LEVIN PORTER ARCHITECTS

ADDENDUM NO. 1

August 7,2026

This addendum supplements and amends the original Drawings and Specifications and shall from the date hereon, become an integral part of the Contract Drawings.

Parking Lot Expansion
Upper Valley Career Center
8811 Career Drive
Piqua, Ohio 45356

LEVIN PORTER ASSOCIATES INC
3011 Newmark Drive
Miamisburg, Ohio 45342
(937) 224-1931
(FAX) 224-3091
LPA Project Nos. 263321.00

TO ALL BIDDERS:

This Addendum including all items listed hereinafter, shall become a part of the Documents, shall be taken into account in preparing the Proposal, and shall become a part of the Contract Documents. The Work under each Contract shall be in accordance with the original Specifications unless excepted by this Addendum.

This Addendum consists of 3 pages and 13 attachments at 24" x 36" and 53 attachments at 8.5" x 11" for a total of 69 pages.

ITEM NO. 2: STORM PIPING REVISIONS:

2.1 Storm piping from 200 to 203 shall be RCP as now called out on the plans. For all storm piping, the contractor shall follow the "Storm Sewer Notes" on sheet C-0.1.

LEVIN PORTER ARCHITECTS

ITEM NO. 3: CIVIL DRAWING REVISIONS:

3.1 Sheet C-2.0 – Added curb islands in the interior parking lot area per owner request.

3.2 Sheet C-2.1 – Overlapped area on this sheet shows items described on sheet C-2.0.

3.3 Sheet C-3.0 – Show new grading for interior parking lot islands. Added additional yard drain north of gravel drive.

3.4 Sheet C-3.1 – Overlapped area on this sheet shows items described on sheet C-3.0.

3.5 Sheet C-4.0 – Added one additional yard drain to north side of gravel drive. Added one 12" storm cleanout west of structure 101-C. Called for piping between structure 203 and the pond to be "RCP". Added callout number "08" for the Storm Cleanout. Added cleanout symbol to the utility legend.

3.6 Sheet C-4.1 – Added new yard drain and cleanout to storm profile "101A to 101D" and revised callouts. Revised profile callouts to read "RCP" from structures 200 to 203.

3.7 Sheet C-6.7 – Show new curbs islands in parking lot. Added additional inlet protection on new yard inlet.

3.8 Sheet C-6.8 – Overlapped area on this sheet shows items described on sheet C-6.7.

3.9 Sheet C-7.1 – Show additional yard drain and cleanout on drainage map.

3.10 Sheet C-7.3 – Added additional structures to storm sewer calculations.

ITEM NO. 4: GEOTECHNICAL REPORT:

4.1 Attached is the Geotechnical Report from KBJW (total 53 pages) dated May 13, 2026. Please note page 9 of 19 indicating the excavation requirements for pavement areas.

ITEM NO. 5: ELECTRICAL REVISIONS:

5.1 Drawing E0.1 – In 'Lighting Fixture Schedule' revise parking lot lighting fixture model specification; and revise poles from aluminum to steel. Refer to drawing issued with Addendum.

5.2 Drawing E1.0 – Revise "Underground Duct' Detail A to revise all underground conduit encasement from concrete to sand. Revise 'Typical Pole Base Detail – Raised' Detail B to allow option of precast bases. Refer to drawing issue with Addendum.

5.3 Drawing E2.0 – New drawing issued with this Addendum with Parking Lot Lighting Photometrics; for Permit use only.

LEVIN PORTER ARCHITECTS

ITEM NO. 6: CLARIFICATIONS:

6.1 Question: It looks like the parking lot stops just short of the trees. The plans call for existing vegetation to be removed in that area. Do you know if the trees need to come down or are they meant to remain?

Response: Any vegetation within the limits of clearing (shown on sheets C-1.0 and C-1.1 needs to be removed. If a tree trunk falls within the clearing limits, then the tree needs to be removed. Otherwise, it should be left undisturbed. The vegetative area you're referring to has to do with limits of grading, not necessarily pavement. See sheet C-3.0 to see grading east of the pavement edge.

6.2 Question: Had some questions regarding he area between existing asphalt parking lot and new where it looks like there may be a 6' wide sidewalk between the two parking lots. It shows barrier curb per detail 4 on sheet C2.0 so maybe this is just a landscape bed in between and not a sidewalk?

Response: It's just a grass strip in between the 2 parking lots.

6.3 Question: On the east side of new parking lot is there a barrier curb that needs to be there as well or are we to provide parking blocks along the east elevation?

Response: No parking blocks were proposed along the east edge of pavement since the school doesn't like that they get in the way of snow plowing.

6.4 Question: Are we to include any landscaping / Seeding, etc.?

Response: No additional landscaping is proposed. All non-paved disturbed areas shall be seeded in accordance with the seeding mixtures shown on sheet C-6.3. The only exception is the spoils that are being placed at the north side of the site. The spoils do not need to be seeded.

6.5 Inspections will be the responsibility of Upper Valley Career Center. The current plan is to have KBJW as the testing agent.

END OF ADDENDUM NO. 1

KOONTZ BRYANT
JOHNSON WILLIAMS

May 13, 2026

Upper Valley Career Center
8811 Career Drive
Piqua, Ohio 45424

Attn: Mr. Steve Verhoff
Director of Operations

Re: Geotechnical Engineering Investigation for the Proposed Parking Lot and Transportation Storage Building at the Upper Valley Career Center, Piqua, Ohio; KBJW Report No. 38776-001-01-0526

Dear Mr. Verhoff:

Koontz Bryant Johnson Williams, Inc. (KBJW, formerly CBC Engineers & Associates, Ltd.) is pleased to submit our report of the geotechnical engineering investigation for the above-referenced project. The purpose of this study was to provide an evaluation of the physical characteristics of the soil strata and net allowable bearing capacities at the locations tested. Also noted are other conditions that might affect the design and/or construction of the proposed project in Piqua, Ohio based on the results of the testing.

For your convenience, the samples collected that were not used to perform the laboratory tests will be kept in our office for a period of three months. If you have any questions, or if we can help you in any way, please call us.

Respectfully submitted,

Koontz Bryant Johnson Williams, Inc.

Deepa Nair, M.S., P.E.
Project Engineer

STATE OF OHIO
MITCHELL T. HARDERT
E-67613
REGISTERED
PROFESSIONAL ENGINEER

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ec: Client (verhoffs@uppervalleycc.org)
1-File

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SECTION I

TEXT

1.0 INTRODUCTION

Authorization to proceed with this investigation was given by Mr. Anthony Fraley of Upper Valley Career Center. Work was to proceed in accordance with KBJW Quotation No. 38776-001, dated March 25, 2026, and the terms and conditions of the contract attached thereto.

The proposed project is to be located at the Upper Valley Career Center in Piqua, Ohio. A Vicinity Map is presented in Figure 1 in Section III of this document.

2.0 WORK PERFORMED

2.1 FIELD WORK

Twelve (12) borings were made in the relative positions shown on the Boring Location Plan (Figure 2) in Section III. The boring logs and resulting data are also included in Section III. The borings were made with an ATV drilling rig using hollow-stem augers and employing standard penetration resistance methods (ASTM D-1586, which includes 140-pound hammer, 30-inch drop, and two-inch-O.D. split-spoon sampler) at maximum 2.5-foot intervals for 10 feet below the ground surface and at 5-foot intervals to the bottom of the borings. The disturbed split-spoon samples were visually classified, logged, sealed in moisture-proof containers, and taken to the KBJW laboratory for study. The depths where these "A"-type split-spoon samples were collected are noted on the boring logs.

2.2 LABORATORY WORK

Thirty-one (31) natural moisture content tests were performed on the "A" type split-spoon samples in accordance with ASTM D-4643. The results of these tests are tabulated in Table 1 as follows, and are also included in Section III of this report:

TABLE 1

RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
KBJW-1	1.0 - 2.5	14.3
KBJW-1	3.5 - 5.0	14.0

TABLE 1- Continued

RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
KBJW-2	1.0 - 2.5	9.0
KBJW-2	13.5 - 15.0	9.9
KBJW-3	1.0 - 2.5	19.0
KBJW-3	3.5 - 5.0	26.9
KBJW-3	13.5 - 15.0	9.8
KBJW-4	6.0 - 7.5	19.1
KBJW-5	1.0 - 2.5	14.9
KBJW-5	3.5 - 5.0	9.7
KBJW-5	6.0 - 7.5	10.1
KBJW-5	8.5 - 10.0	10.4
KBJW-5	13.5 - 15.0	10.5
KBJW-7	8.5 - 10.0	9.9
KBJW-8	1.0 - 2.5	15.1
KBJW-8	3.5 - 5.0	24.9
KBJW-8	6.0 - 7.5	23.7
KBJW-8	8.5 - 10.0	11.3
KBJW-9	3.5 - 5.0	18.9
KBJW-9	6.0 - 7.5	21.3
KBJW-9	8.5 - 10.0	9.4
KBJW-9	13.5 - 15.0	8.9
KBJW-10	8.5 - 10.0	11.0
KBJW-11	1.0 - 2.5	17.6
KBJW-11	3.5 - 5.0	19.0
KBJW-11	6.0 - 7.5	15.3
KBJW-11	8.5 - 10.0	11.1
KBJW-12	1.0 - 2.5	20.1
KBJW-12	3.5 - 5.0	21.9
KBJW-12	6.0 - 7.5	19.6
KBJW-12	8.5 - 10.0	10.4

3.0 SOIL CONDITIONS AND GROUNDWATER LEVELS

A total of twelve (12) borings were made at the proposed site. Borings KBJW-1 through KBJW-5 were made in the area of the proposed building and borings KBJW-6 through KBJW-12

were made at the proposed pavement areas. The project site was generally overlain in the performed borings by gravel and/or topsoil of approximate thickness of 2 to 10 inches. The existing topsoil/gravel was generally underlain in the performed borings by undocumented existing fill (as shown in boring logs) consisting of silty clay soils with sand and gravel and rock fragments extending to an approximate depth of 5.0 to 8.0 feet below the existing ground surface. This existing fill was generally underlain by native soft to stiff silty clay soils and medium dense silty sand and gravel extending to the bottom of the borings with SPT blow counts varying from 3 to 29. The approximate depths of existing fill below the existing ground surface in the borings are as shown in Table 2 below.

TABLE 2

APPROXIMATE DEPTH OF EXISTING FILL BELOW EXISTING SITE GRADE

BORING NO.	APPROXIMATE DEPTH OF EXISTING FILL (FT)
KBJW-1	5.0
KBJW-2	5.0
KBJW-3	5.0
KBJW-4	5.0
KBJW-6	5.0
KBJW-7	5.0
KBJW-8	5.0
KBJW-9	8.0
KBJW-10	8.0

Groundwater observations were made during the drilling operations (by noting the depth of water on the drilling tools) and in the open boreholes following withdrawal of the drilling augers. No free groundwater was encountered at the time of drilling activities in the borings. However, it should be noted that short-term water level readings are not necessarily a reliable indication of the groundwater level and that significant fluctuations may occur due to variations in rainfall and other factors. For specific questions on the soil conditions, please refer to the individual boring logs in Section III.

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class D" per the Ohio Building Code. A "Site Class D" suggests that the

soil materials in the top 100-feet are stiff with standard penetration test "N-values" between 15 and 50.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 PROJECT DESCRIPTION

Upper Valley Career Center is currently developing information regarding a proposed building and pavement project at the Upper Valley Career Center in Piqua, Ohio. No other details of the proposed project regarding the spatial geometry, and structural loads of the proposed facilities have been provided to us at this time. The following recommendations are based on the assumption that no unusual loading conditions or special settlement restrictions apply to the proposed project. Consequently, if the above information is incorrect or if changes are made, KBJW should be notified so that the new data can be reviewed.

4.2 BUILDING AREA

The existing undocumented fill and native softer soils encountered in the borings in the proposed building area are not suitable for foundation support in their in-situ conditions due to their potential for excessive total and/or differential settlement. Therefore, it is recommended that the existing fill/softer native soils encountered below the foundations for the proposed structure be undercut to native stiffer silty clay or silty sand and gravel encountered at the approximate depths shown in Table 4 below and the excavation backfilled to the bottom of the foundations using engineered fill compacted to at least 95% of the maximum dry unit weight with a moisture content within 2% of the optimum moisture content as determined by the modified Proctor test. In order to ensure the presence of suitable bearing soil at the bottom of the foundation excavations, the bottom of the excavations should be observed and tested by a representative of this office. All exposed subgrade at the bottom of the foundation excavations should be compacted to at least 95% of the maximum dry unit weight with a moisture content within 2% of the optimum moisture content as determined by modified Proctor test before engineered fill/footing placement.

Table 4 below shows the approximate depths of availability of the recommended bearing soils below the existing site grade encountered at each boring location.

TABLE 4

APPROXIMATE DEPTHS OF AVAILABILITY OF RECOMMENDED BEARING SOILS
(AS MEASURED BENEATH THE EXISTING SITE GRADE)

BORING NO.	APPROXIMATE DEPTHS OF AVAILABILITY OF RECOMMENDED BEARING SOILS (FT)
KBJW-1	5.0
KBJW-2	5.0
KBJW-3	5.0
KBJW-4	8.0
KBJW-5	1.0

Engineered fill placed at the project site should be compacted to at least 95% of the maximum dry unit weight with moisture content within 2% of the optimum moisture content as determined by the modified Proctor test. Excavated material that is free of organic or objectionable materials can be reused as fill. In general, any non-organic naturally-occurring soils can be used for structural fill. Cohesive soils with a Liquid Limit (LL) greater than 50, a Plasticity Index (PI) of greater than 25, or an organic content greater than 7 percent as determined by Loss-on-Ignition (ASTM D2974) should not be used for engineered fill. The fill should contain no fragments whose greatest dimension is larger than half the thickness of the lift being placed. The majority of the existing fill and upper native soils at the project site appear to be suitable for reuse as engineered fill but will require moisture adjustment and segregation of deleterious content. Once the building pad is prepared according to these recommendations, spread-footing foundations can be placed on the new engineered fill or native stiffer silty clay or silty sand and gravel. The footing elements bearing on native stiffer silty clay or silty sand and gravel, or on new engineered fill placed over these soils can be designed for an allowable bearing capacity of 1,500 psf. This net allowable bearing pressure can be increased by a factor of one-third when designing for transient loadings such as wind or earthquake ground motions. All foundations should bear at a depth of at least 32 inches below the final grade for frost heave considerations. Square and continuous footings for the structure should be designed at least 2.5 feet and 1.5 feet wide, respectively, even if the anticipated structure loadings would allow for smaller foundation element sizes. These recommendations are provided based on the assumption that native stiffer silty clay and medium dense silty sand and gravel is available at the bottom of the footing excavations. As

mentioned earlier the undocumented fill and softer native soils encountered in the borings are not suitable for foundation support, and KBJW should be retained to confirm the acceptability of the native stiffer silty clay and silty sand and gravel bearing soils and verify the recommended bearing capacity once the excavations are completed before the engineered fill is placed and footings are poured.

All soil bearing foundations settle as the result of the externally applied loads. Settlement of the proposed foundations should be anticipated, although such movements are estimated (based upon our experience in similar soils) to be well within the tolerable limits for the structure (i.e., the total settlement will be less than about 1 inch, while differential settlement will be limited to about one half of this value).

Backfill for utility trenches, foundation excavations, etc., within structures should be placed in successive, horizontal layers. Each layer should be compacted to 95% of the maximum modified Proctor dry unit weight within 2% of the optimum moisture content before the next layer is added. In no instance should puddling or jetting the backfill material be allowed as a compaction method. Any silty or clayey soils at foundation depth will soften and the bearing capacity will be reduced if water ponds in the excavation. Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in condition such as from disturbance, rain and freezing. Surface run-off water should be drained away from the excavation and not allowed to pond. If possible, all foundation concrete should be placed the same day the excavation is made. If this is not practical, the foundation excavations should be adequately protected. Also, for this reason, proper drainage should be maintained after construction.

All foundations should be located so that the least lateral clear distance between any two foundations will be at least equal to the difference in their bearing elevations (see Figure 3 in Section III of this document). If this distance cannot be maintained, the lower foundation should be designed to account for the load imparted by the upper foundation. If this condition occurs adjacent to a below-grade wall, the wall should be designed for the additional lateral earth pressure due to the upper foundation.

4.2.1 LATERAL AND UPLIFT FORCES ON SHALLOW FOOTINGS

Lateral forces on the foundation elements can be resisted by passive lateral earth pressures against the opposite vertical face of the foundation and by friction along the soil/foundation interface. An allowable resisting passive earth pressure of 200 lbs./sq. ft., and coefficient of friction of 0.35, respectively, can be used for design purposes. The passive resistance should only be used for that portion of the foundation located at a depth greater than 2.5 feet beneath the final grade (Please see Figure 4 in Section III of this text). A factor of safety of 1.5 relative to the lateral capacity should be used in design. It should be noted that lateral movements, on the order of up to 0.5 inch, may occur to mobilize this lateral resisting force.

It is further recommended that only the weight of the footing and the total weight of the soil above and within the periphery of the footing be used for resisting uplift forces. A total soil unit weight of 120 lbs./cu. ft. should be used for these computations for backfill material compacted as recommended in Section 4.2 (Please see Figure 5 in Section III of this document). It is also recommended that a factor of safety of at least 1.5 be used in calculating uplift resistance due to the weight of the footing and the backfill soil.

4.2.2 LATERAL EARTH PRESSURES ON BELOW GRADE WALLS

The magnitude of lateral earth pressure against subsurface walls is dependent on the method of backfill placement, the type of backfill soil, drainage provisions and whether or not the wall is permitted to yield during and/or after placement of the backfill. When a wall is held rigidly against horizontal movement, the lateral pressure against the wall is greater than the "active" earth pressure that is typically used in the design of free-standing retaining walls. Therefore, rigid walls should be designed for higher, "at-rest" pressures (using an at-rest lateral earth pressure coefficient, K_o), while yielding walls can be designed for active pressures (using an active lateral earth pressure coefficient, K_a).

For use in these computations, a total soil unit weight of 130 lbs/cu. ft. should be used. For below-grade walls, a coefficient of earth pressure at-rest (K_o) of 0.5 and a coefficient of "active" earth pressure of 0.33 are recommended, provided a well-graded granular material is used for backfill (Please see Figure 6 in Section III of this document).

Also, a passive earth pressure coefficient of 2.75 should be used in design. The granular backfill material should extend upward and outward from the base of the wall on a slope not steeper than about 1 (horizontal) to 1 (vertical). This method of computation presumes that there will be no hydrostatic pressure due to water build-up.

It is recommended that the static weight per axle of equipment utilized for the compaction of the backfill materials not exceed 2 tons per axle for non-vibratory equipment and 1 ton per axle for vibratory equipment. All heavy equipment, including compaction equipment heavier than recommended above, should not be allowed closer to the wall (horizontal distance) than the vertical distance from the backfill surface to the bottom of the wall. If it is desired to use heavier compaction equipment adjacent to the below grade wall, it is recommended that this office be contacted to determine the resulting earth pressures.

4.3 SLABS-ON-GRADE

All deleterious existing fill and native soils below the proposed floor slab should be excavated until all such fill and native softer soils are completely removed (approximate depths in Table 4) and the excavation backfilled to the bottom of the floor slab with engineered fill compacted to at least 95% of the maximum dry unit weight with moisture content within 2% of the optimum moisture content as determined by the modified Proctor test. Slabs-on-grade can then be supported on new compacted structural fill or native stiff soils.

It is recommended that all slabs-on-grade be "floating", that is, fully ground supported and not structurally connected to walls or foundations. This is to minimize the possibility of cracking and displacement of the slabs-on-grade because of differential movements between the slab and the foundation. Although the movements are estimated to be within the tolerable limits for structural safety, such movements could be detrimental to the slabs if they were rigidly connected to the foundations.

It is furthermore recommended that the slabs-on-grade be supported on a 4 to 6-inch layer of relatively clean granular material such as sand and gravel or crushed stone. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Proper drainage must be incorporated into this granular layer to preclude future wet areas in the finished slab-on-grade. Provided that a minimum of 4 inches of granular material is placed

below the slab-on-grade (and the existing soil is prepared as recommended), a modulus of subgrade reaction (k_{30}) of 100 lbs./cu. in. can be used for design of the slabs.

4.4 FOUNDATION EXCAVATIONS

Each foundation excavation should be inspected to insure that all loose, soft or otherwise undesirable material is removed so that the foundation will bear on satisfactory material. If pockets of soft, loose or otherwise unsuitable material are encountered in the footing excavations and it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed. The undercut excavation beneath each footing should extend to suitable bearing soils and the dimensions of the excavation base should be determined by imaginary planes extending outward and down on a 1 (vertical) to 1 (horizontal) slope from the base perimeter of the footing as illustrated in Figure 7 in Section III. The entire excavation should then be refilled with a well-compacted engineered fill, or lean concrete (please note that the width of the lean concrete zone should be at least 1-foot wider than the width of the overlying footing element on all sides). Special care should be exercised to remove any sloughed, loose or soft materials near the base of the excavation slopes. Proper shoring techniques must be adopted during the excavation of the proposed footings below the bearing elevations of any nearby existing footings and/or utilities. All Federal, State, and Local regulations should be strictly adhered to relative to excavation side-slope geometry and shoring requirements.

4.5 PAVEMENT AREA SUBGRADE

Any topsoil and/or existing undocumented fill within proposed pavement areas should be excavated to a minimum depth of 3.0 feet below the bottom of the pavement or until all topsoil, existing fill and other soft deleterious materials are completely removed, whichever is shallower, and the excavation backfilled to the bottom of the pavement with compacted engineered fill. All exposed soil at the bottom of any excavations should be compacted to 95% of the maximum modified Proctor dry unit weight within 2% of the optimum moisture content prior to the placement of engineered fill. Proposed pavement areas can then be supported on new compacted structural fill or stiff native soil.

