

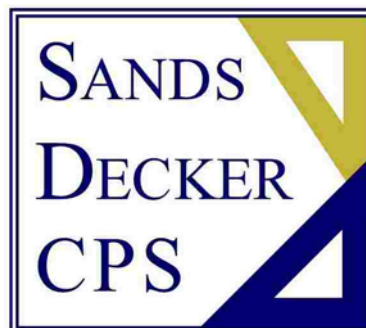
**COUNTRY ESTATES EAST DEVELOPMENT AREA
WATER AND SANITARY
SEWER SYSTEM IMPROVEMENTS**

**MONROE TOWNSHIP
WATER AND SEWER DISTRICT**

TIPP CITY, OHIO

September 2016

PREPARED BY:



**ENGINEERS ■ SURVEYORS
1495 Old Henderson Road
Columbus, Ohio 43220
(614) 459-6992
(614) 459-6987 (FAX)**

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LEGAL NOTICE

Sealed Proposals will be received by the **Monroe Township Water and Sewer District**, Miami County, Ohio until **5:00 p.m.** local time, **October 10, 2016**, for furnishing all the necessary labor, materials, equipment, tools, and services for the construction of "**COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**", hereinafter defined as the Project, all as set forth in the Contract Documents now on file in the office of the Consulting Engineer hereafter named. At the time above mentioned and at the office of **the Monroe Township Water and Sewer District, 4 E. Main Street, Tipp City, Ohio 45371**, said proposals will be publicly opened and read.

Please Note: This is a Monroe Township Water & Sewer District Project. Not a Tipp City project.

The Project includes, but may not be limited to, the following major items:

748	8" Water Main	7,040 L.F.
748	8" Gate Valve	14 Each
748	Fire Hydrant	22 Each
748	¾" Short Service w/ Meter Pit	37 Each
748	¾" Long Service w/ Meter Pit	38 Each
611	8" Sanitary Sewer	5,876 L.F.
611	6" Sanitary Sewer	1,805 L.F.
611	8"X6" Wye	66 Each
611	Standard Manhole	22 Each

Actual estimated quantities for the above items and all other items for the project are listed on the Proposal forms.

The Engineer's Estimate for the entire project is **\$2,045,000**.

All Proposals shall be submitted on the Proposal blanks contained in the contract documents furnished and shall be sealed in an envelope and marked as follows: "**COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**" and mailed or delivered so as to arrive at the office of **the Monroe Township Water and Sewer District, 4 E. Main Street, Tipp City, Ohio 45371**, prior to the above deadline.

A PREBID CONFERENCE will be held on **September 29, 2016** at **10:00 a.m.** at **the Monroe Township Water and Sewer District, 4 E. Main Street, Tipp City, Ohio 45371**. Bidders are strongly encouraged to attend the pre-bid meeting.

The Contract Documents including the Construction Drawings may be seen at the office of F.W. Dodge, or the office of the Engineer, Sands Decker CPS, LLC, 1495 Old Henderson Road, Columbus, Ohio 43220 or may be obtained at

Key Blue Print, Inc.
195 East Livingston Avenue
Columbus, Ohio 43215
Phone: 614-228-3285
Fax: 614-228-0687

Please visit www.keycompanies.com either via in-person pick-up at 195 East Livingston Avenue, Columbus, Ohio 43215 or via mail, upon Issuing Office's receipt of payment for the Bidding Documents. The non-refundable cost of printed Bidding Documents is **\$100.00** per set, payable to **Key Companies**, plus a non-refundable shipping charge. Upon Issuing Office's receipt of payment, printed Bidding Documents will be sent via the prospective Bidder's delivery method of choice; the shipping charge will depend on the shipping method chosen. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the prospective Bidder's date of receipt of the Bidding Documents. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

Each Bidder is required to furnish with its proposal, a Bid Guaranty and Contract Bond in accordance with Section 153.54 of the Ohio Revised Code. Bid security furnished in bond form shall be issued by a Surety Company or corporation licensed in the State of Ohio to provide said surety.

Each Proposal must contain the full name of the party or parties submitting the proposal and all persons interested herein. Each bidder must submit evidence of its experiences on projects of similar size and complexity. The owner intends and requires that this project be completed no later than **November 2017.**

Bidders must comply with the prevailing wage rates on Public Improvements in **Miami County** and the **Monroe Township Water and Sewer District** as determined by the Ohio Bureau of Employment Services, Wage and Hour Division, (614) 644-2239.

Each Bidder must insure that all employees and applicants for employment are not discriminated against because of race, color, religion, sex or national origin.

All contractors and subcontractors involved with the project will, to the extent practicable use Ohio products, materials, services, and labor in the implementation of their project. Additionally, contractor compliance with the equal employment opportunity requirements of Ohio Administrative Code 123, the Governor's Executive Order of 1972, and Governor's Executive Order 84-9 shall be required.

No bidder may withdraw his bid within ninety (90) days after the actual date of the opening thereof.

The **Monroe Township Water and Sewer District**, hereafter defined as the Owner, reserves the right to waive irregularities and to reject any and all Proposals, to increase or decrease or omit any item(s) and to award to the lowest and best qualified Bidder. Each Proposal must contain the full name of every person or company interested in the same.

Dated this 16th day of September 2016.

"Monroe Township Water and Sewer District"

Bill Rodenberg, President Monroe Township Sewer District

Publication Dates: September 16 and September 23, 2016.

Publication: Dayton Daily News.

INFORMATION FOR BIDDERS

SITE CONTRACT REQUIREMENTS: Each bidder is required to examine carefully the Project site, and to read and acquaint himself with all the Contract Documents for the work contemplated. The Bidder, in submitting a Proposal, warrants that he has investigated and is acquainted with the conditions to be encountered in performing the Work including the character, quality and quantities of Work to be performed, materials and equipment to be furnished and/or used, compliance requirements of the Occupational Safety and Health Act of 1970 (OSHA), and the requirements of the Contract Documents hereinafter defined. The Bidder further agrees that submission of a Proposal shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to all the conditions which will affect the Work.

MEANING OF CONTRACT TERMINOLOGY: If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Contract Documents as listed in the Proposal, he may submit to the Engineer a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the Contract Documents will be made only be Addenda duly issued, and a copy of such Addenda will be mailed or delivered to each person or company receiving a set of such documents. The Owner will not be responsible for any other explanations or interpretations of the Contract Documents.

PROPOSAL: The Owner reserves the right to hold Proposals for a period of ninety (90) calendar days after date of opening, and to award the Contract at any time during that period.

EXECUTION OF CONTRACT: The successful Bidder will be required to execute the Contract within ten (10) calendar days after he is awarded the Work.

DOCUMENTS WITH CONTRACT: At the time of execution of the Contract, the Contractor shall furnish the following: A Bid Guaranty and Contract Bond in accordance with Section 153.54 of the Ohio Revised Code, insurance certificates, a work schedule, Ohio Workman's Compensation evidence and all documents or evidence of same as required in the Contract Documents. In case of failure to execute the Contract as stated or to furnish the Bid Guaranty and Contract Bond, the Bidder will be considered to have abandoned the contract and the bond or check accompanying the proposal shall be forfeited to the Owner, not as penalty, but as liquidated damages.

NOTICE TO PROCEED: The "Notice to Proceed" shall be issued within fifteen (15) calendar days of the execution of the Contract by the Owner. Should there be reasons why the "Notice to Proceed" cannot be issued within such a time period, the time may be extended by mutual agreement between the Owner and Contractor. If the "Notice to Proceed" has not been issued within the fifteen (15) calendar day period or within the period mutually agreed upon, the Contractor may terminate the Contract without further liability on the part of either party.

INVESTIGATION BY OWNER: The Owner may make such investigations as he deems necessary in order to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner all such information and data for this purpose. The Owner reserves the right to reject any proposal if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

SUB-CONTRACTORS: Each Bidder must supply with his Proposal the names and addresses of all proposed Sub-Contractors performing work on any portion(s) of the Project. Forms are included herein for providing this information. The Owner reserves the right to accept or reject any changes to the list of proposed Sub-Contractors after opening of bids.

AWARD CONSIDERATIONS: In determining the award, consideration will be given to whether the Bidder and the proposed Sub-Contractors (a) maintain a permanent place of business; (b) have plant and equipment suitable for the Work; (c) are financially able to perform the Work; (d) have the organizational capability to perform the Work; and (e) have a sound record of experience in Work of this type. The Owner may also award the project to the lowest and most qualified bidder for the water improvements only, sewer improvements only or combined water and sewer improvements.

APPLICABLE LAWS: All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout.

SETS OF DOCUMENTS: Four (4) sets of Contract Documents shall be furnished to the successful Bidder upon execution of a Contract at no cost. Any additional sets requested of the Owner will be furnished at the fee stated in the Legal Notice.

SUB-SURFACE CONDITIONS: It is the obligation and responsibility of the Bidder to make his own investigations of sub-surface conditions prior to submitting his Proposal. The Bidder may examine the records of all borings, test excavations and other sub-surface investigations, if any are complete, which are not a part of the Contract Documents except to the extent that the results thereof are specifically shown or stated in the Contract Documents. Any records of borings, test excavations and other sub-surface investigations will only state what was found at the boring and/or test excavation or the specific results of the other sub-surface investigations and are not warranted to show the actual sub-surface conditions. The Bidder agrees that should he become the Contractor he will make no claim against the Owner or the Engineer, if in carrying out the work, he finds that the actual sub-surface conditions encountered do not conform to those indicated by said borings, test excavations and other sub-surface investigations, if available.

QUANTITIES AND PAYMENT: The items and their scheduled quantities as listed in the Bid Schedule are to be used only for the comparison of Proposals. The unit prices submitted by the Bidders will be used with the scheduled quantities to compare the Proposals. Payments, except for lump sum Contracts and except for lump sum items in unit price contracts, will be made to the Contractor for only the actual quantities of Work performed or materials furnished in accordance with the Contract Documents. It is understood that the scheduled quantities of Work to be performed and materials to be furnished may each be increased or diminished without in any way invalidating the unit bid prices.

INTENT OF CONTRACT: The Contract's intent is to insure that a complete, usable project is constructed in accordance with the requirements of the Contract Documents. The Contractor shall complete all Work using approved and accepted methods and good workmanship. Procedural discrepancies shall be judged against this intent and the decision of the Owner shall be final.

NON-COLLUSION AFFIDAVIT: The successful Bidder will be required to execute and submit a "Non-Collusion Affidavit", in the form included herein, after the opening of Proposals and before the award of the contract.

PREVAILING WAGE RATES: The Wage Rates included as part of these Contract Documents shall govern all wages paid under this Contract. Said Wage Rates shall be used by the Bidder in completing his proposal. The Schedule will be either posted in a conspicuous location on the Project Site or readily available for viewing if no convenient location is available.

COMPLETION TIME: The Bidder agrees to commence work on or before a date to be specified in a written "Notice to Proceed" from the Owner and to fully complete the Project within **300** calendar days, starting approximately **January , 2017**.

SUBSTITUTION: If a bidder wishes to propose substitutions for the items specified, the substitutions will only be considered if the bidder submits a base bid, using specified materials and equipment, that is the lowest responsive bid, and the information on each substitution is submitted with his bid using the enclosed "Proposed Substitution" form.

The information on the substitution shall be sufficient for the Owner and Engineer to evaluate the proposed substitution in accordance **with Sections 105 and 106 of the General Provisions**. The Engineer and Owner will evaluate each proposed substitute on its merit and notify the bidder of acceptability prior to the award of a contract. The acceptability of any proposed substitution is at the sole discretion of the Owner and Engineer. Any accepted substitutions will be incorporated in the contract award with the revised contract price and the contract requirement for providing a complete, usable facility as specified and as shown on the Construction Drawings.

MECHANICAL EQUIPMENT: All equipment items including ancillary devices shall be supplied by the same manufacturer and tested, as a system, by the manufacturer at the manufacturer's production facility. In the event of a substitution, the manufacturer shall offer the Owner and/or Engineer the opportunity to witness the system test and provide certified test data for performance of all components tested including hydraulic, electrical and electro-mechanical components. The Engineer and Owner shall be given two weeks prior written notice of test and such testing shall be provided at no cost to the Owner or Engineer. Written notice shall include information on test procedure and schedule for evaluation and approval by the Owner.

The manufacturer shall provide a written warranty of all components for one year after start-up. As part of the warranty, the manufacturer shall provide with the equipment specified or substituted, any normal wear components that may be required during the **FIRST FIVE YEARS OF OPERATION** at **NO COST TO THE OWNER**. This includes such things as impellers, wear plates, cutting and/or grinding elements, O-rings, gaskets, valve seats, base elbow seals, relays and other parts which normally wear as a result of normal operation of equipment.

The manufacturer shall also certify, in writing, that all required repair components as well as replacement parts will be continuously available, in inventory, for rapid shipment in two days or less during the five year extended warranty period.

SPECIAL DEFINITIONS:

- (1) The Engineer, as defined in the General Requirements, and as used in other sections of the Contract Documents, shall mean Sands Decker CPS LLC, 1495 Old Henderson Road, Columbus, Ohio 43220.
- (2) Construction Drawings: The location and nature of the work is shown on a set of Construction Drawings entitled, "**COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**" as prepared by Sands Decker CPS, LLC, 1495 Old Henderson Road, Columbus, Ohio 43220.

ENGINEER'S ESTIMATE: \$ 2,045,000 .

PROPOSED SUBSTITUTIONS

<u>Item Description</u>	<u>Proposed Manufacturer</u>	<u>Change In Contract Amount</u> <small>(indicate if add or deduct)</small>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Note: Please read requirement for proposed substitutions in the “Information for Bidders” and acknowledge your understanding of the requirements by signing below.

(Signature)

(Title)

(Date)

- * Include this page with bid documents if substitutes are proposed.
- ** Include required equipment data for substitutions after this page.

BIDDING DOCUMENTS

PROPOSAL

PROPOSAL INTENT: The BID SCHEDULE, BIDDER INFORMATION, LIST OF SUB-CONTRACTORS, PROPOSAL BOND, BID, and other requirements stated herein comprise the PROPOSAL. By signing the Bid, the bidder warrants that he has read the Contract Documents provided with this Proposal and agrees with their inclusion in the Contract. The Bidder further agrees that upon execution of any Contract Administrative Forms, the said completed forms will thereafter become Contract Documents, and be made a part of the Contract.

PREPARATION OF PROPOSAL: All proposals shall be submitted upon the forms provided herein. Proposals shall be properly executed and the Bid signed by a duly authorized individual for the Contractor submitting the Proposal. Each pay item listed with a quantity or the term "lump sum" entered under the "Quantity" heading shall have separate unit prices entered in the labor, material, and total columns under the "Unit Prices" heading. The total item prices for each pay item listed shall be entered in figures and in words. The total amount of the bid for each section and/or the entire Bid Schedule shall be entered in figures and in words. When a discrepancy appears between any of the unit prices or the total prices, the correct addition of the unit prices for labor and material times the quantity of that item shall govern in determining the cost of the Proposal.

All proposals not in conformity with the instructions listed herein and in the Contract Documents shall be deemed informal Proposals and may be rejected. Proposals will be considered irregular and may be rejected for the following reasons:

- a) If the Proposal is on a form other than that furnished by the Owner or if the form is altered or any part thereof is detached.
- b) If there are unauthorized additions, conditional or alternate Bids, or irregularities of any kind which may tend to make the Proposal incomplete, indefinite, or ambiguous as to its meaning.
- c) If the Bidder adds any provisions reserving the right to accept or reject an award.
- d) If the Bid Schedule does not contain unit prices and a total item price as described in the proposal for each pay item listed, or if all parts are not completed except in the case of authorized alternate pay items.
- e) If the Bid prices are obviously unbalanced.
- f) If all parts of the Proposal are not completed.
- g) If more than one Proposal for the same work is received from an individual firm or corporation under the same or different name.

Each Bidder is required to state in his Proposal his name and place of residence as well as the names of all persons of interest with him. In the case of a corporation, only the names of the president and secretary need to be given. References shall be furnished to establish the skill and business standing of the Bidder, if requested by the Owner.

CONTRACT DOCUMENTS: The following documents comprise the Contract for the completion of the stated work and shall be individually and collectively binding to both parties. All stipulations, terms and considerations stated therein shall be taken into account by the Bidder in preparing his Proposal.

- a) LEGAL NOTICE
- b) INFORMATION FOR BIDDERS
- c) PROPOSAL
- d) FORM OF NON-COLLUSION AFFIDAVIT
- e) CONTRACT AND APPLICABLE ADDENDA
- f) LEGAL AND FISCAL OFFICERS STATEMENTS
- g) BID GUARANTY AND CONTRACT BOND
- h) GENERAL REQUIREMENTS
- i) GENERAL PROVISIONS
- j) APPLICABLE DRAWINGS
- k) CONSTRUCTION DRAWINGS
- l) MINIMUM WAGE DETERMINATION
- m) ALL EXECUTED CONTRACT ADMINISTRATIVE FORMS, EITHER OF THE TYPE INCLUDED HEREIN OR OTHER FORMS USED AND ACCEPTED BY BOTH PARTIES.

CONTRACT ADMINISTRATIVE FORMS: The following forms are included herein for your information. It is the Owner's current intention to use these forms in the administering of the Contract; however, their use is not required for notices, change orders or affidavits to be valid.

- a) NOTICE OF AWARD
- b) NOTICE TO PROCEED
- c) CHANGE ORDER
- d) CERTIFICATE OF SUBSTANTIAL COMPLETION
- e) CERTIFICATE OF FINAL COMPLETION

BIDDER INFORMATION

(To be submitted with Proposal)

Name: _____

Address: _____

Telephone: _____

Principals: _____

Insurance Company Name and Coverage:

Type(s) and/or Name(s) of Large Company-Owned Equipment:

Employee Experience, Preferably Superintendents and/or Foremen:

Similar Recent Projects: (list at least four)

References:

Owner

Contact Person

Telephone

LIST OF SUB-CONTRACTORS

(To be submitted with Proposal)

*Enter "None" if no Sub-Contractors will be used

Name: _____

Address: _____

Items of Work to be Completed: _____

Name: _____

Address: _____

Items of Work to be Completed: _____

Name: _____

Address: _____

Items of Work to be Completed: _____

Name: _____

Address: _____

Items of Work to be Completed: _____

BID GUARANTY AND
CONTRACT BOND

(Section 153.571 Ohio Revised Code)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____
_____ (contractor), _____ (address),
as Principal and _____ (surety), as Surety, are hereby
held and firmly bound unto the _____ (owner) as
Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to
the Obligee on _____ to undertake the project known as:

“WATER SYSTEM IMPROVEMENTS, PHASE IV-A”

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 _____ (\$_____). (If the above line is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, 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.) 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.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named Principal has submitted a bid on the above referred 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 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 percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of 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 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 Obligee 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 its 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 _____, 2016.

