ANN ARBOR DDA
INVITATION TO BID

Huron Streetscape

ITB No. 4562

11:30 a.m., Friday, January 18, 2019

Ann Arbor Downtown Development Authority

Issued By:

Ann Arbor Downtown Development Authority
150 S. Fifth Ave, Ste #301
Ann Arbor, MI 48104

2016+2018 DDA revised
ADDENDUM No. 1
ITB No. 4562
Huron Streetscape Project

The following changes, additions, and/or deletions shall be made to the Invitation to Bid for Huron Streetscape Project, ITB No. 4562, on which proposals are to be received on/or before January 18, 2019 by 11:30 a.m.

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. This Addendum contains 12 page(s) and 8 drawing(s).

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments (if any) in its Bid by so indicating on the Invitation to Bid Form. Bids submitted without acknowledgement of receipt of this Addendum will be considered nonconforming.

CORRECTIONS/ADDITIONS/DELETIONS

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

<table>
<thead>
<tr>
<th>Section/Page(s)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents/TC-1</td>
<td>Add the following after the Detailed Specifications: Appendix A (ADD-1-7) Appendix B (ADD-1-8)</td>
</tr>
<tr>
<td>General Conditions/GC-12</td>
<td>Add the following to Section 29: “(3) A Performance Bond to the Michigan Department of Transportation in accordance with Appendix A — Notice to Surety/Insurance Companies for Obtaining Access to the MDOT Permit Performance Bonds and MDOT Certificate of Insurance Application.”</td>
</tr>
<tr>
<td>Bid Form/BF-1</td>
<td>Replace BF-1 with the attached ADD-1-6 which adds a maximum amount for Item 203 — Minor Traffic Devices and updates the quantity for Geotextile Item 208</td>
</tr>
<tr>
<td>Bid Form/BF-2</td>
<td>Replace BF-2 with the attached ADD-1-7 which updates the quantities for Sand Subbase Item 260 and Planting Soil Item 261</td>
</tr>
<tr>
<td>Bid Form/BF-3</td>
<td>Replace BF-3 with the attached ADD-1-8 which changes the unit of Item 280 — Temporary Pedestrian Type II Channelizer from 1,200 Ea to 1,200 Lft, deletes 2” conduit Item 287, and updates the quantity for 3” conduit Item 288</td>
</tr>
<tr>
<td>Bid Form/BF-4</td>
<td>Replace BF-4 with the attached ADD-1-9 which updates the quantity for Aggregate Base Course Item 527.</td>
</tr>
<tr>
<td>Bid Form/BF-5</td>
<td>Replace BF-5 with the attached ADD-1-10 which updates the quantities for plant Items 812, 814, and 815.</td>
</tr>
</tbody>
</table>
**Detailed Specifications/DS-23**

The seventh paragraph, first sentence, replace “Phase One work will start…” with “Phase Two work will start…”

**Detailed Specifications/DS-28**

Under COVERAGE, replace Item #4 with the following, “Street List - This item shall include the filming of Huron Street (Third St to Division St) and each crossing street (Third, First, Ashley, Main, Fourth, Fifth, Division) from 100-ft north of Huron to 100-ft south of Huron.”

**Appendix A**

Add Appendix A (ADD-1-11) which includes the Notice to Surety/Insurance Companies for Obtaining Access to the MDOT Permit Performance Bonds and MDOT Certificate of Insurance Application

**Appendix B**

Add Appendix B (ADD-1-12) which shows the fixture mounting detail

**Plans – Sheets 53 thru 58**

Replace Sheets E1.01 thru E1.05 and Sheet E5.01 with the attached PLANADD-1-1 thru PLANADD -1-6 which updates the electrical conduit quantities and locations

**Plans – Sheet 61**

Replace Sheet C10.1 with the attached PLANADD-1-7 which updates the Bike Hoop detail

**Plans – Sheet 66**

Replace Sheet L1.01 with the attached PLANADD-1-8 which updates the Plant Schedule

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**QUESTIONS AND ANSWERS**

The follow Questions have been received by the DDA. Responses are being provided in accordance with the terms of the ITB.

**Q1:** Referencing specification Audio Visual Tape Coverage, specifically DS-28 under coverage item #4. I could not find reference to filming all of the streets listed in the Detailed Specification for Progress Schedule & Construction Limits. Can you direct me to that list?

**A1:** That Item #4 should be changed to “This item shall include the filming of Huron Street (Third St to Division St) and each crossing street (Third, First, Ashley, Main, Fourth, Fifth, Division) from 100-ft north of Huron to 100-ft south of Huron.”

**Q2:** I just had a chance to get a quick look at the bid documents this morning and noticed on the bid form that for your line item #280 “Temporary Pedestrian Type II Channelizer” you have 1200 ea (each). Normally this line item is done by the ft (lineal foot). 1200 each would give you approx. 7200 feet of channelizer barricades (just an fyi, the line item 279 “Temporary Pedestrian Type II Barricade” is correct as each (Barricade is normally done by each and channelizer is normally done by the foot). Can you please let me know what your looking for (this makes a difference somewhere close to 100k in price).

**A2:** You are correct. It should be 1200 FT, not EA. We will correct that with the Addendum.

**Q3:** There are 2 each Electrical Enclosures (East and West). There are no pay items for these. How are they getting paid for?

**A3:** Per page DS-105, the City will be providing the electrical panels.
Q4: On sheet DS-106 in the specs, it calls for temporary lighting. Will the existing lighting, which is to be removed by others, be able to remain in place and be the temporary lighting until the new lighting is installed?

A4: The DDA has been coordinating light removal with DTE, who currently owns most of the lights on Huron, so that the light on the southern half of the roadway will be removed while the lights on the north side remain operational during streetscape work on the south side of the road. Once the streetscape Contractor begins work on the north side of the street DTE will remove the remaining lights. The Contractor will be given the contact information with DTE, and will be expected to complete the final coordination of light removal. It is likely that some temporary lighting may be required during the work.

Q5: I noticed on drawing C2.03 that there is no pavement removal shown for the telecommunications conduit that crosses Main Street. Is the conduit to be directionally bored? If so, there is no pay item.

A5: The Telecommunications conduits will not cross Main Street, and this will be reflected in the upcoming Addendum.

Q6: Will the anchor bolts be supplied by the DDA for the light poles?

A6: Yes

Q7: Just confirming that all lighting is provided by the DDA included the XL3 fixtures for the RR.

A7: The XL3 fixtures will be provided by the Contractor.

Q8: I am a supplier of product only. Labor is by others. Can I bid directly per the city bid instructions, or would my bid need to be supplied to installation contractors? If I need to bid to installation contractors, do you know who is bidding the sections mentioned?

A8: Your bid should go through installation contractors. MITN.info should be able to provide the list of plan holders. In addition, we will be issuing the meeting minutes which will include contacts for those in attendance (Accurate Construction, Rauhorn Electric, Bailey Excavating, Fonson Company, Inc., Warren Contractors AF Smith, Corby Energy, Doan Construction).

Q9: The bike hoops are specified as stainless steel on the drawings and painted black on the specification. Can you clarify which is required?

A9: Bike hoops should be black, not stainless. We will correct the drawings with the Addendum.

Q10: In hearing that the new lights for this project are to be owned and/or under the jurisdiction of DTE, I am wondering if the installation of them is open to any electrical contractor or only those approved by DTE? Also, if these are going to be owned by the utility, are they under the jurisdiction of city of Ann Arbor Electrical Inspection?

A10: Sorry for the miscommunication-the existing lights are owned by DTE, the new lights will be owned by the City of Ann Arbor.
Q11: Just to clarify, are we allowed only three blocks to work on concurrently throughout the project?

A11: The intention is to limit the pedestrian access impacts to three blocks. Work can be ongoing on other blocks provided that the ped access is not in a temporary state for more than three blocks. We will provide an example for one possible staging option that would be acceptable to the DDA.

Q12: In the Progress Clause, it is mentioned “Phase One work will start on the north side of Huron Street at the eastern end of the project area and proceed west no later than June 17, 2019”. Is this supposed to say Phase Two instead of Phase One?

A12: Yes. It should say “Phase Two”

Q13: The plans show the electrical and telecommunications conduits being open cut across the crossing streets of Huron. Is the contractor expected to complete the utility crossing work part-width to maintain traffic on the cross street? Can temporary closures (full width of the roadway) be used for each of crossings?

A13: Approval to close side streets to vehicular traffic will be at the City’s discretion based on many factors. For bidding, assume that crossings must be part-width for vehicles. Pedestrian access must always be maintained on one side of the street.

Q14: For the proposed concrete walk and ramps, the detail shows sand subbase (4” or 6”) under the concrete section. Is sand subbase incidental to the concrete sidewalk and ramp items?

A14: No, sand subbase is paid separately as Item 260. However, if the existing material is acceptable, then sand subbase will not be used.

Q15: The plans refer to the notes being on Plan Sheet E2.1 for General Notes. Only problem is that Sheet E2.1 does not exist in the plan sheets and is not listed in the first page of the plans. Could you make E2.1 available?

A15: The notes should say refer to Sheet E1.01. This has been corrected with Addendum 1.

Q16: Special Lighting pay item - We can’t find any details or drawings indicating how many lights are needed or how they are mounted? Please provide addition details.

A16: Here is the information on the Special Lighting:

1. As noted on the Lighting Fixture Schedule found on drawing E5.01, the lights are to be mounted as follows: SURFACE MOUNTED, MOUNT TO UNDERSIDE OF RAILROAD TRACKS STRUCTURE.

2. A detail of the fixture from Bega is attached as Appendix B, noting two points of mounting. Specific details on bolt sizes and locations will be resolved in the field. Bidders should assume the use of stainless steel hardware for mounting.

3. The location of the lights can be found on Drawing E1.01, where four light fixtures are indicated.
Q17: Since the City of Ann Arbor is supplying light poles, will they provide all anchor bolts to contractor?

A17: Yes, the anchor bolts will be supplied by the DDA

Bidders are responsible for any conclusions they may draw from the information contained in this Addendum.
<table>
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<tr>
<th>Pay Item</th>
<th>Description</th>
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<td>Recessing Pavt Mrkg, Transv</td>
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**BF-1**

**TOTAL THIS PAGE $_____________________________**

ADD-1-6
# BID FORM

Section 1 - Schedule of Prices

Company:_______________________________________

Project: Huron Streetscape ITB #4562

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Estimated Item</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
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<td>232</td>
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<td>Sidewalk Unit Pavers</td>
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<td>$________</td>
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<td>Sewer Bulkhead, 4-inch Through 18-inch diameter</td>
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<td>Flowable Fill</td>
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<td>Sand Subbase Course, Class II - C.I.P.</td>
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<td>262</td>
<td>Top Soil</td>
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<td>266</td>
<td>Tree Grate, 4 ft. X 8 ft.</td>
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BF-2 TOTAL THIS PAGE $_____________________________ ADD-1-7
BID FORM
Section 1 - Schedule of Prices

Company: ____________________________________________
Project: **Huron Streetscape ITB #4562**

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Unit</th>
<th>Estimated Quantity</th>
<th>Estimated Unit Price</th>
<th>Total Price</th>
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<td>Sign, Portable Changeable Message</td>
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<td>Lighted Arrow, Type C, Furnish &amp; Operate</td>
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<td>Temporary Pedestrian Type II Barricade</td>
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<td>1,200</td>
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<td>Urban Bench, 5ft</td>
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<td>Urban Bench, 8ft</td>
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<td>Bike Hoops, Surface Mount</td>
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<td>Luminaire Installation</td>
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<td>$________</td>
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BF-3   TOTAL THIS PAGE $_____________________________  
ADD-1-8
### BID FORM
Section 1 - Schedule of Prices

Company: ________________________________

Project: **Huron Streetscape ITB #4562**

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<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Unit</th>
<th>Estimated Quantity</th>
<th>Unit Price</th>
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<td>Handhole Assembly, 17 inch x 30 inch</td>
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<td>$_________</td>
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<td>392</td>
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<td>Adjust Structure Cover</td>
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BF-4 TOTAL THIS PAGE $_________________________
ADD-1-9
**BID FORM**  
Section 1 - Schedule of Prices

Company: ________________________________  
Project: **Huron Streetscape ITB #4562**

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<tr>
<th>Pay Item</th>
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<th>Quantity</th>
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<td>703</td>
<td>Silt Fence</td>
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<td>831</td>
<td>Perovskia atriplicifolia 'Little Spire'</td>
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<td>923</td>
<td>Pavt Mrkg, Wet Retrflc Thermopl, 12 inch, Crosswalk</td>
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<td>925</td>
<td>Pavt Mrkg, Wet Retrflc Thermopl, 24 inch, Stop Bar</td>
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<td>$ _____</td>
<td>$ __________</td>
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BF-5  
TOTAL THIS PAGE $__________________________  
ADD-1-10
APPENDIX A

NOTICE TO SURETY/INSURANCE COMPANIES FOR OBTAINING ACCESS TO THE MDOT PERMIT PERFORMANCE BONDS AND MDOT CERTIFICATE OF INSURANCE APPLICATION

Effective February 1, 2010, Certificate of Insurance (form 2020) and/or the Permit Performance Bond must be submitted electronically via the Permit Performance Bond/Certificate of Insurance application system.

However, the Surety and/or Insurance agent is required to register, if they have not previously registered, with our office in order to obtain access to the Permit Performance Bond/Certificate of Insurance application system. Surety and/or Insurance agents may contact us at Mdot-ePerformanceBondCOI@michigan.gov to register or if you have any questions.

Note: The applicant/contractor does not register for access to this application, Surety/Insurance agents only.
GENERAL NOTES

A. REFER TO THE CITY OF ANN ARBOR'S DIVISION VI "STREETLIGHT INSTALLATION AND CONSTRUCTION" MANUAL FOR SPECIFICATIONS.

B. THE DRAWINGS REPRESENT ELECTRICAL DESIGN INTENT. THEY ARE SCHEMATIC AND DIAGRAMMATIC AND DO NOT INDICATE CONSTRUCTION DETAILS OR ROUTING UNLESS OTHERWISE NOTED. THE SPECIFICATIONS ESTABLISH MINIMUM PERFORMANCE AND PRODUCT INSTALLATION REQUIREMENTS. PROVIDE PRODUCTS CONSISTENT WITH THE DESIGN INTENT AND NECESSARY FOR COMPLETE OPERATING ELECTRICAL SYSTEMS.

C. FINAL SELECTION AND INSTALLATION OF EQUIPMENT SHALL BE EVALUATED BY THE CONTRACTOR AND BASED ON SITE CONDITIONS AND CODE REQUIREMENTS. PROVIDE PRODUCTS CONSISTENT WITH THE DESIGN INTENT AND NECESSARY FOR COMPLETE OPERATING ELECTRICAL SYSTEMS.

D. PROVIDE A MINIMUM #12 AWG CONDUCTORS AND MINIMUM 2-INCH CONDUIT FOR BRANCH CIRCUITS.

E. SYMBOLS AND ABBREVIATIONS SHOWN ARE GENERIC. NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.
1. ENGINEER WILL REVIEW PLANT MATERIALS AND RESERVE THE RIGHT TO REJECT ANY MATERIALS THAT DO NOT MEET THE DESIGNS. ALL MATERIALS WILL BE SHIPPED TO THE SITE. MUNICIPAL PERMITS ARE REQUIRED FOR THE INSTALLATION OF TREE TRUNKS, SHRUB CROWNS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MUNICIPAL PERMITS. ALL WATER SEEDING SHALL BE DONE BY CONTRACTOR AND AUTHORIZED BY ENGINEER PRIOR TO INSTALLATION.があれば工事日焼けを確認する。

2. ALL MATERIALS SUPPLIED FOR AN INDIVIDUAL ITEM ON THE PLANT LIST SHALL MATCH SIZE, SHAPE, FORM, AND NOTED REQUIREMENTS. IN ACCORDANCE WITH THE PROPER SCHEDULES AND SIZES SHOWN ON THE PLANS, CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MUNICIPAL PERMITS. ALL WATER SEEDING SHALL BE DONE BY CONTRACTOR AND AUTHORIZED BY ENGINEER PRIOR TO INSTALLATION.があれば工事日焼けを確認する。

3. ENGINEER SHALL REVIEW PLACEMENT OF PLANT MATERIAL PRIOR TO INSTALLATION, AND RESERVES THE RIGHT TO ADJUST LAYOUT TO FIT THE PLANT SCHEDULES. THE ENGINEER WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAY MAKE MINOR ADJUSTMENTS AS NECESSARY. SUCH ADJUSTMENTS WILL BE AT NO ADDITIONAL COST TO THE OWNER. ALL MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ANLA "STANDARDS FOR PLANT MATERIAL HANDLING, INSTALLATION AND ESTABLISHMENT."

4. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT PLANTS AND ENSURE HEALTH AND PLANT QUALITY DURING TRANSPORTATION AND INSTALLATION. UNLESS OTHERWISE SPECIFIED, ALL PLANTS ARE INTENDED TO BE PLANTED IN SOILS OR Locations THAT ARE COMPOSED OF A NUMBER OF INDIVIDUAL GRASSES AND PERENNIAL SPECIES. THE APPROVED LANDSCAPE BLEND SHALL BE USED TO ENSURE A SATISFACTORY BLENDING OF PLANT MATERIAL TO CREATE THE DESIRED PLANTING ARRANGEMENT. THE APPROVED LANDSCAPE BED MOCKUP SHALL BE USED AS THE MODEL AND STANDARD OF REFERENCE FOR ALL SUBSEQUENT LANDSCAPE BEDS.

5. MINIMIZE CULTIVATION WITHIN THE DRIP LINES OF EXISTING TREES. PREPARE SOIL FOR SEEDING AREAS BY MINIMIZING DISTURBANCE TO 4 INCH DEPTH. HAND CULTIVATE WHEN ENCOUNTERING ROOTS. NO HEAVY EQUIPMENT ALLOWED WITHIN DRIP LINE OF EXISTING TREES.

6. ALL PLANTINGS SHALL RECEIVE A MIN. OF 2" OF DOUBLE PROCESSED SHREDDED HARDWOOD BARK MULCH. WHERE LANDSCAPE BEDS MEET PAVEMENTS OR LAWNS, CUT THE GRADE TO ALLOW FOR MULCH AND 1" DROP FROM THE ADJOINING FINISH GRADE. KEEP MULCH 4" FROM TREE TRUNKS AND SHRUB CROWNS.

7. ALL DISTURBED SEEDING AREAS SHALL RECEIVE A MINIMUM OF 4" DEEP TOPSOIL. TOPSOIL REMOVED DURING DEMOLITION / SITE PREPARATION CAN BE RE-USED, HOWEVER IT MUST MEET OR EXCEED THE TOPSOIL REQUIREMENTS IN THE SPECIFICATIONS. ADDITIONAL TOPSOIL REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR FROM OFF SITE SOURCES.

8. SPACE PLANT MATERIALS AS SHOWN ON PLANS AND INDICATED IN PLANT SCHEDULE. PLANT MATERIALS SHALL CONFORM TO PLANT SCHEDULES AND SIZES SHALL BE THE MINIMUM REQUIREMENTS IN THE SPECIFICATIONS. SEEDING LIMITS INDICATED ON THE DRAWINGS. REPAIR ANY DISTURBED AREAS TO THE SAME CONDITION AS ORIGINALLY FOUND AND TO THE OWNER'S SATISFACTION. IN AREAS WHERE LAWN IS DISTURBED BEYOND THE LIMITS OF CONSTRUCTION, REPLACE LAWN WITH NEW SEED TURF BLEND.

9. PRIOR TO INSTALLATION, DEMARCATE LAYOUT OF ALL PLANTING BEDS, SEED AREAS, AND INDIVIDUAL TREES FOR REVIEW AND APPROVAL BY THE ENGINEER. INCLUDE PERENNIAL GROUPINGS BY SPECIES FOR INTERNAL BED LAYOUTS. FLAGGING, STAKES, OR PAINT MAY BE USED TO DENOTE AREAS OF MOWING ALLOWANCE.

10. SEEDING APPLIES TO ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES EVEN IF ACTIVITIES EXTEND BEYOND THE APPROXIMATED SEQUENCE WITHIN THE SAME PLANTING TIME FRAME. IF THE PLANT MATERIAL IS INSTALLED WITHOUT PRIOR APPROVAL THE ENGINEER MAY MAKE DISCERNIBLE GEOMETRIC PATTERN IN THE PLANTING.

11. LOCALLY SOURCED MATERIALS ARE RECOMMENDED FOR THESE PLANTED WALLS TO OPTIMIZE PERVIOUS THROUGHPUT. INCLUSIONS THAT ARE INCONSISTENT WITH LOCAL SOIL CONDITIONS, MATERIALS OR WATERING REQUIREMENTS SHOULD BE DISCUSSED WITH THE ENGINEER PRIOR TO INSTALLATION.

12. REFER TO DEMOLITION PLANS FOR TREE REMOVALS.

13. LEGAL CORDERS OR DIMENSIONS ASSOCIATED WITH THE PLANT SITE ARE PROVIDED IN THE PLANT SCHEDULE.

14. REFER TO DEMOLITION PLANS FOR EROSION CONTROL MEASURES.

15. REFER TO DEMOLITION PLANS FOR EROSION CONTROL MEASURES.

16. THE LANDSCAPE BEDS SHOWN ON THE PLANTING PLANS ARE COMPRISING OF AN ARRAY OF INDIVIDUAL, GRAASS AND PERENNIAL SPECIES. THE APPROVED LANDSCAPE BLEND SHALL BE USED TO ENSURE A SATISFACTORY BLENDING OF PLANT MATERIAL TO CREATE THE DESIRED PLANTING ARRANGEMENT.

17. UTILIZE HORTICULTURAL TREE WATERING BAGS FOR TREES PLANTED THROUGHOUT WARRANTY PERIOD. REPLENISH TREE WATERING BAGS AS NEEDED. ENSURE A SATISFACTORY BLENDING OF PLANT MATERIAL TO CREATE THE DESIRED PLANTING ARRANGEMENT. THE APPROVED LANDSCAPE BED MOCKUP SHALL BE USED AS THE MODEL AND STANDARD OF REFERENCE FOR ALL SUBSEQUENT LANDSCAPE BEDS.

18. REFER TO DEMOLITION PLANS FOR TREE REMOVALS.

19. REFER TO DEMOLITION PLANS FOR TREE REMOVALS.

20. REFER TO DEMOLITION PLANS FOR TREE REMOVALS.

21. REFER TO DEMOLITION PLANS FOR TREE REMOVALS.
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## ATTACHMENTS

- City of Ann Arbor Prevailing Wage Declaration of Compliance  
- City of Ann Arbor Living Wage Ordinance Declaration of Compliance  
- Vendor Conflict of Interest Disclosure Form  
- City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance
 Uncomment

### Detailed Specification Table

<table>
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<td>Flowable Fill/Sand Subbase Course, Class II-C.I.P.</td>
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Temporary Sign - Type A/ Portable Water Filled Barriers/Lighted Arrow, Type C/
Temporary Pedestrian Type II Barricade/Temporary Pedestrian Type II
Channelizer
Urban Bench, 5 ft./Urban Benches, 8 ft.
Bike Hoop
Boring and Jacking Conduit, 2-4”/2” Schedule 80 PVC Electrical Conduit/3”
Schedule 80 PVC Electrical Conduit/4” Schedule 80 PVC Electrical Conduit
Streetlight, Remove/Luminaire Installation/Pole Installation/Electrical Wiring/
Electrical Wiring – 6 Gauge/Electrical Wiring – 8 Gauge/Electrical Wiring – 10
Gauge/Electrical Wiring – 12 Gauge
Handhole Assembly, 12 Inch X 18 Inch/Handhole Assembly, 17 Inch X 30 Inch
Pavt Mrkg, Wet Retrflec Polyurea, 4 inch, White/Pavt Mrkg, Wet Retrflec
Polyurea, 6 inch, White/Pavt Mrkg, Wet Retrflec Polyurea, 4 inch, Yellow/
Pavt Mrkg, Wet Retrflec Thermopl, 12 inch, Crosswalk/Pavt Mrkg, Wet
Retrflec Thermopl, 12 inch, Cross Hatching, White/Pavt Mrkg, Wet Retrflec
Thermopl, 24 inch, Stop Bar/Pavt Mrkg, Wet Retrflec Thermopl, Symbol/
Pavt Mtkg, Type R, 4 inch, Black
NOTICE OF PRE-BID CONFERENCE

A pre-bid conference for this project will be held 11:00 a.m., Monday, January 7, 2019 at Ann Arbor DDA, 150 S. Fifth Ave, Ste #301, Ann Arbor, MI 48104

Attendance at this conference is highly recommended. Administrative and technical questions regarding this project will be answered at this time. The pre-bid conference is for information only. Any answers furnished will not be official until verified in writing by the DDA Project Manager. Answers that change or substantially clarify the bid will be affirmed in an addendum.
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 the City of Ann Arbor.

Any Bid which does not conform fully to these instructions may be rejected.

Substitutions of materials, products or equipment will not be considered during the bidding phase. Bids shall be based on products listed in the Specification.

Preparation of Bids
Bids should be prepared providing a straight-forward, concise description of the Bidder’s ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on the "Alternate" section of Bid form.

Each person signing the Bid certifies that he/she is the person in the Bidder’s firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participated in any action contrary to the terms of this provision.

Questions or Clarification on ITB Specifications
All questions regarding this ITB shall be submitted via email. Emailed questions and inquires will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before 1:00 p.m., Wednesday, January 9, 2019 and should be addressed to erolla@a2dda.org

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Elizabeth Rolla, P.E. at erolla@a2dda.org after discovery as possible. Further, the contractor and/or service provider shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

Addenda
If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) www.mitn.info and/or Ann Arbor Downtown Development Authority website www.a2dda.org for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The DDA will not be bound by oral responses to inquiries or written responses other than written addenda.
Bid Submission

All Bids are due and must be delivered to the Ann Arbor DDA on or before Friday, January 18, 2019, at 11:30 a.m. EST. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile will not be considered or accepted.

Each Bidder must submit one (1) original Bid and one (1) Bid copies in a sealed envelope clearly marked: ITB No. 4562 Huron Street Streetscape Improvements

Bids must be addressed and delivered to:

Ann Arbor DDA
150 S. Fifth Ave, Ste #301
Ann Arbor, MI 48104

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

The Contractor will enter into a contract with the Ann Arbor DDA. However, this project also includes work for the City of Ann Arbor. Therefore, the following forms provided within this ITB Document must be included in submitted bids.

- City of Ann Arbor Prevailing Wage Declaration of Compliance
- City of Ann Arbor Living Wage Ordinance Declaration of Compliance
- Vendor Conflict of Interest Disclosure Form
- City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance

Bids that fail to provide these completed forms listed above upon bid opening will be rejected as non-responsive and will not be considered for award.

Hand delivered bids will be date/time stamped/signed by the DDA at the address above in order to be considered. Normal business hours are 9:00 a.m. to 4:00 p.m. Monday through Friday, excluding Holidays. The DDA will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the DDA determines in its sole discretion that circumstances warrant it.

Award

The DDA 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 DDA may also utilize alternatives 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 DDA. For unit price bids, the Contract will be awarded based upon the unit prices and the lump sum prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the DDA. If the DDA 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 DDA, 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 Bids, the DDA will give consideration to alternate Bids for items listed in the bid forms. All key staff and subcontractors are subject to the approval by the DDA.

Official Documents
These bid documents are being distributed through the Downtown Development Authority and the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained documents from other sources, it is recommended that you register on www.MITN.info and obtain an official Bid.

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

Withdrawal of Bids
After the time of opening, no Bid may be withdrawn for the period of sixty (60) days

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-2, Article III of the Contract. If these time requirements cannot 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 DDA 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 DDA 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
This project includes work for the City of Ann Arbor. All contractors proposing to do work on this project shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Section 5, beginning at page GC-3 shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor’s Non-Discrimination Ordinance attached at all work locations where its employees provide services under this contract.

Wage Requirements
This project includes work for the City of Ann Arbor. Section 4, beginning at page GC-2, outlines the requirements for payment of prevailing wages and for payment of a “living wage” to employees providing service under this contract. The successful bidder and its subcontractors must comply with all applicable requirements and provide documentary proof of compliance
For laborers whose wage level are subject to federal, state and/or local prevailing wage law the appropriate Davis-Bacon wage rate classification is identified based upon the work including within this contract. The wage determination(s) current on the date 10 days before bids are due shall apply to this contract. The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: www.wdol.gov

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

Major Subcontractors
The Bidder shall identify on Bid Form Section 4 each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over $50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the DDA.

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

Disclosures
After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the “Freedom of Information Act.” The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

Bid Protest
All bid protests must be in writing and filed with Elizabeth Rolla, P.E. within five business days of the award action. The bidder must clearly state the reasons for the protest. The protest will be reviewed by the DDA, whose decision will be final.

Cost Liability
The DDA assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the DDA. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

Reservation of Rights
The Ann Arbor DDA reserves the right to accept any bid or alternative bid proposed in whole or
in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the DDA.

Idlefree Ordinance

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

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

(a) For any period of time while the Commercial Vehicle is unoccupied; or

(b) For more than 5 minutes in any 60-minute period while the Commercial Vehicle is occupied.

In addition, generators and other internal combustion engines are covered

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

Ann Arbor DDA
150 S. Fifth Ave, Ste #301
Ann Arbor, MI 48104

Ladies and Gentlemen:

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

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

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

In accordance with these bid documents, and Addenda numbered 1, 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.

This project includes work for the City of Ann Arbor. 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.

This project includes work for the City of Ann Arbor. The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:320 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services under this Contract. Bidder certifies that the statements contained in the City Prevailing Wage and Living Wage Declaration of Compliance Forms are true and correct.
The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

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

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

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

In submitting this Bid, it is understood that the right is reserved by the DDA 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 DDA believes to be in its best interest.

SIGNED THIS 18th DAY OF January 2019

Fenson Company, Inc.
Bidder's Name

7644 Whitmore Lake Rd.,
Brighton, MI, 48116
Official Address

(810)-231-5188
Telephone Number

bfens@fensoninc.com
Email Address for Award Notice

Authorized Signature of Bidder

John Heavey
(Print Name of Signer Above)
LEGAL STATUS OF BIDDER

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

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of Michigan, for whom John Heavey, bearing the office title of Est. & Constr. Mgr., whose signature is affixed to this Bid, is authorized to execute contracts.

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

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

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

* An individual, whose signature with address, is affixed to this Bid: __________________________

Authorized Official

______________________________  Date _______1-18_____, 2019

(Print) Name John Heavey  Title Est. & Constr. Mgr.

Company: Fanson Company, Inc.

