

REQUEST FOR PROPOSAL AND
CONTRACT DOCUMENTS

FOR

HIGHLAND DOWNTOWN DEVELOPMENT AUTHORITY

Highland Streetscape Boardwalk

PREPARED BY:

NOWAK & FRAUS ENGINEERS
46777 Woodward Avenue
Pontiac, MI 48342 (the "Engineer")

NFE JOB NO. F803-02

FOR:

HIGHLAND DOWNTOWN DEVELOPMENT AUTHORITY
205 W. Livingston Road
Highland, MI 48357

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HIGHLAND DDA
HIGHLAND STREETSCAPE BOARDWALK
NFE JOB NO. F803-02

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ADVERTISEMENT

Sealed Bid Proposals for the construction of the HIGHLAND DDA STREETScape BOARDWALK PROJECT in Oakland County, Michigan will be received by the Clerk of the DDA Charter Township of Highland, 205 N John Street, Highland Charter Township, MI 48357 until **2:00 PM Local Time on Tuesday, November 12, 2024**

The project shall be performed for the Highland Downtown Development Authority, 205 W. Livingston, Highland, Michigan 48357, (“DDA”)

This project consists of the installation of the pathway improvements along the Western side of S Milford Road, between McPherson Street and Ayershire Drive, located in Highland Township, Oakland County, Michigan, (the “Project”). The approximate quantities of the major items of work are:

300 LF	8' WIDE WOOD BOARDWALK TRAIL SECTION
540 VFT	HELICAL PIERS, 10' DEPTH
140 SYD	SIDEWALK, CONC, 6 INCH

All work shall be in accordance with the Bidding Documents prepared by the Engineer. Each sealed Proposal shall be marked “**HIGHLAND DDA– HIGHLAND STREETScape - BOARDWALK**”.

Bidding Documents, which must be used in submitting a Bid, may be examined and secured from BidNet Website.

A NON-MANDATORY PRE-PROPOSAL MEETING will be conducted on-site on **October 23, 2024 at 9:00 AM.**

Attention is called to the fact that for all parts of the Project, no less than the minimum salaries and wages must be paid on this Project as required by the Minimum Wage Act of 1964, as amended, MCL §408.381, et seq, and that the Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin, in accordance with the Elliott-Larsen Civil Rights Act, MCL §37.2101, et seq.

The DDA reserves the right to accept or reject any or all bids, waive or modify proposal requirements, waive informalities, allow correction of errors or omissions, negotiate individually with one or more proponents, request supplemental bids and/or additional information, and to select and award a contract to a qualified contractor as determined by the DDA, in its discretion, to be in the best interest of the DDA considering all factors. The DDA reserves the right to rebid the project or not to select a contractor. Bids shall be evaluated by the DDA Board based on the requirements set forth herein. Notice shall be provided to the successful bidder by the DDA. The successful Bidder shall be required to agree to the terms and conditions provided in the Contract Documents. If the successful Bidder does not agree to the terms and conditions in the Contract Documents, the DDA may select another Bidder.

Published: 10/12/2024

By: Tami Flowers, Township Clerk
Charter Township of Highland

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INSTRUCTIONS TO BIDDERS

1. PREPARATION OF PROPOSAL

The Proposal shall be typewritten or legibly prepared with ink on forms provided herein. The Bidder shall properly fill in blank spaces provided in the Proposal form. The Bidder shall show, in the column provided therefore, the products of the respective quantities times the Unit Prices; and shall show the sum for which the Bidder will perform the proposed work. The Proposal shall be legally signed, and the complete business address of the Bidder given thereon. In the event that any entry made by the Bidder in the Proposal is to be altered, it shall be crossed out with ink. The new entry shall be made and initialed by the Bidder in ink.

2. INTERPRETATION OF PROPOSAL QUANTITIES

The quantities as shown in the Proposal shall be used for the comparison of Bids upon which the award of the Contract will be made. These quantities are not guaranteed, and the furnishing of this information creates no liability on the part of the DDA. The actual quantities of work to be performed are subject to increase or decrease as determined by conditions encountered in the prosecution of the work.

3. DISCREPANCIES

In case of a discrepancy between the Unit Price and the extended amount for any Item, the Unit Price figure shall govern.

4. MODIFICATIONS

Proposals shall contain a complete explanation of the work to be performed and not be a mere summary of the work to be done. No alternate Proposals will be considered unless specifically called for. Oral Proposals or modifications will not be considered.

5. EXAMINATION OF CONTRACT DOCUMENTS, SITE OF WORK, AND SOIL CONDITIONS

Before submitting a Proposal, Bidders shall carefully examine the Project site, review this entire Contract Document, and employ such other means as may be preferred and required to prepare and submit a Bid. Bidders shall fully inform themselves as to all existing conditions and limitations, including the existing soil and groundwater conditions which might affect the work to be performed. Soils information, if available, will be included in the appendix of this Document.

The Bidder should include in his Bid the cost of performing all work required under this Contract.

6. DELIVERY OF PROPOSAL

Proposals shall be delivered by the time and to the place stipulated in the Advertisements. It is the sole responsibility of the Bidder to see that their Proposal is received in proper time. Any Proposal submitted after the deadline for submission of proposals shall not be accepted by the DDA and shall be returned to the Bidder unopened.

7. WITHDRAWAL OF PROPOSAL

Any Bidder may withdraw his Proposal, in writing, at any time prior to the deadline for submission of Proposals.

8. OPENING OF PROPOSAL

Proposals will be publicly opened, identified and subject to disclosure under the Freedom of Information Act at the time and place set forth in the Advertisement.

9. INTERPRETATION OF DOCUMENTS

A person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Contract Documents or finds discrepancies in or omissions from the Drawings or Specifications, may submit to the Engineer a written request for an interpretation or correction thereof. The person submitting the request for interpretation will be responsible for its prompt delivery to the Engineer. Any interpretation or correction of the Documents will be made only by Addendum duly issued and a copy of the Addendum will be made or delivered to each company or person receiving a set of Contract Documents. Neither the DDA nor the Engineer will be responsible for any other explanations or interpretations of the Contract Documents.

10. ADDENDA

Any Addenda issued during the time of bidding or forming a part of the Contract Documents furnished to the Bidder for the preparation of his Proposal, shall be covered in the Proposal and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Bidder's Proposal.

11. BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL

No person, firm, or corporation shall be allowed to make, file, or be interested in more than one Proposal for the same work, unless alternate Proposals are called for. However, a person, firm, or corporation who has submitted a subproposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a subproposal or quoting prices to other Bidders.

12. INSURANCE REQUIREMENTS

The successful Bidder will be required to furnish the insurance coverage as called for in the GENERAL PROVISIONS OF THE CONTRACT.

13. REJECTION OF PROPOSALS

Proposals will be rejected if the Bidder fails or neglects to fill in any Unit Prices, fails or neglects to complete either the Base Bid or Bid Alternate #1, the Proposal is filled out in pencil, the Proposal is not signed, or no Proposal Guaranty is included. Proposals may be rejected if they show any alterations, are conditional or irregular in any way, are unbalanced, or do not indicate acknowledgement of Addenda.

14. BIDDER'S QUALIFICATIONS

Bids are solicited only from responsible Bidders known to be skilled and regularly engaged in work of similar character and magnitude to that covered by the Contract Documents.

After the opening of Bids, the Bidder shall promptly submit a certified written statement with the following information, if requested by the Engineer:

- a. The Bidders accrual basis balance sheet as of end of last fiscal year, certified by an independent CPA.
- b. The Bidder's financial statement showing his net equity of construction equipment and depreciation of construction equipment certified by an independent CPA.
- c. The Bidder's statement of available equipment and experience records showing:

1. Evidence that the Bidder owns or currently leases the major equipment items necessary to perform the work or a copy of a lease agreement or purchase order indicating it shall purchase or lease the major equipment necessary to perform the work.
 2. Experience record of the Bidder's key personnel which makes them capable of performing the work including the name of the Project superintendent proposed for the work.
- d. The Bidder's list of outstanding contracts with the tabular list of value of uncompleted work.
- e. List of all contracts (over \$100,000 in value each) entered into within the last 5 years with a statement showing for each:
1. Current status of completion
 2. Name, address, and phone number of project owner
 3. Name of owner's representative
- f. The Bidder shall list the major parts of the work proposed to be sublet, the name of the Subcontractor, and the value of each part to be subcontracted.

In addition to the above, and when so requested by the Engineer, the Bidder shall meet with the DDA and its Representatives and give further information in relation to such other matters as the DDA may deem necessary in order to determine the Bidder's qualifications, responsibility, and ability to perform and complete the work in accordance with the Contract requirements.

15. RESERVATIONS

The DDA reserves the right to accept or reject any and all Proposals received; to waive any defect or irregularity in the Proposals; to accept and separate items in the Proposals; to reject low proposals, or to accept a higher proposal; to award this Project to the Bidder it deems best to serve the overall interest of the DDA; to award, in any combination, the listed herein; and reserves the right to re-solicit proposals or not move forward with the Project at this time, if it is deemed to be in the best interest of the DDA.

16. AWARD OF CONTRACT

The DDA reserves the right to accept or reject any or all bids, waive or modify proposal requirements, waive

informalities, allow correction of errors or omissions, negotiate individually with one or more Bidders, request supplemental bids and/or additional information, and to select and award a contract to a qualified contractor as determined by the DDA, in its discretion, to be in the best interest of the DDA considering all factors. Bids shall be evaluated by the DDA Board based on the requirements set forth herein. Notice shall be provided to the successful bidder by the DDA. The successful Bidder shall be required to agree to the terms and conditions provided in the Contract Documents. If the successful Bidder does not agree to the terms and conditions of the Contract Documents, the DDA may select another Bidder.

17. EXECUTION OF CONTRACT

The successful Bidder will be required to execute Six original counterparts of the Contract and at least one original of each Insurance Certificate(s) confirming required Policies, and other Contract Documents required by the DDA.

18. TIME OF STARTING AND COMPLETING THIS WORK

Upon approval and confirmation of the executed Contract, the DDA will issue a written Notice to Proceed to the successful Bidder. The Bidder thereby agrees to commence work within 10 days after receipt of the Notice to Proceed. The Bidder further agrees to fully complete the work within the number of consecutive calendar days indicated in their Proposal.

Time being of the essence for completing the Project. The selected Contractor shall prosecute the work diligently so as to assure the completion of the entire Project not later than the time prescribed, or the date to which the time of completion may have been extended pursuant to the provisions of the GENERAL PROVISIONS. The Contractor shall, if necessary complete the work within such time, and if requested and approved by the DDA in its sole discretion, work nights, Saturdays, Sundays, and holidays without any change in the Contract Price.

Final completion of the entire Project consists of completing all work called for in these Contract Documents. This work will include (but not be limited to): furnishing and installing all materials and equipment so as to provide a completed operating facility as intended, seasonal restoration, completion of punch-list items, resolution of claims and complaints, submission of all documents required, and conformance with all Contract provisions.

19. LIQUIDATED DAMAGES

The DDA shall have and is hereby given the right to deduct and retain from monies due the Contractor, not as a penalty but as liquidated damages, the sum of money as stated in the Contract Documents for each and every day that the work is delayed in its completion beyond the specified time.

THE FOLLOWING PROPOSAL IS HEREBY MADE TO:

Highland DDA

DDA

205 W. Livingston

BUSINESS ADDRESS

Highland Township, MI 48357

CITY, STATE, ZIP CODE

The undersigned Bidder, having examined the Drawings, Specifications, and related documents, and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed Project including the availability of materials and labor, hereby proposes to furnish all labor, materials (not provided by DDA), equipment, tools and services to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this Proposal is a part, for the construction of the Project identified as follows:

Job No. NFE-F803-02 Contract No. _____

Job Title: HIGHLAND DDA
HIGHLAND STREETScape BOARDWALK
Located in Highland Township, Oakland County, Michigan

all in accordance with the Drawings, Specifications, and other Contract Documents prepared by Nowak & Fraus Engineers, Consulting Engineers, Pontiac, Michigan.

PROPOSAL GUARANTY: The Proposal Guaranty in the form of a certified check drawn upon an open, solvent bank in good standing, or a bidder's bond for a sum of not less than five percent (5%) of the Proposal (Base Bid Amount Only), is furnished to the DDA as a guarantee on the part of the bidder that: (1) there are no errors in its bid, (2) all information submitted as part of its bid is true and accurate, and (3) that the Bidder will, if called upon to do so, enter in to a contract in the attached form, to do the work covered by such proposal at the price stated therein and the Contract will be executed and a Performance Bond, a Labor and Material Payment Bond, and a Maintenance Bond will be furnished within 10 days after award of the Contract to the undersigned Bidder.

WAIVER: The undersigned individual on behalf of the Bidder affirms: that the Bidder has sufficiently informed itself in all matters affecting the cost of the Work; that it has checked his Bid and this Proposal for errors and omissions; that the prices stated in this Proposal are as intended; and that the total Bid is a complete and correct statement of this price for doing all of the Work required by the Contract Documents. The undersigned, on behalf of the Bidder does hereby waive any claim for the return of his Proposal Guaranty if, on account of errors or omissions claimed to have been made in this Bid or in this Proposal, or if for any other reason, Bidder shall refuse or fail to execute the Contract or furnish the required bonds.

EXECUTION OF CONTRACT AND FURNISHING BONDS: Within 10 days after being awarded the Contract, the undersigned agrees to execute all required Contract Documents, and to furnish

a Performance Bond, a Labor and Material Payment Bond, and a Maintenance Bond, each in an amount equal to 100 percent of the Contract Amount (Base Bid Amount Only).

No special payments will be made to the selected Contractor for Work described in these Contract Documents unless a specific Item for such Work has been provided for in this Proposal. When Work to be performed is not specifically listed in this Proposal, such Work shall be considered incidental to the construction of the Project. The cost of such incidental Work shall, therefore, be considered to be included in the amount Bid for Items specifically listed.

The undersigned Bidder understands that the quantities of Work as shown herein are approximations. The undersigned Bidder offers to do the Work, whether the quantities are increased or decreased, at the Unit Prices or Lump Sum stated in the schedule on the following pages. The following project narrative is offered as explanation of the proposal format:

BASE BID: constitutes the Highland DDA Boardwalk Project, as detailed in the construction documents and specifications for construction. For the Streetscape Boardwalk Project, the successful Contractor will enter a Contract with the DDA, and all provisions of this document will apply.

Bidder understands and agrees to provide the provisions of the Base Bid for the Highland DDA Boardwalk Project as well as the requirements for providing a Bid Bond, Performance Bond, Payment Bond, Maintenance Bond, and providing the Insurance Requirements

Note, the undersigned Bidder understands that the DDA reserves the right to reject any or all Proposals or to waive any formality or technicality in any Proposal that serves the interest of the DDA.

The following is a summary of the Proposal unit pricing structure:

BASE BID – Highland Streetscape Boardwalk

No.	Item Description	Unit	Total Quantity	Unit Price	Bid Amount
1.	Mobilization, Max. 4%	LSUM	1.00	\$ _____	\$ _____
2.	Curb and Gutter, Rem	LF	20.00	\$ _____	\$ _____
3.	Helical Piers	VFT	700.00	\$ _____	\$ _____
4.	Concrete Boardwalk	LF	300.00	\$ _____	\$ _____
5.	Sidewalk, Rem	SY	100.00	\$ _____	\$ _____
6.	Cobblestone Pier	EA	4.00	\$ _____	\$ _____
7.	Sidewalk, Conc, 4 inch	SFT	1,300.00	\$ _____	\$ _____
8.	Curb Ramp, Conc, 6 inch	LF	20.00	\$ _____	_____
9.	Curb and Gutter, Conc, Det F2	LF	20.00	\$ _____	_____
11.	Shared Use Path, Grading,Mod	LSUM	1.00	\$ _____	\$ _____
12.	Project Restoration	LSUM	1.00	\$ _____	\$ _____
13.	Dr Structure Cover, Adj	EA	1.00	\$ _____	_____
14.	Erosion Control, Inlet Protection, Fabric Drop	EA	3.00	\$ _____	\$ _____
15.	Erosion Control, Silt Fence	LF	320.00	\$ _____	_____
16.	Traffic Maintenance and Control	LSUM	1.00	\$ _____	_____
TOTAL BASE BID				\$ _____	_____

The undersigned Bidder hereby agrees to commence Work under this Project within 10 calendar days after receipt of a written "Notice to Proceed" from the DDA. The Bidder further agrees to achieve Completion of the Work (Base Bid) within 90 consecutive calendar days from the date of the mutually agreed upon "Notice to Proceed" with final completion no later than **May 15, 2025**. The date so determined will herein be referred to as the "Completion Date as Bid".

As hereinafter provided in the General Conditions, the undersigned Bidder further agrees to pay the DDA, as liquidated damages, the sum of \$800.00 for each consecutive calendar day after the substantial completion the sum of \$800.00 for each consecutive calendar day after the "Completion Date" (as above determined), that the Project remains uncompleted. The undersigned Bidder agrees that this Proposal shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing time for receipt of Bids.

The DDA agrees to furnish inspection of the Project, at no cost to the Contractor, until the "Completion Date as Bid" After that date, the Contractor shall reimburse the DDA, at the rate of \$750 per inspection-day, for each inspection-day that is furnished in accordance with Section 01.04.03 of Division 1 — GENERAL REQUIREMENTS.

The DDA agrees to furnish normal Construction Contract Administration (CCA) of the Project, at no cost to the Contractor, until the "Completion Date as Bid" After that date - or before that date, if the CCA is abnormal - the Contractor shall reimburse the DDA, at the rate of \$500 per CCA-day, for each CCA-day that is furnished in accordance with Section 01.04.04 of DIVISION 1 - GENERAL REQUIREMENTS.

The undersigned Bidder agrees that this Proposal shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing time for receipt of Bids.

The undersigned Bidder understands that the DDA reserves the right to reject any or all Proposals or to waive any formality or technicality in any Proposal that serves the interest of the DDA.

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

Addendum No. _____ Date _____

Addendum No. _____ Date _____

IRAN LINKED BUSINESS CLAUSE

The Bidder certifies that neither it nor any of its successors, parent companies, subsidiaries, or companies under common ownership or control of the Bidder, are an "Iran Linked Business" engaged in investment activities of \$20,000,000.00 or more with the energy sector of Iran, within the meaning of Michigan Public Act 517 of 2012. It is expressly understood and agreed that the bidder shall not become an "Iran linked business" if it is selected for the award of the Project.

NOTE: IF A PERSON OR ENTITY FALSELY CERTIFIES THAT IT IS NOT AN IRAN LINKED BUSINESS AS DEFINED BY PUBLIC ACT 517 OF 2012, IT WILL BE RESPONSIBLE FOR CIVIL PENALTIES OF NOT MORE THAN \$250,000.00 OR TWO TIMES THE AMOUNT OF THE CONTRACT FOR WHICH THE FALSE CERTIFICATION WAS MADE, WHICHEVER IS GREATER, PLUS COSTS OF INVESTIGATION AND REASONABLE ATTORNEY FEES INCURRED, AS MORE FULLY SET FORTH IN SECTION 5 OF ACT NO. 517, PUBLIC ACTS OF 2012.

CERTIFICATION

I hereby state that I have read, understand, and become thoroughly familiar with and understand the terms and scope of work contained in the request for proposals.

I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have authority to submit this Proposal, which will become the basis for a binding Contract if accepted by the DDA.

I hereby state that this quote will remain valid for six (6) months from this certification date.