PRINCIPAL: _____

BY: _____

TITLE: _____

SURETY _____

SURETY COMPANY ADDRESS:

BY: _____

SURETY AGENT'S NAME AND ADDRESS:

NOTE: Failure by any party to sign the Bid Guaranty and Contract Bond, and Payment Bond shall result in rejection of bid.

ACKNOWLEDGMENT OF BID REQUIREMENTS

(These pages must be executed, in the appropriate place, prior to submission of the attached Proposal for Work)

WRITTEN CONTRACT

The undersigned Bidder hereby acknowledges that, upon the Owner's acceptance of the attached Proposal for Work, the Bidder shall be obligated to enter into a written contract with Owner within ten (10) calendar days from the date of the Notice of Award, specifically stipulating the terms of the agreement. The Bidder further agrees and acknowledges that if Bidder fails to execute said contract (after acceptance by Owner) as provided herein, the bond or certified check accompanying this Proposal for Work shall be forfeited to Owner as liquidated damages. Bidder acknowledges the Owner's right to reject this Proposal.

Proposal for work submitted this _____ day of _____, 2016.

IF AN INDIVIDUAL, SIGN BELOW:

(Name)

(Post Office Address)

IF AN INDIVIDUAL DOING BUSINESS
UNDER A TRADE NAME,
SIGN BELOW:

(Trade Name)

(Post Office Address)

(Name)

IF A PARTNERSHIP OR L.L.P., SIGN BELOW:

(Partner)

(Post Office Address)

(Partner)

(Post Office Address)

(Partner)

(Post Office Address)

(Partner)

(Post Office Address)

IF A JOINT BID, SIGN BELOW:

(Name)

(Name)

By _____

By _____

Its _____

Its _____

(Post Office Address)

(Post Office Address)

IF A CORPORATION OR L.L.C., SIGN BELOW:

(Name of Corporation or Company)

Incorporated under the laws of the State of _____

By _____

(Type or Print Name)

(Title of Officer Signing)

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF
REQUIREMENTS FOR CERTIFICATIONS
OF NON-SEGREGATED FACILITIES

A certification of Non-Segregated Facilities as required by the May 9, 1967 order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities by the Secretary of Labor must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e. quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Date

Signature of Bidder

Address (Including Zip Code)

B I D S C H E D U L E

BID SCHEDULE: The undersigned, having full knowledge of the site, plans, specifications, this proposal and other contract documents; and the conditions stipulated therein agrees to furnish all labor, materials, and equipment necessary to complete the project titled "COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS" as described and to accept the unit prices specified below, prices good for 90 days.

TYPE OF FUNDING: LOCAL FUNDS

PROJECT NO. 2772

Item	Description of Work	Est.	Unit	Unit Prices			Total Item Price	
No.		Qty.		Labor	Material	Total	In Figures	In Words
<u>WATERLINE IMPROVEMENTS</u>								
203	CLEARING & GRUBBING	LUMP	SUM					
301	BTUMINOUS AGREGATE BASE	550	C.Y.					
304	AGGREGATE BASE (ROADWAY REPAIR)	550	C.Y.					
304	AGGREGATE BASE (DRIVE REPAIR)	7	C.Y.					
407	TACK COAT (0.10 GAL/SY)	334	GAL.					
408	PRIME COAT (0.35 GAL/SY)	1155	GAL.					
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (ROADWAY REPAIR)	186	C.Y.					
452	NON-REINFORCED CONCRETE PAVEMENT	58	S.Y.					
603	8" CONDUIT, TYPE D, 707.01, CONTINGENCY ITEM	100	L.F.					
603	12" CONDUIT, TYPE D, 707.01	100	L.F.					
603	6" CONDUIT, TYPE B, 707.33	100	L.F.					

BID SCHEDULE: The undersigned, having full knowledge of the site, plans, specifications, this proposal and other contract documents; and the conditions stipulated therein agrees to furnish all labor, materials, and equipment necessary to complete the project titled "COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS" as described and to accept the unit prices specified below, prices good for 90 days.

TYPE OF FUNDING: LOCAL FUNDS

PROJECT NO. 2772

Item No.	Description of Work	Est. Qty.	Unit	Unit Prices			Total Item Price	
				Labor	Material	Total	In Figures	In Words
609	CURB REPLACEMENT	640	L.F.					
614	MAINTAINING TRAFFIC	LUMP	SUM					
659	SEEDING & MULCHING	932	S.Y.					
670	EROSION CONTROL	LUMP	SUM					
748	8" GATE VALVE /W TRAFFIC TYPE BOX	16	Each					
748	8" DI WATER LINE AND APPURTENANCES	7,001	L.F.					
748	CONNECT TO EXSITING WATERLINES	2	Each					
748	FIRE HYDRANT W/ WATCH VALVE & BOX (TYPE A)	16	Each					
748	FIRE HYDRANT W/ WATCH VALVE & BOX (TYPE B)	2	Each					
748	3/4" SHORT WATER SERVICE W/ METER BOX COMPLETE	38	Each					
748	3/4" LONG WATER SERVICE W/ METER BOX COMPLETE	36	Each					

BID SCHEDULE: The undersigned, having full knowledge of the site, plans, specifications, this proposal and other contract documents; and the conditions stipulated therein agrees to furnish all labor, materials, and equipment necessary to complete the project titled "COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS" as described and to accept the unit prices specified below, prices good for 90 days.

TYPE OF FUNDING: LOCAL FUNDS

PROJECT NO. 2772

Item	Description of Work	Est.	Unit	Unit Prices		Total Item Price		
No.		Qty.		Labor	Material	Total	In Figures	In Words
<u>SANITARY SEWER IMPROVEMENTS</u>								
203	CLEARING & GRUBBING	LUMP	SUM					
301	BTUMINOUS AGREGATE BASE	542	C.Y.					
304	AGGREGATE BASE (ROADWAY REPAIR)	542	C.Y.					
304	AGGREGATE BASE (DRIVE REPAIR)	4	C.Y.					
407	TACK COAT (0.10 GAL/SY)	325	GAL.					
408	PRIME COAT (0.35 GAL/SY)	1,138	GAL.					
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (ROADWAY REPAIR)	180	C.Y.					
452	NON-REINFORCED CONCRETE PAVEMENT	5	S.Y.					
609	CONCRETE CURB REPLACED	700	L.F.					
611	8" CONDUIT, TYPE D, 707.01, CONTINGENCY ITEM	100	L.F.					

BID SCHEDULE: The undersigned, having full knowledge of the site, plans, specifications, this proposal and other contract documents; and the conditions stipulated therein agrees to furnish all labor, materials, and equipment necessary to complete the project titled "COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS" as described and to accept the unit prices specified below, prices good for 90 days.

TYPE OF FUNDING: LOCAL FUNDS

PROJECT NO. 2772

Item No.	Description of Work	Est. Qty.	Unit	Unit Prices			Total Item Price	
				Labor	Material	Total	In Figures	In Words
611	12" CONDUIT, TYPE D, 707.01	100	L.F.					
611	6" CONDUIT, TYPE B, 707.33	100	L.F.					
611	STANDARD MANHOLE	22	EACH					
611	DROP MANHOLE	1	EACH					
614	MAINTAINING TRAFFIC	LUMP	SUM					
659	SEEDING & MULCHING	4,970	S.Y.					
670	EROSION CONTROL	LUMP	SUM					
611	8" SANITARY SEWER	5,958	L.F.					
611	6" SANITARY SEWER HOUSE SERVICE	1,580	L.F.					
611	8" x 6" WYE	64	EACH					
SPEC.	ABANDON PUMP STATION, COMPLETE	LUMP	SUM					

BID SCHEDULE: The undersigned, having full knowledge of the site, plans, specifications, this proposal and other contract documents; and the conditions stipulated therein agrees to furnish all labor, materials, and equipment necessary to complete the project titled "COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS" as described and to accept the unit prices specified below, prices good for 90 days.

TYPE OF FUNDING: LOCAL FUNDS

PROJECT NO. 2772

Item No.	Description of Work	Est. Qty.	Unit	Unit Prices			Total Item Price	
				Labor	Material	Total	In Figures	In Words

**TOTAL BID SANITARY SEWER IMPROVEMENTS
(NOT INCLUDING ALTERNATES)**

**TOTAL BID WATERLINE IMPROVEMENTS
(NOT INCLUDING ALTERNATES)**

**ADD/DEDUCT FOR COMBINED AWARD OF WATER
AND SANITARY SEWER IMPROVEMENTS**

ALTERNATE 1 - WATER SERVICES

ALTERNATE 2 - SEWER SERVICES

SIGNATURE OF PERSON
PREPARING BID

TITLE

NAME OF COMPANY

WAGE RATES

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Local 132 HwyHwy District III (A)

Change # : LCN01-2015fbHvyHwy

Craft : Cement Mason Effective Date : 05/07/2015 Last Posted : 05/07/2015

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason (A)	\$26.38		\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$42.22	\$55.41
Apprentice	Percent											
1st Year	60.00	\$15.83	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$31.67	\$39.58
2nd Year	75.00	\$19.78	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$35.63	\$45.52
3rd Year	90.00	\$23.74	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$39.58	\$51.45

Special Calculation Note : Work performed in accordance with detail (B) please see Cement Mason HwyHwy District 1 (B) wage sheet

Ratio :

2 Journeymen to 1 Apprentice
Company Wide

Jurisdiction (* denotes special jurisdictional note) :

- ADAMS, ALLEN, ASHLAND, ATHENS,
- AUGLAIZE, BELMONT, CARROLL,
- CHAMPAIGN, CLARK, CLINTON,
- COSHOCTON, CRAWFORD, DARKE,
- DELAWARE, FAIRFIELD, FAYETTE,
- FRANKLIN, GALLIA, GREENE, GUERNSEY,
- HARDIN, HARRISON, HOCKING, HOLMES,
- JACKSON, JEFFERSON, KNOX, LAWRENCE,
- LICKING, LOGAN, MADISON, MARION,
- MEIGS, MERCER, MIAMI, MONROE,
- MONTGOMERY, MORGAN, MORROW,
- MUSKINGUM, NOBLE, PERRY, PICKAWAY,

PIKE, PREBLE, RICHLAND, SCIOTO,
SHELBY, TUSCARAWAS, UNION, VAN
WERT, VINTON, WASHINGTON, WAYNE,
WYANDOT

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: Cement Mason Local 132 HwyHwy District III (B)

Change # : LCN01-2015fbHvyHwy

Craft : Cement Mason Effective Date : 05/07/2015 Last Posted : 05/07/2015

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason (B)	\$26.54		\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$42.38	\$55.65
Apprentice	Percent											
1st Year	60.00	\$15.92	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$31.76	\$39.73
2nd Year	75.00	\$19.91	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$35.75	\$45.70
3rd Year	90.00	\$23.89	\$7.19	\$6.00	\$0.55	\$0.00	\$2.10	\$0.00	\$0.00	\$0.00	\$39.73	\$51.67

Special Calculation Note : Work performed in accordance with detail (A) please see Cement Mason HwyHwy District 1 (A) wage sheet

Ratio :

2 Journeymen to 1 Apprentice
Company Wide

Jurisdiction (* denotes special jurisdictional note) :

- ADAMS, ALLEN, ASHLAND, ATHENS,
- AUGLAIZE, BELMONT, CARROLL,
- CHAMPAIGN, CLARK, CLINTON,
- COSHOCTON, CRAWFORD, DARKE,
- DELAWARE, FAIRFIELD, FAYETTE,
- FRANKLIN, GALLIA, GREENE, GUERNSEY,
- HARDIN, HARRISON, HOCKING, HOLMES,
- JACKSON, JEFFERSON, KNOX, LAWRENCE,
- LICKING, LOGAN, MADISON, MARION,
- MEIGS, MERCER, MIAMI, MONROE,
- MONTGOMERY, MORGAN, MORROW,
- MUSKINGUM, NOBLE, PERRY, PICKAWAY,

PIKE, PREBLE, RICHLAND, ROSS, SCIOTO,
SHELBY, TUSCARAWAS, UNION, VAN
WERT, VINTON, WASHINGTON, WAYNE,
WYANDOT

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.

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

Ratio :

3 Journeymen to 1 Apprentice
per company/project

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 :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

Apprentice	Percent											
First 6 months	80.00	\$20.56	\$6.81	\$6.70	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.27	\$44.55
7-12 months	85.00	\$21.84	\$6.81	\$6.70	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.56	\$46.48
13-18 months	90.00	\$23.13	\$6.81	\$0.00	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.14	\$41.71
19-24 months	95.00	\$24.41	\$6.81	\$0.00	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.42	\$43.63
25-30 months	100.00	\$25.70	\$6.81	\$0.00	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.71	\$45.56

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

Ratio :

3 Journeymen to 1 Apprentice per company/project

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 :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

Prevailing Wage Rate Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2016fbLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/20/2016 Last Posted : 05/20/2016

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$29.22		\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$39.67	\$54.28
Group 2	\$29.39		\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$39.84	\$54.54
Group 3	\$29.72		\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$40.17	\$55.03
Group 4	\$30.17		\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$40.62	\$55.71
Watch Person	\$21.95		\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$32.40	\$43.38
Apprentice	Percent											
0-1000 hrs	60.00	\$17.53	\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$27.98	\$36.75
1001-2000 hrs	70.00	\$20.45	\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$30.90	\$41.13
2001-3000 hrs	80.00	\$23.38	\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$33.83	\$45.51
3001-4000 hrs	90.00	\$26.30	\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$36.75	\$49.90
More than 4000 hrs	100.00	\$29.22	\$6.70	\$3.20	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$39.67	\$54.28

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 perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America 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 members 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, Gunitite 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.

1 to 3 Journeymen to 3 Apprentices
4 to 6 Journeymen to 6 Apprentices
per job site

Special Jurisdictional Note : The following townships in Warren County are included:
Clearcreek, Franklin and Wayne.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Inside Lt Commercial South West

Change # : LCNO1-2016fbLoc82in

Craft : Electrical Effective Date : 01/06/2016 Last Posted : 01/06/2016

Classification	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Electrician	\$28.60	\$6.20	\$8.46	\$0.49	\$0.00	\$2.45	\$0.00	\$0.00	\$0.00	\$46.20	\$60.50
CE-3 12,001-14,000	\$20.67	\$5.21	\$0.62	\$0.63	\$0.00	\$0.62	\$0.00	\$0.00	\$0.10	\$27.85	\$38.19
CE-2 10,000-12,000 Hrs	\$16.24	\$5.21	\$0.49	\$0.63	\$0.00	\$0.49	\$0.00	\$0.00	\$0.10	\$23.16	\$31.28
CE-1 8,001-10,000 Hrs	\$14.77	\$5.21	\$0.44	\$0.63	\$0.00	\$0.44	\$0.00	\$0.00	\$0.10	\$21.59	\$28.98
CW-4 6,001-8,000 Hrs	\$13.29	\$5.21	\$0.40	\$0.63	\$0.00	\$0.40	\$0.00	\$0.00	\$0.10	\$20.03	\$26.67
CW-3 4,001-6,000 Hrs	\$11.81	\$5.21	\$0.35	\$0.63	\$0.00	\$0.35	\$0.00	\$0.00	\$0.10	\$18.45	\$24.36
CW-2 2,001-4,000 Hrs	\$10.34	\$5.21	\$0.31	\$0.63	\$0.00	\$0.31	\$0.00	\$0.00	\$0.10	\$16.90	\$22.07
CW-1 0-2,000 Hrs	\$10.34	\$5.21	\$0.31	\$0.63	\$0.00	\$0.31	\$0.00	\$0.00	\$0.10	\$16.90	\$22.07
Apprentice	Percent										
1st period 0 - 1000 hrs	40.00	\$11.44	\$6.20	\$0.34	\$0.19	\$0.00	\$0.00	\$0.00	\$0.00	\$18.17	\$23.89
2nd period 1001-2000 hrs	40.00	\$11.44	\$6.20	\$0.34	\$0.19	\$0.00	\$0.00	\$0.00	\$0.00	\$18.17	\$23.89
3rd period 2001-3500 hrs	45.00	\$12.87	\$6.20	\$3.81	\$0.22	\$0.00	\$1.10	\$0.00	\$0.00	\$24.20	\$30.63
	50.00	\$14.30	\$6.20	\$4.23	\$0.24	\$0.00	\$1.23	\$0.00	\$0.00	\$26.20	\$33.35

4th period 3501-5000 hrs												
5th period 5001-6500 hrs	60.00	\$17.16	\$6.20	\$5.07	\$0.29	\$0.00	\$1.47	\$0.00	\$0.00	\$0.00	\$30.19	\$38.77
6th period 6501-8000 hrs	75.00	\$21.45	\$6.20	\$6.34	\$0.36	\$0.00	\$1.84	\$0.00	\$0.00	\$0.00	\$36.19	\$46.92

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

Ratio :

1 to 3 Journeymen to 3 Apprentices
 4 to 6 Journeymen to 6 Apprentices
 per job site

Jurisdiction (* denotes special jurisdictional note) :

CLINTON, DARKE, GREENE, MIAMI,
 MONTGOMERY, PREBLE, WARREN*

Construction Electrician and Construction Wireman Ratio

There shall be a minimum ratio of one inside Journeyman to every (4) employees of different classification per jobsite. An inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used.

Special Jurisdictional Note : The following townships in Warren County are included: Clearcreek, Franklin and Wayne.

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square fee), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

Details :

Building & Construction Laborer, Railroad Laborer, Asbestos & Hazardous Waste (Levels A,B,C, & D),Concrete Crew, Form Setter, Pipelayer, Bottom Man, Burner (Cutting Torch), Welder Helper, All Machine & Power Driven Tools, Sandblaster
Yardman-Landscaping,Sewer Jet, Waterperson, Tool Cage Laborer,Unloading Furniture & Fixtures,Final Clean-Up
Watchman, Residential Construction, Signal Men

Group 2

Mason Tender For Bricklayers, Flexcore, Firebrick Tender (Blast Furnaces,Soaking Pits,Stoves & Stacks), Plasterer Tenders & Lathers

Group 3

Tender Operator

Asbestos, Lead and Hazardous Material:

The removal, abatement or encapsulation of asbestos, lead and/or toxic and hazardous waste or materials is defined as all work included in the erection, moving servicing and dismantling of all enclosures, scaffolding, barricades, etc. and the operation of all tools and equipment (including generators, compressors and vacuums) normally used in the removal or abatement or asbestos, lead and toxic and hazardous waste or materials; the labeling, bagging, cartoning, crating or otherwise packaging of materials for disposal; as well as the clean-up of the work site and all other work incidental to the removal, abatement or encapsulation of asbestos, lead or toxic and hazardous waste materials.

