MARCH 2024

MIAMI TOWNSHIP
LORVEN DRIVE PHASE 2B PUBLIC ROADWAY IMPROVEMENTS BID AND CONTRACT DOCUMENTS

MIAMI TOWNSHIP, OHIO

Mary Makley Wolff
Chairperson

Ken Tracy
Trustee

Mark Schulte
Trustee

Eric C. Ferry
Fiscal Officer

Bid Opening Date: **Thursday, April 4, 2024, at 2:00 p.m.**

TABLE OF CONTENTS

SECTION 1

NOTICE TO CONTRACTORS

INSTRUCTIONS TO BIDDERS

NOTICE TO CONTRACTORS

Sealed proposals will be received at the Office of the Board of Trustees of Miami Township, Clermont County, at 6101 Meijer Drive, Milford, Ohio 45150 by certified mail before 2:00 p.m. on Thursday, April 4, 2024, or may be delivered in person on Thursday, April 4, 2024, before 2:00 p.m. at the Miami Township Civic Center, 6101 Meijer Drive, Milford, Ohio, 45150 at which time bids will be opened for the construction of the following improvements:

Lorven Drive Phase 2B Public Roadway Improvements

THE PROJECT SCOPE: The successful bidder must provide all materials, manpower, and equipment (including mobilization) to perform the work of this project. It includes approximately 210 LF of new public roadway, 220 LF of new storm sewer including new catch basins, and approximately 400 LF of new Clermont County standard curb, all performed according to the plans and specifications provided. This is a prevailing wage project.

Copies of the contract documents may be obtained Monday through Friday, 8:00 a.m. - 4:00 p.m., beginning Thursday, March 21, 2024, at the Miami Township Service Department, located at 6007 Meijer Drive, Milford, Ohio 45150, or online at www.miamitwpoh.gov.

NOTE: If contract documents are obtained from www.miamitwpoh.gov, contact john.musselman@miamitwpoh.gov in order to be notified of the issuance of any addenda for this project.

A mandatory pre-bid meeting is not required, however; all bidders must attest that they have visited the site.

In accordance with the ORC Section 153.54, each bid must be accompanied by either a bid bond, in the prescribed form, and in the full amount of the bid or a certified check, cashier's check or letter of credit. The certified check, the cashier's check or letter of credit may be in the amount of ten (10) percent of the bid. The bid bond, the certified check, the cashier's check and the letter of credit are subject to the provisions of section 153.54 of the ORC. The successful bidder shall also be required to post a performance bond.

The successful bidder must provide a copy of the certification issued to the bidder by the State of Ohio, Industrial Commission and Bureau of Workers' Compensation for the period covered by the contract. The successful bidder must also provide the Fiscal Officer a copy of his liability insurance holding the Board of Trustees harmless during the period of the contract.

The successful bidder must also provide an affidavit that all indebtedness of such contractor on account of material incorporated into the work or delivered on the site of the improvement and labor performed has been paid, according to Revised Code Section 5575.04.

The successful bidder must provide a notarized statement that at the time of making his bid he was not charged with any delinquent personal property taxes on the general tax list of personal property of Clermont County, according to Revised Code Section 5719.042.

The Board of Trustees of Miami Township reserves the right to reject any or all bids.

BOARD OF TRUSTEES, MIAMI TOWNSHIP, CLERMONT COUNTY

ERIC C. FERRY
Fiscal Officer

INSTRUCTIONS TO BIDDERS

1. Sealed proposals will be received by:

BOARD OF TRUSTEES
MIAMI TOWNSHIP
6101 Meijer Drive
Milford, OH 45150

As set forth in the Specifications. Proposals will be publicly opened and read aloud.

2. Proposals must be presented on the Bid Proposal sheet included in the Bid Proposal section of the Contract Documents.

3. Bidders only may obtain Specifications from www.miamitwpoh.gov or:

Miami Township Service Department
6007 Meijer Drive
Milford, Ohio 45150

4. The Owner is The Board of Trustees Miami Township, Clermont County, OH, and is referred to throughout the Contract Documents as if singular in number. The term Owner means the Owner or the Owner's authorized representative.

5. All proposals shall be submitted in sealed envelopes addressed to:

BOARD OF TRUSTEES
MIAMI TOWNSHIP
6101 Meijer Drive
Milford, OH 45150

The outside of the envelope shall be clearly marked:

Lorven Drive Phase 2B Public Roadway Improvements

6. Bidders may withdraw bids, in person only, at any time prior to the scheduled time for closing the receipt of bids. Withdrawals after the scheduled time for closing the receipt of bids will not be permitted for a period of ninety (90) days.

7. The Owner reserves the unrestricted privilege to reject any, part of any or all Bids received.

8. No proposal nor any obligation hereunder to be assumed by the Owner shall be accepted until such time as the Owner or Owner's representative, may deposit in the U.S. Mail, or hand to the Bidder, personally, written notice addressed to Bidder at the address given on the Proposal of acceptance of Proposal.

9. Bidders are required to examine, before submitting their bids, the location of the proposed work, as well as, the plans and specifications from those heretofore used; it is hereby understood that a bidder has read and fully understands each and every clause embodied in all the documents which are part of this contract. Also, no information derived from the Owner or Engineer will in any way relieve the Contractor from any risks or from fulfilling all of the terms of this contract. The Owner does not guarantee the location of any sub-surface structures, nor the character of any sub-surface materials shown on the plans regarding such structures and materials is based on the best data available but is not to be regarded as conclusive.

10. A bidder at any time may request from the Owner in writing a clarification of such conflict or discrepancy. A written response will be issued as prescribed in paragraphs 25 and 26 of these instructions. If any discrepancy is incurred after entering into a contract with the Contractor, the order of compliance stated above will be strictly adhered to.

11. Proposals must be made out on the blank form in the Specifications Book signed and accompanied by bond or certified check, sealed and addressed to the Owner, and must be deposited, UNDETACHED from the Specification Book, with necessary papers attached thereto.

12. No contract will be awarded to any bidder who is in arrears to the Owner upon any debt or contract, or who is a defaulter as surety or otherwise, upon any obligation to said Owner.

13. Contract(s) will be awarded to the lowest responsive and responsible Bidder as determined by the Owner in accordance with the ORC Section 9.312.

14. Bidders are required to state in their proposals their names and places of residence and the names and places of residence of all persons interested with them, and if no other persons be so interested they shall distinctly state the fact.

15. In case of partnership, the firm name and the name of each individual partner must be signed and in the case of corporation, one of the corporate officers duly authorized to do so shall sign his name, with title, together with the corporation name. Corporate resolutions must be presented showing that the corporation is authorized to bid upon and enter into a contract and identifying the individuals authorized to sign the bid documents and contract for the corporation.

16. The Bidder must have the project totally completed by the time specified in the bid Documents.

17. Bid security in the form provided in the Bid Guaranty and Contract Bond (Section 153.571, Ohio Revised Code) must accompany each bid form and shall be made out in the amount of one hundred (100) percent of the total base bid.

18. After a contract has been awarded to the bidder, he or she shall be required to execute the contract and furnish a performance and maintenance bond satisfactory to the Owner within ten (10) days from the date of service of notice to the effect. In case of failure to do so, he or she will be considered as having abandoned the Contract, and the deposit accompanying the proposal shall there upon be forfeited to the Owner and the work may

be awarded to the next qualified bidder or re-advertised. Such bond shall be from an approved Guaranty Company, satisfactory to the Owner for the faithful performance of the contract and the maintenance obligations as hereinafter set forth for the period of one (1) year, in the sum of one hundred (100) percent of the total price bid for the completed work.

19. All proposals shall be publicly opened and read immediately after the time stated in the advertisement. A time and place for the public Bid Opening is set forth in the Legal Notice.

20. The Bidder must submit at the time requested the various statements required.

21. Additional instructions are included in the copy of the Legal Notice in this set of documents. The Legal Notice takes precedence over any portion of these instructions, which may be in conflict with the instructions.

22. Instructions must be adhered to; failure to observe them strictly shall constitute a sufficient cause for the rejection of a bid.

23. The Owner reserves the right to require the Bidder to present satisfactory evidence that he/she has been regularly engaged, as either Principal or Superintendent, in the business of constructing work similar to that proposed herein. Also, the Owner reserves the right to require the Bidder to present satisfactory evidence that he is fully prepared with necessary capital, material, machinery and equipment to conduct the work contracted for to the satisfaction of Owner and to begin promptly when so ordered. Failure to have performed satisfactorily any Contract awarded to the Bidder or any other person by the Owner shall be sufficient reason for rejection of the proposal.

24. NOT USED

INTERPRETATION OF PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS

25. If any person who plans to submit a bid for the proposed work is in doubt as to the true meaning of the plans, specifications or contract documents, he may submit a written request to the Engineer for the interpretation thereof. Any interpretation of the proposed documents will be made by Addendum only, duly issued, and a copy of such Addendum will be mailed or delivered to each prospective bidder. The Owner will not be responsible for any other explanation or interpretation of the proposed documents.

ADDENDA

26. Change in, or clarification of, the contract documents, determined after the date of the initial advertisement, will be made by Addenda. Such Addenda will be mailed to all prospective bidders at the addresses given. It is the bidder's responsibility to ascertain that all Addenda have been examined and understood by him or her. The Owner will check immediately before bids are opened to make sure that all bidders have received copies of any Addenda issued.

DISCRIMINATION

27. The Contractor agrees that in the hiring of employees for the performance of the proposed work under this contract or any subcontract, no contractor, subcontractor, or any person acting on his behalf, shall, by reason of race, creed, sex, handicap, national origin, color or age discriminate against any citizen of the state in employment of labor or workers who are qualified and available to perform the work to which the employment relates.

    Also, the Contractor agrees that neither he or she nor any of his or her subcontractors, nor any person acting in his or her behalf, shall discriminate against or intimidate any employee hired for the performance of work under this Contract on account of race, creed, sex, handicap, national origin, color or age.

28. NOT USED

29. The Contractor shall maintain awareness of current and shall comply with all existing and future laws, ordinances and regulations of the federal, state, county and municipal governments, in any manner affecting his or her employees, or the conduct of the work, or the materials used or employed in the work.

30. After the award of the contract, the Contractor shall prepare and submit to the Engineer, a progress schedule of a type and in a manner satisfactory to the Owner, showing graphically the progress rate on which time for completion is based. Should the progress rate of the work fall behind this schedule to such extent that the completion date may not be met, and if the Contractor after written notice to that effect, makes no substantial effort to speed up his or her work and to meet the schedule, then the Owner may notify the Contractor's surety of the circumstances or may declare the work abandoned or forfeited and proceed accordingly.

    Proposals are invited only from Contractors who understand and accept the conditions laid down in these "Instructions to Bidders", and in the specifications following, and who expect to work in compliance with them and the plans and special provisions.

31. NOT USED

EMERGENCY TELEPHONE NUMBERS

32. The Contractor must submit Emergency 24 hour telephone numbers to the Owner on the Company letterhead at the Pre-Construction meeting.

UNDERGROUND UTILITIES

33. The contractor will be responsible for notifying the Ohio Utilities Protection Service (800-362-2764) and Clermont County Sewer and Water at 513-732-7970.The utilities have NOT been located on the drawings. Care shall be taken to identify and work around.

34. NOT USED

35. NOT USED

36. NOT USED

37. NOT USED

OSHA PROVISIONS

38. Work of this Contract shall be performed in accordance with "Safety and Health Regulations for Construction" and subsequent amendments, as promulgated by the Department of Labor and identified as Chapter XVII of Title 9, code of Federal Regulations (CFR), Part 1926 (formerly Chapter XIII of Title 29, CFR, Part 1518).

39. Each and every provision of the law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and this Contract shall be read and enforced as though it were included herein, and if through mere mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party hereto the Contract shall forthwith be physically amended to make such insertion.

SECTION 2

General Notes of the Construction Contract

Exceptions/Substitutions Page

GENERAL NOTES OF THE CONSTRUCTION CONTRACT

1.1.0 GENERAL INSTRUCTIONS

Project Bid:

Lorven Drive Phase 2B Public Roadway Improvements

Bid Opening Date: **Thursday, April 4, 2024, at 2:00 p.m.**

1.1.1
All bids submitted for consideration by the Miami Township Board of Trustees must comply with these instructions in order to be considered. These instructions set forth minimum requirements as terms and conditions of the purchase, therefore, if any time frames, bid bond or surety requirements set forth herein are in conflict with stated requirements in the specifications, the specification requirements shall prevail.

1.1.2
Bids shall be submitted in a sealed envelope marked accordingly with Project Bid **Lorven Drive Phase 2B Public Roadway Improvements** and name of bidder and delivered in compliance with the legal notice. Any improperly marked bid will not be considered.

1.1.3
All bids must comply with the specifications attached hereto. Alternative bids may be considered only if clearly marked as such with an explanation as to how the item is sufficient to meet required needs. (See Specifications **1.3.0**)

1.1.4
Price per unit to be quoted F.O.B. Miami Township, Clermont County, Ohio (INSTALLED). All prices, quantities, etc. as bid must be firm for a period of sixty (60) days from the date of the bid opening.

1.1.5
A bid bond or certified check in the amount specified in the Legal Notice must accompany the bid. Bids submitted without bond will be rejected.

1.1.6
Miami Township is exempt from payment of Federal Excise Tax, Transportation Tax and Ohio Sales Tax. Prices shall not include these taxes.

1.1.7
The successful bidder must provide the Fiscal Officer with a copy of the certification issued to the bidder by the State of Ohio, Industrial Commission and Bureau of Workers' Compensation for the period covered by the contract. The successful bidder must also provide the Fiscal Officer a copy of his liability insurance holding the Board of Trustees harmless during the period of the contract.

1.1.8
The Contractor will furnish the following insurance coverage from a commercial insurance carrier satisfactory to Owner.

A. Comprehensive General Liability Insurance in an amount not less than $1,000,000.00 per occurrence with respect to personal injury or death, and $500,000.00 with respect to property damage.
B. Workers' compensation insurance, in accordance with the laws of the State of Ohio, covering the Contractor's employees while on Owner's premises.

The Contractor shall furnish to Owner certificates evidencing such insurance coverage prior to commencing work and shall cause each policy to provide that it shall not be canceled or changed without at least ten (10) days prior written notice to Owner. Any deductibles under the policies shall be borne by the Contractor, but in no event shall any deductible exceed $1,000.00. Each policy shall name Owner and its officers and trustees as additional assureds.

1.1.9
The successful bidder must also provide the Fiscal Officer with an affidavit that all indebtedness of such contractor on account of material incorporated into the work, or delivered on the site of the improvement and labor performed has been paid, according to Revised Code Section 5575.04.

1.1.10
Ohio Revised Code Section 3517.13 I(3) and J(3) requires that no agency or department of this state or any political subdivision shall enter into any contract for the purchase of goods costing more than five hundred dollars or services costing more than five hundred dollars with a corporation, individual, partnership or other unincorporated business, association, including, without limitation, a professional association organized under Chapter 1785 of the Revised Code, estate, or trust unless the contract includes a certification that the individuals named in Revised Code Sections 3517.13(I)(1) and (J)(1) are in compliance with the aforementioned provisions. The Offeror is required to complete the affidavit contained in the Proposal/ Bid. **Failure to submit the required form with the Proposal / Bid packet will deem the Offeror's response to be non-responsive and disqualified from receiving further consideration.**

1.1.11
The attention of the bidder is called to Ohio Revised Code 5719.042. The bidder shall submit to the Township Fiscal Officer a statement affirmed under oath that the person with whom the contract is to be made was not charged at the time the bid was submitted with any delinquent personal property taxes on general tax list of personal property in Clermont County, or that such person was charged with delinquent personal property taxes on any such tax list, in which case the statement shall also set forth the amount of such due in unpaid delinquent taxes and any due and unpaid penalties and interest thereon. If the statement indicates that the taxpayer was charged with any such taxes, a copy of the statement shall be transmitted by the Township Fiscal Officer to the Clermont County Treasurer within thirty (30) days of the date it is submitted. A copy of the statement shall also be incorporated into the contract and no payment shall be made with respect to any contract to which this section applies, unless such statement has been so incorporated as a part thereof.

1.1.12
NON-ASSIGNABILITY: No portion of this contract or any work to be performed under this contract shall be assigned to any other person or business without the express written consent of the Township.

1.1.13
MECHANICS LIEN LAW (ORC 1311.25 to 1311.32): Every sub-contractor, materialman or laborer who is performing or has performed labor or work, or is furnishing or has furnished material for any public improvement, shall submit an affidavit to the public authority stating that they have received payment in full for labor, work or materials. All payments due them from the Contractor will be held in escrow for a period up to one hundred twenty (120) days from the date that work was last performed unless said affidavits are received.

The successful bidder must give a guarantee on the completed project against defective pavement surface resulting from inferior materials, or workmanship. Replacement of all such material and repairs necessary shall be made without any expense to the Township. The Guarantee period will begin on the date of final approval and acceptance by the Township. Acceptance is subject to inspection by the person(s) authorized by the Township Trustees to make inspections.

1.1.14
NOT USED

1.1.15
The bidder shall furnish a reference listing of similar installations within one hundred (100) miles of Miami Township, Clermont County, in the years 2018 and 2019. This list shall include the name and telephone number of a contact person representing the accepting agency.

1.1.16
Bidders are required to submit a **completed** copy of this bid document including the following specifications. Bids must contain a completed Bidder's Response Form. Any exception must be detailed on the EXCEPTIONS page. Any bid failing to meet these requirements will not be accepted.

1.1.17
The Miami Township Trustees reserve the right to waive any informalities or irregularities, to reject any or all bids, to accept any bid which may be deemed to be for the best interest of the Township and to hold such bids for a period of sixty (60) days before taking any action thereon.

1.1.18
When analyzing the bids submitted, superior technology, workmanship, and materials, etc. will be considered in addition to price. It is Miami Township's intent to accept the lowest and best bidder who meets the requirements of Section 153.54 of the Revised Code after a thorough analysis of the bids. Miami Township reserves the right to reject any and all bids.

1.1.19
Every effort shall be made by the bidder awarded the contract to deliver items by or before the time designated in the contract. Any delinquency in such delivery without satisfactory written explanation directed to the Miami Township Trustees may result in cancellation of the contract.

The defaulting bidder shall be liable for any increased costs or expenses incurred as a result of such default.

1.1.20
The Township reserves the right to cancel the contract if the bidder willfully fails to perform any of the provisions in the contract or fails to make installation within the time stated, unless the time is extended by the Township Service Director.

1.1.21
In case of default by the bidder or contractor, Miami Township may procure the services from other sources without further advertising and shall hold the bidder or contractor responsible for any excess costs occasioned thereby, including any reasonable expenses incurred in procuring the articles or services.

1.1.22
Bids will not be accepted after the date and time stated in the invitation to bid.

1.1.23
LIQUIDATED DAMAGES: Failure to complete the work within the time specified in these Specifications shall result in Liquidated Damages calculated in accordance with Sections 108.06, 108.07 or 108.08 of the State of Ohio, Department of Transportation, Construction and Material Specifications, dated January 1, 2019.

1.2.0 ACCEPTANCE AND FINAL PAYMENT

1.2.1
Final payment shall be due thirty (30) days after receipt of invoice (in triplicate) by Miami Township, Clermont County, Ohio; provided the work be then fully completed and the contract fully performed.

Any payment not made to a subcontractor, materialman or laborer by the Contractor within one hundred twenty (120) days from the date that work was last performed shall be deducted from the Contractor's final payment.

1.2.2
Upon receipt of written notice from the contractor that the work is ready for final inspection and acceptance, the Owner shall promptly make such inspection. When the Owner finds the work acceptable under the contract and the contract fully performed, the entire balance due the Contractor shall thereupon be payable.

1.2.3
Before the final payment is made the Contractor will satisfy the requirements of Paragraph 1.1.13 Mechanics Lien Law, of this specification.