THE ABOVE PROPOSAL IS HEREBY RESPECTFULLY SUBMITTED BY:

CONTRACTOR: _____, a duly organized:

____ Proprietorship; ____ Partnership; or ____ Corporation authorized to do business in the Project state

____ Other (described as: _____)

BY: _____ (signature) _____ (title)

_____ (print name of signer) _____ (date)

_____ (address) _____ (city & state) _____ (zip code)

Telephone No. (____) _____ Federal Employer ID No. _____

NOTE: Bidder, if other than an individual (proprietorship), shall cause the following Certificate to be executed:

CERTIFICATE

I, _____, certify that I am a duly authorized _____
of _____, and do certify that the following named persons:

1. _____ (name) _____ (title)
2. _____ (name) _____ (title)
3. _____ (name) _____ (title)
4. _____ (name) _____ (title)

are authorized to sign the Proposal, the Agreement, the Contract Bonds, and all other Contract Documents related to this Project on behalf of and for said company.

BY: _____ (signature) _____ (title)

BY: _____ (signature) _____ (title)

BID BOND

DDA **Highland DDA** PROJECT IDENTIFICATION NUMBER **NFE-F803-02**

ADDRESS **205W Livingston, Highland Township, MI 48357**

CONTRACTOR PRINCIPAL DATE OF BID

ADDRESS

SURETY DATE BOND EXECUTED

ADDRESS

AMOUNT OF (express in words and figures) BOND

WHEREAS, the Principal above-named has submitted to the DDA a proposal or bid, dated as shown above, on the above-Project. NOW, THEREFORE, we, the Principal and Surety, bind ourselves to the DDA in the amount of the bond stated above, that if the above Proposal is accepted, the Principal will promptly enter into a Contract in accordance with the Proposal and the Surety will furnish the required bonds, otherwise the Principal and/or Surety will pay the amount stated above unto the DDA as liquidated damages. This Bond to remain in full force and effect until the Contract is awarded and executed.

Witnessed by: CONTRACTOR PRINCIPAL
By:
Title:

If the Contractor is other than an individual (proprietorship), the following certification must be executed.

I certify that I am the _____ company named as Contractor Principal in the within bond, that _____ who signed the said bond on behalf of the principal, was authorized to do so for and in behalf of said company.

Witnessed by: CORPORATE SURETY
By:
Title:

LOCAL AGENT AGENT'S PHONE

PERFORMANCE BOND

CONTRACT IDENTIFICATION NUMBER – NFE – F803-02

KNOW ALL MEN BY THESE PRESENTS: That _____, (“Principal”), a corporation duly authorized to do business in state of Michigan and _____, as Surety, are held and firmly bound unto the Highland DDA (“DDA”), in the amount of \$ ____ for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the DDA has approved the award of a Contract to Principal for the Project known as Highland Streetscape Boardwalk, conditioned on Principal providing this Performance Bond in compliance with Public Act 213 of 1963, as amended, MCL 129.201 et. seq. , This Bond shall by reference be automatically made a part of the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is that, if Principal shall faithfully perform the Contract according to all conditions, stipulations and specifications contained in the Contract documents, and complete the construction free and clear of all liens and or claims of every description, and satisfy all claims and demands incurred, and shall fully indemnify and save harmless the DDA from all liability and damages of every kind which it may suffer by reason of the Principal’s performance under the Contract, then this obligation shall be void and of no effect; otherwise it shall remain in full force and effect.

The Bond is given upon the express condition that any changes, alterations or modifications of the Contract; the extension of time; or the placing of an inspector or engineer on site by the DDA in accordance with the provisions of the Contract, shall not operate in any way to release the Principal and Sureties.

Whenever the Principal is declared by DDA to be in default under the Contract, the Surety may promptly remedy the default or promptly:

- (a) Complete the Contract in accordance with it 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 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 above.

In lieu of completing the Contract or obtaining bids, DDA may require Surety to pay DDA an amount of money up to the amount of this Bond that is documented by the DDA as being the amount of the delinquent payment obligation or the cost, including attorney fees, it has incurred or will incur in performing or securing performance of Principal’s obligations, including attorney fees, Surety agrees to deliver the required payment to the DDA within 30 days. The DDA’s payment notice shall be sent by registered mail or overnight delivery service.

At least 60 days prior written notice shall be given to the DDA by the Surety of any intention to cancel, replace, or materially alter this bond, such notice to be given by registered mail to the

DDA and Principal.

This Bond is given in compliance with and subject to all provisions and conditions of Public Act 213 of 1963; MCL 129.201 et.seq.

PRINCIPAL,

Dated

(See attached notarization of signature)

SURETY,

Dated

(See attached notarization of signature)

PAYMENT BOND: LABOR AND MATERIAL

CONTRACT IDENTIFICATION NUMBER – NFE – F803-02

KNOW ALL MEN BY THESE PRESENTS: That _____, ("Principal"), a corporation duly authorized to do business in state of Michigan and _____, as Surety, are held and firmly bound unto the Charter Township of Highland (hereinafter called DDA), in the amount of \$ _____ for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the DDA has approved the award of a Contract to Principal for the project known as Highland Streetscape Boardwalk, conditioned on Principal providing this Payment Bond, which Contract upon being fully signed, shall by reference be automatically made a part hereof and is referred to as the "Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is that, if Principal shall pay all persons that furnish labor, supplies, equipment and/or materials used or reasonably required for use in the performance of the Contract (Claimants), this obligation shall be null and void. Otherwise it shall remain in full force and effect.

If the Principal fails to repay claimants promptly and fully for labor and material reasonably required under the Contract, Surety shall pay those claimants. Surety's obligation to pay a Claimant shall not exceed the amount of this Payment Bond is conditioned on the Claimant providing notice of, perfecting and prosecuting its claim in compliance with the requirements of Michigan Public Act No. 213 of 1963, as amended, and other applicable Michigan law.

At least 60 days prior written notice shall be given to the DDA by the Surety of any intention to cancel, replace, or materially alter this bond, such notice to be given by registered mail to the DDA and Principal.

PRINCIPAL,

Dated

(See attached notarization of signature)

SURETY,

Dated

(See attached notarization of signature)

MAINTENANCE AND GUARANTEE BOND

CONTRACT IDENTIFICATION NUMBER – NFE – F803-02

That _____ “Principal”, and _____ “Surety”, are held and firmly bound unto the Charter Township of Highland, “Township”, in the amount of \$_____, for which payment we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally.

The Principal and the DDA have entered a written Contract for a project known as Highland Streetscape Boardwalk.

Pursuant to the Contract, the Principal, guaranteed and warranted the workmanship and materials for the Project performed under the Contract for a period of two (2) year(s) from the date of final payment for Contract work and that any defects would be immediately corrected by repair or replacement as directed by and without additional cost or expense to the DDA.

If the Principal does not correct defects reported in writing by the DDA to the Principal and Surety by repair or replacement as directed by the DDA within the time required, which shall not be less than one week from service of the notice, the DDA shall have the right to perform or secure the performance of the corrections, with all costs and expenses in doing so, including an administrative fee equal to twenty-five percent (25%) of the repair costs, charged to and to be received from the Principal. In the event the Principal does not make payment on the costs charged within 30 days of Notice being sent, the Surety shall pay the amount charged directly to the DDA.

Emergency repairs that are necessary to protect life and property may be undertaken by the DDA immediately and without advance notice to the Principal and Surety, with the cost and expense of the repair, plus the administrative fee, to be charged to and received from the Principal. In the event the Principal does not make payment on the costs charged within 30 days of Notice being sent, the Surety shall pay the amount charged directly to the DDA.

Any repairs the DDA may perform as provided in this Bond may be by DDA employees, agents, or independent contractors. The DDA shall not be required to utilize competitive bidding unless otherwise required by applicable law, with labor cost and expense charges when DDA employees are utilized to be based on the hourly cost to the DDA of the employee(s) performing the repair.

It is a further condition of this Bond that the Principal and Surety shall fully indemnify, defend, and hold the DDA, its agents and others working on the DDA's behalf, harmless from all claims for damages or injuries to persons or property arising from or related to defects in work or materials, the correction of which are covered and guaranteed by this Bond, including claims arising under the worker's compensation laws of the State of Michigan.

PRINCIPAL,

Dated

(See attached notarization of signature)

SURETY,

Dated

(See attached notarization of signature)

SAMPLE

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)
00/00/00

PRODUCER

ABC Insurance Agency
123 Main Street
Somewhere, U.S.A.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER **A** XYZ Insurance Company

COMPANY LETTER **B**

COMPANY LETTER **C**

COMPANY LETTER **D**

COMPANY LETTER **E**

INSURED

DEF Contracting Company
456 Main Street
Anytown, U.S.A.

COVERAGES

THIS IS TO CERTIFY THAT 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.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS			
						EACH OCCURRENCE	AGGREGATE	
A	GENERAL LIABILITY		123456	00/00/00	00/00/00	BODILY INJURY	\$1,000	\$2,000
	<input checked="" type="checkbox"/>	COMPREHENSIVE FORM				PROPERTY DAMAGE	\$1,000	\$2,000
	<input checked="" type="checkbox"/>	PREMISES/OPERATIONS				BI & PD COMBINED	\$1,000	\$2,000
	<input checked="" type="checkbox"/>	UNDERGROUND EXPLOSION & COLLAPSE HAZARD				PERSONAL INJURY		\$1,000
	<input checked="" type="checkbox"/>	PRODUCTS/COMPLETED OPERATIONS						
	<input checked="" type="checkbox"/>	CONTRACTUAL						
	<input checked="" type="checkbox"/>	INDEPENDENT CONTRACTORS						
	<input checked="" type="checkbox"/>	BROAD FORM PROPERTY DAMAGE						
	<input checked="" type="checkbox"/>	PERSONAL INJURY						
<input checked="" type="checkbox"/>	B.F.C.G.I							
B	AUTOMOBILE LIABILITY		123456	00/00/00	00/00/00	BODILY INJURY (PER PERSON)	\$2,000	
	<input checked="" type="checkbox"/>	ANY AUTO				BODILY INJURY (PER ACCIDENT)	\$2,000	
	<input checked="" type="checkbox"/>	ALL OWNED AUTOS (PRIV PASS)				PROPERTY DAMAGE	\$2,000	
	<input checked="" type="checkbox"/>	ALL OWNED AUTOS (OTHER THAN PRIV PASS)				BI & PD COMBINED	\$2,000	
	<input checked="" type="checkbox"/>	HIRED AUTOS						
	<input checked="" type="checkbox"/>	NON-OWNED AUTOS						
<input checked="" type="checkbox"/>	GARAGE LIABILITY							
C	EXCESS LIABILITY		123456	00/00/00	00/00/00	BI & PD COMBINED	\$2,000	\$2,000
	<input checked="" type="checkbox"/>	UMBRELLA FORM						
<input type="checkbox"/>	OTHER THEN UMBRELLA FORM							
D	WORKERS' COMPENSATION AND EMPLOYEES' LIABILITY		123456	00/00/00	00/00/00	STATUTORY		
						\$100	(EACH ACCIDENT)	
						\$100	(DISEASE-POLICY LIMIT))	
						\$500	(DISEASE-EACH EMPLOYEE))	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS
ADDITIONAL INSURED: HIGHLAND DDA , ITS AGENTS, EMPLOYEES, ELECTED OFFICIALS, VOLUNTEERS, AND ALL BOARDS, COMMISSIONS AND AUTHORITIES WITHIN THE OPERATING BUDGETS OF THE CHARTER TOWNSHIP OF HIGHLAND , NOWAK & FRAUS, PLLC; AS RESPECTS JOB: F803-02

CERTIFICATE HOLDER	CANCELLATION
Highland DDA 205 W Livingston Highland, MI 48357	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF. THE ISSUING COMPANY WILL MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.
	AUTHORIZED REPRESENTATIVE John Doe (<i>signature</i>)

(TO BE SIGNED BY SUCCESSFUL BIDDER)
HIGHLAND BOARD WALK CONSTRUCTION CONTRACT

This Highland Boardwalk Construction Contract ("Contract") made and entered into this _____ day of _____ by and between _____ of _____, hereinafter called the Contractor, _____ (Contractor) _____ (City and State)

and Highland DDA of 205 W. Livingston, Highland, Michigan 48357
(DDA) (City and State)

hereinafter called the DDA;

The Contractor and the DDA for the considerations hereinafter named agree as follows:

1. That all Contract Documents (as defined in the "General Provisions" of the Specifications) herein attached as well as the Request for Proposal and Contractors Proposal response for the Highland DDA Boardwalk Project, "Project") identified below, shall be and are hereby made a part of this Contract.

Job No. NFE-F803-02 Contract No. _____

Job Title: HIGHLAND DDA
HIGHLAND STREETSCAPE BOARDWALK

For which the Gross Proposal Amount is \$ _____

2. The Contractor shall furnish all labor, materials, equipment, tools, and services necessary to construct the Project, as set forth in his Proposal and the General Provisions, in strict accordance with the Contract Documents in the manner, time, and place as therein set forth and that for all parts of the Project, no less than the minimum salaries and wages must be paid on this Project as required by the Minimum Wage Act of 1964, as amended, MCL §408.381, et seq, and that the Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin, in accordance with the Elliott-Larsen Civil Rights Act, MCL §37.2101, et seq.
3. In consideration whereof, the DDA agrees to pay to the Contractor the amounts provided in the attached Proposal, being either a Lump Sum or the projection of the Unit Prices therein set forth, multiplied by the number of units actually constructed, all in the time and manner as set forth in Section B.12 of the "General Provisions."
4. IN WITNESS whereof, said parties have hereon set their hands and seals the day and year first above written.

Contractor _____
By _____ Title

By _____ Title

Highland DDA
By _____ Title

By _____ Title

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DIVISION B - GENERAL PROVISIONS

B.01 DEFINITIONS

Whenever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof:

- ACT OF GOD: An earthquake, cyclone, or other cataclysmic phenomenon of nature. Rain, wind, flood, or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God and no representation shall be made to the Contractor for damages to the Work resulting therefrom.
- ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings, and Specifications, by additions, deletions, clarifications, or corrections.
- CONTRACT EXECUTION PAGE: The page of the Contract signed by the DDA and Contractor covering the performance of the Work described in the Contract Documents.
- BID: The offer or Proposal of a Bidder to perform the work described in the Contract Documents when made out and submitted on the prescribed proposal forms setting forth the prices for the work to be performed, properly signed and guaranteed. Also referred to as "Proposal."
- BIDDER: Any person, firm, or corporation submitting a Bid for the Work.
- BONDS: Bid Bond, Performance Bond, Labor and Material, Payment Bond, Maintenance Bond, and other instruments of security, furnished by the Contractor and his Surety in accordance with the Contract Documents.
- CHANGE ORDER: A written amendment of the Contract between the DDA and the Contractor authorizing an addition, deletion, or revision in the Work within the general scope of the Contract Documents or authorizing an adjustment in the Contract Price or Contract Time.
- CONTRACT AMOUNT (CONTRACT PRICE): The total monies payable to the Contractor under the terms and conditions of these Contract Documents.
- CONTRACT DOCUMENTS: The Contract, including Advertisement, Instructions to Bidders, Supplemental Instructions to Bidders, Proposal, Agreement Page, Bonds, Certificate of Insurance, Contractor's Declaration, General Provisions, Supplemental General Provisions, Construction Specifications, Supplemental Specifications, Drawings, Addenda, Notice of Award, Notice to Proceed, and Change Orders.
- CONTRACT TIME: The number of calendar days stated in the Proposal for the completion of the Work.
- CONTRACTOR: The person, firm, or corporation with whom the DDA has executed the Agreement.
- DRAWINGS: The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.
- ENGINEER: The firm retained by the DDA named in the Proposal FIELD ORDER: Written directives issued by the Engineer, as authorized by the DDA, to the Contractor. Field Orders may

take the form of instructions or authorizations in reference to performance of the Work. Field Orders may also be interpretations or clarifications of the Contract Documents. Field Orders do not change the content, nor shall they be interpreted as a change in the Contract Documents.

- GOVERNING AGENCY: Public authority (state, county, township, or other public agency) or their boards, commissions, departments, etc. which has statutory code enforcement, zoning, law enforcement, fire department or other governmental authority of the referred to facility or area.
- GROSS PROPOSAL AMOUNT: The total sum of all of the amounts obtained by extending the Contractor's Bid Prices times the Engineer's Estimated Quantities; on Lump Sum Contracts, the Lump Sum Amount Bid.
- INCIDENTAL TO THE PROJECT: Incidental items of Work required but not specifically listed in the Proposal and for which no separate payment will be made. The costs associated with such incidental items are to be included in the Prices Bid for Items of Work specifically listed in the Proposal and included in the Gross Proposal Amount.
- INCIDENTAL TO ITEM (AS DESIGNATED): Incidental items of Work required but not specifically listed in the Proposal and for which no separate payment will be made. The costs associated with such Work are to be included in the Price Bid for the specific Item so designated.
- NOTICE OF AWARD: The written notice of the acceptance of the Bid from the DDA to the successful Bidder.
- NOTICE TO PROCEED: Written communication issued by the DDA to the Contractor authorizing him to proceed with the Work and establishing the commencement date and completion date for the Work.
- DDA: A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the Work is to be performed.
- DDA'S AGENT: A duly appointed representative delegated by the DDA to perform as his Agent in the administration of the Work. If an DDA's Agent has been appointed, all business conducted by an DDA's Agent shall be in the best interest of the DDA and shall be as if conducted by the DDA.
- DDA'S REPRESENTATIVE: A duly appointed representative of the DDA delegated to assist in the administration of the Contract.
- PLANS: The Drawings as prepared by the Engineer which show the characteristics and scope of the Work to be performed and which are a part of the Contract Documents.
- PROJECT: The undertaking to be performed as provided in the Contract Documents.
- PROPOSAL: The offer of a Bidder to perform the Work described in the Contract Documents when made out and submitted on the prescribed proposal forms, setting forth the prices for the work to be performed, properly signed and guaranteed. Also referred to as "Bid".
- PROPOSAL GUARANTY: The cashier's check, certified check, or Bid Bond accompanying the Proposal submitted by a Bidder as a guarantee that the Bidder will enter into an agreement with the DDA for construction of the Work if the Contract is awarded to him.
-
- PUNCH LIST: A list of uncompleted work given to the Contractor by the Engineer.

- SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules, and other data prepared by the Contractor, a Subcontractor, manufacturer, Supplier, or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.
- SPECIFICATIONS: A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship.
- SUBCONTRACTOR: An individual, firm, or corporation having a direct contract with the Contractor, or with another Subcontractor, for the construction of a part of the project.
- SUBSTANTIAL COMPLETION DATE: That date as certified by the Engineer when the construction of the Project, or a specified part thereof, is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.
- SUPPLEMENTAL GENERAL PROVISIONS AND SUPPLEMENTAL INSTRUCTIONS TO BIDDERS: Modifications to General Provisions and Instructions to Bidders required by a federal or state agency for participation in the Project and approved by the agency in writing prior to inclusion in the Contract Documents, or such requirements that may be imposed by applicable State laws.
- SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.
- SURETY: The corporation that executes the Contractor's Bid Bond, Performance Bond, Labor and Material Payment Bond, or Maintenance Bond.
- WORK: All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.
- WRITTEN NOTICE: Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when delivered or posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the Work.

