# ADDENDUM NO. 03

**November 12, 2026**

**Fall Creek Intermediate Lot Replacement**
**12011 Olio Road**
**Fishers, IN 46037**

## TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated October 15, 2026, by krM Architecture. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 3-1 – 3-2, Geotechnical Report, Guideline Schedule, Exterior Site Logistics Plan, and revised Drawing Sheets C100, C102 and C202.

### A. SECTION 00 20 00 – INFORMATION AVAILABLE TO BIDDERS

1. Reference Geotechnical Report included herein.

### B. SECTION 00 01 12 – MULTIPLE CONTRACT SUMMARY

3.03 Bid Categories

A. BID CATEGORY NO. 01 – SITE IMPROVEMENTS

Add the following Clarifications:

8. Contractor is to disregard the note on the Demolition Series Drawings that reads, *"Contractor shall remove geotextile fabric if required. No geotextile fabric was encountered in the Geotech investigations. If geotextile is found in pavement locations with full depth reclamation (FDR) the geotextile must be removed."* Construction Manager is preparing an allowance if this situation arises.
9. Contractor is responsible for removal of river rock from existing landscape islands in preparation for new concrete at these locations.

10. Contractor is to visually survey and photo document all existing concrete curb to remain. Construction Manager is to be notified of specific locations where existing curbs are damaged prior to commencement of any work. Agreement regarding existing conditions will be established by Prime Subcontractor, Construction Manager, Design Team and Owner during pre-installation meeting.
11. Regarding Clarification #5, the area designated for cleaning is only concrete included within this project scope. The intent is to present a clean and uniform finish product for review during punchlist.
12. It is reasonably assumed the FDR process may interact with existing below grade utilities or conduits. The intent of Clarification #4 is to locate these conflicts and present questions with viable solutions to the Design Team via Request for Information early in construction. Directive for work in field will be provided via RFI response.

**C. <u>SECTION 00 01 32 – SCHEDULES AND REPORTS</u>**

1. Reference Guideline Schedule and Exterior Logistics Plan included herein.

# GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED PAVEMENT IMPROVEMENTS
FALL CREEK INTERMEDIATE SCHOOL
12011 OLIO ROAD
FISHERS, INDIANA

ATLAS PROJECT NO. 170GC01699

JANUARY 17, 2024

PREPARED FOR:

krM ARCHITECTURE
1515 NORTH PENNSYLVANIA STREET
INDIANAPOLIS, IN 46202

ATTENTION: MS. WINIFRID WILLIAMS, AIA, LEED AP+BC
ARCHITECT, PARTNER

January 17, 2024

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Ms. Winifrid Williams, AIA, LEED AP+BC
Architect, Partner
krM Architecture
1515 North Pennsylvania Street
Indianapolis, IN 46202

Re: **Geotechnical Engineering Investigation**
Proposed Pavement Improvements
Fall Creek Intermediate School
12011 Olio Road
Fishers, Indiana
Atlas Project No. 170GC01699

Dear Ms. Williams:

Submitted herewith is the report of the subsurface investigation performed by Atlas Technical Consultants LLC (Atlas) for the referenced project. This study was authorized in accordance with Atlas Proposal-Agreement No. 23-13638 dated December 6, 2023.

This report contains the results of the field and laboratory testing program, an engineering interpretation of this data with respect to the available project characteristics, and recommendations to aid design and construction of the earth-connected phases of this project. We wish to remind you that we will store the samples for 30 days, after which time they will be discarded unless you request otherwise.

We appreciate the opportunity to be of service to you on this project. If we can be of any further assistance, or if you have any questions regarding this report, please do not hesitate to contact either of the undersigned.

Sincerely,

David McIlwaine, P.E.
Senior Project Engineer

ROY D. MCILWAINE
No.
PE11200315
REGISTERED
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Daniel Homm, P.E.
Senior Project Engineer

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# 1 PURPOSE AND SCOPE

The purpose of this study was to characterize the general subsurface conditions at the project site by drilling 13 soil test borings, to determine the condition of the existing pavements by obtaining pavement cores and aggregate base samples at the test boring locations, and to evaluate this data with respect to the proposed pavement improvements. Included in this report are a summary of the project characteristics, an overview of the subsurface investigation findings, and recommendations for the design of the earth-connected elements of the proposed project. Also included is an evaluation of the site with respect to potential construction problems and recommendations dealing with earthwork and quality control during construction.

# 2 PROJECT CHARACTERISTICS

krM Architecture is planning to assist Hamilton Southeastern Schools in the improvement or replacement of the existing parking lots and driveways at Fall Creek Intermediate School at 12011 Olio Road on the east side of Fishers, Indiana. The general location of the project site is shown on the Vicinity Map (Figure 1 in the Appendix), which is taken from a map made prior to the current level of development in the surrounding area. Improvements are planned for all of the existing parking and driveway areas surrounding the existing school building. The existing pavement areas on the site (i.e., proposed pavement improvement areas) and approximate as-drilled test boring locations are shown on the Boring Plan (Figure 2 in the Appendix). Proposed pavement improvements may utilize full-depth asphalt replacement, full-depth reclamation of the existing asphalt pavement, or mill and overlay and it is assumed that the finish pavement grade will not vary by more than a few inches from the existing grade.

# 3 GENERAL SUBSURFACE CONDITIONS

The general subsurface conditions were investigated by drilling 13 test borings to depths of 4.1 ft to 5.0 ft below the existing ground surface. The thickness and relative condition of the existing pavement sections were determined by obtaining pavement cores and aggregate base samples at these 13 locations. The borings were drilled and pavement cores collected at the approximate locations shown on the Boring Plan (Figure 2 in the Appendix). The subsurface conditions and existing pavement conditions disclosed by the field investigation are summarized in the following paragraphs. Detailed descriptions of the subsurface conditions encountered in each test boring are presented on the “Test Boring Logs” in the Appendix, and a photo report of the existing pavement conditions is also presented in the Appendix. It should be noted that the stratification lines shown on the test boring logs represent approximate transitions between material types. In-situ stratum changes could occur gradually or at different depths.

At the existing ground surface, the test borings and pavement cores revealed approximately 3 inches to 6 inches of asphalt pavement overlying approximately 4 inches of aggregate base, with total pavement section thicknesses ranging from about 7 inches to 10 inches. The aggregate base below the existing pavement generally consisted of irregular sizes of crushed limestone and gravel. It is important to recognize the variability in the pavement section thicknesses and that the pavement section characteristics will vary throughout the pavement areas. Grain size distribution tests were performed on selected samples of the aggregate base and the results of these tests are presented on the test report summary sheets in the Appendix of this report.

A summary of the pavement section thicknesses is presented in Table No. 1 below. Photographs of the test boring and pavement core locations, down-hole views, recovered pavement cores, and recovered aggregate base samples are provided in the "Pavement Core Photo Report" in the Appendix.

**Table No. 1 – Summary of Measured Pavement Section Thicknesses**

| Boring/Core Location | Asphalt Thickness, inches | Aggregate Base Thickness, inches | Total Pavement Section Thickness, inches |
|---|---|---|---|
| B-1 | 4 | 4 | 8 |
| B-2 | 6 | 4 | 10 |
| B-3 | 5.5 | 4 | 9.5 |
| B-4 | 5 | 4 | 9 |
| B-5 | 4.5 | 4 | 8.5 |
| B-6 | 4 | 4 | 8 |
| B-7 | 5 | 4 | 9 |
| B-8 | 5 | 4 | 9 |
| B-9 | 5 | 4 | 9 |
| B-10 | 6 | 4 | 10 |
| B-11 | 4 | 4 | 8 |
| B-12 | 3 | 4 | 7 |
| B-13 | 4 | 4 | 8 |

Underlying the pavement sections as described above, the test borings revealed existing fill soils consisting of silty clay, clay and/or sandy silty clay containing varying amounts of sand and gravel to depths of about 1.8 ft to 2.0 ft below the existing ground surface. The fill soils in Borings B-9, B-10, B-11, B-12 and B-13 appeared to have been chemically stabilized during placement. Where no unnatural materials were observed within the soil samples that would positively identify these materials as fill, these soils were identified as fill materials due to the unusual color, texture, and/or stratification of the soil samples.

Below the existing fill materials, the test borings encountered medium stiff to very stiff, silty clay (CL), sandy silty clay (CL) and/or clay (CH) containing varying amounts of sand and gravel to the termination depths ranging from 4.1 ft to 5.0 ft below the existing ground surface. Boring B-8 revealed medium stiff clay (CH) with trace organics and marl between the depths of about 1.9 ft and 3.4 ft.

The qualitative strengths or consistencies of the cohesive soils as described above and on the test boring logs were estimated based on the results of the standard penetration test (ASTM D1586) and the definitions described on the "Field Classification System for Soil Exploration" contained in the Appendix of this report.

Ground water observations were made during the drilling operations by noting the depth of water (if any) on the drilling tools and in the open boreholes immediately after withdrawal of the drilling augers. No free ground water was encountered in any of the test borings at the time of this investigation. It must be noted that short-term ground water level observations made in cohesive soils are not necessarily a reliable indication of the current ground water level or future ground water levels, and shallow ground water in cohesive soils is typically contained (or "perched") within discontinuous sand seams or lenses within the cohesive soils. It is possible that "perched" ground water may be encountered at various depths and locations across the site above the hydrostatic ground water level due to water that is trapped within old fill materials, abandoned utilities, utility trenches, etc. or within saturated sand seams, if encountered. Although the amount of water trapped within old fill materials is usually not significant, it is important to recognize that such ground water may be encountered at various depths and locations. Furthermore, fluctuations in the level of the ground water should also be expected due to variations in rainfall and other factors not evident at the time of the field investigation.

# 4 DESIGN RECOMMENDATIONS

The following design recommendations have been developed on the basis of the previously described project characteristics (Section 2) and subsurface conditions (Section 3). If there are any changes in the project criteria, a review should be made by this office. The design recommendations presented herein are based on the assumption that all earth-related elements of the project will be carefully and continuously observed, tested, and evaluated by a geotechnical engineer, or qualified geotechnical technician working under the direction of a geotechnical engineer, to confirm that the earth-related elements of the project are compatible and consistent with the conditions upon which the design recommendations are based. The careful and thorough field testing and observation of the soil-related aspects of the project are critical and essential components of the design recommendations.

## 4.1 Pavement

Details regarding site grading in the pavement improvement or reconstruction areas are not available at this time; however, depending upon grading requirements and seasonal conditions, it is likely that most of the pavement subgrade areas will be wet, soft, or yielding at the time of construction. Our experience indicates that most subgrade soils beneath existing pavements will be soft or yielding once the existing pavement section is removed, regardless of the presence/condition of the existing pavement and any apparently firm soils in the test borings. Furthermore, near-surface subgrade soils may tend to yield and become unstable under construction traffic, particularly if the construction will be done during seasons when heavy precipitation and cooler temperatures typically occur (such as late fall, winter, and spring). The extent to which yielding subgrade may be a problem is difficult to predict beforehand since it is dependent upon several factors, including seasonal conditions, precipitation, cut depths, sequencing and scheduling of the earthwork, surface and subsurface drainage measures, the weight and traffic patterns of construction equipment, etc. However, it should

be expected that stabilization or modification of the subgrade soils will be needed in most, if not all, of the existing pavement areas due to the presence of the existing pavements and the clayey soils with a higher moisture content that were encountered in the test borings drilled for this project, in addition to other factors. In general, yielding subgrade problems are more prominent in at-grade areas (where saturated or nearly saturated silty and clayey soils are exposed by the excavation) or where little or no fill is placed.

The soils exposed at the new pavement subgrade level should be carefully observed, tested, and evaluated such as by proofrolling to determine where stabilization or removal and replacement of the existing soils is needed. In areas that are found to be excessively wet, soft, or yielding at the time of construction, it may be possible to stabilize the pavement subgrade soils by discing, aerating, and recompacting. However, if it is not possible to improve the subgrade soils in this manner (which is often the case) because of weather conditions, scheduling, or other site conditions or constraints, it is recommended that the subgrade soils be improved or modified using either chemical stabilization (i.e., lime-kiln-dust or cement), mechanical stabilization (i.e., a geogrid with additional crushed limestone placed over the subgrade), or removal of the unsuitable soils and replacement with crushed limestone and/or suitable fill soils determined to be appropriate by the geotechnical engineer. The best method for stabilizing the pavement subgrade should be determined in the field at the time of construction based upon the actual field conditions in conjunction with the specific soil type(s) encountered at the locations requiring stabilization, the sizes of the areas requiring stabilization, and the construction schedule. For soil conditions such as those at this site, chemical stabilization is often the most cost-effective subgrade stabilization method, particularly for large areas requiring stabilization. Chemical stabilization should be performed by a specialty contractor, who has the necessary equipment and experience in the determination of the appropriate chemical stabilizer and in the application of chemical stabilization methods. In areas where the soil conditions are not compatible with chemical stabilization or the sizes of the areas requiring stabilization do not justify the use of chemical stabilization, mechanical subgrade stabilization using a biaxial geogrid in conjunction with additional crushed limestone, or undercutting and replacement with crushed limestone and/or suitable fill soils determined to be appropriate by the geotechnical engineer, is considered appropriate for stabilization.

In order to cope with constructability problems and to avoid schedule delays associated with soft or yielding soils, it would be prudent to develop a plan for subgrade stabilization so that it can be implemented where deemed necessary by the geotechnical engineer at the time of construction based on the specific field conditions encountered. It is important that the geotechnical consultant provide continuous inspection during the earthwork operations to identify areas where special stabilization will be required while limiting the stabilization to only those areas where it is necessary.

Controlling subsurface water in pavement areas is important to enhancing the long-term performance of the pavements. The pavement subgrade surface should be uniformly sloped to facilitate drainage through the granular base and to avoid ponding of water beneath the pavement. Subsurface perforated drainage pipes should, at a minimum, be included beneath the lowest lines of the pavement and between catch basins. If catch basins are not included within the pavement areas, subsurface drains should be included near the lower or outside edges of the pavement to prevent water from being trapped or dammed up within the aggregate base. Subsurface perforated drainage pipes should also be included at transitions from concrete pavement sections to asphalt pavement sections and should be considered along the edges of the entrance roads where the greatest amount

of concentrated truck traffic occurs in order to enhance the long-term performance of the pavements in these areas. Furthermore, since the storm water catch basins in pavement areas are at the lowest points in pavement areas where water is often trapped beneath the pavements, they should be designed to allow water to drain from the aggregate base into the catch basins. At a minimum, subsurface perforated drainage pipes should be included that extend out beneath the pavement at least 25 ft from the catch basins in at least four directions in addition to the other subsurface perforated drainage pipes included for the project.

Based on the results of classification tests and our experience with similar soils, a resilient modulus value of 4,000 lbs/sq.in. has been estimated for use in pavement design for the clayey subgrade soils encountered at this site. The subgrade soils should be prepared and inspected as described in Sections 5.1 and 5.2 of this report.

The following report sections outline recommendations for asphalt and concrete pavements for automobile parking areas and bus/truck zones. It is important to note that the recommendations for the automobile parking areas are based on the assumption that these areas will not be subject to any heavy bus/truck traffic. Therefore, in areas where bus/truck traffic cannot be controlled (i.e., driveways), it is suggested that the thicker pavement section be utilized.

### 4.1.1 Full Reconstructed Asphalt Pavement

Based on a resilient modulus value of 4,000 lbs/sq.in., a design period of 15 years, and the conditions encountered at the site, the following asphalt pavement sections are recommended:

| | |
|---|---|
| Automobile Parking Areas | 3.5 in. of asphaltic concrete over 6 in. of aggregate base |
| Driveway Areas and Bus/Truck Zones | 5 in. of asphaltic concrete over 9 in. of aggregate base |

The base should be a well-graded crushed stone with a maximum of 10 percent (by weight) finer than the No. 200 sieve, such as coarse aggregate size No. 53 in accordance with INDOT Standard Specifications. Aggregates that are locally referred to as “commercial grade” No. 53 crushed stone should not be used as pavement base material. A combination of INDOT No. 2 coarse aggregate and INDOT No. 53 coarse aggregate can be used for aggregate bases that are at least 8 inches thick provided that a minimum of 3 in. of No. 53 crushed stone is used above the No. 2 stone for light duty pavement and a minimum of 4 in. of No. 53 crushed stone is used above the No. 2 stone for heavy duty pavement. The asphaltic concrete pavement should be designed and constructed in accordance with the INDOT Standard Specifications Section 400 – Asphalt Pavements and Section 402 – Hot Mix Asphalt, HMA, Pavement.

It should be expected that normal maintenance compatible with asphalt pavement and the design period selected will be required during the life of the pavement. Furthermore, overlaying the pavement surface may be desirable at an intermediate time period to extend the life of the pavement and improve serviceability.

