

# **PUBLIC IMPROVEMENT REQUEST FOR PROPOSAL**

**RFP# 24-10**

## **2024 Miscellaneous Utilities Project**

City of Ann Arbor  
Public Services / Engineering



**Due Date: March 5, 2024, by 11:00AM (local time)**

Issued By:

City of Ann Arbor  
Procurement Unit  
301 E. Huron Street  
Ann Arbor, MI 48104

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## **SECTION I - GENERAL INFORMATION**

### **A. OBJECTIVE**

The purpose of this Request for Proposal (RFP) is to select a firm to provide construction services for the 2024 Miscellaneous Utilities Project.

### **B. BID SECURITY**

Each bid must be accompanied by a certified check or Bid Bond by a surety licensed and authorized to do business within the State of Michigan, in the amount of 5% of the total of the bid price.

***Proposals that fail to provide a bid security upon proposal opening will be deemed non-responsive and will not be considered for award.***

### **C. QUESTIONS AND CLARIFICATIONS / DESIGNATED CITY CONTACTS**

All questions regarding this Request for Proposal (RFP) shall be submitted via e-mail. Questions will be accepted and answered in accordance with the terms and conditions of this RFP.

**All questions shall be submitted on or before February 21, 2024 at 5:00 p.m. (local time)**, and should be addressed as follows:

Scope of Work/Proposal Content questions shall be e-mailed to Tracy Anderson, PE, Project Manager – Tanderson@a2gov.org

RFP Process and Compliance questions shall be e-mailed to Colin Spencer, Buyer - CSpencer@a2gov.org

Should any prospective bidder be in doubt as to the true meaning of any portion of this RFP, or should the prospective bidder find any ambiguity, inconsistency, or omission therein, the prospective bidder shall make a written request for an official interpretation or correction by the due date for questions above.

All interpretations, corrections, or additions to this RFP will be made only as an official addendum that will be posted to a2gov.org and MITN.info and it shall be the prospective bidder's responsibility to ensure they have received all addenda before submitting a proposal. Any addendum issued by the City shall become part of the RFP, and must be incorporated in the proposal where applicable.

## **D. PRE-PROPOSAL MEETING**

A non-mandatory, virtual pre-proposal conference for this project will be held on **February 20, 2024, at 2:00 p.m.** via Microsoft Teams. Contact the project manager, Tracy Anderson, at [TAnderson@a2gov.org](mailto:TAnderson@a2gov.org) by one hour before the meeting time to receive an email invite to the meeting.

Attendance at this conference is highly recommended. Administrative and technical questions regarding this project will be answered at this time. The pre-proposal conference is for information only. Any answers furnished will not be official until verified in writing by the Financial Service Area, Procurement Unit. Answers that change or substantially clarify the proposal will be affirmed in an addendum.

## **E. PROPOSAL FORMAT**

To be considered, each firm must submit a response to this RFP using the format provided in Section III. No other distribution of proposals is to be made by the prospective bidder. An official authorized to bind the bidder to its provisions must sign the proposal. Each proposal must remain valid for at least one hundred and twenty (120) days from the due date of this RFP.

Proposals should be prepared simply and economically providing a straightforward, concise description of the bidder's ability to meet the requirements of the RFP. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed in ink by the person signing the proposal.

## **F. SELECTION CRITERIA**

Responses to this RFP will be evaluated using a point system as shown in Section III. A selection committee comprised primarily of staff from the City will complete the evaluation.

If interviews are desired by the City, the selected firms will be given the opportunity to discuss their proposal, qualifications, past experience, and their fee proposal in more detail. The City further reserves the right to interview the key personnel assigned by the selected bidder to this project.

All proposals submitted may be subject to clarifications and further negotiation. All agreements resulting from negotiations that differ from what is represented within the RFP or in the proposal response shall be documented and included as part of the final contract.

## G. SEALED PROPOSAL SUBMISSION

**All proposals are due and must be delivered to the City on or before March 5, 2024, by 11:00a.m.** Proposals submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

**Each respondent should submit in a sealed envelope**

- **one (1) original proposal**
- **one (1) additional proposal copy**
- **one USB/flash drive that contains:**
  - **one (1) digital copy of the proposal preferably as one file in PDF format**
  - **one (1) digital copy of E. Schedule of Pricing/Cost preferably as one file in Excel format. A blank Schedule of Pricing/Cost Excel spreadsheet for this project can be provided by the project manager for your use.**

Proposals submitted should be clearly marked: **“2024 Miscellaneous Utilities Project”** and list the bidder’s name and address.

Proposals must be addressed and delivered to:  
City of Ann Arbor  
c/o Customer Service  
301 East Huron Street  
Ann Arbor, MI 48107

All proposals received on or before the due date will be publicly opened and recorded on the due date. No immediate decisions will be rendered.

Hand delivered proposals may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public Monday through Friday from 8am to 5pm (except holidays). The City will not be liable to any prospective bidder for any unforeseen circumstances, delivery, or postal delays. Postmarking on the due date will not substitute for receipt of the proposal.

Bidders are responsible for submission of their proposal. Additional time will not be granted to a single prospective bidder. However, additional time may be granted to all prospective bidders at the discretion of the City.

**A proposal may be disqualified if the following required forms are not included with the proposal:**

- **Attachment D - Prevailing Wage Declaration of Compliance**
- **Attachment E - Living Wage Declaration of Compliance**
- **Attachment G - Vendor Conflict of Interest Disclosure Form**

- **Attachment H - Non-Discrimination Declaration of Compliance**

***Proposals that fail to provide these forms listed above upon proposal opening may be deemed non-responsive and may not be considered for award.***

## **H. DISCLOSURES**

Under the Freedom of Information Act (Public Act 442), the City is obligated to permit review of its files, if requested by others. All information in a proposal is subject to disclosure under this provision. This act also provides for a complete disclosure of contracts and attachments thereto.

## **I. TYPE OF CONTRACT**

A sample of the Construction Agreement is included as Attachment A. Those who wish to submit a proposal to the City are required to review this sample agreement carefully. **The City will not entertain changes to its Construction Agreement.**

For all construction work, the respondent must further adhere to the City of Ann Arbor General Conditions. The General Conditions are included herein. Retainage will be held as necessary based on individual tasks and not on the total contract value. The Contractor shall provide the required bonds included in the Contract Documents for the duration of the Contract.

The City reserves the right to award the total proposal, to reject any or all proposals in whole or in part, and to waive any informality or technical defects if, in the City's sole judgment, the best interests of the City will be so served.

This RFP and the selected bidder's response thereto, shall constitute the basis of the scope of services in the contract by reference.

## **J. NONDISCRIMINATION**

All bidders proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Attachment G shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

## **K. WAGE REQUIREMENTS**

The Attachments provided herein outline the requirements for payment of prevailing wages or of a "living wage" to employees providing service to the City under this contract. The successful bidder must comply with all applicable requirements and provide documentary proof of compliance when requested.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. Use of Michigan Department of Transportation Prevailing Wage Forms (sample attached hereto) or a City-approved equivalent will be required along with wage rate interviews.

For laborers whose wage level are subject to federal, state and/or local prevailing wage law the appropriate Davis-Bacon wage rate classification is identified based upon the work including within this contract. **The wage determination(s) current on the date 10 days before proposals are due shall apply to this contract.** The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: [www.wdol.gov](http://www.wdol.gov).

For the purposes of this RFP the Construction Type of Heavy and Highway will apply.

#### **L. CONFLICT OF INTEREST DISCLOSURE**

The City of Ann Arbor Purchasing Policy requires that the consultant complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected bidder unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Conflict of Interest Disclosure Form is attached.

#### **M. COST LIABILITY**

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the bidder prior to the execution of an Agreement. The liability of the City is limited to the terms and conditions outlined in the Agreement. By submitting a proposal, bidder agrees to bear all costs incurred or related to the preparation, submission, and selection process for the proposal.

#### **N. DEBARMENT**

Submission of a proposal in response to this RFP is certification that the Respondent is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

## O. PROPOSAL PROTEST

All proposal protests must be in writing and filed with the Purchasing Manager within five (5) business days of any notices of intent, including, but not exclusively, divisions on prequalification of bidders, shortlisting of bidders, or a notice of intent to award. Only bidders who responded to the solicitation may file a bid protest. The bidder must clearly state the reasons for the protest. If any bidder contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the bidder to the Purchasing Manager. The Purchasing Manager will provide the bidder with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee, whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the bidder to initiate contact with anyone other than the Designated City Contacts provided herein that the bidder believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

## P. SCHEDULE

The following is the schedule for this RFP process.

<b>Activity/Event</b>	<b>Anticipated Date</b>
Pre-Proposal Conference	Feb. 20, 2024, at 2:00 p.m. (Local Time)
Written Question Deadline	Feb. 21, 2024, 5:00 p.m. (Local Time)
Addenda Published (if needed)	Week of February 19, 2024
Proposal Due Date	March 5, 2024, 11:00am. (Local Time)
Selection/Negotiations	March 2024
Expected City Council Authorizations	April 15, 2024

The above schedule is for information purposes only and is subject to change at the City's discretion.

## Q. IRS FORM W-9

The selected bidder will be required to provide the City of Ann Arbor an IRS form W-9.

## R. RESERVATION OF RIGHTS

1. The City reserves the right in its sole and absolute discretion to accept or reject any or all proposals, or alternative proposals, in whole or in part, with or without cause.



2. The City reserves the right to waive, or not waive, informalities or irregularities in terms or conditions of any proposal if determined by the City to be in its best interest.
3. The City reserves the right to request additional information from any or all bidders.
4. The City reserves the right to reject any proposal that it determines to be unresponsive and deficient in any of the information requested within RFP.
5. The City reserves the right to determine whether the scope of the project will be entirely as described in the RFP, a portion of the scope, or a revised scope be implemented.
6. The City reserves the right to select one or more contractors or service providers to perform services.
7. The City reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the firm of the conditions contained in this RFP, unless clearly and specifically noted in the proposal submitted.
8. The City reserves the right to disqualify proposals that fail to respond to any requirements outlined in the RFP, or failure to enclose copies of the required documents outlined within the RFP.

#### **S. IDLEFREE ORDINANCE**

The City of Ann Arbor adopted an idling reduction Ordinance that went into effect July 1, 2017. The full text of the ordinance (including exemptions) can be found at: [www.a2gov.org/idlefree](http://www.a2gov.org/idlefree).

Under the ordinance, No Operator of a Commercial Vehicle shall cause or permit the Commercial Vehicle to Idle:

- (a) For any period of time while the Commercial Vehicle is unoccupied; or
- (b) For more than 5 minutes in any 60-minute period while the Commercial Vehicle is occupied.

In addition, generators and other internal combustion engines are covered

- (1) Excluding Motor Vehicle engines, no internal combustion engine shall be operated except when it is providing power or electrical energy to equipment or a tool that is actively in use.

#### **T. ENVIRONMENTAL COMMITMENT**

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote, and encourage the City's commitment to the environment.

The City encourages potential vendors to bring forward emerging and progressive products and services that are best suited to the City's environmental principles.

#### **U. MAJOR SUBCONTRACTORS**

The Bidder shall identify each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the City.

#### **N. LIQUIDATED DAMAGES**

A liquidated damages clause, as given on page C-2, Article III of the Contract, provides that the Contractor shall pay the City as liquidated damages, and not as a penalty, a sum certain per day for each and every day that the Contractor may be in default of completion of the specified work, within the time(s) stated in the Contract, or written extensions.

Liquidated damages clauses, as given in the General Conditions, provide further that the City shall be entitled to impose and recover liquidated damages for breach of the obligations under Chapter 112 of the City Code.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

## **SECTION II - SCOPE OF WORK**

### **A. Project Description**

The Project consists of two separate projects each with their own plan set to be completed under one construction contract. The two projects are described below.

#### **2024 Miscellaneous Utilities Project (Huron View, Orkney, and Culver Water Main)**

The project includes installing 20-inch water main on Huron View Blvd. between Main St. to about 200 feet west of the cul-de-sac; this will replace two (2) 16-inch mains that will be abandoned. The water main will be jack and bored under Main Street. Some storm sewer and catch basin replacements will be included. The entire road will be resurfaced.

The project also includes installing 8-inch water main on Orkney Dr. Culver Rd. and Fountain St, from Sunset Rd. to Fountain St. Water main is the only utility to be installed. Only curb that must be removed for the water main is to be removed and replaced. The existing 6-inch water main will be abandoned, and the water main trench will be paved, the entire road is not to be resurfaced.

#### **Ann Arbor Railroad/Boardwalk Culvert**

The project consists of removing 90-inch storm sewer and installing a 90x48-inch precast concrete tee structure to alleviate erosion behind 2400 Boardwalk Dr. This includes removal of 54" abandoned storm sewer, construction of a temporary drive and mud mat for access to the site, reconstruction of a flow channel in an existing structure, and regrading and placing rip rap on the surrounding channels.

**Please see the plan set for more details.**

## **SECTION III - MINIMUM INFORMATION REQUIRED**

### **PROPOSAL FORMAT**

The following describes the elements that should be included in each of the proposal sections and the weighted point system that will be used for evaluation of the proposals.

Bidders should organize Proposals into the following Sections:

- A. Qualifications, Experience and Accountability
- B. Workplace Safety
- C. Workforce Development
- D. Social Equity and Sustainability
- E. Schedule of Pricing/Cost
- F. Authorized Negotiator
- G. Attachments

*Bidders are strongly encouraged to provide details for all of the information requested below within initial proposals. Backup documentation may be requested at the sole discretion of the City to validate all of the responses provided herein by bidders. False statements by bidders to any of the criteria provided herein will result in the proposal being considered non-responsive and will not be considered for award.*

Pursuant to Sec 1:325 of the City Code which sets forth requirements for evaluating public improvement bids, Bidders should submit the following:

#### **A. Qualifications, Experience and Accountability - 20 Points**

1. Qualifications and experience of the bidder and of key persons, management, and supervisory personnel to be assigned by the bidder.
2. References from individuals or entities the bidder has worked for within the last five (5) years including information regarding records of performance and job site cooperation.
3. Evidence of any quality control program used by the bidder and the results of any such program on the bidder's previous projects.
4. A statement from the bidder as to any major subcontractors it expects to engage including the name, work, and amount.

**B. Workplace Safety – 20 Points**

1. Provide a copy of the bidder's safety program, and evidence of a safety-training program for employees addressing potential hazards of the proposed job site. Bidder must identify a designated qualified safety representative responsible for bidder's safety program who serves as a contact for safety related matters.
2. Provide the bidder's Experience Modification Rating ("EMR") for the last three consecutive years. Preference within this criterion will be given to an EMR of 1.0 or less based on a three-year average.
3. Evidence that all craft labor that will be employed by the bidder for the project has, or will have prior to project commencement, completed at least an authorized 10-hour OSHA Construction Safety Course.
4. For the last three years provide a copy of any documented violations and the bidder's corrective actions as a result of inspections conducted by the Michigan Occupational Safety & Health Administration (MIOSHA), U.S. Department of Labor – Occupational Safety and Health Administration (OSHA), or any other applicable safety agency.

**C. Workforce Development – 20 Points**

1. Documentation as to bidder's pay rates, health insurance, pension or other retirement benefits, paid leave, or other fringe benefits to its employees.
- 2.. Documentation that the bidder participates in a Registered Apprenticeship Program that is registered with the United States Department of Labor Office of Apprenticeship or by a State Apprenticeship Agency recognized by the USDOL Office of Apprenticeship. USDOL apprenticeship agreements shall be disclosed to the City in the solicitation response.
3. Bidders shall disclose the number of non-craft employees who will work on the project on a 1099 basis, and the bidders shall be awarded points based on their relative reliance on 1099 work arrangements with more points assigned to companies with fewer 1099 arrangements. Bidders will acknowledge that the City may ask them to produce payroll records at points during the project to verify compliance with this section.

**D. Social Equity and Sustainability – 20 Points**

1. A statement from the bidder as to what percentage of its workforce resides in the City of Ann Arbor and in Washtenaw County, Michigan. The City will consider in

evaluating which bids best serve its interests, the extent to which responsible and qualified bidders employ individuals in either the city or the county. Washtenaw County jurisdiction is prioritized for evaluation purposes for this solicitation.

2. Evidence of Equal Employment Opportunity Programs for minorities, women, veterans, returning citizens, and small businesses.
3. Evidence that the bidder is an equal opportunity employer and does not discriminate on the basis of race, sex, pregnancy, age, religion, national origin, marital status, sexual orientation, gender identity or expression, height, weight, or disability.
4. The bidder's proposed use of sustainable products, technologies, or practices for the project, which reduce the impact on human health and the environment, including raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and waste management.
5. The bidder's environmental record, including findings of violations and penalties imposed by government agencies.

**E. Schedule of Pricing/Cost – 20 Points**

**Company:**

**Project: 2024 Miscellaneous Utilities Project**

**File #: 2022-037; 2023-009**

**RFP#: 24-10**

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
<b>Project Wide</b>					
01000.00	General Conditions, Max \$250,00	LS	1	\$ _____	\$ _____
01001.00	Project Supervision, Max \$100,000	LS	1	\$ _____	\$ _____
01002.00	Project Clean-Up and Restoration	LS	1	\$ _____	\$ _____
01003.00	Digital Audio Visual Coverage	LS	1	\$ _____	\$ _____
<b>2024 Misc. Utilities</b>					
<b>01000.00 General</b>					
01021.00	Erosion Control, Inlet Protection, Fabric Drop	Ea	35	\$ _____	\$ _____
01022.00	Erosion Control, Silt Fence	Ea	150	\$ _____	\$ _____
01030.00	Tree Protection Fence	Ft	200	\$ _____	\$ _____
01040.00	Minor Traffic Control, Max \$40,000	LS	1	\$ _____	\$ _____
01041.00	Traffic Regular Control	LS	1	\$ _____	\$ _____
01050.00	Sign, Type B, Temp, Prismatic, Furn and Oper	Sft	440	\$ _____	\$ _____
01051.00	Sign, Type B, Temp, Prismatic, Special, Furn and Oper	Sft	42	\$ _____	\$ _____
01052.00	Temporary "No Parking" Sign	Ea	100	\$ _____	\$ _____
01061.00	Lighted Arrow, Type B, Furn and Oper	Ea	1	\$ _____	\$ _____
01080.00	Plastic Drum, High Intensity, Lighted, Furn and Oper	Ea	86	\$ _____	\$ _____
01081.00	Channelizer Cone, High Intensity, 42 In., Furn & Oper	Ea	105	\$ _____	\$ _____
01092.00	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn and Oper	Ea	12	\$ _____	\$ _____
01100.00	Pedestrian Type II Barricade, Temp, Furn & Oper	Ea	25	\$ _____	\$ _____
01101.00	Pedestrian Channelizer Device, Furn & Oper	Ea	25	\$ _____	\$ _____
01102.00	Temporary Pedestrian Ramp, Furn & Oper	Ea	4	\$ _____	\$ _____
01103.00	Temporary Pedestrian Mat, Furn & Oper	Ft	100	\$ _____	\$ _____
01110.00	Pavt Mrkg, Longit, Remove	Ft	700	\$ _____	\$ _____
01120.00	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 In., White	Ft	1,500	\$ _____	\$ _____
01121.00	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 In., Yellow	Ft	2,765	\$ _____	\$ _____
<b>02000.00 Removals</b>					
02000.01	Tree, Rem, 6 In. - 12 In.	Ea	2	\$ _____	\$ _____
02000.02	Tree, Rem, 13 In. - 19 In.	Ea	1	\$ _____	\$ _____
02000.04	Tree, Rem, 30 In. - 39 In.	Ea	1	\$ _____	\$ _____
02010.00	Stump, Rem	Ea	1	\$ _____	\$ _____
02020.00	HMA, Any Thickness, Rem	Syd	7,100	\$ _____	\$ _____
02025.00	Concrete Pavt, Any Thickness, Rem	Syd	35	\$ _____	\$ _____
02030.00	Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	1,900	\$ _____	\$ _____
02040.00	Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem	Sft	1,300	\$ _____	\$ _____
<b>03000.00 Earthwork</b>					
03000.70	DS_Machine Grading, Modified	Sta	10.75	\$ _____	\$ _____
03001.70	DS_Machine Grading	Syd	2,900	\$ _____	\$ _____