1.2.4
If any subcontractor or material supplier refuses to furnish Contractor with a final lien waiver, Contractor upon Owner's request shall furnish Owner with a bond, satisfactory to Owner, indemnifying Owner against the claim or any lien, or Owner at its option, may withhold from the

final payment a sum equal to the amount of the claim. If a lien is filed against Owners property at any time and, if within thirty (30) days after notice if the filing has been given by Owner to Contractor, the lien remains unsatisfied or is not bonded satisfactory to Owner, Owner shall thereafter be entitled, regardless of whether the claim is disputed, to pay the full amount of the claim secured by the lien and deduct the cost thereof from the contract sum; or if final payment has been made, Contractor shall promptly reimburse Owner for the amount so expended.

1.2.5
Contractor shall indemnify and hold harmless Owner from and against any and all claims, liens, suits, losses, damages, and expenses, including attorney fees, by whomsoever asserted, including claims for personal injury or property damage, related to or arising out of the work performed or material supplied to the project.

1.2.6
Contractor agrees to furnish Owner any reasonable documentation, including, without limitation, payroll records, invoices, or canceled checks, which Owner may request to confirm payment of all indebtedness related to the work as a condition precedent to final payment.

1.2.7
In the event that a subcontractor or material supplier has not been paid for labor performed or materials furnished in connection with the work, Owner in addition to all remedies available at law or in equity, may pay the Contract Sum Due the Contractor by a check made payable to the order of Contractor and such subcontractor or materialman and in an amount for which the subcontractor or material supplier is due based upon the reasonable judgment of Owner. Payment by such a joint check shall constitute payment of the Contract Sum.

1.2.8
PERFORMANCE BOND AND PAYMENT BOND: The Owner Shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising there under as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the contract.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

1.3.0 SPECIFICATIONS

1.3.1
The following specifications are written to indicate acceptable type and quality. Bids on comparable designs as to function and general construction are solicited provided that:

(a) The general design and operation of the proposed project conforms to the intent of these specifications.

(b) All exceptions to the specifications must be clearly described in supplemental information submitted with bid.

1.3.2
NOT USED

1.3.3
The apparent silence of this specification and supplemental specifications as to any detail or the apparent omission from it of a detailed description concerning any point should be regarded as meaning only best commercial practice will prevail and that only materials and workmanship of first quality are to be used.

If the bidder has any additions, alteration or corrections to make to this proposal or specifications, he is asked to list them in the appropriate space on the bid form or on a plain white sheet of 8 ½" x 11" paper and affix them firmly to this proposal.

1.3.4
Exceptions may be allowed where it is demonstrated that such exception is equal to or superior to the purchaser's stated specification. Total exception to the specifications is not permitted.

1.3.5
All materials shall be new and of the best grade in its particular line. All work shall be done in the best and most skilled manner, exactly as specified or detailed, and shall be subject to the approval of Miami Township Officials.

SPECIAL NOTES:

1. **All underground work must conform to Clermont County Water Rsoures Guidelines and Specifications.**
2. **The geotechnical report is attached to these specifications.**
3. **Backfill for underground utilities is to be 8" bed of crushed limestone, 6" side fill, and 1' of fill above pipe. No CDF is required.**
4. **Do not fill out any forms marked "sample". These are just examples of what the successful bidder will need to fill out.**
5. **Subgrade must be proof rolled under Township supervision and repaired as proof rolling indicates prior to paving. Cost of proof rolling to be included in excavation costs.**
6. **Typical section calls for 1 lift of 6" of 304 aggregate base, 2 separate lifts totaling 5" of 302 base asphalt, followed by 2 separate lifts of asphalt, 1 intermediate and 1 surface course.**
7. **C-900 pipe is approved for the installation of the water line.**
8. **No material is to be exported from the site.**
9. **There are 3 additional plan sheets. 1 Clearing and Demolition Plan sheet for the medical building right in/right out; 2 plan sheets labeled Medical Office Right In/Right Out. This work is to be performed with the rest of Phase 2B.**
10. **The Roan Road right in/right out cannot be built until the Sorrell Lane extension is built and open to traffic.**
11. **Some items on the bid tabulation form may be place-holders. Submit a unit or lump sum price as indicated.**

EXCEPTIONS/SUBSTITUTIONS

All Bids must be based on the specified materials and construction standards. Bidder is to list any substitutions or exceptions for which consideration is desired, showing the addition or reduction in price to be made relative to the specified materials and/or standards for each requested substitution. If the substitution is accepted, or stating "No Change in Price", if none is proposed.

Brand or Make specified	**Proposed substitution**	**Change in cost**

It is understood and agreed that the proposal submitted is based on furnishing materials and construction standards as specified and entitles the Owner to require that such named substitutions be incorporated in the work if the requests are accepted, based on the quotations entered above, are subsequently made a part of the written contract.

Signed:_____

Title:_____

SECTION 3

General Requirements and Detailed Specifications
Signature Sheet

GENERAL REQUIREMENTS
AND DETAILED SPECIFICATIONS

Lorven Drive Phase 2B Public Roadway Improvements

SCOPE OF WORK
This project consists of:

The successful bidder must provide all materials, manpower, and equipment (including mobilization) to perform the work of this project. It includes approximately 210 LF of new public roadway, 220 LF of new storm sewer including new catch basins, and approximately 400 LF of new Clermont County standard curb, all performed according to the plans and specifications provided. This is a prevailing wage project.

Lorven Drive Phase 2B Public Roadway Improvements

and consisting of the title sheet, general notes and typical sections, water main notes, details, sanitary sewer notes and detail, clearing and demolition plan, improvement plan profiles, grading and s.w.p.p. plan, s.w.p.p. notes and detail, traffic control plan, and cross sections (4 sheets).

The Contractor shall provide all the labor and furnish all the materials, except as herein otherwise specified, necessary for properly performing and completing the work per the itemized construction activities listed in the plans and on the "Quantity Estimate and Bid Tabulation" page of this document. The methods, materials, and appliances used therefore shall conform to the current edition of the State of Ohio Department of Transportation Construction and Materials Specifications. These specifications can be found on the ODOT website listed below:

http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2019-Online-Spec-Book.aspx

Any items required, including labor, equipment, and/or materials, but not shown as a separate pay item in the proposal, shall be furnished and installed as incidental to the contract, except where noted in the plans and specifications. **All work shall be completed by August 9, 2024.** The Contractor shall provide all the labor and furnish all the materials necessary for properly performing and completing the work of the Contract.

GENERAL REQUIREMENTS
The current edition of the State of Ohio, Department of Transportation, "Construction and Material Specifications" with amendments, deletions and additions and the "Standard Construction Drawings", current editions, latest revision are adopted and made a part of these Contract Documents.

Under this contract the successful bidder shall furnish all labor, materials and equipment necessary for performing and completing the required improvements as stipulated in the plans and specifications.

All references to OWNER shall be considered to read the BOARD OF TRUSTEES, MIAMI TOWNSHIP, and CLERMONT COUNTY, OHIO.

The herein above-mentioned documents may be amended by the Owner to conform to local conditions.

All references to the Trustees shall be considered to read the Owner.

All references to the Director, the Director of Highways, the First Assistant Director, the Deputy Director, Chief Engineer, the Deputy Director of Design and Construction, the Engineer of Maintenance, the Engineer of Bridges, and the Engineer of Tests shall be considered to read the Owner.

PENALTIES
Should the Contractor not complete all work within the time attached, the OWNER shall keep a record of all expenditures for inspection, supervision, engineering and administration after the end of the allotted time and shall deduct that amount from the final payment.

PROTECTION OF AREAS OUTSIDE OF WORK LIMITS
The Contractor shall be responsible for the protection of areas outside of the designated work limits, but which may be adjacent to those work limits. This shall include those areas used by construction traffic for access to and from the work areas.

Where the Engineer determines that the Contractor's operations have been responsible for damage to areas outside the work limits, the Contractor shall be responsible for the repair of the area subject to the approval of the Engineer. No additional compensation shall be due to the Contractor for any repair of these areas.

The Contractor shall be responsible for the immediate repair of the improved area if any damage is done by the traffic. The Contractor shall also be responsible for the immediate rectification of problems created in areas outside of the improved areas, which are attributes to the failure of the constructed improvements, i.e., the tracking of materials into unimproved areas.

CLEANUP AND RESTORATION
The Contractor shall be responsible for maintaining a neat, clean job site. Areas damaged as a result of construction shall be repaired as directed by the Engineer. Payment for work shall be included in the total price bid for the Project.

JOB SUPERINTENDENT
The Job Superintendent initially assigned to this project shall remain assigned to the project until the project is completed. Only upon written authorization or request from the Engineer can the superintendent be transferred from this project.

ESTIMATED QUANTITIES
The estimated quantities upon which this proposal is based are approximate only. They shall be used in determining the total amount of bids for the purpose of determining the lowest and best bidder. During the term of the contract, and at the option of the Board, they may be increased, decreased, or non-performed as conditions dictate and/or when the need for and/or the proper inspections have been made. The Contractor shall not be entitled to any claim or loss of profits or other damages should the actual quantities of any or all items be greater than or less than the stated Estimated Quantities.

PRE-CONSTRUCTION MEETING
Following the award of the contract and before starting **any** work, the contractor and his superintendent, shall meet with the Engineer and a representative of Miami Township for a pre-construction meeting. The purpose of such meeting is to review all restrictions and regulations governing the work. Any schedules, requests, papers, approvals, submittal, changes, etc. as called for in the Contract Documents shall be done at this time unless otherwise directed. The contractor will be notified of the date, time and place of the meeting.

MATERIALS AND WORKMANSHIP
Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of the first quality and shall be proper and sufficient for the purpose contemplated. The Contractor shall furnish if so required, satisfactory evidence as to kind and quality of materials and workmanship.

All items of equipment and/or material proposed for substitutions must be approved by the Engineer in writing and shall equal or be superior to the items specified in the contract documents. If said substitution proposed by the Contractor for a specified item requires engineering revisions, the expense of said revisions shall be paid for by the Contractor at no additional cost to Miami Township.

Any items of labor and materials required, but not shown as a separate pay item in the proposal, shall be furnished and installed as incidental to the contract, except as noted in the Plans and Specifications.

GUARANTEE
The Contractor hereby guarantees that all workmanship and all material furnished under the contract comply fully with the requirements of the Plans and Specifications. If at any time within one (1) year after the date of the final inspection, any defect should appear which in the opinion of the Engineer is due to inferior materials or workmanship, the Contractor guarantees that he will immediately, without cost to the Township, do whatever is necessary to remedy the defects. The Township will notify the Contractor in writing of the defects and the repairs to be made and the Contractor agrees to begin the repairs within ten (10) days from the date of notice.

If the Contractor fails to begin repairs within ten (10) days, the Township may forthwith cause the defects to be remedied and charge the cost and expense thereof to the Contractor of his Surety. **The Contractor's Surety shall not be relieved until the above guarantee is fulfilled, and written release furnished the Surety by the Owner.**

STORAGE OF CONSTRUCTION MATERIALS
The Contractor shall obtain prior approval of the Township for the locations to be used for the temporary storage of construction materials, tools, and/or machinery on site.

All such materials, tools, and machinery shall be neatly and compactly piled in such a manner so as to cause the least inconvenience to the property owners and to the public. Under no circumstances shall existing drainage courses be blocked or water hydrants, valves, or meter pits covered.

DEBRIS REMOVAL/STREET SWEEPING
The Contractor will be responsible for removal from the site of all construction debris material.

SITE CONDITIONS
Prior to bidding, the Contractor shall make a thorough review of the site and note pertinent bidding information as well as verify the Contract Documents as to their accuracy and completeness and record all pertinent information. The Contractor should anticipate wet weather and wet site conditions and make provisions accordingly to assure completing the project on time.

BIDDER'S ABILITY TO COMPLETE THE CONTRACT WORK
The bidder is advised; that the Township may, prior to award of this Contract, require the Bidder to submit information verifying that he will be able to complete the work on or before the completion date indicated herein. Such information may include data indicating the Bidder's current and anticipated workload during the life of this Contract, the number and skills of personnel available to perform this work, the type and amount of equipment he has available or

can obtain for this work, or any other information necessary to prove the Bidder's capabilities in this regard to the Township's satisfaction. This information may be used in determining the lowest and best bid.

O.S.H.A

The prime contractor and any subcontractor may make their own arrangements with respect to obligations, but neither may delegate any legal responsibility to the other. In no case shall the prime contractor be relieved of the overall responsibility for the compliance with the requirements of CFR 1910 & 1926 Occupational Safety and Health General Construction Industry Standards for all the work to be performed under the contract.

The prime contractor assumes all obligations prescribed as employer obligations under the CFR 1910 &1926 standards whether or not he subcontracts any part of the work. With respect to subcontracted work, the prime contractor and subcontractors shall be deemed to have joint safety and health responsibility of the work site.

DETAILED SPECIFICATIONS

The current edition of the State of Ohio Department of Transportation Construction and Material Specifications and the current edition of the Subdivision Street Design and Construction Standards for Clermont County, Ohio apply to this project. The water main and sanitary sewer (and its associated appurtenances) shall conform to Clermont County Water Resources rules and regulations.

SIGNATURE SHEET

By signing this bid, the bidder has certified that this bid is made without any understanding, agreement, or connection with any other person, firm or corporation making a bid for the same purpose and that his bid is in all respects fair and without collusion or fraud.

The bidder or his duly authorized agent will sign this page in the space provided below signifying that he has read the proposal and specifications and understands them.

If the bidder has any additions, alterations, or correction to make to this proposal or specifications, he is asked to list them in the appropriate space on the bid form or on a plain white sheet of 8 ½" x 11" paper and affix them firmly to this proposal.

_____

COMPANY

_____

ADDRESS TELEPHONE

_____

SIGNATURE

_____

EMERGENCY TELEPHONE NUMBER

SECTION 4

Prevailing Wage Requirements

Prevailing Wage Rates

PREVAILING WAGE REQUIREMENTS

This contract is subject to Ohio Prevailing Wage Laws, Chapter 4115 of the Ohio Revised Code and the Contractor and all subcontractors shall comply with all provisions contained therein or as otherwise provided by this note. The Contractor guarantees that the prevailing wage scale to be paid to all laborers and mechanics employed on this contract shall be in accordance with the schedule of the prevailing hourly wage and fringe benefits as determined by the Ohio Department of Commerce for the county in which the work is being performed. The failure to pay prevailing wages to all laborers and mechanics employed on this project shall be considered a breach of contract. Such a failure may result in the revocation of the contractor's and/or subcontractor's certificate of qualification and debarment. A schedule of the most current prevailing wage rates may be accessed by logging in/registering with the Ohio Department of Commerce, Labor and Worker Safety Division, Wage and Hour Bureau at the following web address:

http://www.actohio.org/clermont-county-pw-rates/

The Contractor and all subcontractors shall compensate the employees on this contract at a pay rate not less than the hourly wage and fringe rate listed on the website noted above, for the applicable job classification or as may be modified by the Ohio Department of Commerce, Division of Labor and Worker Safety Wage and Hour Bureau, when new prevailing rates are established.

Overtime shall be paid at one and one-half (1½) times the basic hourly rate for any hours worked beyond forty (40) hours during a pay week. The Contractor and all subcontractors shall pay all compensation by company check to the worker and fringe benefit program.

The wage and fringe rates determined for this project or as may be later modified, shall be posted by the Contractor in a prominent and accessible place on the project, field office, or equipment yard where they can be easily read by the workers or otherwise made available to the workers. On the first pay date of contract work the Contractor and all subcontractors shall furnish each employee covered by prevailing wage a completed form (WHPW-1512) in accordance with section 4115.05 of the Ohio Revised Code, showing the classification, hourly pay rate, and fringes, and identifying the public authority's Prevailing Wage Coordinator, if such employees are not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of labor. These forms shall be signed by the Contractor or subcontractor and the employee and kept in the Contractor's or subcontractor's payroll files.

The Contractor and all subcontractors shall submit to the Prevailing Wage Coordinator, certified payrolls on form WHPW-1512 or equivalent, in accordance with sections 4115.07 and 4115.071(C) of the Ohio Revised Code, three (3) weeks after the start of work and every subsequent week until the completion of the contract. Additionally, a copy of the "Apprentice Certification" obtained from the Ohio State Apprenticeship Council, must accompany all certified payrolls submitted, for all apprentices working on this project. Upon completion of the contract and before the final payment, the Contractor shall submit to the Prevailing Wage Coordinator a final wage affidavit in accordance with section 4115.07 of the Ohio Revised Code stating that wages have been paid in conformance with the minimum rates set forth in the contract. Please be aware that it is ultimately the responsibility of the Contractor to ensure that all laws relating to prevailing wages in Chapter 4115 of the Ohio Revised Code are strictly adhered to by all subcontractors.

The Contractor and all subcontractors shall make all of its payroll records available for inspection, copying or transcription by any authorized representative of the contracting agency. Additionally, the Contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

Ohio | Department of Commerce

Division of Industrial Compliance

Affidavit of Compliance

Prevailing Wages

I, _____
(Name of person signing affidavit) (Title)

do hereby certify that the wages paid to all employees of

_____
(Company Name)

for all hours worked on the

_____
(Project name and location)

project, during the period from _____ to _____ are in
(Project Dates)

compliance with prevailing wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

_____
(Signature of Officer or Agent)

Sworn to and subscribed in my presence this _____ day of _____, 20_____.

_____ (Notary Public)

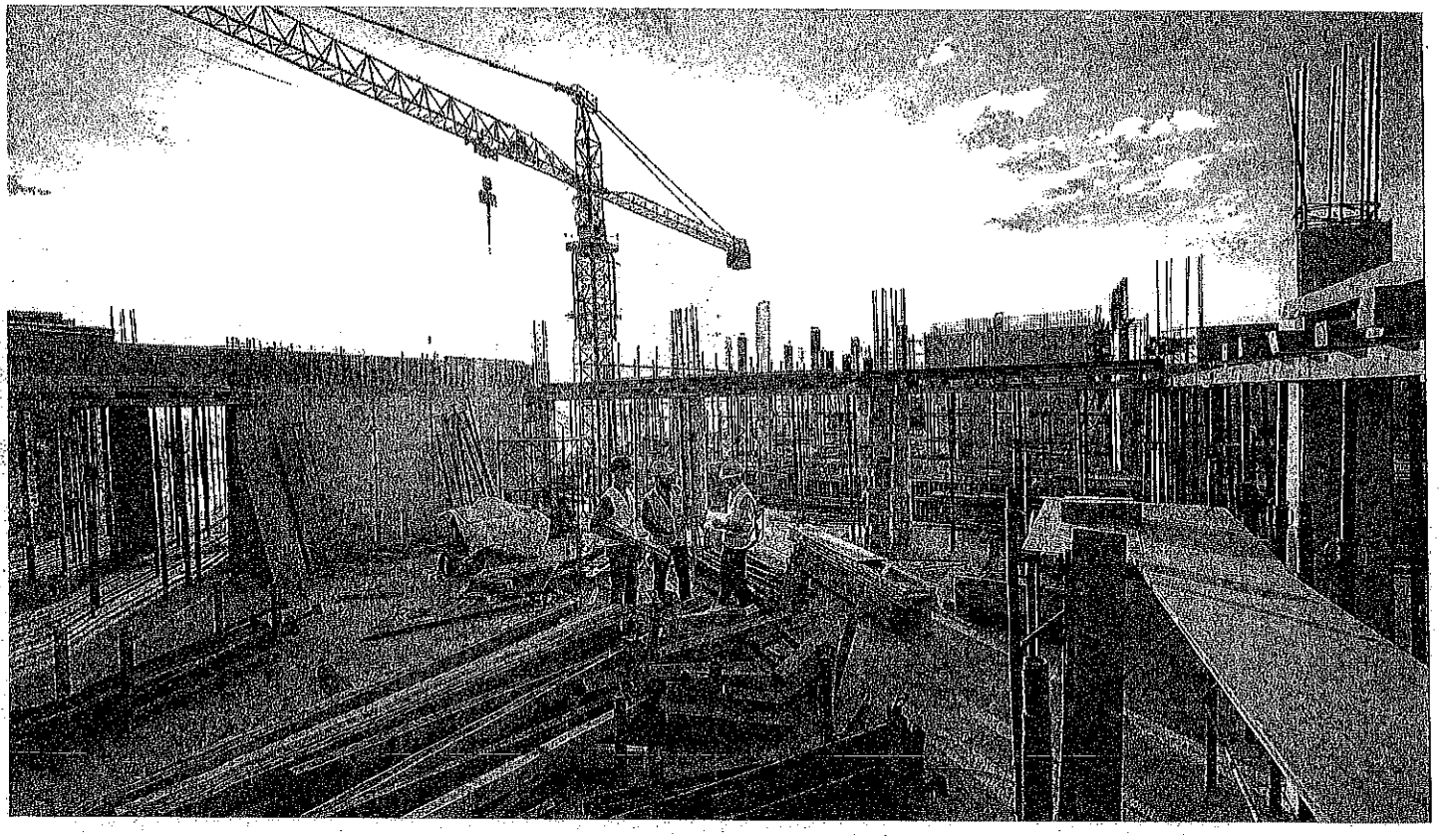
The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.