### 4.1.2 Full Depth Reclamation

It is our understanding that "Full-Depth Reclamation" (FDR) of the existing pavement materials may be considered for rehabilitation of the pavements in some portions, or possibly all, of the existing pavement areas. In order to maintain existing surface grading and drainage patterns, it is assumed that the existing pavement section will need to be milled and removed to some depth. The depth of milling and removal required will be based upon several variables, including the required final pavement surface grading, the thickness of the existing asphalt, the existing and proposed pavement section thicknesses, etc. The pavement materials that remain in place after any required milling, along with the existing subgrade soils below the existing pavement aggregate base, will then be uniformly pulverized, blended with additional materials of appropriate gradation as determined to be necessary, and treated with a chemical modifier (cement) using the FDR technique.

It is recommended that a minimum FDR thickness of 9 inches and a maximum FDR thickness of 12 inches below the milled/removed pavement surface and new asphalt pavement be considered. It is recommended that the FDR treatment use cement as the chemical modifier and that the FDR treatment be designed to result in a minimum unconfined compressive strength of 350 lbs/sq.in. It is also recommended that a minimum cement content of 6 percent by dry weight of pulverized/blended material be used for preliminary planning purposes. The specific final FDR design, including determination of the chemical modifier content, shall be performed by the pavement contractor and/or the pavement contractor's consultant.

It is recommended that the pavement design section be based upon the 1993 AASHTO Design Guide methods and that a Structural Layer Coefficient value ("a") no greater than 0.26 be used for the FDR layer assuming that the FDR layer achieves a minimum unconfined compressive strength of 350 lbs/sq.in. It is suggested that the FDR mix design be performed by the contractor and/or the contractor's consultant and follow the guidelines provided by the ARRA document "Recommended Mix Design Guidelines for Full Depth Reclamation (FDR) Using Cement Stabilizing Agent" (FDR202, 12/22/2016) and the "Guide to Full-Depth Reclamation (FDR) with Cement", January 2019, published by the National Concrete Pavement Technology Center. The construction of the FDR should follow the general procedures outlined in the guidelines provided by the ARRA "Recommended Construction Guidelines for Full Depth Reclamation (FDR) Using Cementitious Stabilization" (FDR102, 09/12/2017) and the "Guide to Full-Depth Reclamation (FDR) with Cement", January 2019, published by the National Concrete Pavement Technology Center.

The aggregate base materials encountered below the existing pavements at the test boring locations was approximately 4 inches thick (as presented in Table No. 1 in Section 3). The aggregate base included various material types (including crushed limestone) that vary in gradation; however, the materials typically consisted of particles with a diameter of 3 inches, or less, in most cases (reports showing the results of grain size analysis tests that were performed on selected samples are presented in the Appendix, and photos of each of the recovered aggregate base samples are presented in the "Pavement Core Photo Report" in the Appendix). The subgrade soils, which generally consist of lower-plasticity to higher-plasticity silty clay, sandy silty clay, and/or clay appear to generally be compatible with the proposed full-depth reclamation as described herein.

Ground water was not encountered during drilling in any of the test borings drilled within the existing pavement areas. Based upon the thickness of the existing asphalt and aggregate base layers, it may be possible that the pavement contractor will need to blend in additional materials to achieve the desired gradation and composition for FDR.

### 4.1.3 Concrete Pavement

Concrete pavement thicknesses were determined from methods developed by the American Association of State Highway and Transportation Officials (AASHTO). These methods assume that the subgrade is firm, well-compacted, and non-pumping and that all joints are properly designed, located, and sealed to minimize moisture seepage into the subgrade. It is also important to ensure that proper concrete curing practices will be employed and that traffic will not be allowed on concrete that has had insufficient time to cure.

For design calculation purposes, the compressive strength of the concrete was assumed to be 4,000 lbs/sq.in. (or have a modulus of rupture of about 600 lbs/sq.in.). The modulus of subgrade reaction of the soil (k) was estimated to be 110 lbs/cu.in.

Based on the above information, the following concrete pavement sections are recommended:

| | |
|---|---|
| Automobile Parking Areas | 5 in. of concrete over 6 in. of aggregate base placed over a well-compacted, non-pumping subgrade |
| Driveway Areas and Bus/Truck Zones | 8 in. of concrete over 6 in. of aggregate base placed over a well-compacted, non-pumping subgrade |

The performance of the concrete paving section is highly dependent on controlling the pumping of the subgrade soils. Although no wet surface soils were noted at the time of this study, it is important that surface drainage be controlled to prevent water from ponding in pavement areas.

## 4.2 Site Grading and Drainage

Proper surface drainage should be provided at the site to minimize increase in moisture content of the subgrade soils and nearby foundation soils of existing structures/facilities. The proposed pavement grades should be sloped to prevent ponding of water, especially to prevent ponding of water around existing structures.

# 5 GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

Since this investigation identified actual subsurface conditions only at the test boring locations, it was necessary to extrapolate these conditions in order to characterize the entire project site. Even under the best of circumstances, the conditions encountered during construction can be expected to vary somewhat from the test boring results and may, in the extreme case, differ to the extent that modifications to the recommendations provided herein become necessary. Therefore, we recommend that Atlas be retained as geotechnical consultant through the earth-related phases of this project to correlate actual soil conditions with test boring data, identify variations, conduct additional tests that may be needed, and recommend solutions to earth-related problems that may develop.

## 5.1 Site Preparation

All areas that will support pavements should be properly prepared. Once rough grade has been established and prior to placement of fill in any fill areas, the exposed subgrade should be carefully tested, observed, and assessed by the geotechnical engineer, or a qualified soils technician working under the direction of the geotechnical engineer, by probing and testing as needed. The exposed subgrade should furthermore be tested by proofrolling with suitable equipment to check for pockets of soft material hidden beneath a thin crust of better soil. Any remnants from previous construction; unsuitable fill; utility pipes; organic material; frozen, wet, soft, or loose soil; and any other undesirable materials should be removed and replaced with engineered fill as outlined in Section 5.2. In cases or areas where determined to be appropriate by the geotechnical engineer, soft, loose, or yielding soils may be stabilized in-place using chemical or mechanical stabilization techniques as described in Section 4.1. Based on the results of the test borings and the nature of the project (since our experience indicates that most subgrade soils beneath existing pavements will be soft or yielding once the existing pavement section is removed, regardless of the presence of the existing pavement and any apparently firm soils in the test borings), it is anticipated that some, if not all, areas will need modification or stabilization due to unsuitable subgrade soils. It is suggested that the project include contingency plans for stabilization or modification (such as removal of unsuitable soils and replacement with compacted fill, chemical stabilization, mechanical stabilization, etc.) to be used as determined appropriate based upon careful observations of the specific conditions encountered in the field at the time of construction.

Care should be exercised during the grading operations at the site. Due to the nature of the near-surface soils, the traffic of construction equipment may create pumping and general deterioration of the shallower soils, especially if excess surface water is present. The grading, therefore, should be done during a dry season, if at all possible. Furthermore, it is important that positive surface drainage be established at the beginning of the earthwork operations and be maintained throughout the project. Surface water must not be allowed to pond. The site storm drainage elements (i.e., catch basins, pipes, manholes, etc.) should be installed as early as possible, which will aid in control of surface water and ground water. Additionally, compaction and sealing of the subgrade surface are important when precipitation is expected.

## 5.2 Fill Compaction

All engineered fill beneath pavements should be compacted to a dry density of at least 98 percent of the standard Proctor maximum dry density (ASTM D698). The compaction should be accomplished by placing the fill in about 8-inch-thick (or less), loose lifts and mechanically compacting each lift to at least the specified minimum dry density. The moisture content of the fill soil should be within a range of 2 percent below the optimum moisture content to the optimum moisture content. Field density tests should be performed on each lift as necessary to verify that adequate moisture conditioning and compaction are being achieved.

All soils encountered in the test borings made at this site are considered suitable as general fill material with the exception of any higher-plasticity, clayey soils and any soils that may contain debris from previous construction or particles larger than 3 inches in diameter. The need for some aeration and moisture conditioning of the soils should be expected before they can be placed and compacted to the specified density. Furthermore, it is emphasized that the high plasticity cohesive soils, which were found to be very prevalent at this site, may require chemical modification in order to be properly placed and compacted and to help prevent shrinking and swelling of the higher-plasticity soils, which could decrease the life and serviceability of the pavements if not treated. It is recommended that only well-graded granular material, such as pit-run sand and gravel or INDOT No. 53 crushed limestone, be used to fill excavations of limited lateral dimensions where proper compaction of cohesive materials is difficult and compaction can only be accomplished with small vibratory equipment.

## 5.3 Construction Dewatering

At the time of our investigation, the ground water level appeared to be below the anticipated excavation depths for the proposed pavement improvements. Depending on the seasonal conditions, some seepage into excavations may be experienced due to “perched” water that may be encountered within old fill materials, abandoned utilities, utility trenches, etc. or in isolated sand seams within the predominantly cohesive soils. It is anticipated that such seepage can likely be handled by conventional dewatering methods such as by pumping from sumps; however, if a saturated sand layer is encountered in the base of the excavation, it will not be possible to pump water directly from the base of the excavation without causing deterioration of the soil. In this case, it will be necessary to pump from a sump located adjacent to the excavation or to depress the ground water using wells or well points. The best dewatering system for each case must be determined at the time of construction based upon actual field conditions.

# 6 FIELD INVESTIGATION

Thirteen test borings were drilled and pavement cores collected at the approximate locations shown on the Boring Plan (Figure 2 in the Appendix). The borings were extended to depths of 4.1 ft to 5.0 ft below the existing grade, and continuous split-barrel samples were obtained by the Standard Penetration Test procedures (ASTM D1586). In addition, aggregate base samples were collected at all locations.

Logs of all test borings, which show visual descriptions of all soil strata encountered using the Unified Soil Classification System (ASTM D2488 “Standard Practice for Description and Identification of Soils by Visual-Manual Procedures”), have been included in numerical order in the Appendix. Ground water observations, sampling information, and other pertinent field data and observations are also included. In addition, a "Field Classification System for Soil Exploration" document defining the terms and symbols used on the test boring logs and explaining the Standard Penetration Test procedure is provided immediately following the test boring logs. Photographs of each of the test boring and pavement core locations, down-hole views, recovered pavement cores, and recovered aggregate base samples are provided in the “Pavement Core Photo Report” in the Appendix.

# 7 LABORATORY INVESTIGATION

The soil samples obtained from the test borings were inspected and classified in general accordance with the Unified Soil Classification System (ASTM D2488 “Standard Practice for Description and Identification of Soils by Visual-Manual Procedures”), and the boring logs were edited as deemed necessary based upon the visual inspection, field logs, and laboratory test results. To aid in classifying the soils and to determine general soil characteristics, laboratory tests were performed on selected samples. The laboratory tests performed on the selected soil samples are summarized in the following table, and the results of these tests are included on the “Test Boring Logs” and report summary sheets in the Appendix.

**Table No. 2 – Laboratory Testing Program**

| Laboratory Test Description | Test Method Designation |
|---|---|
| "Standard Practice for Description and Identification of Soils by Visual-Manual Procedures" | ASTM D2488 |
| Moisture Content Test of Soils | ASTM D2216 |
| Atterberg Limits Tests | ASTM D4318 |
| Organic Content (Loss-on-Ignition Test) | ASTM D2974 |
| Marl Content ($CaCO_3$/$MgCO_3$ Content) | ITM 507 |
| Particle-Size Distribution of Aggregate Using Sieve Analysis | ASTM C136 |
| Calibrated Hand Penetrometer Test ("Pocket Penetrometer Test") | NA |

NA – No standardized test method available.

# 8 LIMITATIONS OF STUDY

An inherent limitation of any geotechnical engineering study is that conclusions must be drawn on the basis of data collected at a limited number of discrete locations. The recommendations provided in this report were developed from the information obtained from the test borings that depict subsurface conditions only at these specific locations and at the particular times designated on the logs. Soil and ground water conditions at other locations may differ from conditions occurring at these boring locations, and ground water conditions will vary over time. The nature and extent of variations between the test borings may not become evident until the course of construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report after performing on-site observations during the excavation and construction period and noting the characteristics of any variations.

Any comments or recommendations made herein regarding construction-related issues or temporary conditions are solely for the purpose of evaluating feasibility and constructability and planning the design of the proposed facility improvements. The scope of this investigation is not sufficient to identify all potential construction-related issues, variations, anomalies, etc. or all factors that may affect construction means, methods, and costs.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the field of geotechnical engineering at the time when the services were performed and at the location where the services were performed. This warranty is in lieu of all other warranties either express or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the field exploration and laboratory test data presented in this report. The scope of our services does not include any environmental assessment or investigation for the presence or

absence of hazardous or toxic materials in the soil, ground water, or surface water within or beyond the site studied.

Atlas Technical Consultants LLC (Atlas) assumes no responsibility for any construction procedures, temporary excavations (including utility trenches), temporary dewatering, or site safety during or after construction. Any recommendations, discussions, or comments provided herein regarding temporary conditions during construction are solely for use in the planning and design of the project. Under no circumstances shall the information provided herein be interpreted to mean that Atlas is responsible for construction site safety or contractor means and methods, and no responsibility is implied or inferred. The contractor shall be solely responsible for all construction procedures, construction means and methods, construction sequencing, and for all safety measures during construction, as well as the protection of all existing facilities. All applicable federal, state, and local laws and regulations regarding construction safety must be followed, including current Occupational Safety and Health Administration (OSHA) Regulations, including OSHA 29 CFR Part 1926 “Safety and Health Regulations for Construction”, Subpart P “Excavations”, and/or successor regulations. The contractor shall be solely responsible for designing and constructing stable, temporary excavations and should brace, shore, slope, or bench the sides of the excavations as necessary to maintain stability of the excavation sides and bottom and to protect the integrity of all existing facilities (i.e., existing foundations, floor slabs, structures, equipment, utilities, pavements, etc.) that are to remain in place.

# Appendix

Figure 1: Vicinity Map
Figure 2: Boring Plan

Test Boring Logs (13)
“Field Classification System for Soil Exploration”
Grain Size Distribution Test Reports (4)
Pavement Core Photo Report
“Important Information About Your Geotechnical Engineering Report”

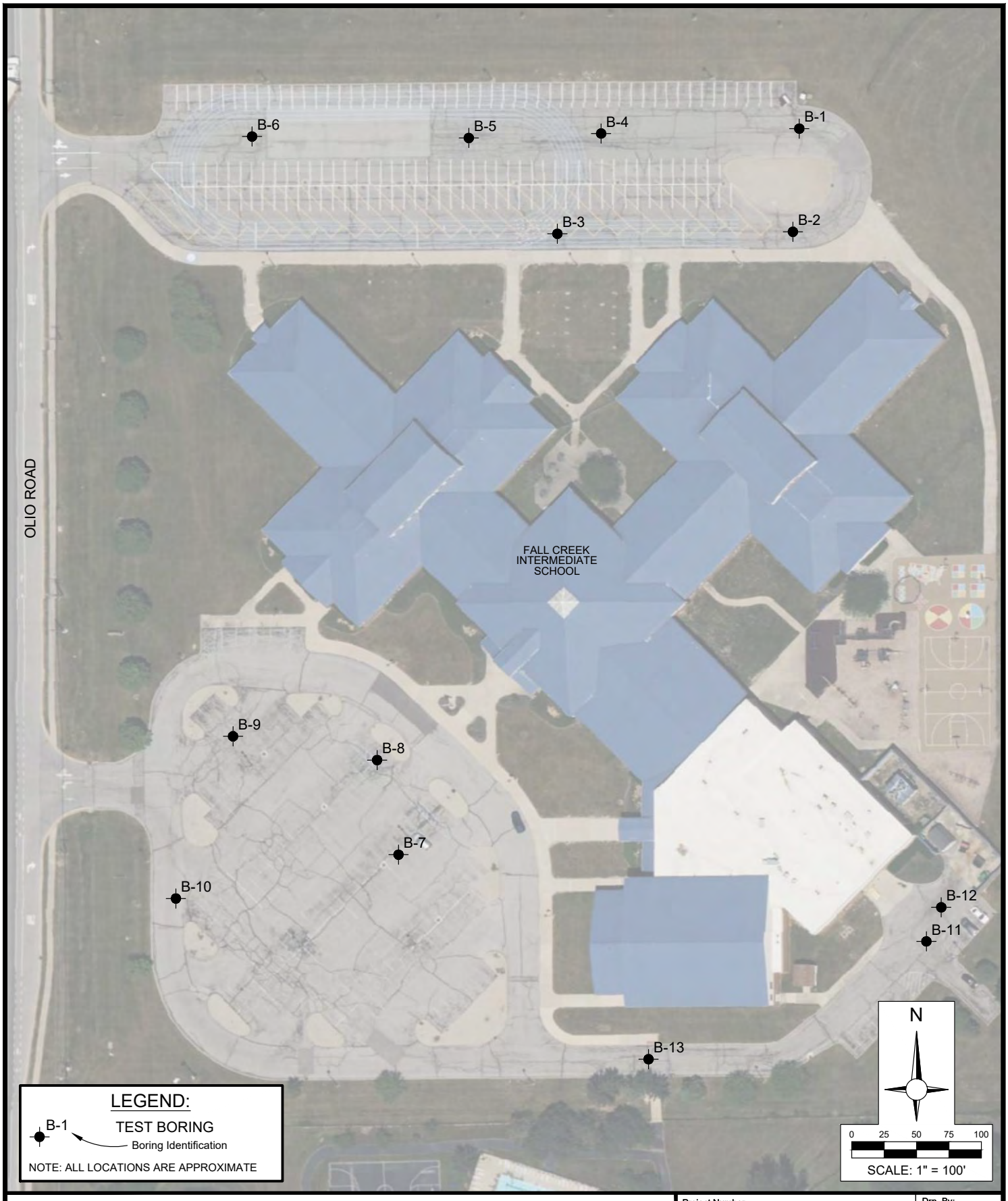



# VICINITY MAP

PROPOSED PAVEMENT IMPROVEMENTS
FALL CREEK INTERMEDIATE SCHOOL
12011 OLIO ROAD
FISHERS, INDIANA

| | | |
|---|---|---|
| Project Number: 170GC01699 | | Drn. By: AK |
| Date: 12/18/2023 | Scale: 1":2,000' | Ckd. By: DM |
| ATLAS | | 1 |