Address: 7644 Whitmore Lake Rd, Brighton, MI, 48116

Contact Phone (810)-231-5188  Fax (810)-231-5404

Email bformance@fansoninc.com
## BID FORM
Section 1 - Schedule of Prices

Company: **Fonson Company, Inc.**
Project: **Huron Streetscape ITB #4562**

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>General Conditions, Max $150,000</td>
<td>LS</td>
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<td>$150,000.00</td>
<td>$150,000.00</td>
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<td>102</td>
<td>Audiovisual Tape Coverage</td>
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<td>$1,975.00</td>
<td>$1,975.00</td>
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<tr>
<td>104</td>
<td>Certified Payroll Compliance and Reporting</td>
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<td>$1,000.00</td>
<td>$1,000.00</td>
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<tr>
<td>120</td>
<td>Project Supervision, Max $100,000</td>
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<td>1</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
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<tr>
<td>135</td>
<td>Tree Removal (8&quot; and Larger)</td>
<td>Ea</td>
<td>15</td>
<td>$690.00</td>
<td>$10,350.00</td>
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<tr>
<td>140</td>
<td>Exploratory Excavation (0-10' deep)</td>
<td>Ea</td>
<td>5</td>
<td>$1,200.00</td>
<td>$6,000.00</td>
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<tr>
<td>203</td>
<td>Minor Traf Devices, Max $90,000</td>
<td>LS</td>
<td>1</td>
<td>$90,000.00</td>
<td>$90,000.00</td>
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<td>204</td>
<td>Non-hazardous Contaminated Material Handling and Disposal</td>
<td>Cyd</td>
<td>40</td>
<td>$50.00</td>
<td>$2,000.00</td>
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<tr>
<td>205</td>
<td>Machine Grading, Modified</td>
<td>Sta</td>
<td>54</td>
<td>$9,230.00</td>
<td>$498,420.00</td>
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<tr>
<td>208</td>
<td>Geotextile</td>
<td>Syd</td>
<td>1,289</td>
<td>$4.50</td>
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<tr>
<td>209</td>
<td>Geogrid</td>
<td>Syd</td>
<td>100</td>
<td>$9.50</td>
<td>$950.00</td>
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<tr>
<td>210</td>
<td>Stone Reservoir</td>
<td>Cyd</td>
<td>370</td>
<td>$75.00</td>
<td>$27,750.00</td>
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<tr>
<td>211</td>
<td>Drainage Board</td>
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<td>223</td>
<td>$12.00</td>
<td>$2,676.00</td>
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<tr>
<td>215</td>
<td>Infiltration Inlet</td>
<td>Ea</td>
<td>2</td>
<td>$360.00</td>
<td>$7,200.00</td>
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<tr>
<td>221</td>
<td>HMA Leveling</td>
<td>Ton</td>
<td>97</td>
<td>$250.00</td>
<td>$24,250.00</td>
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<tr>
<td>222</td>
<td>HMA Wearing</td>
<td>Ton</td>
<td>113</td>
<td>$275.00</td>
<td>$31,075.00</td>
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<tr>
<td>223</td>
<td>Temporary Pavement/Pedestrian Access</td>
<td>Syd</td>
<td>2,628</td>
<td>$13.00</td>
<td>$34,164.00</td>
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<tr>
<td>226</td>
<td>Recessing Pavt Mrkg, Transv</td>
<td>Sft</td>
<td>2,110</td>
<td>$2.95</td>
<td>$6,224.50</td>
</tr>
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</table>

**BF-1**
TOTAL THIS PAGE $959,835.00

ADD-1-6
## BID FORM
Section 1 - Schedule of Prices

Company: **Fenson Company, Inc.**
Project: **Huron Streetscape ITB #4562**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Estimated</th>
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<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Unit</td>
<td>Quantity</td>
<td>Unit Price</td>
<td>Total Price</td>
</tr>
<tr>
<td>227</td>
<td>Remove Concrete Sidewalk and Driveways - Any Thickness</td>
<td>Syd</td>
<td>7,230</td>
<td>$14.50</td>
<td>$104,835.00</td>
</tr>
<tr>
<td>228</td>
<td>Road Pavement, Rem</td>
<td>Syd</td>
<td>1,103</td>
<td>$28.00</td>
<td>$30,884.00</td>
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<tr>
<td>230</td>
<td>Remove Concrete Curb or Curb &amp; Gutter - Any Type</td>
<td>Lt</td>
<td>1,869</td>
<td>$7.50</td>
<td>$14,017.50</td>
</tr>
<tr>
<td>231</td>
<td>Concrete Curb, 6 inch Straight</td>
<td>Lt</td>
<td>659</td>
<td>$33.00</td>
<td>$21,747.00</td>
</tr>
<tr>
<td>232</td>
<td>Concrete Planter Curb</td>
<td>Lt</td>
<td>1,333</td>
<td>$33.00</td>
<td>$43,989.00</td>
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<tr>
<td>234</td>
<td>Concrete Curb &amp; Gutter - Any Type</td>
<td>Lt</td>
<td>1,652</td>
<td>$25.00</td>
<td>$41,300.00</td>
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<tr>
<td>235</td>
<td>8 inch Concrete Sidewalk and Ramp</td>
<td>Sft</td>
<td>11,311</td>
<td>$8.00</td>
<td>$90,488.00</td>
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<tr>
<td>236</td>
<td>6-Inch Concrete Sidewalk</td>
<td>Sft</td>
<td>30,165</td>
<td>$7.00</td>
<td>$211,155.00</td>
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<tr>
<td>237</td>
<td>8-Inch Concrete Drive Approach (TYPE L or M)</td>
<td>Sft</td>
<td>5,618</td>
<td>$8.00</td>
<td>$44,944.00</td>
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<tr>
<td>238</td>
<td>Concrete Base, 8 inch</td>
<td>Sft</td>
<td>880</td>
<td>$5.50</td>
<td>$4,840.00</td>
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<tr>
<td>239</td>
<td>Sidewalk Unit Pavers</td>
<td>Sft</td>
<td>9,279</td>
<td>$17.50</td>
<td>$162,382.50</td>
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<tr>
<td>240</td>
<td>Detectable Warning Surface</td>
<td>Sft</td>
<td>484</td>
<td>$17.50</td>
<td>$8,470.00</td>
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<tr>
<td>252</td>
<td>Sewer Bulkhead, 4-inch Through 18-inch diameter</td>
<td>Ea</td>
<td>2</td>
<td>$290.00</td>
<td>$580.00</td>
</tr>
<tr>
<td>259</td>
<td>Flowable Fill</td>
<td>Cyd</td>
<td>97</td>
<td>$200.00</td>
<td>$19,400.00</td>
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<tr>
<td>260</td>
<td>Sand Subbase Course, Class II - C.I.P.</td>
<td>Cyd</td>
<td>616</td>
<td>$130.00</td>
<td>$80,080.00</td>
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<tr>
<td>261</td>
<td>Planting Soil</td>
<td>Cyd</td>
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<td>262</td>
<td>Top Soil</td>
<td>Cyd</td>
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<td>$55.00</td>
<td>$3,025.00</td>
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<td>264</td>
<td>Landscape Maintenance</td>
<td>Month</td>
<td>14</td>
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<td>$37,800.00</td>
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<td>266</td>
<td>Tree Grate, 4 ft. X 8 ft.</td>
<td>Ea</td>
<td>23</td>
<td>$3,900.00</td>
<td>$89,700.00</td>
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</tbody>
</table>

**TOTAL THIS PAGE $1,019,387.00**

ADD-1-7
## Pay Item Description Estimated Unit Quantity Unit Price Total Price

267 Tree Grate, 5 ft. X 8 ft. Ea 17 $4,275.00 $72,675.00

271 Sign, Portable Changeable Message Ea 2 $2,880.00 $5,760.00

272 Channelizing Device, 42 Inch Ea 120 $21.60 $2,592.00

273 Barricade Type III - Lighted Ea 25 $108.00 $2,700.00

275 Temporary Sign - Type B Sft 1,190 $4.30 $5,117.00

276 Temporary Sign - Type B Special Sft 108 $4.70 $507.60

278 Lighted Arrow, Type C, Furnish & Operate Ea 2 $720.00 $1,440.00

279 Temporary Pedestrian Type II Barricade Ea 37 $122.65 $4,538.05

280 Temporary Pedestrian Type II Channelizer Lft 1,200 $20.45 $24,540.00

281 Urban Bench, 5ft Ea 11 $3,760.00 $41,360.00

282 Urban Bench, 8ft Ea 24 $4,350.00 $104,400.00

283 Bike Hoops, Surface Mount Ea 16 $1,300.00 $20,800.00

288 3" Schedule 80 PVC Electrical Conduit Lft 18,318 $7.00 $128,226.00

289 4" Schedule 80 PVC Electrical Conduit Lft 1,103 $11.00 $12,133.00

290 Street Light, Rem and salvage Ea 4 $1,000.00 $4,000.00

292 Luminaire Installation Ea 157 $375.00 $58,875.00

293 Pole Installation Ea 101 $650.00 $65,650.00

296.2 Electrical Wiring - 2 Gauge Lft 2,480 $2.75 $6,820.00

**BF-3 TOTAL THIS PAGE $562,133.65**

ADD-1-8
<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>296.4</td>
<td>Electrical Wiring - 4 Gauge</td>
<td>Lft</td>
<td>30,822</td>
<td>$1.75</td>
<td>$53,938.50</td>
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<tr>
<td>296.6</td>
<td>Electrical Wiring - 6 Gauge</td>
<td>Lft</td>
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<td>$35,557.50</td>
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<tr>
<td>296.8</td>
<td>Electrical Wiring - 8 Gauge</td>
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<tr>
<td>296.10</td>
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<tr>
<td>297</td>
<td>Handhole Assembly, 12 inch x 18 inch</td>
<td>Ea</td>
<td>121</td>
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<td>$102,850.00</td>
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<tr>
<td>298</td>
<td>Handhole Assembly, 17 inch x 30 inch</td>
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<td>$2,000.00</td>
<td>$8,000.00</td>
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<td>299</td>
<td>Special Lighting</td>
<td>LS</td>
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<td>$21,600.00</td>
<td>$21,600.00</td>
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<tr>
<td>320</td>
<td>RCP, 12 inch, CI E, Tr Det I</td>
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<td>385</td>
<td>Sewer Pipe Abandonment</td>
<td>Lft</td>
<td>95</td>
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<td>386</td>
<td>Sewer Structure Abandonment</td>
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<td>392</td>
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<td>Subgrade Undercutting, Type II</td>
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<td>563</td>
<td>Structure Covers</td>
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<td>564</td>
<td>Reconstruct Structure</td>
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<td>$720.00</td>
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<td>566</td>
<td>Adjust Structure Cover</td>
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<td>$600.00</td>
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<td>582</td>
<td>Temporary Pavement Marking (Type R)-In Place</td>
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TOTAL THIS PAGE $410,225.50
### BID FORM
**Section 1 - Schedule of Prices**

**Company:** Fonson Company, Inc.  
**Project:** Huron Streetscape ITB #4562

<table>
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<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Estimated Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>702</td>
<td>Inlet Filter</td>
<td>Ea</td>
<td>40</td>
<td>$150.00</td>
<td>$6,000.00</td>
</tr>
<tr>
<td>703</td>
<td>Silt Fence</td>
<td>Lft</td>
<td>1,200</td>
<td>$4.00</td>
<td>$4,800.00</td>
</tr>
<tr>
<td>811</td>
<td>Acer griseum</td>
<td>Ea</td>
<td>7</td>
<td>$595.00</td>
<td>$4,165.00</td>
</tr>
<tr>
<td>812</td>
<td>Celtis occidentalis 'Prairie Pride'</td>
<td>Ea</td>
<td>16</td>
<td>$485.00</td>
<td>$7,760.00</td>
</tr>
<tr>
<td>813</td>
<td>Ginkgo biloba 'Autumn Gold'</td>
<td>Ea</td>
<td>17</td>
<td>$595.00</td>
<td>$10,115.00</td>
</tr>
<tr>
<td>814</td>
<td>Gymnocladus dioicus</td>
<td>Ea</td>
<td>19</td>
<td>$485.00</td>
<td>$9,215.00</td>
</tr>
<tr>
<td>815</td>
<td>Gleditsia triacanthos f. inermis 'Skycole' Skyline</td>
<td>Ea</td>
<td>6</td>
<td>$495.00</td>
<td>$2,970.00</td>
</tr>
<tr>
<td>816</td>
<td>Nyssa sylvatica</td>
<td>Ea</td>
<td>18</td>
<td>$485.00</td>
<td>$8,730.00</td>
</tr>
<tr>
<td>817</td>
<td>Quercus macrocarpa</td>
<td>Ea</td>
<td>2</td>
<td>$485.00</td>
<td>$970.00</td>
</tr>
<tr>
<td>818</td>
<td>Ulmus americana 'Princeton'</td>
<td>Ea</td>
<td>18</td>
<td>$485.00</td>
<td>$8,730.00</td>
</tr>
<tr>
<td>827</td>
<td>Syringa reticulata 'Ivy Silk'</td>
<td>Ea</td>
<td>11</td>
<td>$485.00</td>
<td>$5,335.00</td>
</tr>
<tr>
<td>828</td>
<td>Sesleria autumnalis</td>
<td>Ea</td>
<td>831</td>
<td>$10.50</td>
<td>$8,725.50</td>
</tr>
<tr>
<td>829</td>
<td>Hemerocallis 'Stella D'oro'</td>
<td>Ea</td>
<td>244</td>
<td>$9.50</td>
<td>$2,318.00</td>
</tr>
<tr>
<td>830</td>
<td>Pachysandra terminalis</td>
<td>Ea</td>
<td>822</td>
<td>$5.00</td>
<td>$4,110.00</td>
</tr>
<tr>
<td>831</td>
<td>Perovskia atriplicifolia 'Little Spire'</td>
<td>Ea</td>
<td>464</td>
<td>$11.50</td>
<td>$5,336.00</td>
</tr>
<tr>
<td>923</td>
<td>Pavt Mrkg, Wet Retrflec Thermopl, 12 inch, Crosswalk</td>
<td>Lft</td>
<td>2,840</td>
<td>$5.00</td>
<td>$14,200.00</td>
</tr>
<tr>
<td>925</td>
<td>Pavt Mrkg, Wet Retrflec Thermopl, 24 inch, Stop Bar</td>
<td>Lft</td>
<td>960</td>
<td>$10.00</td>
<td>$9,600.00</td>
</tr>
</tbody>
</table>

**BF-5**  
**TOTAL THIS PAGE $113,079.50**

ADD-1-10
BID FORM  
Section 1 - Schedule of Prices

Company:  
Project: Huron Streetscape ITB #4562

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total From Page BF-1</td>
<td>$ 959,835.00</td>
</tr>
<tr>
<td>Total From Page BF-2</td>
<td>$ 1,019,387.00</td>
</tr>
<tr>
<td>Total From Page BF-3</td>
<td>$ 562,133.65</td>
</tr>
<tr>
<td>Total From Page BF-4</td>
<td>$ 410,225.50</td>
</tr>
<tr>
<td>Total From Page BF-5</td>
<td>$ 113,079.50</td>
</tr>
<tr>
<td>TOTAL BASE BID</td>
<td>$ 3,064,660.65</td>
</tr>
</tbody>
</table>
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 DDA, 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.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Add/Deduct Amount</th>
</tr>
</thead>
</table>

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

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 

Date 1/18/19
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-2, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

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

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 __________________________ Date 1-18-19
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.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision to Section 4 of the General Conditions covering subcontractor's employees who perform work on this contract.

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

<table>
<thead>
<tr>
<th>Subcontractor (Name and Address)</th>
<th>Work</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Asphalt Specialists, Inc. 1780 E. Highwood, Pontiac, MI, 48340</td>
<td>HMA Paving</td>
<td>$61,725.00</td>
</tr>
<tr>
<td>2. Rivers Edge Landscape Management 5568 W. River Dr NE, Comstock Park, MI, 49321</td>
<td>Brick Pavers</td>
<td>$162,290.00</td>
</tr>
<tr>
<td>3. G.M. &amp; Sons, Inc. 678 W. Whitmore Lake Rd, Whitmore Lake, MI, 48189</td>
<td>Concrete walks/Curb</td>
<td>$648,708.00</td>
</tr>
<tr>
<td>4. Superior Lawn Care &amp; Snow Removal 4197 Carpenter Rd, Ypsilanti, MI, 48197</td>
<td>Landscaping</td>
<td>$129,055.00</td>
</tr>
<tr>
<td>5. J. Ranck Electric, Inc. 1993 Gower Parkway, Mt. Pleasant, MI, 48858</td>
<td>Electrical</td>
<td>$622,370.00</td>
</tr>
</tbody>
</table>

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 __________________________ Date 1-18-19
### Section 5 – References

Include a minimum of 3 references from similar project completed within the past 5 years.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Project Name</th>
<th>Cost</th>
<th>Date Constructed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>South University Streetscape Improvements</td>
<td>$2,193,136</td>
<td>Oct, 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contact Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elizabeth Rolla</td>
<td></td>
<td>(734)-994-6697</td>
</tr>
<tr>
<td>2)</td>
<td>E. Grand River Sidewalk</td>
<td>$381,580</td>
<td>Dec, 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contact Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jacob Rushlow</td>
<td></td>
<td>(734)-812-7154</td>
</tr>
<tr>
<td>3)</td>
<td>N Fifth Ave Reconstruction</td>
<td>$4,108,380</td>
<td>Dec, 2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contact Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brian Slizewski</td>
<td></td>
<td>(734)-794-6410</td>
</tr>
</tbody>
</table>
CITY OF ANN ARBOR
PREVAILING WAGE DECLARATION OF COMPLIANCE

The "wage and employment requirements" of Section 1:320 of Chapter 14 of Title I of the Ann Arbor City Code mandates that the city not enter any contract, understanding or other arrangement for a public improvement for or on behalf of the city unless the contract provides 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 the Wage Act for the Ann Arbor area compiled by the United States Department of Labor. Where the contract and the Ann Arbor City Code 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. 276-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 1:320 of Chapter 14 of Title I of the Code of the City of Ann Arbor, employees shall be paid a prescribed minimum level of compensation (e.g., Living Wage) for the time those employees perform work on the contract in conformance with section 1:815 of Chapter 23 of Title I of the Code of the City of Ann Arbor.

At the request of the city, any contractor or subcontractor shall provide satisfactory proof of compliance with this provision.

The Contractor agrees:

(a) To pay each of its employees whose wage level is required to comply with federal, state or local prevailing wage law, for work covered or funded by this contract with the City,

(b) To require each subcontractor performing work covered or funded by this contract with the City to pay each of its employees the applicable prescribed wage level under the conditions stated in subsection (a) or (b) above.

(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the wage and employment provisions of the Chapter 14 of the Ann Arbor City Code. The undersigned certifies that he/she has read and is familiar with the terms of Section 1:320 of Chapter 14 of the Ann Arbor City Code and by executing this Declaration of Compliance obligates his/her employer and any subcontractor employed by it to perform work on the contract to the wage and employment requirements stated herein. The undersigned further acknowledges and agrees that if it is found to be in violation of the wage and employment requirements of Section 1:320 of the Chapter 14 of the Ann Arbor City Code it shall have been deemed a material breach of the terms of the contract and grounds for termination of same by the City.

Fonson Company, Inc.

Signature of Authorized Representative: ______________________ Date: 1/18/19


Print Name and Title

7644 Whitmore Lake Rd., Brighton, MI 48116

Address, City, State, Zip

bfonson@fonsoninc.com

Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

9/25/15 Rev 0 PW
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 an employer who is (a) a contractor providing services to or for the City for a value greater than $10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than $10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than $10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

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

The Contractor or Grantee agrees:

(a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as $13.22/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than $14.75/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

Check the applicable box below which applies to your workforce

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

[ ] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

(a) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.

(b) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(c) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

(d) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

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

Fonson Company, Inc.  7644 Whitmore Lake Rd
Company Name  Street Address

1-18-19  Brighton, MI, 48116
Signature of Authorized Representative  Date  City, State, Zip

John Heavey, Est. & Const. Mgr.  bfons@fonsoninc.com
Print Name and Title  Phone/Email address  (810)-231-5188

City of Ann Arbor Procurement Office, 734/794-6500, procurement@a2gov.org  Rev. 3/6/18
CITY OF ANN ARBOR
LIVING WAGE ORDINANCE

RATE EFFECTIVE APRIL 30, 2018 - ENDING APRIL 29, 2019

$13.22 per hour
If the employer provides health care benefits*

$14.75 per hour
If the employer does NOT provide health care benefits*

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

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

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

For Additional Information or to File a Complaint Contact:
Colin Spencer at 734/794-6500 or cspencer@a2gov.org

Revised 2/1/2018
Vendor Conflict of Interest Disclosure Form

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

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

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

<table>
<thead>
<tr>
<th>Conflict of Interest Disclosure*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

None

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

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:

<table>
<thead>
<tr>
<th>Vendor Name</th>
<th>Vendor Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fonson Company, Inc.</td>
<td>(810)-231-5188</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature of Vendor Authorized Representative</th>
<th>Date</th>
<th>Printed Name of Vendor Authorized Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Signature]</td>
<td>11/18/19</td>
<td>[Signature]</td>
</tr>
</tbody>
</table>

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500, procurement@annarbor.gov

COI – Ver. 1 – 6/9/16
CITY OF ANN ARBOR
DECLARATION OF COMPLIANCE

Non-Discrimination Ordinance

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

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

The Contractor agrees:

(a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.

(b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.

(c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.

(d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

Fonson Company, Inc.

Company Name

Signature of Authorized Representative 1/18/19


Print Name and Title

Address, City, State, Zip

(810) -231 -5188, bfonson@fonsoninc.com

Questions about the Notice or the City Administrative Policy, Please contact:

Procurement Office of the City of Ann Arbor

(734) 794-6500

2016 Rev 0 NDO-2
CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below. You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by e-mail (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.
(c) Where fringe benefits are paid in cash

- Each laborer or mechanic listed as employed in the above referenced payroll has been paid, as indicated on the payroll, an amount equal to the sum of the applicable fringe benefits and the amount of the required fringe benefits as stated in the contract, except as noted in section 4(c) below.

<table>
<thead>
<tr>
<th>Exception (Craft)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

(d) Exceptions

- In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been paid or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

- [Signature]  
- [Title]  
- [Date]

- [Contractor or Subcontractor]
  
- [Building or Work]
  
- [City or Town]
  
- [State]
  
- [Zip Code]  
- [Employer Identification Number]  
- [Phone Number]  
- [Fax Number]  
- [Email Address]  
- [Website]  
- [Address]

- [City or Town]
- [State]
- [Zip Code]  
- [Employer Identification Number]  
- [Phone Number]  
- [Fax Number]  
- [Email Address]  
- [Website]  
- [Address]
Fonson Company, INC.

CONSENT RESOLUTIONS OF A SPECIAL MEETING OF THE
BOARD OF DIRECTORS

I, the undersigned, being the sole director of FONSON COMPANY, INC., a Michigan Corporation (the "Corporation"), hereby waive the necessity of notice and holding of a special meeting of the Board of Directors of the Corporation and in its stead I adopts as of December 8, 2014 the following:

RESOLVED, that the following persons are elected to the offices set forth beside his name, to serve until the next annual meeting of the Board of Directors and until the election and qualification of their respective successors (or until the effective date of their resignation, or removal with or without cause by the Board of Directors):

President: Peter D. Scodeller
Vice President: Edward S. Dwyer
Secretary: Peter D. Scodeller
Treasurer: Peter D. Scodeller

RESOLVED, that Peter D. Scodeller shall have authority to enter into and sign bids, proposals, and contracts on behalf of the Corporation.

RESOLVED, that Edward S. Dwyer shall have authority to enter into and sign bids, proposals, and contracts on behalf of the Corporation.

RESOLVED, that John Heavey shall have authority to enter into and sign bids, proposals, and contracts on behalf of the Corporation.

Dated as of:

December 8, 2014

[Signature]

PETER D. SCODELLER
CONTRACT

THIS AGREEMENT is made on the 6th day of February, 2019, between the ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY, a Michigan Municipal Corporation, 150 S. Fifth Ave., Ann Arbor, Michigan 48104 ("DDA") and FONSON COMPANY, Inc. ("Contractor") a Michigan corporation with its address at 7644 Whitmore Lake Rd, Brighton, MI 48116

Based upon the mutual promises below, the Contractor and the DDA 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 Huron Street Streetscape Improvements 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:

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

* This project includes work for the City of Ann Arbor

ARTICLE II - Definitions

Administering Service Area/Unit means Ann Arbor DDA

Project means Huron Street Streetscape Improvements ITB# 4562

Supervising Professional/Engineer means the DDA Project Manager, Elizabeth Rolla, P.E., or her designee

ARTICLE III - Time of Completion

(A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the DDA.

(B) The entire work for this Contract shall be completed in accordance with the Detailed Specification for Progress Clause.

(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 DDA, as liquidated damages and not as a penalty, an amount equal to $500 for each calendar day of delay in the completion of all the work. If any liquidated damages are unpaid by the Contractor, the DDA shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.
The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

ARTICLE IV - The Contract Sum

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

Three million sixty four thousand six hundred sixty and 65/100 Dollars ($3,064,660.65)

(B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the Contract Documents. Increases or decreases shall be determined only by written agreement between the DDA and Contractor.

ARTICLE V - Assignment

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

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 DDA agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract. The parties stipulate that the venue referenced in this Contract is for convenience and waive any claim of non-convenience.

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

ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a Contract of employment but is a Contract to accomplish a specific result. Contractor is an independent Contractor performing services for the DDA. Nothing contained in this Contract shall be deemed to constitute any other relationship between the DDA 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 DDA for any Contract, debt, or any other obligation to the DDA. The DDA 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. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; or (2) three days after mailing certified U.S. mail.

ARTICLE IX - Indemnification

This project includes work for the City of Ann Arbor and within the City's right-of-way. To the fullest extent permitted by law, Contractor shall indemnify, defend and hold harmless the City and DDA, 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 and DDA for losses or damages caused by or resulting from the City or DDA’s sole negligence. The provisions of this Article shall survive the expiration or earlier termination of this contract for any reason.

ARTICLE X - Entire Agreement

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

FOR CONTRACTOR

By

Its: EST. & CUST. Mgr.

FOR THE ANN ARBOR DDA

By

Marie Klopfl, DDA Chair

By

Susan Hollay, Executive Director

Approved as to form and content

Jerry Lax, DDA Attorney
PERFORMANCE BOND

(1) Fonson Company, Inc.

of 7644 Whilmore Lake Road, Brighton, MI 48116 (referred to as "Principal"), and Westfield Insurance Company, a
corporation duly authorized to do business in the State of Michigan (referred to as "Surety"), are bound to the Ann Arbor Downtown Development Authority (referred to as "DDA"), for

Three Million, Sixty Four Thousand, Six Hundred Sixty 65/100
($3,064,660.65), 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 DDA dated February 6, 2019, for: Huron Street Streetscape Improvements 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 DDA 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 DDA 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 DDA,
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 DDA 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 13th day of February, 2019.

Westfield Insurance Company
By: Lisa M. Wilmot
Its Attorney-in-Fact

Fonson Company, Inc.
By: John Henry

Name and address of agent:

Hyland

24 Frank Lloyd Wright Drive, Suite J4100

Ann Arbor, MI 48105

2016 Construction Rev 1 B-1
LABOR AND MATERIAL BOND

(1) Fonson Company, Inc.
of 7644 Whitmore Lake Road, Brighton, MI 48116 (referred to as "Principal"), and Westfield Insurance Company, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the Ann Arbor Downtown Development Authority (referred to as "DDA"), 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 ($3,064,660.65), 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 DDA, dated February 6, 2019, for Huron Street Streetscape Improvements; 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 13th day of February, 2019

Westfield Insurance Company
(Name of Surety Company)
By Lisa M. Wilmoth
(Signature)
Its Attorney-in-Fact
(Title of Office)

Fonson Company, Inc.
(Name of Principal)
By
(Signature)
Its Est & Const. 11/4/2
(Title of Office)

Name and address of agent:

Hyland

24 Frank Lloyd Wright Drive, Suite J4100
Ann Arbor, MI 48105

2016 Construction Rev 1
Westfield Insurance Co.
Westfield National Insurance Co.
Ohio Farmers Insurance Co.
Westfield Center, Ohio

CERTIFIED COPY

POWER NO. 2140082 02

General
Power of Attorney

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint

TERRI L. MAHAKIAN, MICHAEL M. HYLANT, JUDY K. WILSON, DEBORAH A. NEFF, CHALENE M. HADDON, LISA M. WILMOT, JOEL E. SPECKMAN, SUSAN E. HURD, VICKI S. DUNCAN, KRISTIE A. PUDVAR, MONICA M. MILLS, JOINTLY OR SEVERALLY

of ANN ARBOR and State of Ml its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship.

LIMITATION: THIS POWER OF ATTORNEY CANNOT BE USED TO EXECUTE NOTE GUARANTEE, MORTGAGE DEFICIENCY, MORTGAGE GUARANTEE, OR BANK DEPOSITORY BONDS.

and to bind any of the Companies thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the applicable Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney(s)-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolution adopted by the Board of Directors of each of the WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY:

"Be it Resolved, that the President, any Senior Executive, any Secretary or any Fidelity & Surety Operations Executive or other Executive shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

The Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements of indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed by the President and sealed and attested by the Corporate Secretary.

"Be it Further Resolved, that the signature of any such designated person and the seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signatures or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached." (Each adopted at a meeting held on February 9, 2000).

In Witness Whereof, WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY have caused these presents to be signed by their National Surety Leader and Senior Executive and their corporate seals to be hereto affixed this 02nd day of JUNE A.D. 2017.

Corporation Seals Affixed

WESTFIELD INSURANCE COMPANY
WESTFIELD NATIONAL INSURANCE COMPANY
OHIO FARMERS INSURANCE COMPANY

By:
Dennis P. Baus, National Surety Leader and Senior Executive

For:
Dennis P. Baus, National Surety Leader and Senior Executive

State of Ohio
County of Medina ss:

On this 02nd day of JUNE A.D. 2017, before me personally came Dennis P. Baus to me known, who, being by me duly sworn, did depose and say, that he resides in Wooster, Ohio; that he is National Surety Leader and Senior Executive of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, the companies described in and which executed the above instrument; that he knows the seals of said Companies; that the seals affixed to said instrument are such corporate seals; that they were so affixed by order of the Boards of Directors of said Companies; and that he signed his name thereto by like order.

Notarial
Seal
Affixed

State of Ohio
County of Medina ss:

I, Frank A. Carrino, Secretary of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; and furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Westfield Center, Ohio, this 13th day of February A.D. 2019.

Frank A. Carrino, Secretary

BPOAC2 (combined) (06-02)
## INSURER(S) AFFORDING COVERAGE

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<thead>
<tr>
<th>INSURER</th>
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## NAME: CONTACT

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<tr>
<th>(A/C, No. Ext):</th>
<th>PHONE</th>
<th>FAX</th>
<th>E-MAIL ADDRESS:</th>
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<td><a href="mailto:kathys@lymansheets.com">kathys@lymansheets.com</a></td>
</tr>
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</table>

## IMPORTANT:

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed.

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement.

## THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFER NO RIGHTS UPON THE CERTIFICATE HOLDER.

This certificate does not affirmatively or negatively amend, extend or alter the coverage afforded by the policies below. This certificate of insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder.

## COVERAGES

### A COMMERCIAL GENERAL LIABILITY

- **Claims-Made X Occur**
- **General Aggregate Limit Applies Per:**
  - Policy: N
  - Project: N
  - Location: N

### B UMBRELLA LIABILITY

- **None**

### C WORKERS' COMPENSATION AND EMPLOYEES' LIABILITY

- **Any Proprietor/Partner/Executive Officer/Member Excluded?** None

### IMPORTANT:

- If an Additional Insured is added to any policy, additional insured provisions must be endorsed.
- If Subrogation is Waived, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement.

### THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

### DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: ITB No. 4562 Huron Streetscape Project

The City of Ann Arbor, Michigan Department of Transportation and the Ann Arbor Downtown Development Authority are additional insured.

Additional insured and Waiver of Subrogation status apply when required by written contract. Policies contain no self-insured retention or deductibles. Policies have been endorsed to reflect a 30 day notice of cancellation in favor of the certificate holder.

### CERTIFICATE HOLDER

The City of Ann Arbor

c/o myCOI

1075 Broad Ripple Ave

Suite 313

Indianapolis, IN 46220

USA

### CANCELLATION

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

### AUTHORIZED REPRESENTATIVE

[Signature]
Old Republic Insurance Company

445 South Moorland Road
Suite 300
Brookfield, Wisconsin 53005
262/797-3400

Individual notices will not be included in the electronic policy - only hard copy.

Named Insured: Fonson Company Inc.
Policy Number: MWZY 312353
Policy Term: Mar 1, 2018 - Mar 1, 2019

Policyholder Notice Index

Notices Not Made a Part of This Policy at Time of Issuance:

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Orrm 2032

Please reply P.O. Box 2939 Milwaukee, Wisconsin 53201-2939•Fax 262/797-0486
OLD REPUBLIC INSURANCE COMPANY

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<td>KS AND OK CHANGES - TRANSFER OF RIGHTS</td>
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## OLD REPUBLIC INSURANCE COMPANY

### FORMS INDEX

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<tbody>
<tr>
<td>CG 01 34 08 03</td>
<td>MO CHANGES - POLLUTION EXCLUSION ENDORSEMENT</td>
</tr>
<tr>
<td>CG 26 25 04 05</td>
<td>MO CHANGES - GUARANTY ASSOCIATION</td>
</tr>
<tr>
<td>CG 26 50 04 13</td>
<td>MO CHANGES - MEDICAL PAYMENTS</td>
</tr>
<tr>
<td>IL 02 59 09 07</td>
<td>NE CHANGES - CANCELLATION AND NONRENEWAL</td>
</tr>
<tr>
<td>IL 02 59 12 17</td>
<td>NE CHANGES - CANCELLATION AND NONRENEWAL</td>
</tr>
<tr>
<td>IL 02 44 09 07</td>
<td>OH CHANGES - CANCELLATION AND NONRENEWAL</td>
</tr>
<tr>
<td>CG 01 03 06 06</td>
<td>TX CHANGES</td>
</tr>
<tr>
<td>IL 02 75 11 13</td>
<td>TX CHANGES - CANCELLATION AND NONRENEWAL PROVISIONS FOR CASUALTY LINES AND COMMERCIAL PACKAGE POLICIES</td>
</tr>
<tr>
<td>IL 01 68 03 12</td>
<td>TX CHANGES - DUTIES</td>
</tr>
<tr>
<td>PGL 025 11 03</td>
<td>LEAD EXCLUSION ENDORSEMENT</td>
</tr>
<tr>
<td>CG 21 54 01 96</td>
<td>EXCLUSION - DESIGNATED OPERATIONS COVERED BY A CONSOLIDATED (WRAP-UP) INSURANCE PROGRAM</td>
</tr>
<tr>
<td>CG 21 41 11 85</td>
<td>EXCLUSION - INTERCOMPANY PRODUCTS SUITS</td>
</tr>
<tr>
<td>CG 21 96 03 05</td>
<td>SILICA OR SILICA-RELATED DUST EXCLUSION</td>
</tr>
</tbody>
</table>

**ORRM 2008**
OLD REPUBLIC INSURANCE COMPANY

FORMS INDEX

FORMS MADE A PART OF THIS POLICY AT TIME OF ISSUANCE:

<table>
<thead>
<tr>
<th>Form Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGL 003 11 03</td>
<td>ASBESTOS EXCLUSION ENDORSEMENT</td>
</tr>
<tr>
<td>CG 21 47 12 07</td>
<td>EMPLOYMENT-RELATED PRACTICES EXCLUSION</td>
</tr>
<tr>
<td>CG 26 39 12 07</td>
<td>TX CHANGES - EMPLOYMENT - RELATED PRACTICES EXCLUSION</td>
</tr>
<tr>
<td>CG 21 67 12 04</td>
<td>FUNGI OR BACTERIA EXCLUSION</td>
</tr>
<tr>
<td>IL 00 21 09 08</td>
<td>NUCLEAR ENERGY LIABILITY EXCLUSION ENDORSEMENT</td>
</tr>
<tr>
<td>CG 21 65 12 04</td>
<td>TOTAL POLLUTION EXCLUSION WITH A BUILDING HEATING, COOLING AND DEHUMIDIFYING E</td>
</tr>
<tr>
<td>IL 09 85 01 15</td>
<td>DISCLOSURE PURSUANT TO TERRORISM RISK INSURANCE ACT</td>
</tr>
<tr>
<td>IL 09 90 01 15</td>
<td>MO - DISCLOSURE PURSUANT TO TERRORISM RISK INSURANCE ACT</td>
</tr>
<tr>
<td>CG 21 70 01 15</td>
<td>CAP ON LOSSES FROM CERTIFIED ACTS OF TERRORISM</td>
</tr>
</tbody>
</table>

ORRM 2008
ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

<table>
<thead>
<tr>
<th>Name Of Additional Insured Person(s) Or Organization(s)</th>
<th>Location(s) Of Covered Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>All persons or organizations when required by written contract or agreement</td>
<td>All Locations</td>
</tr>
</tbody>
</table>

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

<table>
<thead>
<tr>
<th>Name Of Additional Insured Person(s) Or Organization(s)</th>
<th>Location And Description Of Completed Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>All persons or organizations when required by written contract or agreement</td>
<td>All completed operations</td>
</tr>
</tbody>
</table>

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for “bodily injury” or “property damage” caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance**:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.
C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:
1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations; whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.
WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

| Name Of Person Or Organization: | When required by written contract |

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. Transfer Of Rights Of Recovery Against Others To Us of Section IV – Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.
primary and noncontributory – other insurance condition

this endorsement modifies insurance provided under the following:

commercial general liability coverage part
products/completed operations liability coverage part

the following is added to the other insurance condition and supersedes any provision to the contrary:

primary and noncontributory insurance

this insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

1) the additional insured is a named insured under such other insurance; and

2) you have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.
CANCELLATION OR NONRENEWAL BY US
NOTIFICATION TO A DESIGNATED ENTITY

This endorsement modifies insurance provided under the following:

BUSINESSOWNERS PACKAGE POLICY
CLAIMS-MADE EXCESS LIABILITY COVERAGE PART
COMMERCIAL AUTO COVERAGE PART
COMMERCIAL GENERAL LIABILITY COVERAGE PART
COMMERCIAL UMBRELLA LIABILITY COVERAGE PART
DENTIST’S PACKAGE POLICY
EXCESS LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS COVERAGE PART
PROFESSIONAL LIABILITY COVERAGE PART
PROFESSIONAL UMBRELLA LIABILITY COVERAGE PART
PROFESSIONAL UMBRELLA LIABILITY COVERAGE PART - CLAIMS-MADE

SCHEDULE

Name and mailing address of person(s) or organization(s):

The City of Ann Arbor
301 East Huron Street
PO Box 8647
Ann Arbor, MI 48107

Number of days notice (other than nonpayment of premium): 30

A. If we cancel or nonrenew this policy for any statutorily permitted reason other than nonpayment of premium we will mail notice to the person or organization shown in the Schedule. We will mail such notice at least the number of days shown in the Schedule before the effective date of cancellation or nonrenewal.