03022.00	Subgrade Undercutting, Type III	Cyd	225	\$		\$	
03030.01	Exploratory Excavation, SD-TD-1, (0-10' deep)	Ea	5	\$		\$	
<b>04000.00</b>	<b>Sanitary Sewer</b>						
04000.01	8 In., SDR 26 PVC Sanitary Sewer, SD-TD-2	Ft	5	\$		\$	
04060.00	Sanitary Structure Cover	Ea	5	\$		\$	
04061.00	Sanitary Structure Cover, Adjust	Ea	6	\$		\$	
04080.01	Sanitary Sewer Pipe, 8 In. Dia, Rem	Ft	5	\$		\$	
<b>06000.00</b>	<b>Storm and Drainage</b>						
06000.01	12 In., CI IV RCP Storm Sewer, SD-TD-1	Ft	165	\$		\$	
06020.00	Pipe Undercut & Backfill, Storm	Cyd	2	\$		\$	
06030.04	Storm Sewer Tap, 12 In. Dia	Ea	5	\$		\$	
06060.73	DS_Storm Inlet-Junction, 48 In., Dia., (0-8' deep)	Ea	1	\$		\$	
06070.71	DS_Storm Single Inlet, 24 In., Dia., (0-8' deep)	Ea	9	\$		\$	
06120.03	Storm Sewer Pipe, 12 In. Dia., Rem	Ft	160	\$		\$	
06140.00	Storm Sewer Structure, Rem	Ea	3	\$		\$	
06150.00	Storm Sewer Drop Structure, Rem	Ea	7	\$		\$	
06160.01	Storm Structure Cover	Ea	8	\$		\$	
06160.02	Storm Structure Cover, Adjust	Ea	8	\$		\$	
<b>07000.00</b>	<b>Water Main</b>						
07000.01	4 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	24	\$		\$	
07000.02	6 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	120	\$		\$	
07000.03	8 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	2,900	\$		\$	
07000.05	12 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	20	\$		\$	
07001.01	16 In., PC 250 DIP w/polywrap, SD-TD-1	Ft	30	\$		\$	
07001.02	20 In., PC 250 DIP w/polywrap, SD-TD-1	Ft	1,370	\$		\$	
07001.03	14 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	20	\$		\$	
07001.72	DS_20 In., PC 250 DIP w/polywrap, Bore and Jack	Ft	110	\$		\$	
07009.03	4 In., 22.5° DIP Bend	Ea	3	\$		\$	
07009.04	4 In., 11.25° DIP Bend	Ea	1	\$		\$	
07010.03	6 In., 45° DIP Bend	Ea	1	\$		\$	
07010.03	6 In., 22.5° DIP Bend	Ea	3	\$		\$	
07011.02	8 In., 45° DIP Bend	Ea	7	\$		\$	
07011.03	8 In., 22.5° DIP Bend	Ea	55	\$		\$	
07011.04	8 In., 11.25° DIP Bend	Ea	24	\$		\$	
07016.01	20 In., 90° DIP Bend	Ea	1	\$		\$	
07016.02	20 In., 45° DIP Bend	Ea	5	\$		\$	
07016.03	20 In., 22.5° DIP Bend	Ea	11	\$		\$	
07016.04	20 In., 11.25° DIP Bend	Ea	14	\$		\$	
07020.01	6 In. x 4 In. DIP Reducer	Ea	1	\$		\$	
07020.03	8 In. x 6 In. DIP Reducer	Ea	11	\$		\$	
07020.21	20 In. x 12 In. DIP Reducer	Ea	1	\$		\$	
07020.30	16 In. x 14 In. DIP Reducer	Ea	1	\$		\$	
07030.06	8 In. x 8 In. x 8 In. DIP Tee	Ea	7	\$		\$	
07030.17	16 In. x 16 In. x 8 In. DIP Tee	Ea	1	\$		\$	
07030.27	20 In. x 20 In. x 6 In. DIP Tee	Ea	2	\$		\$	
07030.28	20 In. x 20 In. x 8 In. DIP Tee	Ea	7	\$		\$	



07030.33	20 In. x 20 In. x 20 In. DIP Tee	Ea	1	\$	_____	\$	_____
07050.71	DS_Gate Valve In Box, 6 In.	Ea	2	\$	_____	\$	_____
07050.72	DS_Gate Valve In Box, 8 In.	Ea	2	\$	_____	\$	_____
07060.72	DS_Gate Valve In Well, 8 In.	Ea	7	\$	_____	\$	_____
07060.77	DS_Gate Valve In Well, 20 In.	Ea	4	\$	_____	\$	_____
07080.00	Excavate & Backfill for Water Service Tap and Lead	Ft	450	\$	_____	\$	_____
07090.00	Water Structure Cover	Ea	1	\$	_____	\$	_____
07100.00	Fire Hydrant Assembly, Complete	Ea	10	\$	_____	\$	_____
07102.00	Fire Hydrant Assembly, Rem	Ea	7	\$	_____	\$	_____
07110.01	Sacrificial Anode, 17-pound	Ea	7	\$	_____	\$	_____
07110.02	Sacrificial Anode, 34-pound	Ea	4	\$	_____	\$	_____
07120.00	Gate Box, Adjust	Ea	1	\$	_____	\$	_____
07130.01	Temporary Water Main Line Stop, 8 In. or less	Ea	1	\$	_____	\$	_____
07130.03	Temporary Water Main Line Stop, 12 In.	Ea	1	\$	_____	\$	_____
07130.04	Temporary Water Main Line Stop, 16 In.	Ea	3	\$	_____	\$	_____
07130.06	Temporary Water Main Line Stop, 20 In.	Ea	2	\$	_____	\$	_____
07131.00	Temporary Water Main Line Stop, Additional Rental Day	Ea	1	\$	_____	\$	_____
07141.70	DS_Water Main Pipe, Abandon, Modified (Huronview Blvd)	LS	1	\$	_____	\$	_____
07141.70	DS_Water Main Pipe, Abandon, Modified (Orkney Dr/Culver Rd/Fountain St)	LS	1	\$	_____	\$	_____
07160.01	Gate Valve in Box, 4 In. Dia., Abandon	Ea	1	\$	_____	\$	_____
07160.02	Gate Valve In Box, 6 In. Dia., Abandon	Ea	4	\$	_____	\$	_____
07160.02	Gate Valve In Box, 8 In. Dia., Abandon	Ea	1	\$	_____	\$	_____
07160.06	Gate Valve in Box, 16 In. Dia., Abandon	Ea	1	\$	_____	\$	_____
07170.02	Gate Valve in Well, 6 In. Dia., Abandon	Ea	1	\$	_____	\$	_____
07180.03	Gate Valve in Well, 8 In. Dia., Abandon	Ea	1	\$	_____	\$	_____
07180.06	Gate Valve in Well, 16 In. Dia., Abandon	Ea	4	\$	_____	\$	_____
07190.02	Gate Valve in Well, 6 In. Dia., Rem	Ea	1	\$	_____	\$	_____
<b>08000.00</b>	<b>Streets, Driveways, &amp; Sidewalks</b>						
08000.00	Subbase, CIP	Cyd	85	\$	_____	\$	_____
08010.02	Aggregate Base, 6 In., 21AA, CIP	Syd	150	\$	_____	\$	_____
08010.03	Aggregate Base, 8 In., 21AA, CIP	Syd	3,050	\$	_____	\$	_____
08020.01	Aggregate Surface Course, 8 In., 23A, CIP	Syd	20	\$	_____	\$	_____
08060.00	Hand Patching	Ton	45	\$	_____	\$	_____
08070.15	HMA, 4EML	Ton	1,000	\$	_____	\$	_____
08070.19	HMA, 5EML	Ton	1,000	\$	_____	\$	_____
08070.23	HMA, 4E3	Ton	43	\$	_____	\$	_____
08070.24	HMA, 5E3	Ton	17	\$	_____	\$	_____
08080.03	Conc Pavt, Non-Reinf, 8 In.	Syd	32	\$	_____	\$	_____
08100.03	Conc Pavt With Integral Curb, Non-Reinf, 8 In.	Syd	74	\$	_____	\$	_____
08110.00	Conc, Curb or Curb & Gutter, All Types	Ft	1,450	\$	_____	\$	_____
08120.03	Conc, Driveway Opening, Type M, High Early	Ft	540	\$	_____	\$	_____
08130.01	Conc, Sidewalk, 4 In.	Sft	25	\$	_____	\$	_____
08132.01	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early	Sft	945	\$	_____	\$	_____
08132.02	Conc, Sidewalk, Drive Approach, or Ramp, 8 In., High Early	Sft	305	\$	_____	\$	_____

08140.00	Brick Pavers, Sidewalk, Rem and Reinstall	Sft	20	\$		\$	
08210.01	Pavt Mrkg, Sprayable Thermopl, 4 In., White	Ft	450	\$		\$	
<b>10000.00</b>	<b>Landscaping</b>						
10051.00	Underground Sprinkling System, Restore	Dlr	4,000	\$	1.00	\$	4,000.00
10060.00	Turf Restoration	Syd	4,000	\$		\$	
	<b>Boardwalk Culvert</b>						
<b>01000.00</b>	<b>General</b>						
01004.71	DS_Railroad Protection, Ann Arbor Railroad	Dlr	5,000	\$	1.00	\$	5,000.00
01020.00	Erosion Control, Check Dam	Ft	50	\$		\$	
01021.00	Erosion Control, Inlet Protection, Fabric Drop	Ea	1	\$		\$	
01023.00	Erosion Control, Mud Mat	Syd	154	\$		\$	
01040.00	Minor Traffic Control, Max. \$2,500.00	LS	1	\$		\$	
01030.71	DS_Site and Tree Protection Fence	Ft	250	\$		\$	
<b>03000.00</b>	<b>Earthwork</b>						
03000.71	DS_Machine Grading, Special	Sta	4.15	\$		\$	
<b>05000.00</b>	<b>Sewer and Manhole Rehab</b>						
05090.00	Reconstruction Flow Channel	Ea	1	\$		\$	
<b>06000.00</b>	<b>Storm and Drainage</b>						
06120.71	DS_Storm Sewer Pipe, 54 In. Dia., Rem	Ft	40	\$		\$	
06120.17	Storm Sewer Pipe, 90 In. Dia., Rem	Ft	45	\$		\$	
06001.16	90 In., CL IV RCP Storm Sewer, SD-TD-1	Ft	37	\$		\$	
06020.00	Pipe Undercut & Backfill, Storm	Cyd	15	\$		\$	
06041.00	Riprap, Plain	Syd	576	\$		\$	
06050.71	DS_Storm Manhole, 90 In. Dia., Precast Tee, CI IV RCP	Ea	1	\$		\$	
06140.00	Storm Sewer Structure, Rem	Ea	1	\$		\$	
<b>08000.00</b>	<b>Streets, Driveways, &amp; Sidewalks</b>						
08020.01	Aggregate Surface Course, 8 In., 23A, CIP	Syd	154	\$		\$	
08020.71	DS_Temporary Access Drive	Syd	195	\$		\$	
08050.00	Geotextile Separator Fabric	Syd	576	\$		\$	
<b>10000.00</b>	<b>Landscaping</b>						
10060.01	Turf Restoration_Boardwalk	Syd	650	\$		\$	
10091.00	Mulch Blanket, High Velocity	Syd	400	\$		\$	
	<b>TOTAL BID AMOUNT</b>			\$		\$	

**F. AUTHORIZED NEGOTIATOR / NEGOTIATIBLE ELEMENTS (ALTERNATES)**

Include the name, phone number, and e-mail address of persons(s) in your organization authorized to negotiate the agreement with the City.

The proposal price shall include materials and equipment selected from the designated items and manufacturers listed in the bidding documents. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the bidder wishes to quote alternate items for consideration by the City, it may do so under this Section. A complete description of the item and the proposed price differential must be provided. Unless approved at the time of award, substitutions where items are specifically named will be considered only as a negotiated change in Contract Sum.

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-2, it is requested to stipulate its proposed time for performance of the work.

Consideration for any proposed alternative items or time may be negotiated at the discretion of the City.

**G. ATTACHMENTS**

General Declaration, Legal Status of Bidder, Conflict of Interest Form, Living Wage Compliance Form, Prevailing Wage Compliance Form and the Non-Discrimination Form should be completed and returned with the proposal. These elements should be included as attachments to the proposal submission.

**PROPOSAL EVALUATION**

1. The selection committee will evaluate each proposal by the above-described criteria and point system. The City reserves the right to reject any proposal that it determines to be unresponsive and deficient in any of the information requested for evaluation. A proposal with all the requested information does not guarantee the proposing firm to be a candidate for an interview if interviews are selected to be held by the City. The committee may contact references to verify material submitted by the bidder.
2. The committee then will schedule interviews with the selected firms if necessary. The selected firms will be given the opportunity to discuss in more detail their qualifications, past experience, proposed work plan (if applicable) and pricing.
3. The interview should include the project team members expected to work on the project, but no more than six members total. The interview shall consist of a presentation of up to thirty minutes (or the length provided by the committee) by the

bidder, including the person who will be the project manager on this contract, followed by approximately thirty minutes of questions and answers. Audiovisual aids may be used during the oral interviews. The committee may record the oral interviews.

4. The firms interviewed will then be re-evaluated by the above criteria and adjustments to scoring will be made as appropriate. After evaluation of the proposals, further negotiation with the selected firm may be pursued leading to the award of a contract by City Council, if suitable proposals are received.

The City reserves the right to waive the interview process and evaluate the bidder based on their proposal and pricing schedules alone.

The City will determine whether the final scope of the project to be negotiated will be entirely as described in this RFP, a portion of the scope, or a revised scope.

Work to be done under this contract is generally described through the detailed specifications and must be completed fully in accordance with the contract documents.

Any proposal that does not conform fully to these instructions may be rejected.

## **PREPARATION OF PROPOSALS**

Proposals should have no plastic bindings but will not be rejected as non-responsive for being bound. Staples or binder clips are acceptable. Proposals should be printed double sided on recycled paper.

Each person signing the proposal certifies that they are a person in the bidder's firm/organization responsible for the decisions regarding the fees being offered in the Proposal and has not and will not participate in any action contrary to the terms of this provision.

## **ADDENDA**

If it becomes necessary to revise any part of the RFP, notice of the addendum will be posted to Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) and/or the City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org) for all parties to download.

Each bidder should acknowledge in its proposal all addenda it has received on the General Declarations form provided in the Attachments section herein. The failure of a bidder to receive or acknowledge receipt of any addenda shall not relieve the bidder of the responsibility for complying with the terms thereof. The City will not be bound by oral responses to inquiries or written responses other than official written addenda.

## **SECTION IV - ATTACHMENTS**

Attachment A – Sample Standard Contract

Attachment B – General Declarations

Attachment C - Legal Status of Bidder

Attachment D – Prevailing Wage Declaration of Compliance Form

Attachment E – Living Wage Declaration of Compliance Form

Attachment F – Living Wage Ordinance Poster

Attachment G – Vendor Conflict of Interest Disclosure Form

Attachment H – Non-Discrimination Ordinance Declaration of Compliance Form

Attachment I – Non-Discrimination Ordinance Poster

Sample Certified Payroll Report Template

**ATTACHMENT A  
SAMPLE STANDARD CONTRACT**

*If a contract is awarded, the selected contractor will be required to adhere to a set of general contract provisions which will become a part of any formal agreement. These provisions are general principles which apply to all contractors of service to the City of Ann Arbor such as the following:*

**Administrative Use Only**  
Contract Date: \_\_\_\_\_

**CONTRACT**

THIS CONTRACT is between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 East Huron Street, Ann Arbor, Michigan 48104 ("City") and \_\_\_\_\_  
\_\_\_\_\_  
("Contractor")

\_\_\_\_\_  
(An individual/partnership/corporation, include state of incorporation) (Address)

Based upon the mutual promises below, the Contractor and the City agree as follows:

**ARTICLE I - Scope of Work**

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled **[Insert Title of Bid and Bid Number]** in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, all of which are incorporated as part of this Contract:

- |  |                         |
|--|-------------------------|
| Non-discrimination and Living Wage Declaration of Compliance Forms (if applicable) | General Conditions      |
| Vendor Conflict of Interest Form   | Standard Specifications |
| Prevailing Wage Declaration of Compliance Form (if applicable)                     | Detailed Specifications |
| Bid Forms  | Plans                   |
| Contract and Exhibits  | Addenda                 |
| Bonds  |                         |

**ARTICLE II - Definitions**

**Administering Service Area/Unit** means **[Insert Name of Administering Service Unit]**

**Project** means **[Insert Title of Bid and Bid Number]**

**Supervising Professional** means the person acting under the authorization of the manager of the Administering Service Area/Unit. At the time this Contract is executed,

the Supervising Professional is: **[Insert the person's name]** whose job title is **[Insert job title]**. If there is any question concerning who the Supervising Professional is, Contractor shall confirm with the manager of the Administering Service Area/Unit.

**Contractor's Representative** means \_\_\_\_\_ **[Insert name]** whose job title is **[Insert job title]**.

**ARTICLE III - Time of Completion**

- (A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the City.
- (B) The entire work for this Contract shall be completed within \_\_\_\_\_ ( ) consecutive calendar days.
- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount equal to \$\_\_\_\_\_ for each calendar day of delay in the completion of all the work. If any liquidated damages are unpaid by the Contractor, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

**ARTICLE IV - The Contract Sum**

**Choose one only.**

- (A) The City shall pay to the Contractor for the performance of the Contract, the lump sum price as given in the Bid Form in the amount of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

**Or**

- (A) The City shall pay to the Contractor for the performance of the Contract, the unit prices as given in the Bid Form for the estimated bid total of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the Contract Documents.

Increases or decreases shall be determined only by written agreement between the City and Contractor.

#### **ARTICLE V - Assignment**

This Contract may not be assigned or subcontracted any portion of any right or obligation under this contract without the written consent of the City. Notwithstanding any consent by the City to any assignment, Contractor shall at all times remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it under this contract unless specifically released from the requirement, in writing, by the City.

#### **ARTICLE VI - Choice of Law**

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this Contract, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract. The parties stipulate that the venue referenced in this Contract is for convenience and waive any claim of non-convenience.

Whenever possible, each provision of the Contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision will not invalidate the remainder of the Contract.

#### **ARTICLE VII - Relationship of the Parties**

The parties of the Contract agree that it is not a Contract of employment but is a Contract to accomplish a specific result. Contractor is an independent Contractor performing services for the City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

Contractor certifies that it has no personal or financial interest in the project other than the compensation it is to receive under the Contract. Contractor certifies that it is not, and shall not become, overdue or in default to the City for any Contract, debt, or any other obligation to the City including real or personal property taxes. City shall have the right to set off any such debt against compensation awarded for services under this Contract.

#### **ARTICLE VIII - Notice**

All notices given under this Contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the Contract Documents or other address the Contractor may specify in writing. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; or (2) three days after mailing certified U.S. mail.



**ARTICLE IX - Indemnification**

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney’s fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this Contract, by the Contractor or anyone acting on the Contractor’s behalf under this Contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City’s sole negligence. The provisions of this Article shall survive the expiration or earlier termination of this contract for any reason.

**ARTICLE X - Entire Agreement**

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations, negotiations, agreements, or understandings whether written or oral. Neither party has relied on any prior representations in entering into this Contract. No terms or conditions of either party’s invoice, purchase order or other administrative document shall modify the terms and conditions of this Contract, regardless of the other party’s failure to object to such form. This Contract shall be binding on and shall inure to the benefit of the parties to this Contract and their permitted successors and permitted assigns and nothing in this Contract, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

**ARTICLE XI – Electronic Transactions**

The City and Contractor agree that signatures on this Contract may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this Contract. This Contract may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

**FOR CONTRACTOR**

By \_\_\_\_\_

Its: \_\_\_\_\_

**FOR THE CITY OF ANN ARBOR**

By \_\_\_\_\_  
Christopher Taylor, Mayor

By \_\_\_\_\_  
Jacqueline Beaudry, City Clerk

**Approved as to substance**

By \_\_\_\_\_  
City Administrator

By \_\_\_\_\_

Services Area Administrator

**Approved as to form and content**

\_\_\_\_\_  
Atleen Kaur, City Attorney

**PERFORMANCE BOND**

- (1) \_\_\_\_\_ of \_\_\_\_\_ (referred to as "Principal"), and \_\_\_\_\_, a corporation duly authorized to do business in the State of Michigan (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for \$ \_\_\_\_\_, the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City entitled \_\_\_\_\_, for RFP No. \_\_\_\_\_ and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq.
- (3) Whenever the Principal is declared by the City to be in default under the Contract, the Surety may promptly remedy the default or shall promptly:
- (a) complete the Contract in accordance with its terms and conditions; or
  - (b) obtain a bid or bids for submission to the City for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, arrange for a Contract between such bidder and the City, and make available, as work progresses, sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth in paragraph 1.
- (4) Surety shall have no obligation to the City if the Principal fully and promptly performs under the Contract.
- (5) Surety agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder, or the specifications accompanying it shall in any way affect its obligations on this bond, and waives notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work, or to the specifications.
- (6) Principal, Surety, and the City agree that signatures on this bond may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this bond. This bond may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 202\_.