B.02 ABBREVIATIONS

The following abbreviations, as used in the Contract Documents, have the listed meanings:

AAN	American Association of Nurserymen, Inc.
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AC	Alternating Current, Acres
ACI	American Concrete Institute
AGA	American Gas Association
AGC	The Associated General Contractors of America, Inc.
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APHA	American Public Health Association
API	American Petroleum Institute
APWA	American Public Works Association

ARBA American Road Builders' Association
 AREA American Railway Engineering Association
 ARI Air Conditioning and Refrigeration Institute
 ASCE American Society of Civil Engineers
 ASHRAE American Society of Heating, Refrigerating and Air Conditioning Engineers
 ASLA American Society of Landscape Architects
 ASME American Society of Mechanical Engineers
 ASTM American Society for Testing and Materials
 AUC Associated Underground Contractors, Inc.
 AWG American Wire Gauge
 AWWA American Water Works Association
 BOCA Building Officials Conference of America, Inc.
 BTU British Thermal Unit
 C Centigrade, Celsius
 CF Cubic Foot, Feet
 CFS Cubic Feet per Second
 CPCO Consumers Power Company
 CRSI Concrete Reinforcing Steel Institute
 CSI Construction Specification Institute
 CY Cubic Yards
 DC Direct Current
 DE The Detroit Edison Company
 DNR Department of Natural Resources
 DWSD Detroit Water and Sewerage Department
 EA Each
 EEI Edison Electric Institute
 EPA Environmental Protection Agency
 F Fahrenheit
 FOB Free on Board
 FT Feet
 GPM Gallons per Minute
 HP Horsepower
 (DENT Identification
 IEEE Institute of Electrical and Electronic Engineers
 IES Illuminating Engineering Society
 IN Inches
 ISA Instrument Society of America
 KVA Kilovolt-Ampere
 LBS Pounds
 LF Lineal Feet
 LS Lump Sum
 MBT Michigan Bell Telephone Company
 MCRC Macomb County Road Commission
 MDPH Michigan Department of Public Health
 MDOT or SHD Michigan Department of Transportation or State Highway Department
 NBBPVI National Board of Boiler and Pressure Vessel Inspectors
 NBS National Bureau of Standards
 NCPI National Clay Pipe Institute
 NCPWB National Certified Pipe Welding Bureau
 NEC National Electric Code
 NEMA National Electrical Manufacturers Association
 NFPA National Fire Protection Association
 OPWC/MC Office of the Public Works Commissioner, Macomb County

OSHAOccupation Safety and Health Administration
PSIPounds per Square Inch
REFReference
SAESociety of Automotive Engineers
SFSquare Feet
SMSDSouth Macomb Sanitary District
SPECSpecification
SPISociety of the Plastic Industry, Inc.
SSPCSteel Structures Painting Council
SYSquare Yards
TTons
TGUThousand Gallon Unit
UBCUniform Building Code
ULUnderwriters Laboratory
WPCFWater Pollution Control Federation
USCGSUnited States Coast and Geodetic Survey
USGSUnited States Geological Survey

B.03 DRAWINGS, SPECIFICATIONS, AND RELATED DATA

B.03.01 Intent of Drawings and Specifications

The intent of the Drawings and Specifications is that the Contractor furnish all labor, materials, equipment, and transportation necessary for the proper execution of the Work unless specifically noted otherwise. The Contractor shall do all the Work shown on the Drawings and described in the Specifications and all incidental Work considered necessary to fully complete the Project in a substantial and acceptable manner ready for use, occupancy, and operation by the DDA.

B.03.02 Adequacy of Drawings and Specifications

Responsibility to Contractor for inadequacy of the design and for insufficiency of the Drawings and Specifications shall be borne by the DDA, subject to DDA's recourse against Engineer for all such inadequacies or insufficiencies. The complete requirements of the Work to be performed under the Contract shall be set forth in Drawings and Specifications to be supplied by the DDA through the Engineer or by the Engineer as representative of the DDA. Drawings and Specifications furnished shall be in accordance with the Contract Documents and shall be true and accurate developments thereof. All information concerning utilities shown on the Drawings were obtained using the best information available. No guarantee is given or implied that the information or the location as shown is absolutely correct, or that other facilities, in addition to those shown, are not present and may be encountered.

B.03.03 Dimensions

Figured dimensions on the Drawings will be used in preference to scaling the Drawings. Where dimensions are not shown on the Drawings and are required for the Contractor to properly construct the Work, he shall obtain such dimensions from the Engineer.

B.03.04 Conflicts

If there are conflicts among the Supplemental Specifications, the Drawings, and/or the Detailed Specifications, the Supplemental Specifications shall govern over both the Drawings and the Detailed Specifications; and the Drawings shall govern over the Detailed Specifications.

B.03.05 Discrepancies in Drawings and Specifications

Any discrepancies found between the Drawings and Specifications and site conditions or any errors or omissions in the Drawings or Specifications shall be immediately reported to the Engineer, who shall promptly correct such error or omission in writing. Any Work done by the Contractor after his discovery of such discrepancies, errors, or omissions shall be done at the Contractor's risk.

B.03.06 Specifications by Reference

Where reference is made in the Specifications to specifications or standards of any technical society, association, governmental agency, etc., it is understood and agreed that the latest edition adopted by the state or municipality shall apply (unless otherwise stated) of such specifications or standards are a part of the Specifications as though fully repeated therein. In interpreting any specification or standard referred to, terms such as "Purchaser," "DDA," and the like shall be understood to mean the person or organization designated as the DDA in the Contract, acting by and through its duly constituted Board. Terms such as "Manufacturer," "Supplier," and the like shall mean the Contractor.

It is also understood and agreed that the use or application of any specification or standard referred to shall not necessarily be restricted to that which may be named in the title or the specification or standard but shall be used or applied as set forth in these Specifications.

The Contractor shall secure copies of standards and specifications referred to herein. A copy of each specification or standard referred to is on file in the Engineer's office; however, it is assumed that a qualified Contractor experienced in the type of Work involved will have access to the specifications or standards referred to.

B.03.07 Copies of Drawings and Specifications

Except as provided for otherwise, all copies of Drawings and Specifications reasonably necessary for the execution of the Work shall be furnished to the Contractor without charge.

B.03.08 Drawings and Specifications at the Project Site

One complete set of all Drawings and Specifications shall be maintained at the job site and shall be available to the Engineer at all times.

B.03.09 Ownership of Drawings and Specifications

All original or duplicated Drawings and Specifications and other data prepared by the Engineer shall remain the property of the DDA and Engineer, shall not be copied or reused by Contractor on other Work, and shall be returned to the DDA or Engineer upon completion of the Work upon demand.

B.03.10 Additional Instructions and Detailed Drawings

Further instructions may be issued by the Engineer during the progress of the Work by means of Drawings or otherwise to make more clear or specific the Drawings and Specifications or as may be necessary to explain or illustrate changes in the Work to be done. Moreover, the Contractor shall attend a preconstruction meeting, at a time and place as arranged by the DDA, at which time various utility companies and governmental agency representatives will be present.

B.03.11 Physical Conditions Ordinarily Encountered and Inherent in the Work to be Performed

Contractor agrees and stipulates that following physical conditions may exist at the site and are of a nature ordinarily encountered and generally recognized as inherent in the work to be performed:

- a. Groundwater and soil conditions such that the utilization of dewatering equipment up to and including trench boxes, well points and deep wells as well as additional backfill to support structures may be required.
- b. Trees and other vegetation requiring special care to avoid damage.
- c. Public utilities whose exact location is unknown from plans, including gas, water, electric, sanitary and storm sewer facilities.

B.04 LIMITATION OF LIABILITY, INDEMNIFICATION, AND INSURANCE

B.04.01 Limitation of Liability

The Contractor affirmatively represents that it is skilled and experienced in the use and interpretation of Drawings and Specifications such as those included in the Bid Documents of this Contract. Further, Contractor also affirmatively represents that it has carefully reviewed the Drawings and Specifications of this Contract, and that Contractor has based its Bid solely on these Documents, not relying in any way on any explanation or interpretation -- oral or written -- from any other source. Unless the Contractor shall give written notice to the Engineer of any ambiguities contained in the Drawings and Specifications prior to the submission of its Bid, the Contractor agrees that it shall be conclusively presumed that the Contractor has exercised his aforementioned skill and experience and found the Drawings and Specifications sufficient and free from ambiguities, errors, or omissions for the purpose of determining its Contract Bid Price for the performance of the Work in conformity with the Drawings and Specifications.

Submission of a Bid without prior written notice to the Engineer of any claimed ambiguities, errors, or omissions shall constitute a waiver of any and all bid-price-related claims by the Contractor that are based upon any alleged ambiguities, errors, omissions, or the like in the Drawings or Specifications.

B.04.02 Indemnification

The Contractor agrees to indemnify, defend, and save harmless the DDA, Highland Township, and the Milford Market, the owner of the property where the Project work will take place,, their elected and appointed officials, consultants, agents, and employees, from and against all loss or expense (including costs and attorneys' fees) by reason of liability imposed by law upon the

DDA, Highland Township and Milford Market and the Engineer, their consultants, agents, and employees for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damage to property, including loss of use thereof, arising out of or in consequence of the performance of this Work, whether such injuries to person or damage to property is due or claimed to be due to the negligence of the Contractor, his Subcontractors, the DDA, the Engineer, and their consultants, agents, and employees, except only such injury or damage as shall have been occasioned by the sole negligence of the DDA, Highland Township, the Milford Market, the Engineer, and their agents and/or consultants.

B.04.03 Qualification of Insurance Companies

The Contractor shall provide certificates of all insurance required evidencing the required coverage at the time of the execution of the Contract. The policies shall name the Contractor as an insured and the Highland DDA and Highland Township, their agents, employees, elected and appointed officials, volunteers, and agents, Nowak & Fraus, PLLC and Milford Market as respect to job: NFE - F803-02 as an additional insured.

All policies shall be endorsed to provide that the insurer shall give written notice to the DDA at least thirty (30) days in advance of any cancellation or expiration of the policy. The Contractor shall provide the DDA with written notice of any material change to any policy immediately upon receipt of notice of such material change. Upon request by the DDA, the Contractor shall provide copies of policies required by the Contract. In the event that the Contract is extended beyond its original term, the Contractor shall continue the required insurance coverage in effect during any extended term of the Contract.

All insurance required under these Specifications shall be furnished by an insurance company qualified to do business in the state in which the Work is located and shall have a rating of A:V as listed in the latest issue of A.M. Best's "Key Rating Guide."

Certificates of Insurance shall be on the form of certificate included in these Specifications.

B.04.04 Workmen's Compensation and Employer's Liability Insurance

Unless otherwise provided by law, the Contractor shall procure and maintain in force during the life of this Contract Workmen's Compensation Insurance as required by the statutes of the state of Michigan. In addition, the Workmen's Compensation policy shall be endorsed to define the scope of coverage for the Contractor's corporate officers or partners if required by the Workmen's Compensation Law of the state of Michigan

The Contractor shall also procure and maintain in force during the life of this Contract, Employer's Liability Insurance in an amount not less than \$100,000.

Before starting the Work, the Contractor shall file with the DDA and the Engineer certificates of the above-described insurance, acceptable to the DDA.

B.04.05 Comprehensive General Liability Insurance

The Contractor shall procure and maintain during the life of this Contract Comprehensive General Liability Insurance to protect from claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees including claims insured by personal injury liability coverage and from claims for injury or destruction of tangible property including loss of use resulting therefrom -- any and all of which may arise out of or result

from the Contractor's operations under the Contract whether such operations be by Contractor or by any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be Legally liable. Such insurance shall include coverage for:

- a. Operation and Premises
- b. Independent Contractor Protective Liability
- c. Completed Operation - Products Liability
- d. Contractual Liability
- e. Explosion, Collapse, or Underground Damage
- f. Broad Form Property Damage

The limits of liability for bodily injury including accidental death shall be \$1,000,000 per occurrence and a total limit of \$2,000,000 for all completed Operations-Products bodily injury claims during a single policy year.

The limits of liability for property damage shall be \$1,000,000 per occurrence and \$2,000,000 aggregate limit individually each for Operations, Independent Contractor Protective, and Contractual for each Project, and \$2,000,000 aggregate limit for Completed Operation - Products property damage during a single policy year.

Before starting the Work, the Contractor shall file with the DDA and the Engineer all required certificates of insurance, policies and endorsements," of the above described insurance, acceptable to the DDA.

In addition, the Contractor shall extend the above described Completed Operations-Products Liability insurance coverage to the end of the Contract Guaranty period and shall furnish the DDA a certificate of insurance to that effect for the entire Guaranty period prior to final payment for Work done under this Contract.

B.04.06 Comprehensive Motor Vehicle Liability Insurance

The Contractor shall procure and maintain during the life of this Contract Comprehensive Motor Vehicle Liability Insurance to a combined limit for bodily injury and property damage liability in the amount of \$2,000,000 per accident. The policy shall include coverage for owned, non-owned, and hired motor vehicles.

Before starting the Work, the Contractor shall file with the DDA and the Engineer all required certificates of insurance, policies and endorsements," of the above-described insurance acceptable to the DDA.

B.04.07 Umbrella Excess Liability Insurance

The Contractor shall procure and maintain during the life of the Contract Umbrella Excess Liability Insurance in the single limit of at least \$2,000,000. This insurance shall cover all insureds for at least all risks described in the Comprehensive General Liability and Comprehensive Motor Vehicle Liability policies.

Before starting the Work, the Contractor shall file with the DDA and the Engineer certificates of the above-described insurance acceptable to the DDA.

B.04.08 Protective Public Liability Insurance

a. Owners Protective Public Liability Insurance

The Contractor shall procure and maintain during the life of the Contract Owners Protective Public Liability Insurance in the name of the Highland DDA and the Milford Market to protect against claims for damages because of bodily injury or death, and for property damage caused by the Contractor or his Subcontractors including coverage for costs of defense from all such claims. The limits of liability for bodily injury including death shall be \$2,000,000 per occurrence.

The limits of liability for property damage shall be \$1,000,000 per occurrence and \$2,000,000 aggregate limits.

The Owners Protective Public Liability Insurance Policy shall include as Additional Insureds Highland Township and the Engineer and his consultants, agents, and employees, and all public corporations in whose jurisdiction the Work is located.

Before starting the Work, the Contractor shall file with all Additional Insureds all required certificates of insurance, policies and endorsements," of the policy for the above-described insurance acceptable to the DDA.

B.04.09 All-Risk Builder's Risk Insurance (Required for Buildings Only)

The Contractor shall procure and maintain in the name of the DDA and the Contractor, as their respective interests may appear during the life of the Contract, All-Risk Builder's Risk Insurance on a Completed Value Basis in an amount not less than the Contract Amount plus the value of all material furnished by parties other than the Contractor for installation in the Project, to cover all Project structures and materials, supplies, machinery, equipment, and fixtures including the installation cost thereof which are owned by the insured or for which the insured is legally liable. This policy covers the property of the insured (a) while in transit at the risk of the insured; (b) while on the premises of construction or installation awaiting use in the construction or awaiting the installation; (c) during construction, installation, or testing. This policy insures against all risk of direct physical loss or damage to the property insured hereunder and shall specially cover loss due to Fire, Lightning, Vandalism, Malicious Mischief, Flood, Collapse, Windstorm, Hail, Explosion, Riot, Civil Commotion, Aircraft, Vehicles, Smoke and other "all risk" perils, but may be subject to exclusion of losses from wear and tear, misappropriation or other dishonest act by insured, earthquake, interruption of business, defective materials, collapse due to faulty workmanship, war, nuclear reaction or radiation.

The All-Risk Builder's Risk Insurance Policy shall include the Engineer and his consultants, agents, and employees as additional named insured.

Before starting the Work, the Contractor shall file with all insured a copy of the policy for the above- described insurance acceptable to the DDA.

B.05 CONTRACT BONDS

B.05.01 Performance Bond

At the time of execution of the Contract by the DDA, the Contractor shall furnish a Performance Bond in an amount equal to 100 percent of the Contract Amount. Only the form of bond enclosed

or provided by the DDA will be acceptable. The Surety shall be authorized to do business in the state where the Work is located.

B.05.02 Labor and Material Payment Bond

At the time of execution of the Contract by the DDA, the Contractor shall furnish a Labor and Material Payment Bond in an amount equal to 100 percent of the Contract Amount. Only the form of bond enclosed or provided by the DDA will be acceptable. The Surety shall be authorized to do business in the state where the Work is located.

B.05.03 Maintenance and Guarantee Bond

At the time of execution of the Contract by the DDA, the Contractor shall furnish a Maintenance Bond in an amount equal to 100 percent of the Contract Amount. Only the form of bond enclosed or provided by the DDA will be acceptable. The Surety shall be authorized to do business in the state where the Work is located.

B.06 ENGINEER-DDA-CONTRACTOR RELATIONS AND AUTHORITIES

B.06.01 Contractor's Responsibility and Authority

The Engineer shall maintain a competent and qualified Resident Project Representative (RPR) and assistants (the "RPR staff") at the Project site. Through more extensive on-site observations of the work in progress and field checks of materials and equipment by the RPR staff, the Engineer shall endeavor to provide further protection for the DDA against defects and deficiencies in the work of the Contractor. But the furnishing of such services shall, in no way, make the Engineer responsible for either (a) the quality of any of the work for which the Contractor is intended to be responsible or (b) for the Contractor's failure to perform the Work in accordance with the Construction Contract Documents.

The Contractor shall supervise and direct the Work efficiently and with his best skill and attention. He will be held solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor will be responsible for ensuring that the finished Work complies accurately with the Contract Documents.

The Contractor shall comply with the "Safety and Health Regulations for Construction" (and subsequent amendments) promulgated by the United States Department of Labor, identified as OSHA Safety and Health Standards General Industry Standards, and the current rules and regulations of the Michigan Occupational Safety and Health Act (MIOSHA) covering Safety and Health Standards for construction. These rules and regulations are incorporated by reference in these Contract Documents and all Work under this Contract shall be performed in compliance with them.

B.06.02 Contractor's Superintendent

A qualified superintendent who is acceptable to the Engineer shall be maintained on the Work site on a full time basis and shall give efficient supervision of the Work until its completion. The superintendent shall have full authority to act on behalf of the Contractor.

B.06.03 Contractor's Right to Suspend Work or Terminate Contract

The Contractor may suspend Work or terminate the Contract upon 10 days written notice to the DDA and the Engineer, for any of the following reasons:

- a. If an order of any court, or other public authority caused the Work to be stopped or suspended for a period of 6 months through no act or fault of the Contractor or his employees.
- b. If the DDA should fail to act on an Engineer's Certificate for Payment in the time and manner required by these General Provisions, as supplemented.

B.06.04 Suspension of Work by DDA

The Work or any portion thereof may be suspended at any time by the DDA for his convenience, provided that he gives the Contractor 5-days' written notice of said suspension. The Contractor shall resume the Work upon written notice from the DDA.

B.06.05 DDA's Right to Correct Deficiencies

Upon failure of the Contractor to perform the Work in accordance with the Contract Documents, including any requirements with respect to the Schedule of Completion, and after 5-days' written notice to the Contractor that includes a written statement of deficiencies from the DDA and/or Engineer, the DDA may, without prejudice to any other remedy he may have, correct such deficiencies.

B.06.06 DDA's Right to Terminate Contract and Complete the Work

In the event of any default by the Contractor the DDA shall have the right to terminate the employment of the Contractor after giving 10 days written notice of such termination to the Contractor. In the event of such termination, the DDA may take possession of the Work and of all materials, tools, and equipment thereon and may finish the Work by whatever method and means he may select. It shall be considered a default by the Contractor whenever he shall:

- a. Declare bankruptcy, become insolvent, or assign his assets for the benefit of his creditors.
- b. Disregard or violate provisions of the Contract Documents or Engineer's instructions or fail to prosecute the Work according to the agreed Schedule of Completion, including extensions thereof.
- c. Fail to provide a qualified superintendent, competent workmen, competent Subcontractors, or proper materials, or fail to make prompt payment therefore.

B.06.07 Authority of DDA's Agent

No agent of the DDA shall have power to revoke, alter, enlarge, or relax the stipulations or requirements of the Specifications, except insofar as such authority may be specifically conferred by the Specifications themselves.

