

**CONTRACT DOCUMENTS  
FOR  
SWIFT RUN PARALLEL RELIEF SEWER**



**JUNE 2008**

**FILE NO. 99047  
BID NO. ITB-3957**

**PUBLIC SERVICES DEPARTMENT  
PROJECT MANAGEMENT SERVICES UNIT**

**CITY OF ANN ARBOR  
100 North Fifth Avenue  
Ann Arbor, Michigan 48104**

June 25, 2008

**ADDENDUM NO. 3  
TO  
BID DOCUMENTS  
FOR  
SWIFT RUN PARALLEL RELIEF SEWER PROJECT  
FOR THE  
CITY OF ANN ARBOR, MICHIGAN  
BID NO. ITB - 3957**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the Swift Run Parallel Relief Sewer Project for the City of Ann Arbor, Michigan, Bid No. ITB-3957 on which proposals will be received on or before 2:00 p.m., Friday, June 27, 2008.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. This Addendum includes three (3) pages and no drawings.

**The Contractor is to acknowledge receipt of this Addendum No. 3 on page P-1 of the Bid Documents prior to submitting its Proposal.**

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

- Item #1:** Contract Documents, Addendum No. 2;  
Change the page numbers on Addendum No. 2 to reflect that it was the second Addendum issued, not the first. The page numbers should be changed as follows:  
ADD-1-1 change to ADD-2-1  
ADD-1-2 change to ADD-2-2  
ADD-1-3 change to ADD-2-3  
ADD-1-4 change to ADD-2-4  
ADD-1-5 change to ADD-2-5  
Drawing Number ADD-1 99047-TC1 change to ADD-2 99047-TC1
- Item #2:** Contract Documents, Addendum No. 2;  
Replace page ADD-2-2 with the attached ADD-3-3 which reflects the correct Addendum Item numbers.

- Item #3:** Contract Documents, General Conditions, Section 28;  
Add the following paragraph:  
**5. A commercial general liability insurance policy which lists as an “additional insured party” Gene Ohlgren, of 4380 Welsh Drive, for work performed on Shetland Drive, a private roadway under Ohlgren’s ownership and control.**
- Item #4:** Plans, Sheet Numbers 3, 4, 7, 8, 9, 10 and 11;  
For Plans picked-up prior to June 25, 2008: Change the scale box in each drawing to **“NOT TO SCALE”**.  
  
Plans picked up or downloaded on or after June 25, 2008 have the correct scale.
- Item #5:** Plans, Sheet Number 6;  
For Plans picked-up prior to June 25, 2008: In the Plan view of the Concrete Encasement, change the scale to **“NOT TO SCALE”**  
  
Plans picked up or downloaded on or after June 25, 2008 have the correct scale.

- Item #4:** Plans, Cover Sheet, 99047-C;  
Change the bid number on the edge to **3957**.
- Item #5:** Plans, Sheet 99047-SP;  
In the Proposed Manholes table, change the size of all NEW 4' DIA manholes to **5' DIA**. (S-6 and S-13 remain 6' DIA).
- Item #6:** Plans, Sheet 99047-ND;  
In the “Utility Trench – Wetlands” trench detail, add the following note:  
**“Wetland Topsoil and Wetland Seeding are included in the separate pay items 810 and 811.”**
- Item #7:** Plans, Sheet 99047-PP2;  
In the profile, the “EXISTING MANHOLE Δ-13” at Sta 23+36.03 should be changed to read “EXISTING MANHOLE Δ-1”.
- Item #8:** Plans, 99047-TC-1;  
Add the attached Plan Sheet, 99047-TC-1 to the plan set.

June 24, 2008

**ADDENDUM NO. 1  
TO  
BID DOCUMENTS  
FOR  
SWIFT RUN PARALLEL RELIEF SEWER PROJECT  
FOR THE  
CITY OF ANN ARBOR, MICHIGAN  
BID NO. ITB - 3957**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the Swift Run Parallel Relief Sewer Project for the City of Ann Arbor, Michigan, Bid No. ITB-3957 on which proposals will be received on or before 2:00 p.m., Friday, June 27, 2008.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. This Addendum includes five (5) pages and one (1) drawing.

**The Contractor is to acknowledge receipt of this Addendum No. 1 on page P-1 of the Bid Documents prior to submitting its Proposal.**

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

- Item #1:** Contract Documents, Bid Form, Page BF-1;  
Replace page BF-1 with the attached ADD-1-3. The revised bid form has removed items “136 - Tree Mitigation” and “110 – Traffic Control” and added items “270 – Lighted Arrow, Type C, Furn” and “271 – Lighted Arrow, Type C, Oper”. It also increased the quantity of items “111 – Type II Lighted Barricade Drum Furnished” and “112 – Type II Lighted Barricade Drum Operate” from 10 EA to **20 EA**.
- Item #2:** Contract Documents, Bid Form, Page BF-2;  
Replace page BF-2 with the attached ADD-1-4. The revised bid form has removed items “360 – Type I Manhole (0 – 10’)” and “361 – Type I Manhole (Additional Depth)” and increased the quantity of items “362 – Type II Manhole (0 – 10’)” from 2 EA to **14 EA** and “363 – Type II Manhole (Additional Depth)” from 5 VF to **16 VF**. It also changed the quantity for “Item 891 – Cleanup & Restoration” to **1 LS** (not 11 LS).
- Item #3:** Contract Documents, Detailed Specifications, Page DS-35;  
Add the attached page ADD-1-5 (DS-35) to the Contract Book.
- Item #4:** Plans, Cover Sheet, 99047-C;

Change the bid number on the edge to **3957**.

- Item #4:** Plans, Sheet 99047-SP;  
In the Proposed Manholes table, change the size of all NEW 4' DIA manholes to **5' DIA**. (S-6 and S-13 remain 6' DIA).
- Item #4:** Plans, Sheet 99047-ND;  
In the “Utility Trench – Wetlands” trench detail, add the following note:  
**“Wetland Topsoil and Wetland Seeding are included in the separate pay items 810 and 811.”**
- Item #4:** Plans, Sheet 99047-PP2;  
In the profile, the “EXISTING MANHOLE Δ-13” at Sta 23+36.03 should be changed to read “EXISTING MANHOLE Δ-1”.
- Item #5:** Plans, 99047-TC-1;  
Add the attached Plan Sheet, 99047-TC-1 to the plan set.

**BID FORM**  
Section 1 - Schedule of Prices

Project: Swift Run Parallel Relief Sewer  
File: 99047 Bid No: ITB-3957

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
101	General Conditions	LS	1	\$ _____	\$ _____
111	Type II Lighted Barricade Drum Furnished	EA	10	\$ _____	\$ _____
112	Type II Lighted Barricade Drum Furnished	EA	10	\$ _____	\$ _____
113	Type III Lighted Barricade Furnish/Operate	EA	2	\$ _____	\$ _____
115	Temporary Type B Signs	SF	225	\$ _____	\$ _____
120	Project Supervision	LS	1	\$ _____	\$ _____
130	Protective Fencing	LF	1170	\$ _____	\$ _____
135	Tree Removal (8" & larger)	EA	6	\$ _____	\$ _____
140	Exploratory Excavation	EA	3	\$ _____	\$ _____
200	Machine Grading, Modified	Sta	23.5	\$ _____	\$ _____
201	Audiovisual Tape	LS	1	\$ _____	\$ _____
205	Minor Traffic Control, Modified, Maximum \$3,000	LS	1	\$ _____	\$ _____
206	Flag Control	LS	1	\$ _____	\$ _____
215	28" OD HDPE Sewer Pipe	LF	160	\$ _____	\$ _____
220	Concrete Encasement and Appurtenances	LS	1	\$ _____	\$ _____
225	Extra Depth Bridge Foundation	CYD	10	\$ _____	\$ _____
230	Sewer Lead Abandonment	LF	100	\$ _____	\$ _____
240	HMA Approach - 13A	Ton	30	\$ _____	\$ _____
250	Vegetative Streambank Stabilization	LS	1	\$ _____	\$ _____
255	Erosion Control Blanket	SY	3730	\$ _____	\$ _____
260	Temporary Mailboxes and Trash Service	LS	1	\$ _____	\$ _____
265	Glencoe Hills Sign/Planters - Remove and Reinstall	LS	1	\$ _____	\$ _____
270	Lighted Arrow, Type C, Furn	EA	1	\$ _____	\$ _____
271	Lighted Arrow, Type C, Oper	EA	1	\$ _____	\$ _____
310	24" Cl. 50 DIP (Sewer), Trench Detail IV	LF	5	\$ _____	\$ _____
320	24" CL IV RCP Sewer Pipe, Trench Detail II Modified	LF	10	\$ _____	\$ _____
321	12" CL IV RCP Sewer Pipe, Trench Detail V Modified	LF	20	\$ _____	\$ _____
322	27" CL IV RCP Sewer Pipe, Trench Detail I Modified	LF	45	\$ _____	\$ _____
323	27" CL IV RCP Sewer Pipe, Trench Detail II Modified	LF	1012	\$ _____	\$ _____

BF-1

ADD-1-3

Total This Page \$ \_\_\_\_\_  
(Also to be entered on Page BF-3)

**BID FORM**  
Section 1 - Schedule of Prices

Project: Swift Run Parallel Relief Sewer  
File: 99047      Bid No: ITB-3957

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
324	27" CL IV RCP Sewer Pipe, Trench Detail V Modified	LF	687	\$ _____	\$ _____
325	27" CL IV RCP Sewer Pipe, Wetlands Trench Detail	LF	450	\$ _____	\$ _____
353	SDR 35 PVC Service Lead, 4"	LF	75	\$ _____	\$ _____
362	Type II Manhole (0 - 10')	EA	14	\$ _____	\$ _____
363	Type II Manhole (Additional ft depth)	VF	16	\$ _____	\$ _____
380	Sewer Boring and Jacking and Casing	LF	100	\$ _____	\$ _____
385	Sewer Abandonment	LF	100	\$ _____	\$ _____
392	Pipe Undercut & Refill (6A limestone)	CY	240	\$ _____	\$ _____
500	Remove Bit. Pavement	SY	50	\$ _____	\$ _____
502	Remove curb and gutter any type	LF	80	\$ _____	\$ _____
550	Concrete Barrier Curb and Gutter	LF	80	\$ _____	\$ _____
563	Structure Covers	Lbs	1600	\$ _____	\$ _____
564	Reconstruct Structure	EA	4	\$ _____	\$ _____
703	Silt Fence	LF	2920	\$ _____	\$ _____
801	Swamp Oak, 2" Caliper, B & B	EA	3	\$ _____	\$ _____
802	Silver Maple, 2" Caliper, B & B	EA	3	\$ _____	\$ _____
803	Red Oak, 3" Caliper, B & B	EA	2	\$ _____	\$ _____
804	White Oak, 3" Caliper, B & B	EA	2	\$ _____	\$ _____
805	Shagbark Hickory, 3" Caliper, B & B	EA	2	\$ _____	\$ _____
810	Wetlands Restoration	SY	1600	\$ _____	\$ _____
811	Seed Mixture, Wetland/Swale	SY	1600	\$ _____	\$ _____
882	Seeding & Mulching	SY	3730	\$ _____	\$ _____
891	Cleanup & Restoration	LS	1	\$ _____	\$ _____

BF-2

ADD-1-4

Total This Page \$ \_\_\_\_\_  
(Also to be entered on Page BF-3)



DETAILED SPECIFICATION  
FOR

**270 – LIGHTED ARROW, TYPE C, FURN**

**271 – LIGHTED ARROW, TYPE C, OPER**

**a. Description** - This work shall be done in accordance with Section 812 of the 2003 MDOT Standard Specifications for Construction, the Michigan Manual of Uniform Traffic Control Devices, and as directed by the Engineer.

**b. Materials** - The material used for this work shall meet the requirements of the 2003 MDOT Standard Specifications for Construction.

**c. Measurement and Payment** - The completed work as measured will be paid for at the contract unit price for the following contract item (pay item):

<u><b>Contract Item (Pay Item)</b></u>	<u><b>Pay Unit</b></u>
270 – Lighted Arrow, Type C, Furn .....	Ea
271 – Lighted Arrow, Type C, Oper .....	Ea

The unit price shall include all labor, material and equipment needed to complete the work.



## CITY OF ANN ARBOR, MICHIGAN

100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107-8647

<http://www.ci.ann-arbor.mi.us>

Public Services Area  
Project Management Unit  
June 24, 2008

### Swift Run Parallel Relief Sewer Pre-Bid Meeting Minutes June 20, 2008

File No. 99047.28 Bid No. ITB-3957

#### In Attendance:

Elizabeth Rolla	City of Ann Arbor, Project Management	734-994-6155
Mark TenBroek	CDM Michigan Inc	734-213-5444
Shawn Stockwell	Pamar Enterprises	586-749-8593
Paul Jorgensen	Utility Services Authority, LLC	734-481-0872
Tamer El-Badry	Washtenaw, Inc.	734-483-3000
John Niemiec	E.T. MacKenzie Company	734-761-5050
David Wilkie	Douglas N. Higgins, Inc.	734-996-9500

Liz Rolla gave a brief overview and history of the project. The City is under an Administrative Consent Order (ACO) with the MDEQ to correct sanitary sewer overflows (SSOs) within our system. The Swift Run Trunkline is under capacity (leading to SSOs) and so the City is installing this parallel relief sewer to correct the overflows. The relief sewer must be installed before December 2008 in order to meet the City's Administrative Consent Order deadlines.

This job involves installation of a 27" sewer in parallel with the existing 18" sewer. The majority of the sewer will be placed in a wooded area with wetlands, across a stream bed near a private bridge and rock wall, and within Shetland Dr (gravel road). The crossing of Clark Road will be done via boring and jacking in order to maintain traffic on Clark Road.

The following items were then discussed:

1. An Addendum No. 1 will be issued. This will include, at a minimum, a Temporary Traffic Control plan and will instruct the bidders to remove Item 136 – Tree Mitigation and change Item 891 – Clean Up & Restoration to 1 LS. Also, the bid number on the edge of the Cover Sheet should be changed to 3957.
2. Tree Protection is important and will be enforced. The bidders are highly encouraged to visit the site to assess the access and site limitations. Trees that are to be protected are shown on the Plans. Other trees, not marked for protections, may be removed within the easement areas.
3. The City will provide material testing.
4. The last Engineer's Estimate was \$970K. [Since the meeting, this has been revised to \$670K.]
5. There are still some easements that have yet to be signed. The City expects to have the easements in hand before the scheduled start of construction, however, if they are not obtained, the project may be delayed or even rebid.

6. Shetland Drive is a private access road with the sole access being from Clark Road. The Contractor is responsible to maintain access to all the residences. If the excavation prevents safe access around the trench, the Contractor is responsible to coordinate his/her work with the residents to assure that they are able to access their homes (and leave their homes) when necessary.
7. There are MDEQ-regulated wetlands along Shetland Drive that must not be disturbed.
8. The majority of the pipe is specified to be non-lined concrete. The HDPE section in Swift Run was specified because the City wanted a water-tight pipe within the stream. There is no lining requirement for the concrete pipe.
9. The deadline for completion of the work is October 31, 2008. This date is firm due to restoration and ACO deadlines.
10. Clearing is included in the pay item "Machine Grading, Modified."
11. Washtenaw County Road Commission, Washtenaw County Drain Commission, Ann Arbor Township, and Pittsfield Township permits are to be obtained by the Contractor. All of the above entities have seen the plans for the project, but we do not know what the exact requirements of the permits will be.
12. The bridge footings are about 2' wide.
13. The Service Center manholes are 4' in diameter and the Contractor may remove the cones.
14. Air testing will be required for the concrete pipe, in addition to all other testing required by the Specifications.
15. Inspection and staking will be performed by the City or a consultant to the City. This is yet to be determined.
16. Prevailing wages must be paid.

Other items that have been discussed with potential bidders since the Pre-Bid meeting:

1. *MDEQ Permit, Item #7 describes a "siltation barrier". What exactly are they referring to? Please clarify.*

This is referring to the silt fence shown and details on the contract drawings.

2. *MDEQ Permit, Item #17 states that all native topsoil is to be respread on the disturbed area. This would indicate that the material should be staged adjacent to the trench or stockpile elsewhere. If we are to stockpile the material adjacent to the trench we would require that the construction zone is cleared as stated in my previous e-mail. If this is not the case, where are we to stockpile this material? Please advise. (Actually, if the topsoil is to be stripped and retained for respread at all, I believe that the clearing limits and tree removals must be redefined.)*

The native top soil is to be stockpiled in the 50' wide construction easement between STA 0+00 and 3+30.

3. *MDEQ Permit, Item #26 describes an Ann Arbor Township Wetland Ordinance. Would this ordinance be part of the township permit / permit process?*

Yes.

4. *MDEQ Permit "Notice of Authorization" states that the sewer is to be backfilled w/ CLII material. Are they referring to the 1' of CLII cover over the pipe? Just want to make sure that this does not conflict with the trench details as specified in the proposal package.*

Compacted CLII material is to be used in all trenches as backfill to the depth shown on the contract drawings which is not constant for the entire pipeline route. There are only two trench backfill conditions which require a minimum of 1' of compacted CLII backfill above top of pipe followed by backfill with native materials as shown on the contract drawings: the Type V Mod Trench and Wetlands Trench. The trench type along the route is shown at the top of the profiles on the contract drawings.