\_\_\_\_\_  
(Name of Surety Company)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

\_\_\_\_\_  
Atleen Kaur, City Attorney

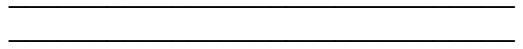
\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Name and address of agent:

\_\_\_\_\_



## LABOR AND MATERIAL BOND

- (1) \_\_\_\_\_  
of \_\_\_\_\_(referred to as "Principal"), and \_\_\_\_\_, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for the use and benefit of claimants as defined in Act 213 of Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq., in the amount of \$ \_\_\_\_\_, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City entitled \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, for RFP No. \_\_\_\_\_; and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963 as amended;
- (3) If the Principal fails to promptly and fully repay claimants for labor and material reasonably required under the Contract, the Surety shall pay those claimants.
- (4) Surety's obligations shall not exceed the amount stated in paragraph 1, and Surety shall have no obligation if the Principal promptly and fully pays the claimants.
- (5) Principal, Surety, and the City agree that signatures on this bond may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this bond. This bond may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 202\_\_

\_\_\_\_\_  
(Name of Surety Company)  
By \_\_\_\_\_  
(Signature)  
Its \_\_\_\_\_  
(Title of Office)

\_\_\_\_\_  
(Name of Principal)  
By \_\_\_\_\_  
(Signature)  
Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

\_\_\_\_\_

Atleen Kaur, City Attorney

Name and address of agent:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **GENERAL CONDITIONS**

### **Section 1 - Execution, Correlation and Intent of Documents**

The contract documents shall be signed in 2 copies by the City and the Contractor.

The contract documents are complementary and what is called for by any one shall be binding. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. Materials or work described in words which so applied have a well-known technical or trade meaning have the meaning of those recognized standards.

In case of a conflict among the contract documents listed below in any requirement(s), the requirement(s) of the document listed first shall prevail over any conflicting requirement(s) of a document listed later.

(1) Addenda in reverse chronological order; (2) Detailed Specifications; (3) Standard Specifications; (4) Plans; (5) General Conditions; (6) Contract; (7) Bid Forms; (8) Bond Forms; (9) Bid.

### **Section 2 - Order of Completion**

The Contractor shall submit with each invoice, and at other times reasonably requested by the Supervising Professional, schedules showing the order in which the Contractor proposes to carry on the work. They shall include the dates at which the Contractor will start the several parts of the work, the estimated dates of completion of the several parts, and important milestones within the several parts.

### **Section 3 - Familiarity with Work**

The Bidder or its representative shall make personal investigations of the site of the work and of existing structures and shall determine to its own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved, and all other factors affecting the work proposed under this Contract. The Bidder to whom this Contract is awarded will not be entitled to any additional compensation unless conditions are clearly different from those which could reasonably have been anticipated by a person making diligent and thorough investigation of the site.

The Bidder shall immediately notify the City upon discovery, and in every case prior to submitting its Bid, of every error or omission in the bidding documents that would be identified by a reasonably competent, diligent Bidder. In no case will a Bidder be allowed the benefit of extra compensation or time to complete the work under this Contract for extra expenses or time spent as a result of the error or omission.

### **Section 4 - Wage Requirements**

Under this Contract, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of

subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. At the request of the City, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. A sample Prevailing Wage Form is provided in the Appendix herein for reference as to what will be expected from contractors. Use of the Prevailing Wage Form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

Where the Contract and the Ann Arbor City Ordinance are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

If the Contractor is a "covered employer" as defined in Chapter 23 of the Ann Arbor City Code, the Contractor agrees to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. The Contractor agrees to pay those employees providing Services to the City under this Contract a "living wage," as defined in Section 1:815 of the Ann Arbor City Code, as adjusted in accordance with Section 1:815(3); to post a notice approved by the City of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Contract are working; to maintain records of compliance; if requested by the City, to provide documentation to verify compliance; to take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee or person contracted for employment in order to pay the living wage required by Section 1:815; and otherwise to comply with the requirements of Chapter 23.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision covering subcontractor's employees who perform work on this contract.

## **Section 5 - Non-Discrimination**

The Contractor agrees to comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. The Contractor further agrees to comply with the provisions of Section 9:158 of Chapter 112 of Title IX of the Ann Arbor City Code, and to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

## **Section 6 - Materials, Appliances, Employees**

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary or used for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and materials shall be of the highest quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.



The Contractor shall at all times enforce strict discipline and good order among its employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned.

Adequate sanitary facilities shall be provided by the Contractor.

## **Section 7 - Qualifications for Employment**

The Contractor shall employ competent laborers and mechanics for the work under this Contract. For work performed under this Contract, employment preference shall be given to qualified local residents.

## **Section 8 - Royalties and Patents**

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringements of any patent rights and shall hold the City harmless from loss on account of infringement except that the City shall be responsible for all infringement loss when a particular process or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the Contract that the particular process or product is patented or is believed to be patented.

## **Section 9 - Permits and Regulations**

The Contractor must secure and pay for all permits, permit or plan review fees and licenses necessary for the prosecution of the work. These include but are not limited to City building permits, right-of-way permits, lane closure permits, right-of-way occupancy permits, and the like. The City shall secure and pay for easements shown on the plans unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the contract documents are at variance with those requirements, it shall promptly notify the Supervising Professional in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work.

## **Section 10 - Protection of the Public and of Work and Property**

The Contractor is responsible for the means, methods, sequences, techniques and procedures of construction and safety programs associated with the work contemplated by this contract. The Contractor, its agents or sub-contractors, shall comply with the "General Rules and Regulations for the Construction Industry" as published by the Construction Safety Commission of the State of Michigan and to all other local, State and National laws, ordinances, rules and regulations pertaining to safety of persons and property.

The Contractor shall take all necessary and reasonable precautions to protect the safety of the public. It shall continuously maintain adequate protection of all work from damage, and shall take all necessary and reasonable precautions to adequately protect all public and private property from injury or loss arising in connection with this Contract. It shall make good any damage, injury or loss to its work and to public and private property resulting from lack of reasonable protective precautions, except as may be due to errors in the contract documents, or caused by agents or

employees of the City. The Contractor shall obtain and maintain sufficient insurance to cover damage to any City property at the site by any cause.

In an emergency affecting the safety of life, or the work, or of adjoining property, the Contractor is, without special instructions or authorization from the Supervising Professional, permitted to act at its discretion to prevent the threatened loss or injury. It shall also so act, without appeal, if authorized or instructed by the Supervising Professional.

Any compensation claimed by the Contractor for emergency work shall be determined by agreement or in accordance with the terms of Claims for Extra Cost - Section 15.

## **Section 11 - Inspection of Work**

The City shall provide sufficient competent personnel for the inspection of the work.

The Supervising Professional shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for access and for inspection.

If the specifications, the Supervising Professional's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the Contractor shall give the Supervising Professional timely notice of its readiness for inspection, and if the inspection is by an authority other than the Supervising Professional, of the date fixed for the inspection. Inspections by the Supervising Professional shall be made promptly, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Supervising Professional, it must, if required by the Supervising Professional, be uncovered for examination and properly restored at the Contractor's expense.

Re-examination of any work may be ordered by the Supervising Professional, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to be in accordance with the contract documents, the City shall pay the cost of re-examination and replacement. If the work is not in accordance with the contract documents, the Contractor shall pay the cost.

## **Section 12 - Superintendence**

The Contractor shall keep on the work site, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Supervising Professional. The superintendent will be responsible to perform all on-site project management for the Contractor. The superintendent shall be experienced in the work required for this Contract. The superintendent shall represent the Contractor and all direction given to the superintendent shall be binding as if given to the Contractor. Important directions shall immediately be confirmed in writing to the Contractor. Other directions will be confirmed on written request. The Contractor shall give efficient superintendence to the work, using its best skill and attention.

## **Section 13 - Changes in the Work**

The City may make changes to the quantities of work within the general scope of the Contract at any time by a written order and without notice to the sureties. If the changes add to or deduct from the extent of the work, the Contract Sum shall be adjusted accordingly. All the changes shall be

executed under the conditions of the original Contract except that any claim for extension of time caused by the change shall be adjusted at the time of ordering the change.

In giving instructions, the Supervising Professional shall have authority to make minor changes in the work not involving extra cost and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Supervising Professional, and no claim for an addition to the Contract Sum shall be valid unless the additional work was ordered in writing.

The Contractor shall proceed with the work as changed and the value of the work shall be determined as provided in Claims for Extra Cost - Section 15.

## **Section 14 - Extension of Time**

Extension of time stipulated in the Contract for completion of the work will be made if and as the Supervising Professional may deem proper under any of the following circumstances:

- (1) When work under an extra work order is added to the work under this Contract;
- (2) When the work is suspended as provided in Section 20;
- (3) When the work of the Contractor is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the Contractor, and which were not the result of its fault or negligence;
- (4) Delays in the progress of the work caused by any act or neglect of the City or of its employees or by other Contractors employed by the City;
- (5) Delay due to an act of Government;
- (6) Delay by the Supervising Professional in the furnishing of plans and necessary information;
- (7) Other cause which in the opinion of the Supervising Professional entitles the Contractor to an extension of time.

The Contractor shall notify the Supervising Professional within 7 days of an occurrence or conditions which, in the Contractor's opinion, entitle it to an extension of time. The notice shall be in writing and submitted in ample time to permit full investigation and evaluation of the Contractor's claim. The Supervising Professional shall acknowledge receipt of the Contractor's notice within 7 days of its receipt. Failure to timely provide the written notice shall constitute a waiver by the Contractor of any claim.

In situations where an extension of time in contract completion is appropriate under this or any other section of the contract, the Contractor understands and agrees that the only available adjustment for events that cause any delays in contract completion shall be extension of the required time for contract completion and that there shall be no adjustments in the money due the Contractor on account of the delay.

## Section 15 - Claims for Extra Cost

If the Contractor claims that any instructions by drawings or other media issued after the date of the Contract involved extra cost under this Contract, it shall give the Supervising Professional written notice within 7 days after the receipt of the instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property. The procedure shall then be as provided for Changes in the Work-Section I3. No claim shall be valid unless so made.

If the Supervising Professional orders, in writing, the performance of any work not covered by the contract documents, and for which no item of work is provided in the Contract, and for which no unit price or lump sum basis can be agreed upon, then the extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

- (1) The Contractor shall be reimbursed for all reasonable costs incurred in doing the work, and shall receive an additional payment of 15% of all the reasonable costs to cover both its indirect overhead costs and profit;
- (2) The term "Cost" shall cover all payroll charges for employees and supervision required under the specific order, together with all worker's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at agreed upon rates, together with cost of fuel and supply charges for the equipment; and any costs incurred by the Contractor as a direct result of executing the order, if approved by the Supervising Professional;
- (3) If the extra is performed under subcontract, the subcontractor shall be allowed to compute its charges as described above. The Contractor shall be permitted to add an additional charge of 5% percent to that of the subcontractor for the Contractor's supervision and contractual responsibility;
- (4) The quantities and items of work done each day shall be submitted to the Supervising Professional in a satisfactory form on the succeeding day, and shall be approved by the Supervising Professional and the Contractor or adjusted at once;
- (5) Payments of all charges for work under this Section in any one month shall be made along with normal progress payments. Retainage shall be in accordance with Progress Payments-Section 16.

No additional compensation will be provided for additional equipment, materials, personnel, overtime or special charges required to perform the work within the time requirements of the Contract.

When extra work is required and no suitable price for machinery and equipment can be determined in accordance with this Section, the hourly rate paid shall be 1/40 of the basic weekly rate listed in the Rental Rate Blue Book published by Dataquest Incorporated and applicable to the time period the equipment was first used for the extra work. The hourly rate will be deemed to include all costs of operation such as bucket or blade, fuel, maintenance, "regional factors", insurance, taxes, and the like, but not the costs of the operator.

## **Section 16 - Progress Payments**

The Contractor shall submit each month, or at longer intervals, if it so desires, an invoice covering work performed for which it believes payment, under the Contract terms, is due. The submission shall be to the City's Finance Department - Accounting Division. The Supervising Professional will, within 10 days following submission of the invoice, prepare a certificate for payment for the work in an amount to be determined by the Supervising Professional as fairly representing the acceptable work performed during the period covered by the Contractor's invoice. To insure the proper performance of this Contract, the City will retain a percentage of the estimate in accordance with Act 524, Public Acts of 1980. The City will then, following the receipt of the Supervising Professional's Certificate, make payment to the Contractor as soon as feasible, which is anticipated will be within 15 days.

An allowance may be made in progress payments if substantial quantities of permanent material have been delivered to the site but not incorporated in the completed work if the Contractor, in the opinion of the Supervising Professional, is diligently pursuing the work under this Contract. Such materials shall be properly stored and adequately protected. Allowance in the estimate shall be at the invoice price value of the items. Notwithstanding any payment of any allowance, all risk of loss due to vandalism or any damages to the stored materials remains with the Contractor.

In the case of Contracts which include only the Furnishing and Delivering of Equipment, the payments shall be; 60% of the Contract Sum upon the delivery of all equipment to be furnished, or in the case of delivery of a usable portion of the equipment in advance of the total equipment delivery, 60% of the estimated value of the portion of the equipment may be paid upon its delivery in advance of the time of the remainder of the equipment to be furnished; 30% of the Contract Sum upon completion of erection of all equipment furnished, but not later than 60 days after the date of delivery of all of the equipment to be furnished; and payment of the final 10% on final completion of erection, testing and acceptance of all the equipment to be furnished; but not later than 180 days after the date of delivery of all of the equipment to be furnished, unless testing has been completed and shows the equipment to be unacceptable.

With each invoice for periodic payment, the Contractor shall enclose a Contractor's Declaration - Section 43, and an updated project schedule per Order of Completion - Section 2.

## **Section 17 - Deductions for Uncorrected Work**

If the Supervising Professional decides it is inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

## **Section 18 - Correction of Work Before Final Payment**

The Contractor shall promptly remove from the premises all materials condemned by the Supervising Professional as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by the removal or replacement.

If the Contractor does not remove the condemned work and materials within 10 days after written notice, the City may remove them and, if the removed material has value, may store the material

at the expense of the Contractor. If the Contractor does not pay the expense of the removal within 10 days thereafter, the City may, upon 10 days written notice, sell the removed materials at auction or private sale and shall pay to the Contractor the net proceeds, after deducting all costs and expenses that should have been borne by the Contractor. If the removed material has no value, the Contractor must pay the City the expenses for disposal within 10 days of invoice for the disposal costs.

The inspection or lack of inspection of any material or work pertaining to this Contract shall not relieve the Contractor of its obligation to fulfill this Contract and defective work shall be made good. Unsuitable materials may be rejected by the Supervising Professional notwithstanding that the work and materials have been previously overlooked by the Supervising Professional and accepted or estimated for payment or paid for. If the work or any part shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good the defect in a manner satisfactory to the Supervising Professional. The judgment and the decision of the Supervising Professional as to whether the materials supplied and the work done under this Contract comply with the requirements of the Contract shall be conclusive and final.

## **Section 19 - Acceptance and Final Payment**

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Supervising Professional will promptly make the inspection. When the Supervising Professional finds the work acceptable under the Contract and the Contract fully performed, the Supervising Professional will promptly sign and issue a final certificate stating that the work required by this Contract has been completed and is accepted by the City under the terms and conditions of the Contract. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of the final certificate.

Before issuance of final certificates, the Contractor shall file with the City:

- (1) The consent of the surety to payment of the final estimate;
- (2) The Contractor's Affidavit in the form required by Section 44.

In case the Affidavit or consent is not furnished, the City may retain out of any amount due the Contractor, sums sufficient to cover all lienable claims.

The making and acceptance of the final payment shall constitute a waiver of all claims by the City except those arising from:

- (1) unsettled liens;
- (2) faulty work appearing within 12 months after final payment;
- (3) hidden defects in meeting the requirements of the plans and specifications;
- (4) manufacturer's guarantees.

It shall also constitute a waiver of all claims by the Contractor, except those previously made and still unsettled.

## **Section 20 - Suspension of Work**

The City may at any time suspend the work, or any part by giving 5 days notice to the Contractor in writing. The work shall be resumed by the Contractor within 10 days after the date fixed in the

written notice from the City to the Contractor to do so. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this Contract as a result of the suspension.

If the work, or any part, shall be stopped by the notice in writing, and if the City does not give notice in writing to the Contractor to resume work at a date within 90 days of the date fixed in the written notice to suspend, then the Contractor may abandon that portion of the work suspended and will be entitled to the estimates and payments for all work done on the portions abandoned, if any, plus 10% of the value of the work abandoned, to compensate for loss of overhead, plant expense, and anticipated profit.

## **Section 21 - Delays and the City's Right to Terminate Contract**

If the Contractor refuses or fails to prosecute the work, or any separate part of it, with the diligence required to insure completion, ready for operation, within the allowable number of consecutive calendar days specified plus extensions, or fails to complete the work within the required time, the City may, by written notice to the Contractor, terminate its right to proceed with the work or any part of the work as to which there has been delay. After providing the notice the City may take over the work and prosecute it to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any excess cost to the City. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the work, any materials, appliances and plant as may be on the site of the work and useful for completing the work. The right of the Contractor to proceed shall not be terminated or the Contractor charged with liquidated damages where an extension of time is granted under Extension of Time - Section 14.

If the Contractor is adjudged a bankrupt, or if it makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of its insolvency, or if it persistently or repeatedly refuses or fails except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if it fails to make prompt payments to subcontractors or for material or labor, or persistently disregards laws, ordinances or the instructions of the Supervising Professional, or otherwise is guilty of a substantial violation of any provision of the Contract, then the City, upon the certificate of the Supervising Professional that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor 3 days written notice, terminate this Contract. The City may then take possession of the premises and of all materials, tools and appliances thereon and without prejudice to any other remedy it may have, make good the deficiencies or finish the work by whatever method it may deem expedient, and deduct the cost from the payment due the Contractor. The Contractor shall not be entitled to receive any further payment until the work is finished. If the expense of finishing the work, including compensation for additional managerial and administrative services exceeds the unpaid balance of the Contract Sum, the Contractor and its surety are liable to the City for any excess cost incurred. The expense incurred by the City, and the damage incurred through the Contractor's default, shall be certified by the Supervising Professional.

## **Section 22 - Contractor's Right to Terminate Contract**

If the work should be stopped under an order of any court, or other public authority, for a period of 3 months, through no act or fault of the Contractor or of anyone employed by it, then the Contractor may, upon 7 days written notice to the City, terminate this Contract and recover from the City payment for all acceptable work executed plus reasonable profit.

## **Section 23 - City's Right To Do Work**

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the City, 3 days after giving written notice to the Contractor and its surety may, without prejudice to any other remedy the City may have, make good the deficiencies and may deduct the cost from the payment due to the Contractor.

## **Section 24 - Removal of Equipment and Supplies**

In case of termination of this Contract before completion, from any or no cause, the Contractor, if notified to do so by the City, shall promptly remove any part or all of its equipment and supplies from the property of the City, failing which the City shall have the right to remove the equipment and supplies at the expense of the Contractor.

The removed equipment and supplies may be stored by the City and, if all costs of removal and storage are not paid by the Contractor within 10 days of invoicing, the City upon 10 days written notice may sell the equipment and supplies at auction or private sale, and shall pay the Contractor the net proceeds after deducting all costs and expenses that should have been borne by the Contractor and after deducting all amounts claimed due by any lien holder of the equipment or supplies.

## **Section 25 - Responsibility for Work and Warranties**

The Contractor assumes full responsibility for any and all materials and equipment used in the construction of the work and may not make claims against the City for damages to materials and equipment from any cause except negligence or willful act of the City. Until its final acceptance, the Contractor shall be responsible for damage to or destruction of the project (except for any part covered by Partial Completion and Acceptance - Section 26). The Contractor shall make good all work damaged or destroyed before acceptance. All risk of loss remains with the Contractor until final acceptance of the work (Section 19) or partial acceptance (Section 26). The Contractor is advised to investigate obtaining its own builders risk insurance.

