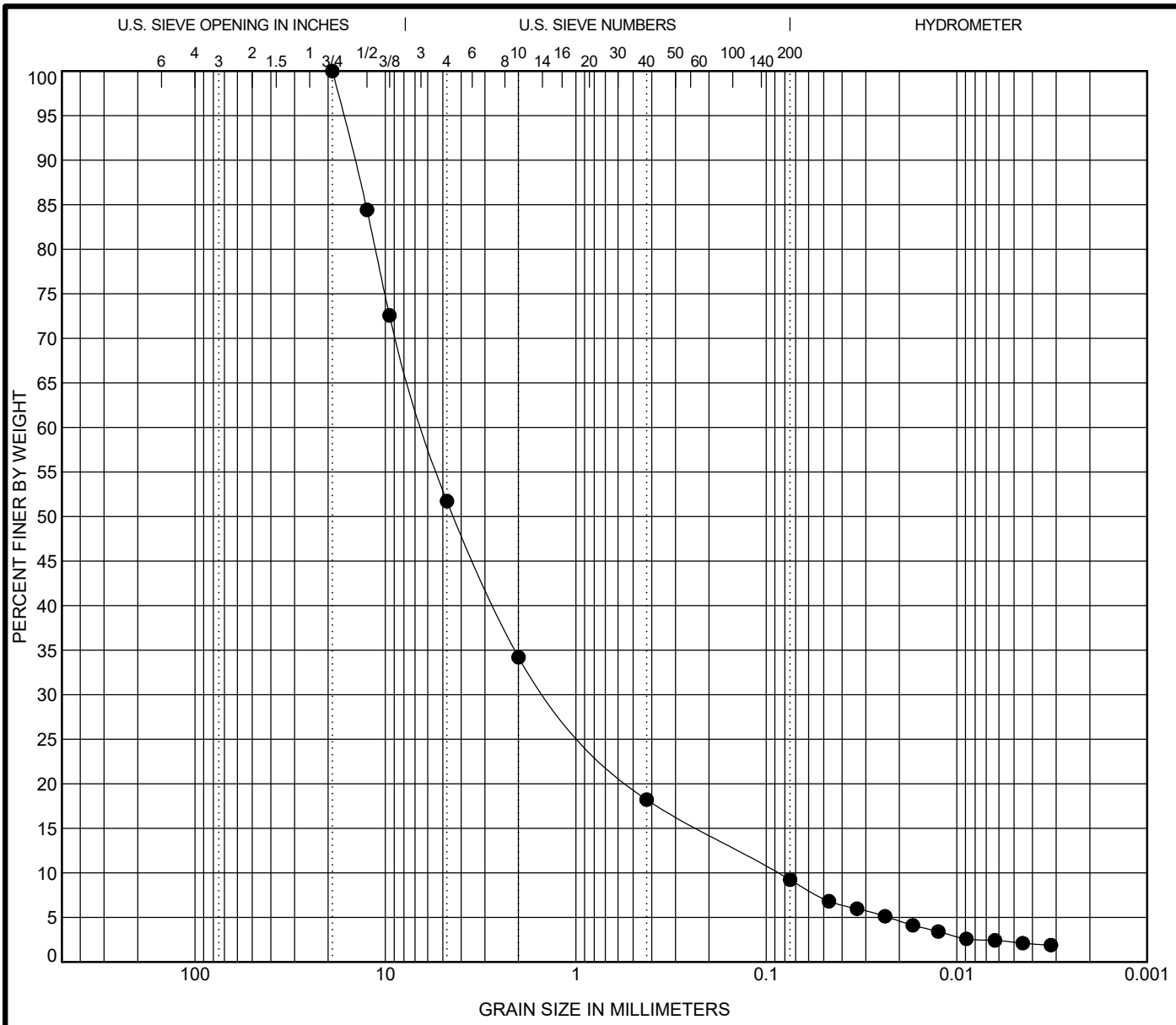
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-03-25**	**SS-3**	**POORLY GRADED GRAVEL with SILT and SAND (GP-GM)**	**5**	**NP**	**NP**	**NP**	**3.26**	**72**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-03-25**	**SS-3**	**19**	**6.26**	**4.362**	**1.331**	**0.087**	**48**	**42**	**8**	**2**

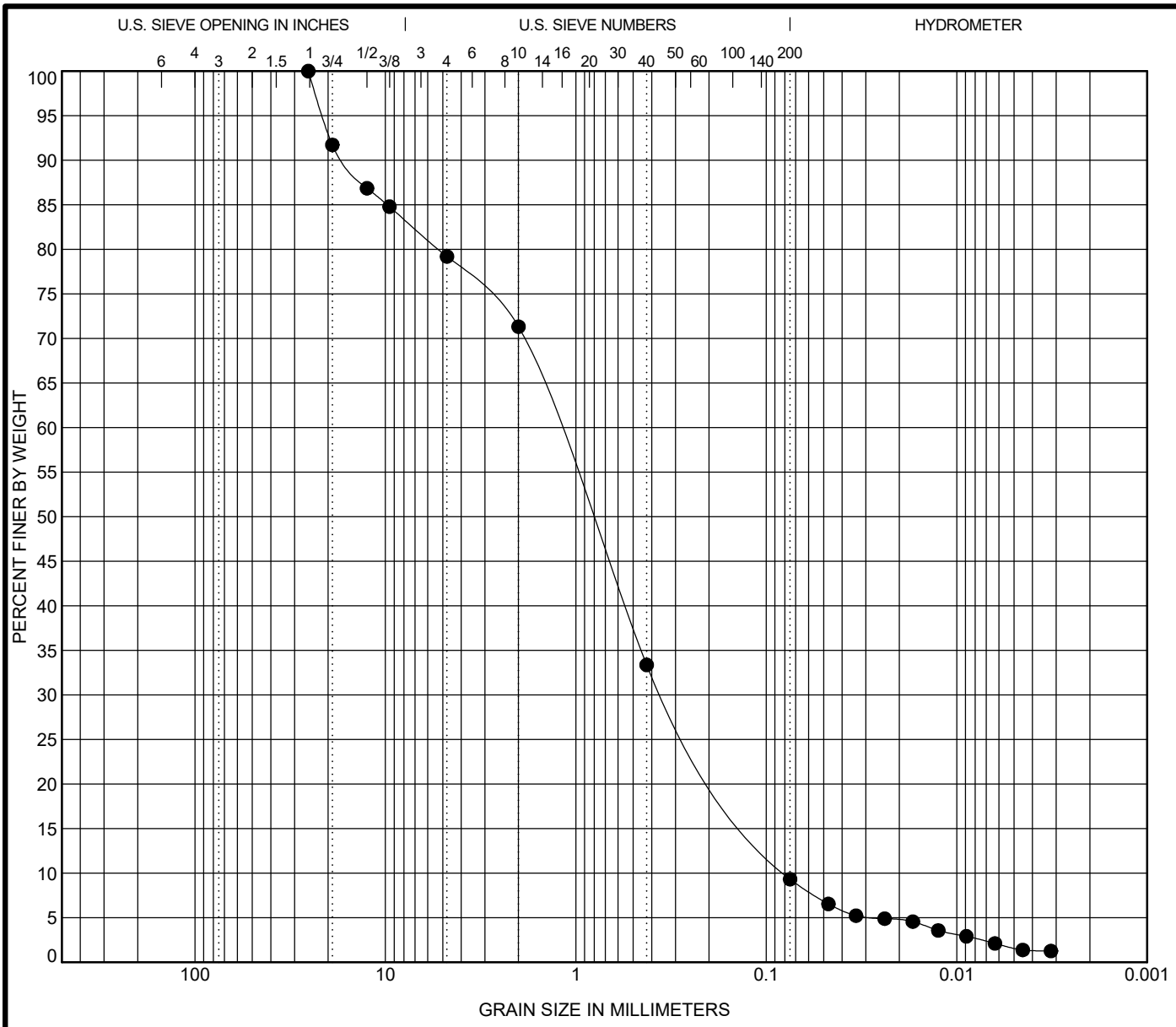
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-03-25**	**SS-5**	**WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**	**5**	**NP**	**NP**	**NP**	**1.12**	**15.99**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-03-25**	**SS-5**	**25.4**	**1.26**	**0.838**	**0.333**	**0.079**	**21**	**70**	**7**	**2**

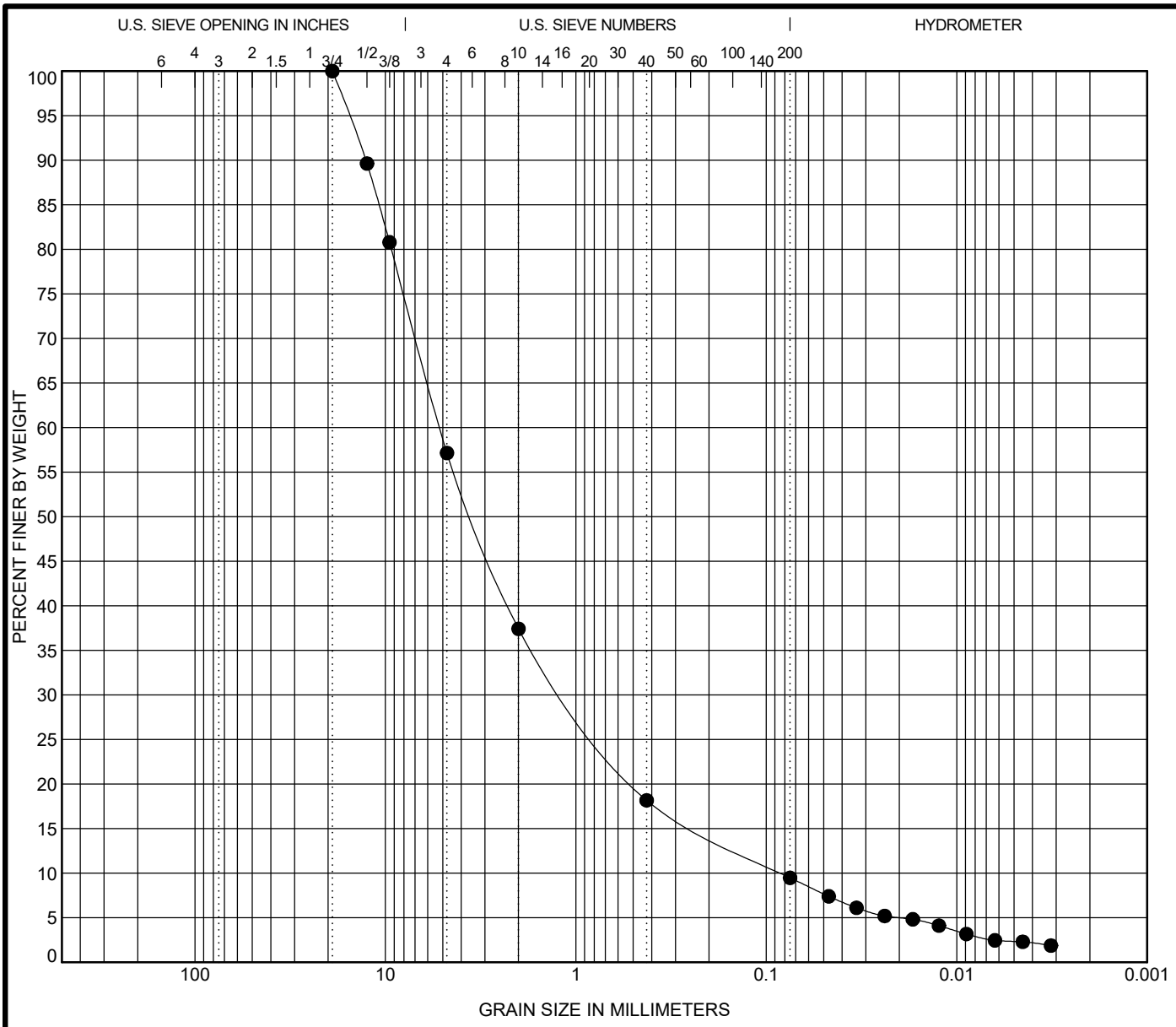
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-03-25**	**SS-8**	**WELL-GRADED SAND with SILT and GRAVEL (SW-SM)**	**9**	**NP**	**NP**	**NP**	**2.82**	**62**

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-03-25**	**SS-8**	**19**	**5.166**	**3.472**	**1.101**	**0.083**	**43**	**48**	**7**	**2**

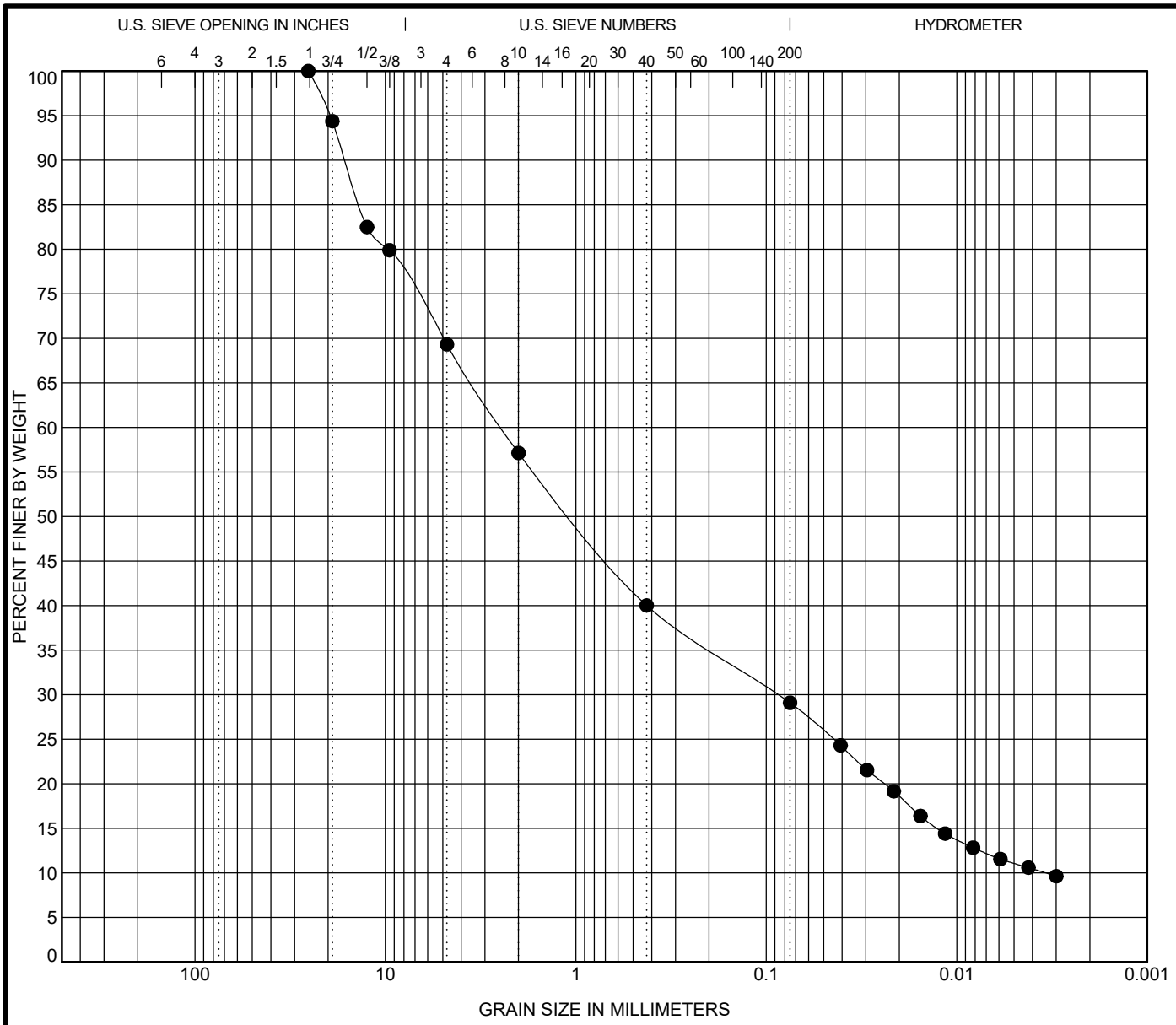
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-04-25**	**SS-1**	**CLAYEY SAND with GRAVEL (SC)**	**18**	**31**	**16**	**15**	**0.9**	**716.25**

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-04-25**	**SS-1**	**25.4**	**2.451**	**1.049**	**0.087**	**0.003**	**31**	**40**	**18**	**11**

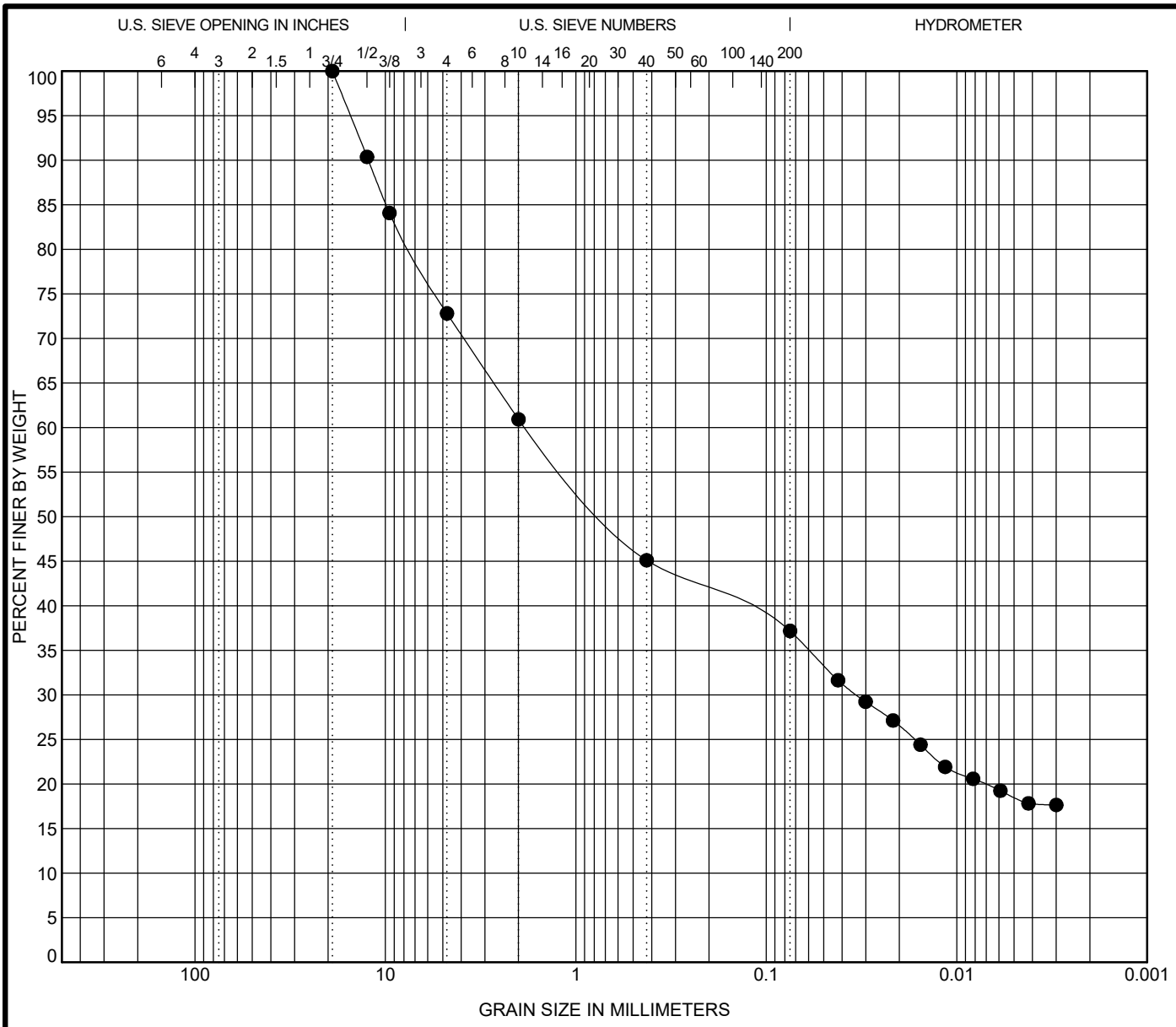
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-04-25**	**SS-2**	**CLAYEY SAND with GRAVEL (SC)**	**28**	**44**	**17**	**27**		

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-04-25**	**SS-2**	**19**	**1.828**	**0.686**	**0.033**		**27**	**36**	**18**	**19**