B. If we cancel this policy for nonpayment of premium, we will mail notice to the person or organization shown in the Schedule. We will mail such notice at least 10 days before the effective date of cancellation.

C. If notice is mailed, proof of mailing to the mailing address shown in the Schedule will be sufficient proof of notice.

D. In no event will coverage extend beyond the actual expiration, termination or cancellation of the policy.
This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

SCHEDULE

Designated Person(s) or Organization(s):

All persons or organizations where required by written contract.

WHO IS AN INSURED (SECTION II) is amended to include the person(s) or organization(s) shown in the above Schedule, but only with respect to "accidents" arising out of work being performed for such person(s) or organization(s).

As respects any person(s) or organization(s) shown in the above Schedule with whom you have agreed in a written contract to provide primary insurance on a non-contributory basis, this insurance will be primary to and non-contributing with any other insurance available to such person(s) or organization(s).
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

<table>
<thead>
<tr>
<th>Named Insured:</th>
<th>Fonson Company Inc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsement Effective Date:</td>
<td></td>
</tr>
</tbody>
</table>

SCHEDULE

<table>
<thead>
<tr>
<th>Name Of Person(s) Or Organization(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>As required by contract or agreement</td>
</tr>
</tbody>
</table>

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph A.1. of Section II – Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph D.2. of Section I – Covered Autos Coverages of the Auto Dealers Coverage Form.
THIS ENDORESEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

**Named Insured:** Fonson Company Inc.

**Endorsement Effective Date:**

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**SCHEDULE**

**Name(s) Of Person(s) Or Organization(s):**

Per contract specifications

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Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.
CANCELLATION OR NONRENEWAL BY US NOTIFICATION TO A DESIGNATED ENTITY

This endorsement modifies insurance provided under the following:

BUSINESSOWNERS PACKAGE POLICY
CLAIMS-MADE EXCESS LIABILITY COVERAGE PART
COMMERCIAL AUTO COVERAGE PART
COMMERCIAL GENERAL LIABILITY COVERAGE PART
COMMERCIAL UMBRELLA LIABILITY COVERAGE PART
DENTIST'S PACKAGE POLICY
EXCESS LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS COVERAGE PART
PROFESSIONAL LIABILITY COVERAGE PART
PROFESSIONAL UMBRELLA LIABILITY COVERAGE PART
PROFESSIONAL UMBRELLA LIABILITY COVERAGE PART - CLAIMS-MADE

MWC 312354 00

SCHEDULE

Name and mailing address of person(s) or organization(s):

The City of Ann Arbor
301 East Huron Street
PO Box 8647
Ann Arbor, MI 48107

Number of days notice (other than nonpayment of premium): 30

A. If we cancel or nonrenew this policy for any statutorily permitted reason other than nonpayment of premium we will mail notice to the person or organization shown in the Schedule. We will mail such notice at least the number of days shown in the Schedule before the effective date of cancellation or nonrenewal.

B. If we cancel this policy for nonpayment of premium, we will mail notice to the person or organization shown in the Schedule. We will mail such notice at least 10 days before the effective date of cancellation.

C. If notice is mailed, proof of mailing to the mailing address shown in the Schedule will be sufficient proof of notice.

D. In no event will coverage extend beyond the actual expiration, termination or cancellation of the policy.
POLICY NUMBER: MWC 312354 00

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

AS REQUIRED BY WRITTEN CONTRACT, TO THE EXTENT ALLOWABLE BY LAW.

DATE OF ISSUE:
GENERAL CONDITIONS

Section 1 - Execution, Correlation and Intent of Documents

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

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

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

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

Section 2 - Order of Completion

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

Section 3 - Familiarity with Work

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

The Bidder shall immediately notify the DDA 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

This project includes work for the City of Ann Arbor. 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 DDA, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section."

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

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

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

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

Section 5 - Non-Discrimination

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

Section 6 - Materials, Appliances, Employees

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

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

Adequate sanitary facilities shall be provided by the Contractor.
Section 7 - Qualifications for Employment

The Contractor shall employ competent employees, including supervisors, operators, and laborers for the work under this Contract.

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 DDA harmless from loss on account of infringement except that the DDA shall be responsible for all infringement loss when a particular process or the product of a particular manufacturer or manufacturers is specified, unless the DDA 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 of Ann Arbor and MDOT building permits, right-of-way permits, lane closure permits, right-of-way occupancy permits, and the like. The DDA 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 DDA. The Contractor shall obtain and maintain sufficient insurance to cover damage to any City/DDA 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 DDA 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 DDA 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 DDA 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 DDA or of its employees or by other Contractors employed by the DDA;
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 Ann Arbor DDA. 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 DDA will retain a percentage of the estimate in accordance with Act 524, Public Acts of 1980. The DDA 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 30 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 DDA 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 DDA 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 DDA 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 DDA 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 DDA 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 DDA within 30 days after the date of the final certificate.
Before issuance of final certificates, the Contractor shall file with the DDA:

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 DDA 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 DDA 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 DDA 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 DDA to the Contractor to do so. The DDA 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 DDA 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 DDA'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 DDA 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 DDA 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 DDA for any excess cost to the DDA. If the Contractor's right to proceed is terminated, the DDA 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 DDA, 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 DDA 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 DDA for any excess cost incurred. The expense incurred by the DDA, 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 DDA, terminate this Contract and recover from the DDA payment for all acceptable work executed plus reasonable profit.

Section 23 - DDA'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 DDA, 3 days after giving written notice to the Contractor and its surety may, without prejudice to any other remedy the DDA 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 DDA, shall promptly remove any part or all of its equipment and supplies from the property of the City/DDA, failing which the DDA 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 DDA and, if all costs of removal and storage are not paid by the Contractor within 10 days of invoicing, the DDA 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 DDA for damages to materials and equipment from any cause except negligence or willful act of the DDA. 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 or longer if stipulated in the Detailed Specifications. 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 DDA 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 DDA, the Supervising Professional shall issue to the Contractor a certificate of partial completion, and immediately the DDA 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 DDA 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 DDA 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 DDA which will protect the DDA in the amount withheld, payment shall be made for amounts withheld under this section.

Section 28 - Contractor's Insurance

1. This project includes work for the City of Ann Arbor and within MDOT and the City's rights-of-way. 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, MDOT (as required by MDOT), the City of Ann Arbor, and the DDA from all claims for bodily injuries, death or property damage which may arise under this Contract; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor or by any subcontractor or anyone employed by them directly or indirectly. In the case of all contracts involving on-site work, the Contractor shall provide to the DDA, before the commencement of any work under this contract, certificates of insurance and other documentation satisfactory to the DDA demonstrating it has obtained the policies and endorsements required on behalf of itself, and when requested, any subcontractor(s). The certificates of insurance endorsements and/or copies of policy language shall document that the Contractor satisfies the following minimum requirements.

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

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

(b) Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98 or current equivalent. The City of Ann Arbor, MDOT, and Ann Arbor DDA shall be named as an additional insured. There shall be no added exclusions or limiting endorsements specifically for the following coverages: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further there shall be no added exclusions or limiting endorsements which diminish MDOT's, the City’s, and DDA’s protections as an additional insured under the policy. The following minimum limits of liability are required:

- $1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.
- $2,000,000 Per Job General Aggregate
- $1,000,000 Personal and Advertising Injury
- $2,000,000 Products and Completed Operations Aggregate

(c) Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The City of Ann Arbor, MDOT, and Ann Arbor DDA shall be named as an additional insured. There shall be no added exclusions or limiting endorsements which diminish the City and DDA’s protections as an additional insured under the policy. Further, the limits of liability shall be $1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

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

(2) Insurance required under subsection (1)(b) and (1)(c) above shall be considered primary as respects any other valid or collectible insurance that the MDOT/City/DDA may possess, including any self-insured retentions the MDOT/City/DDA may have; and any other insurance the MDOT/City/DDA 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
(3) Insurance companies and policy forms are subject to approval of the DDA Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional 30 day written notice of cancellation in favor of the Ann Arbor DDA. 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 DDA, in its sole discretion; (c) that the policy conforms to the requirements specified Contractor shall furnish the DDA with satisfactory certificates of insurance and endorsements prior to commencement of any work. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) to the DDA. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the DDA at least ten days prior to the expiration date.

(4) 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 DDA.

(5) DDA reserves the right to require additional coverage and/or coverage amounts as may be included from time to time in the Detailed Specifications for the Project.

(6) The provisions of General Condition 28 shall survive the expiration or earlier termination of this contract for any reason.

**Section 29 - Surety Bonds**

Bonds will be required from the successful bidder as follows:

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

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

**Section 30 - Damage Claims**

The Contractor shall be held responsible for all damages to property of MDOT, the City of Ann Arbor, Ann Arbor DDA, 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 DDA.

Section 33 - Rights of Various Interests
Whenever work being done by the DDA’s forces, the City of Ann Arbor'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 DDA. The approval will not be given until the Contractor submits to the DDA a written statement concerning the proposed award to the subcontractor. The statement shall contain all information the DDA may require.

The Contractor shall be as fully responsible to the DDA 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 DDA 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 DDA.

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 DDA 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 DDA 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 DDA, 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 of Ann Arbor'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 DDA 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 of Ann Arbor approval) will be permitted except in the case of an emergency and then only to the extent absolutely necessary. The City of Ann Arbor 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 DDA is exempt from the assessment of State Sales Tax on its direct purchases. Contractors who acquire materials, equipment, supplies, etc. for incorporation in DDA projects are not likewise exempt. State Law shall prevail. The Bidder shall familiarize itself with the State Law and prepare its Bid accordingly. No extra payment will be allowed under this Contract for failure of the Contractor to make proper allowance in this bid for taxes it must pay.
Section 43

CONTRACTOR'S DECLARATION

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

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

Contractor ___________________________ Date ___________________________

By ___________________________
(Signature)

Its ___________________________
(Title of Office)

Past due invoices, if any, are listed below.
Section 44

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, _____________________________, represents that on __________, 20___, it was awarded a contract by the Ann Arbor DDA 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 Ann Arbor DDA.

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 Ann Arbor DDA.

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

 Contractor _____________________________ Date _____________________________

By _____________________________
(Signature)

Its _____________________________
(Title of Office)

Subscribed and sworn to before me, on this ____ day of __________, 20___
_______________________________, ____________ County, Michigan

Notary Public

______________________________ County, MI
My commission expires on:
STANDARD SPECIFICATIONS

All work under this contract shall be performed in accordance with the Public Services Department Standard Specifications in effect at the date of availability of the contract documents stipulated in the Bid. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents.

Standard Specifications are available online:
http://www.a2gov.org/departments/engineering/Pages/Engineering-and-Contractor-Resources.aspx
NOTE: This project is being completed by the Ann Arbor Downtown Development Authority (DDA) and is located in the City of Ann Arbor (City). The Huron Street right-of-way is under the jurisdiction of the Michigan Department of Transportation (MDOT). The design, engineering, and construction requirements of both the City and the MDOT are referenced in these project specifications where appropriate, and work shall be completed in compliance with the requirements of both entities. In cases of a discrepancy between the requirements of the two entities, the requirements of MDOT shall prevail, unless otherwise directed by the DDA.

The DDA is pursuing a permit to work within the right of way from MDOT prior to the work commencing. The contractor will be responsible for implementing the project consistent with the permit conditions required by MDOT, and the approved plans and specifications.

Both the DDA and the City will be engaged in the administration of the construction contract, with the DDA taking a lead role. References in these construction documents to either entity, whether mentioned singularly or together, shall be considered to include both entities.

This project involves the removal and reconstruction of the Huron Street sidewalk zones, including new poured concrete walks, precast concrete unit pavers, street lighting, curbed planters, landscaping and site amenities, and also includes limited amounts of new road curb and storm water sewer work.

The Contractor is reminded as to the requirements of article 104.07 of the 2012 edition of the MDOT Standard Specifications, “Cooperation by the Contractor.”

The Contractor shall directly coordinate his/her work with the DDA.

The Contractor is hereby notified that the City of Ann Arbor Field Services Unit may be installing traffic control conduits, traffic signal sensors, and the like, at various locations.

DTE Energy will be performing work on the south side of the Huron Street right of way, from Fourth Avenue to Thayer Avenue. The work is anticipated to begin in the early spring and conclude around the end of July. The DTE gas main project is anticipated to start at Fourth Avenue, and continue east, and be substantially completed in the area between Fourth and Division prior to the Huron Street Sidewalk Project advancing work in this area. The work anticipated to be part of the DTE project includes pavement removal, curb removal (where required), gas main installation, connection to gas services and temporary paving and site restoration. The work is anticipated to require the closure of the southernmost traffic lane, and temporary closures of streets intersecting with Huron. Since the work areas of DTE gas main replacement and this project overlap, the Contractor is responsible for providing all reasonable accommodations to coordinate the construction of the Huron Street Sidewalk Project with the DTE gas main project, including, but not limited to the following:

- Mutual use of the lane closures
- Project Schedules
- Management of Traffic Maintenance Devices
- Access management for pedestrians, transit buses, and temporary drives and walks
• Communication with the property owners, tenants, DDA, DTE, City of Ann Arbor, and MDOT
• Coordination Meetings

Please refer to the Progress Clause for additional information on proposed project phasing and schedule.

The Contractor is hereby notified that Private Developers may be staging their construction and/or maintenance work within the Huron Street right-of-way. No additional compensation will be paid to the Contractor for coordinating his/her work with the Developer.

No additional compensation will be paid to the Contractor, and no adjustments to contract unit prices will be made, due to delays and/or the failure of others in the performance of their work, nor for delays due to the encountering of existing utilities that are, or are not, shown on the Plans.

The following Utility Owners (and others) may have overhead and/or underground facilities located within the Right-of-Way:
  • DTE - MichCon (Michigan Consolidated Gas Company) DTE - Edison (Detroit Edison Company)
  • SBC - (Ameritech)
  • Comcast
  • MCI Communications
  • Sprint Communications
  • The City of Ann Arbor

On all projects:
“3 Working Days before you Dig - Call MISS DIG - Toll Free” Phone No. 1-800-482-7171.

The Owners of public or private utilities which will not interfere with the completed project and which do not present a hazard to the public or an extraordinary hazard to the Contractor's operations will not be required to move their facilities on or from the street right-of-way.

Stoppages created solely by the operations of the utility companies which delay utility revisions on any portion of this project may be considered as a basis of claim for an extension of time for project completion. Costs for this work will not be paid for separately but shall be included in the bid price of the Contract Item “General Conditions.”
DETAILED SPECIFICATION
FOR
DISPOSING OF EXCAVATED MATERIAL

The Contractor shall dispose of, at the Contractor’s expense, all excavated material. Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

DETAILED SPECIFICATION
FOR
INSURANCE REQUIREMENTS

In addition to the insurance requirements noted in Section 28 of the General Conditions, the following agencies must be listed as additional insured:

“Ann Arbor Downtown Development Authority”
DETAILED SPECIFICATION
FOR
PROTECTION OF UTILITIES

Damages to utilities by the Contractor's operations shall be repaired by the utility owner at the Contractor's expense.

Delays to the work due to utility repairs are the sole responsibility of the Contractor.

The Contractor shall keep construction debris out of utilities at all times. The Contractor shall be back charged an amount of $50.00 per day for each manhole/inlet/utility pipe that contains construction debris caused as a result of the Contractor's (including subcontractors and suppliers) work.

The Contractor is solely responsible for any damages to the utilities or abutting properties due to construction debris.

Certain sanitary and storm sewers within the influence of construction may have been cleaned and videotaped prior to construction. The City may also choose to videotape utility line(s) during or after the work of this Contract to inspect them for damages and/or construction debris. If such inspection shows damage and/or debris, then all costs of such inspection, cleaning, repairs, etc., shall be the Contractor's sole responsibility. If such inspection is negative, the City will be responsible for the costs of such inspection.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."
DETAILED SPECIFICATION
FOR
SOIL EROSION CONTROL

The Contractor shall maintain and remove soil erosion and sedimentation control measures, including but not limited to, fabric filters at all drainage structures, all in accordance with all applicable City (and other governmental agencies) codes and standards, as directed by the Engineer, Supervising Professional, as detailed in the Standard Specifications, and as shown on the Plans.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."
DETAILED SPECIFICATION
FOR
VACUUM TYPE STREET AND UTILITY STRUCTURE CLEANING EQUIPMENT

The Contractor shall furnish and operate throughout the construction period, vacuum type street cleaning and utility structure cleaning equipment (Vac-All, Vactor, etc.) approved by the Engineer, as and when directed by the Engineer for dust control, for dirt/debris control, and for street cleaning immediately prior to, and for street and utility structure cleaning after any and all paving. The cleaning equipment shall be of sufficient power to remove dust, dirt, and debris from the pavement and from utility structures in and adjacent to the construction area.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."
DETAILED SPECIFICATION
FOR
SITE CLEAN-UP

Immediately after completion of construction on each block, the Contractor shall clean the entire area within the influence of construction, including but not limited to all pavement, sidewalks, lawn areas, and underground utility structures, of all materials which may have accumulated prior to or during the construction.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."
DETAILED SPECIFICATION
FOR
MATERIALS AND SUPPLIES CERTIFICATIONS

The following materials and supplies shall be certified by the manufacturer or supplier as having been tested for compliance with the Specifications:

- HMA materials
- Hot-poured Joint Sealants
- Cements, coatings, admixtures and curing materials
- Sands and Aggregates
- Steel and Fabricated metal
- Portland Cement Concrete Mixtures
- Reinforcing Steel for Concrete
- Reinforcing Fibers for Concrete
- Pre-cast Concrete products
- Sanitary Sewer Pipe
- Storm Sewer Pipe
- Water Main Pipe
- Corrugated Metal Pipe
- High Density Polyethylene Pipe
- Timber for retaining walls
- Modular Concrete Block for retaining walls
- Edge Drain and Underdrain Pipe
- Geotextile Filter Fabric and Stabilization Fabric/Grids

The Contractor shall submit all certifications to the Engineer for review and approval a minimum of three business days prior to any scheduled delivery, installation, and/or construction of same.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."
The Contractor shall carefully check and review all Drawings/Plans and advise the Engineer of any errors or omissions discovered. The Drawings/Plans may be supplemented by such additional Drawings/Plans and sketches as may be necessary or desirable as the work progresses. The Contractor shall perform all work shown on any additional or supplemental Drawings/Plans issued by the Engineer.
DETAILED SPECIFICATION
FOR EXISTING
SOIL BORING AND PAVEMENT SECTION DATA

Data pertaining to existing soil borings and pavement sections which may be included in these Contract Documents are provided to help the Engineer and Contractor determine the soil conditions existing within the construction area. The City in no way guarantees existing conditions to be the same as shown in the data. The Contractor is solely responsible for any and all conclusions he/she may draw from the data.
DETAILED SPECIFICATION
FOR
WORKING IN THE RAIN

The Contractor shall not work in the rain unless authorized in writing by the Engineer.

The Engineer may delay or stop the work due to threatening weather conditions.

The Contractor shall not be compensated for unused materials or downtime due to rain, or the threat of rain.

The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the rain.
DETAILED SPECIFICATION
FOR
WORKING IN THE DARK

The Contractor shall not work in the dark except as approved by the Engineer and only when lighting for night work is provided as detailed elsewhere in this contract.

The Engineer may stop the work, or may require the Contractor to defer certain work to another day, if, in the Engineer's opinion, the work cannot be completed within the remaining daylight hours, or if inadequate daylight is present to either properly perform or inspect the work.

The Contractor will not be compensated for unused materials or downtime, when delays or work stoppages are directed by the Engineer for darkness and/or inadequate remaining daylight reasons.

The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the dark.
DETAILED SPECIFICATION
FOR
QUANTITIES AND UNIT PRICES

Quantities as given are approximate and are estimated for bidding purposes. Quantities are not guaranteed and may vary by any amount. While it is the City of Ann Arbor and the DDA's intent to complete the project substantially as drawn and specified herein, quantities may be changed or reduced to zero for cost savings or other reasons. The City of Ann Arbor and the DDA reserve the right to change the quantities and no adjustment in unit price will be made for any change in any quantity.
The following notes pertain to all Plan sheets issued as part of this Contract, and these notes shall be considered part of each Plan sheet or Detailed Information Sheet.

1. All work shall conform to latest revision of the City Standard Specifications.

2. The Contractor shall maintain access to all drives throughout the course of construction. Drives shall never be closed during non-working hours, unless otherwise authorized in writing by the Engineer.

3. The Contractor shall completely restore all existing site features to better than, or equal to, their existing condition.

4. The Contractor shall be aware that there are above-ground and below-ground utilities existing in and on these streets which include, but are not limited to: gas mains and service leads; water mains and service leads; storm sewer mains and service leads; sanitary sewer mains and service leads; telephone poles, wires, cables and conduits; electrical poles, wires, cables and conduits; cable television wires, cables and conduits, and other various utilities. The Contractor shall conduct all of its work so as not to damage or alter in any way, any existing utility, except where specified on the Plans or where directed by the Engineer. The City has videotaped and cleaned all sanitary and storm sewers, including storm sewer inlet leads, and has found all of these facilities to be in good condition, with the exception of those shown on the Plans for repairs or replacement.

5. The Contractor is solely responsible for any delays, damages, costs and/or charges incurred due to and/or by reason of any utility, structure, feature and/or site condition, whether shown on the Plans or not, and the Contractor shall repair and/or replace, at its sole expense, to as good or better condition, any and all utilities, structures, features and/or site conditions which are impacted by reason of the work, or damaged by its operations, or damaged during the operations of its subcontractors or suppliers.

6. No extra payments or adjustments to unit prices will be made for damages, delays, costs and/or charges due to existing utilities, structures, features and/or site conditions not shown or being incorrectly shown or represented on the Plans.

7. The Contractor is solely responsible for furnishing the appropriate equipment and qualified personnel for the size and condition of the site and the requirements of the proposed work. Damage to buildings, amenities, utilities, paving, and facilities within and adjacent to the work area, and to work already performed by the Contractor shall be the responsibility of the Contractor to repair as needed, at no cost to the project.
DETAILED SPECIFICATION
FOR
CONCRETE DURABILITY

DESCRIPTION

The Contractor shall furnish a Portland cement concrete mixture for this project that has been tested under this specification and shown to be resistant to excessive expansion caused by alkali-silica reactivity (ASR) and provides adequate air entrainment for freeze thaw durability. The Contractor shall construct the project with practices outlined in this specification.

MATERIALS

The materials provided for use on this project shall conform to the following requirements:

- Portland cement: ASTM C 150
- Fine Aggregate: ASTM C 33*
- Coarse Aggregate: ASTM C 33*
- Fly Ash, Class F: ASTM C 618
- Slag Cement, Grade 100, 120: ASTM C 989
- Silica Fume: ASTM C 1240
- Blended Cements: ASTM C-595
- Air Entraining Admixtures: ASTM C-260
- Chemical Admixtures: ASTM C-494
- White Membrane Cure: ASTM C-309 Type 2

* Fine and coarse aggregates shall consist of natural aggregates as defined in the 2012 MDOT Standard Specifications Section 902.02.A.1.

The Contractor shall provide documentation that all materials to be incorporated into proposed mixed designs meet the requirements of this section.

Alkali-Silica Reactivity

The Contractor shall supply to the Engineer preliminary concrete mix designs including a list and location of all suppliers of concrete materials. The Contractor shall evaluate the mixtures for the potential for excessive expansion caused by ASR and provide documentation to the Engineer. The Contractor’s evaluation shall include a review of any previous testing of the material sources intended to be used for both the fine and coarse aggregates for the concrete mixtures. The previous testing may be from other projects or records provided by the material suppliers.

Aggregates shall be tested under ASTM C-1260. If the expansion of the mortar bars is less than 0.10%, at 14 days, the aggregates shall be considered innocuous and there are no restrictions for ASR mitigation required with this material.

Previous aggregate test data may be used. If no previous test data is available, for the concrete mix, that shows that it is resistant to ASR, a concrete mixture that will mitigate the potential for ASR must be designed using either method 1 or 2 as described below.

Method 1. Substitution of a portion of the cement with Class F Fly Ash, Slag Cement Grade 100 or
120 or a ternary mix (blended cement) containing a blend of Portland cement and slag cement, or Class F fly ash, or silica fume.

The maximum substitution of cement with the fly ash permitted shall be 25% by weight of total cementitious material (cement plus fly ash). Additional requirements for the Fly Ash, Class F are that the Calcium Oxide (CaO) percent shall be less than 10% and the available alkalis shall not exceed a maximum of 1.5%. A copy of the most recent mill test report shall be submitted to verify. Note: a Class C fly ash with a minimum total oxides (SiO2 + Al2O3 + Fe2O3) of 66% and a minimum SiO2 of 38% may be used in lieu of Type F fly ash.

The maximum substitution of cement with the Slag Cement permitted shall be 40% by weight of total cementitious material (cement plus Slag Cement). The minimum replacement rate with Slag Cement shall be 25%.

For a ternary blend the total replacement of supplementary cementitious materials is 40% with a blend consisting of a maximum of 15% type F fly ash, and/or 8% silica fume and/or slag cement.

For method 1, the effectiveness of the proposed mix combination to resist the potential for excessive expansion caused by ASR shall be demonstrated using current or historic data. To demonstrate the effectiveness of the proposed mix the Contractor shall construct and test mortar bars per ASTM C1567 (14 day test) using both the fine and coarse aggregate along with the proposed cementitious material for the concrete mixture. If a mortar bar constructed of these materials produces an expansion of less than 0.10%, concrete mixture will be considered to be resistant to excessive expansion due to ASR.

If a mortar bar constructed produces an expansion of 0.10% or greater, concrete mixtures containing these materials shall not be considered resistant to the potential for excessive expansion due to ASR and shall be rejected. Additional testing, including alternate proportions or different materials will be required.

**Method 2.** Use low alkali cement and maintain the total alkali content from the cementitious at no more than 3.0 lbs/cyd (Na2Oeq). The total alkali contribution is calculated by the quantity contained in the Portland cement only.

Requirements for Low Alkali Cement are that the alkali content does not exceed 0.60% expressed as Na2O equivalent. Equivalent sodium oxide is calculated as: \(\text{percent Na2O} + 0.658 \times \text{percent K2O}\).

For either method 1 or 2, if the Contractor intends to change any component material supplied after the mix design has been approved all concrete work will be suspended with no cost to the project or extensions of time, unless approved, until evaluation of the new mixtures and testing of the new materials demonstrates that it is resistant to excessive expansion due to ASR.

The Engineer and Contractor shall monitor the concrete that is delivered to the project site so as to insure that the approved mix design is being followed. The supplier shall include on the delivery ticket for each batch of concrete delivered to the job, the identification and proportions of each material batched.

When concrete is placed during cold weather, defined for the purposes of this Detailed Specification to be, air temperatures below 40º F, the use of accelerators, heated aggregates, silica fume and/or additional forms of cold weather protection will be required. Cold weather will not eliminate the requirement for furnishing and placing a concrete mix that is considered resistant to ASR attack.
Prior to cool weather placement, defined for the purposes of this detailed specification to be, air temperatures between 40º and 60º F, the set time of the proposed mix shall be verified under anticipated field conditions. This information shall be used when scheduling pours and saw crews.

**Air Entrainment**

Air entrainment shall be accomplished by addition of an approved air entraining agent. Air content as determined by ASTM C 231 or ASTM C 173, shall be determined on each day of production as early and as frequently as necessary until the air content is consistently acceptable. If during the period of time while adjustments are being made to the concrete to create a mixture that is consistently acceptable, concrete is produced that does not meet the requirements of this Detailed Specification, the Engineer may reject the material and direct it to be removed from the jobsite. Any rejected material shall be removed from the jobsite at the Contractor’s sole expense. Quality Control testing performed by the Contractor to ensure compliance with the project specifications shall be performed on the grade ahead of the placement operation.

**Paver placement:** During production, the plastic concrete material shall be tested for acceptance at a point ahead of the paver. The air content of the concrete mixture that the Contractor shall provide shall be known as the Acceptance Air Content (AAC). The Contractor shall also provide additional entrained air in the concrete mixture to account for the air loss which occurs in the concrete mixture experienced during transportation, consolidation and placement of the concrete. The “air loss” shall be added to the air content of the concrete mixture as established on the approved concrete mix design. The AAC for the project will be 6.0% plus an amount equal to the air loss.

For up to the first four loads, the air content measured on-site prior to placement shall be at least 8.0% and no more than 12.0%. To establish the initial AAC on the first day of paving, the air content of the first load shall be tested at the plant. After initial testing at the plant the Contractor shall provide at least two sample sets to determine the actual air loss during placement. A sample set shall consist of two samples of concrete from the same batch, one taken at the point of discharge and the other from the in-place concrete behind the paver. The air loss from the two sample sets shall be averaged and added to 6.0% to establish the AAC (rounded to the next higher 0.5%). After the testing and adjustment procedure(s) have been completed, the project acceptance air tests shall be taken prior to placement. The Contractor shall provide concrete to the jobsite that has an air content of plus 2.0%, or minus 1.0%, of the AAC.

After the AAC has been established, it shall be verified and/or adjusted through daily checks of the air loss through the paver. The Contractor shall check the air loss through the paver a minimum of two times a day. A Revised AAC shall be required to be established by the Contractor if the average air loss from two consecutive tests deviates by more than 0.5% from the current accepted air loss. The testing operations performed by the Contractor to establish a revised AAC shall be performed to the satisfaction of the Engineer. The Contractor shall be solely responsible for any delays and/or costs that occur to the project while establishing revised AACs.

**Hand placed concrete:** The air content for non-slip-form paving shall be 7.0% plus 1.5%, or minus 1.0%, at the point of placement.

**CONSTRUCTION METHODS**

**Aggregate Control**

**Gradation control** – The supplier shall provide a detailed stockpile management plan, describing
their process control procedure for shipping, handling, and stockpiling of each aggregate including workforce training.

**Moisture control** – All aggregate materials must be conditioned to a moisture content of not less than saturated surface dry (SSD) prior to batching. A watering process using an effective sprinkler system designed and operated by the Contractor shall be required on all coarse aggregate material stockpiles.

The Contractor shall provide verification that these processes have been performed by the supplier. The Engineer reserves the right to independently verify that the supplier has complied with these standards.

**Mixing**

**Central mix plants** - The total volume of the batch shall not exceed the designated size of the mixer or the rated capacity as shown on the manufacturer's rating plate.

**Drum Mix Plants:** After all solid materials are assembled in the mixer drum; the mixing time shall be a minimum of 60 seconds and a maximum of 5 minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall start after the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer throughout the charging cycle. Any additional slump water required shall be added to the mixing chamber by the end of the first 25% of the specified mixing time. Mixers shall not be used if the drum is not clean or if the mixing blades are damaged or badly worn.

**Ribbon mixers:** After all solid materials are assembled in the mixer; the mixing time shall be a minimum of 30 seconds and a maximum of 2.5 minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall be indicated by an accurate timing device which is automatically started when the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer throughout the charging cycle. After any additional slump water is added to the mixing chamber the mixing shall continue for a minimum of 10 seconds. Mixers shall not be used if the mixer is not clean or if the mixing blades are damaged or badly worn.