The Contractor shall guarantee the quality of the work for a period of one year. The Contractor shall also unconditionally guarantee the quality of all equipment and materials that are furnished and installed under the contract for a period of one year. At the end of one year after the Contractor's receipt of final payment, the complete work, including equipment and materials furnished and installed under the contract, shall be inspected by the Contractor and the Supervising Professional. Any defects shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. Any defects that are identified prior to the end of one year shall also be inspected by the Contractor and the Supervising Professional and shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. The Contractor shall assign all manufacturer or material supplier warranties to the City prior to final payment. The assignment shall not relieve the Contractor of its obligations under this paragraph to correct defects.



## **Section 26 - Partial Completion and Acceptance**

If at any time prior to the issuance of the final certificate referred to in Acceptance and Final Payment - Section 19, any portion of the permanent construction has been satisfactorily completed, and if the Supervising Professional determines that portion of the permanent construction is not required for the operations of the Contractor but is needed by the City, the Supervising Professional shall issue to the Contractor a certificate of partial completion, and immediately the City may take over and use the portion of the permanent construction described in the certificate, and exclude the Contractor from that portion.

The issuance of a certificate of partial completion shall not constitute an extension of the Contractor's time to complete the portion of the permanent construction to which it relates if the Contractor has failed to complete it in accordance with the terms of this Contract. The issuance of the certificate shall not release the Contractor or its sureties from any obligations under this Contract including bonds.

If prior use increases the cost of, or delays the work, the Contractor shall be entitled to extra compensation, or extension of time, or both, as the Supervising Professional may determine.

## **Section 27 - Payments Withheld Prior to Final Acceptance of Work**

The City may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to the extent reasonably appropriate to protect the City from loss on account of:

- (1) Defective work not remedied;
- (2) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor;
- (3) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- (4) Damage to another Contractor.

When the above grounds are removed or the Contractor provides a Surety Bond satisfactory to the City which will protect the City in the amount withheld, payment shall be made for amounts withheld under this section.

## **Section 28 - Contractor's Insurance**

- (1) The Contractor shall procure and maintain during the life of this Contract, including the guarantee period and during any warranty work, such insurance policies, including those set forth below, as will protect itself and the City from all claims for bodily injuries, death or property damage that may arise under this Contract; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor, any subcontractor, or anyone employed by them directly or indirectly. Prior to commencement of any work under this contract, Contractor shall provide to the City documentation satisfactory to the City, through City-approved means (currently myCOI), demonstrating it has obtained the required policies and endorsements. The certificates of insurance endorsements and/or copies of

policy language shall document that the Contractor satisfies the following minimum requirements. Contractor shall add registration@mycoitracking.com to its safe sender's list so that it will receive necessary communication from myCOI. When requested, Contractor shall provide the same documentation for its subcontractor(s) (if any).

Required insurance policies include:

- (a) Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

- Bodily Injury by Accident - \$500,000 each accident
  - Bodily Injury by Disease - \$500,000 each employee
  - Bodily Injury by Disease - \$500,000 each policy limit

- (b) Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 04 13 or current equivalent. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements specifically for the following coverages: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further there shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. The following minimum limits of liability are required:

- \$1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.
  - \$2,000,000 Per Project General Aggregate
  - \$1,000,000 Personal and Advertising Injury
  - \$2,000,000 Products and Completed Operations Aggregate, which, notwithstanding anything to the contrary herein, shall be maintained for three years from the date the Project is completed.

- (c) Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 10 13 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

- (d) Umbrella/Excess Liability Insurance shall be provided to apply excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

- (2) Insurance required under subsection (1)(b) and (1)(c) above shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute

with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City for any insurance listed herein.

- (3) Insurance companies and policy forms are subject to approval of the City Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional and un-qualified 30-day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number(s); name of insurance company(s); name and address of the agent(s) or authorized representative(s); name(s), email address(es), and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which may be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified Contractor shall furnish the City with satisfactory certificates of insurance and endorsements prior to commencement of any work. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) and all required endorsements to the City. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the Administering Service Area/Unit at least ten days prior to the expiration date.
- (4) Any Insurance provider of Contractor shall be authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-authorized insurance companies are not acceptable unless approved in writing by the City.
- (5) City reserves the right to require additional coverage and/or coverage amounts as may be included from time to time in the Detailed Specifications for the Project.
- (6) The provisions of General Condition 28 shall survive the expiration or earlier termination of this contract for any reason.

## **Section 29 - Surety Bonds**

Bonds will be required from the successful bidder as follows:

- (1) A Performance Bond to the City of Ann Arbor for the amount of the bid(s) accepted;
- (2) A Labor and Material Bond to the City of Ann Arbor for the amount of the bid(s) accepted.

Bonds shall be executed on forms supplied by the City in a manner and by a Surety Company authorized to transact business in Michigan and satisfactory to the City Attorney.

## **Section 30 - Damage Claims**

The Contractor shall be held responsible for all damages to property of the City or others, caused by or resulting from the negligence of the Contractor, its employees, or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. The Contractor must restore all property injured including sidewalks, curbing, sodding, pipes, conduit, sewers or other public or private property to not less than its original condition with new work.

## **Section 31 - Refusal to Obey Instructions**

If the Contractor refuses to obey the instructions of the Supervising Professional, the Supervising Professional shall withdraw inspection from the work, and no payments will be made for work performed thereafter nor may work be performed thereafter until the Supervising Professional shall have again authorized the work to proceed.

## **Section 32 - Assignment**

Neither party to the Contract shall assign the Contract without the written consent of the other. The Contractor may assign any monies due to it to a third party acceptable to the City.

## **Section 33 - Rights of Various Interests**

Whenever work being done by the City's forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Supervising Professional, to secure the completion of the various portions of the work in general harmony.

The Contractor is responsible to coordinate all aspects of the work, including coordination of, and with, utility companies and other contractors whose work impacts this project.

## **Section 34 - Subcontracts**

The Contractor shall not award any work to any subcontractor without prior written approval of the City. The approval will not be given until the Contractor submits to the City a written statement concerning the proposed award to the subcontractor. The statement shall contain all information the City may require.

The Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and all other contract documents applicable to the work of the subcontractors and to give the Contractor the same power to terminate any subcontract that the City may exercise over the Contractor under any provision of the contract documents.

Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the City.

## **Section 35 - Supervising Professional's Status**

The Supervising Professional has the right to inspect any or all work. The Supervising Professional has authority to stop the work whenever stoppage may be appropriate to insure the proper execution of the Contract. The Supervising Professional has the authority to reject all work and materials which do not conform to the Contract and to decide questions which arise in the execution of the work.

The Supervising Professional shall make all measurements and determinations of quantities. Those measurements and determinations are final and conclusive between the parties.

## **Section 36 - Supervising Professional's Decisions**

The Supervising Professional shall, within a reasonable time after their presentation to the Supervising Professional, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents.

## **Section 37 - Storing Materials and Supplies**

Materials and supplies may be stored at the site of the work at locations agreeable to the City unless specific exception is listed elsewhere in these documents. Ample way for foot traffic and drainage must be provided, and gutters must, at all times, be kept free from obstruction. Traffic on streets shall be interfered with as little as possible. The Contractor may not enter or occupy with agents, employees, tools, or material any private property without first obtaining written permission from its owner. A copy of the permission shall be furnished to the Supervising Professional.

## **Section 38 - Lands for Work**

The Contractor shall provide, at its own expense and without liability to the City, any additional land and access that may be required for temporary construction facilities or for storage of materials.

## **Section 39 - Cleaning Up**

The Contractor shall, as directed by the Supervising Professional, remove at its own expense from the City's property and from all public and private property all temporary structures, rubbish and waste materials resulting from its operations unless otherwise specifically approved, in writing, by the Supervising Professional.

## **Section 40 - Salvage**

The Supervising Professional may designate for salvage any materials from existing structures or underground services. Materials so designated remain City property and shall be transported or stored at a location as the Supervising Professional may direct.

## **Section 41 - Night, Saturday or Sunday Work**

No night or Sunday work (without prior written City approval) will be permitted except in the case of an emergency and then only to the extent absolutely necessary. The City may allow night work which, in the opinion of the Supervising Professional, can be satisfactorily performed at night. Night work is any work between 8:00 p.m. and 7:00 a.m. No Saturday work will be permitted unless the Contractor gives the Supervising Professional at least 48 hours but not more than 5 days notice of the Contractor's intention to work the upcoming Saturday.

## **Section 42 - Sales Taxes**

Under State law the City is exempt from the assessment of State Sales Tax on its direct purchases. Contractors who acquire materials, equipment, supplies, etc. for incorporation in City projects are not likewise exempt. State Law shall prevail. The Bidder shall familiarize itself with the State Law and prepare its Bid accordingly. No extra payment will be allowed under this Contract for failure of the Contractor to make proper allowance in this bid for taxes it must pay.

## Section 43

### CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period \_\_\_\_\_, 20\_\_\_\_, to \_\_\_\_\_, 20\_\_\_\_, performed any work, furnished any materials, sustained any loss, damage or delay, or otherwise done anything in addition to the regular items (or executed change orders) set forth in the Contract titled \_\_\_\_\_, for which I shall ask, demand, sue for, or claim compensation or extension of time from the City, except as I hereby make claim for additional compensation or extension of time as set forth on the attached itemized statement. I further declare that I have paid all payroll obligations related to this Contract that have become due during the above period and that all invoices related to this Contract received more than 30 days prior to this declaration have been paid in full except as listed below.

There is/is not (Contractor please circle one and strike one as appropriate) an itemized statement attached regarding a request for additional compensation or extension of time.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Past due invoices, if any, are listed below.

## Section 44

### CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, \_\_\_\_\_, represents that on \_\_\_\_\_, 20\_\_\_\_, it was awarded a contract by the City of Ann Arbor, Michigan to \_\_\_\_\_ under the terms and conditions of a Contract titled \_\_\_\_\_. The Contractor represents that all work has now been accomplished and the Contract is complete.

The Contractor warrants and certifies that all of its indebtedness arising by reason of the Contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the project, as well as all other claims arising from the performance of the Contract, have been fully paid or satisfactorily settled. The Contractor agrees that, if any claim should hereafter arise, it shall assume responsibility for it immediately upon request to do so by the City of Ann Arbor.

The Contractor, for valuable consideration received, does further waive, release and relinquish any and all claims or right of lien which the Contractor now has or may acquire upon the subject premises for labor and material used in the project owned by the City of Ann Arbor.

This affidavit is freely and voluntarily given with full knowledge of the facts.

\_\_\_\_\_ Date \_\_\_\_\_

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Subscribed and sworn to before me, on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
\_\_\_\_\_, \_\_\_\_\_ County, Michigan

Notary Public

\_\_\_\_\_ County, MI

My commission expires on:



## **STANDARD SPECIFICATIONS**

All work under this contract shall be performed in accordance with the **2024 Public Services Department Standard Specifications**. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents.

Standard Specifications are available online:

<http://www.a2gov.org/departments/engineering/Pages/Engineering-and-Contractor-Resources.aspx>

**DETAILED SPECIFICATIONS**

An item number ending in X.7X and an item description starting with “DS\_” indicates a detailed specification.

<u>Detailed Specification</u>	<u>No. of Pages</u>
Project Schedule and Payment .....	3
Water Transfer of Service .....	1
Machine Grading .....	1
Drainage Structures .....	1
Bore and Jack Water Main .....	2
Water Structures .....	1
Water Main Abandon.....	1
Railroad Protection.....	1
Protection Fence .....	2
Machine Grading, Special .....	2
Storm Sewer Pipe Removal .....	1
Storm Precast Tee .....	2
Temporary Access Drive .....	1

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROJECT SCHEDULE AND PAYMENT**

AA:TCA

1 of 3

2/9/24

**Description**

Examination of Plans, Specifications, and Work Site

Bidders shall carefully examine the Bid Form, plans, specifications, and the work site until the Bidder is satisfied as to all local conditions affecting the contract and the detailed requirements of construction. The submission of the bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and all requirements of the Contract.

The entire work under this Contract shall be completed in accordance with, and subject to, the scheduling requirements as outlined below, and all other requirements of the Contract Documents.

1. The Contractor shall begin the work of this project on or before **May 6, 2024**, and only upon receipt of the fully executed Contract and Notice to Proceed. Appropriate time extensions shall be granted if the Notice to Proceed is delayed beyond this date.
2. This Contract requires water main and appurtenances, storm sewer and structures, road resurfacing, and turf establishment, and shall be completed within **one hundred and eighty (180) consecutive calendar days**. Contractor shall determine the sequence of work at the project locations and shall not be actively working on more than one project locations, unless otherwise approved by the Engineer. The three project locations and location specific work requirements include:
  - a. Huron View Blvd – No longer than eighty (80) consecutive calendar days.
  - b. Orkney/Culver/Fountain – No longer than seventy (70) consecutive calendar days.
  - c. Boardwalk Culver – No longer than thirty (30) consecutive calendar days.
3. Contractor shall provide all necessary sewer flow control to maintain flow at all existing sewer crossings, connections and lead transfers.
4. No work shall be performed during Holiday weekends as follows, unless approved by the City of Ann Arbor:
  - Memorial Day, from 3:00 p.m. Friday May 24, 2024, through 7:00 a.m. Tuesday May 28, 2024
  - Fourth of July, from 3:00 p.m. Wednesday July 3, 2024, through 7:00 a.m. Friday July 5, 2024
  - Labor Day, from 3:00 p.m. Friday August 30, 2024, through 7:00 a.m. Tuesday September 3, 2024
5. No work shall be performed during University of Michigan home football games.
6. No work or lane closures in Main Street during Ann Arbor Art Fair July 18 - 20, 2024.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROJECT SCHEDULE AND PAYMENT**

AA:TCA

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2/9/24

City Council approval is expected on or before **April 15, 2023**. The Contractor shall not begin the work without approval from the Project Engineer, and in no case before the receipt of the Notice to Proceed.

Contractor will be furnished with two (2) copies of the Contract, for his/her execution, before the aforementioned City Council meeting. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance Certificate, to the City within **ten (10) days**.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project by the final completion date. Should the Contractor demonstrate that they must work on some Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the City. There will be no additional compensation due to the Contractor for work performed on Sundays.

Prior to the start of any construction, the Contractor shall submit a detailed schedule of work for the Engineer's review and approval. Work shall not be started until a schedule is approved in writing by the Engineer. The proposed schedule must fully comply with the scheduling requirements contained in this Detailed Specification. The Contractor shall update the approved work schedule upon request by the Engineer and present it to the Engineer within seven days of said request.

#### Liquidated Damages

Failure to complete all work as specified herein within the times specified herein, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct from the payments due the Contractor, **\$2,000.00** in Liquidated Damages, and not as a penalty, for delays in the completion of the work for each and every calendar day beyond the times for each sub-phase, as required by this Detailed Specification.

Liquidated Damages will be assessed until the required work is completed in the current construction season. If, with the Engineer's approval, work is extended beyond seasonal limitations, the assessment of Liquidated Damages will be discontinued until the work is resumed in the following construction season.

#### Measurement and Payment

If the construction Contract is not completed within the specified calendar day period including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor, this Contract may be terminated with no additional compensation due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least three (3) years. If the Engineer elects to terminate the Contract, Contract items paid for on a Lump Sum basis shall be paid up to a maximum percentage equal to the percentage of the Contract work that has been completed.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROJECT SCHEDULE AND PAYMENT**

AA:TCA

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2/9/24

Costs for the Contractor to organize, coordinate, and schedule all of the work of the project, will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions, Max \$\_\_\_\_\_".

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**WATER MAIN TRANSFER OF SERVICE**

HRC:JB

1 of 1

2/6/24

**Description**

This work shall consist of developing a sequence of construction for the transfer of water service (branches, secondary mains, connecting new mains to existing mains, domestic service leads, etc.) from existing water main(s) to the new water main(s). The contractor shall develop a sequence of construction that will result in the shortest possible disruption of service to residents and occupants impacted by the proposed water main work and present the sequence to the Project Manager for review and approval prior to implementation. The contractor must have a sequence approved by the Project Manager a minimum of two weeks before the transfer work is scheduled to begin. Transfer work will not be permitted without an approved sequence plan AND two weeks' notice to the Project Manager, and the Contractor shall be responsible for all costs related to any resulting delays for failing to comply with these requirements.

**Materials**

N/A

**Construction**

N/A

**Measurement and Payment**

All labor, materials, and equipment required to develop and implement an Ann Arbor-approved sequence of construction for the transfer of water service (branches, secondary mains, domestic service leads, etc.) shall be considered incidental to the unit price bid for the item **General Conditions, Max. \$\_\_\_ - LS** and will not be paid for separately.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**MACHINE GRADING**

HRC:JB

1 of 1

2/6/24

**Description**

This work shall consist of furnishing all labor, tools, equipment, and materials to shape and grade the site in accordance with the Ann Arbor 2024 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

**Materials**

Materials for fill earthwork shall be as specified in Section II.J of Article 5 of the Ann Arbor 2024 Public Services Standard Specifications or approved equal as determined by the City of Ann Arbor.

**Construction**

The site shall be shaped, graded, and compacted such that the proposed work (HMA pavements, concrete pavements, aggregate bases, subbases, curb, gutter, curb & gutter, etc.) will be constructed to the required dimensions, lines, and grades as indicated in the plans.

**Measurement and Payment**

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Machine Grading, Modified.....	Sta
DS_Machine Grading. ....	Syd

Item requirements, measurement, and payment for **DS\_Machine Grading, Modified - Sta** shall be as described in Sections II.J.3 and II.J.4 of Article 11 of the Ann Arbor 2024 Public Services Standard Specifications, except that all excavation (cut) work required to construct the proposed work shall also be considered incidental to the unit price bid, and will not be paid for separately. All required grading/earthwork located within the R.O.W. limits of Huronview Blvd (including up to N Main St.'s west edge of pavement) shall be paid for with the item DS\_Machine Grading, Modified – Sta.

Item requirements, measurement, and payment for **DS\_Machine Grading - Syd** shall be as described in Sections II.J.2 and II.J.4 of Article 11 of the Ann Arbor 2024 Public Services Standard Specifications, except that all excavation (cut) work required to construct the proposed work shall also be considered incidental to the unit price bid, and will not be paid for separately. All required grading/earthwork located outside of the R.O.W. limits of Huronview Blvd, and anywhere on Sunset Rd, Orkney Dr, Culver Rd, and Fountain St, shall be paid for with the item DS\_Machine Grading – Syd.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**DRAINAGE STRUCTURES**

HRC:JB

1 of 1

2/6/24

**Description**

This work shall consist of furnishing all labor, tools, equipment, and materials to construct drainage structures in accordance with the Ann Arbor 2024 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

**Materials**

Materials shall be as specified in Section II of Article 4, and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications, or approved equal as determined by the City of Ann Arbor.

**Construction**

Drainage structures shall be constructed in accordance with the conditions and requirements of Section II.S of Article 10 of the Ann Arbor 2024 Public Services Standard Specifications, and the current editions of Standard Details SD-ST-2 and SD-ST-3, or as indicated in the plans.

**Measurement and Payment**

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Storm Inlet-Junction, ___ In. Dia., (0-8' deep) .....	Each
DS_Storm Single Inlet, ___ In. Dia., (0-8' deep).....	Each

Item requirements, measurement, and payment shall be as described in Article 11 Section II.T.2, except that furnishing and placing the required frame and cover shall also be considered incidental to the items listed above, and will not be paid for separately.



CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**BORE AND JACK WATER MAIN**

HRC:JB

1 of 2

2/6/24

**Description**

This work shall consist of furnishing all labor, tools, equipment, and materials to construct water main in place via bore and jack method in accordance with the Ann Arbor 2024 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

Where unspecified by City of Ann Arbor Standard Specifications and/or standard details, work and materials shall be in accordance with the MDOT 2020 Standard Specifications for Construction.

**Materials**

Casing pipe and spacers shall meet the material requirements of Section XXVI of Article 1, Section II.E of Article 3, and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications.

Blocks, bricks, and mortar for bulkheads shall meet the material requirements of Appendix A of the Ann Arbor 2024 Public Services Standard Specifications, or approved equal as determined by the City of Ann Arbor.

Carrier pipe, fittings, restraints, and wrappings shall meet the material requirements of Section II.A of Article 3 and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications.

Tracer wire shall meet the material requirements of Section II.F of Article 3 and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications.

**Construction**

The proposed water main (of the size indicated) and casing pipe shall be constructed at the locations and to the vertical and horizontal limits and elevations indicated in the plans. Unless otherwise noted, construction shall be in accordance with Ann Arbor Standard Detail SD-W-6 (current edition).