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# BORING PLAN

PROPOSED PAVEMENT IMPROVEMENTS
FALL CREEK INTERMEDIATE SCHOOL
12011 OLIO ROAD
FISHERS, INDIANA

| Project Number: 170GC01699 | | Drn. By: AK |
|---|---|---|
| Date: 12/18/2023 | Scale: AS SHOWN | Ckd. By: DM |
| ATLAS | | 2 |

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-1**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 in. Asphalt | 835.7 | 0.3 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.3 | 0.7 | | 1 | SS | | | 9-10-7 | 12.9 | | |
| Gray, moist, sandy silty clay with little gravel (FILL) | 834.1 | 1.9 | | 2 | SS | | | 6-6-6 | 13.5 | 2.0 | |
| Brown, moist, stiff to very stiff, SILTY CLAY (CL) with little sand and trace gravel | | | | 3 | SS | | | 7-9-9 | 13.6 | 1.5 | |
| Bottom of Test Boring at 4.9 ft. | 831.1 | 4.9 | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
Noted on Drilling Tools **None** ft.
At Completion **None** ft.
After -- hours -- ft.
Cave Depth **4.5** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-2**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 in. Asphalt | 835.5 | 0.5 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.2 | 0.8 | | 1 | SS | | | 4-5-7 | 31.3 | | |
| Dark gray, moist, clay with trace sand (FILL) | 834.0 | 2.0 | | | | | | | | | **Sample No. 1:** Atterberg Limits: LL=51 PL=28 PI=23 |
| Gray, moist, stiff, CLAY (CH) with trace sand | 832.5 | 3.5 | | 2 | SS | | | 5-5-6 | 25.4 | 1.25 | **Sample No. 2:** Atterberg Limits: LL=55 PL=18 PI=37 |
| Dark brown and gray, moist, medium stiff, SILTY CLAY (CL) with little sand and trace gravel | 831.0 | 5.0 | 5 | 3 | SS | | ▨ | 3-3-4 | 23.5 | 1.5 | |
| Bottom of Test Boring at 5.0 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.2** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-3**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.5 in. Asphalt | 835.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.2 | 0.8 | | 1 | SS | | | 6-4-4 | 31.5 | | |
| Dark gray and brown, moist, silty clay with trace sand (FILL) | 834.1 | 1.9 | | | | | | | | | |
| Gray and brown, moist, medium stiff, SILTY CLAY (CL) with little sand | 832.6 | 3.4 | | 2 | SS | | | 3-4-4 | 25.0 | 1.5 | |
| Gray, moist, medium stiff, SILTY CLAY (CL) with trace sand and gravel | 831.1 | 4.9 | | 3 | SS | | ▨ | 2-3-4 | 30.2 | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.6** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-4**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION / SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 in. Asphalt | 835.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.2 | 0.8 | | 1 | SS | | | 7-4-5 | | | |
| Gray, moist, sandy silty clay with crushed limestone fragments and trace gravel (FILL) | 834.1 | 1.9 | | | | | | | | | |
| Brown, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | | | | 2 | SS | | | 5-7-6 | 12.2 | 2.0 | |
| | | | | 3 | SS | | | 6-6-6 | 14.2 | 1.5 | |
| | 831.1 | 4.9 | | | | | ▨ | | | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.8** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-5**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.5 in. Asphalt | 835.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.3 | 0.7 | | 1 | SS | | | 7-8-7 | 27.2 | | **Sample No. 1:** Atterberg Limits: LL=43 PL=21 PI=22 |
| Dark gray and brown, moist, silty clay with trace sand (FILL) | 834.1 | 1.9 | | 2 | SS | | | 4-5-6 | 26.3 | 1.5 | |
| Gray and brown, moist, stiff, SILTY CLAY (CL) with trace sand and gravel | 832.6 | 3.4 | | 3 | SS | | | 5-5-6 | 12.5 | 1.5 | |
| Brown, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | 831.1 | 4.9 | | | | | | | | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
Noted on Drilling Tools **None** ft.
At Completion **None** ft.
After -- hours -- ft.
Cave Depth **4.2** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-6**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 in. Asphalt | 835.7 | 0.3 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.3 | 0.7 | | 1 | SS | | | 7-8-8 | 20.3 | | |
| Dark gray and brown, slightly moist, silty clay with little sand (FILL) | 834.1 | 1.9 | | | | | | | | | |
| Gray and brown, moist, very stiff, CLAY (CH) with trace sand | 832.6 | 3.4 | | 2 | SS | | | 8-8-10 | 27.7 | 2.0 | **Sample No. 2:** Atterberg Limits: LL=56 PL=18 PI=38 |
| Brown, moist, stiff, SILTY CLAY (CL) with trace sand | 831.1 | 4.9 | | 3 | SS | | ▨ | 8-6-5 | 24.3 | 1.25 | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.0** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-7**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 835 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 in. Asphalt | 834.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 834.2 | 0.8 | | 1 | SS | | | 2-2-2 | 29.8 | | |
| Dark gray, gray, and brown, moist, sandy silty clay with trace gravel (FILL) | 833.1 | 1.9 | | | | | | | | | |
| Gray and brown, moist, medium stiff, SILTY CLAY (CL) with little sand and trace gravel | 831.6 | 3.4 | | 2 | SS | | | 3-3-3 | 25.1 | 1.75 | |
| Gray, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | 830.1 | 4.9 | | 3 | SS | | ▨ | 4-5-6 | | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.3** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-8**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 in. Asphalt | 835.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.2 | 0.8 | | 1 | SS | | | 3-5-6 | 29.2 | | |
| Dark gray, moist, silty clay with little sand (FILL) | 834.1 | 1.9 | | | | | | | | | **Sample No. 1:** Atterberg Limits: LL=47 PL=26 PI=21 |
| Dark gray, moist, medium stiff, CLAY (CH) with trace organics and marl | 832.6 | 3.4 | | 2 | SS | | | 4-4-4 | 27.2 | 1.75 | **Sample No. 2:** Atterberg Limits: LL=51 PL=18 PI=33 Organic Content = 3.5% Marl Content = 11% |
| Gray, moist, medium stiff, SANDY SILTY CLAY (CL) with little gravel | 831.1 | 4.9 | | 3 | SS | | ▨ | 3-4-4 | 27.1 | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.2** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-9**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 836 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 in. Asphalt | 835.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 835.2 | 0.8 | | 1 | SS | | | 13-7-10 | 24.3 | | |
| Dark gray, slightly moist, silty clay with little sand (FILL) (possibly chemically stabilized) | 834.1 | 1.9 | | | | | | | | | **Sample No. 1:** pH = 9.5 |
| Gray and brown, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | 832.6 | 3.4 | | 2 | SS | | | 5-6-8 | 25.4 | 1.5 | |
| Brown and gray, moist, stiff, SILTY CLAY (CL) with trace sand | 831.1 | 4.9 | | 3 | SS | | | 4-5-6 | 23.9 | 1.0 | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
Noted on Drilling Tools **None** ft.
At Completion **None** ft.
After -- hours -- ft.
Cave Depth **4.5** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-10**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 837 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 in. Asphalt | 836.5 | 0.5 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 836.2 | 0.8 | | 1 | SS | | | 8-8-11 | 20.8 | | |
| Dark gray, slightly moist, sandy silty clay with trace gravel (FILL) (chemically stabilized) | 835.0 | 2.0 | | | | | | | | | **Sample No. 1:** pH = 9.2 |
| Dark gray, moist, medium stiff to stiff, SILTY CLAY (CL) with trace sand and gravel | | | | 2 | SS | | ▨ | 4-4-5 | 24.4 | | |
| | | | | 3 | SS | | | 7-50/0.1 | 23.5 | 2.0 | |
| | 832.9 | 4.1 | | | | | | | | | |
| Bottom of Test Boring at 4.1 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **3.3** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

ATLAS
7988 Centerpoint Drive, Suite 100
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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-11**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 838 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 in. Asphalt | 837.7 | 0.3 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 837.3 | 0.7 | | 1 | SS | | | 5-5-8 | 27.5 | | |
| Dark gray, slightly moist, silty clay with little sand and trace gravel (FILL) (possibly chemically stabilized) | 836.1 | 1.9 | | | | | | | | | |
| Dark gray, moist, stiff, CLAY (CH) with trace sand | 834.6 | 3.4 | | 2 | SS | | | 5-5-6 | 24.0 | 1.75 | **Sample No. 2:** Atterberg Limits: LL=50 PL=17 PI=33 |
| Brown, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | 833.1 | 4.9 | | 3 | SS | | ▨ | 5-6-7 | 14.2 | 2.25 | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.2** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-12**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 838 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 in. Asphalt | 837.7 | 0.3 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 837.4 | 0.6 | | 1 | SS | | | 13-16-13 | 27.8 | | |
| Dark gray, slightly moist, sandy silty clay with trace gravel (FILL) (chemically stabilized) | 836.2 | 1.8 | | | | | | | | | **Sample No. 1:** pH = 9.7 |
| Dark brown and brown, moist, very stiff, CLAY (CH) with little sand | 834.7 | 3.3 | | 2 | SS | | | 8-10-13 | 24.6 | 1.5 | **Sample No. 2:** Atterberg Limits: LL=57 PL=19 PI=38 |
| Brown, moist, very stiff, SILTY CLAY (CL) with little sand | 833.2 | 4.8 | | 3 | SS | | ▨ | 10-10-12 | 22.8 | 2.5 | |
| Bottom of Test Boring at 4.8 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
● Noted on Drilling Tools **None** ft.
▽ At Completion **None** ft.
▼ After -- hours -- ft.
▨ Cave Depth **4.2** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

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# TEST BORING LOG

CLIENT **krM Architecture** BORING # **B-13**

PROJECT NAME **Proposed Pavement Improvements** JOB # **170GC01699**

PROJECT LOCATION **Fall Creek Intermediate School**
**12011 Olio Road, Fishers, Indiana**

DRILLING and SAMPLING INFORMATION

| | | | |
|---|---|---|---|
| Date Started | 1/2/24 | Hammer Wt. | 140 lbs. |
| Date Completed | 1/2/24 | Hammer Drop | 30 in. |
| Drill Foreman | G. Lauber | Spoon Sampler OD | 2.0 in. |
| Inspector | D. McIlwaine | Rock Core Dia. | -- in. |
| Boring Method | HSA | Shelby Tube OD | -- in. |

TEST DATA

| SOIL CLASSIFICATION<br>SURFACE ELEVATION 837 | Stratum Elevation | Stratum Depth, ft | Depth Scale, ft | Sample No. | Sample Type | Sampler Graphics / Recovery Graphics | Groundwater | Standard Penetration Test, Blows per 6 in. Increments | Moisture Content, % | Pocket Penetrometer PP-tsf | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 in. Asphalt | 836.6 | 0.4 | | | | | | | | | Ground surface elevation estimated from topography provided by the Hamilton County GIS website. |
| 4 in. Aggregate Base | 836.2 | 0.8 | | 1 | SS | | | 4-7-8 | 29.2 | | |
| Gray, moist, silty clay with little sand (FILL) (chemically stabilized) | 835.1 | 1.9 | | | | | | | | | **Sample No. 1:** pH = 10.1 |
| Brown, moist, stiff, SILTY CLAY (CL) with little sand and trace gravel | | | | 2 | SS | | | 6-6-7 | 26.2 | 2.0 | |
| | | | | 3 | SS | | | 7-7-8 | 20.1 | 1.5 | |
| | 832.1 | 4.9 | | | | | | | | | |
| Bottom of Test Boring at 4.9 ft. | | | | | | | | | | | |

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
Noted on Drilling Tools **None** ft.
At Completion **None** ft.
After -- hours -- ft.
Cave Depth **4.5** ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
CA - Casing Advancer
MD - Mud Drilling
HA - Hand Auger

# FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

## NON-COHESIVE SOILS
**(Silt, Sand, Gravel and Combinations)**

| Density | | SPT* |
|---|---|---|
| Very Loose | - | 5 blows/ft or less |
| Loose | - | 6 to 10 blows/ft |
| Medium Dense | - | 11 to 30 blows/ft |
| Dense | - | 31 to 50 blows/ft |
| Very Dense | - | 51 blows/ft or more |

| Relative Proportions | |
|---|---|
| Descriptive Term | Percent |
| Trace | 1 - 10 |
| Little | 11 - 20 |
| Some | 21 - 35 |
| And | 36 - 50 |

| Particle Size Identification | | | |
|---|---|---|---|
| Boulders | - | 8 inch or greater | |
| Cobbles | - | 3 to 8 inch | |
| Gravel | - | Coarse | - 1 to 3 inch |
| | | Medium | - ½ to 1 inch |
| | | Fine | - ¼ to ½ inch |
| Sand | - | Coarse | 2.00mm to ¼ inch (dia. of pencil lead) |
| | | Medium | 0.42 to 2.00mm (dia. of broom straw) |
| | | Fine | 0.074 to 0.42mm (dia. of human hair) |
| Silt | | | 0.074 to 0.002mm (cannot see particles) |

## COHESIVE SOILS
**(Clay, Silt and Combinations)**

| Consistency | | SPT* |
|---|---|---|
| Very Soft | - | 3 blows/ft or less |
| Soft | - | 4 to 5 blows/ft |
| Medium Stiff | - | 6 to 10 blows/ft |
| Stiff | - | 11 to 15 blows/ft |
| Very Stiff | - | 16 to 30 blows/ft |
| Hard | - | 31 blows/ft or more |

| Plasticity | |
|---|---|
| Degree of Plasticity | Plasticity Index |
| None to slight | 0 - 4 |
| Slight | 5 - 7 |
| Medium | 8 - 22 |
| High to Very High | over 22 |

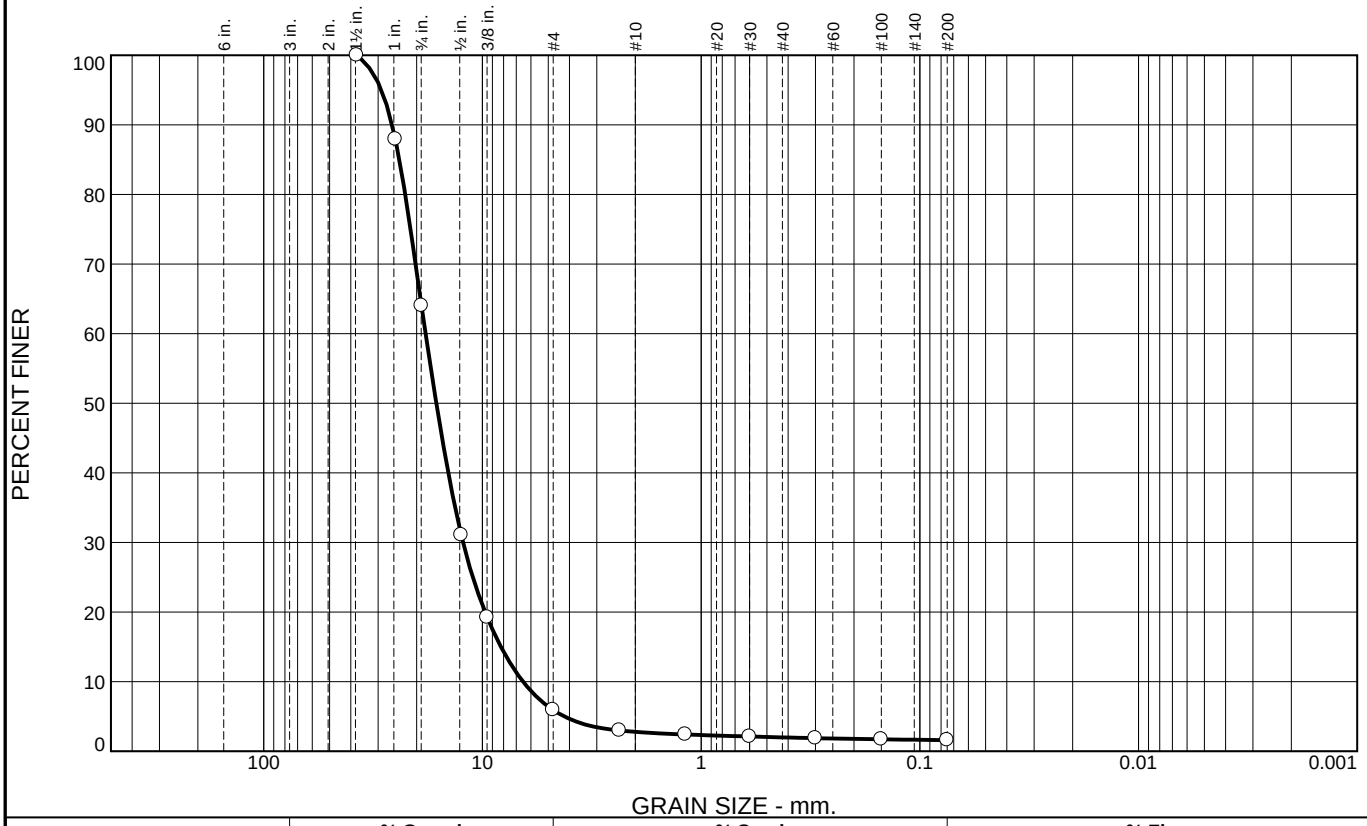
Classification on the logs are made by visual inspection of samples.
*Based upon results of Standard Penetration Test as described below.