5. *Between STA 0+00 and STA 7+00, what is the Western boundary of the construction limits?*

From STA 0+00 to STA 3+30 the permanent easement is 50' wide, and this covers both the existing 18" and new 27" relief sewers. This easement area allows the stockpiling of construction materials and wetland soils for later use. From STA 3+30 to approximately STA 7+00 the construction zone is approximately 30' wide. There is a temporary construction easement on the creek side of this, but this area is not to be used for stockpiling of materials as disturbance is to be minimized. In particular, the zone between STA 3+50 and STA 5+00 is the front lawn of a resident, and disruption of this area is to be minimized.

6. *It appears that (if I am reading the plans correctly) there are a substantial number of trees along the cross country route shown to be protected when in fact it will be nearly impossible to open cut this section of the sewer without removing them. We will need at LEAST 20'-30' of clear and open space to install the sewer via open-cut. Please comment. (The diameter of pipe specified requires more than a miniature excavator (CAT 325 – 330) to lift and drive home the individual sections. In addition, we need room to supply materials to the pipe installation crew.)*

Along the section of the alignment between STA 0+00 to STA 7+00 there are two landmark trees that need to be removed and 6 landmark trees that require protection and shall not be removed. In addition, the excavation shall be as far from these trees as practical. There are other smaller trees identified to be protected along this route that should be retained, if possible, but can be removed if the Contractor deems that construction cannot reasonably be performed without their removal. Removal of these trees must be approved by the Engineer and will not be paid for separately but shall be considered removal for Contractor's convenience. However, the non-landmark trees located between STA 3+30 and STA 5+50 near the lawn on the 4121 Shetland Drive parcel shall be protected and shall not be removed.

7. *Is it your intent to clear and grub between the silt fence and the Swift Run Creek to allow for streambank grading and streambank stabilization?*

It was not the intent to grade the existing stream bank, but rather to stabilize the existing stream bank in its current location. Grading on that side of the silt fence

would likely cause increased erosion. The location of the silt fence is intended to facilitate placement of the stabilization measures on the existing slope of this stream bank.

8. *Would it be possible to re-align S3 and S4 to allow for bridge foundation clearance? Is the storm sewer to the east of the proposed pipe (sanitary) governing it's proposed location?*

The relief sewer was placed in the location shown on the contract drawings to minimize impacts on the retaining wall, providing a safe distance from the storm sewer outlet, and allow placement next to the existing bridge. Therefore, realignment of this section of pipeline will not be acceptable.

9. *Would it be possible to install the sanitary under the Glencoe Hills entrance and sign via bore & jack in lieu of open cut? We could possibly save the sign, landscaping and drive entrance if possible.*

The Contractor may elect to install this section of the sewer using jack and bore method. It is understood that this may reduce the Contractor's costs for restoration of the road and entrance sign as a result. The Engineer will need to review the details of the proposed construction method to verify that the impacts to other features are minimized.

10. *What are the construction limits along Shetland Drive? Are we to stay within the "permanent easement" as shown on the plans?*

The easement for Shetland Drive has been changed slightly from the drawings. The extents of the 66' wide roadway are now included in the utility easement and this easement can be used in its entirety for construction, with the exception of the wetland areas delineated on the Plans. The Contractor may not disturb these wetland areas.

11. *I assume that none of the permits that the contractor is required to obtain are available for inspection prior to the bid. Please verify.*

This assumption is correct.

12. *Is it possible to substitute RCP for HDPE pipe along the proposed sewer?*

HDPE is only used in two sections of the relief sewer, between S-3 and S-4 and between S-12 and S-13 as shown in the contract drawings. These sections utilize HDPE to reduce the quantity of infiltration. HDPE shall be used in these two sections with no exceptions.

13. *Can the sanitary line to be abandoned SE of s-12 be bypass pumped into MH s-13 (this is the only MH I can see that is available without crossing the road)?*

Yes, this can be used. The Contractor must maintain access to Glencoe Hills Drive.

*14. 48" Precast manholes cannot be cored / cast to accept 27" concrete pipe. The largest diameter that they can accept (in a straight through configuration) is 24". If the MH's are upsized to 60" they should all work with the exception of S5 (requires a 72" structure), S13 (requires a 72" structure). Please advise.*

Addendum No. 1 addresses these changes. All new manholes will be 5' diameter with the exception of S-6 and S-13, which will remain 6' diameter.

*15. The Plans provided for pick up at the City are not to proper scale.*

Plans to the proper scale are now available in pdf format. Bid holders may request printed out hardcopies too. Please contact Liz Rolla at [erolla@a2gov.org](mailto:erolla@a2gov.org) if you would like to pick up a new set.

These meeting minutes will become part of the Contract Documents.

Please notify the preparer of any errors or omissions. Prepared by Elizabeth Rolla - (734) 994-6155 or [erolla@a2gov.org](mailto:erolla@a2gov.org)

cc: Attendees  
Craig Hupy, P.E., Systems Planning Manager  
Procurement Services Unit

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ADVERTISEMENT FOR  
THE SWIFT RUN PARALLEL RELIEF SEWER  
CITY OF ANN ARBOR, MICHIGAN

BID NO. ITB-3957

Sealed Bids will be received by the, Purchasing Division, Third Floor, City Hall, on or before 2:00 p.m., June 27, 2008 for construction of the Swift Run Parallel Relief Sewer. Bids will be publicly opened and read aloud at this time.

Work to be done includes the construction of approximately 2200 LF of 27" RCP sanitary sewer, 160 LF of 28" HDPE sewer, 100 LF of sewer boring and jacking, wetlands mitigation, and all related work. Bid documents may be obtained on or after 3:00 p.m., June 10, 2008 from the office of the Procurement Services Unit, 5th Floor, City Hall, Ann Arbor, Michigan.

A fee of \$15.00 per set of documents will be charged. No refunds will be given for returned documents.

Each proposal shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A proposal, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a contract with the City of Ann Arbor is compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. The successful Bidder may also be required to comply with Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the contract documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days. The City reserves the right 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.

Any further information may be obtained from the Procurement Services Unit, (734) 994-2719.

CITY OF ANN ARBOR, MICHIGAN



CI

## INSTRUCTIONS FOR COMPLETING THE CONTRACT COMPLIANCE FORMS

### City Policy

The "non discrimination in contracts" provision of the City Code, (Chapter 112, Section 9:161) requires contractors/vendors/grantees doing business with the City not to discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, condition of pregnancy, marital status, physical or mental limitations, source of income, family responsibilities, educational association, sexual orientation, gender identity or HIV status against any of their employees, any City employee working with them, or any applicant for employment. It also requires that the contractors/vendors/grantees include a similar provision in all subcontracts, which they execute, for City work or programs.

This Ordinance further requires that each prospective contractor/vendor submit employment data to the City showing current total employee breakdown by occupation, race and gender. This allows the Human Rights Office to determine whether or not the contractor/vendor has a workforce, which is reflective of the availability of women and under-represented minorities within the contractor's labor recruitment area (the area where they can reasonably be expected to recruit employees). *This data is provided to the City on the Human Rights Office Contract Compliance Forms (attached).*

### **To complete the form:**

**1) If a company has more than one location, then that company must complete 2 versions of the form.**

- **Form #1** should contain the employment data for the **entire corporation.**
- **Form #2** should contain the employment data for those employees:
  - who will be working on-site;
  - in the office responsible for completing the contract; or,
  - in the case of non-profit grantees, those employees working on the project funded by the City grant(s).

2) If the company has only one location, fill out Form #1 only.

3) Complete all data in the upper section of the form including the name of the person who completes the form and the name of the company/organization's president.

4) Complete the Employment Data in the remainder of the form. Please be sure to complete all columns including the Total Columns on the far right side of the form, and the Total row and Previous Year Total row at the bottom of the form.

5) Return the completed form(s) with **your completed bid proposal.**

**For assistance in completing the form, contact:**  
Human Resources Office of the City of Ann Arbor  
(734) 994-2803

If a contractor is determined to be out of compliance, the Human Rights Office will work with them to assist them in coming into compliance.

Instructions for contractors 9/03

# CITY OF ANN ARBOR HUMAN RIGHTS OFFICE

Form #1

## CONTRACT COMPLIANCE FORM

Entire Organization (Totals for All Locations where applicable)

Name of Company/Organization C1 CONTRACTING INC Date Form Completed 6/27/08  
 Name and Title of Person Completing this Form KEVIN TRAEER Name of President KEVIN TRAEER  
 Address 1279 S. OGDEN ST. STE. 8. BRIGHTON MI 48114 County LIVINGSTON Phone # 810-225-9601  
 (Street address) (City) (State) (Zip) (Area Code)  
 Fax# 810-225-9604 Email Address KEVIN1@C1-CONTRACTING.COM  
 (Area Code)

### EMPLOYMENT DATA

Job Categories	Number of Employees (Report employees in only one category)												
	Male						Female						
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	TOTAL COLUMNS A-M
Exec/Sr. Level Officials	A	B	C	D	F	G	H	I	J	K	L	M	1
Supervisors	2												2
Professionals													
Technicians													
Sales													
Admin. Support	2						1						3
Craftspeople													
Operatives													
Service Workers													
Laborers/Helper	5												5
Apprentices													
Other													
TOTAL	10						1						11
PREVIOUS YEAR TOTAL	31						1						32

AAF-2

# CITY OF ANN ARBOR HUMAN RIGHTS OFFICE CONTRACT COMPLIANCE FORM

Form #2

*Local Office (Only those employees that will do local or on-site work, if applicable)*

Name of Company/Organization \_\_\_\_\_

Date Form Completed \_\_\_\_\_

Name and Title of Person Completing this Form \_\_\_\_\_

Fax# \_\_\_\_\_

(Area Code) \_\_\_\_\_

Email Address \_\_\_\_\_

## EMPLOYMENT DATA

Number of Employees

(Report employees in only one category)

Job Categories	Male						Female						TOTAL COLUMNS A-M
	White A	Black or African American B	Asian C	Hispanic or Latino D	Native Hawaiian or Other Pacific Islander F	American Indian or Alaska Native G	White H	Black or African American I	Asian J	Hispanic or Latino K	Native Hawaiian or Other Pacific Islander L	American Indian or Alaska Native M	
Exec./Sr. Level Officials													
Supervisors													
Professionals													
Technicians													
Sales													
Admin. Support													
Craftspeople													
Operatives													
Service Workers													
Laborers/Helper													
Apprentices													
Other													
TOTAL													
PREVIOUS YEAR TOTAL													

AAF-3

9/03

Questions about this form? Call 734/997-1380 or Email: jcarpenter@ci.ann-arbor.mi.us

City of Ann Arbor

**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 employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the **Living Wage**. This wage must be paid to the employees for the length of the contract/project.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:*

- \_\_\_\_\_ This company is exempt due to the fact that we employ or contract with fewer than 5 individuals.  
\_\_\_\_\_ This non-profit agency is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$10.85/hour when health care is provided, or no less than \$12.56/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted upward each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include the adjustment for 2008.
- b) Please check the boxes below which apply to your workforce:
- ☐ Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes \_\_\_\_\_ No \_\_\_\_\_
- OR
- ☒ Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes ☒ No \_\_\_\_\_
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

CI CONTRACTING INC.  
Company Name

[Signature]  
Signature of Authorized Representative

KEVIN FERRER, PRESIDENT  
Type or Print Name and Title

6/27/08  
Date signed

1279 S. OLIVUS ST, SUITE B  
BRIGHTON, MI 48114  
Address City State Zip

810-225-9601  
Phone (area code)

KEVIN@CI-CONTRACTING.COM  
Email address

**Questions about this form? Please contact:**  
Procurement Office City of Ann Arbor  
Phone: 734/994-2719 Fax: 734/994-1795

→ **NEW RATE EFFECTIVE APRIL 30, 2008** ←

## **LIVING WAGE ORDINANCE – CITY OF ANN ARBOR**

**\$10.85 per hour**      **\$12.56 per hour**

if the employer provides health  
care benefits\*

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.***

## **ENFORCEMENT**

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 includes 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:***

**Dee Lumpkin, Procurement Assistant  
734/994-2719 or [dlumpkin@a2gov.org](mailto:dlumpkin@a2gov.org)      LW-1**

## **NOTICE OF PRE-BID CONFERENCE**

A pre-bid conference for this project will be held on June 20, 2008 at 10:00 a.m., in the 5th Floor Conference Room, City Hall, 100 North Fifth Avenue, Ann Arbor, Michigan.

Attendance at this conference is optional, but highly recommended. Administrative and technical questions regarding this project will be answered at this time. If any questions arise whose answers constitute modifications to the bid documents, an addendum will be issued.

## INSTRUCTIONS TO BIDDERS

### General

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. All work to be done under this Contract is located in or near the City of Ann Arbor.

The City shall make available to all prospective Bidders, prior to receipt of the Bids, access to the area in which the work is to be performed. Advance notice should be given to the Administering Service Area/Unit in cases where access to the site must be arranged by the City.

Any proposal which does not conform fully with these instructions may be rejected.

### Proposals

Proposals must be submitted on the "Proposal Forms" and "Bid Forms" provided, without removal from the binder, with each blank properly filled in. Sealed proposals will be received by the City of Ann Arbor Purchasing Division, Third Floor, City Hall, Ann Arbor, Michigan, at the time stipulated in the Advertisement, promptly after which proposals will be publicly opened and read aloud. Each proposal must be enclosed in a sealed envelope, endorsed across one end:

### BID #ITB-3957, Proposal for Swift Run Parallel Relief Sewer

The City intends to award a Contract(s) to the lowest responsible Bidder(s). On multi-divisional contracts, separate divisions may be awarded to separate Bidders. The City may also utilize discounts offered in the Bid Forms, if any, to determine the lowest responsible Bidder on each division, and award multiple divisions to a single Bidder, so that the lowest total cost is achieved for the City. For unit price bids, the contract will be awarded based upon the lump sum and unit prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the City. If the City determines that the unit price for any item is materially different for the work item bid than either other bidders or the general market, the City, in its sole discretion, in addition to any other right it may have, may reject the bid as not responsible or non-conforming.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing proposals, the City will give consideration to alternate proposals for items listed in the forms, or other alternates which the Bidder may wish to submit, but preference will be given to Base Bid Proposals.

The City reserves the right 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.

### Bid Security

Each proposal 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.

### Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of days specified in the Advertisement.

### Contract Time

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-1, Article III of the Contract. If these time requirements can not be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

### 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.

### Human Rights Information

Section 5, beginning at page GC-3, outlines the requirements for fair employment practices under City of Ann Arbor Contracts. To establish compliance with this Ordinance, the Bidder must complete and return with its bid completed copies of the white and pink Human Rights Division Contract Compliance Forms (copy attached) or an acceptable equivalent.

### Wage Requirements

Section 4, beginning at page GC-1, outlines 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 may be required to provide documentary proof of compliance.



### 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.

## PROPOSAL

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 Advertisement, Human Rights Division Contract Compliance Forms, Notice of Pre-Bid Conference, Instructions to Bidders, Proposal, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans 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 proposal is one part.

In accordance with these bid documents, and Addenda numbered 1, 2, 3, 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 1:319 (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 further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

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 Proposal shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Proposal, or if this Proposal 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 27th DAY OF JUNE, 2008.

C1 CONTRACTING INC.

Bidder's Name

1279 S. OLD US 23, SUITE B  
BRIGHTON, MI 48114

Official Address

810-225-9601

Telephone Number



Authorized Signature of Bidder

KEVIN IRRER

(Print Name of Signer Above)

## LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other two.)

Bidder declares that it is:

\* A corporation organized and doing business under the laws of the state of MICHIGAN, for whom KEVIN IRRER, bearing the office title of PRESIDENT, whose signature is affixed to this proposal, is authorized to execute contracts.