**Truck Mixers** - The capacities and mixing capabilities shall be as defined in ASTM C 94, and each unit shall have an attached plate containing the information described therein. The plate may be issued by the Truck Mixer Manufacturer. The mixer capacity shall not be exceeded, and the mixing speeds shall be within the designated limits. Truck mixers shall be equipped with a reliable reset revolution counter. If truck mixers are used for mixing while in transit, the revolution counter shall register the number of revolutions at mixing speed.

An authorized representative of the concrete producer shall certify that the interior of the mixer drum is clean and reasonably free of hardened concrete, that the fins or paddles are not broken or worn excessively, that the other parts are in proper working order, and that the unit has been checked by the representative within the previous 30 calendar day period to substantiate this certification. The current, signed certification shall be with the unit at all times.
The required mixing shall be between 70 and 90 revolutions. The mixing shall be at the rate designated by the manufacturer and shall produce uniform, thoroughly mixed concrete.

The Engineer may inspect mixer units at any time to assure compliance with certification requirements, and removal of inspection ports may be required. Should the Engineer question the quality of mixing, the Engineer may check the slump variation within the batch. Should the slump variation between two samples taken, one after approximately 20% discharge and one after approximately 90% discharge of the batch, show a variation greater than 3/4 inch (20 mm) or 25% of the average of the two, whichever is greater, the Engineer may require the mixing to be increased, the batch size reduced, the charging procedure be modified or the unit removed from the work.

The practice of adding water on the site shall be discouraged. After the slump of the concrete in the first round of trucks has been adjusted on-site, the amount of water added at the plant shall be adjusted accordingly for that day’s work. All additions of water on site shall be approved by the Engineer.

**Curing**

Apply liquid curing compound in a fine atomized spray to form a continuous, uniform film on the horizontal surface, vertical edges, curbs and back of curbs immediately after the surface moisture has disappeared, but no later than 30 minutes after concrete placement. With approval of the Engineer, the timing of cure application may be adjusted due to varying weather conditions and concrete mix properties.

The cure system shall be on site and tested prior to concrete placement.

Apply a curing compound at a rate of application not less than 2 gallons per 25 square yards. The Contractor shall keep the material thoroughly mixed per the Manufacturer’s recommendations. The curing compound shall not be diluted.

The finished product shall appear as a uniformly painted solid white surface. Areas exhibiting a blotchy or spotty appearance shall be recoated immediately.

**COMPLIANCE WITH STANDARDS**

The Engineer will review and approve all material test reports and mix designs supplied by the Contractor before any placement of concrete. The Engineer will visually inspect the placed concrete and review the concrete test reports prior to final acceptance.

Acceptance sampling and testing will be performed using the sampling method and testing option selected by the Engineer. Acceptance testing will be performed at the frequency specified by the Engineer. Quality control measures to insure job control are the responsibility of the Contractor. The Engineer’s testing and/or test results will not relieve the Contractor from his/her responsibilities to produce, deliver, and place concrete that meets all project requirements. The Engineer’s test results are for acceptance purposes only.

If the results of the testing are not in compliance with the project specifications, the Engineer shall determine appropriate corrective action(s). Time extensions will not be granted to the Contractor during the time that the Engineer is determining the necessary corrective actions.

If, in the Engineer’s judgment, the rejected material must be replaced, the material in question will be removed and replaced at the Contractor’s sole expense. The removal costs will be deemed to include all relevant and associated costs including, but not limited to; re-mobilization, traffic control, re-grading the aggregate base course, if required, placement of material meeting the project specifications, and all other
expenses. Time extensions will not be granted to the Contractor for any required repair work to meet the requirements of this specification.

If the Engineer decides that the material in question can remain in place, an adjustment to the contract unit price(s) may be made of up to 100% of the bid price(s) for the affected items of work.

**MEASUREMENT AND PAYMENT**

The cost associated with complying with the requirements as described herein, including any required remedial action(s), shall be included in the cost of other items of work and shall not be paid for separately.
Plant Material Source
The Ann Arbor Downtown Development Authority is pre-purchasing the street trees for this project from a southeast Michigan landscape supplier in order to ensure the availability of the specified trees and the quality of the tree stock. The supply of all other plants and landscape materials will be the responsibility of the landscape contractor.

The specified street trees will be provided to the landscape contractor at no cost. The Contractor will be responsible for coordination with the tree supplier regarding the shipment of the trees to either the landscape contractor’s yard, or the job site. The landscape contractor will be expected to inspect the trees upon delivery and accept or reject the trees as to their health and general condition. Once the trees have been delivered from the supplier, the landscape contractor will be responsible for the care and livelihood of the trees. If, through poor care or negligence, the trees become unhealthy or otherwise unacceptable once they have been delivered to and accepted by the landscape contractor, the cost of replacing the tree will solely be the responsibility of the landscape contractor.

As part of this purchasing effort the DDA will be purchasing quantities of trees above the specified number being installed. These additional trees will be available from the supplier to be used in warrantee replacement and will be provided for use by the contractor for no cost, assuming that the need to replace the previously installed tree is not because of poor care or negligence by the landscape contractor. All other labor, equipment, and materials required to install the warrantee plant materials will be the responsibility of the landscape contractor.

Warranty and Maintenance Period:
The end of the warranty and maintenance period shall be:

- October 31 – one year following fall Substantial Completion.
- June 30 – one year following spring Substantial Completion.

Warrantee Conditions:
Prior to and during the warranty and maintenance period, replace any plants that are damaged, dead, or, in the opinion of the Engineer, are unhealthy, or have lost more than 25% of their natural shape due to dead branches, excessive pruning or improper maintenance. Rejected plant materials shall be removed from the site immediately after being rejected and legally disposed off-site. Replacement plants shall be installed within 2 weeks following the inspection unless otherwise agreed to in writing by the Owner.

Only one replacement of any plant is required after Substantial Completion, except for losses due to failure to comply with specified installation and/or maintenance requirements.

Make replacements in accordance with the original specifications, plant list, and notes. Fully restore areas damaged by replacement operations to their original and specified condition.

The Contractor will not be held responsible for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents beyond landscape installer's control which result from hail storms, winds over 100 miles per hour, fires or vandalism, unless Contractor has not completed specified installation in a manner that could have protected the landscaping from these phenomena.

If, in the opinion of the Engineer, it is advisable to extend the warranty and maintenance period for an additional growing season, the contractor will be notified of such requirement by the Owner. Improper
planting and/or failure to perform and document the specified maintenance in accordance with contract requirement shall be the basis for extending the period of establishment for a second growing season. All specified maintenance and warranty requirements will be required during this extended period and all costs shall be the responsibility of the Contractor.

**MEASUREMENT AND PAYMENT**

The cost associated with complying with the requirements as described herein, including any required remedial action(s), shall be included in the cost of other items of work and shall not be paid for separately.
PROGRESS CLAUSE: The Notice to Proceed is expected on February 7, 2019. In no case shall any work be commenced prior to receipt of formal notice of award by the Ann Arbor Downtown Development Authority (DDA).

All work in this contract shall be completed on or before November 30, 2019.

The work shall be completed in a methodical sequence of activity (or “stages”) moving through the project site, as indicated on the Construction Phasing Plan and Traffic Maintenance Plans; and within the Phases noted on the plans and herein. The Contractor may propose alternative ideas to the phasing and scheduling of the work for consideration by the City of Ann Arbor and the DDA. If, after consideration, the Engineer believes that the alternative proposed is beneficial to the City and DDA, they may opt to accept the proposed alternative.

The Phasing Plan has been developed in cooperation with DTE, in order to facilitate the construction schedules of both projects.

In general, terms the Streetscape project will proceed in two phases, the south side of the corridor as Phase One, and the north side as Phase Two. The work within each phase shall be coordinated to ensure that no more than three blocks of sidewalk are in a temporary access condition at one time (i.e., without a clear poured concrete sidewalk path to all building doorways.)

Phase One work will start on the western end of the project area and proceed east no later than April 1, 2019. At the same approximate time, the DTE project, which impacts primarily the south side of the street will begin at Fourth Avenue and proceed east. As the Streetscape project moves east, and begins work near Fourth Avenue, the DTE work will largely be completed up to Division Street (though the work by DTE will continue along the south side of Huron concurrent to the Streetscape project to the east of Division Street). Portions of the southernmost lane of Huron Street will be closed throughout Phase One work. Except for landscape installations, the work of Phase One will be substantially complete by July 12, 2019.

Phase One work will start on the north side of Huron Street at the eastern end of the project area and proceed west no later than June 17, 2019. Portions of the southernmost lane of Huron Street will be closed throughout Phase Two work. Except for landscape installations, the work of Phase Two will be substantially complete by October 11, 2019.

Work must be sequenced such that ADA-compliant and concrete paved thru pedestrian access on each side of each block is restricted no longer than 28 consecutive calendar days. Within those 28 days, temporary ADA-compliant pedestrian access into each business must be maintained during the business’ hours. Continuous, thru pedestrian access must be maintained on at least one side of each block at all times.

Pedestrian access to all business, public and private buildings must be maintained throughout the construction period. Pedestrian crossing of Huron Street at intersections shall always be maintained on at least one side of the intersection. All pedestrian access shall be ADA compliant.

Vehicular and pedestrian access must be provided to parking lots, service areas, and alleys that are accessed from Huron Street, at all times. Work in these areas will be coordinated to provide, at a minimum, partial
width and temporary access as needed. The contractor will be required to coordinate and communicate with property owners and tenants that may be impacted by limited access to their facilities.

Landscape maintenance will occur from November 2019 – November 2021.

The Contractor may propose to adjust the limits or sequencing of construction in order to complete the work more efficiently. Changes to the recommended construction sequence must be approved in writing by the Engineer prior to construction and must assure all required coordination with other projects and time lines.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment, and work throughout all authorized hours in order to complete the project by the final completion date. Costs for the Contractor to organize, coordinate, and schedule all of the work of the project, will not be paid for separately, but shall be included in the bid price of the Contract Item “General Conditions.”

Liquidated damages will be charged for delays within each phase, in the amount of $500 per calendar day. This includes delays to pedestrian access as specified above.

The approved low bidder(s) for the work covered by this proposal will be required to meet with the Engineer to work out a detailed Progress Schedule. The schedule for this meeting will be set within two weeks after the approved low bidder is determined. The low bidder will also submit for review and approval a sequence of operation/staging plan to complete the work by the specified completion date.

The named subcontractor(s) for Specialty and/or Designed Items (if such items are designated in the proposal) which materially affect the work schedule shall also be present at the scheduled meeting, and they will be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule.

The Engineer will arrange the time and place for the meeting.

The Plans and Special Provisions describe further logistics, coordination and scheduling requirements of the Project, which shall be included in the Progress Schedule and otherwise conformed to. Work will be allowed from 7am – 8pm, Monday – Saturday.

Work beyond these hours is subject to the approval of the Engineer, and subject to approval of an extended hours work permit application by the City of Ann Arbor.

No work may be performed on Memorial Day, Independence Day, Labor Day or on the event dates shown below:

- The week of the Ann Arbor Street Art Fair, July 15 through July 21, 2019

Any costs associated with down time, demobilizing/remobilizing, temporary paving or restoration, temporary pavement markings, and removal/replacement of traffic control devices required due to these events and downtimes shall be included in contract pay item "Item No 101, General Conditions," and it will not be paid for separately.
DESCRIPTION

This item shall include all work described and required by the Plans and Specifications for which no item of work is listed in the Bid Form, including but not limited to:

- Scheduling and organization of all work, subcontractors, suppliers, testing, inspection, surveying, and staking
- Providing and coordinating the review of all project submittals and testing.
- Coordination of, and cooperation with, other contractors, agencies, departments, and utilities
- Protection of Utilities
- Placing, maintaining, and removing all soil erosion and sedimentation controls
- Maintaining drainage
- Maintaining drives, drive openings, sidewalks, pedestrian building access, mail deliveries, and solid waste/recycle pick-ups
- Storing all materials and equipment off lawn areas
- Coordination efforts to furnish various HMA mixtures as directed by the Engineer
- Furnishing and operating vacuum-type street cleaning equipment
- Furnishing and operating vacuum-type utility structure cleaning equipment
- Furnishing and operating both vibratory plate and pneumatic-type (“pogo-stick”) compactors
- Furnishing and operating all equipment required to completed the proposed work activities as specified
- Noise and dust control
- Furnish and install temporary barricades and fencing at excavation areas to protect workers and people in the work area.
- Mobilization(s) and demobilization(s)
- Furnishing submittals and certifications for materials and supplies
- Disposing of excavated materials and debris
- All miscellaneous and incidental items such as overhead, insurance, and permits.
- Interim and final site cleanup, including, but not limited to removal and disposal of excess materials, removal of all dirt and deleterious materials, power washing pavements, removal of all packing materials and labels, etc.

MEASUREMENT AND PAYMENT

This item of work will be paid for on a pro rata basis at the time of 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.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Conditions, Max $150,000</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>
The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the City Standard Specifications and as modified by this Detailed Specification.
DETAILED SPECIFICATION
FOR
ITEM #102 – AUDIO VISUAL TAPE COVERAGE

DESCRIPTION

This work shall include digital audiovisual 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 construction.

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 four (4) week period immediately prior to the start of construction.
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. Carried-out under the supervision of the Engineer.

The Contractor shall furnish one (1) copy of the completed audiovisual record to the Engineer. An index of the footage shall be included, which will enable any particular area of the project to be easily found. This includes indexing the files according to street. The Contractor shall retain a second copy of the audiovisual record 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.

PRODUCTION

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

1. DVD Format, No Editing - The filming shall be done in color 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 videotaping equipment and 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 recording 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, where applicable, 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, street address, 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. 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 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.

4. 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. The Contractor shall notify the Engineer in writing in the event that the weather or snow cover is anticipated to cause a delay in filming.

**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 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. The filming shall include all the street adjacent walls of the basements and vaults of buildings in the project area. The Contractor shall request access from building owners, and document the buildings for which access was denied or otherwise not reasonably made available.

3. Other Areas - The Contractor shall film at his/her opinion, the establishment of a record of existing conditions is warranted. The Contractor shall notify the Engineer in writing in the event that the weather or snow cover is anticipated to cause a delay in filming.

4. Street List – This item shall include the filming all of the streets as listed in the Detailed Specification for Progress Schedule and Construction Limits.

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

**AUDIOVISUAL 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
- Topo Video, Inc.
- Video Media Corp.

**MEASUREMENT AND PAYMENT**

The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:
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, for each and every street, as described above.
DESCRIPTION

This specification covers all administrative requirements, payroll reporting procedures to be followed by Contractors performing work on City-sponsored public improvements projects, and all other miscellaneous and incidental costs associated with complying with the applicable sections of the City of Ann Arbor Code of Ordinances with regard to payment of prevailing wages and its Prevailing Wage Compliance policy.

This specification is not intended to include the actual labor costs associated with the payment of prevailing wages as required. Those costs should be properly incorporated in all other items of work bid.

GENERAL

The Contractor is expected to comply with all applicable sections of Federal and State prevailing wage laws, duly promulgated regulations, the City of Ann Arbor Code of Ordinances, and its Prevailing Wage Compliance Policy as defined within the contract documents. The Contractor shall provide the required certified payrolls, city-required declarations, and reports requested elsewhere in the contract documents within the timeline(s) stipulated therein.

The Contractor shall also provide corrected copies of any submitted documents that are found to contain errors, omissions, inconsistencies, or other defects that render the report invalid. The corrected copies shall be provided when requested by the Supervising Professional.

The Contractor shall also attend any required meetings as needed to fully discuss and ensure compliance with the contract requirements regarding prevailing wage compliance. The Contractor shall require all employees engaged in on-site work to participate in, provide the requested information to the extent practicable, and cooperate in the interview process. The City of Ann Arbor will provide the needed language interpreters in order to perform wage rate interviews or other field investigations as needed.

Certified Payrolls may be submitted on City-provided forms or forms used by the Contractor, as long as the Contractor’s forms contain all required payroll information. If the Contractor elects to provide their own forms, the forms shall be approved by the Supervising Professional prior to the beginning of on-site work.

UNBALANCED BIDDING

The City of Ann Arbor and DDA will examine the submitted cost for this item of work prior to contract award. If the City determines, in its sole discretion, that the costs bid by the Contractor for complying with the contract requirements are not reasonable, accurately reported, or may contain discrepancies, the City reserves the right to request additional documentation that fully supports and justifies the price as bid. Should the submitted information not be determined to be reasonable or justify the costs, the City reserves the right to pursue award of the contract to the second low bidder without penalty or prejudice to any other remedies that it may have or may elect to exercise with respect to the original low-bidder.
The Contract Completion date will not be extended as a result of the City’s investigation of the as-bid amount for this item of work, even if the anticipated contract award date must be adjusted. The only exception will be if the Contractor adequately demonstrates that their costs were appropriate and justifiable. If so, the City will adjust the contract completion date by the number of calendar days commensurate with the length of the investigation, if the published Notice to Proceed date of the work cannot be met. The contract unit prices for all other items of work will not be adjusted regardless of an adjustment of the contract completion date being made.

**MEASUREMENT AND PAYMENT**

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>Contract Item (Pay Item)</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Payroll Compliance and Reporting</td>
<td>.................................................. Lump Sum</td>
</tr>
</tbody>
</table>

The unit price for this item of work shall include all supervisory, accounting, administrative, and equipment costs needed to monitor and perform all work related to maintaining compliance with the tasks specified in this Detailed Specification, the City of Ann Arbor Code of Ordinances, its Prevailing Wage Compliance policy and the applicable Federal and State laws.

Payment for this work will be made with each progress payment, on a pro-rata basis, based on the percentage of construction completed. When all of the work of this contract has been completed, the measurement of this item shall be 1.0 times the Lump Sum bid amount. This amount will not be increased for any reason, including extensions of time, extra work, and/or adjustments to existing items of work.
DETAILED SPECIFICATION
FOR
ITEM #120 - PROJECT SUPERVISION, MAX $100,000

DESCRIPTION

The Contractor shall designate a full-time Project Supervisor to act as the Contractor's agent/representative, and to be responsible for scheduling and coordination of all subcontractors, suppliers, other governmental agencies, and all public and private utility companies. The Project Supervisor shall also be responsible for communicating the work schedule with all impacted businesses.

The Project Supervisor shall not be an active crew member of the Contractor, shall not be an active member or employee of any subcontractor's work force, and shall not perform general or specialized labor tasks.

Prior to the pre-construction meeting, the Contractor shall designate a proposed Project Supervisor by name, and shall furnish the City of Ann Arbor and the DDA with a current, thorough, detailed summary of the proposed Project Supervisor's work history, outlining all previous supervisory experience on projects of a similar size and nature. The detailed work history shall include personal and professional references (names and phone numbers) of persons (previous owners or agents) who can attest to the qualifications and work history of the proposed Project Supervisor. Proposed candidates for Project Supervisor shall have a demonstrated ability to work harmoniously with the City, DDA, the public, subcontractors, and all other parties typically involved with work of this nature. The Project Supervisor shall be able to demonstrate that they have filled a supervisory role on at least three projects of similar scope and size within the last 5 years. The Supervising Professional, Engineer, and DDA will have the authority to reject a proposed Project Supervisor whom he/she considers unqualified.

The Project Supervisor shall be available 24 hours-per-day to provide proper supervision, coordination and scheduling of the project for the duration of the Contract. The Contractor shall furnish the DDA with telephone numbers of the Project Supervisor in order to provide 24 hour-per-day access during business and non-business hours, including weekends and holidays.

The Project Supervisor shall be equipped by the Contractor with a mobile telephone to provide the DDA with 24 hour-per-day access to him/her during daily construction activities, during transit to and from the construction site, and during all non-business hours including weekends and holidays.

The Project Supervisor shall be equipped with assistants as necessary to provide project supervision as specified herein, and in accordance with the Contract.

DUTIES AND RESPONSIBILITIES

The Project Supervisor work harmoniously with the City, DDA, the public, subcontractors, and all other parties typically involved with work of this nature.

The Project Supervisor shall have a thorough, detailed understanding and working knowledge of all construction practices and methods specified elsewhere herein, as well as the handling, placement, testing and inspection of aggregates, aggregate products, landscape materials, electrical equipment, pre-cast unit pavers, HMA concrete, and Portland cement concrete materials.
The Project Supervisor shall be responsible for all of the work of all of the Contractor's, subcontractors' and suppliers' work forces.

The Project Supervisor shall be responsible for proper and adequate maintenance (emissions, safety, and general operation) of all of the Contractor's, subcontractors' and suppliers' equipment and vehicles.

The Project Supervisor is responsible to assure that mail delivery, solid waste, and recycling pick-ups are uninterrupted by the construction.

The Project Supervisor is responsible to coordinate deliveries to the local businesses.

The Project Supervisor shall be responsible for the legal, proper and safe parking/storage of all of the Contractor's, subcontractors' and suppliers' equipment, work vehicles, and employee's vehicles.

The Project Supervisor shall schedule and coordinate the work of all parties involved in the project, including utility companies, testing agencies, governmental agencies, all City departments (such as Utilities and Transportation), the DDA and/or City inspectors, and the impacted businesses.

The Project Supervisor shall coordinate and schedule the work of any independent survey crews that may be retained by the City or DDA to witness and reset existing and new geographic/benchmark monuments. Failure to have existing monuments witnessed and reset may result in delays to the Contractor's work. Costs for such delays will be the Contractor's sole responsibility.

The Project Supervisor shall coordinate and schedule both testing inspectors and City and DDA inspectors in a timely manner, to assure proper and timely testing and inspection of the work.

The Project Supervisor shall review the Inspector's Daily Reports (IDRs) for accuracy, and shall sign all IDRs on a daily basis as the representative of the Contractor. Items to be reviewed include descriptions, locations and measurements of quantities of work performed, workforce, equipment, and weather. The Project Supervisor shall also be responsible for its subcontractors’ review and initialing of IDRs containing work items performed by each respective subcontractors.

The Project Supervisor shall submit to the Engineer, an updated, detailed schedule of the proposed work on a weekly basis, and an update of all proposed changes on a daily basis, all in accordance with the Detailed Specification for Project Schedule contained elsewhere herein.

The Project Supervisor shall schedule and chair a weekly progress meeting with the Engineer and all subcontractors to discuss the work. Upon the completion of each meeting, the Project Supervisor shall prepare and distribute, to all present, a written summary of the meeting’s minutes. Those in attendance shall review the minutes and, if necessary, comment on any deficiencies or errors prior to or at the next scheduled progress meeting.

The Project Supervisor shall engage with the affected businesses to communicate expectations for the work and to adjust the construction methods and/or times to best accommodate the local businesses.

**ADDITIONAL PERFORMANCE REQUIREMENTS**

If, in the sole opinion of the Supervising Professional, the Project Supervisor is not adequately performing the duties as outlined in this Detailed Specification, the following system of notices will be given to the contractor with the associated penalties:
First Notice – A warning will be issued in writing to the contractor detailing the deficiencies in the Project Supervision. The contractor must respond within 7 calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within 7 calendar days will result in the issuing of a second notice.

Second Notice – A second warning will be issued in writing to the contractor further detailing the deficiencies in the Project Supervision. The contractor must respond within 7 calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within 7 calendar days will result in the issuing of a third notice. A deduction of 10% will be made from the original Project Supervision contract amount. At this time, the DDA reserves the right to meet with personnel with the necessary authority within the Contractor’s organization to discuss the deficiencies in the Project Supervision.

Third Notice – An additional deduction of 25% will be made from the original Project Supervision contract amount, and the Project Supervisor shall be removed from the project, and replaced immediately with another individual to be approved by the Supervising Professional.

Should, in the sole opinion of the Supervising Professional, the Project Supervisor fail to perform his/her duties and responsibilities as described herein to such a degree that the successful completion of the project is put in jeopardy, the above system of notices may be foregone, and the Contractor shall immediately replace the Project Supervisor upon receipt of written notice. Failure to provide adequate project supervision, as determined by the Engineer, shall be considered basis for the Supervising Professional to suspend work without extension of contract time or additional compensation.

**MEASUREMENT AND PAYMENT**

This item of work will be paid for on a pro rata basis at the time of 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, minus any deductions incurred for inadequate performance as described herein. This amount will not be increased for any reason, including extensions of time, extras, and/or additional work.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Supervision, Max $100,000</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>

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

The work of Minor Traffic Devices shall include, but not be limited to:

- The furnishing and operating of miscellaneous signs, warning devices, and cones;
- The provision of flag persons;
- The operation of additional signs furnished by the MDOT, City of Ann Arbor, or the DDA;
- Maintaining pedestrian traffic;
- Temporarily covering traffic controls;
- Temporarily covering existing signs as directed;
- 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.

MEASUREMENT AND PAYMENT

This item of work will be paid for on a pro rata basis at the time of 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.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Traffic Devices, Max $90,000</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>

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.
Figure 6H-28. Sidewalk Detour or Diversion (MI) (TA-28)

Typical Application 28

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

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Figure 6H-29. Cross walk Closures and Pedestrian Detours (MI) (TA-29)

Note: For long-term stationary work, the double yellow centerline and/or lane lines should be removed between the crosswalk lines.

See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.
a. **Description.** This work shall include all labor, equipment, and materials necessary to handle, transport, and dispose of non-hazardous contaminated material as described herein, as directed by the Engineer.

Should the City determine that soils in the project site include non-hazardous contaminated material these materials shall not be used elsewhere or disposed of in a manner inconsistent with this special provision, or applicable federal, state, or local regulations unless otherwise directed by the Engineer.

b. **Method of Construction.** This work shall be performed in accordance with Sections 204 and 205 of the MDOT 2012 Standard Specifications for Construction, except as modified herein or as directed by the Engineer.

The Contractor shall have all manifests signed by its representative, the Engineer’s representative, the authorized representative of the waste hauler and the waste disposal facility.

c. **Excavation of Non-Hazardous Contaminated Material.** Non-Hazardous contaminated material shall be excavated as directed by the Engineer.

d. **Temporary Storage of Non-Hazardous Contaminated Material.** Excavated non-hazardous contaminated material which is to be temporarily stockpiled shall be placed on plastic sheeting or tarps having a minimum thickness of 6 mils or in trucks, roll-off boxes, or other containers, such that no liquid may escape from the containment. At the end of each work day, the non-hazardous contaminated material shall be covered securely with plastic sheeting of 6 mils thickness or greater.

Excavated non-hazardous material shall be disposed of as soon as approval is received from the disposal site. In no case shall this material be stockpiled for longer than 30 days prior to disposal.

The Contractor is responsible for the necessary coordination such that his/her work activities are not adversely impacted by the stockpiling of contaminated soil. Stockpiled soil shall not impair sight distance or drainage.

e. **Sampling and Analysis of Non-Hazardous Contaminated Material.** City staff and the Engineer shall be notified of excavation in the identified area of concern. Should the city determine that the materials being excavated potentially contain non-hazardous contaminated material, the Contractor shall excavate soils in the area, stock pile materials and/or leave the materials in-situ, as directed by the Engineer.

During the period following excavation and stockpiling, and prior to loading and removal of the soils, the Contractor will be directed to proceed with work in other areas of the project, should other areas be available for work within the project area and in compliance with the project schedule and Progress Clause. Any downtime related to the discovery, excavation, stockpiling, testing, loading and hauling of the non-hazardous contaminated material will not be paid for separately.

The City will be responsible for the costs associated with testing of the soils to determine the nature and extent of the contamination. Reports related to any testing will be provided to the Contractor.
The information contained in this report shall be utilized to secure a Type II disposal facility for disposal of the non-hazardous contaminated material. The contractor shall be responsible for preparing any forms or applications required by the disposal facility prior to their acceptance of the non-hazardous contaminated material for disposal.

The contractor shall also be responsible for familiarizing themselves with the information contained in the report and adjusting their operations accordingly to meet the safety and health requirements as set forth in Section 104.07.B of the MDOT 2012 Standard Specifications for Construction.

f. Disposal of Non-Hazardous Contaminated Material. Disposal of non-hazardous contaminated material shall be at a licensed Type II sanitary landfill. The Contractor shall submit at the preconstruction meeting the name of the Type II landfill to be used for disposal, the sampling and analysis requirements of the landfill, and verification that the use of the proposed landfill will meet the requirements of the County solid waste plan.

g. Measurement and Payment. The completed work as described will be paid for at the contract unit price for the following contract item (pay item):

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hazardous Contaminated Material Handling and Disposal (LM)</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

Non-Hazardous Contaminated Material Handling and Disposal will be measured by volume in cubic yards, loose measure, as contained in the hauling unit. Under no circumstance will the Contractor be paid for quantities of this material that have not been approved for payment by the Engineer and as measured and tracked by the Engineer and the Contractor. The Contractor will not be paid “standard amounts” that have been determined by the disposal facility; only measured volumes as computed by the Engineer will be paid. Prior to payment, the Engineer shall be given receipts from the disposal facility for the number of cubic yards disposed of at that facility. Payment shall include all costs for materials, labor and equipment needed for storage, loading, transportation, and disposal of the non-hazardous contaminated material. Disposal costs shall include all documentation required by the landfill. Payment for this item shall be the same, regardless of whether or not the Contractor temporarily stores the contaminated material; the Contractor shall not be paid for re-handling of the material due to construction staging, stockpiling, or other related activities.

Payment for excavation of non-hazardous contaminated materials shall be included with the related items of work.
DETAILED SPECIFICATION
FOR
ITEM #205 – MACHINE GRADING, MODIFIED

DESCRIPTION

This work shall consist of constructing earth grades by excavating, cutting, filling, trimming, and grading; general restoration, removal and salvage of miscellaneous site amenities, and sign removals in accordance with the Detailed Specifications elsewhere herein; and maintaining the work in a finished condition until such time that it is accepted by the Engineer. This work shall be done as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer, and in accordance with Section 205 of the 2012 MDOT Standard Specification for Construction, except as specified herein.

The drawings indicate work to be completed outside of the right of way on property owned by the Ann Arbor Public Schools. This work is an extension of the right of way work and will be paid for based on the applicable unit prices. Machine Grading, Modified will be extended to the limits of grading where work includes property adjacent to the right of way.

CONSTRUCTION METHOD

Machine Grading:
The Contractor shall construct earth grades as required to develop the typical and/or detailed cross-section(s) as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer. This shall include, but not be limited to, the excavation of soil, rocks of any size, stumps, logs, and bricks; the removal and proper disposal off-site of surplus excavated material; the scarifying, plowing, diskning, moving and shaping of earth; the trimming, grading, compaction and proof-rolling of the prepared subgrade; the importing, furnishing, placement and compaction of embankment and/or fill materials; the full depth saw-cutting of pavement at the removal limits; the grading of side slopes; general restoration in accordance with the detailed Specifications elsewhere herein and the general items of the work as specified herein. Road subbase and base materials shall be paid for separately.

The Contractor shall remove, add to, re-shape, re-grade, and re-compact the existing roadbed materials, and shall construct the roadway and sidewalk area to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer.

The existing site may include irrigation system that is to be abandoned. As part of Machine Grading the Contractor is to ensure that the system is no longer active with water pressure, then remove any remaining irrigation equipment uncovered during the work, and properly dispose of all materials off site.

Existing lawn panels or extensions in the right of way which are to remain in the proposed project are to be regraded to allow for direct drainage from the sidewalk to the roadway and remove built up soil materials within the extension. Contractor is to gut the grade in these areas to receive topsoil seed as indicated in this specification. This regrading and restoration will be paid for as part of Machine Grading, Modified.

As part of Machine Grading the Contractor shall remove other surface features, including signs, concrete filled steel bollards, and bicycle parking hoops located within the grading limits and not otherwise identified, as directed by the Engineer. Signs shall be salvaged and provided to City as directed by the Engineer.
The Contractor shall move excavated and/or imported materials longitudinally and/or transversely where necessary, and as directed by Engineer.

The Contractor shall keep the project site well graded and drained at all times.

The Contractor shall not use rubber-tired equipment on the subgrade, when its use causes or may cause, in the opinion of the Engineer, damage to the subgrade. The Contractor shall conduct its operation(s), and provide all necessary equipment, to insure the satisfactory completion of the work without damaging the subgrade. This includes the transporting, stockpiling, re-handling, and movement of materials over additional distances, in lieu of driving on an unprotected, or partially unprotected, subgrade.

The Contractor is solely responsible for the maintenance and protection of the subgrade. Further, any damage to the subgrade which, in the opinion of the Engineer, is caused as a result of the Contractor's operation(s), or its subcontractors' or suppliers' operation(s), shall be repaired by the Contractor at the Contractor's expense. This includes any additional earthwork and/or maintenance materials as directed by the Engineer, for the purposes of the Contractor's maintenance and protection of the subgrade. The Contractor shall not be entitled to any additional compensation for the implementation of these procedures.

The Contractor shall perform all rough and/or finish grading and compaction in the right of way to the grades shown on the Plans, as detailed in the Specifications, and as directed by the Engineer.

The Contractor shall proof roll all graded and compacted surfaces in the presence of the Engineer as detailed in the Specifications. The Engineer will monitor the proof rolling operation to locate deleterious and/or uncompacted materials, and will direct undercuts as necessary.

The Contractor shall take any and all steps necessary to avoid interruption in the mail delivery, and solid waste, recycling, and compostable pick-up within the project limits. This shall include the temporary relocation of mailboxes, where required by the Engineer, as well as moving of all solid waste/recycling/compost containers to the nearest cross street.

The Contractor shall coordinate with the City Forester prior to the removal of any tree roots 2 inches or larger in size.

Machine Grading includes reviewing the condition of existing sand base in sidewalk areas with the Engineer, and grading and compacting the subgrade and sand to meet grade requirements for the sidewalk zone. If the existing sand base must be removed due to poor condition, the removal will be paid for as part of Machine Grading, Modified, and the replacement sand base paid as Sand Subbase Course, Class II - C.I.P.