Several items should be carefully considered in the selection of a final design cross-section for the pavement. These factors are:

- A minimum of 2.5 inches of bituminous concrete should be provided if the pavement is placed directly on the ground surface. Experience has shown that even small areas where the pavement thickness is less than 2.5 inches, do not perform well over time.
- A tack coat should be used between layers of bituminous concrete.
- The paved area should have a minimum slope of 1.5 percent to provide adequate drainage. A means of draining the base material and/or surface of the pavement by the catch basins or draining through the subbase material must be provided. No undrained granular fill area should be allowed to exist in the pavement cross-section. This includes utility trenches, as well as the base course of the pavement. Prior to paving, the entire area should be thoroughly compacted, or recompacted to a dry unit weight of at least 95% of the maximum modified Proctor dry unit weight at no more than three percent over optimum moisture.

The design of flexible pavement sections at the project site is dependent on several major design considerations such as the support capability of the subgrade soil underneath including its drainage characteristics, and anticipated truck traffic in the pavement sections, and the type of asphalt and aggregate proposed to be utilized in the pavement sections.

Based on the results of this investigation and our experience with similar soils, a California Bearing Ratio (CBR) value of 3 has been estimated for use in pavement design for the silty clay/sand and gravel subgrade soils encountered at this site. The subgrade soils should be prepared and inspected as described in Section II of this report. CBR values are highly dependent on the moisture content of the subgrade soil. The moisture content of the subgrade can fluctuate/vary depending on climatic conditions such as precipitation, rate of evaporation, proper drainage, etc., and elevated moisture contents can significantly reduce the CBR value of the subgrade soils. Therefore, it is recommended that proper drainage (surface and sub-surface) be provided in all pavement areas so that water is not able to build-up in the granular base or the subgrade which could potentially result in subgrade softening and pavement distress.

Anticipated truck traffic including the estimated volume of future truck traffic (expressed in terms of ESAL value) is another design consideration in determining the

thickness of the pavement section. No detailed information regarding the anticipated automobile/truck traffic and type of pavement proposed at the project location is available at this time. Heavy-duty areas (truck areas) generally require thicker pavement sections compared to light-duty areas (non-truck areas). Therefore, in areas where truck traffic cannot be controlled (i.e., driveways), it is suggested that the thicker pavement section be utilized.

Details regarding site grading in pavement areas are not available at this time; however, depending upon grading requirements and seasonal conditions, it is possible that the pavement subgrade in some areas will be wet or spongy at the time of construction. If at the time of construction the subgrade is found to be excessively wet and spongy, it is recommended that the subgrade soils be stabilized by discing, aerating and recompacting. However, if it is not possible to suitably dry the subgrade soils they should be chemically stabilized or a biaxial/triaxial geogrid with additional crushed stone placed over the subgrade and/or perforated pipe subdrains should be added to the pavement system. In any case, the subgrade surface should be uniformly sloped to facilitate drainage through the granular base and to avoid any ponding of water beneath the surface. Any storm water catch basins or other drainage features in pavement areas should be designed to allow water to drain into the drainage features.

5.0 SITE PREPARATION

All areas that will support foundations, slabs-on-grade and traffic areas should be properly prepared. After rough grade has been established in cut areas and prior to placement of fill in all fill areas, the exposed subgrade should be carefully inspected by probing and testing as needed. Any topsoil or other organic material still in place, frozen, wet, soft or loose soil, and other undesirable existing fill should be removed and replaced with engineered fill as recommended in the previous sections. Aeration of the near-surface in-situ soils should be anticipated prior to their placement as engineered fill (or chemical stabilization can also be used). The exposed subgrade should furthermore be inspected by proofrolling with a loaded tandem axle truck or other suitable equipment to check for pockets of soft material hidden beneath a thin crust of better soil. Any unsuitable materials thus exposed should be removed and replaced with well-compacted, engineered fill as outlined in the specifications of this document. However, it may also become necessary (due to the

presence of soft exposed soil materials) to employ chemical stabilization or to locally incorporate 2" aggregate into the subgrade to increase its stiffness.

In general, care should be exercised during the grading operations at the site. Due to the nature of the near surface soils, the traffic of heavy equipment, including heavy compaction equipment, may create pumping and general deterioration of the shallower soils, especially if excess surface water is present. If this occurs, it may be necessary to utilize a biaxial/triaxial geogrid, chemical stabilization, or other methodology (such as the incorporation of 2" aggregate into the subgrade) to stabilize the disturbed subgrade. The grading, therefore, should be done during a dry season, if at all possible.

In addition, it must be emphasized that once engineered fill is properly placed on the project site, that these materials can also degrade significantly due to the effects of heavy construction traffic and wet weather. This degradation may in some cases require the excavation and replacement of the engineered fill with aerated, chemical-stabilized fill materials; hence, caution should be exercised to avoid such degradation of these soil materials.

It should be noted that when vibratory rollers are utilized on certain soils types (such as fine grain sands or silts), that shear induced pore water pressures may be developed within these materials which will result in significant "pumping" of these materials (even though these soils may be stiff and pass moisture density tests on engineered fills). Therefore (in these types of soils), it is imperative that the vibrator not be utilized and that these soils be statically rolled in order to preclude the development of such shear induced pore water pressures. These shear induced pore water pressures dissipate over a number of days (depending on the permeability of the soil materials); however, in the short term, significant "pumping" of these materials can be witnessed in the field.

6.0 SLOPE CONSIDERATIONS

A detailed slope stability analysis is beyond the scope of this study. However, it is, recommended that fill slopes less than 10 feet in height be designed for slopes not steeper than 2.5 (horizontal) to 1 (vertical). For any fill greater than 10 feet in height, it is recommended that slopes be not steeper than 3 (horizontal) to 1 (vertical).

In general, temporary cut slopes of 2 (horizontal) to 1 (vertical) should remain stable during a reasonable construction period provided they are not higher than about 10 feet and are not subjected to excessive vibration from construction equipment and are protected from surface erosion. The need for temporary bracing of utility trenches should be anticipated. In general, any permanent cut slopes should be no steeper than about 3 (horizontal) to 1 (vertical).

7.0 CONSTRUCTION DEWATERING

At the time of our investigation, the free groundwater level was not encountered in the borings. However, significant quantities of groundwater should be anticipated in the proposed foundation excavations due to the presence of water-bearing sand and gravel zones. In order to maintain proper bearing support for the foundations, the entire foundation excavation area must be dewatered (groundwater level lowered) to at least 2 feet below the deepest footing bearing elevation prior to the placement of the engineered fill and foundations, and the dewatering of the area maintained until the foundations are fully constructed. Sump pumping is generally a suitable method of dewatering in such areas where the required depth of groundwater to be lowered is generally less. Extra care must be exercised when pumping from sumps that extend into silts and other granular soils as observed at this site, as a general deterioration of the bearing soils and a localized "quick" condition could result. Extra care must also be exercised during pumping to ensure that the loss of fines does not occur and filter fabric should be used as necessary to maintain a soil-tight system. It is imperative that the dewatering of the foundations and subgrade soils be continually maintained until the foundations are fully constructed, and they are providing confinement of the underlying soils. If the groundwater level is allowed to rise to the surface of the excavation areas without the surface being confined, detrimental softening and degradation of the foundation and subgrade soils should be expected that will require remedial measures in order to provide adequate support for the structure. The evaluation and design of any required temporary or permanent dewatering measures to facilitate proper construction and proper in-service conditions is the responsibility of others than KBJW.

8.0 SOIL SWELLING POTENTIAL

Based upon the laboratory tests performed for this study and the mineralogy of typical soils from the general vicinity of the project site, no significant soil swelling is anticipated.

To our knowledge, there are no instances of problems associated with soil swelling in the project vicinity.

9.0 LIQUEFACTION

When certain soils (generally only granular soils) below the groundwater table are subjected to dynamic loads, such as those produced by earthquakes, a sudden increase in pore water pressure occurs as the result of shearing of the soil particles passed one another. In extreme cases, when these shear induced pore water pressures exceed the strength of the soil, the soil strength can reduce to zero thereby resulting in a phenomenon known as "liquefaction." Conditions at this site have been examined to determine the likelihood for liquefaction of the natural soils during earthquake ground motions.

Soil type, relative density, initial confining pressure (i.e., the depth of the potentially liquefiable soil below the ground surface) and the magnitude of potential ground motions are the most important factors in determining the liquefaction potential of a soil mass. It is generally agreed that saturated, relatively loose (with blow counts or "N" values typically less than about 13) in the upper 50 feet or so are most susceptible to liquefaction.

Clayey soils are generally considered to be non-vulnerable to liquefaction. It is, therefore, concluded that liquefaction (or any significant loss of strength) of the soils underlying the project site during earthquake ground motions is extremely unlikely. To our knowledge, there are no recorded cases of liquefaction of subsurface materials similar to those at this project site. Therefore, no special design measures relative to soil liquefaction appear to be warranted.

10.0 BURIED UTILITY PIPES

Excavations for buried utility pipelines should follow the guidelines set forth previously in this report. Depending on the pipeline material, a minimum thickness of at least 0.5 foot of select fine-grained granular bedding material should be used beneath all below-grade pipes, with a minimum cover thickness of at least 3 feet to afford an "arching" effect and reduce stresses on the pipe. The cover thickness may be reduced if the external loading condition on the pipe is relatively light or if the pipe is designed to withstand the external loading condition. It is not recommended that "pea-gravel" or other "open-work" aggregates

be used for trench backfill since these materials are nearly impossible to compact and have a tendency to pond water within their interstices.

11.0 DRAINAGE

Adequate drainage should be provided at the site to minimize any increase in moisture content of the foundation soils. The exterior grade (including all pavement areas) should be sloped away from all facility structures to prevent ponding of water.

12.0 CLOSURE

12.1 BASIS OF RECOMMENDATIONS

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. Data used during this exploration included, but were not necessarily limited to:

- Twelve (12) exploratory borings performed during this study,
- observations of the project site by our staff,
- results of the laboratory soil tests,
- site information furnished by the client,
- supportive interaction with the client,
- published soil or geologic data of this area.

In the event that changes in the project characteristics are planned, or if additional information or differences from the conditions anticipated in this report become apparent, KBJW, should be notified so that the conclusions and recommendations contained in this report can be reviewed and, if necessary, modified or verified in writing.

12.2 LIMITATIONS OF STUDY/RECOMMENDED ADDITIONAL SERVICES

The subsurface conditions discussed in this report and those shown on the boring logs represent an estimate of the subsurface conditions based on interpretation of the boring data using normally accepted geotechnical engineering judgments. Although individual test borings are representative of the subsurface conditions at the boring locations on the dates

shown, they are not necessarily indicative of subsurface conditions at other locations or at other times.

Regardless of the thoroughness of a subsurface exploration, there is the possibility that conditions between borings will differ from those at the boring locations, that conditions are not as anticipated by designers, or that the construction process has altered the soil conditions. As variations in the soil profile are encountered, additional subsurface sampling and testing may be necessary to provide data required to re-evaluate the recommendations of this report. Consequently, after submission of this report it is recommended that KBJW be authorized to perform additional services to work with the designer(s) to minimize errors and omissions regarding the interpretation and implementation of this report.

Prior to construction, we recommend that KBJW:

- work with the designers to implement the recommended geotechnical design parameters into plans and specifications,
- consult with the design team regarding interpretation of this report,
- establish criteria for the construction observation and testing for the soil conditions encountered at this site; and
- review final plans and specifications pertaining to geotechnical aspects of design.

During construction, we recommend that KBJW:

- observe the construction, particularly the site preparation, fill placement, and foundation excavation or installation,
- perform in-place density testing of all compacted fill,
- perform materials testing of soil and other materials as required; and
- consult with the design team to make design changes in the event that differing subsurface conditions are encountered.

If KBJW is not retained for these services, we shall assume no responsibility for construction compliance with the design concepts, specifications or recommendations.

12.3 WARRANTY

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. No other warranty, express or implied, is made.

While the services of KBJW are a valuable and integral part of the design and construction teams, we do not warrant, guarantee, or insure the quality or completeness of services provided by other members of those teams, the quality, completeness, or satisfactory performance of construction plans and specifications which we have not prepared, nor the ultimate performance of building site materials.

12.3.1 SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings, although test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report, and is presented on the Boring Location Plan or on the boring log. The location and elevation of the boring should be considered accurate only to the degree inherent with the method used.

The boring log includes sampling information, description of the materials recovered, approximate depth of boundaries between soil and rock strata and groundwater data. The boring log represents conditions specifically at the location and time the boring was made. The boundaries between different soil strata are indicated at specific depths; however, these depths are in fact approximate and are somewhat dependent upon the frequency of sampling (The transition between soil strata is often gradual). Free groundwater level readings are made at the times and under conditions stated on the boring logs (Groundwater levels change with time and season). The borehole does not always remain open sufficiently long enough for the measured water level to coincide with the groundwater table.

12.3.2 LABORATORY AND FIELD TESTS

Laboratory and field tests are performed in accordance with specific ASTM standards unless otherwise indicated. All determinations included in a given ASTM standard are not always required and performed. Each test report indicates the measurements and determinations actually made.

12.3.3 ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the engineering design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it is not intended to determine the cost of construction or to stand alone as a construction specification.

Our engineering report recommendations are based primarily on data from test borings made at the locations shown on a boring location plan included in this report. Soil variations may exist between borings and these variations may not become evident until construction. If significant variations are then noted, the geotechnical engineer should be contacted so that field conditions can be examined and recommendations revised if necessary.

The geotechnical engineering report states our understanding as to the location, dimensions and structural features proposed for the site. Any significant changes in the nature, design, or location of the site improvements MUST be communicated to the geotechnical engineer such that the geotechnical analysis, conclusions, and recommendations can be appropriately adjusted. The geotechnical engineer should be given the opportunity to review all drawings that have been prepared based on their recommendations.

12.3.4 CONSTRUCTION MONITORING

Construction monitoring is a vital element of complete geotechnical services. The field engineer/inspector is the owner's "representative" observing the work of the contractor, performing tests as required in the specifications, and reporting data developed from such tests and observations. The field engineer or inspector does not direct the contractor's construction means, methods, operations or personnel. The field inspector/engineer does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The field inspector/engineer is responsible for his own safety but has no responsibility for the safety of other personnel at the site. The field inspector/engineer is an important member of a team whose responsibility is to watch and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications.

12.3.5 GENERAL

The scope of our services did not include an environmental assessment for the presence or absence of hazardous or toxic materials in the soil, surface water, groundwater or air, on, within or beyond the site studied. Any statements in the report or on the boring logs regarding odors, staining of soils or other unusual items or conditions observed are strictly for the information of our client.

To evaluate the site for possible environmental liabilities, we recommend an environmental assessment, consisting of a detailed site reconnaissance, a record review, and report of findings. Additional subsurface drilling and samplings, including groundwater sampling, may be required. KBJW can provide this service and would be pleased to provide a cost proposal to perform such a study, if requested.

This report has been prepared for the exclusive use of Upper Valley Career Center for specific application to the proposed project (see Figure 1 in Section III of this report). Specific design and construction recommendations have been provided in the various sections of the report. The report shall, therefore, be used in its entirety. This report is not a bidding document and shall not be used for that purpose. Anyone reviewing this report must interpret and draw their own conclusions regarding specific construction techniques and methods chosen. KBJW is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploratory and laboratory test data presented in this report.

SECTION II

SPECIFICATIONS

CLEARING AND GRADING SPECIFICATIONS

1.0 GENERAL CONDITIONS

The Contractor shall furnish all labor, materials, and equipment, and perform all work and services necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction and grading as shown on the plans and as described therein.

This work shall consist of all clearing and grading, removal of existing structures unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications.

This work is to be accomplished under the constant and continuous supervision of the Owner or his designated representative.

In these specifications the terms "approved" and "as directed" shall refer to directions to the Contractor from the Owner or his designated representative.

2.0 SUBSURFACE CONDITIONS

Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site; and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work. Borings and/or soil investigations shall have been made. Results of these borings and studies will be made available by the Owner to the Contractor upon his request, but the Owner is not responsible for any interpretations or conclusions with respect thereto made by the Contractor on the basis of such information, and the Owner further has no responsibility for the accuracy of the borings and the soil investigations.

If conditions other than those indicated are discovered by the Contractor, the Owner should be notified immediately. The material which the Contractor believes to be a changed condition should not be disturbed so that the Owner can investigate the condition.

3.0 SITE PREPARATION

Within the specified areas, all trees, brush, stumps, logs, tree roots, and structures scheduled for demolition shall be removed and disposed of.

All cut and fill areas shall be properly stripped. Topsoil will be removed to its full depth and stockpiled for use in finish grading. Any rubbish, organic and other objectionable soils, and other deleterious material shall be disposed of off the site, or as directed by the Owner or his designated representative if on site disposal is provided. In no case shall such objectionable material be allowed in or under the fill unless specifically authorized in writing.

Prior to the addition of fill, the original ground shall be compacted to job specifications as outlined below. Special notice shall be given to the proposed fill area at this time. If wet spots, spongy conditions, or groundwater seepage is found, corrective measures must be taken before the placement of fill.

4.0 FORMATION OF FILL AREAS

Fills shall be formed of satisfactory materials placed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross-section. The depth of lift may be increased if the Contractor can demonstrate the ability to compact a larger lift. If compaction is accomplished using hand-tamping equipment, lifts will be limited to 4-inch loose lifts. Engineered fill placed shall be compacted to at least 95% of the maximum dry unit weight with a moisture content within 2% of the optimum moisture content as determined by the modified Proctor test.

All material entering the fill shall be free of organic matter such as leaves, grass, roots, and other objectionable material.

The operations on earth work shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing weather, or other unsatisfactory conditions. The Contractor shall keep the work areas graded to provide the drainage at all times.

The fill material shall be of the proper moisture content before compaction efforts are started. Wetting or drying of the material and manipulation to secure a uniform moisture content throughout the layer shall be required. Should the material be too wet to permit proper compaction or rolling, all work thus affected shall be delayed until the material has dried to the required moisture content. The moisture content of the fill material should be no more than two (2) percentage points higher or lower than optimum unless otherwise authorized. Sprinkling shall be done with equipment that will satisfactorily distribute the water over the disced area. Any areas inaccessible to a roller shall be consolidated and compacted by mechanical tampers. The equipment shall be operated in such a manner that hardpan, cemented gravel, clay or other chunky soil material will be broken up into small particles and become incorporated with the other material in the layer. The fill shall contain no fragments whose greatest dimension is larger than 1/2 of the thickness of the lift being placed.

In the construction of filled areas, starting layers shall be placed in the deepest portion of the fill, and as placement progresses, additional layers shall be constructed in horizontal planes. Original slopes shall be continuously, vertically benched to provide horizontal fill planes. The size of the benches shall be formed so that the base of the bench is horizontal and the back of the bench is vertical. As many benches as are necessary to bring the site to final grade shall be constructed. Filling operations shall begin on the lowest bench, with the fill being placed in horizontal eight (8) inch thick loose lifts unless otherwise authorized. The filling shall progress in this manner until the entire first bench has been filled, before any fill is placed on the succeeding benches. Proper drainage shall be maintained at all times during benching and filling of the benches, to insure that all water is drained away from the fill area.

Frozen material shall not be placed in the fill nor shall the fill be placed upon frozen material.

The Contractor shall be responsible for the stability of all fills made under the contract, and shall replace any portion, which in the opinion of the Owner or his designated representative, has become displaced due to carelessness or negligence on the part of the Contractor. Fill damaged by inclement weather shall be repaired at the Contractor's expense.

5.0 SLOPE RATIO AND STORM WATER RUN-OFF

Slopes shall not be greater than 3 (horizontal) to 1 (vertical) in both cut and fill, or as illustrated on the construction drawings. Excavations shall be constructed in accordance with all Federal, State and local codes relative to slope geometry.

6.0 GRADING

The Contractor shall furnish, operate, and maintain such equipment as is necessary to construct uniform layers, and control smoothness of grade for maximum compaction and drainage.

7.0 COMPACTING

The compaction equipment shall be approved equipment of such design, weight, and quantity to obtain the required density in accordance with these specifications.

8.0 TESTING AND INSPECTION SERVICES

Testing and inspection services will be provided by the Owner.

SECTION III

BORING LOGS, LAB TESTING RESULTS, & FIGURES

BORING LOG TERMINOLOGY

STRATUM DEPTH

Distance in feet and/or inches below ground surface.

STRATUM ELEVATION

Elevation in feet below ground surface elevation.

DESCRIPTION OF MATERIALS

Major types of soil material existing at boring location. Soil classification based on one of the following systems: Unified Soil Classification System, Ohio State Highway Classification System, Highway Research Board Classification System, Federal Aviation Authority Classification System, Visual Classification.

SAMPLE NO.

Sample numbers are designated consecutively, increasing with depth for each boring.

SAMPLE TYPE

"A" Split spoon, 2" O.D., 1-3/8" I.D., 18" in length.

"B" One of the following:

- Power Auger Sample
- Piston Sample
- Diamond Bit NX: BX: AX:
- Housel Sample
- Wash Sample
- Denison Sample

"C" Shelby Tube 3" O.D. except where noted.

SAMPLE DEPTH

Depth below top of ground at which appropriate sample was taken.

BLOWS PER 6" ON SAMPLER

The number of blows required to drive a 2" O.D., 1-3/8" I.D., split spoon sampler, using a 140 pound hammer with a 30 inch free fall, is recorded for 6" drive increments. (Example: 3/8/9)

"N" BLOWS/FT.

Standard penetration resistance. This value is based on the total number of blows required for the last 12" of penetration. (Example: 3/8/9 $\therefore$ N = 8 + 9 = 17)

WATER OBSERVATIONS

Depth of water recorded in test boring is measured from top of ground to top of water level. Initial depth indicates water level during boring, completion depth indicates water level immediately after boring, and depth of "X" number hours indicates water level after letting water rise or fall over a time period. Water observations in pervious soil are considered reliable ground water levels for that date. Water observations in impervious soils can not be considered accurate ground water measurements for that date unless records are made over several days' time. Factors such as weather, soil porosity, etc., will cause the ground water level to fluctuate for both pervious and impervious soils.