**Standard Penetration Test —** Driving a 2.0" O.D. 1-3/8" I.D. sampler a distance of 12 inches into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary for ATC to drive the split-barrel sampler 6 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the split-barrel sampler and making the test are recorded for each 6 inches of penetration of the sampler (Example – 6-8-9). The standard penetration test result can be obtained by adding the last two figures (i.e., 8 + 9 = 17 blows/ft). The Standard Penetration Test is performed according to ASTM D-1586-18.

**Strata Changes —** In the column "Soil Classifications" on the Test Boring Logs the horizontal lines represent strata changes. A solid line (_____) represents an actually observed change. A dashed line (_ _ _ _ _ _) represents an estimated change.

**Ground Water** observations were made at the times and conditions indicated on the Test Boring Logs. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

# Particle Size Distribution Report




| % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| 0.0 | 35.7 | 58.4 | 3.1 | 0.8 | 0.4 | 1.6 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 1-1/2 | 100.0 | | |
| 1 | 87.9 | | |
| 3/4 | 64.0 | | |
| 1/2" | 31.1 | | |
| 3/8 | 19.2 | | |
| #4 | 5.9 | | |
| #8 | 3.0 | | |
| #16 | 2.4 | | |
| #30 | 2.1 | | |
| #50 | 1.9 | | |
| #100 | 1.7 | | |
| #200 | 1.6 | | |

* (no specification provided)

**Material Description**

Aggregate Base

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{90}$= 25.8668 $D_{85}$= 23.9826 $D_{60}$= 18.1956
$D_{50}$= 16.2540 $D_{30}$= 12.2601 $D_{15}$= 8.2261
$D_{10}$= 6.5225 $C_u$= 2.79 $C_c$= 1.27

**Classification**

USCS= AASHTO=

**Remarks**

**Source of Sample:** 15694 **Depth:** Aggregate
**Sample Number:** B-2, 3, & 4 **Date:**

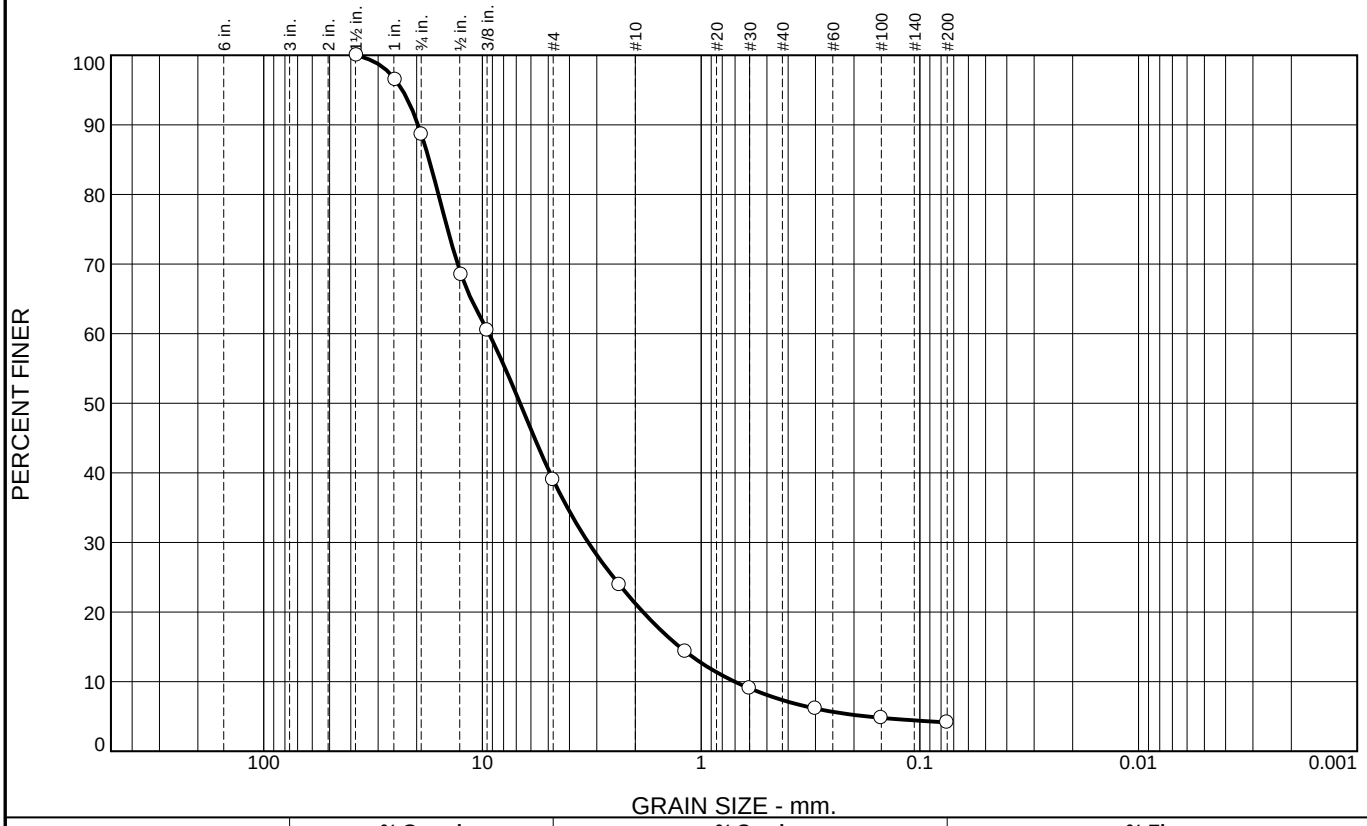
**Atlas**

**Indianapolis, Indiana**

**Client:** KRM
**Project:** FCI School Pavement

**Project No:** 170GC01699 **Figure**

# Particle Size Distribution Report




| % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| 0.0 | 11.3 | 49.7 | 17.8 | 13.8 | 3.2 | 4.2 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 1-1/2 | 100.0 | | |
| 1 | 96.5 | | |
| 3/4 | 88.6 | | |
| 1/2" | 68.5 | | |
| 3/8 | 60.5 | | |
| #4 | 39.0 | | |
| #8 | 23.9 | | |
| #16 | 14.3 | | |
| #30 | 9.1 | | |
| #50 | 6.1 | | |
| #100 | 4.8 | | |
| #200 | 4.2 | | |

* (no specification provided)

**Material Description**

Aggregate Base

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{90}$= 19.6757 $D_{85}$= 17.5431 $D_{60}$= 9.3300
$D_{50}$= 6.7310 $D_{30}$= 3.2806 $D_{15}$= 1.2542
$D_{10}$= 0.7017 $C_u$= 13.30 $C_c$= 1.64

**Classification**

USCS= AASHTO=

**Remarks**

**Source of Sample:** 15694 **Depth:** Aggregate
**Sample Number:** B-7 & 8 **Date:**

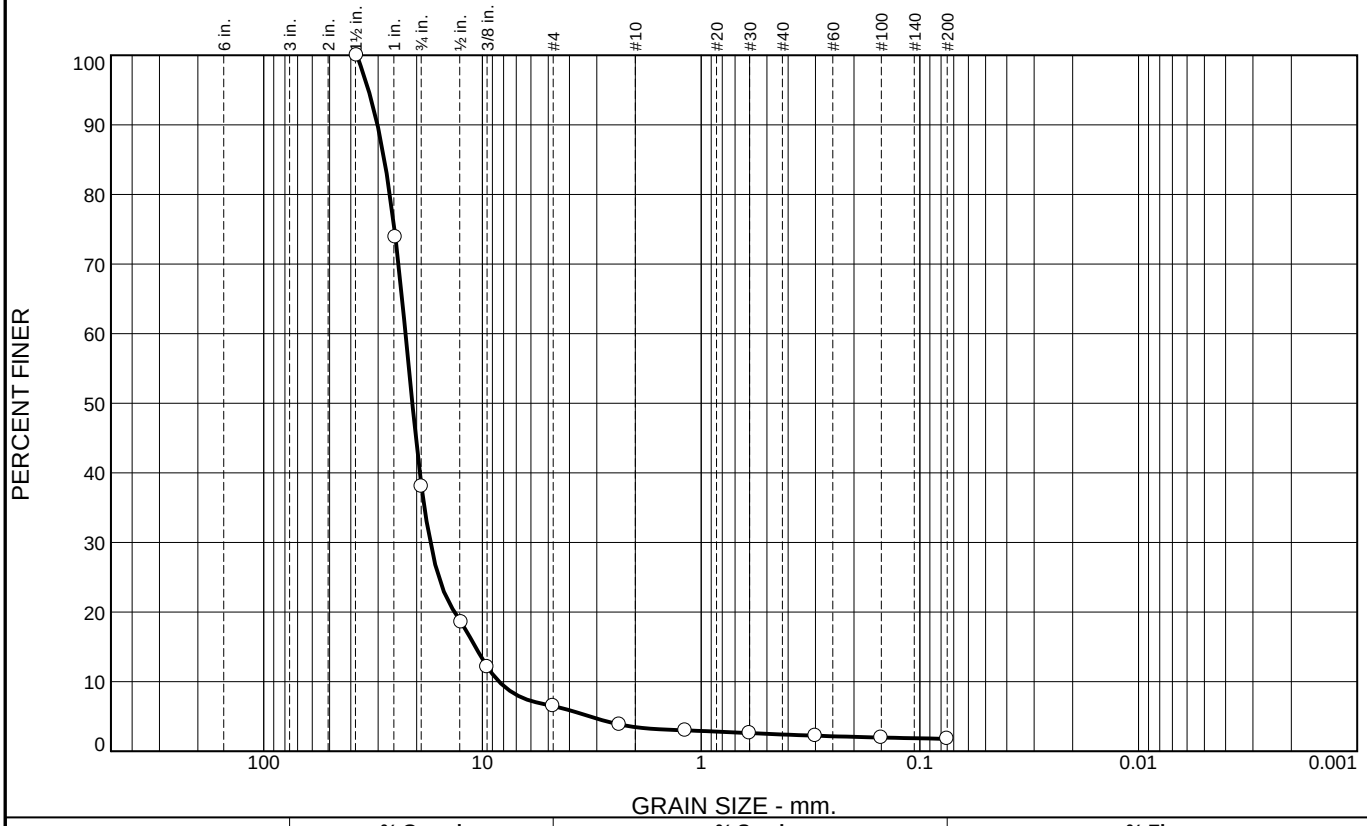
**Atlas**

**Indianapolis, Indiana**

**Client:** KRM
**Project:** FCI School Pavement

**Project No:** 170GC01699 **Figure**

# Particle Size Distribution Report




| % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| 0.0 | 61.7 | 31.8 | 3.0 | 1.1 | 0.6 | 1.8 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 1-1/2 | 100.0 | | |
| 1 | 73.9 | | |
| 3/4 | 38.1 | | |
| 1/2" | 18.5 | | |
| 3/8 | 12.1 | | |
| #4 | 6.5 | | |
| #8 | 3.9 | | |
| #16 | 3.0 | | |
| #30 | 2.6 | | |
| #50 | 2.2 | | |
| #100 | 2.0 | | |
| #200 | 1.8 | | |

* (no specification provided)

**Material Description**

Aggregate Base

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{90}$= 30.1729 $D_{85}$= 28.0674 $D_{60}$= 22.4836
$D_{50}$= 20.9249 $D_{30}$= 17.3242 $D_{15}$= 10.7683
$D_{10}$= 8.3883 $C_u$= 2.68 $C_c$= 1.59

**Classification**

USCS= AASHTO=

**Remarks**

**Source of Sample:** 15694 **Depth:** Aggregate
**Sample Number:** B-9 & 10 **Date:**

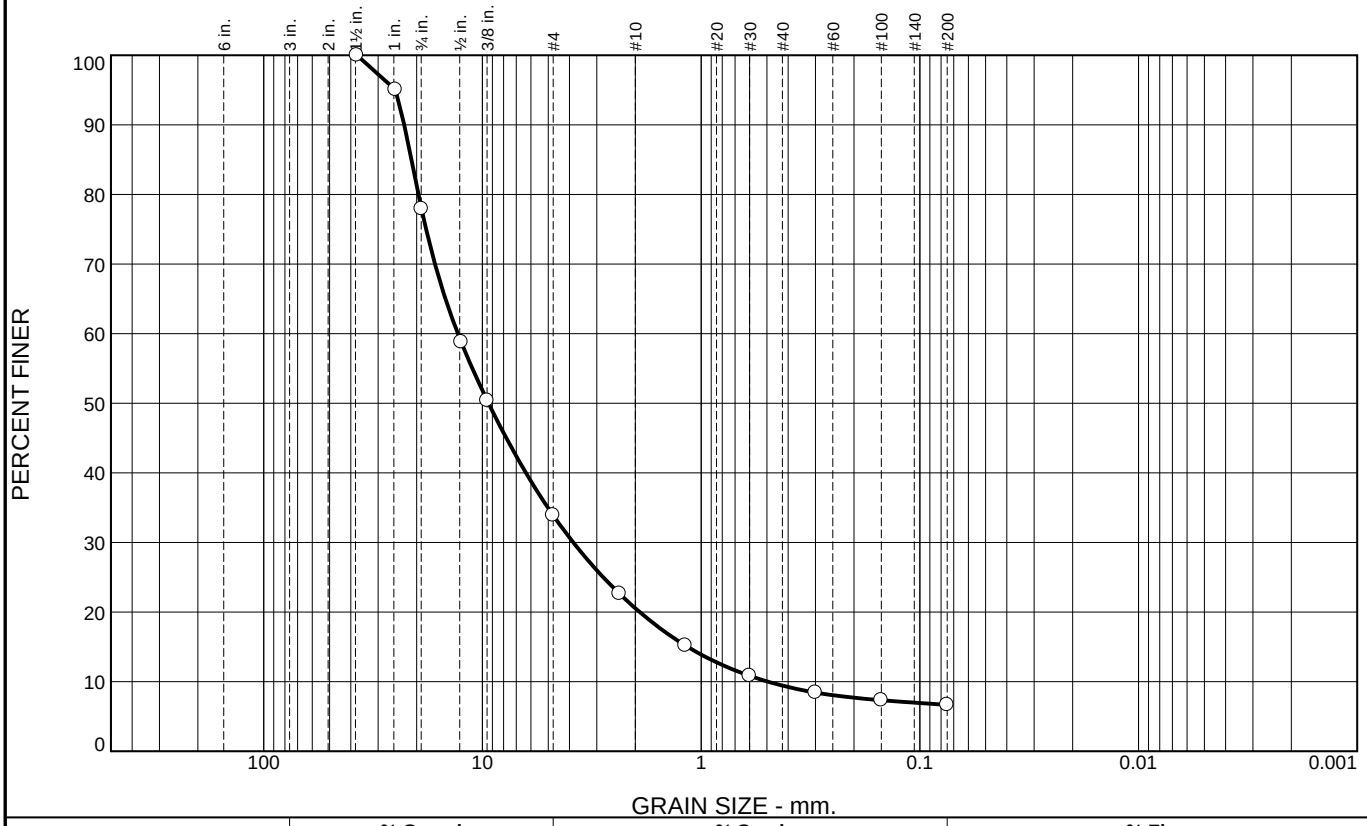
**Atlas**

**Indianapolis, Indiana**

**Client:** KRM
**Project:** FCI School Pavement

**Project No:** 170GC01699 **Figure**

# Particle Size Distribution Report




| % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| 0.0 | 21.9 | 44.2 | 13.3 | 11.2 | 2.7 | 6.7 | |

| SIEVE SIZE | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 1-1/2 | 100.0 | | |
| 1 | 95.0 | | |
| 3/4 | 77.9 | | |
| 1/2" | 58.8 | | |
| 3/8 | 50.4 | | |
| #4 | 33.9 | | |
| #8 | 22.6 | | |
| #16 | 15.2 | | |
| #30 | 10.8 | | |
| #50 | 8.4 | | |
| #100 | 7.3 | | |
| #200 | 6.7 | | |

