
City of Otsego
Watermain Loop Improvement Project

ADDENDUM 01

5/2/2022

Plan holders on the City of Otsego, Watermain Loop Improvement Project are hereby notified of the following amendments to the Contract Documents. This Addendum is hereby made a part of the Contract Documents.

REFERENCE NOTE

The City of Otsego is aware of the current necessary lead times needed to procure ductile iron pipe. The City of Otsego is requesting a bid alternate for the installation of C900 PVC water main vs. ductile iron pipe. The contract times per Section C-410, Article 6, Time of Completion, 6.01, and 6.02 have been adjusted accordingly. The contract times shall run for 480 calendar days after the date when the Contract Times commence to run if ductile iron pipe is installed. The contract times shall run for 210 calendar days after the date when the Contract Times commence to run if PVC pipe is installed. The City of Otsego does not anticipate Winter work being performed.

SPECIFICATIONS

Replace the following specifications with the attached: Specification numbers 01010 and C-410.

Plan holders should update the Table of Contents to reflect the above sections.

An updated Table of Contents will be included in the Issued for Construction Project Manual.

DRAWINGS

No drawings have been changed.

QUESTIONS/ANSWERS

1. Are soil borings available with groundwater levels? ***No soil borings are available.***
2. How are connections to existing water mains to be paid? ***Per section 18.01 B all work to install connections to existing water mains is included in the unit price of installing watermain.***
3. It looks like the Machine Grading item only includes the work on Morrel Street. Is that correct?
YES
4. If Yes, How is the sidewalk grading down Sherwood, Garfield, and along M-89 paid? ***Excavation and grading the sidewalk along Sherwood, Garfield and M-89 shall be considered incidental to Pay Item 13 and included in the contractor's unit price for Pay Item 13.***

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON PAGE C-410-1 OF THE BID.

BID FORM

City of Otsego, Watermain Loop Improvements Project

Project No. 900-7825.001

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Otsego, 117 E. Orleans Street, Otsego, Michigan 49078

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all the terms and conditions of the Instructions to Bidders, including and without limitation, those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for thirty (30) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

| <u>Addendum No.</u> | <u>Addendum, Date</u> |
|---------------------|-----------------------|
| 01 | 5-2-2022 |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and

drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work, (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, and (3) Bidder's safety precautions and programs.

- E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the price(s) included on C-410-4 and C-410-5. Bidder shall fill in all blanks on the Bid Form.
- A. The name or make of any piece of equipment or material of construction specified in the Contract Documents and identified on the following Base Bid List shall be utilized in determining the base bid price.
 - B. Where two or more Equipment or Product Manufacturers are named, or the words "Or Equal" are listed in the Contract Documents and not included in the Base Bid List, Bidders may utilize any of the named or follow the "Or Equal" process outlined in the Contract Documents.
 - C. The Owner will have the right to select the Equipment or Product Manufacturer in the Base Bid List if Bidder fails to make a selection where required.
- 5.02 Bidder shall provide pricing for the Mandatory Alternates below:
- A. Where required, Bidder shall make a selection for the "Add" or "Deduct" by circling one, indicating that the price is to be Added to the Base Bid or Deducted from the Base Bid. If the Bidder fails to make a selection, the default will be a Deduction.
 - B. A Mandatory Alternate is required for each Equipment or Product Manufacturer listed.

UNIT PRICE BID

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

| Item No. | Description | Estimated Quantity | Unit | Unit Cost in Numbers | | Unit Price in Words | Total Estimated Cost of Item | |
|----------|-----------------------------------------------|--------------------|------|----------------------|--|---------------------|------------------------------|--|
| 1 | General Conditions/Mobilization | 1 | LS | | | | | |
| 2 | Traffic Control | 1 | LS | | | | | |
| 3 | Audio/Video Recording | 1 | LS | | | | | |
| 4 | Tree and Stump Removal 19 inches to 36 inches | 1 | EA | | | | | |
| 5 | Curb Removal | 3,878 | LF | | | | | |
| 6 | Curb & Gutter MDOT F4 | 3,863 | LF | | | | | |
| 7 | Trench Repair Pavement | 672 | SF | | | | | |
| 8A | Driveway Removal Concrete | 172 | SY | | | | | |
| 8B | Driveway Removal Bituminous | 513 | SY | | | | | |
| 8C | Driveway Removal Gravel | 84 | SY | | | | | |

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Addendum 01
Otsego, MI
Watermain Loop Improvements

| Item No. | Description | Estimated Quantity | Unit | Unit Cost in Numbers | | Unit Price in Words | Total Estimated Cost of Item | |
|----------|--------------------------------------------|--------------------|------|----------------------|--|---------------------|------------------------------|--|
| 9 | Sidewalk Removal | 2,506 | SY | | | | | |
| 10 | Crush and Shape Bit. Pavement (Full Depth) | 7,418 | SY | | | | | |
| 11 | Machine Grading (Modified) | 18.3 | STA | | | | | |
| 12A | HMA MDOT 13A Leveling Course | 7,688 | SY | | | | | |
| 12B | HMA MDOT 36A Wearing Course | 7,688 | SY | | | | | |
| 13 | Sidewalk Replacement | 17,114 | SF | | | | | |
| 14 | Driveway and Sidewalk Replacement | 9,804 | SF | | | | | |
| 15 | ADA Sidewalk Ramp | 2,440 | SF | | | | | |
| 16 | Detectable Warnings | 161 | LF | | | | | |
| 17A | Water Service Connection 1-inch (Long) | 19 | EA | | | | | |
| 17B | Water Service Connection 1-inch (Short) | 18 | EA | | | | | |
| 17C | Water Service Connection 1-inch (Private) | 19 | EA | | | | | |

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Addendum 01
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| Item No. | Description | Estimated Quantity | Unit | Unit Cost in Numbers | | Unit Price in Words | Total Estimated Cost of Item | |
|----------|----------------------------|--------------------|------|----------------------|--|---------------------|------------------------------|--|
| 18 | 8" Ductile Iron Water Main | 2,880 | LF | | | | | |
| 19 | 6" Ductile Iron Water Main | 22 | LF | | | | | |
| 20 | 4" Ductile Iron Water Main | 17 | LF | | | | | |
| 21 | 8" Tee | 9 | EA | | | | | |
| 22 | 8" 45 Degree Bend | 16 | EA | | | | | |
| 23 | 8" Plug | 4 | EA | | | | | |
| 24 | 8" x 6" Reducer | 5 | EA | | | | | |
| 25 | 8" x 4" Reducer | 5 | EA | | | | | |
| 26 | 6" 90 Degree Bend | 1 | EA | | | | | |
| 27 | 6" 45 Degree Bend | 2 | EA | | | | | |
| 28 | 6" Plug | 1 | EA | | | | | |
| 29 | 4" 90 Degree Bend | 1 | EA | | | | | |
| 30 | 4" 45 Degree Bend | 2 | EA | | | | | |