SOIL DESCRIPTION

COLOR

When the color of the soil is uniform throughout, the color recorded will be such as brown, gray, black and may be modified by adjectives such as light and dark. If the soil's predominant color is shaded by a secondary color, the secondary color precedes the primary color, such as: gray-brown, yellow-brown. If two major and distinct colors are swirled throughout the soil, the colors will be modified by the term mottled, such as: mottled brown and gray.

PARTICLE SIZE	VISUAL	SOIL COMPONENTS	
Boulders	Larger than 8"	**Major Component**	**Minor Component Term**
Cobbles	8" to 3"	Gravel	Trace 1-10%
Gravel—Coarse	3" to ¾"	Sand	Some 11-35%
Fine	2 mm. To ¾"	Silt	And 36-50%
Sand —Coarse	2 mm.-0.6 mm. (Pencil lead size)	Clay	
—Medium	0.6 mm.-0.2 mm.	**Moisture Content**	
	(Table sugar and salt size)	**Term**	**Relative Moisture**
—Fine	0.2 mm.-0.06 mm.	Dry	Powdery
	(Powdered sugar and human hair size)	Damp	Moisture content below plastic limit
Silt	0.06 mm.-0.002 mm.	Moist	Moisture content
Clay	0.002 and smaller (Particle size of both Silt and Clay not visible		above plastic limit but below liquid limit
	to naked eye)	Wet	Moisture content above liquid limit

Condition of Soil Relative to Compactness Granular Material		Condition of Soil Relative to Consistency Cohesive Material	
Very Loose	5 blows/ft. or less	Very Soft	3 blows/ft. or less
Loose	6 to 10 blows/ft.	Soft	4 to 5 blows/ft.
Medium Dense	11 to 30 blows/ft.	Medium Stiff	6 to 10 blows/ft.
Dense	31 to 50 blows/ft.	Stiff	11 to 15 blows/ft.
Very Dense	51 blows/ft. or more	Very Stiff	16 to 30 blows/ft.
		Hard	31 blows/ft. or more

STANDARD PENETRATION RESISTANCE (ASTM D1586)

The purpose of this test is to determine the relative consistency of the soils in a boring, or from boring to boring over the site. This method consists of making a hole in the ground and driving a 2 inch O.D. split spoon sampler into the soil with a 140 pound hammer dropped from a height of 30 inches. The sampler is driven 18 inches and the number of blows recorded for each 6 inches of penetration. Values of standard penetration (N) are determined in blows per foot, summarizing the blows required for the last two 6 inch increments of penetration. (Example: 2-6-8; N = 14)

THIN-WALLED SAMPLER (ASTM D1587)

The purpose of the thin-walled sampler is to recover a relatively undisturbed soil sample for laboratory tests. The sampler is a thin-walled seamless tube with a 3 inch outside diameter, which is hydraulically pressed into the ground, at a constant rate. The ends are then sealed to prevent moisture loss, and the tube is returned to the laboratory for tests.

UNCONFINED COMPRESSION OR TRIAXIAL TESTS (ASTM D2166)

The unconfined compression test and the triaxial tests are performed to determine the shearing strength of the soil, to use in establishing its safe bearing capacity. In order to perform the unconfined compression tests, it is necessary that the soil exhibit sufficient cohesion to stand in an unsupported cylinder. These tests are normally performed on samples which are 6.0 inches in height and 2.85 inches in diameter. In the triaxial test, various lateral stresses can be applied to more closely simulate the actual field conditions. There are several different types of triaxial tests. These are, however, normally performed on constant strain apparatus with a deformation rate of 0.05 inches per minute.

CONSOLIDATION TEST (ASTM D2435)

The purpose of this test is to determine the compressibility of the soil. This test is performed on a sample of soil which is 2.5 inches in diameter and 1.0 inch in height, and has been trimmed from relatively "undisturbed" samples. The test is performed with a level system or an air activated piston for applying load. The loads are applied in increments and allowed to remain on the sample for a period of 24 hours. The consolidation of the sample under each individual load is measured and a curve of void ratio vs. Pressure is obtained. From the information obtained in this manner and the column loads of the structure, it is possible to calculate the settlement of each individual building column. This information, together with the shearing strength of the soil, is used to determine the safe bearing capacity for a particular structure.

REVISED TO ASTM D4318
ATTERBERG LIMITS (ASTM D423 AND D424)

These tests determine the liquid and plastic limits of soils having a predominant percentage of fine particle (silt and clay) sizes. The liquid limit of a soil is the moisture content expressed as a percent at which the soil changes from a liquid to a plastic state, and the plastic limit is the moisture content at which the soil changes from a plastic to a semi-solid state. Their difference is defined as the plasticity index (P.I. = L.L. - P.L.), which is the change in moisture content required to change the soil from a "semi-solid" to a liquid. These tests furnish information about the soil properties which is important in determining their relative swelling potential and their classifications.

MECHANICAL ANALYSIS (ASTM D422)

This test determines the percent of each particle size of a soil. A sieve analysis is conducted on particle sizes greater than a No. 20 sieve (0.074 mm), and a hydrometer test on particles smaller than the No. 200 sieve. The gradation curve is drawn through the points of cumulative per cent of particle size, and plotted on semi-logarithmic paper for the combined sieve and hydrometer analysis. This test, together with the Atterberg Limits tests, is used to classify a soil.

NATURAL MOISTURE CONTENT (ASTM D2216)

The purpose of this test is to indicate the range of moisture contents present in the soil. A wet sample is weighed, placed in the constant temperature oven at 105° for 24 hours, and re-weighed. The moisture content is the change in weight divided by the dry weight.

PROCTOR TESTS

The purpose of these tests is to determine the maximum density and optimum moisture content of a soil. The Modified Proctor test is performed in accordance with ASTM D1557-70. The test is performed by dropping a 10 pound hammer 25 times from an 18 inch height on each of 5 equal layers of soil in a 1/30 cubic foot mold, which represents a compaction effort of 56,250 foot pounds per cubic foot. The moisture content is then raised, and this procedure is repeated. A moisture density curve is then plotted, with the density on the ordinate axis and the moisture content on the abscissa axis. The moisture content at which the maximum density requirement can be achieved with a minimum compactive effort is designated as the optimum moisture content (O.M.C.). The Standard Proctor test is performed in accordance with ASTM D698-70. This test is similar to the Modified Proctor test and is performed by dropping a 5.5 pound hammer 25 times from a height of 12 inches on 3 equal layers of soil in a 1/30 cubic foot mold, which represents a compaction effort of 12,375 foot pounds per cubic foot. This test gives proportionately lower results than the Modified Proctor test.

FIELD CLASSIFICATION SYSTEM FOR ROCK EXPLORATION

Saprolite A transitional material between soil and rock retains the relic structure of the parent rock and exhibits penetration resistance between 60 blows per foot and 100 blows/2 inches of penetration.

R.Q.D. Rock Quality Designation; Ratio of the core lengths greater than four inches to the total length of the core run.

Description	Percentage Core Recovered	RQD Rock Quality Description	Description of Rock Quality
Incompetent	Less than 40	0 - 25	very poor
Competent	40 - 70	25 - 50	poor
Fairly Competent	70 - 80	50 - 75	fair
Fairly Continuous	80 - 90	75 - 90	good
Continuous	90 - 100	90 - 100	excellent

FIELD HARDNESS: (A measure of resistance to scratching or abrasion)

Very Hard	Cannot be scratched with knife or sharp pick, breaking of hand specimens requires several hard blows of geologist's pick.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of a hammer required to detach hand specimen.
Moderately Hard	Can be scratched with knife or pick. Gouges or grooves to ¼ inch deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
Medium	Can be grooved or gouged 1/16 inch deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1 inch maximum size by hard blows of the point of a geologist's pick.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips and pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Very soft	Can be carved with knife. Can be excavated with point of pick. Pieces 1 inch or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

WEATHERING: (The action of the elements in altering the color, texture, and composition of the rock)

Very slightly	Rock generally fresh, joints stained, some joints may contain thin clay coatings, crystals in broken face show bright. Rock rings under hammer if crystalline.
Slightly	Rock generally fresh, joins stained, and discoloration extends into rock up to 1 inch. Joints may contain clay. In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
Moderately	Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some may be decomposed to clay. Rock as dull sound under hammer and has a significant loss of strength compared with fresh rock.
Severely	All rock except quartz discolored or stained. Rock "fabric" clear and evident but reduced in strength to strong soil. In granitoid rocks all feldspars kaolinized to some extent. Some fragments of strong rock usually left.
Very severely	All rock except quartz discolored of stained. Rock "fabric" discernible, but mass effectively reduces to "soil" with only fragments of strong rock usually left.
Completely	All rock completely altered to soil-like material.

ROCK FRACTURE FREQUENCY: (Any break in a rock whether or not it has undergone relative displacement.)

Description	Spacing Between Fractures
Extremely fractured	Less than 1 inch
Moderately fractured	1 inch to 4 inches
Slightly fractured	4 inches to 8 inches
Sound	More than 8 inches

Note: Fracture frequency terms are generalized to described the average condition of the rock obtained from the core run. Portions of the rock within the run described may vary from the generalized descriptions. Where a core break appears to be due to drilling and not to natural causes, it has not been considered as a break for accessing fracture frequency. Frequency shown on Record of Soil Exploration represents condition of core as removed form the core barrel.

JOINTS BEDDING, AND FOLIATION:

Joints	Bedding & Foliation	Spacing
Very close	Very thin	Less than 2 inches
Close	Thin	2 inches - 1 foot
Moderately close	Medium	1 foot - 3 feet
Wide	Thick	3 feet - 10 feet
Very wide	Very Thick	More than 10 feet

Notes: Refers to perpendicular distance between discontinuities

Attitude	Angle (degrees)
Horizontal	0 to 5
Shallow to low angle	5 to 35
Moderately dipping	35 to 55
Steep or high angle	55 to 85
Vertical	85 to 90

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-1
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN, FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	GRAVEL					
	8"	FILL, soft, brown, silty CLAY, trace sand and gravel					
1.0		(moist)	1A	1.0	2.5	3-3-3	6
2.0							
3.0							
			2A	3.5	5.0	2-2-2	4
4.0							
5.0	5.0	ORIGINAL, very stiff, brown, silty CLAY, some sand and gravel (moist)					
6.0			3A	6.0	7.5	9-21-12	33
7.0							
8.0							
	8.5	Medium dense, brown, silty SAND, some gravel	4A	8.5	10.0	9-9-8	17
9.0		(moist)					
10.0							
11.0							
12.0							
13.0							
			5A	13.5	15.0	8-13-16	29
14.0							
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Auger
DC Driven Casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

Koontz Bryant Johnson Williams, Inc.
3171 Research Boulevard, Suite 150
Dayton, OH 45420
(P) (937) 428-6150

BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-2
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTER-VAL)	SPT "N" , OR RECOVERY (IN FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	10"	FILL, medium stiff, brown, silty CLAY, trace sand					
1.0		and gravel, rock fragments (moist)	1A	1.0	2.5	3-4-5	9
2.0							
3.0							
			2A	3.5	5.0	9-13-14	27
4.0							
5.0	5.0	ORIGINAL, medium stiff, brown, silty CLAY, some					
		sand and gravel (moist)					
6.0			3A	6.0	7.5	3-4-6	10
7.0							
8.0							
			4A	8.5	10.0	4-5-5	10
9.0							
10.0							
11.0							
12.0							
13.0							
			5A	13.5	15.0	3-4-4	8
14.0							
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-3
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	--
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	GRAVEL					
	8"	FILL, soft, brown, silty CLAY, trace sand and gravel					
1.0		(moist)	1A	1.0	2.5	3-2-2	4
2.0							
3.0							
			2A	3.5	5.0	2-2-2	4
4.0							
5.0	5.0	ORIGINAL, medium stiff, brown, silty CLAY, some sand and gravel (moist)					
6.0			3A	6.0	7.5	4-4-5	9
7.0							
8.0							
	8.5	Loose brown, silty SAND, some gravel	4A	8.5	10.0	4-4-4	8
9.0		(moist)					
10.0							
11.0							
12.0							
13.0							
	13.5	Stiff, brown, silty CLAY, some sand and gravel	5A	13.5	15.0	4-5-5	10
14.0		(moist)					
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-4
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	--
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	6"	FILL, very soft, brown, silty CLAY, trace sand and gravel (moist)					
1.0			1A	1.0	2.5	3-4-5	9
2.0							
3.0							
			2A	3.5	5.0	1-1-1	2
4.0							
5.0	5.0	ORIGINAL, soft, brown, silty CLAY, some sand and gravel (moist)					
6.0			3A	6.0	7.5	2-2-2	4
7.0							
8.0							
	8.5	Medium dense, brown, silty SAND, some gravel (moist)	4A	8.5	10.0	17-14-9	23
9.0							
10.0							
11.0							
12.0							
13.0							
			5A	13.5	15.0	11-14-10	24
14.0							
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-5
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	10"	ORIGINAL, medium stiff, brown, silty CLAY, trace					
1.0		sand and gravel (moist)	1A	1.0	2.5	3-5-4	9
2.0							
3.0							
			2A	3.5	5.0	7-4-4	8
4.0							
5.0							
6.0			3A	6.0	7.5	4-5-4	9
7.0							
8.0							
			4A	8.5	10.0	3-4-5	9
9.0							
10.0							
11.0							
12.0							
13.0							
			5A	13.5	15.0	4-4-6	10
14.0							
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-6
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	10"	FILL, medium stiff, brown, silty CLAY, some sand					
1.0		and gravel, rock fragments (moist)	1A	1.0	2.5	4-4-6	10
2.0							
3.0							
			2A	3.5	5.0	6-13-29	42
4.0							
5.0	5.0	ORIGINAL, very stiff, brown, silty CLAY,					
		some sand and gravel (moist)					
6.0			3A	6.0	7.5	8-10-11	21
7.0							
8.0							
			4A	8.5	10.0	11-12-11	23
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-7
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	--
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	4"	FILL, stiff, brown, silty CLAY, some sand and gravel,					
1.0		rock fragments (moist)	1A	1.0	2.5	5-26-31	57
2.0							
3.0							
			2A	3.5	3.7	50/2"	100+
4.0							
5.0	5.0	ORIGINAL, stiff, brown, silty CLAY, some sand and					
		gravel, rock fragments (moist)					
6.0			3A	6.0	6.2	50/1.5"	100+
7.0							
8.0							
			4A	8.5	8.8	50/4"	100+
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-8
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN, FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	2"	FILL, very soft, brown, silty CLAY, some sand and					
1.0		gravel (moist)	1A	1.0	2.5	2-1-1	2
2.0							
3.0							
			2A	3.5	5.0	2-2-2	4
4.0							
5.0	5.0	ORIGINAL, medium stiff, brown, silty CLAY, some					
		sand and gravel (moist)					
6.0			3A	6.0	7.5	2-2-3	5
7.0							
8.0							
			4A	8.5	10.0	3-4-4	8
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-9
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	--
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	FILL, very soft, brown, silty CLAY, some sand and gravel (moist)					
1.0			1A	1.0	2.5	WOH-1-WOH	0
2.0							
3.0			2A	3.5	5.0	WOH-1-WOH	0
4.0							
5.0							
6.0			3A	6.0	7.5	WOH-WOH-WOH	0
7.0							
8.0	8.0	ORIGINAL, stiff, brown, silty CLAY, some sand and gravel (moist)	4A	8.5	10.0	4-6-8	14
9.0							
10.0							
11.0							
12.0							
13.0			5A	13.5	15.0	9-11-13	24
14.0							
15.0		BOTTOM OF BORING AT 15.0 FEET					
16.0							
17.0							
18.0							
19.0							
20.0							

Major Soil Components: Gravel, Sand, Silt, Clay
Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Auger
DC Driven Casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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(P) (937) 428-6150

BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-10
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN, FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	6"	FILL, stiff, brown, silty CLAY, some sand and gravel,					
1.0		rock fragments (moist)	1A	1.0	1.2	50/2"	100+
2.0							
3.0							
			2A	3.5	5.0	48-19-16	35
4.0							
5.0							
6.0			3A	6.0	6.1	50/1"	100+
7.0							
8.0	8.0	ORIGINAL, very stiff, gray, silty CLAY,					
		some sand and gravel (moist)	4A	8.5	10.0	39-16-10	26
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Auger
DC Driven Casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-11
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel, Sand, Silt, Clay Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN. FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	10"	ORIGINAL, very soft, brown, silty CLAY,					
1.0		trace sand and gravel (moist)	1A	1.0	2.5	2-2-2	4
2.0							
3.0							
			2A	3.5	5.0	2-1-2	3
4.0							
5.0							
6.0			3A	6.0	7.5	3-3-4	7
7.0							
8.0							
			4A	8.5	10.0	2-3-3	6
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Auger
DC Driven Casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

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(P) (937) 428-6150

BORING LOG

CLIENT:	Upper Valley Career Center	REPORT NO.:	38776-001	BORING NO.:	KBJW-12
		DATE STD.:	4/28/2026	DATE FINISHED:	4/28/2026
PROJECT:	GEI for Parking Lot & Transportation Storage Building	DRILLERS:	EnviroCore, Inc.	GROUND ELEV.:	–
LOCATION:	Piqua, Ohio	METHOD:	HSA		

SCALE, FT.	STRATUM DEPTH, FT.	CLASSIFICATION OF MATERIAL Major Soil Components: Gravel Sand Silt Clay Minor Component Term: Trace 1-10% Some 11-35% And 36-50%	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT. FROM	DEPTH OF SAMPLE, FT. TO	BLOWS ON SAMPLER PER SPT (6" INTERVAL)	SPT "N", OR RECOVERY (IN, FOR SHELBY TUBES, % FOR ROCK CORE)
0.0	0.0	TOPSOIL					
	10"	ORIGINAL, soft, brown, silty CLAY, trace sand and					
1.0		gravel (moist)	1A	1.0	2.5	2-3-3	6
2.0							
3.0							
			2A	3.5	5.0	2-2-2	4
4.0							
5.0							
6.0			3A	6.0	7.5	3-4-4	8
7.0							
8.0							
			4A	8.5	10.0	3-4-6	10
9.0							
10.0		BOTTOM OF BORING AT 10.0 FEET					
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							

WATER LEVEL OBSERVATIONS
Noted on rods Dry ft.
At completion Dry ft.
After -- hours -- ft.

BORING METHOD

HSA	Hollow Stem Auger	MD	Mud Drilling
CFA	Continuous Flight Auger	RC	Rock Coring
DC	Driven Casing	CA	Casing Advancer

TYPE SAMPLE
A - Split Spoon
B - Rock Core
C - Shelby Tube
D - Other

*These Shelby Tube Samples Obtained In An Auxiliary Boring Drilled A Few Feet From This Boring

TABLE 1

RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
KBJW-1	1.0 - 2.5	14.3
KBJW-1	3.5 - 5.0	14.0
KBJW-2	1.0 - 2.5	9.0
KBJW-2	13.5 - 15.0	9.9
KBJW-3	1.0 - 2.5	19.0
KBJW-3	3.5 - 5.0	26.9
KBJW-3	13.5 - 15.0	9.8
KBJW-4	6.0 - 7.5	19.1
KBJW-5	1.0 - 2.5	14.9
KBJW-5	3.5 - 5.0	9.7
KBJW-5	6.0 - 7.5	10.1
KBJW-5	8.5 - 10.0	10.4
KBJW-5	13.5 - 15.0	10.5
KBJW-7	8.5 - 10.0	9.9
KBJW-8	1.0 - 2.5	15.1
KBJW-8	3.5 - 5.0	24.9
KBJW-8	6.0 - 7.5	23.7
KBJW-8	8.5 - 10.0	11.3
KBJW-9	3.5 - 5.0	18.9
KBJW-9	6.0 - 7.5	21.3
KBJW-9	8.5 - 10.0	9.4
KBJW-9	13.5 - 15.0	8.9
KBJW-10	8.5 - 10.0	11.0
KBJW-11	1.0 - 2.5	17.6
KBJW-11	3.5 - 5.0	19.0
KBJW-11	6.0 - 7.5	15.3
KBJW-11	8.5 - 10.0	11.1
KBJW-12	1.0 - 2.5	20.1
KBJW-12	3.5 - 5.0	21.9
KBJW-12	6.0 - 7.5	19.6
KBJW-12	8.5 - 10.0	10.4