B.06.08 Engineer's Responsibility and Authority

Subject to DDA's approval, the Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, Work performed, rate of progress of Work,

interpretation of Drawings and Specifications, and all questions as to the acceptable fulfillment of the Contract on the part of the Contractor.

The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

B.06.09 Engineer's Decisions

All claims of the Contractor shall be presented to the Engineer for recommendations to DDA which shall be made in writing within a reasonable time. All recommendations of the Engineer shall be provided to Contractor at the same time as they are provided to DDA.

B.06.10 Suspension of Work by the Engineer

Subject to DDA's approval, the Engineer shall have the authority to suspend the Work, wholly or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for prosecution of the Work, or failure on the part of the Contractor to carry out the provisions of the Contract or to supply materials meeting the requirements of the Specifications. The Contractor shall not suspend operation without the Engineer's written permission, which requires DDA's approval.

B.06.11 Rights of Various Interests

Whenever work being done by the DDA 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 Engineer to secure the completion of the various portions of the Work in general harmony.

B.07 CONTRACT EXECUTION

B.07.01 Assignment of Contract

Neither the Contractor nor the DDA shall sublet, sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right title or interest therein, or his obligations thereunder, without written consent of the other party.

B.07.02 LEFT INTENTIONALLY BLANK

B.07.03 Notice to Proceed

Following execution of the Agreement by the DDA, a written Notice to Proceed with the Work shall be given to the Contractor. The Contractor shall begin and shall prosecute the Work regularly without interruption thereafter (unless otherwise directed in writing by the DDA), with such forces as to secure the completion of the Work within the Contract Time.

B.07.04 Contractor's Responsibility to Notify DDA and Engineer

After receipt of the Notice to Proceed from the DDA and prior to the start of construction, the Contractor shall notify the DDA and Engineer when the Work is to commence. The DDA will be allowed 3 working days, if needed, to arrange for inspection and testing of the Work.

B.07.05 Contractor's Responsibility to Notify Governing Agencies

The Contractor shall notify all governing agencies, Miss Dig and all concerned utility companies 3 working days prior to the start of construction. Additional notification shall be given by the Contractor to all the above mentioned parties 3 working days prior to crossing, connecting to, or working in the vicinity of any right-of-way or utility owned or controlled by any of the concerned parties.

B.07.06 Separate Contracts

The DDA may let other contracts in connection with the Work of the Contractor. The Contractor shall cooperate with other contractors with regard to storage of materials and execution of their Work. It shall be the Contractor's responsibility to inspect all Work by other contractors affecting his Work and to report to the Engineer any irregularities which will not permit him to complete his Work in a satisfactory manner. His failure to notify the Engineer of such irregularities shall indicate the Work of other contractors has been satisfactorily completed to receive his Work. The Contractor will not be responsible for defects of which he could not have known, which develop in the work of others after the Work is completed.

B.07.07 Subcontracts

At the time specified by the Contract Documents or when requested by the Engineer, the Contractor shall submit in writing to the DDA for approval of the Engineer the names of the Subcontractors proposed for the Work. Subcontractors may not be changed except at the

request or with the approval of the Engineer. The Contractor shall not sublet an aggregate total of more than 50 percent of the Contract Amount without written permission of the DDA.

The Contract Documents shall not be construed as creating any contractual relation between any Subcontractor and the DDA. The Contractor shall bind every Subcontractor by the terms of the Contract Documents. For convenience of reference and to facilitate the letting of contracts and subcontracts, the Specifications are separated into titled divisions and sections. Such separation shall not, however, operate to make the DDA or the Engineer an arbiter to establish limits of work of subcontracts between Contractor and Subcontractors.

B.07.08 Oral Agreement

No oral order, objection, claim, or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

B.07.09 Changes in the Work

The DDA may, as the need arises, order changes in the Work through additions, deletions, or modifications without invalidating the Contract. Changes in the Project that impact the scope of the Project and or costs, shall require an amendment to the Contract signed by the Contractor and Dda. The DDA reserves the right to delete or add work costing up to 30 percent of the original total Contract Price without penalty or changes in the Unit Prices shown in the Proposal. Payment and time of completion affected by such changes shall be adjusted at the time of ordering such changes.

B.07.11 Extra Work

New and unforeseen items of Work found to be necessary, and which cannot be covered by any item or combination of items for which there is a Contract Price, shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials as may be required for the proper completion or construction of the whole Work contemplated, upon written notice from the DDA as approved by the Engineer and a signed amendment to the Contract. In the absence of such written notice, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these Specifications; or special provisions shall be done in accordance with the best practice as approved by the Engineer. Extra Work required in an emergency to protect life and property shall be performed by the Contractor as required.

B.07.12 Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed by and between the Contractor and DDA that the date of beginning and the time for completion as specified in the Proposal are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed." The Contractor agrees that said Work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion, in an acceptable manner thereof, within the time specified. The Contractor affirms that the time for completion of the Work described herein is a reasonable time for completion of the Work and that he has sufficient plant, equipment, and manpower to accomplish the Work within the specified time for completion. It is

further agreed that TIME IS OF THE ESSENCE of each and every portion of this Contract and of the Specification wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall become the essence of this Contract.

If the Contractor shall neglect, fail, or refuse to complete the Work within the completion date specified or within any proper extension thereof granted by the DDA, then the Contractor does hereby agree to pay the DDA for such breach of Contract the amount specified in the Proposal, which is incorporated into the Contract, for liquidated damages.

B.07.13 Extension of the Contract Time

A delay beyond the Contractor's control occasioned by an Act of God, or act or omission on the part of the DDA, or by strikes, lockouts, fire, or other disaster, may entitle the Contractor to an extension of time to be agreed to by DDA, by which to complete the Work, provided, however, that the Contractor shall within five days after the beginning of such delay, give written notice to the DDA of the cause of such delay.

B.08 USE OF LANDS AND PROPERTY

B.08.01 Permits and Licenses

The Contractor shall procure and pay for all permits, licenses, and fees necessary for the execution of the Work unless otherwise specifically provided in the Supplemental Specifications.

B.08.02 Lands by DDA

The DDA shall provide the lands upon which the Work under the Contract is to be performed and/or which is to be used for rights-of-way or access all as shown on the Drawings. Any delay in furnishing these lands by the DDA shall be deemed proper cause for adjustment in the time of completion.

B.08.03 Lands by Contractor

Any additional land and access thereto not shown on the Drawings that may be required for temporary construction procedures or facilities or for storage of materials shall be provided by the Contractor with no liability to the DDA. The Contractor shall confine his apparatus and storage of materials and operation of his workmen to those areas described in the Drawings and Specifications and such additional areas which he may provide as approved by the Engineer.

B.08.04 Private Property

The Contractor shall not enter upon private property for any purpose without obtaining written permission. Copies of such written permission shall be furnished to the DDA or the Engineer upon request. He shall be responsible for the preservation of all public property, trees, monuments, fences, etc. along and adjacent to the street and/or right-of-way and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

B.08.05 Patents and Royalties

If any design, device, material, or process covered by letters, patent, or copyright is used by the Contractor, he shall provide for such use by legal agreement with the owner of the patent or copyright, or by a licensee of such owner, and shall indemnify and save harmless the DDA of the Project from any and all loss or expense on account thereof, including its use by the DDA of the Project.

B.08.06 Laws to be Observed

The Contractor shall give all notices and comply with all federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the Work, and all such orders and decrees as exist or may be enacted by bodies or tribunals having any jurisdiction or authority over the Work, and shall indemnify and save harmless the DDA against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees, or Subcontractors.

B.09 SURVEYS AND PROJECT CONTROL POINTS

B.09.01 Construction Surveys and Survey Control Points

Unless otherwise specified, the DDA, through the Engineer, shall furnish all surveys, lines, and grades reasonably necessary for the control of the Work, but this shall not relieve the Contractor of responsibility for making careful and accurate measurements and for constructing all Work accurately to the lines and grades as shown on the Drawings. The Contractor shall have the responsibility to carefully preserve and protect U.S. government corners, property corners, bench marks, monuments, and reference points (hereinafter referred to as "Survey Control Points") and construction stakes. In case of loss or disturbance of said points during the construction period, the Contractor shall pay the cost of replacement and shall be responsible for any mistakes that may be caused by such loss or disturbance.

B.09.02 Protection of Survey Control Points

Prior to beginning of construction, a guard post assembly consisting of 3 posts protruding about 3 feet above the ground shall be constructed around each survey control point. The installation of the guard post assemblies will not be the Contractor's responsibility unless they are listed as a Bid item in the Proposal. However, the guard post assemblies shall be maintained by the Contractor until all of his construction and clean-up Work is completed, except for paving contractors who shall maintain them until the Engineer sets witness stakes and removes the survey control point. The cost of maintaining and replacing disturbed guard post assemblies shall be paid by the Contractor.

B.10 WORKMANSHIP AND MATERIALS

B.10.01 Quality of Equipment and Materials

In order to establish standards of quality, the Engineer has, in the Specifications, referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design. However, if the Contractor does desire to make substitutions, he shall observe the following:

- a. The Contractor shall furnish the complete list of proposed desired substitutions prior to signing of the Contract, together with such engineering, catalog, and performance history data as the Engineer may require.
- b. The Contractor shall abide by the Engineer's judgment when proposed substitute materials or items of equipment are judged to be unacceptable and shall furnish the specified material or item of equipment in such case. All proposals for substitutions shall be submitted in writing by the General Contractor and not by Subcontractors or Suppliers. Subject to the DDA's review, the Engineer will approve or disapprove proposed substitutions in writing within a reasonable time. No substitute materials shall be used unless approved in writing.

B.10.02 Responsibility for Workers and Subcontractors

The Contractor shall at all times be responsible for the conduct and supervision of his employees and/or any Subcontractor or persons employed by Subcontractors. All workers must have sufficient knowledge, skill, and experience to perform properly the Work assigned to them. Any foreman or workman employed by the Contractor or Subcontractor who, in the opinion of the Engineer, does not perform his Work in a skillful manner, or appears to be incompetent or to act in a disorderly or intemperate manner shall, at the written request of the Engineer, be immediately removed from the job site and shall not be employed again in any portion of the Work without the approval of the Engineer.

B.10.03 Materials Furnished By the Contractor

All materials used in the Work shall meet the requirements of the respective Specifications and shall be new materials and no material shall be used until it has been approved by the Engineer. All materials not otherwise specifically indicated shall be furnished by the Contractor.

The Contractor shall be free to secure the approved material and equipment from sources of his own selection. However, if the Engineer finds that the Work will be delayed or adversely affected in any way because a selected source of supply cannot furnish a uniform product in sufficient quantity or the product is not suitable for the Work, the Engineer shall have the right to require that the original source of supply be changed by the Contractor. The Contractor shall have no claim for damage for additional compensation because of this requirement.

All water used in connection with the Work shall be municipal water. The Contractor shall secure the required permission from Highland Township's Water Department and shall bear all the expense of such permission and for the water used. If connections are made by hydrant, the Contractor shall also obtain permission for such connections from the local fire department. Fire department standard hydrant wrench shall be used for opening and closing the hydrant.

B.10.04 Materials Furnished by the DDA *(not applicable to earthwork)*

When the Contract Documents indicate that materials are to be furnished by the DDA, the furnishing of such material is conclusive evidence of its acceptability for the purpose intended, and the Contractor may continue to use it until otherwise directed. If the Contractor discovers any defect in material furnished by the DDA, he shall notify the Engineer. Unless otherwise noted or specifically stated, materials furnished by the DDA which are not of local occurrence are considered to be FOB the nearest railroad station. The Contractor shall be prepared to

unload, transport, and properly protect all such material from damage or loss. The Contractor shall be responsible for material loss or damage after receipt of material at the point of delivery.

B.11 PUBLIC SAFETY

B.11.01 Compliance with Applicable Safety Standards and Regulations

The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to: all employees on the Work and to other persons who may be affected thereby; all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, and those structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He shall notify Miss Dig to mark utilities when prosecution of the Work may affect said utilities.

The Contractor shall remedy all damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by his operations, or by any Subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them be liable.

B.11.02 Warning Signs and Barricades

The Contractor shall provide adequate signs, fences, barricades, signal lights, and watchmen and shall take all necessary precautions for the protection of the Work and the safety of the public. All barricades and obstructions shall be protected at night by signal lights which shall be kept lighted from sunset to sunrise. Suitable warning signs shall be so placed and illuminated at night to show in advance where construction, barricades, or detours exist. Such warning and protection devices shall comply with the requirements of the governing agency.

B.11.03 Public Safety and Convenience

The Contractor shall at all times so conduct his Work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the Work, and to insure the protection of persons and property in a manner satisfactory to the Engineer and proper governmental authority. All local, state, and national laws, ordinances, rules, and regulations pertaining to the kind, use, and loading of all apparatus, equipment, and material shall be complied with as well as all other reasonable precautions required by the Engineer to insure safe working conditions. Mailboxes, fire hydrants, water supply valves, and gas valves on or adjacent to the Work shall be accessible at all times.

Temporary provisions shall be made by the Contractor to insure the use of mailboxes, sidewalks and the proper functioning of all sewers, sewer inlets, gutters, and drainage ditches.

The Contractor has the sole responsibility for the proper construction of the Project and is solely responsible for: the safety in, on, or about the job site; control of the safety or adequacy of any equipment, building component, scaffolding, sheeting, bracing, forms, or other Work aids; and superintending the Work. Construction review, or inspection by the DDA or the Engineer, shall not relieve the Contractor of the above responsibilities.

B.11.04 Work During an Emergency

The Contractor shall perform any Work and shall furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases he shall notify the Engineer of the emergency as soon as practicable, but he shall not wait for instructions before proceeding to properly protect both life and property.

B.12 MEASUREMENT AND PAYMENT

B.12.01 Breakdown of Contract Amount

In cases where a Lump Sum Contract Amount forms the basis for payment under the Contract, the Contractor shall, within 10 days of receipt of the Notice to Proceed, submit a complete breakdown of the Contract Amount. The breakdown shall show the value assigned to each part of the Work, including an allowance for profit and overhead. Upon approval of the breakdown by the Engineer, it shall be used as a basis for all requests for payment. The approved breakdown will not be considered as fixing a basis for additions to or deductions from the Contract Amount.

In cases where Unit Prices form the basis for payment under the Contract, the summation of amounts determined by multiplying the total number of each of the completed units of Work by the Unit Price stated in the Proposal for that item shall be used as the basis for payment requests. The number of units contained in the Proposal is approximate only, and final payment will be made for the actual number of units that are incorporated into or made necessary by the Work covered in the Contract.

B.12.02 Requests for Payment

Periodically (at the specified times, but not more than once a month), the Contractor shall submit to the DDA, through the Engineer, a Request for Payment for Work performed in a format suitable to DDA. A copy of the Contractor's Declaration (in the form attached at the rear of this division) shall be completed, signed, and attached to each Request for Payment. Waivers of lien shall be required from subcontractors and suppliers when they have provided labor and/or materials on the Project. Also to be included are any other periodic reports required (such as monthly payrolls, etc.).

In cases where a Lump Sum forms the basis for payment under the Contract, the Request for Payment shall indicate the Work completed to date on the items listed in the approved "Breakdown of the Contract Amount". If the Request for Payment includes materials and equipment stored on the site, it shall be accompanied by invoices from the manufacturer or Supplier or such other information satisfactory to the DDA.

In cases where Unit Prices form the basis for payment under the Contract, the Request for Payment shall state the units of Work completed to date. If the Request for Payment includes materials and equipment stored on the site, it shall be accompanied by invoices from the manufacturer or Supplier or such other information satisfactory to the DDA. In cases where Lump Sum items are included in a Unit Price Contract, the Contractor shall be paid for the percentage of Work completed, as determined by the Engineer.

B.12.03 Engineer's Certificate for Payment

Each Request for Payment shall be submitted to the Engineer. Within 10 days after receipt of the Contractor's Request for Payment, the Engineer shall verify the Request for Payment and prepare and submit to the DDA an Engineer's Certificate for Payment based upon an approved Request for Payment or upon the Engineer's estimate of the Work completed from the start of the Work up to the date of the Request for Payment. The Engineer's Certificate for Payment shall not certify for payment, Work that has not been completed in compliance with the Contract Documents.

B.12.04 Progress Payments to the Contractor

Not later than the date specified in the Supplemental General Provisions, the DDA shall make a Progress Payment to the Contractor on the basis of the Engineer's Certificate for Payment, less amounts for Work DDA claims and specifies as not completed in compliance with the Contract Documents; but to insure proper performance of the Contract, the DDA may retain 10 percent of the amount of the Engineer's Certificate for Payment until completion and acceptance of all Work covered by the Contract. However, the maximum amount retained shall not exceed 5 percent of the bid contract amount.

B.12.05 DDA's Right to Withhold Progress Payments

In addition to DDA's rights under Section B.12.04, the DDA may withhold any Progress Payment, in whole or in part, on an Engineer's Certificate for Payment to the extent necessary to protect himself from loss on account of any of the following causes discovered subsequent to the submittal of the Engineer's Certificate:

- a. Defective Work.
- b. Evidence indicating probable filing of claims by other parties against the Contractor.
- c. Failure of the Contractor to make payment to Subcontractors and/or material Suppliers.
- d. Damage to another Contractor's work.
- e. Failure to submit periodic reports required by the Contract Documents.

B.12.06 Payment for Rejected Work and Materials

The removal of rejected Work and materials and the re-execution of such Work in an acceptable state shall be done by or at the expense of the Contractor; and he shall pay the cost of replacing other contractors' work which is destroyed or damaged by the removal and subsequent replacement of the rejected Work or materials.

The cost of removing rejected Work or materials by the DDA shall be paid by the Contractor or deducted from payments due the Contractor for Work done under this Contract.

B.12.07 Payment for Uncorrected Work

Should the DDA approve the Contractor not correcting Work that has been damaged or that has not been performed in accordance with the Contract Documents, an equitable deduction from the Contract Price shall be made to compensate the DDA for the uncorrected Work.

B.12.08 Payment for Work by the DDA

The cost of the Work performed by the DDA in removing construction equipment, tools, and supplies and for correcting deficiencies shall be paid by the Contractor.

B.12.09 Payment for Work Suspended by the DDA

If the Work or any part thereof shall be suspended by the DDA for more than 30 days without Contractor's approval, the Contractor will then be entitled to payment for all Work done to the date of suspension.

B.12.10 Payment for Work Done by the DDA Following His Termination of the Contract

Upon termination of the Contract by the DDA, no further payments shall be due the Contractor until the Work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the Work (including all overhead cost), the excess shall be paid to the Contractor. If the cost of completing the Work shall exceed the unpaid balance, the Contractor shall pay the difference to the DDA within 30 days of DDA's written notice of the amount owed. The cost incurred by the DDA, as herein provided, and the damage incurred through the Contractor's default, shall be certified by the DDA and approved by the Engineer.

B.12.11 Payment for Work Terminated by the Contractor

Upon suspension of the Work or termination of the Contract by the Contractor in accordance with Section B.06.03, the Contractor shall be entitled to payment from the DDA for the Work performed.

B.12.12 Payment for Replacing Survey Control Points and Construction Stakes

Notwithstanding any liability which may be imposed by law on the Contractor for loss or disturbance of survey points, the Contractor shall pay the cost of replacing survey points lost or disturbed as a result of Work under the Contract. In addition to the replacement cost, the Contractor shall be liable for any other expenses, damages, or mistakes caused by such loss or disturbance. The cost of replacing U.S. government corners, property corners, bench marks, monuments, and reference points (known collectively as survey control points) shall be the actual cost as certified by the Engineer.