Bureau of Wage and Hour Administration
6606 Tussing Road
Reynoldsburg, OH 43068-9009
LAW1003
3/2019

614-644-2239
Fax 614-728-8639
TTY/TDD 800-750-0750
com.ohio.gov

Department of Commerce

Prevailing Wage Contractor Responsibilities



This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

Expand All Sections

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than $250,000 for new construction or $75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public

funds when the total overall project cost is fairly estimated to be more than $91,150 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or $27,309 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

a. Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration

b. Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census*, but may not increase or decrease more than 3% for any year

Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.

1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.

2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.

3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.

B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.

1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.

2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.

C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:

1. Time cards, time sheets, daily work records, etc.

2. Payroll ledger\journals and canceled checks\check register.

3. Fringe benefit records must include program, address, account number, & canceled checks.

4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.

5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.

D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.

E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.

F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.

1. Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.

G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.

H. Supply all subcontractors with the Prevailing Wage Rates and changes.

I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:

1. Employees' names, addresses, and social security numbers.
    a. Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
2. Employees' work classification.
    a. Be specific about the laborers and/or operators (Group)
    b. For all apprentices, show level/year and percent of journeyman's rate
3. Hours worked on the project for each employee.
    a. The number of hours worked in each day and the total number of hours worked each week.
4. Hourly rate for each employee.
    a. The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
    b. All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
    a. When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the

hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.

b. When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by dividing the total yearly contribution by 2080.

6. Gross amount earned on all projects during the pay period.
7. Total deductions from employee's wages.
8. Net amount paid.

J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.

K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (A)

Change # : LCN01-2023ibLoc23HevHwyA

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Sewer Water Works A	$32.40		$9.75	$9.03	$0.52	$0.00	$0.00	$0.00	$0.00	$0.00	$51.70	$67.90
Apprentice	**Percent**											
1st year	70.00	$22.68	$9.75	$9.03	$0.52	$0.00	$0.00	$0.00	$0.00	$0.00	$41.98	$53.32
2nd year	80.00	$25.92	$9.75	$9.03	$0.52	$0.00	$0.00	$0.00	$0.00	$0.00	$45.22	$58.18
3rd year	90.00	$29.16	$9.75	$9.03	$0.52	$0.00	$0.00	$0.00	$0.00	$0.00	$48.46	$63.04

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

3 Journeymen to 1 Apprentice
6 Journeymen to 2 Apprentice
9 Journeymen to 3 Apprentice
12 Journeymen to 4 Apprentice
15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN

WERT, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.
(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (B)

Change # : LCN01-2023ibLoc23HevHwyB

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	$33.39		$9.75	$9.03	$0.53	$0.00	$0.00	$0.00	$0.00	$0.00	$52.70	$69.39
Apprentice	**Percent**											
1st year	70.00	$23.37	$9.75	$9.03	$0.53	$0.00	$0.00	$0.00	$0.00	$0.00	$42.68	$54.37
2nd year	80.00	$26.71	$9.75	$9.03	$0.53	$0.00	$0.00	$0.00	$0.00	$0.00	$46.02	$59.38
3rd year	90.00	$30.05	$9.75	$9.03	$0.53	$0.00	$0.00	$0.00	$0.00	$0.00	$49.36	$64.39

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

3 Journeymen to 1 Apprentice
6 Journeymen to 2 Apprentice
9 Journeymen to 2 Apprentice
12 Journeymen to 4 Apprentice
15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT,

TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.
(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Bricklayer Local 23 (Cincinnati)

Change # : LCN01-2023ibLoc23Cinci

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Bricklayer	$33.48		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.03	$66.77
Stone Mason	$33.48		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.03	$66.77
Pointer Caulker Cleaner	$33.48		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.03	$66.77
Refractory Workers	$34.48		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$51.03	$68.27
Refractory Worker Hot Pay	$36.48		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$53.03	$71.27
Sawman	$33.73		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.28	$67.14
Layout Man	$33.73		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.28	$67.14
Free Standing Chimney	$33.98		$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$50.53	$67.52
Apprentice	**Percent**											
1st 6 months	70.00	$23.44	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$39.99	$51.70
2nd 6 months	74.00	$24.78	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$41.33	$53.71
3rd 6 months	78.00	$26.11	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$42.66	$55.72
4th 6 months	82.00	$27.45	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$44.00	$57.73
5th 6 months	86.00	$28.79	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$45.34	$59.74
6th 6 months	90.00	$30.13	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$46.68	$61.75
7th 6 months	94.00	$31.47	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$48.02	$63.76
8th 6 months	98.00	$32.81	$9.55	$6.27	$0.73	$0.00	$0.00	$0.00	$0.00	$0.00	$49.36	$65.77

MASON FINISHER 1-90 Days	45.00	$15.07	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$15.07	$22.60
90-365 Days	45.00	$15.07	$9.55	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$24.62	$32.15
366+ Days	50.00	$16.74	$9.55	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$26.29	$34.66

Special Calculation Note : **In order to utilize a Pre-Apprentice, you must have 1 Registerd Apprentice in your employ.
Mason Trainees Health and Welfare after 180 days

Ratio :

1-2 Journeyman to 1 Apprentice
3-4 Journeyman to 2 Apprentice
5-6 Journeyman to 2 Apprentice
7-10 Journeyman to 3 Apprentice

1 Apprentice permits 1 Mason Trainee
2 Apprentice permits 1 Mason Trainee
3 Apprenticepermits 2 Mason Trainees
4 Apprentice permits 2 Mason Trainees

For each additional 5 Journeyman to 1 Apprentice,
for every 3 additional Apprentices, 1 Mason Finisher
may be added

Jurisdiction (* denotes special jurisdictional note) :
BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE*, WARREN

Special Jurisdictional Note : In Preble County the following townships are included: (Dixon, Gasper, Graits, Israel, Lanier and Somers)

Details :
MASON FINISHER:duties shall be to work in all aspects of Masonry construction taking direction from the employer and the Journeyman Bricklayer & Stone Mason's working on the job. Mason Finisher's may work on job site only when a registered apprentice is on job and the ratios in table above will strictly be enforced.

Refractory work is classified as working with any of the following materials:
Acid brick, carbon black brick or carbon black block, firebrick grinding, plastics (with a gun) and any resinous cement.

Fifty cents ($0.50) per hour above scale shall be paid to employees working on free standing industrial or institutional chimneys which are completely detached from any building structure.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Carpenter & Pile Driver SW District HevHwy

Change # : LCN01-2023ibCarpSWHevHwy

Craft : Carpenter Effective Date : 05/03/2023 Last Posted : 05/03/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Journeyman	$33.28		$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$53.99	$70.63
Apprentice	Percent											
1st 6 Months	60.00	$19.97	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$40.68	$50.66
2nd 6 Months	65.00	$21.63	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$42.34	$53.16
3rd 6 Months	70.00	$23.30	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$44.01	$55.65
4th 6 Months	75.00	$24.96	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$45.67	$58.15
5th 6 Months	80.00	$26.62	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$47.33	$60.65
6th 6 Months	85.00	$28.29	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$49.00	$63.14
7th 6 Months	90.00	$29.95	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$50.66	$65.64
8th 6 Months	95.00	$31.62	$8.44	$6.95	$0.60	$0.00	$4.57	$0.15	$0.00	$0.00	$52.33	$68.13

Special Calculation Note : Other is UBC National Fund.

Ratio :

1 Journeymen to 1 Apprentice

An employer shall have the right to employ one (1) Apprentice for one (1) Journeyman Carpenter in its employment for the first Apprentice employed, and 1 (1) Apprentice for two (2) Journeyman Carpenter for additional Apprectices employed.
Thereafter, every third additonal carpenter hired shall be an apprentice, if available, and if practical for the type of work being performed.

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY, WARREN

Special Jurisdictional Note :

Details :

Highway Construction, Airport Construction, Heavy Construction but not limited to:(tunnels,subways,drainage projects,flood control,reservoirs). Railroad Construction,Sewer Waterworks & Utility Construction but not limited to: (storm sewers, waterlines, gaslines). Industrial & Building Site, Power Plant, Amusement Park, Athletic Stadium Site, Sewer and Water Plants.

When the Contractor furnishes the necessary underwater gear for the Diver, the Diver shall be paid one and one half (1&1/2) times the journeyman rate for the time spent in the water.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Cement Mason Local 132 (Cincinnati)

Change # : LCN01-2023ibLoc132

Craft : Cement Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	$30.50		$7.60	$6.50	$0.65	$0.00	$0.24	$0.06	$0.00	$0.00	$45.55	$60.80
Apprentice	Percent											
1st yr	70.00	$21.35	$7.60	$6.50	$0.65	$0.00	$0.24	$0.06	$0.00	$0.00	$36.40	$47.08
2nd yr	80.00	$24.40	$7.60	$6.50	$0.65	$0.00	$0.24	$0.06	$0.00	$0.00	$39.45	$51.65
3rd yr	90.00	$27.45	$7.60	$6.50	$0.65	$0.00	$0.24	$0.06	$0.00	$0.00	$42.50	$56.23

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time. *Other is International Training

Ratio :

1 Journeymen to 1 Apprentice
4 Journeymen to 2 Apprentice
7 Journeymen to 3 Apprentice
10 Journeymen to 4 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN

Special Jurisdictional Note :

Details :

*Cement Masons working on silo & slip form work shall receive $.50 per hour over Journeyman scale.
*Cement Masons working on swinging scaffolds shall receive $.50 per hour over Journeyman scale.
*Cement Masons working on high lifts from 20' and above shall receive $.50 per hour over Journeyman scale.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy

Change # : LCN01-2023ibCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	$33.74		$8.50	$7.55	$0.65	$0.00	$2.25	$0.07	$0.00	$0.00	$52.76	$69.63
Apprentice	Percent											
1st Year	70.00	$23.62	$8.50	$7.55	$0.65	$0.00	$2.25	$0.07	$0.00	$0.00	$42.64	$54.45
2nd Year	80.00	$26.99	$8.50	$7.55	$0.65	$0.00	$2.25	$0.07	$0.00	$0.00	$46.01	$59.51
3rd Year	90.00	$30.37	$8.50	$7.55	$0.65	$0.00	$2.25	$0.07	$0.00	$0.00	$49.39	$64.57

Special Calculation Note : Other $0.07 is for International Training Fund

Ratio :

1 Journeymen to 1 Apprentice
2 to 1 thereafter

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA*, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA*, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON*, GALLIA, GEAUGA*, GREENE, GUERNSEY, HAMILTON, HANCOCK*, HARDIN, HARRISON, HENRY*, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE*, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS*, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM*, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD*, WYANDOT

Special Jurisdictional Note : (A) Highway Construction, Sewer, Waterworks And Utility

Construction, Industrial & Building Site, Heavy
Construction, Airport Construction Or Railroad Construction Work, Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facilities Construction.

*For Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facility Construction work in the following Counties: Ashtabula, Cuyahoga, Fulton, Geauga, Hancock, Henry, Lake, Lucas, Putnam and Wood Counties, those counties will use the Cement Mason Statewide Heavy Highway Exhibit B District 1 Wage Rate.

Details :
This rate replaces the previous Cement Mason Heavy Highway Statewide Rates (Exhibit A and Exhibit B rates), except for Cement Mason Statewide Heavy Highway Exhibit B Dist 1. sks

Prevailing Wage Rate
Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2023ibLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Group 1	$34.62		$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$48.42	$65.73
Group 2	$34.79		$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$48.59	$65.98
Group 3	$35.12		$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$48.92	$66.48
Group 4	$35.57		$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$49.37	$67.15
Watch Person	$27.35		$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$41.15	$54.83
Apprentice	**Percent**											
0-1000 hrs	60.00	$20.77	$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$34.57	$44.96
1001-2000 hrs	70.00	$24.23	$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$38.03	$50.15
2001-3000 hrs	80.00	$27.70	$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$41.50	$55.34
3001-4000 hrs	90.00	$31.16	$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$44.96	$60.54
More than 4000 hrs	100.00	$34.62	$8.20	$4.05	$0.45	$0.00	$1.00	$0.00	$0.10	$0.00	$48.42	$65.73

Special Calculation Note : Watchmen have no Apprentices. Tunnel Laborer rate with air-pressurized add $1.00 to the above wage rate.

Ratio :

1 Journeymen to 1 Apprentice
3 Journeymen to 1 Apprentice thereafter

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN,

MORROW, MUSKINGUM, NOBLE, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SCIOTO, SENECA, SHELBY, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note : Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

Details :

Group 1

Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, *Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

*Bridge Man will perfomr work as per the October 31, 1949, memorandum on concrete forms, byand between the United Brotherhood of Caprpenters and Joiners of Americ and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by memebers of the Laborers' International Union of North America."

Group 2

Asphalt Raker, Screwman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Striper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air),Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), ***Lead Abatement, Hazardous Waste (level C)

***Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

Group 3

Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarner, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

Group 4

Miner,Welder, Gunite Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc.
The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Labor Local 265 Building

Change # : LCN01-2023ibLoc265

Craft : Laborer Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer	$25.90		$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$43.95	$56.90
Apprentice	Percent											
0-1000 Hours	80.00	$20.72	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$38.77	$49.13
1001 - 2000 Hours	85.00	$22.01	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$40.07	$51.07
2001 - 3000 Hours	90.00	$23.31	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$41.36	$53.01
3001 - 4000 Hours	95.02	$24.61	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$42.66	$54.97
More than 4000 Hours	100.00	$25.90	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$43.95	$56.90

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 Journeymen to 1 Apprentice
3 Journeymen to 1 Apprentice
thereafter per project

Jurisdiction (* denotes special jurisdictional note) :

BROWN, CLERMONT, CLINTON, HAMILTON

Special Jurisdictional Note :

Details :

Building & Common Laborer, Asbestos Removal, Cement Mason Helpers, Hand Operated Mechanical Mule, Mechanical Mule, Mechanical Sweeper, Signaler, Flagger Wrecking Laborer, Bottom Man, Pipe Layer, Skid Steer, Industrial Fork Lift Operator, Burning Torch Operator, Jack Hammer, Air Spade, Chipping Hammer, Mechanical & Air Tamper Operator, Mechanical Concrete Buggies, Power Operated Mechanical Mule, Concrete Pump Hose Man, Vibrator Man, CERCLA Trained Hazardous, Material Removal (Levels A,B & C), High Lifts, Lulls and Dingo, Tunnel Laborer.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Labor Local 265A Mason Tender

Change # : LCN01-2023ibLoc265A

Craft : Laborer Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Mason Tender/ Scaffolding/ Forklift Operator	$25.00		$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$43.05	$55.55
Apprentice	**Percent**											
0-1000 Hours	80.00	$20.00	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$38.05	$48.05
1001-2000 Hours	85.00	$21.25	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$39.30	$49.93
2001-3000 Hours	90.00	$22.50	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$40.55	$51.80
3001-4000 Hours	95.00	$23.75	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$41.80	$53.68
Over 4000 Hours	100.00	$25.00	$8.20	$9.35	$0.40	$0.00	$0.00	$0.00	$0.10	$0.00	$43.05	$55.55

Special Calculation Note :

Ratio :

1 Journeymen to 1 Apprentice
3 Journeymen to 1 Apprentice
thereafter per project

Jurisdiction (* denotes special jurisdictional note) :
BROWN, CLERMONT, CLINTON, HAMILTON

Special Jurisdictional Note :

Details :
TENDERS: The tending of Masons and mixing, handling and conveying of all materials used by Brick or Stone Masons, whether done by hand or by any other procedure including but not limited to, all forklifts or other mechanical means, all heating and drying off all materials used by Brick or Stone Masons and cleaning and clearing of all debris.

SCAFFOLDING: The building and dismantling of scaffolding and staging for Masons shall be the work of the Mason Tenders.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Operating Engineers - Building Local 18 - Zone III

Change # : LCN01-2023ibLoc18zone3

Craft : Operating Engineer Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Operator Group A	$41.49		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.74	$78.48
Operator Group B	$41.37		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.62	$78.30
Operator Group C	$40.33		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$56.58	$76.74
Operator Group D	$39.15		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$55.40	$74.97
Operator Group E	$33.69		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.94	$66.78
Master Mechanic	$41.74		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.99	$78.86
Cranes & Mobile Concrete Pumps 150'-180'	$41.99		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$58.24	$79.23
Cranes & Mobile Concrete Pumps 180'-249'	$42.49		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$58.74	$79.98
Cranes & Mobile Concrete Pumps 249' and over	$42.74		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$58.99	$80.36
Apprentice	Percent											
1st Year	50.00	$20.75	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$37.00	$47.37
2nd Year	60.00	$24.89	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$41.14	$53.59
3rd Year	70.00	$29.04	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$45.29	$59.81
4th Year	80.00	$33.19	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.44	$66.04
Field Mechanic Trainee												
1st Year	50.00	$20.75	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$37.00	$47.37
2nd Year	60.00	$24.89	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$41.14	$53.59

3rd Year	70.00	$29.04	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$45.29	$59.81
4th Year	80.00	$33.19	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.44	$66.04

Special Calculation Note : Other: Education & Safety $0.09; *Misc is National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company there may be employed (1) Registered Apprentice or trainee Engineer through the referral when they are available. An apprenice, while employed as part of a crew per Article VIII, paragraph 78, will not be subject to the apprenticeship ratios in this collective bargaining agreement

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note :

Details :

Note: There will be a 10% increase for the apprentices on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Group A- Barrier Moving Machines; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types); Compact Cranes, track or rubber over 4,000 pounds capacity; Cranes self-erecting, stationary, track or truck (all configurations); Derricks (all types); Draglines; Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Forklift (rough terrain with winch/hoist); Gradalls; Helicopter Operators, hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Horizonal Directional Drill; Hydraulic Gantry (lift system); Laser Finishing Machines; Laser Screed and like equipment; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Operator/Technician(Mechanic Operator/Technician and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms; Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all), used on caissons for foundations and sub-structure; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Trench Machines (over 24" wide); Tug Boats.

Group B - Articulating/end dumps (minus $4.00/hour from Group B rate); Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs.; Bulldozers; CMI type Equipment; Concrete Saw, Vermeer-type; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats;, Rotomills (all), grinders and planers of all types.

Group C - A-Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or Skid Steer Loader with or without attachments; Boilers (15 lbs. pressure and over); All Concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drills - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled), Buck Hoists, Transport Platforms, Construction Elevators; Hydro Vac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Man Lifts; Material hoist/elevators; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie (Inserter/Remover); Rotovator (Lime-Soil Stabilizer); Submersible Pumps (4"and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24" and under); Utility Operators.