~~\* A partnership, list all members and the street and mailing address of each:~~

~~Also identify the County and State where partnership papers are filed:~~

~~County of \_\_\_\_\_, State of \_\_\_\_\_~~

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

BID FORM  
Section 1 - Schedule of Prices

Project: Swift Run Parallel Relief Sewer  
File: 99047 Bid No: ITB-3957

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
101	General Conditions	LS	1	\$ <u>25000</u>	\$ <u>25000</u>
111	Type II Lighted Barricade Drum Furnished	EA	20 10'	\$ <u>40</u>	\$ <u>400</u> 800 EL
112	Type II Lighted Barricade Drum Furnished	EA	20 10'	\$ <u>40</u>	\$ <u>400</u> 800 EL
113	Type III Lighted Barricade Furnish/Operate	EA	2	\$ <u>300</u>	\$ <u>600</u>
115	Temporary Type B Signs	SF	225	\$ <u>15</u>	\$ <u>3375</u>
120	Project Supervision	LS	1	\$ <u>8500</u>	\$ <u>8500</u>
130	Protective Fencing	LF	1170	\$ <u>2.50</u>	\$ <u>2925</u>
135	Tree Removal (8" & larger)	EA	6	\$ <u>750</u>	\$ <u>4500</u>
140	Exploratory Excavation	EA	3	\$ <u>200</u>	\$ <u>600</u>
200	Machine Grading, Modified	Sta	23.5	\$ <u>2450</u>	\$ <u>57575</u>
201	Audiovisual Tape	LS	1	\$ <u>4500</u>	\$ <u>4500</u>
205	Minor Traffic Control, Modified, Maximum \$3,000	LS	1	\$ <u>3000</u>	\$ <u>3000</u>
206	Flag Control	LS	1	\$ <u>2400</u>	\$ <u>2400</u>
215	28" OD HDPE Sewer Pipe	LF	160	\$ <u>130</u>	\$ <u>20800</u>
220	Concrete Encasement and Appurtenances	LS	1	\$ <u>50500.49</u>	\$ <u>50500.49</u>
225	Extra Depth Bridge Foundation	CYD	10	\$ <u>200</u>	\$ <u>2000</u>
230	Sewer Lead Abandonment	LF	100	\$ <u>12</u>	\$ <u>1200</u>
240	HMA Approach - 13A	Ton	30	\$ <u>120</u>	\$ <u>3600</u>
250	Vegetative Streambank Stabilization	LS	1	\$ <u>30000</u>	\$ <u>30000</u>
255	Erosion Control Blanket	SY	3730	\$ <u>2.15</u>	\$ <u>8019.50</u>
260	Temporary Mailboxes and Trash Service	LS	1	\$ <u>1000</u>	\$ <u>1000</u>
265	Glencoe Hills Sign/Planters - Remove and Reinstall	LS	1	\$ <u>2500</u>	\$ <u>2500</u>
270	Lighted Arrow, Type C, Furn	EA	1	\$ <u>2000</u>	\$ <u>2000</u>
271	Lighted Arrow, Type C, Oper	EA	1	\$ <u>101</u>	\$ <u>101</u>
310	24" Cl. 50 DIP (Sewer), Trench Detail IV	LF	5	\$ <u>150</u>	\$ <u>750</u>
320	24" CL IV RCP Sewer Pipe, Trench Detail II Modified	LF	10	\$ <u>190</u>	\$ <u>1900</u>
321	12" CL IV RCP Sewer Pipe, Trench Detail V Modified	LF	20	\$ <u>37</u>	\$ <u>740</u>
322	27" CL IV RCP Sewer Pipe, Trench Detail I Modified	LF	45	\$ <u>125</u>	\$ <u>5625</u>
323	27" CL IV RCP Sewer Pipe, Trench Detail II Modified	LF	1012	\$ <u>95</u>	\$ <u>96140</u>

BF-1

ADD-1-3

Total This Page \$ 340550  
(Also to be entered on Page BF-3)

341,350 ER

BID FORM  
Section 1 - Schedule of Prices

Project: Swift Run Parallel Relief Sewer  
File: 99047 Bid No: ITB-3957

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
324	27" CL IV RCP Sewer Pipe, Trench Detail V Modified	LF	687	\$ <u>73</u>	\$ <u>50151</u>
325	27" CL IV RCP Sewer Pipe, Wetlands Trench Detail	LF	450	\$ <u>76</u>	\$ <u>34200</u>
353	SDR 35 PVC Service Lead, 4"	LF	75	\$ <u>35</u>	\$ <u>2625</u>
362	Type II Manhole (0 - 10')	EA	14	\$ <u>2600</u>	\$ <u>36400</u>
363	Type II Manhole (Additional ft depth)	VF	16	\$ <u>100</u>	\$ <u>1600</u>
380	Sewer Boring and Jacking and Casing	LF	100	\$ <u>550</u>	\$ <u>55000</u>
385	Sewer Abandonment	LF	100	\$ <u>12</u>	\$ <u>1200</u>
392	Pipe Undercut & Refill (6A limestone)	CY	240	\$ <u>28</u>	\$ <u>6720</u>
500	Remove Bit. Pavement	SY	50	\$ <u>3.50</u>	\$ <u>175</u>
502	Remove curb and gutter any type	LF	80	\$ <u>2.50</u>	\$ <u>200</u>
550	Concrete Barrier Curb and Gutter	LF	80	\$ <u>30</u>	\$ <u>2400</u>
563	Structure Covers	Lbs	1600	\$ <u>3</u>	\$ <u>4800</u>
564	Reconstruct Structure	EA	4	\$ <u>1800</u>	\$ <u>7200</u>
703	Silt Fence	LF	2920	\$ <u>1.50</u>	\$ <u>43800</u>
801	Swamp Oak, 2" Caliper, B & B	EA	3	\$ <u>300</u>	\$ <u>900</u>
802	Silver Maple, 2" Caliper, B & B	EA	3	\$ <u>400</u>	\$ <u>1200</u>
803	Red Oak, 3" Caliper, B & B	EA	2	\$ <u>400</u>	\$ <u>800</u>
804	White Oak, 3" Caliper, B & B	EA	2	\$ <u>415</u>	\$ <u>830</u>
805	Shagbark Hickory, 3" Caliper, B & B	EA	2	\$ <u>415</u>	\$ <u>830</u>
810	Wetlands Restoration	SY	1600	\$ <u>5.50</u>	\$ <u>8800</u>
811	Seed Mixture, Wetland/Swale	SY	1600	\$ <u>1.50</u>	\$ <u>2400</u>
882	Seeding & Mulching	SY	3730	\$ <u>1.40</u>	\$ <u>5222</u>
891	Cleanup & Restoration	LS	1	\$ <u>5000</u>	\$ <u>5000</u>

BF-2

ADD-1-4

233033  
Total This Page \$ ~~732033~~ 128  
(Also to be entered on Page BF-3)

BID FORM

Section 1 - Schedule of Prices

Project: Swift Run Parallel Relief Sewer

File: 99047 Bid No: ITB-3957

Total from Page BF-1	<u>\$ <del>340,550.</del></u>	341,350 ER
Total from Page BF-2	<u>\$ 233,033</u>	
TOTAL BASE BID	<u><u><del>\$ 573,583</del></u></u>	574,383 ER

## BID FORM

### Section 2 - Material and Equipment Alternates

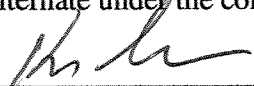
The Base Bid proposal price shall include materials and equipment selected from the designated items and manufacturers listed in the bidding documents. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the Contractor 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.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
--------------------	--------------------	--------------------------

If the Bidder does not suggest any material or equipment alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any material or equipment alternate under the contract.

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



## BID FORM

### Section 3 - Time Alternate

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-1, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

If the Bidder does not suggest any time alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any time alternate under the contract.



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

## BID FORM

### Section 4 - Major Subcontractors

For purposes of this contract, a Subcontractor is anyone (other than the Contractor) who performs work (other than or in addition to the furnishing of materials, plans or equipment) at or about the construction site, directly or indirectly for or on behalf of the Contractor (and whether or not in privity of contract with the Contractor), but shall not include any individual who furnishes merely the individual's own personal labor or services.

For the work outlined in these documents the Bidder expects to engage the following major subcontractors to perform the work identified:

<u>Subcontractor (Name and Address)</u>	<u>Work</u>	<u>Amount</u>
Cataldo Inc. P.O. Box 129. New Lothrop, MI 48460	Base.	55,000.

If the Bidder does not expect to engage any major subcontractor, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT expect to engage any major subcontractor to perform work under the contract.

---

Signature of Authorized Representative of Bidder

## CONTRACT

THIS AGREEMENT is made on the \_\_\_\_\_ day of \_\_\_\_\_, 200\_, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 100 N. Fifth Avenue, 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 “Swift Run Parallel Relief Sewer” in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, which are incorporated as part of this Contract:

Human Rights Division Contract  
Compliance Forms  
Living Wage Declaration of  
Compliance Forms  
(if applicable)  
Bid Forms  
Proposal  
Contract and Exhibits  
Bonds

General Conditions  
Standard Specifications  
Detailed Specifications  
Plans  
Addenda

### ARTICLE II - Definitions

Administering Service Area/Unit means Project Management Services Unit

Supervising Professional means Homayoon Pirooz, P.E. or other persons acting under the authorization of the Administrator/Manager of the Administering Service Area/Unit.

Project means Swift Run Parallel Relief Sewer, Bid No. ITB-3957

### ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin within seven (7) calendar days after the Contractor’s receipt of a fully executed Contract.
- (B) The entire work for this Contract shall be completed within the time frame specified in the Detailed Specification for Progress Schedule.
- (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 \$250 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.

As an independent requirement, where the Detailed Specifications identify certain portions of the work to be completed within a shorter period of time and the Contractor fails to complete each portion within the shorter period specified for each portion, including any extension granted in writing by the Project Supervisor, the City is entitled to deduct from the monies due the Contractor, as liquidated damages and not as a penalty, the amount identified in the Detailed Specifications for each portion of the work not timely completed for each calendar day of delay in completion of each portion of the work.

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.

Liquidated damages under this section are in addition to any liquidated damages due under Section 5 of the General Conditions.

#### ARTICLE IV - The Contract Sum

(A) The City shall pay to the Contractor for the performance of the Contract, the unit prices as given in the Bid Forms for the estimated 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.

#### ARTICLE V - Assignment

This Contract may not be assigned or subcontracted without the written consent of 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 agreement, 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.

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 agreement.

#### 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..

#### ARTICLE IX - Indemnification

To the fullest extent permitted by law, for any loss not covered by insurance under this contract, Contractor shall indemnify, defend and hold harmless 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.

ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations or agreements whether written or oral. Neither party has relied on any prior representations in entering into this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

**FOR CONTRACTOR**

By \_\_\_\_\_

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

**FOR THE CITY OF ANN ARBOR**

By \_\_\_\_\_  
John Hieftje, Mayor

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

**Approved as to substance**

By \_\_\_\_\_  
Roger W. Fraser, City Administrator

By \_\_\_\_\_  
Sue F. McCormick  
Service Area Administrator

**Approved as to form and content**

\_\_\_\_\_  
Stephen K. Postema, 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 dated \_\_\_\_\_, 200\_\_, for: The Swift Run Parallel Relief Sewer 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.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

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

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

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

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

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

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

Name and address of agent:

Approved as to form:

\_\_\_\_\_  
Stephen K. Postema, City Attorney

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, dated \_\_\_\_\_, 200 \_\_, for

The Swift Run Parallel Relief Sewer; 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.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

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

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

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

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

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

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

Name and address of agent:

Approved as to form:

\_\_\_\_\_  
Stephen K. Postema, City Attorney



## **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) Proposal.

### **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."

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.

Further, to the extent that any employees of the Contractor providing services under this contract are not part of the class of craftsmen, mechanics and laborers who receive a prevailing wage in conformance with Section 1:319 of Chapter 14 of Title I of the Code of the City of Ann Arbor, the Contractor agrees to conform to Chapter 23 of Title I of the Code of the City of Ann Arbor, as amended, which in part states:

### **1:814. Applicability.**

- (1) This Chapter shall apply to any person that is a contractor/vendor or grantee as defined in Section 1:813 that employs or contracts with five (5) or more individuals; provided, however, that this Chapter shall not apply to a non-profit contractor/vendor or non-profit grantee unless it employs or contracts with ten (10) or more individuals.
- (2) This Chapter shall apply to any grant, contract, or subcontract or other form of financial assistance awarded to or entered into with a contractor/vendor or grantee after the effective date of this Chapter and to the extension or renewal after the effective date of this Chapter of any grant, contract, or subcontract or other form of financial assistance with a contractor/vendor or grantee.

### **1:815. Living Wages Required.**

- (1) Every contractor/vendor or grantee, as defined in Section 1:813, shall pay its covered employees a living wage as established in this Section.
  - (a) For a covered employer that provides employee health care to its employees, the living wage shall be \$9.42 an hour, or the adjusted amount hereafter established under Section 1:815(3).
  - (b) For a covered employer that does not provide health care to its employees, the living wage shall be \$10.91 a hour, or the adjusted amount hereafter established under Section 1:815(3).
- (2) In order to qualify to pay the living wage rate for covered employers providing employee health care under subsection 1:815(1)(a), a covered employer shall furnish proof of said health care coverage and payment therefor to the City Administrator or his/her designee.

- (3) The amount of the living wage established in this Section shall be adjusted upward no later than April 30, 2002, and every year thereafter by a percentage equal to the percentage increase, if any, in the federal poverty guidelines as published by the United States Department of Health and Human Services for the years 2001 and 2002. Subsequent annual adjustments shall be based upon the percentage increase, if any, in the United States Department of Health and Human Services poverty guidelines when comparing the prior calendar year's poverty guidelines to the present calendar year's guidelines. The applicable percentage amount will be converted to an amount in cents by multiplying the existing wage under Section 1.815(1)(b) by said percentage, rounding upward to the next cent, and adding this amount of cents to the existing living wage levels established under Sections 1:815(1)(a) and 1:815(1)(b). Prior to April 1 of each calendar year, the City will notify any covered employer of this adjustment by posting a written notice in a prominent place in City Hall, and, in the case of a covered employer that has provided an address of record to the City, by a written letter to each such covered employer.

#### Section 5 - Non-Discrimination

The Contractor agrees to comply with the nondiscrimination provisions of Chapter 112 of the Ann Arbor City Code and to take affirmative action to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate any inequality based upon race, national origin or sex. The Contractor agrees to comply with the provisions of Section 9:161 of Chapter 112 of the Ann Arbor City Code and in particular the following excerpts:

##### 9:161 NONDISCRIMINATION BY CITY CONTRACTORS

- (1) All contractors proposing to do business with the City of Ann Arbor shall satisfy the nondiscrimination administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All contractors shall receive approval from the Director prior to entering into a contract with the City, unless specifically exempted by administrative policy. All City contractors shall take affirmative action to insure 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 race, national origin or sex.
- (2) Each prospective contractor shall submit to the City data showing current total employment by occupational category, sex and minority group. If, after verifying this data, the Director concludes that it indicates total minority and female employment commensurate with their availability within the contractor's labor recruitment area, i.e., the area from which the contractor can reasonably be expected to recruit, said contractor shall be accepted by the Director as having fulfilled affirmative action requirements for a period of one year at which time the Director shall conduct another review. Other contractors shall develop an affirmative action program in conjunction with the Director. Said program shall include specific goals and timetables for the hiring and promotion of minorities and females. Said goals shall reflect the availability of minorities and females within the contractor's labor recruitment area. In the case of construction contractors, the Director shall use for employment verification the labor recruitment area of the Ann Arbor-Ypsilanti standard metropolitan statistical area. Construction contractors determined to be in compliance shall be accepted by the Director as having fulfilled affirmative action requirements for a period of

six (6) months at which time the Director shall conduct another review.

- (3) In hiring for construction projects, contractors shall make good faith efforts to employ local persons, so as to enhance the local economy.
- (4) All contracts shall include provisions through which the contractor agrees, in addition to any other applicable Federal or State labor laws:
  - (a) To set goals, in conference with the Human Resources Director, for each job category or division of the work force used in the completion of the City work;
  - (b) To provide periodic reports concerning the progress the contractor has made in meeting the affirmative action goals it has agreed to;
  - (c) To permit the Director access to all books, records and accounts pertaining to its employment practices for the purpose of determining compliance with the affirmative action requirements.
- (5) The Director shall monitor the compliance of each contractor with the nondiscrimination provisions of each contract. The Director shall develop procedures and regulations consistent with the administrative policy adopted by the City Administrator for notice and enforcement of non-compliance. Such procedures and regulations shall include a provision for the posting of contractors not in compliance.
- (6) All City contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the contract for which the City shall be entitled, at its option, to do any or all of the following:
  - (a) To cancel, terminate, or suspend the contract in whole or part and/or refuse to make any required periodic payments under the contract;
  - (b) Declare the contractor ineligible for the award of any future contracts with the City for a specified length of time;
  - (c) To recover liquidated damages of a specified sum, said sum to be that percentage of the labor expenditure for the time period involved which would have accrued to minority group members had the affirmative action not been breached;
  - (d) Impose for each day of non-compliance, liquidated damages of a specified sum, based upon the following schedule:

<u>Contract Amount</u>	<u>Assessed Damages Per Day of Non-Compliance</u>
\$ 10,000 - 24,999	\$ 25.00
25,000 - 99,999	50.00
100,000 - 199,999	100.00
200,000 - 499,999	150.00

500,000 - 1,499,999	200.00
1,500,000 - 2,999,999	250.00
3,000,000 - 4,999,999	300.00
5,000,000 - and above	500.00

- (e) In addition the contractor shall be liable for any costs or expenses incurred by the City of Ann Arbor in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under this contract.

#### 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 13. 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

- A. 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 from all claims for bodily injuries, death or property damage which may arise under this Contract; whether the acts were made by the Contractor or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required:

1. 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

2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements including, but not limited to: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further, 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 Job General Aggregate

\$1,000,000 Personal and Advertising Injury

\$2,000,000 Products and Completed Operations Aggregate

3. Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. 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.
4. 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.