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| Item No. | Description | Estimated Quantity | Unit | Unit Cost in Numbers | | Unit Price in Words | Total Estimated Cost of Item | |
|----------|----------------------------------------|--------------------|------|----------------------|--|---------------------|------------------------------|--|
| 31 | 4" x 2" Reducer | 2 | EA | | | | | |
| 32 | 4" Plug | 2 | EA | | | | | |
| 33 | Water Main Termination and Abandonment | 1 | EA | | | | | |
| 34 | 24" Diameter Meter Pit | 4 | EA | | | | | |
| 35A | 8" Gate Valve & Box | 19 | EA | | | | | |
| 35B | 6" Gate Valve & Box | 1 | EA | | | | | |
| 35C | 4" Gate Valve & Box | 1 | EA | | | | | |
| 36 | Fire Hydrant Assembly | 9 | EA | | | | | |
| 37 | Remove Existing Fire Hydrant | 2 | EA | | | | | |
| 38A | 6" Sanitary Sewer Lead | 90 | LF | | | | | |
| 38B | 12" Storm Sewer Class IV RCP | 35 | LF | | | | | |
| 39 | Catch Basin, 2' Diameter | 1 | EA | | | | | |

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Addendum 01
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| Item No. | Description | Estimated Quantity | Unit | Unit Cost in Numbers | | Unit Price in Words | Total Estimated Cost of Item | |
|-------------------------------------------------|-----------------------------------------------------------|--------------------|------|----------------------|--|---------------------|------------------------------|--|
| 40 | Restoration | 1 | LS | | | | | |
| 41 | Laboratory Services | 1 | LS | | | | | |
| 42 | Construction Survey Work | 1 | LS | | | | | |
| 43 | 8" Ductile Iron Watermain If Contamination is Encountered | 1 | LS | | | | | |
| Total Estimated Construction Cost Base Bid: | | | | | | | | |
| 18 | (Deduct) 8" Ductile Iron Water Main | 2880 | LF | | | | | |
| 18A | (Add) 8" C900 PVC Water Main | 2880 | LF | | | | | |
| Total Estimated Construction Cost Alternate 01: | | | | | | | | |

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Base Bid: Bidder agrees that the Work will be substantially complete within 450 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 480 calendar days after the date when the Contract Times commence to run.
- 6.02 Alternate 01 Bid: Bidder agrees that the Work will be substantially complete within 180 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 210 calendar days after the date when the Contract Times commence to run.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. Evidence of authority to do business in the state of the Project; and
 - C. List of proposed subcontractors, suppliers, references, and contractor’s license number.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____
(where applicable)

SECTION 01010
DEFINITION OF CONTRACT ITEMS

PART 1 GENERAL

1.01 FOREWORD

- A. This Section describes the various Contract Items listed in the Bid.

1.02 WORK INCLUDED

- A. Under each Item the Contractor shall furnish all labor, materials, tools, equipment, supplies, maintenance of equipment, heating, lighting and power, insurance and bonds, coordination, and all Work and in accordance with the Specifications Divisions 1 through 5 necessary to complete the Work in accordance with the obvious or expressed intent of the Contract Documents.

1.03 WORKMANSHIP AND MATERIALS

- A. The quality of workmanship and materials entering into any and all of the Items and the Work included shall conform to pertinent sections, paragraphs, sentences, and clauses, both directly and indirectly applicable thereto, contained in the Contract Documents, whether or not direct reference to such occurs under each Item in this Section.

1.04 PAYMENT

- A. The lump sum and unit prices stated in the Bid shall be payment in full for the completion of all Work specified and described or required to be included in the Contract, complete, and ready for use.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

PART 4 SPECIAL PROVISIONS

4.01 CONTRACT ITEMS

- A. The Contract items are defined on the following pages.

ITEM 1
GENERAL CONDITIONS/MOBILIZATION

1.01 DESCRIPTION

- A. This Item is intended to pay non-recurring cost to the Contractor not recovered under other pay Items of the Contract.
- B. This Item shall include, but not be limited to, the cost for moving equipment in and out, performance and payment bonds, insurance, permits, utility connection cost, and other expenses associated with preparation for construction in accordance with the requirements of the Contract Documents.

1.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

1.03 DEFINITION OF ITEMS

- A. Item 1 - General Conditions/Mobilization.

1.04 MEASUREMENT

- A. The lump sum stated in the Bid shall be full compensation for all Work required under Item 1.
- B. Mobilization for Contractor and any tier of subcontractor(s) shall be considered collectively and shall not exceed 10 percent of the Contract Price.
- C. Mobilization shall be those costs associated with the initiation of the Project and Site Work, including but not limited to, transporting of personnel, equipment, materials, supplies, and incidental items; establishment of the field offices and temporary facilities necessary for the Project; bonds and insurances, submittal requirements, permits, field supervision, final cleanup and demobilization. Mobilization does not include items such as contract negotiations and bid preparation.

1.05 PAYMENT

- A. General Conditions/Mobilization shall be those costs associated with the initiation of the Project and Site Work, including but not limited to, transporting of personnel, equipment, materials, supplies, and incidental items; establishment of the field offices and temporary facilities necessary for the Project; bonds and insurances, submittal requirements, permits, field supervision, final cleanup and demobilization.
- B. The Engineer may reduce the amount to be paid under Item 1 if the percentage requested is not represented by the actual amount performed.

**ITEM 2
TRAFFIC CONTROL**

2.01 DESCRIPTION

- A. Under this Item, the Contractor shall provide, mobilize, and temporarily install all traffic signage and equipment necessary to complete the Project as described in the Specifications and plans.
- B. The Contractor shall provide a traffic control plan and obtain all permits as necessary and required by all local governing agencies with appropriate jurisdiction.

2.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

2.03 DEFINITION OF ITEMS

- A. Item 2 – Traffic Control.

2.04 MEASUREMENT

- A. The lump sum stated in the Bid shall be full compensation for all Work required under Item 2.

2.05 PAYMENT

- A. The lump sum unit price stated in the Bid shall be full compensation for traffic control as required.

**ITEM 3
AUDIO/VIDEO RECORDING**

3.01 DESCRIPTION

- A. Under this item, the Contractor shall produce and deliver to the Owner, color video recordings of existing topography along all water main and areas of pavement work within the Zone of Influence as specified and directed. Audio/Video Recording also includes recording inside residential basements where lead water services will be replaced both prior to commencing work and upon completion of the work.