* (no specification provided)

**Material Description**

Aggregate Base

**Atterberg Limits**

PL= LL= PI=

**Coefficients**

$D_{90}$= 22.7903 $D_{85}$= 21.1177 $D_{60}$= 12.9445
$D_{50}$= 9.3740 $D_{30}$= 3.8414 $D_{15}$= 1.1518
$D_{10}$= 0.4939 $C_u$= 26.21 $C_c$= 2.31

**Classification**

USCS= AASHTO=

**Remarks**

**Source of Sample:** 15694 **Depth:** Aggregate
**Sample Number:** B-11 & 12 **Date:**

**Atlas**

**Indianapolis, Indiana**

**Client:** KRM
**Project:** FCI School Pavement

**Project No:** 170GC01699 **Figure**

ATLAS

# Pavement Core Photo Report

BORING NO.: **B-1**

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-1.1
Site View




Figure B-1.2
Downhole View

*Note: Coring process involves water.*
*Photos of pavement cores depict top of pavement core on the left.*

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-1.3
Recovered Pavement Core




Figure B-1.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: B-2

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-2.1
Site View




Figure B-2.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-2.3
Recovered Pavement Core

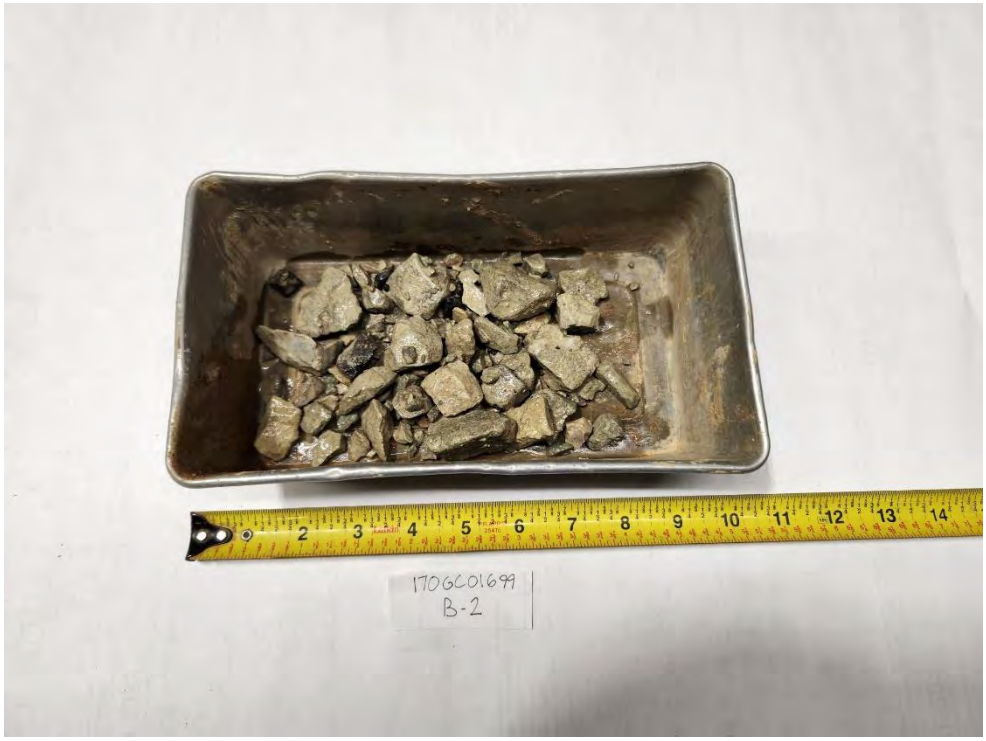



Figure B-2.4
Recovered Aggregate Base

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-3.1
Site View



Figure B-3.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-3.3
Recovered Pavement Core




Figure B-3.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: **B-4**

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-4.1
Site View



Figure B-4.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-4.3
Recovered Pavement Core




Figure B-4.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: **B-5**

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-5.1
Site View




Figure B-5.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-5.3
Recovered Pavement Core




Figure B-5.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: B-6

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-6.1
Site View



Figure B-6.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-6.3
Recovered Pavement Core




Figure B-6.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: B-7

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-7.1
Site View



Figure B-7.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-7.3
Recovered Pavement Core




Figure B-7.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: B-8

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-8.1
Site View



Figure B-8.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-8.3
Recovered Pavement Core




Figure B-8.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: B-9

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-9.1
Site View



Figure B-9.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-9.3
Recovered Pavement Core




Figure B-9.4
Recovered Aggregate Base

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-10.1
Site View



Figure B-10.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-10.3
Recovered Pavement Core




Figure B-10.4
Recovered Aggregate Base

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-11.1
Site View

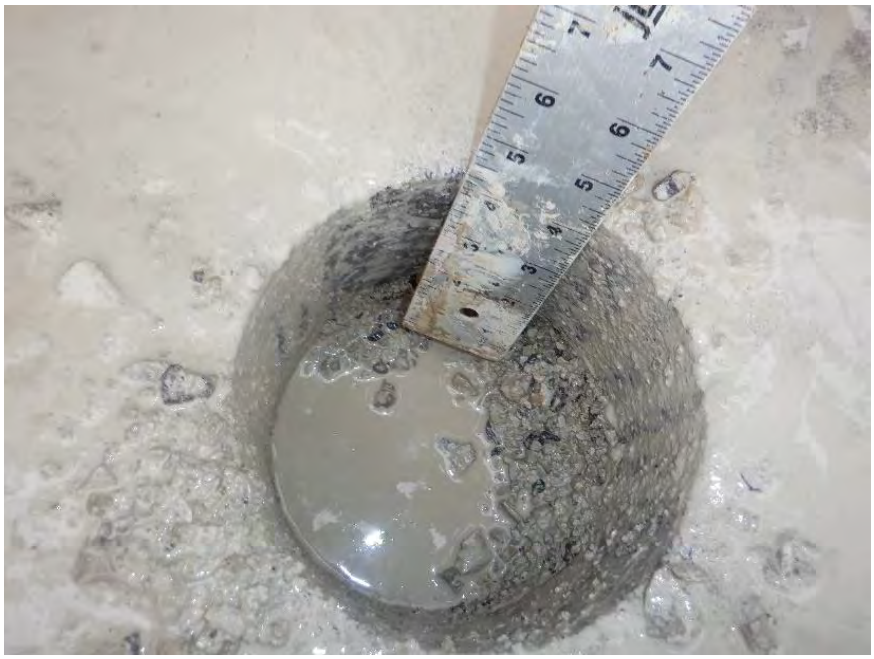


Figure B-11.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-11.3
Recovered Pavement Core

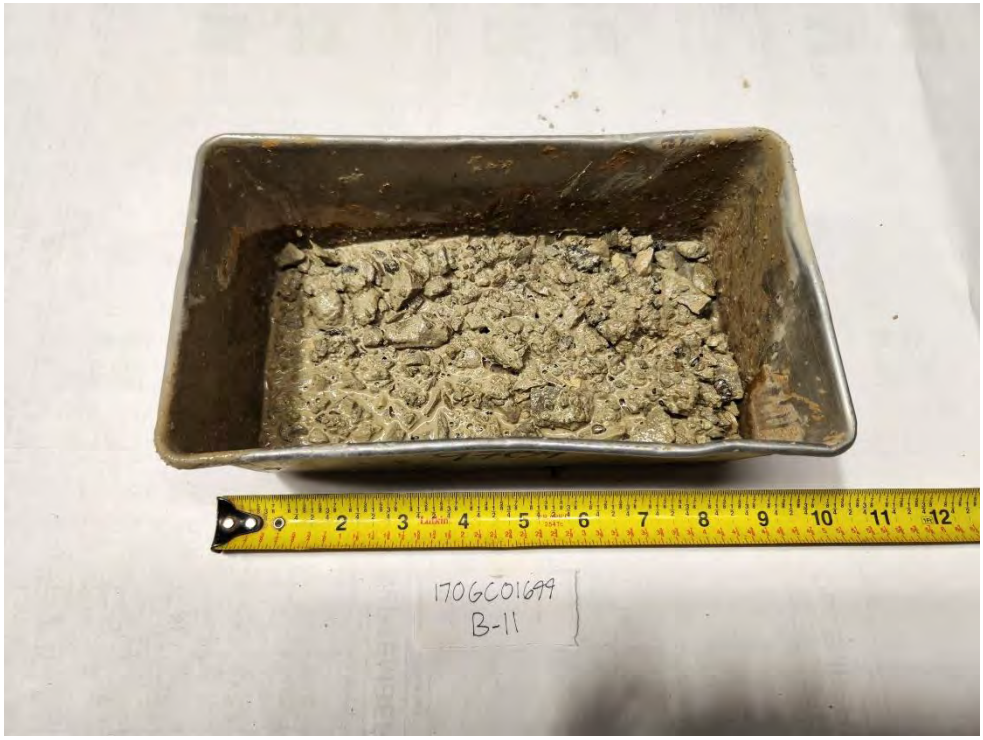



Figure B-11.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: **B-12**

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS



Figure B-12.1
Site View



Figure B-12.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-12.3
Recovered Pavement Core

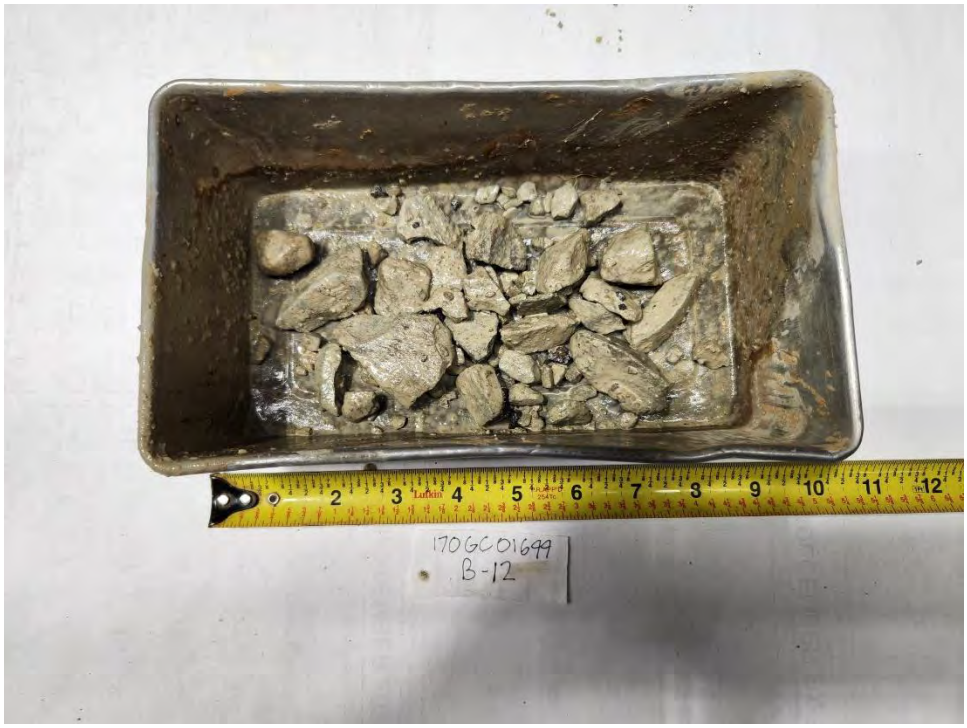



Figure B-12.4
Recovered Aggregate Base

# Pavement Core Photo Report

BORING NO.: **B-13**

SHEET 1 OF 2

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-13.1
Site View



Figure B-13.2
Downhole View

# Pavement Core Photo Report

CLIENT NAME: KRM Architecture

PROJECT TYPE: Proposed HSE Fall Creek Intermediate School Pavement Improvements, Fishers, IN