Level A

Protective equipment is required when the area has been determined to contain extremely toxic contaminants or contaminants unknown but may be expected to be extremely toxic and/or immediately dangerous to life and health. This ensemble includes a fully encapsulated chemical suit, self contained breathing apparatus (SCBA) or airline fed respirator, and various types and numbers of boots and gloves.

Level B

Protective equipment includes a chemically resistant splash suit and a SCBA or airline respirator. This ensemble is required when the situation is very hazardous, such as oxygen deficient atmospheres, IDLH atmospheres, or confined space entries.

Level C

Protective equipment includes a protective suit and an air purifying respirator (APR) with the appropriate filter canisters.

Level D

To be worn only in established "safe zones" may consist of, from normal work clothes to normal skin protection such as gloves, face shields goggles, coveralls and occasionally respiratory protection.

Prevailing Wage Rate

Skilled Crafts

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

Change # : LCN01-2016fbLoc18zone3

Craft : Operating Engineer Effective Date : 06/01/2016 Last Posted : 06/01/2016

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Operator Class 1	\$33.84		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.34	\$65.26
Class 2	\$32.72		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$47.22	\$63.58
Class 3	\$32.68		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$47.18	\$63.52
Class 4	\$31.50		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$46.00	\$61.75
Class 5	\$26.04		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$40.54	\$53.56
Class 6	\$34.09		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.59	\$65.64
Class 7	\$34.34		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.84	\$66.01
Class 8	\$34.84		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$49.34	\$66.76
Class 9	\$35.09		\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$49.59	\$67.14
Apprentice	Percent											
1st Year	50.00	\$16.92	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$31.42	\$39.88
2nd Year	60.00	\$20.30	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$34.80	\$44.96
3rd Year	70.00	\$23.69	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$38.19	\$50.03
4th Year	80.00	\$27.07	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$41.57	\$55.11
Field Mechanic Trainee												
1st Year	50.00	\$16.92	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$31.42	\$39.88
2nd Year	60.00	\$20.30	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$34.80	\$44.96
3rd Year	70.00	\$23.69	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$38.19	\$50.03
4th Year	80.00	\$27.07	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$41.57	\$55.11

Special Calculation Note : Other: Education & Safety

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice. An apprentice, while employed as part of a crew per Article VIII, paragraph 77, will not be subject to the apprenticeship ratios in this collective bargaining agreement. On jobs where maintenance engineers are to be employed, for every (2) Class 2 Mechanics there may be (1) Mechanic Trainee & so fourth.

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 :

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

Class 1 - Barrier Moving Machine; 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) Derricks (all types); Draglines Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Gradalls; Helicopter Operators; hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Hydraulic Gantry (lift system); Laser Finishing Machines; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Engineers (Mechanic 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 work; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Tug Boats. Horizontal Directional Drill, Rough Terrain Fork-lift with Winch/Hoist, Laser Screed, and Like equipment; Compact Cranes, track or rubber over 4,000 pound capacity, self-erecting cranes: stationary, track or truck (all configurations) bucket trench machines (over 24 " wide).

Class 2 - Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs. Bulldozers; CMI type Equipment; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats; Vermeer Type Concrete Saw; All rotomills, grinders & planers of all types. Articulating/end dumps (minus \$4.00/hour from Class 2 rate)

Class 3 - 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 Drillers - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled); Man lifts; 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; Rotator (Lime-Soil Stabilizer); Submersible Pumps (4 inches and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24 inches and under); Utility Operators; Material hoist/elevators.

Class 4 - Ballast Re-locator; Backfillers and Tampers; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Spreader; Conveyors, used for handling building materials; Concrete Mixers, one bag capacity (side loader); Concrete Mixers, capacity more than one bag; Crushers; Deck Hands; Drum Fireman (in Asphalt Plant); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators: Guniting Machines; Hydro-Seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2 inch discharge); Road Widening Trenchers; Rollers (except asphalt); All Concrete pumps (without Boom with 4 inch or smaller systems); Self-Propelled Power Spreaders; Concrete Spreaders; Self-Propelled Sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepfoot rollers or graders; VAC/ALLS; Vibratory Compactors, with integral power; Welder Operators.

Class 5 - Boilers (less than 15 lbs. pressure); 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); Signalmen, Submersible Pumps (under 4 inch discharge). Directional Drill Locator and Allen Screed Concrete Paver. Fueling and greasing (plus \$3.00), compact cranes; track or rubber under 4,000 pounds.

Class 6 - Master Mechanic

Class 7 - Boom & Jib 150 - 180 feet

Class 8 - Boom & Jib 180 - 249 feet

Class 9 - Boom & Jib 250 - or over

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - HevHwy II

Change # : LCN01-2016fbLoc18hevhwylI

Craft : Operating Engineer Effective Date : 06/01/2016 Last Posted : 06/01/2016

Classification	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Operator Class 1	\$33.84	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.34	\$65.26	
Class 2	\$33.72	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.22	\$65.08	
Class 3	\$32.68	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$47.18	\$63.52	
Class 4	\$31.50	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$46.00	\$61.75	
Class 5	\$26.04	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$40.54	\$53.56	
Class 6	\$34.09	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.59	\$65.64	
Class 7	\$34.09	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.59	\$65.64	
Class 8	\$34.34	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$48.84	\$66.01	
Great Lakes Floating Agreement												
Class 1	\$41.90	\$7.41	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$56.15	\$77.10	
Class 2A	\$40.40	\$7.41	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$54.65	\$74.85	
Class 2B	\$40.40	\$7.41	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$54.65	\$74.85	
Class 3	\$35.95	\$7.41	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$50.20	\$68.18	
Class 4	\$29.90	\$7.41	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$44.15	\$59.10	
Apprentice	Percent											
1st Year	50.00	\$16.92	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$31.42	\$39.88	
2nd Year	60.00	\$20.30	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$34.80	\$44.96	
3rd Year	70.00	\$23.69	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$38.19	\$50.03	
4th Year	80.00	\$27.07	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$41.57	\$55.11	
Field Mech Trainee Class 2												
1st year	49.82	\$16.86	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$31.36	\$39.79	
2nd year	59.78	\$20.23	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$34.73	\$44.84	
3rd year	69.73	\$23.60	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$38.10	\$49.89	

4th year	79.73	\$26.98	\$7.66	\$6.00	\$0.75	\$0.00	\$0.00	\$0.09	\$0.00	\$0.00	\$41.48	\$54.97
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Special Calculation Note : Other: Education & Safety Fund is \$0.09 per hour.

Ratio :

For every (3) Operating Engineer Journeymen employed by the company , there may be employed (1) Registered Apprentice. An apprentice, while employed as part of a crew per Article VIII paragraph 65, will not be subject the apprenticeship ratios in this collective bargaining agreement. On jobs where maintenance engineers are to be employed, for every (2) Class 2 Mechanics there may be (1) Mechanic Trainee & so fourth. Mechanic Trainee rate is a percentage of Class 2 rate.

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, 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 will 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 1 - Air Compressors on Steel Erection; Barrier Moving Machine; Boiler Operators, on Compressors or Generators, when mounted on a rig; Cableways, Combination Concrete mixers & Towers; Concrete Pumps; Concrete Plants (over 4 yd capacity); Cranes (all types, including Boom Trucks, Cherry Pickers); Derricks; Draglines, Dredgers (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, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial - Type Tractors; Jet Engine Dryers (D8 or D9), Diesel Tractors; Locomotives (standard gage); Maintenance Operators (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); Side Booms; Slip Form Pavers; Tower Dericks; Tree Shredders; Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators. Rough Terrain Fork-lift with Winch/Hoist; Compact Cranes, track rubber over 4,000 pound capacity, self-erecting cranes; stationary, track or truck (all configurations) Bucket trench machines (over 24 inches wide).

Class 2 - 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; Endloaders; Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Maintenance Operators, Class B (Portage and Summit Counties only); Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Trench Machines (24inch wide and under); Vermeer Type Concrete saw. Material Transfer Equipment (Shuttle buggy) Asphalt; All rotomills,grinders and planers of all types. Horizontal Directional Drill (Over 50,000 ft.lbs.thrust and over)

Class 3 - A-Frames; Air Compressors, on tunnel work (low Pressure); Asphalt Plant Engineers; Bobcat-type and/or skid steer loader with or without attachments; Power Boilers (15 lbs pressure and over); Highway Drills (all types); Rollers, asphalt; Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rotator (lime-soil Stabilizer), Switch & Tie Tampers (without lifting and aligning device); Locomotives (narrow gage); Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Utilities Operators, (small equipment); Welding Machines; Material hoist/elevators. Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

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

Class 5 - Compressors (portable, Sewer, Heavy and Highway); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters; Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalmen; Drum Fireman (in Asphalt Plant); Oil Heaters (Asphalt Plant); Tire Repairmen; VAC/ALLS; Fueling and greasing (plus \$3.00), compact cranes: track or rubber under 4,000 pounds.

Class 6 - Master Mechanic

Class 7 - Crane Boom 150 ft - 180 ft

Class 8 - Crane Boom over 180 ft .

GREAT LAKES FLOATING AGREEMENT:

Class 1 - Diver, Wet Tender, Engineer, (Hyd.Dredge), Craft Foreman (Master Mechanic)

Class 2A - Crane Backhoe Operator, Mechanic/Welder, Assistant Engineer (Hyd. Dredge), Leverman (Hyd Dredge) Diver Tender, Tug Operator (Tug 70T and over)

Class 2B - Friction Crane, Lattice Boom or any Crane Certification.

Class 3 - Deck Equipment Operator, (Machineryman), Maint. of Crane, Tug/Launch Operator, Loader/Dozer on Barge, Deck Machinery, Maintenance of Crane (over 50T capacity), or Backhoe

(115,000lbs or more) Loaders/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock Scow.

Class4 - Deck Equipment Operator, (Machineryman/Fireman)(4 equipment Units or more), Deck Hand, Tug Engineer, Crane Maintenance, 50T and under/Backhoe 115,000lbs or less, Assistant Tug Operator, add off Road Truck.

C O N T R A C T F O R M S

FORM OF NON-COLLUSION AFFIDAVIT

STATE OF OHIO

SS:

COUNTY OF:

Proposal Identification COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS

Contractor _____

being first duly sworn, deposes and says that he _____ (sole owner, a partner, president, secretary, etc.) of _____ the party making the foregoing Proposal; that such Proposal is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such Proposal is genuine and not collusive or sham; that said Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Proposal in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the Bid price of said Bidder or of any other Bidder, or to fix any overhead, profit, or cost element of such Bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract or anyone interested in the proposed Contract; that all statements contained in such Proposal are true; and, further, that said Bidder has not, directly or indirectly, submitted his Bid price or any breakdown thereof, or paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a membership or other financial interest with said Bidder in his general business.

Signed: _____

Title: _____

Sworn to before me and subscribed in my presence this ____ day of _____, 2016

Seal of Notary

Notary Public

CONTRACT

THIS CONTRACT, made and entered into this _____ day of _____, 2016, by and between the **Monroe Township Water and Sewer District**, acting by and through its duly authorized agent hereinafter designated the "Owner", and _____, of the City of _____, County of _____ and State of _____, hereinafter designated the "Contractor".

WITNESSETH: The Owner and Contractor, each in consideration of the undertakings, promises and agreements on the part of the other herein contained, have undertaken, promised and agreed and do hereby undertake, promise and agree, the owner for itself, heirs, executors, administrators, successors and assigns, as follows:

That the Contractor, in consideration of the sums of money herein specified to be paid by the Owner to the Contractor, shall and will at its own cost and expense, furnish all the labor, materials, tools and equipment for "**COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**", in accordance with the Contract Documents enumerated in the proposal at the unit prices quoted herein said Proposal being incorporated in and made a part of this Contract, all of said Work to be fully completed, in compliance with the Contract Documents, and to the acceptance of the Owner.

The Contractor further agrees to furnish all labor, materials, equipment, tools and services necessary to perform and complete in a workmanlike manner all work required, in strict compliance with the Contract Documents herein mentioned, on the following Addenda, all of which are hereby made a part of the Contract.

Addendum No.	Date
N/A	

Damages by Failure to Complete the Work Within the Time Agreed Upon, or so Extended. The Contractor hereby agrees that the Owner shall be, and they are hereby, authorized to deduct and retain out of the monies which may be due or become due to the Contractor, under this agreement, as damages for the noncompletion of the Work described herein within the time stipulated for its completion or within such further time as shall be fixed or allowed for such performances, or completion in accordance with the provisions of this agreement. Said damages shall be calculated and assessed in accordance with the schedule set forth in the General Requirements.

Provision of Law. Each and every provision of 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 mistakes 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.

IN TESTIMONY WHEREOF, the said parties have hereunto set their hands the day and year above written.

ATTEST:

(Owner)

By: _____

By: _____

Typed or Printed

Signature

Title

ATTEST:

(Contractor)

By: _____

By: _____

Typed or Printed

Signature

Title

LEGAL AND FISCAL OFFICERS
STATEMENT

Date: _____

I, _____, hereby certify that I am the _____
(Printed or Typed)

for _____, Ohio and that the amount of money to Wit \$ _____

required to meet the cost of the attached Contract between

_____ and _____.
(Owner) (Contractor)

has been or will be, prior to the ordering of any materials, lawfully appropriated for the purpose of said Contract and the money so appropriated is on deposit or in the process of collection to the credit of the appropriate fund, free from any previous encumbrances.

_____, 2016

By: _____

Title

AFFIDAVIT OF CONTRACTOR OR SUPPLIER OF
NON-DELINQUENCY
OF PERSONAL PROPERTY TAXES

O.R.C. 5719.042

STATE OF OHIO:

SS:

TO:

The undersigned, being first duly sworn, having been awarded a contract by you for the "**COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**", hereby states that we are not charged at the time the bid was submitted with any delinquent personal property taxes on the general tax list of personal property of any county in which you as a taxing district have territory and that we were not charged with delinquent personal property taxes on any such tax list.

In consideration of the award of the above contract, the above statement is incorporated in said contract as covenant of the undersigned.

Signed: _____

Title

Sworn to before me and subscribed in my presence this ____ day of _____, 2016

Seal of Notary

Notary Public

**CONTRACT
ADMINISTRATIVE
FORMS**

NOTICE OF AWARD

To: _____

_____.

PROJECT DESCRIPTION: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS

The Owner has considered the Proposal submitted by you for the above-referenced Work in response to the Legal Notice dated _____, 2016.

You are hereby notified that your Proposal has been accepted for item (s) AS SUBMITTED ON THE BID SCHEDULE in the amount of \$ _____.

You are required by the "Information for Bidders" to execute the Contract and furnish the required information within ten (10) calendar days from the date of this notice to you. Enclosed herewith are three (3) copies of the Contract Documents excluding the Construction Drawings. Upon completion, return all copies to the Engineer. Dates will be entered at the time the Owner signs the Contract. One (1) copy of the executed Contract Documents, excluding the Construction Drawings, will be returned to you.

If you fail to execute said Contract within ten (10) calendar 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 Proposal as abandoned. The Owner will be entitled to such other rights as may be granted by Law.

A Pre-Construction Conference is scheduled for _____ AM (local time) on _____, 2016, at _____.

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

Dated this _____ day of _____, 2016.

Owner

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged.

Contractor _____

This _____ day of _____, 2016

By _____

Title _____

NOTICE TO PROCEED

To: _____

DATE: _____, 2016

PROJECT:

**“COUNTRY ESTATES EAST WATER
AND SEWER IMPROVEMENTS”**

You are hereby notified to commence Work in accordance with the Contract dated _____, 2016, on or before _____, 2016, and you are to Fully complete the Work within 300 consecutive calendar days. The date of completion of all Work is therefore _____, 2016.

**Monroe Township Water
and Sewer District**

Owner

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged.

Contractor _____

This _____ day of _____, 20__

By _____

Title _____

NOTICE OF COMMENCEMENT OF PUBLIC IMPROVEMENT

STATE OF OHIO:

SS:

COUNTY OF:

_____, being first duly cautioned and sworn, states that she is the Treasurer of the **Monroe Township Water and Sewer District**, a District duly organized under the laws of and as a political subdivision of Miami County with its principal business office located at the following address: **4 E. Main Street, Tipp City, Ohio 45371**; that she is authorized by said District to give this Notice of Commencement; that the information contained hereinbelow is true and accurate as of the _____ day of _____, 2016; and that

- 1) Notice is hereby given, pursuant to Section 1311.252 of the Ohio Revised Code, that a public improvement duly authorized by the aforementioned District is about to commence.
- 2) The name, location and project number, if any of said public improvement are as follows:

COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS.

- 3) The names, addresses and trades of the principal contractors for said public improvement are as follows:

a) _____

b) _____

c) _____

- 4) The names and addresses for all sureties for the principal contractors on said public improvement are as follows:

a) _____

b) _____

c) _____

d) _____

5) For purposes of serving an Affidavit pursuant to Section 1311.26 of the Ohio Revised Code, the following representative has been duly authorized by said Village to accept such service:

Name

4 E. Main Street
Address

Tipp City, Ohio 45371
City, State Zip Code

6) This Notice of Commencement has been placed on file and is open for public inspection from 8:00am to 4:00pm, Monday through Friday, at
(time) (days)
the offices of **Monroe Township Water and Sewer District** located at **4 E. Main Street, Tipp City, Ohio 45371**

Further Affiant sayeth naught.

AFFIANT

Sworn to before me and subscribed in my presence this ___ day of _____, 20__

Notary Seal

Notary Public

CHANGE ORDER

Project No. _____

Order No. _____

Date _____

Current Contract Date _____

NAME OF PROJECT: _____

OWNER: _____

CONTRACTOR: _____

The following changes are hereby made to the Contract Documents:

1. CHANGE TO CONTRACT PRICE: Original Contract Price \$ _____
 Previous Change Order Adjustment to Contract Price: \$ _____
 Current Contract Price: \$ _____
 This Change Order will (increase)(decrease) the Contract Price By: \$ _____
 The New Contract Price, including this Change Order is: \$ _____

2. CHANGE TO CONTRACT TIME: Original Completion Date _____
 Total Time Extensions Granted to date: _____
 This Change Order will (increase)(decrease) the Contract Time by _____ calendar days.
 The New Date for Completion of all Work is: _____
 Date

3. TERMS OF CHANGE ORDER: To be effective, this Change Order must meet all the requirements of the Contract Documents. The following listed enclosures (if any) shall be a part of this Change Order, all of which shall thereby become a part of the Contract Documents.