- B. Insurance required under Section A.2 and A.3 of this Contract 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.
- C. In the case of all Contracts involving on-site work, the Contractor shall provide to the City before the commencement of any work under this Contract documentation demonstrating it has obtained the above mentioned policies. Documentation must provide and demonstrate an unconditional 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; name

of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which shall be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified. An original certificate of insurance may be provided as an initial indication of the required insurance, provided that no later than 21 calendar days after commencement of any work the Contractor supplies a copy of the endorsements required on the policies. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) 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 to the Administering Service Area/Unit at least ten days prior to the expiration date.

- D. Any Insurance provider of Contractor shall be admitted and 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-admitted insurance companies are not acceptable unless approved in writing by the City.

#### 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 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.

**CONTRACTOR'S DECLARATION**

I hereby declare that I have not, during the period \_\_\_\_\_, 200\_\_\_\_, 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.

**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.

Contractor

By

(Signature)

Its

(Title of Office)

Subscribed and sworn to before me, on this \_\_\_\_\_ day of \_\_\_\_\_, 200  
\_\_\_\_\_, \_\_\_\_\_ County, Michigan

Notary Public

My commission expires on:

## **STANDARD SPECIFICATIONS**

All work under this contract shall be performed in accordance with the Public Services Department Standard Specifications in effect at the date of availability of the contract documents stipulated in the Advertisement. 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.

A copy of the Public Services Department Standard Specifications may be purchased from the Engineering Division, (Fourth Floor, City Hall, Ann Arbor, Michigan), for \$35.00 per copy. In addition, a copy of these Standard Specifications is available for public viewing at the Engineering Division office, for review Monday through Friday between the hours of 8:30 a.m. and 4:00 p.m.

## **DETAILED SPECIFICATION FOR PROGRESS SCHEDULE**

All work must be performed in accordance with this Project Schedule, unless otherwise directed by the Engineer in writing.

The Contractor shall start work within seven (7) calendar days after receiving the fully executed contract. It is expected that City Council will award the contract on August 7, 2008 and a fully executed contract will be delivered to the Contractor by August 18, 2008.

The Contractor shall follow all State and local requirements associated with the seasonal weight restrictions and shall take these requirements into account when preparing their detailed progress schedule. In no case, shall any work be commenced prior to receipt of a fully executed contract from the City of Ann Arbor.

All work shall be completed by October 31, 2008 with the exception of the establishment and maintenance of vegetation, wetlands, and trees. The maintenance of landscaping shall continue through 2009 in accordance with the associated specifications.

Liquidated Damages will be assessed until the required work is completed.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment to complete the project by the intermediate and final completion dates.

All work must be completed in accordance with the Detailed Specification for "Construction Sequencing".

The low bidder(s) for the work covered by this Contract will be required to submit to the Engineer a detailed progress schedule within one week after the low bidder is determined. A subsequent preconstruction meeting will be arranged by the City of Ann Arbor to finalize the detailed schedule and other items. It is recommended that any named subcontractor(s), as shown in the contract, be at the scheduled meeting if such items materially affect the work schedule. The Progress Schedule shall include all the major work items for the completion of each phase and the planned dates that these work items will be complete. The Engineer must approve the progress schedule before the Contractor may begin work. The inability of the Contractor to provide an acceptable progress schedule in a timely manner shall not be cause for a time extension.

## **DETAILED SPECIFICATION FOR GENERAL CONSTRUCTION NOTES**

All work must be performed in accordance with this Detailed Specification. The cost for this work shall be included within the existing Contract pay items. No additional payment will be made for completion of the work in accordance with this Detailed Specification.

1. All existing sanitary lines and service connections are to remain in service, through bypass pumping or other means, where necessary, until each segment of the new relief sewer line is tested, approved, and placed in service. All existing sanitary lines will remain in service at the end of the project except where noted on the Plans.
2. All construction activities must be contained within the existing sewer easements, Pittsfield Township or Ann Arbor Township right-of-ways, or new sewer easements.
3. The Contractor must protect all retaining walls, buildings, foundations, driveways, bridges, and the like within the construction influence area. The Contractor will be responsible to repair any damage to these items.
4. Groundwater is expected to be encountered along significant sections of this project. In particular, high levels of groundwater were encountered in the vicinity of Swift Run and along Clark Road. Any groundwater entering the construction trench and pits shall be accommodated by the Contractor. The soils and locations where groundwater was encountered during drilling of the geotechnical borings are included in the geotechnical report, which is attached to these specifications for reference.
5. In areas where groundwater is encountered, the Contractor is responsible for dewatering or other means for controlling the groundwater entering construction trench or pit. Payment for any work associated with controlling the groundwater is included within the related sewer pay items.
6. The location and depth of all existing utilities are approximate and must be field verified by the Contractor. Service leads from homes along Shetland Drive have been identified from available records and are provided on the Plans where available. These locations are approximate and the Contractor has the responsibility of field locating these and the remaining sanitary connections and shall not be a basis of claim for additional compensation. Mains and leads damaged by the Contractor during the construction work must be repaired immediately.
7. It is the Contractor's responsibility to protect and maintain all trees, not marked for removal, located within the construction influence area. Any damage to trees as a result of the Contractor's work shall be repaired by the City Forester. All costs incurred by the City to repair trees resulting from the Contractor's damage shall be reimbursed by the Contractor.
8. It is the Contractor's responsibility to coordinate all necessary driveway closures with the property owners and residents in the areas of construction. Driveways shall never be closed during non-working hours, unless authorized in writing by the Engineer.
9. It is the Contractor's responsibility to coordinate any temporary interruptions to sewer service with the property owners and residents in the areas of construction. Property owners shall be informed of such interruptions in advance, and if necessary, temporary pumping or other means shall be provided by the Contractor so that property owners have continuous wastewater service during construction. The use

of trench boxes to maintain the road access will be required if necessary and is included in the associated sewer pay items.

10. Postal delivery and refuse pick-up service shall be maintained at all times. It shall be the Contractor's responsibility to coordinate with the U.S. Postal Service, Ann Arbor Township, and any private waste haulers for the delivery of mail and collection of refuse.
11. At least one lane of traffic on Shetland Road shall be open at all times. Welsh Drive shall be accessible at all times.
12. The private bridge at the end of Shetland Road shall not be utilized for construction traffic as noted on sheet 7 of 11.
13. Prior to excavation of the area between the foundations of the private bridge at the end of Shetland Drive, the Contractor shall hand dig test pits next to each bridge foundation to determine the depth of the footings to ensure that the encasement excavation does not undercut the bridge foundations. If the existing foundations are not of sufficient depth and thereby will be undercut by the encasement work, then the Contractor shall develop a plan to extend the bridge foundations below the encasement depth and provide lateral support to the bridge foundations to prevent damage.
14. The existing manhole interconnection work at the Hogback Road – Washtenaw County Service Center Drive work site shall be performed during dry weather flow conditions.
15. The Contractor is responsible to locate and protect all sewer leads from homes on the east side of Shetland Drive. Leads shall be connected to the new sewer when the appropriate section of sewer and all downstream sewer has been tested and is approved for service.
16. Additional silt fence, from what is shown on the Plans, may be required per SESC permits.
17. Vegetative Stream Bank Stabilization is required by MDEQ Permit No. 06-81-0069-P, included elsewhere in these Contract Documents.
18. The Contractor is responsible for protecting all existing utilities during construction, including the utility pole at Station 0+05.
19. The temporary workpad/pull-off along Hogback Road shall be constructed for the Contractor's convenience to facilitate access to the construction zone west of the bridge (approximately Station 0+00 to 7+20) and to keep construction equipment and materials off of Hogback Road. This workpad shall be constructed as necessary for the Contractor's operations and shall be removed upon the completion of construction north of the bridge. The area shall be restored to previous conditions and maintained until vegetation is fully established. This work shall also be done in accordance with any requirements of the WCRC permit to be obtained by the Contractor. Payment for all of this work, including seeding and mulching, is included in Machine Grading, Modified and will not be paid separately.

# **DETAILED SPECIFICATION FOR CONSTRUCTION SEQUENCING**

## **General Description:**

All work shall be performed in accordance with this Detailed Specification unless a separate sequence is submitted in writing by the Contractor and approved by the Engineer.

The construction sequence listed below is one possible option. The Contractor may elect to use another sequence for construction, if approved by the Engineer, however, the Contractor is solely responsible to assure that all existing sanitary lines and leads remain in service while the new relief sewer line is installed, tested, approved, and placed in service.

Provide a bypass pumping plan (for all stream and sewer bypasses) for Engineer's review. The sewer bypass pumping plan shall include a provision for monitoring during times when the Contractor is not otherwise onsite (e.g., overnight pumping) and a response plan for the event that the pumping system fails.

1. Install all Soil Erosion and Sedimentation Control measures and protective fencing in accordance with all applicable permits. Leave appropriate access for Stream Bank Stabilization work.
2. Prepare temporary work area off Hogback Road utilizing proper traffic maintenance, including flag persons.
3. Install the Vegetative Stream Bank Stabilization. Complete installation of SESC measures where any gaps were left for access to the stream.
4. Install the sewer pipe and concrete encasement between S-3 and S-4 using a temporary stream diversion, along with the necessary streambank restoration measures. Protect and support concrete bridge as necessary. Build manholes S-3 and S-4. Air test and mandrel test the pipe from S-3 to S-4. Mandrel testing shall require that ID not be reduced below 95% of the manufactured diameter in any dimension for the installed pipe. Repair any sections not meeting these tests.
5. Install the sewer pipe between existing manhole s-6 to S-3. Restore and seed the disturbed areas, including all wetland seeding. Build manholes s-6 through S-3. Air test the pipe from s-6 to S-3. Remove temporary workpad off Hogback Road.
6. Install the sewer pipe between S-4 and S-5. Bypass pump or use other means to maintain sanitary lead service. Build manhole S-5 and the 24" interconnection between S-5 and the existing 18" sewer. Plug the interconnection in the manhole of the 18" sewer. Air test the pipe from S-4 to S-5. After this section is approved for service, connect sanitary leads.
7. Coordinate with USPS and trash haulers. Install temporary mailboxes.
8. Install the sewer pipe between S-5 and S-6. Build manhole S-6 and bypass using pumping or other means to maintain flow in the existing 8" line down Welsh Drive to the existing 18" line. Air test the pipe from S-5 to S-6.
9. After the sewer from S-5 to S-6 is approved for service, connect the 8" sanitary line on Welsh Drive to manhole S-6. Connect sanitary leads.



10. Install the sewer pipe from S-7 to S-11, building manholes S-7 through S-11. Bypass pump or use other means to maintain sanitary lead service. Air test the pipe from S-7 to S-11. After approved for service connect sanitary leads.
11. Abandon 12" sanitary sewer from s-12. Bypass pump to maintain service.
12. Install, by boring, the sewer pipe from S-12 to S-13. The 12" line from the southeast will need to be diverted around the bore pit by pumping or other means. Build manholes S-12 and S-13. Connect sewer from S-11 to S-12. Air test the pipe from S-11 to S-13. Mandrel test the pipe from S-12 to S-13. Mandrel testing shall require that ID not be reduced below 95% of the manufactured diameter in any dimension for the installed pipe. Repair any sections not meeting these tests.
13. Perform all restoration and final grade Shetland Drive.
14. Build manhole S-14 and install the sewer pipe from S-13 to S-14. Air test the pipe from S-13 to S-14. Reconnect the 12" sanitary sewer.
15. Install the sewer pipe from S-13 to existing manhole s -1. Air test the pipe from S-13 to s-1.
16. Rebuild manhole s-3 and remove bulkhead from 21" interconnection near manhole s-3.
17. Restore all disturbed areas.
18. Construct 24" interconnection between existing manholes near Washtenaw County Service Center Drive and Hogback Road.

**DETAILED SPECIFICATION  
FOR  
ITEM #200 - MACHINE GRADING, MODIFIED**

**Description**

This work shall consist of performing earthwork and related items in accordance with Section 205 of the 2003 Michigan Department of Transportation's Standard Specifications for Construction, and as specified herein. The Contractor shall furnish all labor, material and equipment for removing and properly disposing off-site any surplus materials; installing, maintaining, removing, properly disposing off-site, and restoring (including vegetating) the temporary workpad/pull-off on Hogback Road; test rolling and fine grading Shetland Drive following completion of the sewer installation; removing and properly disposing off-site, trees and stumps that are less than 6 inches in diameter, vegetation, landscape plantings, and roots as directed by the Engineer; preserving trees, vegetation, and landscaping where directed by the Engineer; grading the project limits to promote proper drainage; and maintaining the work in a finished condition until such time that it is accepted by the Engineer.

Maintenance of a driving surface on Shetland Drive and Welsh Court and meeting any other requirements of associated permits is also included.

All work to excavate materials not covered by separate items in the contract will be classified as "Machine Grading, Modified".

**Construction Methods.** The work shall be kept well graded and drained at all times. Any part of the Construction Influence Area that becomes damaged by rain shall be undercut by the Contractor and backfilled as directed at the Contractor's sole expense.

The Contractor shall perform all cutting, filling, shaping, compacting, test rolling, scarifying, plowing, disking, moving, manipulating of earth necessary to modify the existing conditions and prepare and maintain the grades as shown on the Plans and as directed by the Engineer.

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

The Contractor is responsible to grade around existing structures and around trees, light poles, power poles, mailboxes and any other items located within the construction influence area. The Contractor shall be responsible for any damage to structures in this area covered by their operation.

**Measurement and Payment.** The completed work as measured for "Machine Grading, Modified" will be paid for at the contract unit price for the following contract item (pay item):

<b>Contract Item (Pay Item)</b>	<b>Pay Unit</b>
Machine Grading, Modified .....	Station

Machine Grading, Modified will be measured by length in stations, or portion thereof, along the centerline of the sewer per the stations shown on the plans and it shall include the entire grading limits area of the project, including intersections, side streets, and driveways. This work will be paid for at the contract unit price per station, which shall be payment in full for all labor, equipment, and material needed to accomplish the work.

Each station as measured will encompass both the left-hand and right-hand side of the sewer, including intersections and work within the project grading limits, regardless of the phase or phases of construction.

## **DETAILED SPECIFICATION FOR 201 - AUDIOVISUAL TAPE COVERAGE**

**a. Description** - This work shall include providing a film record of the physical, structural, and aesthetic conditions of the construction site and adjacent areas as provided herein. This work will be performed for the entire project limits prior to the start of each construction season.

The audio-visual filming shall be:

1. Of professional quality, providing a clear and accurate audio and visual record of existing conditions.
2. Prepared within the three (3) week period immediately prior to the preconstruction meeting.
3. Furnished to the Engineer a minimum of one (1) week prior to bringing any materials or equipment within the areas described in this Detailed Specification.
4. Furnished to the Engineer either at or prior to the preconstruction meeting.
5. Carried-out under the supervision of the Engineer.

The Contractor shall furnish one (1) copy of the completed film to the Engineer at or before the preconstruction meeting. An index of the film, which will enable any particular area of the project to be easily found on the film, shall be included. The Contractor shall retain a second copy of the film for his/her own use.

Any portion of the film determined by the Engineer to be unacceptable for the documentation of existing conditions shall be filmed again at the Contractor's sole expense prior to mobilizing onto the site.

**b. Production** - The audio-visual filming shall be completed in accordance with the following minimum requirements:

1. VHS Format / DVD, No Editing - The filming shall be done in color on VHS format tape or DVD using equipment that allows audio and visual information to be recorded. Splicing or editing of the tape shall not be allowed and the speed and electronics of the video taping equipment and VHS cassettes or DVD shall be equal to that which is standard to the video taping industry.
2. Perspective / Speed / Pan / Zoom - To ensure proper perspective, the distance from the ground to the camera lens shall not be less than 10 feet and the filming must proceed in the general direction of travel at a speed not to exceed 48 feet per minute. Pan and zoom rates shall be controlled sufficiently so that playback will ensure quality of the object viewed.

3. Display - The video taping equipment shall have transparent time, date stamp and digital annotation capabilities. The final copies of the tape shall continuously and simultaneously display the time (hours:minutes:seconds) and the date (month/date/year) in the upper left-hand corner of the frame. Accurate project stationing shall be included in the lower half of the frame in standard format (i.e. 1+00). Below the stationing periodic information is to be shown, including project name, name of area shown, direction of travel, viewing direction, etc.

If in the event, the stationing has not been established on-site, refer to the plans and approximate the proposed stationing.

4. Audio Commentary / Visual Features. Locations relative to project limits and landmarks must be identified by both audio and video means at intervals no longer than thirty 100 feet along the filming route. Additional audio commentary shall be provided as necessary during filming to describe streets, buildings, landmarks, and other details, which will enhance the record of existing conditions.
5. Visibility / Ground Cover - The filming shall be performed during a time of good visibility. Filming shall not be performed during periods of precipitation or when snow, leaves, or other natural debris obstruct the area being filmed.