The cost of replacing or relocating construction stakes shall not be based solely on the number of such stakes replaced but shall be based upon the number of occurrences in which the Engineer is required to replace or relocate lost or disturbed stakes. For each such occurrence, the cost shall be the actual cost to the DDA. The Engineer shall certify to the DDA in the final Engineer's Certificate for Payment the actual cost for replacing all survey control points and/or construction stakes.

The total actual cost as certified by the Engineer shall be deducted from the earned amount due the Contractor for Work under the Contract.

B.12.13 Payment for Extra Work

Written notice of claims for payments for Extra Work shall be given by the Contractor within 10 days after receipt of the request for extra work from the DDA. No claim for Payment for extra work shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Engineer. The DDA's order for Extra Work shall be in the form of a Change Order to be signed by both DDA and Contractor and shall specify any extension of the Contract time and one of the following methods of payment:

- a. Unit Prices or combinations of Unit Prices which formed the basis of the original Contract.
- b. A Lump Sum based on the Contractor's estimate, approved by the Engineer and accepted by the DDA.
- c. Actual cost of direct Work by the Contractor plus 15 percent for overhead and profit. Actual cost of Subcontract Work shall include 5 percent for the Contractor's overhead and profit. Actual cost of direct Work by the Contractor shall be:
 1. Labor Costs shall be the amount shown on the Contractor's payroll plus unemployment taxes and Workmen's Compensation Insurance when such additional taxes or insurance costs can be shown to have been incurred.
 2. Material Costs shall be the net price paid for material delivered to the site of the Work.
 3. Equipment Rental shall be the actual additional costs incurred for necessary equipment actually used in the Extra Work. No payment will be made for equipment not used in the Extra Work. All costs shall be computed using the basic monthly rental rate as published in the current edition of "Rental Rates for Construction Equipment Bluebook" published by the Equipment Guide-Book Company. For periods of less than a month the daily rate shall be computed as 1/22 of the monthly rate with no allowance for fuel or other operating costs.

B.13 COMPLETION AND ACCEPTANCE OF THE WORK

B.13.01 Guarantees

The Contractor shall warrant all equipment furnished and Work performed by him for a period of two (2) years from the date of final payment for the Contract Work regardless of the terms of any manufacturer or supplier warranties.

B.13.02 Use of Completed Portions of the Work

The DDA shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

B.13.03 Release of Liens

To the extent not required in connection with a progress payment request, the Contractor shall deliver to the DDA a complete release of all liens or claims arising out of this Contract before the retained percentage or the final Request for Payment is paid. If any lien or claim remains unsatisfied after all payments are made, the Contractor shall refund to the DDA such amounts as the DDA may have been compelled to pay in discharging such liens, or claims, including all costs and a reasonable attorney's fee.

B.13.04 Acceptance and Final Payment

When the Contractor shall have completed all the Work in accordance with the terms of the Contract Documents, the Contractor shall submit to the DDA, through the Engineer, the following items for review:

- a. A signed Contractor's Declaration
- b. A signed Contractor's Affidavit on a form furnished by the DDA.
- c. Release of Liens and Claims described above.
- d. Waiver of Liens and Claims from all Suppliers and Subcontractors indicating that all debts for labor, materials, and equipment incurred in connection with this Contract have been paid in full.
- e. Certificate of Completed Operations Insurance for 1 year after final payment.

Letters of Release may be required approving final payment to the Contractor from all agencies concerned with the Work, including the state highway department, county road commissions, the Office of Public Works, municipalities, electric, gas, telephone and other utilities, railroad companies, and the Contractor's surety company. The Contractor shall allow sufficient time after submittal of the above data for verification.

The Engineer shall certify his approval of the Final Contract Amount which shall be the original Contract Amount plus all approved additions, less all approved deductions and the Engineer shall forward all submitted data to the DDA.

Thereafter, the DDA will review all data submitted for compliance with the Contract requirements and, when approved, will accept the Work subject to Contractor's Bonds, any legal rights of the DDA, required guarantees, and Contractor's responsibility for correction of faulty work after final payment, and make final payment to the Contractor.

B.13.05 Correction of Faulty Work After Final Acceptance

The approval by the Engineer of the final Request for Payment, and the making of the final payment by the DDA to the Contractor, shall not relieve the Contractor of responsibility for faulty materials or workmanship. The DDA shall promptly give the Contractor notice of any faulty materials or workmanship discovered within 2 years after the date of final payment for the Contract Work; and the Contractor shall promptly replace any such defects.

CONTRACTOR'S DECLARATION

(to be attached to the Contractor's periodic request for payment)

Project Description _____

Contract No. _____ Contract Date _____ Job No. _____

Contractor _____

DDA _____

Certification Period: _____

_____ From the Date of the Contract to the Date of this Declaration. _____

I hereby certify that I have not, during the above noted certification period, performed any work, furnished any material, sustained any loss, damage or delay for any reason, including soil conditions encountered or created, or otherwise done anything for which I shall ask, demand, sue for, or claim compensation from the DDA or his agents, in addition to the regular items set forth in the above noted Contract (and executed Change Orders thereto) executed between myself and the DDA, except as I hereby claim for additional compensation and/or extension of time as described in previously submitted claim letters to the DDA dated:

Contractor _____

By _____
(Authorized Signature)

Title _____

Date _____

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, _____
hereby represents that on _____ (it) was awarded a Contract
by, the Highland DDA _____
_____ hereinafter called the DDA, to
construct _____ in accordance with the terms and
conditions of Contract No. _____ ; and the undersigned further represents that
the subject Work has now been accomplished and the said Contract has now been completed.

The undersigned hereby warrants and certifies that all of (its) indebtedness arising by reason of
the said Contract has been fully paid or satisfactorily secured; and that all claims from
Subcontractors and others for labor and material used in accomplishing the said Project, as well
as all other claims arising from the performance of the said Contract, have been fully paid or
satisfactorily settled. The undersigned further agrees that, if any such claim should hereafter
arise, (it) shall assume responsibility for the same immediately upon request to do so by the
DDA.

The undersigned, for the total Contract consideration of _____
the receipt of which is hereby acknowledged, does further hereby waive, release, and relinquish
any and all claims or right of lien which the undersigned now has or may hereafter acquire upon
the subject premises for labor and material used in accomplishing said Project, or upon the DDA,
the Consulting Engineers, and their respective employees or agents.

This affidavit is freely and voluntarily given with the full knowledge of the facts, on this _____
day of _____, 20 _____.

Contractor _____

By _____

Title _____

Subscribed and sworn to before me, a Notary Public
in and for _____ County, Michigan
on this _____ day of _____, 20 _____.

Notary Public

My Commission Expires: _____

PARTIAL WAIVER OF LIEN

To All Whom It May Concern:

Whereas, the undersigned has been employed by (A) _____

to furnish labor and materials for (B) _____
_____ work,
under a contract (C) _____
for the improvement of the premises described as (D) _____

in the _____ (City-Village) of _____, County of
_____, State of _____
of which _____
_____ is the DDA.

NOW, THEREFORE, this _____ day of _____, 20_____, for
and in consideration of the sum of (E) _____ Dollars
paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the
undersigned does hereby waive and release to the extent only of the aforesaid amount, any lien rights to,
or claim of lien with respect to and on said above-described premises, and the improvements thereon, and
on the monies or other considerations due or to become due from the DDA, by virtue of said contract, on
account of labor, services, materials, fixtures, apparatus or machinery furnished by the undersigned to or
for the above-described premises, but only to the extent of the payment aforesaid.

(F) _____ (SEAL)
(Name of the sole ownership, corporation or partnership)
(Affix corporate seal here)
_____(SEAL)
(Signature)
TITLE: _____

INSTRUCTIONS FOR PARTIAL WAIVER

- (A) Name person or firm with whom you agreed to furnish either labor, or services, or materials, or both.
(B) Fill in nature and extent of work; strike the word labor or the word materials if not in your contract.
(C) If you have more than one contract on the same premises, describe the contract by number if available, date
and extent of work.
(D) Furnish an accurate enough description of the improvement and location of the premises so that it can be
distinguished from any other property.
(E) Amount shown should be the amount actually received on that date.
(F) If waiver is for the corporation, corporate name should be used, corporate seal affixed and title of officer signing
waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should
sign and designate himself as partner.

FINAL WAIVER OF LIEN

To All Whom It May Concern:

Whereas, the undersigned has been employed by (A) _____

_____ to furnish labor and materials for (B) _____

_____ work,

under a contract (C) _____

for the improvement of the premises described as (D) _____

_____ in the _____ (City-Village) of _____, County of

_____, State of _____

of which _____

_____ is the DDA.

NOW, THEREFORE, this _____ day of _____, 20_____, for and in consideration of the sum of (E) _____ Dollars paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien rights to, or claim of lien with respect to and on said above-described premises, and the improvements thereon, and on the monies or other considerations due or to become due from the DDA, on account of labor, services, materials, fixtures, apparatus or machinery heretofore or which may hereafter be furnished by the undersigned to or for the above-described premises by virtue of said contract.

(F) _____ (SEAL)

(Name of the sole ownership, corporation or partnership)

(Affix corporate seal here)

(Signature)

TITLE: _____ (SEAL)

INSTRUCTIONS FOR PARTIAL WAIVER

- (A) Name person or firm with whom you agreed to furnish either labor, or services, or materials, or both.
- (B) Fill in nature and extent of work; strike the word labor or the word materials if not in your contract.
- (C) If you have more than one contract on the same premises, describe the contract by number if available, date and extent of work.
- (D) Furnish an accurate enough description of the improvement and location of the premises so that it can be distinguished from any other property.
- (E) Amount shown should be the amount actually received on that date.
- (F) If waiver is for the corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.

DIVISION B1

SUPPLEMENTAL GENERAL PROVISIONS

Date: _____

The language noted below shall replace and/or take precedence over paragraph B.12.04 in Division-B (General Provisions) of the Contract Documents:

To accommodate the meeting schedule of the Highland DDA) Board at which Progress Payments are to be approved, DDA and _____ as Contractor hereby agree that General Condition B.12.04, DDA's payments are to be made not later than the 30th day after receipt of the Engineer's Certificate for Payment unless there is no regular meeting of the DDA Board within that time in which case the payment shall be made within five (5) days of that meeting.

But to insure proper performance of the Contract, the DDA may retain 10 percent of the amount of the Engineer's Certificate for Payment until completion and acceptance of all Work covered by the Contract. However, the maximum amount so retained shall not exceed 5 percent of the bid Contract amount.

Contractor _____

By _____
Name Title

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DIVISION 1 - GENERAL REQUIREMENTS

01.01 SUMMARY OF THE WORK

01.01.01 Work Covered By Contract Documents

The following Specifications for Contract Work, including "Division 1-General Requirements" and the supplementary specifications, as included, set forth conditions or requirements peculiar to the Work to be performed under this Contract. The Work to be performed shall be as described in the plans and Supplemental Specifications. The method of measurement and basis of payment for Work performed shall be as indicated in the Proposal and described in the following specifications. Under each item of Work listed in the Proposal and herein described, the Contractor shall furnish: all labor and materials; tools, plant, equipment, supplies, and bonds; costs of heating, lighting, and power; tests of construction materials as required under any section of these Specifications; and all Work that may be specifically described and included in the following specifications (under the respective items, whether incidental or otherwise) necessary to complete the Work in accordance with the obvious or expressed intent of the Contract. The supplementary specifications are prepared utilizing/referencing the Michigan Department of Transportation's 2012 Standard Specifications for Construction, and said specifications are incorporated into the contract documents for the various pay items of work referenced in the bid proposal.

01.01.02 Contractor's Use of Premises

The Contractor shall confine his operations at the site to areas permitted by Law, Ordinances, Permits, and the Contract Documents.

The Contractor shall not load or permit any part of any existing or proposed structure to be subjected to any forces that will endanger its safety.

The Contractor shall not discharge any smoke, dust, or other contaminants into the atmosphere, or discharge any fluids or materials into any waterway as will violate regulations of any legally constituted authority.

The Contractor shall assume full responsibility for protection and safekeeping of any products stored on the premises. The Contractor shall move any stored products which interfere with the operations of the or other Contractors. The Contractor shall obtain and pay for any additional storage or work areas needed for his operations.

01.01.03 Existing Facilities Operations

The existing facilities are to be operated as described in the Supplemental Specifications, The Contractor shall plan and conduct the construction operations to avoid disturbing the existing facilities, piping, equipment and services in any manner that will interrupt or impair operations, except as approved by the Engineer.

The Contractor shall submit for approval a construction sequence, detailed Drawings, and written explanations of all temporary facilities and appurtenances intended to be used in maintaining the uninterrupted operations of the existing facilities, if described in the Supplemental Specifications.

01.01.04 Hours of Work

The Contractor is required to prosecute Work done under this Contract during the hours of daylight, and no Work will be permitted at night, on Sundays, or on holidays unless specifically authorized by the Engineer and by written approval of the local unit of government. Should the Contractor elect to work at night, Sundays, or on holidays, a copy of the written approval of the local unit of government and regulatory agencies shall be submitted to the DDA and to the Engineer prior to commencing said Work.

01.01.05 Cutting and Patching

The Contractor shall do all cutting, fitting, or patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by Work of other Contractors shown upon, or reasonably implied by, the Drawings and Specifications for the completed Work as the Engineer may direct.

01.01.06 Subsurface Exploration

The Contractor shall assume all risk and responsibility because of existing soil conditions. The Contractor shall make his own determination as to soil conditions and he shall complete the Work in whatever manner and under whatever conditions he may encounter or create. This shall apply whether or not borings are included in the Contract Documents. Any soil information shown in the Contract Documents, or attached in the Appendix, is given solely for the Contractor's information and is to be used at his own discretion.

It shall be the Contractor's responsibility to evaluate data provided, along with making any onsite inspections which he may consider necessary, to protect his interests in the Project. It will also be the responsibility of the Contractor to report to the Engineer as soon as possible any subsurface conditions found to be contradictory to those outlined in the above mentioned report.

It is also noted that there will be no compensations made to the Contractor for soil explorations and/or analysis thereof. All Work, either incidental or directly related to the Contract, shall be performed at the Contract Prices regardless of soil conditions encountered.

01.02 PROJECT MEETING(S)

01.02.01 Preconstruction Meeting

After receipt of the "Notice to Proceed," the Contractor shall have the audiovisual tape coverage of construction area performed (if listed in the Proposal as a bid-item) and shall submit to the DDA a construction progress schedule showing in a clear graphical manner, satisfactory to the DDA, the proposed dates for commencement, progress, and completion for the Work. The audiovisual tapes and construction schedule shall be submitted to the DDA for review 1 week prior to the scheduled preconstruction meeting. After the Contractor's schedule has been approved and the audiovisual tapes have been reviewed and found acceptable, the DDA shall schedule a preconstruction meeting. The Contractor shall attend the preconstruction meeting at the time and place arranged by the DDA, at which various utility companies, the Engineer, the designated inspection agencies, local municipal officials, governmental agency representatives and the DDA's Representatives will be present to discuss the Project.

01.02.02 Progress Meetings

Periodic progress meetings shall be conducted, as determined necessary by the DDA, during the life of the Contract. The Contractor shall attend these progress meetings and their Subcontractor shall also attend these meetings when requested. The purpose of these meetings shall be to update the construction schedule, discuss and resolve construction related problems, and obtain and exchange Project related information from the DDA and the Engineer.

01.03 SUBMITTALS

01.03.01 Materials Certification

Where called for in the Specifications or requested by the Engineer, the Contractor shall secure and submit to the Engineer two copies of materials certificates.

01.03.02 Shop Drawings

The Contractor shall submit to the Engineer three copies of any Shop Drawings, required by the Specification sections. The Contractor shall review Shop Drawings, product data, and samples for general compliance with the Contract Documents prior to submission to the Engineer. The Contractor shall verify field measurements, field construction criteria, catalog numbers, and similar data.

The Contractor shall coordinate each submittal with the requirements of the Contract Documents and shall submit Shop Drawings for major equipment items in one package to permit checking complete installation details in all involved trades. The Engineer's review of a separate item does not constitute approval of an assembly in which the item functions.

After the Shop Drawings have been reviewed by the Contractor, in a clear space above the title block or on the back in the upper right-hand corner, hand stamp the following and enter the required information:

DDA's Name: _____
Project Title: _____
Contractor's Name: _____
Date: _____
Identification: _____
Contract Drawing No.: _____
Specification Section _____ Paragraph No. _____

This document has been checked for accuracy of content and for compliance with the Contract Documents. The information contained herein has been fully coordinated with all involved Subcontractors.

Subcontractor: _____
Signed for Contractor: _____
(Signature)
(Print Name and Title) _____

The Contractor's responsibility for errors, omissions, and deviations from requirements of the Contract Documents in submittals is not relieved by the Engineer's review of Shop Drawings. The Contractor shall notify the Engineer, in writing at time of submission, of any deviations on the Shop Drawings from the requirements of the Contract Documents.

The Contractor shall not install materials or equipment which requires submittals until the submittals are returned with the Engineer's signature.

Shop Drawings that indicate material, equipment, or details that do not conform to the Contract Documents will be rejected and returned to the Contractor with an explanation given why the Shop Drawings are unsatisfactory. The Engineer shall review and return one copy of all submittals to the Contractor within 15 days after the date the submittals have been received. The Contractor shall make the necessary corrections or obtain the necessary information or data and resubmit until the Shop Drawings comply with the Contract Documents.

After the Shop Drawings have been determined to be acceptable, the Contractor shall submit the number of copies he requires for distribution plus five copies which will be retained by the Engineer. All Shop Drawings shall be folded to an approximate size of 8-1/2 by 11 inches in such a manner that the title block will be located in the lower right-hand corner of the exposed surface and provide a one inch margin on the left-hand side for binding purposes.

01.03.03 Samples

All samples called for in the Specifications or required by the Engineer shall be furnished by the Contractor and shall be submitted to the Engineer for his review. Samples shall be furnished so as not to delay fabrication, allowing the Engineer reasonable time for the consideration of the samples submitted. Contractor shall furnish such samples of material as may be required for examination and test. All materials for tests shall be taken according to methods provided in the Specifications. The Contractor shall furnish such assistance and facilities as the Engineer may require for collecting, storing, and forwarding the samples. The entire cost of taking the samples and delivering them to the testing authority shall be paid for by the Contractor at no cost to the DDA. The physical cost of testing by the testing authority shall be paid for by the DDA at no cost to the Contractor.

Failure of samples to meet Contract requirements shall be sufficient cause for refusal to consider any further samples of the same brand from the manufacturer whose equipment has failed.

Any of the materials or equipment delivered on the site or in place may be taken by the DDA or Engineer for testing. Materials or equipment which fail to meet Contract requirements will automatically void previous approvals of the items tested. The Contractor shall replace all such disapproved materials or equipment at his own cost.

Tests will be made by such methods and in such numbers as the Engineer determines to be adequate and equitable. When materials are required to conform to Federal, NCPI, AWWA, or ASTM specifications, and such specifications are accepted as establishing the technical qualities and testing methods, they shall not necessarily govern the number of tests required to be made. The Engineer may require laboratory tests on samples submitted or may approve materials on the basis of data submitted in certificates with the samples.

If the tests of the samples submitted indicate that the proposed material will not conform to the Contract requirements, the Engineer will notify the Contractor that the proposed material is unacceptable and rejected and will furnish the Contractor the basic reasons for such rejection. However, the Engineer will not be required to furnish the Contractor with copies of all the test data and results.

All materials rejected by the DDA or his Representative shall be indelibly marked and immediately removed from the site of the Work.

01.03.04 Operations and Maintenance Data

The Contractor shall furnish three copies of complete catalog data for every manufactured item of equipment and all components to be used in the Work, including specific performance data, material description, rating, capacity, working pressure, material gauge or thickness, brand name, catalog number, and general type.