3.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

3.03 DEFINITION OF ITEMS

- A. Item 3 – Audio/Video Recording. Includes audio/video recording of the Zone of Influence/ Construction Limits.

3.04 MEASUREMENT

- A. The lump sum stated in the Bid shall be full compensation for all Work required under Item 3.

3.05 PAYMENT

- A. The lump sum unit price stated in the Bid for Item 3 shall be full compensation for video recording production as specified and required.

**ITEM 4
TREE AND STUMP REMOVAL 19 INCHES TO 36 INCHES**

4.01 DESCRIPTION

- A. Under this Item, the Contractor shall perform all Work necessary for the removal of trees with a trunk diameter 19 inches to 36 inches, including the removal of tree cuttings and stumps and the removal and disposal of all debris generated by tree cutting operations, as specified and shown on the Drawings.
- B. This Item shall include the removal of stumps with a trunk diameter greater than 19 inches to 36 inches, as specified and shown on the Drawings.

4.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

4.03 DEFINITION OF ITEMS

- A. Item 4 – Tree and Stump Removal 19 inches to 36 inches shall be the cutting of trees with a trunk diameter measuring 19 inches to 36 inches, including the removal of tree cuttings and stumps.

4.04 MEASUREMENT

- A. The quantities to be paid for under Item 4 – Tree and Stump Removal 19 inches to 36 inches shall be measured by the number of trees with a trunk of specified diameter measured four (4) feet above ground height and removed. payment

- B. The unit price stated in the bid for Item 4 – Tree and Stump Removal 19 inches to 36 inches shall be full compensation for each tree removed and disposed of as specified and required.

**ITEM 5
CURB REMOVAL**

5.01 DESCRIPTION

- A. Under this item, the Contractor shall remove curb and gutter. The removal of curb and gutter includes any necessary saw cutting to remove the existing curb.

5.02 WORK NOT INCLUDED

- A. Curbs and gutters damaged or destroyed beyond the specified limits shall be replaced at the Contractor's expense.
- B. Any Work specifically included under other Bid Items.

5.03 DEFINITION OF ITEMS

- A. Item 5 – Curb Removal. Includes curb and gutter removal.

5.04 MEASUREMENT

- A. Quantities to be paid for under this item shall be the actual linear footage quantity removed, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

5.05 PAYMENT

- A. The unit price stated in the Bid for Item 5 shall be for each linear foot of curb and gutter removed within the prescribed limits as specified, so measured.

**ITEM 6
CURB & GUTTER MDOT F4**

6.01 DESCRIPTION

- A. Under this Item, the Contractor shall construct concrete curb and gutter.

6.02 WORK NOT INCLUDED

- A. Curb and gutter damaged or destroyed beyond the specified limits shall be replaced at the Contractor's expense.

- B. Any Work specifically included under other Bid Items.

6.03 DEFINITION OF ITEMS

- A. Item 6 – Curb & Gutter MDOT F4.

6.04 MEASUREMENT

- A. Quantities to be paid for under Item 6 shall be the actual quantity constructed, measured in place by linear foot at the back of the curb, within the limits as scheduled and shown on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

6.05 PAYMENT

- A. The unit price stated in the bid for Item 6 shall be full compensation for each linear foot of MDOT F4 Curb and Gutter installed in accordance with the Specifications and Drawings.

**ITEM 7
TRENCH REPAIR PAVEMENT**

7.01 DESCRIPTION

- A. Under this Item, the Contractor shall remove the bituminous pavement, including the aggregate base on Garfield Street, Allegan Street (M-89) and Dix Street within the limits shown on the drawings and per the Trench Repair Pavement detail on drawing SR-0.1.

7.02 WORK NOT INCLUDED

- A. Pavement removal required beyond specified construction limits and items included for payment under other items.
- B. Pavement and curb and gutters damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.
- C. Any Work specifically included under other Bid Items.

7.03 DEFINITION OF ITEMS

- A. Item 7 – Trench Repair Pavement. Includes saw cutting the bituminous pavement, removing the bituminous pavement, aggregate base and subbase to the desired level. Repairing the pavement subbase with Class II sand in 12" lifts, installing 8-12" MDOT 21AA aggregate base, 6" MDOT-P-NC-Concrete, 1.5" HMA MDOT Bit. Mix 13A Leveling Course, and 1.5" HMA MDOT Bit. Mix 36A wearing course as shown on Trench Repair Pavement detail on drawing SR-0.1.

7.04 MEASUREMENT

- A. Quantities to be paid for under this item shall be the actual square foot quantity removed and replaced, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

7.05 PAYMENT

- A. The unit price stated in the Bid for Item 8 shall be full compensation for each square foot of pavement removed and replaced within the prescribed limits as specified, so measured.

ITEM 8A, 8B & 8C
DRIVEWAY REMOVAL

8.01 DESCRIPTION

- A. Under these Items, the Contractor shall remove driveways including bituminous pavement, concrete pavement, gravel, and the aggregate base as scheduled, shown on the Drawings, and specified herein.

8.02 WORK NOT INCLUDED

- A. Driveway removal required beyond specified construction limits and items included for payment under other items.
- B. Pavement and curb and gutters damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.
- C. Any work specifically included under other Bid Items.

8.03 DEFINITION OF ITEMS

- A. Item 8A – Driveway Removal, Concrete includes complete removal of concrete driveways, including the aggregate base.
- B. Item 8B – Driveway Removal, Bituminous includes complete removal of bituminous driveways, including the aggregate base.
- C. Item 8C – Driveway Removal, Gravel includes complete removal of gravel driveways.

8.04 MEASUREMENT

- A. Quantities to be paid for under these items shall be the actual square yardage quantity removed, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

8.05 PAYMENT

- A. The unit price stated in the Bid for Item 8A shall be full compensation for each square yard of concrete driveway removed within the prescribed limits as specified, so measured.
- B. The unit price stated in the Bid for Item 8B shall be full compensation for each square yard of bituminous driveway removed within the prescribed limits as specified, so measured.
- C. The unit price stated in the Bid for Item 8C shall be full compensation for each square yard of gravel driveway removed within the prescribed limits as specified, so measured.

**ITEM 9
SIDEWALK REMOVAL**

9.01 DESCRIPTION

- A. Under these Items the Contractor shall remove sidewalks including concrete pavement, as scheduled, shown on the Drawings, and specified herein.

9.02 WORK NOT INCLUDED

- A. Sidewalk removal required beyond specified construction limits and items included for payment under other items.
- B. Pavement and curb and gutters damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.
- C. Any Work specifically included under other Bid Items.

9.03 DEFINITION OF ITEMS

- A. Item 9 – Sidewalk Removal. Includes complete removal and disposal of concrete sidewalk regardless of the depth.