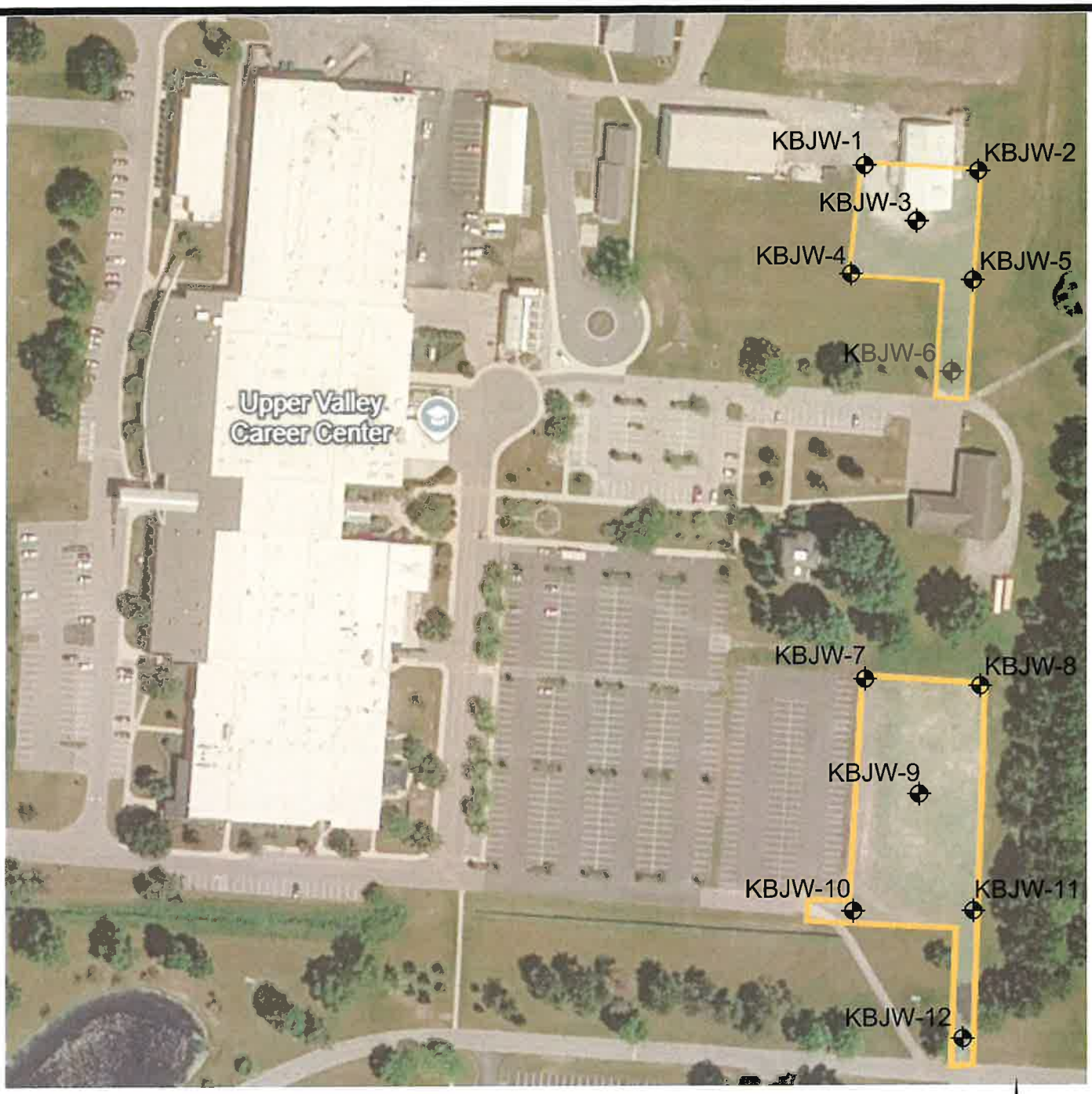
VICINITY MAP

GEOTECHNICAL ENGINEERING INVESTIGATION
FOR THE PROPOSED PARKING LOT & TRANSPORTATION STORAGE BUILDING AT THE UPPER VALLEY CAREER CENTER,
PIQUA, OHIO

Project No.	38776-001
Scale	1" = 1 MILE
Dale:	5/13/26

KOONTZ BRYANT JOHNSON WILLIAMS
Formerly CBC Engineers

Figure No. 1



LEGEND

KBJW−1 ⊕ = APPROXIMATE BORING LOCATION

N

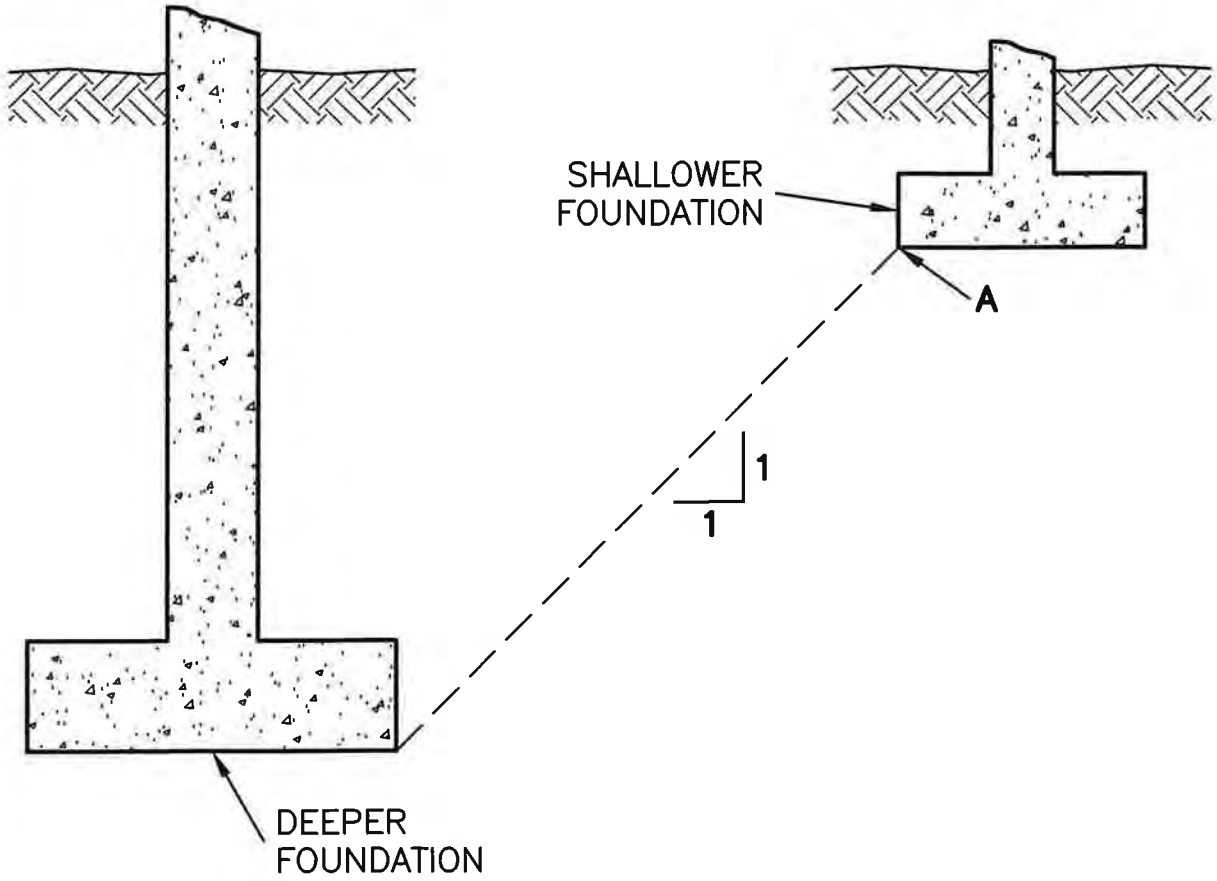
BORING LOCATION PLAN

GEOTECHNICAL ENGINEERING INVESTIGATION
FOR THE PROPOSED PARKING LOT & TRANSPORTATION STORAGE
BUILDING AT THE UPPER VALLEY CAREER CENTER,
PIQUA, OHIO

Project No.	38776-001
Scale	N.T.S.
Date:	5/13/26

KOONTZ BRYANT JOHNSON WILLIAMS
Formerly CBC Engineers

Figure No. 2



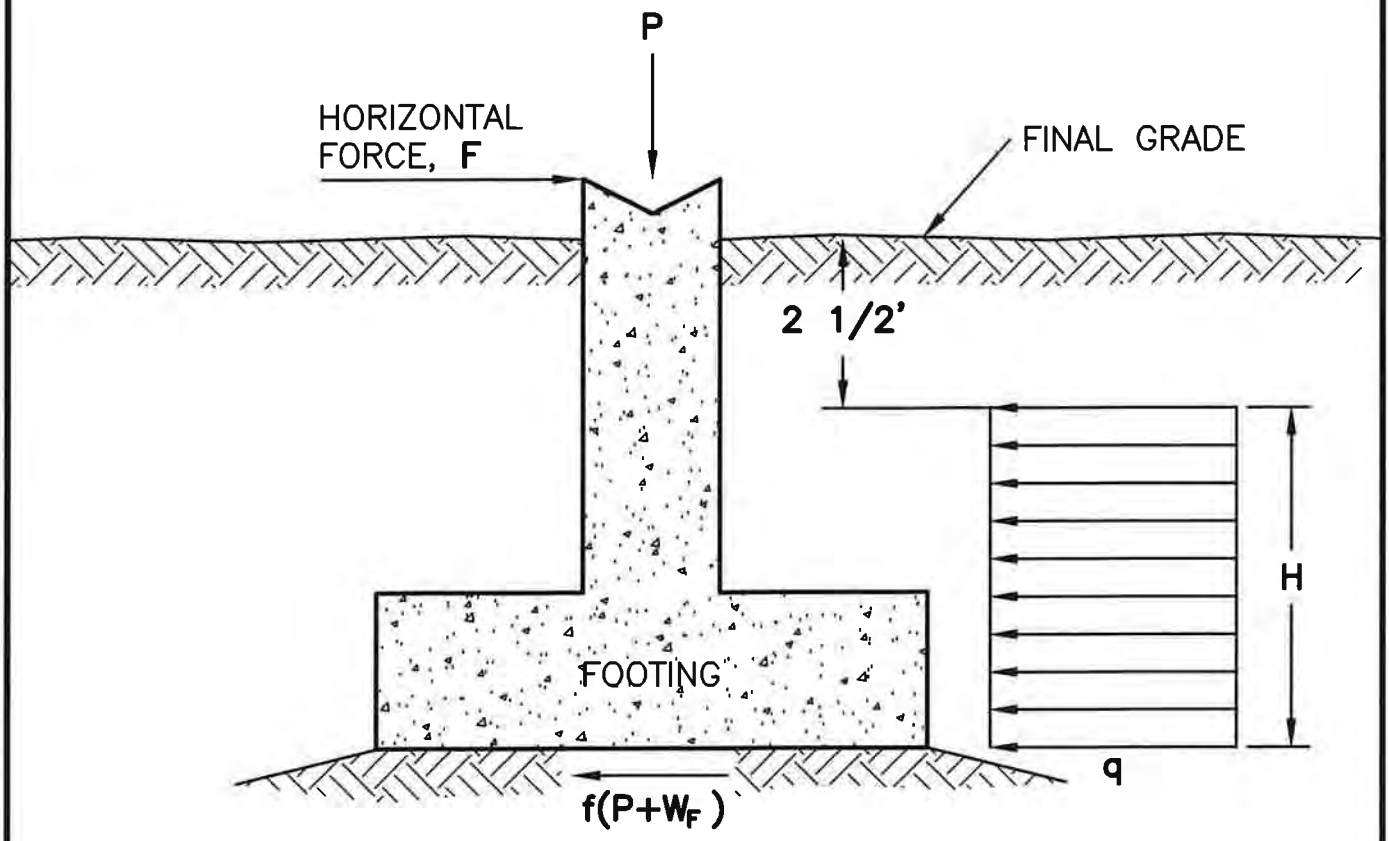
NOTE: POINT "A" OF SHALLOWER FOOTING MUST BE SITUATED BELOW THE DASHED LINE SHOWING THE FOOTING LOCATION LIMIT.

DESIGN ILLUSTRATION:

ADJACENT FOOTINGS

KOONTZ BRYANT JOHNSON WILLIAMS
Formerly CBC Engineers

PROJECT NO.	SCALE:	FIGURE NO.
.	NONE	3



LEGEND:

P = MINIMUM DOWNWARD LOAD

f = COEFFICIENT OF FRICTION AT CONCRETE/SOIL INTERFACE

F = MAXIMUM HORIZONTAL FORCE

W_F = WEIGHT OF FOOTING BELOW FINAL GRADE

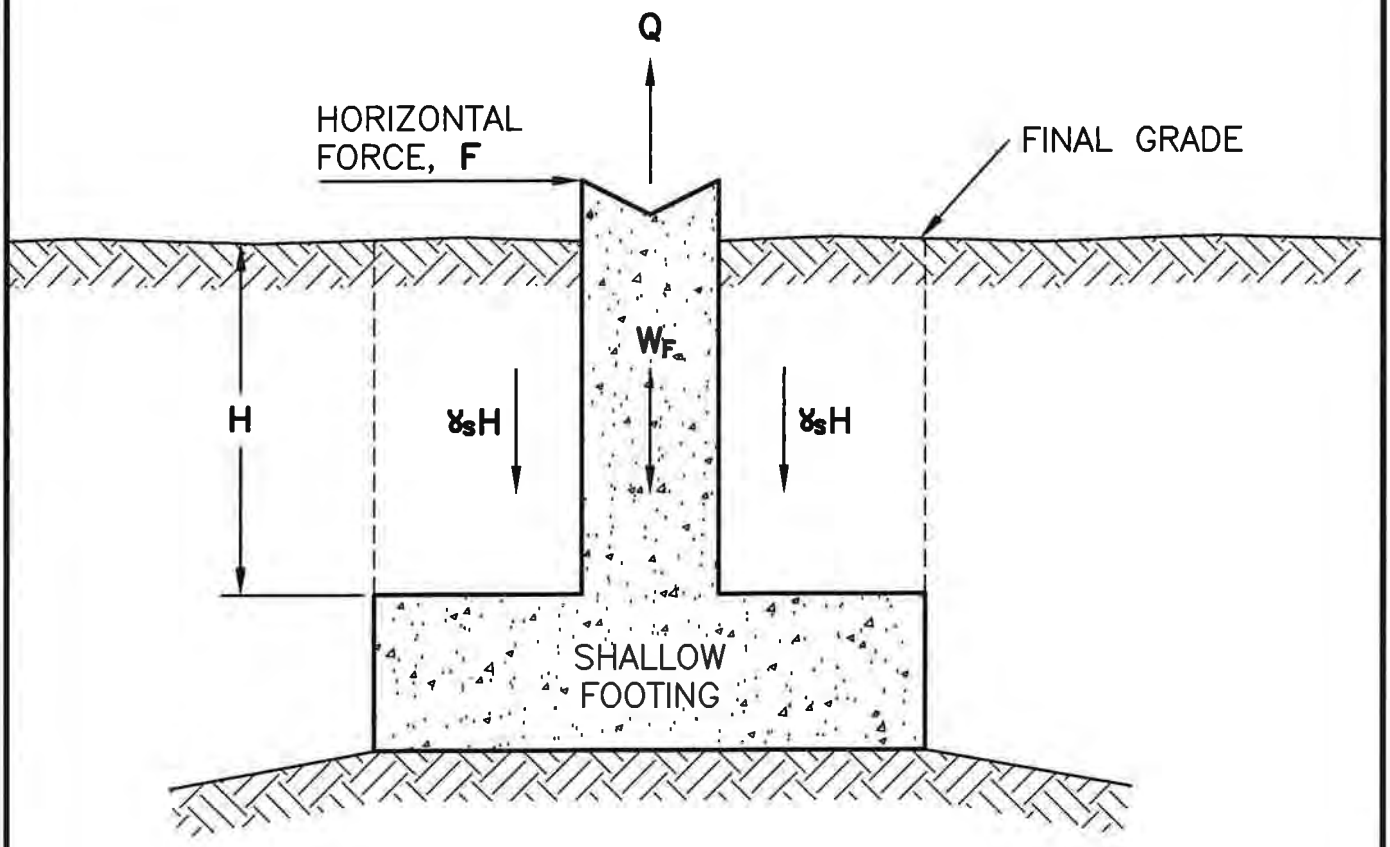
q = RESISTING PASSIVE PRESSURE

DESIGN ILLUSTRATION:

RESISTING LATERAL FORCES FOR SHALLOW FOOTINGS

KOONTZ BRYANT JOHNSON WILLIAMS
Formerly CBC Engineers

PROJECT NO:	SCALE:	FIGURE NO.
.	NONE	4



LEGEND:

Q = MAXIMUM UPLIFT LOAD

γ_s = TOTAL SOIL UNIT WEIGHT

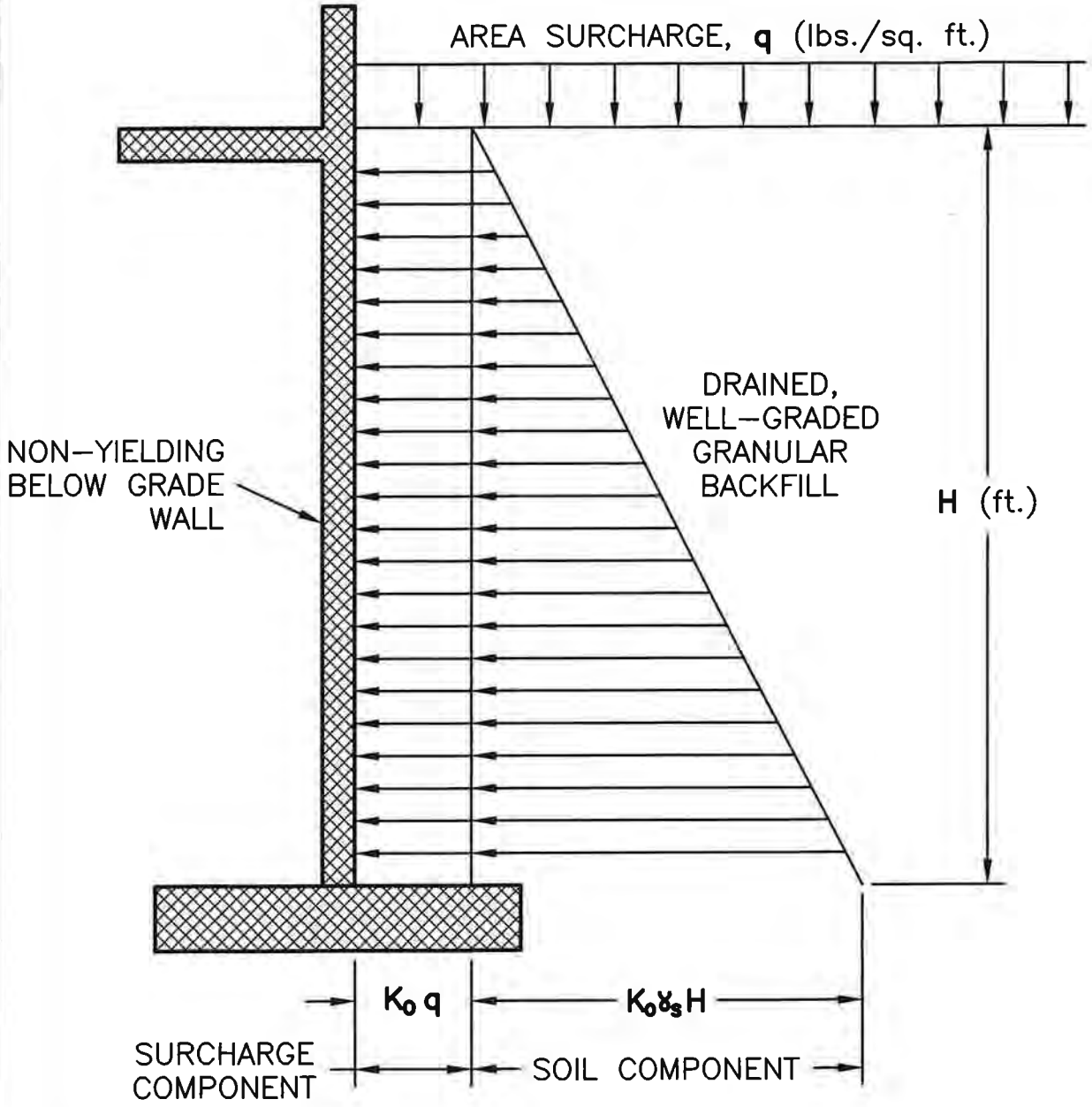
W_F = WEIGHT OF FOOTING BELOW FINAL GRADE

DESIGN ILLUSTRATION:

RESISTING UPLIFT FORCES FOR
SHALLOW FOOTINGS

KOONTZ BRYANT JOHNSON WILLIAMS
Formerly CBC Engineers

PROJECT NO:	SCALE:	FIGURE NO.
.	NONE	5



LEGEND:

γ_s = TOTAL SOIL UNIT WEIGHT, (lbs./cu. ft.)

K_o = AT REST EARTH PRESSURE COEFFICIENT

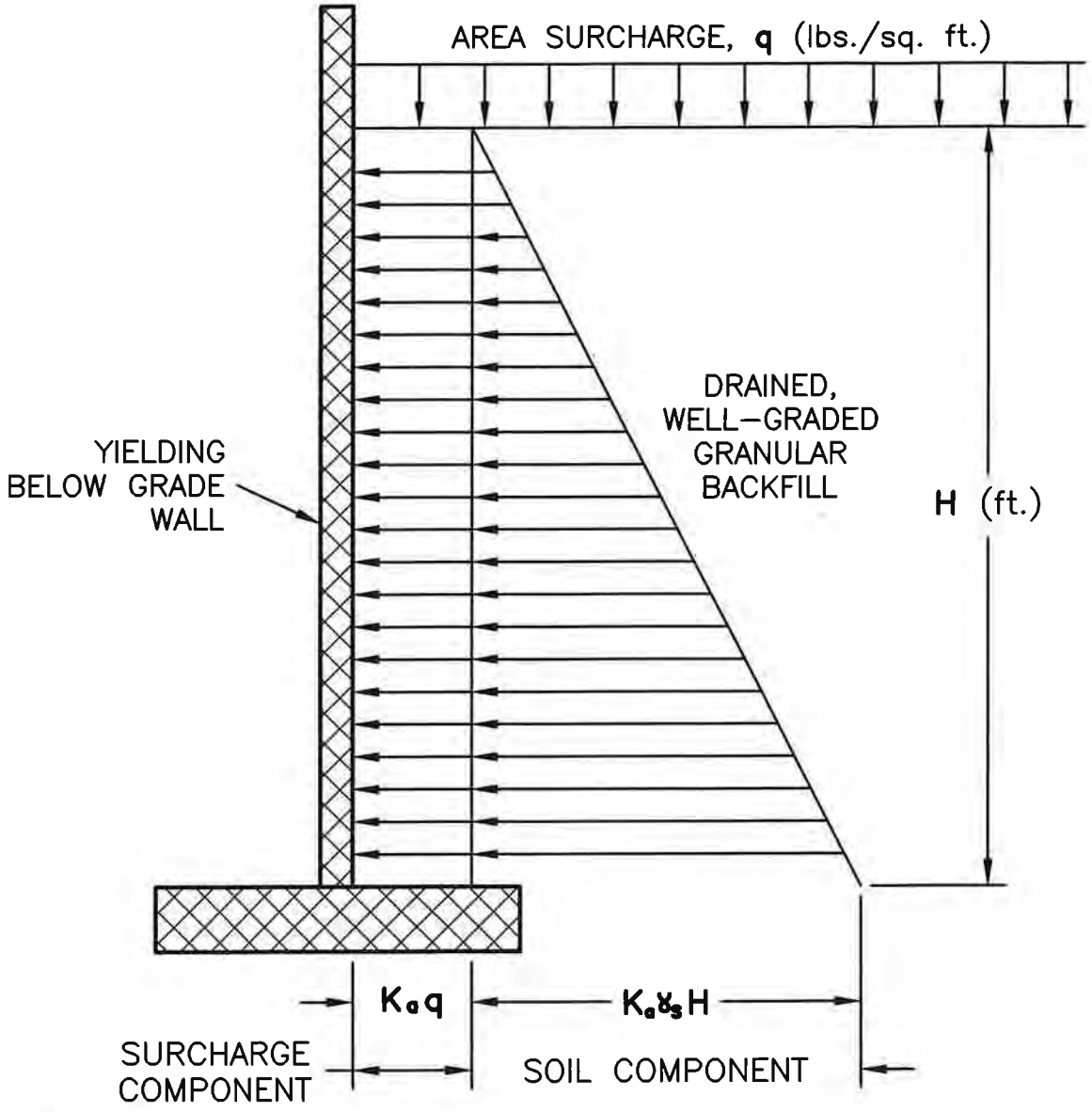
DESIGN ILLUSTRATION:

LATERAL EARTH PRESSURE AGAINST NON-YIELDING BELOW-GRADE WALL ASSUMING DRAINED BACKFILL WITH NON-HYDROSTATIC PRESSURE

KOONTZ BRYANT JOHNSON WILLIAMS

Formerly CBC Engineers

PROJECT NO.	SCALE:	FIGURE NO.
.	NONE	6



LEGEND:

K_a = ACTIVE EARTH PRESSURE COEFFICIENT

γ_s = TOTAL SOIL UNIT WEIGHT, (lbs./cu. ft.)