4. SIGNATURES: This Change Order is:

Requested By: _____ Date _____

 Title

Recommended By: _____ Date _____

 Title

Accepted By: _____ Date _____

 Title

Ordered By: _____ Date _____

 Title

Exceptions, if any, are attached herewith _____ yes _____ no.

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____

DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
WATERLINE IMPROVEMENTS						
203	CLEARING & GRUBBING		LUMP	SUM		
301	BTUMINOUS AGREGATE BASE		542	C.Y.		
304	AGGREGATE BASE (ROADWAY REPAIR)		542	C.Y.		
304	AGGREGATE BASE (DRIVE REPAIR)		4	C.Y.		
407	TACK COAT (0.10 GAL/SY)		325	GAL.		
408	PRIME COAT (0.35 GAL/SY)		1138	GAL.		
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (ROADWAY REPAIR)		180	C.Y.		
452	NON-REINFORCED CONCRETE PAVEMENT		58	S.Y.		
603	8" CONDUIT, TYPE D, 707.01, CONTINGENCY ITEM		100	L.F.		
603	12" CONDUIT, TYPE D, 707.01		100	L.F.		

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____
 DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
603	6" CONDUIT, TYPE B, 707.33		100	L.F.		
609	CURB REPLACEMENT		640	L.F.		
614	MAINTAINING TRAFFIC		LUMP	SUM		
659	SEEDING & MULCHING		932	S.Y.		
670	EROSION CONTROL		LUMP	SUM		
748	8" GATE VALVE /W TRAFFIC TYPE BOX		16	Each		
748	8" DI WATER LINE AND APPURTENANCES		7001	L.F.		
748	CONNECT TO EXSITING WATERLINES		2	Each		
748	FIRE HYDRANT W/ WATCH VALVE & BOX (TYPE A)		16	Each		
748	FIRE HYDRANT W/ WATCH VALVE & BOX (TYPE B)		2	Each		
748	3/4" SHORT WATER SERVICE W/ METER BOX COMPLETE		38	Each		

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____
 DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
748	3/4" LONG WATER SERVICE W/ METER BOX COMPLETE		36	Each		
748	1" SHORT WATER SERVICE W/ METER BOX COMPLETE		4	Each		
748	1" LONG WATER SERVICE W/ METER BOX COMPLETE		7	Each		
SPEC	MASTER METER PIT COMPLETE		2	Each		
SPEC	12"X8" TAPPING SLEEVE AND VALVE		1	Each		
SPEC	EVANSTON ROAD CROSSING		LUMP	SUM		
SANITARY SEWER IMPROVEMENTS						
203	CLEARING & GRUBBING		LUMP	SUM		
301	BTUMINOUS AGREGATE BASE		542	C.Y.		
304	AGGREGATE BASE (ROADWAY REPAIR)		542	C.Y.		

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____

DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
304	AGGREGATE BASE (DRIVE REPAIR)		4	C.Y.		
407	TACK COAT (0.10 GAL/SY)		325	GAL.		
408	PRIME COAT (0.35 GAL/SY)		1138	GAL.		
448	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (ROADWAY REPAIR)		180	C.Y.		
452	NON-REINFORCED CONCRETE PAVEMENT		5	S.Y.		
609	CONCRETE CURB REPLACED		700	L.F.		
611	8" CONDUIT, TYPE D, 707.01, CONTINGENCY ITEM		100	L.F.		
611	12" CONDUIT, TYPE D, 707.01		100	L.F.		
611	6" CONDUIT, TYPE B, 707.33		100	L.F.		
611	STANDARD MANHOLE		22	EACH		
611	DROP MANHOLE		1	EACH		

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____
 DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
614	MAINTAINING TRAFFIC		LUMP	SUM		
659	SEEDING & MULCHING		4,970	S.Y.		
670	EROSION CONTROL		LUMP	SUM		
611	8" SANITARY SEWER		5958	L.F.		
611	6" SANITARY SEWER HOUSE SERVICE		1580	L.F.		
611	8" x 6" WYE		62	EACH		
SPEC.	ABANDON PUMP STATION, COMPLETE		LUMP	SUM		
SPEC.	SANITARY FLOW METER, COMPLETE		2	EACH		
SPEC.	ADDITIONAL GRANULAR BACKFILL		3075	C.Y.		
	TOTAL AMOUNT DUE TO DATE					

CONTRACT PAYMENT SCHEDULE

Project: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
 Project No. 2772

PAY REQUEST NO.: _____
 DATE: _____

TYPE OF FUNDING: LOCAL

Sect. No.	Description of Work	Est. % Comp.	Est. Quan. Comp.	Unit	Unit Price	Total Price
	LESS RETAINAGE					
	DELIVERED MATERIALS					
	BALANCE DUE TO DATE					
	LESS PREVIOUS PAYMENT					
	NET AMOUNT DUE THIS DRAW					

We certify and agree that the amount of _____ is an accurate estimate of the amount due this Draw on the subject project as of _____

Validated in the amount of _____

 Contractor Date

Approved By: _____
 Sands Decker CPS, LLC Date
 Project Engineer

 Owner Date

 Title

**CERTIFICATE OF
SUBSTANTIAL COMPLETION**

TO: Monroe Township Water and Sewer District (Owner)
DATE OF SUBSTANTIAL COMPLETION: _____
PROJECT TITLE: **COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS**
PORTIONS OF THE WORK CONSIDERED SUBSTANTIALLY COMPLETE: _____

LOCATION: _____
OWNER: _____
CONTRACTOR: _____

The Work as indicated above is hereby declared to be substantially complete on the above date.

DEFINITION OF SUBSTANTIAL COMPLETION

The Work shall be considered substantially complete when the improvement is functional and may be used by the Owner for its design-intended purpose, all in accordance with the Contract Documents. The purpose of declaring the Project Substantially Complete is to commence the warranty period for major project components. Substantial completion does not relieve the Contractor of the obligation to fully complete the project or be subject to Liquidated Damages.

A tentative list of items yet to be completed is appended hereto. This list may not be exhaustive, and the failure to include an items on it does not alter the responsibility of the Contractor to complete all the Work as described in the Contract Documents.

ENGINEER

By _____
AUTHORIZED REPRESENTATIVE

DATE

The Contractor accepts the Certificate of Substantial Completion and agrees to correct any deficiencies and complete all Work as described in the Contract Documents.

CONTRACTOR

By _____
AUTHORIZED REPRESENTATIVE

DATE

The Owner accepts the Work as substantially complete and will assume full possession of the Work at ____ (time), on _____ (date), subject to the Contractor being responsible to fully complete the Work as described in the Contract Documents and to repair or replace any Work damaged or destroyed while completing all Work as described in the Contract Documents. The responsibility for heat, utilities, security, and the all risk insurance for the substantially completed Work only shall become the responsibility of the Owner at the time and date stated in this paragraph.

OWNER

By _____
AUTHORIZED REPRESENTATIVE

DATE

**CERTIFICATE OF
FINAL COMPLETION**

TO: Monroe Township Water and Sewer District (Owner)
DATE OF SUBSTANTIAL COMPLETION: _____
PROJECT TITLE: COUNTRY ESTATES EAST WATER AND SEWER IMPROVEMENTS
LOCATION: _____
OWNER: Monroe Township Water and Sewer District _____
CONTRACTOR: _____

The Work as indicated above is hereby declared to be complete as designed and ready for Final Acceptance by the Owner.

DEFINITION OF FINAL COMPLETION

The Work shall be considered finally complete when the Owner determines that the Work is sufficiently complete as designed in the Contract Documents, including all Work identified as outstanding or incomplete in the Certificate of Substantial Completion or in subsequent notices to the Contractor, and the project has been accepted for full use and operational control by the Owner. The Contractor is subject to Liquidated Damages for failure to complete the Work within the allotted time until this Certificate of Final Completion is executed by the Owner.

Sands Decker CPS, LLC.
ENGINEER

By _____
AUTHORIZED REPRESENTATIVE

DATE

The Contractor accepts the Certificate of Final Completion.

CONTRACTOR

By _____
AUTHORIZED REPRESENTATIVE

DATE

The Owner accepts the Work as finally complete and will assume full possession of the Work at 12:00 P.M., on _____, subject to the Contractor being responsible to fully complete the Work as described in the Contract Documents and to repair or replace any Work damaged or destroyed while completing all Work as described in the Contract Documents. The responsibility for heat, utilities, security, and the all related costs relevant to owning, operating, and maintaining the completed Work shall become the responsibility of the Owner at the time and date stated in this paragraph.

Monroe Township Water and Sewer District
OWNER

By _____
AUTHORIZED REPRESENTATIVE

DATE

**GENERAL
REQUIREMENTS**

GENERAL REQUIREMENTS

<ul style="list-style-type: none"> 1.1 DEFINITIONS 1.2 PRE-CONSTRUCTION CONFERENCE AND PROGRESS SCHEDULE 1.3 WORK PROGRESS AND COMPLETION 1.4 TIME EXTENSION 1.5 FAILURE TO COMPLETE ON TIME 1.6 FAILURE TO COMPLY WITH OWNER'S DIRECTIVES 1.7 CONSTRUCTION LAYOUT STAKES 1.8 PLANS AND WORK DRAWINGS 1.9 CONSTRUCTION PROGRESS MEETING 1.10 CONTRACTOR TO CHECK CONTRACT DOCUMENTS 1.11 FIELD OFFICE 1.12 CONTRACTOR'S EMPLOYEES 1.13 CONTRACTOR'S INSURANCE 1.14 INDEMNITY PROVISION 1.15 ASSIGNMENT OF THE CONTRACT AND SUBCONTRACTING 	<ul style="list-style-type: none"> 1.16 CONTRACTOR NOT RELEASED BY SUBCONTRACTORS 1.17 TERMINATION FOR UNSATISFACTORY PROGRESS, BREACH OF CONTRACT 1.18 DAMAGES FROM FRAUD 1.19 PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS 1.20 COOPERATION BETWEEN CONTRACTORS 1.21 INCREMENTAL PAYMENT SCHEDULE 1.22 CHANGE ORDERS AND EXTRA WORK 1.23 MONTHLY ESTIMATES 1.24 FINAL QUANTITIES & PAYMENT 1.25 FINAL CLEAN-UP 1.26 FINAL ACCEPTANCE & PAYMENT 1.27 PROJECT SIGNS
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- 1.1 **DEFINITIONS:** These are in addition to the definitions of Chapter 1, Section 101 of the Construction and Material Specifications. When the following words, or pronouns used in their stead occur in the Contract Documents, the intent and meaning in both singular and plural shall be as given herein.
 - 1.1a **Contract:** A written agreement between the Contractor and the Owner, describing the obligations of parties signatory to the agreement including performance of the Work; the furnishing of labor, materials and equipment; and the basis of payment.
 - 1.1b **Contractor:** The party or parties entering into a contract or contracts with the Owner to complete parts or all of the Project as defined in these Contract Documents, or the Contractor's duly authorized representative, legally empowered to act on the Contractor's behalf.
 - 1.1c **The Project:** The location and description of Work as shown on the Construction Drawings and described in the Contract Documents to be executed and finished under the terms of the Contract.
 - 1.1d **Subcontractor:** All persons, partnerships or corporations having contracts awarded them by the Contractor or Subcontractor to do or perform any part of the Project, or said Subcontractor's duly authorized representative, legally empowered to act on the Subcontractor's behalf.

- 1.1e Supplier or Materialman: Any person, partnership, corporation, or organization and their duly authorized representative, legally empowered to act on their behalf, who supplies materials or equipment for the Project, including that fabricated to special design, but who does not perform labor at the site.
- 1.2 **PRE-CONSTRUCTION CONFERENCE AND PROGRESS SCHEDULE**: a pre-construction conference between the Owner, Contractor and such other parties as deemed appropriate by the Owner will be held following the award of the Contract and prior to the beginning of the Project. Prior to the conference or at a time agreeable to the Owner, but prior to beginning the Project, the Contractor shall submit a progress schedule. The schedule shall show the Contractor's plan to carry out all the Work, the dates on which the Contractor and subcontractors will start and complete the critical features of the Work, including procurement of materials, equipment and supplies; testing as required; and the standard drawing and material submissions as required. The schedule shall show the sequencing of the Work and the dates for substantial and final completion. Prior to beginning the Project and after such adjustments as agreed to by the Owner and Contractor have been made, the Owner shall accept the schedule as the Contractor's commitment to completing the critical features of the Work and the Project on the dates shown in the progress schedule. No allowance shall be made for any claim that the bid was based upon a schedule not in compliance with the schedule accepted as described above. Failure of the Contractor to comply with the requirements of this section may be considered just cause to terminate the Contract.
- 1.3 **WORK PROGRESS AND COMPLETION**: The Contractor shall start the Work in accordance with the requirements of Section 1.2. The Contractor shall notify the Owner at least 48 hours before beginning any work and keep the Owner informed of progress throughout the contract period. The Work shall be diligently and continuously carried to completion. The Contractor agrees to provide at all times an adequate force of labor and sufficient materials and equipment to insure the completion of the contract within the time allowed. The progress of the Work shall be at a rate sufficient to complete the contract in an acceptable manner within the time allowed. The Contractor shall submit with each pay estimate a report relating the actual progress to the accepted progress schedule. The report shall include the Contractor's plan for bringing the progress that is lagging on any critical feature into compliance with the schedule or shall be accompanied by a revised progress schedule for the Owner's review and acceptance. The revised schedule should identify the actions to be taken to bring the progress on the critical features back into compliance with the total project progress schedule and/or identify those circumstances beyond the Contractor's control that are causing delays, with a description of the Contractor's actions to minimize the effects of the delay. **THE SUBMISSION OF A REVISED PROGRESS SCHEDULE DOES NOT CONSTITUTE A REQUEST FOR TIME EXTENSION AS PROVIDED IN SECTION 1.4.** Failure to provide an accurate, appropriate schedule may be grounds for the suspension of the Work. Any cost incurred by the Owner because of the rescheduling of Work shall be deducted from the amounts due the Contractor as provided in Section 1.5 except for the reasons stated in Section 1.4 or due to Owner-initiated Project revisions.

- 1.4 TIME EXTENSION: The Contractor shall complete the Work on or before the calendar date specified in these Contract Documents, or on or before a later date determined as specified herein. Otherwise, the Owner shall proceed as provided in Sections 1.5 and 1.17. If Contract revisions will cause delays in the completion of the Work, or if the Contractor finds it impossible, for reasons beyond his control, to complete the Work by the date specified or as extended in accordance with the provisions of this section, the Contractor shall make a written request to the Owner for an extension of time setting forth therein the reasons which the Contractor believes will justify the granting of the request. Granting of time extension for delays herein described shall not entitle the Contractor to damage claims or compensation because of the delay.
- 1.4a The Contractor's assertions that insufficient time was specified is not a reason for extension of time. If the Owner finds that the Work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion in such amount as the conditions justify.
- 1.4b Requests for extensions of time, other than for weather or seasonal conditions, shall be submitted in writing to the Owner within 30 days following the termination of the delay and prior to the expiration of the contract time in force before the request.
- 1.4c Requests for extensions of time due to weather or seasonal conditions shall be submitted in writing to the Owner at the end of each month. The time between December 1 and April 30 is considered winter months and no extension will be granted for the contract completion date. It is anticipated that four (4) workdays will be lost in each of the months between May 1 and November 30. No time extension will be granted for a month until four (4) workdays have been lost for that month. The contract completion date shall be extended by one (1) day for each workday lost because of weather over four (4) workdays per month between May 1 and November 30. A workday will be counted as lost if the Contractor can't work more than half a day on the critical features under construction at that time. Weekends and holidays will not be counted as lost workdays unless the Contractor normally works those days. The extended time for completion shall then be in full force and affect the same as though it were the original time for completion.
- 1.5 FAILURE TO COMPLETE ON TIME: If the Contractor fails to complete the Work within the time or times allowed by the Contract Documents or fails to complete portions of the Work as shown on the accepted progress schedule, and if the Owner is satisfied that the Contractor is carrying the Work forward with reasonable progress and deems it to be in the best interest of the public, the Owner may allow the Contractor to continue in control of the Work. It shall be necessary for the Contractor to make written application to the Owner in order to warrant such continuance. Payments to the Contractor for Work performed and materials furnished will be made if such written application is accepted and approved by the Owner.

When the Work is not completed within the time or times allowed by the contract and the Contractor is permitted to remain in control, the Work shall be prosecuted at as many different places, at such times and with such forces as the Owner may request. The Contractor shall be required to provide a written plan for the completion of the Work. Acceptance by the Owner of said plan does not release the Contractor from the responsibility to cover the costs incurred by the Owner because of the delay.

For each calendar day that any portion of the Work remains uncompleted after the contract or scheduled completion date or dates, the sum specified in Section 1.5b will be deducted from any money due the Contractor, not as a penalty but as liquidated damages; provided, however, that due account shall be taken of any adjustment of the completion date or dates granted under the provisions of Section 1.4. In the event the completion date on the progress schedule is missed for more than one critical feature, the amount set forth in the Schedule of Liquidated Damages shall be determined using the total contract amount for the uncompleted critical features.

Permitting the Contractor to continue and finish the Work or any part of the Work after the date or dates fixed for completion, or after the date or dates to which completion may have been extended, shall not be considered as a waiver on the part of the Owner of any of its rights under the contract.

The Owner may waive such portions of the liquidated damage as may accrue after the Work is in a condition for safe and convenient use by the public.

1.5a The Owner-incurred costs in liquidated damages shall include the costs of direct and indirect project administration, attorney fees, construction layout and observation, clerical support, testing, engineering, and loss of use of the Work. The Owner-incurred costs, which are not part of the liquidated damages, include any cost incurred to terminate the contract in accordance with Section 1.17 and to complete the unfinished portions of the Project.

1.5b SCHEDULE OF LIQUIDATED DAMAGES.