9.04 MEASUREMENT

- A. Quantities to be paid for under these items shall be the actual square yardage of quantity removed, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

9.05 PAYMENT

- A. The unit price stated in the Bid for Item 9 shall be full compensation for each square yard of sidewalk removed within the prescribed limits as specified, so measured.

**ITEM 10
CRUSH AND SHAPE BIT. PAVEMENT (FULL DEPTH)**

10.01 DESCRIPTION

- A. Under this item, HMA Base Crushing and Shaping (Full Depth), the Contractor shall perform his Work on Morell Street between Sherwood Street and S. North Street as shown on the plans and in accordance with MDOT Section 305. The Contractor shall provide a self-propelled rotary reduction crushing machine capable of the crushing the pavement into a gradation equivalent to a MDOT 22A gradation. The Contractor shall mix the crushed material to the full depth of the underlying aggregate base. Uniformly spread and compact the crushed material to the dimensions shown on the plans and compact the crushed material to 98% of its maximum unit weight. Saw cutting the full depth of areas where the new pavement meets the existing pavement shall be considered incidental to Crush and Shape Bit. Pavement (Full Depth).

10.02 WORK NOT INCLUDED

- A. Fine grading the crushed material shall be paid for under the pay item machine grading modified.
- B. Trench Repair Pavement on Garfield Street, Allegan Street (M-89), and Dix Street where new pavement meets existing pavement shall be paid for as a separate pay item.
- C. Pavement and curb and gutters damaged or destroyed shall be replaced at the Contractor's expense.
- D. Any Work specifically included under other Bid Items.

10.03 DEFINITION OF ITEMS

- A. Item 10 – HMA Base Crush and Shape Bit. Pavement (Full Depth). Includes the full depth of the roadway as shown on the Drawings.

10.04 MEASUREMENT

- A. Quantities to be paid for under this item shall be per square yard of Crushed and Shaped Material, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

10.05 PAYMENT

- A. The unit price stated in the Bid for Item 10 shall be full compensation for each square yard of crushed and shaped material regardless of the depth, within the prescribed limits scheduled on the Drawings, so measured.

**ITEM 11
MACHINE GRADING (MODIFIED)**

11.01 DESCRIPTION

- A. Under this item, Machine Grading Modified shall be performed on Morell Street between Sherwood Street and S. North Street in accordance with article 205 of MDOT 2012 Standard Specifications for Construction, except as follows: Machine Grading modified shall include all earth excavation (cut), earth embankment (fill), grading and shaping to develop the roadway cross-section as shown on the Drawings including any necessary temporary removal and replacement of the gravel roadbed to achieve the desired subbase grade. The roadbed shall be finished to grade with a bladed grader or equivalent equipment. Stormwater runoff shall be directed to drainage structures or outlets as shown on the Drawings. Proof rolling the subgrade and gravel base with a vibratory compactor shall take place in the presence of the Engineer or the Engineer's Project Representative.

11.02 WORK NOT INCLUDED

- A. Driveway removal between the curb and right of way line is included under other payment items.
- B. Pavement removal within the road right-of-way and saw cutting the full depth of areas where new pavement meets existing pavement shall be paid for as a separate pay item.
- C. Pavement and curb gutters damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.
- D. Any Work specifically included under other Bid Items.

11.03 DEFINITION OF ITEMS

- A. Item 11 – Machine Grading Modified includes machine grading Morell Street from Sherwood Street to S. North Street from face of curb to face of curb along the entire length of the roadway as shown on the plans.

11.04 MEASUREMENT

- A. Quantities to be paid for under these items shall be per station of machine grading, measured in place within the limits as scheduled on the Drawings, unless otherwise authorized by the Engineer, in which case measurement will be made to the authorized limits.

11.05 PAYMENT

- A. The unit price stated in the Bid for Item 11 shall be full compensation for each square yard of machine grading within the prescribed limits as specified, so measured.

**ITEMS 12A & 12B
HMA MDOT 13A, HMA MDOT 36A**

12.01 DESCRIPTION

- A. Under Items 12A, & 12B the Contractor shall construct pavement courses as scheduled, shown on the Drawings and specified herein.
- B. The Contractor shall adjust all existing structure castings as required to set flush with new grades. Casting adjustments shall be incidental to this pay item.

12.02 WORK NOT INCLUDED

- A. Pavement replacement required beyond specified construction limits and items included for payment under other Items.
- B. Pavement damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.
- C. Bituminous Driveway Replacement shall be paid for under a separate pay item.

12.03 DEFINITION OF ITEMS

- A. Item 12A - Includes HMA MDOT 13A – 1.5” Leveling Course.
- B. Item 12B - Includes HMA MDOT 36A – 1.5” Wearing Course.

12.04 MEASUREMENT

- A. Quantities to be paid for under Items 12A & 12B, shall be the actual quantity constructed, measured in place within the limits as defined below, and/or scheduled on the Drawings, unless otherwise authorized by the Engineer; in which case, measurement will be made to the authorized limits. When uniform courses are specified, the volume to be paid for shall not exceed the quantity calculated from plan lines and dimensions.

- B. Pay Limits:
 - 1. Depth - As specified, scheduled, or ordered.
 - 2. Length - The actual length ordered.
 - 3. Width - The actual width ordered.

12.05 PAYMENT

- A. The unit prices stated in the Bid for Items 12A, & 12B shall be full compensation for each square yard of pavement placed within the prescribed limits as specified, so measured.

**ITEM 13
SIDEWALK REPLACEMENT**

13.01 DESCRIPTION

- A. Under this Item, the Contractor shall place 4-inch thick concrete pavement and 4-inch MDOT 21AA aggregate base to replace existing sidewalks as required, as scheduled, shown on the Drawings and specified herein. The removal and disposal of the existing sidewalk shall be considered incidental to this item. *Excavation and grading for the installation of the new sidewalk along Sherwood Street, Garfield Street and M-89 shall be considered incidental to his item.*

13.02 WORK NOT INCLUDED

- A. Sidewalk replacement required beyond specified construction limits and items included for payment under other Items.
- B. Sidewalk damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.

13.03 DEFINITION OF ITEMS

- A. Item 13 - Sidewalk Replacement 4-inch thickness.

13.04 MEASUREMENT

- A. Quantities to be paid for under this Item shall be the actual quantity constructed, measured in place within the limits as scheduled and shown on the Drawings, unless otherwise authorized by the Engineer; in which case, measurement will be made to the authorized limits.

13.05 PAYMENT

- A. The unit price stated in the Bid for Item 13 shall be full compensation for each square foot of concrete placed within the prescribed limits as specified, so measured.