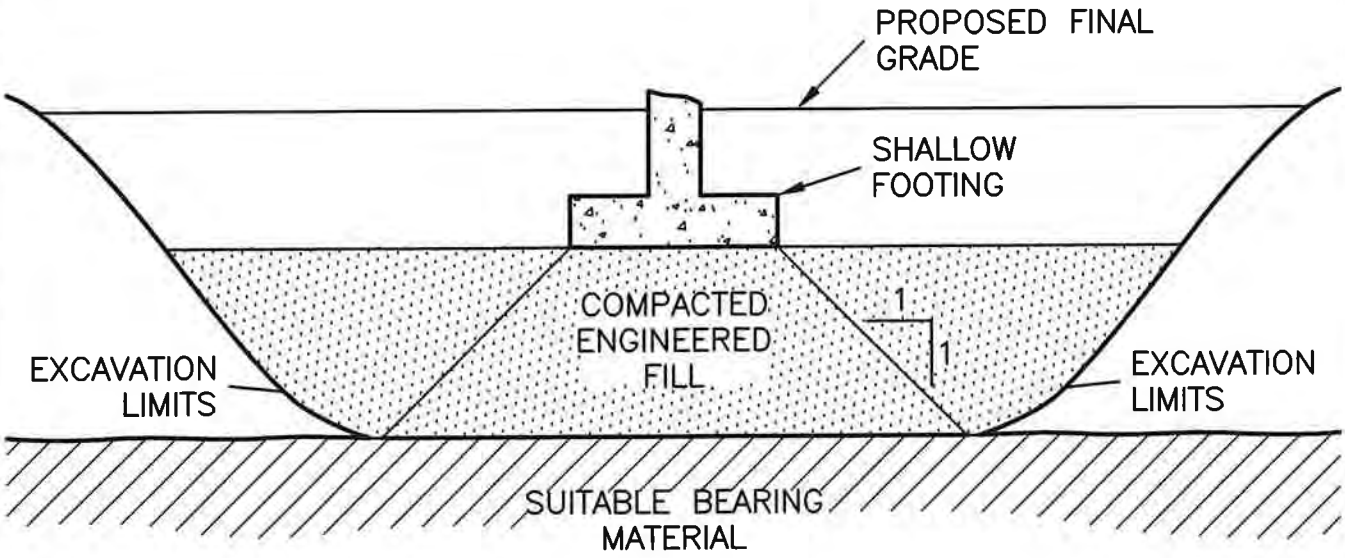
DESIGN ILLUSTRATION:

LATERAL EARTH PRESSURE AGAINST YIELDING BELOW-GRADE WALL ASSUMING DRAINED BACKFILL WITH NO HYDROSTATIC PRESSURE

ROONTZ BRYANT JOHNSON WILLIAMS

Formerly CBC Engineers

PROJECT NO.	SCALE:	FIGURE NO.
	NONE	6A



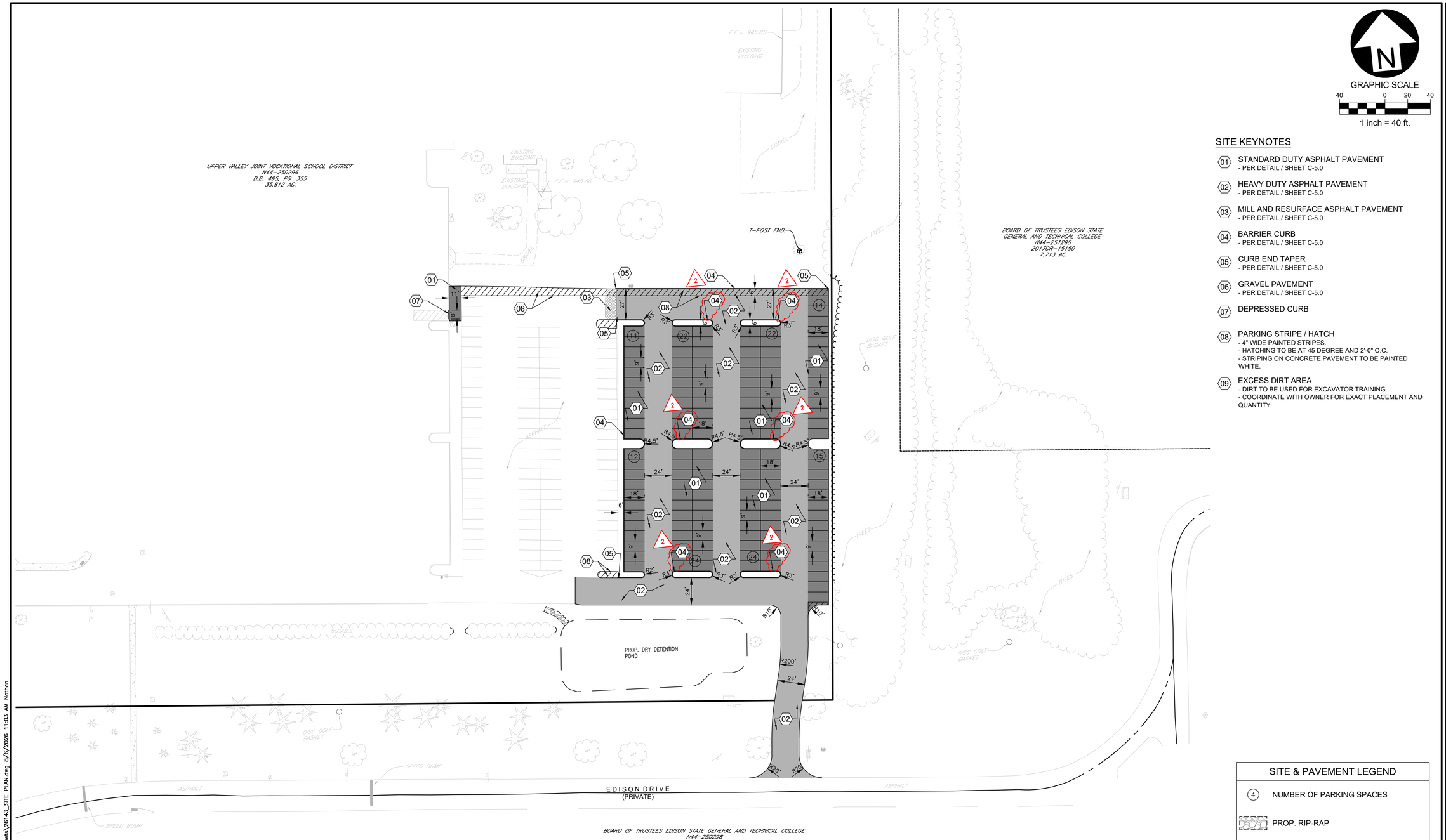
DESIGN ILLUSTRATION:

SHALLOW FOOTINGS IN AN UNDERCUT AREA

KOONTZ BRYANT JOHNSON WILLIAMS

Formerly CBC Engineers

PROJECT NO:	SCALE:	FIGURE NO.
	NONE	7



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

SITE KEYNOTES

01 STANDARD DUTY ASPHALT PAVEMENT
- PER DETAIL / SHEET C-5.0

02 HEAVY DUTY ASPHALT PAVEMENT
- PER DETAIL / SHEET C-5.0

03 MILL AND RESURFACE ASPHALT PAVEMENT
- PER DETAIL / SHEET C-5.0

04 BARRIER CURB
- PER DETAIL / SHEET C-5.0

05 CURB END TAPER
- PER DETAIL / SHEET C-5.0

06 GRAVEL PAVEMENT
- PER DETAIL / SHEET C-5.0

07 DEPRESSED CURB

08 PARKING STRIPE / HATCH
- 4" WIDE PAINTED STRIPES.
- HATCHING TO BE AT 45 DEGREE AND 2'-0" O.C.
- STRIPING ON CONCRETE PAVEMENT TO BE PAINTED WHITE.

09 EXCESS DIRT AREA
- DIRT TO BE USED FOR EXCAVATOR TRAINING
- COORDINATE WITH OWNER FOR EXACT PLACEMENT AND QUANTITY

SITE & PAVEMENT LEGEND

- (4) NUMBER OF PARKING SPACES
- PROP. RIP-RAP
- PROP. STANDARD-DUTY ASPHALT
- PROP. HEAVY-DUTY ASPHALT
- MILL AND RESURFACE

Know what's below. Call before you dig.

W:\Civil 3D Projects\26143 - UVCC Parking Expansion_CAD\CIVIL\Sheets\26143_SITE PLAN.dwg 8/6/2026 11:03 AM Nathan

STATE OF OHIO
NATHAN D. TIBEY
77917
REGISTERED PROFESSIONAL ENGINEER

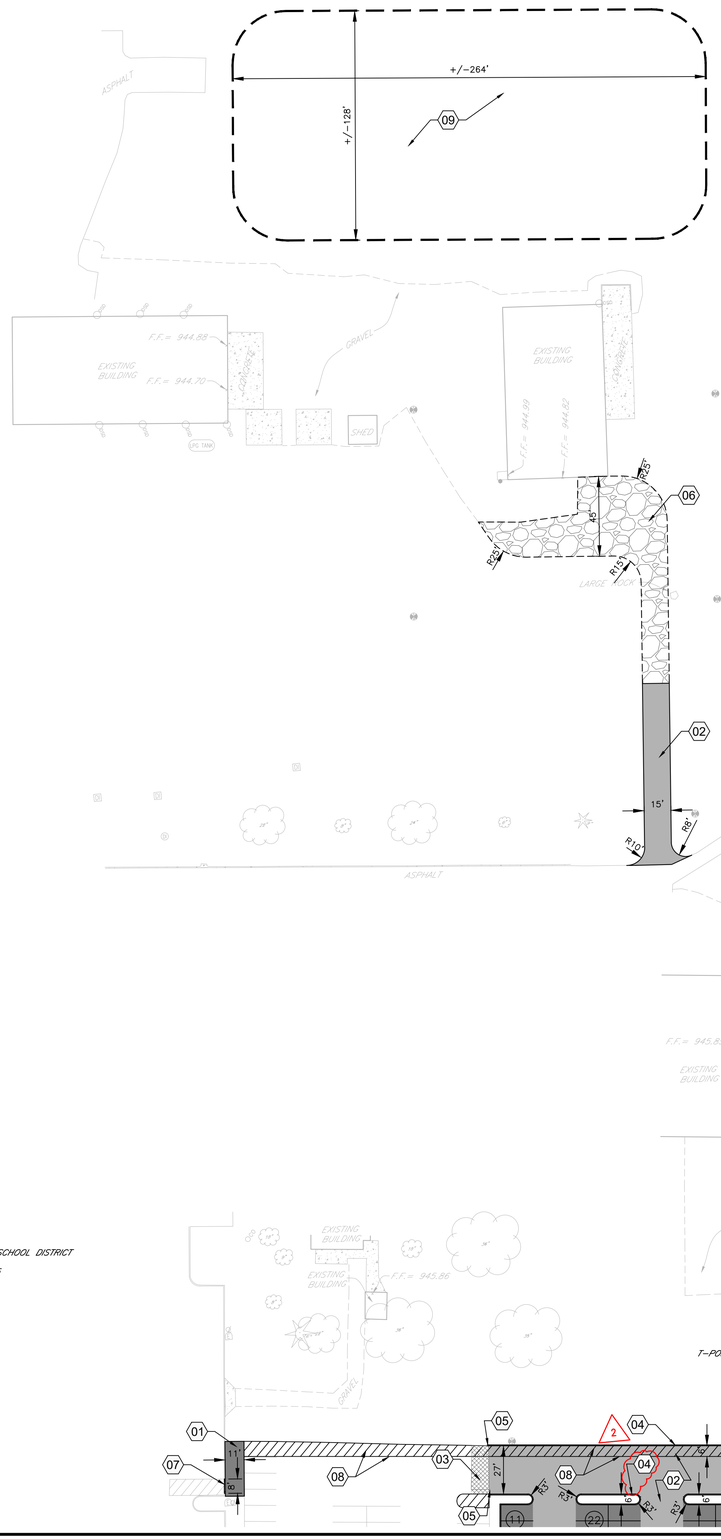
08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:
UPPER VALLEY CAREER CENTER PARKING EXPANSION
8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

BURKHARDT ENGINEERS • SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-9060 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	
Date: 07.17.2026	
Sheet: SOUTH SITE PLAN	
Sheet No.: C-2.0	



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

SITE KEYNOTES

01 STANDARD DUTY ASPHALT PAVEMENT
- PER DETAIL / SHEET C-5.0

02 HEAVY DUTY ASPHALT PAVEMENT
- PER DETAIL / SHEET C-5.0

03 MILL AND RESURFACE ASPHALT PAVEMENT

04 BARRIER CURB
- PER DETAIL / SHEET C-5.0

05 CURB END TAPER
- PER DETAIL / SHEET C-5.0

06 GRAVEL PAVEMENT
- PER DETAIL / SHEET C-5.0

07 DEPRESSED CURB

08 PARKING STRIPE / HATCH
- 4" WIDE PAINTED STRIPES.
- HATCHING TO BE AT 45 DEGREE AND 2'-0" O.C.
- STRIPING ON CONCRETE PAVEMENT TO BE PAINTED WHITE.

09 EXCESS DIRT AREA
- DIRT TO BE USED FOR EXCAVATOR TRAINING
- COORDINATE WITH OWNER FOR EXACT PLACEMENT AND QUANTITY

SITE & PAVEMENT LEGEND

- (4) NUMBER OF PARKING SPACES
- PROP. RIP-RAP
- PROP. STANDARD-DUTY ASPHALT
- PROP. HEAVY-DUTY ASPHALT
- MILL AND RESURFACE

Know what's below. Call before you dig.

W:\Civil 3D Projects\26143 - UVCC Parking Expansion_CAD\CIVIL\Sheets\26143_SITE PLAN.dwg 8/6/2026 11:04 AM Nathan

STATE OF OHIO
NATHAN D. TIBEY
7917
REGISTERED PROFESSIONAL ENGINEER

08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:
UPPER VALLEY CAREER CENTER PARKING EXPANSION
8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

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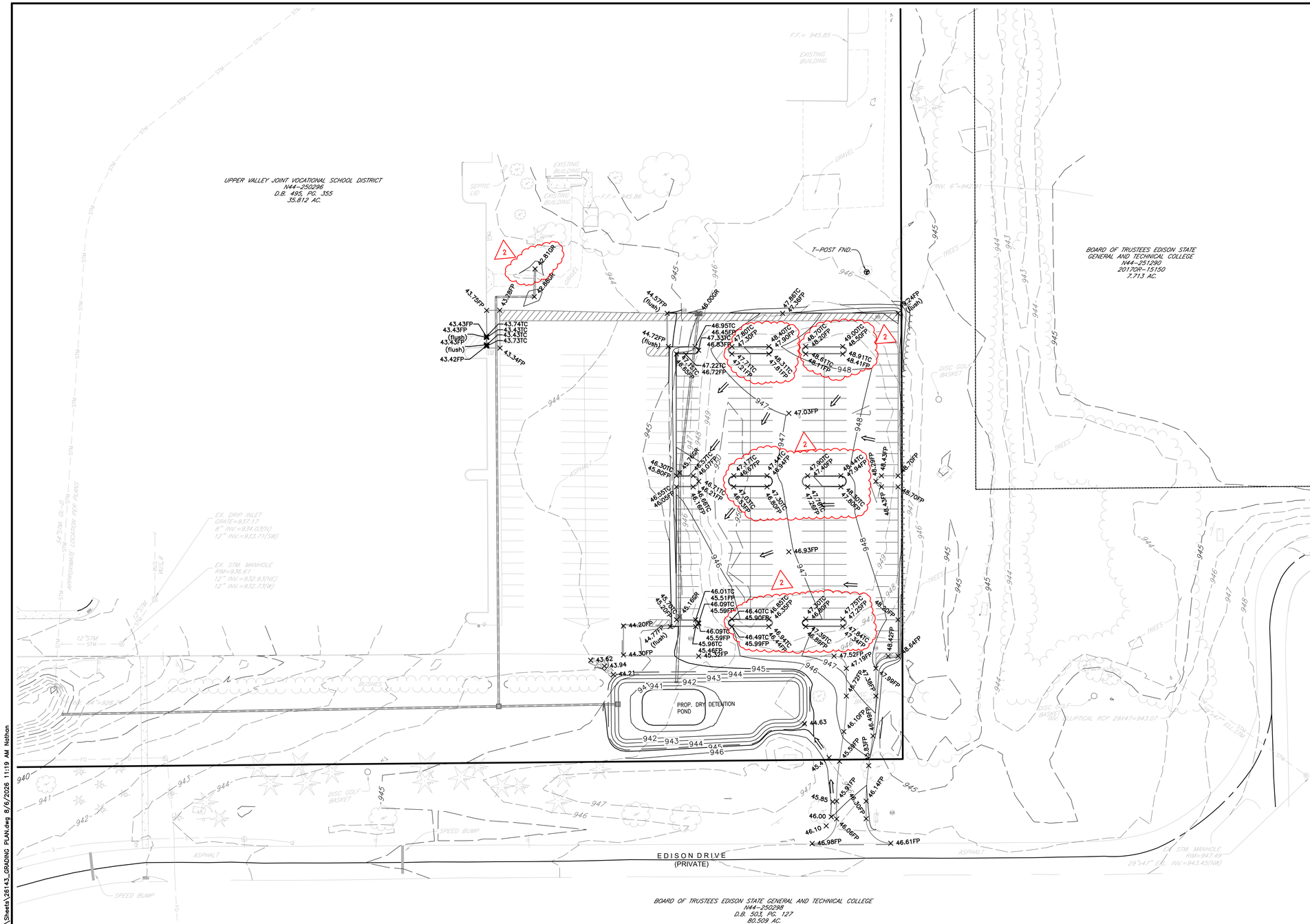
Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	
Date: 07.17.2026	

Sheet: NORTH SITE PLAN

Sheet No.: C-2.1



GRADING LEGEND

× 100.00TC	PROP. TOP OF CURB ELEVATION
× 100.00FP	PROP. FINISHED PAVEMENT ELEVATION
× 100.00GR	PROP. TOP OF GRATE/RIM ELEVATION
× 100.00	PROP. SPOT ELEVATION
⟹	PROP. FLOW ARROW
1000	PROP. CONTOUR - INDEX
1000	PROP. CONTOUR - INTERMEDIATE
1000	EX. CONTOUR - INDEX
1000	EX. CONTOUR - INTERMEDIATE

GRAPHIC SCALE
40 0 20 40
1 inch = 40 ft.

SPOT ELEVATIONS PROVIDED ON THIS PLAN ARE LOCATED AT HORIZONTAL GEOMETRY CHANGES (CORNERS, CURVES/RADII, END POINTS, ETC.) AND VERTICAL GRADE BREAKS (HIGH POINTS, LOW POINTS, AND SLOPE CHANGES). ADDITIONAL SPOT ELEVATIONS MAY BE PROVIDED UPON REQUEST.