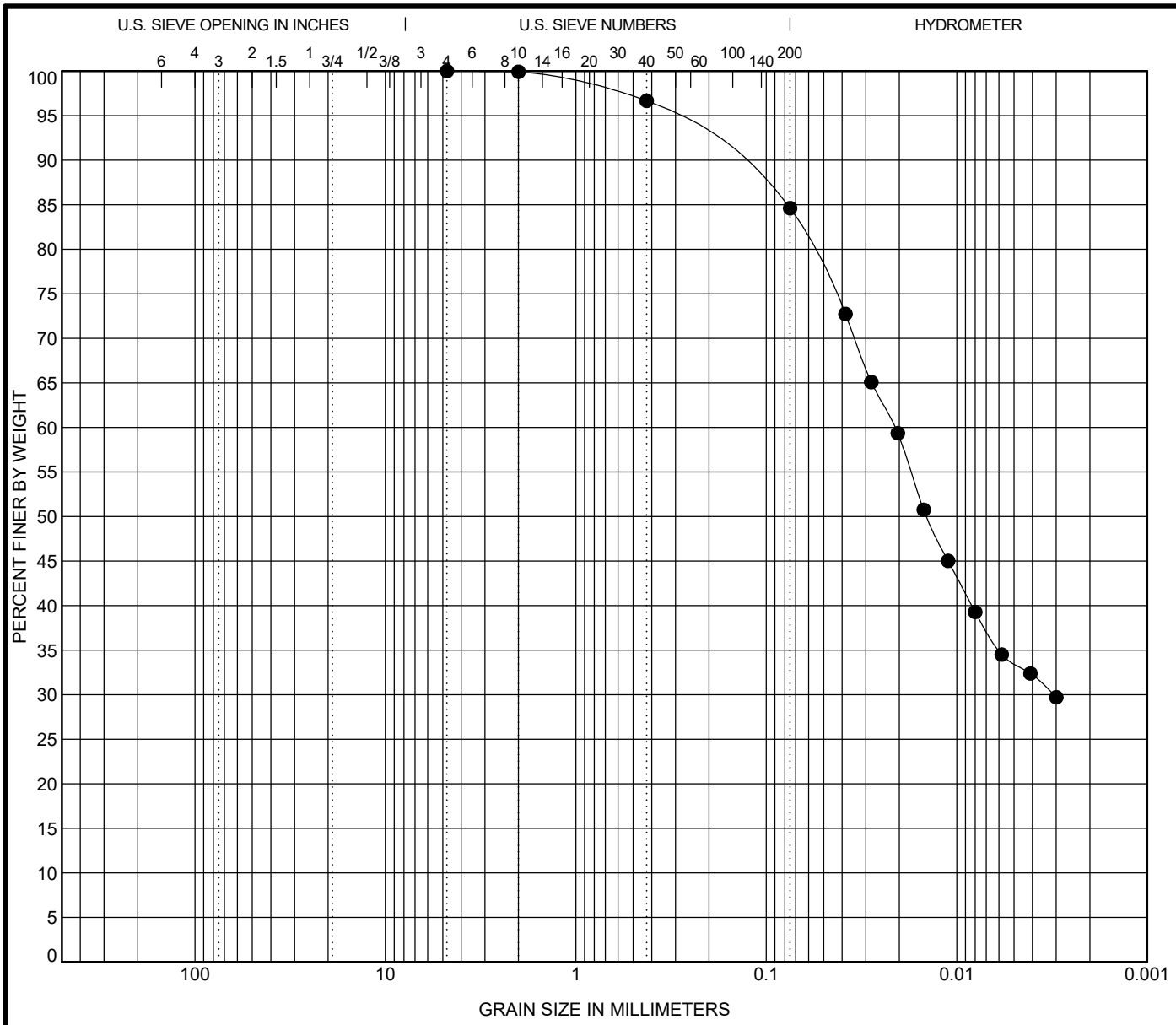
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
●	**B-05-25**	**SS-1**	**LEAN CLAY with SAND (CL)**	**19**	**38**	**18**	**20**		

	Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-05-25**	**SS-1**	**4.75**	**0.021**	**0.014**	**0.003**		**0**	**15**	**51**	**34**

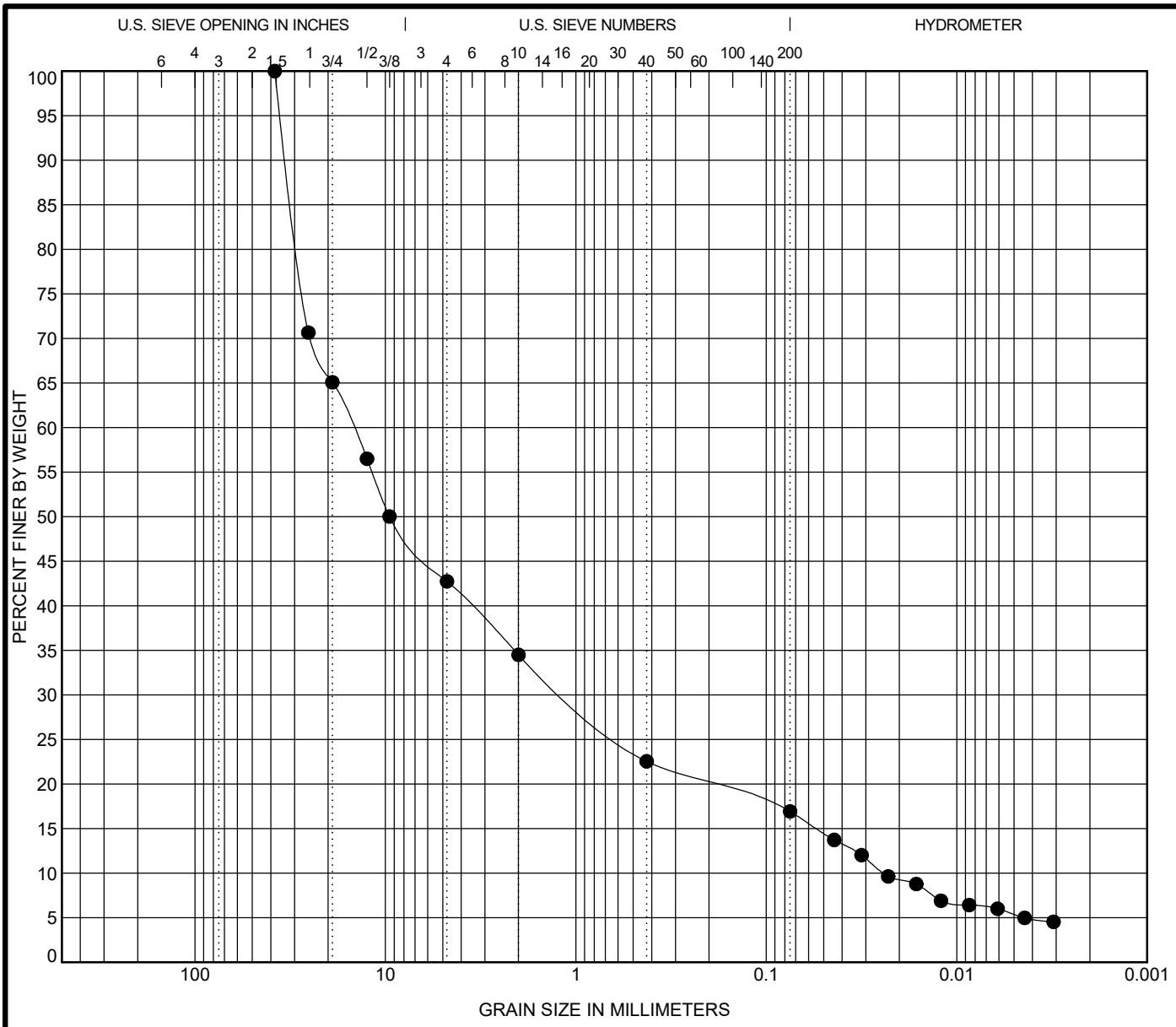
CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Sample	Classification	%MC	LL	PL	PI	Cc	Cu
● **B-05-25**	**SS-3**	**CLAYEY GRAVEL with SAND (GC)**	**7**	**29**	**21**	**8**	**3.5**	**616.24**

Specimen ID	Sample	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **B-05-25**	**SS-3**	**38.1**	**14.827**	**9.504**	**1.117**	**0.024**	**57**	**26**	**12**	**5**

CTL Engineering
2860 Fisher Rd.
Columbus, Ohio 43204
Telephone: 614-276-8123
Fax: 614-276-8123

GRAIN SIZE DISTRIBUTION (ASTM D6913, D 7928, D 4318)

Project: ODNR Great Council Observation Tower and Restroom Fa

Location: Xenia, Greene County, Ohio

CTL Project Number: 25050027COL

Project Keynotes

05 50 00	METAL FABRICATIONS
06 10 00	ROUGH CARPENTRY
033000.1	STRUCTURAL CAST-IN-PLACE CONCRETE
051200.1	STRUCTURAL STEEL FRAMING
053100.4	COMPOSITE METAL DECKING
055100.1	METAL STAIRS
055200.1	METAL RAILINGS/GUARDRAILS
055200.2	METAL HANDRAILS
061000.1	BLOCKING
061000.2	DIMENSIONAL WOOD FRAMING
061000.5	PLYWOOD/OSB WALL SHEATHING
061000.6	PLYWOOD ROOF SHEATHING
061700.1	WOOD I-JOIST STRUCTURAL FRAMING
072100.1.2	MINERAL WOOL BATT INSLUATION
072100.2.3	(ISO) POLYISOCYANURATE
072613.2	ABOVE GRADE VAPOR RETARDER
074263.1	FABRICATED WALL PANEL ASSEMBLIES
075400.03	THERMOPLASTIC MEMBRANE ROOFING
078413.1	FIRESTOPPING
081113.1	HOLLOW METAL DOORS
081113.2	HOLLOW METAL DOOR FRAMES
081433.1	STILE AND RAIL WOOD DOORS
081433.2	WOOD DOOR FRAMES
085113.1	ALUMINUM WINDOW
085200.1	WOOD WINDOW
092216.1	NON-STRUCTURAL METAL FRAMING
092216.2	METAL CHANNEL FURRING
092216.3	RESILIENT CHANNEL FURRING
092900.1	GYPSUM BOARD
092900.3	ACOUSTIC BATT INSULATION
099600.1	HIGH PERFORMANCE COATING
102113.1	TOILET COMPARTMENTS
102813.01	PAPER TOWEL DISPENSER
102813.02	WASTE RECEPTACLE
102813.03	FRAMED MIRROR
102813.04	SOAP DISPENSER
102813.05	TOILET TISSUE DISPENSER
102813.06	CHANGING TABLE
102813.07.1	12" GRAB BAR
102813.07.2	18" GRAB BAR
102813.07.3	24" GRAB BAR
102813.07.4	36" GRAB BAR
102813.07.5	42" GRAB BAR
102813.07.6	18" VERTICAL GRAB BAR
102813.07.7	16" X 31" L-SHAPED GRAB BAR
102813.07.8	42" X 54" L-SHAPED GRAB BAR
102813.08	FOLDING SHOWER SEAT
102813.09	SHOWER CURTAIN ROD
102813.10	SHOWER CURTAIN

Project Keynotes

102813.11	SHOWER DOOR
102813.12	TOWEL PIN
102813.13	TOWEL ROD
102813.14	SANITARY NAPKIN VENDOR
102813.15	SANITARY NAPKIN DISPOSAL
102813.16	TOILET SEAT COVER VENDOR
102813.17	MOP AND BROOM HOLDER
102813.18	GARMENT HOOK
102813.20	UNDERLAVATORY GUARDS
102813.21	WARM-AIR DRYER

Material Indications

- **Brick (elevation)**
- **Brick (section)**
- **Concrete**
- **Concrete Block (section)**
- **Earth**
- **Existing Construction, U.N.O.**
- **Finish wood (section)**
- **Gravel fill**
- **Gypsum Board**
- **Marble**
- **Metal 1/2" and larger**
- **Metal 1/2" and smaller**
- **Plaster**
- **Plywood**
- **Rigid insulation**
- **Rough wood**

Symbols

SITE

- 481.0 — Point Elevation
- 130 — Existing Contours
- 130 — New Contours
- Property / Boundary Line

ARCHITECTURAL

- MATCH LINE — Match Line
- A / 1 — Column Grid
  Use letters in horizontal direction
  Use numbers in vertical direction
- ROOM 104 — Room Number & Name
- 6000 — Door Number
  See door schedule in A600 series
- E-1 — Window / Louver Type
  See window & louver schedules in A600 series
- XX-XX-XX — Partition Type
  See partition schedule in A000 series
- Exst Basement EL. 139'-1" — Datum Point
- 1 / A101 — Building / Wall Section
  Detail number
  Sheet number
- 1 / A101 — Elevation
  Detail number
  Sheet number
- 1 / A101 — Detail
  Detail number
  Sheet number
- 1/A101 — Photograph Call-out
- Coded Note
- Alternate Tag
- Wall Finish / Base Finish / Floor Finish — Finish Tag
- Center Line
- 1 — Revision Mark
- North Arrow

General Notes

1. Schedules:
   Partition Type Schedule see drawing A020.
   Exterior and Interior Window and Louver Schedule see drawing A600.
   Door and Frame Schedule see drawing A610.
2. All dimensions shall be verified at the job by the General Contractor and each Sub-Contractor and the Architect must be notified of any discrepancies before proceeding with the work.
3. All dimensions are to the face of finish, face of concrete, face of masonry, to centerlines of columns and other grid points, and to centerlines of doors and other scheduled openings unless otherwise noted.
4. All door locations not dimensioned are located by details * /A800 and * /A800 respectively for framed and masonry walls.
5. Access door locations are noted on the drawings. Actual size, location, and quantity may vary upon field conditions. Verify and coordinate locations and quantity required with the appropriate contractor(s).
6. Offset studs and/or shim as required to align finish material.
7. All housekeeping pads and curbs shall be furnished and installed by the general (lead) contractor. Verify with appropriate contractor(s) for required size and location.
8. All floor drain (F.D.) elevations are 1/2" lower than finished floor elevation unless otherwise noted.
9. All vertical elevations and working points are given with reference to level one finish floor elevation 100'-0" datum.
10. The drawings are the graphic portion of the contract documents showing the design, location, and dimensions of the work. Do not scale the drawings to determine a dimension in question, consult the architect for clarification.
11. Contractor(s) are to investigate and verify location, condition, and capacity of all existing utilities within the limits of work, prior to beginning construction. See site utility, mechanical and electrical drawings for further information.
12. The structure is designed to be self-supporting and stable after the building is fully completed. It is solely the contractor(s) responsibility to determine erection procedures and sequences and to ensure the safety of the building and its component parts during erection, including the addition of shoring, sheathing, temporary enclosure, etc. It is the contractor(s) sole responsibility to follow all applicable safety and construction regulations, ordinances and codes during the course of construction.

REMODELING NOTES

1. The coursing of all masonry to match that in existing building.
2. Contractor to verify all dimensions and profiles of stone at the site.
3. Fill any masonry voids with mortar or concrete where anchors occur.
4. Provide lintels over all openings including those req'd for ductwork, pipes, louvers, grilles, dampers, etc.
5. Coordinate locations and/or elevations of floor drain, registers, access panels, grilles, louvers, convectors, cabinet unit heaters, panels, etc., with mechanical and electrical contractors. Size and location of all floor openings to be verified with trade affected before proceeding with work.
6. Bolting of wood to structural members or masonry shall be in general with a minimum of 1/2" bolts @ 4'-0" O.C. except where shown otherwise. Situations requiring special bolting shall be with the size and spacing of bolts to suit the conditions.
7. In any room in which plumbing, heating, or electrical alterations are made: the General Contractor shall make proper repairs to other building items affected; i.e. floors, walls, ceilings, base, chair rail, trim, etc. In general, new materials and materials for repair conditions shall match similar items in quality, detail, profile and finish as those already built into the work.
8. All shaded walls appearing on reflected ceiling plans are to extend to underside of structure above.
9. All walls of all rooms with exposed structure ceilings to extend and seal to the structure.
10. All concrete curbs and equipment pads shall be furnished by the General Contractor and sized and located by the contractor installing the equipment.

Drawing Index

1

Abbreviations

&	And
∠	Angle
@	At
∅	Diameter
#	Pound(s)
A/C	Air Conditioning
ACT	Acoustic Ceiling Tile
ADD'L	Additional
ADJ	Adjacent
A/E	Architect And/ Or Engineer
AFF	Above Finished Floor
ALUM	Aluminum
ALT	Alternate
ARCH	Architectural
ASPH	Asphalt
B/	Bottom of
BD	Board
BLDG	Building
BOT	Bottom
C	Center
C/C	Center to Center
CAB	Cabinet
CJ	Control Joint
CL / ℄	Center Line
CLG	Ceiling
CLR	Clear
CMU	Concrete Masonry Unit
COL	Column
CONC	Concrete
CONT	Continuous
CONSTR	Construction
COORD	Coordinate
CT	Ceramic Tile
CTR	Center
CU FT	Cubic Foot
CU YD	Cubic Yard
DEMO	Demolish
DET	Detail
DF	Drinking Fountain
DIA	Diameter
DIM	Dimension
DIV	Division
DS	Down Spout
DWG	Drawing
EA	Each
EL	Elevation
ELEC	Electrical
EQ	Equal
EXIST	Existing
EXP	Expansion or Exposed
EXT	Exterior
FA	Fire Alarm
FD	Floor Drain
FE	Fire Extinguisher.
FEC	Fire Extinguisher Cabinet
F.F.	Finished Floor
FF EL	Finish Floor Elevation
FIN	Finish
FLR	Floor
FTG	Footing
GA	Gauge
GB	Grab Bar
GYP	Gypsum
HM	Hollow Metal
HORIZ	Horizontal
HSS	Tube Steel
HT	Height
HVAC	Heating/Ventilating/Air Conditioning
INSUL	Insulation
INT	Interior
JC	Janitor's Closet
JT	Joint
LAM	Laminate
LAV	Lavatory
LB / Lbs.	Pound(s)
LG	Long
LH	Left Hand
MATL	Material
MAX	Maximum
MECH	Mechanical
MFR	Manufacturer / Supplier
MIN	Minimum
MO	Masonry Opening
MTL	Metal
NA / N/A	Not Applicable
NIC	Not in Contract
NO / #	Number
NOM	Nominal
NRC	Noise Reduction Coefficient
NTS	Not to Scale
O.C.	On Center
OH	Opposite Hand
OPP	Opposite
PLAM	Plastic Laminate
PLYWD	Plywood
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PT / PTD	Paint / Painted
PVC	Poly Vinyl Chloride
QT	Quarry Tile
R	Radius
RCP	Reflected Ceiling Plan
RD	Roof Drain
REINF	Reinforced / Reinforcing
REQD	Required
RR	Rest Room
REV	Revision
RM	Room
RO	Rough Opening
SCHED	Schedule
SD	Storm Drain
SECT	Section
SF	Square Feet
SHT	Sheet
SIM	Similar
SPEC	Specifications
SQ	Square
STD	Standard
STL	Steel
STOR	Storage
STR	Stair
STRUCT	Structural
SUSP	Suspended
T/	Top of (T/STL, T/CONC)
THK	Thickness
THRU	Through
TOC	Top of Concrete
TOM	Top of Masonry
TOS	Top of Steel
TYP	Typical
UNO	Unless Noted Otherwise
VERT	Vertical
VB	Vinyl Base
VCT	Vinyl Composition Tile
VIF	Verify in Field
W/	With
WC	Water Closet
WD	Wood
WF	Wide Flange
W/O	Without

Vicinity Map

Area Map

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

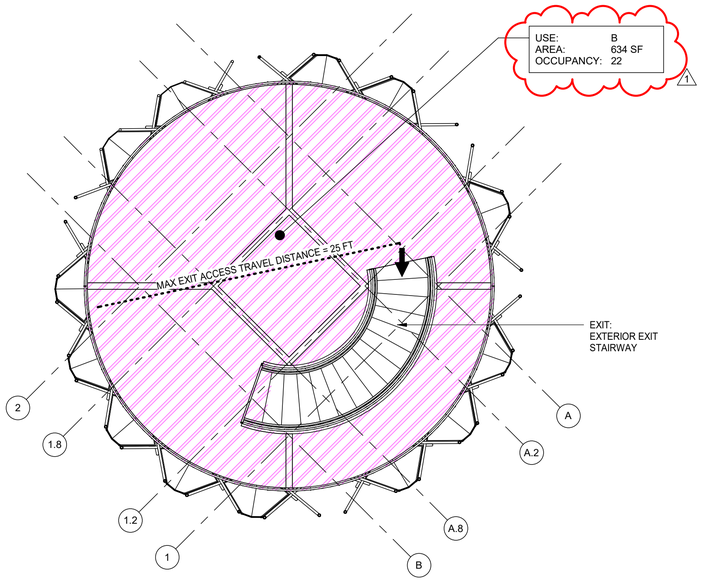
Index and Symbols

G1

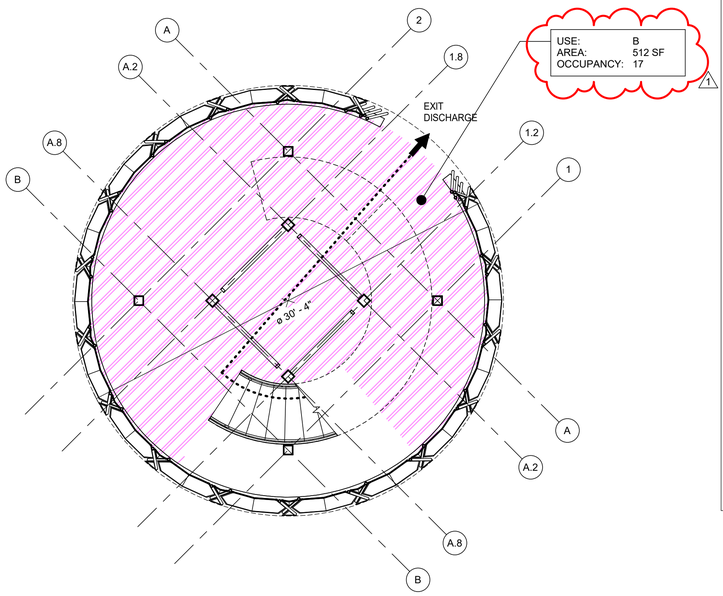
62

CODE DATA - SYMBOL LEGEND

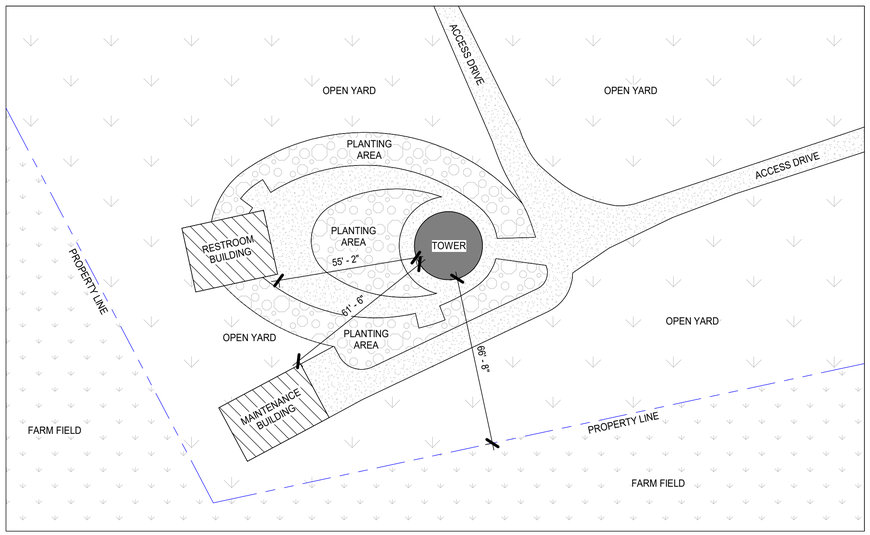
HFB	HOUR FIRE BARRIER
HFW	HOUR FIRE WALL
HFS	HOUR FIRE SEPARATION
	USE AND OCCUPANCY: A-3 and A-5, ASSEMBLY 15 NET SQ FT PER OCCUPANT
	USE AND OCCUPANCY: B, BUSINESS 100 GROSS SQ FT PER OCCUPANT
	EGRESS
	ONE (1) HOUR FIRE BARRIER (HFB) COMPLY WITH UL FIRE ASSEMBLIES
	TWO (2) HOUR FIRE BARRIER (HFB) COMPLY WITH UL FIRE ASSEMBLIES
	TWO (2) HOUR FIRE SEPARATION (HFS) COMPLY WITH UL FIRE ASSEMBLIES
	THREE (3) HOUR FIRE WALL (HFW) COMPLY WITH UL FIRE ASSEMBLIES
	PATH OF EGRESS
	COMMON PATH OF TRAVEL
	EGRESS EXIT
	ADA ACCESS OR ADA DWELLING UNIT
	OCCUPANT LOAD SIGNAGE
FE	NEW FIRE EXTINGUISHER
FEC	NEW FIRE EXTINGUISHER CABINET, RECESSED IN WALL
T	TOLIET



2 Platform - Code Plan
3/16" = 1'-0"



1 Ground Floor - Code Plan
3/16" = 1'-0"



3 Code Site Plan
1" = 30'-0"

CODE DATA - 2024 OHIO BUILDING CODE

PROJECT SUMMARY:

THE PROJECT IS A NEW CONSTRUCTION OF AN OPEN AIR OBSERVATION TOWER.