**ITEM 14
DRIVEWAY AND SIDEWALK REPLACEMENT**

14.01

- A. Under Item 14, the Contractor shall place 6-inch thick concrete driveway and a 6-inch thick concrete sidewalk behind the driveways on a 4-inch thick MDOT 21AA aggregate base to replace existing driveways and sidewalks as required and shown on the Drawings and specified herein. The removal and disposal of the existing driveway and sidewalk shall be considered incidental to this item.

14.02 WORK NOT INCLUDED

- A. Sidewalk replacement required beyond specified construction limits and items included for payment under other Items.
- B. Driveways damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.

14.03 DEFINITION OF ITEMS

- A. Item 14 - Driveway and Sidewalk Replacement.

14.04 MEASUREMENT

- A. Quantities to be paid for under this Item shall be the actual quantity constructed, measured in place within the limits as scheduled and shown on the Drawings, unless otherwise authorized by the Engineer; in which case, measurement will be made to the authorized limits.

14.05 PAYMENT

- A. The unit price stated in the Bid for Item 14 shall be full compensation for each square foot of concrete placed within the prescribed limits as specified, so measured.

**ITEM 15
ADA SIDEWALK RAMP**

15.01 DESCRIPTION

- A. Under this Item, the Contractor shall place a 4-inch thick ADA compliant concrete sidewalk ramps and 4-inch MDOT 21AA aggregate base to replace existing sidewalk ramps as required, as scheduled, shown on the Drawings and specified herein. The

Work shall be constructed in accordance with Michigan Department of Transportation (MDOT) Curb Ramp and Detectable Warning Details R-28-J.

15.02 WORK NOT INCLUDED

- A. Detectable Warning Surface used in the sidewalk ramps shall be paid for separately.
- B. Concrete sidewalk replacement required beyond specified construction limits and items included for payment under other Items.
- C. Concrete damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.

15.03 DEFINITION OF ITEMS

- A. Item 15 - ADA Sidewalk Ramp

15.04 MEASUREMENT

- A. Quantities to be paid for under this Item shall be the actual quantity constructed, measured in place within the limits as scheduled and shown on the Drawings, unless otherwise authorized by the Engineer; in which case, measurement will be made to the authorized limits.

15.05 PAYMENT

- A. The unit price stated in the Bid for Item 15 shall be full compensation for each square foot of concrete placed within the prescribed limits as specified, so measured.

**ITEM 16
DETECTABLE WARNINGS**

16.01 DESCRIPTION

- A. Under this Item, the Contractor shall supply and install a detectable warning surface in an inline truncated dome pattern on all curb ramps and walking surfaces at the locations and to the dimensions shown on the Drawings. The Work shall be constructed in accordance with Michigan Department of Transportation (MDOT) Curb Ramp and Detectable Warning Details R-28-J.

16.02 WORK NOT INCLUDED

- A. Concrete sidewalk replacement required beyond specified construction limits and items included for payment under other Items.
- B. Concrete curb damaged or destroyed beyond specified pay limits shall be replaced at the Contractor's expense.

16.03 DEFINITION OF ITEMS

- A. Item 16 – Detectable Warnings. Includes supplying and installing a Detectable Warning Surface.

16.04 MEASUREMENT

- A. Quantities to be paid for under this Item shall be the actual quantity constructed, measured in place within the limits as scheduled and shown on the Drawings, unless otherwise authorized by the Engineer; in which case, measurement will be made to the authorized limits.

16.05 PAYMENT

- A. The unit price stated in the Bid for Item 16 shall be full compensation for each lineal foot of 24" wide detectable warning surface supplied and installed as specified and shown on the Drawings.

**ITEMS 17A, 17B, & 17C
WATER SERVICE CONNECTION**

17.01 DESCRIPTION

- A. Under these Items, the Contractor shall furnish and perform all Work necessary for the installation of the water services, shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- B. These Items include all Work to install the water services, including but not limited to the following: excavation; saw-cutting; removal and replacement of existing fences for the installation of the new water service; hauling excess spoil material from site; backfill; compaction; bedding; pipe materials; fittings; connections to existing water mains; construction, maintenance and removal of temporary access to the Work area; horizontal directional drilling by use of a missile or torpedo under existing pavement.
- C. The removal of existing water services, including existing fittings, valves, meter pits and other associated appurtenances shall be included under these items.
- D. All repair of existing utilities damaged during water service construction is included under these Items.
- E. Connections of new water services to existing water services as shown on the Drawings are included under these Items. This shall include connections of new water services to new water meter pits.

- F. Reinstatement of existing water services onto the new water line shall be included under this pay item.
- G. Restoration of landscape surface improvements including seeding, mulching, and fertilizing all disturbed lawn areas shall be included under these Items.
- H. These Items shall include all water service fittings, accessories and appurtenances not included in other pay items. Fittings, including those not shown on the plans required to avoid existing utilities shall be included under these Items.
- I. The excavation and backfill of bore and receiving pits for trenchless water service construction is included under these items.

17.02 WORK NOT INCLUDED

- A. Pavement replacement within Contract limits is included for payment under other Items.
- B. New meters will be provided by the Owner.
- C. Repairing of water services which were damage by the contractor as a result of the construction and not planned to be replaced, will be at the Contractor's expense.

17.03 DEFINITION OF ITEMS

- A. Item 17A – Water Service Connection 1-inch (Long).
- B. Item 17B – Water Service Connection 1-inch (Short).
- C. Item 17C – Water Service Connection 1-inch (Private).

17.04 MEASUREMENT

- A. The quantities to be paid under Item 17A shall be each (Long) water service connection furnished and installed in accordance with the Specifications and Drawings. A (Long) water service connection is a water service that is connected to the water main on the opposite side of the roadway from the building or residence being connected and shall extend from the corporation stop to the curb stop box.
- B. The quantities to be paid under Item 17B shall be each (Short) water service connection furnished and installed in accordance with the Specifications and Drawings. A (Short) water service connection is a water service that is connected to the water main on the adjacent side of the road next to the building or residence being connected and shall extend from the corporation stop to the curb stop box.
- C. The quantities to be paid under Item 17C shall be each (Private) water service connection furnished and installed in accordance with the Specifications and Drawings. A (Private) water service connection replaces an existing lead water service with a new water service on private property from the curb stop box to the first valve

past the meter inside the home. It also includes any necessary coordination needed to gain access to property.

17.5 PAYMENT

- A. The unit price stated in the Bid for Item 17A shall be full compensation for each (Long) water service connection, so measured, as specified and required.
- B. The unit price stated in the Bid for Item 17B shall be full compensation for each (Short) water service connection, so measured, as specified and required.
- C. The unit price stated in the Bid for Item 17C shall be full compensation for each (Private) water service connection, so measured, as specified and required.