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STATE OF OHIO
NATHAN D. FINEY
77917
REGISTERED PROFESSIONAL ENGINEER
08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:
UPPER VALLEY CAREER CENTER PARKING EXPANSION
8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

BURKHARDT
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28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-0060 | BURKHARDTINC.COM
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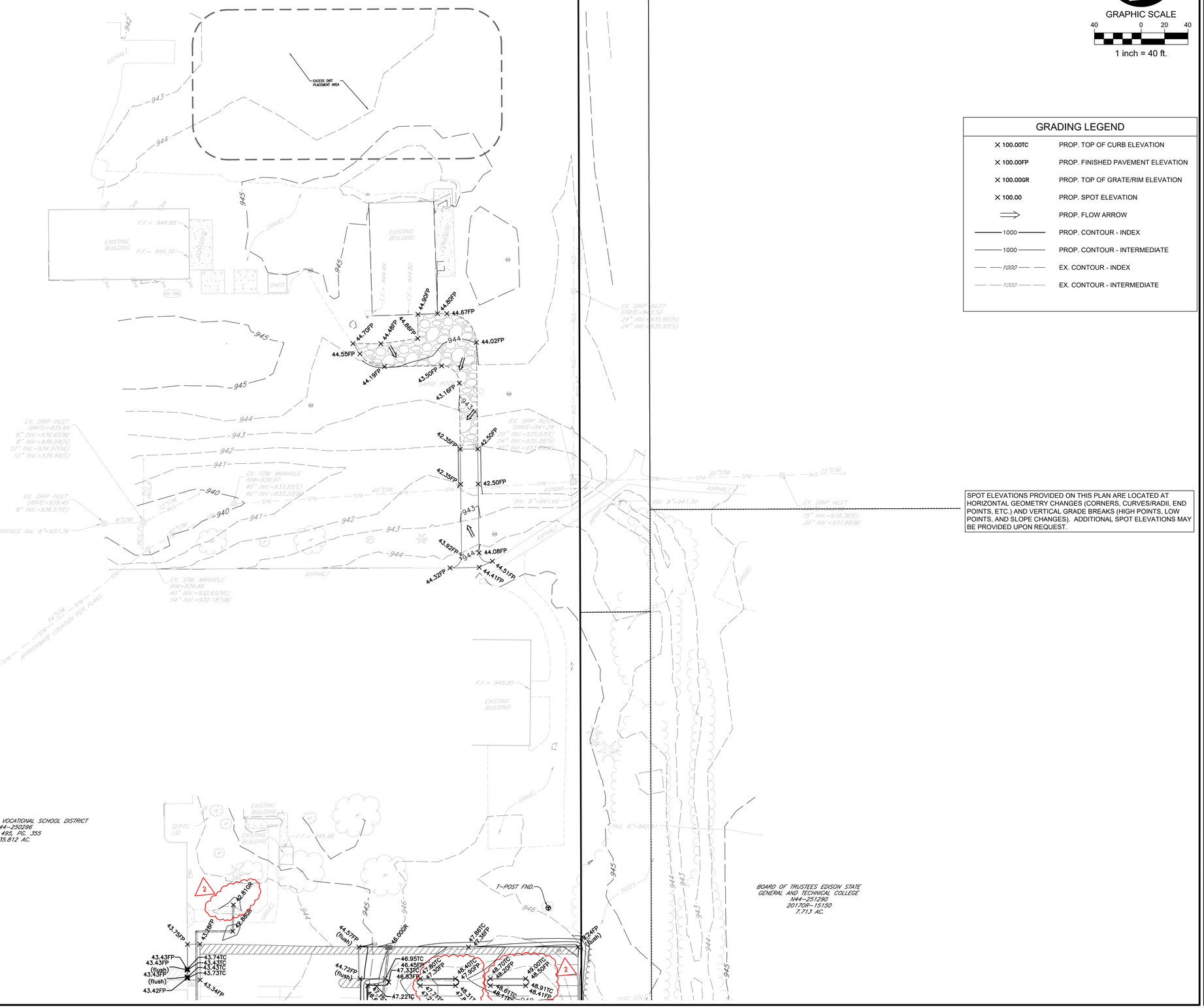
Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	
Date: 07.17.2026	
Sheet: SOUTH GRADING PLAN	
Sheet No.: C-3.0	



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

GRADING LEGEND

× 100.00TC	PROP. TOP OF CURB ELEVATION
× 100.00FP	PROP. FINISHED PAVEMENT ELEVATION
× 100.00GR	PROP. TOP OF GRATE/RIM ELEVATION
× 100.00	PROP. SPOT ELEVATION
⟹	PROP. FLOW ARROW
1000	PROP. CONTOUR - INDEX
1000	PROP. CONTOUR - INTERMEDIATE
1000	EX. CONTOUR - INDEX
1000	EX. CONTOUR - INTERMEDIATE

SPOT ELEVATIONS PROVIDED ON THIS PLAN ARE LOCATED AT HORIZONTAL GEOMETRY CHANGES (CORNERS, CURVES/RADII, END POINTS, ETC.) AND VERTICAL GRADE BREAKS (HIGH POINTS, LOW POINTS, AND SLOPE CHANGES). ADDITIONAL SPOT ELEVATIONS MAY BE PROVIDED UPON REQUEST.

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STATE OF OHIO
NATHAN D. TIBEY
77917
REGISTERED PROFESSIONAL ENGINEER

08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:

UPPER VALLEY CAREER CENTER PARKING EXPANSION

8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

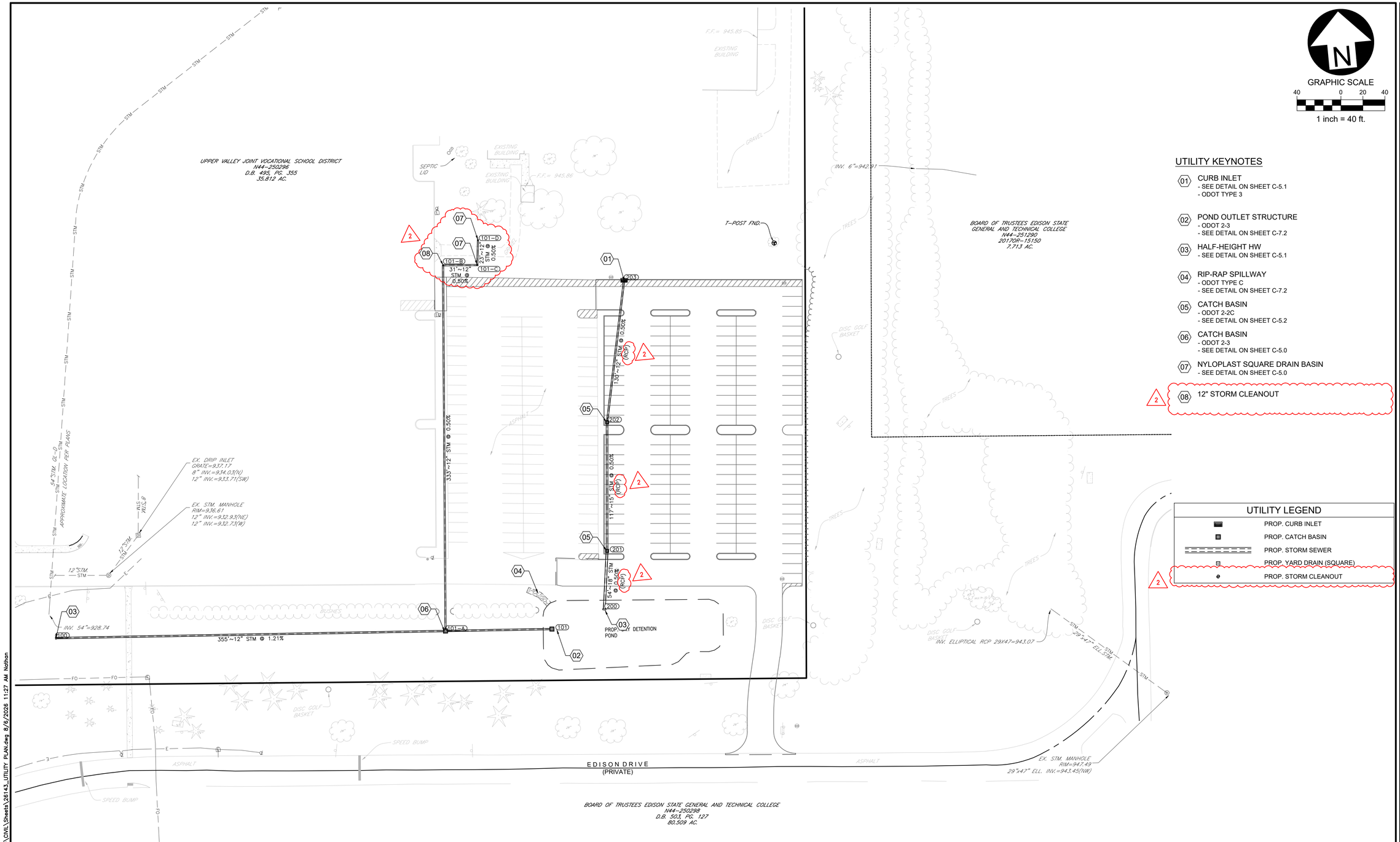
BURKHARDT ENGINEERS • SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-0060 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: NORTH GRADING PLAN

Sheet No.: C-3.1



UTILITY KEYNOTES

01 CURB INLET
- SEE DETAIL ON SHEET C-5.1
- ODOT TYPE 3

02 POND OUTLET STRUCTURE
- ODOT 2-3
- SEE DETAIL ON SHEET C-7.2

03 HALF-HEIGHT HW
- SEE DETAIL ON SHEET C-5.1

04 RIP-RAP SPILLWAY
- ODOT TYPE C
- SEE DETAIL ON SHEET C-7.2

05 CATCH BASIN
- ODOT 2-2C
- SEE DETAIL ON SHEET C-5.2

06 CATCH BASIN
- ODOT 2-3
- SEE DETAIL ON SHEET C-5.0

07 NYLOPLAST SQUARE DRAIN BASIN
- SEE DETAIL ON SHEET C-5.0

2 08 12" STORM CLEANOUT

UTILITY LEGEND

- PROP. CURB INLET
- PROP. CATCH BASIN
- PROP. STORM SEWER
- PROP. YARD DRAIN (SQUARE)
- 2 PROP. STORM CLEANOUT

STATE OF OHIO
NATHAN D. TIBEY
77917
REGISTERED PROFESSIONAL ENGINEER
08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:
UPPER VALLEY CAREER CENTER PARKING EXPANSION
8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

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Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: UTILITY PLAN

Sheet No.: C-4.0

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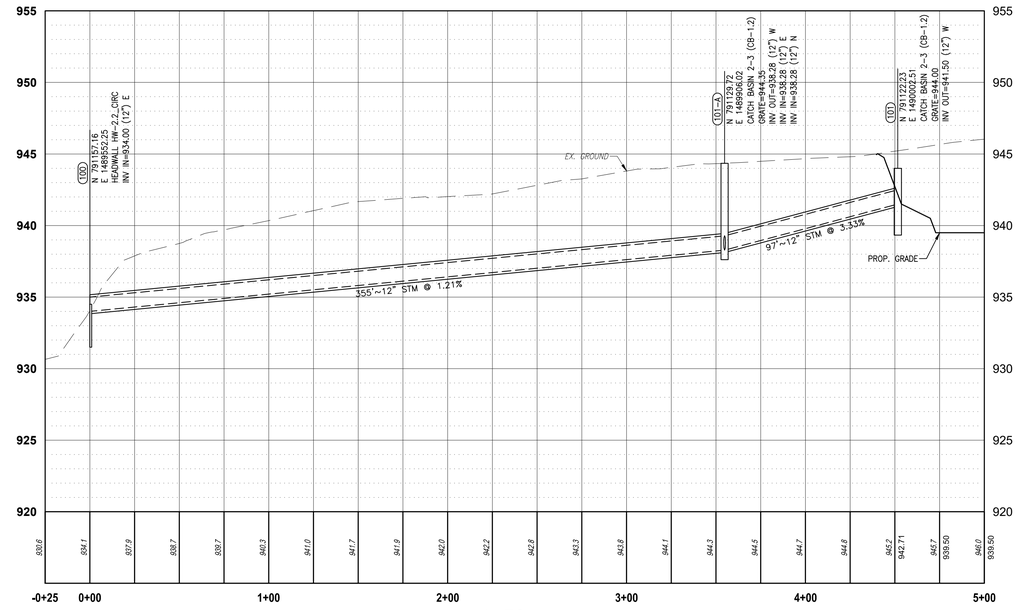
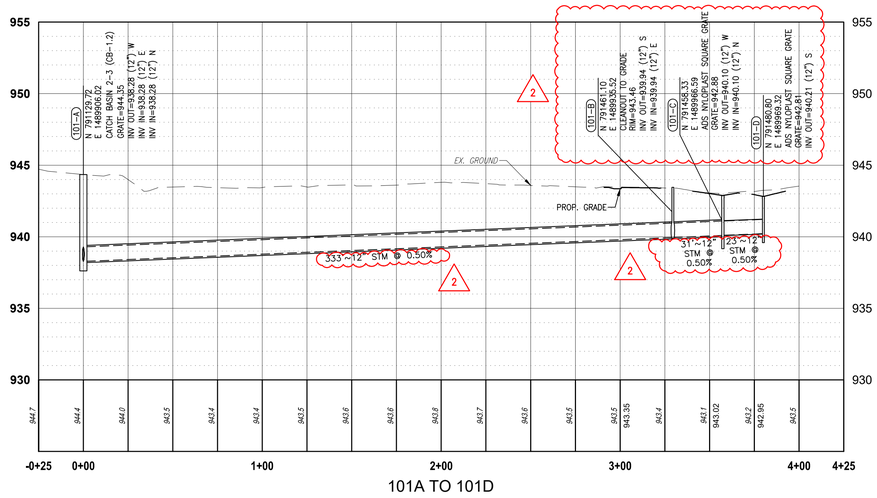
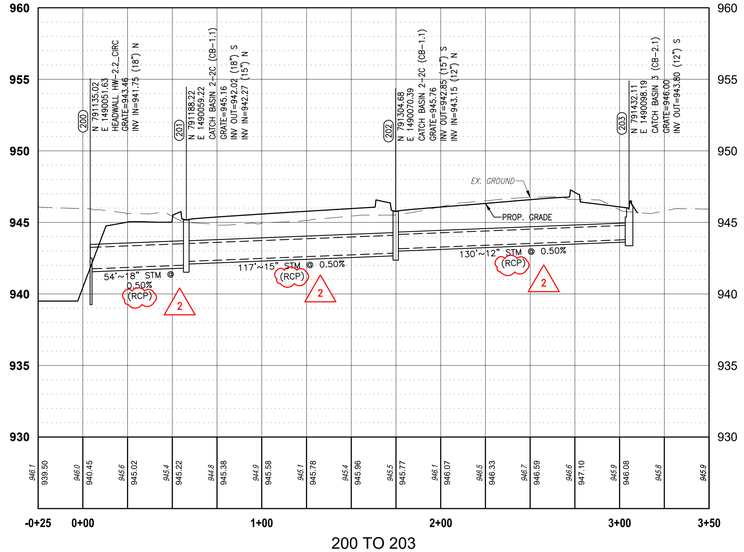


100 TO 101



101A TO 101D



200 TO 203

GRAPHIC SCALE

1 inch = 5 ft.

GRAPHIC SCALE

1 inch = 40 ft.

Know what's below. Call before you dig.

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NATHAN D. TABEY 77917 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

08/06/2026 12:37:29 PM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:

UPPER VALLEY CAREER CENTER PARKING EXPANSION

8811 CAREER DRIVE

CITY OF PIQUA, MIAMI COUNTY, OHIO

BURKHARDT ENGINEERS ▼ SURVEYORS

28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-0660 | BURKHARDTINC.COM

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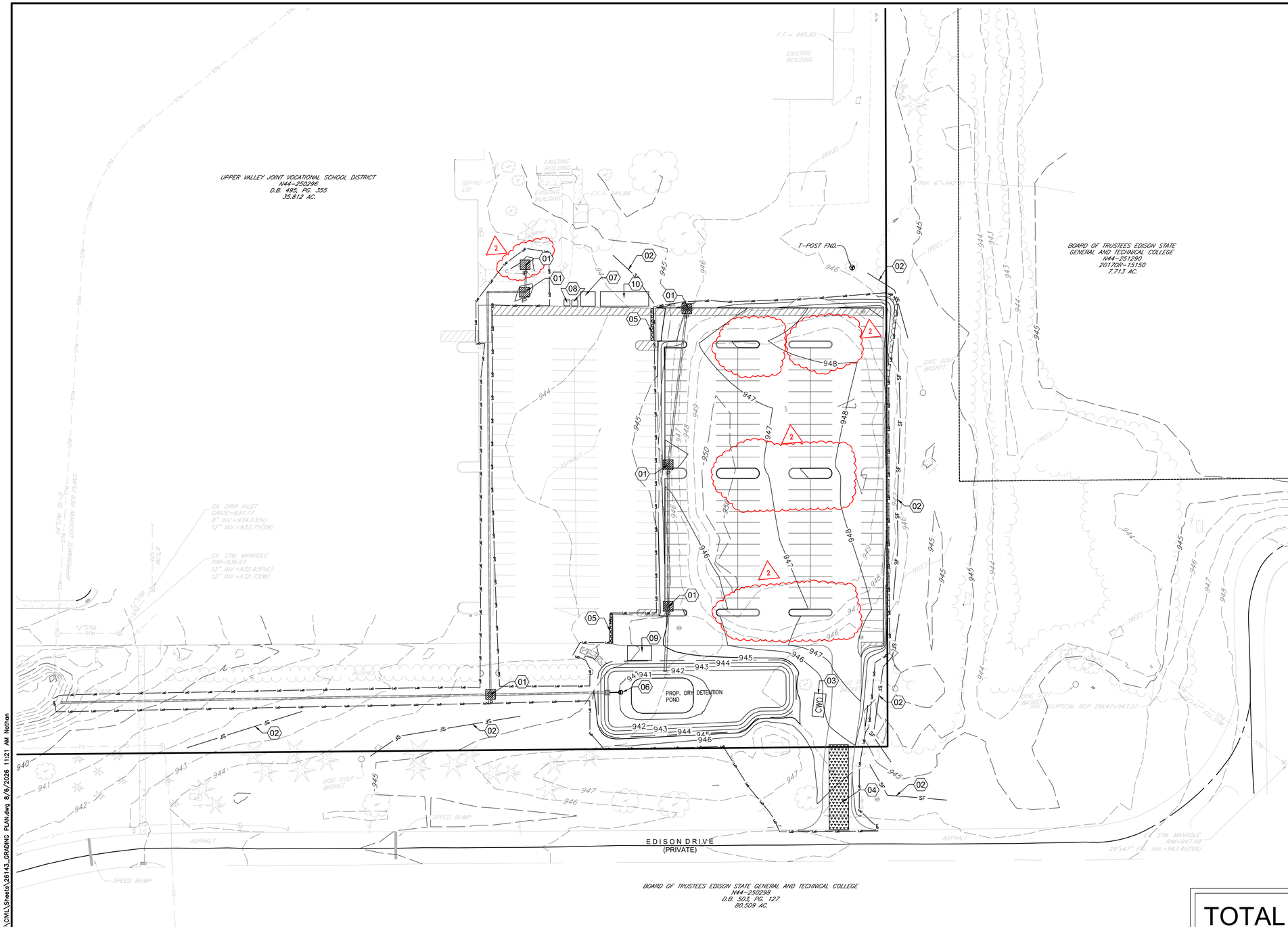
Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: UTILITY PROFILES

Sheet No.: C-4.1



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

PROPOSED EROSION CONTROL LEGEND

- IP — INLET PROTECTION — SEE DETAIL(S) ON SHEET XXXX
- SF — SILT FENCE — SEE DETAIL ON SHEET XXXX
- CWO — CONCRETE WASHOUT — SEE DETAIL ON SHEET XXXX
- CONSTRUCTION ENTRANCE — SEE DETAIL ON SHEET XXXX
- LIMITS OF DISTURBANCE
- FILTER SOCK — SEE DETAIL ON SHEET XXXX

EROSION CONTROL KEYNOTES

01 INLET PROTECTION
02 SILT FENCE
03 CONCRETE WASHOUT
04 CONSTRUCTION ENTRANCE
05 FILTER SOCK
06 FAIRCLOTH SKIMMER - SEE DETAIL ON SHEET XXX
07 TEMPORARY DUMPSTER AREA
08 PORTABLE TOILET AREA
09 VEHICLE FUELING AREA
10 JOB TRAILER AREA

TOTAL DISTURBED AREA
3.18 ± acres

Know what's below. Call before you dig.