Group D - Backfillers and Tampers; Ballast Re-locator; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Mixers, more than one bag capacity; Concrete Mixers, one bag capacity (side loaders); All Concrete Pumps (without boom with 4" or smaller system); Concrete Spreader; Conveyors, used for handling building materials; Crushers; Deckhands; Drum Fireman (in asphalt plants); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators: Gunite Machines; Hydro-seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2") discharge); Road Widening Trenchers; Rollers (except asphalt); Self-propelled sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepsfoot post roller or grader; VAC/ALLS; Vibratory Compactors, with integral power; Welders.

Group E – Allen Screed Paver (concrete); Boilers (less than 15 lbs. pressure); Cranes-Compact, track or rubber (under 4,000 pounds capacity); Directional Drill "Locator"; Fueling and greasing +$3.00; Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson, Submersible Pumps (under 4" discharge).

Master Mechanics - Master Mechanic

Cranes 150' – 180' - Boom & Jib 150 - 180 feet

Cranes 180' – 249' - Boom & Jib 180 - 249 feet

Cranes 250' and over - Boom & Jib 250-feet or over

Prevailing Wage Rate
Skilled Crafts

Name of Union: Operating Engineers - HevHwy Zone II

Change # : LCN01-2023ibLoc18hevhwyII

Craft : Operating Engineer Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Operator Class A	$41.49		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.74	$78.48
Operator Class B	$41.37		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.62	$78.30
Operator Class C	$40.33		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$56.58	$76.74
Operator Class D	$39.15		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$55.40	$74.97
Operator Class E	$33.69		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.94	$66.78
Master Mechanic	$41.74		$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$57.99	$78.86
Apprentice	**Percent**											
1st Year	50.00	$20.75	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$37.00	$47.37
2nd Year	60.00	$24.89	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$41.14	$53.59
3rd Year	70.00	$29.04	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$45.29	$59.81
4th Year	80.00	$33.19	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.44	$66.04
Field Mech Trainee Class 2												
1st year	50.00	$20.75	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$37.00	$47.37
2nd year	60.00	$24.89	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$41.14	$53.59
3rd year	70.00	$29.04	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$45.29	$59.81
4th year	80.00	$33.19	$9.01	$6.25	$0.85	$0.00	$0.00	$0.09	$0.00	$0.05	$49.44	$66.04

Special Calculation Note : Other: Education & Safety Fund is $0.09 per hour. *Misc is National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice or Trainee Engineer through the referral when they are available. An Apprentice, while employed as part of a crew per Article VIII,

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE,

paragraph 65 will not be subject to the apprenticeship ratios in this collective bargaining agreement	FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY; HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

**Apprentices wilt receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if they are required to have CDL.

Class A - Air Compressors on Steel Erection; Asphalt Plant Engineers (Cleveland District Only); Barrier Moving Machine; Boiler Operators, Compressor Operators, or Generators, when mounted on a rig; Boom Trucks (all types); Cableways; Cherry Pickers; Combination- Concrete Mixers & Towers; Concrete Plants (over 4 yd capacity); Concrete Pumps; Cranes (all types); Compact Cranes track or rubber over 4,000 pounds capacity; Cranes self-erecting stationary, track or truck; Derricks (all types); Draglines; Dredges dipper, clam or suction; Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls; Helicopter Crew (Operator- hoist or winch); Hoes (all types); Hoisting Engines; Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial-type Tractors; Jet Engine Dryer (D8 or D9) diesel Tractors; Locomotives (standard gauge); Maintenance Operators/Technicians (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic lifting and aligning device); Refrigerating Machines (freezer operation); Rotary Drills, on caisson work; Rough Terrain Fork Lift with winch/hoist; Side Booms; Slip Form Pavers; Survey Crew Party Chiefs; Tower Derricks; Tree Shredders; Trench Machines (over 24" wide); Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators.

Class B - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or Skid Steer Loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Concrete Saws, Vermeer type; Endloaders; Horizontal Directional Drill (50,000 ft. lbs. thrust and over); Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Maintenance Operators/Technicians, Class B; Material Transfer Equipment (shuttle buggy) Asphalt; Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Rotomills (all), Grinders and Planners of all types, Groovers (excluding walk-behinds); Trench Machines (24 inch wide and under).

Class C - A-Frames; Air Compressors, on tunnel work (low Pressure); Articulating/straight bed end dumps if assigned (minus $4.00 per hour); Asphalt Plant Engineers (Portage and Summit Counties only); Bobcat-type and/or skid steer loader with or without attachments; Drones; Highway Drills (all types); HydroVac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Locomotives (narrow gauge); Material Hoist/Elevators; Mixers, concrete (more than one bag capacity); Mixers, one bag

capacity (side loader); Power Boilers (over 15 lbs. pressure); Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rollers, Asphalt; Rotovator (lime-soil Stabilizer); Switch & Tie Tampers (without lifting and aligning device); Utilities Operators, (small equipment); Welding Machines and Generators.

Class D – Backfillers and Tampers; Ballast Re-locator; Bar and Joint Installing Machines; Batch Plant Operators; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yds. and under); Concrete Saws (multiple); Conveyors (highway); Crushers; Deckhands; Farm type tractors, with attachments (highway); Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway), except masonry; Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers (hydraulic or cable); Plant Mixers; Post Drivers; Post Hole Diggers; Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Steam Firemen; Survey Instrument men; Tractors, pulling sheepsfoot rollers or graders; Vibratory Compactors, with integral power.

Class E - Compressors (portable, Sewer, Heavy and Highway); Cranes-Compact, track or rubber under 4,000 pound capacity; Drum Firemen (asphalt plant); Fueling and greasing (Primary Operator with Specialized CDL Endorsement Add $3.00/hr); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oil Heaters (asphalt plant); Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson; Survey Rodmen or Chairmen; Tire Repairmen; VAC/ALLS.
Master Mechanic - Master Mechanic

Prevailing Wage Rate
Skilled Crafts

Name of Union: Plasterer Local 132 (Cincinnati)

Change # : LCN01-2023ibLoc132Cinci

Craft : Plasterer Effective Date : 07/01/2023 Last Posted : 06/28/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Plasterer	$28.40		$5.80	$8.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$44.70	$58.90
Apprentice	**Percent**											
1st 900 hours	70.00	$19.88	$5.80	$0.00	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$27.44	$37.38
2nd 900 hours	74.00	$21.02	$5.80	$0.00	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$28.58	$39.08
3rd 900 hours	78.00	$22.15	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$37.45	$48.53
4th 900 hours	82.00	$23.29	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$38.59	$50.23
5th 900 hours	86.00	$24.42	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$39.72	$51.94
6th 900 hours	90.00	$25.56	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$40.86	$53.64
7th 900 hours	94.00	$26.70	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$42.00	$55.34
8th 900 hours	98.00	$27.83	$5.80	$7.74	$0.70	$0.00	$1.00	$0.06	$0.00	$0.00	$43.13	$57.05

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

*Other is International Training

Ratio :

1 Journeyman to 1 Apprentice
4 Journeyman to 2 Apprentice
7 Journeyman to 3 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN

Special Jurisdictional Note :

Details :

Apprentice and Shop Hand Pension are $1.00 less than Journeyman.

Prevailing Wage Rate
Skilled Crafts

Name of Union: Plumber Pipefitter Local 392

Change # : LCN01-2023ibLoc392

Craft : Plumber/Pipefitter Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Plumber Pipefitter	$38.62		$10.58	$13.93	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$64.45	$83.76
Plumber Helper	$25.10		$10.48	$7.24	$0.79	$0.00	$0.00	$0.00	$0.00	$0.00	$43.61	$56.16
Apprentice	**Percent**											
1st Year	52.00	$20.08	$10.38	$1.05	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$32.83	$42.87
2nd Year	55.00	$21.24	$10.38	$1.05	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$33.99	$44.61
3rd Year	58.00	$22.40	$10.38	$7.74	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$41.84	$53.04
4th Year	62.00	$23.94	$10.38	$7.74	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$43.38	$55.36
5th Year	75.00	$28.96	$10.38	$13.93	$0.79	$0.00	$0.00	$0.53	$0.00	$0.00	$54.60	$69.08

Special Calculation Note : OTHER IS: SUPPLEMENTAL UNEMPLOYMENT BENEFITS.

Ratio :

1 Journeymen to 1 Apprentice
2 Journeymen to 4 Apprentices
3 Journeymen to 6 Apprentices

When more than Sixteen (16) Journeymen are employed additional apprentices may be acquired at a ratio of one (1) apprentice to four (4) journeymen.

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CLERMONT, HAMILTON, WARREN

Special Jurisdictional Note :

Details :

Helpers shall be permitted to work on ONLY , Exterior Sewers, Concrete, Vitrified Clay or PVC Pipe and Digging and Backfilling for Piping Work. The ratio shall not exceed 2 helpers to 1 Journeymen when performing the scope of work listed above

Prevailing Wage Rate
Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 1
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 1 4 wheel service, dump, and batch trucks; drivers on tandems; truck sweepers (not to include power sweepers & scrubbers)	$31.24		$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$48.39	$64.01
Apprentice	**Percent**											
First 6 months	80.00	$24.99	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$42.14	$54.64
7-12 months	85.00	$26.55	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$43.70	$56.98
13-18 months	90.00	$28.12	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$45.27	$59.32
19-24 months	95.00	$29.68	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$46.83	$61.67
25-30 months	100.00	$31.24	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$48.39	$64.01

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA,

COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate
Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 2
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 2 Tractor Trailer-Semi Tractor Trucks; Pole Trailers; Ready Mix Trucks; Fuel Trucks; 5 Axle & Over; Belly Dumps; Low boys - Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation; Truck Mechanics (when needed)	$31.66		$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$48.81	$64.64
Apprentice	**Percent**											
First 6 months	80.00	$25.33	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$42.48	$55.14
7-12 months	85.00	$26.91	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$44.06	$57.52
13-18 months	90.00	$28.49	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$45.64	$59.89
19-24 months	95.00	$30.08	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$47.23	$62.27
25-30 months	100.00	$31.66	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$48.81	$64.64

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON,

KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate
Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 3
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy3

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 3 Articulated Dump Trucks; Ridge-Frame Rock Trucks; Distributor Trucks)	$32.66		$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$49.81	$66.14
Apprentice	**Percent**											
First 6 months	80.00	$26.13	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$43.28	$56.34
7-12 months	85.00	$27.76	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$44.91	$58.79
13-18 months	90.00	$29.39	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$46.54	$61.24
19-24 months	95.00	$31.03	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$48.18	$63.69
25-30 months	100.00	$32.66	$7.75	$9.20	$0.20	$0.00	$0.00	$0.00	$0.00	$0.00	$49.81	$66.14

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN,

HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

SECTION 5

Experience Statement
Understanding HB 694 Ohio's Pay To Play Law
Affidavit in Compliance with O.R.C. Section 9.24 Affidavit
Affidavit in Compliance with O.R.C. Section 3517.13 Affidavit
Declaration Terrorist Organization
Bid Guaranty
PERSONAL Property Tax Affidavit
EEO Affidavit
Non-Collusion Affidavit
Bid Response form
Quantity Estimate and Bid Tabulation
Detailed Drawings and Specifications
Affidavit of Contractor – Prevailing Wages
Contractor's or Subcontractor's Final Affidavit
Final Release of Lien
Notice of Award
Notice to Proceed
Bid Proposal
Agreement Between Contractor and Owner
Certification of Funds

EXPERIENCE STATEMENT

COMPLETED WORK WITHIN 100 MILES

The Bidder is required to provide a list of work similar to the proposed contract.

Please list: Contract Name, Owner's Name, Address, and Telephone Number

Understanding HB 694 Ohio's Pay to Play Law

Passed at the end of the 126th General Assembly, HB 694 became effective April 4, 2007. As introduced and passed by the Ohio House, the bill tightened the restrictions on pay to play contracting for vendors seeking state contracts. Amendments added by the Ohio Senate without input from political subdivisions extended these restrictions to contracts awarded by local governments, including boards of township trustees, boards of education and county commissioners.

Under the new law, any bid or unbid contract, purchase order or collective bargaining agreement with a value of more than $500 will require the vendor to certify to the contracting authority that the vendor has not made a contribution to the contracting authority in an amount that exceeds the limits provided by law. The limits are $1000 per an individual and $2000 for individuals, partners and shareholders of the same firm. The contributions are aggregated among owners, partners, family members and shareholders so that even if the contributions are less than $1000 they may trigger the prohibition if they exceed $2000 in the aggregate. Labor organizations, public contributing entities affiliated with labor organizations, and PAC's affiliated with businesses are all subject to the contribution limits.

For any contract awarded to an individual, partnership, other unincorporated business, association including a professional association, estate, or trust, the following must certify they have not exceeded contribution limits:

- The individual
- Each partner or owner of the partnership or unincorporated business
- Each shareholder of the association
- Each administrator and each executor of the estate
- Each trustee of the trust
- Each spouse of any of the preceding persons
- Each child 7-17 years of age of any of the preceding persons
  Any combination of the persons listed above
  In the case of contracts awarded to a corporation or business trust, the following must certify the have not exceeded contribution limits:
- Each owner of more than 20% of the corporation or business trust
- Each spouse of an owner or more than 20% of the corporation or business trust
- Each child 7-17 years of age of any of the preceding persons
- Any combination of the persons listed above

Campaign contribution limitations apply during the term of each contract and for one year following termination of the contract. The law has a 2 year look back provision that includes campaign contributions, however, for purposes of complying with the new law only contributions made after January 1, 2007 are considered. The campaign contribution limitations also apply to candidates running for an office from the date a candidate files for an office in the same manner as the holder of an office.

Penalties for an office holder who solicits a contribution from the holder of a government may be charged with a first degree misdemeanor. Knowingly accepting a contribution from a vendor who has a government contract with the contracting authority worth more than $500 requires that the contribution be returned.

Penalties for the vendor are up to a $1000 fine and rescission of the contract. Vendors who hold government contracts and make campaign contributions in excess of the limits provided by law may be subject to a penalty equivalent to 3 times the excess amount and may have their contract rescinded by the Ohio Elections Commission. Finally, a vendor that makes a false statement on a certification form or an affidavit that certifies to the government that they have not exceeded the campaign limitations is subject to prosecution for a fifth degree felony and will have their contract rescinded.

AFFIDAVIT IN COMPLIANCE WITH O.R.C. 9.24
(Initial one Line)

_____ Bidder states that no finding for recovery has been issued against the bidder by the Auditor of State on or after January 1, 2001.

_____ Bidder states that a finding of recovery has been made against the bidder by the Auditor of State on or after January 1, 2001 and the finding for recovery is resolved/unresolved.

State of _____)
) SS:
County of _____)

I, _____, after being duly cautioned and sworn

hereby state that I am the_____ of
(Title)

_____ and that the response set forth above is true.
(Company)

_____
Affiant

Sworn to before me subscribed in my presence this _____ day of _____, 2024.

Notary Public_____

My commission expires:_____

AFFIDAVIT IN COMPLIANCE WITH SECTION 3517.13 OF THE OHIO REVISED CODE

STATE OF OHIO)
) ss:
COUNTY OF _____)

Personally appeared before me the undersigned, as an individual or as a representative of

_____ a bidder on a project entitled:

LORVEN DRIVE PHASE 2B PUBLIC ROADWAY IMPROVEMENTS

who, after being duly cautioned and sworn, makes the following statement with respect to prohibited activities constituting a conflict of interest or other violations under Ohio Revised Code Section 3517.13, and further states that the undersigned has the authority to make the following representation on behalf of himself or herself or of the business entity:

1. That none of the following has **individually** made within the two previous calendar years and that, if awarded a contract for the purchase of goods or services in excess of $500, none of the following **individually** will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, as an individual, one or more campaign contributions totaling in excess of $1,000, to any member of the Miami Township Board of Trustees or their individual campaign committees:
    a. myself;
    b. any partner or owner or shareholder of the partnership (if applicable);
    c. any owner of more than 20% of the corporation or business trust (if applicable);
    d. each spouse of any person identified in (a) through (c) of this section;
    e. each child seven years of age to seventeen years of age of any person identified in divisions (a) through (c) of this section (only applicable to contributions made on or after January 1, 2007).
2. That none of the following have **collectively** made since January 1, 2007, and that, if awarded a contract for the purchase of goods or services in excess of $500, none of the following **collectively** will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, one or more campaign contributions totaling in excess of $2,000, to any member of the Miami Township Board of Trustees or their individual campaign committees:
    a. myself;
    b. any partner or owner or shareholder of the partnership (if applicable);
    c. any owner of more than 20% of the corporation or business trust (if applicable);
    d. each spouse of any person identified in (a) through (c) of this section;
    e. each child seven years of age to seventeen years of age of any person identified in divisions (a) through (c) of this section.

Signature_____

Title: _____

Sworn to before me and subscribed in my presence this_____day_____2024.

Notary Public _____

My Commission Expires: _____

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO TERRORIST ORGANIZATION
(CIRCLE APPROPRIATE RESPONSE)

Are you a member of an organization of the U.S. Department of State Terrorist Exclusion List?
Yes No

Have you used any position of prominence you have within any country to persuade to support an organization on the U.S. Department of State Terrorist Exclusion List?
Yes No

Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List?
Yes No

Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist List?
Yes No

Have you committed an act that you know, or reasonably should have known, affords "material support or resources" (see below) to an organization on the U.S. Department of State Terrorist Exclusion List?
Yes No

Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism?
Yes No

For purposes of this declaration of material assistance/non-assistance, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, and financial services that are in excess of one hundred dollars, as well as communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials."

_____

State of _____)
) SS:
County of _____)

I, _____, after being duly cautioned and sworn

hereby state that I am the_____ of
(Title)

_____ and that the response set forth above is true.
(Company)

_____
Affiant

Sworn to before me subscribed in my presence this _____ day of _____, 2024.

Notary Public_____

My commission expires:_____

BID GUARANTY
(To Accompany Bid Proposal)
(Section 153.571 Ohio Revised Code)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned

_____
(Names and Address)

as Principal and _____
(Name of Surety)

_____ as Surety, are hereby held firmly

bound unto the _____

hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by

the Principal to the Obligee on ____, _____, 2024 to undertake the Project known as:

LORVEN DRIVE PHASE 2B PUBLIC ROADWAY IMPROVEMENTS

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall

the penal sum exceed the amount of_____dollars. ($_____).

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns. If the foregoing blank is not filled in, the penal sum will be the full amount of the principal's bid including alternates. Alternatively, if the blank is filled in, the amount stated must not be less than the full amount of the bid including alternates, in dollars and cents. A percentage is not acceptable.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named Principal has submitted a bid on the above referred to project;

NOW, THEREFORE, if the obligee accepts the bid of the principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten (10) percent of the penalty hereof between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the Work covered by the bid; or in the event the

Obligee does not award the contract to the next lowest bidder and resubmits the Project for bidding, the Principal will pay the Obligee the difference not to exceed ten (10) percent of the penalty hereof between the amount specified in the bid, of the costs, in connection with the resubmission, or printing new Contract Documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be void, otherwise to remain in full force and effect. If the Obligee accepts the bid of the Principal and the Principal within ten (10) days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

IF THE SAID Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Township against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman or laborer having a just claim, as well as, for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefore shall in any way affect the obligations of said Surety on this bond and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this _____ day of _____, 2024.

PRINCIPAL: _____

SURETY:_____

BY:_____ _____
Attorney-in-fact

TITLE:_____

_____
Surety Company Address

_____
City State Zip

_____
Surety Agent's Name

_____
Address

_____
City State Zip

PERSONAL PROPERTY TAX AFFIDAVIT

State of _____)

)SS:

County of _____)

I, _____, after being duly cautioned and sworn hereby

state that I am _____ of _____.
(Title) (Company)

and that said company, officer, owner, or partner of said is not charged with any delinquent personal property taxes on the general tax list of personal property in Clermont County, Ohio or that said company, officer, employee, or partner is charged with delinquent taxes in the amount of:

_____
(Company)

_____
(Affiant)

Sworn to before me subscribed in my presence this _____day of _____2024.