**c. Coverage** - The audio-visual film coverage shall include the following:

1. General Criteria - This general criteria shall apply to all filming and shall include all areas where construction activities will take place or where construction vehicles or equipment will be operated or parked and or where materials will be stored. The filming shall extend an additional 50 feet outside of all areas. The filming shall include all significant, existing man-made and natural features such as driveways, sidewalks, utility covers, utility markers, utility poles, other utility features, traffic signal structures and features, public signs, private signs, fences, landscaping, trees, shrubs, other vegetation, and other similar or significant features.
2. Detour Route / Maintenance of Traffic Areas. The entire detour route and maintenance of traffic areas shall be filmed as indicated in this Detailed Specification except as follows:
  - a. The filming must proceed in the general direction of travel at a speed not exceeding fifty-three 175 feet per minute (2 mi./hr).
  - b. The coverage area shall include the street and not go beyond the curb, or edge of asphalt, except in areas where there is a fair possibility that the detoured traffic will drive over the curb, such as at intersections.
  - c. The filming shall focus in particular at sidewalk ramps and other features likely to have been damaged or likely to be damaged as a result of existing traffic, temporary detoured traffic and or construction traffic. In these areas, filming may need to proceed much more slowly. Only the side of street with the detoured traffic must be filmed.
3. Other Areas - The Contractor shall film at his sole expense other areas where, in his/her opinion, the establishment of a record of existing conditions is warranted. The Contractor shall notify the Engineer in writing of such areas.

The Engineer may direct the filming of other minor areas not specified herein at the Contractor's sole expense.

**d. Audio-Visual Filming Services** - The following companies are known to be capable of providing the filming services required by this Detailed Specification and shall be utilized, unless the Contractor receives prior written approval from the Engineer to utilize another company of comparable or superior qualifications.

Construction Video Media  
Midwest Company  
Topo Video, Inc.  
Video Media Corp.

**e. Measurement and Payment -** The completed work shall be paid for at the contract unit price for the following contract item (pay item):

**Contract Item (Pay Item)**

**Pay Unit**

201 - Audiovisual Tape Coverage .....Each

Audiovisual Tape Coverage shall include all labor, equipment, and materials required to perform the filming and to provide the finished videotape the Engineer. The unit price includes filming the entire project limits as described above, once per construction season.

**DETAILED SPECIFICATION  
FOR  
ITEM #205 - MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$3,000**

**DESCRIPTION**

This work shall consist of protecting and maintaining vehicular and pedestrian traffic, in accordance with Sections 103.05, 103.06, and 812, of the 2003 of the MDOT Standard Specifications for Construction; Part 6 of the Michigan Manual of Uniform Traffic Control Devices, Latest Revised Edition (MMUTCD); and the City Standard Specifications, except as modified herein.

**MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS**

Materials and equipment shall meet the requirements specified in the above-designated sections of the MDOT Standard Specifications.

The Contractor shall maintain two-way traffic on major streets (including Clark Road and Hogback Road), access for local traffic on local streets (including Shetland Drive and Welsh Court), and keep all intersections open to traffic at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain traffic such that no vehicle shall be required to drive into active work areas. Patch areas which extend more than halfway across the roadway shall be removed and replaced so as to provide a minimum of half the width at all times for maintaining traffic. The use of trench boxes is required as necessary to maintain access width.

The Contractor shall keep all driveways open at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain pedestrian traffic at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, Plastic Drum, High Intensity, Lighted shall be placed by the Contractor, as directed by the Engineer. The Contractor, when directed by the Engineer, shall place "Sidewalk Closed" and/or "Cross Here" signs and the cost shall be included in this pay item and will not be paid for separately.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

All existing signs, and signs erected by the City of Ann Arbor on this project shall be preserved, protected, and maintained by the Contractor. The City will repair any existing City owned signs, at the Contractor's expense, which are damaged by the Contractor during the work.

The Contractor shall obtain a right-of-way permit from the Washtenaw County Road Commission, at least 72 hours in advance of any proposed work within the right-of-way.

Traffic on Major streets (including Hogback Road and Clark Road) shall not be impacted between the hours of 7:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 6:00 p.m. without written permission from the Engineer or as specified on the lane-closure permit. All major changes in traffic control shall be made either between 9:30 a.m. and 3:30 p.m., or between 7:00 p.m. and 6:30 a.m. in order to minimize interference with rush-hour traffic. All traffic controls must be in-place and ready for traffic each day by 6:30 a.m. and 3:30 p.m.

The hours of work on all Local streets are 7:00 a.m. to 8:00 p.m., Monday through Saturday, or as specified by the associated permit(s). No equipment will be allowed in the street before or after these hours. Work must be completed each day such that all streets are re-opened to through traffic by 8:00 p.m. unless otherwise specified, directed, or authorized in writing by the Engineer.

The Contractor shall temporarily cover conflicting traffic and/or parking signs when directed by the Engineer.

Parking violation citations issued to the Contractor, subcontractor and material suppliers, including their employees, shall be enforced under appropriate Code.

The Contractor shall replace missing or damaged traffic control devices, as directed by the Engineer. When traffic control devices have been damaged by, or due to, the negligence of the Contractor, his subcontractors or material suppliers, the traffic control devices shall be replaced at the Contractor's expense.

The work for Minor traffic control devices shall include: furnishing and operating of miscellaneous signs and warning devices; furnishing cones; operating additional signs furnished by the City throughout the life of the Contract; furnishing and operating pedestrian traffic control devices; maintaining a safe trench during all non-working hours; maintaining access to all drives; covering conflicting existing signs and removal of these covers; and any and all other miscellaneous and/or incidental items which are necessary to properly perform the work.

The Contractor shall maintain vehicular and pedestrian traffic during the work by the use of flag-persons, channelizing devices and signs as necessary, as directed by the Engineer, and in accordance with MMUTCD. Typical applications for maintaining pedestrian traffic in accordance with the MMUTCD are included in this detailed specification.

Flagging performed for the Contractor's convenience by workers who are also performing other duties (i.e., not designated flaggers) will be paid under this item.

### **MEASUREMENT AND PAYMENT**

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City. Costs for transporting barricades and other traffic control devices shall be included in the bid prices for the individual items of work.

Minor Traffic Devices will be paid for on a pro rata basis with each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be 1.0 Lump Sum, regardless of any extension of time to the contract or delays to the contract.

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

#### **PAY ITEM**

205 - Minor Traffic Control, Modified, Maximum \$3,000

#### **PAY UNIT**

Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.



**DETAILED SPECIFICATION  
FOR  
206 – FLAG CONTROL**

**DESCRIPTION**

This work shall consist of protecting and maintaining vehicular with the use of Traffic Regulators, in accordance with Section 812 of the 2003 of the MDOT Standard Specifications for Construction; the Michigan Manual of Uniform Traffic Control Devices, Latest Revised Edition (MMUTCD); and the City Standard Specifications, and as directed by the Engineer.

**Materials and Construction Methods**

All work shall be performed in accordance with Sections 812 and 922 of the 2003 of the MDOT Standard Specifications for Construction. Designated flaggers must

**MEASUREMENT AND PAYMENT**

Partial payments for Flag Control will be made in accordance with the Table 812-1 of the 2003 MDOT Standard Specifications for Construction. Payment will only be made if designated flaggers are utilized. No payment will be made for Flag Control if the flagging is performed by members of the Contractor's crew who perform other work. This flagging will be paid for under "Minor Traffic Control, Modified, Maximum \$3,000".

The final allowable payment amount will be 1.0 LS regardless of any extension of time to the contract or delays to the contract.

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

**PAY ITEM**

206 – Flag Control

**PAY UNIT**

Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

# **DETAILED SPECIFICATION FOR ITEM #215 – 28” OD HDPE SEWER PIPE**

## **Description**

This item of work shall be executed in accordance with the City of Ann Arbor Standard Specifications, as described herein, and as directed by the Engineer.

## **Materials and Construction Methods**

All high density polyethylene (HDPE) pipe and fittings shall be from a single manufacturer. All HDPE pipe to be installed under this Contract may be inspected at the factory for compliance with this Section by an independent testing laboratory provided by the Owner. The Contractor shall require the manufacturer's cooperation in these inspections. The cost of these plant inspections of all pipe approved for this Contract, plus the cost of inspection of a reasonable amount of disapproved pipe will be borne by the Owner.

All incoming resin shall be sampled for conformance testing against test results supplied by the resin manufacturer. Samples shall be taken from the top and bottom of each compartment from every hopper car received. The following conformance tests shall be performed on the sampler:

- a. Melt Flow Index                      ASTM D1238
- b. Density                                  ASTM D1505
- c. The results of these tests shall become part of the manufacturer's permanent quality control records.
- d. Pipe Class                              Iron Pipe Size (IPS) DR-21
- e. Outer Diameter                      28"

The HDPE pipe manufacturer shall provide certification that stress regression testing has been performed on the specific polyethylene resin being utilized in the manufacture of this product. This stress regression testing shall have been done in accordance with ASTM D2837 and the manufacturer shall provide a product supplying a minimum Hydrostatic Design Basis (HDB) of 1,600 psi as determined in accordance with ASTM D2837.

Inspection of the pipe may also be made by the Engineer or other representatives of the Owner after delivery. The pipe shall be subject to rejection at any time on account of failure to meet any of the specified requirements, even though pipes may have been accepted as satisfactory at the place of manufacture. Pipe rejected after delivery shall be marked for identification and shall immediately be removed from the job.

The pipe material manufacturer shall provide an unconditional extended warranty for the pipe covering the cost of materials for repair or replacement plus installation manpower should the pipe fail within the warranty period. The manufacturer's extended warranty shall be for ten years after the final acceptance of the project by the Owner. The manufacturer shall guarantee that the pipe furnished is suitable for the purpose intended and free from defects of material and workmanship for the duration of the extended warranty. In the event the pipe fails to perform as specified, the pipe manufacturer shall promptly replace defective pipe at no additional cost to the Owner.

Care shall be taken in loading, transporting, and unloading to prevent injury to the pipe. Pipe or fittings shall not be dropped. All pipe or fittings shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe shall be repaired as directed by the Engineer. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner by the Contractor, at his own expense.

All pipe and fittings shall be thoroughly cleaned before installation, and shall be kept clean until they are used in the work.

Pipe shall be laid to lines and grade shown on the Drawings with bedding and backfill as shown on the Drawings.

When laying is not in progress, including lunchtime, the open ends of the pipe shall be closed by fabricated plugs, or by other approved means. All plugs shall be OD fitting type plugs. No plugs will be allowed that require insertion of the plug into the pipe.

Pipe shall be stored on clean level ground to prevent undue scratching or gouging. The handling of the pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. The maximum allowable depth of cuts, scratches or gouges on the exterior of the pipe is 10 percent of wall thickness. The interior pipe surface shall be free of cuts, gouges or scratches.

Sections of the pipe with cuts, scratches or gouges exceeding five percent of the pipe wall thickness shall be removed completely and the ends of the pipeline rejoined.

When cutting pipe is required, the cutting shall be done by machine, leaving a smooth cut at right angles to the axis of the pipe.

The pipe shall be joined by the method of thermal butt fusion, as outlined in ASTM D2657. All joints shall be made in strict compliance with the manufacturer's recommendations.

### **MEASUREMENT AND PAYMENT**

HDPE sewer pipe as specified shall be measured in place by length in lineal feet (LF) from center of manhole to center of manhole.

#### **PAY ITEM**

#### **PAY UNIT**

Item # 215

28" OD HDPE Sewer Pipe

LF

Payment will include; excavation; removal of excavated material; sheeting and shoring; the installation of watertight plugs; protection of existing utilities; connections into existing structures; bedding; dewatering; bypass pumping; backfilling per the trench details; cleaning; TV inspection; mandrel testing, and air testing. Mandrel testing shall require that ID not be reduced below 95% of the manufactured diameter in any dimension for the installed pipe. Corrective action shall be taken for any sections not meeting the inspection requirements.

# **DETAILED SPECIFICATION FOR ITEM #220 - CONCRETE ENCASEMENT AND ROCK RETAINING WALL**

## **Description**

This work shall consist of all labor, equipment, and material required to install a reinforced concrete encasement in the Swift Run stream bottom as shown on the Plans and in accordance with Sections 401 and 706 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, and as directed by the Engineer. This includes restoration of the rock retaining wall for the HDPE stream crossing. See General Construction Notes specification for associated existing bridge foundation constraint.

This work includes excavation to plan depth; removal and proper disposal off site of unsuitable materials; hand digging test pits next to the bridge foundations; salvaging, stockpiling, and reusing stream bottom rocks and retaining wall rocks; furnishing and placing geotextile fabric for the rock wall replacement; placement and removal of forms; and all other work necessary to construct the concrete encasement and retaining wall as shown on the Plans and as directed by the Engineer.

**Material** – The concrete shall be MDOT Grade S1 (611 lbs/cyd), Type A as specified in Section 701 of the MDOT Standard Specifications for Construction.

The reinforcing steel shall be ASTM A615, 60 ksi yield grade; deformed billet steel bars, unfinished epoxy coated in accordance with ASTM A775 finish, in accordance with Section 905 of the MDOT Standard Specifications for Construction.

The Tie Wire shall be minimum 16 gage annealed type. The Chairs, Bolsters, Bar Supports, Spacers shall be sized and shaped for strength and support of reinforcement during concrete placement conditions.

**Construction Method** - This work shall consist of constructing the concrete encasement per Section 706 of the 2003 Michigan Department of Transportation Standard Specifications for Construction and as indicated on the Plans. The Contractor shall refer to the “Detailed Specification for Construction Sequencing” for specific sequencing of the construction.

Concrete shall be ready-mixed concrete produced by equipment acceptable to the Engineer. No hand-mixing will be permitted. Clean each transit mix truck drum and reverse drum rotation before the truck proceeds under the batching plant. Equip each transit-mix truck with a continuous, nonreversible, revolution counter showing the number of revolutions at mixing speeds.

Concrete mix showing either poor cohesion or poor coating of the coarse aggregate with paste shall be remixed. If this does not correct the condition, the concrete shall be rejected.

Concrete surface shall be hand troweled in wave-like motions to create a sand-ripple effect and concrete shall be colored in earth tones approved by the City of Ann Arbor to achieve a natural appearance matching the downstream streambed texture. The surface shall match the pre-construction stream bed elevations shown on the drawings. Usable gravel and stone from the areas excavated for the concrete encasement area shall be pressed into the wet cement (no closer than 6” to the horizontal location of buried pipe) until either flush or less than 1/4” above flush to provide a natural-looking surface.

Prior to excavation of the area between the foundations of the private bridge at the end of Shetland Drive, the Contractor shall hand dig test pits next to each bridge foundation to determine the depth of the footings to ensure that the encasement excavation does not undercut the bridge foundations. If the existing foundations

are not of sufficient depth then the Contractor shall develop a plan to extend the bridge foundations as described in the Detailed Specification for Extra Depth Bridge Foundation.

#### Reinforcing Steel

Place, support and secure reinforcement against displacement. Do not deviate from required position. Do not displace or damage geotextile concrete or other geotextile or drainage products. Repair in accordance with suppliers recommendations, as approved by Engineer, any epoxy coated surfaces damaged during transport or placement. Accommodate placement of formed openings. Maintain minimum concrete cover around reinforcing. Conform to applicable code for concrete cover over reinforcement.

#### Curing and Protections

Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

#### Field Quality Control

Provide free access to Work and cooperate with appointed firm. Submit proposed mix design of each class of concrete to Engineer for review 2 weeks prior to commencement of work. Tests of cement and aggregates may be performed to ensure conformance with specified requirements. Four concrete test cylinders will be taken for every 50 or less cubic yds of each class of concrete placed in one day. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents. One slump test and air content will be taken for each set of test cylinders taken.

#### Patching

Allow Engineer to inspect concrete surfaces immediately upon removal of forms. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery. Patch imperfections as directed.

#### Defective Concrete

Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

Repair or replacement of defective concrete will be determined by the Engineer. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

#### Formwork

Design, engineer and construct formwork, shoring and bracing to conform to design and code requirements; resultant concrete to conform to required shape, line and dimension. Erect formwork, shoring and bracing to achieve design requirements, in accordance with the MDOT Standard Specifications for Construction. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores. Coordinate this section with other sections of work which require attachment of components to formwork. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement before proceeding, request instructions from Architect/Engineer. Construct formwork to maintain tolerances required by the MDOT Standards Specifications for Construction.

### Rock Retaining Wall

The rock retaining wall located along the east streambank shall be rebuilt using the existing rocks and matching the existing grades. During removal, all rocks larger than 4" in diameter shall be saved and stockpiled for reuse when rebuilding the wall. Prior to re-installing the rock, the soil surface shall be covered with a geofabric layer to prevent erosion. The approximate slope along undisturbed sections of the rock wall shall be maintained in the replacement section and the individual rocks shall be placed such that the surfaces interlock to create a stable slope. Larger rocks shall be used along the bottom of the wall to the extent possible to improve stability.

### Measurement and Payment

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

#### PAY ITEM

#### PAY UNIT

Item # 220	Concrete Encasement and Rock Retaining Wall	LS
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The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and this Detailed Specification, including any clearing, grubbing, excavation, stockpiling, salvaging, grading, shoring and bracing, mixing, drilling, toweling, sealing, coloring, materials, retaining wall replacement in-kind, existing bridge foundation investigation, and labor associated with reinforced concrete encasement, rock retaining wall, and all associated work including by-pass pumping and dewatering.

The Contractor is responsible to perform his/her own computations of the quantities required to complete all of the work described above and include all of his/her costs to complete ALL of the work in the respective pay item. Plan quantities will be paid for the work, and will not be adjusted.