Original Contract Amount (Total Amount of the Bid)		Amount of Liquidated Damages to be deducted for Each Calendar Day of Overrun in Time
From More Than	To and Including	
\$0	\$50,000	\$150.00
\$50,000	\$500,000	\$300.00
\$500,000	\$2,000,000	\$600.00
\$2,000,000	\$5,000,000	\$900.00
\$5,000,000	\$10,000,000	\$1,100.00
OVER \$10,000,000		\$1,200.00

- 1.6 FAILURE TO COMPLY WITH OWNER'S DIRECTIVES: Failure of the Contractor to comply with the Owner's directions is just cause for the Owner to make such corrections as are necessary to correct defective or unauthorized work and deduct the cost from the monies due the Contractor, or to terminate the contract as stipulated hereinafter, or both.
- 1.7 CONSTRUCTION LAYOUT STAKES: Field layout of the lines and grades for this Project as described in the Specifications will be provided by the owner.
- 1.8 PLANS AND WORK DRAWINGS: The Contractor shall keep a complete set of Contract Documents, including plans, change orders and shop drawings, on the Project site at all times for the use of those legitimately interested.
- 1.9 CONSTRUCTION PROGRESS MEETING: At a mutually convenient location and time as determined by the Owner, the Contractor shall meet with the Owner to discuss construction activities. Minutes of these meetings will be kept by the Owner and a copy given to the Contractor. If no objections to the minutes are received in writing within ten (10) calendar days of the date the minutes are mailed or delivered, the minutes will be considered accurate and entered into the project file. Any objection must specifically identify the items for which the objection is made and describe the proposed correction.
- 1.10 CONTRACTOR TO CHECK CONTRACT DOCUMENTS: The Contractor shall check all dimensions and quantities on the Drawings or Schedules given to him and shall notify the Owner of any errors or omissions therein which he may encounter. The Contractor will not be allowed to take advantage of any error or omission in the Contract Documents, as full instructions will be furnished should such an error or omission be encountered. The Contractor shall carry out such instructions as if originally specified.
- 1.11 FIELD OFFICE: When shown as an item on the Bid Schedule of the Proposal, the Contractor shall maintain a field office of at least 150 sq. ft. located conveniently to the Work in which a separate desk, chair, file cabinet, telephone, light, and heat shall be provided for the exclusive use of the Owner. This office may be part of the Contractor's office; however, the Owner's office shall be separated by doors and partitions to provide a soundproof barrier between the two offices and the offices shall have separate entrances from the outside.
- 1.12 CONTRACTOR'S EMPLOYEES: The Contractor shall keep a competent superintendent on the Project and such employees as necessary to diligently prosecute the Work. Said superintendent shall represent the Contractor in his absence and all directions given to him and/or by him shall be binding to the Contractor. The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Project any unfit person or anyone not skilled in the work assigned to him. The Owner will have the authority to order the dismissal of any employee on the Project who refuses or neglects to obey any instructions of the Owner or the construction review personnel relating to the carrying out of the provisions and intent of the Contract Documents, or who is competent, unfaithful, abusive, threatening or disorderly in his conduct, and such person shall not again be employed on the Project.

1.13 **CONTRACTOR'S INSURANCE:** The Contractor shall present to the Owner, at the time of the execution of the Contract, evidence or certificates of having obtained all insurance required herein. The Work shall not commence until said evidence of insurance has been received by the Owner. It is the Contractor's responsibility to obtain such certificates as are required herein for all Subcontractors prior to their commencing with any Work. All policies must provide that at least thirty (30) days prior written notice be given to the Owner should the policies be terminated or changed in any way which affects the insurance requirements hereunder, during the performance of the Work.

1.13a Compensation Insurance: The Contractor and any Subcontractors shall take out and maintain, during the life of this Contract, Workman's Compensation Insurance for all of their employees working at the site of the Project, pursuant to the requirements of the State of Ohio. Compensation insurance for Employer's Liability coverage with a limit of One Million Dollars (\$1,000,000.00) shall also be taken out.

1.13b Contractor's Liability Insurance: The Contractor agrees to maintain Comprehensive General and Automobile Liability Insurance covering all operations directly or indirectly incident to the Work under this Contract whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by either of them. Such insurance coverage shall be maintained during the life of this Contract in the types and amounts herein specified. Such Comprehensive General and Automobile Liability Insurance shall include coverage for:

- 1) Claims arising after the Contractor and Subcontractors have completed their Work (completed operations and products liability coverage); and,
- 2) Claims for property damage and personal injury arising from excavation or tunneling operations; and,
- 3) Claims for property damage and personal injury arising from operations directly or indirectly incident to moving, shoring underpinning, scaffolding hoisting, razing, blasting or demolition of any building or structure; and
- 4) Claims for property damage to any property below, on or above the surface of the ground, and off-site property; and
- 5) Claims for property damage and personal injury arising from operations directly or indirectly incident to welding, cutting, sand blasting, grinding, using other abrasives, or painting, however caused; and,
- 6) Claims for property damage and personal injury arising from operations directly or indirectly incident to blasting or explosions, however caused; and,

- 7) If watercraft and/or aircraft are used, claims arising from their use or operation, and,
- 8) Claims arising from the liability assumed by the Contractor under this Contract including third party beneficiary liability coverage.

1.13c Coverage Limit: The limits of liability of the insurance required for Comprehensive General and Automobile liability shall be not less than One Million Dollars (\$1,000,000.00) per occurrence, combined single limit for bodily injury and property damage including products and completed operations, and personal injury.

There shall also be Umbrella Liability Insurance providing excess limits over the General Liability, and Employer's Liability coverage with limits of Five Million Dollars (\$5,000,000.00).

1.13d Owner's Protective Liability Insurance: The Contractor agrees to provide an Owner's Protective Liability Insurance policy naming the Owner and the Engineer as the insured, covering the conditions outlined in 1.13b, and with the same limits of liability described in 1.13c. In lieu of this requirement, the Contractor shall name the Owner and the Engineer as insured in his Comprehensive, General and Automotive Liability policy, or Umbrella Liability Insurance.

1.13e All Risk Builder's Insurance: The Contractor shall procure and maintain during the life of this Contract, All Risk Builder's Insurance (Fire and Extended Coverage) on a 100% completed value basis on the insurable portion of the Project. The Owner, the Engineer, the Contractor, and the Subcontractors, as their interests may appear, shall be named as the insured.

1.14 INDEMNITY PROVISION:

1.14a The Contractor shall indemnify and hold harmless the Owner, the Engineer, and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense:

- 1) Is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and
- 2) Is caused, in whole or in part, by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them

may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

- 1.14b The Contractor is skilled and experienced in the use and interpretation of Contract Documents. He has carefully reviewed the Contract Documents for this Project and has found them to be free of ambiguities and sufficient for bid purposes. Further, he has carefully examined the Project site, and from his own observations, has satisfied himself as to the nature and location of the Work; the character, quality and quantity of materials; the difficulties likely to be encountered; and any other items that may affect the execution of the Work. He has based his bid solely on these documents and observations and has not relied in any way on any other explanation or interpretation, oral or written, from any other source. Therefore, the Contractor agrees to limit the liability of the Owner and the Engineer for professional negligence, errors or omissions of the Engineer to a total aggregate sum of Fifty Thousand Dollars (\$50,000.00) or the Engineer's total fee for services rendered on this Project, whichever is less.
- 1.15 **ASSIGNMENT OF THE CONTRACT AND SUBCONTRACTING:** The Contractor agrees that he will not assign this Contract, or any part thereof, or any of the money or orders payable under the Contract without the previous written consent of the Owner and the Contractor's sureties endorsed on this Contract, if any, but will keep the same under his personal control. No right under this Contract, nor to any monies or orders due or to become due hereunder, shall be asserted against the Owner, or any department, office or officers thereof, by reason of any such assignment, in law or equity, of this Contract or any part thereof or of any monies or orders payable thereunder unless such assignment has authorized by the written consent of the Owner and the Contractor's sureties endorsed on this Contract. No person other than the Contractor has any claim thereunder, and no claim shall be made except under this specific clause of this Contract, and under that clause relating to claim of workmen and materialmen.
- 1.16 **CONTRACTOR NOT RELEASED BY SUBCONTRACTORS:** No Subcontract shall, under any circumstances, relieve the Contractor of his liabilities and obligations under this Contract. Should any Subcontractor fail to perform the Work undertaken by him in a satisfactory manner, and should this provision be violated, the Owner may end and terminate the Contract. The Subcontractor shall be governed by all requirements governing the Contractor.
- 1.17 **TERMINATION FOR UNSATISFACTORY PROGRESS, BREACH OF CONTRACT:** If the Contractor has not commenced his Work within the time stated in this contract, or does not carry the same forward with reasonable progress or in accordance with the acceptable progress schedule, or is improperly performing his Work, or has abandoned the Work, or fails or refuses to complete the Work, or has violated any provision of this Contract, the Owner, upon making a finding to that effect, shall notify in writing the Contractor and the Contractor's surety, if any, of the Owner's intent to terminate the Contract. Such violations shall cease and satisfactory arrangement for correction shall be made within ten (10) days after the serving of such notice upon the Contractor or the

Contract shall cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the surety, if any. The surety shall have the right to take over and perform the Contract provided, however, that if the surety does not begin work within thirty (30) days from the date of the mailing of the notice of termination to the surety, the Owner may take over the project and prosecute it to completion at the expense of the Contractor. The Contractor and his surety shall be liable to the Owner for any excess cost, in addition to the accrued and charged liquidated damages, occasioned the Owner for completing the Project. Upon taking over the project to complete it, the Owner may take possession of and utilize in completing the Work such materials, equipment, appliances, and plant as may be on the site of the Work and necessary therefore.

- 1.18 DAMAGES FROM FRAUD: Nothing in this section nor in any provision of these Contract Documents shall be construed as barring the Owner at any time from recovering the damages of such monies as may be needed to rebuild any or all portions of the Project in which fraud was practiced or improper material or work was hidden, whenever found.
- 1.19 PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS: All fees for any patented invention, article or arrangements that may be used in any manner connected with the construction, erection, operation, or maintenance of the Work, or any part thereof, embraced in these Contract Documents shall be included in the amount bid and subsequently referred to in the Contract for this Project. The Contractor shall protect and hold harmless the Owner against any and all demands for such fees or claims. Prior to the release of the final payment or settlement on account of the Contract, the Contractor shall furnish acceptable proof of a proper and satisfactory release from all such claims.
- 1.20 COOPERATION BETWEEN CONTRACTORS: The Owner reserves the right to, at any time, contract for and perform other or additional work on or near the work covered by the Contract.
- 1.20.01 When separate contracts are let within the limits of a Project, each Contractor shall conduct his Work so as not to interfere with or hinder the progress or completion of the Work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.
- 1.20.02 Each Contractor involved shall assume all liability, financial or otherwise, in connection with his Contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same Project.
- 1.20.03 The Contractor shall arrange his Work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same

project. He shall join his Work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

1.21 INCREMENTAL PAYMENT SCHEDULE: The following table will be used to establish a uniform method for determining the estimated value of the Work satisfactorily completed for inclusion in a pay request.

ITEMS	PERCENTAGE OF INVOICE	PERCENTAGE OF PAY ITEM			
	a.	b.	c.	d.	e.
Equipment, meters, controls, work inside tanks and buildings	92	80	5	10	5
Site Work including fencing, site piping, concrete, roadways, and electrical and telephone wiring	None	85	5	5	5
Seeding and Mulching	None	90	-0-	5	5
Clearing and Grubbing	None	90	10	-0-	-0-
Excavation and Embankment	None	80	10	5	5
Sewers, water lines, and force mains	92	60	20	15	5
Structures including catch basins, manholes, tankage, booster stations, lift stations, water tanks, and building shells	92	75	10	10	5

1.21a Acceptable delivered materials securely stored.

1.21b Item installed and, when required, backfilled.

1.21c Removal of debris, rocks, trees, stubs and cuttings, and excess soil; rough grading (to within 0.3' of final grade); temporary repair or placement of fences, mail boxes, driveways, roads and other utilities or facilities removed or damaged during construction; and installation of erosion control measures.

1.21d Necessary tests passed.

1.21e Final cleanup and preparation of seeding, sodding, mulching, and pavement replacement.

1.22 CHANGE ORDERS AND EXTRA WORK: The Owner may, by written Change Order to the Contractor, make alterations in the Contract Documents involving increases or decreases in the quantity of Work as may be necessary or

desirable. Such Change Order shall not be considered as a waiver of any of the Conditions of the Contract, nor invalidate any of the provisions thereof.

1.22a Extra Work: Extra Work is authorized new work made necessary by alterations of the Contract Documents or the Work other than that required to complete the improvement as detailed in the Contract Documents. Extra Work shall be performed by the Contractor in accordance with the Contract Documents where applicable. Work not covered by the Contract Documents shall be done in accordance with the best practice as determined by the Owner, provided, however, that before any Extra Work is started, a written Change Order from the Owner shall be delivered to the Contractor who shall proceed only as directed by the Owner. The value of the Extra Work shall be determined in one or more of the following ways:

- 1) By an agreed lump sum.
- 2) By an agreed unit price.
- 3) By force account.

When agreement on a unit price or lump sum cannot be reached or when the Owner requires it, the Contractor shall do the Extra Work on the force account basis. The compensation for the force account work will be established in accordance with Item 109.04 (ODOTCMS).

1.23 MONTHLY ESTIMATES: On the first of each month, or within seven days thereof, during the Work, the Contractor shall prepare and submit to the Owner a pay request for the estimated value of the Work satisfactorily completed, including work on completed change orders and/or suitable materials delivered to the site. Partial payment to the Contractor for Work performed under a lump sum price shall be based on a detailed breakdown of the bid as reviewed by the Engineer and accepted by the Owner prior to any payment being made. Payment of an estimate which has been reviewed by the Engineer will be made thirty (30) days after acceptance by the Owner. Said pay requests shall be in such form and detail as provided herein.

1.23a Retainage: Acceptable materials delivered to the site but not yet incorporated in the Work will be paid for at 92% of the invoice value. Until the Project is 50% complete based on the amount due the Contractor, the Contractor will be paid 92% of the estimated value of the Work satisfactorily completed as determined in Section 1.21. This 8% retainage of the first 50% of the Project will be held by the Owner until thirty (30) days after the final acceptance of the Project. After the Project is 50% complete, labor and material incorporated in the Work will be paid for at 100%.

1.23b Owner's Right to Withhold Certain Amounts: Upon non-payment by the Contractor for a period of ten (10) days after the due date of just claim for labor done under this Contract or upon non-payment by the Contractor for a period of thirty (30) days after the due date of just claims for material

furnished under this Contract, the Owner may retain from subsequent estimates due the Contractor such amounts as the Owner deems necessary in order to pay such overdue claims.

- 1.24 **FINAL QUANTITIES AND PAYMENT:** The Contractor shall receive and accept compensation provided for in the Contract Documents as full payment for furnishing all materials and performing all Work under the Contract in order to provide a complete and usable system and/or facility, and for all risk, loss, damage or expense of whatever character arising out of the nature of the Work or the prosecution thereof. Except as otherwise provided for in any Extra Work authorization, full payment shall be based on the original unit prices and the actual quantity of Work performed in accordance with these Contract Documents. The final payment shall constitute full compensation for all Work required herein. No allowances or extra payment will be made over and above these amounts for unforeseen difficulties or delays during the execution of the Work; for increased expenses or loss of reimbursement or anticipated profits resulting either directly or indirectly from Change Orders, from alterations in bid quantities, or due to unbalanced allocation for all Contractor's expenses throughout the Contract and/or Change Order items, or due to errors or omissions by the Contractor during bidding or agreement of prices; or for any other cause.
- 1.25 **FINAL CLEAN-UP:** The Contractor shall clean up the Project site and associated areas in accordance with the Specifications. The Contractor shall not receive additional monies over and above the Contract price for final clean-up.
- 1.26 **FINAL ACCEPTANCE AND PAYMENT:** After all requirements of the Contract Documents have been fulfilled; all Work has been completed as specified; all manuals, instructions, guarantees, other literature and parts have been supplied; and the Project site has been cleaned up; the Engineer and the Owner will make a final review. This final review shall also be made by any other regulatory agency as may be required. After all Work has been completed as enumerated herein and all discrepancies discovered during the final review have been corrected, the Owner will issue a final acceptance for the Project, subject to the guarantee provisions of the Specifications. The final payment will be made after the Contract has been completed and the final acceptance issued. No payments will be made for unauthorized work.
- 1.26.01 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or its sureties from any obligations under the Contract Documents or the Performance and Payment Bonds.

**GENERAL
PROVISIONS**

GENERAL PROVISIONS

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101 DEFINITIONS: Whenever the words defined in this section, or pronouns used in their stead, occur in these Specifications or the Contract Documents, they shall have the meaning given herein:

101.01 Abbreviations: Whenever the following abbreviations are used in these Specifications or in the Contract Documents, they are to be construed as meaning the same as the following:

American Association of State and Highway and Transportation Officials	AASHTO
American Concrete Institute	ACI
American National Standards Institute	ANSI
American Public Works Association	APWA
American Society of Testing & Materials	ASTM
American Water Works Association	AWWA

State of Ohio Department of Transportation Construction & Material Specifications ODOTCMS

Ohio Environmental Protection Agency OEPA

- 102 CONSTRUCTION DRAWINGS AND SPECIFICATIONS: The location and nature of the Work is shown in a set or sets of Construction Drawings approved by the Owner. These Specifications, the Construction Drawings prepared for the Work, and all supplementary documents are intended to be complimentary and to describe and provide for a complete, usable improvement. Anything called for in the Specifications and not shown on the Construction Drawings or shown on the Construction Drawings and not called for in the Specifications must be furnished by the Contractor as though appearing in both. In case of discrepancy, calculated dimensions shall govern over scaled dimensions. If there is an apparent conflict or a conflict in fact between sections of the Specifications or the Specifications and the Construction Drawings as approved by the Owner, the most stringent information and interpretation shall prevail.
- 103 REFERENCE DRAWINGS AND SPECIFICATIONS: When the American Society of Testing and Materials (ASTM) Specifications, State of Ohio Department of Transportation Construction and Material Specifications (ODOTCMS), American Water Works Association (AWWA) Specifications, American Association of State Highway and Transportation Officials (AASHTO) Specifications, and other specifications and/or standard drawings are referenced, unless stated otherwise, the latest revision or edition of said specifications and drawings, on the date the construction drawings are approved by all approving agencies, shall become part of these Contract Documents.
- 104 DEVELOPER/LANDOWNER TO MEET CONTRACTOR RESPONSIBILITIES: When a developer/landowner wishes to develop land by constructing or installing, or causing the construction or installation of Work, all or part of which is intended to be owned, operated, or maintained by the Owner, the developer/landowner shall be responsible to the Owner for compliance with these specifications by all parties performing the Work.
- 105 SUBMITTALS:
- 105.01 Required Submissions: A list of all material suppliers, material samples, and such shop drawings, sketches, specifications, and descriptions are as determined by the Engineer to be required to establish compliance with the Contract Documents shall be submitted to the Engineer for review. The material sample submission shall be of the size and amount required by the Engineer for testing. The material sample and four (4) sets of the information must be submitted at least fourteen (14) days prior to the date that the project components represented by the submitted

material or information are to be incorporated into the Work. No equipment or materials shall be ordered nor work begin prior to the completion of the review and acceptance of the submitted material or information.