- a. This submission shall be compiled by the Contractor and reviewed by the Engineer for general compliance with the Contract Documents before any of the equipment is ordered. The Engineer's review does not relieve the Contractor of his responsibility for correctness of dimensions or details.
- b. Each data sheet or catalog in the submission shall be indexed according to Specifications section and paragraph for easy reference.
- c. If the Engineer's review determines the submitted data to be in general compliance with the Contract Documents, the submitted data shall become a part of the Contract and may not be deviated from except upon written approval of the Engineer.
- d. Catalog data for equipment reviewed by the Engineer does not in any case supersede the Contract Documents. The review of the Engineer shall not relieve the Contractor of responsibility for deviations from Drawings or Specifications, unless he has in writing called the Engineer's attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in the items submitted.

The Contractor shall check the Work described by the catalog data for conformance with the Contract Documents.

- e. It shall be the responsibility of the Contractor to ensure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Drawings and Specifications.
- f. Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the Contractor to install the equipment to operate properly, and in harmony with the intent of the Drawings and Specifications, and to make all changes in the Work required by the different arrangement of connections.

01.03.05 Record (As-Built) Documents by the Contractor

The Contractor will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process.

These record documents shall be available to the Engineer and shall be delivered to him for the DDA upon completion of the Project.

01.03.06 Contractor's Progress Schedule

The Contractor shall prepare a detailed construction progress schedule in graphic form showing the proposed dates of starting and completing each major Division of the Work. The schedule shall be consistent with the time, order of Work and requirements of the Specifications, and shall be the basis of the Contractor's proposed operations. Information included on the progress schedule shall include, but not be limited to the following:

- Beginning and completion dates for major items or phases of Work as identified in the Contract Documents
- Contractor's proposed method of construction
- Designation of the Project Superintendent
- Proposed number of crews
- Estimated date of completion
- Contractor's proposed Construction Safety Program to include weekend, emergency, traffic, and maintenance telephone numbers. Personnel listed for contact should be fully qualified to - act on behalf of the Contractor as his agent
- The name, address, telephone number, and specialty of any Subcontractors proposed to conduct Work
- The source and Supplier of materials and equipment to be furnished

The Contractor shall submit 1 reproducible copy of the proposed progress schedule to the Engineer for review 2 weeks prior to the scheduled preconstruction meeting. If requested by the Engineer, the Contractor will revise and resubmit the progress schedule prior to the preconstruction meeting. If during the execution of the Work the Contractor falls behind or advances ahead of the proposed schedule, said schedule, upon request by the Engineer, will be revised by the Contractor based on the current status of the Work.

01.03.07 Construction Photographs

If required by the Supplemental Specifications (Division 30), the Contractor shall furnish photographs in the number, type, and stage as enumerated below.

For each contract, the Contractor shall have 2 photographs made of the Work every 2 weeks as it progresses. The photographs shall be of such views and taken at such times as the Engineer directs.

All photographic work shall be done by a qualified, established commercial photographer acceptable to the DDA. One 8 inch by 10-inch color (or black and white when requested) print as well as the negative of each photograph shall be furnished to the DDA. Prints shall be inserted in transparent sheet protectors provided with punching for a 3-ring binder. Suitable binders shall be provided.

Each photograph shall have a permanent negative title block in the lower right-hand corner, approximately 2-1/4 inches wide by 1-3/4 inches high, stating therein in neat lettering:

1. DDA's Name
2. Project Title
3. Contractor's Name
4. Description of View
5. Photo Number and Date
6. Consulting Engineer's Name
7. Project Number

01.04 QUALITY CONTROL

01.04.01 Grades, Lines, and Levels

a. General

All Work under this Contract shall be built in accordance with the lines and grades shown on the Drawings or as altered or modified by the authority of the DDA.

All construction survey work provided by the Contractor shall be performed under the supervision and direction of a Registered Land Surveyor licensed to practice in the State of Michigan. (See Special Provision concerning Contractor Staking).

The Contractor shall have the responsibility to carefully preserve and protect the United States Government corners, established reference points, bench marks, property corners, monuments, and construction stakes. The Contractor shall notify the Engineer whenever any of these points are lost, disturbed, or require relocation. In case of loss or disturbance of these points during the construction period, the Contractor shall pay the cost of replacement and restaking and shall be responsible for any mistakes that may be caused by such loss or disturbance.

Wherever in the Contract Documents there are given survey stations, bearings, or similar survey designations for the location of structures, or portions of structures, it is understood that they are approximate only, and no change of such designations caused by the developments of construction shall be made the basis of claims for payment other than provided for in the Contract.

b. Construction Surveys to be Furnished by DDA Building Construction

The DDA will provide construction control baselines and will provide a Master Bench Mark at the site. The Contractor shall be responsible for the layout and location of all new construction, including the proper elevation of such construction.

c. Tunnel Construction

The DDA will provide vertical and horizontal control points. The Contractor shall accurately locate his Work from these reference points and shall be responsible for the installation of all Work to the lines and grades as shown on the Drawings.

The Contractor shall provide the Engineer with reasonable and necessary opportunities to check the accuracy of all Work as to the lines and grades shown on the Drawings. This shall consist of the placement and removal of alignment points, and furnishing such materials and giving such assistance to the Engineer as may be necessary to check the Work. It may be necessary to stop construction during the checking operation. No compensation shall be paid to the Contractor for any Work, materials, labor, or delays as a result of making these checks or other necessary measurements. If it is found necessary to carry on these operations at any time other than normal working hours (namely, over 8 hours a day, Saturday, Sunday, and holidays), the Contractor shall pay the DDA all additional overtime cost of such checking Work.

d. Open Cut Construction

The DDA will provide all surveys, lines, and grades reasonably necessary for the control of the Work. The Contractor shall be responsible for making careful and accurate measurements and for constructing all Work accurately to the lines and grades as shown on the Drawings.

01.04.02 Inspection of Parts of the Work by Permit Agencies

Inspection of that part of the Work requiring special permits from agencies such as road commissions, drain commissions, railroads, Michigan Department of Transportation (MDOT), and the Michigan Department of Environmental Quality (MDEQ) may be performed by that agency. The cost of inspection of special permit work by agencies other than the DDA shall be at the Contractor's expense.

01.04.03 Inspection by DDA

The Engineer and his representatives shall at all times have access to the Work. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted to inspect all Work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor shall provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.

If any Work is covered without prior inspection or contrary to the instructions of the Engineer, it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.

If the Engineer considers it necessary or advisable that Work previously approved for covering be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose, or otherwise make available for observation, inspection, or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection, and testing of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction. An appropriate Change Order will be issued.

In addition to the inspection required by Permit Agencies, the DDA may provide Engineers and/or Inspectors to inspect the Work performed under this and related Contracts. The DDA has determined that construction and related operations requiring full time inspection are generally defined as follows:

a. General

1. Check for required permits
2. Inspect the plant operations of manufacturers, including batch plants, and/or Suppliers of materials to be incorporated in the Work
3. Check for certification and Engineer approval of all materials and equipment (including compliance with approved Shop Drawings) delivered to the job site
4. Attendance at preconstruction meeting and construction progress meetings
5. Review of Contractor's payment requests
6. Preparation and review of Field Orders and Change Orders
7. Witness all final inspection of Work
8. Restoration of conditions existing prior to construction, including drives, sidewalks, fences, landscaping, cleanup, etc.
9. Resolution of construction complaints, including the viewing of audiovisual record of construction area
10. Construction of appurtenances
11. Preparation of Punch Lists
12. Change plans to as-built conditions

b. Streets and Roads

1. Excavation and preparation of the site
 - (a) Salvage of gravel or base material
 - (b) Construction of compacted fills
 - (c) Construction of ditches and swales
 - (d) Replacement and compaction of roadway surface gravel
2. Subbase construction
3. Base construction
4. HMA placement

c. Water Mains

1. Excavation, bedding, and backfill
2. Tunneling, jacking, and boring
3. Installation of materials
4. Pressure testing and disinfecting
5. Structure Adjustments

d. Sewers and Drains

1. Excavation, bedding, and backfill
 2. Tunneling, jacking, and boring
 - (a) Shaft construction
 - (b) Mining
 - (c) Forming
 - (d) Placement of concrete
- (NOTE: Two inspectors are required to be present at each tunnel site; 1 in the tunnel and 1 topside)*
3. Installation of materials
 4. Witness TV inspection of sanitary sewers
 5. Final inspection of underground facilities and utilities
 6. Structure Adjustments

e. Buildings and Structures

1. Excavation and earthwork
2. Construction of sheeting, shoring, and bracing related to construction
3. Inspect the delivery and storage of materials and equipment
4. Construction of foundations
5. Placement of reinforcing steel
6. Placement of concrete
7. Backfilling and compaction
8. Inspection of all building related Work including process, electrical, mechanical, and instrumentation work
9. Installation, testing, and start-up of equipment
10. Final cleanup and site work

The Contractor shall notify the DDA or the Engineer and the affected permit agency 24 hours in advance of any Work to be performed on the Project.

The DDA will provide inspection of the Project up to the "Completion Date as Bid" determined in the Notice to Proceed at no cost to the Contractor.

However, the Contractor shall reimburse the DDA the cost of inspection of work performed after said Completion Date at the rate per Inspection day shown in the Proposal.

An Inspection-day is defined as 1 construction operation requiring 1 full-time Inspector for 8 hours. Partial days or overtime hours will be computed as follows:

Through 4 hours/day	½ inspection-day
Over 4 through 8 hours/day	1 Inspection-day
Over 8 hours/day	1/6 Inspection-day/hour
Holiday or weekend	1/6 Inspection-day/hour (min. 4 hours)

01.04.04 Construction Contract Administration by DDA's Representative

During the execution of the Work, the DDA will provide one, or more, Representatives designated to perform Construction Contract Administration (CCA). These Representatives will make periodic visits to the Project site to observe the progress and quality of the executed Work and will determine in general if the Work is proceeding in accordance with the Contract Documents. CCA time will be supplemental to Inspection time; therefore, it is not intended that CCA will include exhaustive or continuous onsite inspections to check the quality and quantity of the Work. Nor will CCA by the DDA's Representatives assume any of the Contractor's responsibility for the construction means, methods, techniques, sequences, procedures, or safety precautions incidental thereto or the Contractor's obligation to perform the Work in accordance with the Contract Documents. The intention of CCA is to provide assurance to the DDA that the Work is executed, and when completed will conform essentially to the requirements of the Contract Documents.

Every eight man-hours of CCA time will be considered a "CCA-day". The cost of CCA time will be based on the number of "CCA-days" expended to perform this function by the DDA's Representative.

Until the Completion Date as Bid, the DDA will provide, at no cost to the Contractor, the CCA time required to perform the normal CCA described as follows:

- Preliminary review and approval of Audiovisual Tape Coverage of the construction area
- Original review of Shop Drawings
- General contract correspondence
- The negotiation and preparation of Field orders and/or Change Orders originated by the DDA or his Representatives
- Review and approval of construction progress schedules
- Attendance at preconstruction meetings and progress meetings scheduled under this Contract
- The resolution of citizen complaints caused by construction operations done in accordance with the Contract Documents

However, the actual amount of time required for CCA may be largely determined by the Contractor's organization of the Work and his efficiency. All CCA time consumed for work that is not included in the above-listed normal categories shall therefore be paid for by the Contractor at the cost per CCA-day shown in the Proposal. These general categories of CCA time, for which the Contractor will be back-charged, will include, but are not necessarily limited to, the following:

- All CCA-days consumed after the established "Completion Date as Bid"
- Re-review of Shop Drawings
- Any site visits by the DDA's Representatives that are required to resolve construction conflicts directly caused by, or the result of, the Contractor's activities
- The resolution of citizen complaints caused by construction operations not done in accordance with the Contract Documents
- Negotiation and preparation of Field Orders and/or Change Orders originated by the Contractor
- Any job related meetings other than those normally scheduled under this Contract

01.04.05 Materials Testing & Inspection

All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents. Material tests and inspection may be made by the Engineer or his authorized representative during manufacture and/or upon delivery. All material rejected after delivery shall be removed from the job site within 5 days after notification of rejection. The Contractor shall pay all costs for such removal and replacement with acceptable material, including all handling, loading, and transportation charges.

The DDA will provide, at his expense, the testing services required by the Contract Documents. The Contractor shall pay for all re-testing. Invoices for Material Testing will be submitted to the contractor for reimbursement (see Special Provision for Material Testing).

If the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by someone other than the DDA, the Contractor will give the Engineer timely notice of readiness. The Contractor shall then furnish the Engineer the required certificates of inspection, testing, or approval.

Inspections, tests, or approvals by the Engineer or others shall not relieve the Contractor of his obligations to perform the Work in accordance with the requirements of the Contract Documents. Approval of any material or equipment shall be only for the characteristics of uses named in such approval and shall not constitute a change or modification of the Contract or a waiver of the DDA's right to demand full compliance with the Drawings and Specifications.

When materials or equipment have been approved, no change or substitution will be permitted.

01.05 TEMPORARY FACILITIES

01.05.01 Soil Erosion and Sedimentation Control

The Contractor shall construct this Project in compliance with part 91 of Act No. 451 of 1994 (being Section 324.9101 of the Michigan Compiled Laws entitled "Soil Erosion and Sedimentation Control") under the control of the local permit agency charged with administering the provisions of this Act. The Contractor shall follow the procedures delineated below and construct and maintain the facilities shown on the Drawings to control water and wind erosion during construction of this Project.

All disturbed surface areas (including utility trenches) shall be temporarily graded and/or ditched to direct all water runoff from such areas to sedimentation control devices so as to prevent water carrying soil from entering a watercourse, sewer, or adjacent lands. Such sedimentation control devices shall include, but not be limited to: protective ditches, sediment traps, sediment filters, ditch traps, pipe barriers, straw bale berms, and filters, as detailed and required and located on the Drawings. After the Project Work has been completed, inspected, and approved, the Contractor shall remove all sedimentation control devices, material, and their collected silt and debris and complete the Project Work in accordance with the Drawings.

In roadway areas temporary aggregate surfacing shall be placed immediately after the backfilling operation has been completed. Positive dust control measures shall be taken at all times.

Within 15 days from the date a Project improvement is installed, the Contractor shall proceed with final cleanup and restoration of the Project area disturbed (including spill areas) and complete such operations within the next 15 days. If seasonal conditions prevent final cleaning and restoration, the Contractor shall proceed with temporary stabilization of the disturbed area. Final cleanup and restoration shall consist of final grading, top soiling, seeding and mulching, and/or sodding of all disturbed areas of the Project. Temporary stabilization shall consist of rough grading the disturbed area to a condition ready to receive topsoil, seeding with 70 pounds per acre of perennial rye grass, and mulching the disturbed area in accordance with these Specifications. Temporary stabilization materials shall be removed and disposed of and final cleanup and restoration shall be completed no later than 60 days after seasonal conditions allow performance of the required Work.

01.05.02 Siltation and Erosion Control at Stream Crossings

The Contractor shall comply with the following excerpts from the Michigan Department of Natural Resources Specifications for erosion and siltation control at stream crossings. All costs in connection with these requirements shall be borne by the Contractor and shall be considered as incidental to the Contract.

The DDA shall secure required permits from the MDEQ for all stream crossings and the Contractor shall pay the cost of any inspection charges by that agency for Work done under those permits.

a. Notice for Inspection

The Contractor shall give 10 days' notice to the Engineering Division of MDEQ before the beginning of Work so that arrangements can be made for field inspection by the Department.

b. Notice of Work Adjacent to a Stream

Five days' notice of crossing or ditching within 50 feet of any stream shall be given to the MDEQ Engineering Division.

c. Prevention of Damage to Fish and Wildlife Habitat

The Contractor shall take necessary steps in carrying out the Contract to prevent damage to fish and game habitat, and to preserve the natural resources of the state. Excavation shall be carried out so as to prevent discharge of damaging material into any stream, lake, or reservoir.

d. Time of Construction

Construction Work across major streams shall be done following special weekend holidays (Memorial Day - Labor Day) rather than just before and during such times.

e. Need for Expeditious Completion of Work

The work of clearing, grading, ditching, backfilling, and final cleanup in close proximity to streams, lakes, and reservoirs shall be completed as soon as possible in order to prevent erosion occurring from wind and precipitation.

f. Settling Basins

Temporary settling basins may be required at some crossings. Settling basins when required shall be constructed prior to any other Work at the site crossing. Cofferdams will be in the same category. Cold water streams will in most cases require this type of treatment.

g. Cofferdams

Cofferdams are to be removed, including any materials trapped by them in the control of siltation. Intermittent removal of silt or sand during construction may be required for proper operation of settling basins.

h. Trench Excavation

All pipe trenches shall be excavated to a depth that will provide a minimum depth of 30 inches from bed of stream to top of pipe.

Appropriate trench excavation methods shall be employed to minimize the entry of material from the trench into the stream, giving due consideration to the soil, terrain, cover, side slope, and weather conditions involved.

The pipe trench excavation shall stop some distance from the stream to leave a 10 to 20 foot long protective plug of unexcavated material at each bank. These plugs shall be left in place until the pipe laying operation across the stream is begun.

Trench excavation across the stream shall be done first. The landward portion of the plug shall be next. The plugs shall not be completely removed until absolutely necessary. They shall be protected from ditch erosion by sheet piling, sandbagging, or side cut diversion openings.

Earth plugs shall be replaced on each bank as soon as the pipe is laid and protected, as specified above.

The trench in the stream bed shall not be backfilled except where necessary to provide a foundation for the stream bank riprap, or to protect the pipe line from possible damage by partially filling the trench with coarse aggregate. In no event shall any type of backfill be used which will cause excessive siltation.

Construction water shall be prevented from entering the stream by construction of diversion ditches or by pumping water from trench excavations to appropriate sedimentation basins on private lands secured from land DDAs.

i. Final Cleanup

Final cleanup shall consist of reshaping the stream to its original configuration, width and depth and bottom material; protection of the stream banks as specified and removing all construction material and debris from the crossing site, including any material and debris deposited downstream from the site as a result of the pipeline construction. Exposed beds and banks of streams shall not remain unprotected over 7 days.

j. Stream Bank Protection

All disturbed stream banks with raw soil exposure shall have a finished slope no steeper than one on two (one vertical to two horizontal) to prevent sloughing until stabilized by vegetative cover or riprap. The one on two slope shall be graded back to the top of the natural bank. If the top of the natural bank is more than 3 feet above the high-water line, a 10 foot berm may be placed at this level and the remaining slopes constructed upward parallel with the natural bank.

All raw soil exposed above the water line shall be sodded, riprapped, or seeded, fertilized, and mulched with Type 5S-1S Emulsion.

Mulch is to consist of 3 inches of straw or other approved material. Mulch on slopes greater than 10 percent shall be held in place by a spray of asphalt Type SS-1 S Emulsion mixed with an equal amount of water.

Seeding and fertilizing rates shall be as follows: Fertilizer - 200 lbs. of 6-24-24 per acre; Seed - 10 lbs. Kentucky 31 fescue, 3 lbs. Birdsfoot trefoil, and 3 lbs. white clover per acre.

At crossings through or near stream bends permanent riprap shall be used from the stream bed up to the high-water line. Permanent riprap shall also be used on any disturbed stream bank where the stream velocity measured within 10 feet of the bank is greater than 5 feet per second. Permanent riprap shall be 5 to 1 mix of sand, to cement in burlap or canvas bags. Sackcrete may be used instead of the above mix.

At crossings on straight sections of streams permanent type riprap shall be placed along the stream bank from the stream bed up to an elevation 2 rows of riprap above the normal water line. Sandbags shall be placed from this elevation to the high-water line.