W:\Civil 3D Projects\26143 – UVCC Parking Expansion_CAD\CIVIL\Sheets\26143_GRADING PLAN.dwg 8/6/2026 11:21 AM Nathan

STATE OF OHIO
NATHAN D. TIBEY
77917
REGISTERED PROFESSIONAL ENGINEER

08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:
UPPER VALLEY CAREER CENTER PARKING EXPANSION
8811 CAREER DRIVE
CITY OF PIQUA, MIAMI COUNTY, OHIO

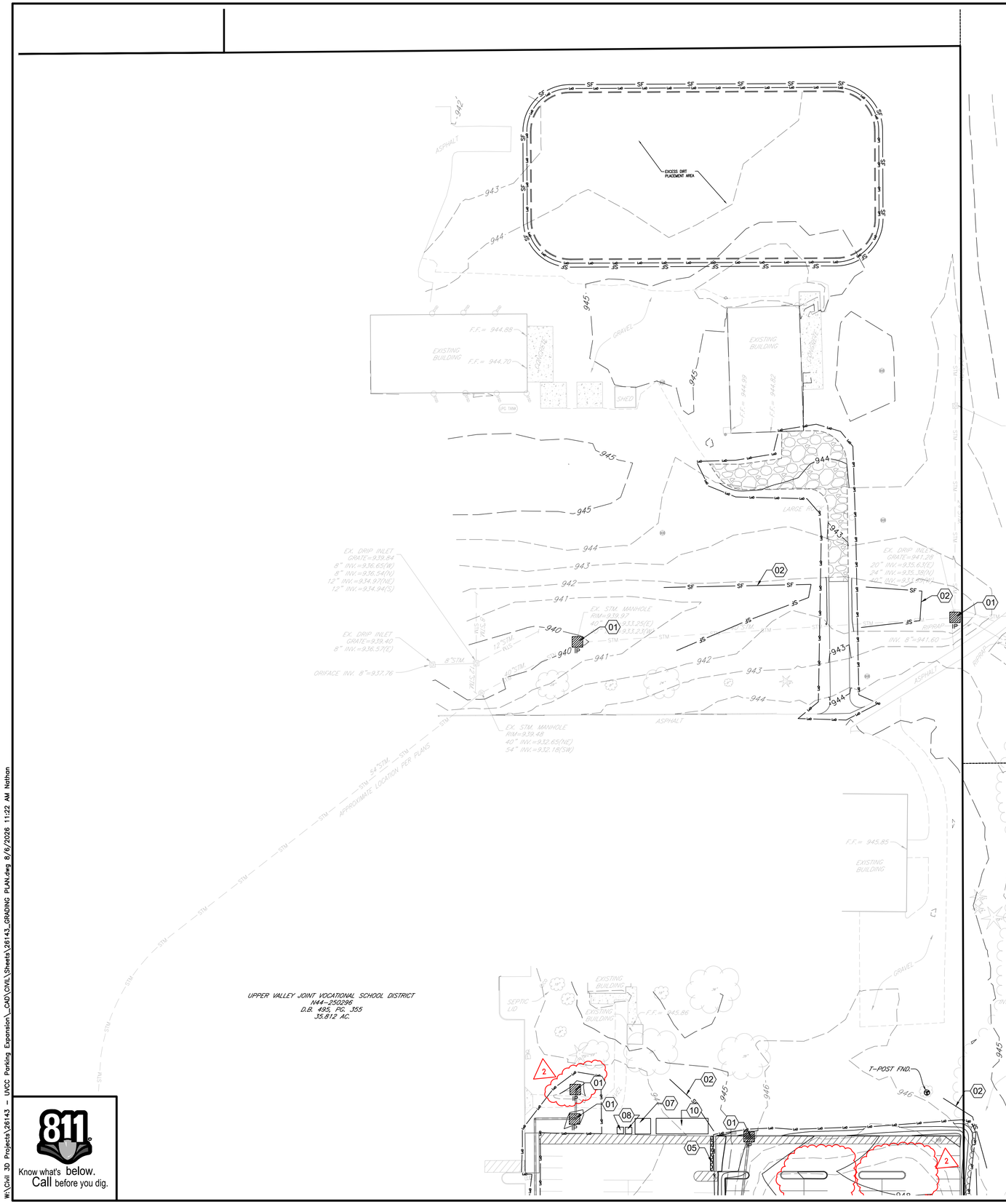
BURKHARDT
ENGINEERS ▼ SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-0060 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: SOUTH SWPPP PLAN

Sheet No.: C-6.7



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

PROPOSED EROSION CONTROL LEGEND

- IP — INLET PROTECTION — SEE DETAIL(S) ON SHEET XXXX
- SF — SILT FENCE — SEE DETAIL ON SHEET XXXX
- CWO — CONCRETE WASHOUT — SEE DETAIL ON SHEET XXXX
- CONSTRUCTION ENTRANCE — SEE DETAIL ON SHEET XXXX
- LIMITS OF DISTURBANCE
- FILTER SOCK — - SEE DETAIL ON SHEET XXXX

EROSION CONTROL KEYNOTES

01 INLET PROTECTION
02 SILT FENCE
03 CONCRETE WASHOUT
04 CONSTRUCTION ENTRANCE
05 FILTER SOCK
06 FAIRCLOTH SKIMMER - SEE DETAIL ON SHEET XXX
07 TEMPORARY DUMPSTER AREA
08 PORTABLE TOILET AREA
09 VEHICLE FUELING AREA
10 JOB TRAILER AREA

TOTAL DISTURBED AREA
3.18 ± acres

811 Know what's below. Call before you dig.

W:\Civil 3D Projects\26143 - UVCC Parking Expansion_CAD\CIVIL\Sheets\26143_GRADING PLAN.dwg 8/6/2026 11:22 AM Nathan

STATE OF OHIO — NATHAN D. TIBEY — 77917 — REGISTERED PROFESSIONAL ENGINEER

08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

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8811 CAREER DRIVE
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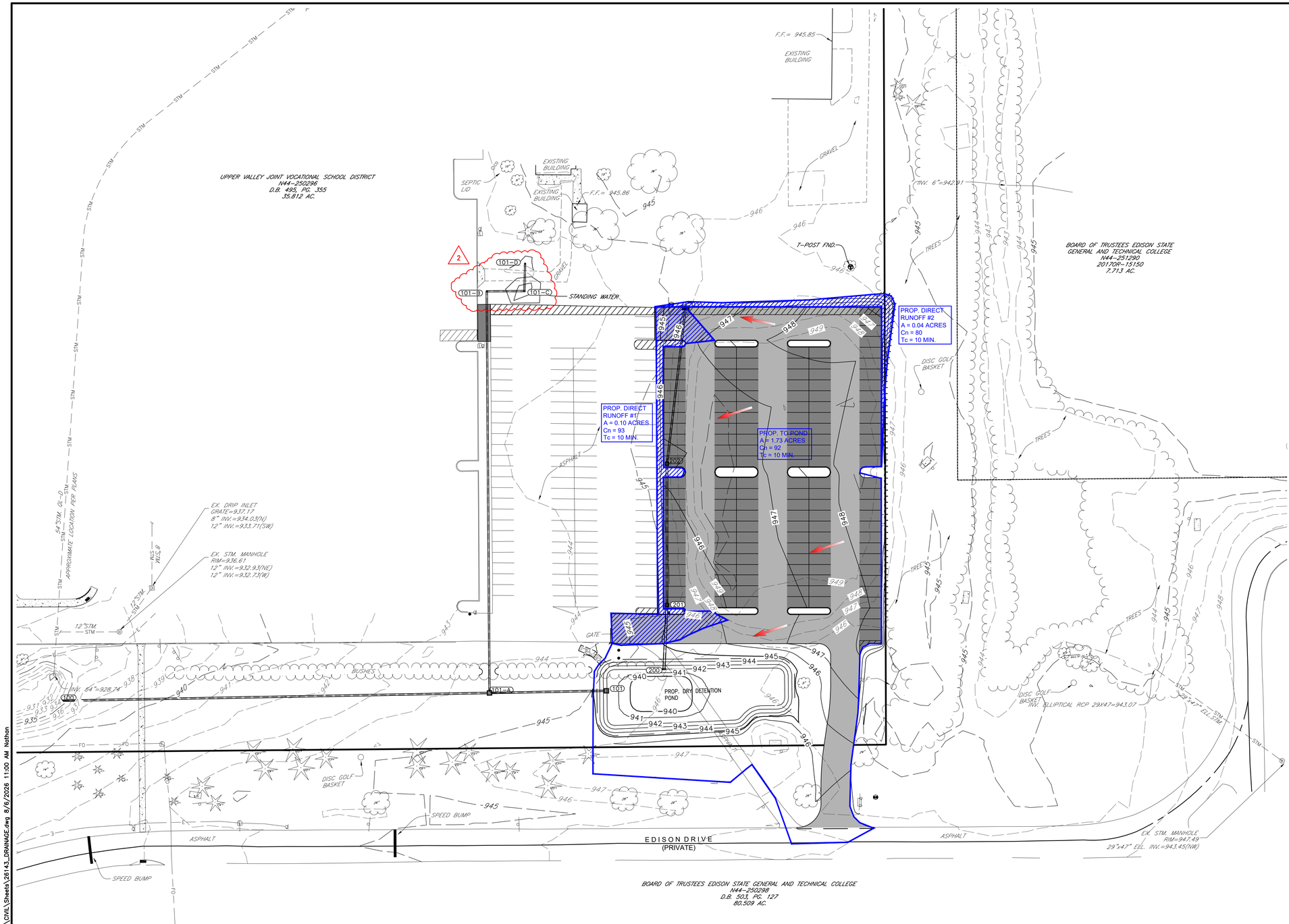
Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	
Date: 07.17.2026	
Sheet: NORTH SWPPP PLAN	
Sheet No.: C-6.8	



GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

DRAINAGE MAP LEGEND

- EX. DRAINAGE AREA
- EX. DRAINAGE AREA Tc FLOW PATH
- PROP. DRAINAGE AREA
- PROP. DIRECT RUNOFF
- PROP. DRAINAGE AREA Tc FLOWPATH
- SURFACE DRAINAGE PATTERN

STATE OF OHIO
NATHAN D. TIBEY
77917
REGISTERED PROFESSIONAL ENGINEER

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Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: PROPOSED DRAINAGE MAP

Sheet No.: C-7.1

Know what's below. Call before you dig.

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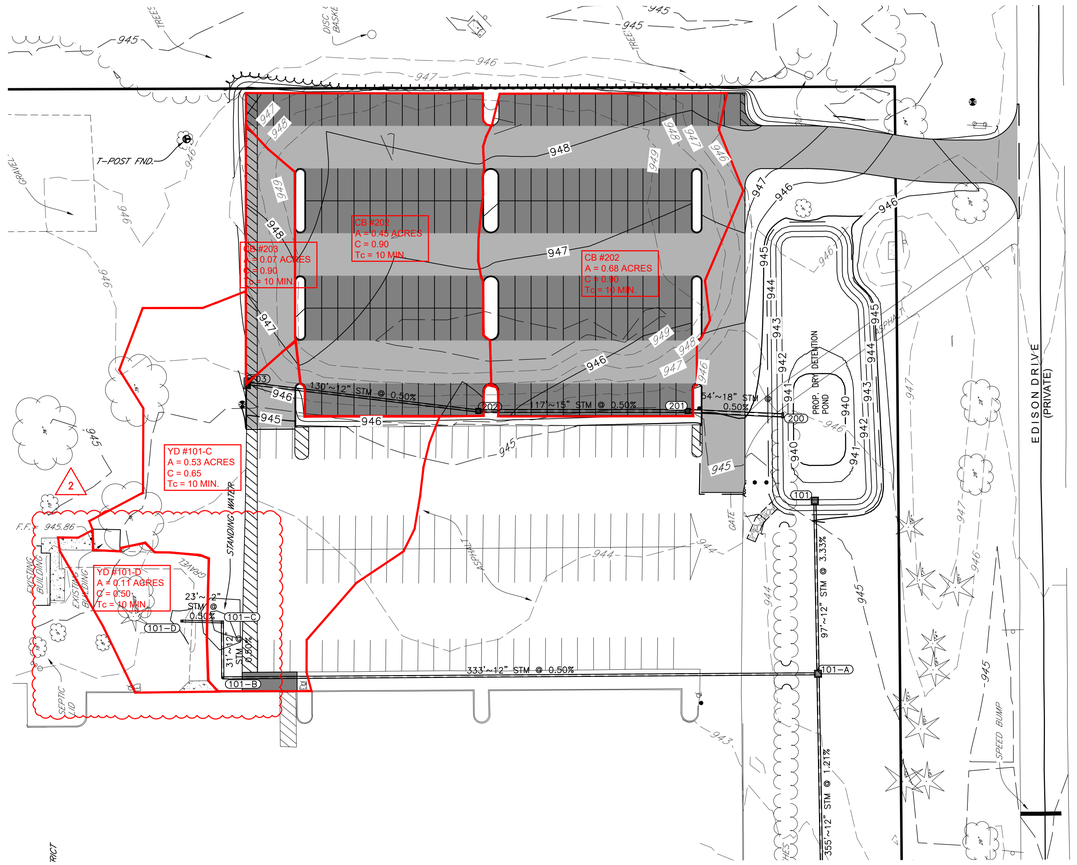


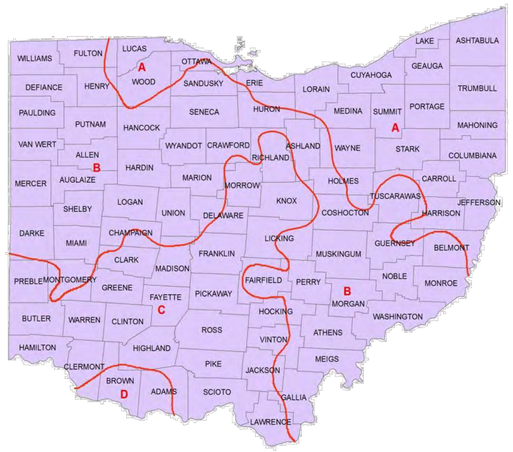
GRAPHIC SCALE

40 0 20 40

1 inch = 40 ft.

July 2022

Rainfall Intensity-Frequency-Duration Curves	1101-2
	REFERENCE SECTION 1101.2.3



Rainfall Intensity Zone Map

July 2022

Rainfall Intensity-Frequency-Duration Curves	1101-2
	REFERENCE SECTION 1101.2.3

The Rainfall Intensity-Duration-Frequency (IDF) curves are based upon precipitation data obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14. The precipitation data was collected between 4/1863 to 12/2000.

Rainfall depth varies across the State with more rainfall depth present in the Southwest portion of the state and gradually decreaseing towards the Northeast. IDF curves were developed for 4 regions across the State to simplify hydraulic design. The regions were determined by normalizing contours created from NOAA precipitation GIS data from the 10% AEP, 60 minute duration.

Federal Highway Administration Hydraulic Engineering Circular No. 12 Appendix A offers a methodology for converting IDF data points to an equation of the general form:

$i = a/(t+b)^c$

Where: i = rainfall intensity (inches/hour)
t = time of concentration (minutes)
a = constant
b = constant
c = constant

The IDF Curves can be expressed using the above general equation utilizing the constants shown below.

Intensity Zone	AEP %	Constant a	Constant b	Constant c
A	50	46.184	9.000	0.859
	20	56.985	10.250	0.851
	10	64.167	11.000	0.842
	4	66.528	11.000	0.811
	2	65.702	10.750	0.782
	1	64.489	10.500	0.754
B	50	47.987	9.000	0.859
	20	60.684	10.500	0.858
	10	73.126	12.000	0.863
	4	75.841	12.000	0.833
	2	65.621	10.000	0.781
	1	85.047	13.250	0.806
C	50	56.299	10.000	0.876
	20	67.933	11.000	0.869
	10	84.550	13.000	0.882
	4	95.736	14.000	0.871
	2	96.783	14.000	0.850
	1	80.436	11.500	0.794
D	50	57.448	10.000	0.876
	20	67.933	11.000	0.869
	10	79.192	12.000	0.864
	4	87.886	12.750	0.849
	2	95.169	13.500	0.839
	1	91.982	13.000	0.810

UVCC PARKING EXPANSION

Project No. ~ 26143

STORM SEWER CALCS

OHIO AREA: C
CAPACITY CHECK: 10 YEAR
HYDRAULIC GRADE LINE CHECK: 100 YEAR

IDF Constants: a: 84.550 (10-YEAR) b: 13.000 c: 0.882

IDF Constants: a: 80.436 (100-YEAR) b: 11.500 c: 0.794

INLET LOC. (DES. PT.)	DESCRIPTION	OVERLAND FLOW TIME	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	DOWNSTREAM INLET	TRAVEL TIME	RUNNOFF COOEF. C	DRAINAGE AREA A	CA	SUM CA	INLET/CONDUIT TRAVEL TIME	TIME OF CONCENTRATION Tc	RAINFALL INT 10-YR FREQ. I	RAINFALL INT 100-YR FREQ. I	10-YEAR RUNOFF	100-YEAR RUNOFF	PIPE DIAMETER	LOW INVERT AT STRUCTURE	DOWNSTREAM INVERT	LENGTH, L	SLOPE	MANNING COEFF., n	GRATE OR TOP ELEV.	A (PIPE AREA)	R (HYDRAULIC RADIUS)	K	FRICTION SLOPE (100-YEAR)	Q/Qfull (100-YEAR)	y/Do	NORMAL DEPTH (100-YEAR)	TAILWATER ELEV (100-YEAR)	Hif (HEAD LOSS DUE TO FRICTION)	HYDRAULIC GRADE LINE	HGL CHECK (100-YEAR)	JUST FULL VELOCITY	JUST FULL CAPACITY	CAPACITY CHECK (10-YEAR)	PERCENT CAPACITY (10-YEAR)
		MIN.					MIN		ACRES			MIN.	MIN.	IN/HR	IN/HR	CFS	CFS	IN.	FT.	FT.	FT.	%		FT	SF	FT		FT/FT	CFS/CFS	FT/FT	FT.	FT.	FT.	FT.	OK OR BAD	FPS	CFS	OK OR BAD	%
X	X	X	X	X	X	X		X	X									X	X	X	X	X	X	X							X							
1	CB #203	10				2	**0.62**	0.90	0.070	**0.063**	**0.063**	**0.00**	**10.00**	**5.32**	**7.04**	**0.34**	**0.44**	12	943.80	943.15	130.0	0.50%	0.012	946.00	**0.785**	**0.250**	**38.597**	**0.000**	**0.051**	**0.270**	**0.270**	943.85	**0.017**	**944.115**	OK	**3.48**	**2.74**	OK	**12.3%**
2	CB #202	10	1			3	**0.48**	0.90	0.450	**0.405**	**0.468**	**0.62**	**10.62**	**5.20**	**6.88**	**2.43**	**3.22**	15	942.85	942.27	117.0	0.50%	0.012	945.76	**1.227**	**0.313**	**69.981**	**0.002**	**0.202**	**0.580**	**0.725**	943.85	**0.248**	**944.098**	OK	**4.04**	**4.96**	OK	**49.0%**
3	CB #201	10	2			OUTFALL	**0.21**	0.90	0.680	**0.612**	**1.080**	**0.48**	**11.10**	**5.11**	**6.76**	**5.51**	**7.31**	18	942.02	941.75	58.0	0.50%	0.012	945.16	**1.767**	**0.375**	**113.797**	**0.004**	**0.282**	**0.740**	**1.110**	943.85	**0.239**	**943.850**	OK	**4.57**	**8.07**	OK	**68.4%**
4	YD #101-D	10				5	**0.11**	0.65	0.530	**0.345**	**0.345**	**0.00**	**10.00**	**5.32**	**7.04**	**1.83**	**2.42**	12	940.21	940.10	23.0	0.50%	0.012	942.81	**0.785**	**0.250**	**38.597**	**0.004**	**0.276**	**0.730**	**0.730**	939.00	**0.091**	**940.940**	OK	**3.48**	**2.74**	OK	**67.0%**
5	YD #101-C	10	4			6	**0.15**			**0.000**	**0.345**	**0.11**	**10.11**	**5.30**	**7.01**	**1.83**	**2.42**	12	940.10	939.94	31.0	0.50%	0.012	942.88	**0.785**	**0.250**	**38.597**	**0.004**	**0.275**	**0.720**	**0.720**	939.00	**0.121**	**940.820**	OK	**3.48**	**2.74**	OK	**66.7%**
6	CO #101-B	0	5			OUTFALL	**1.59**	0.00	0.000	**0.000**	**0.345**	**0.15**	**10.26**	**5.27**	**6.97**	**1.82**	**2.40**	12	939.94	938.28	333.0	0.50%	0.012	943.46	**0.785**	**0.250**	**38.597**	**0.004**	**0.274**	**0.720**	**0.720**	939.00	**1.290**	**940.660**	OK	**3.48**	**2.74**	OK	**66.7%**

2

Know what's below. Call before you dig.

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STATE OF OHIO — NATHAN D. TIBEY — 77917 — REGISTERED PROFESSIONAL ENGINEER

08/06/2026 11:35:46 AM

Item	Description	Date
1	BID & PERMIT	07/17/2026
2	ADDENDUM 1	08/06/2026

SITE DEVELOPMENT PLANS FOR:

UPPER VALLEY CAREER CENTER PARKING EXPANSION

8811 CAREER DRIVE

CITY OF PIQUA, MIAMI COUNTY, OHIO

BURKHARDT ENGINEERS • SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-0060 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: NDT	Proj: 26143
Draw: NDT	Dwg:
Check: SRF	Tab:
Scale: SEE SHEET	

Date: 07.17.2026

Sheet: STORM SEWER CALCULATIONS

Sheet No.: C-7.3

GENERAL NOTES

A. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2024 OHIO BUILDING CODE, INCLUDING REFERENCED CODES AND STANDARDS, ALL LOCAL AND STATE CODES AND MEET APPROVAL OF AUTHORITIES HAVING JURISDICTION.

B. BIDDERS SHALL INSPECT PROJECT SITE EXISTING CONDITIONS DURING BIDDING.

C. INCLUDE PAYMENT OF ALL PERMIT AND INSPECTION FEES AND OBTAIN AN ELECTRICAL PERMIT AND SECURE INSPECTION AND APPROVAL OF THE CODE OFFICIAL.

D. SUBMIT AN ELECTRONIC COPY OF SUBMITTAL DATA AND DESCRIPTIVE LITERATURE IN .PDF FORMAT FOR ALL FIXTURES AND EQUIPMENT.

E. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND REPRESENT THE BEST PRACTICES OF THE INDUSTRY.

F. COORDINATE INSTALLATION WITH OTHER TRADES; PROVIDE OFFSETS AS REQUIRED.

G. INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

H. COORDINATE EACH ROUGH-IN INSTALLATION REQUIREMENTS AND LOCATIONS WITH OTHER TRADES, ACTUAL EQUIPMENT PROVIDED AND FIELD CONDITIONS BEFORE PERFORMING WORK.

I. ALL EQUIPMENT AND MATERIAL REQUIRED FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT.

ELECTRICAL SPECIFICATIONS

A. ALL ELECTRICAL WIRING, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE 2024 OHIO BUILDING CODE, 2023 NATIONAL ELECTRIC CODE AND LOCAL CODES, LATEST ADOPTED EDITIONS.

B. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. APPROVED AND COMMERCIAL GRADE.

C. SUBMIT ELECTRONIC SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING FOR THE FOLLOWING EQUIPMENT: LIGHT FIXTURES, PANELBOARD(S), CIRCUIT BREAKER(S) AND WIRING DEVICES.