**DETAILED SPECIFICATION  
FOR  
ITEM #225 - EXTRA DEPTH BRIDGE FOUNDATION**

**Description:**

This work shall consist of all labor, equipment, and material required to plan for and modify the existing concrete bridge foundations as necessary and as shown on the Plans and in accordance with Sections 401 and 706 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, and as directed by the Engineer.

**Materials:**

The concrete shall be MDOT Grade S1 (611 lbs/cyd), Type A as specified in Section 701 of the MDOT Standard Specifications for Construction.

**Construction Methods:**

If, as part of the existing bridge foundation investigation included in Item #220, it is determined that the existing foundations are not of sufficient depth and thereby will be undercut by the encasement work, the Contractor shall develop a plan to extend the bridge foundations below the encasement depth, provide lateral support to the bridge foundations to prevent damage, and place forms and concrete to provide extra depth to the bridge foundation. This plan shall be approved by the Engineer prior to beginning the work.

**Measurement and Payment**

The completed work as measured in place will be paid for at the contract unit price for the following contract item (pay item):

**PAY ITEM**

**PAY UNIT**

Item # 225                      Extra Depth Bridge Foundation

CYD

This item includes developing a plan, providing support, excavation, grading, shoring and bracing, mixing, drilling, toweling, sealing, materials, existing bridge foundation modification and labor associated with Extra Depth Bridge Foundation and all associated work including by-pass pumping and dewatering.

**DETAILED SPECIFICATION  
FOR  
ITEM #230 – SEWER LEAD ABANDONMENT**

**Description:**

This work shall consist of all labor, equipment, and material required to abandon the existing sanitary sewer leads from the existing sewer to the new sewer. This work shall be done in accordance with the City of Ann Arbor Specifications for Sewer Abandonment.

**Construction Methods:**

The existing leads from the homes on the east side, shall be cut and capped at the main. The remaining length of pipe from the existing sewer to the new main, shall be removed or flow filled as directed by the Engineer.

**Measurement and Payment**

The completed work as measured in place will be paid for at the contract unit price for the following contract item (pay item):

**PAY ITEM**

**PAY UNIT**

Item # 230

Sewer Lead Abandonment

LF

This item includes any excavation, materials, backfilling , removal and/or flow filling, and labor associated with Sewer Lead Abandonment and all associated work including by-pass pumping and dewatering. Measurement shall be made from the center of the existing sewer to the end of the length of lead that is removed to facilitate connection to the new sewer main.



**DETAILED SPECIFICATION  
FOR  
ITEM #240 – HMA APPROACH – 13A**

**Description:**

This work shall consist of all labor, equipment, and material required to install HMA Driveways as shown on the Plans and in accordance with Section 502 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, and as directed by the Engineer.

**Materials and Construction Methods:**

Hot Mix Asphalt shall be 13A and construction methods shall be in accordance with Section 502 of the MDOT Specifications for Construction.

**Measurement and Payment**

The completed work as measured in place will be paid for at the contract unit price for the following contract item (pay item):

<u><b>PAY ITEM</b></u>		<u><b>PAY UNIT</b></u>
Item # 240	HMA Approach	Ton

This item includes preparation of the foundation, furnishing, placing, and compacting HMA in two lifts.

# **DETAILED SPECIFICATION FOR ITEM # 250 - VEGETATIVE STREAMBANK STABILIZATION**

## **Description**

This work shall consist of furnishing, placement, and maintaining the streambank as directed by Engineer and in accordance with the City of Ann Arbor Standard Specifications, as described herein, as directed by the Engineer and in accordance with MDOT Permit No. 06-81-0069-P.

## **Materials and Construction Methods**

Restoration includes preparing a uniform bank slope, placement and anchoring geofabric 3' beyond the top of bank, upstream and downstream ends of restoration, continuously along each seam of the geofabric, at the middle of bank, and at the base of the bank. Work includes the placement of natural field stone at base of bank to 1' above the normal water depth, and vegetative plantings along the length of the restoration.

Geotextile fabric will be placed on smooth surface and secured with stakes. Stakes will be placed every 3 ft. in all directions with special attention to ends and sides. If material is stretched or torn area will have to be removed and replaced. 2 foot overlap of fabric is required; overlap is required in all directions. Fabric will be placed longitudinally down slopes.

Biodegradable stakes will be placed a minimum of 18 inches into the ground on slopes and 12 inches into the ground in flat areas or as directed by Engineer.

The geofabric shall be a coconut fiber erosion control blanket as specified in the Detailed Specification for "Erosion Control Blanket". Geofabric shall be extended completely under stone placed at the base of the restored bank.

Plantings of vegetation shall be made from healthy-looking shrubs of varieties such as willows or dogwoods and shall be made using cuttings from the previous year's growth, 1/4"-1/2" thick and 12-18 inches long. Plantings shall be inserted approximately halfway into the bank with as little soil disturbance as possible, staggered with 2 feet between rows and 2 feet between the cuttings in each row for the entire length and height of the restoration area.

Where bank slopes are less than 1% approaching the top of bank, a grass mixture of creeping red fescue, tall fescue, and perennial ryegrass in a 4:4:1 weight basis may be applied at 1.25 lbs per 1,000 sq ft instead of cuttings. Seeded areas shall be worked with a stiff rake to prepare a seed bed, seeds lightly raked into the soil, and mulched with straw.

## **Measurement and Payment**

The completed work will be paid for at the contract unit price for the following contract items (pay items):

### **PAY ITEM**

### **PAY UNIT**

Item # 250	Vegetative Streambank Stabilization	LS
------------	-------------------------------------	----

This item includes any clearing, grubbing, excavation, grading, planting, seeding, watering, fertilizing, maintaining, raking, protecting, and otherwise meeting the specification for vegetative streambank stabilization from the toe to the top of bank where noted on Plans. Payment will be made upon completion of the work which price shall be payment in full for all labor, equipment and material needed to accomplish this work.

The Contractor is responsible to perform his/her own computations of the quantities required to complete all of the work described above and include all of his/her costs to complete ALL of the work in the respective pay item. Plan quantity of 1.0 Lump Sum will be paid for the work, and will not be adjusted.

The Contractor is responsible for maintaining and repairing, if necessary, at no cost to the owner, the streambank stabilization areas for one year following completion of the work.

**DETAILED SPECIFICATION  
FOR  
ITEM #255 – EROSION CONTROL BLANKET**

**a. Description** - This work shall consist of furnishing and installing erosion control blankets in the seeded restoration areas as directed by the Engineer. The blankets shall be installed per manufacturer's recommendations. This item includes maintenance of the erosion control blankets until the vegetation is fully established as determined by the Engineer.

**b. Material** - The erosion control blanket shall be C125BN as manufactured by North American Green, or equivalent as approved by the Engineer. The coconut fiber erosion control blanket shall have the following properties.

Matrix: 100% coconut fiber. (0.50lb/squared)

Netting :

Top: Leno woven 100% biodegradable organic jute fiber (9.30 lbs/1000sft approximate weight).

Bottom: 100% biodegradable organic jute fiber (7.7lbs/1000sft approximate weight)

Thread: Biodegradable.

Physical Specifications

Width: +/- 5% 6.67ft.

Length: +/- 5% 108 ft.

Weight: +/- 52.22 lbs.

Area: 80 syd.

Stitch Spacing for all rolls = 1.50 inches.

The Erosion Control Blanket shall be manufactured with a colored line or thread along outer edges to ensure proper material overlapping. The Manufacturer's recommended fastening pattern must be clearly marked on blanket to insure proper anchorage to soil.

Biodegradable fasteners shall be supplied by the manufacturer based on type of installation required and as approved by the Engineer.

**c. Submittals** - Within 30 days prior to starting the work, the Contractor shall submit samples of the Erosion Control Blanket to the Engineer for approval. Installation instructions need to be provided with each delivery of the erosion control blankets.

**d. Method of Construction** - Erosion Control Blankets shall be installed per Manufacturer's recommendations and as directed by the Engineer. The loss of Erosion Control Blankets due to any cause will be the responsibility of the Contractor. No additional payment will be made to replace Erosion Control Blankets previously placed.

**e. Measurement and Payment** - The completed work of Erosion Control Blankets will be paid for at the contract unit price for the following contract items (pay items):

**Contract item (Pay Item)**

**Pay unit**

Item #255 - Erosion Control Blanket.....Square Yard

The Erosion Control Blanket will be measured in place by square yard of surface area. Overlap of the material will be included in the above measurement (not in addition to the above measurement) and not paid for separately. Erosion Control Blanket will be paid at the contract unit price per square yard installed, which

price shall be payment in full for all labor, equipment and material needed to accomplish this work. Also included in the unit price is the work of maintaining the blanket as required by the Engineer until the area is fully established.

The fabric/blanket used for streambank stabilization and rock retaining wall is not included in this item but is included in the separate pay items "Item #250 - Vegetated Streambank Stabilization" and "Item #220 - Concrete Encasement and Rock Retaining Wall" .

**DETAILED SPECIFICATION  
FOR  
ITEM #260 - TEMPORARY MAILBOXES AND TRASH SERVICE**

**Description**

This item includes the temporary provision of mailboxes at the entry to Shetland Drive for all residents entering along Shetland Drive. This item also includes moving or providing temporary trash service along Shetland Drive for the period of time that access is limited in Shetland Drive.

**Materials and Construction Methods**

Work includes provision of temporary postal mailboxes that meet USPS requirements near the entry to Shetland Drive as shown on the Drawings. The exact location shall be determined by the Engineer. Contractor shall place mailboxes prior to the start of any construction work, and shall coordinate with the USPS to begin and end temporary service to the mailboxes during the construction period. Contractor shall maintain the mailboxes during the duration of the project and remove the temporary mailboxes after construction is complete and when full access is available for the USPS to resume normal delivery. The mailboxes shall become the property of the Contractor or shall be delivered to the City Yard on Stone School Road, at the direction of the Engineer.

Each mailbox shall be individually numbered to correspond to a parcel address within the limits and shall meet US Postal Service standards for curb delivery.

Temporary refuse service will be provided during periods when access to Shetland Drive is limited.

**Measurement and Payment**

The completed work will be paid for at the contract unit price for the following contract items (pay items):

**PAY ITEM**

**PAY UNIT**

Item # 260	Temporary Postal and Trash Service	LS
------------	------------------------------------	----

This item includes all work and materials associated with these above items.

The Contractor is responsible to perform his/her own computations of the quantities required to complete all of the work described above and include all of his/her costs to complete ALL of the work in the respective pay item. Plan quantity of 1.0 Lump Sum will be paid for the work, and will not be adjusted.

**DETAILED SPECIFICATION  
FOR  
ITEM #265 - GLENCOE HILLS SIGN/PLANTERS – REMOVE AND  
REINSTALL**

**Description**

This item of work shall be executed in accordance with the City of Ann Arbor Standard Specifications, as described herein, and as directed by the Engineer.

**Materials and Construction Methods**

Work includes the temporary sign relocation and permanent reinstallation of the Glencoe Hills sign and planters located along Clark Road as shown on the Drawings. Temporary relocation of the sign is required to the location noted on the Drawings. The planters and contents of the planters shall be replaced in-kind as part of the permanent reinstallation of the sign/planters after relief sewer testing has been completed between manholes S-13 and s-1.

This includes protecting and/or restoring the electrical service to the sign. Electrical work, if needed, shall be performed by a licensed electrician.

**Measurement and Payment**

The completed work will be paid for at the contract unit price for the following contract items (pay items):

<b><u>PAY ITEM</u></b>		<b><u>PAY UNIT</u></b>
Item # 265	Glencoe Hills Sign/Planters Remove and Reinstall	LS

This item includes all work and materials associated with these above items.

The Contractor is responsible to perform his/her own computations of the quantities required to complete all of the work described above and include all of his/her costs to complete ALL of the work in the respective pay item. Plan quantity of 1.0 Lump Sum will be paid for the work, and will not be adjusted.

# **DETAILED SPECIFICATION FOR ITEM #810 - WETLANDS RESTORATION**

## **Description**

This work shall consist of grading and preparing the seedbed of the wetland restoration area as indicated on the plans or as directed by the Engineer. All work shall be performed in accordance with Section 816 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, the City of Ann Arbor Public Services Department Standard Specifications, the MDEQ Permit No. 06-81-0069-P, and as specified herein.

## **Materials and Construction Methods**

Restore all existing wetland areas which are temporarily altered by construction activities, including excavation, stockpiling, clearing, and trenching of wetlands in the course of construction activities. Provide erosion control; replace wetland topsoil; establish finish grade; apply soil amendments; plant balled and burlapped, potted and bare root plant stock; and maintain the wetlands restoration area. Restoration shall proceed as follows:

1. During any excavation, trenching or ditching in wetlands, the existing wetland topsoil shall be scraped off and segregated from subsoils and kept wet if stockpiled for more than 24 hours. Stockpiled wetland topsoil shall be irrigated to prevent desiccation of roots and viable propagules within the wetland topsoil.
2. After construction of the sewer is completed, restore subgrades to match preconstruction conditions (8 to 12-in below finished grade).
3. The finished grade shall be established using Manufactured Topsoil Type I and the wetland topsoil removed from the temporary wetland alteration area and stockpiled separately from subsoils. The areas shall be rolled with a hand roller weighing not more than 100 pounds per foot of width and raked smooth. The finish grades shall match preconstruction grades and transition smoothly to the surrounding undisturbed wetland contours.
4. After final grades are established the altered area shall be stabilized with the Wetland/Swale Seed Mix.
5. Plantings shall be watered in accordance with the Detailed Specification for Seed Mix, Wetland/Swale.
6. Maintenance shall begin immediately after areas are planted and seeded and shall continue until substantial completion. After areas are planted and seeded, the Contractor shall request an inspection of the work by the Engineer.

## **Measurement and Payment**

The completed work will be paid for at the contract unit price for the following contract items (pay items):



**PAY ITEM****PAY UNIT**

Item # 810

Wetlands Restoration

SY

This item includes all clearing, grubbing, grading, furnishing of materials and any necessary corrective action to meet the specification requirements and abiding by MDEQ guidelines and Permit No. 06-81-0069-P. Seeding and watering are included in Item 811.

# DETAILED SPECIFICATION FOR ITEM #811 - SEED MIXTURE, WETLAND/SWALE

## Description

This work shall consist of seeding, watering, maintaining and reseeding the disturbed areas through 2009 as indicated on the plans or as directed by the Engineer. All work shall be performed in accordance with Section 816 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, the City of Ann Arbor Public Services Department Standard Specifications, the MDEQ Permit No. 06-81-0069-P, and as specified herein.

**Materials** - All materials shall meet the requirements of the 2003 Michigan Department of Transportation Standard Specifications for Construction and the City of Ann Arbor Public Services Department Standard Specifications, and as specified herein. Preference will be given to seed distributors that belong to the "Michigan Native Plant Producers Association".

The Contractor shall provide a fresh, clean, new crop seed along with a guaranteed statement of the composition of the mixture and the percentages of purity and germination of each variety. The seed mixtures and application rate shall be as described below.

WETLAND/SWALE SEED MIX	Indicator Status	Proportion by Weight	PLS Lbs./acre
Andropogon gerardii (Big bluestem)	FAC-	38.8%	2.00
Aster nova-angliae (New England aster)	FACW	2.5%	0.13
Carex bebbii (Bebb's sedge)	OBL	2.5%	0.13
Carex vulpinoidea (Foxtail sedge)	OBL	2.5%	0.13
Coreopsis tripteris (Tall coreopsis)	FAC	2.5%	0.13
Elymus virginicus (Virginia wild-rye)	FACW-	19.4%	1.00
Eupatorium maculatum (Joe-Pye weed)	OBL	2.4%	0.13
Helenium autumnale (Sneezeweed)	FACW+	2.4%	0.13
Juncus effusus (Soft-stemmed rush)	OBL	0.6%	0.03
Panicum virgatum (Switch grass)	FAC+	14.5%	0.75
Scirpus atrovirens (Dark green bulrush)	OBL	1.2%	0.06
Scirpus cyperinus (Wool grass)	OBL	0.6%	0.03
Silphium terebinthinaceum (Prairie dock)	FACU	2.5%	0.13
Verbena hastata (Blue vervain)	FACW+	2.5%	0.13
Vernonia fasciculata (Ironweed)	FACW	2.5%	0.13
Zizia aurea (Golden alexander)	FAC+	2.5%	0.13
<b>TOTAL NATIVE SEED:</b>		100%	5.16
<b>TEMPORARY COVER:</b>			
Seed Oats (Avena sativa)			20.00
Annual Rye (Lolium multiflorum)			6.00

Any water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances.

No heeled-in plants or plants from cold storage shall be used. Plantings shall be from healthy and vigorous, well-branched and densely foliated when in leaf; shall be free of disease, insect pests, eggs or larvae and shall have healthy, well-developed root systems. Inspection of plants before cutting and digging shall be at the option of the Engineer.

**Submittals** - Within 60 days prior to starting work, the Contractor shall submit for approval the following:

1. Name and location of seed supplier(s)
2. Geographic origin of each species
3. Percentage of Pure Live Seed (PLS) for each species or commitment by supplier to provide germination results.