Deflection dikes reinforced by 1 row of sandbags shall be used to divert runoff from steep slopes to undisturbed areas adjacent to the right-of-way where the contributing runoff could be great enough to cause slope erosion.

These dikes shall be placed along the top of all stream banks where the entire slope is not protected with riprap. They shall also be placed at the top of and at 100 foot intervals or less on slopes greater than 20 percent.

01.05.03 Temporary Access Roads and Drives

The Contractor shall, where necessary, construct and maintain temporary access roads and drives as directed by the Engineer.

These roads and drives shall serve as access for local public or private use or as access to the construction site both for the Contractor's equipment and for the delivery or removal of materials.

The temporary access roads and drives shall be removed by the Contractor when directed by the Engineer. The areas shall be restored as near the condition found as is practical and shall be compatible with the adjacent undisturbed areas.

01.05.04 Traffic Control

Facilities shall be provided along the route adjacent to the Work in progress as necessary to maintain both local pedestrian and vehicular traffic that is dependent solely upon such route for access to adjacent property. Closing of any street to through traffic, even if just temporary, may be done, if at all, only as specifically authorized by the governing agencies. Unobstructed access to fire hydrants and water and gas valves shall always be provided.

Where any street is to be partially blocked, temporary roadways, sidewalks, bridges, crossings, barricades, lights, signs, and the like shall be provided and maintained as the Engineer considers necessary to accommodate and protect the public. Should the Contractor fail to promptly provide or neglect to maintain the required temporary facilities, or be dilatory in carrying out specific instructions of the Engineer, those having authority may, with or without notice to the Contractor, take such remedial measures deemed necessary and charge the Contractor with any costs incurred therefore. Any such action, however, shall in no way serve to release the Contractor from his general or particular liability for the safety of the traveling public or the protection of property.

Where street obstruction is authorized, the Contractor shall inform the Municipal Fire Department in advance of such obstruction, so that plans may be prepared for servicing the area. He shall, likewise, notify the authorities having jurisdiction over the streets and roads at least 1 week prior to the contemplated obstruction so that regulatory traffic controls may be arranged.

In the event the Contractor is authorized to close the road to all traffic, it will be the responsibility of the Contractor to notify the local police department, the governing agency, local fire department, local school board, and residents on the road affected by the road closure. Furthermore, it will be the Contractor's responsibility to provide any temporary facilities required by the local governing authorities due to the temporary closing of the road, and to obtain permits prior to closing any road.

All traffic signs or traffic lights disturbed or damaged during the construction of the Project shall be replaced in their original condition. Any traffic sign or light temporarily disturbed or removed during construction shall be replaced with temporary signs or flagmen during construction in the immediate area and then permanently replaced immediately after construction in that area is essentially finished. The cost of this replacement shall be incidental to the Project and no separate payment will be made therefore.

01.05.05 Pumping, Maintaining Sewage Flow, and Drainage

Adequate pumping and drainage facilities shall be provided, and all water from whatever sources entering the Work during any stage of construction shall be promptly removed and disposed of. All pumping and drainage shall be done without damage to property or structures and without

interference with the rights of the public, owners of private property, pedestrians, vehicular traffic, or the Work of other Contractors. Dewatering shall be done in such a manner that the soil under or adjacent to existing structures shall not be disturbed, removed or displaced.

The overloading or obstructing of existing drainage facilities will not be permitted and the Contractor shall be solely responsible for damage caused by his operations.

Both dry weather sewage flow and storm flows in all existing sewers, ditches, streams, rivers and drains, which may in any way be affected by the new construction, shall be adequately maintained. Only such methods shall be used in maintaining flows as will prevent raising the levels of the sewage in upstream sewers to the extent to cause basement flooding or other damage. All gutters, ditches, catch basins, and other surface water inlets and drains shall be kept clear for proper surface drainage. Surface water inlets and drains that interfere with the Contractor's operations shall be temporarily altered or relocated by the Contractor as directed or approved by the Engineer.

The Contractor shall take all necessary precautions to assure that no raw sewage is bypassed to a receiving stream as a result of his operations.

All alterations, relocation, or use of any existing facilities shall be approved by the proper governing agency and shall be restored to the original location, and to as good a condition as found; all as approved by the governing agency.

Should the Contractor desire to place or remove any restrictions (such as bulkheads, curtain walls, dams, sandbags, or flumes) or to leave temporary openings in any sewer wall, approval shall first be obtained from the Engineer. Any temporary obstruction so placed shall be promptly removed when no longer needed. Any temporary opening made in an existing sewer structure shall, likewise, be promptly closed when no longer needed. Such closure shall be made as directed by the Engineer to provide structural and hydraulic conditions equivalent to those originally existing.

Should flooding or damage to construction Work result from storm conditions, the Contractor will not be entitled to any extra compensation for such loss as he may sustain, or for the extra Work that may result therefrom.

01.05.06 Temporary Sanitary Facilities

The Contractor shall provide and maintain during the life of the Contract sanitary conveniences for the use of all persons employed on the Work, including his Subcontractors, in sufficient number, in such manner and at such places as shall be approved by the Engineer, and all persons connected with the Work shall be obligated to use them. The Contractor shall prohibit the committing of a nuisance within the Work or upon lands about the Work. Any employee found violating these provisions shall be discharged and not again employed without the written consent of the Engineer.

In addition, the Contractor shall provide separate sanitary conveniences for the use of the Engineer and Inspectors. This facility shall be located at the site designated for the Inspector's field office.

The facilities shall be maintained in a sanitary condition, frequently cleaned and disinfected, and promptly removed from the site when directed by the Engineer.

01.05.07 Project Sign

When required by the Supplemental Specifications, the Contractor shall provide, erect, and maintain in good condition throughout the life of the Project, a Project Sign in the location selected by the DDA. The Project Sign shall be constructed in accordance with the following Specifications:

- Size: 4 feet x 8 feet
- Material: The panels shall be exterior type high density overlaid 3/4 inch plywood. The frame shall be 1-1/4 inch by 4 inch fir dressed on all 4 sides.
- Assembly: 1-1/4 inch by 4 inch fir frame to fit 4 foot by 8 foot by 3/4 inch plywood panel with 2 center braces.
- Mounting: The sign shall be mounted to 4 inch by 4 inch wood posts with four 3/8 inch bolts and nuts including washers on each side of the sign.
- Erection: The 4 inch by 4 inch posts shall be set in concrete 12 inches in diameter to a depth of 3 feet below grade.
- Paint: The face of the panel shall receive 3 coats of exterior enamel (sprayed). The rear of the panel shall receive 1 coat of exterior enamel (sprayed). The frame and posts shall receive 3 coats of blue exterior enamel.
- Lettering: Silk screen enamels where possible or hand painted enamels.

The information to be shown on the Project Sign, and the format to be used, will be provided by the DDA after the award of the Contract.

01.05.08 Bulkheads

Bulkheads shall be built or removed at locations shown on the Drawings. Other complete or partial bulkheads or temporary dams may be built as an aid to the construction operations when approved as to location, type and size by the Engineer. Such bulkheads or dams shall be removed prior to the completion of the Work, or when directed by the Engineer.

A brick bulkhead, with the natural soil removed is not designed to withstand air pressures. If air is being used in a tunnel approaching an existing brick bulkhead the pressure shall be reduced or entirely removed. If air pressure is being used in the tunnel or in the adjacent section, then a reinforced concrete bulkhead, designed to withstand 25 psi air pressure or as specified by the Engineer, shall be constructed in place of a brick bulkhead.

The cost associated with the construction of bulkheads shall be incidental to the Contract unless otherwise specified in the Supplemental Specifications.

01.05.09 Air Quality and Ventilation

Means and equipment shall be provided as may be required for detection of and protection against gas encountered in the Work and to safeguard the men employed. Such means and equipment shall comply with all applicable requirements of the United States Bureau of Mines and the U.S. Department of Labor.

In any shaft, tunnel, sewer, or excavation, a positive and approved means shall be provided for testing the air quantitatively for carbon monoxide, nitrogen dioxide, flammable or toxic gases, dusts, mists, fumes, and oxygen deficiency. If gas above allowable limits is encountered, the men shall be ordered to withdraw from the shaft, tunnel, sewer or excavation. Ventilating equipment of sufficient capacity and suitable type to adequately and quickly dilute the gas shall be promptly installed and operated. Gas in gas pockets shall be removed by bleeders to the main exhaust line of the

Ventilating system till such time that the gas pocket is sealed off. The men shall not return to Work until the shaft, tunnel, sewer, or excavation has been thoroughly examined for harmful or dangerous gas and oxygen deficiency and found to be within the allowable limits. Suitable signs shall be conspicuously placed at hazardous locations prohibiting smoking and the use of open flame.

No open flame or other open light shall be used in the tunnels, shafts, sewers, or gas producing excavations to which entry is necessary. Should an open flame be necessary for Work such as cutting existing steel and the like, it shall be used only after satisfactory gas test and as limited by the authorization of the Engineer.

Such regulations shall be rigidly enforced by the Contractor and he shall promptly discharge any employee who violates such safety requirements.

01.05.10 Temporary Utilities

Except as specifically noted, the Contractor shall furnish and pay for all required labor, materials and equipment, tools, construction equipment and machinery, samples, shipping costs and tests, all necessary utilities, such as water, electric power, telephones, roads, fences, and sanitary facilities, including maintenance thereof, and any other facilities and services necessary for proper execution and completion of the Work.

01.05.11 Materials and Equipment Storage on Site

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and/or they shall be placed under cover. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the DDA or lessee.

All materials and equipment shall be handled in a manner to avoid damage or breakage and delay in the completion of the Work, The Contractor shall repair or replace, without cost to the DDA and Milford Market and to the satisfaction of the Engineer, all items damaged or broken as a result of his operation.

All materials shall be delivered, stored, and handled as to prevent the inclusion of foreign materials and/or damage by water, breakage, or other causes. Packaged materials shall be delivered in original unopened containers and shall be stored until ready for use. Packages or materials showing evidence of damage or contamination, regardless of cause, will be rejected. All materials which have been stored shall be subject to retest and shall meet the requirements of these Specifications at the time they are used in the Work and at the time of final acceptance of the Work.

All materials to be incorporated in the Work shall be properly arranged, covered, and protected and the Contractor shall be solely responsible for the safety of the same. Material improperly stored shall not be included in estimates for partial payment, or if already included, shall be deducted for subsequent estimates.

Private property shall not be used for storage purposes without written permission of the DDA or lessee.

01.05.12 Fences, Mailboxes and Other Physical Features

All fences, mailboxes and other physical features disturbed or damaged during the Work under this Contract shall be maintained and if damaged, repaired or replaced in a workmanlike manner with materials satisfactory to the property owner affected and the Engineer. In addition, the Contractor shall furnish, erect and maintain any temporary construction fencing required during the performance of the Work or ordered by the Engineer.

01.06 EXISTING PROPERTIES, STRUCTURES, AND UTILITIES

01.06.01 Notification of Governing Agencies and Utilities

At least a week in advance of beginning Work, the Contractor shall notify all public bodies and other Owners of such facilities of the proposed location of his operations, advising them that their property may be affected and that such measures as they may deem necessary should be promptly taken to protect, adjust, remove and/or rebuild them.

01.06.02 Preservation of Property, Trees, Monuments, etc.

The Contractor shall be responsible for the preservation of all public and private property affected by operations within his control. He shall use the precautions necessary to prevent damage or injury thereto. All such protective and corrective work shall be in accordance with the Contract Documents.

The Contractor shall be responsible for the damage or destruction of property of any character resulting from neglect, misconduct, or non-execution of the Work, or caused by defective work or the use of unsatisfactory materials.

The Contractor shall not injure or destroy trees or shrubs nor remove or cut them without authorization by the DDA. All trees and shrubs except those ordered to be removed shall be adequately protected by boxes or otherwise by the Contractor. No excavated material shall be placed so as to injure such trees and shrubs. Trees and shrubs destroyed by negligence of the Contractor or his employees shall be replaced by him with new stock, or with other stock satisfactory to the DDA, at the proper season, and at the sole expense of the Contractor.

Parkways shall be left in as good condition as before the commencement of the Work. Where sod is removed, it shall be carefully preserved and later replaced with sod of equivalent quality.

When or where any direct or indirect damage or injury is done to public or private property resulting from the Contractor's operations, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before commencement of his work.

01.06.03 Cleanliness of the Project

The Contractor shall keep the Work area and all property occupied by him in a neat and orderly condition at all times. Waste materials, rubbish, and debris shall not be allowed to accumulate. The Contractor's equipment, temporary buildings, scaffolding, and excess materials shall be promptly removed as they become no longer needed for the progress of the Work. At the completion of the Work, the Work area shall be restored to as good as, if not better than, that prior to construction.

If, in the opinion of the Engineer, cleanliness of the Project is not progressing in a reasonable manner, he shall have the right to direct the Contractor to proceed with such Work, or any portion thereof, immediately. In the event the Contractor does not then immediately proceed with this Work, the Engineer may order any or all other operations of the Contractor, under this Contract, to cease until the cleanliness of the Project is proceeding in an acceptable manner.

01.06.04 Truck Routes

The Contractor shall work with the appropriate government agency(ies) in determining truck routes on this Project and shall have such routes approved by the same before the routes can be used. It may further be required that truck routes be audio visually taped before, during, and after construction by the Contractor when so requested by the Engineer. It shall thereafter be the responsibility of the Contractor to maintain the truck routes for the period of time such routes are used by the Contractor.

The Contractor shall keep clean all streets used in his operations. Trucks hauling materials, cement, sand, stone, or other loose materials from or to the site, shall be tight so that no spilling will occur. Before trucks start away from the site, their loads shall be carefully trimmed to prevent spillage.

The above requirements likewise apply to Suppliers making deliveries to the site, and the Contractor will be held responsible for compliance by his Suppliers.

01.06.05 Rights-of-Way and Easements

All available rights-of-way and easements have been shown on the Drawings. If the Contractor requires additional easements for his construction operations he shall obtain such easements and furnish copies of such to the DDA and Engineer. In carrying out the Work within private rights-of-way and easements, the Contractor shall take due and proper precautions against any injury to adjacent properties and structures and shall comply with the conditions outlined in the easement and/or right-of-way Agreements included in the Contract. Prior to performing any Work, the Contractor shall obtain any required permits and furnish bonds that may be required to construct within any public right-of-way.

01.06.06 Highway and Street Requirements

The highway and street requirements contained herein shall be considered requirements for the use of both public and private roads in this Project. All costs in connection with these requirements shall be borne by the Contractor and shall be considered as incidental to the Project.

Snow fencing, unless otherwise specified, shall be the minimum provided to preclude the entrance of the public into the construction area. Where the construction disrupts or interferes with the normal walkways used by pedestrians, they shall be duplicated in kind so that pedestrians may traverse the construction area safely.

Trench excavation shall be done so as to minimize interference to the operating roadway and where trench sides are within 5 feet or closer to the traveled portion of the roadway, bypasses shall be constructed. All signing construction of bypasses, and construction of permanent restoration shall be in accordance with the governing agency, municipality, or MOOT Specifications.

In all primary roads where open cut crossings will be made, the Contractor shall submit Plans for re-routing of traffic to the Road Commission or Municipal Traffic Engineer for approval before proceeding with construction across primary road.

The Contractor shall rough grade, and open, road ditches and other waterways every night before closing down the job.

Existing ditches disturbed during construction shall be re-ditched in the location and to the cross section, as determined by the Engineer prior to final grading. The cost of such re-ditching shall be incidental to the Project and no separate payment will be made therefore.

Materials and equipment shall not be stockpiled within the right-of -ways so as to obstruct or cause a problem to any driveway or side street.

All obstruction within 8 feet of pavement edge shall be lighted from sunset to sunrise.

If it is necessary to direct motorists more than 3 feet laterally, street lighting shall be provided.

Temporary pavement parking, in addition to signing, shall be required at all lateral displacements of traffic. The placing of the pavement markings, the covering of the old lines, and restoration shall be performed by *the* Contractor in accordance with the governing agency's requirements.

The Contractor shall maintain the traveled portion of the roadway clear from mud, dirt, debris, and other materials. The Contractor shall maintain the road surface in the working area safe for the motoring public, shall salt when hazardous ice or snow conditions require it, and shall chloride the roads to alleviate dust conditions engendered by his operations whenever necessary.

All signs, lighting, and other necessary safety requirements shall comply with the governing agency and the state highway department Specifications. In addition, the Contractor shall take all necessary precautions as directed by the governing agency as are deemed necessary to protect the public.

Unless otherwise indicated in the Supplemental Specifications, the Contractor shall pay all permit fees and inspection charges for Work performed by all governing agencies, the MDOT and railroads.

01.06.07 Work Within Railroad Rights-of-Way

All Work within railroad rights-of-way shall be conducted in accordance with the requirements of the railroad company having jurisdiction over the right-of-way.

The Contractor, to protect his and the DDAs interest, shall keep a detailed record of all services and materials furnished by the railroad. Daily reports of such Work and material should be signed both by the DDA's Inspector and any representative of the railroad present on the Project. Seventy-two hour's notice, exclusive of Saturdays, Sundays, and holidays, shall be given to the railroad superintendent before any Work is performed within a railroad right-of-way. Since the railroad requires that all Project communications be forwarded through the DDA, the Contractor shall notify the DDA sufficiently in advance to allow him to make necessary arrangements with the railroad.

01.06.08 Overhead Utilities

All utility poles and overhead lines may not be shown or identified on the Drawings. The Contractor shall make his own determination of existing utility poles and facilities attached thereto and overhead lines. Where overhead utilities are encountered in the Work, Contractor shall arrange with the utility Owner for the necessary relocation or protection of their facilities. Protection, removal and replacement, tunneling or supporting of existing utility poles and protection and removal and replacement of utilities which are installed on the poles shall be provided either by the Contractor or by the utility at the Contractor's expense, all in accordance with requirements of the utility owner.

01.06.09 Underground Utilities

All underground utilities as shown on the Drawings have been plotted utilizing the best information available. Prior to excavating in any area, the Contractor shall notify MISS DIG or the involved utility companies and request verification of the utility locations as shown. Any variances in location which occur shall be brought to the attention of the Engineer prior to the commencement of any digging operations. In the event that the installation of a proposed utility is depended upon knowing the exact elevation or location of any existing utility, the Contractor shall excavate and locate such utilities in advance of the Work and inform the Engineer of their exact location.

Should the Contractor discover conflicts that exist between the location of the existing utility and those proposed, he shall notify the Engineer in writing in advance of any Work so that adjustments can be made.

Where underground utilities are encountered in the Work, the Contractor shall arrange with the utility DDA for any necessary protection or relocation of their facilities.

All protection, maintenance of service, removal and replacement etc., shall be in conformance with the requirements of the utility DDA. Protection, maintenance of service, removal and replacement, and supporting of existing underground utilities, shall be provided by the Contractor or by the utility at the Contractor's expense unless relocation or removal and replacement of certain utilities are specifically covered by a separate pay item in the Proposal.

01.06.10 Structures

The Contractor shall assume full responsibility for the protection of all buildings, utilities, or other structures and their foundations, as well as other improvements, such as pavement, etc., that might be encountered during, or affected by, his operations. Should settlement or lateral movement of adjacent structures or surface features occur, such conditions shall be rectified at the Contractor's expense. If damage to any structures, utilities, or other improvements occurs by reason of the Contractor's operations, even though special precautions have been employed, the Contractor shall be entirely responsible for such damage.

01.07 PROJECT CLOSE OUT

01.07.01 Final Inspection of the Completed Work and Engineer's Punch List

When the Contractor considers the Work to be complete he shall submit written certification to the DDA (copies should be forwarded to Engineer, and governing agency representatives) that:

1. The Contract Documents have been reviewed in reference to the completed Work.
2. All Work has been completed in accordance with the Contract Documents or written clarification and modifications thereof.
3. All equipment and systems have been tested in the presence of the DDA's Representative and are operational in the manner set forth in the plans and/or specifications.