## PHOTOS




Figure B-13.3
Recovered Pavement Core




Figure B-13.4
Recovered Aggregate Base

# Important Information about This

# Geotechnical-Engineering Report

**Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.**

**While you cannot eliminate all such risks, you can manage them. The following information is provided to help.**

## Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

## Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

## Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

## Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

## Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

## A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

## A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

## Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

## Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

## Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

## Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

## Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

## Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

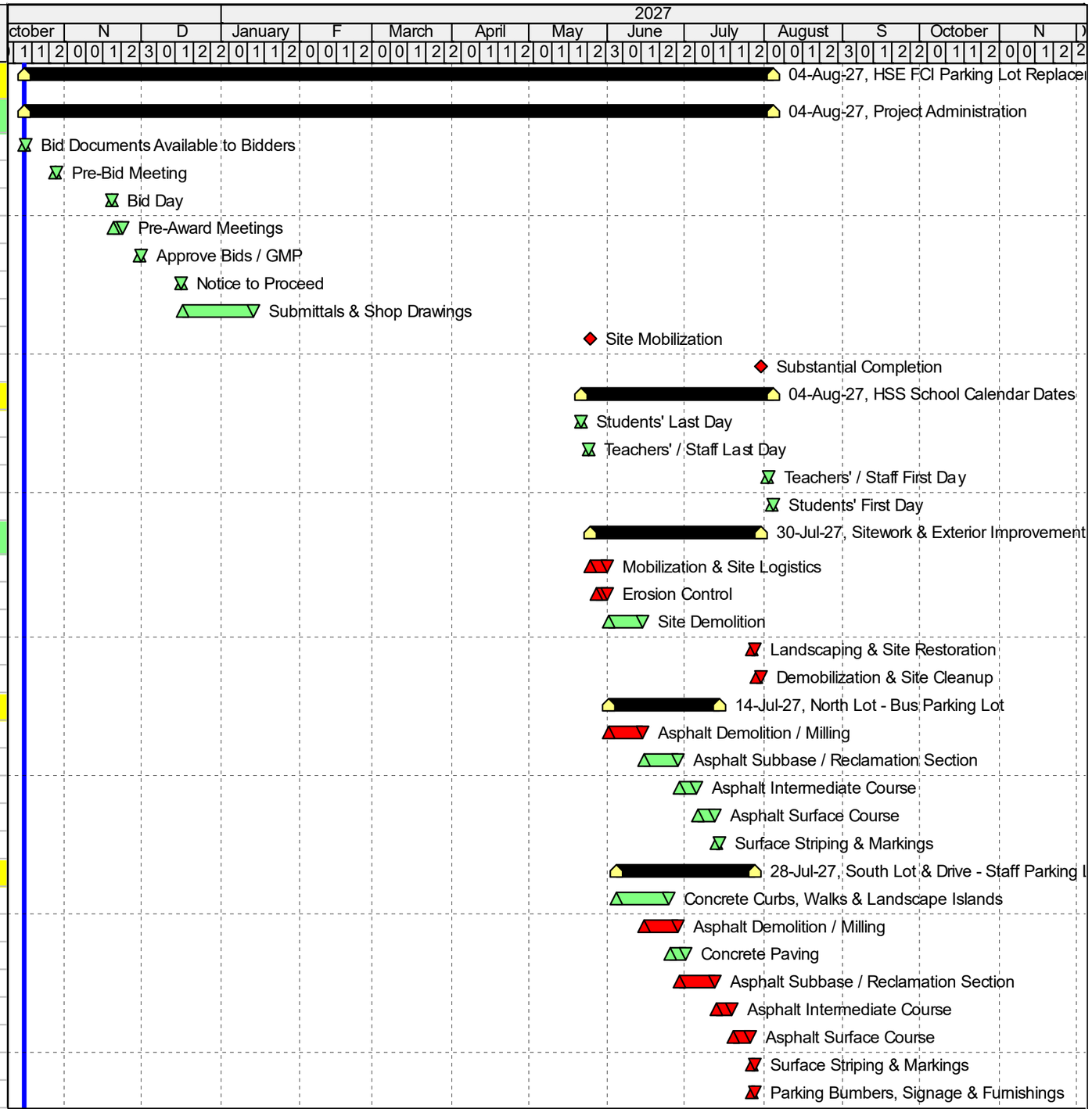
Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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| Activity Name | Original Duration | Start | Finish |
|---|---|---|---|
| **HSE FCI Parking Lot Replacement** | 209 | 16-Oct-26 | 04-Aug-27 |
| **Project Administration** | 209 | 16-Oct-26 | 04-Aug-27 |
| Bid Documents Available to Bidders | 1 | 16-Oct-26 | 16-Oct-26 |
| Pre-Bid Meeting | 1 | 28-Oct-26* | 28-Oct-26 |
| Bid Day | 1 | 19-Nov-26* | 19-Nov-26 |
| Pre-Award Meetings | 2 | 20-Nov-26 | 23-Nov-26 |
| Approve Bids / GMP | 1 | 30-Nov-26* | 30-Nov-26 |
| Notice to Proceed | 1 | 16-Dec-26* | 16-Dec-26 |
| Submittals & Shop Drawings | 20 | 17-Dec-26 | 13-Jan-27 |
| Site Mobilization | 0 | 25-May-27* | |
| Substantial Completion | 0 | | 30-Jul-27* |
| **HSS School Calendar Dates** | 54 | 21-May-27 | 04-Aug-27 |
| Students' Last Day | 1 | 21-May-27* | 21-May-27 |
| Teachers' / Staff Last Day | 1 | 24-May-27* | 24-May-27 |
| Teachers' / Staff First Day | 1 | 02-Aug-27* | 02-Aug-27 |
| Students' First Day | 1 | 04-Aug-27* | 04-Aug-27 |
| **Sitework & Exterior Improvements** | 49 | 25-May-27 | 30-Jul-27 |
| Mobilization & Site Logistics | 5 | 25-May-27 | 31-May-27 |
| Erosion Control | 3 | 27-May-27 | 31-May-27 |
| Site Demolition | 10 | 01-Jun-27 | 14-Jun-27 |
| Landscaping & Site Restoration | 2 | 27-Jul-27 | 28-Jul-27 |
| Demobilization & Site Cleanup | 2 | 29-Jul-27 | 30-Jul-27 |
| **North Lot - Bus Parking Lot** | 32 | 01-Jun-27 | 14-Jul-27 |
| Asphalt Demolition / Milling | 10 | 01-Jun-27 | 14-Jun-27 |
| Asphalt Subbase / Reclamation Section | 10 | 15-Jun-27 | 28-Jun-27 |
| Asphalt Intermediate Course | 5 | 29-Jun-27 | 05-Jul-27 |
| Asphalt Surface Course | 5 | 06-Jul-27 | 12-Jul-27 |
| Surface Striping & Markings | 2 | 13-Jul-27 | 14-Jul-27 |
| **South Lot & Drive - Staff Parking Lot & Drive** | 39 | 04-Jun-27 | 28-Jul-27 |
| Concrete Curbs, Walks & Landscape Islands | 15 | 04-Jun-27 | 24-Jun-27 |
| Asphalt Demolition / Milling | 10 | 15-Jun-27 | 28-Jun-27 |
| Concrete Paving | 5 | 25-Jun-27 | 01-Jul-27 |
| Asphalt Subbase / Reclamation Section | 10 | 29-Jun-27 | 12-Jul-27 |
| Asphalt Intermediate Course | 5 | 13-Jul-27 | 19-Jul-27 |
| Asphalt Surface Course | 5 | 20-Jul-27 | 26-Jul-27 |
| Surface Striping & Markings | 2 | 27-Jul-27 | 28-Jul-27 |
| Parking Bumbers, Signage & Furnishings | 2 | 27-Jul-27 | 28-Jul-27 |



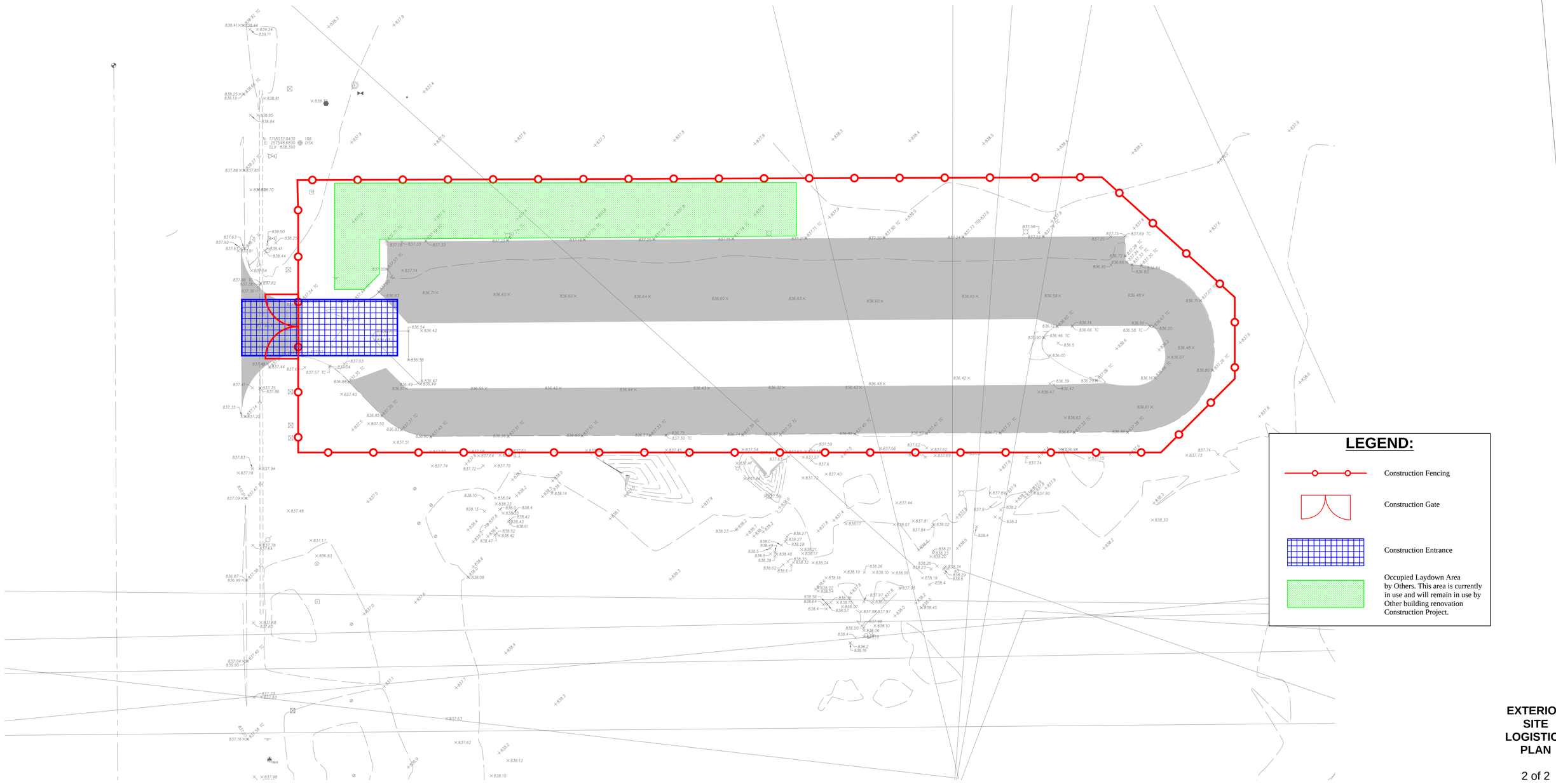

Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

# HSE FCI Parking Lot Replacement

## Guideline Schedule



SKILLMAN




**EXTERIOR SITE LOGISTICS PLAN**

## DEMOLITION PLAN NOTES

1. EROSION CONTROL SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE, INCLUDING PAVEMENT REMOVAL.
2. THE CONTRACTOR SHALL HIRE A PRIVATE LOCATER TO VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES TO BE PROTECTED, REMOVED, RELOCATED OR ABANDONED PRIOR TO COMMENCING FDR ACTIVITIES. IF CONFLICTS EXIST, NOTIFY THE ENGINEER IMMEDIATELY.
3. THE CONTRACTOR SHALL COORDINATE WORK ASSOCIATED WITH THE REMOVAL, RELOCATION OR ABANDONMENT OF UTILITIES WITH THE UTILITY COMPANY OR ENTITY HAVING OWNERSHIP OF EACH RESPECTIVE UTILITY. COSTS FOR DISCONNECTION, REMOVAL, AND/OR RELOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS OR AS NECESSARY TO ALLOW FOR EXECUTION OF THE WORK SHALL BE PAID BY THE CONTRACTOR.
4. NO OPEN BURNING SHALL BE PERMITTED ON THE SITE.
5. THE OWNER HAS FIRST SALVAGE RIGHTS ON ALL ITEMS REMOVED. IF OWNER FORFEITS RIGHTS, ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE SHOWN.
6. UNLESS SCHEDULED FOR DEMOLITION ON THE DRAWINGS, ALL TREES AND VEGETATION SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT. PROTECTIVE MEASURES SHALL INCLUDE INSTALLATION AND MAINTENANCE OF TREE PROTECTION FENCING TO BE LOCATED WHERE SHOWN AND AT THE DRIPLINE OF ALL TREES LOCATED WITHIN CLOSE PROXIMITY OF AREAS WHERE HEAVY EQUIPMENT WILL OPERATE.
7. A CLEAN, STRAIGHT EDGE SHALL BE SAWCUT BETWEEN ALL CONCRETE AND ASPHALT SURFACES SCHEDULED FOR DEMOLITION AND CONCRETE AND ASPHALT SURFACES TO REMAIN IN-PLACE.
8. TERMINAL ENDS OF UNDERGROUND UTILITIES ABANDONED IN-PLACE SHALL BE CUT, CAPPED AND PLUGGED. THE ENDS OF DISCONNECTED UNDERGROUND UTILITIES SHALL BE MARKED FOR FUTURE IDENTIFICATION WITH DETECTABLE LOCATOR TAPE OR A METAL ROD.
9. ALL SIDEWALKS, CURBS, APPARATUSES, ETC., DESIGNATED FOR REMOVAL SHALL BE DEMOLISHED ACCORDING TO SPECIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE ACCESS FOR PEDESTRIANS AND VEHICLE TRAFFIC. THE CONTRACTOR WILL MAINTAIN ALL UTILITY SERVICES TO ALL BUILDING SECTIONS. IF UTILITY SERVICES MUST BE INTERRUPTED, THE CONTRACTOR SHALL COORDINATE THAT SHUTDOWN TO MINIMIZE IMPACT TO THE BUILDING AND SCHOOL FACILITIES. COORDINATE SHUTDOWN AT LEAST ONE WEEK IN ADVANCE WITH BUSINESS, OWNER'S REPRESENTATIVE AND FACILITY MANAGER.
11. ALL EXISTING ON-SITE UTILITIES SHALL REMAIN UNLESS DESIGNATED FOR REMOVAL, OR UNLESS THEY INTERFERE WITH PROJECT CONSTRUCTION. CONTACT ENGINEER BEFORE REMOVING. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN.
12. EXISTING MANHOLES, CATCH BASINS, CLEANOUTS, VALVE BOXES, FRAMES COVERS AND GRATES REMAINING IN USE SHALL BE PROTECTED AND ADJUSTED TO FINAL GRADES.
13. FOR ALL UTILITY LINES AND STRUCTURES DESIGNATED TO BE REMOVED, PLACE AND COMPACT STRUCTURAL BACKFILL WITHIN TRENCH/EXCAVATION.
14. SAWCUT INTEGRAL CURB & WALK AT NEAREST CONSTRUCTION JOINT WHEN ADJACENT INTEGRAL CURB & WALK IS TO REMAIN.
15. CONTRACTOR SHALL CUT CONCRETE AT NEAREST CONSTRUCTION JOINT.

## PROTECTION NOTES

1. PROTECT ALL LIGHT POLES, UTILITIES, CONCRETE AND CURBS UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL
2. ALL STRIPING SHALL BE REINSTALLED IN THE SAME CONFIGURATION AS IT EXISTS AT THE TIME OF THE SURVEY, EXCEPT WHERE SHOWN ON THE SITE PLAN.
3. PROTECT ALL TREES AND VEGETATION UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL

## POTHOLING & UTILITY PROTECTION NOTES

CONTRACTOR SHALL POTHOLE UTILITIES IN THE AREAS OF FDR RECONSTRUCTION. IF ANY UTILITIES WILL BE COMPROMISED BY THE FDR PROCESS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

## NOTE

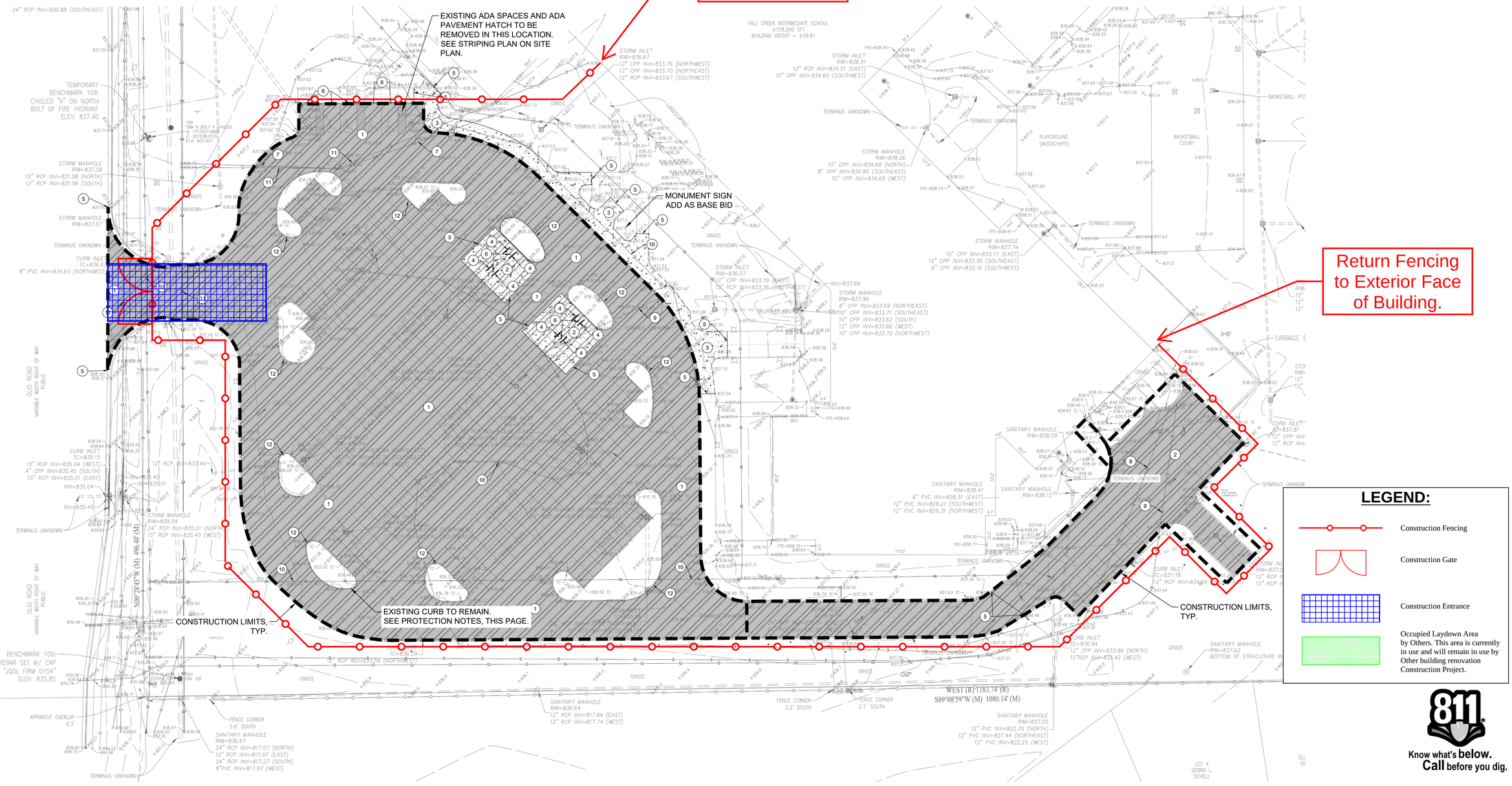
CONTRACTOR SHALL REMOVE GEOTEXTILE FABRIC IF REQUIRED. NO GEOTEXTILE FABRIC WAS ENCOUNTERED IN THE GEOTECH INVESTIGATIONS. IF GEOTEXTILE IS FOUND IN PAVEMENT LOCATIONS WITH FULL DEPTH RECLAMATION (FDR) THE GEOTEXTILE MUST BE REMOVED.