**ITEMS 18 - 34
DUCTILE IRON WATER MAIN**

18.01 DESCRIPTION

- A. Under these Items, the Contractor shall furnish and perform all Work necessary for the installation of the water mains as scheduled, shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- B. These Items shall include all Work to install the water mains, including but not limited to the following: excavation, backfill, compaction, bedding, pipe materials, fittings, maintenance of trenches, temporary pavement, connections to existing water mains, and related Work and materials such as blow offs to perform disinfection, flushing, performing pressure and bacteriological tests as shown on the Drawings and specified in conformance with relevant Sections of the Specifications.
- C. These Items also shall include all Work under the Contract unless specifically included for payment under other Items.
- D. Connections of new water lines to new and existing water lines shall be included under these Items, unless specifically included under other items. Temporary supporting of existing utilities, locating of existing utilities, exploratory excavation and backfill required by the utility owner for existing utilities encountered during construction, is included under these Items.
- E. The removal or abandonment of existing water mains, including existing fittings, valves, backfill, bedding, structures and other associated appurtenances, shall be included under these items.
- F. These Items shall include all water main fittings, accessories and appurtenances not included in other pay items. Fittings, including those not shown on the plans required to avoid existing utilities, shall be included under these Items.

- G. All repairs of existing utilities damaged, as a result of construction, are included under these Items.
- H. Restoration of landscape surface improvements including seeding, mulching, and fertilizing all disturbed lawn areas shall be included under these Items, unless specifically included under other items.

18.02 WORK NOT INCLUDED

- A. Pavement replacement within the Contract limits is included under other Items.
- B. Hydrant assemblies including associated 6-inch water main piping and gate valve are included under other items.
- C. Any Work specifically included under other Bid Items.

18.03 DEFINITION OF ITEMS

- A. Item 18 - 8" Ductile Iron Water Main.
- B. Item 18A - 8" C900 PVC Watermain
- C. Item 19 - 8" Tee.
- D. Item 20 - 8" 45 Degree Bend.
- E. Item 21 - 8" Plug.
- F. Item 22 - 8" x 6" Reducer.
- G. Item 23 - 8" x 4" Reducer.
- H. Item 24 - 6" Ductile Iron Water Main.
- I. Item 25 - 6" 90 Degree Bend.
- J. Item 26 - 6" 45 Degree Bend.
- K. Item 27 - 6" Plug.
- L. Item 28 - 4" Ductile Iron Water Main.
- M. Item 29 - 4" 90 Degree Bend.
- N. Item 30 - 4" 45 Degree Bend.
- O. Item 31 - 4" x 2" Reducer.
- P. Item 32 - 4" Plug.
- Q. Item 33 - Water Main Termination and Abandonment
- R. Item 34 - 24" Diameter Meter Pit.

18.04 MEASUREMENT

- S. The quantities to be paid for under Item 18 shall be the horizontal length of 8-inch D.I.P. water main measured parallel to the axis of the line along the surface of the ground, with no deduction for laying length of fittings and valves. Vertical portions of the water main shall not be measured for payment.
- T. The quantities to be paid for under Item 18A shall be the horizontal length of 8-inch C900 PVC water main measured parallel to the axis of the line along the surface of the ground, with no deduction for laying length of fittings and valves. Vertical portions of the water main shall not be measured for payment.
- U. The quantity to be paid under Item 19 shall be the measured quantity of each 8-inch x 8-inch tee installed as specified, shown on the Drawings, and so measured.
- V. The quantity to be paid under Item 20 shall be the measured quantity of each 8-inch 45 degree bend installed as specified, shown on the Drawings, and so measured.
- W. The quantity to be paid under Item 21 shall be the measured quantity of each 8-inch plug installed as specified, shown on the Drawings, and so measured.
- X. The quantity to be paid under Item 22 shall be the measured quantity of each 8-inch x 6-inch reducer installed as specified, shown on the Drawings, and so measured.
- Y. The quantity to be paid under Item 23 shall be the measured quantity of each 8-inch x 4-inch reducer installed as specified, shown on the Drawings, and so measured.
- Z. The quantities to be paid for under Item 24 shall be the horizontal length of 6-inch D.I.P. water main measured parallel to the axis of the line along the surface of the ground, with no deduction for laying length of fittings and valves. Vertical portions of the water main shall not be measured for payment.
- AA. The quantity to be paid under Item 25 shall be the measured quantity of each 6-inch 90 degree bend installed as specified, shown on the Drawings, and so measured.
- BB. The quantity to be paid under Item 26 shall be the measured quantity of each 6-inch 45 degree bend installed as specified, shown on the Drawings, and so measured.
- CC. The quantity to be paid under Item 27 shall be the measured quantity of each 6-inch plug installed as specified, shown on the Drawings, and so measured.
- DD. The quantity to be paid under Item 28 shall be the horizontal length of 4-inch D.I.P. water main measured parallel to the axis of the line along the surface of the ground, with no deduction for laying length of fittings and valves. Vertical portions of the water main shall not be measured for payment.
- EE. The quantity to be paid under Item 29 shall be the measured quantity of each 4-inch 90 degree bend installed as specified, shown on the Drawings, and so measured.
- FF. The quantity to be paid under Item 30 shall be the measured quantity of each 4-inch 45 degree bend installed as specified, shown on the Drawings, and so measured.

- GG. The quantity to be paid under Item 31 shall be the measured quantity of each 4-inch x 2-inch reducer installed as specified, shown on the Drawings, and so measured.
- HH. The quantity to be paid under Item 32 shall be the measured quantity of each 4-inch plug installed as specified, shown on the Drawings, and so measured.
- II. The quantity to be paid under Item 33 shall be for each water main termination and abandonment of the existing water main as specified, shown on the Drawings, and so measured.
- JJ. The quantity to be paid under Item 34 shall be for each 24" diameter meter pit furnished and installed as specified, shown on the Drawings, and so measured.

18.05 PAYMENT

- A. The unit price stated in the Bid for Item 18 shall be full compensation for each linear foot, furnished and installed as specified, and so measured.
- B. The unit prices stated in the Bid for Items 19 through 23 shall be full compensation for each item, furnished and installed as specified and required.
- C. The unit price stated in the Bid for Item 24 shall be full compensation for each linear foot, furnished and installed as specified, and so measured.
- D. The unit prices stated in the Bid for Items 25 through 27 shall be full compensation for each item, furnished and installed as specified and required.
- E. The unit price stated in the Bid for Item 28 shall be full compensation for each linear foot, furnished and installed as specified, and so measured.
- F. The unit price stated in the Bid for Items 29 through 34 shall be full compensation for each item, furnished and installed as specified and required.