**Measurement and Payment**

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_20 In., PC 250 DIP w/polywrap, Bore and Jack .....	Ft

Payment shall be made based on the lineal foot constructed in place, as measured along the centerline of the carrier pipe, from end of casing pipe to end of casing pipe. The unit price bid shall be payment in full for all labor, materials, and equipment required to bore and jack casing pipe at the locations and to the horizontal and vertical limits and grades indicated in the project

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**BORE AND JACK WATER MAIN**

HRC:JB

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plans and profiles, and install the proposed water main pipe and required appurtenances (joint restraints, mechanical joint fittings, polyethylene encasement, tracer wire, etc.) inside of the casing pipe, as indicated in Ann Arbor Standard Detail Sd-W-6. All labor, material, and equipment requirements of Ann Arbor Standard Detail SD-W-6 shall be considered incidental to the unit price bid for the item **DS\_20 In., PC 250 DIP w/polywrap, Bore and Jack – Ft** and will not be paid for separately, including the removal and offsite disposal of earth spoils and slurry from the bore operation.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**WATER STRUCTURES**

AA:TCA

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2/6/24

**Description**

This work shall consist of furnishing all labor, tools, equipment, and materials to construct water main structures in accordance with the Ann Arbor 2024 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

**Materials**

Materials shall be as specified in Section II of Article 3, and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications, or approved equal as determined by the City of Ann Arbor.

**Construction**

Valves shall be installed in boxes or well structures constructed in accordance with the conditions and requirements of Section II.S of Article 10 of the Ann Arbor 2024 Public Services Standard Specifications, and the current editions of Standard Details SD-W-3 and SD-W-4, or as indicated in the plans.

**Measurement and Payment**

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Gate Valve in Well, __ In. ....	Each
DS_Gate Valve in Box, __ In. ....	Each

Item requirements, measurement, and payment for **DS\_Gate Valve in Well, \_\_ In. – Ea** shall be as described in Section II.OO.6 of Article 11 of the Ann Arbor 2024 Public Services Standard Specifications, except that: furnishing and placing the required frame and cover shall also be considered incidental to the unit price bid, and will not be paid for separately, and; the type of valve (gate valve vs butterfly valve) shall be as indicated in the project plans, and will not be paid for differently.

Item requirements, measurement, and payment for **DS\_Gate Valve in Box, \_\_ In. – Ea** shall be as described in Section II.OO.7 of Article 11 of the Ann Arbor 2024 Public Services Standard Specifications, except that furnishing and placing the required box structure shall also be considered incidental to the unit price bid, and will not be paid for separately.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**WATER MAIN ABANDONMENT**

AA:TCA

1 of 2

2/6/24

**Description**

This work shall consist of furnishing all labor, tools, equipment, and materials to remove and abandon existing water main(s) in accordance with the Ann Arbor 2024 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

**Materials**

Plugs and/or caps shall meet the material requirements of Section II of Article 3 and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications or approved equal as determined by the City of Ann Arbor.

Concrete for thrust blocks shall meet the material requirements the current edition of Ann Arbor Standard Detail SD-W-2 or approved equal as determined by the City of Ann Arbor.

Blocks, bricks, and mortar for bulkheads shall meet the material requirements of Appendix A of the Ann Arbor 2024 Public Services Standard Specifications or approved equal as determined by the City of Ann Arbor.

Backfill material shall meet the requirements of Appendix A of the Ann Arbor 2024 Public Services Standard Specifications or approved equal as determined by the City of Ann Arbor.

Flowable fill shall meet the requirements of Section II.P of Article 5 of the Ann Arbor 2024 Public Services Standard Specifications or approved equal as determined by the City of Ann Arbor.

**Construction**

Construction shall be in accordance with the Section II.BB of Article 10 of the Ann Arbor 2024 Public Services Standard Specifications.

All water main greater than 12 inches in diameter to be abandoned shall be filled with flowable fill within project limits.

**Measurement and Payment**

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Water Main Pipe, Abandon, Modified (___)	LS

Item requirements, measurement, and payment for **DS\_Water Main Pipe, Abandon, Modified (\_\_\_) - LS** shall be as described in Sections II.G.4 of Article 11 of the Ann Arbor 2024 Public Services Standard Specifications, except that the filling of water main abandoned in place within

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**WATER MAIN ABANDONMENT**

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the project limits with flowable fill (where applicable) shall be considered incidental to the unit price bid, and will not be paid for separately.

Payment shall be made when the entire water main is properly abandoned on the associated road.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**RAILROAD PROTECTION**

SDA:DAD

1 of 1

05/05/23

**Description**

This work consists of the Contractor consulting with the representative of the Ann Arbor Railroad (herein after called the Railroad) to determine the necessity for, the type of, and cost of protection required for ensuring the safety and continuity of Railroad traffic and payment to the Railroad for protective services when doing work on, above, or below the Railroad property.

**Materials**

None specified.

**Construction**

Contact the Railroad 30 calendar days prior to starting work in the vicinity of their tracks. Provide documentation to the Engineer with the details of the contact including the person contacted, phone number or email used and the specific time and date. Ensure construction methods are in compliance with the requirements in the contract and as directed by the Engineer.

Pay (or pre-pay when required by the Railroad) the cost for right of entry permit, insurance, flag persons, watchpersons, training, and other protective services and devices furnished or required by the Railroad and made necessary in the judgment of the representative of the Railroad because of the Contractors' operations which are adjacent to the railroad track. All Railroad invoices for such protection costs must be paid within 14 calendar days of receipt if not prepaid.

Monitor and provide immediate preference to clearing any traffic which backs up over the crossing resulting from temporary traffic control away from the crossing.

**Measurement and Payment**

Review the accuracy of costs from the Railroad and resolve any inconsistencies prior to submitting to Engineer for reimbursement. Submit satisfactory evidence or certification to the Engineer indicating all bills for protective services and devices furnished by the Railroad have been paid.

The City will reimburse the Contractor for the costs incurred that have satisfactory evidence of payment to the Railroad using the following pay item.

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Railroad Protection, Ann Arbor Railroad .....	Dollar

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROTECTION FENCE**

SDA:DAD

1 of 2

02/05/24

**Description**

This work consists of installing protective fencing at the limits of the construction area as shown on the plans, around excavations, around trees and other vegetation designated for protection, and in other areas of the project as directed by the Engineer. Perform this work in accordance with Article 10 subsection VI.M and Article 12 of the City of Ann Arbor (CAA) 2024 Public Services Standard Specifications, as directed by the Engineer, and as described herein.

**Materials**

Protective fencing must be orange, high-density polyethylene (HDPE) mesh fabric with a nominal 2-inch diamond design. Protective fencing must be 48 inches high and weigh at least 0.102 pound per square foot. Use 6 foot long, T-shaped, metal posts or 2-inch square hardwood stakes.

**Construction**

Install protective fencing at the limits of the construction area(s) as shown on the plans, around excavations, around trees and other vegetation designated for protection, and in other areas as directed by the Engineer.

Install fencing for tree protection in accordance with Article 12, Standard Detail SD-L-3 of the CAA 2024 Public Services Standard Specifications

Anchoring and Bracing Posts. Anchor and brace enough posts to keep the fabric taut.

Maintaining Fence. Maintain the protective fence until the Engineer directs its removal or accepts the project.

Removing Protective Fence. Remove and dispose of the protective fence.

Do not operate equipment beyond any construction area(s) bounded by protective fencing without the approval of the Engineer.

Do not stockpile or store construction material, supplies, and/or equipment beyond any construction area(s) bound by protection fence.

The Engineer will not permit any vehicles and/or personnel beyond any construction area(s) bounded by protection fence.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROTECTION FENCE**

SDA:DAD

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02/05/24

**Measurement and Payment**

Measure and pay for the completed work, as described, at the contract unit price using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Site and Tree Protection Fence.....	Foot

Measure **DS\_Site and Tree Protection Fence** length in place by the unit foot and pay for it at the contract unit price, which price includes all cost for labor, equipment, and materials necessary to complete the work. The contract unit price also includes payment for any/all costs related to fence maintenance, and reinstallation as required, during the construction period.



CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**MACHINE GRADING, SPECIAL**

SDA:DAD

1 of 2

02/05/24

**Description**

This work consists of earth excavation and embankment required to reconstruct the north and south drainage channels, and to construct and remove the mud mat/temporary drive access as shown on the plans, as directed by the Engineer, and as specified herein. This work also includes disposing of excess material.

**Materials**

Provide MDOT Class II Granular Material, Sound Earth or other suitable material approved by the Engineer as backfill.

**Construction**

Perform this work in accordance with Article 10 of the City of Ann Arbor (CAA) 2024 Public Services Standard Specifications, and as shown on the plans.

The work includes, but is not limited to, the following:

1. Earth excavation, placing embankment, and grading and shaping to reconstruct the north and south drainage channels, and the temporary access drive;
2. Flatten fill slopes around culvert extensions and storm sewer inlets;
3. Remove cattails, tree limbs, brush, stumps, concrete, and all other miscellaneous debris;
4. Remove trees with a diameter of less than 6 inches;
5. Blend channel profiles to match the existing ditches;
6. Remove soils/spoils from the project site.

Estimated earth excavation and embankment volumes and cut/fill values are as follows:

1. Construction and removal of mud mat/temporary access drive.  
Excavation = 500 Cyd  
Embankment = 500 Cyd  
Maximum cut/fill = 6 Feet
2. Reconstruction of north channel.  
Excavation = 125 Cyd  
Embankment = 50 Cyd  
Maximum cut = 3 Feet  
Maximum fill = 1 Foot

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**MACHINE GRADING, SPECIAL**

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- 3. Reconstruction of south channel.
  - Excavation = 325 Cyd
  - Embankment = 50 Cyd
  - Maximum cut = 3 Feet
  - Maximum fill = 1 Foot

Excavated earth may be used to fill existing ditches and to flatten fill slopes, as approved by the Engineer.

Dispose of materials in accordance with the CAA 2024 Public Services Standard Specifications.

**Measurement and Payment**

Measure and pay for the completed work, as described, at the contract unit price at each location using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Machine Grading, Special .....	Station

Measure **DS\_Machine Grading, Special** along the channel and temporary access drive centerlines in length by the 100-foot unit station and pay for it at the contract unit price, which price includes all cost for labor, equipment, and materials necessary to complete the work.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**STORM SEWER PIPE REMOVAL**

SDA:DAD

1 of 1

02/05/24

**Description**

This work consists of removing and bulkheading the 54 inch diameter sewer pipe as shown on the plans in accordance with Article 10 subsection II.AA of the City of Ann Arbor (CAA) 2024 Public Services Standard Specifications, as directed by the Engineer, and as described herein.

**Materials**

Provide MDOT Class II Granular Material or Sound Earth as backfill. Use MDOT Concrete Grade 3000, or brick or block and Type R-2 Mortar materials for sewer bulkheads.

**Construction**

Perform work in accordance with Article 10 subsection II.AA of the CAA 2024 Public Services Standard Specifications.

Remove sewers or parts of sewers that require removal or that interfere with the new construction.

Backfill excavated sites or holes resulting from removals within the influence of the subgrade surface limit of the temporary drive access with granular material Class II. For excavated sites outside the influence of the subgrade surface, backfill with sound earth. Place and compact backfill per the CAA 2024 Public Services Standard Specifications.

Dispose of materials in accordance with the CAA 2024 Public Services Standard Specifications.

Bulkhead the existing storm sewer pipe remaining in place at the limits of removal.

Construct sewer bulkheads using Grade 3000 concrete or brick or block masonry. Extend the bulkhead at least 1 foot into the pipe from its end or from the inner wall of the drainage structure whichever applies.

**Measurement and Payment**

Measure and pay for the completed work, as described, at the contract unit price at each location using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Storm Sewer Pipe, 54 In. Dia., Rem.....	Foot

Measure **DS\_Storm Sewer Pipe, 54 In. Dia., Rem** length in place by the unit foot and pay for it at the contract unit price, which price includes all cost for labor, equipment, and materials necessary to complete the work including bulkheading the existing storm sewer pipe remaining in place at the limits of removal.

The unit price for **Storm Sewer Pipe, 54 In. Dia., Rem** includes the cost of testing for disposal, hauling, and disposing of generated waste.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**STORM PRECAST TEE**

SDA:DAD

1 of 2

02/05/24

**Description**

This work consists of constructing a precast concrete manhole tee in accordance with Articles 4, 10 and 12 of the City of Ann Arbor (CAA) 2024 Public Services Standard Specifications, as shown on the plans, as directed by the Engineer, and as specified herein.

**Materials**

Furnish materials in accordance with Article 4 subsections II.A and II.B of the CAA 2024 Public Services Standard Specifications, and MDOT Standard Plan R-3-B.

Provide Class IV reinforced concrete precast manhole tee in accordance with Article 4 subsection II.A of the CAA 2024 Public Services Standard Specifications. Provide pipe backfill in accordance with Article 10 subsections II.H and II.I of the CAA 2024 Standard Specifications.

Furnish frame and cover model EJ V3600-6 RG or approved equal. At least 14 calendar days prior to installation, submit shop drawings of the proposed cover and frame system for review and approval.

Furnish precast concrete adjusting rings, brick, block and mortar Type R-2.

**Construction**

Construct precast concrete manhole tee in accordance with Article 10 section II and Article 12 of the CAA 2024 Public Services Standard Specifications, MDOT Standard Plan R-3-B, CAA Standard Detail SD-TD-1 (UTILITY TRENCH – TYPE 1), as shown on the plans, as described below, and as directed by the Engineer.

Furnish working drawings for precast concrete manhole tee in accordance with subsection 104.02 of the MDOT Standard Specifications for Construction.

Furnish and install drainage structure covers and frames in accordance with the manufacturer's guidelines.

Furnish and adjust to finish elevation the proposed drainage structure cover as shown on the plans.

Immediately remove any debris that falls into the precast tee due to the Contractor operations.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**STORM PRECAST TEE**

SDA:DAD

2 of 2

02/05/24

**Measurement and Payment**

Measure and pay for the completed work, as described, at the contract unit price at each location using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Storm Manhole, 90 In. Dia., Precast Tee, CI IV RCP .....	Each

Measure **DS\_Storm Manhole, 90 In. Dia., Precast Tee, CI IV RCP** in place by the unit each and pay for it at the contract unit price, which price includes all cost for labor, equipment, and materials necessary to complete the work. This item of work also includes furnishing and installing the new drainage structure frame and cover, and adjustment of the structure cover to the finish elevation regardless of the vertical change in height.

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**TEMPORARY ACCESS DRIVE**

SDA:DAD

1 of 1

02/05/24

**Description**

This work consists of constructing an aggregate surface on a prepared grade to maintain construction traffic and site access during construction as directed by the Engineer. Additional materials required to maintain access along with removal and disposal of the aggregate when no longer needed, are included in this item of work.

**Materials**

Use material meeting the grading requirements for MDOT Class 23A, to construct the aggregate surface.

**Construction**

Place 8 inches of aggregate for the temporary access drive on the prepared subgrade at locations shown on the plans or as directed by the Engineer to provide a flush transition from the mud mat and to other areas where construction traffic and site access is to be maintained. Maintain the flow of any drainage courses interrupted by temporary access drive.

Maintain the aggregate surface in a smooth and firm condition until no longer needed for maintaining traffic and access. When construction operations progress to the point that the temporary drive access is no longer needed, remove all temporary access drive materials, and restore the area to its preconstruction condition.

**Measurement and Payment**

Measure and pay for the completed work, as described, at the contract unit price at each location using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
DS_Temporary Access Drive .....	Square Yard

Measure **DS\_Temporary Drive Access** in area by the square yard and pay for it at the contract unit price, which price includes all cost for labor, equipment, and materials necessary to complete the work required for the construction, maintenance, removal and disposal of the aggregate surface and restoration of temporary access drive location as described in this detailed specification and as directed by the Engineer.

**DS\_Machine Grading, Special** includes removal topsoil and other earth excavation and embankment necessary to construct the subgrade for the temporary access drive.

**SOIL BORING REPORT**



**MATERIALS TESTING CONSULTANTS**

**GEOTECHNICAL DATA PACKAGE**

**ANN ARBOR 2023 SOIL BORING BUNDLE 1 – MISCELLANEOUS UTILITIES  
ANN ARBOR, MICHIGAN**

**Prepared For:**

CITY OF ANN ARBOR  
Ann Arbor, Michigan

**Prepared By:**

MATERIALS TESTING CONSULTANTS, INC.

October 2023  
MTC Project No. 231352





October 23, 2023  
Project No. 231532

City of Ann Arbor  
Guy C. Larcom City Hall  
301 E. Huron, 4th Floor  
Ann Arbor, Michigan 48107

Attention: Andrea Wright

Reference: Geotechnical Data Package  
Ann Arbor 2023 Soil Boring Bundle 1 – Miscellaneous Utilities  
Ann Arbor, Michigan

Dear Ms. Wright:

We have completed a geotechnical investigation for the above-referenced project. The purpose of this investigation has been to identify the general subsurface soil conditions in the vicinity of the proposed construction. This work has been performed as described in our proposal dated August 8, 2023, and in accordance with our active City of Ann Arbor contract for 2021 Geotechnical and Environmental Services.

Presented herein are descriptions of our understanding of the design considerations, the geotechnical investigation, encountered conditions and engineering recommendations. The Appendix contains the report limitations and data collected during this investigation.

## PROJECT LOCATION AND INFORMATION

The area of investigation is shown on Figure Nos. 1 and 2 and is generally located along Huronview Boulevard, Culver Road, Orkney Drive and Fountain Street. We understand miscellaneous utilities will be installed by the City of Ann Arbor along these alignments and the associated roadways are likely to be reconstructed.

## INVESTIGATION METHODOLOGY

Conventional soil test borings, hand auger borings and sampling along with field engineering reconnaissance were used to investigate the subsurface conditions. Boring depths ranged from 6.5 ft to 15 ft below the existing ground surface in requested areas. Boring SB2023-080 encountered shallow refusal at a depth of 7 ft and was reattempted twice; Boring SB2023-080A encountered shallow refusal at a depth of 6.5 ft and Boring SB2023-080B extended to the requested depth of 15 ft. Boring SB2023-072 was completed using hand auger equipment after discussion with the City of Ann Arbor due to overhead utility conflicts which



prevented the use of a drill rig. Boring locations are shown on Figure Nos. 1 and 2. Investigation procedures, soil classification information and boring logs are provided in the Appendix.

MTC staked the approximate boring locations in the field per locations provided by Ms. Andrea Wright of the City of Ann Arbor by email on July 27, 2023. Boring elevations were approximated by GPS. The elevations used in this report are given in feet and are based on NAVD 88 datum, with boring coordinates based on the Michigan State Plane South coordinate system. If more precise location and elevation data are desired, a registered professional land surveyor should be retained to locate the borings and determine their ground elevations.

Borings were drilled and other sampling was conducted solely to obtain indications of subsurface conditions as part of a geotechnical exploration program. No services were performed to evaluate subsurface environmental conditions.

#### Laboratory

Soil samples were reviewed by one of our engineers and technically classified according to the methods of ASTM D2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)". Calibrated penetrometer tests were performed on cohesive samples to obtain an indication of unconfined compressive strength values.

Selected samples were subjected to moisture content testing via ASTM D2216 "Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass". The ASTM D2488 classifications are included on the boring logs. Results of the laboratory tests are provided in the Appendix.

Environmental testing via Brighton Analytical, LLC was completed on samples obtained from Borings SB2023-074, SB2023-078, SB2023-080 and SB2023-082. Soil resistivity and pH tests were performed on samples from SB2023-074, SB2023-078 and SB2023-080 and soil resistivity, pH, and volatile organic compounds (VOCs) tests were performed on samples from SB2023-082. The full reports from Brighton Analytical, LLC are provided in the Appendix

The estimated values for resilient modulus,  $M_r$ , have been provided based on the visual classification of the soil and Table 12-2 in the Michigan DOT User Guide for Mechanistic Empirical Pavement Design, Interim Edition dated March 2015. Other data including results from FWD testing, local knowledge, or from past ME pavement performance on similar subgrade materials may also be of use in estimating resilient modulus if they are available. Typically, recommendations based on visual classification are given as a range of values for various assumptions regarding compaction, moisture content and roadway type. Generally, more conservative values of resilient modulus should be used on high traffic roads with a higher cost to early failure, in areas of high soil moisture/high water table and in areas of variable soil, utility trenches, etc. Conversely, less conservative (higher range) values are typically used on lower traffic roads with drier and more uniform soils.