The Contractor shall restore all disturbed areas to better than or equal to their original condition. This includes the placement and compaction of 2.5 inches of topsoil, followed by the placement of grass seed, followed by the placement of 0.5 inches of topsoil at all turf restoration locations, where indicated on plans, and at locations where concrete items are removed and turf is to be established. All restoration work and materials shall be in accordance with the City Standard Specifications. Restoration work must be performed within one week of the placement of the street trees. Such restoration will be considered part of Machine Grading.

This contract assumes that the Contractor has inspected these items and is familiar with their features, and understands the actions which much take place in order to complete the tasks noted above. All removals shall be accomplished without damage to buildings, light pole, site amenities, pavement to remain, and
related site features.

**MEASUREMENT AND PAYMENT**

Measurement for payment for the item “Machine Grading Modified” shall be the computed by road station (as further described below) and the quantity of excavated material (soil, rock, brick, etc.) to the bottom of the excavation. Embankment, fill, subgrade protection/maintenance, and drainage maintenance will not be paid for separately, and are included in this item of work.

Reinstallation of Plaza Amenities is paid for separately.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Grading, Modified</td>
<td>Station</td>
</tr>
</tbody>
</table>

The unit prices for **Machine Grade Modified** 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.

“Station” in the **Machine Grading, Modified** pay unit is defined as a one hundred foot length of street as stationed on the plans; each “Station” pay unit is measure longitudinally for every 100 feet or fraction thereof, and is measure from the center line of the right of way to the edge of the right of way (that being one half of the right of way).
DESCRIPTION AND MATERIALS

This work includes stone reservoir trenches, drainage board, and geosynthetic materials, as specified herein, as shown on the Plans, and as directed by the Engineer.

RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, City Standard Specification, and MDOT 2012 Standard Specifications for Construction (as well as applicable Special Provisions as referenced herein) apply to this Section.

SUBMITTALS

A. Aggregates/Sand:
   1. Source: Must be MDOT approved.
   2. Aggregate gradation and percent voids (porosity).

B. Admixtures: Certification from MDOT approved supplier.

C. Geotextile, Geogrid, and Drainage Board: Product Certifications and specifications from manufacturer.

QUALITY CONTROL/QUALITY ASSURANCE

A. Installation Personnel Qualifications:
   1. Trained and experienced in the fabrication and installation of the materials and equipment.
   2. Knowledgeable of the design.

B. Testing: The City of Ann Arbor and DDA’s representative shall perform testing to ensure compliance with the materials specifications as required by the Engineer.

C. Weight Slips:
   1. Furnish weight slips for material incorporated in the Project.
   2. Verify that the required tonnage has been applied by calculating and submitting yield for each day of work.

DELIVERY, STORAGE AND HANDLING

A. Handle and store materials in a manner which will prevent deterioration, damage, contamination with foreign matter, and damage by weather or elements, and according to Manufacturer's directions.
B. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation.

C. Reject damaged, deteriorated or contaminated material and immediately remove from the Site. Replace rejected materials with new materials at no additional cost to Owner.

MATERIALS

A. Aggregate/Sand Materials:
   1. Stone Reservoir:
      a. MDOT 6AA
         1) Washed.
         2) Thickness and width: as shown on Plans.

B. Geotextile
   1. Nonwoven.
   2. Minimum Properties:
      a. Weight - 6 oz.
      b. Marafi 160N, TerraTex N06, US Fabric 165 NW, or approved equal.

C. Geogrid
   1. Polypropylene triaxial grid.
   2. Minimum Properties:
      a. Minimum Rib Thickness: 0.03 inches (0.76 mm)
      b. Tensile Strength @2% Strain (ASTM D6637): 280 lbs/ft
      c. Tensile Strength @5% Strain (ASTM D6637): 580 lbs/ft
      d. Ultimate Tensile Strength (ASTM D6637): 850 lbs/ft
      e. Flexural Stiffness (ASTM D5732): 250,000 mg-cm
      f. Resistance to Installation Damage (ASTM D5818 & D6637): 93%
      g. Tensar TX 5 or approved equal.

D. Drainage Board
   1. Core board to be manufactured of High Impact Polystyrene, and have the following minimum properties:
      a. Thickness: .44 inches
      b. Compressive strength: 18,000 psf
      c. Flow Rate: 21 gpm/ft
   2. The board shall be covered on all sides with an integral needle punch non-woven polypropylene fabric, with the following minimum properties:
      a. Flow rate: 90 gpm/ft
      b. Grab tensile strength: 200 lb
      c. Apparent opening size: 80 sieve

CONSTRUCTION METHODS

PREPARATION

A. Final Subgrade Preparation:
   1. Avoid compaction of subgrade soil unless directed or approved by Engineer.
2. Scarify compacted or disturbed subgrade soils to a minimum depth of 6 inches with York rake; or equivalent method and light tractor.

3. Remove accumulation of fine materials due to ponding or surface erosion with light equipment.

4. Conform to line, grade, and elevations indicated.
   a. Excavate, fill, re-grade, and scarify areas damaged by erosion, ponding or traffic compaction.
   b. Use light equipment.

5. Proof Roll:
   a. To identify soft or unstable areas.
   b. Use light equipment, avoid over compacting subgrade.

6. Do not place geotextile or geogrid until subgrade surface has been inspected and approved by Engineer.

B. Stone Reservoir Trench & Geotextile
   1. Begin installation of stone reservoir immediately after approval of subgrade preparation.
   2. Do not place sand or aggregate materials on a frozen base, subbase, or subgrade.
   3. Remove any accumulation of debris or sediment which has taken place after approval of subgrade and installation of stone reservoir and prior to installation of the geotextile, at the contractor's expense.
   4. Place geotextile in accordance with Manufacturer’s standards and recommendations.
      b. Prevent runoff or sediment from entering the stone reservoir.
   5. Place backfill for stone reservoir in uniform layers such that when compacted, they have the thicknesses shown on the Plans, or as directed by the Engineer.
      a. The loose measure of any layer -- not more than 9-inches or less than 4-inches.
      b. Compact backfill to a minimum of 95% of the maximum density per City Standard Specifications.
   6. The Stone Reservoir is to be completely wrapped in geotextile fabric.

C. Geogrid Installation:
   1. Place geogrid and aggregate base course immediately after installation of stone reservoir.
   2. Remove any accumulation of debris or sediment which has taken place after approval of subgrade and installation of stone reservoir prior to installation of the geogrid, at the contractor's expense.
   3. Place geogrid in accordance with Manufacturer’s standards and recommendations.
      b. Tie together overlapping strips 24 inches on center, as directed by Engineer.
      c. Prevent runoff or sediment from entering the storage bed.
   4. Place aggregate base course to grades indicated on Drawings.
      a. Maximum Lift Thickness: 10 inches.
      b. Minimum Lift Thickness: 6 inches.
      c. Compact each layer to a minimum of 95-98% (varies with paving materials) of the maximum density per City Standard Specifications.
      d. Fine grade as necessary to conform to elevations and cross section indicated on the Drawings.
      e. Roll aggregate layer with paving roller until smooth, as directed by Engineer.

D. Drainage Board Installation
   1. Coordinate with the Engineer to establish limits of drainage board coverage.
   2. Smooth and compact base material under drainage board. Provide horizontal slop of
3. Use care in backfilling drainage board so as to protect the installed board from puncture, collapse of cells, or other damage. Replace damaged sections as directed by the Engineer.

**MEASUREMENT AND PAYMENT**

The items of work included in this Detailed Specification shall be paid for at the Contract Unit Price, which shall be payment in full for all labor, material and equipment needed to accomplish all the work described in this detailed specification, which includes, but is not limited to: furnishing, placement, and compaction of all aggregate materials and furnishing and placement of geotextile or geogrid.

Price adjustments shall be enforced by the City of Ann Arbor and DDA if materials are not in accordance with specifications.

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geotextile</td>
<td>Square Yard</td>
</tr>
<tr>
<td>Geogrid</td>
<td>Square Yard</td>
</tr>
<tr>
<td>Stone Reservoir</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Drainage Board</td>
<td>Square Yard</td>
</tr>
</tbody>
</table>

The unit prices for these items 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 – INFILTRATION INLET – 48-INCH DIAMETER

DESCRIPTION

This work shall consist of installing storm water leaching basin structure. The Contractor shall furnish all labor, equipment and materials necessary to install the structure and appurtenances specified in the Plans and these specifications.

These units shall be installed as detailed on the plans or as configured according to reviewed and approved shop drawings submitted by the Contractor.

MATERIALS

All materials shall conform to City standards and specifications. Precast concrete components shall conform to applicable sections of ASTM C 478, ASTM C 857 and ASTM C 858 and the following:

1. Concrete shall achieve a minimum 28-day compressive strength of 4,000 pounds per square-inch (psi);
2. The precast concrete sections shall be designed to withstand lateral earth and AASHTO H-20 traffic loads;
3. Cement shall be Type III Portland Cement conforming to ASTM C 150;
4. Aggregates shall conform to ASTM C 33;
5. Reinforcing steel shall be deformed billet-steel bars, welded steel wire or deformed welded steel wire conforming to ASTM A 615, A 185 or A 497, respectively;
6. Joints shall be sealed with preformed joint sealing compound conforming to ASTM C 990 and
7. Shipping of components shall not be initiated until a minimum compressive strength of 4,000 psi is attained or five (5) calendar days after fabrication has expired, whichever occurs first.
8. Geotextile fabric and Geogrid materials as noted in the appropriate detailed specification.

A. Internal Components and Appurtenances

Internal Components and appurtenances shall conform to the following:
1. Screen and support structure shall be manufactured of Type 316 and 316L stainless steel conforming to ASTM F 1267-01;
2. Hardware shall be manufactured of Type 316 stainless steel conforming to ASTM A 320;
3. Access system(s) conform to the following:
   a. Manhole castings shall be designed to withstand AASHTO H-20 loadings and manufactured of cast-iron conforming to ASTM A 48 Class 30.
   b. Casting and rim per plans and City Standard Specifications.

Submittals

The Contractor shall prepare and submit shop drawings in accordance with the contract documents at least two weeks prior to installation. The shop drawings shall detail horizontal and vertical dimensioning, reinforcement and joint type and locations.

The Contractor shall submit four (4) sets of shop drawings sealed by a Professional Engineer in the State
of Michigan certifying the above requirements to the City and the DDA, and showing details for the storm
water inlet. The submittal should also include laboratory test results for the proposed units and references
for local projects where the units have been installed. These documents must be reviewed and approved
prior to the start of construction.

CONSTRUCTION METHODS

Handling and Storage

1. The Contractor shall exercise care in the storage and handling of the structure prior to and
during installation. Any repair or replacement costs associated with events occurring after
delivery is accepted and unloading has commenced shall be borne by the Contractor.
2. The work shall be completed by a Contractor approved by the City and DDA.
3. The structure shall be installed in accordance with the manufacturer’s recommendations and
related sections of the contract documents. The manufacturer shall provide the Contractor
installation instructions and offer on-site guidance during the important stages of the
installation as identified by the manufacturer at no additional expense. A minimum of 72
hours’ notice shall be provided to the manufacturer prior to their performance of the services
included under this subsection.
4. The Contractor shall fill all voids associated with lifting provisions provided by the
manufacturer. These voids shall be filled with non-shrinking grout providing a finished
surface consistent with adjacent surfaces. The Contractor shall trim all protruding lifting
provisions flush with the adjacent concrete surface in a manner which leaves no sharp
points or edges.

MEASUREMENT AND PAYMENT

The stone infiltration mat and backfill will be paid for separately as “Stone Reservoir”. Geogrid and
Geotextile fabric will also be paid for separately.

Cast iron frame and cover are included in this pay item.

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infiltration Inlet – 48-inch Diameter</td>
<td>Each</td>
</tr>
</tbody>
</table>

The unit price includes all labor, equipment, materials, and documents necessary to install the structure,
except as specifically noted herein.
DETAILED SPECIFICATION
FOR
ITEM #220 – HMA PAVEMENT BASE COURSE
ITEM #221 - HMA PAVEMENT LEVELING
ITEM #222 - HMA PAVEMENT WEARING
ITEM #224 – HAND PATCHING

DESCRIPTION

This work shall consist of constructing HMA pavement base, leveling, and wearing courses, and hand patching, in accordance with Division 5 and Section 501 of the 2012 MDOT Standard Specifications, current supplemental MDOT specifications, and the City Standard Specifications, except as modified herein, and as directed by the Engineer.

MATERIALS

General

The HMA mixtures to be used for this work shall be as follows:

<table>
<thead>
<tr>
<th>WORK ITEM</th>
<th>THICKNESS</th>
<th>MDOT HMA MIXTURE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMA Pavement Wearing</td>
<td>1.5”</td>
<td>5E1</td>
</tr>
<tr>
<td>HMA Pavement Leveling</td>
<td>2”</td>
<td>4E1</td>
</tr>
<tr>
<td>HMA Pavement Base Course</td>
<td>3”</td>
<td>3E1</td>
</tr>
<tr>
<td>Hand Patching (Permanent)</td>
<td>2”/3”</td>
<td>4E1/3E1</td>
</tr>
<tr>
<td>Hand Patching (Temporary)</td>
<td>as directed</td>
<td>see note</td>
</tr>
</tbody>
</table>

Binders for the bituminous mixes shall be PG 64-28 or as directed by the Engineer, and shall meet the requirements specified in Section 904 of the 2012 MDOT Standard Specifications, and any current supplemental MDOT specifications.

Bond coat shall be an emulsified asphalt Type SS-1h and shall meet the requirements specified in Section 904 of the 2012 MDOT Standard Specifications, and any current supplemental MDOT specifications.

The use of Marshall Mixes and Cold Patch will be acceptable for use in Hand Patching for areas identified as temporary pavement, at the approval of the Engineer.

The Aggregate Wear Index (AWI) number for this project is 260. This AWI number applies to all aggregates used in all top course mixtures. Blending aggregates to achieve this AWI requirement is permitted in accordance with current MDOT Standards, and Supplemental Specifications. Reclaimed Asphalt Pavement (RAP) in HMA Mixtures

The use of Reclaimed Asphalt Pavement (RAP) in HMA mixtures shall be in accordance with Section 501. 02. A. 2 of the 2012 MDOT Standard Specifications, and the City of Ann Arbor Standard Specifications.

CONSTRUCTION METHODS

All concrete work shall be completed prior to placing HMA mixtures.
The Contractor shall have a 10-foot long straight-edge, backhoe, air-compressor and jackhammer available during all paving operations.

Prior to placing the bond coat, the Contractor shall kill all vegetation (within the area to be paved) by applying an approved weed killer ("Round-Up" by Monsanto, or equal), shall thoroughly clean all joints & cracks in the existing pavement (and any gutter to be overlaid) with compressed air and/or vacuum-type street cleaning equipment to remove all dirt and debris to a depth of at least 1-inch, and shall thoroughly clean the entire surface to be paved, with a Vac-All or similar vacuum-type street cleaning equipment.

MDOT SS-1h bond coat shall be applied at a uniform rate of 0.10 gallons/square yard, on all exposed, existing HMA and concrete surfaces which will come in contact with the new HMA material. The Contractor shall take extra care to avoid covering surfaces which are not to be paved. After September 15, SS-1h bond coat shall not be diluted by more than 25%.

The Contractor shall place HMA wedges using the base, leveling, and wearing mixtures specified herein, as directed by the Engineer, prior to placing the wearing course. Such wedging shall be measured and paid for at the respective unit price of the appropriate HMA Pavement item.

Construction of butt joints, where directed by the Engineer, shall be measured and paid for as "Machine Grading Modified."

The Contractor shall construct the pavement courses to provide the final cross-slopes (crowns) specified by the Engineer.

The Contractor shall construct feather joints, and shall feather the leveling and wearing courses at structures, in drive approaches, and at intersection joints, as directed by the Engineer. Feather joints shall vary the thickness of the asphalt from 0.0-inches to the required full paving thickness (approximately 1½-inches) over a 5-foot to 15-foot distance, or as directed by the Engineer. The Contractor shall rake all large aggregates out of the HMA mixture in feather joints, prior to compaction.

The Contractor shall provide a minimum of two rakers during the placement of all wearing and leveling courses. Further, the Contractor shall provide, when directed by the Engineer, a second "Break-Down" roller in order to achieve the specified asphalt densities.

The Contractor shall provide a minimum of 24-hours’ notice to the Engineer prior to paving, and shall obtain a "Permit To Pave" from the Engineer in advance of scheduling paving.

The Contractor and Engineer shall carefully observe the paving operation for signs of faulty mixtures. Points of weakness in the surface shall be removed or corrected by the Contractor, at his/her expense, prior to paving subsequent lifts of HMA material. Such corrective action may include the removal and replacement of thin or contaminated sections of pavement, including sections that are weak or unstable. Once the Contractor or his representative is notified by the Engineer that the material being placed is out of allowable tolerances, or there is a problem with the paving operation, the Contractor shall stop the paving operation at once, and shall not be permitted to continue placing HMA material until again authorized by the Engineer. Substandard work that, in the Engineer’s opinion, requires removal and replacement, shall be completed as follows:

1. Remove and replace leveling and/or wearing course areas mixed with foreign materials and defective areas.
2. Sawcut full depth of existing pavement in perpendicular and parallel directions to adjoining surfaces to ensure a quality and aesthetically pleasing repair.
3. Replacement may need to extend beyond the area of repair. Cut out such areas and fill with fresh, hot mix asphalt.
4. Compact by rolling to specified density and smoothness.
5. Sawcut or route new joint and fill with specified Hot Poured Rubber Joint Sealer product.

During the placement of leveling and wearing courses, the speed of the paving machine(s) shall not exceed 50-feet per minute.

The Contractor shall furnish and operate enough materials and equipment so as to keep the paving machine(s) moving continuously at all times. Failure to do so shall be cause for the suspension of the paving operation until the Contractor can demonstrate to the satisfaction of the Engineer, that sufficient resources have been dedicated to perform the work in accordance with the specifications.

Each layer of HMA mixture shall be compacted to between 92 to 96 percent (or as determined acceptable by the Engineer) of the theoretical maximum density, as listed on the approved Job Mix Formula.

MEASUREMENT AND PAYMENT

Measurement of these HMA paving items shall be by the ton, in place. Unused portions of material loads shall be returned to the plant and re-weighed, and the corrected weight slip shall be provided to the Engineer. All weight slips must include the type of mixture (codes are not acceptable), as well as vehicle number, gross weight, tare weight and net weight.

The bond coat is included in the cost of the HMA Pavement Item.

Corrective action shall be enforced as described at Division 5 of the 2012 MDOT Standard Specifications and will be based on the City's or DDA’s testing reports.

All costs for furnishing and operating vacuum-type street cleaning equipment, backhoes, jackhammers, and air compressors shall be included in the bid prices for these items of work or in the item of work “General Conditions.”

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>All HMA Pavement Items</td>
<td>Ton</td>
</tr>
</tbody>
</table>

The unit prices for these items 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.

Payment Adjustment In Lieu Of Repair/Replacement

In the case that the work that is installed does not meet the specified quality of materials or installation, the DDA may opt to require the full removal and replacement of the substandard work, or, at their discretion, use the formulas listed below to reduce payment for the work.

A. Pavement Compaction:
   1. Pavement
a. If the daily average in place density is less than 94%, but greater than 93% of the mixture theoretical maximum density (TMD) the paving will be evaluated by the Engineer and Owner and at Owner’s discretion, the unit price of that days paving will be reduced to 90% of full payment.

b. If the daily average in place density is less than 93% but greater than 92% of the mixture TMD the paving will be evaluated by the Engineer and Owner and at Owner’s discretion may either be removed or the unit price of that days paving will be reduced to 75% of full payment.

c. If the daily average in place density is less than 92% of the mixture TMD the paving will be removed and replaced at no cost to Owner.
DETAILED SPECIFICATION  
FOR  
ITEM #223 – TEMPORARY PAVEMENT/PEDESTRIAN ACCESS

DESCRIPTION

This work shall consist of installing Temporary Pavement/Pedestrian Access as necessary to insure access to entrances to active businesses in the project area. All work shall conform to the 2012 edition of the MDOT Standard Specifications, and the City of Ann Arbor Standard Specifications, except as modified herein, and as directed by the Engineer. All Temporary Aggregate Pavement shall conform to the most recent applicable guidelines and requirements of the Americans with Disability Act (ADA).

MATERIALS

The Temporary Pavement/Pedestrian Access shall be constructed of 21AA Limestone Aggregate mix as specified in the 2012 edition of the MDOT Standard Specifications. The contractor may substitute alternative materials and means of providing temporary access that meets the requirements of the Americans with Disability Act (ADA) for consideration by the Engineer.

CONSTRUCTION METHODS

All areas excavated on any given day which restrict barrier free access to businesses shall be graded, compacted and a temporary walk installed that is opened to pedestrian traffic, that same day, immediately following the excavation. Install the Temporary Pavement/Pedestrian Access as necessary to insure barrier free access, and as directed by the Engineer.

Construction of the pavement shall meet the following conditions:

1. The temporary walks to each business entrance shall connect to existing paved areas suitable for pedestrian access.
2. Compact the subgrade under the location of the temporary walks prior to placement of aggregates.
3. The temporary walks are to be a minimum of 5 feet wide, and shall be a minimum of 4 inches thick of the specified aggregate.
4. The aggregate of each walk area shall be evenly graded and trimmed, and shall be compacted by the use of a vibratory plate compactor or other approved method(s).
5. Compact all temporary walk areas to not less than 98% of its maximum unit weight.
6. In no case shall the longitudinal slope of the temporary walk exceed 5%; cross slope on the walk shall not exceed 2%.
7. Should the temporary walks create areas of ponded water, the Contractor will remove the water with pumps and/or temporary pipes to completely drain the area.
8. The completed work of temporary walk construction shall provide a smooth walking surface, to the satisfaction of the Engineer.
9. Remove the aggregate from the temporary walk areas immediately prior to the installation of the permanent concrete sidewalk. Maintain segregation of the temporary walk aggregate during removal for use in future work. Aggregates used in temporary walk construction may be re-used on the site for other temporary walks or permanent constructed, at the discretion of the Engineer.

MEASUREMENT AND PAYMENT

Measurement shall be by the square yard, in place, for each temporary walk section or area installed.
The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Pavement/Pedestrian Access</td>
<td>Square Yard</td>
</tr>
</tbody>
</table>

The unit prices for these items 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. The unit price for this item also includes any and all maintenance of the access surface as may be required during the construction period to insure ADA compliance.
DESCRIPTION

This work consists of providing all equipment and labor required to prepare (grooving) the pavement surface for recessed longitudinal, transverse, and turning guide line pavement markings in accordance with the City of Ann Arbor Permanent Pavement Markings Detailed Specification, the plans, and this detailed specification.

MATERIALS

None specified.

CONSTRUCTION

Install a recess (groove) in accordance with the recessed pavement marking material manufacturer’s installation instructions. Ensure all recessing configurations are in accordance with the Michigan Manual of Uniform Traffic Control Devices and the Michigan Department of Transportation Pavement Marking Standards.

1. Grooving Concrete and Hot Mix Asphalt Pavement. If there are no markings on the pavement, paint a temporary tracer line (with no beads) exactly where the permanent markings will be placed. Use these lines as a template for the grooving operation.

   Use equipment and methods approved by the manufacturer of the recessed pavement marking material to be recessed for forming grooves in pavement surfaces. Dry-cut the grooves in a single pass using stacked diamond cutting heads on self-vacuuming equipment capable of producing a finished groove ready for pavement marking material installation.

   Ensure that the bottom of the groove has a fine corduroy finish. If a coarse tooth pattern results, increase the number of blades and decrease the spaces on the cutting head until the required finish is achieved.

2. Groove Dimensions. Ensure grooves for recessed pavement markings are in accordance with the following:

   **Longitudinal Markings**
   - Groove Width: Material width +1 inch, (±1/8 inch)
   - Groove Depth: As recommended by the manufacturer, (±5 mils)
   - Groove Position: Center/Lane Lines: 2 inches from joint line, (±1/8 inch)
     Edge Lines: On lane, 2-4 inches in from the joint line, (±1/8 inch)
     Edge Lines for 14 foot paved lanes: as directed by the Engineer

   **Transverse Markings**
   - Groove Width: Material width +1 inch, (±1/8 inch)
   - Groove Depth: As recommended by the manufacturer, (±5 mils)
**Groove Position**: In the exact location where the transverse marking (crosswalk or stop bar) will be placed.

**Turning Guide Line Markings**

<table>
<thead>
<tr>
<th>Groove Width</th>
<th>Material width +1 inch, (±1/8 inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groove Depth</td>
<td>As recommended by the manufacturer, (±5 mils)</td>
</tr>
<tr>
<td>Groove Position</td>
<td>In the exact location where the turning guide line markings will be placed.</td>
</tr>
</tbody>
</table>

Placing Recessed Pavement Markings. Place the pavement marking material in the grooves within 24 hours of the grooves being made. Ensure the grooves are clean and dry prior to placing pavement marking material. Locate the groove so the entire marking can be placed within the groove.

**MEASUREMENT AND PAYMENT**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recessing Pavt Mrkg, Transv</td>
<td>Square Foot</td>
</tr>
</tbody>
</table>

**Recessing Pavt Mrkg, Transv**: include placing the temporary tracer line (with no beads), when required, and all work as described in this special provision.

Pavement marking materials, including retroreflective pavement marking required for traffic control, will be paid for separately using the appropriate pay items.
DETAILED SPECIFICATION
FOR
ITEM #227 - REMOVE CONCRETE SIDEWALK AND DRIVE - ANY THICKNESS
ITEM #228 – ROAD PAVEMENT REMOVE
ITEM #230 - REMOVE CONCRETE CURB OR CURB & GUTTER - ANY TYPE

DESCRIPTION

This work shall consist of removing asphalt and concrete road pavement, concrete curb, gutter, curb and gutter, integral curb, sidewalk (concrete and brick), sidewalk ramps, and drive openings and drives, as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer, in accordance with Section 204 of the 2012 MDOT Standard Specifications for Construction, except as specified herein, and as directed by the Engineer.

CONSTRUCTION METHOD

Prior to the start of removals, the Engineer and Contractor together shall field measure all removals.

The Contractor shall perform full-depth saw cutting at removal limits, including those necessary to construct 2-foot wide MDOT Type M drive openings, and including those necessary to provide for the partial removal of existing drive approaches, sidewalks, and curbs as shown on the Plans, as directed by the Engineer, and as marked for removal. The Contractor shall cut steel reinforcement bars as directed by the Engineer at all areas of removal.

The Contractor shall excavate, cut, remove stumps, remove brush, remove trench drain and clean out, grade, and trim as needed and as directed.

The Contractor shall coordinate with the City Forester prior to the removal of any tree roots.

The Engineer may direct aggregate base materials to be either removed from or added to the job-site, to properly complete the work. Where the Engineer directs the addition of such materials, they shall be paid for as either the Item of Work: “AGGREGATE BASE COURSE-21AA-C.I.P.” or “SAND SUBBASE COURSE, 2NS - C. I. P.” as directed by the Engineer. Where the Engineer directs such materials to be removed, they will not be paid for separately, but shall be included in “Machine Grading, Modified”.

Where existing concrete curb & gutter is to be replaced on a street with a concrete (or brick) base, the Engineer may direct the Contractor to remove a 2-foot wide, full-depth section of pavement and pavement base from immediately in front of the curb & gutter. As part of this pavement/base removal, the Contractor shall perform additional (double) full-depth saw-cutting along the entire removal limits, and shall take sufficient care so as not to damage and/or disturb any adjacent pavement, pavement base, and/or any other site feature, all as directed by the Engineer. The removals shall be to a sufficient width and depth to allow for the placement and removal of the curb & gutter formwork. Such removals will be paid for as “Road Pavement, Rem”. After the removal of the formwork, the Contractor shall replace the concrete base to its original thickness and elevation(s), or as directed by the Engineer.

Excavated/removal areas shall be adequately protected with barricades or fencing at all times; paid for as part of “General Conditions”.

Removed or excavated materials which are not incorporated into the work shall become the property of
the Contractor and shall be immediately removed and properly disposed of off-site. Removed or excavated materials may not be stockpiled overnight on, or adjacent to, the site.

MEASUREMENT AND PAYMENT

Sidewalk ramp, pre-cast concrete pavers, brick, subgrade, and related removals shall be measured and paid for as “Remove Concrete Sidewalk and Driveways - Any Thickness”.

“Road Pavement, Rem” includes the removal and disposal of all paving to the full depth of the pavement, regardless of the depth encountered. Pavement materials are anticipated to include asphalt, concrete, and brick.

All saw cutting required for removals shall be included in the appropriate item of work and will not be paid for separately.

Concrete removal items shall be field measured and paid for at the Contract Unit Prices for their respective Contract (Pay) Items as follows:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove Concrete Sidewalk &amp; Driveways - Any Thickness</td>
<td>Square Yard</td>
</tr>
<tr>
<td>Road Pavement, Rem</td>
<td>Square Yard</td>
</tr>
<tr>
<td>Remove Concrete Curb or Curb &amp; Gutter - Any Type</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

The unit prices for these items 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 #231 – CONCRETE CURB, 6 INCH STRAIGHT
ITEM #234 – CONCRETE CURB & GUTTER - ANY TYPE
ITEM #235 - 8-INCH CONCRETE SIDEWALK and RAMP
ITEM #236 - 6-INCH CONCRETE SIDEWALK
ITEM #237 - 8-INCH CONCRETE DRIVE APPROACH, TYPE L OR TYPE M
ITEM #238 – CONCRETE BASE, 8 INCH

DESCRIPTION

This work shall consist of constructing concrete items including concrete curb, gutter, curb and gutter, sidewalks, drive approaches, concrete pavement base and crosswalks MDOT Type M drive openings, steel reinforcement, mechanical anchors and hook bolts, all of any type and/or dimensions, all of either regular, fibermesh reinforced, and/or high-early concrete, in accordance with Sections 601, 602, 603, 801, 802, and 803 of the 2012 MDOT Standard Specifications for Construction, except as specified herein, as shown on the Plans, as shown in this Detailed Specification, and as directed by the Engineer.

The Contractor is responsible to construct all sidewalks, sidewalk ramps, drives, curbs, and all other concrete items within ADAAG compliance. All sidewalks and curb ramps must be constructed in accordance with MDOT Standard Detail R-28-J (version in place at time of the bid letting).

Please note that the project includes concrete paving collars around utility structures in precast unit paving areas as noted in the Detailed Specification for Sidewalk Unit Pavers.

MATERIALS

Concrete mixtures shall be as follows (or as directed by the Engineer), and concrete materials shall meet the requirements specified in the referenced sections of the MDOT Standard Specifications:

<table>
<thead>
<tr>
<th>Concrete Item</th>
<th>Concrete Mixture</th>
<th>MDOT Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb or Curb &amp; Gutter</td>
<td>P-NC, P1, 6-sack</td>
<td>601</td>
</tr>
<tr>
<td>6” or 8” Sidewalk, Ramp, Pavement or Drive</td>
<td>Fibermesh Reinforced P1, 6 sack</td>
<td>601</td>
</tr>
<tr>
<td></td>
<td>Fibermesh Reinforced P-NC</td>
<td></td>
</tr>
<tr>
<td>12” Crosswalk</td>
<td>Fibermesh Reinforced P1, 6 sack</td>
<td>601</td>
</tr>
<tr>
<td></td>
<td>Fibermesh Reinforced P-NC</td>
<td></td>
</tr>
</tbody>
</table>

“Fibermesh Reinforced” concrete shall have a polypropylene fibrillated fibers added at a rate of 1.5 pounds per cubic yard. The fibers shall meet the requirements of ASTM C116-89 “Specification for Fiber Reinforced Concrete and Shotcrete” Classification 4.1.3 Type III. The concrete shall be thoroughly mixed for a minimum of 5 minutes after the addition of the fibers to assure uniform distribution throughout the concrete.

Where steel dowels are indicated on the plans, the dowels are to be epoxy coated steel reinforcement bars at the size indicated.

CONSTRUCTION METHODS

General
Concrete items, including sidewalk, non-integral curb/gutter, drives, and structure adjustments shall be completed prior to the placement of bituminous asphalt pavement and precast unit pavers.

All subgrade work shall be completed prior to placing concrete items, unless directed or approved by the Engineer.

The subbase shall be trimmed to final elevation before placing curb. Curb shall not be placed on a pedestal or mound.

The Contractor is responsible for any damage to concrete items, including but not limited to vandalism; vehicular, pedestrian and/or miscellaneous structural damage; surface texture damage; and rain damage. Such damaged work will be removed and replaced at no additional cost.

The Contractor shall maintain on-site at all times, a sufficient quantity of adequate materials to protect concrete items. The Engineer may suspend or defer concrete placement if rain protection is not available. The Contractor shall not be entitled to any additional compensation due to work suspension or deferral resulting from a lack of adequate rain protection.

The subbase and adjacent concrete shall be sufficiently wet-down with water prior to placing concrete, to prevent water loss from the new concrete, and to form a better bond between old and new concrete. If a cold-joint becomes necessary, (the) existing concrete surface(s) shall be cleaned with compressed air to expose the aggregate in the concrete.

Where concrete items are placed adjacent to existing pavement that is within areas scheduled for subsequent pavement removal and/or milling, the adjacent pavement area shall, within 48-hours of the removal of concrete formwork, be backfilled with MDOT 21AA, Modified aggregate compacted in place to 95% up to the elevation of the bottom of the adjacent pavement and paid for as “Aggregate Base Course - 21AA - C.I.P.”

Prior to compacting backfill in front of curb and gutter, the back of curb shall be backfilled with approved material and compacted by mechanical means to 95%.

Concrete surfaces are to have the finishes noted on the plans. Where no finish is noted, a Light Broom finish perpendicular to the street (for sidewalks). “Concrete Base, 8 Inch”, is intended to provide a base under bituminous pavement, and shall have a float finish.