ITEMS 35A, 35B, & 35C VALVES

35.01 DESCRIPTION

- A. Under these Items, the Contractor shall furnish and perform all Work necessary for the installation of the valves and accessories as shown on the Drawings and specified in conformance with relevant Sections of the Specifications.
- B. These Items shall include all Work to furnish and install water main valves, including but not limited to the following: excavation; hauling excess spoil material from Site; backfill;

compaction; bedding; pipe materials; fittings and pipe connections; construction, maintenance and removal of temporary access to the Work area, and related Work.

- C. Inserting valves (cutting-in-valves) shall be included under these Items.
- D. The removal of inserting valves on abandoned water mains following the Work shall be included under these Items.

35.02 WORK NOT INCLUDED

- A. Pavement replacement within Contract limits is included for payment under other Items.
- B. 6-inch gate valves associated with fire hydrant assemblies are include under other Items.

35.03 DEFINITION OF ITEMS

- A. Item 35A - 8-inch Gate Valve and Box.
- B. Item 35B - 6-inch Gate Valve and Box.
- C. Item 35C - 4-inch Gate Valve and Box.

35.04 MEASUREMENT

- A. The quantities to be paid under Items 35A through 35C shall be full compensation for each valve and box provided in accordance with the Specifications and Drawings.

35.05 PAYMENT

- A. The unit price stated in the Bid for Items 35A through 35C shall be full compensation for each valve and box furnished and installed as specified and required.

**ITEM 36
FIRE HYDRANT ASSEMBLY**

36.01 DESCRIPTION

- A. Under this Item, the Contractor shall furnish and perform all Work necessary for the installation of the fire hydrant assemblies shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- B. This Item shall include all Work to install the fire hydrant assemblies, including but not limited to the following: excavation, pavement removal, saw-cutting, concrete drive, curb and walk removal, hauling excess spoil material from Site, backfill,

compaction, bedding, pipe materials, fittings, connections to water lines, construction maintenance and removal of temporary access to the Work area, and related Work such as performing material testing, unless included under other Items.

- C. If a new hydrant is not replacing an existing hydrant, a new sign will be furnished and installed according to the Drawings.
- D. If a fire hydrant sign is damaged, stolen, lost, or otherwise rendered unusable, the Contractor will be responsible to furnish and install a replacement sign.
- E. Tee fittings at main line shall be incidental to this Item.

36.02 WORK NOT INCLUDED

- A. Pavement replacement within Contract limits is included for payment under other items.

36.03 DEFINITION OF ITEMS

- A. Item 36 - Fire Hydrant Assembly

36.04 MEASUREMENT

- A. The quantity to be paid under Item 36 shall be the measured quantity of each fire hydrant assembly completed as specified, shown on the Drawings, and so measured.

36.05 PAYMENT

- A. The unit price stated in the Bid for Item 36 shall be full compensation for each hydrant assembly so measured, as specified and required.

**ITEM 37
REMOVE EXISTING FIRE HYDRANT**

37.01 DESCRIPTION

- A. Under this Item, the Contractor shall furnish and perform all Work necessary for the removal of the fire hydrant as shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- B. This Item shall include all Work to remove the fire hydrant and plug the existing fire hydrant valve, including but not limited to the following: excavation, pavement removal, saw-cutting, concrete drive, curb and walk removal, hauling excess spoil material from Site, backfill, compaction, bedding, pipe materials, fittings, connections to water lines, construction maintenance and removal of temporary access to the

Work area, and related Work such as performing material testing, unless included under other items.

- C. The removed fire hydrant shall become the property of the Owner and the Contractor shall deliver the hydrant to the Owner as directed by the Owner.

37.02 WORK NOT INCLUDED

- A. Pavement replacement within Contract limits is included for payment under other Items.

37.03 DEFINITION OF ITEMS

- A. Item 37 – Remove Existing Fire Hydrant

37.04 MEASUREMENT

- A. The quantity to be paid under Item 37 shall be the measured quantity of each fire hydrant removed as shown on the Drawings, and so measured.

37.05 PAYMENT

- A. The unit price stated in the Bid for Item 37 shall be full compensation for each hydrant removed so measured, as specified and required.

**ITEMS 38A AND 38B
SEWER PIPE**

38.01 DESCRIPTION

- A. Under these Items, the Contractor shall furnish and perform all Work necessary for the installation of the sewer pipe as scheduled, shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- B. These Items shall include all Work under the Contract unless specifically included for payment under other Items.
- C. These Items shall include all Work to install the sewers, including but not limited to the following: excavation; removal and replacement of fences including fabric and posts; hauling excess spoil material from Site; backfill; compaction; bedding; pipe materials; fittings; connections to existing sewers or manholes; construction maintenance and removal of temporary access to the Work area; and related Work such as performing material testing; deflection and infiltration tests.

- D. Connections of new sewers to new and existing manholes or to new and existing sewers shall be included under these Items, unless specifically included under other items.
- E. Sewer tap connection, for existing or new sewer pipe, to the new sewer shall be included under these Items.
- F. Maintaining existing sewers in operation and temporary flow stoppage, diversions and sewer flow by-pass connections shall be included under these Items.
- G. All Work required to dewater trenches is included under these Items.
- H. Temporary supporting existing utilities, locating of existing utilities, exploratory excavation and backfill required by the utility owner for existing utilities encountered during sewer construction is included under these Items.
- I. Vertical pipe sections and riser pipes for 6-inch lateral sewers and cleanouts shall be included under these Items.
- J. No additional compensation shall be considered for sewers installed within 2 feet of the elevation shown on the Drawings.
- K. The placement, compaction and grading of fill required for backfilling drainage ways enclosed in pipes is included under this Item.

38.02 WORK NOT INCLUDED

- A. Pavement replacement within the Contract limits is included under other Items.
- B. Closed circuit television inspection of new sewers 8-inches in diameter and larger installed as part of the Work are included under other Items.
- C. Sewers installed to convey sewage around or through the Work during construction will not be measured for payment.
- D. Damage to existing utilities shall be the responsibility of the Contractor.
- E. The furnishing and placing of special backfill in areas specified under Section 02200, is included under other Items.

38.03 DEFINITION OF ITEMS

- A. Item 38A - Includes 6-inch Sanitary Sewer Lead, SDR 35 Pipe, All Depths.
- B. Item 38B - Includes 12-inch Class IV, RCP Storm Sewer

38.04 MEASUREMENT

- A. The quantities to be paid under Items 38A and 38B shall be the horizontal length of pipe measured parallel to the axis of the line along the surface of the ground, with no deduction for laying length of fittings for the specified sizes and trench detail.

38.05 PAYMENT

- A. The unit prices stated in the Bid for Items 38A and 38B shall be full compensation for each linear foot of pipe of the sizes furnished and installed as specified, so measured.