## INVESTIGATION RESULTS

### Regional Geology

The *Map of the Surface Formations of the Southern Peninsula of Michigan*, published by the State of Michigan, indicates the site is in an area of sand lake beds. Soil conditions typically are found to consist of sands in this type of geologic area. The *Map of Bedrock Topography of the Southern Peninsula of Michigan* indicates bedrock to be between els 650 and 750, on the order of 50 to 280 ft below existing grades.

### Site Conditions

At the time of our field work, Culver Road, Orkney Drive and Huronview Boulevard were covered with asphalt pavement. Fountain Street was generally unpaved with the exception of the Culver Road intersection which was asphalt paved. Fountain Street sloped down from south to north with elevations ranging from el 930 at the intersection with Sunset Road to el 888 at the intersection with Culver Road. Culver Road generally sloped down to the north and south from the approximate location of 1316 Culver Drive, with elevations ranging from els 868 to 914. Orkney Drive sloped down from south to north with elevations ranging from els 868 to 902. Huronview Boulevard sloped down from west to east with elevations ranging from els 804 to 882.

Pavement along each street was generally observed and the pavement condition and descriptions are presented in the following table. Surface drainage was generally directed to catch basins located within curbs, with the exception of the unpaved portion of Fountain Street where drainage was directed towards vegetated areas at the edges of the street.

Street Name	Pavement Condition	Pavement Description
Fountain Street	Unpaved	Unpaved
Culver Road	Good to fair	Occasional transverse and mild block cracking, with occasional patches
Orkney Drive	Good to fair	Occasional transverse and mild block cracking, with occasional patches
Huronview Boulevard	Poor to very poor	Alligator cracking observed over more than 25% of the surface, severe distortion or rutting, as well as potholes

### Subsurface Conditions

*Borings SB2023-072 to SB2023-079 – Fountain Street, Culver Road, Orkney Drive*

Borings SB2023-073 to SB2023-079 generally encountered 2 to 4 inches of HMA and 4 to 12 inches of natural aggregate base at the surface. Boring SB2023-072, drilled within the unpaved area on Fountain Street, encountered 10 inches of natural aggregate at the surface.



Beneath the pavements, Borings SB2023-072, SB2023-074, and SB2023-076 to SB2023-078 encountered urban fill, consisting of poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) and stiff to hard lean clay (CL), to depths ranging from 2 to 9 ft (els 875.5 to 925.1). Possible buried topsoil, roots and brick debris were occasionally encountered within the fill.

Beneath the surficial materials and fill, Borings SB2023-073, SB2023-075 and SB2023-079 generally encountered very loose to medium dense poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to depths ranging from 2.5 to 4.5 ft (els 864.2 to 907.7) and stiff to very stiff lean clay (CL) to the explored depths of 10 ft (els 858.7 to 901.5). Borings SB2023-074 and SB2023-076 to SB2023-078 generally encountered very stiff to hard lean clay (CL) to the explored depths of 10 ft (els 874.5 to 920.6).

Borings SB2023-077 and SB2023-079 encountered poor recovery due to possible coarse gravel or cobble at depths up to 7.5 ft (els 861.2 to 914.7). Boulder may be present where cobble is noted.

Seepage groundwater from saturated sand lenses was encountered in Borings SB2023-073, SB2023-076 and SB2023-079 at depths ranging from 4.5 to 9.8 ft (els 858.9 to 926.1).

*Borings SB2023-080, SB2023-080A and SB2023-080B to SB2023-083 - Huronview Boulevard*

Borings SB2023-081 to SB2023-083 generally encountered 3 to 5 inches of HMA and 4 to 6 inches of natural aggregate base at the surface, with the exception of Boring SB2023-082 which did not encounter any aggregate base. Borings SB2023-080, SB2023-080A and SB2023-080B generally encountered 8 inches of clayey topsoil at the surface. Beneath the pavement sections, Borings SB223-082 and SB2023-083 encountered fill, consisting of medium dense clayey sand (SC) and very stiff lean clay (CL) to depths ranging from 1.5 to 4 ft (els 873.8 to 876.2).

Beneath the surficial materials and fill, SB2023-080B to SB2023-083 generally encountered very loose to medium dense poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to depths ranging from 1.2 to 5.5 ft (els 805.2 to 869.8) and stiff to hard lean clay (CL) to the explored depths of 6.5 to 15 ft (els 791.4 to 865.2).

Boring SB2023-080 and SB2023-080A met shallow auger refusal at depths of 6.5 to 7 ft (els 799.5 to 800) due to possible coarse gravel or cobble. Difficult drilling conditions were noted in Boring SB2023-080 at depths ranging from 2 to 7 ft (els 799.5 to 804.5). Boulder may be present where cobble is noted.

Seepage groundwater from saturated sand lenses was encountered in Boring SB2023-083 at a depth of 7 ft (el 873.2).



The relative density of granular soil is based on recorded SPT N-values while the consistency of cohesive soil is based on both recorded SPT N-values and on estimates of the unconfined compressive strength obtained with a calibrated penetrometer.

Groundwater levels may fluctuate due to seasonal variations such as precipitation, snowmelt, nearby river or lake levels and other factors that may not be evident at the time of measurement. Groundwater levels may be different at the time of construction.

This section has provided a generalized description of the encountered subsurface soil conditions. The boring logs located in the Appendix should be reviewed for detailed soil descriptions. Some variation between boring locations may be expected.

## CLOSURE

In this data package, descriptions of the geotechnical investigation and encountered conditions have been presented. The limitations of this study are described in the Appendix.

We appreciate the opportunity to provide this service to you on this project. Should you have any questions or require further assistance, please contact our office.

Sincerely,

## MATERIALS TESTING CONSULTANTS, INC.

Ryan D. Starcher, E.I.T.  
Project Engineer

Robert J. Warren, P.E.  
Project Manager

Attachments: Figure Nos. 1 and 2 - Boring Location Plans  
Table 1 – Summary of Investigation Results  
Appendix  
- Limitations  
- Test Drilling and Sampling Procedures  
- Boring Log Terminology and Classification Outline  
- Boring Logs  
- Summary of Laboratory Test Results  
- Environmental Laboratory Reports



**LEGEND**

 BORING LOCATION (TYP)

NOTE: AERIAL IMAGE FROM GOOGLE EARTH



TITLE: BORING LOCATION PLAN

PROJECT: ANN ARBOR 2023 SOIL BORINGS BUNDLE 1 – MISCELLANEOUS UTILITIES

SCALE: AS SHOWN

DATE: 10/23/2023

PROJECT NO.: 231532

FIG. NO.: 1


DR. BY: JM

REV. BY: RS





**LEGEND**

 BORING LOCATION (TYP)

NOTE: AERIAL IMAGE FROM GOOGLE EARTH



TITLE: BORING LOCATION PLAN

PROJECT: ANN ARBOR 2023 SOIL BORINGS BUNDLE 1 – MISCELLANEOUS UTILITIES

SCALE: AS SHOWN

DATE: 10/23/2023

PROJECT NO.: 231532

FIG. NO.: 2

DR. BY: JM

REV. BY: RS





**Table 1 - Summary of Investigation Results**

Street Name	Limits	Borings	Asphalt Thickness (inches)	Base Thickness and Description	Subgrade Soils	Estimated Resilient Modulus, psi	Laboratory Results - Moisture, %
Fountain Street, Culver Road, Orkney Drive	Sunset Road to Orkney/Culver	SB2023-072 to SB2023-079	SB2023-072: None SB2023-073 to SB2023-079: 2 to 4	SB2023-073 to SB2023-079: 4 to 12" Natural Agg. SB2023-072: 10" Natural Agg.	SB2023-072: Poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) and lean clay (CL) to 7.2 ft (Fill) SB2023-074, SB2023-076 to SB2023-078: Poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to 2 to 5.5 ft (fill), lean clay (CL) to 10 ft SB2023-073, SB2023-075 and SB2023-079: Poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to 2.5 to 4.5 ft and lean clay (CL) to 10 ft	SC: 3,700 - 5,100 SP-SC: 3,700 - 5,100 SP-SM: 5,900 - 8,100 CL: 3,700 - 5,100	CL: 7.5 to 19.8 SC: 7.2 to 17.6
Huronview Boulevard	North Main Street to Turnaround	SB2023-080, SB2023-080A, SB2023-080B to SB2023-083	SB2023-080, SB2023-080A, SB2023-080B: None SB2023-081 to SB2023-083: 3 to 5	SB2023-081 and SB2023-083: 4 to 6" Natural Agg. SB2023-080, SB2023-080A, SB2023-080B, SB2023-082: No Agg. Base	SB2023-080, SB2023-080A, SB2023-080B, SB2023-081: Poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to 1.2 to 5.5 ft and lean clay (CL) to the explored depths of 15 ft SB2023-082 and SB2023-083: Clayey sand (SC) and lean clay (CL) to 1.5 to 4 ft (Fill), Poorly graded sand with varying amounts of clayey and silty fines (SP-SM, SP-SC, SC) to depths ranging from 1.2 to 5.5 ft and stiff to hard lean clay (CL) to the explored depths of 15 ft	SC: 3,700 - 5,100 SP-SC: 3,700 - 5,100 SP-SM: 5,900 - 8,100 CL: 3,700 - 5,101	CL: 9.5 to 16.2 SC: 12.9 to 15.4





## *APPENDIX*

- Limitations
- Test Drilling and Sampling Procedures
- Boring Log Terminology and Classification Outline
- Boring Logs
- Infiltration Test Results



## LIMITATIONS

### Soil Variations

The recommendations in this report are based upon the data obtained from the soil borings. This report does not reflect variations which may occur between these borings, and which would not become evident until construction. If variations then become evident, it would be necessary for a re-evaluation of recommendations of this report, after performing on-site observations.

### Warranties

We have prepared this report in accordance with generally accepted soil and foundation engineering practices. We make no other warranties, either expressed or implied, as to the professional advice provided under the terms of our agreement and included in this report. This report is prepared exclusively for our client and may not be relied upon by other parties without written consent from our office.

### Boring Logs

In the process of obtaining and testing samples and preparing this report, we follow reasonable and accepted practice in the field of soil engineering. Field logs maintained during drilling describe field occurrences, sampling locations, and other information. The samples obtained in the field are subjected to additional testing in the laboratory and differences may exist between the field logs and the final logs. The engineer reviews the field logs and laboratory test data, and then prepares the final boring logs. Our recommendations are based on the contents of the final logs.

### Review of Design Plans and Specifications

In the event that any changes in the design of the building or the location, however slight, are planned, our recommendations shall not be considered valid unless modified or approved in writing by our office. We recommend that we be provided the opportunity to review the final design and specifications in order to determine whether changes in the original concept may have affected the validity of our recommendations, and whether our recommendations have, in fact, been implemented in the design and specifications.



## TEST DRILLING AND SAMPLING PROCEDURES

### Test Drilling Methods:

- Hollow stem auger, ASTM D6151
- Mud rotary, ASTM D5783
- Casing advancer, ASTM D5872
- Rock coring, ASTM D2113
- Core/Hand Auger

*Note: Cone penetration test data can be used to interpret subsurface stratigraphy and can provide data on engineering properties of soils. The ASTM procedure does not include a procedure for determining soil classification from CPT testing. Soil classifications shown on CPT logs are based on published procedures and are not based on physical ASTM soil classification tests.*

### Sampling Methods:

- SPT, ASTM D1586, Auto hammer (140 lb., 30" drop, 2" OD split spoon sampler)
- Grab Samples

*Note: The number of hammer blows required to drive the SPT sampler 12 inches, after seating 6 inches, is termed the soil N-value and provides an indication of the soil's relative density and strength parameters at the sample location. SPT blow counts in 6 inch increments are recorded on the boring logs.*

### Drill Rig:

- CME 55 LC (ATV)
- CME 750 Rubber tired (ATV)
- CME 95 Truck
- Geoprobe 7822
- Geoprobe Rotary Sonic

### Boreholes Backfilled With:

- Excavated soil
- Cement bentonite grout
- Piezometer or Monitoring Well (see notes on logs)
- Concrete or asphalt patch where appropriate

### Sample Handling and Disposition:

- Samples labeled, placed in jars, returned to MTC Laboratory
- Discard after 60 days



# BORING LOG TERMINOLOGY AND ASTM D 2488 CLASSIFICATION OUTLINE

## TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE-GRAINED SOILS** (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

Descriptive Terms	Relative Density	SPT Blow Count
Very loose	0 to 15 %	< 5
Loose	15 to 35 %	5 to 10
Medium dense	35 to 65 %	10 to 30
Dense	65 to 85 %	30 to 50
Very dense	85 to 100 %	> 50

Per ASTM D2487, the following conditions must be met based on laboratory testing to justify the label 'well graded' in a soil description.

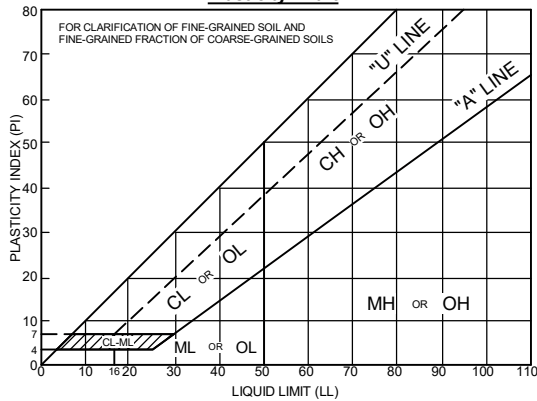
Gravel:  $C_u = \frac{D_{60}}{D_{10}}$  greater than 4;  $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$  between 1 and 3

Sand:  $C_u = \frac{D_{60}}{D_{10}}$  greater than 6;  $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$  between 1 and 3

**FINE-GRAINED SOILS** (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

Descriptive Terms	Unconfined Compressive Strength TSF	SPT Blow Count
Very soft	< 0.25	< 2
Soft	0.25 to 0.5	2 to 4
Medium stiff	0.5 to 1.0	4 to 8
Stiff	1.0 to 2.0	8 to 15
Very stiff	2.0 to 4.0	15 to 30
Hard	> 4.0	> 30

**Plasticity Chart**



MAJOR DIVISIONS				TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 15% FINES	GW	WELL-GRADED GRAVELS WITH OR WITHOUT SAND
		GRAVELS WITH 15% OR MORE FINES	GP	POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
			GM	SILTY GRAVELS WITH OR WITHOUT SAND
		GC	CLAYEY GRAVELS WITH OR WITHOUT SAND	
	SANDS MORE THAN HALF COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 15% FINES	SW	WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP	POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
		SANDS WITH 15% OR MORE FINES	SP-SM	POORLY-GRADED SANDS WITH SILT WITH OR WITHOUT GRAVEL
			SM	SILTY SANDS WITH OR WITHOUT GRAVEL
		SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL	
		FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS	ML
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL			
OL	ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL			
SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%	MH		INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL	
	CH		INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL	
OH	ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL			
HIGHLY ORGANIC SOILS		PT/OL	PEAT AND OTHER HIGHLY ORGANIC SOILS	

## GENERAL NOTES

- Classifications are based on the United Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.
- "Grades with" or "Grades without" may be used to describe soil when characteristics vary within a stratum.
- Preserved soil samples will be discarded after 60 days unless alternate arrangements have been made.

## GROUNDWATER OBSERVATIONS:

**During** - indicates water level encountered during the boring  
**End** - indicates water level immediately after drilling  
**Date and Depth** - Measurements at indicated date

## SAMPLE TYPES AND NUMBERING

S	SPT, split barrel sample, ASTM D1586
U	Shelby tube sample, ASTM D1587
R	Rock core run
*S	Other than 2" split barrel sample
L	SPT with liner, ASTM D1586
A	Auger cuttings
G	Geoprobe liner

## MINOR COMPONENT QUANTIFYING TERMS

Less than 5%	TRACE
5 to 10%	FEW
15 to 25%	LITTLE
30 to 40%	SOME
50 to 100%	MOSTLY

## GRAIN SIZE

BOULDER	>12"
COBBLE	12" to 3"
COARSE GRAVEL	3" to 0.75"
FINE GRAVEL	0.75" to No. 4
COARSE SAND	No. 4 to No. 10
MEDIUM SAND	No. 10 to No. 40
FINE SAND	No. 40 to No. 200



# LOG OF BORING

**Project No.:** 231532

**Boring No.:** SB2023-072

**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Hand Auger

**Crew Chief:** Field Eng.: IA Rev. By: RS

**Coordinates:** N=290766.6 E=13289240.8 (MI South 1ft)

**Elevation:** 893.1 ft **Datum:** NAVD 88 (GPS Observation)

**Notes:** Opposite of Driveway 1321 Fountain Street, 1'S of SB Fountain Drive

**Plugging Record:** Backfilled borehole with compacted cuttings.

**Date Begin:** 09/08/2023

**Date End:** 09/08/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing			During	None
Sampler	Hand Auger	3 1/4"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

Depth Drilled: 7.2 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
892.9	0.25	A-1				10" Natural Aggregate Base				Fill: 0.0' to 7.2'
892.6	0.50									
892.4	0.75						0.8			
892.1	1.00									
891.9	1.25	A-2			SP-SM	Gray poorly graded SAND with silt; mostly coarse to fine sand, few silty fines, trace coarse to fine gravel, moist, Fill with roots and brick debris				Odor noted at 3.75'
891.6	1.50									
891.4	1.75									
891.1	2.00									
890.9	2.25									
890.6	2.50									
890.4	2.75	A-3			SP-SC	Gray poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, trace coarse to fine gravel, Fill				Possible organics noted at 5.25'
890.1	3.00						2.8			
889.9	3.25									
889.6	3.50	A-4			SC	Gray clayey SAND; mostly coarse to fine sand, some clayey fines, moist, Fill				
889.4	3.75						4.0			
889.1	4.00									
888.9	4.25									
888.6	4.50	A-4			CL	Gray sandy lean CLAY; mostly clayey fines, some coarse to fine sand, moist, Fill				
888.4	4.75						17.6			
888.1	5.00									
887.9	5.25									
887.6	5.50									
887.4	5.75	A-4								
887.1	6.00						6.0			
886.9	6.25									
886.6	6.50	A-4								
886.4	6.75						2.5	18.9		
886.1	7.00									
						End of Boring				

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532

**Boring No.:** SB2023-073

**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Geoprobe 7822

**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS

**Coordinates:** N=290959.5 E=13289443.7 (MI South lift)

**Elevation:** 878.5 ft      **Datum:** NAVD 88 (GPS Observation)

**Notes:** Culver Drive, 5' N of Curb of 1402 Culver Drive; 60'W from Center of Driveway of 1402 Culver Drive

**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 8.0 ft.

**Date Begin:** 09/06/2023

**Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	7.0
Sampler	SPT	2"	End	7.9
Core			Seepage	7.0
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
878.0	0.5	S-1	1.5	5-5-4 N=9	SP-SM	3" HMA	0.3			
877.5	1.0					3" Natural Aggregate Base	0.5			
877.0	1.5	S-2	1.5	8-4-3 N=7	CL	Brown poorly graded SAND with silt; mostly coarse to fine sand, few silty fines, moist	2.5	10.0		
876.5	2.0									
876.0	2.5									
875.5	3.0									
875.0	3.5	S-3	1.5	1-1-1 N=2	CL	Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist	2.5	11.1		
874.5	4.0									
874.0	4.5									
873.5	5.0									
873.0	5.5	S-4	1.5	1-3-4 N=7	CL	Grades with occasional wet sand seams at 7.0'	2.5	10.3		
872.5	6.0									
872.0	6.5									
871.5	7.0									
871.0	7.5									
870.5	8.0									
870.0	8.5									
869.5	9.0									
869.0	9.5									
868.5	10.0						10.0			

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-074  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=290828.5 E=13289410.3 (MI South lift)  
**Elevation:** 884.5 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:** Culver Drive; 5' N S of WB Curb; 35' E of W Drive Lane of 1335 Culver Drive  
**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 8.0 ft.