Reinforcement

All steel reinforcement, mechanical anchors and hook bolts, all of any type and/or dimensions shall be provided and installed per the Engineer and plans. All costs associated with reinforcement, anchors, and hook bolts is considered incidental to the concrete work.

Sidewalk pavements shall utilize fiber mesh reinforcing, made of 100 percent virgin homopolymer polypropylene graded multifilament fiber. Blend with concreate mix at the rate specified by the manufacturer for the depth of pavements and concrete mix specified.

Contraction Joints in Sidewalk

Contraction joints shall be as located and detailed on the plans. The method of forming joints and spacing shall be approved by the Engineer prior to construction. Joints shall be evenly spaced, forming the pattern indicated on plans, and shall be perpendicular to the building face or curb line unless otherwise directed by
Expansion Joints in Sidewalks

¾-inch wide expansion joints shall be placed through concrete sidewalks in line with the extension of all property lines or at the longitudinal ends of each block as directed by Engineer; at all expansion joints in the abutting curb, gutter, and combination curb and gutter, and as directed by the Engineer. Transverse expansion joints shall be placed through the sidewalks at uniform intervals of not more than 300-foot intervals, or at a minimum, the center of each block.

½-inch wide expansion joints shall be placed between the sidewalk and back of abutting curb or gutter, at the juncture of two sidewalks, between the sidewalk and buildings and other rigid structures, and as directed by the Engineer.

Expansion Joints in Curb and Gutter

¾-inch wide expansion joints shall be placed at all street returns, at all expansion joints in an abutting pavement, at each side of all driveways (at radius points), elsewhere at 300-foot maximum intervals, and as directed by the Engineer.

Expansion joint material shall extend to the full depth of the joint. After installation, the top shall not be above the concrete nor be more than ½-inch below it. No reinforcing steel shall extend through expansion joints.

Plane of Weakness Joints in Curb and Gutter

Intermediate plane of weakness joints shall be placed to divide the structure into uniform sections, normally 10-feet in length, with a minimum being 8-feet in length, and shall be placed opposite all plane of weakness joints in the abutting concrete base course.

Plane of weakness joints shall be formed by narrow divider plates, which shall extend 3-inches into the exposed surfaces of the curb or curb and gutter. Plates shall be notched, if necessary, to permit the steel reinforcement to be continuous through the joint.

Dowels are to be installed where indicated on the plans and as directed by the engineer. When installing dowels into existing concrete walks or curbs, predrill hole to accept dowel and fill the gap between the edge of the hole and the dowel with a two-part epoxy adhesive.

MEASUREMENT AND PAYMENT

The work of furnishing and installing mechanical anchors and hook bolts will be considered incidental to the work item.

A deduction in length for catch basins and inlet castings will be made to measurements of Curb and Gutter.

Curb and gutter (including “Curb and Gutter, Thickened Pan”), and MDOT type M openings, shall be paid as "Concrete Curb & Gutter - ALL TYPES", and measured at the center of the curb and gutter cross section.

All miscellaneous hand work is considered included in the pay items of work and shall not be paid for separately.
Payment for saw cutting for Type M openings and for partial removal of existing drives shall be included in the price for the item of work, “Remove Concrete Sidewalk & Driveways - Any Thickness”, and will not be paid for separately.

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

<table>
<thead>
<tr>
<th>PAY ITEMS</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Curb, 6 Inch Straight</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Concrete Curb and Gutter – Any Type</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>8-Inch Concrete Sidewalk and Ramp</td>
<td>Square Foot</td>
</tr>
<tr>
<td>6-Inch Concrete Sidewalk</td>
<td></td>
</tr>
<tr>
<td>8-Inch Concrete Drive Approach (Type L or Type M)</td>
<td>Square Foot</td>
</tr>
<tr>
<td>Concrete Base, 8 Inch</td>
<td></td>
</tr>
</tbody>
</table>

The unit prices for these items 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.
DESCRIPTION

Section includes cast-in-place architectural concrete planter curb including form facings, reinforcement, concrete materials, concrete mixture design, placement procedures, and finishes. This work shall completed as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer, in accordance with City of Ann Arbor Standard Specifications and the 2012 MDOT Standard Specifications for Construction, except as specified herein, and as directed by the Engineer.

A. Definitions

Cast-in-Place Architectural Concrete: Formed concrete that is exposed to view on surfaces of completed Concrete Planter Curb and that requires concrete materials, formwork, placement, or finishes to obtain specified architectural appearance.

Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

Design Reference Sample: Sample designated by Engineer in the Contract Documents that reflects acceptable surface quality and appearance of cast-in-place architectural concrete.

B. Preinstallation Meetings

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place architectural concrete to attend, including the following:

   Contractor's superintendent.
   PART 1 - Independent testing agency responsible for concrete design mixtures.
   PART 2 - Ready-mix concrete manufacturer.
   PART 3 - Cast-in-place architectural concrete subcontractor.

2. Review concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction joints, forms and form-removal limitations, reinforcement accessory installation, concrete repair procedures, decorative lighting, and protection of cast-in-place architectural concrete.

C. Action Submittals

Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments. Indicate amounts of mixing water to be withheld for later addition at Project site.
Placement Schedule: Submit concrete placement schedule before start of placement operations. Include locations of all joints including construction joints.

D. Informational Submittals

Material Certificates: For each of the following:
1) Cementitious materials.
2) Admixtures.
3) Form materials and form-release agents.
4) Repair materials.

Material Test Reports: For the all aggregates, by a qualified testing agency

E. Quality Assurance

Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

Source Limitations for Cast-in-Place Architectural Concrete: Obtain each color, size, type, and variety of concrete material and concrete mixture from single manufacturer with resources to provide cast-in-place architectural concrete of consistent quality in appearance and physical properties.

ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
1) ACI 301, "Specification for Structural Concrete
2) ACI 303.1, "Specification for Cast-in-Place Architectural Concrete."

Concrete Testing Service: The Owner will engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures. The Contractor may, at their own expense, elect to perform materials testing.

Mockups: Before casting architectural concrete, the Engineer may require the contractor to build mockups to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship. Obtain Engineer's approval of mockups before casting architectural concrete. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

MATERIALS

A. Form-Facing Materials

General: Comply with Division 03 Section "Cast-in-Place Concrete" for formwork and other form-facing material requirements.

Chamfer Strips: Metal, rigid plastic, elastomeric rubber, or dressed wood, 3/4 by 3/4 inch (19 by 19 mm), minimum; nonstaining; in longest practicable lengths.

Sealer: Penetrating, clear, polyurethane wood form sealer formulated to reduce absorption of bleed water and prevent migration of set-retarding chemicals from wood.
Form-Release Agent: Commercially formulated, colorless form-release agent that will not bond with, stain, or adversely affect architectural concrete surfaces and will not impair subsequent treatments of those surfaces. Formulate form-release agent with rust inhibitor for steel form-facing materials.

Surface Retarder: Chemical liquid set retarder, for application on form-facing materials, capable of temporarily delaying final hardening of newly placed concrete surface to depth of reveal specified.

B. Concrete Materials

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

Portland Cement: ASTM C 150, Type I. The provider may supplement Portland Cement with the following:

1) Fly Ash: ASTM C 618, Maximum 25% of total cementitious material for Class C and 20% of total cementitious material for Class F. Minimum amount of fly ash, when used 15% of total cementitious material.
2) Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or Grade 120. Maximum 50 percent of total cementitious material.
3) Silica Fume: ASTM C 1240, amorphous silica. Maximum 7.5 percent of total cementitious material.
4) Combined pozzolanic mineral admixture or fly ash, and silica fume: 30% by total cementitious material with fly ash or pozzolans not exceeding 25%.
5) Combined fly ash or other pozzolans, ground granulated blast-furnace slag and silica fume: 50% of total cementitious material.

Use cementitious material that is of same brand and type and from same plant as used in the concrete mix design submittal.

B. Normal-Weight Aggregates: To match sidewalk aggregate source, ASTM C 33

C. Normal-Weight Fine Aggregate: To match sidewalk aggregate source, ASTM C 33

D. Water: Potable, complying with ASTM C 94/C 94M except free of wash water from mixer washout operations.

C. Admixtures


Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1) Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2) Retarding Admixture: ASTM C 494/C 494M, Type B.
3) Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4) High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5) High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6) Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

D. Curing Materials

Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.

Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

E. Repair Materials

Bonding Agent: ASTM C 1059/C 1059M, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

Epoxy Bonding Adhesive: ASTM C 881/C 881M, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements. Types I and II, non-load bearing for bonding hardened or freshly mixed concrete to hardened concrete.

F. Concrete Mixtures, General

Prepare design mixtures for each type and strength of cast-in-place architectural concrete proportioned on basis of laboratory trial mixture or field test data, or both, according to ACI 301.

Use a qualified independent testing agency for preparing and reporting proposed design mixtures based on laboratory trial mixtures.

Proportion concrete mixtures as follows:

1) Compressive Strength (28 Days): 4000 psi (27.6 MPa) (20.7 MPa).
2) Maximum Water-Cementitious Materials Ratio: 0.46.
3) Slump Limit: 4 inches (100 mm), plus or minus 1 inch (25 mm).
4) Air Content: 6 percent, plus or minus 1.5 percent at point of delivery.

Admixtures: Use admixtures according to manufacturer's written instructions.

G. Concrete Mixing

Ready-Mixed Architectural Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and furnish batch ticket information.

1) Clean equipment used to mix and deliver cast-in-place architectural concrete to prevent contamination from other concrete.
2) When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
**CONSTRUCTION METHODS**

A. **Formwork (applies to all Concrete Planter Curb)**

Limit deflection or other irregularities in forms to less than ¼ over the length of any given curb section.

Fabricate forms to result in cast-in-place architectural concrete that complies with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-in-place surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood rustications, keyways, reglets, recesses, and the like, for easy removal.

Do not use rust-stained steel form-facing material.

Chamfer exterior corners and edges of cast-in-place architectural concrete, as indicated on the drawings.

Coat contact surfaces of wood rustications and chamfer strips with sealer before placing reinforcement, anchoring devices, and embedded items.

Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

Coat contact surfaces of forms with surface retarder, according to manufacturer's written instructions, before placing reinforcement.

B. **Removing and Reusing Forms**

Formwork for the planter curb may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.

Schedule form removal to maintain surface appearance that matches approved.

Clean and repair surfaces of forms to be reused in the Work. Do not use split, frayed, delaminated, or otherwise damaged form-facing material. Apply new form-release agent.

When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for cast-in-place architectural concrete surfaces.
C. Joints

Contraction Joints: Saw cut contraction joints true to line with faces perpendicular to surface plane of cast-in-place architectural concrete so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

Joints will be continuous across the visible face and back of the curb.

D. Concrete Placement

Before placing concrete, verify that installation of formwork, form-release agent, reinforcement, and embedded items is complete and that required inspections have been performed.

Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer.

Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

Deposit concrete continuously. Deposit concrete to avoid segregation.

1) Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2) Consolidate placed concrete with mechanical vibrating equipment according to ACI 303.1.
3) Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. Do not permit vibrators to contact forms.

Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1) When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2) Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3) Do not use calcium chloride, salt, or other materials containing antifreeze agents.
4) Do not use chemical accelerators unless otherwise specified and approved in design mixtures.

Hot-Weather Placement: Comply with ACI 301 and as follows:

1) Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2) Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.
E. Finishes, General

Architectural Concrete Finish: Match Engineer's design reference sample, identified and described as indicated, to satisfaction of Engineer.

Related Unformed Surfaces: At tops of curbs and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces.

Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

Maintain uniformity of special finishes over construction joints unless otherwise indicated.

F. As-Cast Formed Finishes

Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

G. Concrete Protecting and Curing

General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.

Begin curing cast-in-place architectural concrete immediately after removing forms from concrete. Cure according to ACI 308.1, by one or a combination of the following methods that will not mottle, discolor, or stain concrete:

Moisture Curing: Keep exposed surfaces of cast-in-place architectural concrete continuously moist for no fewer than seven days with the following materials:

1) Continuous water-fog spray.
2) Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
3) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for no fewer than seven days. Immediately repair any holes or tears during curing period; use cover material and waterproof tape.
4) Curing Compound: Mist concrete surfaces with water. Apply curing compound uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

H. Repairs, Protection, and Cleaning

Repair and cure damaged finished surfaces of cast-in-place architectural concrete when approved by Engineer. Match repairs to color, texture, and uniformity of surrounding surfaces and to repairs on approved mockups.
Remove and replace cast-in-place architectural concrete that cannot be repaired and cured to Engineer's approval.

Protect corners, edges, and surfaces of cast-in-place architectural concrete from damage; use guards and barricades.

Protect cast-in-place architectural concrete from staining, laitance, and contamination during remainder of construction period.

Clean cast-in-place architectural concrete surfaces after finish treatment to remove stains, markings, dust, and debris.

Wash and rinse surfaces according to concrete finish applicator's written instructions. Protect other Work from staining or damage due to cleaning operations.

Do not use cleaning materials or processes that could change the appearance of cast-in-place architectural concrete finishes.

MEASUREMENT AND PAYMENT

This work will be measured and paid using the following contract item (pay item):

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Planter Curb</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

Payment for these items includes all materials, labor and equipment necessary to complete the work as described, including, but not limited to, excavation, base prep, stone base, forming and reinforcing planter curbs, pouring and finishing and planter curbs, and backfilling.

Concrete Planter Curb will be measured in place at the face of the curb.
DETAILED SPECIFICATION
FOR
ITEM #240 - DETECTABLE WARNING, CAST IN PLACE

DESCRIPTION

This work shall consist of furnishing and installing cast in place detectable warning units in compliance to the Americans with Disability Act (ADA). All work shall be in accordance with MDOT Standard Detail R-28-J (version in place at time of the bid letting).

MATERIALS AND CONSTRUCTION METHODS

The detectable warning tiles shall be ceramic cement or composite polymer concrete (CRC), colored as Federal Number 22144 (frequently referred to as “Colonial Red” or “Brick Red”). The detectable warning tiles shall meet the following dimensions and tolerances:

1. Dimensions: Cast In Place Detectable/tactile Warning Surface Tiles shall be held within the following dimensions and tolerances:
   - Length: 24”
   - Width: The full width of the approaching walk (60” for typical sidewalk), or as indicated on plans.
   - Depth: 1.375 (1-3/8”) (±/−) 5% max.
   - Face Thickness: 0.1875 (3/16”) (±/−) 5% max.
   - Warpage of Edge: 0.5% max.
   - Embedment Flange Spacing: shall be no greater than 3.1”

2. Water Absorption of Tile when tested by ASTM D 570-98 not to exceed 0.05%.
3. Slip Resistance of Tile when tested by ASTM C 1028-96 the combined Wet and Dry Static Co-Efficients of Friction not to be less than 0.80 on top of domes and field area.
4. Compressive Strength of Tile when tested by ASTM D 695-02a not to be less than 28,000 psi.
5. Tensile Strength of Tile when tested by ASTM D 638-03 not to be less than 19,000 psi.
6. Flexural Strength of Tile when tested by ASTM D 790-03 not to be less than 25,000 psi.
7. Chemical Stain Resistance of Tile when tested by ASTM D 543-95 (re approved 2001) to withstand without discoloration or staining - 10% hydrochloric acid, urine, saturated calcium chloride, black stamp pad ink, chewing gum, red aerosol paint, 10% ammonium hydroxide, 1% soap solution, turpentine, Urea 5%, diesel fuel and motor oil.
8. Abrasive Wear of Tile when tested by BYK - Gardner Tester ASTM D 2486-00 with reciprocating linear motion of 37± cycles per minute over a 10” travel. The abrasive medium, a 40 grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled, weight and wood block is to be 3. 2 lb. Average wear depth shall not exceed 0.060 after 1000 abrasion cycles when measured on the top surface of the dome representing the average of three measurement locations per sample.
9. Resistance to Wear of Unglazed Ceramic Tile by Taber Abrasion per ASTM C501-84 (re approved 2002) shall not be less than 500.
10. Fire Resistance of Tile when tested to ASTM E 84-05 flame spread shall be less than 15.
11. Gardner Impact to Geometry "GE" of the standard when tested by ASTM D 5420-04 to have a mean failure energy expressed as a function of specimen thickness of not less than 550 in. lb/in. A failure is noted when a crack is visible on either surface or when any brittle splitting is observed on the bottom plaque in the specimen.
12. Accelerated Weathering of Tile when tested by ASTM G 155-05a for 3000 hours shall exhibit
the following result – E<4.5, as well as no deterioration, fading or chalking of surface.

13. Accelerated Aging and Freeze Thaw Test of Tile and Adhesive System when tested to ASTM D1037-99 shall show no evidence of cracking, delamination, warpage, checking, blistering, color change, loosening of tiles or other detrimental defects.

14. Salt and Spray Performance of Tile when tested to ASTM B117-03 not to show any deterioration or other defects after 200 hours of exposure.

15. AASHTO HB-17 single wheel HS20-44 loading "Standard Specifications for Highways and Bridges". The Cast In Place Tile shall be mounted on a concrete platform with a ½" airspace at the underside of the tile top plate then subjected to the specified maximum load of 10,400 lbs., corresponding to an 8000 lb individual wheel load and a 30% impact factor. The tile shall exhibit no visible damage at the maximum load of 10,400 lbs.

16. Embedment flange spacing shall be no greater than 3.1” center to center spacing as illustrated on the product Cast In Place drawing.

CONSTRUCTION METHODS

The contractor shall follow manufacturer specifications for installation, except where they conflict with MDOT Standard Detail R-28-J (version in place at time of the bid letting).

MEASUREMENT AND PAYMENT

The completed work as measured for this item of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Item:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detectable Warnings, Cast In Place</td>
<td>Square Foot</td>
</tr>
</tbody>
</table>

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 # 239 - SIDEWALK UNIT PAVERS

DESCRIPTION AND MATERIALS

This work includes supplying and installing pre-cast concrete pavers laid with hand-tight joints over a fine aggregate bedding, to be placed on a separately paid for stone reservoir. All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

Related Documents

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, City Standard Specification, and MDOT 2012 Standard Specifications for Construction (as well as applicable Special Provisions as referenced herein) apply to this Section

Submittals

A. Samples: Submit one sample of each shape and color of paver for approval. Where necessary submit additional pavers showing extreme range of color and texture for specified items.

B. Certification Reports:

1. Submit product certification materials for each type of precast concrete units, demonstrating compliance for the following:
   a) Compressive Strength
   b) Flexural Strength
   c) Absorption
   d) Freeze/Thaw Resistance

2. Submit product certification materials for all jointing and bedding aggregates and paving joint mortars.

Quality Control/Quality Assurance

A. Employ one installing entity to be responsible for the finished pavement surface, including installation of the paver containment, setting bed, joint filler and setting of unit pavers, who has, in the past three years, installed at least three projects of this size or larger.

B. Job Mock-Up

1. Install a preliminary mock-up, 20 square feet minimum, prior to placement of concrete sidewalk to determine if minor adjustments to the width of the paver band may be prudent to avoid excessive cutting of pavers during installation. Such modifications to dimensions are to be approved by the Engineer.

2. Construct a second mock-up sample, 40 square feet minimum, of the paving system indicating the pattern and joints required in actual construction. Make all mock-up samples as required until accepted by the Owner. Consider the selected mock-up a minimum standard
of workmanship when accepted, to be matched or bettered throughout the Project. The mock-up may be constructed as part of the Project and, if approved, will be accepted as part of the Work. However, should the Mock-up fail to meet the Owner’s approval, remove and reconstruct it until approved.

C. Protect the Work completed under this section, adjacent work and materials against damage during progress of the Work until complete.

**Delivery, Storage and Handling**

A. Deliver materials to the job site in a timely manner so as not to delay progress of the Work.

B. Deliver materials to the job site in their original unopened containers bearing labels clearly identifying the manufacturer's name.

C. Suitably store materials, if necessary, in a location agreeable to the Owner and Contractor.

D. Store the materials under cover, clear of the ground, and protected from the weather and damage during storage.

**Materials**

A. Source Limitations: Obtain each type of unit paver, joint material, and setting material from single source with resources to provide materials and products of consistent quality in appearance and physical properties.

B. Setting Bed Aggregate for permeable pavement areas. Clean, fine, sharp aggregate, in compliance with ASTM C33 and the gradation requirements of ASTM D 448 No.8 (MDOT 29A). The joint opening aggregate shall be free of organics and soluble salts or other contaminants likely to cause efflorescence. The joint opening aggregate shall be in compliance with the following grading limits:

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Percent Passing</th>
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<tbody>
<tr>
<td>½</td>
<td>100</td>
</tr>
<tr>
<td>3/8</td>
<td>85-100</td>
</tr>
<tr>
<td>No. 4</td>
<td>10-30</td>
</tr>
<tr>
<td>No. 8</td>
<td>0-10</td>
</tr>
<tr>
<td>No. 16</td>
<td>0-5</td>
</tr>
</tbody>
</table>

C. Joint Opening Aggregates for permeable pavement areas. Clean, fine, sharp aggregate, in compliance with ASTM C33 and the gradation requirements of ASTM D 448 No.8 (MDOT 29A). The joint opening aggregate shall be free of organics and soluble salts or other contaminants likely to cause efflorescence. The joint opening aggregate shall be in compliance with the following grading limits:

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<td>0-10</td>
</tr>
<tr>
<td>No. 16</td>
<td>0-5</td>
</tr>
</tbody>
</table>
D. Fine Aggregate Bed for applications over vaults and underground structures: Sand shall be well graded, washed sharp sand conforming to ASTM C33, and meeting the following sieve analysis gradations:

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8 inch</td>
<td>100</td>
</tr>
<tr>
<td>No. 8</td>
<td>80-100</td>
</tr>
<tr>
<td>No. 16</td>
<td>50-85</td>
</tr>
<tr>
<td>No. 30</td>
<td>25-60</td>
</tr>
<tr>
<td>No. 50</td>
<td>20-30</td>
</tr>
<tr>
<td>No. 200</td>
<td>0-5</td>
</tr>
</tbody>
</table>

Use of masonry sand will not be permitted.

E. Jointing Sand for applications over vaults and underground structures. Clean, fine, sharp sand, in compliance with ASTM C144 (gradation for 1/8-inch joints). The jointing sand shall be free of organics and soluble salts or other contaminants likely to cause efflorescence. The jointing sand shall be in compliance with the following grading limits:

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 8</td>
<td>95-100</td>
</tr>
<tr>
<td>No. 16</td>
<td>70-100</td>
</tr>
<tr>
<td>No. 30</td>
<td>40-75</td>
</tr>
<tr>
<td>No. 50</td>
<td>10-35</td>
</tr>
</tbody>
</table>

F. Precast Unit Pavers: Solid paving units made from normal-weight concrete with a compressive strength not less than 5000 psi, water absorption not more than 5 percent according to ASTM C140, and no breakage and not more than 1 percent mass loss when tested for freeze-thaw resistance according to ASTM C 1645.

1. Manufacturers: Subject to compliance with requirements, provide precast unit paver products by Unilock, 12591 Emerson Drive, Brighton MI, 48116
2. Paver type is Eco-Promenade, as manufactured by Unilock.
3. Paver laying pattern is to be as indicated on the plans
4. Thickness: 4 inches (10 cm)
5. Face Size and Shape: paver surface shall be rectangular, 3 inches (7 cm) in width, and 12 inches (30 cm) in length
6. Color: Pavers indicated as dark grey on the plans shall be “Steel Grey”; light grey pavers indicated on the plans shall be “Opal Blend”. All pavers shall have an Enduro color face mix and standard finish. Pigments shall confirm to ASTM C 979

Contractor is to provide the specified precast concrete unit paver, or an equal product approved by the Engineer.

G. Paving Jointing Mortar for applications over vaults and underground structures: Two component epoxy resin paving jointing mortar for light to medium traffic loads

2. Paving jointing mortar to be Rompox®-D1 by Romex®
3. Color: stone grey

Contractor is to provide the specified paving jointing mortar, or an equal product approved by the Engineer.

CONSTRUCTION METHODS

A. Examination
1. Examine areas indicated to receive paving for compliance with requirements for installation tolerances and other conditions affecting performance for the following items before placing the Permeable Concrete Pavers.
   a) Verify that subgrade preparation, compacted density and elevations conform to specified requirements.
   b) Verify that Geotextiles, if applicable, have been placed according to drawings and specifications.
   c) Verify that Permeable Base and Subbase Aggregate materials, thickness, compacted density, surface tolerances and elevations conform to specified requirements.
   d) Provide written density test results for soil subgrade, Permeable Base and Subbase Aggregate materials to the Owner, General Contractor and paver installation subcontractor.
   e) Verify location, type, and elevations of edge restraints, concrete collars around utility structures, and drainage inlets.
2. Proceed with installation only after unsatisfactory conditions have been corrected.
   a) Beginning of bedding aggregate and paver installation signifies acceptance of base and edge restraints.

B. Preparation
1. Verify that the subgrade soil is free from standing water.
2. Stockpile Permeable Setting Bed, Joint, Base and Subbase Aggregate materials such that they are free from standing water, uniformly graded, free of any organic material or sediment, debris, and ready for placement.
3. Remove any excess thickness of soil applied over the excavated soil subgrade to trap sediment from adjacent construction activities before placing the Geotextile and Permeable Subbase Aggregate materials.
4. Keep area where pavement is to be constructed free from sediment during entire job. Remove and replace all Geotextile, Permeable Joint, Setting Bed, Base and Subbase Aggregate materials contaminated with sediment with clean materials.

C. Paver Setting Bed
1. The aggregate shall be of uniform moisture content when screeded and shall be protected against rain when stockpiled on site prior to screeding. For installation, the moisture content shall be in the range of 4 to 8 percent.
2. Spreading: The bedding aggregate shall be spread loose in a uniform layer to give a depth after compaction of the paving units a thickness as indicated in plans, recommended by the paver manufacturer and as required to achieve designed grades.

D. Screeding of Paver Setting Bed:
1. The spread aggregate shall be carefully maintained in a loose condition and protected against pre-compaction by traffic or rain both prior to and following screeding. Aggregate shall be
lightly screeded in a loose condition to predetermined depth. Under no circumstances shall the aggregate be screeded in advance of the laying face to an extent to which paving will not be completed on that day. Any screeded aggregate which is pre-compacted prior to laying of paving unit shall be brought back to profile in a loose condition. Neither pedestrian nor vehicular traffic shall be permitted on the screened aggregate.

2. The Contractor shall screed the bedding aggregate using either an approved mechanical spreader or by the use of screed guides and boards.

E. Utility Collars
1. All water and gas valves, curb boxes and related at grade obstructions located in the sidewalk unit pavers are to have a cast in place concrete collar installed, which is square or rectangular in shape, at least 4 inches wider than the perimeter of the utility cover in all directions. Where feasible, the utility collar should be dimensioned to minimize the cutting of pavers and the use of cut slivers of pavers. Review color and utility conditions with Engineer before completion of sidewalk formwork.

2. Utility collars will be paid for as part of this pay item.

F. Placing Brick Pavers
1. Pavers chips, cracks, voids, discolorations or other defects shall not be installed.
2. Pattern: The pavers shall be laid in the pattern as shown on drawings
3. Color Blending: Paving units shall be installed from a minimum of three bundles simultaneously drawing the paver vertically rather than horizontally.
4. Joints: Place units hand tight against spacer bars. Adjust horizontal placement of laid pavers to align straight.
5. Alignment: String lines or chalk lines on bedding aggregate should be used to hold all pattern lines true. Prevent joint (bond) lines from shifting more than ±1/2 in. (±15 mm) over 50 ft. (15 m) from string lines.
6. Traffic: Prevent all traffic on installed pavers until Joint Aggregate has been vibrated into joints.

G. Cutting of Pavers
1. Contractor shall make all efforts to use full bricks to the maximum extent possible. Where cutting of brick is required to achieve the desired pattern, brick shall be cut to leave a clean edge to the traffic surface using a mechanical hydraulic, or guillotine cutter or masonry saw.
2. Discontinuities in patterns will not be permitted. Lay out pavers in all areas so as to eliminate slivers at edges.
3. Coordinate with poured concrete flatwork installer to establish paver area dimensions which help reduce or eliminate longitudinal cuts to pavers.
4. Carefully place the pavers by hand in straight courses with hand-tight joints and uniform top surface. Maintain good alignment and provide the pattern indicated.
5. Protect newly laid pavers at all times by panels of plywood, on which the installer stands, which can be advanced as work progresses. However, keep the plywood protection in areas which will be subjected to continued movement of materials and equipment. Take these precautions to avoid depressions and protect paver alignment.
6. If additional leveling of the pavers is required, and before sweeping in joint filler, roll with a power roller after sufficient heat has built up in the surface from several days of hot weather.
7. Inspection of Installed Pavers: After sweeping and prior to compaction, the paved area shall be inspected by the Owner and the Engineer to ensure satisfactory color blending. Areas deemed poorly blended shall be removed and re-installed in order to achieve satisfactory color distribution.
H. Compaction of Pavers
1. After inspection of the pavers, they shall be compacted to achieve consolidation of the bedding and brought to design levels and profiles by not less than three passes of a suitable plate compactor.
2. Compaction shall be accomplished by the use of a plate compactor capable of a minimum of 5,000-pound compaction force.
3. Initial compaction should proceed as closely as possible following installation of the paving units and prior to acceptance of any traffic or application of jointing aggregate.
4. Care shall be taken not to damage pavers or surface finish during compaction.

I. Initial Joint Treatment for Pavers
1. Jointing aggregate shall be spread over the pavement after initial compaction has been completed. The jointing aggregate shall be spread as soon as is practical after initial compaction and prior to the termination of work on that day. The Contractor shall not use wet aggregate.
2. The jointing aggregate shall be broomed to fill the joints. Excess aggregate shall then be removed from the pavement surface and the pavers shall be compacted again to settle the jointing aggregate.
3. Repeat this operation a minimum of two times.

J. Final Compaction for Pavers
1. After jointing aggregate has been installed and the pavement surface swept clean, final compaction shall be accomplished by not less than two passes of the plate compactor.
2. Final compaction should proceed as closely as possible following installation of jointing aggregate and prior to the acceptance of any traffic.

K. Proof Rolling
1. Proof roll the completed installation with pneumatic tire equipment which replicates anticipated service traffic. Subject each individual paver to at least one passage of load.
2. Equipment and procedures are subject to approval by the Owner and Engineer and proof rolling will be observed and recorded by the Engineer.
3. Remove and replace units cracked or otherwise damaged by proof rolling, including inspection and repair of setting bed.

L. Paving jointing mortar for area over vaults and underground structures
1. Preparation: Clean out joints to a depth of at least 1 3/16" (3 cm). The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.
2. Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.
3. Mix: Pour the 55.1 lbs (25 kg) filler components into a powered mixing tub and start the mixing process. While mixing, slowly add the separately packaged components completely into the mixture. After mixing for 3 minutes add water according to the product package and continue mixing well for at least 3 minutes.
4. Application: Apply the mixed paving jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the paving jointing mortar. Application time at 68 °F (20 °C) is approx. 20 – 30 minutes.
5. Final cleaning: After approx. 10 – 15 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct
moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not re-use swept off material.

6. Protection: The freshly jointed surface needs to be protected against rain for the next 12 – 24 hours. The rain protection layer must not be laid directly onto the paved surface this is to ensure sufficient air circulation. Safe rain protection is afforded by the specially developed ROMEX® protective surface mats that can be simply laid on the surface.

M. Allowable Tolerance
1. Finished surface of pavement: smooth, even, and true to the lines, grades and cross section indicated. Maximum deviation when tested with a 10-foot straight-edge parallel to the centerline of the surfaced area: 1/4 inch in 10 feet.
2. Maximum offset from flush from paver surface to paver surface or from paver surface to a fixed flush edge: 1/16 inch.
3. Slope finished walk for drainage without any ponded water on the finished surface.

N. Repair, Cleaning and Protection.
1. Clean paver surface of all debris, dirt, aggregate, and sand.
2. Remove and replace pavers which are chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in the same manner as original units, with same joint treatment to eliminate evidence of replacement.
3. Provide final protection of paver areas in a manner acceptable to the installer, which ensures paver work being without damage or deterioration at the time of substantial completion.
4. Warranty. Finished area shall be free of bumps or depressions, evenly graded to levels shown, and shall be guaranteed against defects of materials and workmanship for a period of two years after substantial completion.

MEASUREMENT AND PAYMENT

This work will be measured and paid using the following contract item (pay item):

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalk Unit Pavers</td>
<td>Square Foot</td>
</tr>
</tbody>
</table>

Sidewalk Unit Pavers will be measured and paid by the area of unit paver pavement in place. The work includes the aggregate setting bed, jointing sand and aggregate, and all incidental measures required to complete the work, including the utility collars described herein. The Stone Reservoir base will be paid for separately.
DETAILED SPECIFICATION
FOR
ITEM #252 - SEWER BULKHEAD, 4-INCH THROUGH 18-INCH DIAMETER

DESCRIPTION AND MATERIALS

This work shall consist of constructing sewer bulkheads, as specified herein, as shown on the Plans, and as directed by the Engineer.

Materials shall meet the requirements of the City of Ann Arbor Standard Specifications.

CONSTRUCTION METHODS

The Contractor shall install Sewer Bulkheads, as shown on the Plans, as detailed in the City Standard Specifications, and as directed by the Engineer.

MEASUREMENT AND PAYMENT

Furnishing and placing flowable fill as backfill for these items will not be paid separately, but shall be included in the bid prices for these items of work.

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:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer Bulkhead, 4-Inch Through 18-Inch Diameter</td>
<td>Each</td>
</tr>
</tbody>
</table>

The unit prices for these items 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.
DESCRIPTION

This work shall consist of constructing an aggregate subbase and flowable aggregate fill on an existing aggregate surface, or on a prepared subgrade in accordance with Sections 301, 302 and 307 of the 2012 MDOT Standard Specifications for Construction, except as specified herein.