105.02 Final Acceptance Submissions: Prior to final acceptance of the Project, the Contractor shall submit three (3) sets of all technical data, brochures, manufacturer's specifications, operating and maintenance instructions, wiring and flow diagrams, guarantees and warranties for the equipment and materials incorporated in the Project. Each set shall be indexed and submitted in a three ring binder. Upon request by the Contractor, the Owner may waive this submission requirement for certain materials and equipment.

106 **QUALITY OF MATERIALS:** Wherever particular brands or makes of material, devices or equipment is shown or specified, such items shall be regarded as standard and shall be read as being followed by "or approved equivalent". Prior to incorporating an item that is not specified into the Project, information must be submitted and reviewed in accordance with Section 105 of these Specifications. Any other brand or make of material, device or equipment which, in the opinion of the Owner, is the equivalent of that specified in quality, workmanship, economy of operation, and suitability for the purpose intended shall be accepted. Acceptances of such items shall not be construed to remove the Contractor's responsibility to provide a complete, usable facility as specified herein and shown on the construction drawings.

107 **PROJECT CONTROL:**

107.01 Authority of the Engineer: The Engineer shall observe the progress and quality of the Work and determine, in general, if the results of the Work are in general conformity with the Contract Documents. On the basis of his on-site observations, he shall endeavor to guard the Owner against apparent defects and deficiencies in the permanent Work constructed by the Contractor, but does not guarantee the performance of the Contractor. The Engineer is not responsible for construction means, methods, techniques, sequences, procedures, time of performance, programs, or compliance with any Occupational Safety and Health Act (OSHA) requirements or for any safety precautions in connection with the construction work. The Engineer is not responsible for the Contractor's failure to execute the Work in accordance with these Construction Drawings and these Specifications. In making the construction observations as described herein, the Contractor agrees to the following:

- 107.11 The Engineer shall receive and make recommendations to the Owner on all questions of fact which may arise, including the quantity, quality, or suitability of materials and equipment furnished, work performance, and rate of progress of the Work.
- 107.12 The Engineer may correct any apparent or actual errors or omissions when such corrections are necessary for the proper fulfillment of the intention of the Construction Drawings and these Specifications.
- 107.13 Failure of the Engineer to observe or recommend rejection of any defective, unauthorized or non-conforming Work shall not in any way prevent later rejection when such defective, unauthorized or non-conforming Work is discovered, nor obligate the Owner to final acceptance.

107.02 Control of Work and Material: All Work shall be subject to review by the Engineer. The Engineer shall be provided access to all parts of the Work and shall be provided such information and assistance by the Contractor as is required to complete his review. The Engineer shall call the attention of the Contractor to any observed failure of the Work to conform to the Contract Documents. Should the Contractor fail to comply with these Specifications or Construction Drawings, fail to provide certifications and/or proof of the suitability of materials, fail to provide for review of the Work by the Engineer or fail to prosecute the Work in a diligent and good workmanlike manner, the Engineer may recommend to the Owner that the Contractor's operation be suspended on any or all portions of the Project until such unauthorized, unreviewed or defective Work, materials and/or equipment are corrected. Failure of the Contractor to comply with the Owner's directions is just cause for the Owner to have such corrections made and deduct the cost from the monies due the Contractor or to terminate the contract as stipulated hereinafter, or both.

107.03 Testing of Equipment and Materials: Any tests required by the Owner due to lack of certificates or proof of suitability of any equipment and/or materials to be incorporated in the Work shall be paid for by the Contractor. Unless stated otherwise, all tests required by these Specifications and Construction Drawings shall be paid for by the Contractor. All equipment and materials that have passed the prescribed tests may be incorporated in the Work provided that said equipment and materials meet all other requirements.

- 107.04 Construction Layout Stakes: Stakes showing the lines and grades necessary for the completion of the Work shall be provided by a surveyor licensed in the State of Ohio. The Contractor shall give a minimum of 48 hours prior notice before requiring layout stakes. Cut sheets, using the Owner's format, shall be provided for all water and sewer line installations.
- 108 **CORRECTION OF WORK:** The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the typical Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement. All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) calendar days after receipt of written notice, the Owner may remove such Work and store the materials at the expense of the Contractor.
- 109 **WATERTIGHT STRUCTURES:** All structures to be used for holding water shall be made watertight and shall be tested by filling with water before they will be accepted. Tests of concrete watertight basins shall be made before backfill is placed, however, where special reasons make this impractical, the Engineer may permit backfilling to proceed before the test is made. Permission to backfill shall not relieve the Contractor from any responsibility for water tightness of the structure and if, upon making the test, the need to remove backfill and/or repair the structure arises, it shall be done by and at the expense of the Contractor.
- 110 **PRESERVATION OF REFERENCES:** The Contractor shall carefully preserve benchmarks, reference points and stakes. In case of willful or careless destruction, the Contractor shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.
- 111 **EXISTING UTILITIES:** The information shown on the Construction Drawings concerning existing utilities is approximate only and is only as accurate as the information provided by the owners of the utilities. It is not represented, warranted, or guaranteed to be complete or accurate. The Engineer does not independently verify nor field locate utilities. It is the Contractor's responsibility to physically locate and verify, in the field, the horizontal and vertical locations of all existing utilities, whether shown on the plan or not, prior to beginning construction operations. The Contractor shall support, protect, and restore all existing utilities and their associated items.

The Contractor shall notify the Ohio Utilities Protection Service (Telephone 1-800-362-2764) and all owners of utility facilities who are not members of the registered utility protection service, in writing, by telephone or in person, in accordance with Section 153.64, Ohio Revised Code, at least two (2) working days, excluding Saturdays, Sunday, and legal holidays, prior to commencing construction. The Contractor shall coordinate his work with them, and shall keep the utility owners apprised of his schedule and requirements until all Work is completed. The Contractor shall provide the Owner with evidence of having notified the utilities and provided them with his work schedule prior to beginning any Work.

The Contractor may review the information received from the utility companies at our office prior to submitting his bid. Contractors requiring more accurate or more complete information in preparing their bids should, before bidding, field locate or otherwise verify the horizontal and vertical location of all existing utilities whether shown on the construction drawings or not.

112 SUBSURFACE CONDITIONS: The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by written notice of:

112.01 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; and/or

112.02 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

113 PROTECTION OF MATERIALS AND PROPERTY: The Contractor shall take all necessary measures to prevent damage, destruction or loss to:

113.01 All the Work, and all materials and equipment to be incorporated therein whether in storage on or off the site.

113.02 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

114 PROTECTION OF FINISHED WORK: The Contractor shall be held responsible for any and all materials or Work to the full amount of payments made thereon, and will be required to make good, at his own cost, any injury or damage which said materials or Work may sustain from any source, including any severe or inclement weather. The Contractor shall provide the necessary drainage, heating facilities and other protection for the Work to prevent any possible

damage from frost action. It will also be necessary for the Contractor to provide protection for excavation walls from earth slippage and ponding of water and mud that could cause structural or material damage, including from freeze/thaw action.

- 115 **ACCEPTANCE OF PRIOR WORK:** Prior to beginning any Work each tradesman, contractor, or subcontractor shall inspect the Work already in place and identify any observed defects or deficiencies. Beginning work on the Work already in place constitutes acceptance of the in-place Work by the tradesman, contractor, or subcontractor doing the new Work, except for the areas identified as being defective or having deficiencies. Once the observed defects and deficiencies are corrected and accepted by the tradesman, contractor, or subcontractor, the entire area is accepted. Any corrective actions required after acceptance shall be the responsibility of the tradesman, contractor, or subcontractor who accepted the Work.
- 116 **SERVICE OF MANUFACTURERS' REPRESENTATIVES:** When required by the Construction Drawings or Specifications, the services of competent and experienced manufacturer' representatives shall be furnished to supervise the initial installation of material and equipment as well as to provide start-up and operational instructions to the Owner's personnel. Where the supervision by a manufacturer's representative is not called for, the Contractor is not relieved of his responsibility to properly construct or install material in accordance with the terms of these specifications or to provide start-up and operational instructions.
- 117 **NOTICES:** Notice shall mean written notice. Written notice shall be deemed to have been duly served when delivered in person to the person, firm, officer, agent or representative, or when delivered at the last known business address of such person, firm or corporation, or when enclosed in a postage prepaid wrapper or envelope addressed to such person, firm, or corporation at his, their or its last known business address and sent by registered mail with return receipt requested.
- 118 **SANITARY REGULATIONS:** Suitable sanitary conveniences for the use of all persons working on the Project, properly screened from public observation, shall be provided and maintained by the Contractor. The Contractor shall obey and enforce such other sanitary regulations and orders and shall take such precautions against infectious diseases as may be deemed necessary by the Owner.
- 119 **ACCESS TO ABUTTING PROPERTIES:** The Contractor shall provide and maintain temporary access to all properties where access is interrupted by his construction observations.

- 120 SPACE AVAILABLE FOR CONSTRUCTION OBSERVATION: The Contractor shall confine his operations to the Project as shown on the Construction Drawings and/or described herein. Private property shall not be used by the Contractor without the property owner's written consent. The Contractor shall confine his operations within the temporary and permanent easements or rights-of-way, or as stated otherwise in the Contract Documents.
- 121 INCLEMENT WEATHER CONDITIONS: All Work which will be adversely affected by climatic conditions such as rain, wind, or temperature shall be suspended unless permission is given by the Owner to proceed. Whenever work proceeds under such conditions, the Contractor shall provide approved facilities for protecting all the materials and the finished Work. This shall include heating of materials if required for proper installation.
- 122 TIMBERING ORDERED LEFT IN PLACE: In the event any timbering, sheathing or bracing used in shoring trenches or other excavation is ordered left in place by the Owner, it shall be paid for at the rate of Eight Hundred Dollars (\$800.00) per 1,000 feet board measure (M.F.B.M.). Such material ordered left in place shall be cut off as directed by the Owner and measured in place without allowance for waste.
- 123 UTILITY COSTS: The Contractor shall pay for the installation and use of all utilities such as water, gas, telephone and electric service needed during construction and until final acceptance of the Project by the Owner.
- 124 SAFETY AND HEALTH PROVISIONS: The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work or with any activities associated with the Work on or off the Project site, pursuant to the most current applicable sections of the Occupational Safety and Health Act (OSHA) or other safety or health regulations in effect throughout the contract period. Neither the Owner nor the Engineer shall assume, or have assigned them, the responsibility or authority for site safety for any area of the Project. The Contractor shall take all necessary measures to prevent injury or loss to all employees on the Project and to all other persons who may be affected thereby. Special care shall be taken for the entire duration of the Contract to prevent unauthorized persons from falling into, climbing upon, or entering any of the excavations, equipment, or work areas.
- 125 GUARANTEE: The Contractor shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees, for a period of one (1) year from the date of Substantial Completion of the system, that the completed system is free from all defects due to faulty materials or workmanship. The Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed

defects with reasonable promptness. In the event that the Contractor should fail to make such repairs or adjustments or perform other Work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

- 126 FINAL CLEAN-UP: The Project site and areas of associated activities shall be graded, have all debris removed and all property restored as specified, to a condition equivalent to that which existed before the Work was started. All disturbed grass or unimproved areas outside the limits established for work shall be fertilized, seeded and mulched in accordance with Item 659 (ODOTCMS), except as modified by the Owner.
- 127 SUBSTANTIAL COMPLETION: Substantial completion of any of the Work, in part or total, shall only occur upon completion and signing of a, "Certificate of Substantial Completion". The date of the Substantial Completion shall be the date shown on the Substantial Completion Certificate. Substantial Completion shall be considered achieved when the proposed waterline is fully operational and existing waterline has been abandoned.
- 128 FINAL COMPLETION: Final Completion and acceptance of the Work shall occur upon the completion and signing of a "Certificate of Final Completion." For the Owner to accept full use and operation control, all manuals, instructions, guarantees, spare parts, and other items required by the Contract Documents must be provided to the Owner.

**GEOTECHNICAL SOILS
REPORT**

Geotechnical Engineering Report

Country Estates East Water and Sewer Project
Monroe Township, Ohio

November 12, 2012

Terracon Project No. N4125182

Prepared for:

Monroe Township Water and Sewer District
c/o Sands Decker CPS, LLC
Columbus, Ohio

Prepared by:

Terracon Consultants, Inc.
Columbus, Ohio

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon



November 12, 2012

Monroe Township Water and Sewer District
c/o Sands Decker CPS, LLC
1495 Old Henderson Road
Columbus, Ohio 43220

Attn: Mr. Scott Sands, P.E.
P: [614] 459 6992
F: [614] 459 6992
E: scott.sands@sandsdeckercps.com

Re: Geotechnical Engineering Report
Country Estates East Water and Sewer Project
Monroe Township, Miami County, Ohio
Terracon Project Number: N4125182

Dear Mr. Sands:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering services for the above referenced project. This study was performed in general accordance with our proposal number PN4120313 dated June 13, 2012 and our agreement for services of September 25, 2012. This report presents the findings of the subsurface exploration and provides geotechnical recommendations regarding the design and construction of the proposed improvements.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Alma K. Baratta, E.I.
Senior Staff Engineer

Kevin M. Ernst, P.E.
Geotechnical Department Manager

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EXECUTIVE SUMMARY

Terracon Consultants, Inc. has completed a geotechnical exploration for the proposed improvements to the Country Estates Water and Sewer Project for the Monroe Township Water and Sewer District, Miami County, Ohio. Ten (10) borings, designated B-1 through B-10, were performed to depths of approximately 20 feet below the existing ground surface in the area the proposed improvements to the water and sewer system.

Based on the information obtained from our subsurface exploration, the site can be developed for the proposed project. The following geotechnical considerations were identified:

- The recently completed test borings indicated the presence of predominantly native cohesive soils with native granular soils to the termination depth of the borings. Bedrock was not encountered in any of the borings.
- It is anticipated excavation can be performed using a conventional means (e.g. a backhoe or large hydraulic excavator).
- Due to site constraints, temporary excavation support may be needed for support of the proposed excavations and to protect nearby pavements, utilities, and other infrastructure.
- The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was encountered in some of the borings between 8 and 17 feet below existing grade for the short duration the boreholes were allowed to remain open. Based on our short-term observations, seepage may occur in shallow excavations for this site. However, groundwater levels fluctuate over time and should be evaluated at the time of construction. The contractor is responsible for employing appropriate dewatering methods to control seepage and facilitate construction.

This summary should be used in conjunction with the entire report for design purposes. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. Section **5.0 GENERAL COMMENTS** should be read for an understanding of the report limitations.

**GEOTECHNICAL ENGINEERING REPORT
COUNTRY ESTATES EAST WATER AND SEWER PROJECT
MONROE TOWNSHIP, MIAMI COUNTY, OHIO**

Terracon Project No. N4125182
November 12, 2012

1.0 INTRODUCTION

Terracon Consultants, Inc. has completed a geotechnical exploration for the proposed improvements to the Country Estates Water and Sewer Project for the Monroe Township Water and Sewer District, Miami County, Ohio. Ten (10) borings, designated B-1 through B-10, were performed to depths of approximately 20 feet below the existing ground surface in the area the proposed improvements to the water and sewer system. Logs of the borings and a boring location plan are included in Appendix A of this report.

The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- subsurface soil conditions
- groundwater conditions
- earthwork
- seismic considerations
- sewer line and water line bedding and backfill

2.0 PROJECT INFORMATION

2.1 Project Description

Item	Description
Site layout	See Appendix A, Exhibit A-2: Boring Location Plan
Improvements	The project consists of improvements to the water and sewer systems. Specific depths of the water and sewer pipes have not been provided; however, information provided by Sands Decker CPS, LLC indicated water pipes are typically located at a depth of about 5 feet below grade, and sewer pipes are typically located at a depth of about 8 to 10 feet below grade.

2.2 Site Location and Description

Item	Description
Location	The proposed improvements are located within the Monroe Township Water and Sewer District, in the subdivision south of the intersection of Evanston Road and Curtwood Drive near Tipp City, Ohio.
Existing improvements	Residential neighborhood with associated drives and infrastructure
Current ground cover	Varies, includes paved streets and grass-covered areas.
Existing topography	The ground surface appears to be relatively level.

3.0 SUBSURFACE CONDITIONS

3.1 Typical Profile

Based on the results of the borings, subsurface conditions on the project site can be generalized as follows:

Description	Approximate Depth to Bottom of Stratum (feet)	Material Encountered	Consistency/Relative Density
Surface	1 to 1.3	Asphalt and aggregate base	N/A
Predominantly low-plasticity native cohesive soils with native granular soils	6 to greater than 20 feet (Boring B-6 terminates in this layer)	Predominantly native cohesive soils (sandy lean clay, lean to fat clay, lean clay) with native granular soils (clayey sand, poorly graded gravel, poorly graded sand) containing varying amounts of sand and gravel	Cohesive: Medium stiff to very stiff Granular: Loose to medium dense
Predominantly moderate-plasticity native cohesive soils with native granular soils	Greater than 20 feet – All borings except Boring B-6 terminate in this layer	Predominantly native cohesive soils (lean to fat clay) with native granular soils (silty sand, clayey sand, poorly graded sand) containing varying amounts of sand and gravel	Cohesive: Soft to hard Granular: Medium dense to dense

Conditions encountered at each boring location are indicated on the individual boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soil types; in situ, the transition between materials may be gradual.

3.2 Water Level Observations

The borings were observed while drilling and immediately after completion for the presence and level of groundwater. The subsurface water levels observed at these times are indicated on the boring logs in Appendix A and are summarized in the following table.

Boring Number	Observed Water Depth (feet) ¹	
	While Drilling	After Drilling
B-1	N/E	N/E (DCI at 12)
B-2	N/E	N/E (DCI at 15.5)
B-3	17	13 (WCI at 15)
B-4	10	9 (WCI at 9.5)
B-5	14.5	N/E (DCI at 17)
B-6	12	9 (WCI at 15.5)
B-7	8	12 (WCI at 15.5)
B-8	N/E	N/E (DCI at 15)
B-9	N/E	N/E (DCI at 18)
B-10	13	9 (WCI at 13)

¹ Below existing grade

N/E – Not Encountered

DCI – Dry cave-in condition noted at listed depth after auger casing removed

WCI – Wet cave-in condition noted at listed depth after auger casing removed

The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was encountered in Borings B-3 to B-7 and B-10 between 8 and 17 feet below existing grade for the short duration the boreholes were allowed to remain open. Based on our short-term observations, seepage may occur in shallow excavations at this site.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the borings were performed. In addition, perched or trapped water can develop over low permeability soils. Therefore, groundwater levels during construction or at other times in the life of the basins may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

4.0 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

4.1 Geotechnical Considerations

The recently completed test borings indicated the presence of predominantly native cohesive soils with native granular soils to the termination depth of the borings. Bedrock was not encountered in any of the borings.