## DEMOLITION PLAN KEYNOTES

1. FULL DEPTH REHABILITATION SECTION - REMOVE ASPHALT AND BASE AS REQUIRED TO MEET PROPOSED GRADES - COORDINATE WITH SITE PLAN AND GRADING PLAN.
2. FULL DEPTH REHABILITATION SECTION - REMOVE MATERIAL FOR PROPOSED PAVEMENT SECTION
3. REMOVE INTEGRAL CURB & SIDEWALK & SIDEWALK AT NEAREST CONSTRUCTION JOINTS
4. REMOVE AND SALVAGE CONCRETE WHEEL STOPS
5. SAW CUT
6. DEMO ADA POST & SIGN FILL VOIDS WITH CEMENT MORTAR WITH CRUSHED AGGREGATE.
7. PROTECT EXISTING FIBER OPTIC LINES DURING CONSTRUCTION
8. PROTECT EXISTING GAS LINE DURING CONSTRUCTION
9. PROTECT EXISTING ELECTRIC LINES DURING CONSTRUCTION
10. PROTECT EXISTING WATER LINES DURING CONSTRUCTION
11. PROTECT EXISTING COMMUNICATION LINES DURING CONSTRUCTION
12. MAINTAIN EXISTING CURBS DURING CONSTRUCTION

0 30' 60'

SCALE: 1:30




## LEGEND:

- Construction Fencing
- Construction Gate
- Construction Entrance
- Occupied Laydown Area by Others. This area is currently in use and will remain in use by Other building renovation Construction Project.

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

krM Architecture+

A&F ENGINEERING Transportation & Site Engineering

RDG

kbsd CONSULTING

LHB Lynch, Harrison & Brunsleve, Inc.

REVISIONS
1 100% CD Set October 2026

07.12.24
HAMILTON SOUTHEASTERN SCHOOLs
**23055 - FALL CREEK INTERMEDIATE RENOVATIONS**
12011 Olio Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS

SET TO BE PRINTED IN COLOR

CONSTRUCTION DOCUMENTS 07.12.24
krM JOB NO. 23055
DRAWN BY A&F

DRAWING NAME

**EXTERIOR SITE LOGISTICS PLAN**



Z:\2024\24007-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\2026 BID SET\DWG'S\C101 EXISTING CONDITIONS.DWG plotted by STEVEN O'ROURKE on 10/14/2026 10:02:06 AM last saved by SOROURKE on 10/14/2026 10:01:47 AM
Xrefs: 24007-BASE TOPO.DWG & _A_KA50 TTL BLOCK.DWG

# LAND DEVELOPMENT
# FALL CREEK INTERMEDIATE RENOVATION
## 12011 OLIO ROAD FISHERS, INDIANA

### PROJECT DATA

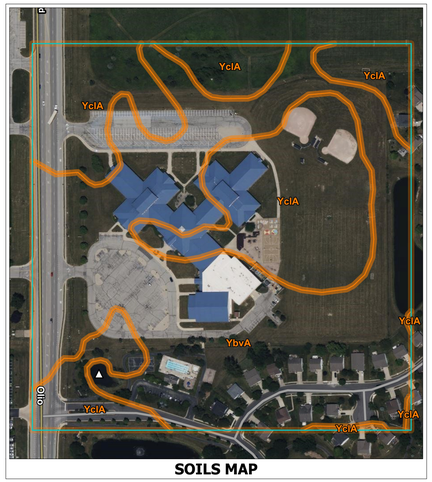
**Project Information:**

| | |
|---|---|
| Project Title: | FALL CREEK INTERMEDIATE - PHASE 2 |
| Address: | 12011 OLIO ROAD |
| City/Town: | Fishers |
| County: | Hamilton |
| Civil Township: | Delaware |
| Quarter: | NE |
| Section: | 36 |
| Township: | 18N |
| Range: | 5E |
| Latitude: | 39° 57' 31" N |
| Longitude: | 85° 55' 09" W |

Project Description: Pavement maintenance improvements to existing parking lots and access roads.



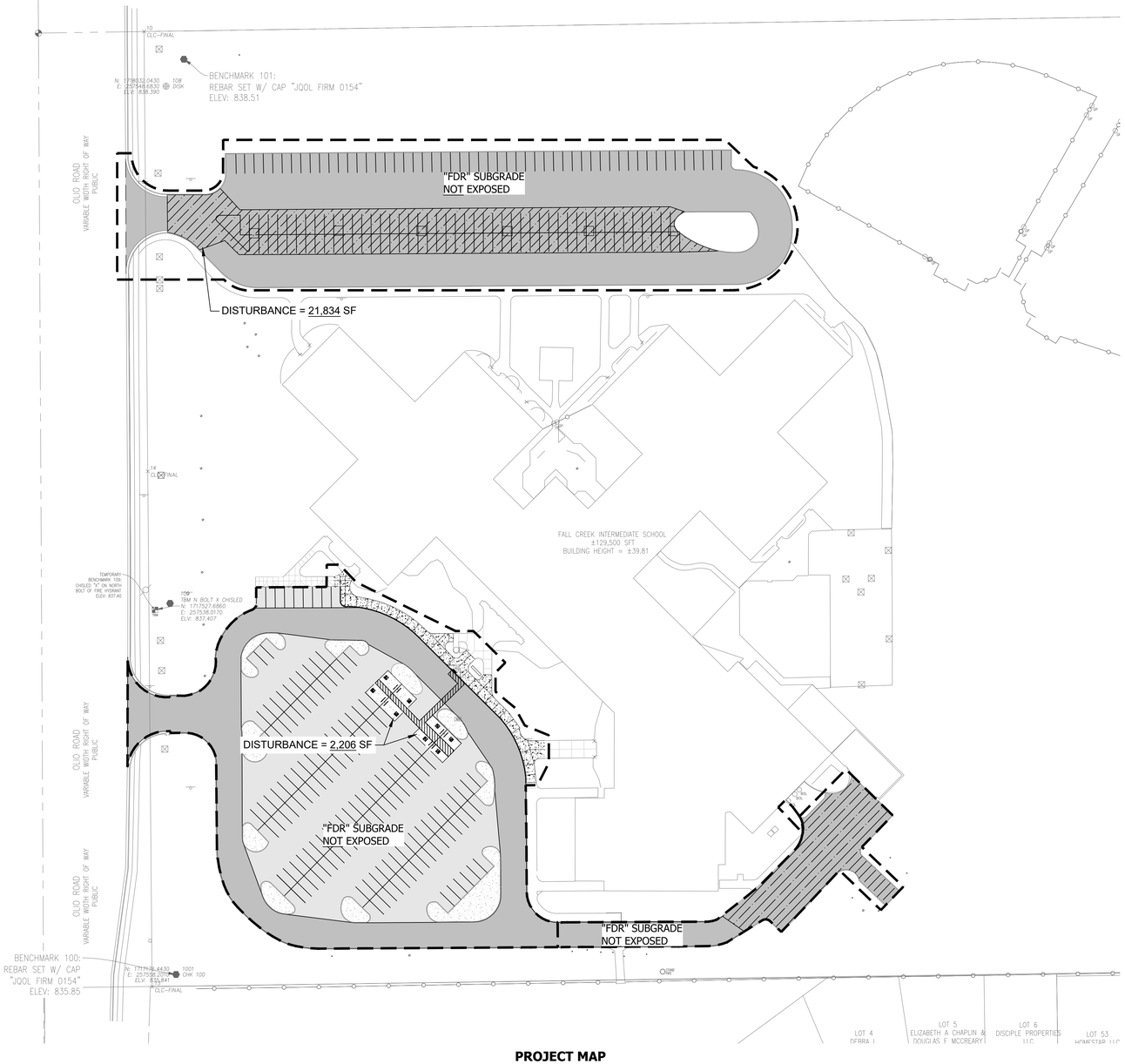

LOCATION MAP




SOILS MAP

### PROJECT SOIL SURVEY

| | |
|---|---|
| YbvA | Brookston silty clay loam-Urban land complex, 0 to 2 percent slopes |
| YclA | Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes |




PROJECT MAP
SCALE: 1" = 60'

| SHEET INDEX | |
|---|---|
| No. | DESCRIPTION |
| C100 | COVER SHEET |
| | SURVEY |
| C101-C102 | DEMOLITION PLAN |
| C201-C202 | SITE PLAN |
| C301-C302 | GRADING & UTILITY PLAN |
| C401 | SWPPP PLAN (INITIAL) |
| C402 | SWPPP PLAN (FINAL) |
| C403 | SWPPP PLAN (DETAILS) |
| C901 | SITE DETAILS |
| | FISHERS CONSTRUCTION DETAILS |

TOTAL DISTURBANCE IF ALL ALTERNATES ARE ACCEPTED IS 0.83 AC FDR PROCESS DOES NOT EXPOSE SUBGRADE AND IS NOT INCLUDED IN THE DISTURBED AREA.

| REVISIONS | | |
|---|---|---|
| MARK | DATE | DESCRIPTION |
| | | |
| | | |
| | | |
| | | |

### BENCHMARKS

BENCHMARK 100:
REBAR SET W/ CAP "JQOL FIRM 0154"
ELEV:835.85

TEMPORARY
BENCHMARK 109:
CHISLED "X" ON NORTH BOLT OF FIRE HYDRANT
ELEV:837.40

BENCHMARK 101:
REBAR SET W/ CAP "JQOL FIRM 0154"
ELEV:838.51

### FLOOD ZONE STATEMENT

ALL OF THE PARCEL DESCRIBED HEREIN DOES NOT LIE WITHIN THAT SPECIAL FLOOD ZONE "A", BUT LIES WITHIN FLOOD ZONE "X". AS SAID PARCEL PLOTS ON COMMUNITY PANEL NUMBER 18057C0584G (DATED NOVEMBER 19, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR THE TOWN OF FISHERS, INDIANA, THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.

Know what's below. Call before you dig.

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A&F ENGINEERING Transportation & Site Engineering
kbso CONSULTING
Lynch, Harrison & Brumleve, Inc.

REVISIONS
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Addendum 03 11/11/2026

07.12.24
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REGISTERED
No.890237
STATE OF INDIANA
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS
07.12.24
krM JOB NO.
23055
DRAWN BY
A&F
DRAWING NAME
COVER SHEET
DRAWING NO.
C100

Z:\2024\24007\--KRM ARCHITECTURE_LAND DEVELOPMENT_FALL CREEK INTERMEDIATE RENOVATION\2026 BID SET\DWG'S\C100 COVER SHEET.DWG plotted by STEVEN O'ROURKE on 11/10/2026 8:38:03 AM last saved by SOROURKE on 11/9/2026 10:23:39 AM
Xrefs: 24001_BASE_TOPO.DWG & 24001_BASE SITELINE & _24A.ST TTL BLOCK.DWG

## DEMOLITION PLAN NOTES

1. EROSION CONTROL SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE, INCLUDING PAVEMENT REMOVAL.
2. THE CONTRACTOR SHALL HIRE A PRIVATE LOCATER TO VERIFY THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES TO BE PROTECTED, REMOVED, RELOCATED OR ABANDONED PRIOR TO COMMENCING FDR ACTIVITIES. IF CONFLICTS EXIST, NOTIFY THE ENGINEER IMMEDIATELY.
3. THE CONTRACTOR SHALL COORDINATE WORK ASSOCIATED WITH THE REMOVAL, RELOCATION OR ABANDONMENT OF UTILITIES WITH THE UTILITY COMPANY OR ENTITY HAVING OWNERSHIP OF EACH RESPECTIVE UTILITY. COSTS FOR DISCONNECTION, REMOVAL, AND/OR RELOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS OR AS NECESSARY TO ALLOW FOR EXECUTION OF THE WORK SHALL BE PAID BY THE CONTRACTOR.
4. NO OPEN BURNING SHALL BE PERMITTED ON THE SITE.
5. THE OWNER HAS FIRST SALVAGE RIGHTS ON ALL ITEMS REMOVED. IF OWNER FORFEITS RIGHTS, ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE SHOWN.
6. UNLESS SCHEDULED FOR DEMOLITION ON THE DRAWINGS, ALL TREES AND VEGETATION SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT. PROTECTIVE MEASURES SHALL INCLUDE INSTALLATION AND MAINTENANCE OF TREE PROTECTION FENCING TO BE LOCATED WHERE SHOWN AND AT THE DRIPLINE OF ALL TREES LOCATED WITHIN CLOSE PROXIMITY OF AREAS WHERE HEAVY EQUIPMENT WILL OPERATE.
7. A CLEAN, STRAIGHT EDGE SHALL BE SAWCUT BETWEEN ALL CONCRETE AND ASPHALT SURFACES SCHEDULED FOR DEMOLITION AND CONCRETE AND ASPHALT SURFACES TO REMAIN IN-PLACE.
8. TERMINAL ENDS OF UNDERGROUND UTILITIES ABANDONED IN-PLACE SHALL BE CUT, CAPPED AND PLUGGED. THE ENDS OF DISCONNECTED UNDERGROUND UTILITIES SHALL BE MARKED FOR FUTURE IDENTIFICATION WITH DETECTABLE LOCATOR TAPE OR A METAL ROD.
9. ALL SIDEWALKS, CURBS, APPARATUSES, ETC., DESIGNATED FOR REMOVAL SHALL BE DEMOLISHED ACCORDING TO SPECIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE ACCESS FOR PEDESTRIANS AND VEHICLE TRAFFIC. THE CONTRACTOR WILL MAINTAIN ALL UTILITY SERVICES TO ALL BUILDING SECTIONS. IF UTILITY SERVICES MUST BE INTERRUPTED, THE CONTRACTOR SHALL COORDINATE THAT SHUTDOWN TO MINIMIZE IMPACT TO THE BUILDING AND SCHOOL FACILITIES. COORDINATE SHUTDOWN AT LEAST ONE WEEK IN ADVANCE WITH BUSINESS, OWNER'S REPRESENTATIVE AND FACILITY MANAGER.
11. ALL EXISTING ON-SITE UTILITIES SHALL REMAIN UNLESS DESIGNATED FOR REMOVAL, OR UNLESS THEY INTERFERE WITH PROJECT CONSTRUCTION. CONTACT ENGINEER BEFORE REMOVING. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN.
12. EXISTING MANHOLES, CATCH BASINS, CLEANOUTS, VALVE BOXES, FRAMES COVERS AND GRATES REMAINING IN USE SHALL BE PROTECTED AND ADJUSTED TO FINAL GRADES.
13. FOR ALL UTILITY LINES AND STRUCTURES DESIGNATED TO BE REMOVED, PLACE AND COMPACT STRUCTURAL BACKFILL WITHIN TRENCH/EXCAVATION.
14. SAWCUT INTEGRAL CURB & WALK AT NEAREST CONSTRUCTION JOINT WHEN ADJACENT INTEGRAL CURB & WALK IS TO REMAIN.
15. CONTRACTOR SHALL CUT CONCRETE AT NEAREST CONSTRUCTION JOINT.