APPLICABLE CODES:

ZONING:	Xenia Township Zoning District Base Zoning:	A - AGRICULTURAL B-2 - NEIGHBORHOOD BUSINESS DISTRICT
	Parcel ID's:	M36000100140001900
FLOOD ZONE:	Flood Zone X – F.E.M.A. Map Number 39057C0130E – (3/8/2022)	
FIRE CODE:	OAC 1301:7 (1-7)	
BUILDING CODE:	OAC 4101:1 (1-35)	
ACCESSIBILITY:	OAC 4101:1 (11)	2024 – Ohio Fire Code (2021 IFC with Ohio amendments)
ENERGY CODE:	OAC 4101:1 (13)	2024 – Ohio Building Code (2021 IBC with Ohio amendments)
ELECTRICAL CODE:	OAC 4101:1 (27)	2024 – OBC Chapter 11 and ICC A117.1 - 2017 new construction, 2009 for alterations / change of use
MECHANICAL CODE:	OAC 4101:2 (1-15)	2021 – IECC and ASHRAE 90.1-2019 (with Ohio amendments)
PLUMBING CODE:	OAC 4101:3 (1-15)	2024 – OBC Chapter 27 and National Electrical Code NFPA 70-23
		2024 – Ohio Mechanical Code (2021 IMC with Ohio amendments)
		2024 – Ohio Plumbing Code (2021 IPC with Ohio amendments)

CLIMATE ZONE (IECC C301.1):
4A Greene County

USE AND OCCUPANCY CLASSIFICATION: 1
OBC 303.1: BUSINESS GROUP B
OBC 303.1.1: SMALL BUILDINGS AND TENANT SPACES
A BUILDING OR TENANT SPACE USED FOR ASSEMBLY PURPOSES WITH AN OCCUPANT LOAD OF LESS THAN 50 PERSONS SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY.

GENERAL BUILDING HEIGHTS AND AREAS:
OBC TABLE 504.3: ALLOWABLE HEIGHT:
TYPE III-B CONSTRUCTION
MAX 2 STORIES AND 55' HEIGHT
1 STORY ACTUAL AND 48' HEIGHT ACTUAL

OBC TABLE 506.2: BUILDING AREA:
TYPE III-B CONSTRUCTION
9,500 SF FLOOR ALLOWABLE
1,146 SF FLOOR ACTUAL

TYPE OF CONSTRUCTION:
OBC TABLE 601:

TYPE III-B CONSTRUCTION

STRUCTURAL FRAME:	0-HOURS
BEARING WALLS, EXTERIOR:	2-HOURS
BEARING WALLS, INTERIOR:	0-HOURS
NON-BEARING WALLS AND PARTITIONS:	0-HOURS
FLOOR CONSTRUCTION:	0-HOURS
ROOF CONSTRUCTION:	0-HOURS

MEANS OF EGRESS:
OBC 1004.1: DESIGN OCCUPANT LOAD: 39 OCCUPANTS
OBC TABLE 1006.2.1: COMMON PATH OF EGRESS TRAVEL: A-3 = 75 FT MAX ALLOWABLE
OBC TABLE 1006.3.4(2): STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES
MAXIMUM OCCUPANT LOAD PER STORY: 29
MAXIMUM EXIT ACCESS TRAVEL DISTANCE IN FEET: 75

OBC 1027 EXTERIOR EXIT STAIRWAYS AND RAMPS
OBC 1027.3 OPEN SIDE: SEE CODE ELEVATIONS SHEET T-G3
OBC 1027.4 SIDE YARDS: SEE CODE SITE PLAN 3/T-G2
OBC 1027.5 LOCATION: SEE CODE SITE PLAN 3/T-G2

ACCESSIBILITY:
OBC TABLE 1106.1: 0 PARKING SPACES PROVIDED
0 REQUIRED ACCESSIBLE PARKING SPACES

OBC 1104.4: EXCEPTION 1 - NO ELEVATOR PROVIDED SINCE OBSERVATION PLATFORM IS LESS THAN 3,000 SF

PLUMBING FOR BASEMENT & FIRST FLOORS:
OBC TABLE 2902.1 / OPC 403: REQUIRED MINIMUM PLUMBING FACILITIES

WATER CLOSETS
REQUIRED: 2
PROVIDED: 2 (IN ADJACENT BUILDING, PERMITTED SEPARATELY)

LAVATORIES
REQUIRED: 1
PROVIDED: 2 (IN ADJACENT BUILDING, PERMITTED SEPARATELY)

DRINKING FOUNTAINS
REQUIRED: 1
PROVIDED: 1 (IN ADJACENT BUILDING, PERMITTED SEPARATELY)

OTHER REQUIRED: 1 SERVICE SINK
OTHER PROVIDED: 1 SERVICE SINK (IN ADJACENT BUILDING, PERMITTED SEPARATELY)

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Code Analysis - Tower

T-G2

DEMOLITION - GENERAL NOTES

A. Items shown dashed are to be removed - typical. All shaded walls indicate existing construction to remain.

B. Remove ceilings referenced by coded notes.

C. Coodinate areas with enlarged plans and new work plans.

D. Coordinate all demolition work with New Work plans. Review New Work drawings to verify and/or determine extent of demolition prior to performing demolition work.

E. Refer to Mechanical, Plumbing, and Electrical plans for extent of equipment, fixtures, and ductwork to be removed. Remove abandoned or unused plumbing.

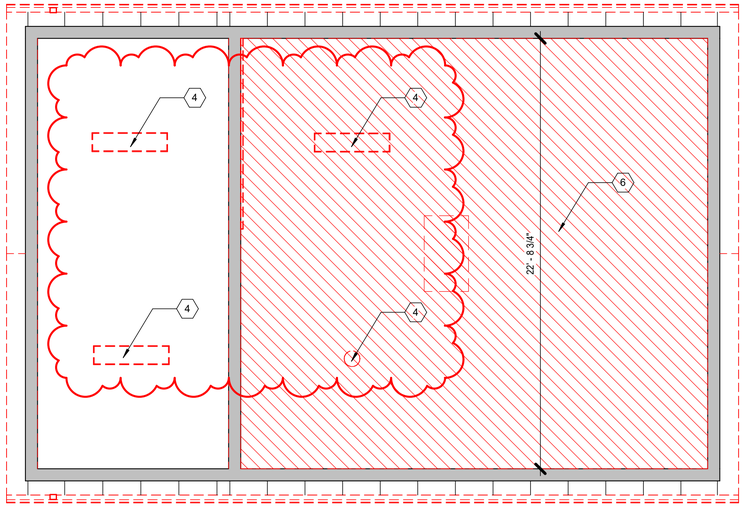
F. For all removed finishes, furnishings, casework and building elements the demolition shall include all mounting materials, adhesives, hardware, fasteners or other associated supporting elements of the construction.

G. At interior walls where doors and windows have been removed, patch back the opening to match the thickness and construciton of the adjacent wall surfaces as required for the new work.

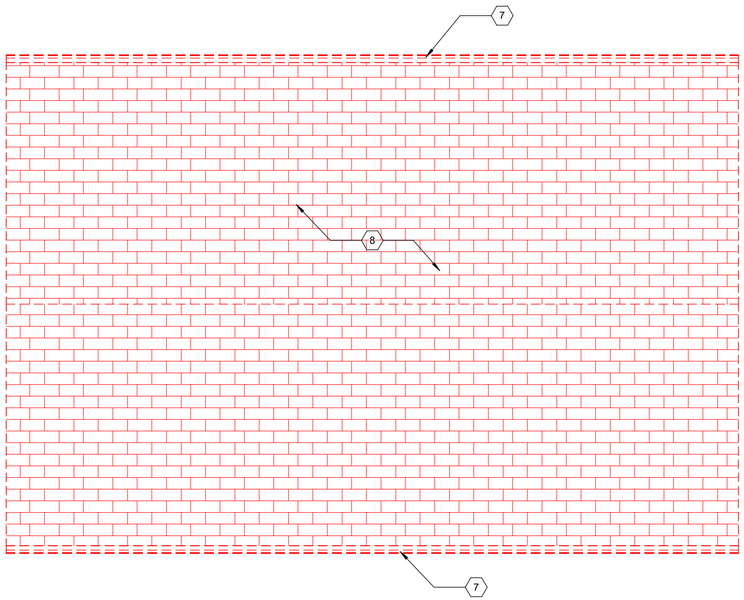
H. At all removed interior walls, patch to match adjacent wall and ceiling.

DEMOLITION - CODED NOTES

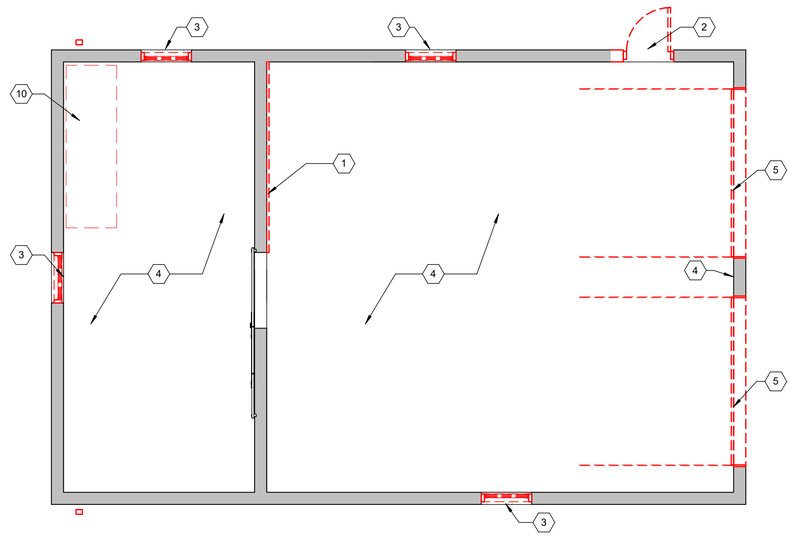
1. Remove panelling and wall furring.
2. Remove exisiting door. Repair CMU header as required for new door and door frame. Provide new (2) L3 1/2x3 1/2x1/4 Lintel w/ 8" BRG each end.
3. Remove existing window. Patch/grout CMU as required for new windows. At all window openings where there is no existing steel lintel, provide (2) L3 1/2x3 1/2x1/4 w/ 8" BRG each end.
4. Remove all existing electrical panels, lighting, wiring, and devices.
5. Demo existing garage doors.
6. Remove existing plywood ceiling for future access.
7. Remove existing gutters and downspouts.
8. Remove existing shingles and underlayment down to roof sheathing.
9. Remove existing vinyl siding and air/weather barrier down to sheathing.
10. Remove/salvage work bench for reinstallation during new work.
11. Widen existing opening for new door. Refer to new work plan.
12. New opening for new louver. Refer to mechanical drawings.



3 Reflected Ceiling Plan Demolition
1/4" = 1'-0"



2 Roof Demolition Plan
1/4" = 1'-0"



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

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Floor Plan Demolition

M-AD1

62

DEMOLITION - GENERAL NOTES

A. Items shown dashed are to be removed - typical. All shaded walls indicate existing construction to remain.

B. Remove ceilings referenced by coded notes.

C. Coodinate areas with enlarged plans and new work plans.

D. Coordinate all demolition work with New Work plans. Review New Work drawings to verify and/or determine extent of demolition prior to performing demolition work.

E. Refer to Mechanical, Plumbing, and Electrical plans for extent of equipment, fixtures, and ductwork to be removed. Remove abandoned or unused plumbing.

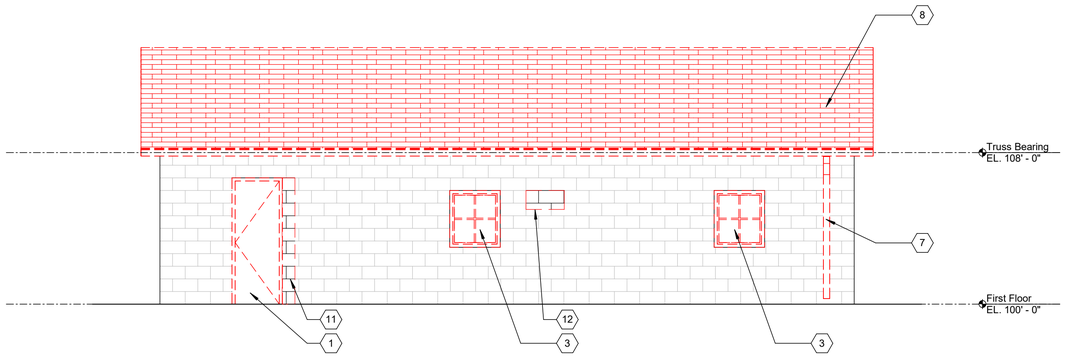
F. For all removed finishes, furnishings, casework and building elements the demolition shall include all mounting materials, adhesives, hardware, fasteners or other associated supporting elements of the construction.

G. At interior walls where doors and windows have been removed, patch back the opening to match the thickness and construciton of the adjacent wall surfaces as required for the new work.

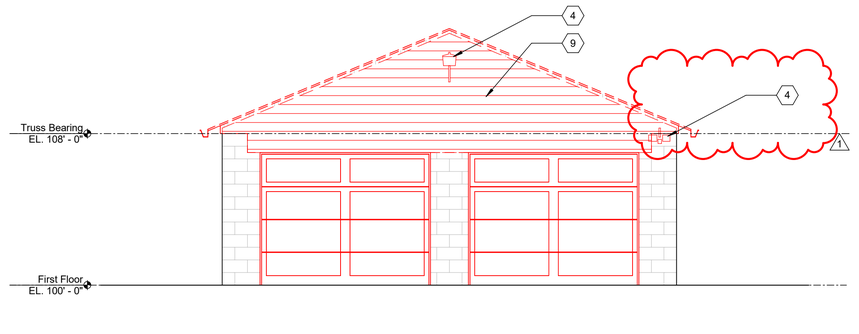
H. At all removed interior walls, patch to match adjacent wall and ceiling.

DEMOLITION - CODED NOTES

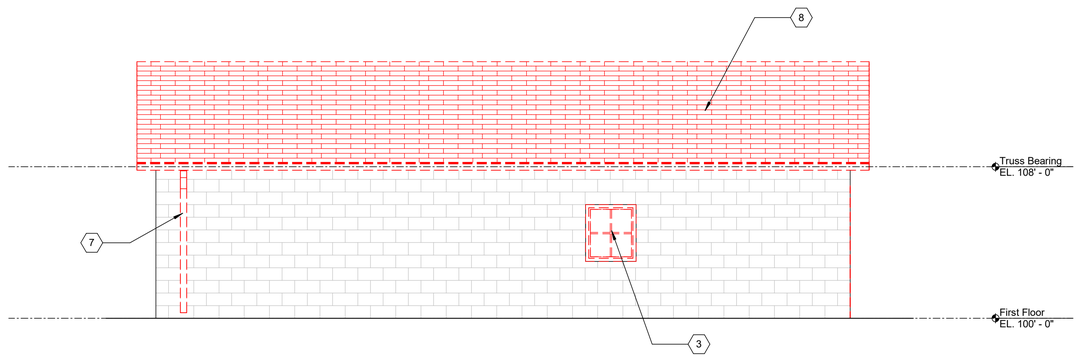
1. Remove panelling and wall furring.
2. Remove exisiting door. Repair CMU header as required for new door and door frame. Provide new (2) L3 1/2x3 1/2x1/4 Lintel w/ 8" BRG each end.
3. Remove existing window. Patch/grout CMU as required for new windows. At all window openings where there is no existing steel lintel, provide (2) L3 1/2x3 1/2x1/4 w/ 8" BRG each end.
4. Remove all existing electrical panels, lighting, wiring, and devices.
5. Demo existing garage doors.
6. Remove existing plywood ceiling for future access.
7. Remove existing gutters and downspouts.
8. Remove existing shingles and underlayment down to roof sheathing.
9. Remove existing vinyl siding and air/weather barrier down to sheathing.
10. Remove/salvage work bench for reinstallation during new work.
11. Widen existing opening for new door. Refer to new work plan.
12. New opening for new louver. Refer to mechanical drawings.