**Date Begin:** 09/06/2023      **Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
884.0	0.5	S-1	1.2	5-3-2 N=5	GP	3" HMA	0.3	2.75		Fill: 0.0' to 9.0'
883.5	1.0					9" Natural Aggregate Base	1.0			
883.0	1.5					Gray lean CLAY; mostly clayey fines, moist, Fill with wood debris	2.75			
882.5	2.0									
882.0	2.5									
881.5	3.0	S-2	1.4	2-3-6 N=9	CL	Grades with occasional sand lenses at 4.0'	2.75	15.6		
881.0	3.5									
880.5	4.0									
880.0	4.5									
879.5	5.0									
879.0	5.5	S-3	1.5	2-2-1 N=3	CL	Grades with frequent root fragments at 6.7'	2.0	19.8	Possible organics at 7.0'	
878.5	6.0									
878.0	6.5									
877.5	7.0									
877.0	7.5									
876.5	8.0	S-4	1.5	1-3-3 N=6	CL	Gray lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist	2.0	10.3		
876.0	8.5									
875.5	9.0									
875.0	9.5									
874.5	10.0					End of Boring	10.0			

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532

**Boring No.:** SB2023-075

**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Geoprobe 7822

**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS

**Coordinates:** N=290485.5 E=13289424.8 (MI South lift)

**Elevation:** 911.5 ft      **Datum:** NAVD 88 (GPS Observation)

**Notes:** Culver Road; 11'W from NB Edge of Curb; 50'S from 1316 Culver Road Driveway

**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 5.5 ft.

**Date Begin:** 09/07/2023

**Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
911.0	0.5	S-1	1.5	7-9-8 N=17	SP-SC	3" HMA	0.3	7.2		
910.5	1.0					5" Natural Aggregate Base	0.7			
910.0	1.5	S-1	1.5	7-9-8 N=17	SP-SC	Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, moist	1.7	7.2		
909.5	2.0									
909.0	2.5									
908.5	3.0									
908.0	3.5	S-2	1.5	9-17-18 N=35	SC	Brown clayey SAND; mostly coarse to fine sand, little clayey fines, moist	3.8	7.5		
907.5	4.0									
907.0	4.5									
906.5	5.0									
906.0	5.5	S-3	1.5	4-18-20 N=38	CL	Brown sandy CLAY; mostly clayey fines, some coarse to fine sand, moist	3.0	8.0		
905.5	6.0									
905.0	6.5									
904.5	7.0									
904.0	7.5	S-4	1.5	14-23-22 N=45	CL	Brown sandy CLAY; mostly clayey fines, some coarse to fine sand, moist	3.0	7.5		
903.5	8.0									
903.0	8.5									
902.5	9.0									
902.0	9.5	S-4	1.5	14-23-22 N=45	CL	Brown sandy CLAY; mostly clayey fines, some coarse to fine sand, moist	3.0	7.5		
901.5	10.0									
End of Boring							10.0			

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.





# LOG OF BORING

**Project No.:** 231532

**Boring No.:** SB2023-076

**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Geoprobe 7822

**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS

**Coordinates:** N=289871.0 E=13289445.9 (MI South lift)

**Elevation:** 930.6 ft      **Datum:** NAVD 88 (GPS Observation)

**Notes:** Orkney Drive; 4' S from Edge of Curb, 26' NW from Edge of Sunset Drive

**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 8.6 ft.

**Date Begin:** 09/06/2023

**Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	4.5
Sampler	SPT	2"	End	NA
Core			Seepage	4.5, 9.6
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
930.1	0.5	S-1	1.5	3-3-3 N=6	CL	2" HMA	0.2	2.75	15.2	Fill: 0.0' to 5.5'
929.6	1.0					4" Natural Aggregate Base	0.5			
929.1	1.5					Gray lean CLAY; mostly clayey fines, few coarse to fine sand, moist, Fill	2.75			
928.6	2.0									
928.1	2.5									
927.6	3.0									
927.1	3.5	S-2	1.5	3-3-5 N=8	CL	Grades with occasional wet sand seams at 4.5'	5.5	4.5	13.3	
926.6	4.0									
926.1	4.5									
925.6	5.0									
925.1	5.5	S-3	1.5	5-9-10 N=19	CL	Brown lean CLAY; mostly clayey fines, few coarse to fine sand, trace fine gravel, moist	4.5	13.3	15.4	
924.6	6.0									
924.1	6.5									
923.6	7.0	S-4	1.5	4-8-11 N=19	CL	Grades with wet sand seams at 9.6'	3.75	15.4		
923.1	7.5									
922.6	8.0									
922.1	8.5									
921.6	9.0									
921.1	9.5									
920.6	10.0						10.0			

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-077  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=290037.1 E=13289559.4 (MI South lift)  
**Elevation:** 922.2 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:** Orkney Drive; 7' E from Edge of the Curb, 25' N from the center of Driveway of 1206 Orkney Drive  
**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 6.0 ft.

**Date Begin:** 09/06/2023      **Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS		
921.7	0.5	S-1	1.5	7-7-6 N=13	GP	2" HMA	0.2			Fill: 0.0' to 2.0'		
921.2	1.0					7" Natural Aggregate Base	0.7					
920.7	1.5	S-2	1.5	6-5-7 N=12	CL	Gray sandy lean CLAY; mostly clayey fines, some coarse to fine sand, moist, Fill	2.75			S-3: Poor recovery; possible coarse gravel / COBBLE		
920.2	2.0						2.0					
919.7	2.5							Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist				
919.2	3.0											
918.7	3.5	S-3	0.7	6-17-28 N=45	CL	Black gravelly sand inclusion at 7.0'	4.0	12.5				
918.2	4.0											
917.7	4.5											
917.2	5.0	S-4	1.5	13-20-22 N=42			4.0	8.0				
916.7	5.5											
916.2	6.0											
915.7	6.5											
915.2	7.0											
914.7	7.5											
914.2	8.0											
913.7	8.5											
913.2	9.0											
912.7	9.5											
912.2	10.0						10.0					

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-078  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Geoprobe 7822

**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS

**Coordinates:** N=290292.6 E=13289697.9 (MI South lift)

**Elevation:** 887.7 ft      **Datum:** NAVD 88 (GPS Observation)

**Notes:** Orkney Drive; 5.5'E from Edge of Curb, NB Oakney Drive; 60'S from Center of Drive Lane of 1310 Orkney Drive

**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 8.3 ft.

**Date Begin:** 09/06/2023

**Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
887.2	0.5	S-1	1.5	6-5-2 N=7	CL	4" HMA	0.3	2.5		Fill: 0.0' to 4.0'
886.7	1.0					6" Natural Aggregate Base	0.8			
886.2	1.5	S-2	1.5	1-2-2 N=4	CL	Brown sandy lean CLAY; mostly clayey fines, some coarse to fine sand, moist, Fill	4.0	2.75	17.8	
885.7	2.0									
885.2	2.5									
884.7	3.0									
884.2	3.5	S-3	1.5	2-4-5 N=9	CL	Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist	3.0	10.1		
883.7	4.0									
883.2	4.5									
882.7	5.0									
882.2	5.5	S-4	1.5	2-3-5 N=8	CL		3.0	10.4		
881.7	6.0									
881.2	6.5									
880.7	7.0									
880.2	7.5									
879.7	8.0									
879.2	8.5									
878.7	9.0									
878.2	9.5									
877.7	10.0						10.0			

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532

**Boring No.:** SB2023-079

**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1

**Client:** City of Ann Arbor

**Location:** Ann Arbor, Michigan

**Drill Type:** Geoprobe 7822

**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS

**Coordinates:** N=290721.2 E=13289750.8 (MI South lift)

**Elevation:** 868.7 ft      **Datum:** NAVD 88 (GPS Observation)

**Notes:** Orkney Drive; 5' W from Edge of NB Orkney Drive; 13'N of 1330 Orkney Drive Driveway

**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 6.5 ft.

**Date Begin:** 09/06/2023

**Date End:** 09/06/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	9.8
Sampler	SPT	2"	End	NA
Core			Seepage	9.8
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 10.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
868.2	0.5	S-1	1.5	9-11-4 N=15	SC	4" HMA	0.3	9.3		
867.7	1.0					12" Natural Aggregate Base	1.5			
867.2	1.5					Brown clayey SAND; mostly coarse to fine sand, some clayey fines, moist				
866.7	2.0									
866.2	2.5	S-2	1.2	3-1-1 N=2	CL	Brown sandy lean CLAY; mostly clayey fines, some coarse to fine sand, trace medium to fine gravel, moist	4.5	3.0	11.8	S-2, S-3: Poor recovery; possible coarse gravel / COBBLE
865.7	3.0									
865.2	3.5									
864.7	4.0									
864.2	4.5	S-3	1.2	4-6-6 N=12	CL	Grades with wet sand seams at 9.8'	2.75	9.7		
863.7	5.0									
863.2	5.5									
862.7	6.0									
862.2	6.5	S-4	1.5	3-4-5 N=9			2.5	10.0		
861.7	7.0									
861.2	7.5									
860.7	8.0									
860.2	8.5									
859.7	9.0									
859.2	9.5									
858.7	10.0									

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-080  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291694.6 E=13291120.8 (MI South lift)  
**Elevation:** 806.5 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:**

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Plugging Record:** Backfilled borehole with compacted cuttings. Cave in at 6.0 ft.  
**Depth Drilled:** 7.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%      **QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
806.0	0.5	S-1	1.5	3-8-9 N=17	SP-SM	8" Clayey Topsoil	0.7			Driller noted difficult drilling from 2.0' to 7.0'
805.5	1.0					Brown poorly graded SAND with silt; mostly coarse to fine sand, few silty fines, moist	1.3			
805.0	1.5									
804.5	2.0					Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist				
804.0	2.5									
803.5	3.0									
803.0	3.5									
802.5	4.0	S-2	1.5	5-10-9 N=19	CL		4.0			
802.0	4.5						4.0	11.4		
801.5	5.0									
801.0	5.5									
800.5	6.0	S-3	0.2	50/2"						
800.0	6.5									
799.5	7.0					7.0				

End of Boring

Auger refusal due to possible coarse gravel / COBBLE

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-080A  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291697.5 E=13291119.5 (MI South 1ft)  
**Elevation:** 806.5 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:**  
**Plugging Record:** Backfilled borehole with compacted cuttings. Cave in at 6.0 ft.

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

Depth Drilled: 6.5 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%      **QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
806.0	0.5					8" Clayey Topsoil	0.7			Soil layer depths determined from auger cuttings observation
805.5	1.0				SP-SM	Brown poorly graded SAND with silt; mostly coarse to fine sand, few silty fines, moist	1.2			
805.0	1.5									
804.5	2.0				CL	Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist				
804.0	2.5									
803.5	3.0									
803.0	3.5									
802.5	4.0									
802.0	4.5									
801.5	5.0									
801.0	5.5									
800.5	6.0									
800.0	6.5									

End of Boring

Auger refusal due to possible coarse gravel / COBBLE

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-080B  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291695.3 E=13291115.1 (MI South lift)  
**Elevation:** 806.4 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:**  
**Plugging Record:** Backfilled borehole with compacted cuttings. Cave in at 11.5 ft.

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 15.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%      **QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
805.9	0.5					8" Clayey Topsoil	0.7			
805.4	1.0				SP-SC	Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, moist	1.3			
804.9	1.5									
804.4	2.0				CL	Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist	4.0			Driller noted difficult drilling from 4.0' to 6.0'
803.9	2.5									
803.4	3.0									
802.9	3.5									
802.4	4.0									
801.9	4.5									
801.4	5.0									
800.9	5.5									
800.4	6.0									
799.9	6.5	S-3		3-5-8 N=13						
799.4	7.0				CL	Gray lean CLAY; mostly clayey fines, trace coarse to fine sand, moist	4.5+	12.8		
798.9	7.5									
798.4	8.0									
797.9	8.5									
797.4	9.0									
796.9	9.5	S-4		5-10-12 N=22						
796.4	10.0									
795.9	10.5									
795.4	11.0									
794.9	11.5									
794.4	12.0									
793.9	12.5									
793.4	13.0									
792.9	13.5									
792.4	14.0									
791.9	14.5	S-5		2-6-8 N=14		4.5+	11.6			
791.4	15.0					15.0				

End of Boring

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-081  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291645.4 E=13290666.0 (MI South lift)  
**Elevation:** 836.3 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:** Huron View Blvd; 13'S from SB Curb; 35'W from Driveway of 210 Huron View Boulevard  
**Plugging Record:** Backfilled borehole with compacted cuttings, patched pavement with cold patch. Cave in at 11.9 ft.

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 15.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS	
835.8	0.5	S-1	1.5	10-9-5 N=14	SP-SC	3" HMA	0.3				
835.3	1.0					6" Natural Aggregate Base	0.8				
834.8	1.5	S-1	1.5	10-9-5 N=14	SP-SC	Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, moist					
834.3	2.0										
833.8	2.5										
833.3	3.0										
832.8	3.5	S-2	1.5	3-2-4 N=6	CL	Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist	4.0				
832.3	4.0										
831.8	4.5										
831.3	5.0										
830.8	5.5	S-3	1.5	2-3-3 N=6	CL	Gray lean CLAY; mostly clayey fines, moist	7.0	3.25	14.8		
830.3	6.0										
829.8	6.5										
829.3	7.0										
828.8	7.5	S-4	1.5	1-2-3 N=5	CL			2.5	16.2		
828.3	8.0										
827.8	8.5										
827.3	9.0										
826.8	9.5	S-5	1.5	2-5-8 N=13	CL			4.5	12.7		
826.3	10.0										
825.8	10.5										
825.3	11.0										
824.8	11.5										
824.3	12.0										
823.8	12.5										
823.3	13.0										
822.8	13.5										
822.3	14.0										
821.8	14.5										
821.3	15.0										
						End of Boring					

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.





# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-082  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291453.8 E=13290185.5 (MI South 1ft)  
**Elevation:** 875.3 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:**  
**Plugging Record:** Backfilled borehole with compacted cuttings. Cave in at 13.0 ft.

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 15.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS	
874.8	0.5	S-1	1.5	3-5-7 N=12	CL	5" HMA	0.4	3.75		Fill: 0.0' to 1.5'	
874.3	1.0					Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist, Fill	1.5				
873.8	1.5					SP-SC	Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, moist				4.0
873.3	2.0										
872.8	2.5										
872.3	3.0	S-2	1.5	3-1-1 N=2	SC	Brown clayey SAND; mostly coarse to fine sand, some clayey fines, moist	5.5	15.4			
871.8	3.5										
871.3	4.0										
870.8	4.5										
870.3	5.0										
869.8	5.5	S-3	1.5	1-2-2 N=4	CL	Brown sandy CLAY; mostly clayey fines, some medium to fine sand, moist	2.0	11.4			
869.3	6.0										
868.8	6.5										
868.3	7.0										
867.8	7.5										
867.3	8.0	S-4	1.5	2-2-3 N=5	CL	Grades with trace coarse to fine gravel at 14.5'	2.0	13.6			
866.8	8.5										
866.3	9.0										
865.8	9.5										
865.3	10.0										
864.8	10.5	S-5	1.5	7-20-29 N=49	CL	Grades with trace coarse to fine gravel at 14.5'	4.5	10.3			
864.3	11.0										
863.8	11.5										
863.3	12.0										
862.8	12.5										
862.3	13.0	End of Boring									
861.8	13.5										
861.3	14.0										
860.8	14.5										
860.3	15.0										

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



# LOG OF BORING

**Project No.:** 231532  
**Boring No.:** SB2023-083  
**Sheet:** 1 of 1

**Project:** Ann Arbor 2023 Soil Borings Bundle 1  
**Client:** City of Ann Arbor  
**Location:** Ann Arbor, Michigan  
**Drill Type:** Geoprobe 7822  
**Crew Chief:** DM      **Field Eng.:** IA      **Rev. By:** RS  
**Coordinates:** N=291434.7 E=13290112.2 (MI South 1ft)  
**Elevation:** 880.2 ft      **Datum:** NAVD 88 (GPS Observation)  
**Notes:**  
**Plugging Record:** Backfilled borehole with compacted cuttings. Cave in at 13.3 ft.

**Date Begin:** 09/07/2023      **Date End:** 09/07/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	7.0
Sampler	SPT	2"	End	NA
Core			Seepage	7.0
Tube			Date	Depth, ft.
SPT Hammer				

**Depth Drilled:** 15.0 ft.

**Component Percentages:** Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

**QP =** Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
879.7	0.5	S-1	1.5	5-3-7 N=10	SC	3" HMA	0.3	12.9		Fill: 0.0' to 4.0'
879.2	1.0					4" Natural Aggregate Base	0.6			
878.7	1.5					Brown clayey SAND; mostly coarse to fine sand, some clayey fines, moist, Fill				
878.2	2.0									
877.7	2.5									
877.2	3.0	S-2	1.5	2-1-2 N=3	CL		4.0	2.0	13.3	
876.7	3.5									
876.2	4.0									
875.7	4.5					Brown sandy lean CLAY; mostly clayey fines, some coarse to fine sand, moist				
875.2	5.0									
874.7	5.5	S-3	1.5	3-4-3 N=7	CL		2.0	2.0	11.1	
874.2	6.0									
873.7	6.5									
873.2	7.0					Grades with wet sand seams at 7.0'				
872.7	7.5									
872.2	8.0	S-4	1.5	WOH-3-3 N=6	CL		2.0	2.0	10.3	WOH: Weight of Hammer
871.7	8.5									
871.2	9.0									
870.7	9.5									
870.2	10.0									
869.7	10.5	S-5	1.5	6-9-11 N=20	CL		12.0	3.0	9.5	
869.2	11.0									
868.7	11.5									
868.2	12.0									
867.7	12.5					Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist				
867.2	13.0									
866.7	13.5									
866.2	14.0									
865.7	14.5									
865.2	15.0					15.0				
End of Boring										

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.



## SUMMARY OF LABORATORY TEST DATA

Boring Number	Sample No.*	Sample Depth (ft)	Sample Description (USCS Symbol)	Natural Moisture Content (%)
SB2023-072	A-3	4.5-5	SC	17.6
SB2023-072	A-4	6.5-7	CL	18.9
SB2023-073	S-2	3.5-5	CL	10.0
SB2023-073	S-3	6-7.5	CL	11.1
SB2023-073	S-4	8.5-10	CL	10.3
SB2023-074	S-2	3.5-5	CL	15.6
SB2023-074	S-3	6-7.5	CL	19.8
SB2023-074	S-4	8.5-10	CL	10.3
SB2023-075	S-1	0.5-2	SC	7.2
SB2023-075	S-2	3.5-5	CL	7.5
SB2023-075	S-3	6-7.5	CL	8.0
SB2023-075	S-4	8.5-10	CL	7.5
SB2023-076	S-2	3.5-5	CL	15.2
SB2023-076	S-3	6-7.5	CL	13.3
SB2023-076	S-4	8.5-10	CL	15.4
SB2023-077	S-2	3.5-5	CL	14.6
SB2023-077	S-3	6-7.5	CL	12.5
SB2023-077	S-4	8.5-10	CL	8.0
SB2023-078	S-2	3.5-5	CL	17.8
SB2023-078	S-3	6-7.5	CL	10.1
SB2023-078	S-4	8.5-10	CL	10.4
SB2023-079	S-1	0.5-2	SC	9.3
SB2023-079	S-2	3.5-5	CL	11.8
SB2023-079	S-3	6-7.5	CL	9.7
SB2023-079	S-4	8.5-10	CL	10.0
SB2023-080	S-2	3.5-5	CL	11.4
SB2023-080B	S-3	6-7.5	CL	15.7
SB2023-080B	S-4	8.5-10	CL	12.8
SB2023-080B	S-5	13.5-15	CL	11.6
SB2023-081	S-2	3.5-5	CL	14.7
SB2023-081	S-3	6-7.5	CL	14.8
SB2023-081	S-4	8.5-10	CL	16.2
SB2023-081	S-5	13.5-15	CL	12.7
SB2023-082	S-2	3.5-5	SC	15.4
SB2023-082	S-3	6-7.5	CL	11.4
SB2023-082	S-4	8.5-10	CL	13.6
SB2023-082	S-5	13.5-15	CL	10.3
SB2023-083	S-1	0.5-2	SC	12.9
SB2023-083	S-2	3.5-5	CL	13.3
SB2023-083	S-3	6-7.5	CL	11.1
SB2023-083	S-4	8.5-10	CL	10.3
SB2023-083	S-5	13.5-15	CL	9.5

\* A – Auger Sample  
S – Split Spoon Sample (ASTM D 1586)

PROJECT NO.: 231352  
PAGE: 1 OF 1

September 19, 2023

Materials Testing Consultants  
253 Dino Drive  
Suite B  
Ann Arbor, MI 48335

Subject: AA Boring Bundle 1  
231532

Dear : Mr. Warren

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 09/08/2023 for the above mentioned project. NELAP/TNI Accredited Analysis and EGLE Drinking Water Certified Analysis will be identified in their respective reporting formats. Hard copies can be supplied at your request for a fee of \$20.00 per copy.

The invoice for this project will be emailed separately. If you have any questions concerning the data or invoice, please don't hesitate to contact our office. We welcome your comments and suggestions to improve our quality systems. Please reference Brighton Analytical, L.L.C. Project ID 91796 when calling or emailing. We thank you for this opportunity to partner with you on this project and hope to work with you again in the future.