Notary Public_____

County of:_____State of:_____

My commission expires_____

EEO AFFIDAVIT

State of _____)
) SS:
County of _____)

I, _____, being duly sworn hereby states that I am
(Affiant)

_____ of _____
(Title) (Company)

and that said Company pledges to provide equal opportunity to all employees or applicants for employment without regard to race, color, creed, national origin, sex, or age. Said pledge applies to all matters pertaining to employment including hiring, placement, upgrading, transfer, demotion, removal, recruitment, pay, training, and layoff. This statement is made in accordance with Title VI of the Civil Rights Act of 1963.

_____
(Affiant)

Sworn to before me subscribed in my presence this ____ day of _____2024.

Notary Public_____

County of _____, State of_____

My commission expires_____

NON-COLLUSION AFFIDAVIT

(This affidavit must be executed for the bid to be considered.)

STATE OF _____)
) SS.
COUNTY OF _____)

I, _____, _____ being duly sworn,
(TITLE)

do depose and say: that _____

_____
(Names of all persons, firms, or corporations interested in the bid.)

Its agents, officers, or employees have not directly or indirectly entered into any agreement, participated in any collusions, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal: and also that no member of the Board of Trustees, head of any department, or employee therein, or any officer of Miami Township is directly or indirectly interested therein.

_____
(SIGNATURE)

_____
(TITLE)

Sworn to and subscribed before me this _____ day of _____, 2024.

_____
NOTARY PUBLIC

County of _____, State of _____

My commission expires _____

CHECK YOUR BID – ERRORS OR OMISSIONS COULD RESULT IN YOUR BID BEING DECLARED INVALID.

BID RESPONSE FORM

TO: MIAMI TOWNSHIP TRUSTEES
6101 MEIJER DRIVE
MILFORD, OHIO 45150

Dear Sir:

The undersigned proposes to furnish the services as outlined on the following pages of this proposal for Miami Township.

DETAILED SPECIFICATIONS are hereby made a part of the proposal, and the bidder hereby acknowledges that he has read and understands them.

BIDDER: _____

AUTHORIZED SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____

LORVEN DRIVE PHASE 2B PUBLIC ROADWAY IMPROVEMENTS

MIAMI TOWNSHIP, CLERMONT COUNTY, OHIO

ENGINEER'S ESTIMATE- $227,115.00

March 19, 2024

ITEM NO.	DESCRIPTION	UNIT OF MEASURE	APPROX. QTY.	UNIT PRICE	TOTAL
201	CLEARING AND GRUBBING, AS PER PLAN	LUMP	1		
203	EXCAVATION, INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN	LUMP	1		
204	SOILS TESTING (ALLOWANCE)	LUMP	1	$5,400.00	$5,400.00
207	SILT FENCE	LF	300		
207	INLET PROTECTION	1	4		
207	SEED, MULCH, FERTILIZER	SY	1000		
302	ASPHALT PAVING- BASE COURSES- 2 COMPACTED LIFTS TOALLING 5 INCHES	SY	625		
304	CONSTRUCTION ENTRANCE (ALLOWANCE)	1	1	$2,500.00	$2,500.00
304	6 INCH COMPACTED THICKNESS AGGREGATE BASE COURSE FOR ROADWAY	CY	110		
304	CRUSHED LIMESTONE FOR STORM/SANITARY PIPE BEDDING AND BACKFILL	C.Y.	50		
407	TACK COAT	GALS	63		
448	ASPHALT COURSES-TOP TWO COURSES- 3.5 INCHES TOTAL COMPACTED THICKNESS	SY	625		
605	UNDERDRAINS	LF	100		
608	5' CONCRETE WALK	SF	330		
609	ROLLED CURB AND GUTTER	LF	160		
611	12" STORM SEWER	LF	147		
611	CB 3	EACH	2		
611	CB 2-2B	EACH	1		
611	REMOVE PLUG AND CONNECT TO EXISTING STORM SEWER	EACH	1		
614	MAINTAINING TRAFFIC	LS	1		
623	SITE LAYOUT/CONSTRUCTION STAKING	LS	1		
638	8" WATER MAIN	LF	187		
638	8" X 6" TAPPING VALVE AND SLEEVE	EACH	1		
730	STOP SIGNS WITH POST	EACH	1		
730	24" STOP BAR	LF	24		
730	STREET NAME BLADES WITH POST	EACH	1		
730	DO NOT ENTER SIGNS WITH POST	EACH	0		
730	NO RIGHT TURN SIGN WITH POST	EACH	0		
SPL	CONTINGENCY	LS	1	$25,000.00	$25,000.00

TOTAL BID

NAME OF BIDDER

SIGNATURE

AFFIDAVIT OF CONTRACTOR OR SUB-CONTRACTOR

Prevailing Wages

I, _____,
(Name of person signing affidavit) (Title)

of the _____, do hereby certify that the wages
(Company)

paid to all employees for the full number of hours worked in connection with the Contract to the Improvement, Repair and Construction of:

_____
(Project and Location)

during the following period from _____ to _____

is in accordance with the prevailing wage prescribed by the contract document.

I further certify that no rebates of deductions for any wages due any person have been directly or indirectly made other than those provided by law.

_____
(Signature of Officer or Agent)

Sworn to and subscribed in my present this _____ day of _____, 2024.

_____
(Notary Public)

The above affidavit must be executed and sworn to by the officer or agent or the Contractor or Subcontractor who supervises the payment of employees, before the owner will release the surety and/or make a final payment due under the terms of the contract.

CONTRACTOR AND/OR SUB-CONTRACTOR'S FINAL AFFIDAVIT

Date_____

The Request for Payment submitted herewith contains a request for

$_____ which sum is due the sub-contractors and materialmen and for

$_____ which sum is due the principal contractor herein for the work performed under the Project.

Affidavit further states all payroll taxes or contribution imposed upon the affiant by statute or law has been paid.

Affiant further states that all the foregoing is true and complete to the best of his knowledge, information and belief.

Further affiant saith not.

_____
(Signature)

_____
(Title)

_____
(Company)

State of)
) SS:
County of)

Before me, a Notary Public, in and for the State of _____, came _____, by me known, and made oath that he is _____ of _____ and that he has read the foregoing affidavit and subscribed the same and that he knows it to be true to the best of his knowledge, information and belief.

_____
Notary Public

_____
My commission expires

Notary Seal

FINAL RELEASE OF LIEN

For and in consideration of _____, the

undersigned_____
(Name of Company)

does hereby waive, release and relinquish any and all claims, demands, and right of lien for all work, labor, material, machinery, and other goods, equipment, and services done, performed and furnished in and for the Improvement, Repair and Construction of:

In witness whereof, the undersigned has caused these presents to be duly executed

this _____ day of _____, 2024.

_____
(Name of Company)

By_____

_____
(Title)

This _____ day of _____, 2024, being personally known to me, appeared before me and executed the foregoing Final Release of Lien and acknowledged such execution to be his free act and deed.

Notary Seal

_____
Notary Public

My Commission Expires_____

NOTICE OF AWARD

TO: _____

Project Description:

Lorven Drive Phase 2B Public Roadway Improvements

The Owner has considered the bid submitted by you for the above-described work in response to its Advertisement for Bids dated Thursday, March 21, 2024, and Information to Bidders.

You are hereby notified that your bid has been accepted for items in the amount of $_____.

You are required by the information for bidders to execute the agreement and furnish the required contractor's Performance Bond, Payment Bond, and certificates of insurance within ten (10) calendar days from the date of this "Notice" to you.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid as abandoned and as a forfeiture of your bid bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, 2024.

Miami Township, Clermont County, Ohio
Owner

By: _____
Steve Kelly

Title: Township Administrator

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by

_____

this the _____ day of _____, 2024.

By_____

Title_____

NOTICE TO PROCEED

TO: _____ **Date:** _____

Project:

Lorven Drive Phase 2B Public Roadway Improvements

You are hereby notified to commence WORK in accordance with Agreement dated _____ and you are to complete the WORK within ____**consecutive** calendar days thereafter. The date of completion of all WORK is therefore **August 9, 2024.**

_____
Mary Makley Wolff
Miami Township Trustee

_____
Mark Schulte
Miami Township Trustee

_____
Ken Tracy
Miami Township Trustee

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____this the _____ day of _____2024

BY_____

TITLE_____

BID PROPOSAL

PROJECT IDENTIFICATION:

Lorven Drive Phase 2B Public Roadway Improvements

THIS PROPOSAL IS SUBMITTED TO:

Board of Trustees
Miami Township
6101 Meijer Drive
Milford, Ohio 45150

1. The undersigned BIDDER proposes and agrees, if this Proposal is accepted, to enter into an Agreement with the OWNER in the form included in the Contract Documents to complete all work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Proposal and in accordance with the Contract Documents.

   The undersigned BIDDER proposes to furnish all labor, equipment, and material necessary for the construction of **Lorven Drive Phase 2B Public Roadway Improvements** in accordance with the rules and regulations of the Clermont County Building Department and the Technical Specifications contained in the Construction Drawings and Specifications as follows:

   Total Lump Sum Bid: $_____ Completion Date: August 9, 2024.
   Total Lump Sum Bid Words_____

2. BIDDER accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of the Proposal Bond. This Proposal will remain open for sixty (60) days after the day of the Proposal Opening. BIDDER will sign the Agreement and submit the Contract Security and other documents required by the Contract Documents within ten (10) days after the date of OWNER'S Notice of Award.

3. In submitting this Proposal, BIDDER represents, as more fully set forth in the Agreement, that:

   (a) BIDDER has examined copies of all the Contract documents and of the following addenda:

   _____Date _____ Number
   _____Date _____ Number
   _____Date _____ Number

   (receipt of all of which is hereby acknowledged) and also copies of the Advertisement of Invitation to make a Proposal and the Instructions of Bidders:

(b) BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as BIDDER deems necessary;

(c) This Proposal is genuine and not made in the interest or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Proposal; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work for the price(s) on the Proposal Bid Schedule enclosed herewith.

5. **BIDDER agrees that the Work will be completed on or before August 9, 2024.**

6. The following documents are attached to and made condition of this Proposal:

   (a) Required Bid Bond;
   (b) A Tabulation of Subcontractors and other persons and organizations required to be identified in this Proposal; and,
   (c) Required Bidder's Qualification Statement with supporting data.

7. The terms used in the Proposal which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meaning assigned to them in the General Conditions.

8. Communications concerning this proposal shall be addressed to the address of BIDDER indicated below:

BIDDER: _____

_____

_____

AUTHORIZED SIGNATURE: _____

Date

ADDRESS: _____

_____

_____

TELEPHONE: _____

MIAMI TOWNSHIP

Lorven Drive Phase 2B Public Roadway Improvements

AGREEMENT BETWEEN CONTRACTOR AND OWNER

This agreement (hereinafter called "Contract") made the ____of _____, 2024 between _____(hereinafter called "Contractor") and **Miami Township** (hereinafter called "Owner").

Witnesseth, that the contractor, and the owner for the consideration hereinafter named, agree as follows:

1. SCOPE OF WORK

The successful bidder must provide all materials, manpower, and equipment (including mobilization) to perform the work of this project. It includes approximately 210 LF of new public roadway, 220 LF of new storm sewer including new catch basins, and approximately 400 LF of new Clermont County standard curb, all performed according to the plans and specifications provided. This is a prevailing wage project.

All work shall be completed by, August 9, 2024.

2. TIME FOR COMPLETION

The work to be performed by contractor under this contract shall be started within 30 days after contract start date of _____, 2024 and shall be completed by August 9, 2024.

3. PURCHASE PRICE OF PAYMENT

In consideration for the services set forth in the scope of work, including meetings with the Township Service Director and Consulting Engineer, Contractor will charge and the Township will pay the **LUMP SUM** of **$_____.**

4. INSURANCE

The Contractor shall procure and maintain during the term of this Contract, at its sole expense, the following insurance coverage from a commercial insurance carrier satisfactory to Owner.

A. Comprehensive General Liability Insurance in an amount not less than $1,000,000.00 per occurrence with respect to personal injury or death, and $500,000.00 with respect to property damage.

B. Workers' compensation insurance, in accordance with the laws of the State of Ohio, covering the Contractor's employees while on Owner's premises.

The Contractor shall furnish to Owner certificates evidencing such insurance coverage prior to commencing work and shall cause each policy to provide that it shall not be canceled or changed without at least ten (10) days prior written notice to Owner. Any deductibles under the policies shall be borne by the Contractor, but in no event shall any deductible exceed $1,000.00.

Each policy shall name Owner and its officers and trustees as additional assureds.

5. LAWS, ORDINANCES, RULES AND REGULATIONS

The Contractor shall comply with all laws, ordinances, rules and regulations bearing on the project. If the Contractor furnishes any work, which is not in conformance with such laws, ordinances, rules and regulations, and without written notice to the Owner, he shall bear all costs arising from the correction thereof.

6. WORKMANSHIP

The workmanship called for by the specifications shall be of the highest quality in every respect, as usually recognized in the construction industry.

Installation must comply with, and pass inspection of all applicable State of Ohio Department of Transportation Construction and Material Specifications.

Where doubt exists as to the quality or effectiveness of the work, the work shall be installed as directed by the Owner.

Defective materials and/or workmanship will not be acceptable and if built in shall be removed and replaced with sound materials and highest quality workmanship or otherwise corrected to the Owner's satisfaction. The Contractor shall bear all expense of replacement or remedial work and repairs to and alterations in work of other contractors necessitated by his replacement or remedial work. Should the Contractor be unable to replace or remedy the defective work, he shall promptly remove the entire work and reimburse the Owner for all money paid therefore.

7. CLEANING UP

The Contractor shall at all times maintain the project in an orderly, workmanlike condition, reasonably clean and free of accumulations of dirt and debris. If the Contractor fails so to maintain the project, the Owner shall have the right to engage others to do so at the Contractor's expense.

The project shall, in general, be turned over to the Owner in a thoroughly clean and workmanlike condition ready for the Owner's use in every respect.

8. OWNERS RIGHT TO TERMINATE CONTRACT

If the Contractor shall be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in case for which extension of time is provided, to supply enough properly skilled workmen or proper materials to keep the project on schedule, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances, rules, regulations or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the Contract, or fail to provide or maintain the insurance herein required, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor three (3) days notice, terminate the employment of the Contractor and take possession of the premises and all materials, tools and appliances thereon and finish the project by whatever method the Owner may deem expedient. In such case the Contractor shall not be entitled to receive any further payment.

If such expense of finishing the project shall exceed such unpaid balance, the Contractor shall pay such excess to the Owner.

9. PERFORMANCE BONDS

The Owner shall have the right, prior to the signing of the Contract, to require the Contractor to furnish bond covering the faithful performance of the contract and the payment of all obligations arising there under, in such form as the Owner may prescribe and with such sureties as he may approve. The Contractor shall pay the premium.

10. WARRANTY

The Contractor shall remedy any defects to faulty materials or workmanship and pay for any damage to other work resulting from such defects and/or the remedying thereof, which shall appear within the warranty period of one (1) year. Neither the foregoing nor any other provision in the Contract Documents, nor the time limit of any special warranty shall limit the Contractor's liability for defects or installations resulting from deliberate or other deviations from the plans and specifications to less than the legal limit of liability under the law. The Owner shall give notice of observed defects with reasonable promptness.

All warranties and bonds shall be delivered to the Owner before final payment is made.

11. NON-ASSIGNABILITY

No portion of this contract or any work to be performed under this contract shall be assigned to any other person or business without the express written consent of the Township. In the event work is assigned to subcontractors final payment shall not be made without a release signed by the subcontractor or assignee.

12. MECHANICS LIEN LAW (ORC 1311.25 to 1311.32)

Every sub-contractor, material men or laborer who is performing or has performed labor or work, or is furnishing or has furnished material for any public improvement, shall submit an affidavit to the public authority stating that they have received payment in full for labor, work or materials. All payments due them from the Contractor will be held in escrow for a period up to one hundred twenty (120) days from the date that work was last performed unless said affidavits are received.

13. APPLICATION FOR PROGRESS PAYMENT

The Contractor shall submit applications for payment to the Service Director for processing.

Progress payments; Retainage, Owner shall make progress payments on account of the Contract Price on the basis of Contractors applications for payment as recommended by the Engineer, on or about the 1st day of each month during the construction period.

Prior to substantial completion, progress payments will be made in an amount equal to the percentage indicated below, but in each case, less the aggregate of payments previously made and less such amounts as Engineer shall determine.

Payment #1:

If work has been 25% completed as determined by the Service Director and if the character and progress of the work has been satisfactory. Subsequent payments of 50%, and 75% when applied for as described above

Upon substantial completion, in an amount sufficient to increase total payments to Contractor to 90% of the Contract price (with the balance being retainage), less such amounts as Engineer shall determine.

The Contractor can submit to the Owner an application for payment covering work completed as of the date of the application. The application shall be accompanied by (a) bill of sale, invoice or other documentation warranting that materials have been delivered to the construction site free and clear of all Liens; (b) documentation warranting the materials are covered by appropriate property insurance. Progress payments can be applied for no more than once a month. A 10% retainage for the full amount of the bid will be held until all construction and paperwork is completed, and final payment is applied for.

14. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due (30) days after completion of the work, provided the work be then fully completed and the contract fully performed.

Upon receipt of written notice from the contractor that the work is ready for final inspection and acceptance, the Owner shall promptly make such inspection. When the Owner finds the work acceptable under the contract and the contract fully performed, the entire balance due the Contractor shall thereupon be payable.

Before the final payment is made the Contractor will satisfy the requirements of Paragraph 12 Mechanics Lien Law, of this contract.

If any subcontractor or material supplier refuses to furnish Contractor with a final lien waiver, Contractor upon Owner's request shall furnish Owner with a bond, satisfactory to Owner, indemnifying Owner against the claim or any lien, or Owner at its option, may withhold from the final payment a sum equal to the amount of the claim. If a lien is filed against Owners property at any time and, if within 30 days after notice if the filing has been given by Owner to Contractor, the lien remains unsatisfied or is not bonded satisfactory to Owner, Owner shall thereafter be entitled, regardless of whether the claim is disputed, to pay the full amount of the claim secured by the lien and deduct the cost thereof from the contract sum; or if final payment has been made, Contractor shall promptly reimburse Owner for the amount so expended. Contractor shall indemnify and hold harmless Owner from and against any and all claims, liens, suits, losses, damages, and expenses, including attorney fees, by whomsoever asserted, including claims for personal injury or property damage, related to or arising out of the work performed or material supplied to the project

Contractor agrees to furnish Owner any reasonable documentation, including, without limitation, payroll records, invoices or canceled checks, which Owner may request to confirm payment of all indebtedness related to the work as a condition precedent to final payment.

In the event that a subcontractor or material supplier has not been paid for labor performed or materials furnished in connection with the work, Owner in addition to all remedies available at law or in equity, may pay the Contract Sum Due the Contractor by a check made payable to the order of Contractor and such subcontractor or materialman and in an amount for which the subcontractor or material supplier is due based upon the reasonable judgment of Owner. Payment by such a joint check shall constitute payment of the Contract Sum.

15. THE CONTRACT DOCUMENTS

Included as a part of this contract are: The Contractor's proposal signed and dated this _____day of _____, 2024, and specifications prepared by Miami Township.

IN WITNESS WHEREOF, the parties hereto have executed this Contract, the day and year first above written.

Contractor:

By: _____

Title: _____

Witness (for Contractor)

Owner: Miami Township

By: _____

Title: _____

(Pursuant authorization from Board of Trustees)

_____

Witness (for Owner)

CERTIFICATION OF FUNDS

I hereby certify that at the time of making of this Contract and the execution of this certification the amount required to meet the obligations set forth in this Contract has been lawfully appropriated for such purpose and is in the treasury or in the process of collection to the credit of an appropriate fund free from any previous encumbrance.