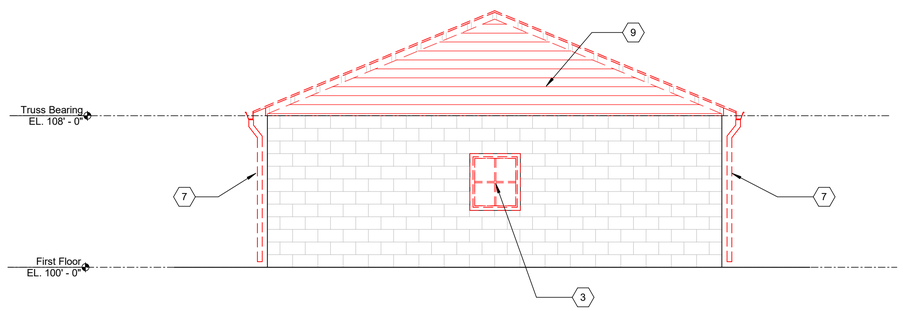
2 North Elevation Demolition
1/4" = 1'-0"



1 East Elevation Demolition
1/4" = 1'-0"



4 South Elevation Demolition
1/4" = 1'-0"



3 West Elevation Demolition
1/4" = 1'-0"

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Elevation Demolition

M-AD2

Door & Frame Schedule

DOOR MARK	DOOR TYPE	SIZE W	SIZE H	SIZE THK	DOOR STATUS	DOOR MATERIAL	DOOR FINISH	DOOR GLAZING TYPE	FRAME TYPE	FRAME STATUS	FRAME MATERIAL	FRAME FINISH	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	FIRE RATING	HARDWARE SET NO	HARDWARE ELECTRICAL	REMARKS
First Floor																			
M100A	D8	3' - 0"	6' - 6"	1 3/4"	NEW	HM	PT	-	F1	NEW	HM	PT	6/M-A1	5/M-A1	7/M-A1	-	01	YES	
M100B	D7	8' - 10"	6' - 11"	1 1/2"	NEW		PT	-	-	NEW	-	-	5/M-A4	6/M-A4	7/M-A4	-	04	-	
M100C	D7	8' - 10"	6' - 11"	1 1/2"	NEW		PT	-	-	NEW	-	-	5/M-A4	6/M-A4	7/M-A4	-	04	-	
M101		4' - 0"	7' - 0"		EXISTING		-	-	-	EXISTING	-	-	-	-	-	-	-	-	Existing barn door to remain

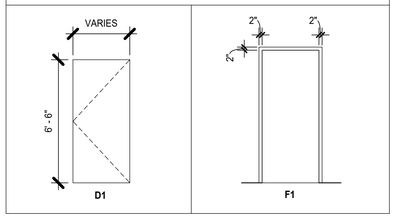
Room Finish Schedule

ROOM #	ROOM NAME	FLOOR FINISH	BASE FINISH	CEILING FINISH	WALL FINISHES NORTH	WALL FINISHES EAST	WALL FINISHES SOUTH	WALL FINISHES WEST	REMARKS
First Floor									
M100	GARAGE	SC	-	PT-1	PT-1	PT-1	PT-1	PT-1	
M101	WORKSHOP	SC	-	PT-1	PT-1	PT-1	PT-1	PT-1	

Finish Legend

KEYNOTE	ITEM	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN PRODUCT	COLOR/FINISH	SIZE	EDGE/PROFILE	NOTES	SPECIFICATION SECTION (hidden)
07 31 53 - Synthetic Shake Shingles								
PSS-1	Roof Shingles	DaVinci RoofScapes	DaVinci Shake	Aged Cedar	Single Width	-		07 31 53 - Synthetic Shake Shingles
07 46 46 - Fiber Cement Siding								
S-1	Siding	Woodtone	RusticSeries	Aspen Ridge	-	Board and Batten		07 46 46 - Fiber Cement Siding
09 91 00 - Painting								
PT-1	CMU Wall Paint	Sherwin-Williams	-	SW6035/ Gauzy White	-	-	Satin	09 91 00 - Painting
PT-2	Ceiling Paint	Sherwin-Williams	-	SW6035/ Gauzy White	-	-	Satin	09 91 00 - Painting
PT-3	Trim Paint	Sherwin-Williams	-	SW 6103 Tea Chest	-	-	Satin	09 91 00 - Painting
E. Plastic Laminate Clad Casework - 12 32 16								
PL-1		Sample Manufacturer	Sample Product	Sample Color	See Elevations	-	Refer to M-A5	E. Plastic Laminate Clad Casework - 12 32 16

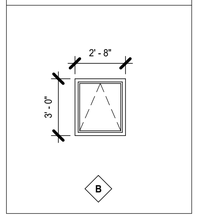
DOOR & FRAME TYPES



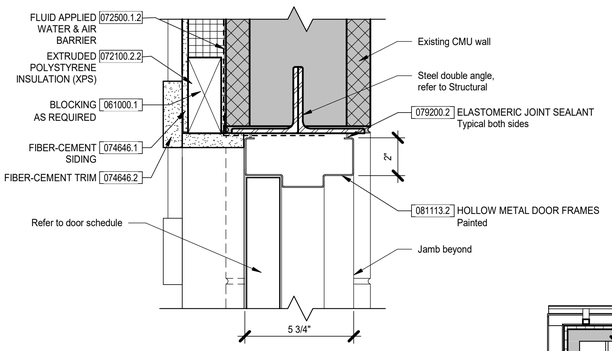
081113.1 - HOLLOW METAL DOOR TYPES

081113.2 - HOLLOW METAL FRAME TYPES

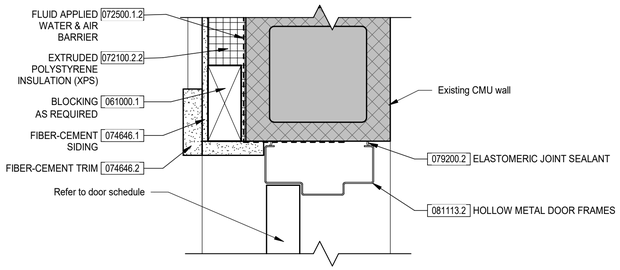
WINDOW TYPES



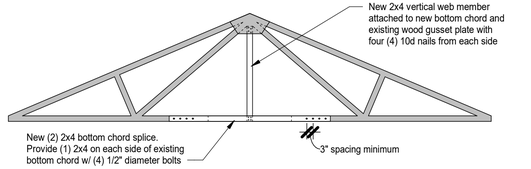
085113.1 - ALUMINUM WINDOW TYPES



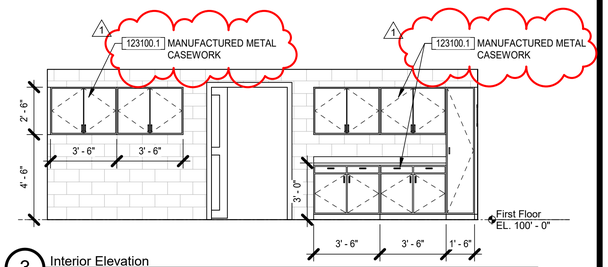
6 Door Head Detail
3" = 1'-0"



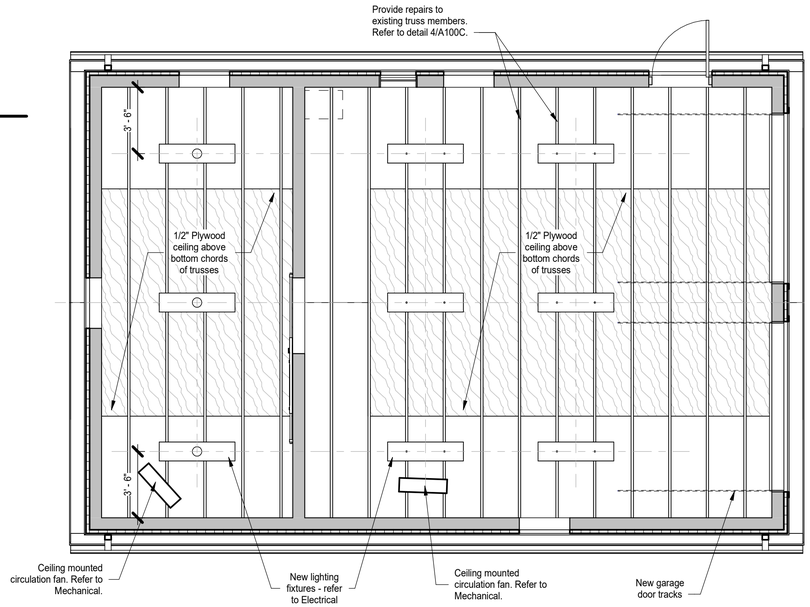
5 Door Jamb Detail
3" = 1'-0"



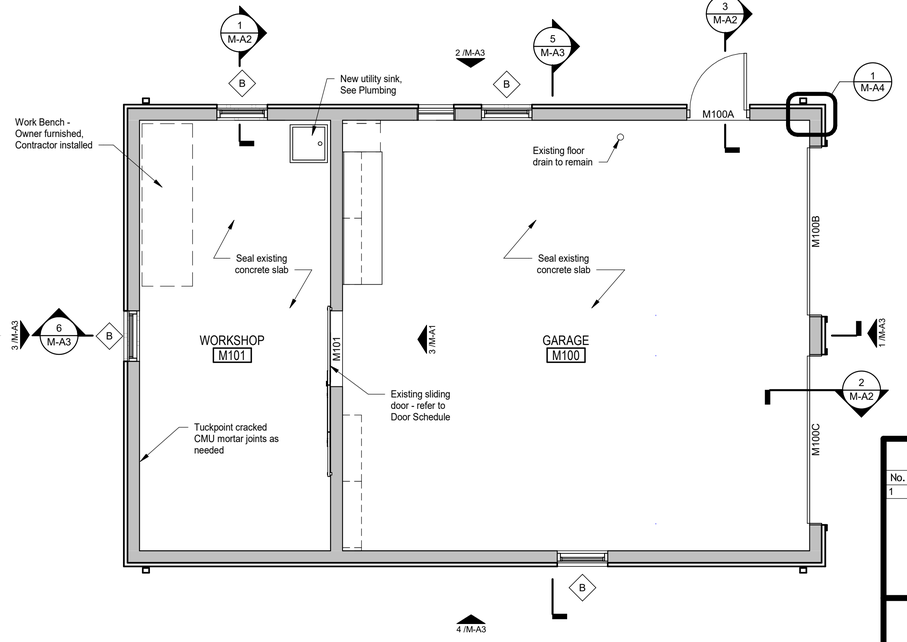
4 Truss Repair Detail
1/4" = 1'-0"



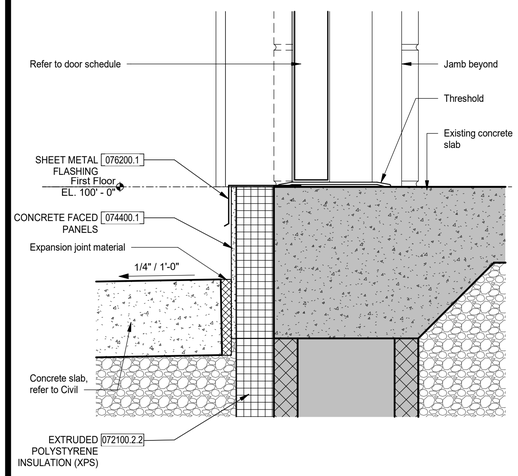
3 Interior Elevation
1/4" = 1'-0"



2 Reflected Ceiling Plan - New Work
1/4" = 1'-0"



1 Floor Plan - New Work
1/4" = 1'-0"



7 Door Sill Detail
3" = 1'-0"

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

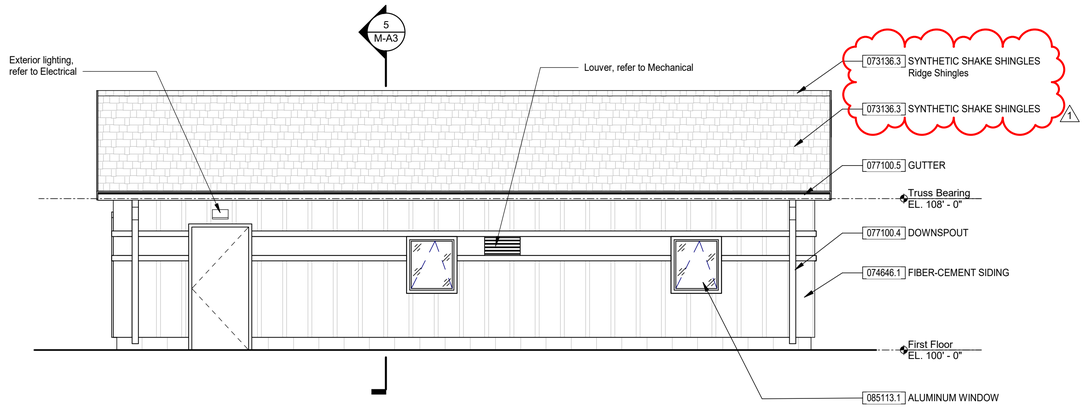
ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

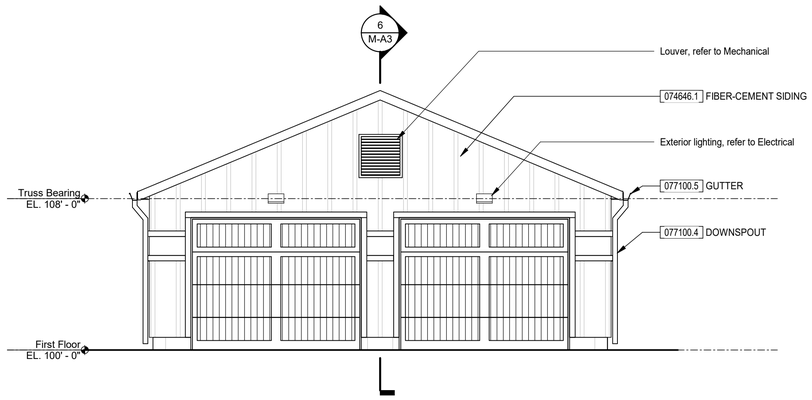
DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Floor Plans and Interior Elevation

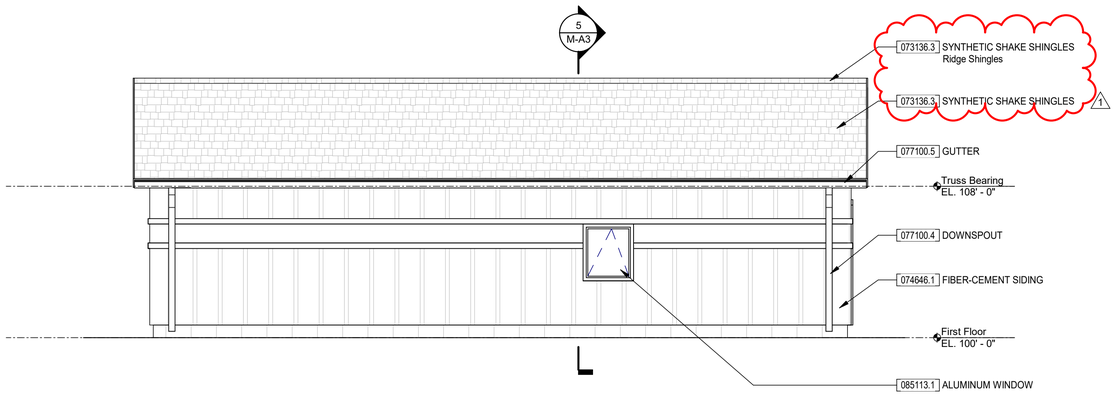
M-A1



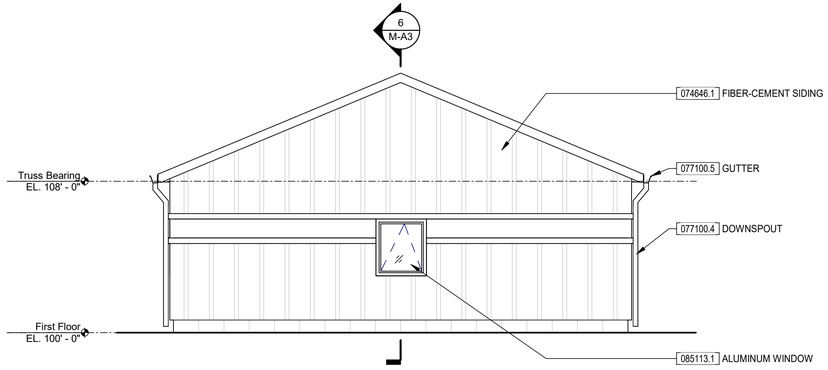
2 North Elevation
1/4" = 1'-0"



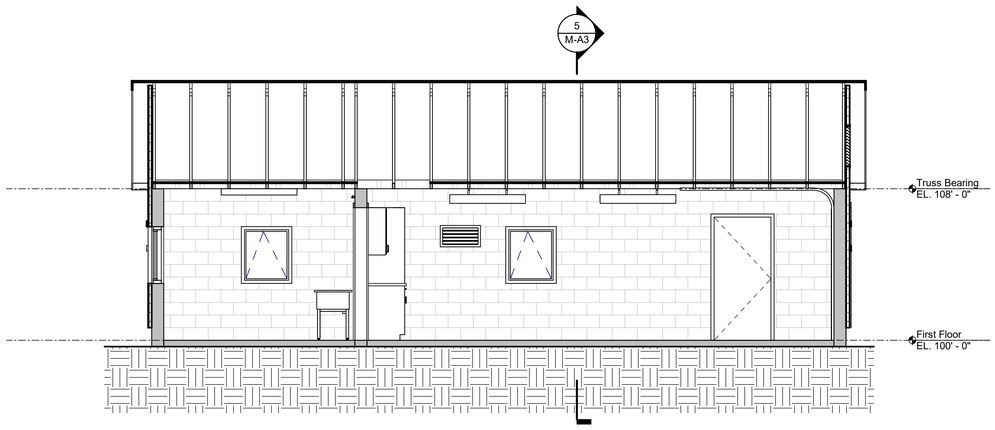
1 East Elevation
1/4" = 1'-0"



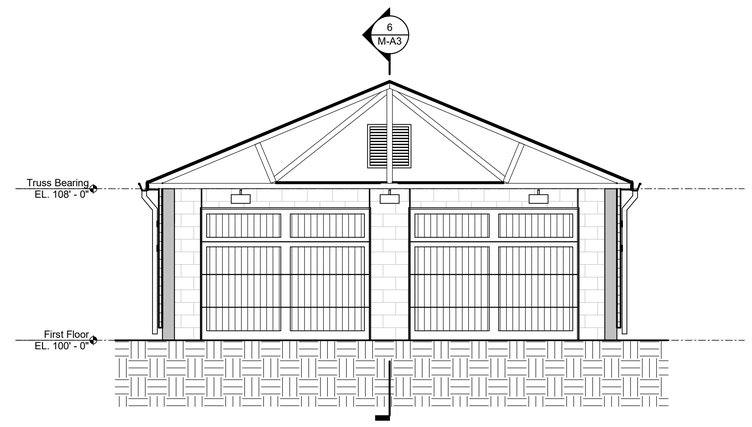
4 South Elevation
1/4" = 1'-0"



3 West Elevation
1/4" = 1'-0"



6 Longitudinal Section
1/4" = 1'-0"



5 Transverse Section
1/4" = 1'-0"

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

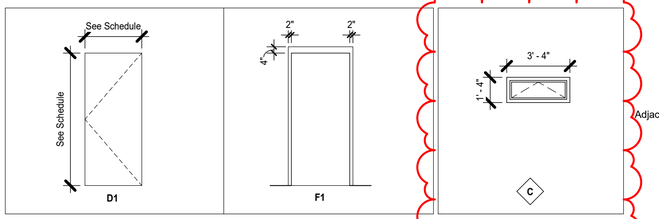
DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Exterior Elevations and Building Sections

M-A3

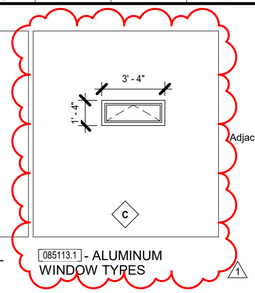
Door & Frame Schedule

DOOR MARK	DOOR TYPE	SIZE W	SIZE H	SIZE THK	DOOR MATERIAL	DOOR FINISH	GLAZING TYPE	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	FIRE RATING	HARDWARE SET NO	HARDWARE ELECTRICAL	REMARKS
First Floor																	
R100	D1	3' - 0"	7' - 0"	1 3/4"	HM	PT-2	-	F1	HM	PT-2	4/A100	3/A100	5/A100	-	01	-	
R101	D1	3' - 0"	7' - 0"	1 3/4"	HM	PT-2	-	F1	HM	PT-2	4/A100	3/A100	5/A100	-	02	YES	
R102	D1	3' - 0"	7' - 0"	1 3/4"	HM	PT-2	-	F1	HM	PT-2	4/A100	3/A100	5/A100	-	03	YES	
R103	D1	3' - 0"	7' - 0"	1 3/4"	HM	PT-2	-	F1	HM	PT-2	4/A100	3/A100	5/A100	-	02	YES	

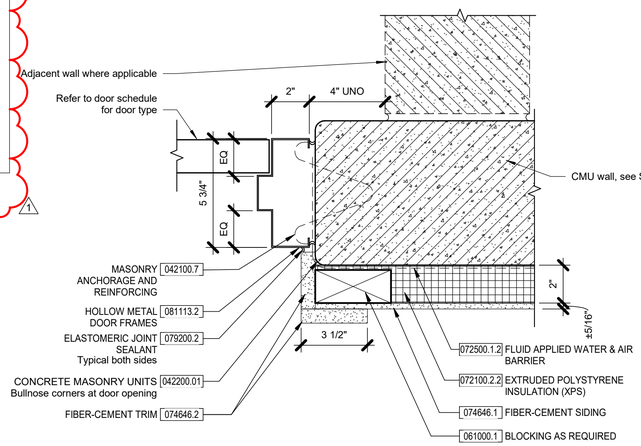


081113.1 - HOLLOW METAL DOOR TYPES

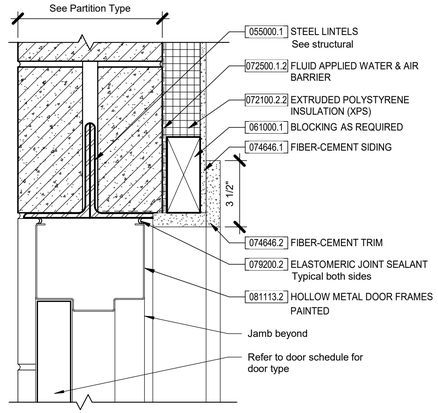
081113.2 - HOLLOW METAL FRAME TYPES



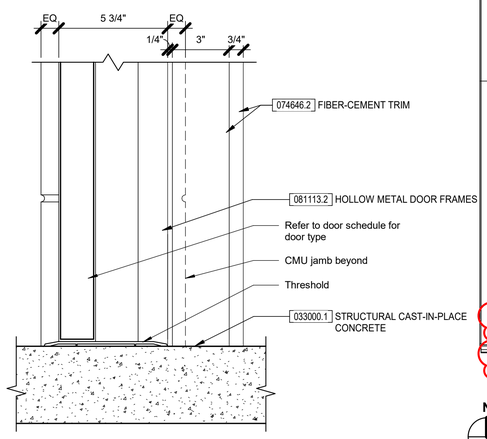
085113.1 - ALUMINUM WINDOW TYPES



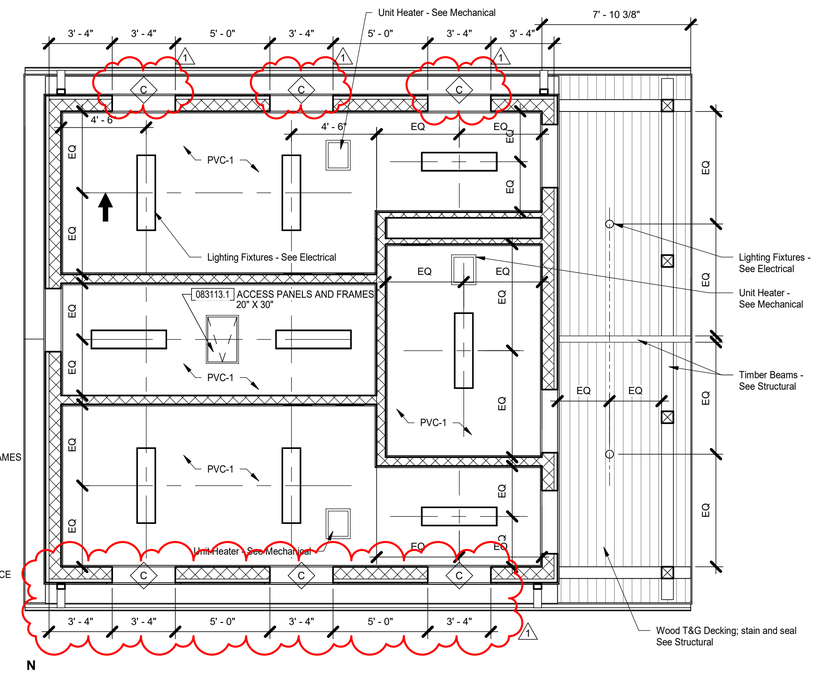
3 Hollow Metal Door and Frame - Jamb Detail
3" = 1'-0"