It is anticipated excavation can be performed using a conventional means (e.g. a backhoe or large hydraulic excavator).

Due to site constraints, temporary excavation support may be needed for support of the proposed excavations and to protect nearby pavements, utilities, and other infrastructure.

The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was encountered in all of the borings between 8 and 17 feet below existing grade for the short duration the boreholes were allowed to remain open. Based on our short-term observations, seepage may occur in shallow excavations for this site. However, groundwater levels fluctuate over time and should be evaluated at the time of construction. The contractor is responsible for employing appropriate dewatering methods to control seepage and facilitate construction.

Our geotechnical recommendations are presented in the sections that follow.

4.2 Sewer and Water Line Construction

The existing ground surface elevation in the area of the proposed improvements appears to be relatively level. Information provided by Sands Decker CPS, LLC indicated water and sewer lines are typically located between approximately 5 and 10 feet below the existing ground surface.

4.2.1 Excavations

All excavations should comply with applicable local, state and federal safety regulations, including the current Occupational Health and Safety Administration (OSHA) Excavation and Trench Safety Standards. As a minimum, any temporary excavations should be sloped or braced as required by current OSHA regulations to provide stability and safe working conditions. Temporary excavations may be required during grading operations and installation of utilities. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom.

Under no circumstances shall the information provided herein be interpreted to mean that Terracon is assuming any responsibility for construction site safety or the contractor's activities; such responsibility shall neither be implied or inferred. Construction site safety is the sole responsibility of the contractor, who shall also be solely responsible for the means, methods, and sequencing of the construction operations.

All vehicles and soil piles should be kept back from the crest of excavation slopes. The stability of excavation slopes should be reviewed continuously by qualified personnel. The responsibility for excavation safety and temporary construction slopes lies solely with the contractor.

All excavations should comply with applicable local, state and federal safety regulations, including the current Occupational Health and Safety Administration (OSHA) Excavation and Trench Safety Standards. As a minimum, any temporary excavations should be sloped or braced as required by current OSHA regulations to provide stability and safe working conditions. Temporary excavations may be required during grading operations and installation of utilities. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom.

If the required temporary excavation slopes are not feasible due to practical restrictions imposed by existing utilities, right-of-way, etc., then a shield-type (trench box) or temporary bracing system should be considered. These bracing systems will have to be appropriately designed to prevent lateral and vertical movements of any existing structures, pavements, and utilities located adjacent to the excavation area. Monitoring of the retention system performance should be required during the entire time the excavation is left open.

The limits of movement for the earth retention system would be directly related to how much movement the existing site features can tolerate. We would expect that only very small deflections (e.g., less than 1 inch) would be acceptable, however, this should be evaluated by the designer. We also recommend that a preconstruction survey of the area in the immediate vicinity of the excavation be performed to allow comparison of any changes in the site features due to excavation activities in front of the temporary retaining wall. We can provide assistance in developing a temporary retention system monitoring program if requested.

Some minor seepage should be expected in shallow excavations at the site. In such an event, sump and pumping methods are expected to be adequate for temporary dewatering. In deeper excavations, the construction dewatering program may need to be modified to handle higher seepage rates.

A lean concrete mudmat or working mat of crushed stone aggregate could be considered for placement at the bottom of excavations to minimize disturbance of the subgrade during construction activities.

4.2.2 Bedding and Backfill

The limited subsurface exploration performed along the proposed water and sewer line alignments indicates that predominantly native cohesive soils with native granular soils would be exposed at the water and sewer invert level and proposed manhole bottom level. If soft to medium stiff, loose, or otherwise unsuitable bearing soils are exposed at the proposed bearing elevations, it is recommended that these soils be undercut up to a depth of about 1 foot and the foundation grade reestablished with dense graded aggregate fill, such as crushed stone, until a stable base is created.

Bedding material should consist of a clean granular soil with a maximum fragment size of 1.5 inches or less. Suitable material types per the Unified Soil Classification System would include SW, SP, GW, and GP. Bedding material type should conform to the requirements of the ODOT Construction and Materials Specification's latest edition and pipe manufacturers' recommendations.

Upon completion of bedding placement and water and sewer line construction, the cut areas should be backfilled with structural fill up to proposed finish grade. Selected structural fill should be free of organics, debris, and other deleterious substances and have a liquid limit less than 40 and a plasticity index less than 22. Note that some of the existing overburden soils (e.g., fat clays and lean to fat clays) do not meet this requirement.

We recommend that the engineered fill have a moisture content within about 3 percent of its optimum value and be placed in maximum 8 inch loose lifts and be uniformly compacted to at least 98 percent of standard proctor density, ASTM D698. Structural backfill within the limits of pavement areas and zone of influence of the roadway pavement sections should also conform to the requirements of the latest edition of the ODOT Construction and Materials Specifications.

All trench excavations should be made with sufficient working space to permit construction including backfill placement and compaction. Small compaction equipment, such as a vibratory plate, jumping jack or walk-behind vibratory roller may be necessary. In these cases, compactive energy levels are lower and require smaller lift thicknesses to achieve compaction throughout the lift. Lift thicknesses should be maintained at 4 inches or less when using these types of small compaction equipment and the backfill should be compacted to the same criteria as presented for structural fill.

Compaction requirements for bedding and backfilling around utilities may need to be adjusted to the pipe material type and the pipe manufacturer's bedding and backfill material recommendations. If utility trenches are backfilled with relatively clean granular material, they should be capped with at least 18 inches of cohesive fill to reduce the infiltration and conveyance of surface water through the trench backfill.

Surface water should not be allowed to pond on the site and soak into the soil during construction. Any water that collects over or adjacent to construction areas should be promptly removed, along with any softened or disturbed soils.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during placement and compaction of controlled compacted fills and backfilling of excavations.

5.0 GENERAL COMMENTS

Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX A
FIELD EXPLORATION

Geotechnical Engineering Report

Country Estates East Water and Sewer Project ■ Monroe Township, Ohio

November 12, 2012 ■ Terracon Project No. N4125182



Field Exploration Description

The subsurface exploration consisted of drilling and sampling ten (10) borings at the site to depths of about 20 feet below existing grades. The boring locations were staked in the field by Terracon personnel. The locations of the borings should be considered accurate only to the degree implied by the means and methods used to define them. The as drilled boring locations are indicated on the attached Boring Location Plan.

The borings were drilled with a truck-mounted rotary drill rig using continuous flight hollow-stem augers to advance the boreholes. Samples of the soil encountered in the borings were obtained using the split barrel sampling procedures.

In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound auto-hammer with a free fall of 30 inches, is the standard penetration resistance value (SPT-N). This value is used to estimate the in-situ relative density of cohesionless soils and consistency of cohesive soils.

An automatic SPT hammer was used to advance the split-barrel sampler in the borings performed on this site. A significantly greater efficiency is achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. This higher efficiency has an appreciable effect on the SPT-N value. The effect of the automatic hammer's efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

The samples were tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification. Information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and any groundwater conditions. The borings were backfilled with auger cuttings prior to the drill crew leaving the site.

A field log of each boring was prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling, as well as, the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples.

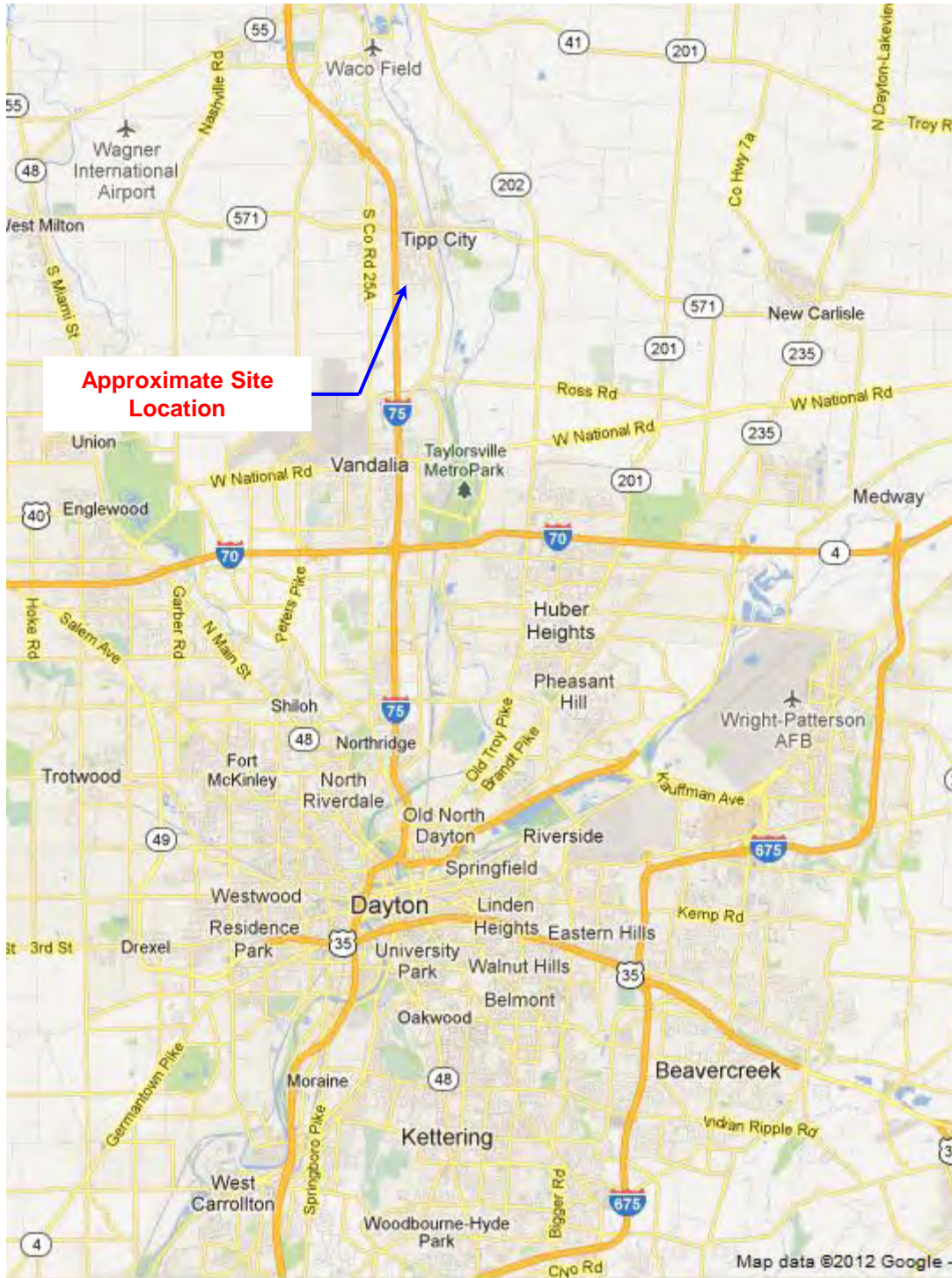


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: KME	Project No. N4125182
Drawn by: AKB	Scale: N.T.S.
Checked by: KME	File Name: N4125182BLP
Approved by: KME	Date: November 2012

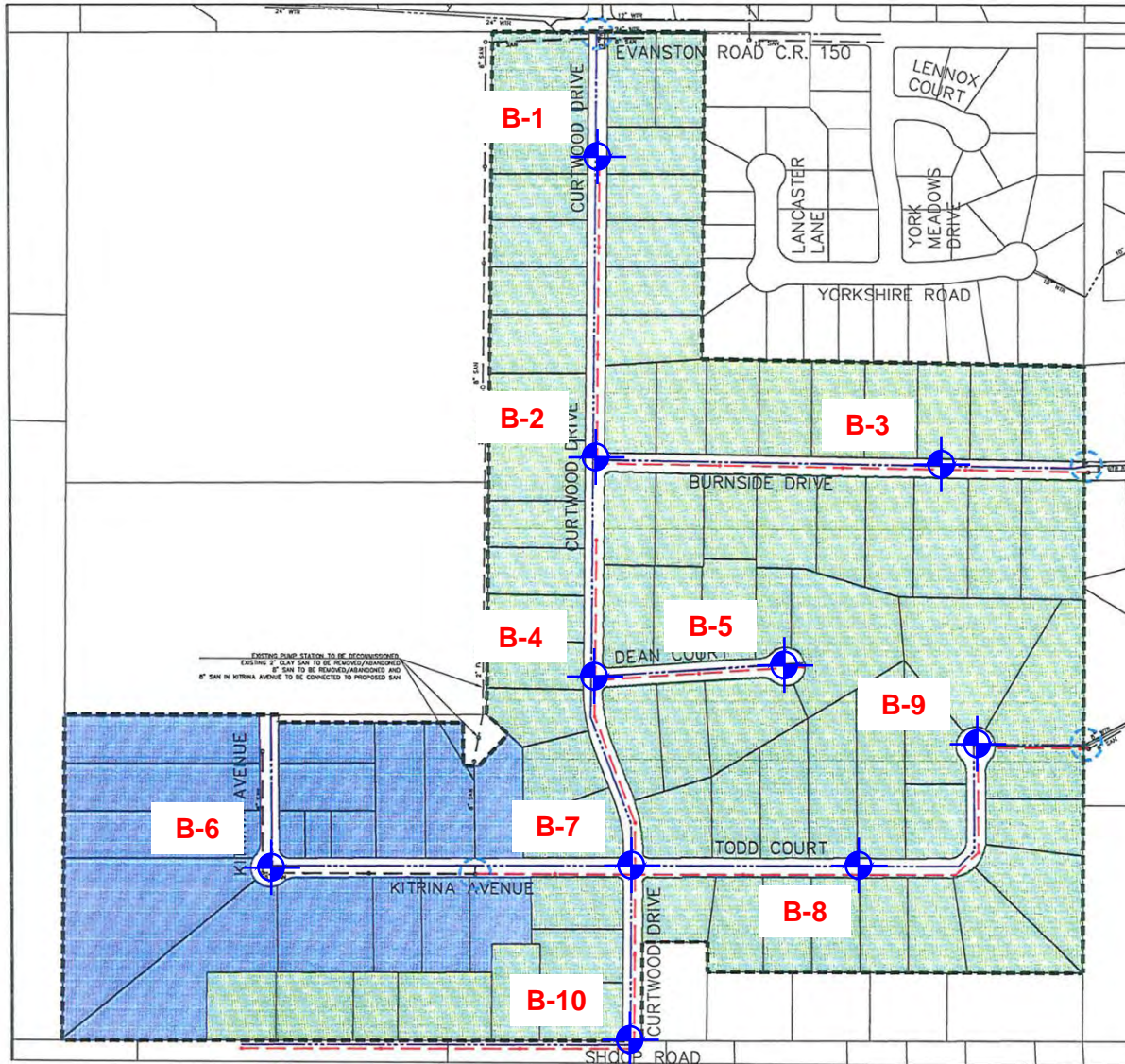
Terracon
Consulting Engineers & Scientists

790 Morrison Road Columbus, Ohio 43230
PH. (614) 863-3113 FAX. (614) 863-0475

SITE LOCATION MAP
COUNTY ESTATES EAST WATER AND SEWER PROJECT
MONROE TOWNSHIP, OHIO

Exhibit
A-2

MAP OF MONROE TOWNSHIP WATER AND SEWER DISTRICT



PLANNED CAPITAL IMPROVEMENTS

- 8" PROPOSED WATER
- 8" PROPOSED SANITARY SEWER
- EXISTING WATER
- EXISTING SANITARY SEWER
- DISTRICT BORDER
- SANITARY AND/OR WATER CONNECTION LOCATION
- PROPOSED WATER AND SANITARY SERVICE AREA
- PROPOSED WATER ONLY SERVICE AREA

ESTIMATED PROPOSED UTILITIES

- 6,880 L.F. OF 8" SANITARY SEWER
- 26 SANITARY MANHOLES
- 8,335 L.F. OF 8" WATER
- 23 8" WATER VALVES
- 26 FIRE HYDRANT ASSEMBLIES
- 3 MASTER METERS
- 3 PROPOSED CONNECTIONS TO EXISTING WATER SYSTEM
- 3 PROPOSED CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM
- 7,100 L.F. ROAD TO BE REPLACED/REPAIRED
- 14,200 L.F. OF CURB TO BE REPLACED/REPAIRED
- 75 PARCELS WITH WATER AND SANITARY SEWER LATERALS
- 17 PARCELS WITH WATER ONLY LATERALS

APPROXIMATE BORING LOCATION



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: KME	Project No. N4125182
Drawn by: AKB	Scale: N.T.S.
Checked by: KME	File Name: P4125182BLP
Approved by: KME	Date: November 2012

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BORING LOCATION PLAN
COUNTY ESTATES EAST WATER AND SEWER PROJECT
MONROE TOWNSHIP, OHIO

Exhibit
A-3

BORING LOG NO. B-1

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	0.4 ASPHALT (5")										
	1.0 AGGREGATE BASE										
	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, stiff to very stiff	5		X	8	4-5-6 N=11	2500 (HP)	10			
		10		X	18	6-8-10 N=18	4500 (HP)	13			
		15		X	15	4-7-7 N=14	4500 (HP)	13			
		20		X	6	6-10-14 N=24	3500 (HP)	10			
		25		X	18	6-7-9 N=16	4000 (HP)	11			
		30		X	1	11-17-20 N=37		8			
		35		X	18	6-8-13 N=21	4000 (HP)	13			
	13.5										
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) , trace sand Grayish brown, very stiff	15									
	20.0										
	Boring Terminated at 20 Feet	20									
		25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

No water observed

Dry cave in at 12 feet after boring completion



Boring Started: 10/29/2012

Boring Completed: 10/29/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

BORING LOG NO. B-2

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
0.4	ASPHALT (4.5")										
1.3	AGGREGATE BASE										
6.0	LEAN CLAY WITH GRAVEL (CL) Dark brown, stiff	5		X	1	9-6-5 N=11		1			
6.0	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, stiff	10		X	6	4-5-9 N=14	1000 (HP)	18			
13.0	LEAN TO FAT CLAY WITH SAND (CL-CH) Dark brown, very stiff to hard	15		X	15	3-5-10 N=15	3500 (HP)	16			
13.0	LEAN TO FAT CLAY WITH SAND (CL-CH) Dark brown, very stiff to hard	20		X	18	8-5-9 N=14	3500 (HP)	10			
20.0	LEAN TO FAT CLAY WITH SAND (CL-CH) Dark brown, very stiff to hard	25		X	15	4-5-9 N=14	4000 (HP)	10			
20.0	LEAN TO FAT CLAY WITH SAND (CL-CH) Dark brown, very stiff to hard	20		X	18	7-10-7 N=17	4500 (HP)	10			
20.0	Boring Terminated at 20 Feet	20		X	14	14-20-25 N=45	4500 (HP)	9			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