01.07.02 Contractor's Close Out Submittals

When the Engineer finds that the Work is acceptable and conforms to the Contract Documents, the Contractor shall make the following close out submittals:

1. Evidence of compliance with requirements of governing agencies
2. Operation and maintenance data

3. Record documents
4. Keys and key schedule
5. Guarantees
6. Spare parts and maintenance materials

Final request for payment with supporting data (i.e., Contractor's Declaration, Contractor's Affidavit, Release and Waivers of Liens, Agencies' Releases, etc.).

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PROGRESS CLAUSE
FOR
HIGHLAND DDA
HIGHLAND STREETSCAPE BOARDWALK
NFE JOB NO. F803-02

PROGRESS CLAUSE: The Contractor shall start work within ten (10) days of receiving Notice to Proceed, on or before the date designated as the starting date in the detailed Progress Schedule, as agreed upon by the DDA and Engineer. In no case, shall any work be performed prior to receipt of formal Notice of Award by the DDA.

The entire project shall be completed on or before May 15, 2025. Once work commences, contractor shall complete all work, including restoration, within Ninety (90) Calendar Days.

The Contractor will be expected to mobilize sufficient manpower and all necessary equipment to meet the completion dates specified above.

Failure by the Contractor to meet the above requirements and dates will result in the Contractor being assessed liquidated damages in accordance with the provisions outlined within the Contract.

Liquidated Damages will be assessed on a phase basis or on a project completion basis, pursuant to the conditions of the form of proposal and will continue to be assessed for each calendar day or portion of a day that this work remains incomplete.

The Contractor will be required to meet with the DDA and Engineer and to submit a detailed Progress Schedule. The Engineer will arrange the time and place for the meeting. The named subcontractor(s) for designated and/or specialty items, as shown in the proposal, is / are recommended to attend the preconstruction meeting if such items materially affect the work schedule.

NOTICE TO BIDDERS
BUY MICHIGAN / HIRE MICHIGAN

1 of 1

The Contractor is hereby notified that it is the intent of the Highland DDA that a “Buy Michigan / Hire Michigan” initiative be used during the project.

The Contractor shall make a good faith, concentrated effort to initiate a “Buy Michigan / Hire Michigan” provision by employing Michigan residents, subcontracting to Michigan based business and purchase goods manufactured or grown in Michigan, as a part of a competitive commercial bid.

NOTICE TO BIDDERS

CERTIFIED PAYROLL

1 of 1

Contractor and all tiers of subcontractors are required to pay no less than the minimum salaries and wages as required by the Minimum Wage Act of 1964 as amended, and that the Contractor must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, or natural origin, in accordance with the Elliot-Larson Civil Rights Act.

In accordance with the Contract, the Engineer reserves the right to request Certified Payrolls of the Contractor and / or subcontractors to verify wage compliance requirements are being met. If requested, payrolls shall be provided as a requirement for progress payments.

NOTICE TO BIDDERS

JOB SITE SAFETY

1 of 1

Neither the professional activities of the Engineer, nor the presence of the Engineer or its employees and consultants, shall relieve the Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The Engineer and its personnel have no authority to exercise any control over any construction Contractor or other entity or their employees in connection with their work or any health or safety precautions. The Contractor agrees that the Contractor is solely responsible for job site safety. The Contractor also agrees, to the extent permitted by law, that the DDA, the Milford Market, Highland Township, Engineer and their respective elected and appointed officials, employees and consultants shall be indemnified by the Contractor for claims, demands, damages, judgments, losses, interest, attorney's fees, litigation costs and expenses of any kind, at any time, for bodily injury and or property damage, arising out of or in any way connected to the Contractor's work or acts related to the Project. The Contractor also agrees that the DDA, the Milford Market, Highland Township and Engineer and their respective elected and appointed officials, employees and consultants shall be made additional insured under the Contractor's general liability insurance policy.

NOTICE TO BIDDERS

BI-WEEKLY PROGRESS MEETING

1 of 1

Contractor will be required to attend a bi-weekly progress meeting with the Engineer and any other interested parties. Dates will be selected at the beginning of the project and the meeting will be held at Highland DDA's offices, or as otherwise arranged. The Contractor's project representative along with representatives from all critical subcontractors, as requested by the Engineer, shall be present at the meeting to discuss the status of the Project and to coordinate the work for the following week.

SPECIAL PROVISION
FOR
UTILITY COORDINATION CLAUSE

1 of 1

Description

The following public utilities may have facilities located within the project limits:

Electric: DTE Energy 37849 Interchange Drive Farmington Hills, MI 48335 Contact: Sebastian Sarkissian (248) 427-2947	Telephone: SBC 54 North Mill Street Pontiac, MI 48342 Contact: Larry Zdan (248)456-0821
Water Main & Sanitary Sewer: Oakland County Water Resources Commissioner One Public Works Drive Waterford, MI 48328	Milford Road Right-of-Way: Road Commission of Oakland County 2420 Pontiac Lake Road Waterford, MI 48328 Contact: Scot Mulholland (248) 858-4835
Cable Television: Comcast Cable Television 25626 Telegraph Road Southfield, MI Contact: Ed Buster (248)809-2706	Natural Gas Consumers Energy 1030 Featherstone Road Pontiac, MI 48342

On all projects: "Three Working Days before you Dig – Call MISS DIG (800)482-7171", excluding Saturday, Sunday and holidays.

Owners of public utilities will not be required by the DDA to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

SPECIAL PROVISION
FOR
DUST CONTROL

1 of 1

Description

The Contractor shall take such precautions and do such work so as to effectively control dust caused by his operations on all areas that are affected by the construction of the project.

During each seven (7) day period that the project is under construction, the Contractor shall supply and apply water to the grade in such amounts that dust will be kept to a minimum. The water shall be applied to the grade at least once during each seven (7) day period and at such other times and places as the Engineer may direct. The Contractor shall schedule the application of water to be done on the Thursday of each week. The rate of application shall be 0.5 gallons per square yard.

In the event that the ground is already sufficiently wet from natural causes, the Contractor may not be required to apply water to the grade. The Contractor's equipment and labor to apply the water to the grade shall be on site every Thursday ready and equipped to apply water. The Engineer shall have sole discretion as to whether or not water is required and the Engineer's decision shall be final.

Measurement and Basis of Payment

The completed work for Dust Control shall not be paid for separately and shall be considered included in the various pay items of the contract.

In the event that the DDA deems it necessary to perform this work for the Contractor, the DDA shall have the work done and charge the cost thereof against any monies that may be due or may become due to the Contractor.

SPECIAL PROVISION
FOR
PROJECT COMPLETION AND CLOSEOUT

1 of 1

Description

This provision establishes the procedures and schedule for the completion of deficient / punch list work and timely closeout of the project. This provision does not revise any schedule constraints otherwise indicated within the Contract, nor does it relieve the Contractor and Engineer from properly coordinating the evaluation of completed work and the correction of defects during the general progression of the project.

Procedure

In accordance with the 2012 Michigan Department of Transportation Standard and Specifications for Construction, the Contractor shall submit written notification that the contract work is complete. Following receipt of this, the Engineer will conduct an inspection of the project, and supply the Contractor with a preliminary punch list within five (5) days.

The Contractor shall complete the items listed within the preliminary punch list and notify the Engineer, in writing, that the items have been completed, within fourteen (14) days of receiving the punch list. Following receipt of this, the Engineer and DDA will conduct an inspection of the project and supply the Contractor with a final punch list within five (5) days.

Failure to complete the items outlined on the preliminary punch list within the schedule noted above will result in the Contractor being assessed 50% of the liquidated damages (per day) in accordance with the Contract, for a maximum of 21 calendar days. Failure to complete the preliminary punch list within the 21-day limit may result in the DDA placing the Contractor in default, in accordance with the Contract.

Failure to complete the items outlined on the final punch list within the schedule noted above will result in the Contractor being assessed 50% of the liquidated damages (per day) in accordance with the Contract, for a maximum of 14 calendar days. Failure to complete the preliminary punch list within the 14-day limit may result in the DDA placing the Contractor in default, in accordance with the Contract.

Upon completion of all final punch list items, the Engineer will have twenty one (21) days to meet with the Contractor, finalize all Contract items and provide the Contractor with a list of final as-built quantities. The Contractor shall have twenty one (21) days, following receipt of the as-built quantity list, to review and respond with agreement or disagreement. If the Contractor disagrees with the quantities presented, they shall provide written justification (calculations, sketches, etc.) to back up their findings. If the Contractor fails to respond within this timeframe, the Engineer will proceed with preparing the final estimate and processing for payment with the DDA.

SPECIAL PROVISION
FOR
PERMITS

1 of 1

The contractor is hereby notified of the following required permits for the project:

Soil Erosion Control Permit

This permit has been applied for, approved by Oakland County Water Resources and acquired by the DDA.

EGLE Wetland Permit

This permit has been applied for and will be acquired by the DDA. The Contractor will be responsible for adherence to the permit requirements.

SPECIAL PROVISION
FOR
SHARED USE PATH, GRADING, MOD

1 of 2

Description

This work shall be done in accordance with the requirements of Section 205 of the Michigan Department of Transportation 2020 Standard Specifications for Construction, except as herein described:

The work of Shared Use Path, Grading, Mod shall consist of constructing proposed sub base and walk section grades by excavating material, moving, shaping, placing and compacting the remaining sub grade surface, as necessary to develop the cross section and grade specified in the plans. The work shall include disposing of excavated, surplus or unsuitable material; furnishing, placing and compacting of embankment materials; trimming of the earth grade and maintaining the work in a finished condition until acceptance by the Engineer.

Proposed sand subbase material shown in the concrete walk section shall be included in this item.

Any excess material not permitted to be incorporated into the project will require removal from the project limits. The Contractor shall be responsible for the proper disposal of any surplus or excavated material resulting from grading operations.

Shared Use Path, Grading, Mod shall also include the following items:

- Stripping of any vegetation and topsoil within the grading limits.
- Excavation for sidewalk installations.
- Backfilling behind the curb, walks with Engineer approved material.
- Grading from the right of way line, easement limits or grading limits, to the required depth in order to receive all topsoil surfaces.
- Proof-rolling sidewalk surface
- All required sawcutting as identified in the plans and specifications and/or directed by the engineer.
- Locating all ex. structures prior to restoration efforts.
- Any grading required to transition existing side slope areas with the new pathway surface.
- Protection of existing signage, trees and landscaping throughout the project site over the course of the project.
- Excavation and disposal of all material not able to be incorporated into the project, including excavation for pathway, base construction.

Measurement and Payment

The importing and installation of any off-site material that may be required for pathway embankment will not be paid for separately but shall be included in the pay item for Shared Use Path, Grading, Mod.

Earth excavation will not be paid for separately but shall be considered included in the pay item for Shared Use Path, Grading, Mod.

The Contractor shall be responsible for determining their own volume of earthwork required to construct the proposed improvements to the grade specified in the construction plans.

The completed work for Shared Use Path, Grading, Mod shall be measured as a lump sum.

Item

Unit

Shared Use Path, Grading, Mod

Lump Sum

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
 - 1. Installation of the Work.
 - 2. Coordination of Owner-installed products.
 - 3. Starting and adjusting.
 - 4. Protection of installed construction.
 - 5. Correction of the Work.
 - 6. Coordination with Other Utilities
 - 7. Work Day Limitations.
 - 8. Progress Schedule Requirements

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

1.4 CONTRACTOR COORDINATION

- A. The Contractor shall also be prepared to coordinate with property owner during the project to allow for continued site maintenance work.
- B. Coordination efforts will not be paid for separately and shall be considered part of the overall project cost.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions and Private Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
 - 2. No additional compensation will be paid for delays due to material shortages or other reasons beyond the control of the DDA or construction delays due to the encountering of existing utilities that are or are not shown on the plans.
 - 3. Work stoppages by employees of utility companies or any other occurrence which results in a delay in utility relocations on this project may be considered the basis for a claim for an extension of time of completion but will not be the basis for a claim for extra compensation or an adjustment in contract unit prices. The amount of any such time extension will be based upon the amount of delay to the Contractor's controlling operation for completion actually experienced as a result of the utility relocation delay.
- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
- B. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

1.2 PREPARATION

- A. Existing Utility Information: Furnish information to **Owner** that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Project Engineer.

1.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb, and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Project Engineer. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Project Engineer.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Project Engineer. Fit exposed connections together to form hairline joints.

1.4 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

1.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

1.6 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.

- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

1.7 PROGRESS SCHEDULE

Submit a detailed progress schedule to the Engineer at the preconstruction meeting. Schedule shall include, as a minimum, approximate start date for major components of, including restoration start dates. The schedule shall be reviewed and approved by the Engineer, prior to payment of the first pay application.

END OF SECTION 017300

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. List of known public utility companies and potential contact information (to be verified by the Contractor)

1.2 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Comply with the following:
 - 1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
 - 2. Maintain support facilities until Engineer schedules Substantial Completion inspection. Remove before Substantial Completion.
- B. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install subbase and base for temporary roads and paved areas in accordance with Section 312000 "Earth Moving."
 3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
- C. Parking: Provide temporary parking areas for construction personnel.
- D. Storage and Staging: Use designated areas of Project site for storage and staging needs.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.3 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

3.4 TRAFFIC MAINTENANCE AND CONTROL

PROVISION FOR LOCAL TRAFFIC

During the progress of the work, the Contractor shall accommodate both local vehicular and pedestrian traffic in road rights-of-ways. The Contractor's truck and equipment operations on public streets shall be governed by all local traffic ordinances and regulations of the Fire and Police Departments.

EXISTING WARNING AND REGULATORY SIGNS

Existing signs on this project are to be preserved and maintained, where possible, depending on phasing, to aid in traffic control.

CONSTRUCTION SIGNS AND BARRICADES

Contractor shall provide the required warning and detour signs, barricades, and flashing lights for the barricades as shown in the Phasing Plans or as directed by the Engineer. All signs, barricades, and placement configurations shall conform to the Michigan Manual of Uniform Traffic Control Devices and the Michigan Department of Transportation Standard Specifications for Construction. The Contractor shall also provide signs, barricades, and flagman as necessary to protect the vehicular and pedestrian traffic and the work within the construction zone. This shall include Type III barricades to close areas and Type II barricades to direct traffic and protect work. Traffic control devices shall meet American with Disability Act (ADA) requirements.

The Contractor shall not begin any operation on the project until all required signs and barricades have been set, per Phase.

Procurement, placement or maintenance of traffic control items will not be paid for separately, but shall be included in the pay item:

Traffic Maintenance and Control Lump Sum

MAINTENANCE OF STREETS

During construction, if public access is partially obstructed, the Contractor shall place and maintain temporary driveways, ramps, bridges, and crossings that are necessary to accommodate the public, and as outlined on the plans. In the event of the Contractor's failure to comply with the foregoing provisions, the Owner may, with or without notice, cause the same to be done and deduct the cost of such work from any monies due or to become due the Contractor under this contract.

Performance of such work by the Owner shall in no way serve to release the Contractor from his liability for the safety of the traveling public. The Contractor shall provide flagmen, warning lights, signs and barricades as necessary to direct and protect vehicular and pedestrian traffic.

END OF SECTION 015000

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. 2020 MDOT Standard Specifications for Construction, Section 816.

1.2 SUMMARY

- A. Section Includes:
 - 1. Seeding.
 - 2. Topsoil
 - 3. Hydroseeding.
 - 4. Turf renovation.
- B. Related Requirements:
 - 1. Sod, seeding and hydroseeding requirements outlined in the MDOT 2020 Standard Specifications for Construction.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil; imported topsoil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
- C. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Accompany each delivery of bulk materials with appropriate certificates.

1.5 FIELD CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Final Completion.
- B. Restoration operations shall be confined to the MDOT seasonal limitations, which are April 15 through October 10 for this project. Disturbed areas not seeded or sodded or where growth had failed to substantially take hold by the final seasonal date shall be protected by placement of temporary soil erosion control measures. The Contractor shall maintain temporary soil erosion control measures until permanent measures have been established. No additional payments shall be made for temporary seeding operations required due to seasonal limitations.
- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.6 PAY ITEMS

All labor, equipment and material cost associated with “**Project Restoration**” shall be completed in accordance with 2020 MDOT Standard Specifications for Construction (Section 816) and the underlying requirements.

All disturbed greenbelt areas shall be restored with imported and 3” screened topsoil and Class A hydroseed. Restoration areas will be determined based upon the amount of disturbance created and areas will not be measured separately. Watering will not be paid for separately, and Contractors shall meet the acceptance levels as outlined within this specification (Section 3.9)

Item	Unit of Measure
Project Restoration	Lump Sum

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
 - 1. Quality, State Certified: State-certified seed of grass species as listed below for solar exposure.
 - 2. Sun and Partial Shade, Cool-Season Grass: Proportioned by weight as follows:
 - a. 50 percent Kentucky bluegrass (*Poa pratensis*).
 - b. 30 percent chewings red fescue (*Festuca rubra* variety).
 - c. 10 percent perennial ryegrass (*Lolium perenne*).
 - d. 10 percent redtop (*Agrostis alba*).
- C. Turfgrass Species, Cool-Season Grass: Sod of grass species as follows, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
 - 1. Sun and Partial Shade: Proportioned by weight as follows:
 - a. 50 percent Kentucky bluegrass (*Poa pratensis*).
 - b. 30 percent chewings red fescue (*Festuca rubra* variety).
 - c. 10 percent perennial ryegrass (*Lolium perenne*).
 - d. 10 percent redtop (*Agrostis alba*).
 - 2. Alternate:
 - a. 40% Creeping Red Rescue, 30% Kentucky Bluegrass and 30% Perennial Ryegrass
 - 3. No-Mow Lawn Seed:
 - a. Provided by: Prairie Nursery, Inc., P.O. Box 306 Westfield, WI 53964
 - b. www.prairienursery.com 1-800-476-9453
 - c. Seeding Rate: 5 lbs per 1,000 square feet.

2.2 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

D. TOPSOIL

Topsoil shall be imported and screebed and shall consist of dark, organic, natural surface soil exclusive of peat or muck. The organic material content, passing the No.4 (4.75 mm) Sieve, shall

be between 2% and 20% (by mass) of the topsoil. Topsoil shall be screened material free of stones, rocks and other debris over one-half inch in diameter.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Engineer and replace with new planting soil.

3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
 - 2. Protect grade stakes set by others until directed to remove them.

3.3 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil
- B. Placing Planting Soil: Place topsoil
 - 1. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Engineer's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate 5 lb/1000 sq. ft
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect all No Mow seeded areas with erosion control blanket installed and stapled according to manufacturer's written instructions.
- E. Protect seeded areas from hot, dry weather or drying winds by applying within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

3.5 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, commercial fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Mix slurry with fiber-mulch manufacturer's recommended tackifier.
 - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/ dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.6 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.7 TURF RENOVATION

- A. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
 - 2. Install new planting soil as required.
- B. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.
- C. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.
- D. Mow, dethatch, core aerate, and rake existing turf.
- E. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- F. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off City of Rochester Hills's property.
- G. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.
- H. Apply sod as required for new turf.
- I. Water newly planted areas and keep moist until new turf is established.

3.8 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

3.9 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Engineer:
 - 1. Satisfactory Seeded Turf: A healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
- B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.10 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off City of Rochester Hills's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

3.11 MAINTENANCE SERVICE

- A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:
 - 1. Seeded Turf: 60 days from date of planting completion
 - a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.
 - 2. Sodded Turf: 30 days from date of planting completion

END OF SECTION 329200