_____

Eric C. Ferry
Fiscal Officer

Purchase Order No.: _____

APPROVED AS TO FORM:

_____

Joseph J. Braun
Law Director

GEOTECHNOLOGY INC
FROM THE GROUND UP

GEOTECHNICAL EXPLORATION
PROPOSED SR-28 MIXED-USE DEVELOPMENT
MILFORD, OHIO

Prepared for:

LORVEN MILFORD, LLC
DAYTON, OHIO

Prepared by:

GEOTECHNOLOGY, INC.
ERLANGER, KENTUCKY

Date:

MARCH 25, 2019

Geotechnology Project No.:

J034114.01

SAFETY
QUALITY
INTEGRITY
PARTNERSHIP
OPPORTUNITY
RESPONSIVENESS

GEOTECHNOLOGY INC
FROM THE GROUND UP

March 25, 2019

Mr. Harry Rao
Lorven Milford, LLC
7106 Corporate Way
Dayton, Ohio 45459

Re: Geotechnical Exploration
Proposed SR-28 Mixed-Use Development
Milford, Ohio
Geotechnology Project No. J034114.01

Dear Mr. Rao:

Presented in this report are the results of our geotechnical exploration completed for the Proposed SR-28 Mixed-Use Development in Milford, Ohio. Our services were performed in general accordance with our Proposal P034114.01, which was dated March 5, 2019, and signed for authorization on March 5, 2019.

We appreciate the opportunity to provide the geotechnical services for this project. If you have any questions regarding this report, or if we may be of any additional service to you, please do not hesitate to contact us.

Respectfully submitted,
GEOTECHNOLOGY, INC.

Akshat Saxena, EI
Project Engineer

STATE OF OHIO
DANIEL A. FURGASON
E-52266
REGISTERED
PROFESSIONAL ENGINEER

Daniel A. Furgason, PE
Geotechnical Manager

AKS/DAF:aks/tmk

Copies submitted: Lorven Milford, LLC (email)

TABLE OF CONTENTS

GEOTECHNOLOGY INC
FROM THE GROUND UP

GEOTECHNICAL EXPLORATION
PROPOSED SR-28 MIXED-USE DEVELOPMENT
MILFORD, OHIO
March 25, 2019 | Geotechnology Project No. J034114.01

1.0 INTRODUCTION

Geotechnology, Inc. (Geotechnology) prepared this geotechnical exploration report for Lorven Milford, LLC (Lorven) for the Proposed SR-28 Mixed-Use Development in Milford, Ohio. Our services were performed in general accordance with our Proposal P034114.01, which was dated March 5, 2019, and signed for authorization on March 5, 2019.

The purposes of the geotechnical exploration were: to evaluate the general subsurface profile at the site and the engineering properties of the soils; and to develop recommendations for the geotechnical aspects of the design and construction of the project, as defined in our proposal. Our scope of services included a site reconnaissance, geotechnical borings, laboratory testing, engineering analyses, and preparation of this report.

2.0 PROJECT INFORMATION

The following project information was derived from:

- The Preliminary Site Plan prepared by DLZ dated December 17, 2018;
- Alta Survey and Plat of Survey prepared by Berding Surveying dated February 15, 2019; and,
- Correspondence with Mr. David F. Betz, NAI Bergman

The project involves mixed-used development of a 21-acre site located off the south side of State Route (SR) 28 and east of Woodspoint Lane in Milford, Ohio. Initially, a single-story ALDI building and a single-story shopping center/retail building measuring approximately 21,725 square-feet (SF) and 11,900 sf in plan, respectively, have been proposed; accompanying parking lots have also been planned for both the buildings.

In the future, two 13,360 SF apartment buildings and a 32,800 SF nursing home have also been proposed in the southern portion of the parcel and south of the shopping center. The nursing home will be south of the apartment buildings, south of an existing creek.

A site grading plan was unavailable at the time of this report. Foundation loads were also not available, however it is assumed that column and wall loads will be less than 75 kips and 6 kips per linear foot (klf), respectively.

3.0 SITE CONDITIONS

The site location and topography area are shown on the Boring Plan included in Appendix B. The site generally has a rolling topography with streams located on the west side of the site and across the site from between the multi-family section and the nursing home. Previous slides and signs of slope instability were observed along the stream/drainage area between the multi-family and nursing home sections of the site. The overall site is generally wooded with a few open areas, generally in the vicinity of existing residences.

Based on the existing topography on the site, as shown on the preliminary site plan prepared by DLZ, the existing grade at the location of the Aldi's building varies from about El. 834 to El. 856. The existing grade at the single-story shopping center building ranges from El. 854 to El. 862. Grade changes at the multifamily apartment buildings vary by 20 feet at the south building and 12 feet at the west building and the grade varies from El. 846 to El. 866 across the nursing home building footprint. The higher elevations occur on ridgetops that enter the site from the east and the lower areas are between the ridgetops and along the west side of the property. Based on the grade changes across the building footprints, 10 to 15 feet of cut and fill may be required across the buildings and pavement areas.

4.0 SUBSURFACE EXPLORATION

The subsurface exploration consisted of twenty-one borings (numbered 1 through 21). The boring locations were selected and staked by Geotechnology. The locations of the borings are shown on our Boring Plan, which is included in Appendix B. Elevations shown on the boring logs were estimated from the site topography provided on the DLZ Preliminary Site Plan. The elevations shown could vary by a few feet. The boring locations should be surveyed to provide accurate elevations to the top of bedrock and elevations for weak soils and suitable bearing material at the borings.

The borings were drilled between March 13 and March 20, 2019, with a track-mounted drill rig advancing hollow-stem augers, as indicated on the boring logs presented in Appendix C. Sampling of the overburden soils and bedrock was accomplished ahead of the augers at the depths indicated on the boring logs, with 2-inch-outside-diameter (O.D.) split-spoons in general accordance with the procedures outlined by ASTM D1586. Standard Penetration Tests (SPTs) were performed with the split-spoon sampler to obtain the standard penetration resistance or N-value[1] of the sampled material.

[1] The standard penetration resistance, or N-value, is defined as the number of blows required to drive the split-spoon sampler 12 inches with a 140-pound hammer falling 30 inches. Since the split spoon sampler is driven 18 inches or until refusal, the blows for the first 6 inches are for seating the sampler, and the number of blows for the final 12 inches is the N-value. Additionally, "refusal" of the split-spoon sampler occurs when the sampler is driven less than 6 inches with 50 blows of the hammer.

Observations for groundwater were made in the borings during drilling, at the completion of drilling, and before backfilling the boring holes.

As each boring was advanced, the Drilling Foreman kept a field log of the subsurface profile noting the soil types and stratifications, groundwater, SPT results, and other pertinent data.

Representative portions of the split-spoon samples were placed in glass jars with lids to preserve the in-situ moisture contents of the samples. The glass jars were marked and labeled in the field for identification when returned to our laboratory.

5.0 LABORATORY REVIEW AND TESTING

Upon completion of the fieldwork, the samples recovered from the borings were transported to our Soil Mechanics Laboratory, where they were visually reviewed and classified by the Project Geotechnical Engineer.

The boring logs, which are included in Appendix C, were prepared by the Project Geotechnical Engineer on the basis of the field logs and the visual classification of the soil samples in the laboratory. Soil Classification Sheets are also included in Appendix C, which describe the terms and symbols used on the boring logs. The dashed lines on the boring logs indicate an approximate change in strata as estimated between samples, whereas a solid line indicates that the change in strata occurred within a sample where a more precise measurement could be made. Furthermore, the transition between strata can be abrupt or gradual.

6.0 SUBSURFACE CONDITIONS

6.1 Stratification

Generally, the soils below the topsoil included a shallow medium stiff lean clay at some locations (typically to 2.5 feet or less) and otherwise stiff to hard lean clay to the depth of the borings or to bedrock, where encountered. Weak sediment soils were present at to a depth of 9.5 feet in one boring performed in a swale at the edge of the Aldi building and existing fill was present in a boring in a swale west of the shopping center building. More specific descriptions of the subsurface strata are provided below, and the boring logs containing detailed material descriptions are located in Appendix C.

6.1.1 Topsoil

Topsoil was encountered at the ground surface in ten of the borings with depths ranging from 2 to 9 inches. Topsoil was removed during the clearing process at a few of the borings.

6.1.2 Fill

Existing fill was encountered at Boring 8 to a depth of 7.0 feet. Fill was not encountered at the other boring locations.

6.1.3 Sediment

Weak low density medium stiff lean clay sediment containing roots was present in Boring 6 to a depth of 9.5 feet.

6.1.4 Native Soils

The native soils generally consisted of lean clay. The shallow lean clay was alluvial or loess in origin and was generally medium stiff to stiff. The deeper natural soils were predominantly of glacial origin (classified as glacial till), and consisted of stiff to hard lean clay with significant percentages of silt, sand, and gravel. Residual soil, which is typically encountered just above the parent bedrock, was present at depths of 2.0 to 5.0 feet at Borings 3, 4 and 5 and at a depth of 10 feet at Boring 6 and consisted of layered clay and limestone. High plasticity (fat) clay was encountered at Boring 6 at a depth of 10.0 feet and Boring 10 at a depth of 14.5 feet.

6.1.5 Bedrock

The bedrock at the site is According to United States Geological Survey (USGS) Geologic Mapping is shale and limestone bedrock of the Ordovician age. Interbedded shale and limestone was encountered in Borings 2 through 6, and Boring 10 at depths of 7.5 to 17.0 feet.

6.2 Groundwater Conditions

As mentioned in Section 4.0, groundwater observations were made in the borings during drilling, at the completion of drilling, and before backfilling the boring holes. Groundwater was not encountered at the majority of the borings. Water seepage was noted in Borings 6, 7, 16 at a depth of 17.5 feet in each boring. At completion of drilling, measurable water was only encountered in Boring 6 at a depth of 3.8 feet.

Based on the groundwater observations and our local experience, groundwater seepage is anticipated, along the fill/native soil interface, along the overburden soil/bedrock interface, along limestone layers within the bedrock, and in the saturated zones of fill or native soils that are within the perched groundwater zones, or that are below the groundwater table. Locally concentrated flow may occur due to saturated layers of fill or native soils or along fractures in the bedrock. Additionally, groundwater levels and seepage amounts are expected to vary with time, location, season of the year, and amounts of precipitation.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our reconnaissance of the site, the borings, the visual examination of the recovered samples, the laboratory test results, our understanding of the proposed project, our engineering analyses, and our experience as Consulting Soil and Foundation Engineers in the Greater Cincinnati Area, we have reached the following conclusions and make the following recommendations of this report.

7.1 Subsurface Conditions

As discussed in Section 3.0, the project site is rolling with swales and ridges and grade changes as much as 20 to 22 feet across the various buildings. The ground surface or pavement in the

project area is underlain by generally stiff to hard cohesive soils with low density weak soils present to shallow depths in a few areas and low density weak soils present deeper in swale areas. Refer to Section 6.1 and the boring logs in Appendix C for additional information on the subsurface strata. Significant groundwater was not encountered and is not anticipated to be a problem unless excavations are deep or excavations are performed in the low swale areas.

7.2 Excavation Support

Excavation support should be the responsibility of the Contractor. Excavation support should be designed and implemented such that excavations are adequately ventilated and braced, shored, and/or sloped in order to protect and ensure the safety of workers within and near the excavations and to protect adjacent ground, slopes, structures, and infrastructure. Federal, state, and local safety regulations should be satisfied. The analyses, discussions, conclusions, and recommendations throughout this report are not to be interpreted as pre-engineering compliance with any safety regulations.

7.3 Site Preparation and Earthwork

As stated in Section 2.0, earthwork for this project may involve cuts and fills of 10 to 15 feet. Grading information was not available at the time of preparation of this report. Once grading information is available, Geotechnology should be given the opportunity to review the grading plan and modify our recommendations, as needed. Depending on the final grading and the depth of the fill placement, it may be necessary to place settlement monuments in deep fill areas to determine when substantial settlement of new fill and underlying soil is complete and construction of the structure(s) may proceed.

The initial preparation of the site for grading should include the removal of vegetation, heavy root systems, and topsoil from the proposed cut, fill, pavement, and structure areas. The topsoil may be stockpiled for future use on the completed cut and fill slopes or in landscaped areas, if permitted by specification, whereas the vegetation, including the heavy root systems, should be disposed of off site in accordance with applicable regulations.

Any existing structures and pavements within the grading and proposed structure limits should be demolished, and the foundations removed. Concrete, asphalt, rubble, and debris associated with those structures and pavements should be disposed of off site. Pavements outside of the footprints of the proposed structures may temporarily be left in place prior to removal and/or replacement to provide a stable base for construction equipment.

Following clearing the site of the existing vegetation and topsoil, we recommend that undocumented fill, swale area sediments and surficial low-density very soft to medium stiff soils that exist within the building, pavement, and proposed fill areas be undercut to expose stiff to very stiff native clayey soils.

After the above operations and making the required excavations in the cut areas, the exposed subgrade should be thoroughly proofrolled using a heavily loaded piece of equipment under the review of the Project Geotechnical Engineer, or a representative thereof. Soft or yielding soils

observed during the proofrolling should be undercut to stiff non-yielding cohesive soils; the depth of undercut below proposed subgrade may be limited to 4 feet in pavement areas.

Where undercuts are performed, the excavations should be backfilled with new compacted fill satisfying the material and compaction requirements presented in this section. The undercut soils may be reused provided that they conform to the recommendations contained in this report regarding acceptable fill materials. We recommend that the Contract Documents include a bid item for the recommended undercutting, as deemed necessary, and their replacement with new compacted and tested fill on a "per cubic yard of in-place compacted fill" basis. Experience indicates that the overburden soils can be excavated with conventional earthwork construction equipment (i.e., dozers, hoes, loaders, scrapers, etc.).

Fill materials should consist of approved on-site, non-organic, clayey soils, or approved borrow material that are relatively free of topsoil, vegetation, trash, construction or demolition debris, frozen materials, particles over 6 inches in maximum dimension, or other deleterious materials.

The shale and limestone bedrock may be incorporated into the fill provided that the shale is pulverized to a soil-like consistency and moisture-conditioned, and provided that the limestone is broken up and dispersed so as not to cause nesting or retard compaction. The maximum dimension of the broken-up limestone floaters in the fills should be limited to 18 inches with a maximum thickness of 6 inches; thicker layers or larger pieces of limestone, if not capable of being broken up, should be wasted off site. Additionally, limestone floaters should be restricted from the fill from subgrade elevation to 2 feet below bearing elevations within the footprints of the proposed structures and 10-foot buffer areas around these structures. In pavement areas, we recommend that the limestone floaters be restricted from the fill within 1 foot of subgrade elevations.

The fill should be placed in shallow level lifts (or layers), 6 to 8 inches in loose thickness. Each lift should be moisture-conditioned to within the acceptable moisture content range provided in Table 1, and compacted with a sheepsfoot roller or self-propelled compactor to at least the minimum percent compaction indicated in the same table. Moisture-conditioning may include: aeration and drying of wetter soils; wetting drier soils; and/or thoroughly mixing wetter and drier soils into a uniform mixture. Additionally, if shale is used in the fill, water will likely need to be mixed in with the shale to moisture-condition the shale.

Table 1. Percent compaction and moisture-conditioning requirements for fill and backfill.

Area	Minimum Percent Compaction[a,b]	Acceptable Moisture Content Range[c]
Structural [d]	98% of SPMDD	-2% to +3% of OMC
Non-structural	95% of SPMDD	±3% of OMC
Floor slab subgrade	98% of SPMDD	0% to +3% of OMC
Pavement subgrade ≤ 12 inches below subgrade	100% of SPMDD	0% to +2% of OMC

[a] SPMDD = standard Proctor maximum dry density determined from ASTM D698.
[b] For granular soils that do not exhibit a well-defined moisture-density relationship, refer to Table 2 for minimum relative density requirements.
[c] OMC = optimum moisture content determined from ASTM D698.
[d] Structural fill and backfill for foundations are defined as fill and backfill located within the zones of influence of structures. The zone of influence of a structure is defined as the area below the footprint of the structure and 2H:1V outward and downward projections from the bearing elevation of the structure.

Where fill is placed on sloping terrain that is steeper than 6H:1V, the fill should be placed on continuous horizontal benches up the sloping terrain with the initial bench having a minimum width of 15 feet and all subsequent benches being at least 5 feet wide. The initial 15-foot wide bench should be located at the toe of the proposed fill, unless noted otherwise. The benching operations should remove surficial medium stiff or softer soils and expose stiff native soils on the surfaces of the benches. The benches should not be made until the fill is ready to be placed. If groundwater seepage is noted on the benches, the Project Geotechnical Engineer should be contacted for underdrainage recommendations before the soils are replaced and compacted. Instability was noted on the sides of the slopes north of the nursing home building area. Benching of the slope should remove any slide mass if a drive is to be located in a section where the slope has moved.

We recommend that the permanent cut and fill slopes for this project be designed not steeper than 3H:1V. Gentler slopes should be used whenever possible for ease of maintenance. Additionally, we recommend that the fill slopes be slightly overbuilt and then trimmed back to the design slope to achieve a well-compacted surface. Silt and/or sand soils should also be excluded from the surficial 5 feet of the fill slopes, as these materials are more susceptible to erosion.

Topsoil should be track-compacted on the proposed cut and fill slopes. We recommend that a maximum of 6 inches of topsoil be placed on the slopes. It should be noted that bedrock exposures at proposed grades may not consistently hold the topsoil layer, and small pop-outs may occur, especially at points of seepage.

Groundwater is not expected to have a significant adverse effect on the proposed earthwork construction; however, the Contractor must be prepared to remove seepage that accumulates in excavations, on fill surfaces, or at subgrade levels.

Maintaining the moisture content of bearing and subgrade soils within the acceptable range provided in Table 1 is very important during and after construction for the proposed structures.

The clayey bearing and subgrade soils should not be allowed to become excessively wet or dried during or after construction, and measures should be taken to prevent water from ponding on these soils and to prevent these soils from desiccating during dry weather.

Positive drainage should be established around the proposed structures to promote the rapid drainage of surface water away from these structures and to prevent the ponding of water adjacent to these structures. Finish grading in grass and landscaped areas should be sloped down and away from the structures at 10 percent for at least 10 feet, and then at a gradient of at least 2 percent beyond the initial 10 feet from the structures. Proposed pavements should drain away from the structures at a minimum of 2 percent. The final grades should direct the surface water to storm water collection systems.

Deep-rooted vegetation should not be planted within 1.5 times their projected mature foliage radius from foundations, as the roots of such vegetation can extract moisture from plastic and low-plastic soils alike, causing them to shrink, which can potentially create foundation settlement issues. Additionally, smaller bushes or flowerbeds adjacent to proposed structures should not be watered by ponding water in the beds where the bushes or flowers may be growing, which could lead to swelling of the foundation soils and heave.

We recommend that the earthwork operations be carried out during the drier season of the year and that a sufficient gradient be maintained at the ground surface to prevent ponding of surface water. In our experience, the weather conditions are historically more favorable for earthwork during the months of May through October in the Greater Cincinnati Area. Regardless of the time of year, asphalt, concrete, or fill should not be placed over frozen or saturated soils, and frozen or saturated soils should not be used as compacted fill or backfill.

Best management practices (BMPs) should be implemented to reduce the effects of erosion and the siltation of adjacent properties. Upon completion of earthwork, disturbed areas should be stabilized. It is also recommended that riprap and/or suitable armoring be used at the outlets of storm sewers and headwalls to reduce flow velocities and protect against erosion.

7.4 Seismic Site Classification

Based on the subsurface conditions encountered, for preliminary design, a Site Class D should be assumed. Once final grades are determined at a specific building, the site class can be re-evaluated.

7.5 Foundation Design and Construction

We recommend that the proposed Aldi building and shopping center be supported on shallow foundations, i.e., continuous wall footings and isolated column pads, bearing in stiff to very stiff native soils or new compacted and tested fill (placed after removal of existing fill, low density sediment and low density surficial soils). The footings may be proportioned for a maximum net allowable bearing pressure of 3,000 pounds per square foot (psf), full dead and full live load. We recommend that the minimum lateral dimensions for continuous wall footings and isolated column footings be at least 18 and 24 inches, respectively. An allowable bearing pressure of 3,000 pounds

per square foot can be used for the multi-family and nursing home buildings as well, provided the column and wall loads are as stated in section 2.0 of this report.