## PROTECTION NOTES

1. PROTECT ALL LIGHT POLES, UTILITIES, CONCRETE AND CURBS UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL
2. ALL STRIPING SHALL BE REINSTALLED IN THE SAME CONFIGURATION AS IT EXISTS AT THE TIME OF THE SURVEY, EXCEPT WHERE SHOWN ON THE SITE PLAN.
3. PROTECT ALL TREES AND VEGETATION UNLESS SPECIFICALLY DESIGNATED FOR REMOVAL

## POTHOLING & UTILITY PROTECTION NOTES

CONTRACTOR SHALL POTHOLE UTILITIES IN THE AREAS OF FDR RECONSTRUCTION. IF ANY UTILITIES WILL BE COMPROMISED BY THE FDR PROCESS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

## NOTE

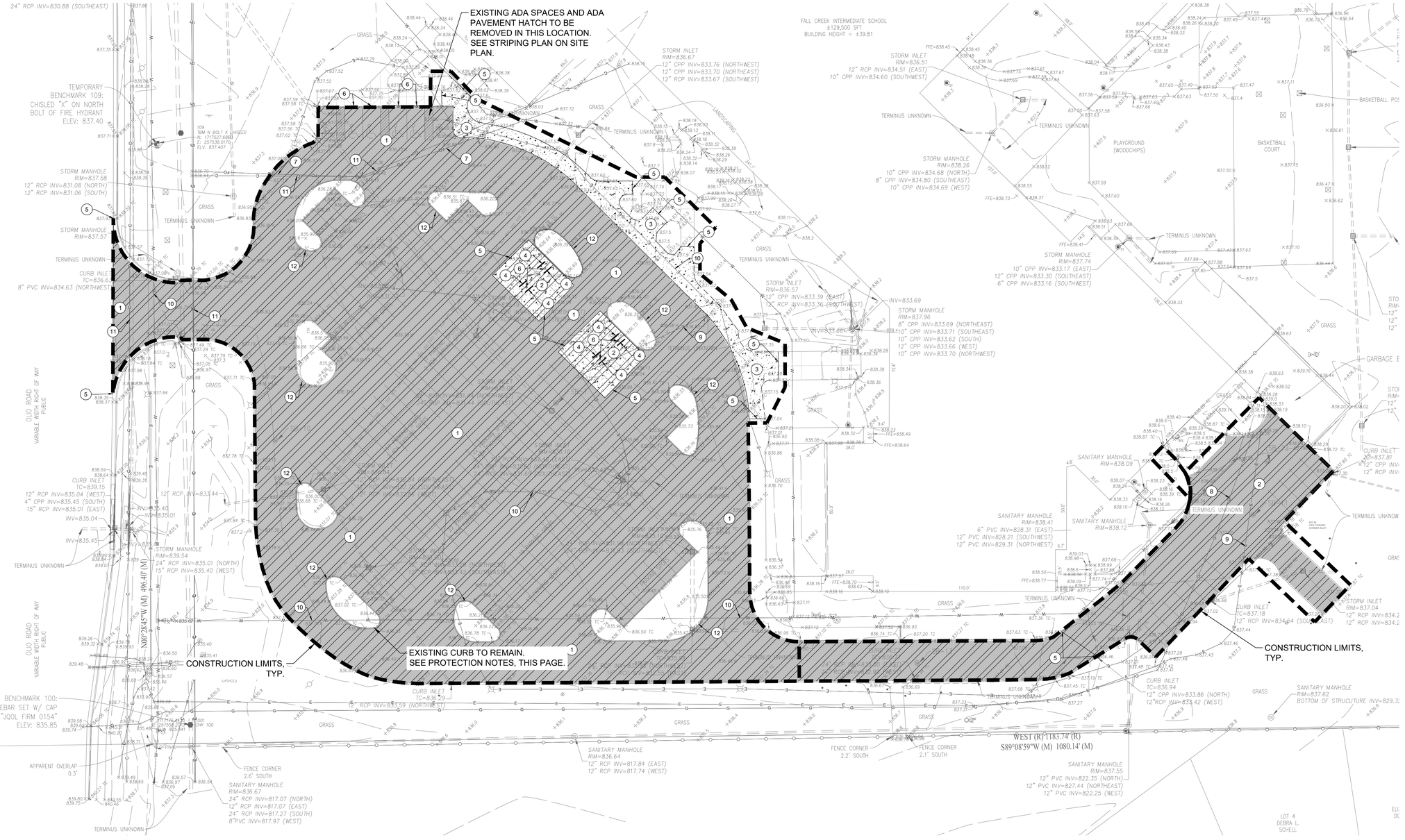
CONTRACTOR SHALL REMOVE GEOTEXTILE FABRIC IF REQUIRED. NO GEOTEXTILE FABRIC WAS ENCOUNTERED IN THE GEOTECH INVESTIGATIONS. IF GEOTEXTILE IS FOUND IN PAVEMENT LOCATIONS WITH FULL DEPTH RECLAMATION (FDR) THE GEOTEXTILE MUST BE REMOVED.

## DEMOLITION PLAN KEYNOTES

1. FULL DEPTH REHABILITATION SECTION - REMOVE ASPHALT AND BASE AS REQUIRED TO MEET PROPOSED GRADES - COORDINATE WITH SITE PLAN AND GRADING PLAN.
2. FULL DEPTH REHABILITATION SECTION - REMOVE MATERIAL FOR PROPOSED PAVEMENT SECTION
3. REMOVE INTEGRAL CURB & SIDEWALK & SIDEWALK AT NEAREST CONSTRUCTION JOINTS
4. REMOVE AND SALVAGE CONCRETE WHEEL STOPS
5. SAW CUT
6. DEMO ADA POST & SIGN
   FILL VOIDS WITH CEMENT MORTAR WITH CRUSHED AGGREGATE.
7. PROTECT EXISTING FIBER OPTIC LINES DURING CONSTRUCTION
8. PROTECT EXISTING GAS LINE DURING CONSTRUCTION
9. PROTECT EXISTING ELECTRIC LINES DURING CONSTRUCTION
10. PROTECT EXISTING WATER LINES DURING CONSTRUCTION
11. PROTECT EXISTING COMMUNICATION LINES DURING CONSTRUCTION
12. MAINTAIN EXISTING CURBS DURING CONSTRUCTION
13. REMOVE RIVER ROCK TO ACCOMMODATE THE PROPOSED CONCRETE SECTION ADD CRUSHED #8 INDOT STONE TO ADJUST TO GRADES AS NEEDED.

0 30' 60'

SCALE: 1:30





krM Architecture+
A&F ENGINEERING Transportation & Site Engineering
RQC
kbso CONSULTING
LHB Lynch, Harrison & Brunsleve, Inc.


REVISIONS

| | | |
|---|---|---|
| 1 | 100% CD Set | October 2026 |
| 2 | Addendum 03 | 11/11/2026 |

07.12.24
HAMILTON SOUTHEASTERN SCHOOLs
**23055 - FALL CREEK INTERMEDIATE RENOVATIONS**
12011 Olio Rd. Fishers, IN 46037
CONSTRUCTION DOCUMENTS

SET TO BE PRINTED IN COLOR

STEVEN J. FEHRENBACHER No.890237 STATE OF INDIANA PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS 07.12.24
krM JOB NO. 23055
DRAWN BY A&F
DRAWING NAME

DEMOLITION PLANS

DRAWING NO. C102

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

Z:\2024\24007-KRM ARCHITECTURE, LAND DEVELOPMENT, FALL CREEK INTERMEDIATE RENOVATION\2026 BID SET\DWG'S\C101 EXISTING CONDITIONS.DWG plotted by STEVEN O'ROURKE on 11/10/2026 3:09:08 PM last saved by SOROURKE on 11/10/2026 2:53:22 PM
Xrefs: 24007r BASE TOPO.DWG & _A_FA1b0 TTL BLOCK.DWG

## GENERAL SITE NOTES

1. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM AGENCIES HAVING JURISDICTION OVER THE WORK PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL OBTAIN AND PAY THE COST OF ALL PERMITS THAT HAVE NOT BEEN SECURED BY THE OWNER.
2. CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION SAFETY STANDARDS AS ISSUED BY THE U.S. DEPARTMENT OF LABOR OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION AS SET FORTH IN FINAL RULE 29, PART 1926, WHERE SUCH REGULATIONS APPLY TO THE WORK.
3. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AND REQUEST FIELD LOCATIONS OF FACILITIES WITHIN THE WORK AREA PRIOR TO COMMENCING EXCAVATION ACTIVITIES. CONTRACTOR SHALL REPORT ANY VARIATIONS FROM THE LOCATIONS SHOWN THAT MAY PRESENT A CONFLICT WITH EXECUTION OF THE WORK TO THE ENGINEER PRIOR TO CONSTRUCTION.
4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS.
5. MAINTENANCE OF TRAFFIC SHALL BE PER THE MUTCD. COORDINATE ANY CLOSURES WITH THE SCHOOL.

## SITE DEVELOPMENT PLAN NOTES

1. TRANSVERSE EXPANSION JOINTS ARE TO BE PROVIDED IN CONCRETE SIDEWALKS AND COMBINED WALKS/CURBS WHERE SHOWN AND AT INTERVALS NOT TO EXCEED 12 x THE WIDTH OF THE WALK.
2. EXPANSION JOINTS SHALL BE INSTALLED IN CONCRETE PAVEMENTS AND WALKS AT ALL LOCATIONS WHERE PAVEMENTS AND WALKS ABUT A VERTICAL SURFACE SUCH AS A CURB, WALL, COLUMN, ETC.
3. CONTRACTION JOINTS SHALL BE PROVIDED AT EQUAL INTERVALS BETWEEN EXPANSION JOINTS IN CONCRETE WALKS. INSTALL CONTRACTION JOINTS AS SHOWN BUT IN NO CASE AT INTERVALS GREATER THAN 1.5 x THE WIDTH OF THE WALK.

DOCUMENT EXISTING PAVEMENT MARKINGS IN THE NORTH BUS LOT AND SUBMIT TO OWNER FOR REVIEW AND APPROVAL. THIS WILL BE THE PAVEMENT MARKINGS THAT NEED TO BE INSTALLED FOLLOWING THE PAVEMENT REPLACEMENT IF THE NORTH BUS PAVEMENT ALTERNATE IS SELECTED

## SITE PLAN NOTES

1. FDR STANDARD DUTY ASPHALT PAVEMENT
2. CONCRETE SIDEWALK (COMBINED WALK AND CURB ADJACENT TO ASPHALT PAVEMENT)
3. HEAVY DUTY ASPHALT PAVEMENT
4. FDR HEAVY DUTY ASPHALT PAVEMENT
5. CONCRETE PAVEMENT
6. ADA PARKING STALL
7. ADA PARKING SIGN
8. CONCRETE WHEEL STOPS (SALVAGED)
9. WHITE PAVEMENT MARKING - INSTALL TO MATCH EXISTING CONDITION UNLESS OTHER WISE SHOWN (ALL PARKING STALL & STOP BARS / LETTERS SHALL BE WHITE)
10. SIDEWALK RAMP WITH DETECTABLE WARNING
11. CURBS TO BE MAINTAINED DURING CONSTRUCTION
12. ACCESSIBLE CROSSWALK PAINT

# TOTAL PARKING = 306

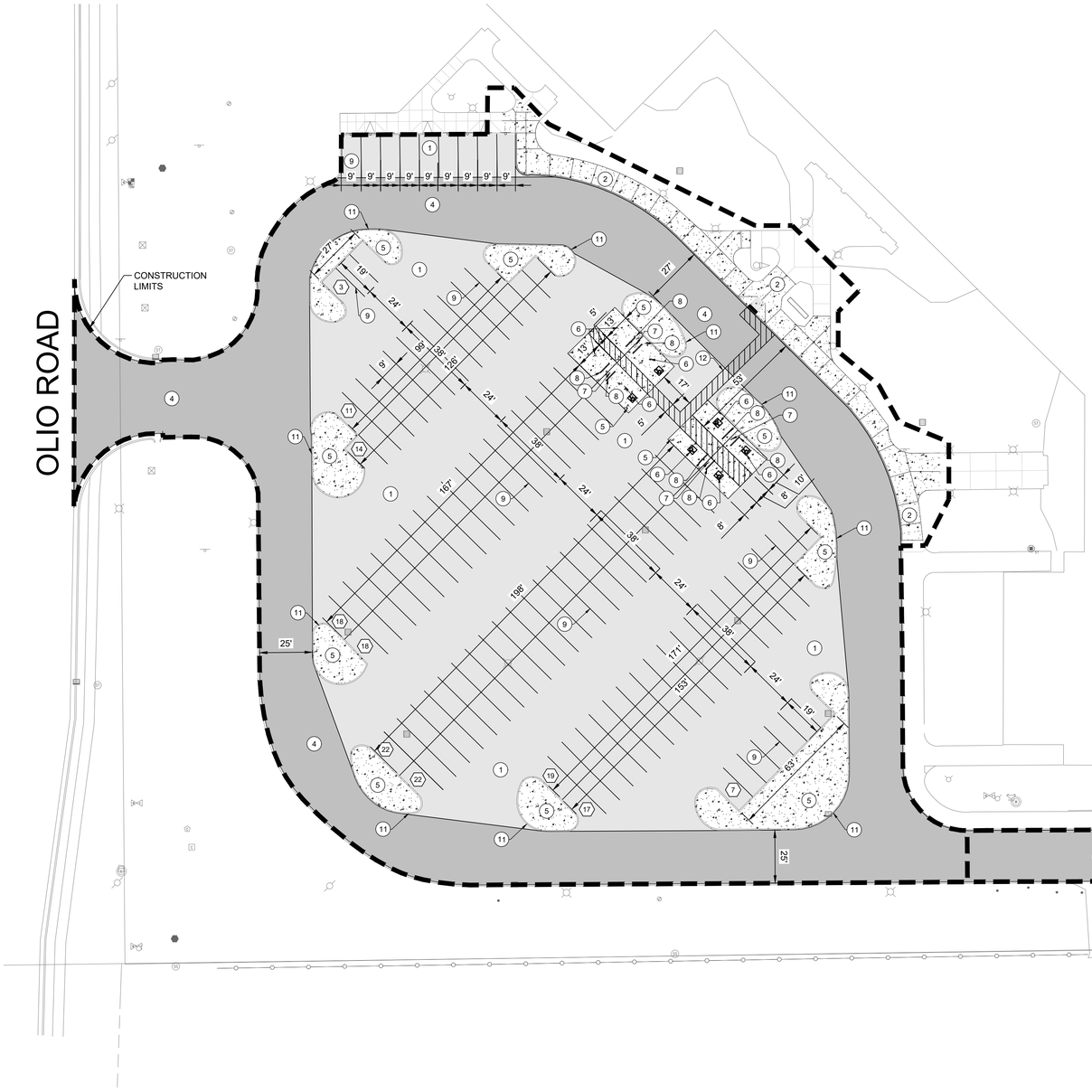
ADA PARKING = 8

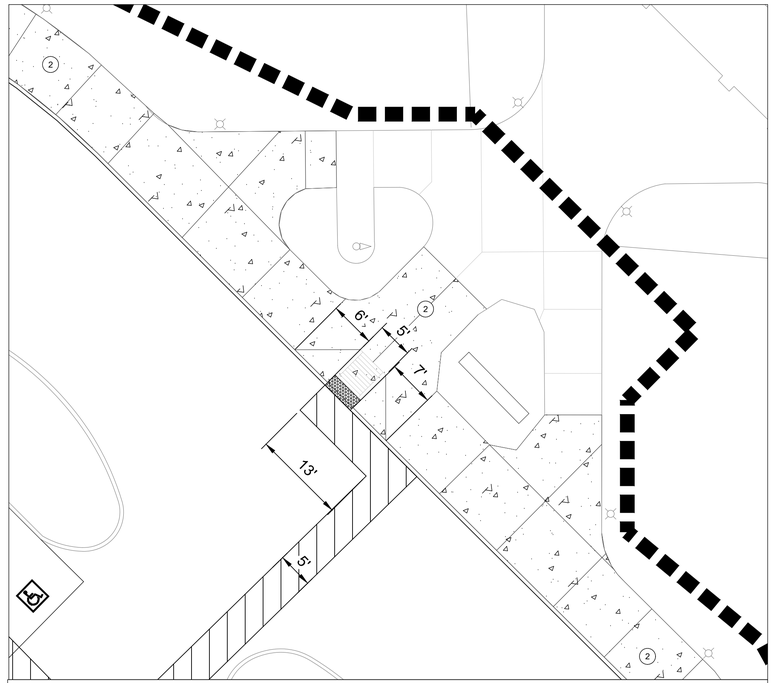
## STRIPING NOTE

ALL STRIPING SHALL BE REPLACED TO MATCH EXISTING CONDITION EXCEPT WHERE SHOWN. ALL EXISTING WHITE AND YELLOW MARKINGS SHALL BE RETAINED. ALL CURBS THAT ARE CURRENTLY PAINTED YELLOW SHALL BE REPAINTED YELLOW PER PROJECT SPECIFICATIONS.

## NOTE

ALL CURBS, SIDEWALKS AND POWER POLES SHALL BE POWER WASHED.




CONCRETE SIDEWALK DIMS ENLARGEMENT SCALE: 1' = 10'

0 30' 60'

SCALE: 1" = 30'

Know what's below. Call before you dig.

REVISIONS
- 100% CD Set — October 2026
- Addendum 03 — 11/11/2026

07.12.24
HAMILTON SOUTHEASTERN SCHOOLS
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SET TO BE PRINTED IN COLOR

STEVEN J. FEIN IPLS — No.890237 — STATE OF INDIANA — PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS 07.12.24
krM JOB NO. 23055
DRAWN BY A&F

DRAWING NAME: SITE PLAN

DRAWING NO. C202

Z:\2024\24007\-krM ARCHITECTURE_LAND DEVELOPMENT_ FALL CREEK INTERMEDIATE RENOVATION\2026 BID SET\DWG'S\C201 SITE PLAN.DWG plotted by STEVEN O'ROURKE on 11/10/2026 3:09:25 PM last saved by SOROURKE on 11/10/2026 8:41:14 AM
XREFs: 24007L BASE TOPO.DWG & 24007L BASE SITE.DWG & A_24X36 TTL BLOCK.DWG