D. ALL POWER AND SYSTEMS WIRING SHALL BE INSTALLED IN CONDUIT RACEWAYS UNLESS OTHERWISE SPECIFICALLY NOTED.

E. THE ARCHITECT SHALL RESERVE THE RIGHT TO MAKE MINOR ADJUSTMENT IN LOCATIONS OF SYSTEM RUNS AND COMPONENTS WHERE THEY CONSIDER SUCH ADJUSTMENTS DESIRABLE IN THE INTEREST OF CONCEALING WORK OR PRESENTING A BETTER APPEARANCE WHERE EXPOSED. ANY SUCH CHANGES SHALL BE ANTICIPATED AND REQUESTED SUFFICIENTLY IN ADVANCE SO AS TO NOT CAUSE EXTRA WORK, OR UNDULY DELAY THE WORK. COORDINATE WORK IN ADVANCE WITH ALL OTHER TRADES AND REPORT IMMEDIATELY ANY DIFFICULTIES WHICH CAN BE ANTICIPATED. WHERE ANY SYSTEM RUNS AND COMPONENTS ARE SO PLACED AS TO CAUSE OR CONTRIBUTE TO A CONFLICT, IT SHALL BE READJUSTED AT THE EXPENSE OF THE CONTRACTOR CAUSING SUCH CONFLICT. THE ARCHITECT'S DECISION SHALL BE FINAL IN REGARD TO ARRANGEMENT OF EQUIPMENT, FIXTURES, ETC., WHERE CONFLICT ARISES.

F. ALL WIRING SHALL UTILIZE MIN. #12 AWG SIZE COPPER THHN/THWN STRANDED CONDUCTORS WITH INSULATION SUITABLE FOR THE APPLICATION. CONDUCTORS FOR ELECTRIC RADIENT HEATERS SHALL BE LISTED FOR THE APPLICATION.

G. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT AND SEPARATE GREEN COLORED INSULATED COPPER GROUNDING CONDUCTOR FOR EACH BRANCH CIRCUIT. NEUTRAL WIRES FOR 120 VOLT CIRCUITS SHALL BE WHITE AND FOR 277 VOLT CIRCUITS SHALL BE GRAY COLOR.

H. ALL CONDUCTORS SHALL BE INSTALLED IN MIN. 0.75" SIZE CONDUIT. EMT SHALL BE UTILIZED FOR INTERIOR FEEDERS AND BRANCH CIRCUITRY. LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR ALL OTHER FINAL CONNECTIONS TO MOVEABLE/VIBRATING EQUIPMENT. ALL EXTERIOR CONDUIT SHALL BE RIGID METAL CONDUIT.

I. EMT CONDUIT FITTINGS SHALL BE ALL STEEL COMPRESSION OR SETSCREW TYPE.

J. ALL CONDUITS INSTALLED ON EXTERIOR SHALL BE RIGID GALVANIZED TYPE WITH THREADED STEEL FITTINGS. UTILIZE COMPATIBLE NEMA 3R TYPE BOXES FOR ALL EXTERIOR FIXTURE AND OUTLET BOXES.

K. ALL CONDUIT, FITTINGS, BENDS, ETC. SHALL BE PROPERLY SUPPORTED PER NEC AND NEATLY INSTALLED.

L. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS TO AVOID INTERFERENCE WITH THE BUILDING COMPONENTS, EXISTING UTILITIES, EQUIPMENT, ETC.

M. PERFORM ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL SYSTEMS. PATCHING SHALL BE CONSISTENT WITH ADJACENT SURFACES.

N. PROVIDE ONE YEAR COMPLETE WARRANTY (PARTS, MATERIALS, LABOR). START OF WARRANTY FROM DATE OF BENEFICIAL OCCUPANCY AGREED TO IN WRITING.

GENERAL LEGEND

EC	ELECTRICAL CONTRACTOR.
GC	GENERAL CONTRACTOR.
NIC	NOT IN CONTRACT.
(E)	EXISTING.
ES	EQUIPMENT SUPPLIER.
EM	EMERGENCY.
MH	MOUNTING HEIGHT.
S	SURFACE MOUNTED.
WP	WEATHER PROOF.
⟨3⟩	NOTE SYMBOL – APPLIES ONLY TO SHEET ON WHICH IS SHOWN.
(2)	DETAIL NOTE SYMBOL – APPLIES ONLY TO DETAIL ON WHICH IS SHOWN.
- - - - -	ITEM TO BE REMOVED.
———	EXISTING ITEM TO REMAIN.
———	NEW ITEM.

ELECTRICAL LEGEND

	ELECTRICAL CONNECTION REQUIRED.
H1 B1 a b	LIGHTING FIXTURE: CAPITAL LETTER DENOTES FIXTURE TYPE. LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.
— E —	EXISTING WIRE & CONDUIT.
A-1&2	EACH ARROWHEAD REPRESENTS ONE COMPLETE CIRCUIT; CAPITAL LETTER DENOTES PANEL; NUMBER DENOTES CIRCUIT.
———	WIRE & CONDUIT IN WALL OR ABOVE CEILING.
- - - - -	WIRE & CONDUIT IN OR BELOW SLAB OR BELOW GRADE.
J	JUNCTION BOX.
	DASHED SYMBOL INDICATES THAT PARTICULAR OUTLET OR DEVICE TO BE REMOVED AND CIRCUITRY MADE CONTINUOUS WHERE REQUIRED.
E	EXISTING OUTLET OR DEVICE TO REMAIN, MAINTAIN EXISTING CIRCUITRY.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" M.H.).
D	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, (46" M.H.). D = DOUBLE DUPLEX.
WP/GF	20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" M.H.), WITH HUBBELL #WP26M CAST ALUMINUM "WHILE-IN-USE" COVER.
	SINGLE POLE WALL SWITCH (46" M.H.).

LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	LUMINAIRE TYPE: LED	FLUORESCENT	HALOGEN	WATTS/FIXTURE	LUMENS / COLOR TEMP	FIXTURE VOLTAGE	MANUFACTURER & CATALOG NO.	OTHER ACCEPTABLE MANUFACTURERS	DIFFUSING MEDIA	TRIM COLOR: WHITE	BLACK	ALUMINUM	BRONZE	STANDARD	SEE NOTE	MOUNTING	SIZE: DIAMETER OR WIDTH	LENGTH	DEPTH	DIAMETER	SEE NOTE	SPARE FIXTURE (QTY)
PL	•		1	219	29420 LUMENS/ 4000K	480	LITHONIA DSX2-LED-P3-40K-70CRI-T3M-HVOLT -RPA- DDBXD REPLACEMENT LUMINAIRE	BEACON	CUTOFF CLEAR LENS				•			EXISTING 25' POLE	14	30	3			1,2
PL2	•		1	219	29420 LUMENS/ (X2) 4000K	480	LITHONIA DSX2-LED-P3-40K-70CRI-T3M-HVOLT -RPA- DDBXD (QTY 2) AND LITHONIA RSS-25-6E-DM28AS-VD-DDBXD ROUND STRAIGHT STEEL POLE (HADCO POLE EQUAL)	BEACON	CUTOFF CLEAR LENS				•			25' POLE	14	30	3			

MOUNTING: S - SURFACE; R - RECESSED; SM - STEM MTD.; WM - WALL MTD.; C - CHAIN MTD.; UC - UNDER CAB; CS - CLG. SURF.

LIGHTING FIXTURE NOTES:
1. REPLACEMENT LUMINAIRES INSTALLED ON EXISTING 25' LITHONIA 6" DIA. POLE.
2. PROVIDE MOUNTING FOR EXISTING 6" DIA. ROUND STRAIGHT ALUMINUM POLE.

STATE OF OHIO
JEFFREY D ZELINSKI
63822
JEFFERY D. ZELINSKI, LICENSE #63822
EXPIRATION DATE 12/31/2027

REVISIONS:
1 08-6-26 ADDENDUM 1

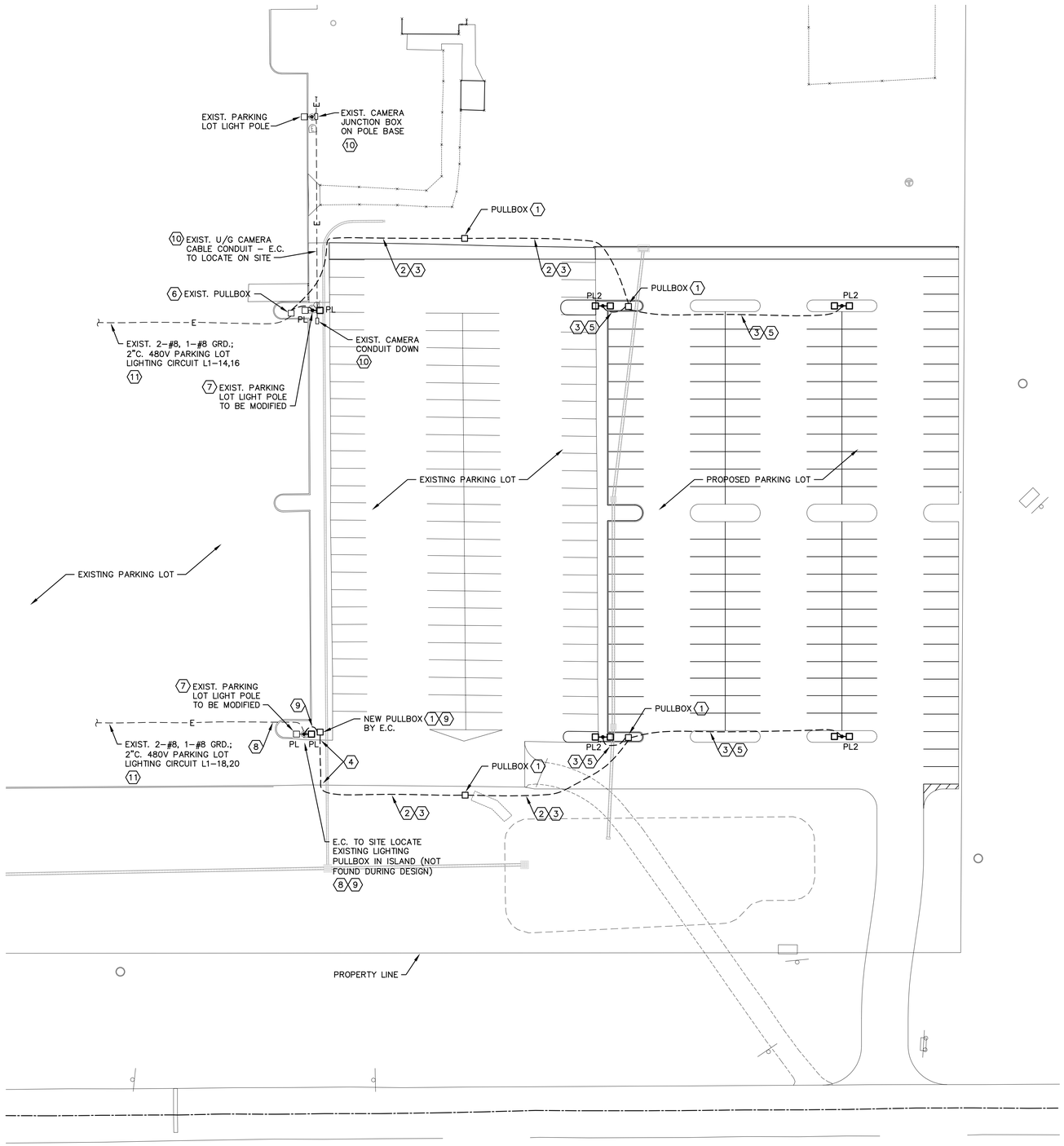
PRINTING:
7-22-26 CONSTRUCTION DOCUMENTS

UPPER VALLEY CAREER CENTER
PARKING LOT EXPANSION
8811 CAREER DRIVE
PIQUA, OHIO 45356

PROJECT NO: 263321.00
CHECKED BY: MM
DRAWN BY: DC
DATE: 07-22-26

LEVIN PORTER ARCHITECTS
3011 NEWMARK DRIVE
MIAMISBURG, OHIO 45342
www.levin-porter.com
P: 937.224.1931
F: 937.224.3091
Levin Porter Associates Inc. dba Levin Porter Architects

DRAWING NUMBER
E0.1

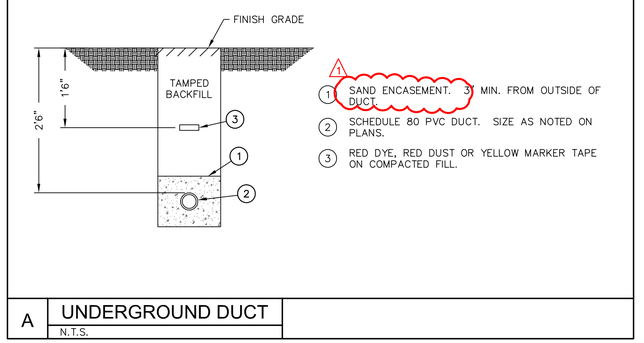


SITE PLAN

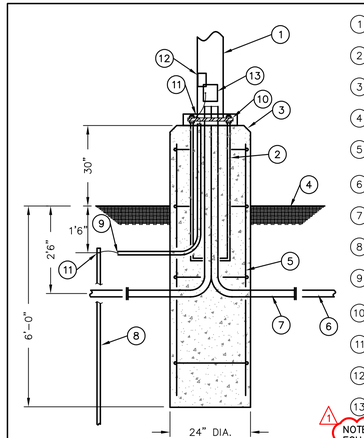
SCALE: 1" = 30'-0"

CONSTRUCTION NOTES

1. PRECAST COMPOSITE PULLBOX AND COVER 12"x12"x12"DP WITH HEAVY DUTY COVER IMPRINTED "ELECTRIC". QUAZITE PG1212BA12 WITH PG1212CAOO BOLTED COVER IMPRINTED "ELECTRIC".
2. DIRECT BURIAL SCHEDULE 80 PVC CONDUIT: 1.5"C. SIZE UNLESS OTHERWISE NOTED.
3. ALL WIRING #8 AWG SIZE (INCLUDING GROUND) SERVING EXTERIOR FIXTURES.
4. BORE OR CUT AND PATCH DRIVE FOR NEW CONDUIT(S).
5. DIRECT BURIED 1" SCHEDULE 80 PVC CONDUIT FROM PULLBOX TO POLE FIXTURE.
6. TERMINATE NEW CONDUIT INTO EXISTING PULLBOX.
7. REMOVE (1) EXISTING 400 WATT METAL HALIDE LUMINAIRE AND INSTALL TWO NEW TYPE 'PL' LUMINAIRIES (1 IN EXISTING POSITION; 1 – 180 DEGREES OPPOSITE FACING EAST. DRILL POLE AS REQUIRED.
8. E.C. TO TRACE EXISTING 2–1"C. TO POLE IN FIELD LOCATE EXISTING OUTDOOR LIGHTING PULLBOX IN ISLAND – CONNECT NEW 1.5"C. TO EXISTING PULLBOX IF FOUND.
9. IF EXISTING PULLBOX IS NOT FOUND E.C. TO PROVIDE NEW PULLBOX IN ISLAND AND EXTEND 1" R.G.C. FROM PULLBOX ATTACHED TO EXISTING CONCRETE BASE AND 1" L–B FITTING INTO EXISTING POLE. CONNECT 2–#8; 1–#8 GRD. TO EXISTING 480V SUPPLY CIRCUIT AND EXTEND TO NEW PULLBOX AND NEW POLE FIXTURES.
10. E.C. TO SITE LOCATE EXISTING U/G CAMERA CABLE CONDUIT PRIOR TO EXCAVATION AND PROTECT FROM DAMAGE.
11. EXISTING 480V–1PH PARKING LOT LIGHTING SUPPLY CIRCUIT FROM 480Y/277V PANELBOARD IN MAIN ELECTRIC ROOM. CIRCUIT SERVES FOUR (4) 'EXISTING TO REMAIN' 400 WATT METAL HALIDE FIXTURES AND SIX (6) NEW LED FIXTURES. TOTAL LOAD = (4 x 450 = 1800 VA EXISTING) + (6 x 210 = 1260 VA NEW) TOTAL 3060 VA; 6.4 AMP LOAD ON 480 VOLT 20A CIRCUIT.



A UNDERGROUND DUCT
N.T.S.



1 SEE FIXTURE SCHEDULE FOR POLE AND FIXTURE ASSEMBLY.
2 ANCHOR BOLTS BY POLE SUPPLIER, WELD TO REBARS.
3 CHAMFERED EDGE.
4 FINISH GRADE, COMPACT TO 95%.
5 SIX #4 REINFORCING BARS VERTICALLY ON #3 STIRRUPS AT 18" O.C.
6 PVC CONDUIT, SCHEDULE 40.
7 RIGID GALVANIZED STEEL CONDUIT.
8 GROUND ROD.
9 0.50" PVC GROUND CONDUCTOR SLEEVE WITH #8 GROUND CONDUCTOR.
10 BASE PLATE, LEVELING NUTS, GROUT BASE.
11 EXOTHERMICALLY WELDEED GROUND CONNECTION.
12 LIGHTNING ARRESTOR.
13 HANDHOLE.
1 NOTE: PRECAST CONCRETE POLE BASES OF EQUAL DIMENSIONS ARE ACCEPTABLE.

B TYPICAL POLE BASE DETAIL - RAISED
N.T.S.

0 15 30 60 90 120 150
SCALE: 1"=30'–0"

STATE OF OHIO
JEFFREY D ZELINSKI
63822
JEFFERY D. ZELINSKI, LICENSE #63822
EXPIRATION DATE 12/31/2027

REVISIONS:
1 08-6-26 ADDENDUM 1
PRINTING:
7-22-26 CONSTRUCTION DOCUMENTS

UPPER VALLEY CAREER CENTER
PARKING LOT EXPANSION
8811 CAREER DRIVE
PIQUA, OHIO 45356

PROJECT NO: 263321.00
CHECKED BY: MM
DRAWN BY: DC
DATE: 07-22-26

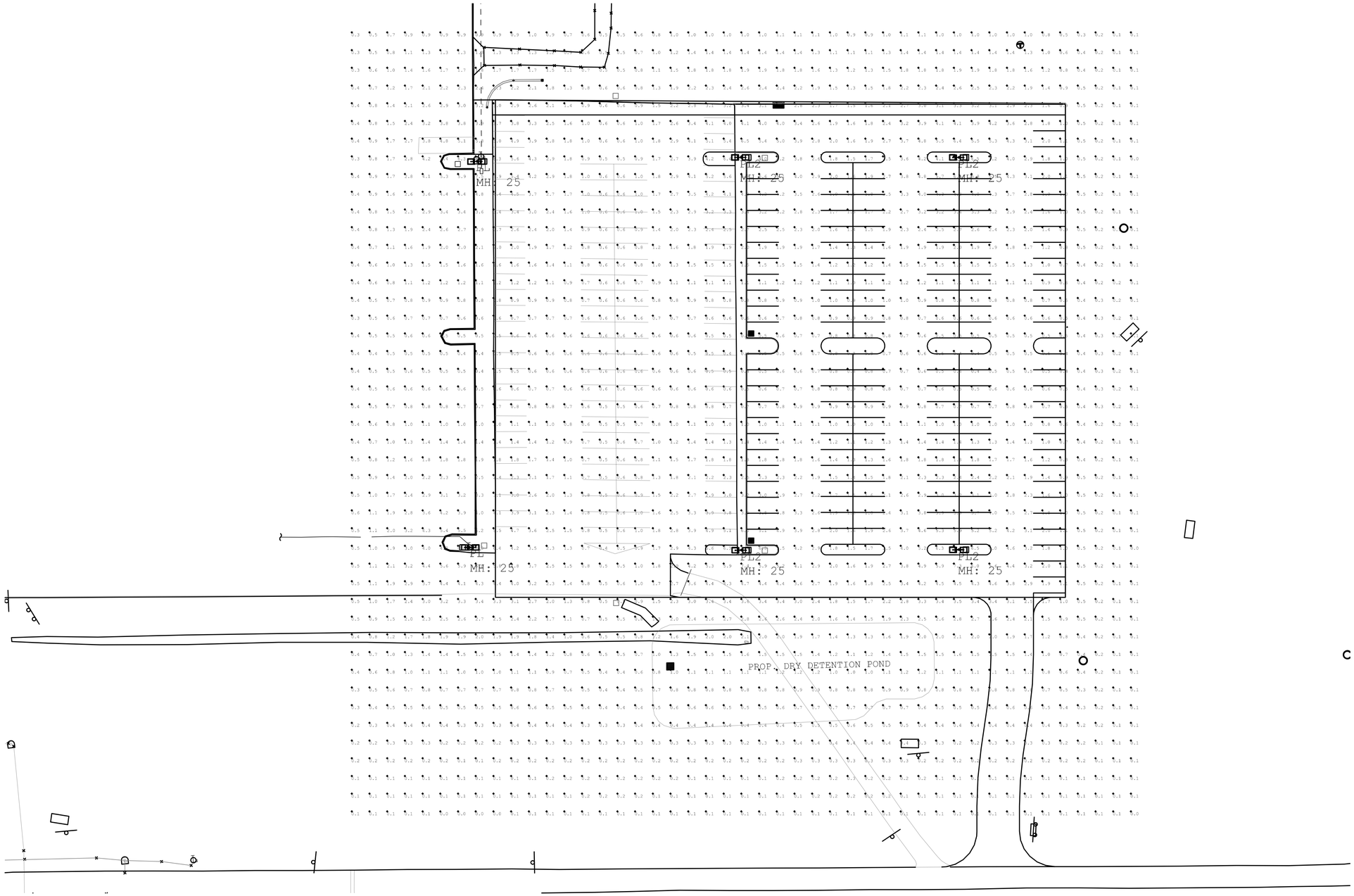
LEVIN PORTER ARCHITECTS
2011 DEUTWAY DRIVE
MIAMISBURG, OHIO 45342
www.Levin-porter.com
Levin Porter Associates Inc. dba Levin Porter Architects
O: 937.224.1831
F: 937.224.3091

DRAWING NUMBER
E1.0

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Total Watts	Lum. Lumens
	2	PL	Back-Back	0.900	2 x DSX2 LED P3 40K 70CRI T3M	219.4	877.6	29420
	4	PL2	Back-Back	0.900	2 x DSX2 LED P3 40K 70CRI T3M	219.4	1755.2	29420

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Site	Illuminance	Fc	1.45	8.3	0.0	N.A.	N.A.
Lot	Illuminance	Fc	1.95	8.3	0.4	4.88	20.75

Note: Lights on 25ft pole.



PHOTOMETRIC CALCULATION

SCALE: N.T.S.

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1 E2.0