Within 30 days prior to starting work, submit for approval copies of all seed labels.

**Construction Methods** - Before seeding, the Contractor shall verify that the topsoil surface is worked to a smooth, uniform, firmly compacted surface with no visible lumps or depressions.

1. Hydro seeding will not be permitted for all native seeding operations.
2. Damage to restored areas resulting from storms, including major storms, settlement, or erosion shall be repaired by the Contractor, at the Contractor's expense.
3. Restored areas shall be protected and maintained after seeding by watering, collecting debris, and correcting all erosion and settlement until acceptance by the Engineer
4. Additional watering, as required to establish the vegetation, will be the Contractor's responsibility. Soil moisture must be sufficient to stimulate germination and sustain viable plant growth. Watering must continue during the 2009 growing season to maintain optimal soil moisture. Water shall be applied to moisten the soil to a minimum depth of three inches, in a manner that does not cause erosion. It will be the Contractor's responsibility to furnish adequate equipment for watering and an appropriate source and supply.
5. Ensure good contact between seed and mineral soil. Scarify or loosen topsoil as necessary to bring it to the proper condition. Remove foreign matter larger than 1-inch diameter.
6. Native seed shall not be covered with more than 1/8 inch of soil.
7. Sowing of the seed during adverse weather or when wind speeds exceed five miles per hour will not be permitted
8. Break bulk seed mix down into smaller quantities for better management to provide even distribution over the site. A carrying agent such as vermiculite must be pre-

approved by the Engineer. Sawdust and sand are inadequate carriers and will not be permitted.

9. The areas to be seed shall be crossed twice, the second time shall be perpendicular to the first pass, to ensure even seed distribution.
  10. Lightly rake or drag the topsoil in the planted area following seed application, resulting in no more than 1/8-inch cover over the seed.
- c. Seeding Schedule** – Due to the Construction Sequencing of the Project and the required watering by the Contractor, traditional seeding schedules do not apply. The Contractor must adhere to the following.
1. Install the appropriate seed mix when final topsoil placement is completed. Waiting for the entire site to be ready prior to the commencement of seed installation will not be permitted. Also, refer to the Detailed Specification for Construction Sequence for appropriate cover crop seeding times.
  2. Dewatering measures shall be maintained to keep wetland areas drained of standing or flowing water during the seeding period.
- d. Maintenance** – The Contractor, prior requesting a letter of Provisional Acceptance from the Engineer, shall submit two copies of a maintenance schedule detailing the work items identified under this DETAILED SPECIFICATION. This schedule shall include a table covering the two-year warranty period, identifying all site visits and the tasks to be performed during each visit. The schedule shall show that no maintenance will occur between the periods of October 15th and April 1st, unless otherwise required by related Detailed Specifications.
1. Maintenance of the seeding shall begin immediately after provisional acceptance is granted and shall continue as required until final acceptance at the end of the warranty period.
  2. Maintenance shall include all measures necessary to establish and maintain vegetation in a vigorous and healthy growing condition.
  3. The Contractor shall irrigate all plants adequately to maintain an optimum supply of moisture within the root zone. Reoccurring overly dry or wet conditions shall be grounds for rejection of plant material. Water shall come from a source approved by the Engineer. Water shall not be applied with a force that will displace the seed or mulch blankets or cause soil erosion, and shall not be applied so quickly that the seed or mulch blankets cannot absorb it.
  4. Maintenance of the seeding areas shall consist of the following: mowing (or weed-whacking) vegetation to prevent the flowering and seeding of perennial and annual weeds throughout the growing season; removing invasive species via hand pulling; spot seeding with species from the original seed mix; burning (as approved by

Engineer) to discourage weed growth; and other practices considered necessary by the Contractor (and approved by Engineer) to achieve the required conditions for final acceptance.

5. First and Second year management will include, but not limited to a mowing or a weed-whacking regime where cutting of the plants to 4"-6" when the plantings reach a 10"-12" height. Contractor shall not pull weeds by hand or use herbicides to eradicate weeds.
  6. At the end of the Third year, after the final acceptance, the Contractor shall either mow or weed-whack the seeded areas to the ground. This work shall be done in late fall and will be approved by the Engineer prior to the work.
- e. **Final Acceptance and Warranty** - Before seeding, the Contractor shall verify that the topsoil surface is worked to a smooth, uniform, firmly compacted surface with no visible lumps or depressions.
1. The Contractor shall warrant all seed species to be true to botanical name.
  2. The Contractor shall establish a dense cover of specified species in all areas seeded under the contract. These areas shall be maintained until Final Acceptance of the work. For all seeded zones, the Engineer shall conduct warranty field inspections of all seeded areas at the end of the first, second and third growing seasons following seeding.
  3. **Provisional Acceptance** will be granted upon the successful completion of all seeding and the Engineer's verification that all work has been installed in accordance with the Plans and Specifications. **Final Acceptance** will be granted at the end of the 2009 growing season following the seed installation.
  4. The Engineer and Contractor shall conduct the final acceptance inspections before the end of the Warranty period. **Final acceptance** will be granted if the erosion control fence has been removed and the Wetland/Swale Seed Mix meets 90% total cover.
  5. Within all seeded areas after the first full growing season, any bare areas with less than 30% cover by seeded species that are 30 square feet in size or greater shall be reseeded. These areas shall be reseeded as originally specified at no additional cost to the Owner.
  6. Within all seeded areas after the Second full growing season, any bare areas with less than 50% cover by seeded species that are 30 square feet in size or greater shall be reseeded. These areas shall be reseeded as originally specified at no additional cost to the Owner.

7. Areas which do not meet the contract requirements for **Final acceptance** shall be reseeded within acceptable planting dates as directed by the Engineer. No additional payment will be made for reseeding.

**f. Final Acceptance Inspection** - The final acceptance inspection of the seeding work will be made by the Engineer and the Contractor just before the warranty period expires. All seeding shall be established and the site shall be cleaned-up, prior to the inspection.

1. The final acceptance inspection of the seeding areas shall be made during October 2009.
2. Areas, which do not meet the contract requirements, shall be reseeded to the original project specifications and within acceptable seeding dates as directed by the Engineer and the warranty period will be extended.

**f. Measurement and Payment.-** The completed work shall be paid for at the contract unit price for the following contract items (pay items):

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
811 - Seed Mixture, Wetland/Swale .....	SYD

Seeding will be measured in place by area in square yards and shall include all labor, equipment, seed, water, Maintenance and Warranty as required meeting the requirements of this specification, providing a uniform, weed-free vegetation of the specified mixes.

Payment Schedule for each of the above items shall be as follows:

**Provisional Acceptance** - After the initial installation of the Seed mixture, 50% of each unit price shall be certified for payment.

**Provisional Acceptance** - After the Spring 2009 full growing season, and when all the above referenced criteria have been met, an additional 25% of each unit price shall be certified for payment.

**Final Acceptance** – In October 2009 and when all the above referenced criteria have been met, an additional 25% of each unit price shall be certified for payment. This payment shall constitute 100% for the item.

## **APPENDIX A**

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### **SOIL BORING LOCATION DIAGRAM**

SB-1

SB-2

SB-3

SB-4/4a

SB-5

SB-6

Welsh Road

Shetland Drive

Clark Road

Glencoe Hills Drive



LEGEND	
	Soil Boring



SOIL BORING LOCATION DIAGRAM  
SWIFT RUN PARALLEL RELIEF SEWER  
ANN ARBOR & PITTSFIELD TOWNSHIPS, MICHIGAN

SOMAT Engineering, Inc.  
Detroit - Taylor

Not to Scale

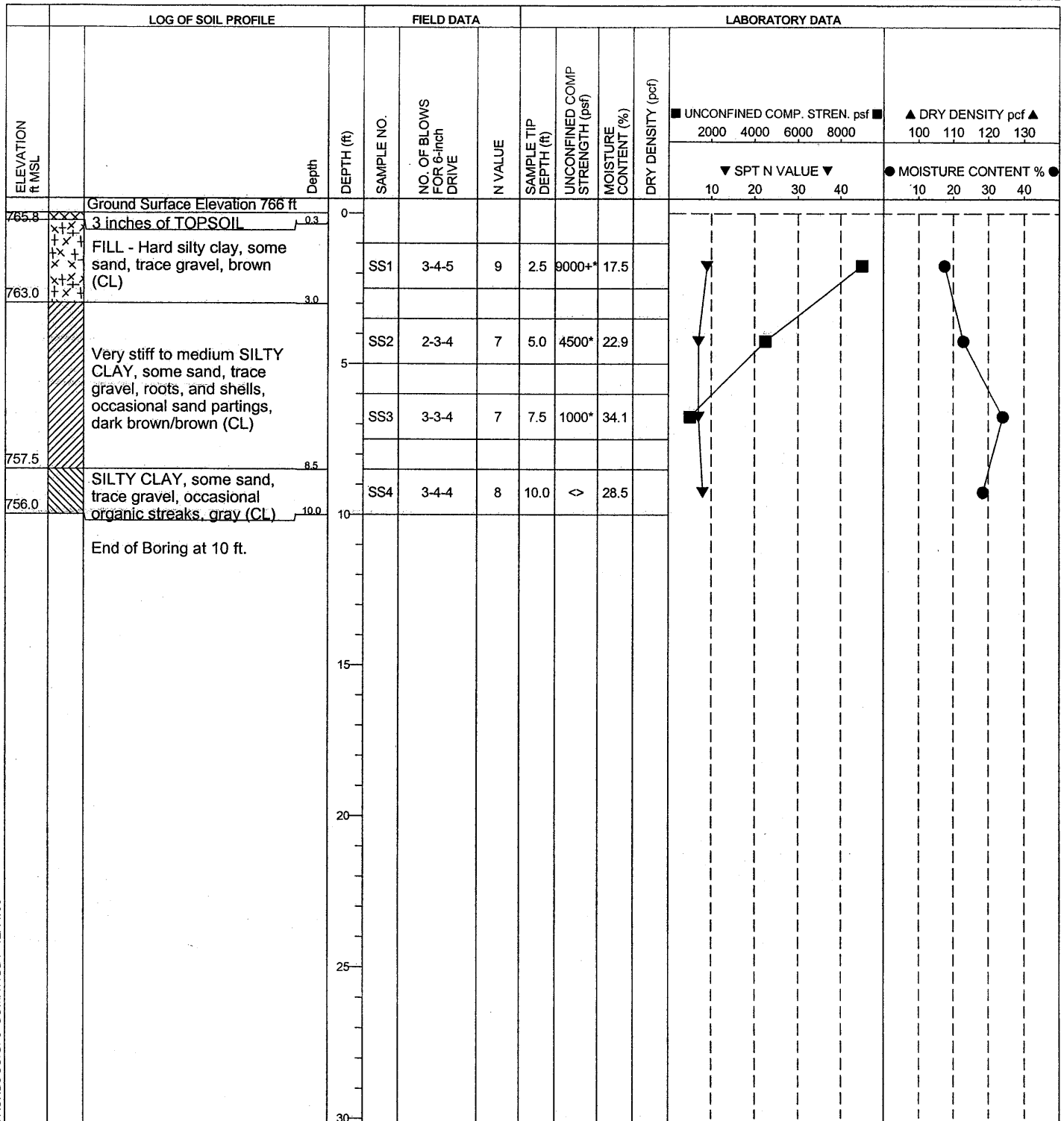
SOMAT Project No. G06140A  
December 8, 2006



## **APPENDIX B**

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### **LOGS OF SOIL BORINGS AND GENERAL NOTES**



Drilling Company: Mateco  
Drill Rig: CME 45 Buggy  
Engineer on Rig: S. Swaminathan  
Drilling Method: 3 1/4 inch HSA  
Hammer Type: automatic  
Backfilled With: Cuttings  
Date Started: 11-20-06  
Date Completed: 11-20-06  
Checked By: JSS  
# Torvane  
\* Pocket Penetrometer  
<> Disturbed Sample

First Encountered: none  
Upon Completion: none  
Remarks:  
Boring drilled at approx. Sta 4+00.



# Somat Engineering

## Swift Run Parallel Relief Sewer Ann Arbor and Pittsfield Townships, Michigan

PROJECT NO. G06140A

DATE 11/20/2006

LOG OF TEST BORING SB-2

LOG OF SOIL PROFILE			FIELD DATA							LABORATORY DATA			
ELEVATION ft MSL		Depth	DEPTH (ft)	SAMPLE NO.	NO. OF BLOWS FOR 6-INCH DRIVE	N VALUE	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	■ UNCONFINED COMP. STREN. psf ■ 2000 4000 6000 8000	▲ DRY DENSITY pcf ▲ 100 110 120 130	
											▼ SPT N VALUE ▼ 10 20 30 40	● MOISTURE CONTENT % ● 10 20 30 40	
		Ground Surface Elevation 770 ft	0										
767.0	+	FILL - Very stiff silty clay, with sand, trace gravel, occasional sand partings and seams, brown and dark brown (CL)	3.0	SS1	2-3-3	6	2.5	5000*	13.6				
764.0	+	FILL - Stiff silty clay, some sand, trace gravel, organics, and roots, dark brown (CL)	6.0	SS2	3-2-2	4	5.0	2000*	28.6				
762.0	+	FILL - Very loose silty fine to medium sand, trace gravel, dark brown, moist (SM)	8.0	SS3	1-1-2	3	7.5						
758.0		Loose CLAYEY FINE TO MEDIUM SAND, trace gravel, dark brown, moist (SC) (Possible Fill)	12.0	SS4	2-4-4	8	10.0						
755.0	----	Loose SILTY FINE TO MEDIUM SAND, trace gravel, gray/brown, moist to wet (SM) (Possible Fill)	15.0	SS5	4-4-5	9	15.0						
		End of Boring at 15 ft.	15										
			20										
			25										
			30										

## BORING COORDINATES

## GROUNDWATER READINGS

First Encountered: 6 feet

Upon Completion: 4.5 feet

## Remarks:

Boring drilled at approx Sta 7+50.

Drilling Company: Mateco

Drill Rig: CME 45 Buggy

Engineer on Rig: S. Swaminathan

Drilling Method: 3 1/4 inch HSA

Hammer Type: automatic

Backfilled With: Cuttings

Date Started: 11-20-06

Date Completed: 11-20-06

Checked By: JSS

# Torvane

\* Pocket Penetrometer

&lt;&gt; Disturbed Sample



Somat Engineering

Swift Run Parallel Relief Sewer  
Ann Arbor and Pittsfield Townships,  
Michigan

PROJECT NO. G06140A

BORING NO. SB-2

PAGE 1 of 1

LOG OF TEST BORING VER2 G06140A SWIFTRUNLOGS.GPJ SOMAT.GDT 12/11/06

12/11/06



PROJECT NO. G06140A

DATE 11/20/2006

LOG OF TEST BORING SB-4

LOG OF SOIL PROFILE			FIELD DATA							LABORATORY DATA								
ELEVATION ft MSL			DEPTH (ft)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE	N VALUE	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	■ UNCONFINED COMP. STREN. psf ■ 2000 4000 6000 8000				▲ DRY DENSITY pcf ▲ 100 110 120 130			
			Depth								▼ SPT N VALUE ▼ 10 20 30 40				● MOISTURE CONTENT % ● 10 20 30 40			
			Ground Surface Elevation 778 ft	0														
			FILL - Hard silty clay, some sand, trace gravel, occasional sand partings, brown (CL)	SS1	3-4-5	9	1.5	8000*	19.0		▼				■	●		
774.0			End of Boring at 4 ft. (Boring terminated on obstruction at 4 feet)															

## BORING COORDINATES

## GROUNDWATER READINGS

First Encountered: none  
Upon Completion: none

Remarks:  
Boring drilled at approx. Sta 18+30.  
Boring continued as SB-4a.

Drilling Company: Mateco  
Drill Rig: CME 45 Buggy  
Engineer on Rig: S. Swaminathan  
Drilling Method: 3 1/4 inch HSA  
Hammer Type: automatic  
Backfilled With: Cuttings/Sand  
Date Started: 11-20-06  
Date Completed: 11-20-06  
Checked By: JSS

# Torvane  
\* Pocket Penetrometer  
<> Disturbed Sample



Somat Engineering

Swift Run Parallel Relief Sewer  
Ann Arbor and Pittsfield Townships,  
Michigan

PROJECT NO. G06140A

BORING NO. SB-4

PAGE 1 of 1

LOG OF TEST BORING VER2 G06140A SWIFTRUNLOGS.GPJ SOMAT.GDT 12/11/06

12/11/06

PROJECT NO. G06140A

DATE 11/21/2006

LOG OF TEST BORING SB-5

LOG OF SOIL PROFILE			FIELD DATA							LABORATORY DATA									
ELEVATION ft MSL		Depth	DEPTH (ft)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE	N VALUE	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UNCONFINED COMP. STREN. psf ■				▲ DRY DENSITY pcf ▲				
											2000 4000 6000 8000				100 110 120 130				
											▼ SPT N VALUE ▼				● MOISTURE CONTENT % ●				
												10	20	30	40	10	20	30	40
		Ground Surface Elevation 782 ft	0	SS1	3-4-4	8	1.5	◇	11.0										
777.0		Stiff SILTY CLAY, some sand, trace gravel, frequent clayey fine to coarse sand seams, brown (CL) (Possible Fill)	5.0	SS2	3-3-5	8	5.0	3500*	23.8			■							
		Medium dense to loose CLAYEY FINE TO COARSE SAND, trace gravel, frequent silty clay seams, driller reported cobbles between 7 ft. and 8.5 ft., brown, moist to wet (SC)		SS3	3-5-6	11	7.5												
				SS4	2-3-2	5	10.0												
768.5			13.5																
		Very loose SILTY FINE TO COARSE SAND, trace clay and gravel, brown, wet (SM)	15	SS5	1-2-2	4	15.0												
765.0			17.0																
		Loose SILTY FINE TO MEDIUM SAND, trace gravel, gray, wet (SM)		SS6	3-4-5	9	20.0												
762.0			20.0																
		End of Boring at 20 ft.	20																
			25																
			30																

## BORING COORDINATES

## GROUNDWATER READINGS

First Encountered: 12 feet

Upon Completion: none

## Remarks:

Boring drilled at approx. Sta 19+50.