Exterior footings and footings in unheated interior areas should bear at least 30 inches below the lowest adjacent exterior/unheated grade for protection from frost penetration. Additionally, the foundation bearing elevations should not be located higher than a relationship of 2H:1V above proposed adjacent foundations or the inverts of nearby existing or proposed utilities that parallel or nearly parallel the foundations, without a site-specific evaluation of the conditions by the Project Geotechnical Engineer.

We recommend that foundation excavations be cut to neat lines and grades so that concrete may be placed directly against the banks of the excavations without forming. Loose, soft, wet, frozen, or otherwise disturbed materials should be removed from the bearing surfaces of the foundations prior to the placement of reinforcing steel and concrete. If a crusted or saturated surface develops at the bearing surface for a foundation, we recommend that it be skimmed to expose a fresh surface before reinforcing steel and concrete are placed. Foundation concrete should be placed the same day as the excavation is made to prevent saturation or desiccation of the bearing surfaces.

Concrete mud mats may be placed over the bearing surfaces to protect the bearing materials from desiccation or softening via saturation. If concrete mud mats are utilized, the concrete should have a minimum compressive strength of 1,500 psi, and a minimum thickness of 3 inches. The excavated bearing surface should be lowered at least the thickness of the mud mat, and the top of the mud mat should be at or below the design bearing elevation of the foundation. Prior to the placement of the concrete mud mat, the bearing surfaces should be cleaned of loose, soft, wet, frozen, or otherwise disturbed material.

Water should not be allowed to pond on top of either bearing soils or bedrock within footing excavations, or on or around completed footings, in order to reduce potential softening or swelling of the bearing materials.

We recommend that foundation steps have a maximum height of 2 feet and a corresponding minimum length of 4 feet. Reinforcing steel and concrete should remain continuous through the foundation steps.

We recommend that foundation excavations be reviewed by the Project Geotechnical Engineer, or a representative thereof, prior to placing concrete in order to confirm that the bearing materials and surfaces are consistent with the design recommendations of this report.

7.6 Utility Construction

Excavation difficulty in utility trenches will vary with location, depth of utility, and depth of cuts made to development grades on the ridgetops and slopes.

We anticipate that select granular backfill will be used as pipe bedding and pipe zone backfill for the utilities. We recommend that the granular backfill be limited to the pipe bedding and minimum required pipe/utility cover. The remainder of the utility trenches should be backfilled with flowable fill or compacted clayey soils up to design subgrade elevation to reduce the potential for water collecting in these trenches and being absorbed by the surrounding clays or shale, causing heave of foundations, slabs, pavement, etc.

Granular bedding and backfill that exhibits a well-defined moisture-density relationship should be compacted and moisture-conditioned per the requirements presented in Table 1; otherwise, the granular material should be compacted to at least the minimum relative densities indicated in Table 2.

Table 2. Relative density compaction requirements for granular fill and backfill.

Area	Minimum Relative Density[a,b]
Structural ≤ 20 feet below proposed grades[c]	80%
Structural > 20 feet below proposed grades[c]	85%
Non-structural	75%
Floor slab and pavement subbase	80%

[a] Relative density evaluated on the basis of the maximum and minimum index densities determined from ASTM D4253 and D4254, respectively.
[b] For granular soils that exhibit a well-defined moisture-density relationship, refer to Table 1 on page 7 for minimum percent compaction and moisture-conditioning requirements.
[c] Structural fill and backfill for foundations are defined as fill and backfill located within the zones of influence of structures. The zone of influence of a structure is defined as the area below the footprint of the structure and 2H:1V outward and downward projections from the bearing elevation of the structure.

Utility trench backfill should be placed in 6- to 8-inch thick lifts with each lift compacted to at least the specified degree of compaction. Under no circumstances should the backfill be flushed in an attempt to obtain compaction.

If flowable fill is used, it should have a design strength of at least 30 psi for stability and not greater than 100 psi for future excavatability.

7.7 Floor Slab

We anticipate that the floor slabs for the buildings will be designed as slab-on-grade concrete. The concrete floor slab thicknesses should be designed based on the native or compacted and tested, stiff soils at this site providing a modulus of subgrade reaction (k) of 100 pounds per cubic inch (pci).

We recommend that the floor slab be underlain by a minimum 4-inch-thick subbase layer of dense-graded aggregate (DGA) or No. 57 coarse aggregate to serve as a capillary break and reduce the potential for groundwater rising beneath and into the floor slab from the clayey subgrade via capillary action. For fork lift loading or heavy loads on the floor slab, we recommend

a dense-graded aggregate (DGA) be used. The subbase should be compacted per the requirements presented in Table 1. Immediately prior to placement of the granular base, we recommend that the top 8 inches of clayey floor slab subgrade be compacted and moisture-conditioned per the requirements presented in Table 1.

Additionally, we recommend that a vapor retarder/barrier be provided between the floor slab and the subbase where moisture-sensitive floor coverings will be applied to the floors, where moisture-sensitive products/packaging will be stored in direct contact with the floors, and where the humidity of the enclosed space is a concern.

Care should be taken during slab-on-grade construction to not allow the subgrade to become desiccated or saturated. Additionally, consideration should be given to the timing of construction relative to the time of year and weather. If the slab construction is performed during relatively cold and wet weather, the use of lime- or cement-treatment of the subgrade may be beneficial to maintain progress during construction; otherwise, the subgrade is likely to be weakened by softening from saturation by rain and/or snow, leading to delays in reworking the subgrade to prepare it back to its pre-softened condition. A cost-benefit analysis may need to be performed to evaluate the need for lime- or cement-treatment.

It is recommended that control joints be provided within the concrete slab-on-grade floors. These joints should be sealed to reduce surface water infiltration until the building is enclosed. The floor slab should be structurally separated from walls, columns, footings, and penetrations to allow independent movement of the floor. Alternatively, floor slabs that are not structurally independent should be designed to allow for differential movements that normally occur between the floor slabs, columns, and foundation walls.

7.8 Pavement Design and Construction

Pavements for this project should be designed in accordance with expected axle loads, frequency of loading, and the properties of the subgrade. The subgrade properties should be evaluated by field California Bearing Ratio (CBR) or plate load tests after final grading is completed, or by the correlation of field density tests to laboratory CBR tests. For preliminary design purposes, a CBR equal to 3.0 may be used.

Proposed pavement subgrades should be proofrolled with a heavily loaded piece of equipment under the review of the Project Geotechnical Engineer, or representative thereof. Soft or yielding soils observed during the proofroll should be undercut to stiff, non-yielding soils; however, the depth of undercut below subgrade may be limited to 3 feet in light-duty traffic areas and 4 feet in heavy-duty traffic areas. The undercut should be backfilled with new compacted fill satisfying the material and compaction requirements presented in Section 7.3. We recommend that the Contract Documents include an item for undercutting unsuitable soils and replacing them with new compacted and tested fill on a "per cubic yard of compacted replacement fill" basis.

If soft or yielding soils are encountered at the maximum undercut depths specified above (i.e., 3 feet for light-duty traffic and 4 feet for heavy-duty traffic) and the compaction requirements of the

undercut backfill cannot be achieved at the bottom of the undercut, the subgrade may be stabilized at those depths using a biaxial or triaxial geogrid (e.g., Tensar BX-1200 or TriAx TX160 or equivalent) and an 8-inch lift of compacted crushed stone. The remainder of the undercut should be backfilled with dense-graded aggregate or clayey soils satisfying the material and compaction requirements presented in Section 7.3. If clayey soils are used, a separation geotextile should be provided at the interface between the crushed stone and the clayey soils.

In lieu of undercutting soft or yielding soils to the maximum undercut depths specified above (i.e., 3 feet for light-duty traffic and 4 feet for heavy-duty traffic), the subgrade may be stabilized using a biaxial or triaxial geogrid (e.g., Tensar BX-1200 or TriAx TX160 or equivalent) and at least 12 inches of compacted crushed stone. We recommend that the thickness of undercut and compacted crushed stone be field-evaluated based on the conditions encountered during construction and using a test section.

Prior to the placement of pavement or aggregate base, where provided, we recommend that the top 12 inches of clayey subgrade be scarified and recompacted per the requirements presented in Table 1.

If the proposed pavement section includes an aggregate base, we recommend that caution be exercised so that the proposed aggregate base does not become saturated during or after construction. Water trapped in the aggregate base is capable of freezing, causing it to expand within the voids it occupies. Consequently, ice lenses may form and potentially heave the pavement. Furthermore, the thawing process can soften underlying cohesive subgrades, which reduces the pavement support provided by the subgrade, giving rise to "pumping" of the pavements under loads.

Surface drainage should be directed away from the edges of proposed or existing pavements so that water does not pond next to pavements or flow onto pavements from unpaved areas. Such ponding or flow can cause deterioration of pavement subgrades and premature failure of pavements. If drainage ditches are used to intercept surface water before it reaches the pavements, the ditches should have an invert at least 6 inches below the pavement subgrade, and have a sufficient longitudinal gradient to rapidly drain the ditches and prevent ponding of water. In those areas where exterior grades do not fully slope away from the edges of the proposed pavement, we recommend that edge drains be installed along the perimeter of the pavement.

Regarding the pavements adjacent to loading docks, we recommend that the pavement be designed as a concrete slab to support the heavy prolonged loads of loaded and parked tractor-trailers.

If dumpsters are utilized at the project site, we recommend that the dumpster be supported on reinforced concrete slabs and that the slabs be sized to accommodate the loading wheels of the dumpster truck. The access lane to the dumpster should also be designed for the heavier wheel loads associated with dumpster trucks.

8.0 RECOMMENDED ADDITIONAL SERVICES

The conclusions and recommendations given in this report are based on: Geotechnology's understanding of the proposed design and construction, as outlined in this report; site observations; interpretation of the exploration data; and our experience. Since the intent of the design recommendations is best understood by Geotechnology, we recommend that Geotechnology be included in the final design and construction process, and be retained to review the project plans and specifications to confirm that the recommendations given in this report have been correctly implemented. We recommend that Geotechnology be retained to participate in prebid and preconstruction conferences to reduce the risk of misinterpretation of the conclusions and recommendations in this report relative to the proposed construction of the subject project.

Since actual subsurface conditions between boring locations may vary from those encountered in the borings, our design recommendations are subject to adjustment in the field based on the subsurface conditions encountered during construction. Therefore, we recommend that Geotechnology be retained to provide construction observation services as a continuation of the design process to confirm the recommendations in this report and to revise them accordingly to accommodate differing subsurface conditions. Construction observation is intended to enhance compliance with project plans and specifications. It is not insurance, nor does it constitute a warranty or guarantee of any type. Regardless of construction observation, contractors, suppliers, and others are solely responsible for the quality of their work and for adhering to plans and specifications.

9.0 LIMITATIONS

This report has been prepared on behalf of, and for the exclusive use of, the client for specific application to the named project as described herein. If this report is provided to other parties, it should be provided in its entirety with all supplementary information. In addition, the client should make it clear that the information is provided for factual data only, and not as a warranty of subsurface conditions presented in this report.

Geotechnology has attempted to conduct the services reported herein in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions. The recommendations and conclusions contained in this report are professional opinions. The report is not a bidding document and should not be used for that purpose.

Our scope for this phase of the project did not include any environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site. Any statements in this report or on the boring logs regarding odors noted or unusual or suspicious items or conditions observed are strictly for the information of our client. Our scope did not include an assessment of the effects of flooding and erosion of creeks or rivers adjacent to or on the project site.

The analyses, conclusions, and recommendations contained in this report are based on the data obtained from the subsurface exploration. The field exploration methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Consequently, subsurface conditions may vary gradually, abruptly, and/or nonlinearly between sample locations and/or intervals.

The conclusions or recommendations presented in this report should not be used without Geotechnology's review and assessment if the nature, design, or location of the facilities is changed, if there is a substantial lapse in time between the submittal of this report and the start of work at the site, or if there is a substantial interruption or delay during work at the site. If changes are contemplated or delays occur, Geotechnology must be allowed to review them to assess their impact on the findings, conclusions, and/or design recommendations given in this report. Geotechnology will not be responsible for any claims, damages, or liability associated with any other party's interpretations of the subsurface data or with reuse of the subsurface data or engineering analyses in this report.

The recommendations included in this report have been based in part on assumptions about variations in site stratigraphy that may be evaluated further during earthwork and foundation construction. Geotechnology should be retained to perform construction observation and continue its geotechnical engineering service using observational methods. Geotechnology cannot assume liability for the adequacy of its recommendations when they are used in the field without Geotechnology being retained to observe construction.

A copy of "Important Information about This Geotechnical-Engineering Report" that is published by the Geotechnical Business Council (GBC) of the Geoprofessional Business Association (GBA) is included in Appendix A for your review. The publication discusses some other limitations, as well as ways to manage risk associated with subsurface conditions.

APPENDIX A – IMPORTANT INFORMATION ABOUT THIS GEOTECHNICAL-ENGINEERING REPORT

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.

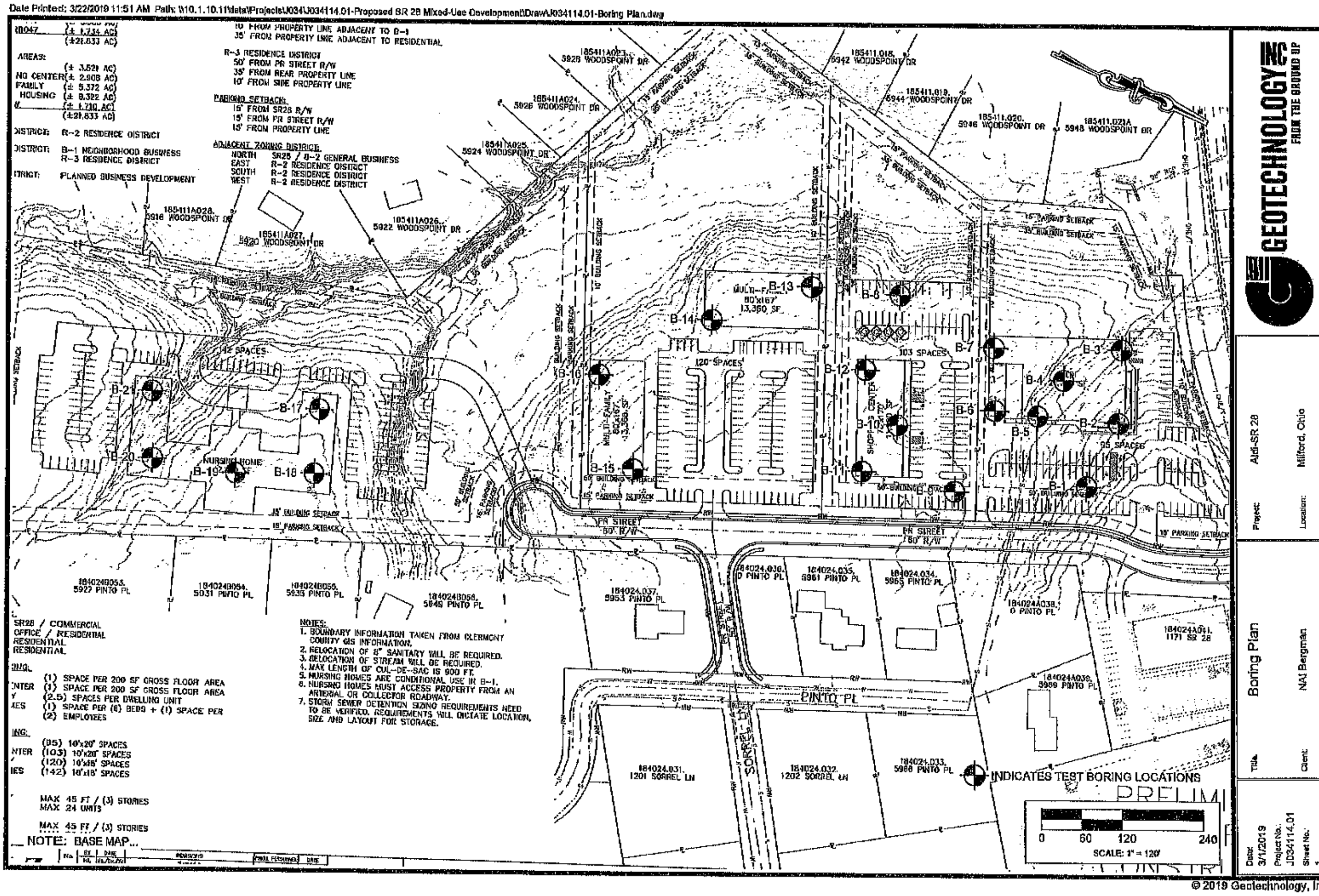
GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

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

APPENDIX B – PLAN

Boring Plan, Sheet No. 1

Date Printed: 3/22/2019 11:51 AM Path: \\10.1.10.11\data\Projects\J034\J034114.01-Proposed SR 28 Mixed-Use Development\Draw\J034114.01-Boring Plan.dwg



APPENDIX C – BORING INFORMATION

Boring Logs

Soil Classification Sheet

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 1
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
850.0	Ground Surface	0.0	0						
849.4	TOPSOIL (8 inches)	0.6							
	Brown moist stiff to very stiff LEAN CLAY with silt seams.			I	1	DS	3-3-3	18	100
				I	2	DS	4-4-4	18	100
			5	I	3	DS	6-6-5	18	100
841.0		9.0		I	4	DS	4-4-5	18	100
	Bottom of test boring at 9.0 feet.		10						
			15						
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 850.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 2
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
845.0	Ground Surface	0.0	0						
844.3	TOPSOIL (9 inches)	0.7							
843.0	Brown medium stiff LEAN CLAY, trace sand, trace oxide stains.	2.0		I	1	DS	1-2-3	18	100
	Brown and gray moist stiff to very stiff LEAN CLAY, trace sand, trace roots, trace oxide stains.			I	2	DS	3-3-3	14	78
			5	I	3	DS	2-4-5	18	100
				I	4	DS	4-4-5	18	100
			10	I	5	DS	7-9-14	18	100
833.0		12.0		I	6	DS	50/3"	3	100
	Interbedded olive brown moist extremely weak weathered SHALE and gray medium strong to very strong LIMESTONE (bedrock).								
830.5		14.5							
829.3	Interbedded gray moist very weak SHALE and gray medium strong to very strong LIMESTONE (bedrock).	15.7	15	I	7	DS	42-50/3"	9	100
	Bottom of test boring at 15.7 feet.								
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 845.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 3
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
836.0	Ground Surface	0.0	0						
835.3	TOPSOIL (9 inches)	0.7							
	Brown and gray moist stiff LEAN CLAY with silt seams.			I	1	DS	1-2-3	18	100
833.5		2.5							
	Gray moist stiff LEAN CLAY with silt seams.			I	2	DS	3-3-6	18	100
831.0		5.0	5						
	Brown moist very stiff to hard layered CLAY with limestone (residual).			I	3	DS	7-10-10	18	100
828.5		7.5							
	Interbedded brown weathered SHALE and gray strong LIMESTONE (bedrock).			I	4	DS	9-16-40	18	100
826.0		10.0							
825.7	Interbedded gray SHALE and gray strong LIMESTONE (bedrock).	10.3	10	I	5	DS	50/4"	4	100
	Bottom of test boring at 10.3 feet.		15						
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 836.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019
Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.
Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25
Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 4
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
839.0	Ground Surface	0.0	0						
838.7	TOPSOIL (4 inches)	0.3							
	Brown moist stiff to very stiff LEAN CLAY, trace oxide concretion, trace sand, trace roots, trace gravel.			I	1	DS	2-3-2	18	100
835.0		4.0		I	2	DS	2-2-4	18	100
	Olive brown moist very stiff LEAN CLAY, trace oxide concretion, with bedding planes, little limestone fragments (residual).		5	I	3	DS	3-5-6	18	100
829.5		9.5		I	4	DS	6-9-11	18	100
	Interbedded moist extremely weak SHALE and gray medium strong to very strong LIMESTONE (bedrock).		10	I	5	DS	30-50/3"	9	100
				I	6	DS	50/0"	2	
822.4		16.6	15						
	Bottom of test boring at 16.6 feet.		20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 839.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 5
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
844.0	Ground Surface	0.0	0						
843.7	TOPSOIL (2 inches)	0.3							
	Brown moist medium stiff LEAN CLAY, trace oxide concretions, trace roots.			I	1	DS	2-2-3	18	100
842.0		2.0							
	Brown and gray moist very stiff LEAN CLAY, trace oxide concretion, trace roots, little bedding planes.			I	2	DS	2-2-3	13	72
			5	I	3	DS	4-6-6	17	94
				I	4	DS	3-4-6	18	100
834.5		9.5							
	Interbedded brown moist extremely weak highly weathered SHALE and gray medium strong to very strong LIMESTONE (bedrock).		10	I	5	DS	40-26-50/4"	16	100
833.0		11.0							
	Interbedded gray moist very weak SHALE and gray medium strong to very strong LIMESTONE (bedrock).			I	6	DS	50/2"	2	100
831.4		12.6							
	Bottom of test boring at 12.6 feet.		15						
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 844.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 6
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6"	Recovery	
							Rock Core RQD (%)	(in.)	(%)
851.0	Ground Surface	0.0	0						
850.8	TOPSOIL (3 inches)	0.2		I	1	DS	2-3-3	18	100
	Brown moist medium stiff LEAN CLAY, little sand and gravel, trace roots, trace cinders (sediment).			I	2	DS	2-2-2	18	100
			5	I	3	DS	2-2-4	18	100
				I	4	DS	2-2-2	4	22
841.5		9.5							
841.0	Brown moist stiff LEAN CLAY, trace sand.	10.0	10						
	Brown and gray moist very stiff FAT CLAY, trace sand, trace oxide concretions, trace roots, trace bedding planes with shale fragments (residual).			I	5	DS	4-4-6	18	100
				I	6	DS	4-6-8	18	100
			15	I	7	DS	8-14-17	18	100
834.0		17.0							
	Interbedded olive brown moist extremely weak unweathered SHALE and gray medium strong to very strong LIMESTONE (bedrock).			I	8	DS	16-14-20	12	67
			20						
829.7		21.3		I	9	DS	25-15-50/4"	16	100
	Bottom of test boring at 21.3 feet.								
			25						
			30						