4 Hollow Metal Door and Frame - Head Detail
3" = 1'-0"



5 Hollow Metal Door and Frame - Sill Detail
3" = 1'-0"



N

2 Reflected Ceiling Plan
1/4" = 1'-0"

Room Finish Schedule

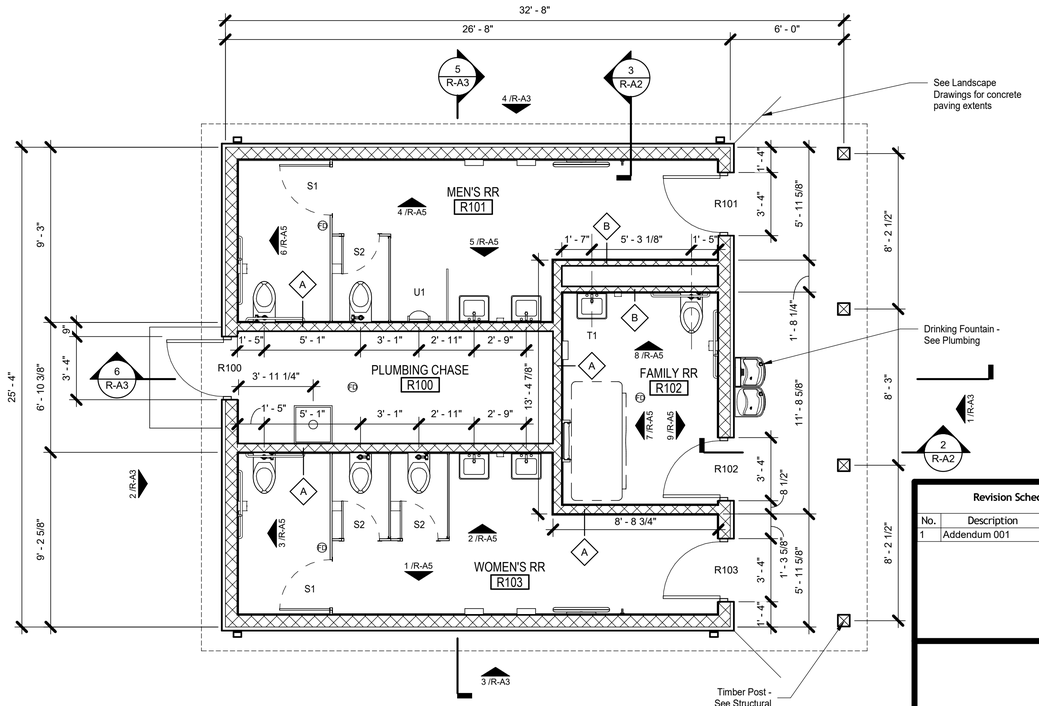
ROOM #	ROOM NAME	FLOOR FINISH	BASE FINISH	CEILING FINISH	WALL FINISHES NORTH	WALL FINISHES EAST	WALL FINISHES SOUTH	WALL FINISHES WEST	REMARKS
First Floor									
R100	PLUMBING CHASE	SC	-	PVC-1	-	-	-	-	
R101	MEN'S RR	RES-1	-	PVC-1	PT-1	PT-1	PT-1	PT-1	
R102	FAMILY RR	RES-1	-	PVC-1	PT-1	PT-1	PT-1	PT-1	
R103	WOMEN'S RR	RES-1	-	PVC-1	PT-1	PT-1	PT-1	PT-1	

Finish Legend

KEYNOTE	ITEM	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN PRODUCT	COLOR/FINISH	SIZE	EDGE/PROFILE	NOTES	SPECIFICATION SECTION (hidden)
06 83 16 - Fiberglass Reinforced Wall Panel								
PVC-1	PVC Ceiling Panel	Trusscore	Wall and Ceiling Board	White		-		06 83 16 - Fiberglass Reinforced Wall Panel
07 31 53 - Plastic Synthetic Shingles								
PSS-1	Roof Shingles	DaVinci Roofscapes	DaVinci Shake	Aged Cedar	Single Width			07 31 53 - Plastic Synthetic Shingles
07 46 46 - Fiber Cement Siding								
S-1	Siding	Woodtone	RusticSeries	Aspen Ridge	-	Board and Batten		07 46 46 - Fiber Cement Siding
09 67 00 - Resinous Flooring								
RF-1	Flooring & Base	Sherwin-Williams	Resuflor	Americano	-	-	Floor and 6" Base	09 67 00 - Resinous Flooring
09 91 00 - Painting								
PT-1	CMU Wall Paint	Sherwin-Williams	-	SW 6035 Gauzy White	-	-	Satin	09 91 00 - Painting
PT-2	Ceiling Paint	Sherwin-Williams	-	SW 6035 Gauzy White	-	-	Satin	09 91 00 - Painting
PT-3	Trim Paint	Sherwin-Williams	-	SW 6103 Tea Chest	-	-	Satin	09 91 00 - Painting
102113 - Toilet Compartments								
TC-1	Toilet Partitions	Hadrian	Hadrian Plastic Partitions	Canyon Granite 217				102113 - Toilet Compartments

Non-Bearing Partition Legend

A	6" Concrete Masonry Unit
B	4" Concrete Masonry Unit



N

1 New Work Plan
1/4" = 1'-0"

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

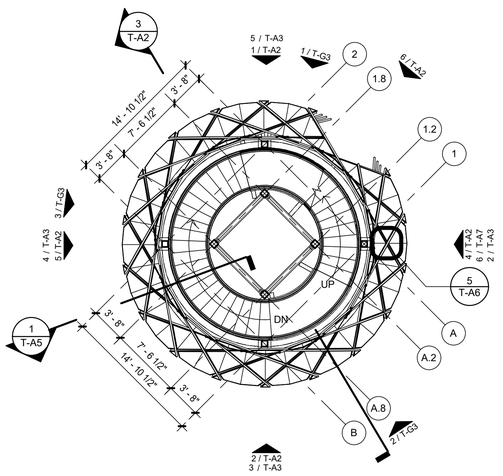
Floor Plan

R-A1

62

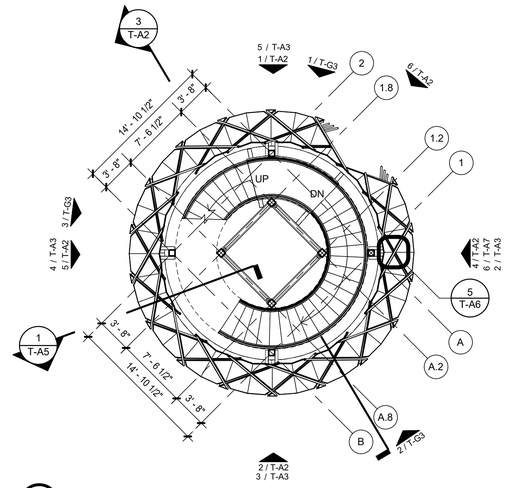
Finish Legend

KEYNOTE	ITEM	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN PRODUCT	COLOR/FINISH	SIZE	EDGE/PROFILE	NOTES
A. Interior Architectural Woodwork - 06 40 23							
CD-1	Composite Decking	Trex	Transcend	Jasper	-	-	06 73 00 - Composite Wood Decking
B. Painting - 09 91 00							
PT-4	Paint	Tnemec	Refer to Specifications	Medium Bronze - 85BR	-	-	Eggshell



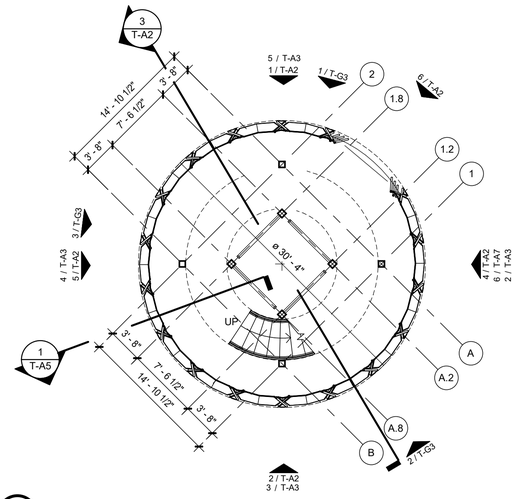
N

3 Landing 2
1/8" = 1'-0"

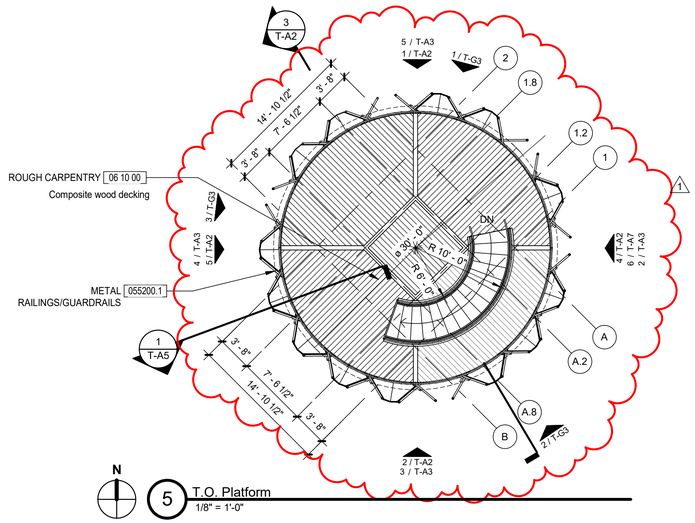


N

2 Landing 1
1/8" = 1'-0"

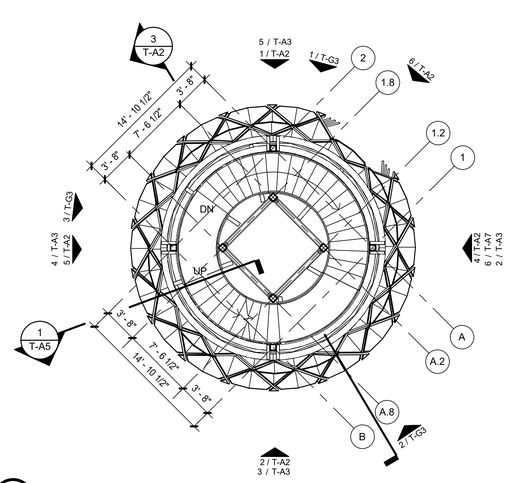


1 Observation Tower Floor Plan
1/8" = 1'-0"



N

5 T.O. Platform
1/8" = 1'-0"



N

4 Landing 3
1/8" = 1'-0"

Revision Schedule

No.	Description	Date
1	Addendum 001	09/19/2025

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

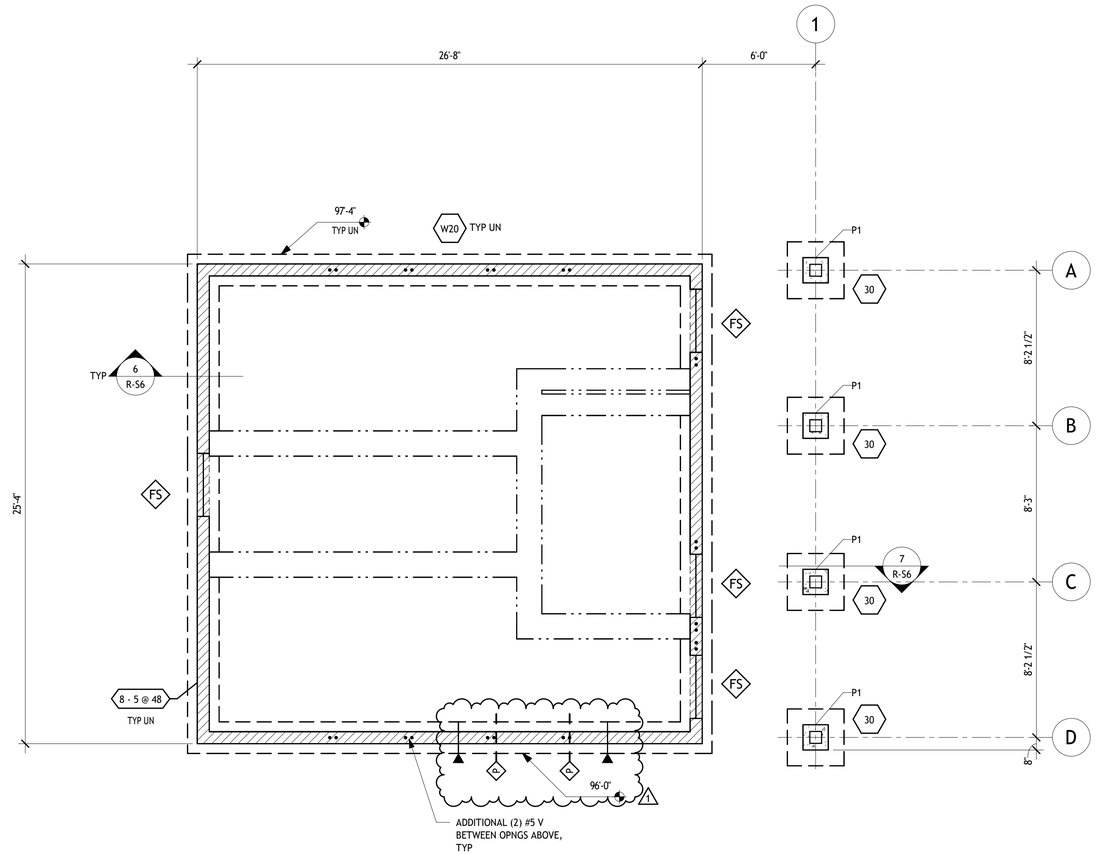
ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

Tower Floor Plan

T-A1



FOUNDATION PLAN

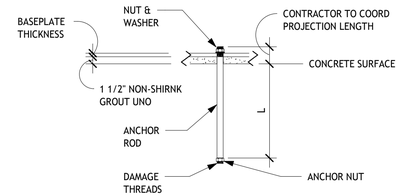
1/4" = 1'-0"

NORTH

1. VERIFY LOCATIONS OF COLUMNS, WALLS, OPENINGS, ETC. WITH ARCHITECTURAL DRAWINGS BEFORE PLACING FOUNDATIONS.
2. 4" SLAB ON GRADE WITH 6x6-W1.4xW1.4 WWR. TYPICAL EXCEPT AS NOTED. PROVIDE 4" OF GRANULAR SUBGRADE BELOW SLAB UNLESS NOTED OTHERWISE IN THE REFERENCED GEOTECHNICAL REPORT.
3. TOP OF SLAB ELEVATION 100'-0" EXCEPT AS NOTED. SEE CIVIL DRAWINGS FOR REFERENCE SITE ELEVATION.
4. DESIGN SOIL BEARING PRESSURE 2,000 PSF. ANY SOFT SPOTS OR VARIATIONS IN SUBSURFACE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. THE DESIGN BEARING CAPACITY SHALL BE FIELD VERIFIED BY AN INDEPENDENT TESTING AGENCY SPECIALIZING IN SOILS INVESTIGATIONS. GEOTECHNICAL INFORMATION INCLUDED IN THE CONSTRUCTION DOCUMENTS WAS OBTAINED FROM A REPORT ISSUED BY CTL ENGINEERING, PROJECT NUMBER 25050027COL, DATED JUNE 9, 2025.
5. ELEVATIONS SHOWN ON PLAN ARE TOP OF THE FOOTING OR SLAB.
6. FOOTINGS TO CENTER UNDER COLUMN OR WALL UNLESS NOTED.
7. CONTRACTOR SHALL PROVIDE FLOOR CONTROL AND CONSTRUCTION JOINTS IN SLAB ON GRADE IN ACCORDANCE WITH SECTIONS 1 / R-S6 , 2 / R-S6 & 3 / R-S6 .
8. ALL EXTERIOR FOOTINGS ARE TO EXTEND A MINIMUM OF 3'-0" BELOW FINISHED GRADE OR TO LOCALLY RECOGNIZED FROST DEPTH.
9. WHERE FILL IS ON BOTH SIDES OF THE FOUNDATION WALLS, INSTALL THE FILL UNIFORMLY ON BOTH SIDES OF THE WALL.
10. REFERENCE: GENERAL STRUCTURAL NOTES - R-S2 .
11. SYMBOL LEGEND:

- INDICATES TOP OF FOOTING ON PLAN.
- INDICATES FOOTING MARK. SEE SCHEDULE ON SHEET R-S4 .
- INDICATES THICKENED SLAB ON PLAN, 16" WIDE x 8" DEEP WITH (2) #4 CONTINUOUS. SEE SECTION 4 / R-S6 .
- FS — INDICATES FROST SLAB. SEE SECTION 5 / R-S6 FOR MORE INFORMATION.
- A - B @ C — INDICATES CMU BEARING WALL MARK;
  "A" -INDICATES WALL THICKNESS IN INCHES.
  "B" -INDICATES REINFORCING BAR SIZE.
  "C" -INDICATES REINFORCING SPACING IN INCHES.
  REINFORCING BAR SIZE AND SPACING IS FROM TOP OF FOUNDATION TO TOP OF WALL. PROVIDE DOWELS FROM FOOTING TO MATCH VERTICAL REINFORCING SIZE AND SPACING.

  PROVIDE ADDITIONAL REINFORCING AS SHOWN IN SECTION ON PLAN.
- P# — INDICATES COLUMN (OR PIER) ON PLAN. SEE SCHEDULE ON SHEET R-S4 .
- P — INDICATES APPROXIMATE LOCATION OF PLUMBING UNDER SLAB ON PLAN. COORDINATE WITH MEP.
- 1 — INDICATES APPROXIMATE LOCATION OF STEP IN FOOTING ON PLAN. SEE SECTION 1 / R-S4 .



1. L = ANCHOR ROD EMBEDMENT (8" MIN UNO)
2. TYPICAL ANCHOR ROD DESIGNATION
   __ Ø X L A. ROD

TYPICAL ANCHOR ROD DETAIL

CONCRETE PIER SCHEDULE

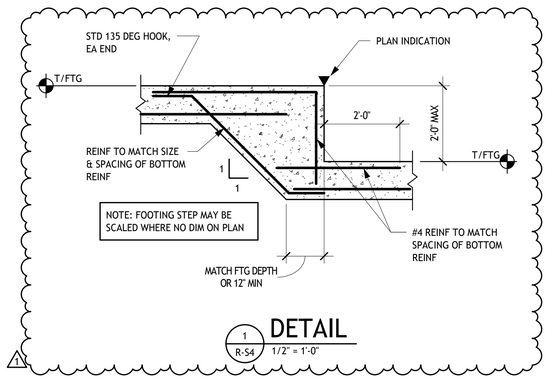
MARK	WIDTH	LENGTH	REINFORCING	REMARKS
P1	1'-4"	1'-4"	(4) #6 VERT w/ #4 TIES @ 12"c/c	T/PIER = 100'-6"

FOOTING SCHEDULE - ISOLATED FOOTINGS

TYPE	SIZE			REINFORCING	REMARKS
	WIDTH	LENGTH	THICKNESS		
30	3'-0"	3'-0"	1'-0"	(3) #5 EWB	

FOOTING SCHEDULE - WALL FOOTINGS

TYPE	SIZE			REINFORCING	REMARKS
	WIDTH	LENGTH	THICKNESS		
W20	1'-8"	CONT	1'-0"	(2) #5 CONT BOT	



Revision Schedule

No.	Description	Date
1	ADDENDUM 001	09/19/2025

SMBH STRUCTURAL ENGINEERING
1166 Dublin Road Suite 200
Columbus, OH 43215-1038
614-481-9800
www.smbhinc.com
smbh job no: 024-055.006