MATERIAL

A. Flowable Fill
   1. Flowable Fill Mix: Provide fill containing, at a minimum, cementitious materials and water. Cementitious materials to be portland cement, pozzolanic materials, or other self-cementing materials, or combinations thereof, at Contractor’s option, provided certification of no degradation of groundwater quality has been submitted. Flowable fill mix design may also contain, fine aggregate or filler, and chemical admixtures in any proportions for final product to meet specified strength, flow consistency and shrinkage requirements.
      a. Mix Design: Consistency that at time of placement does not require manual means for placement. Mixture is capable of filling all voids in irregular space and hard to reach places, is self-leveling, and hardens in a matter of a few hours without the need for compaction in layers.
      b. Minimum Strength: 200-300 psi according to ASTM C39/C39M at 28 days after placement.
      c. Minimum Subsidence and Bleed Water Shrinkage: Bleed water evaporation to result in maximum 10.4 mm per m (1/8 inch per foot) shrinkage of flowable fill depth (for mixes containing high fly ash content), as measured in ASTM C940 Section 10.
      d. Flowable Fill Unit Weight: 80 90 lbs/cu. ft. measured at point of placement after 60-minute ready mix truck transport.
   2. Provide equipment as recommended by manufacturer and comply with manufacturer’s instructions for addition of additives, at production plant or before placement at project site.
   3. Provide each product from one manufacturer. If not otherwise specified, comply with ACI 229R recommendations.
      a. Portland Cement: ASTM C150, Type I or Type 2.
      b. Mixing Water: Fresh, clean, and potable.
      c. Air-Entraining Admixture: ASTM C260/C260M.
      d. Chemical Admixtures: ASTM C494/C494M.
      e. Aggregate: ASTM C33/C33M.

B. Sand Subbase Course, Class II – C.I.P.: The materials used for this work shall be MDOT Class II granular material meeting the requirements of the City Standard Specifications.
CONSTRUCTION METHOD

A. General

Sand or aggregate courses shall not be placed if, in the opinion of the Engineer, there are any indications that they may become frozen before their specified densities are obtained.

Sand or aggregate courses shall not be placed on a frozen base, subbase or subgrade.

The Contractor shall not use rubber-tired equipment on the grade, when its use causes, or may cause, in the opinion of the Engineer, damage to the grade. The Contractor shall conduct his/her operation(s), and provide all necessary equipment, to insure the satisfactory completion of the work without damaging the grade. This includes the transporting, stockpiling, re-handling, and movement of materials over additional distances, in lieu of driving on an unprotected, or partially unprotected, grade.

The Contractor is solely responsible for the maintenance and protection of the grade. Further, any damage to the grade which, in the opinion of the Engineer, is caused as a result of the Contractor's operation(s), or his/her subcontractors' or suppliers' operation(s), shall be repaired by the Contractor at the Contractor's expense. This includes any additional earthwork and/or maintenance materials as directed by the Engineer, for the purposes of the Contractor's maintenance and protection of the grade.

The Contractor shall shape the base, subbase and subgrade to the elevations, crowns, and grades as specified on the Plans and as directed by the Engineer. This may include re-grading the subbase to provide different crown grades than those existing prior to the construction.

The Contractor shall remove, add to, re-shape, re-grade, and re-compact the existing roadbed materials (including the base bed under sidewalks), and shall construct the roadway and sidewalks to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer. The Contractor shall use blade graders, maintainers, vibratory rollers, and/or other equipment as necessary, and as directed by the Engineer, for this work. Use of each specific piece of equipment is subject to the approval of the Engineer.

The Contractor shall maintain the base, subbase and subgrade in a smooth, well drained condition at all times.

Manholes, valve boxes, inlet structures and curbs shall be protected from damage. Manholes & inlet structures shall be continuously cleaned of construction debris and properly covered at all times during the construction. Upon completion of each day’s work, manholes, water valve boxes, inlets and catch basins shall be thoroughly cleaned of all extraneous material.

B. Flowable Fill

Examine and verify substrate suitability for product installation. Install flowable fill pursuant to manufacturer’s recommendations, insuring that the material adequately fills all void spaces. Avoid contact with metal surfaces.

Protect exposed surfaces of flowable fill from premature drying, wash by rain or running water, wind, mechanical injury, and excessively hot or cold temperature, by curing method subject to Engineer’s approval.
C. Sand Subbase Course, Class II
Sand and aggregate courses shall be placed in uniform layers such that when compacted, they have the thicknesses shown on the Plans, or as directed by the Engineer. The loose measure of any layer shall not be more than 9-inches nor less than 4-inches.

Sand subbase and aggregate base courses shall be compacted to not less than 98% of their respective maximum unit weights, as determined by the AASHTO T-180 test.

All granular materials shall be deposited from trucks or through a spreader in a manner that will minimize segregation of material.

MEASUREMENT AND PAYMENT

Where granular materials are used as base, as subbase, or as fill for excavations in Machine Grading areas, item of work "Sand Subbase Course CL II - C. I. P. " shall be measured and paid accordingly.

Where a flowable fill material is called for on the plans or installed as directed by the Engineer, the item of work “Flowable Fill” shall be measured and paid for accordingly.

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowable Fill</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Sand Subbase Course Class II - C.</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

The unit prices for these items 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 #261 – PLANTING SOIL
ITEM #262 - TOPSOIL

DESCRIPTION

The work consists of providing and placing Planting Soil and Topsoil in landscape planters, lawn areas, and tree pits, as shown on the plans, as detailed herein or as directed by the Engineer. All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

MATERIAL

Provide materials as described below.

A. **Planting Soil:** The topsoil provided shall meet the requirements of City of Ann Arbor Division III, Section 6B. Planting and Backfill Soil Material, and be amended as noted in Section 6B for use in all landscape applications other than the rain gardens.

B. **Topsoil:** Topsoil shall be fertile, friable, sandy loam without admixture of sub-soil, and shall be free of stones, roots, sticks, and other extraneous material 2 inches in diameter or larger. A certified analysis of the topsoil from each source shall be submitted to the Engineer for approval before delivery to the site. If deficiencies in the topsoil are found as a result of this analysis, they shall be corrected at no expense to the City and DDA.

CONSTRUCTION METHOD

Excavate to the depth detailed on the plans and details to accommodate the installation of plant material, soil planting soil and mulch. For tree grate landscape areas, excavate the entire area beneath the limits of the tree grate, less any area required to slope from the top of the backfill area to the base of the excavation. For landscape areas bordered by concrete planter curbs, excavate the entire area within the curbed limits to the specified depth.

Prepare planting soil mix prior to placement in landscape areas. Planting soil shall be friable, and without aggregate chunks larger than 1 inch in diameter. The components of the planting soil shall be evenly distributed through the mix.

Do not place frozen soils.

Backfill excavated planting areas to avoid air gaps and pockets, while also avoiding undue compaction of the soils. Soil surface shall be smooth and evenly graded across all planting areas.

Final grades shown on the plans are to the top of the soil, or as directed by the Engineer.

MEASUREMENT AND PAYMENT

The completed work, as described, will be measured and paid for at the contract unit price using the
following pay items:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting Soil</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Topsoil</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

Provide surface mulch on landscape beds and tree planting as indicated on plans. Mulch is considered incidental to the landscape and soils pay items and will not be paid for separately.
DETAILED SPECIFICATION
FOR
ITEM# 264 - LANDSCAPE MAINTENANCE

DESCRIPTION

For this pay item, the work includes two full years of maintenance of planting areas following the one year of maintenance which is part of the standard Landscape Pay Items. Item #264 Landscape Maintenance shall include but not be limited to; pruning; cultivating; weeding; removal or trash, leaves and debris, watering; fertilizing; and furnishing and applying such sprays and other treatments as necessary to keep all plantings free of insects and diseases.

Debris and Leaf Cleanup, as described in this Detailed Specification, shall also be performed during the initial maintenance and warrantee period that is included in the standard Landscape Pay Items (i.e., during the first year after plant installation).

All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

The Maintenance Contractor shall be a company specializing in native landscape installation and maintenance, native restoration, native seed mix installation and maintenance, including thorough knowledge of native vs. non-native species, and having a minimum 3 years of experience in projects of the scope and scale being specified.

MATERIALS

A. Maintenance Plans and Schedules:
   1. Maintenance Plan and Schedule: Maintenance Contractor must submit detailed typewritten methodology and schedules for maintenance of all landscape areas as outlined in Part 3 of this section. The schedule shall be comprehensive and shall be the basis for monthly payments for the duration of the maintenance contract. Maintenance Contractor shall submit Maintenance Plan and Schedule to Owner within 1 week following the issuance of the Notice to Proceed.
      a. Schedule must identify activities, number of personnel to be involved, tentative calendar schedule, and expected work hours.
   2. Maintenance Report Forms: Maintenance Contractor to submit a Maintenance Report Form template to Owner for prior approval.
      a. Every maintenance visit must be thoroughly and completely recorded on an approved Maintenance Report Form, which will include the date, the maintenance crew’s names, weather conditions, maintenance provided, areas that received maintenance, number of hours onsite, chemical rates of application and equipment used, notes on future maintenance/problem, etc.
      b. Submit Maintenance Report Forms following completion of each maintenance visit. The forms shall cross-reference the Maintenance Plan and Schedule. Payment for this work will only be made by the Owner when proof of completed work has been provided.

B. Product Data Submittals required:
   1. Fertilizer.
   2. Pesticides and Herbicides: Include product label and manufacturer’s application instructions specific to the project site.
C. Delivery, Storage and Handling
   1. General:
      a. Packaged Materials: Deliver packaged materials in original unopened containers showing weight, analysis and name of manufacturer. During shipment and storage on site, protect materials from breakage, moisture, heat or other damage.
      b. No packaged materials may be stored onsite unless Maintenance Contractor receives prior approval from Owner.

   2. Pesticides/Herbicides/Chemical Control Agents:
      a. Storage, handling, application, clean-up, and disposal of all pesticides, herbicides, and other controlled use materials shall be in strict conformance with all government and industry standards.
      b. Maintain and operate all pesticide/herbicide application equipment according to manufacturer’s standards and instructions. Equipment shall be clean, free of leaks, calibrated, and deliver spray patterns as specified by the manufacturer.
      c. Utilize pesticides/herbicides only for their labeled use and in accordance with precautions, instructions, rates, and timing as specified by manufacturer.
      d. Pesticides/herbicides shall be applied only by Michigan certified applicators, excluding over the counter types. Notify Owner prior to application of any pesticide, herbicide, or other chemical control agent. Clearly label areas that have received application of these materials.
      e. Mixing of pesticides, herbicides, and other chemical control materials shall not occur onsite unless Owner has given prior approval.

CONSTRUCTION METHODS

A. Weeding
   1. Weeding under this section involves plant beds and tree planters and tree grates.
   2. The beds, planters, and grates shall be weeded on a monthly basis through the growing season (typically March through November).
   3. Use Integrated Pest Management to control weeds to the extent reasonably possible.
   4. Notify the DDA prior to the use of pesticides and herbicides.
   5. No pre-emergent pesticide may be used because native species are encouraged to spread via seed.
   6. Manual removal of weeds with a trowel or small shovel is recommended to ensure complete removal of weedy root mass. Do not damage or displace adjacent desirable plant species.
   7. Legally dispose of weedy plants offsite. Do not allow any seedheads to remain in the project site.

B. Pruning and Deadheading:
   1. Most plants at this site are native species and should not require substantial pruning. The natural habit of the plant should be preserved. Shrub beds should be allowed to grow out naturally and become a continuous mass to shade out weeds.
   2. All pruning shall conform to standards established by the International Society of Arboriculture.
   3. In general:
      a. Do not shear plants; remove individual limbs back to main trunk or leader (thinning).
      b. Do not leave stubs longer than ¼”.
      c. Use the proper tools for the cut being made.
      d. Keep cutting tools sharp and clean, and disinfect tools between cuts and plants.
      e. Avoid pruning during rainy weather as this may increase the chance of spreading fungal spores.
f. Do not prune any oak between April 1 and October 31.
g. Prune at the proper time of year for the plant species to be pruned in order to avoid removing next year’s flowering buds.
h. Do not prune trees or shrubs during the growing season after July 15 because new growth may not harden off before winter.
i. Do not deadhead stands of native grasses in order to allow the seeds to further establish the native grass areas. Stands of native grasses may be cut to the ground in early March each year for a cleaner appearance, but the cut grass and seedheads should be left on the ground.

4. Utilize the following procedures when pruning canopy trees, ornamental trees, and shrubs:
   a. Remove dead, damaged, or dangerous branches; branches that interfere with pedestrians; water sprouts, suckers, and crossing branches.
   b. Assume one pruning each year of each plant species. Review the site with the DDA each spring to review pruning needs.
   c. Major Storm Damage is not part of this contract.

C. Watering
   1. Watering shall be conducted on an as-needed basis as defined herein. Native plants at the site are generally drought tolerant and should not be watered regularly or for short durations in order to encourage deeper growth of rootmass. During periods of drought plants should receive 1” of water per week, especially the arrowwood viburnums (Viburnum dentatum) and gray dogwoods (Cornus racemosa). Plants on slopes will require more water than those on flatter terrain.
   2. To determine soil moisture within the planting root zone, a hand-held soil moisture meter is recommended.
   3. Water should not be applied at a rate to disturb or erode soil.
   4. The use of TreeGator® bags is encouraged for canopy and ornamental trees during periods of drought, but should be removed before winter and during periods of normal precipitation.

D. Fertilizing
   1. Generally the plants used at the site are native species that should not require long-term fertilization, but fertilization is recommended during the first 3 years following installation.
   2. Fertilize trees and shrubs in the fall after the first hard freeze but before the ground freezes. Trees less than 6” diameter at breast height (DBH) should receive 0.25 lbs of nitrogen per inch of DBH. Shrubs should receive 1 lb. of nitrogen per 100 square feet of shrub mass per year.
   3. Do not fertilize after July 15 because new growth may not harden off before winter.
   4. Perform soil tests once per year to determine nutrient excesses/deficiencies in the soil. Send soil samples to an accredited agricultural soil testing laboratory to test for N, P, K, macro- and micronutrients, as well as pH and organic matter, and obtain a fertilizer recommendation from the testing laboratory.
   5. Perform additional fertilizer applications as the soil tests indicate.

E. Debris and Leaf Clean-up
   1. Collect all trash, litter, etc. from the sidewalks, plant beds, planters and grates on a monthly basis through the growing season (typically March through November) and dispose of off-site in a legal manner. Collect leaves from sidewalks and curblines and remove off-site.

F. Guarantee
   1. The Maintenance Contractor shall repair or replace all defects to plant material and seeded areas arising from poor workmanship, improper use of materials, or through improper care.
of any plant or plantings growing within the area covered in this Contract. The total cost of replacements, labor, material, etc. is to be at the expense of the Maintenance Contractor. This does not cover damage or losses caused by acts of nature beyond the control of the Maintenance Contractor. However, it does include any loss resulting from disease or insects where the prudent and timely use of cultural or chemical controls would avoid such loss, and disease or insect brought to the site through replacement plant or landscape material, and any loss resulting from the lack of watering or overwatering.

**MEASUREMENT AND PAYMENT**

Debris and Leaf Cleanup, as described in this Detailed Specification, shall also be performed during the initial maintenance and warrantee period that is included in the standard Landscape Pay Items (i.e., during the first year after plant installation), and the costs of such work is to be included in individual pay Landscape Pay Items (#810 through #822).

This work will be measured and paid using the following contract item (pay item):

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape Maintenance</td>
<td>Month</td>
</tr>
</tbody>
</table>

**Landscape Maintenance** will be measured and paid on a unit basis for each month or fraction of month worked through the growing season. The Contractor shall submit copies of the Maintenance Reports with each pay application to demonstrate that the required work has been completed. The work includes all labor, materials, equipment costs, disposal fees and related work for providing these services.
DETAILED SPECIFICATION
FOR
ITEM # 266 - TREE GRATE, 4 ft. X 8 ft.
ITEM # 267 – TREE GRATE, 5 ft. X 8 ft.

DESCRIPTION

This work consists of furnishing and installing cast iron tree grates and their frames. All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

MATERIALS

Provide iron castings conforming to section 908 of the MDOT Standard Specification for Construction that come with a 10-year warranty against breakage. Tree grates and frames are to be the sizes and configurations noted on the plans, with openings slots in a pattern that conforms to ADA guidelines.

Tree grate castings and frames to be furnished and manufactured by Urban Accessories of Tacoma, WA (phone is 877-487-0488). Contractor is to provide the specified tree grate casting and frame, or an equal product approved by the Engineer; as follows:

A. Tree Grate, 4 ft. x 8 ft.: Shall be 4 ft. x 8 ft. in size (nominal), “Boston” model, with Urban Accessories manufactured frame, and supports.

B. Tree Grate, 5 ft. x 8 ft.: Shall be 5 ft. x 8 ft. in size (nominal), “Boston” model, with Urban Accessories manufactured frame, and supports.

All castings will be made of Ductile Iron meeting ASTM A536 Class 65-45-12, and will a Liquid Coat finish, in black per manufacturer’s process. Ensure all anchoring bolts, nuts, washers, and all other hardware for installation meet the manufacturer’s recommendation.

Furnish certification regarding the compliance of materials incorporated in the work, for approval by Engineer prior to installation.

Ensure all anchoring bolts, nuts, washers, and all other hardware for installation meet the manufacturer’s recommendation.

Furnish certification regarding the compliance of materials incorporated in the work, for approval by Engineer prior to installation.

CONSTRUCTION METHODS

A. Fabrication
   1. Ensure all tree grate castings are manufactured true to pattern and component parts must fit together in a uniform manner.

   2. Ensure castings are free of all defects and cleaned by shot blasting.
B. Installation

1. Square up the frame sections and bolt them together. Install the tree grate frame flush and on a plane with the proposed surrounding slope, prior to casting the concrete around it.

2. Set the grates flush with the top of the frame and ensure that the grate does not rock in the frame. Securely bolt grate halves together on the underside. Clean any foreign matter from the grates prior to setting.

3. If the engineer believes that the product or the installation has resulted in either a poorly fitted grate and frame, an unsafe walking surface, or an unacceptable amount of rocking, they may reject the installed product, and require a new installation and/or a new tree grate.

MEASUREMENT AND PAYMENT

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Grate, 4 ft. X 8 ft.</td>
<td>Each</td>
</tr>
<tr>
<td>Tree Grate, 5 ft. X 8 ft.</td>
<td>Each</td>
</tr>
</tbody>
</table>

The unit price for “Tree Grate, 4 ft. X 8 ft.” and “Tree Grate, 5 ft. X 8 ft.” shall include all labor, material, and equipment costs to perform all the work specified, including thickened concrete edge, frames, grates, hardware, and grate supports.
DETAILED SPECIFICATION
FOR
ITEM #270 - NO PARKING SIGN
ITEM #271 - SIGN, PORTABLE CHANGEABLE MESSAGE
ITEM #272 - CHANNELIZING DEVICE, 42 INCH
ITEM #273 - BARRICADE TYPE III - LIGHTED
ITEM #274 - BARRICADE TYPE II
ITEM #275 - TEMPORARY SIGN - TYPE B
ITEM #276 - TEMPORARY SIGN - TYPE B SPECIAL
ITEM #277 - PORTABLE WATER FILLED BARRIERS
ITEM #278 - LIGHTED ARROW, TYPE C
ITEM #279 - TEMPORARY PEDESTRIAN TYPE II BARRICADE
ITEM #280 - TEMPORARY PEDESTRIAN TYPE II CHANNELIZER

DESCRIPTION

Traffic shall be maintained in accordance with the City of Ann Arbor Public Services Department Standard Specifications except as specified in Sections 810, 812, 919, and 920 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, Part 6 of the latest edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), and the City Standard Specifications, and as amended herein.

MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS

General

Materials and equipment shall meet the requirements specified in the above-designated sections of the 2012 MDOT Standard Specifications.

The Contractor shall maintain two-way traffic on major streets (unless staging specifically requires one-way operation), maintain access for local traffic on local streets, 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 pavement width at all times for maintaining traffic.

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, Type II barricades and channelizers shall be placed by the Contractor, as directed by the Engineer. "Sidewalk Closed" and/or "Cross Here" signs shall be placed, by the Contractor, when directed by the Engineer.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City and DDA 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 or DDA on this project shall be preserved, protected, and maintained by the Contractor. Existing City owned signs which are damaged by the Contractor during the work will be repaired by the City at the Contractor's expense.

A lane-closure permit shall be obtained by the Contractor from the City Transportation Division, at least 48 hours in advance of any proposed lane or street closing.

The hours of work on all Local streets are 7:00 a.m. to 8:00 p.m., Monday through Saturday, or as specified on the lane-closure permit. No equipment will be allowed in the street before or after these hours. Local streets may only be closed to through traffic (local access only) with written authorization of the Engineer. 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. 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 Contractor shall temporarily cover conflicting traffic and/or parking signs when directed by the Engineer, and such efforts will be considered incidental to the work.

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

Channelizing Devices; II & III Barricades; Type A and B Temporary Signs

The Contractor shall furnish and operate these items as directed by the Engineer.

Channelizing Devices and Barricades shall comply with MDOT specifications.

Type III Barricades shall have standard orange-and-white stripes on both sides of the barricade.

Sufficient signs shall be provided by the Contractor to insure the safety of the workers and the general public in accordance with the current MMUTCD.

"Construction Ahead" warning signs shall be placed, as indicated on the Plans, or as directed by the Engineer, prior to the start of work, regardless of the nature, magnitude or duration of the work.

No-Parking Signs and Posts

Prior to the commencement of any construction activity, the Contractor shall place No-Parking signs as directed by the Engineer. The Contractor shall obtain a permit for “Temporary Permission of Reserve Parking Lane for Work Related Purposes” from the City Engineering Unit. This permit shall be obtained a minimum of 5 days prior to the posting of No-Parking signs.

The City will furnish No-Parking signs to the Contractor at no cost. The Contractor shall furnish the signposts and shall securely bolt the signs to the signposts as directed by the Engineer. The Contractor shall install the signposts at least 2-feet deep into the ground, and there shall be a minimum 6-feet and
maximum 7-feet clearance maintained between the bottom of the sign and the ground. The signs shall be placed at 75-foot intervals (or as necessary) to eliminate parking in the construction area.
The installation of No-Parking signs shall be in accordance with the permit. No-Parking signs shall be installed by the Contractor, as directed by the Engineer, **at least 48 hours prior to the proposed start-of-work/enforcement date**.

No-Parking signs shall be returned to the City at the completion of the work. The cost of unreturned signs will be back charged to the Contractor.

No-Parking signs shall be covered by the Contractor, thereby allowing on-street parking, until between 48 and 36 hours prior to the start of the work. No-Parking signs shall be covered by the Contractor whenever there is no work being performed for a period of time longer than 72 hours.

**Portable Water Filled Barriers**

Contractor shall submit specifications for all portable water filled barriers to the Engineer for approval prior to the installation of the barriers. Barriers shall comply with TL-2 criteria and as approved by the Engineer. Barrier shall be Triton water filled barrier or approved equal. Barrier to be anchorless, unless directed otherwise by the Engineer. Location and installation shall comply with MDOT Standard Specifications for Construction and as approved by Engineer. The intended use for the barriers is to protect traffic that is within 3 feet of work zones with a surface differential of 12 inches or greater and as specified by the Engineer.

**Portable Changeable Message Signs**

Review sign requirements and site constraints with Engineer prior to ordering and placing the Portable Changeable Message Signs.

**Lighted Arrow, Type C, Furnish & Operate**

The contractor shall supply lighted arrow boards as shown on the plans and as directed by the Engineer at an Engineer approved locations. The lighted arrow boards shall comply with MDOT Standard Specifications for Construction. The contractor shall furnish and operate the lighted arrow throughout the duration of the project as directed by the Engineer. The contractor will maintain continuous operation of the lighted arrow when in use.

**Temporary Pedestrian Type II Barricade**

Provide a temporary pedestrian Type II barricade that meets the requirements of National Cooperative Highway Research Program Report 350 (NCHRP 350) or Manual for Assessing Safety Hardware (MASH), in addition to meeting the following requirements:

1. Provide barricade sections at least 43 inches wide, designed to interconnect to ensure a continuous Americans with Disabilities Act (ADA) compliant tactile barrier. Ensure the connection includes provisions to accommodate non-linear alignment as well as variations in elevation at the installation area.

2. Ensure the top surface of the barricade is designed to function as a hand-trailing edge, and has a height between 32 and 38 inches. Ensure the lower edge of the barricade is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the barricade is a minimum of 8 inches above the surface of the non-motorized facility. The
barricade may have a solid continuous face. Finally, all features on the front face of the barricade (the face in contact with pedestrians) must share a common vertical plane.

3. Equip both sides of the barricade with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the barricade section has a solid face. If the barricade consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of ASTM D 4956 Type IV sheeting.

Construct the Temporary Pedestrian Type II Barricade in accordance with the manufacturer’s recommendations, Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the plans, and the following requirements:

1. Install the barricade as shown on the plans and as directed by the Engineer. Interconnect all barricade sections using hinge components if necessary to ensure a continuous detectable edge for the entire installation. Ensure the barricade is ballasted according to the manufacturer’s recommendations to ensure stability during wind events and contact with pedestrians.

2. When the barricade is installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists.

3. When pedestrian Type II barricades are used to close a non-motorized facility, ensure a sufficient number of barricade sections are used to block the entire width of the facility. The barricade may extend outside the edge of the non-motorized facility but must not be less than the full width of the facility.

4. If sections of multiple colored barriers are used (i.e. safety orange and white) install the sections such that the colors alternate to increase conspicuity.

5. Ensure pedestrian Type II barricades are not used to close a motor vehicle facility. Ensure these barricades are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic.

Temporary Pedestrian Type II Channelizer

Provide a temporary pedestrian channelizer that is crashworthy according to the National Cooperative Highway Research Program Report 350 (NCHRP 350) or Manual for Assessing Safety Hardware (MASH), in addition to meeting the following requirements:

1. Ensure the channelizer is designed to interconnect to maintain continuous delineation along the entire installation. This includes provisions to accommodate non-linear alignment as well as variations in elevation.

2. Ensure the top surface of the channelizer is designed to function as a hand-trailing edge, and have a height between 32 and 38 inches. Ensure this top surface is designed to have a 2 inch horizontal gap between the top edge and the support (if so equipped), to allow for continuous hand-trailing without obstructions. Ensure the lower edge of the channelizer is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the
channelizer is a minimum of 8 inches above the surface of the non-motorized facility or the channelizer may have a solid continuous face. Finally, all features on the front face of the channelizers (the face in contact with pedestrians) must share a common vertical plane.

3. Equip both sides of the channelizer with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the channelizer section has a solid face. If the channelizer consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of ASTM D 4956 Type IV sheeting.

Deploy the temporary pedestrian Type II channelizer in accordance with the manufacturer’s recommendations, the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the plans, and the following requirements:

1. Install the channelizer as shown on the plans and as directed by the Engineer. Interconnect all channelizers using hinge components if necessary to ensure a continuous detectable edge for the entire installation. Ensure the channelizers are ballasted according to the manufacturer’s recommendations to ensure stability during wind events and contact with pedestrians.

2. When the channelizers are installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists providing appropriate delineation for the pedestrian path.

3. If sections of multiple colored barriers are used (i.e. safety orange and white), install the sections such that the colors alternate to increase conspicuity.

4. Ensure temporary pedestrian Type II channelizers are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic. Ensure temporary pedestrian channelizers are not used to channelize motor vehicle traffic, or separate motor vehicle and pedestrian traffic.

**MEASUREMENT AND PAYMENT**

**General**

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City or DDA 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 or DDA.

Costs for transporting barricades and other traffic control devices shall be included in the bid prices for the individual items of work.

**Barricade Type III - Lighted**

Payment for furnishing and operating lighted Type III barricades shall be for the maximum quantity in-place at any one time during the work of the entire project (all streets).
**Barricade Type II**

Payment for furnishing and operating Type II barricades shall be for the maximum quantity in-place at any one time during the work of the entire project.

**Temporary Sign - Type B**

Payment for Type B signs shall be for the maximum quantity used on each street. Includes all special signs that are custom-made for the project.

**Temporary Sign - Type B Special**

Payment for Type B Special signs shall be for the maximum quantity used on each street. Includes all special signs that are custom-made for the project.

**Channelizing Device, 42 Inch – Furnish & Operate**

There will be a one-time payment for each street for the maximum number of 42 inch channelizing devices in-place (operated) at any one time, as directed by the Engineer.

**No-Parking Signs**

No-Parking Signs will be measured as the maximum number installed on each street at any one time. The unit price includes the removal and return of No-Parking signs to the City upon completion of the project. The Contractor shall be backcharged for the replacement costs for damaged or unreturned signs.

**Portable Changeable Message Signs**

Measurement for furnishing and operating Portable Changeable Message Signs will be for the maximum quantity in-place at any one time during the work of the entire project (all streets).

**Portable Water Filled Barriers**

Measurement for furnishing and operating Portable Water Filled Barriers will be for the maximum quantity in-place at any one time during the work of the entire project (all streets). Installing, adjusting, moving, placing, repairing, maintaining, and all related work shall be included in the pay item for “Portable Water Filled Barriers”.

**Lighted Arrow, Type C**

Measurement for furnishing and operating the lighted arrow boards will be for the maximum quantity in-place at any one time during the work of the entire project (all streets). Installing, adjusting, moving, placing, repairing, maintaining, and all related work shall be included in the pay item for “Lighted Arrow, Type C, Furnish & Operate”

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:

**Temporary Pedestrian Type II Barricade AND Temporary Pedestrian Type II Channelizer**

Payment for Temporary Pedestrian Type II Barricade AND Temporary Pedestrian Type II Channelizer
shall be for the maximum quantity used on each street. Includes all special signs that are custom-made for the project.

One Pedestrian Type II Barricade is defined as a barricade section at least 43 inches wide, including all supports, ballast, and hardware

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
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</thead>
<tbody>
<tr>
<td>Channelizing Device, 42 Inch</td>
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</tr>
<tr>
<td>Barricade Type III - Lighted</td>
<td>Each</td>
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<tr>
<td>Barricade Type II</td>
<td>Each</td>
</tr>
<tr>
<td>Temporary Sign, Type B</td>
<td>Square Foot</td>
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<tr>
<td>Temporary Sign, Type B Special</td>
<td>Square Foot</td>
</tr>
<tr>
<td>No-Parking Sign</td>
<td>Each</td>
</tr>
<tr>
<td>Sign, Portable Changeable Message</td>
<td>Each</td>
</tr>
<tr>
<td>Portable Water Filled Barriers</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Lighted Arrow, Type C</td>
<td>Each</td>
</tr>
<tr>
<td>Temporary Pedestrian Type II Barricade</td>
<td>Each</td>
</tr>
<tr>
<td>Temporary Pedestrian Type II Channelizer</td>
<td>Each</td>
</tr>
</tbody>
</table>
DETAILED SPECIFICATION
FOR
ITEM #281 – URBAN BENCH, 5 FT
ITEM #282 - URBAN BENCH, 8 FT

DESCRIPTION

This work consists of furnishing and installing a precast concrete benches in accordance with the details and at the location on the plans. This includes any necessary excavation, drilling, concrete and steel pipe footings, assembly, and disposal of unsuitable materials and packaging required for a complete installation. The precast concrete benches are intended for use in a harsh urban environment, and the manufacturer will be responsible for the structural design of the bench to withstand this difficult use environment.

All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

MATERIALS

Provide bench materials selected and approved by the DDA. The materials will include the anchor hardware and foundation, and all other hardware required for installation in accordance with the specifications herein, details included on the plans and per the manufacturer’s recommendations.

Shop drawings from the manufacturer are to be submitted to the Engineer for approval prior to fabrication. Submit shop drawings of all precast concrete items must show detail sections and profile for all precast items. Details shall show all reinforcing and special hardware required for fastening, mounting and installation. The manufacturer is responsible for all concrete reinforcement design, and shop drawings shall be sealed by a professional engineer.

Precast Concrete Manufacturer and Trade Contractor must have a minimum of 5 years of successful experience on projects of similar magnitude and complexity to that indicated project. Pre-approved suppliers of the benches include:

a) Tectura Designs (Wausau Tile Inc., 9001 Business Highway 51, Rothschild, WI 54474; phone 1-800-388-8728), and
b) Landscape Forms (LFI, 7800 E. Michigan Ave., Kalamazoo, MI 49048; local representative is Kyle Verseman, phone 734-223-2101)

Urban benches shall conform to the following specifications:

1. The bench shall be constructed of reinforced pre-cast concrete and manufactured in a climate-controlled environment suitable for such work.

2. Concrete shall have a compressive strength of 5,000 psi, air content between 6 and 8%, and a water cement ratio of 45:1.

3. Color to be selected by Engineer from standard color pallet. Use integral inorganic color admixtures to achieve the selected color. Submit 1 sample, 6” x 6” size for the selected color. Color and finish of concrete to be consistent across all surfaces.
4. Finish of the exposed surfaces of the precast concrete units shall be standard acid wash.

5. Bench must be surface mounted and installed per the plans and manufacturer’s recommendations.

6. All anchoring posts, and all other hardware for installation, to be galvanized steel.

7. All units to conform to shop drawings, with a 1/8" tolerance in dimension. All exposed edges to have corners as indicated on plans. If not noted otherwise, corners shall have a minimum 1/8" chamfer or radius to prevent chipping and be true in line and detail over the length of the bench.

8. All precast concrete finished surfaces to be sealed with a sealer approved by manufacturer.

Precast Concrete Manufacturer and Trade Contractor must have a minimum of 5 years of successful experience on projects of similar magnitude and complexity to that indicated project.