Datum: NAVD 88
Surface Elevation: 851.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted 17.5 ft.
At Completion 3.8 ft.
After --
Backfilled --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 7
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" Rock Core RQD (%)	Recovery (in.)	Recovery (%)
856.0	Ground Surface	0.0	0						
855.6	TOPSOIL (5 inches)	0.4							
	Brown moist stiff LEAN CLAY, trace sand, trace oxide stains.			I	1	DS	3-3-2	18	100
852.0		4.0		I	2	DS	3-2-3	8	44
	Brown moist very stiff LEAN CLAY, with sand and gravel, some limestone fragments (glacial).		5	I	3	DS	5-7-9	16	89
				I	4	DS	5-8-9	18	100
			10	I	5	DS	5-7-8	18	100
				I	6	DS	3-3-7	3	17
			15	I	7	DS	3-7-10	18	100
839.0		17.0							
	Brownish-gray moist very stiff LEAN CLAY, with sand and gravel.			I	8	DS	5-10-12	18	100
836.5		19.5							
	Gray moist very stiff FAT CLAY, with sand.		20	I	9	DS	5-6-9	18	100
834.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 856.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019
Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.
Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25
Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted 17.5 ft.
At Completion Dry
After --
Backfilled --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 8
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
848.0	Ground Surface	0.0	0						
846.0	Mixed dark brown moist soft to medium stiff FILL, lean clay, little sand and gravel, trace roots, trace rock fragments, little limestone.	2.0		I	1	DS	2-3-4	12	67
	Mixed brown and gray moist stiff to very stiff FILL, lean clay, some sand, trace gravel, trace roots.			I	2	DS	2-4-6	18	100
			5	I	3	DS	9-13-14	18	100
841.0		7.0							
	Gray moist stiff to very stiff LEAN CLAY, trace sand.			I	4	DS	7-9-11		
839.5		8.5							
	Bottom of test boring at 8.5 feet.		10						
			15						
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 848.0 ft.
Date Started: 3/13/2019
Date Completed: 3/13/2019
Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.
Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25
Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA= Hollow Stem Augers
CFA= Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D= Disintegrated
I = Intact
U= Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 9
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
860.0	Ground Surface	0.0	0						
859.4	TOPSOIL (8 inches)	0.6							
	Brown moist medium stiff LEAN CLAY, some silt, some sand, little gravel.			I	1	DS	2-2-3	18	100
857.5		2.5							
	Brown moist stiff to very stiff LEAN CLAY, some silt, some sand (glacial).			I	2	DS	2-3-11	16	89
	Rock fragments at 5.0 feet.		5						
853.5		6.5		I	3	DS	5-9-7	18	100
	Bottom of test boring at 6.5 feet.		10						
			15						
			20						
			25						
			30						

Datum: NAVD 88
Surface Elevation: 860.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 10
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (In.)	Recovery (%)
858.0	Ground Surface	0.0	0						
	Dark brown moist medium stiff LEAN CLAY, some gravel, trace roots with topsoil.			I	1	DS	2-2-2	18	100
856.0		2.0							
	Brown and gray moist very stiff LEAN CLAY with sand and gravel (glacial).			I	2	DS	7-9-13	15	83
			5	I	3	DS	7-10-15	18	100
				I	4	DS	16-20-17	18	100
			10	I	5	DS	11-12-16	18	100
846.0		12.0							
	Gray moist very stiff LEAN CLAY, with sand and gravel.			I	6	DS	4-10-14	18	100
843.5		14.5							
	Brownish-gray moist very stiff FAT CLAY, little sand and gravel.		15	I	7	DS	5-8-10	18	100
841.0		17.0							
	Interbedded brown moist extremely weak highly weathered SHALE and gray medium strong to very strong LIMESTONE (bedrock).			I	8	DS	6-8-13	18	100
			20	I	9	DS	11-39-25	18	100
836.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 858.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019
Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.
Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25
Drill Rig: CME-55 TD-5
Foreman: N. Hudson/J.Gilbert
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 11
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
862.0	Ground Surface	0.0	0						
	Brown and gray stiff to very stiff LEAN CLAY, trace sand, trace oxide concretions, trace roots, little gravel, trace limestone fragments.			I	1	DS	2-3-6	18	100
				I	2	DS	4-4-4	15	83
857.5		4.5	5						
	Brown and gray moist very stiff LEAN CLAY, with sand and gravel (glacial).			I	3	DS	5-6-12	15	83
				I	4	DS	7-10-14	18	100
			10	I	5	DS	12-15-19	18	100
				I	6	DS	11-15-15	15	83
			15	I	7	DS	9-17-21	15	83
				I	8	DS	9-12-16	18	100
			20	I	9	DS	5-7-8	18	100
840.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 862.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 12
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
860.0	Ground Surface	0.0	0						
859.2	TOPSOIL (9 inches)	0.8		I	1	DS	1-2-2	18	100
	Brown moist medium stiff LEAN CLAY with few roots.								
857.5		2.5		I	2	DS	4-6-7	18	100
	Brown moist stiff to very stiff LEAN CLAY, silt seams, some sand, little to some gravel.		5	I	3	DS	5-9-9	18	100
	Rock fragments and gravel at 7.5 feet becomes very stiff to hard.			I	4	DS	6-10-11	18	100
			10	I	5	DS	6-9-10	18	100
				I	6	DS	4-6-7	18	100
			15	I	7	DS	5-7-6	18	100
				I	8	DS	6-10-13	18	100
840.0		20.0	20						
	Gray moist very stiff CLAY with sand, gravel and rock fragments.			I	9	DS	5-11-9	10	56
838.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 860.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 13
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" Rock Core RQD (%)	Recovery (in.)	Recovery (%)
854.0	Ground Surface	0.0	0						
853.7	TOPSOIL (4 inches)	0.3		I	1	DS	1-2-2	18	100
	Brown moist stiff LEAN CLAY with roots.			L	2	DS	3-4-5	0	0
849.0		5.0	5	I	3	DS	9-14-13	18	100
	Brown moist to damp very stiff to hard LEAN CLAY with sand gravel and rock fragments (glacial).			I	4	DS	9-10-12	18	100
			10	I	5	DS	5-7-8	18	100
				I	6	DS	7-10-14	18	100
839.0		15.0	15	I	7	DS	5-7-9	18	100
	Gray moist very stiff LEAN CLAY with sand, gravel and rock fragments (glacial).			I	8	DS	6-8-9	11	61
			20	I	9	DS	6-8-11	18	100
832.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 854.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: ---
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 14
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
852.0	Ground Surface	0.0	0						
	Brown moist stiff LEAN CLAY with roots and silt SEAMS.			I	1	DS	1-2-2	10	56
849.5		2.5							
	Brown damp hard LEAN CLAY, some sand, some gravel (glacial).			I	2	DS	8-10-12	18	100
			5	I	3	DS	15-18-13	18	100
				I	4	DS	13-15-16	18	100
			10	I	5	DS	12-16-19	18	100
839.5		12.5							
	Gray damp to moist very stiff to hard clayey SILT with gravel, rock fragments and silt seams.			I	6	DS	22-11-10	18	100
			15	I	7	DS	23-19-23	10	56
				I	8	DS	6-8-11	18	100
			20	I	9	DS	12-12-14	18	100
830.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 852.0 ft.
Date Started: 3/20/2019
Date Completed: 3/20/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 15
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
862.0	Ground Surface	0.0	0						
	Brown moist stiff to very stiff LEAN CLAY, some sand, little gravel.			I	1	DS	3-4-6	18	100
				I	2	DS	4-5-5	12	67
857.5		4.5	5						
	Brown, some gray moist very stiff LEAN CLAY, with sand and gravel, some limestone fragments (glacial).			I	3	DS	10-13-16	15	83
				I	4	DS	10-14-14	18	100
			10	I	5	DS	10-16-18	18	100
				I	6	DS	9-13-17	18	100
			15	I	7	DS	7-17-18	18	100
845.0		17.0							
	Gray moist very stiff LEAN CLAY with sand and gravel.			I	8	DS	9-12-15	18	100
			20	I	9	DS	8-11-13	18	100
840.5		21.5							
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 862.0 ft.
Date Started: 3/19/2019
Date Completed: 3/19/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 16
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
848.0	Ground Surface	0.0	0						
	Brown moist stiff to very stiff LEAN CLAY, trace sand, trace till, limestone fragments.			I	1	DS	3-4-6	15	83
				I	2	DS	6-11-13	12	67
			5	I	3	DS	8-10-14	18	100
841.0		7.0							
	Brown and gray moist stiff to very stiff CLAY and sand, limestone fragments (glacial).			I	4	DS	14-16-18	18	100
			10	I	5	DS	9-14-18	18	100
836.0		12.0							
	Gray and brown moist stiff to very stiff CLAY, sand and gravel, trace sand, trace till, limestone fragments.			I	6	DS	7-11-9	12	67
			15	I	7	DS	5-6-18	18	100
				I	8	DS	22-28-26	15	83
			20						
826.5		21.5		I	9	DS	9-15-19	18	100
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 848.0 ft.
Date Started: 3/18/2019
Date Completed: 3/18/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted 17.5 ft.
At Completion Dry
After --
Backfilled --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 17
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
862.0	Ground Surface	0.0	0						
860.0	Brown moist stiff LEAN CLAY, trace sand, trace roots.	2.0		I	1	DS	4-5-4	15	83
	Brown moist very stiff LEAN CLAY, with sand and gravel (glacial).			I	2	DS	4-5-8	15	83
			5	I	3	DS	13-16-13	18	100
				I	4	DS	8-15-15	18	100
852.5		9.5							
850.5	Brown and gray moist very stiff LEAN CLAY, with sand and gravel.	11.5	10	I	5	DS	12-14-42	15	83
	Gray moist very stiff LEAN CLAY, with sand and gravel.			I	6	DS	9-14-17	18	100
			15	I	7	DS	7-9-10	18	100
				I	8	DS	7-8-10	18	100
840.5		21.5	20	I	9	DS	5-8-11	12	67
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 862.0 ft.
Date Started: 3/18/2019
Date Completed: 3/18/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 18
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
865.0	Ground Surface	0.0	0						
863.0	Brown moist stiff LEAN CLAY, trace sand, trace roots.	2.0		I	1	DS	2-3-4	18	100
860.5	Brown, little gray moist stiff to very stiff LEAN CLAY, little sand, trace oxide concretions.	4.5		I	2	DS	2-4-5	12	67
	Brown, little gray moist very stiff to stiff LEAN CLAY, little to some sand and gravel, some limestone fragments, trace oxide concretion (glacial).		5	I	3	DS	8-9-9	18	100
				I	4	DS	10-13-18	18	100
			10	I	5	DS	15-15-16	18	100
				I	6	DS	6-18-13	18	100
			15	I	7	DS	7-13-13	18	100
848.0		17.0							
	Gray moist very stiff LEAN CLAY with sand and gravel.			I	8	DS	7-8-10	18	100
			20						
843.5		21.5		I	9	DS	5-8-10	18	100
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 865.0 ft.
Date Started: 3/18/2019
Date Completed: 3/18/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 19
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
865.0	Ground Surface	0.0	0						
863.0	Brown moist medium stiff LEAN CLAY, trace sand and gravel, trace roots.	2.0		I	1	DS	3-4-4	18	100
858.0	Brown moist stiff to very stiff LEAN CLAY, trace sand, trace oxide concretions, some limestone fragments.	7.0	5	I	2	DS	3-3-3	15	83
				I	3	DS	4-5-7	18	100
853.0	Brown and gray moist very stiff LEAN CLAY, with limestone fragments, some sand (glacial).	12.0	10	I	4	DS	8-14-15	12	67
				I	5	DS	9-20-16	18	100
845.5	Brown and gray moist very stiff LEAN CLAY, with sand and gravel, with limestone fragments.	19.5	15	I	6	DS	10-43-22	18	100
				I	7	DS	13-16-24	18	100
				I	8	DS	10-17-31	6	33
843.5	Brownish-gray moist very stiff LEAN C.AY, with sand and gravel, little limestone fragments.	21.5	20	I	9	DS	13-17-18		
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 865.0 ft.
Date Started: 3/18/2019
Date Completed: 3/18/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D= Disintegrated
I = Intact
U= Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 20
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
854.0	Ground Surface	0.0	0						
	Brown and dark brown moist medium stiff LEAN CLAY, trace roots, little sand.			I	1	DS	3-4-6	18	100
				I	2	DS	8-13-14	18	100
849.0		5.0	5						
	Brown, little gray moist very stiff to stiff LEAN CLAY, with sand and gravel (glacial).			I	3	DS	11-14-14	18	100
				I	4	DS	21-18-30	6	33
			10	I	5	DS	13-18-16	6	33
842.0		12.0							
	Gray, trace brown moist LEAN CLAY, with sand and gravel.			I	6	DS	9-12-16	18	100
			15	I	7	DS	12-15-20	18	100
				I	8	DS	5-8-10		
			20						
832.5		21.5		I	9	DS	8-10-13	15	83
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 854.0 ft.
Date Started: 3/13/2019
Date Completed: 3/13/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D.

Hole Diameter: 7.5 in.
Rock Core Diameter: --
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: --
Backfilled: --

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

LOG OF TEST BORING

CLIENT: Lorven Milford LLC
PROJECT: Proposed SR 28 Mixed-Use Development
Miami Township, Ohio
LOCATION OF BORING: As shown on Boring Plan, Sheet No. 1

BORING #: 21
PROJECT #: J034114.01
PAGE #: 1 of 1

ELEV.	COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION	Strata Depth (feet)	Depth Scale (feet)	Sample Condition	Sample Number	Sample Type	SPT* Blows/6" / Rock Core RQD (%)	Recovery (in.)	Recovery (%)
854.0	Ground Surface	0.0	0						
852.0	Brown moist medium stiff LEAN CLAY, little sand, trace organics, trace topsoil.	2.0		I	1	DS	2-2-3	15	83
	Brown and gray moist stiff to very stiff LEAN CLAY, with sand and gravel (glacial).			I	2	DS	4-7-9	18	100
			5	I	3	DS	8-10-10	18	100
				I	4	DS	8-11-13	18	100
844.5		9.5							
	Gray, trace brown moist very stiff LEAN CLAY, with sand and gravel, trace limestone fragments.		10	I	5	DS	7-12-16	18	100
				I	6	DS	5-6-10	18	100
			15	I	7	DS	6-8-12	18	100
				I	8	DS	5-15-9	15	83
			20						
832.5		21.5		I	9	DS	6-9-11	18	100
	Bottom of test boring at 21.5 feet.		25						
			30						

Datum: NAVD 88
Surface Elevation: 854.0 ft.
Date Started: 3/13/2019
Date Completed: 3/13/2019

Hammer Weight: 140 lb.
Hammer Drop: 30 in.
Pipe Size: 2 in. O.D,

Hole Diameter: 7.5 in.
Rock Core Diameter: ---
Boring Method: HSA-3.25

Drill Rig: CME-55 TD-5
Foreman: N. Hudson
Engineer: Akshat Saxena

BORING METHOD
HSA = Hollow Stem Augers
CFA = Continuous Flight Augers
DC = Driving Casing
MD = Mud Drilling

SAMPLE TYPE
PC = Pavement Core
CA = Continuous Flight Auger
DS = Driven Split Spoon
PT = Pressed Shelby Tube
RC = Rock Core

SAMPLE CONDITIONS
D = Disintegrated
I = Intact
U = Undisturbed
L = Lost

GROUNDWATER DEPTH
First Noted: None
At Completion: Dry
After: ---
Backfilled: ---

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

GEOTECHNOLOGY INC
FROM THE GROUND UP

SOIL CLASSIFICATION SHEET

NON COHESIVE SOILS
(Silt, Sand, Gravel and Combinations)

Density

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 Properties

Descriptive Term	Percent
Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Particle Size Identification

Boulders	- 8 inch diameter or more	
Cobbles	- 3 to 8 inch diameter	
Gravel	- Coarse	- 3/4 to 3 inches
	- Fine	- 3/16 to 3/4 inches
Sand	- Coarse	- 2mm to 5mm (dia. of pencil lead)
	- Medium	- 0.45mm to 2mm (dia. of broom straw)
	- Fine	- 0.075mm to 0.45mm (dia. of human hair)
Silt		- 0.005mm to 0.075mm (Cannot see particles)

COHESIVE SOILS
(Clay, Silt and Combinations)

Consistency	Field Identification	Unconfined Compressive Strength (tons/sq. ft.)
Very Soft	Easily penetrated several inches by fist	Less than 0.25
Soft	Easily penetrated several inches by thumb	0.25 – 0.5
Medium Stiff	Can be penetrated several inches by thumb with moderate effort	0.5 – 1.0
Stiff	Readily indented by thumb but penetrated only with great effort	1.0 – 2.0
Very Stiff	Readily indented by thumbnail	2.0 – 4.0
Hard	Indented with difficulty by thumbnail	Over 4.0

Classification on logs are made by visual inspection.

Standard Penetration Test – Driving a 2.0" O.D., 1 3/8" I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the tests are recorded for each 6 inches of penetration on the drill log (Example – 6/8/9). The standard penetration test results can be obtained by adding the last two figures (i.e. 8+9=17 blows/ft.). Refusal is defined as greater than 50 blows for 6 inches or less penetration.

Strata Changes – In the column "Soil Descriptions" on the drill log, the horizontal lines represent strata changes. A solid line (————) represents an actually observed change; a dashed line (— — — —) represents an estimated change.

Groundwater observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.