Sincerely,  
Brighton Analytical, L.L.C.



**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**  
 BA Sample ID: **CU01055** Project Number: **231532**

Sample ID: **SB2023-82 (8' to 15')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
<b>Inorganic Analysis</b>						
pH (Soil and Waste)	<b>8.8</b>	S.I.		SW846 9045C	RG	09/13/2023
Resistivity (ASTM Leach)	<b>100</b>	megohms/cm		EPA 120.1	AP	09/14/2023
<b>Volatile Analysis(Methanol Preserved)</b>						
Acetone	<b>Not detected</b>	ug/Kg	750	SW846 8260C	BY	09/15/2023
Acrylonitrile	<b>Not detected</b>	ug/Kg	100	SW846 8260C	BY	09/15/2023
Benzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Bromobenzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Bromochloromethane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Bromodichloromethane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Bromoform	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Bromomethane(Methyl bromide)	<b>Not detected</b>	ug/Kg	200	SW846 8260C	BY	09/15/2023
2-Butanone (MEK)	<b>Not detected</b>	ug/Kg	250	SW846 8260C	BY	09/15/2023
Carbon disulfide	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Carbon tetrachloride	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Chlorobenzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Chloroethane	<b>Not detected</b>	ug/Kg	250	SW846 8260C	BY	09/15/2023
Chloroform	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Chloromethane(Methyl chloride)	<b>Not detected</b>	ug/Kg	250	SW846 8260C	BY	09/15/2023
cis-1,2-Dichloroethene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
cis-1,3-Dichloropropene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Cyclohexane	<b>Not detected</b>	ug/Kg	500	SW846 8260C	BY	09/15/2023
Dibromochloromethane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2-Dibromo-3-Chloropropane	<b>Not detected</b>	ug/Kg	250	SW846 8260C	BY	09/15/2023
1,2-Dibromoethane(Ethylene dibromide)	<b>Not detected</b>	ug/Kg	20	SW846 8260C	BY	09/15/2023
Dibromomethane(Methylene bromide)	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2-Dichlorobenzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,3-Dichlorobenzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,4-Dichlorobenzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Dichlorodifluoromethane	<b>Not detected</b>	ug/Kg	100	SW846 8260C	BY	09/15/2023
1,1-Dichloroethane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2-Dichloroethane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,1-Dichloroethene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2-Dichloropropane	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023
Diethyl ether	<b>Not detected</b>	ug/Kg	200	SW846 8260C	BY	09/15/2023
Diisopropyl Ether(DIPE)	<b>Not detected</b>	ug/Kg	250	SW846 8260C	BY	09/15/2023
Ethyl benzene	<b>Not detected</b>	ug/Kg	50	SW846 8260C	BY	09/15/2023



**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail:bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**

BA Sample ID: **CU01055** Project Number: **231532**

Sample ID: **SB2023-82 (8' to 15')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
<b>Volatile Analysis(Methanol Preserved)</b>						
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Methylene chloride	Not detected	ug/Kg	100	SW846 8260C	BY	09/15/2023
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Naphthalene	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Styrene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260C	BY	09/15/2023
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
Toluene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260C	BY	09/15/2023
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Trichloroethene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260C	BY	09/15/2023
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260C	BY	09/15/2023
Xylenes	Not detected	ug/Kg	150	SW846 8260C	BY	09/15/2023



**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**  
 BA Sample ID: **CU01055** Project Number: **231532**

Sample ID: **SB2023-82 (8' to 15')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
EPA Method 5035 Methanol Preserv	<b>Extracted</b>			EPA 5035	MTC	09/07/2023
%Solid	<b>88</b>	%		ASTM D2216	AP	09/08/2023

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve EGLE designated target detection limits (TDL).

All soil results based on dry weight.

Released by *Cynthia Williams*  
 Date 9/19/2023



**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**  
 BA Sample ID: **CU01056** Project Number: **231532**

Sample ID: **SB2023-80 (8' to 15')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
<b>Inorganic Analysis</b>						
pH (Soil and Waste)	<b>8.9</b>	S.I.		SW846 9045C	RG	09/13/2023
Resistivity (ASTM Leach)	<b>110</b>	megohms/cm		EPA 120.1	AP	09/14/2023
%Solid	<b>88</b>	%		ASTM D2216	AP	09/08/2023

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve EGLE designated target detection limits (TDL).

Released by *Cynthia Williams*  
 Date 9/19/2023





**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**  
 BA Sample ID: **CU01057** Project Number: **231532**

Sample ID: **SB2023-78 (6' to 7.5')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
<b>Inorganic Analysis</b>						
pH (Soil and Waste)	9.2	S.I.		SW846 9045C	RG	09/13/2023
Resistivity (ASTM Leach)	110	megohms/cm		EPA 120.1	AP	09/14/2023

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve EGLE designated target detection limits (TDL).

Released by Cynthia Williams  
 Date 9/19/2023



**Brighton Analytical LLC**  
 2105 Pless Drive  
 Brighton, Michigan 48114  
 Phone: (810)229-7575 (810)229-8650  
 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date: 09/07/2023  
 Submit Date: 09/08/2023  
 Report Date: 09/19/2023

To: Materials Testing Consultants  
 253 Dino Drive  
 Suite B  
 Ann Arbor, MI 48335

BA Report Number: **91796** Project Name: **AA Boring Bundle 1**  
 BA Sample ID: **CU01058** Project Number: **231532**

Sample ID: **SB2023-74 (6' to 7.5')**

Parameters	Result	Units	DL	Method Reference	Analyst	Analysis Date
<b>Inorganic Analysis</b>						
pH (Soil and Waste)	9.2	S.I.		SW846 9045C	RG	09/13/2023
Resistivity (ASTM Leach)	120	megohms/cm		EPA 120.1	AP	09/14/2023

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve EGLE designated target detection limits (TDL).

Released by *Cynthia Williams*  
 Date 9/19/2023

**Brighton Analytical, L.L.C™**  
 2105 Pless Drive  
 Brighton, MI 48114  
 Phone: 810-229-7575 Fax: 810-229-8650  
 email: bai-brighton@sbcglobal.net

BA PROJECT #: **91796**

COMPANY INFO:  
**MTL**  
 253 Dino Dr, Ann Arbor  
 MI - 48103  
 Attn: **Rob Warron**  
 PHONE: **248 826 3042**  
 SEND: **efso**  
 EMAIL: **rwarron@mtl-test.com**

For Laboratory Use Only:  
 Sample received within holding time? yes  no   
 Temperature of samples °C: **50 ice**  
 pH verified in login? yes  no   
 Headspace/bubbles in VOA'S? yes  no  n/a   
 Sample containers and COC match? yes  no

P.O. NUMBER:  
 BILLING ADDRESS (IF REQUIRED)  
**Methanol**  
**EPA5035**  
**MTL**

For Laboratory Use Only: Field pH/Temp/Time/Initials  
**Drinking Water Only:**  
 Send to LCHD? yes  no   
 Chlorinated Water Supply? yes  no   
 MCL Failure yes  no   
 Client Notified (date/time/initials): \_\_\_\_\_

Analysis Requested/Method

Abbreviations for Sample Matrix:  
 S = Solid  
 L = Liquid  
 DW = Drinking H<sub>2</sub>O  
 WW = Wastewater  
 O = Oil  
 P = Wipe  
 A = Air (Tedlar Bag)  
 F = Filter  
 T = Tube  
 GW = Groundwater  
 SW = Surface Water  
 M - Misc.

Container Type & Quantity

IF RUSH approved by  
 Sample Matrix  
 VOCs  
 PH  
 Resisting

Sample Matrix  
 VOCs  
 PH  
 Resisting

Container Type & Quantity  
 HDPE UNPRESERVED  
 HDPE HNO<sub>3</sub>  
 HDPE H<sub>2</sub>SO<sub>4</sub>  
 HDPE NaOH  
 AMBER GLASS (UNPRESERVED)  
 AMBER GLASS (PRESERVED)  
 GLASS, NO PRESERVATIVE  
 STERILIZED BACTERIA  
 METALS FILTERED (Field OR Lab)  
 MECH PRESERVED (Field or Lab)

Sample Matrix  
 VOCs  
 PH  
 Resisting

Sample Matrix  
 VOCs  
 PH  
 Resisting

Sample Matrix  
 VOCs  
 PH  
 Resisting

Requested Turnaround: (X BOX WITH TAT NEEDED)  
 Default TAT Standard: 7 - 10 Business days  
 RUSH: 1 Business day (Verify with lab) @3x Surcharge  
 RUSH: 2 Business days @2x Surcharge (Non TCLP)  
 RUSH: 3 Business days @1.5x Surcharge (TCLP @ 2X)

Sample Description  
 35 Characters Limit  
 1) **CU 162023-82 (8-7-15)**  
 2) **DL05C SB2023-80 (8-16-15)**  
 3) **01057 SB2023-78 (6-7-15)**  
 4) **01058 SB2023-74 (6-7-15)**

Date  
 9-7 10:00  
 9-7 2:00 PM  
 9-7 3:10 PM  
 9-7 5:30 PM

Time  
 9-7 10:00  
 9-7 2:00 PM  
 9-7 3:10 PM  
 9-7 5:30 PM

Trans #  
 1  
 2

RECEIVED BY:  
**R. Coffey**

DATE:  
**7/9/23**

TIME:  
**4:46.3**

RECEIVED BY:  
 RECEIVED BY:  
 DATE/TIME:

Special Instructions:  
 Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses. All hold samples = \$10.

Trans #  
 1  
 2

RECEIVED BY:  
**R. Coffey**

DATE:  
**7/9/23**

TIME:  
**4:46.3**

RECEIVED BY:  
 RECEIVED BY:  
 DATE/TIME:

RECEIVED BY:  
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RECEIVED BY:  
 RECEIVED BY:  
 DATE/TIME:



BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY  
CONTROL

# GC/MS

## VOLATILE METHOD 8260

### REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: September 15, 2023 Spike Std. ID: 4593.4.4 Inst./Detec: HP7890/5973 Vol 6  
 Laboratory ID: CU01055 Matrix: Soil Analyst: BY

	Matrix Spike - Precision			Matrix Spike - Accuracy				Sample background	LCS	Method Blank
d4-1,2-Dichloroethane	45.5	44.7	1.7	50	91	89	70-130	94%	95%	93%
d8-Toluene	50.5	50.8	0.6	50	101	102	70-130	101%	101%	102%
4-Bromofluorobenzene	49.0	48.9	0.3	50	98	98	70-130	109%	98%	107%
<b>COMPOUNDS</b>										
1,1- Dichloroethene	40.8	40.1	1.8	50	82%	80%	70-130	<1	92%	<1
1,1- Dichloroethane	44.6	42.8	4.2	50	89%	86%	70-130	<1	97%	<1
Chloroform	42.8	42.5	0.7	50	86%	85%	70-130	<1	88%	<1
1,2- Dichloroethane	44.6	44.3	0.7	50	89%	89%	70-130	<1	101%	<1
Carbon tetrachloride	52.9	51.5	2.6	50	106%	103%	70-130	<1	105%	<1
1,2- Dichloropropane	52.6	54.0	2.7	50	105%	108%	70-130	<1	109%	<1
cis- 1,3 -dichloropropene	50.8	51.1	0.6	50	102%	102%	70-130	<1	105%	<1
Trichloroethene	54.2	52.8	2.6	50	108%	106%	70-130	<1	106%	<1
Dibromochloromethane	49.7	52.2	5.0	50	99%	104%	70-130	<1	107%	<1
1,1,2- Trichloroethane	52.7	54.0	2.5	50	105%	108%	70-130	<1	112%	<1
Tetrachloroethane	49.2	47.6	3.4	50	98%	95%	70-130	<1	98%	<1
1,1,2,2 -Tetrachloroethane	53.9	56.4	4.4	50	108%	113%	70-130	<1	118%	<1
Chlorobenzene	52.0	52.2	0.4	50	104%	104%	70-130	<1	100%	<1
1,3- Dichlorobenzene	54.8	55.1	0.7	50	110%	110%	70-130	<1	107%	<1
1,4- Dichlorobenzene	54.9	55.8	1.7	50	110%	112%	70-130	<1	103%	<1
1,2-Dichlorobenzene	55.0	55.7	1.3	50	110%	111%	70-130	<1	108%	<1

ug/L is equivalent to ppb

Comments: \_\_\_\_\_

# REPRESENTATIVE BATCH QUALITY CONTROL

## Accuracy & Precision

Analyst: RG

Parameter: pH

Analysis Date: 9/13/2023

Method Reference: SM4500H+B/9040/9045

### SPIKE - ACCURACY

Laboratory ID	True Value	Observed (°F)	DIFFERENCE	Acceptable Range	
ERA P324-977	6.19	6.23	0.04	0.05	

Laboratory ID	Observed A	Observed B	DIFFERENCE	Acceptable Range	
CU01055	0.10	0.10	0.02	0.05	

COMMENTS: \_\_\_\_\_

## **APPENDIX**

**ATTACHMENT B**  
**GENERAL DECLARATIONS**

City of Ann Arbor  
Guy C. Larcom Municipal Building  
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements and Declaration of Compliance Form, Living Wage requirements and Declaration of Compliance Form, Prevailing Wage requirements and Declaration of Compliance Form, Vendor Conflict of Interest Form, Notice of Pre-Bid Conference, General Information, Bid, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans (if applicable) and understands them. The Bidder declares that it conducted a full investigation at the site and of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance. The Bidder also declares that it has extensive experience in successfully completing projects similar to this one.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

The undersigned proposes to perform all work shown on the plans or described in the bid documents, including any addenda issued, and to furnish all necessary machinery, tools, apparatus, and other means of construction to do all the work, furnish all the materials, and complete the work in strict accordance with all terms of the Contract of which this Bid is one part.

In accordance with these bid documents, and Addenda numbered \_\_\_\_\_, the undersigned, as Bidder, proposes to perform at the sites in and/or around Ann Arbor, Michigan, all the work included herein for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:320 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder certifies that the statements contained in the City Prevailing Wage and Living Wage Declaration of Compliance Forms are true and correct. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.



The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

The Bidder encloses a certified check or Bid Bond in the amount of 5% of the total of the Bid Price. The Bidder agrees both to contract for the work and to furnish the necessary Bonds and insurance documentation within 10 days after being notified of the acceptance of the Bid.

If this Bid is accepted by the City and the Bidder fails to contract and furnish the required Bonds and insurance documentation within 10 days after being notified of the acceptance of this Bid, then the Bidder shall be considered to have abandoned the Contract and the certified check or Bid Bond accompanying this Bid shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Bid, or if this Bid is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 202\_.

\_\_\_\_\_  
Bidder's Name

\_\_\_\_\_  
Authorized Signature of Bidder

\_\_\_\_\_  
Official Address

\_\_\_\_\_  
(Print Name of Signer Above)

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Email Address for Award Notice

**ATTACHMENT C**  
**LEGAL STATUS OF BIDDER**

(The bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

\* A corporation organized and doing business under the laws of the State of \_\_\_\_\_, for whom \_\_\_\_\_, bearing the office title of \_\_\_\_\_, whose signature is affixed to this Bid, is authorized to execute contracts.

**NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority**

• A limited liability company doing business under the laws of the State of \_\_\_\_\_, whom \_\_\_\_\_ bearing the title of \_\_\_\_\_ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.

\* A partnership, organized under the laws of the state of \_\_\_\_\_ and filed in the county of \_\_\_\_\_, whose members are (list all members and the street and mailing address of each) (attach separate sheet if necessary):

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\* An individual, whose signature with address, is affixed to this Bid: \_\_\_\_\_ (initial here)

**Authorized Official**

\_\_\_\_\_ **Date** \_\_\_\_\_, 202\_\_

(Print) Name \_\_\_\_\_ Title \_\_\_\_\_

Company:

---

Address:

---

Contact Phone ( ) \_\_\_\_\_ Fax ( ) \_\_\_\_\_

Email \_\_\_\_\_



**ATTACHMENT E**  
**LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than \$10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than \$10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than \$10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here  No. of employees \_\_\_\_\_*

The Contractor or Grantee agrees:

- (a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as \$15.90/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than \$17.73/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

***Check the applicable box below which applies to your workforce***

- Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits
- Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

- (b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- (c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
- (d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.
- (e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Phone/Email address

## Attachment F

# CITY OF ANN ARBOR LIVING WAGE ORDINANCE

**RATE EFFECTIVE APRIL 30, 2023 - ENDING APRIL 29, 2024**

**\$15.90** per hour

If the employer provides health care benefits\*

**\$17.73** per hour

If the employer does **NOT** provide health care benefits\*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

V.

### W. ENFORCEMENT

X. The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

\* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

**The Law Requires Employers to Display This Poster Where Employees Can Readily See It.**

**For Additional Information or to File a Complaint contact  
Colin Spencer at 734/794-6500 or [cspencer@a2gov.org](mailto:cspencer@a2gov.org)**



**ATTACHEMENT G**

<b>Vendor Conflict of Interest Disclosure Form</b>
--

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor’s conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee’s immediate family member has an ownership interest in vendor’s company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor’s Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

<b>Conflict of Interest Disclosure*</b>	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <hr style="border: 0; border-top: 1px solid black;"/> <input type="checkbox"/> Interest in vendor’s company <input type="checkbox"/> Other (please describe in box below)

\*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

<b>I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:</b>		
<b>Vendor Name</b>	<b>Vendor Phone Number</b>	
<b>Signature of Vendor Authorized Representative</b>	<b>Date</b>	<b>Printed Name of Vendor Authorized Representative</b>

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500, [procurement@a2gov.org](mailto:procurement@a2gov.org)

## ATTACHMENT H

### DECLARATION OF COMPLIANCE

#### Non-Discrimination Ordinance

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.
- (b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Address, City, State, Zip

\_\_\_\_\_  
Phone/Email Address

**Questions about the Notice or the City Administrative Policy, Please contact:**  
Procurement Office of the City of Ann Arbor  
(734) 794-6500

# ATTACHMENT I

## **CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE**

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.  
You can review the entire ordinance at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights).

**Intent:** It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

**Discriminatory Employment Practices:** No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

**Discriminatory Effects:** No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

**Nondiscrimination by City Contractors:** All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

**Complaint Procedure:** If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights). Then submit it to the Human Rights Commission by e-mail ([hrc@a2gov.org](mailto:hrc@a2gov.org)), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at [hrc@a2gov.org](mailto:hrc@a2gov.org).

**Private Actions For Damages or Injunctive Relief:** To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND  
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.



## MICHIGAN DEPARTMENT OF TRANSPORTATION CERTIFIED PAYROLL

COMPLETION OF CERTIFIED PAYROLL FORM FULFILLS THE MINIMUM MDOT PREVAILING WAGE REQUIREMENTS

(1) NAME OF CONTRACTOR / SUBCONTRACTOR (CIRCLE ONE) (2) ADDRESS

(3) PAYROLL NO. (4) FOR WEEK ENDING (5) PROJECT AND LOCATION (6) CONTRACT ID

(a)	(b)	(c)	(d) DAY AND DATE							(e)	(f)	(g)	(h)	(i)	(j) DEDUCTIONS						(k)
															TOTAL HOURS ON PROJECT	PROJECT RATE OF PAY	PROJECT RATE OF FRINGE PAY	GROSS PROJECT EARNED	GROSS WEEKLY EARNED	TOTAL WEEKLY HOURS WORKED ALL JOBS	
EMPLOYEE INFORMATION	WORK CLASSIFICATION	Hour Type	HOURS WORKED ON PROJECT							TOTAL HOURS ON PROJECT	PROJECT RATE OF PAY	PROJECT RATE OF FRINGE PAY	GROSS PROJECT EARNED	GROSS WEEKLY EARNED	TOTAL WEEKLY HOURS WORKED ALL JOBS	FICA	FEDERAL	STATE	OTHER	TOTAL DEDUCT	TOTAL WEEKLY WAGES PAID FOR ALL JOBS
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0											\$0.00	\$0.00
NAME:									0				\$0.00							\$0.00	\$0.00

Date \_\_\_\_\_

I, \_\_\_\_\_ (Name of Signatory Party) \_\_\_\_\_ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the \_\_\_\_\_ (Contractor or Subcontractor)  
 \_\_\_\_\_; that during the payroll period commencing on the \_\_\_\_\_ (Building or Work)  
 \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_,  
 all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ from the full \_\_\_\_\_ (Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARKS:	
NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	