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

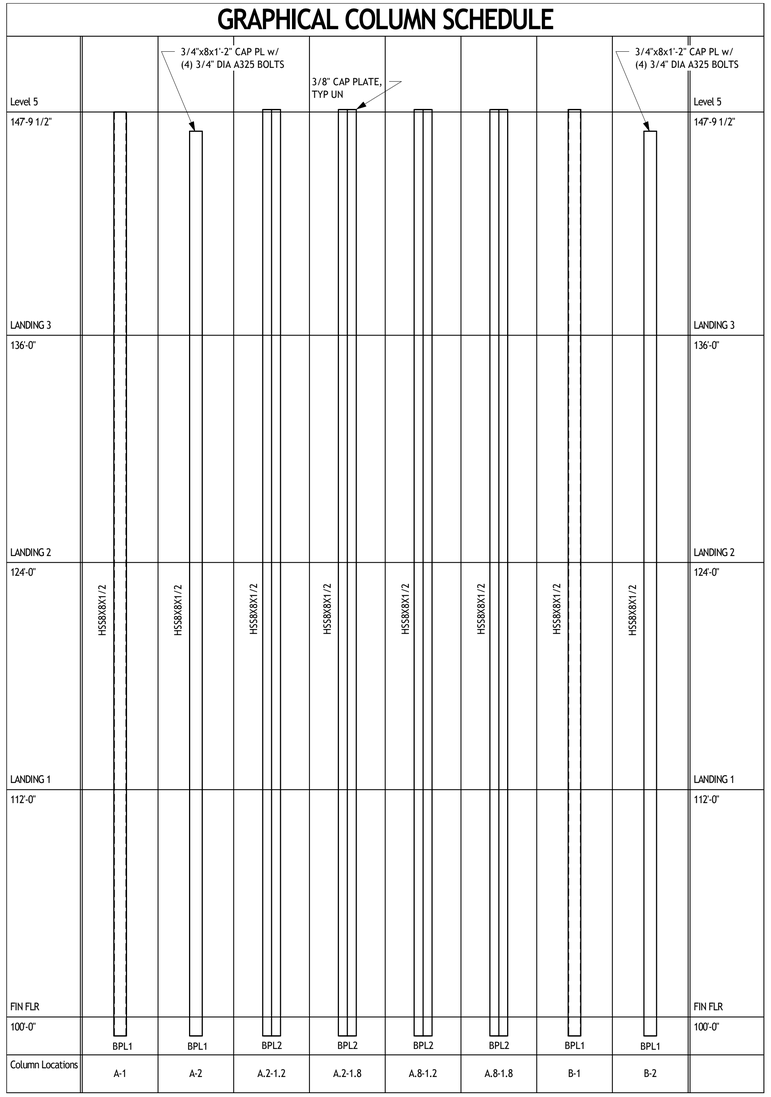
DESIGNED BY: SMBH	JOB NUMBER: DNR-250004
DRAWN BY: SMBH	SCALE: AS NOTED
CHECKED BY: SMBH	DATE: 07/28/2025
APPROVED BY: SMBH	CONSTRUCTION DOCUMENTS

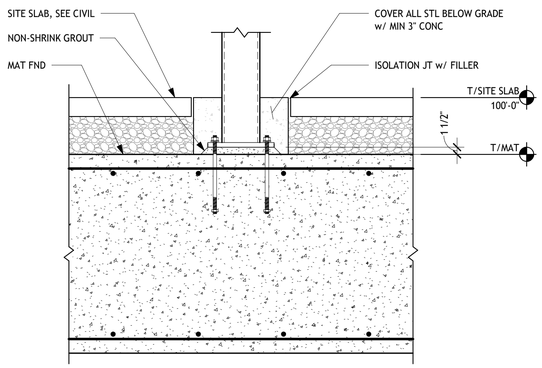
FOUNDATION PLAN

R-S4

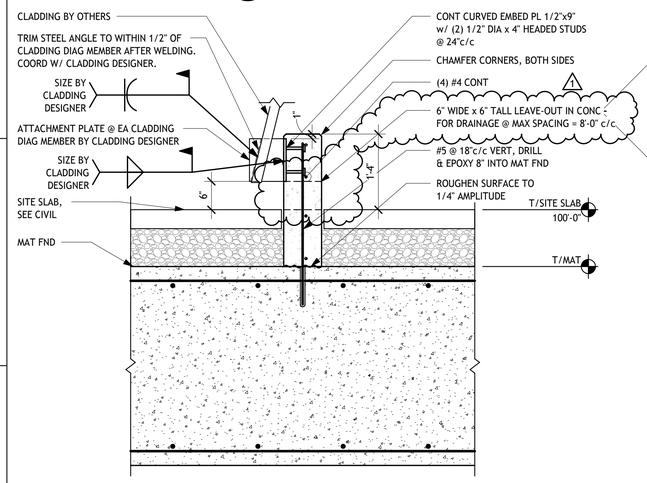
62

GRAPHICAL COLUMN SCHEDULE





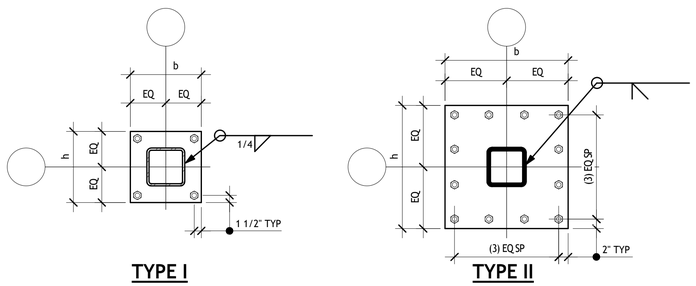
1 T-S4 SECTION
3/4" = 1'-0"



2 T-S4 SECTION
3/4" = 1'-0"

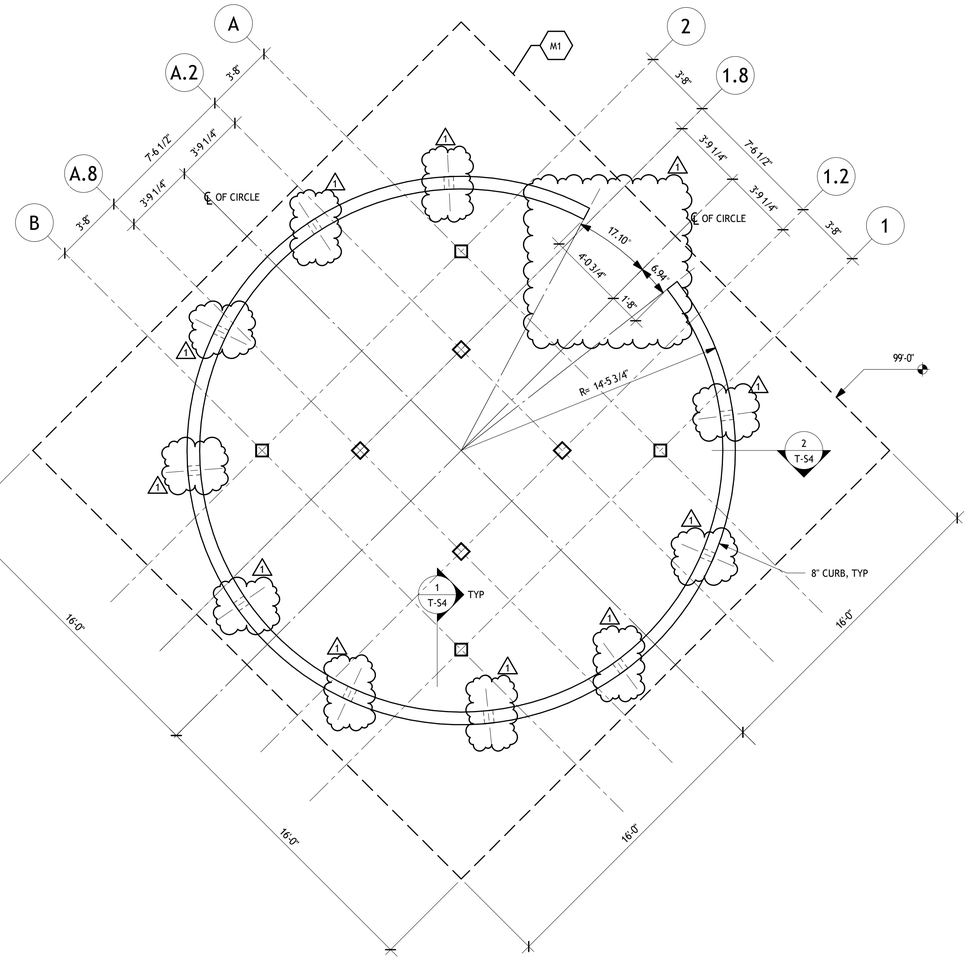
1. L = ANCHOR ROD EMBEDMENT (8" MIN UNO)
2. TYPICAL ANCHOR ROD DESIGNATION
   __" Ø X L A. ROD

TYPICAL ANCHOR ROD DETAIL



TYPE I TYPE II

COLUMN BASE PLATE DETAILS



FOUNDATION PLAN

1/4" = 1'-0"

1. VERIFY LOCATIONS OF COLUMNS, WALLS, OPENINGS, ETC. WITH ARCHITECTURAL DRAWINGS BEFORE PLACING FOUNDATIONS.
2. TOP OF MAT ELEVATION 99'-0" EXCEPT AS NOTED. SEE CIVIL DRAWINGS FOR REFERENCE SITE ELEVATION.
3. DESIGN SOIL BEARING PRESSURE 2,000 PSF. ANY SOFT SPOTS OR VARIATIONS IN SUBSURFACE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. THE DESIGN BEARING CAPACITY SHALL BE FIELD VERIFIED BY AN INDEPENDENT TESTING AGENCY SPECIALIZING IN SOILS INVESTIGATIONS. GEOTECHNICAL INFORMATION INCLUDED IN THE CONSTRUCTION DOCUMENTS WAS OBTAINED FROM A REPORT ISSUED BY CTL ENGINEERING, PROJECT NUMBER 25050027COL, DATED JUNE 9, 2025..
4. ELEVATIONS SHOWN ON PLAN ARE TOP OF THE FOOTING OR SLAB.
5. REFERENCE: GENERAL STRUCTURAL NOTES - T-S2 ; COLUMN SCHEDULE - T-S4 .
6. SYMBOL LEGEND:

- INDICATES TOP OF FOOTING ON PLAN.
- M1 — INDICATES MAT FOUNDATION. SEE SCHEDULE ON SHEET T-S4 .
- C# — INDICATES COLUMN ON PLAN. SEE SCHEDULE ON SHEET T-S4 .

BASE PLATE SCHEDULE

MARK	BASE PLATE SIZE	ANCHOR BOLTS	BASE PLATE TYPE
BPL1	1"x14'x1'-2"	(4) 3/4" DIA x1'-4"	TYPE 1
BPL2	1 3/4"x26'x2'-2"	(12) 1" DIA x1'-6"	TYPE 2

FOOTING SCHEDULE - MAT FOUNDATIONS

TYPE	SIZE WIDTH	SIZE LENGTH	SIZE THICKNESS	REINFORCING	REMARKS
M1	32'-0"	32'-0"	3'-6"	#9 @ 10" c/c EA WAY T&B	

Revision Schedule

No.	Description	Date
1	ADDENDUM 001	09/19/25

SMBH STRUCTURAL ENGINEERING
1166 Dublin Road Suite 200
Columbus, OH 43215-1038
614-481-9800
www.smbhinc.com
smbh job no: 024-055.006

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

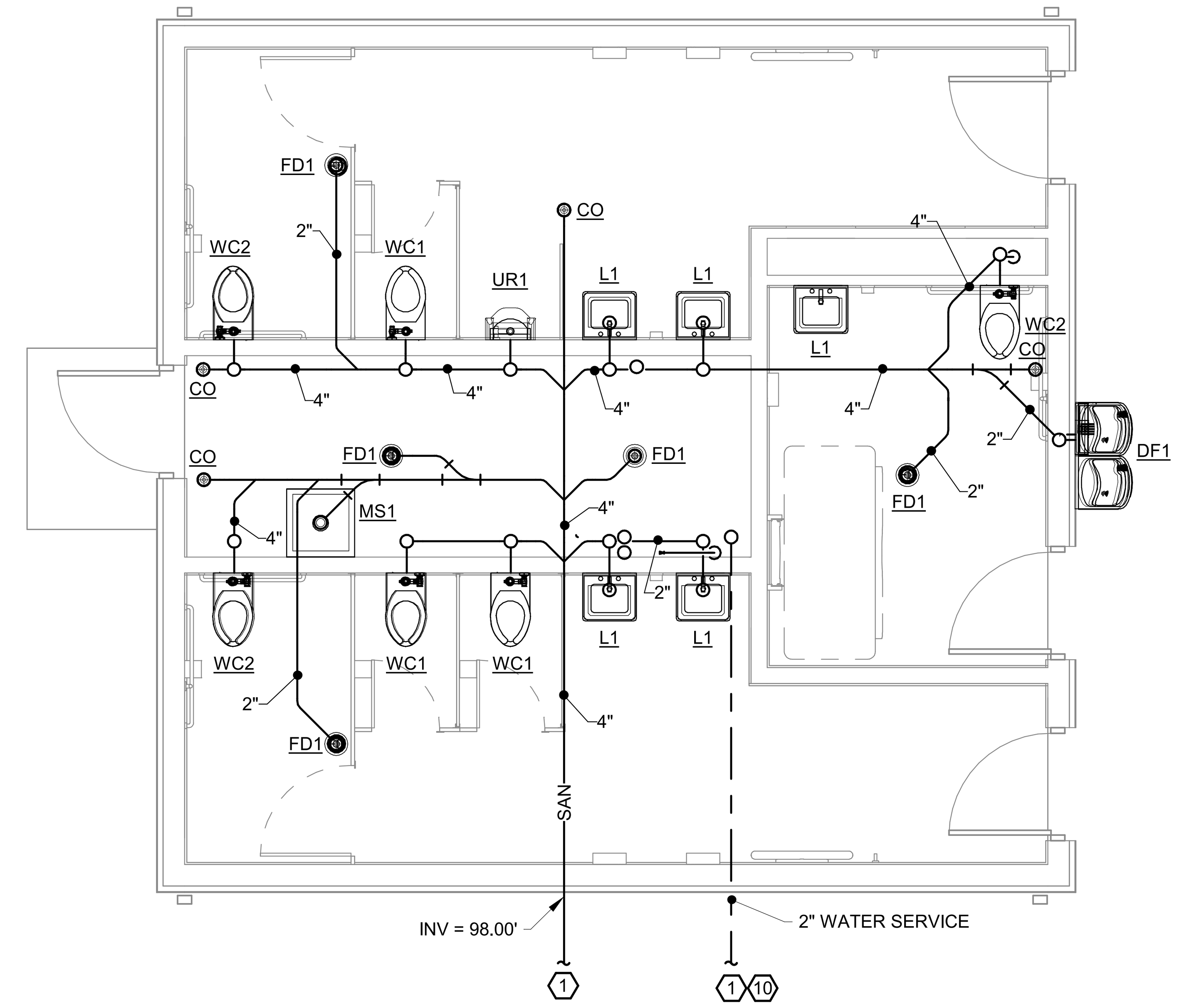
DESIGNED BY: SMBH	JOB NUMBER: DNR-250004
DRAWN BY: SMBH	SCALE: AS NOTED
CHECKED BY: SMBH	DATE: 08/28/2025
APPROVED BY: SMBH	CONSTRUCTION DOCUMENTS

FOUNDATION PLAN & DETAILS

T-S4

GENERAL SHEET NOTES:

1. CLOSELY COORDINATE WORK WITHIN PLUMBING CHASE WITH ALL OTHER TRADES.
2. IT IS THE DESIGN INTENT THAT EACH RESTROOM'S WATER SUPPLY SHALL BE ABLE TO BE SHUT DOWN INDEPENDENTLY FOR WINTERIZATION. PROVIDE SHUT OFF VALVES AND AIR COMPRESSOR FITTINGS AS NECESSARY.

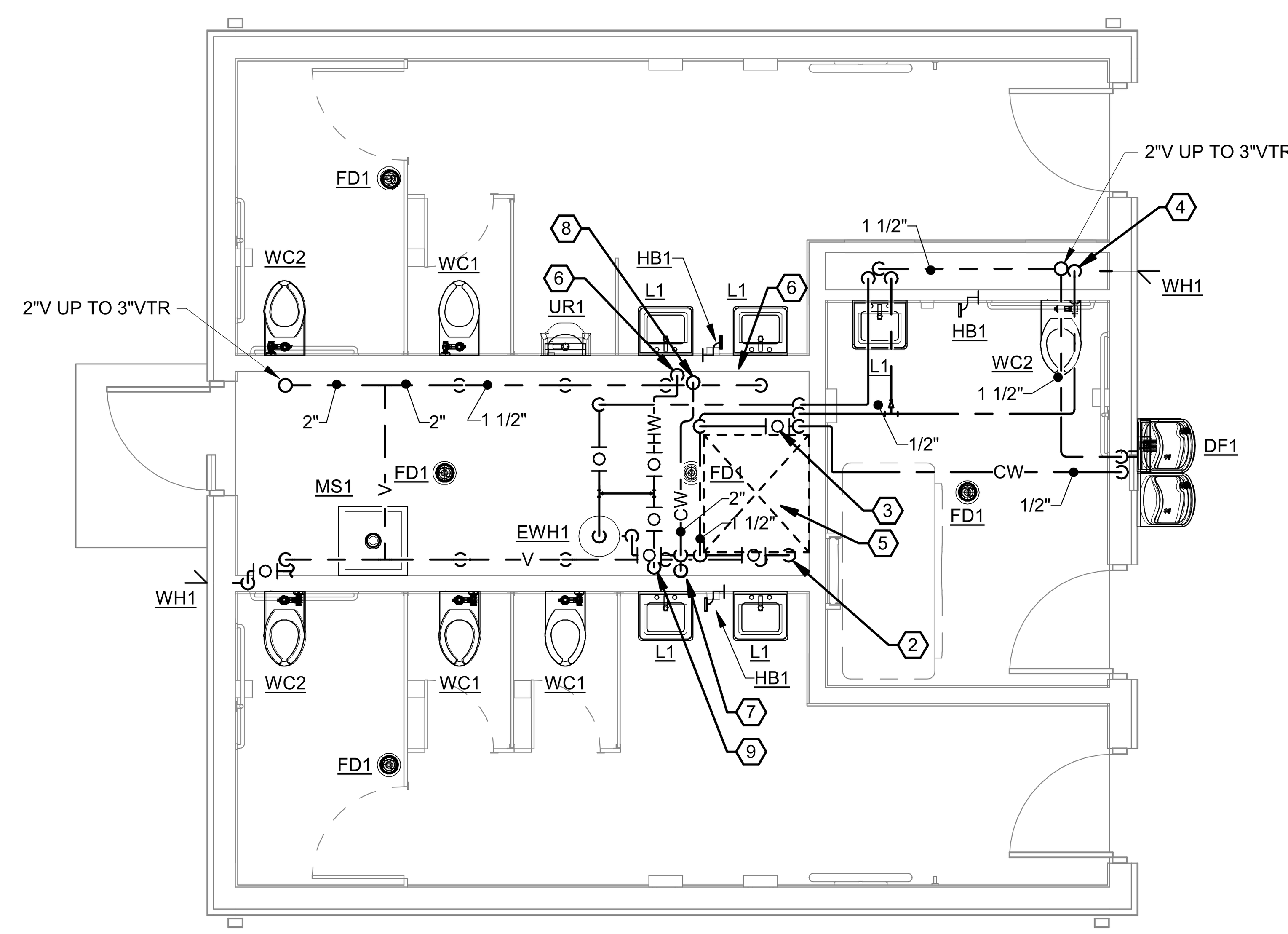


N

2 UNDERFLOOR PLAN - PLUMBING
1/4" = 1'-0"

SHEET KEYNOTES:

1. EXTEND 5 FEET BEYOND BUILDING WALL FOR CONTINUATION BY SITE UTILITY CONTRACTOR.
2. WATER SERVICE ENTRANCE WITH SHUT-OFF VALVE. PROVIDE COMPRESSED AIR FITTING DOWNSTREAM OF SHUT OFF VALVE FOR WINTERIZATION BLOW DOWN. COORDINATE PENTRATION LOCATION AND ELECTRICAL PANEL CLEARANCES WITH ELECTRICAL CONTRACTOR.
3. PROVIDE SHUT OFF VALVE WITH COMPRESSED AIR FITTING DOWNSTREAM FOR WINTERIZATION BLOW DOWN OF DRINKING FOUNTAIN SUPPLY.
4. 1" CW DOWN IN CHASE. EXTEND 1" CW TO WC, 3/4" CW TO WH1, AND 1/2" CW TO HB1.
5. MAINTAIN CLEARANCE AROUND ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL CONTRACTOR.
6. 3/4" HW DOWN ON WALL. EXTEND AND CONNECT 1/2" HW TO EACH LAV.
7. 2" CW DOWN ON WALL WITH SHUT OFF VALVE. PROVIDE COMPRESSED AIR FITTING DOWNSTREAM OF SHUT OFF VALVE FOR WINTERIZATION BLOW DOWN. EXTEND FULL SIZE ON WALL AND CONNECT 1" TO EACH WC, 1/2" TO EACH LAV, 1/2" TO THE HB, AND 1/2" CW TO MS1.
8. 2" CW DOWN ON WALL WITH SHUT OFF VALVE. PROVIDE COMPRESSED AIR FITTING DOWNSTREAM OF SHUT OFF VALVE FOR WINTERIZATION BLOW DOWN. EXTEND FULL SIZE ON WALL AND CONNECT 1" TO EACH WC, 3/4" TO THE UR, 1/2" TO EACH LAV AND 1/2" TO THE HB.
9. 3/4" HW DOWN ON WALL. EXTEND AND CONNECT 1/2" HW TO EACH LAV AND MS1.
10. SEE CIVIL PLANS FOR WATER METER AND BACKFLOW PREVENTER LOCATED ON SITE.