When requested by the Engineer, the Contractor must furnish certification regarding the compliance of materials incorporated in the work.

Precast concrete to be delivered properly packaged and undamaged, and will be stored in secure area in original packaging. Protect from damage by other trades.

**CONSTRUCTION METHODS**

Install and anchor the bench on the concrete sidewalk in accordance with the details as shown on the plans. The bench must be level and square in a true, flat plane to prevent rocking. Benches shall be set to be parallel and perpendicular to the sidewalk jointing and unit paver pattern.

Contractor shall protect the finished work from the time the installing contractor completes the work.

Manufacturer/Installer shall warrant installed system for a period of 2 years from date of substantial completion against failure of workmanship and materials.

**MEASUREMENT AND PAYMENT**

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Bench, 5 ft</td>
<td>Each</td>
</tr>
<tr>
<td>Urban Bench, 8 ft</td>
<td>Each</td>
</tr>
</tbody>
</table>

_Urban Bench, 5 ft_ and _Urban Bench, 8 ft_ include all labor, materials, and equipment necessary to complete the work as described. Please note that there are two versions of the Urban Bench 5 ft to accommodate the alternative orientation and placement of the bench relative to the planter curb and roadway.
DETAILED SPECIFICATION
FOR
ITEM # 283 - BIKE HOOP

DESCRIPTION

This work consists of furnishing all labor, equipment, materials, required to place bike loops in the areas shown on the plans. All work must be conducted in accordance with the plans and specifications, the 2012 MDOT Standard Specification for Construction, and the City Standard Specifications.

MATERIALS

Provide bike hoop materials selected and approved by the DDA. The materials will include the anchor bolts, nuts, washers, and all other hardware and concrete anchoring required for installation in accordance with the specifications herein, details included on the plans and per the manufacturer’s recommendations.

Shop drawings from the manufacturer are to be submitted to the Engineer for approval prior to fabrication.

Furnish and install bike hoops with the following specifications:

1. All pipe and anchoring hardware materials are to be made of galvanized steel.

2. Fabricate bike hoops as dimensioned on the plans.

3. The finish of the bike hoops is to be powder-coated (black) over galvanized steel.

4. The bike hoop pipe is to be Schedule 40.

5. Bike hoops must be surface mounted, and embedded where shown and as noted on plans; install per the manufacturer’s recommendations.

6. All anchoring bolts, nuts, washers, and all other hardware for installation to be galvanized steel, finished to match the bike hoop.

CONSTRUCTION METHODS

Embedded installation is required in locations with unit pavers as a pavement; surface mounting is required in areas with poured concrete pavement. Identify each part prior to assembly, only after final adjustment and leveling permanently tighten all bolt, nuts, and fasteners.

Evenly space bike hoops at the dimensions noted on plans. Bike hoops must be installed plumb and in line with each other, and shall be firmly connected to the foundation or pavement so as to prevent rocking.

Perform the construction methods in accordance with section 803 of the 2012 MDOT Standard Specification for Construction unless otherwise stated in this special provision.

MEASUREMENT AND PAYMENT

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike Hoop</td>
<td>Each</td>
</tr>
</tbody>
</table>

Both embedded and surface mounted bike hoops will be paid for as a single pay item, and include all materials and labor necessary for a complete installation.
DETAILED SPECIFICATION
FOR
ITEM #286 BORING AND JACKING CONDUIT, 2-4”
ITEM # 287 – 2” SCHEDULE 80 PVC ELECTRICAL CONDUIT
ITEM #288 – 3” SCHEDULE 80 PVC ELECTRICAL CONDUIT
ITEM #289 - 4” SCHEDULE 80 PVC ELECTRICAL CONDUIT

DESCRIPTION

This work shall include the excavation and proper disposal off-site of excess excavated material, the installation of conduits, the placement of MDOT Class II bedding and backfill compacted to 95% of its maximum unit weight, and the installation of pull strings and detection tape. All work shall be completed in accordance with Sections 819 and 918.01 of the MDOT 2012 Standard Specifications for Construction, the City of Ann Arbor Standard Specifications for Streetlight Installation and Construction, as shown on the plans, as directed by the Engineer, and as modified herein.

CONSTRUCTION

Schedule 80 PVC conduit will be used for ALL areas of the project.

All conduits, including sweeps into handholes, and fittings shall be installed in accordance with the latest revision of Article 347 of the National Electric Code (NEC). The minimum sweep radius of the conduit shall measure at least 7 inches. After clearing the conduits, the Contractor shall install a pull line and install a plug or cap (suitable for removal at the time of future cable installation) for each conduit.

Trenching, placement of conduit, and backfilling shall be completed as outlined in the City of Ann Arbor Standard Specifications for Streetlight Installation and Construction, except as noted herein.

Detectable Marking Tape shall also be installed with the conduit which will allow for detection using an inductive method. The tape shall be pigmented polyolefin film with a printed message on one side. The ink used to print the material shall be permanent which cannot be removed by normal handling or upon underground burial. The polyethylene shall be chemically inert and shall not degrade when exposed to alkalies, acids and other destructive substances commonly found in soil. The tape shall be placed continuously, 6 to 8 inches above the buried conduits with overlap where splices are required. Over the conduit between the communication handhole assemblies, the tape shall be orange in color and shall read "Fiber Optic Cable - City of Ann Arbor Transportation." Over the conduit between the street lighting handholes, the tape shall be red in color and shall read "Caution—Buried Electrical Line."

A Tracer Wire, 1/C #10 RHH/RHW/USE, shall be placed around the conduits that are to be utilized for future traffic signal interconnection. The tracer wire shall be continuous and run from handhole to handhole.

The Contractor shall install conduit utilizing trenchless excavation methods for placing conduit under existing curb and gutter, sidewalks, driveway approaches, etc. which will remain in place.

The Contractor shall provide and install appropriate non-metallic sleeves and gasketed expansion couplings for each conduit if it is required to be installed in a bridge at each bridge joint. The Contractor shall submit catalog “cuts” of the proposed materials for review by, and approval of, the Engineer prior to ordering materials or performing any of the work.
Conduits following the same path may be installed in the same trench and will be paid for separately. Multiple conduits installed in the same trench shall be backfilled with pea stone conforming to the MDOT specifications for 34G aggregate. Vibrate pea stone backfill to ensure filling of voids around conduits.

Install conduit under and through street intersections by boring and jacking, or combination of both. Contractor to verify location and depth of all underground utilities and related sub surface obstructions prior to commencing work. Boring and jacking will be paid for separately as described below.

**MEASUREMENT AND PAYMENT**

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

<table>
<thead>
<tr>
<th>PAY ITEMS</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boring and Jacking Conduit, 2-4”</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>2” Schedule 80 PVC Electrical Conduit</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>3” Schedule 80 PVC Electrical Conduit</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>4” Schedule 80 PVC Electrical Conduit</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

All work indicated herein shall be included in the unit prices for the above pay items and shall include all labor, materials and equipment required to complete the work.

The per foot unit price for "X" Schedule 80 PVC Electrical Conduit shall include the installation of each conduit. Conduits following the same path may be installed in the same trench, and will be paid for separately. Also included in the unit price shall be the labor, materials, and equipment costs associated with the installation of the conduits, including, but not limited to, fittings, sweeps, pull strings, end caps, sleeves, tracer wire, backfilling, and all other materials necessary for placing conduit as shown on the plans, and specified herein.

The per unit foot price for “Boring and Jacking Conduit, 2-4”” will be paid for separately from the Schedule 80 PVC Electrical Conduit, as a premium cost for each conduit that is above and beyond the unit price to install the conduit in the typical trench and backfill approach. Included in the unit price is the excavation and backfill of work areas to allow for Boring and Jacking, equipment rental or expense, utility location, and any other expense related to successfully place the conduits below the pavement.
DETAILED SPECIFICATION
FOR
ITEM #290- STREETLIGHT, REMOVE
ITEM #292 - LUMINAIRE INSTALLATION
ITEM #293 – POLE INSTALLATION
ITEM #296 - ELECTRICAL WIRING
ITEM #296.2 - ELECTRICAL WIRING – 2 GAUGE
ITEM #296.4 - ELECTRICAL WIRING – 4 GAUGE
ITEM #296.6 - ELECTRICAL WIRING – 6 GAUGE
ITEM #296.8 - ELECTRICAL WIRING – 8 GAUGE
ITEM #296.10 - ELECTRICAL WIRING – 10 GAUGE
ITEM #299 – SPECIAL LIGHTING

DESCRIPTION

This work shall include the furnishing, installation and testing of the street lighting fixtures at the locations shown in the plans, and as directed by the Engineer to provide a complete working system ready for use. All work shall be completed in accordance with the National Electric Code (NEC), Section 819 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, the City of Ann Arbor Standard Specifications, and as specified herein.

Any costs associated with the obtaining a permit for the electrical work will be paid for by the Contractor, at no additional expense to the DDA or City.

Please note that the City of Ann Arbor will be providing the new electrical panels indicated on the plans. The contractor will be responsible for coordination with the City, and making all connections and related work to make the panel operable

MATERIALS

The Contractor shall furnish all materials and equipment required to install and place in operation Street Light Fixtures, except as clarified below. All materials shall meet the requirements of the current IEEE, NEMA, ANSI Standards as applicable, MDOT 2012 Standard Specifications for Construction, the City of Ann Arbor Standard Specifications, and as specified herein. All electrical components shall be furnished new and be listed by, and bear the label of Underwriter’s Laboratories, Inc.

1. Street light fixtures shall be pre-purchased and provided to the Contractor by the DDA for use in this project. The light fixtures shall be complete, fitted with LED assembly and driver, fuses, support brackets, etc. The Contractor will arrange with the manufacturer for the delivery and storage of all items required for the complete installation.

2. Light poles, clam shell base pieces, and banner brackets (if used) shall be pre-purchased and provided to the Contractor by the DDA for use in this project. The Contractor will arrange with the manufacturer for the delivery and storage of all items required for the complete installation.

Street light fixtures shall be installed complete with wiring from the base to the luminaires including pole base fuse holders. Wiring installed in lighting standard poles between luminaires and taps in base shall be copper conductors type “XHHW” No. 10 AWG minimum, in conduit.

Cable and wire shall be manufactured by:

Collyer         Hatfield         Reynolds
Conductors are to match the sizes of the wires being replaced, unless otherwise specified to be larger herein, or directed by the Engineer.

The connection of conductors from size #12 AWG and larger to terminal parts or other conductors shall be made with heavy-duty cast alloy solderless connectors of the pressure double indent type. Tap connectors at light standards shall be multiple aluminum connector with four positions for #2 AWG copper and a 5th position for #12 AWG or larger fixture wire. Connectors shall be Utilco Catalog No. SLC-4-0-1-L with cover for tap block.

Ground rods shall be copper clad steel, and shall be either two 1/2-inch diameter round by 6-feet long rods, or one 5/8-inch diameter round by 8-feet long rod, as shown on the plans.

Fuse holders shall be watertight, in-line, break-away type, 30A, 600V with insulating boots. Install one fast-acting fuse per phase conductor. Fuses shall be five ampere and/or sized for the fixtures being protected.

Provide 20A, 125VAC NEMA type 5-20R ground fault circuit interrupter (GFCI) receptacle with solid-state ground fault sensing and circuit interrupter Class A, Group 1. Per UL standard 943-2003, manufacturer after January 1, 2003 and five milliamperes ground fault trip level. Receptacles must be rated for outdoor use and meet current code requirements for the intended application.

All fasteners shall consist of stainless steel tamperproof screws, bolts, nuts, washers, etc. All anchor bolts and associated washers, nuts, studs, and couplings shall conform to the requirements of the Michigan Department of Transportation 2012 Standard Specifications for Construction, Section 908.14, and shall be galvanized in accordance with ASTM A-153 or as noted on the Drawings.

Prior to beginning construction, the Contractor shall submit to the Engineer product data sheets and Manufacturer’s certifications of all wiring, splices, lamps, rods, base plates, anchor bolts, and other parts used in the construction of the light and pole assembly. Certifications shall indicate that all materials meet the minimum requirements of these specifications.

For each submittal or resubmittal, the Contractor shall allow at least 14 calendar days from the date of the submittal to receive the Engineer’s acceptance or request for revisions. The Engineer’s comments shall be incorporated into the submitted plans, calculations and descriptions. The Engineer’s acceptance is required before beginning the work. Resubmittals shall be reviewed and returned to the General Contractor within 14 calendar days. Required revisions will not be a basis of payment for additional compensation, extra work, or an extension of contract time. The Contractor shall include time for this entire review process in his/her schedule.

For the pay item “Special Lighting”, provide the lights and materials noted on the plans.

**CONSTRUCTION METHODS**

The Contractor shall provide temporary street lighting during the entire construction period, providing the equivalent of half of the current light levels on the street, either through the use of existing street lights, installed lights as specified, or other temporary equipment and measures.
Remove conduits and wires as indicated in the plans and specifications, and where the existing wires are replaced by new wires. Unused and unnecessary conduit that is located in undisturbed soils may remain in place.

The Contractor shall provide all labor, materials, tools, equipment, and supervision required for the furnishing and installing of the street lighting fixtures and new GFCI outlets. Connections to equipment, lighting standards, contactors, etc., shall be made in accordance with applicable building and electrical codes and the recommendations from manufacturers of the particular equipment furnished. Any and all additional connections called for by the equipment manufacturer’s or otherwise required for the successful operation of the particular equipment furnished shall be installed by the Contractor as part of his Contract with no additional compensation.

The Contractor shall examine all fixtures and poles delivered to jobsite prior to installation to ensure all specification requirements and shop drawing notes & comments have been incorporated by manufacturer. Installation of fixtures signifies Contractor’s acceptance and approval of fixtures from manufacturer.

Contractor must provide adequate storage space for all electrical equipment, conduit, and materials delivered to the job site under a weather-protected enclosure. Location of the space must be approved by the Engineer. Equipment set in place in unprotected areas must be provided with temporary protection.

The Contractor shall be responsible for maintenance of, and repair of damage as a result of accident or vandalism to, the light fixtures, bases, luminaries, and all other materials installed, or to be installed, related to, or necessary for the light fixture and pole installation on the project. This shall remain the Contractor’s responsibility until the installation is complete, tested, and accepted by the Engineer.

All connections shall be per the manufacturer’s recommendation. Where Utilco connections are not used, all joints in outlet or junction boxes shall be taped in such manner that the insulating value of the joint or splice will be at least equal to the insulating value of the conductor to which it is applied.

Wire brush and apply approved corrosion inhibiting compound all connections.

Ground cables shall be #6 AWG, soft drawn, bare, stranded copper wire. Pressure-type connectors shall be used to connect the ground cable to poles and electrical equipment. The cable shall be properly attached to the ground rods.

All fixtures and poles shall be thoroughly and permanently grounded at each location. Grounding shall be in accordance with the latest National Electric Code and as shown on the Drawings, as a minimum. At the disconnect cabinet, the Detroit Edison neutral, the disconnect cabinet, and the ground mat system shall all be permanently grounded together. The resistance of the ground rod to ground shall not exceed 25 ohms when tested with a megger. In case the resistance is more than 25 ohms, additional or longer ground rods shall be installed.

Install concrete poles foundation where indicated on the drawings. Base of the foundation is to rest on undisturbed subgrade or on 21AA Limestone Aggregate (or pea stone) compacted to not less than 98% of its maximum unit weight. Backfill pole foundation with 21AA Limestone Aggregate (or pea stone) in 6 to 8 inch lifts, compacting each lift as the hole is filled. Precast concrete pole shall be set plumb and in-line with existing poles, with no more than one-half inch deviation from plumb in any direction.

All excavation for main conduit runs shall be of a depth to leave at least 30 inches from the top of the conduit encasement or top of direct buried rigid conduit to grade of top of curb or surrounding terrain.
lateral flexible conduit, the corresponding dimensions shall be 30 inches. The trench shall be graded to handhole and pole location so that the finished conduit run will contain no pockets where water might accumulate or drain into a handhole or pole.

Conduit shall be cut with a hacksaw or other approved tool. The ends shall be square after cutting and the conduit shall be reamed. All conduits must be securely fastened to boxes with locknuts and bushings of an approved make, care being taken that the full number of threads project into the bushings. Rigid galvanized conduit shall be assembled by means of approved threaded galvanized coupling, unions, and fittings. PVC conduit shall be assembled by means of approved threaded or solvent-welded fittings.

Conduits which are installed underground or concealed in concrete, foundations, or other structures, shall be cleared of foreign material and obstructions, after installation and before conductors or pull wire are drawn in, by wire brushing, swabbing and employing an iron or hardwood mandrel which is 1/4" smaller in diameter than the internal diameter of the duct or conduit.

Conduits shall be cut a minimum of 1 inch above the light pole base and not more than 2 inches above the base.

Cable shall be pulled into conduits using a proper cable grip for the purpose. The cable shall be so handled that it is not subjected to excessive strain or kinked when pulled through the conduit. Damaged or kinked cable shall not be used. Where more than one cable is to be installed in a conduit, all cables shall be pulled through simultaneously. Splices in ducts and conduit will not be permitted.

Cables shall be neatly racked and identified on cable racks in all handholes after being formed to their final position. Cables shall be racked slightly higher than the duct entrances so that they will not rest on the edges of the duct. Cables shall be properly tagged in all handholes and poles. All splices and connections shall be made as described herein and as shown on the details. Where cable is installed but not immediately spliced, the cable ends shall be thoroughly sealed and racked out of the way of possible danger.

Conductors shall not be installed in conduit until all work which might cause damage to the conduits or cables has been completed. Street light conductors shall be installed in continuous lengths from light to light with connections in the base of lights or street light pull boxes. All splices shall be accessible through the pole handhole and shall extend 4”-6” outside the handhole. No splices will be allowed which are inaccessible inside the pole. Street lighting splices required in ground handholes shall be terminated using splice kits that insulate, seal, and protect the splices.

Printed color code phase identification shall be repeated at all connections. The printing of the conductor coding shall be repeated at all connections. The printing of the conductor coding shall adhere to covering and not be readily removed by rubbing.

Where Utilco connections are not used, all joints in outlet or junction boxes shall be taped in such manner that the insulating value of the joint or splice will be at least equal to the insulating value of the conductor to which it is applied.

All trenching and backfilling to install electrical work shall be by the Electrical Contractor. When backfilling the trenches under areas to be paved and around street light foundations, the earth must be compacted in place (in 6-8" layers) to 95% of the material’s maximum dry density.

Any excess excavated native material that cannot be placed back into the trench from which it came is to be disposed of as detailed in the special provision entitled “Non Hazardous Contaminated Material”. Any
excess excavated fill material placed as part of this project is to be used or “wasted” on site as directed by the Engineer. If it is unable to be incorporated into the final work, at the sole discretion of the Engineer, the excess excavation shall be disposed of offsite at no additional cost.

The use of equipment, or any part thereof, for purposes other than testing, even with the Engineer’s consent, shall not be construed to be an acceptance of the work on the part of the Engineer, nor shall it be construed to obligate the Engineer in any way to accept improper work or defective materials.

Upon completion of the underground work, the Contractor shall grade the work area smooth, filling any trench settlements, eliminating any large piles of earth and cleaning up any debris, or left over construction materials and disposing of it offsite at an approved manner and location.

All factory finished equipment shall be cleaned at the completion of the work by the Contractor. Equipment showing mars or rust shall be refinished by the Contractor in a manner acceptable to the Engineer.

MEASUREMENT AND PAYMENT

The cost of providing temporary street lighting as specified herein shall not be paid for separately.

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetlight, Remove</td>
<td>Each</td>
</tr>
<tr>
<td>Luminaire Installation</td>
<td>Each</td>
</tr>
<tr>
<td>Pole Installation</td>
<td>Each</td>
</tr>
<tr>
<td>Electrical Wiring</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Special Lighting</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>

“Streetlight, Remove” shall be paid for at the Contract unit price each and shall include all labor, equipment, and materials, including, but not limited to excavation of pole foundation, removal of light pole fixture, and attached appurtenances, complete removal of the concrete foundation, and disposal of the light fixtures, poles and attached appurtenances, and backfilling the excavation with MDOT Class II fill, compacted in 6 inch layers to 95% dry weight density.

“Luminaire Installation” shall be paid for at the Contract unit price each and shall include all labor, equipment, and materials, including, but not limited to new wiring from the base of the pole to the fixture and outlet, cable splicing, fittings, supports, hangers, connectors, tape, fuses, grounding equipment; new water proof outdoor rated GFCI outlets, and, any other materials required for complete installation of the light fixture and outlet onto the light pole and its foundation; all required testing; and, placing light fixtures and pole assemblies into service. The luminaire fixtures will be provided by the DDA.

“Pole Installation” shall be paid for at the Contract unit price each and shall include all labor, equipment, and materials including, setting pole and anchor bolts. The light pole will be provided by the DDA. Install the pole such that the handhole is on the opposite side of vehicle traffic (i.e., a person accessing the handhole would be facing the traffic).

“Electrical Wiring” shall be paid for at the Contract unit price based on the linear foot of each single conductor wire installed, as measure from connection point to connection point. Electrical Wiring shall
include all labor, equipment, and materials, including, but not limited to wiring, splicing, connections, tape and related materials and labor necessary to make the electrical system operational. Current electrical conductors being replaced range in size from No. 2 to No. 10. This pay item includes the removal of any conduit and wires indicated on plans for removal.

“Special Lighting” shall be paid for at the Contract unit price on a lump sum basis and shall include all labor, equipment, and materials, including, but not limited to the conduit, wires, mounting, assembly and related work to fully provide special lighting at the railroad viaduct between Third and First Streets.
DETAILED SPECIFICATION FOR
ITEM #297 – HANDHOLE ASSEMBLY, 12 INCH X 18 INCH
ITEM #298 – HANDHOLE ASSEMBLY, 17 INCH X 30 INCH

DESCRIPTION

This work shall consist of furnishing and installing traffic signal handholes and communication handhole assemblies at the locations shown in the Plans, or as directed by the Engineer. All work shall be completed in accordance with the current National Electric Code (NEC), Section 819 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, except as specified herein.

MATERIALS

All materials shall be new and meet the requirements of the current IEEE, NEMA, ANSI Standards as applicable, and as specified herein.

The Contractor shall submit product data sheets for all handholes, covers and other parts for Engineer approval prior to ordering materials. The manufacturer “Quazite Composolite,” referenced below, is located in Lenoir City, Tennessee.

12 inch x 18 inch handhole assemblies shall consist of "Quazite Composolite" box. The box shall be #PG1118BA12. The cover shall be, #PG1118HA41, a locking heavy-duty bolt-down type with a logo that reads “Street Lighting.” The total depth of the handhole shall be 12 inches.

17 inch x 30 inch handhole assemblies shall consist of two, stacked "Quazite Composolite" boxes. The lower box shall be #PG1730BB18. The upper box shall be #PG1730BA18. The cover shall be #PG1730HA46, a locking heavy-duty bolt-down type with a logo that reads “Traffic Signal.” The total depth of the handhole shall be 36 inches.

24 inch x 36 inch handhole assemblies shall consist of "Quazite Composolite" box. The box shall be #PG2436BA24. The cover shall be # PG2436HA12, a locking heavy-duty bolt-down type with a logo that reads “Street Lighting.” The total depth of the handhole shall be 24 inches.

Provide Granular Material, Class II in accordance with Section 902.

CONSTRUCTION

Handholes shall be placed at all junctions of traffic signal or electrical conduit, and as shown on the plans. Maximum distance between any two handholes shall be as shown on the Plans, but in no case shall exceed 500 feet.

Place foundation material consisting of 4 inches of MDOT Class II sand compacted to 95% of its maximum unit weight.

Set the handhole or stacked units to the proper depth and elevation.

Connect handholes to new and existing conduits, whether shown on the plans or not. All conduits shall
be connected to the handholes in accordance with the latest revision of Article 346 of the National Electrical Code (NEC).

Backfill around the perimeter of the handhole with MDOT Class II material compacted to 95% of its maximum unit weight.

MEASUREMENT AND PAYMENT

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

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handhole Assembly, 12 inch x 18 inch</td>
<td>Each</td>
</tr>
<tr>
<td>Handhole Assembly, 17 inch x 30 inch</td>
<td>Each</td>
</tr>
</tbody>
</table>

Handhole Assembly, ___ inch x ___ inch shall be paid for at their contract unit prices and shall include all labor, equipment, and materials to complete the work as specified herein.

The pay item shall also include the excavation and disposal of materials, furnishing, installing and compacting MDOT Class II sand, and all work related to connecting handholes to new and existing conduits, whether shown on the plans or not.
DETAILED SPECIFICATION FOR
ITEM # 920 - PAVT MRKG, WET RETRFLC POLYUREA, 4 INCH, WHITE
ITEM #921- PAVT MRKG, WET RETRFLC POLYUREA, 6 INCH, WHITE
ITEM #922 - PAVT MRKG, WET RETRFLC POLYUREA, 4 INCH, YELLOW
ITEM #923 - PAVT MRKG, WET RETRFLC THERMOPL, 12 INCH, CROSSWALK
ITEM #924 - PAVT MRKG, WET RETRFLC THERMOPL, 12 INCH, CROSS HATCHING, WHITE
ITEM #925 - PAVT MRKG, WET RETRFLC THERMOPL, 24 INCH, STOP BAR
ITEM #926 - PAVT MRKG, WET RETRFLC THERMOPL, SYMBOL
ITEM #927 – PAVT MTKG, TYPE R, 4 INCH, BLACK

DESCRIPTION

This work consists of furnishing and installing wet night retroreflective (WR) beads and/or elements and liquid applied pavement marking materials. All work shall be consistent with the City of Ann Arbor Standard Specifications and the 2012 MDOT Standard Specifications for Construction, except as specified herein.

MATERIALS

Wet Night Retroreflective Beads and/or Elements. Select WR beads and/or elements from one of the following Manufacturers or a Department approved alternative that meets the requirements in Table 1:

- 3M Corporation
- Potter's Industries
- Swarco
- Flex-o-Lite

Table 1: WR Markings

<table>
<thead>
<tr>
<th>Test Method</th>
<th>White</th>
<th>Colo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry (ASTM E 1710)</td>
<td>700</td>
<td>500</td>
</tr>
<tr>
<td>Wet Recovery (ASTM E 2177)</td>
<td>250</td>
<td>200</td>
</tr>
</tbody>
</table>

Ship the material to the job site in sturdy containers marked in accordance with subsection 920.01.A of the Standard Specifications for Construction.

Submit to the Engineer prior to the start of work:

a. The Manufacturer’s recommended application rate of the beads/elements and the liquid applied pavement marking binder to be used on the project. If the Manufacturer’s recommended application rate differs from the specified rate in Table 811-1 of the Standard Specifications for Construction, the Manufacturer’s recommended rate supersedes the table values.

b. Certification from the Manufacturer that when applied according to their application
recommendations the beads and/or elements meet the requirements shown in Table 1 above.

Binder. Provide a liquid pavement marking product of the binder type specified in the contract documents from section 811 of the Qualified Products List or as specified by special provision, or use an alternative binder as approved by the Engineer.

CONSTRUCTION

Place the binder and beads in accordance with the Manufacturers’ recommendations and sections 811 and 920 of the Standard Specifications for Construction except as noted above.

MEASUREMENT AND PAYMENT

The completed work, as described, will be measured and paid for at contract unit prices using the following pay items:

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavt Mrkg, Wet Retrflc Polyurea, 4 inch, White</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Polyurea, 6 inch, White</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Polyurea, 4 inch, Yellow</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Thermopl, 12 inch, Crosswalk</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Thermopl, 12 inch, Cross Hatching, White</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Thermopl, 24 inch, Stop Bar</td>
<td>Foot</td>
</tr>
<tr>
<td>Pavt Mrkg, Wet Retrflc Thermopl, Symbol</td>
<td>Each</td>
</tr>
<tr>
<td>Pavt Mtkg, Type R, 4 inch, Black</td>
<td>Foot</td>
</tr>
</tbody>
</table>

The unit price for these items of work shall include all labor, material, and equipment costs to perform all the work.
CITY OF ANN ARBOR
PREVAILING WAGE DECLARATION OF COMPLIANCE

The "wage and employment requirements" of Section 1:320 of Chapter 14 of Title I of the Ann Arbor City Code mandates that the city not enter any contract, understanding or other arrangement for a public improvement for or on behalf of the city unless the contract provides 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. Where the contract and the Ann Arbor City Code 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 1:320 of Chapter 14 of the Code of the City of Ann Arbor, employees shall be paid a prescribed minimum level of compensation (i.e. Living Wage) for the time those employees perform work on the contract in conformance with section 1:815 of Chapter 23 of Title I of the Code of the City of Ann Arbor.

At the request of the city, any contractor or subcontractor shall provide satisfactory proof of compliance with this provision.

The Contractor agrees:

(a) To pay each of its employees whose wage level is required to comply with federal, state or local prevailing wage law, for work covered or funded by this contract with the City,

(b) To require each subcontractor performing work covered or funded by this contract with the City to pay each of its employees the applicable prescribed wage level under the conditions stated in subsection (a) or (b) above.

(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the wage and employment provisions of the Chapter 14 of the Ann Arbor City Code. The undersigned certifies that he/she has read and is familiar with the terms of Section 1:320 of Chapter 14 of the Ann Arbor City Code and by executing this Declaration of Compliance obligates his/her employer and any subcontractor employed by it to perform work on the contract to the wage and employment requirements stated herein. The undersigned further acknowledges and agrees that if it is found to be in violation of the wage and employment requirements of Section 1:320 of the Chapter 14 of the Ann Arbor City Code it shall has be deemed a material breach of the terms of the contract and grounds for termination of same by the City.

________________________________________________________
Company Name

________________________________________________________
Signature of Authorized Representative                                 Date

________________________________________________________
Print Name and Title

________________________________________________________
Address, City, State, Zip

________________________________________________________
Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

9/25/15 Rev 0 PW-
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 an employer who is (a) a contractor providing services to or for the City for a value greater than $10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than $10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than $10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

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

The Contractor or Grantee agrees:

(a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as $13.22/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than $14.75/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

Check the applicable box below which applies to your workforce

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

[___] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

(a) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every workplace or other location in which employees or other persons contracting for employment are working.

(b) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(c) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

(d) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

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

Company Name ______________________ Street Address ______________________

Signature of Authorized Representative ______________________ Date __________ City, State, Zip ______________________

Print Name and Title ______________________ Phone/Email address ______________________

City of Ann Arbor Procurement Office, 734/794-6500, procurement@a2gov.org

Rev. 3/6/18
CITY OF ANN ARBOR
LIVING WAGE ORDINANCE

RATE EFFECTIVE APRIL 30, 2018 - ENDING APRIL 29, 2019

$13.22 per hour  
If the employer provides health care benefits*

$14.75 per hour  
If the employer does NOT provide health care benefits*

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

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

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

For Additional Information or to File a Complaint Contact:  
Colin Spencer at 734/794-6500 or cspencer@a2gov.org

Revised 2/1/2018
All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor’s conflict of interest policies as stated within the certification section below.

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

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

<table>
<thead>
<tr>
<th>Conflict of Interest Disclosure*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.</td>
</tr>
<tr>
<td>(   ) Interest in vendor’s company</td>
</tr>
</tbody>
</table>

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

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:

<table>
<thead>
<tr>
<th>Vendor Name</th>
<th>Vendor Phone Number</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature of Vendor Authorized Representative</th>
<th>Date</th>
<th>Printed Name of Vendor Authorized Representative</th>
</tr>
</thead>
</table>

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

COI – Ver. 1 – 6/9/16
CITY OF ANN ARBOR
DECLARATION OF COMPLIANCE

Non-Discrimination Ordinance

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

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

The Contractor agrees:

(a) To comply with the terms of the City of Ann Arbor’s Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.

(b) To post the City of Ann Arbor’s Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.

(c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.

(d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

__________________________________________________________
Company Name
__________________________________________________________
Signature of Authorized Representative                                   Date
__________________________________________________________
Print Name and Title
__________________________________________________________
Address, City, State, Zip
__________________________________________________________
Phone/Email Address

Questions about the Notice or the City Administrative Policy, Please contact:
Procurement Office of the City of Ann Arbor
(734) 794-6500

2016 Rev 0            NDO-2
CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.
You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor’s Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City’s Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual’s knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by email (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk’s Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.
<table>
<thead>
<tr>
<th>NAME</th>
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<th>70</th>
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<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
</tbody>
</table>

TOTAL PAYROLL: $0.00

PAYROLL BREAKDOWN:
- Federal: $0.00
- State: $0.00
- Local: $0.00

TOTAL DEDUCTIONS: $0.00

PAYROLL SUMMARY:
- Hours Worked on Project: 0
- Total Hours on Project: 0
- Total Payroll: $0.00
- Total Deductions: $0.00

MICHIGAN DEPARTMENT OF TRANSPORTATION
CERTIFIED PAYROLL
COMPLETION OF CERTIFIED PAYROLL FORM FULFILLS THE MINIMUM MDOT PREVAILING WAGE REQUIREMENTS
(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(a) below.

<table>
<thead>
<tr>
<th>EXCEPTION (CRAFT)</th>
<th>EXPLANATION</th>
</tr>
</thead>
</table>

(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full weekly wages earned by any person, other than permissible deductions as defined in Regulations, Part 339-C P.R., Subtitle A, issued by the Secretary of Labor under the Copeland Act, as amended (40 Stat. 443, 60 Stat. 106, 72 Stat. 383, 76 Stat. 697, 80 Stat. 987, 40 U.S.C. § 3145), and described below.

(2) That any payroll(s) otherwise under this contract required to be submitted for the above period are correct and complete, that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract, that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or in a State or Federal apprenticeship program.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.