Drilling Company: Mateco

Drill Rig: CME 45 Buggy

Engineer on Rig: S. Swaminathan

Drilling Method: 3 1/4 inch HSA

Hammer Type: automatic

Backfilled With: Cuttings

Date Started: 11-21-06

Date Completed: 11-21-06

Checked By: JSS

# Torvane

\* Pocket Penetrometer

&lt;&gt; Disturbed Sample



Somat Engineering

Swift Run Parallel Relief Sewer  
Ann Arbor and Pittsfield Townships,  
Michigan

PROJECT NO. G06140A


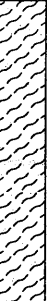
BORING NO. SB-5

PAGE 1 of 1

PROJECT NO. G06140A

DATE 11/21/2006

LOG OF TEST BORING SB-6

LOG OF SOIL PROFILE			FIELD DATA							LABORATORY DATA								
ELEVATION ft MSL		Depth	DEPTH (ft)	SAMPLE NO.	NO. OF BLOWS FOR 6-inch DRIVE	N VALUE	SAMPLE TIP DEPTH (ft)	UNCONFINED COMP STRENGTH (psf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	■ UNCONFINED COMP. STREN. psf ■ 2000 4000 6000 8000				▲ DRY DENSITY pcf ▲ 100 110 120 130			
											▼ SPT N VALUE ▼ 10 20 30 40				● MOISTURE CONTENT % ● 10 20 30 40			
		Ground Surface Elevation 777 ft	0															
		Hard SILTY CLAY, some sand, trace gravel, occasional sand and silt partings, brown (CL) (Small boulder encountered at about 1 foot depth)	SS1	6-8-12	20	2.5	9000+*	15.1										
			SS2	10-14-16	30	5.0	9000*	15.6										
771.0		6.0	5															
		Loose CLAYEY FINE TO COARSE SAND, trace gravel, occasional silty clay seams, brown (SC)	SS3	5-3-3	6	7.5		17.5										
			SS4	3-4-5	9	10.0												
763.5		13.5	10															
762.0		15.0	15	SS5	2-5-6	11	15.0											
		End of Boring at 15 ft.																
			20															
			25															
			30															

## BORING COORDINATES

## GROUNDWATER READINGS

First Encountered: 12 feet  
Upon Completion: 11 feet

Remarks:  
Boring drilled at approx. Sta. 23+00.

Drilling Company: Mateco  
Drill Rig: CME 45 Buggy  
Engineer on Rig: S. Swaminathan  
Drilling Method: 3 1/4 inch HSA  
Hammer Type: automatic  
Backfilled With: Cuttings/Sand  
Date Started: 11-21-06  
Date Completed: 11-21-06  
Checked By: JSS  
# Torvane  
\* Pocket Penetrometer  
<> Disturbed Sample



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BORING NO. SB-6

PAGE 1 of 1





# Somat Engineering

## GENERAL NOTES

### DRILLING & SAMPLING SYMBOLS:

SS:	Split Spoon – 1 3/8" I.D., 2" O.D., (unless otherwise noted)
ST:	Thin-Walled Tube – 3" O.D., (unless otherwise noted)
LS:	Liner Sample
PA:	Power Auger
HA:	Hand Auger
AU:	Auger Sample
BS:	Bulk Sample
HS:	Hollow Stem Auger

PS:	Piston Sample
WS:	Wash Sample
RC:	Rock Core with diamond bit, NX size, (unless otherwise noted)
RB:	Rock Bit/Roller Bit
WR:	Wash Rotary
NR:	No Recovery
VS:	Vane Shear Test

Standard Penetration Test Resistance, N-Value: Sum of 2<sup>nd</sup> and 3<sup>rd</sup> 6-inch increments, in blows per foot of a 140-pound hammer falling 30 inches and driving an 18-inch long, 2-inch OD split spoon, unless otherwise noted.

### WATER LEVEL MEASUREMENT:

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. In pervious soils, the indicated levels may reflect the location of a groundwater table. In low permeability soils (clays and silts), the accurate determination of groundwater levels may not be possible with only short-term observations.

### DESCRIPTIVE SOIL CLASSIFICATION:

Soil classification is based on the Unified Soil Classification (USC) System and ASTM Standards D-2487 and D-2488. Coarse-grained soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: clays, if they are plastic, and silts, if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their apparent in-place density and fine-grained soils on the basis of their consistency.

### SECONDARY SOIL CONSTITUENT

Percentage Range	Primary Constituent	
	Sand & Gravel	Clay & Silt
≤ 5%	Trace	Trace
>5% → ≤12%	Trace to Some	Trace to Some
>12% → ≤25%	Secondary Constituent	Some
>25% → <50%	Secondary Constituent	Secondary Constituent

### COARSE-GRAINED SOILS

N-Value	Apparent Density
0 – 4	Very Loose
5 – 9	Loose
10 – 29	Medium Dense
30 – 49	Dense
50 – 80	Very Dense
>80	Extremely Dense

### FINE-GRAINED SOILS

Unconfined Compressive Strength Qu, psf	Consistency
< 500	Very Soft
500 - <1000	Soft
1000 - <2000	Medium
2000 - <4000	Stiff
4000 - <8000	Very Stiff
≥ 8000	Hard

### DEFINITIONS OF STRUCTURAL AND DEPOSITIONAL FEATURES

Term	Definition
Parting	≤ 1/16 inch (1.6 mm) thick
Seam	> 1/16 inch (1.6 mm) → ½ inch (12.7 mm) thick
Layer	> ½ inch (12.7 mm) to ≤ 12 inches (305 mm) thick
Pocket	Small, erratic deposits of limited lateral extent
Lens	Lenticular deposit
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay
Varved	Alternating partings or seams (1 mm – 12 mm) of silt and/or clay and sometimes fine sand
Stratified	Alternating layers of varying material or color with layers ≥ 6 mm thick
Laminated	Alternating layers of varying material or color with layers < 6 mm thick
Fissured	Contains shears or separations along planes of weakness
Slickensided	Shear planes appear polished or glossy, sometimes striated
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Homogeneous	Same color and appearance throughout
Occasional	One or less per foot (305 mm) of thickness
Frequent	More than one per foot (305 mm) of thickness
Interbedded	Applied to strata of soil lying between or alternating with other strata of a different nature

### GRAIN SIZE TERMINOLOGY

Major Component of Sample	Size Range
Boulders	≥ 12" (300 mm)
Cobbles	< 12" - 3" (300 mm – 75 mm)
Gravel - Coarse	< 3" - ¾" (75 mm – 19 mm)
Gravel - Fine	< ¾" - #4 (19 mm – 4.75 mm)
Sand - Coarse	< #4 - #10 (4.75 mm – 2 mm)
Sand - Medium	< #10 - #40 (2 mm - 0.425 mm)
Sand - Fine	< #40 - #200 (0.425 mm - 0.074 mm)
Silt	< 0.074 mm - 0.005 mm
Clay	< 0.005 mm

## **APPENDIX C**

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**MDEQ PERMIT NO. 06-81-0069-P**

# MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY PERMIT

## ISSUED TO:

City of Ann Arbor  
Attn: Elizabeth Rolla  
100 North Fifth Avenue  
Ann Arbor, MI 48107

Permit No.	06-81-0069-P
Issued	December 21, 2006
Extended	
Revised	
Expires	December 31, 2008

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and specifically:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Part 301 Inland Lakes and Streams             | <input type="checkbox"/> Part 315 Dam Safety                           |
| <input type="checkbox"/> Part 325 Great Lakes Submerged Lands                     | <input type="checkbox"/> Part 323 Shorelands Protection and Management |
| <input checked="" type="checkbox"/> Part 303 Wetlands Protection                  | <input type="checkbox"/> Part 353 Sand Dune Protection and Management  |
| <input checked="" type="checkbox"/> Part 31 Floodplain/Water Resources Protection |  |

Permission is hereby granted, based on permittee assurance of adherence to State requirements and permit conditions to:

Permitted Activity: \*\*\*\*\***MODIFIED PERMIT**\*\*\*\*\*  
Construct a new 27-inch diameter sanitary relief sewer, using open cut construction within wetland and the floodplain of the Swift Run Creek. Excavate approximately 750 cubic yards of material from a 5 feet wide by 500 feet long trench within wetland and floodplain. Backfill the trench to original grade with Class II granular fill and the excavated material. Restore the disturbed areas with native wetland species.

Permitted Activity Continued on Page 2.

City of Ann Arbor  
Project Management

Water Course Affected: Swift Run Creek

Property Location: Washtenaw County, Ann Arbor Township, Section 36  
Subdivision, Lot      Town/Range 2S, 6E      Property Tax No.

DEC 25 2006

RECEIVED

## Authority granted by this permit is subject to the following limitations:

- Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Part 31, Floodplain/Water Resources Protection of the NREPA.
- This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
- No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
- It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
- This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
- This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
- This permit shall not be assigned or transferred without the written approval of the MDEQ.
- Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
- Work to be done under authority of this permit is further subject to the following special instructions and specifications:

Permitted Activity continued....

**Install a temporary sandbag cofferdam and by-pass pipe within Swift Run Creek to divert stream flow during the open cut installation of the sanitary sewer beneath the bottom of the stream channel. Encase the new sewer pipe in concrete and maintain original grade of the channel bottom within the area of construction. Stabilize and revegetate a 15-foot section of the creek bank that is collapsing to prevent erosion. All work shall be completed in accordance with the attached specifications and modified plans dated December 21, 2006.**

**\*\*SPECIFICATIONS\*\***

- 1) All work shall be completed in accordance with the attached modified plans and the terms and conditions of this permit.
- 2) Prior to initiating construction, authorized by this permit, the permittee is required to provide a copy of the permit to the contractor(s) for his/her review.
- 3) The property owner, contractor(s), and any agent involved in obtaining or exercising this permit, are held responsible to ensure the project is constructed in accordance with all drawings and specifications contained in this permit. The contractor is required to provide a copy of the permit to any and all subcontractors doing work authorized by this permit.
- 4) Notification shall be made to the MDEQ's Land and Water Management Division, five days prior to starting the project. Please notify: James Sallee at:  


4<sup>th</sup> Floor State Office Building  
301 E. Louis Glick Hwy  
Jackson, MI 49201  
517-780-7910
- 5) All raw areas resulting from the permitted construction activity shall be promptly and effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner so as to prevent erosion and any potential siltation to surface waters or wetlands.
- 6) All fill/backfill shall consist of clean inert material which will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be CONTAINED in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be STABILIZED with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.
- 7) Prior to the initiation of any permitted construction activities, a siltation barrier shall be constructed immediately adjacent to the construction site. Siltation barriers shall be specifically designed to handle the sediment type, load, water depth, and flow conditions of each construction site throughout the anticipated time of construction and unstable site conditions. The siltation barrier shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an upland (non-wetland, non-floodplain) site. The siltation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.

- 8) A sandbag cofferdam shall be installed within the stream channel to isolate all construction activities from stream flow and the water by-passed around the crossing. Water shall be discharged into the watercourse with appropriate treatments to remove suspended particles and to dissipate energy. The cofferdam shall be maintained in good working order throughout the duration of the project. Upon project completion, accumulated materials shall be removed and disposed of at an upland site. The cofferdam shall then be removed in its entirety.
- 9) If the project, or any portion of the project, is stopped and lies uncompleted for any length of time other than that encountered in a normal work week, every precaution shall be taken to protect the uncompleted work from erosion, including the placement of temporary gravel bag riprap or other acceptable temporary protection.
- 10) No work shall be done in the stream during periods of above-normal flows except as necessary to prevent erosion.
- 11) No fill within the 100-year floodplain is authorized by this permit.
- 12) This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
- 13) No fill, excess soil, or other material shall be placed in any wetland or surface water area not specifically authorized by this permit, its plans, and specifications.
- 14) Excess soil materials from the project shall not be deposited in wetlands or surface water without first securing a permit under Part 303, Wetlands Protection, of the NREPA or other applicable statute. Prior to the initiation of any permitted construction activity, a silt fence shall be installed along the entire route of the disturbed wetland area and maintained in good working order until permanent stabilization and revegetation of all disturbed areas has occurred. Silt fence shall be removed after re-vegetation. All excess soil material shall be placed on an upland site and seeded and mulched to prevent erosion into waters, floodplain, or wetlands.
- 15) Construction must be undertaken and completed during the dry period of the wetland.
- 16) If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- 17) Upon completion of the project, the site will be restored to the original contour elevation and stabilized with sod and/or seed and mulch to prevent erosion. Trench excavation shall be restored as closely as possible to pre-existing grade by backfilling the trench so native soils are replaced in reverse order of excavation, replacing the topsoil at the surface.
- 18) In issuing this permit, the MDEQ has relied on the information and data which the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- 19) Noncompliance with these terms and conditions, and/or the initiation of other regulated activities not specifically authorized by this permit shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.

- 20) The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representatives of the permittee, undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- 21) This permit placard shall be kept posted at the work site, in a prominent location at all times for the duration of the project, or until permit expiration.
- 22) Please provide the name, address, and telephone number of the person responsible for compliance of these permit conditions, and who has the authority to stop work on the project, whom the MDEQ shall contact if necessary:
- Name:  
Print \_\_\_\_\_
- Sign \_\_\_\_\_
- Date \_\_\_\_\_
- Address \_\_\_\_\_
- \_\_\_\_\_
- Telephone Number \_\_\_\_\_
- FAX Number \_\_\_\_\_
- 23) If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- 24) This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to accept transfer of the permit. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.
- 25) A permit may be extended for cause. To request an extension of a permit a written request must be submitted to the MDEQ before the expiration date of the permit. The request must indicate the reasons for the extension. The MDEQ will review the request, and if approved, will provide written notification to the permittee.
- 26) Ann Arbor Township has a wetlands ordinance. Authority granted by this permit does not waive permit requirements or the need to obtain a separate permit from Ann Arbor Township. Contact phone number: 734-663-3418.
- 27) Authority granted by this permit does not waive the need to acquire applicable permits from the Washtenaw County Drain Commissioner's Office. Contact the WCDC at 734-994-2525.

- 28) This permit does not negate the need to obtain a Sewerage System Permit from the MDEQ's Water Bureau as required under the authority of Part 41, Sewerage Systems, of the NREPA. Please contact: Ms. Tiffany Myers, Water Bureau, Jackson District Office, 517-780-7480.
- 29) The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval, or authorizations necessary to conduct the activity.

Steven E. Chester, Director  
Department of Environmental Quality

By   
James Sallee  
District Representative  
Land and Water Management Division

cc: Mr. Dennis Wojcik, Washtenaw County Drain Commissioner's Office  
Ann Arbor Township  
Mr. Mark Tenbroek, CDM Michigan Inc.  
Ms. Tiffany Myers, DEQ, Water Bureau



# Notice of Authorization

Permit Number 06-81-0069-P

Issued: 12/21/2006

Expiration Date: 12/31/2008

The State of Michigan, Department of Environmental Quality, Land and Water Management Division, 301 E. Louis Glick Hwy., Jackson, Michigan, 49201-1535, 517-780-7690, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and specifically:

- ☒ Part 31 Floodplain/Water Resources Protection.
- ☒ Part 301 Inland Lakes and Streams.
- ☒ Part 303 Wetland Protection.

Authorized activity:

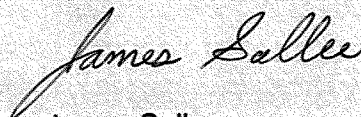
\*\*\*\*\*MODIFIED PERMIT\*\*\*\*\*

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To be conducted at property located: Washtenaw County, Waterbody: Swift Run Creek  
Section 36 , Town 2S, Range 6E, Ann Arbor Township

Permittee: City of Ann Arbor  
Attn: Elizabeth Rolla  
100 North Fifth Avenue  
Ann Arbor, MI 48107

Steven E. Chester, Director  
Department of Environmental Quality



James Sallee  
District Representative

*This notice must be displayed at the site of work.  
Laminating this notice or utilizing sheet protectors is recommended.*

Please refer to the above Permit Number with any questions or concerns.