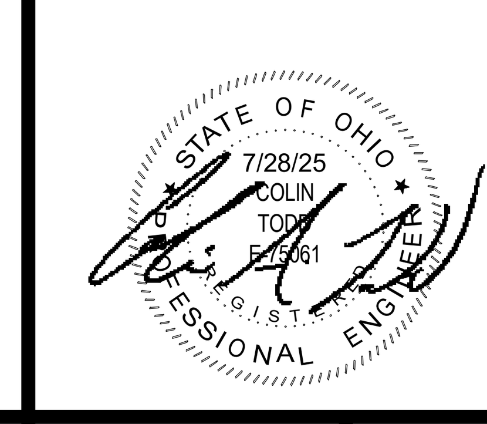


N

1 FIRST FLOOR PLAN - PLUMBING
1/4" = 1'-0"

Revision Schedule

No.	Description	Date
	Permit Set	07/28/25
	Owner Review	08/05/25
1	Addendum 001	09/19/25



SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

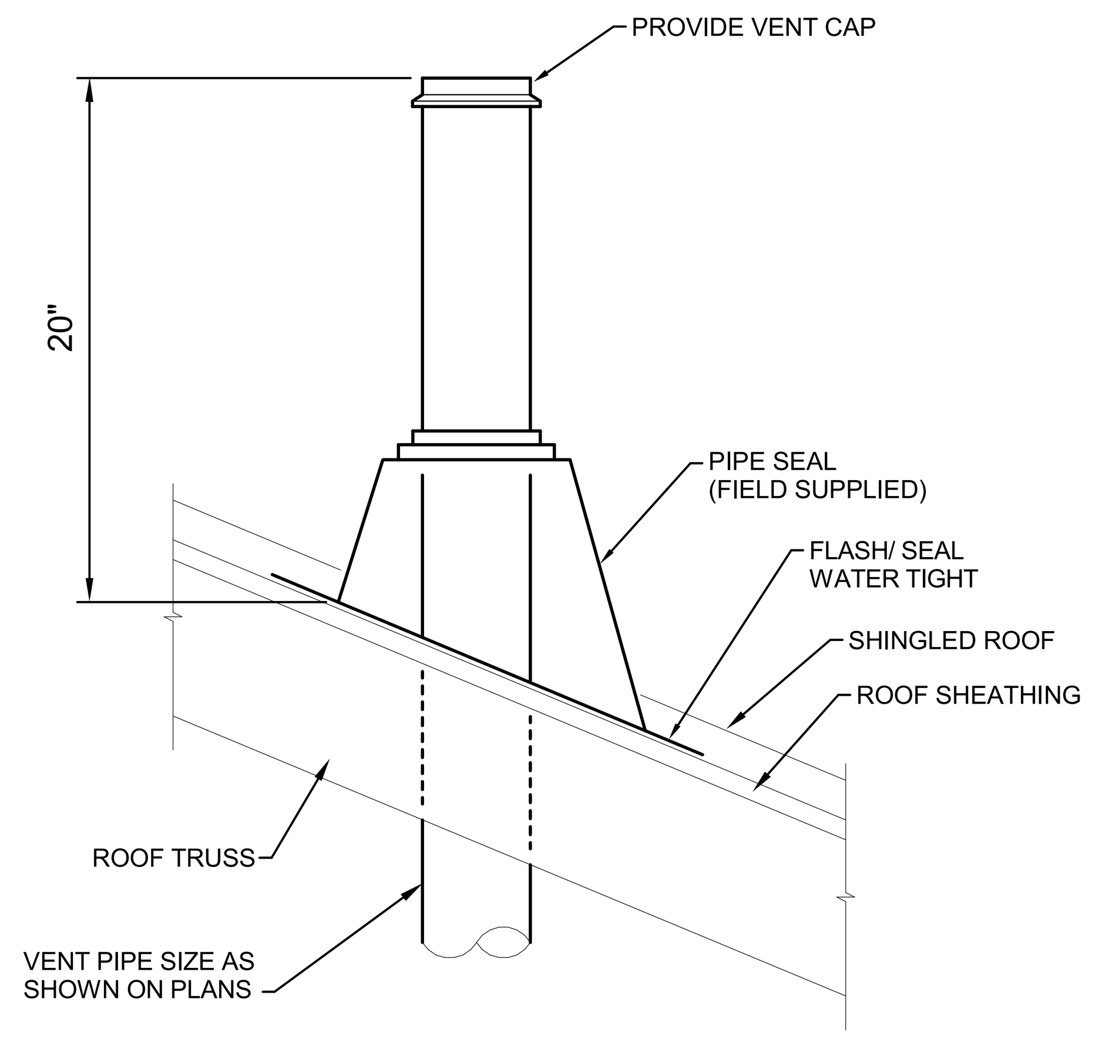
GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

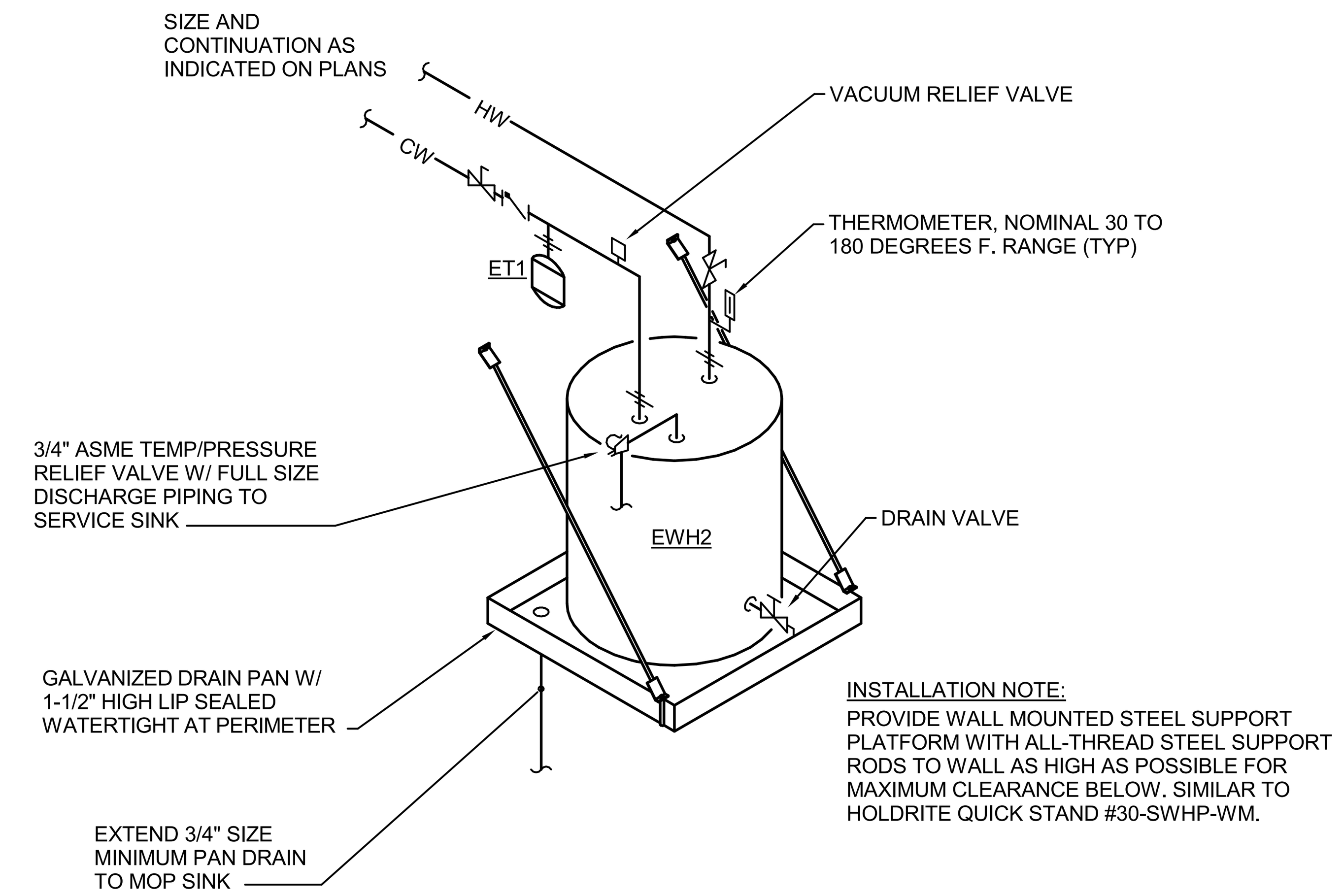
JOB NUMBER: DNR-250004
SCALE: AS NOTED
DATE: 09/04/2025
BID DOCUMENTS

FIRST FLOOR PLAN - PLUMBING

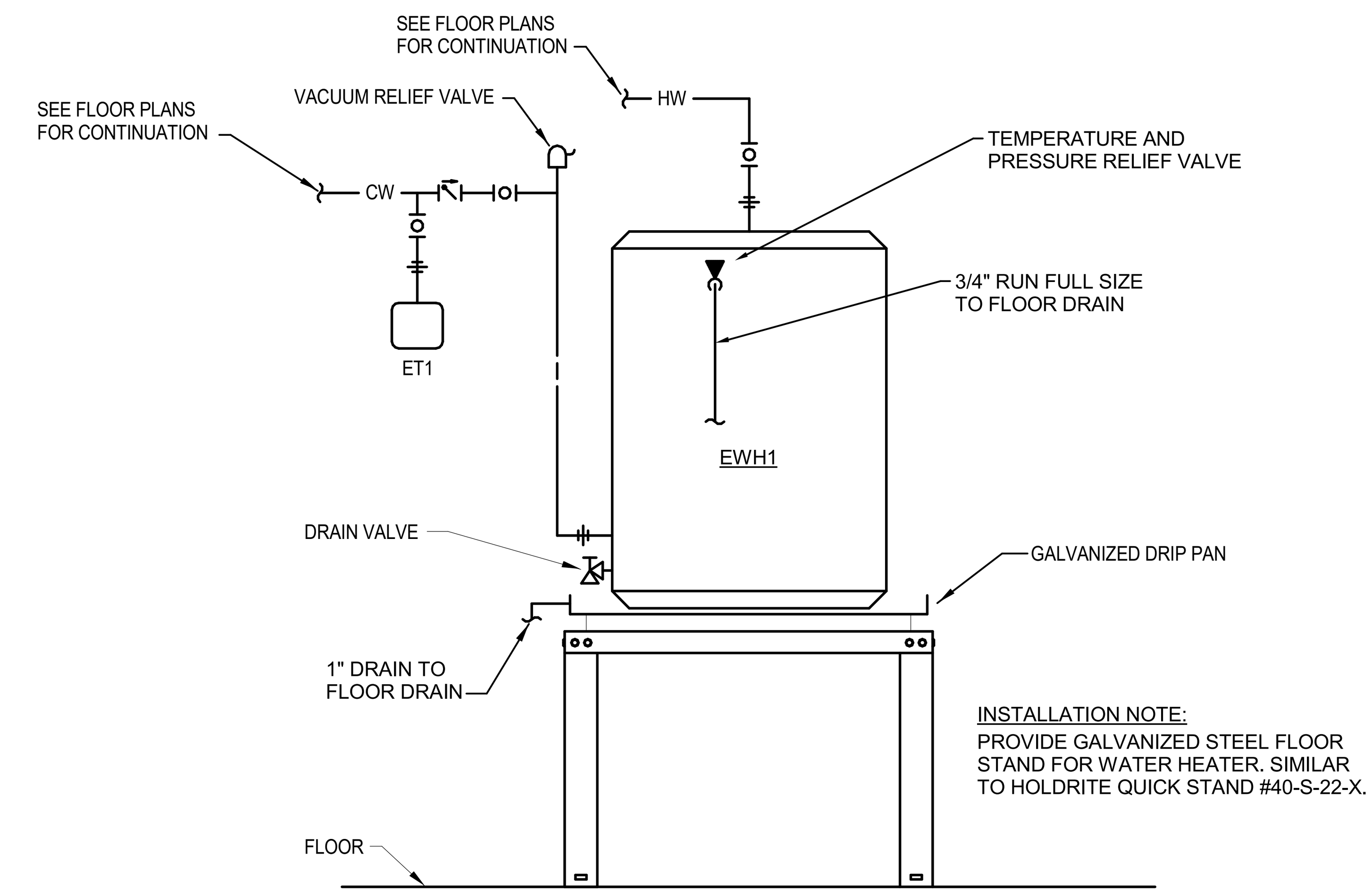
P101



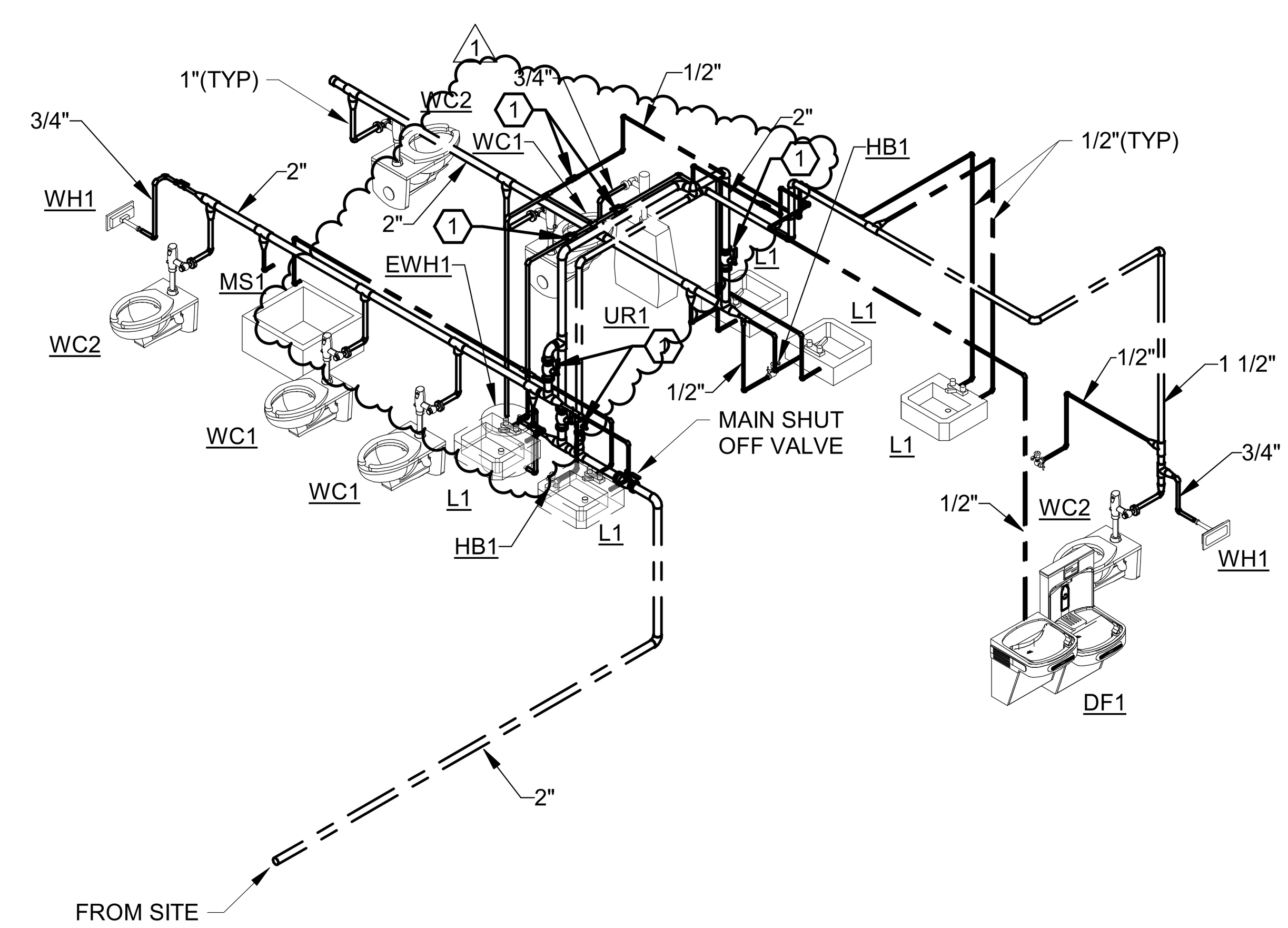
3 DETAIL - VENT THROUGH ROOF
NTS



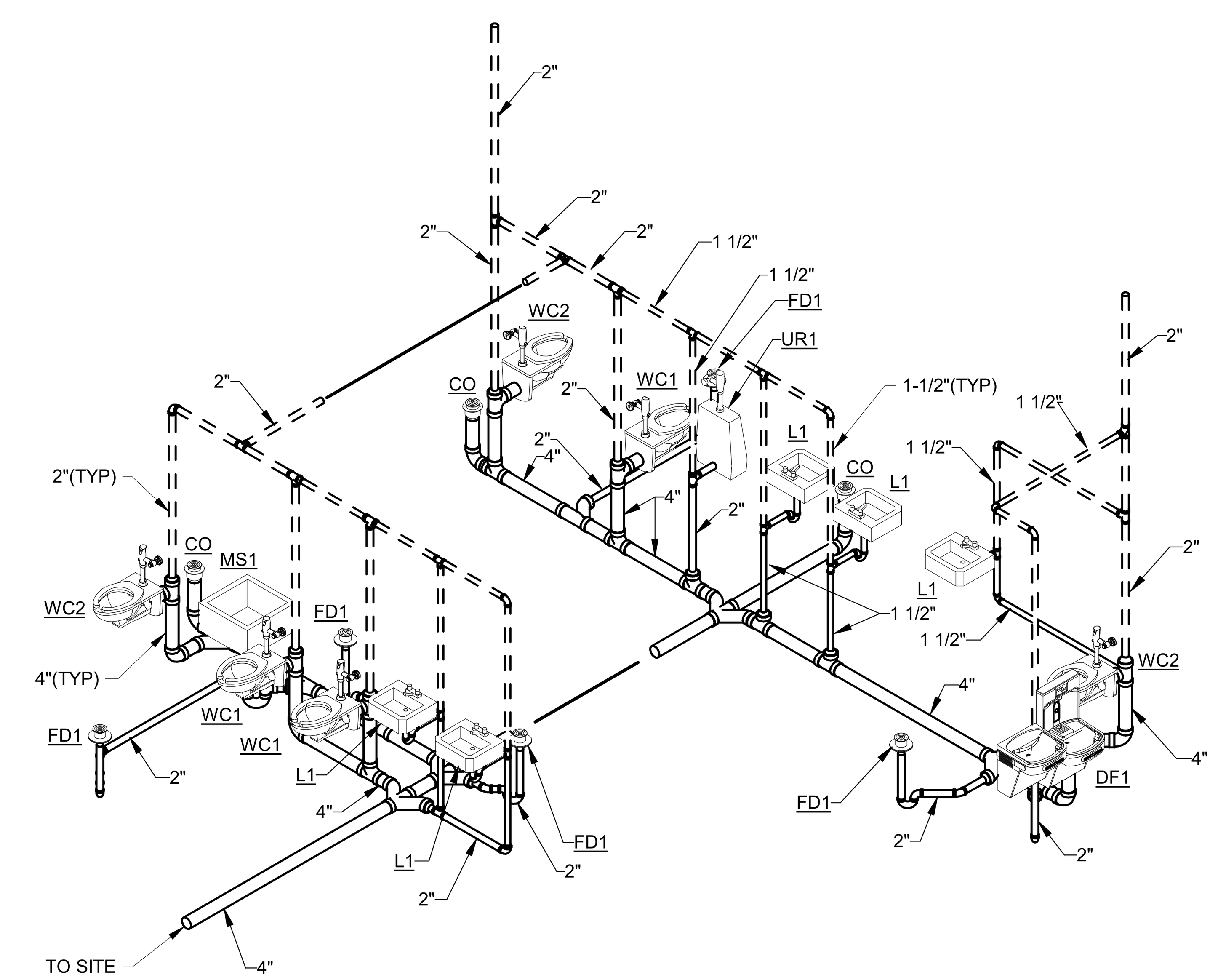
2 DETAIL - ELECTRIC WATER HEATER EWH2
NTS



1 DETAIL - ELECTRIC WATER HEATER EWH1
NTS



5 DOMESTIC ISOMETRIC



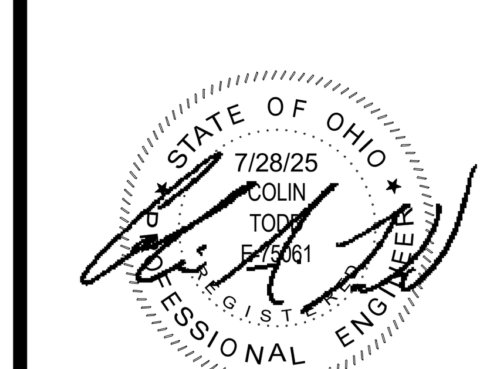
4 SANITARY ISOMETRIC

KEYNOTES

1. RESTROOM ISOLATION VALVE. PROVIDE AIR COMPRESSOR FITTING DOWNSTREAM OF VALVE FOR WINTERIZATION BLOWDOWN.

Revision Schedule

No.	Description	Date
	Permit Set	07/28/25
	Owner Review	08/05/25
1	Addendum 001	09/19/25



SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

JOB NUMBER: DNR-250004
SCALE: AS NOTED
DATE: 09/04/2025
BID DOCUMENTS

DETAILS - PLUMBING

GENERAL SHEET NOTES:

A. UNLESS OTHERWISE NOTED, MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1.25", DIRECT BURIED, PER DETAIL 2/E-501.

B. UNDERGROUND CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE EXACT ROUTING.

C. COORDINATE ALL SITE WORK WITH OTHER TRADES AND EXISTING UNDERGROUND UTILITIES.

D. ALL POLE MOUNTED LIGHTING FIXTURES SHALL HAVE A TRANSIENT VOLTAGE SURGE ARRESTOR MOUNTED IN THE POLE BASE ACCESSIBLE THROUGH THE HAND HOLE. THE SURGE ARRESTOR SHALL BE DITEK MODEL DTK-DL277 OR APPROVED EQUAL.