No water observed

Dry cave in at 15.5 feet after boring completion



Boring Started: 10/29/2012

Boring Completed: 10/29/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-5

BORING LOG NO. B-3

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
0.4	ASPHALT (5")										
1.0	AGGREGATE BASE										
3.0	CLAYEY SAND WITH GRAVEL (SC) Yellowish brown, loose			X	16	6-5-4 N=9		11			
5.0	SANDY LEAN CLAY WITH GRAVEL (CL) Yellowish brown, medium stiff to stiff			X	18	2-2-4 N=6	1500 (HP)	12			
7.0				X	18	3-4-10 N=14	2500 (HP)	12			
8.0	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) , trace sand Dark brown, stiff			X	18	4-4-6 N=10	3000 (HP)	12			
10.0				X	18	3-3-6 N=9	2000 (HP)	13			
12.0			▽								
14.0				X	14	7-6-5 N=11	4500 (HP)	9			
16.0			▽								
17.0	SILTY SAND WITH GRAVEL (SM) Brown, medium dense			X	18	10-14-14 N=28					
20.0	Boring Terminated at 20 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ Water initially observed at 17 feet
- ▽ Water observed at 13 feet after boring completion
- Wet cave in at 15 feet after boring completion



Boring Started: 10/29/2012

Boring Completed: 10/29/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-6

BORING LOG NO. B-4

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

**SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio**

**ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
	0.6 ASPHALT (7")										
	1.0 AGGREGATE BASE										
	POORLY GRADED SAND WITH GRAVEL (SP) , trace clay Yellowish brown, medium dense			X	8	13-8-7 N=15					
	SANDY LEAN CLAY (CL) , trace gravel Brown, stiff			X	8	5-5-5 N=10				50	
	CLAYEY SAND WITH GRAVEL (SC) Brown, loose			X	18	3-4-4 N=8					
	LEAN TO FAT CLAY (CL-CH) , trace gravel and sand Dark brown, stiff		▽	X	12	3-2-4 N=6					
	LEAN TO FAT CLAY (CL-CH) , trace gravel and sand Dark brown, stiff		▽	X	12	6-7-5 N=12	4500 (HP)	12			
	LEAN TO FAT CLAY (CL-CH) , trace gravel and sand Dark brown, soft to medium stiff			X	18	2-3-5 N=8	500 (HP)	13			
	Boring Terminated at 20 Feet			X	18	2-3-5 N=8	1000 (HP)	13			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ Water initially observed at 10 feet
- ▽ Water observed at 9 feet after boring completion
- Wet cave in at 9.5 feet after boring completion



Boring Started: 10/29/2012

Boring Completed: 10/29/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-7

BORING LOG NO. B-5

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
0.4	ASPHALT (5")										
1.2	AGGREGATE BASE										
3.0	CLAYEY SAND WITH GRAVEL (SC) Yellowish brown, medium dense			X	5	5-6-6 N=12					
8.5	SANDY LEAN CLAY WITH GRAVEL (CL) , noted sand seams Brown, stiff	5		X	18	4-6-5 N=11					
18.0	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, stiff to very stiff	10		X	18	3-5-9 N=14	3000 (HP)	14			
18.0		10		X	18	6-8-9 N=17	4500 (HP)	12			
18.0		15	▽	X	15	8-9-8 N=17		14			
18.0		15		X	15	3-4-6 N=10		14			
20.0	SILTY SAND WITH GRAVEL (SM) Brown, dense	20		X	15	21-16-17 N=33					
	Boring Terminated at 20 Feet	20									
		25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ Water initially observed at 14.5 feet
No water observed after boring completion
Dry cave in at 17 feet after boring completion



Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-8

BORING LOG NO. B-6

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

**SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio**

**ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio**

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
0.4	ASPHALT (5")										
1.1	AGGREGATE BASE										
8.0	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, stiff to very stiff	5		X	12	8-5-4 N=9	4500 (HP)	13			
8.0	SANDY LEAN CLAY WITH GRAVEL (CL) , noted sand seams Dark brown, very stiff to hard	10	▽	X	18	8-8-11 N=19	4000 (HP)	13			
8.0		15		X	18	5-6-11 N=17	4500 (HP)	11			
8.0		20	▽	X	18	10-18-12 N=30	9000 (HP)	8	20-11-9		
8.0		15	▽	X	18	5-3-4 N=7	4500 (HP)	12			
8.0		15		X	15	14-13-25 N=38	4500 (HP)	12			
8.0		20		X	14	20-25-25 N=50	4500 (HP)	10			
Boring Terminated at 20 Feet		20									
		25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ Water initially observed at 12 feet
- ▽ Water observed at 9 feet after boring completion
- Wet cave in at 15.5 feet after boring completion



Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-9

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

BORING LOG NO. B-7











PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

**SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio**

**ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	0.5 ASPHALT (6")										
	1.1 AGGREGATE BASE										
	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, medium stiff				18	3-3-4 N=7	500 (HP)	23			
	LEAN CLAY WITH GRAVEL (CL) Mottled brown and gray, stiff				15	3-4-6 N=10	1500 (HP)	17			
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, stiff to very stiff				18	3-5-6 N=11	3500 (HP)	13			
			▽								
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, stiff to very stiff				18	7-9-11 N=20	4000 (HP)	12			
			▽								
	POORLY GRADED SAND WITH GRAVEL (SP) , trace clay Brown, medium dense				18	4-5-9 N=14	4500 (HP)	12			
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Brown, very stiff				18	8-9-11 N=20					
			▽								
	Boring Terminated at 20 Feet				10	15-12-20 N=32	3500 (HP)	9			
		20									
		25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ Water initially observed at 8 feet
- ▽ Water observed at 12 feet after boring completion
- Wet cave in at 15.5 feet after boring completion



Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-10

BORING LOG NO. B-8

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
0.4	ASPHALT (5")										
1.0	AGGREGATE BASE										
8.0	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, stiff to very stiff	5		X	12	4-4-4 N=8	2000 (HP)	10			
		5		X	15	8-11-12 N=23		11			
		5		X	18	2-3-5 N=8	3000 (HP)	12			
		10		X	18	12-10-14 N=24	4500 (HP)	10			
		10		X	16	7-7-10 N=17	4500 (HP)	10			
		15		X	18	2-6-12 N=18	4500 (HP)	9			
		20		X	18	8-10-15 N=25	4500 (HP)	9			
	Boring Terminated at 20 Feet	20									
		25									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

No water observed

Dry cave in at 15 feet after boring completion



790 Morrison Road
Columbus, Ohio

Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-11

BORING LOG NO. B-9

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	DEPTH										
0.5	ASPHALT (6")										
1.1	AGGREGATE BASE										
3.0	SANDY LEAN CLAY WITH GRAVEL (CL) Brown, stiff			X	16	3-7-3 N=10	4500 (HP)	14			
6.0	LEAN CLAY WITH GRAVEL (CL) , trace sand Brown, medium stiff to stiff			X	18	4-7-4 N=11		14			
13.0	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, medium stiff to stiff			X	18	2-3-4 N=7	2500 (HP)	15			
18.0	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, very stiff			X	8	3-4-6 N=10	3000 (HP)	14			
20.0	CLAYEY SAND WITH GRAVEL (SC) Brown, medium dense			X	0	4-3-5 N=8					
15.0	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, very stiff			X	18	4-6-11 N=17	4500 (HP)	11			
20.0	Boring Terminated at 20 Feet			X	16	7-10-9 N=19					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

No water observed

Dry cave in at 18 feet after boring completion



Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-12

BORING LOG NO. B-10

PROJECT: Country Estates East Water and Sewer Project

CLIENT: Monroe Township Water and Sewer District

SITE: South of Evanston Road and Curtwood Drive
Monroe Township, Miami County, Ohio

ENGINEER: Sands Decker CPS, LLC
Columbus, Ohio

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SMART LOG-DEPTH TO BOTTOM OF PAGE. COUNTRY ESTATES EAST LOGS.GPJ ODOT TEST.GPJ 11/12/12

GRAPHIC LOG	LOCATION See Exhibit A-3	DEPTH (ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	WATER CONTENT (%)	ATTERBERG LIMITS		Percent Fines
									LL-PL-PI		
	0.5 ASPHALT (6")										
	1.0 AGGREGATE BASE										
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, stiff			X	8	3-4-6 N=10	2500 (HP)	25			
	LEAN CLAY WITH GRAVEL (CL) , trace sand Brown, stiff to very stiff			X	18	5-7-9 N=16	4500 (HP)	13	27-14-13		
				X	6	3-5-6 N=11	3000 (HP)	11			
			▽	X	18	5-9-14 N=23	4000 (HP)	11			
				X	15	7-8-9 N=17	4000 (HP)	11			
			▽	X	18	13-20-13 N=33					
	POORLY GRADED GRAVEL WITH SAND (GP) , trace clay Brown, dense			X	18	13-20-13 N=33					
	LEAN TO FAT CLAY WITH GRAVEL (CL-CH) Dark brown, very stiff			X	18	4-10-15 N=25	4500 (HP)	11			
	Boring Terminated at 20 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-1 for description of field procedures

Notes:

Abandonment Method:

See Appendix B for description of laboratory procedures and additional data, (if any).

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ Water initially observed at 13 feet
- ▽ Water observed at 9 feet after boring completion
- Wet cave in at 13 feet after boring completion



Boring Started: 10/30/2012

Boring Completed: 10/30/2012

Drill Rig: Truck

Driller: Knisley

Project No.: N4125182

Exhibit: A-13

APPENDIX B
LABORATORY TESTING

Geotechnical Engineering Report

Country Estates East Water and Sewer Project ■ Monroe Township, Ohio

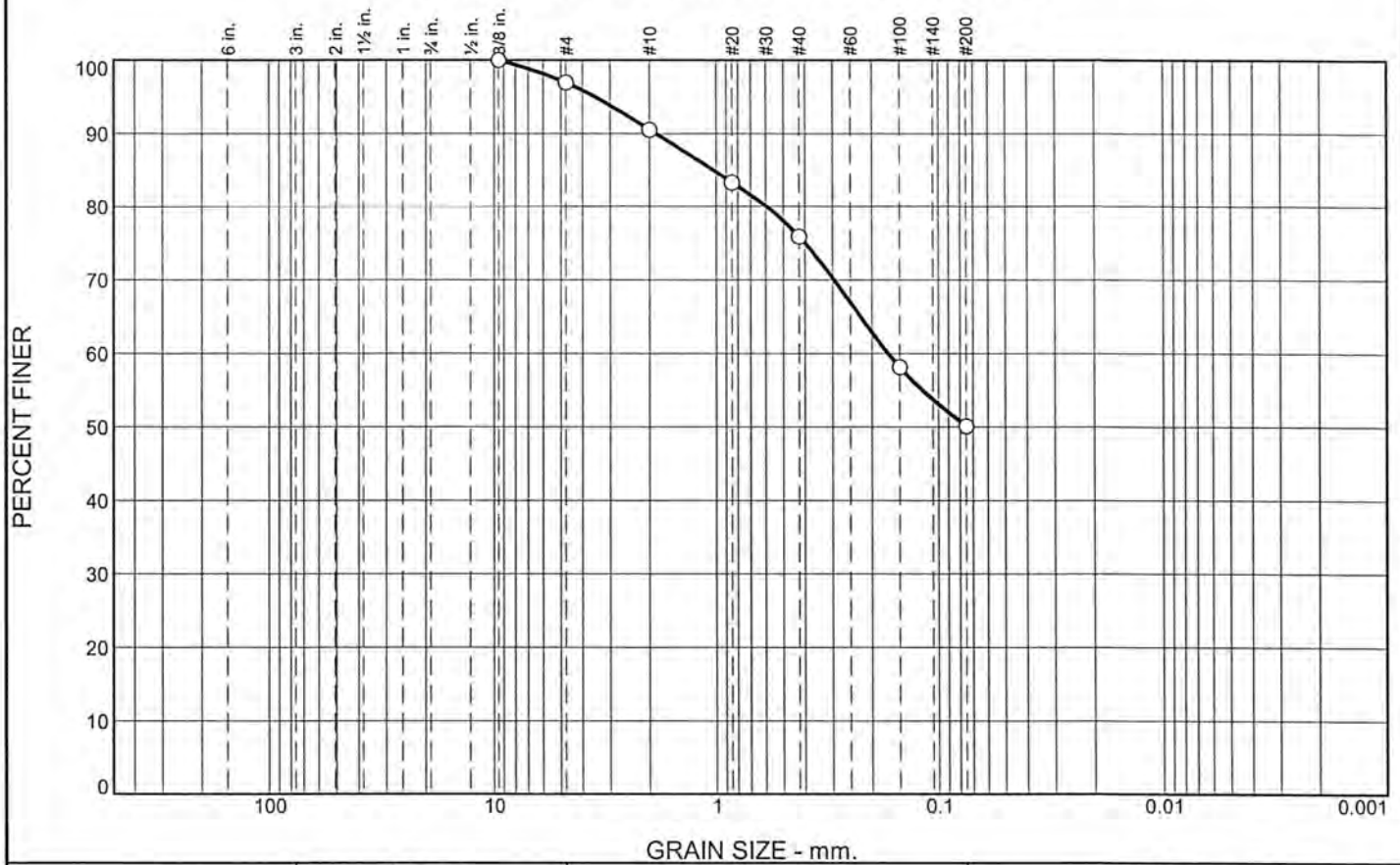
November 12, 2012 ■ Terracon Project No. N4125182



Laboratory Testing

As a part of the laboratory testing program, the soil samples were classified in the laboratory based on visual observation, and texture. The soil descriptions presented on the boring logs for native soils are in accordance with our enclosed General Notes and Unified Soil Classification System (USCS). A brief description of the Unified System is included in this report. Classification was predominantly by visual manual procedures. Moisture content, grain size analysis, and Atterberg Limit tests were performed on selected samples. The results of this laboratory testing are presented on the boring logs and laboratory data sheets included in Appendix B.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.0	6.5	14.6	25.8	50.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	97.0		
#10	90.5		
#20	83.3		
#40	75.9		
#100	58.1		
#200	50.1		

Soil Description

Brown SANDY LEAN CLAY, trace gravel

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 1.8764 D₈₅= 1.0303 D₆₀= 0.1692
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CL AASHTO=

Remarks

Lab No. 974
F.M.=1.17

* (no specification provided)

Source of Sample: B-4 Depth: 3.5'-5.0'
Sample Number: S-2

Date: 11-7-12












TERRACON CONSULTANTS, INC. Columbus, Ohio	Client: Monroe Township Project: Country Estates East Water & Sewer Project Project No: N4125182
Exhibit B-2	

Tested By: DS Checked By: AM

APPENDIX C
SUPPORTING DOCUMENTS

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer	
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T) Torvane	
					Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)	
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID) Photo-Ionization Detector	
							(OVA) Organic Vapor Analyzer	
Ring Sampler	Rock Core							
								
Grab Sample	No Recovery							

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifier	> 12

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GP	Poorly graded gravel ^F	
			Fines classify as CL or CH	GM	Silty gravel ^{F,G,H}	
		Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu < 4$ and/or $1 > Cc > 3$ ^E	GC	Clayey gravel ^{F,G,H}
	Sands with Fines: More than 12% fines ^D		$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I	
			$Cu < 6$ and/or $1 > Cc > 3$ ^E	SP	Poorly graded sand ^I	
			Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
		Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}		
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}	
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

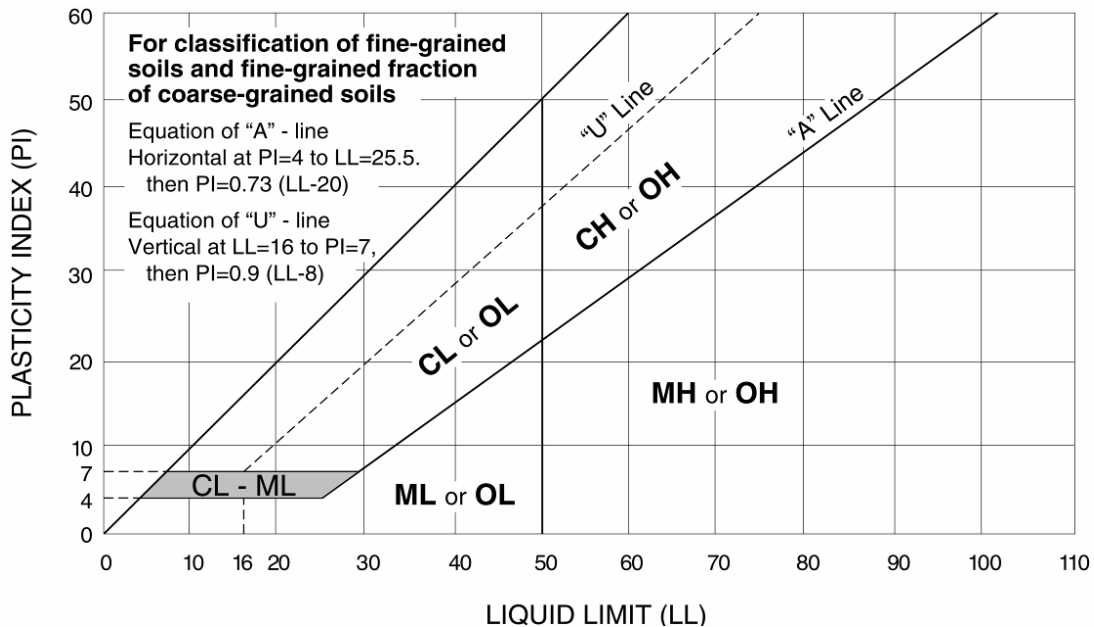
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



White Background Balck Letters

**COUNTRY ESTATES EAST
WATER & SEWER IMPROVEMENTS**

**OWNER: Monroe Township
Water & Sewer District**

**Engineer: Sands Decker CPS
Phone: 1-866-277-0600**

**Contractor: "Contractor Name"
"1-000-000-0000"**

4'

4'

**SIGN DIMENSIONS: Approx. 4' x 4' x $\frac{3}{4}$ "
Plywood Panel (APA RATED A-B Grade-Exterior)
Mounted on 2- 4"x4" Wood Posts**



**Country Estates Water and Sanitary
Sewer Improvements
Project Sign**

DATE: 07/20/16	SHEET NO. 1
PROJECT NO: 2772	
DRAWN BY: EAW	