**ITEM 39
CATCH BASIN 2' DIAMETER**

39.01 DESCRIPTION

- A. Under this Item, the Contractor shall perform all Work necessary for the construction, replacement or abandonment of catch basins as scheduled, shown on the Drawings, and specified herein.
- B. These Items shall include all Work to install the catch basins, including but not limited to the following: excavation; pavement removal; saw-cutting; concrete drive, curb and walk removal; removal and replacement of fences including fabric and posts; hauling excess spoil material from Site; backfill; compaction; bedding; pipe materials; fittings; connections to new and existing sewers; construction, maintenance and removal of temporary access to the Work area; and related Work such as performing material testing.
- C. All Work required to dewater trenches is included under these Items.
- D. Temporary supporting existing utilities, locating of existing utilities, exploratory excavation and backfill required by the utility owner for existing utilities encountered during construction is included under these Items.
- E. Restoration of landscape surface improvements including seeding, mulching, and fertilizing all disturbed lawn areas shall be included under these Items, unless specifically included under other items.
- F. This item includes performing all Work necessary including but not limited to the materials and labor to reconnect leads to catch basins designated to be removed and replaced.

39.02 WORK NOT INCLUDED

- A. Pavement replacement within the Contract Limits is included under other Items.
- B. Sewer pipe, not including the catch basin lead, shall be included under the respective sewer pipe item.

39.03 DEFINITION OF ITEM

- A. Item 39 - Includes Catch Basin, 2' Diameter

39.04 MEASUREMENT

- A. The quantities to be paid under Item 39 shall be the full compensation for catch basin furnished and installed in accordance with the Specifications and Drawings.

39.05 PAYMENT

- A. The unit prices stated in the Bid for Item 39 shall be full compensation for each catch basin installed in accordance with the Specifications and Drawings and so measured.

**ITEM 40
RESTORATION**

40.01 DESCRIPTION

- A. Under this Item, the Contractor shall restore landscape surface improvements including topsoil, seeding, mulching, and fertilizing all disturbed lawn areas within the defined construction limits as shown on the Drawings and specified.

40.02 WORK NOT INCLUDED

- A. All other landscape surface improvements disturbed or damaged by the Contractor without prior approval from the Engineer shall be repaired or replaced at the Contractor's expense.
- B. Wetland restoration is included under other Bid Items.

40.03 DEFINITION OF ITEMS

- A. Item 40 - Restoration.

40.04 MEASUREMENT

- A. The lump sum price stated in the Bid for Item 40 shall be full compensation for all Work required under Item 40 - Restoration.

40.05 PAYMENT

- A. The lump sum unit price stated in the Bid for Item 40 shall be full compensation for restoration as specified and required.

**ITEM 41
LABORATORY SERVICES**

41.01 DESCRIPTION

- A. Under this Item, the Contractor shall coordinate with an independent laboratory to provide materials testing as specified and required.

41.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

41.03 DEFINITION OF ITEMS

- A. Item 41 – Laboratory Services.

41.04 MEASUREMENT

- A. The lump sum stated in the Bid shall be full compensation for all Work required under Item 41.

41.05 PAYMENT

- A. The lump sum unit price stated in the Bid for Item 41 shall be full compensation for laboratory services as specified and required.

**ITEM 42
CONSTRUCTION SURVEY WORK**

42.01 DESCRIPTION

- A. Under this Item, the Contractor shall coordinate with a licensed Surveyor to provide construction staking as specified. The Surveyor shall coordinate the layout and staking for the Project with the Engineer.

42.02 WORK NOT INCLUDED

- A. Any Work specifically included under other Bid Items.

42.03 DEFINITION OF ITEMS

- A. Item 42 - Construction Survey Work.

42.04 MEASUREMENT

- A. The lump sum stated in the Bid shall be full compensation for all Work required under Item 42.

42.05 PAYMENT

- A. The lump sum unit price stated in the Bid for Item 42 shall be full compensation for construction survey work as specified and required.

ITEM 43

8" DUCTILE IRON WATER MAIN IF CONTAMINATION IS ENCOUNTERED

43.01 DESCRIPTION

- B. Under these Items, the Contractor shall furnish and perform all Work necessary for the installation of the water mains as scheduled, shown on the Drawings and specified, in conformance with relevant sections of the Specifications.
- C. These Items shall include all Work to install the water mains, including but not limited to the following: excavation, backfill, compaction, bedding, pipe materials, fittings, maintenance of trenches, temporary pavement, connections to existing water mains, and related Work and materials such as blow offs to perform disinfection, flushing, performing pressure and bacteriological tests as shown on the Drawings and specified in conformance with relevant Sections of the Specifications.
- D. These Items also shall include all Work under the Contract unless specifically included for payment under other Items.
- E. Connections of new water lines to new and existing water lines shall be included under these Items, unless specifically included under other items. Temporary supporting of existing utilities, locating of existing utilities, exploratory excavation and backfill required by the utility owner for existing utilities encountered during construction, is included under these Items.
- F. The removal or abandonment of existing water mains, including existing fittings, valves, backfill, bedding, structures and other associated appurtenances, shall be included under these items.
- G. These Items shall include all water main fittings, accessories and appurtenances not included in other pay items. Fittings, including those not shown on the plans required to avoid existing utilities, shall be included under these Items.
- H. All repairs of existing utilities damaged, as a result of construction, are included under these Items.
- I. Restoration of landscape surface improvements including seeding, mulching, and fertilizing all disturbed lawn areas shall be included under these Items, unless specifically included under other items.

- J. Installation of Fastite Fluoroelastomer gaskets in the watermain in the areas shown on the plans on sheet W-3.1 is included in this pay item.
- K. Where shown on Sheet W-3.1, If soil contamination is present in the field, any contaminated soils encountered shall be removed from the site. All handling and disposal shall be in done in accordance with all local, state, and federal requirements. The new watermain pipe shall be backfilled per special backfill detail shown on sheet W-0.2 to the limits shown on drawing W-3.1.

43.02 WORK NOT INCLUDED

- L. Pavement replacement within the Contract limits is included under other Items.
- M. Hydrant assemblies including associated 6-inch water main piping and gate valve are included under other items.
- N. Any Work specifically included under other Bid Items.

43.03 DEFINITION OF ITEMS

- O. Item 43 - 8" Ductile Iron Water Main If Contamination Encountered.

43.04 MEASUREMENT

- P. The lump sum stated in the Bid shall be full compensation for all Work required under Item 43.

43.05 PAYMENT

- Q. The lump sum unit price stated in the Bid for Item 43 shall be full compensation for 8" Ductile Iron Water Main if contamination Encountered work as specified and required.

END OF SECTION

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