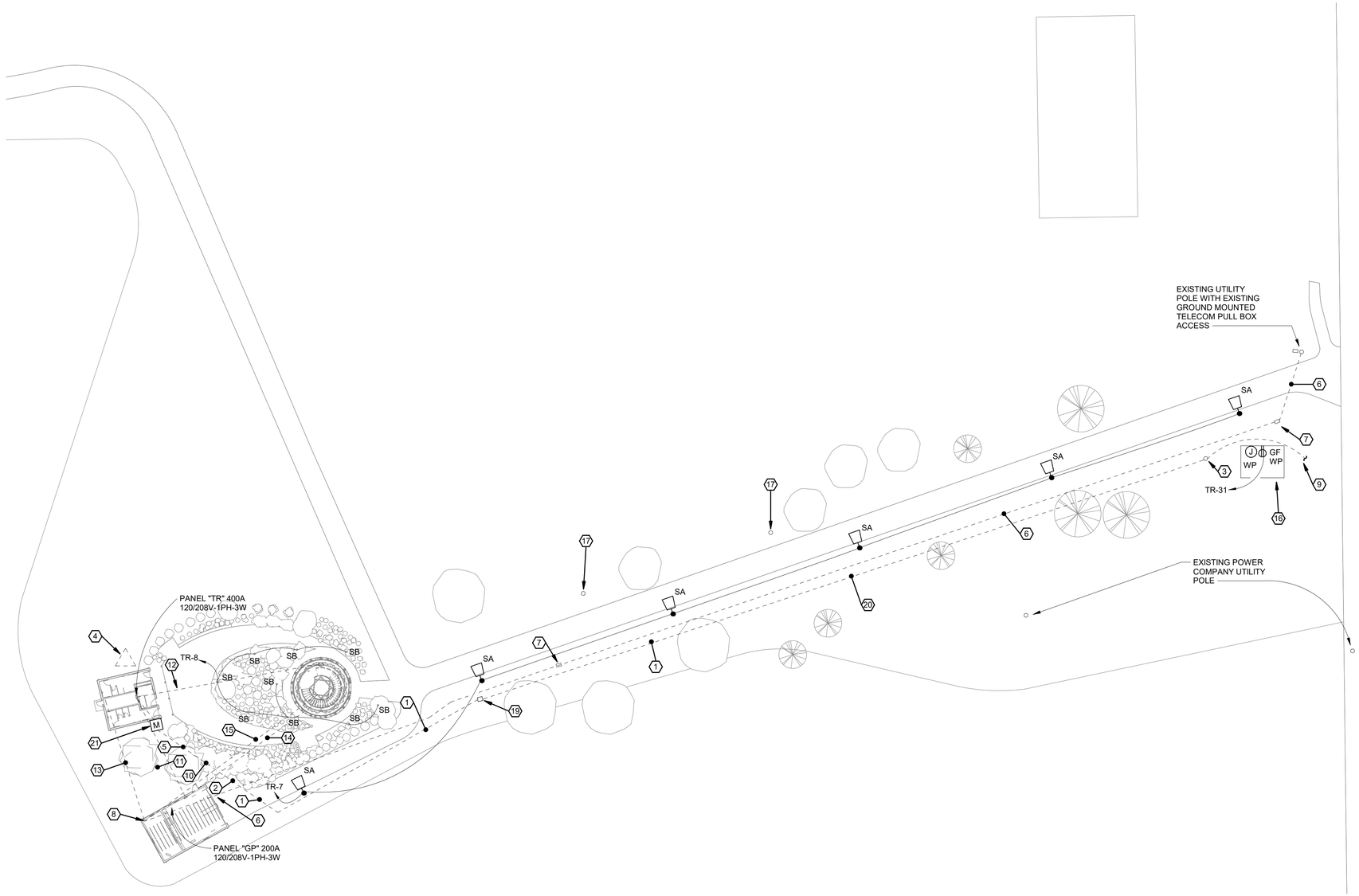
E. ALL EXTERIOR CONDUITS RISING ABOVE GRADE, ENTERING MANHOLES, HANDHOLES, BUILDING, AND OR EQUIPMENT SHALL BE RGC FROM THE LAST 6 FEET OF TRANSITION FROM BELOW GRADE.

F. UNLESS NOTED, OTHERWISE ALL LIGHTING CIRCUITS SHALL BE CONNECTED WITH A MINIMUM #8 CONDUCTORS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL CIRCUITS MAINTAIN A 3% VOLTAGE DROP MAXIMUM THROUGHOUT THE CIRCUIT. INCREASE WIRE SIZE AS REQUIRED TO MAINTAIN VOLTAGE DROP REQUIREMENTS.

G. CALL BEFORE YOU DIG #811.

SHEET KEYNOTES:

1. CONCRETE ENCASED DUCT BANK, REFER TO DETAIL 1/E501.
2. DIRECT BURY CONDUIT, REFER TO DETAIL 2/E501.
3. NEW UTILITY POLE AND OVERHEAD AND PRIMARY RISER LINES TO BE FURNISHED BY AES POWER WITHIN PROPERTY LINE OF ODNR. CONTRACTOR SHALL STUB PRIMARY DUCT BANK UP AT BOTTOM OF POLE.
4. GROUNDING TRIANGLE AND TEST WELL. REFER TO DETAIL 7 AND 8/E501. EXTEND GROUNDING ELECTRODE TO GROUND BAR IN MAIN ELECTRICAL ROOM.
5. INCOMING ELECTRICAL DUCT BANKS SHALL TURN UP AT CT CABINET. REFER TO E101 FOR EXTENSION INTO BUILDING.
6. PROVIDE TELECOM PATHWAYS WITH 4-CELL FABRIC INNERDUCT WITHIN CONDUIT. EQUAL TO MAXCELL DIRECT BURIED, PER DETAIL 2/E501. PROVIDE TWO (2) 2" CONDUITS.
7. GROUND MOUNTED PULL BOX 17" x 30" QUAZITE PG STYLE, REFER TO DETAIL 3/E501.
8. INCOMING TELECOM DUCT BANKS SHALL TURN UP WITHIN MAINTENANCE BUILDING, WORKSHOP #105. REFER TO E101 FOR EQUIPMENT LOCATION WITHIN ROOM.
9. AES POWER SHALL EXTEND OVERHEAD AERIAL LINES FROM NEARBY DISTRIBUTION TO RISER POLE LOCATED ON ODNR PROPERTY. REFER TO KEYNOTE #3.
10. PROVIDE (2 SETS) 3#250KCMIL (AL), 1#1(G), 4"C FROM PANEL "TR" UNDERGROUND TO NEW UTILITY POLE AND UP POLE TO TRANSFORMERS. PROVIDE 6' EXTRA CONDUCTORS FOR UTILITY COMPANY CONNECTION.
11. PROVIDE 3#250 KCMIL (AL), 1#2(G)-3"C FROM PANEL "TR" UNDERGROUND TO PANEL "GP".
12. PROVIDE A 1.25" CONDUIT WITH (3 SETS) 2#12, 1#12(G) FOR TOWER LIGHTING AND POWER.
13. PROVIDE A 2" CONDUIT WITH PULLWIRE FOR FUTURE COMMUNICATION WIRING UNDERGROUND FROM WORK SHOP TO PLUMBING CHASE IN RESTROOM BUILDING. CAP AND TAG UNDERGROUND SPARE.
14. PROVIDE A 1.25" CONDUIT WITH PULLWIRE UNDERGROUND FROM PANEL "GR" TO TOWER FOR FUTURE ELECTRICAL.
15. PROVIDE A 2" CONDUIT WITH PULLWIRE UNDERGROUND FROM GARAGE WORK SHOP TO TOWER FOR FUTURE COMMUNICATION. CAP AND TAG UNDERGROUND SPARE.
16. WATER METER ENCLOSURE AND HEATER. PROVIDE A WEATHERPROOF JUNCTION BOX AND WEATHERPROOF GFCI DUPLEX AT METER ENCLOSURE. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR. PROVIDE A JUNCTION BOX NEAR PANEL "TR". FROM A 20/1 CIRCUIT BREAKER IN PANEL "TR", PROVIDE 2#12, 1#12(G)-3/4"C TO JUNCTION BOX LOCATED NEAR PANEL. FROM JUNCTION BOX, PROVIDE 2 #3, 1#10(G)-1 1/4"C (BRANCH CIRCUIT IS SIZED FOR VOLTAGE DROP) UNDERGROUND TO WEATHERPROOF JUNCTION BOX IN WATER METER ENCLOSURE. FROM JUNCTION BOX IN METER ENCLOSURE, PROVIDE 2# 12, 1#12(G)-3/4"C TO WEATHERPROOF GFCI DUPLEX RECEPTACLE IN WATER METER ENCLOSURE.
17. APPROXIMATE LOCATION OF EXISTING POWER COMPANY UTILITY POLE TO BE REMOVED BY THE POWER COMPANY.
18. APPROXIMATE LOCATION OF UTILITY COMPANY POWER POLES.
19. APPROXIMATE LOCATION OF NEW AES POWER COMPANY POLE MOUNTED TRANSFORMER.
20. PROVIDE TWO (2) 4" PVC CONDUITS UNDERGROUND FOR AES POWER PRIMARY FEEDERS.
21. METER AND CT CABINET LOCATION ON SIDE OF RESTROOM. CONTRACTOR TO PROVIDE PER AES STANDARDS .



N

1 SITE PLAN - ELECTRICAL
1" = 30'-0"

Revision Schedule

No.	Description	Date
	Permit Set	07/28/25
	Owner Review	08/05/25
1	Addendum 001	09/19/25

STATE OF OHIO
7/28/25
JOHNATHAN S. SAIGE
E-82841
PROFESSIONAL ENGINEER

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

SITE PLAN - ELECTRICAL

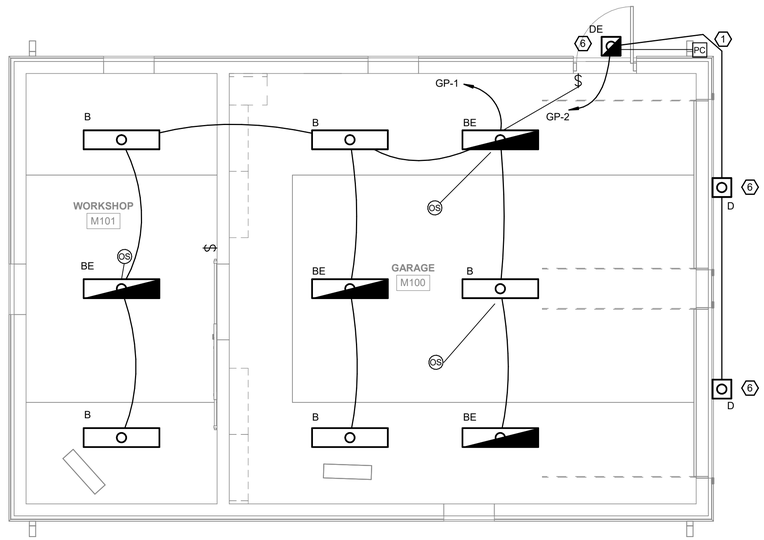
E002

Panel: GP

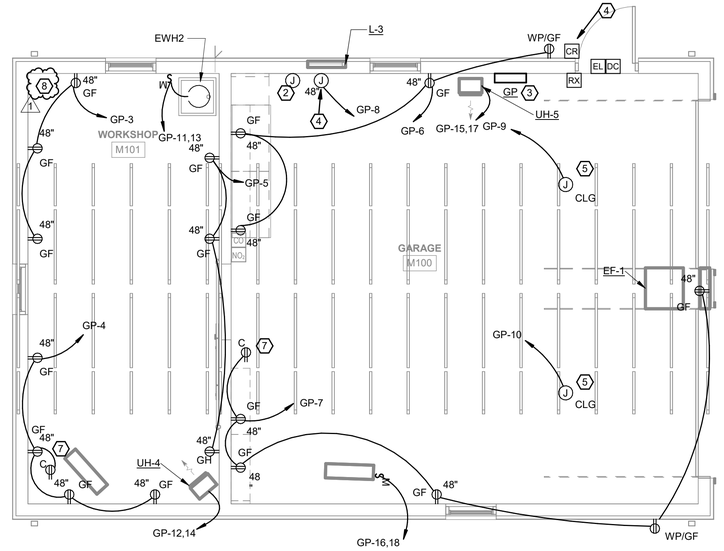
Location: | **Volts:** 120/208 Single | **A.I.C. Rating:** 22,000
Supply From: TR | **Phases:** 1 | **Mains Type:** MCB
Mounting: Surface | **Wires:** 3 | **Mains Rating:** 200 A
Enclosure: Type 1 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	104, 105 LIGHTING	20 A	1	0.4	0.1			1	20 A	GARAGE EXTERIOR...	2
3	RECEPTACLE	20 A	1			0.5	0.9	1	20 A	RECEPTACLE	4
5	RECEPTACLE	20 A	1	0.5	0.7			1	20 A	RECEPTACLE	6
7	RECEPTACLE	20 A	1			1.1	0.1	1	20 A	DOOR SECURITY	8
9	DOOR OPENER	20 A	1	1.2	1.2			1	20 A	DOOR OPENER	10
11	EWH-2	20 A	2			1.0	5.0	2	30 A	UH-4	12
13				1.0	5.0						14
15	UH-5	60 A	2			5.0	0.3	2	15 A	EF-1	16
17				5.0	0.3						18
19	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	20
21	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	22
23	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	24
25	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	26
27	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	28
29	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	30
31	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	32
33	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	34
35	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	36
37	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	38
39	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	40
41	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	42
			Total Load:	15.4 kVA		13.9 kVA					
			Total Amps:	146 A		134 A					

Conn. Load:	Demand Load:	Demand...
29.3 kVA	29.3 kVA	141 A



1 FIRST FLOOR CEILING PLAN - LIGHTING
1/4" = 1'-0"



2 FIRST FLOOR PLAN - POWER AND SYSTEMS
1/4" = 1'-0"

GENERAL SHEET NOTES:

LIGHTING GENERAL NOTES

A. COORDINATE EXACT LOCATIONS OF DEVICE AND LUMINAIRES WITH ARCHITECTURAL REFLECTED CEILING PLAN AND HVAC PLANS PRIOR TO ROUGH-IN TO AVOID CONFLICTS.

B. PROVIDE ALL MOUNTING HARDWARE PER MANUFACTURER'S WRITTEN INSTRUCTIONS TO SUPPORT LUMINAIRE. CONTRACTOR TO VERIFY MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN. LUMINAIRES SHALL NOT BE SUPPORTED BY CEILINGS.

C. NO SHARED NEUTRALS - EACH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR.

D. STRAIGHT LINES INDICATE LUMINAIRES CIRCUITED TO COMMON CONTROL AND CIRCUIT. ARC LINES INDICATE A COMMON BRANCH BUT SEPARATE CONTROLS CIRCUIT.

E. UNLESS NOTED OTHERWISE, LUMINAIRES WITH 0-10V DIMMING DRIVERS SHALL HAVE 0-10V DIMMING CONTROLS WIRED TO LIGHTING CONTROL DEVICE, JUNCTION BOX OR POWER PACK, REGARDLESS OF CONTROLS (DIM OR NONDIM) DEFINED.

F. UNLESS NOTED OTHERWISE, LIGHTING CONTROLS SHALL SERVE LUMINAIRES IN THE SAME SPACE.

POWER AND SYSTEMS GENERAL NOTES

A. FIELD VERIFY EXACT LOCATIONS OF ALL RECEPTACLES AND EQUIPMENT. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER CONSTRUCTION WORK TRADES FOR ADDITIONAL ELECTRICAL WORK INCLUDED IN DIVISION 26.

B. ALL RECEPTACLES WITHIN GENERAL PUBLIC ACCESS SHALL BE TAMPER RESISTANT TYPE.

C. COORDINATE ALL ROUGH-IN REQUIREMENTS OF DEVICES AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

D. UNLESS NOTED OTHERWISE, ALL CABLING SHALL BE IN CONDUIT ROUTED PARALLEL AND TIGHT TO BUILDING STRUCTURE.

E. PROVIDE FINAL CONNECTIONS AS SHOWN TO ALL EQUIPMENT SHOWN PER MANUFACTURER'S PUBLISHED INSTRUCTION.

F. COORDINATE DEVICE COLOR SELECTIONS WITH ARCHITECT AND OWNER.

G. REFER TO MECHANICAL SCHEDULE SHEETS MX.XX AND MX.XX FOR ADDITIONAL INFORMATION.

H. COORDINATE FINAL FLOOR BOX LOCATION WITH ARCHITECTURAL FURNITURE PLANS.

I. ALL EXTERIOR CONNECTIONS AND DEVICES SHALL BE LISTED WEATHE RESISTANT AND WATER TIGHT.

SHEET NOTES:

1. PROVIDE PHOTOCELL FOR AUTO ON/AUTO OFFCONTROL OF EXTERIOR BUILDING MOUNTED FIXTURES AND SITE LIGHTING POLE MOUNTED AND BOLLARD FIXTURES. MOUNT PHOTOCELL TO BUILDING FACING NORTH AND INSTALL AND AIM PER MANUFACTURER.
2. COORDINATE WITH CONTROLS CONTRACTOR AND PROVIDE A JUNCTION BOX, 3/4" CONDUIT WITH PULLWIRE FOR CONTROL WIRING FOR LOUVER BY OTHERS.
3. MOUNT PANELBOARD ON SURFACE OF WALL.
4. PROVIDE CONDUIT AND PULLWIRE AT DOOR FOR LOW VOLTAGE DOOR HARDWARE.COORDINATE EXACT LOCATION AND WIRING REQUIREMENTS WITH OTHER TRADES AND APPROVED SHOP DRAWINGS. COORDINATE EXACT LOCATION OF POWER SUPPLY, CARD READER, AND CONTROLLER WITH OTHER TRADES. INDICATES DOOR HARDWARE IS ROUGH-IN ONLY. CARD ACCESS SYSTEM SHALL BE PROVIDED BY OWNER. PROVIDE BLANK COVERPLATES ON "CR".
5. PROVIDE A CEILING MOUNTED JUNCTION BOX FOR DIRECT CONNECTION TO GARAGE DOOR OPENERS. MAKE FINAL CONNECTIONS.
6. MOUNT EXTERIOR WALL MOUNTED FIXTURE 6" ABOVE DOOR FRAME TO BOTTOM OF FIXTURE.
7. GFCI DUPLEX RECEPTACLE MOUNTED AT CEILING FOR AIR CIRCULATION FAN. COORDINATE EXACT OCATION WITH MECHAICAL CONTRACTOR PRIOR TO ROUGH-IN.
8. APPROXIMATE LOCATION OF OWNER COMMUNICATION EQUIPMENT. STUB CONDUITS UP IN CORNER OF ROOM. CONFIRM EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.

STATE OF OHIO
7/28/25
JOHNATHAN S. SAIGE
E-82841
PROFESSIONAL ENGINEER

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard T 614-628-0300
Columbus OH 43215 F 614-628-0311
schooleycaldwell.com

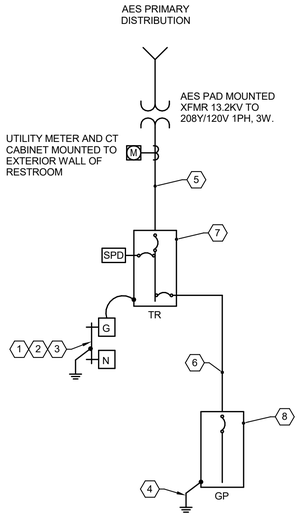
ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY: DPL	JOB NUMBER: DNR-210062.02
DRAWN BY: DPL	SCALE: AS NOTED
CHECKED BY: JSS	DATE: 09/04/25
APPROVED BY: JSS	CONSTRUCTION DOCUMENTS

FLOOR PLAN - ELECTRICAL

E201



1 SINGLE-LINE DIAGRAM - ELECTRICAL
NTS

SHEET KEYNOTES:

1. BOND NEUTRAL TO GROUND AT SERVICE ENTRANCE EQUIPMENT. PROVIDE GROUNDING ELECTRODE CONDUCTOR TO UL LISTED INTERSYSTEM GROUND BAR. REFER TO DETAIL 8/E501.
2. PROVIDE BONDING JUMPERS FROM GROUND BAR TO EACH GROUNDING ELECTRODE IN ACCORDANCE WITH NEC ARTICLE 250.
3. PROVIDE 10' X 3/4" DIA. UL LISTED GROUND ROD(S) AS REQUIRED. REFER TO DETAIL 7/E501.
4. PROVIDE GROUND ROD(S) AT REMOTE BUILDING PANELBOARD, DO NOT BOND NEUTRAL TO GROUND, BOND EQUIPMENT GROUNDING CONDUCTOR FROM FEEDER.
5. FROM TRANSFORMER, PROVIDE (2 SETS) 3#250KCMIL (AL), 1#1(G), 4"C FROM POWER COMPANY POLE MOUNTED TRANSFORMER TO PANEL "TR". (1) (1)
6. PROVIDE 3#250KCMIL (AL), 1#2(G)-3"C. FROM PANEL "TR" IN RESTROOM PLUMBING CHASE TO PANEL "GP" IN GARAGE.
7. PROVIDE A 42 SPACE, 400A MCB, 208Y/120V-1PH-4W PANELBOARD.
8. PROVIDE A 42 SPACE, 200A MCB, 208Y/120V-1PH-3W PANELBOARD.

Revision Schedule

No.	Description	Date
	Permit Set	07/28/25
	Owner Review	08/05/25
1	Addendum 001	09/19/25

STATE OF OHIO
7/28/25
JOHNATHAN S. SAIGE
E-82841
PROFESSIONAL ENGINEER

SCHOOLEY CALDWELL
ARCHITECTURE. INSPIRED.
300 Marconi Boulevard
Columbus OH 43215
schooleycaldwell.com
T 614-628-0300
F 614-628-0311

ENGINEERING
Ohio Department of Natural Resources

GREAT COUNCIL STATE PARK
OBSERVATION TOWER, RESTROOM, AND MAINTENANCE
GREENE COUNTY, OHIO

DESIGNED BY:	JOB NUMBER: DNR-250004
DRAWN BY:	SCALE: AS NOTED
CHECKED BY:	DATE: 09/04/2025
APPROVED BY:	BID DOCUMENTS

DIAGRAMS - ELECTRICAL

E701