

YPSILANTI HERITAGE BRIDGE SPECIFICATIONS

March 25, 2015

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ADVERTISEMENT FOR BIDS

PROJECT: Ypsilanti Heritage Bridge
Michigan Ave.
Ypsilanti, Michigan 48197

OWNER: City of Ypsilanti
One South Huron St.
Ypsilanti, Michigan 48197
Contact: Stan Kirton
Director of Public Services
(734) 483-1421
skirton@cityofypsilanti.com

Washtenaw County Parks & Recreation
2230 Platt Road
Ann Arbor, Michigan 48107
Contact: Meghan Bonfiglio
Superintendent of Park Planning
(734) 971-6337
bonfigliom@ewashtenaw.org

ENGINEER: The Mannik & Smith Group, Inc.
1771 North Dixie Hwy.
Monroe, Michigan 48162
Contact: Christopher M. Zangara, PE
Civil/Municipal Engineering Manager
(734) 289-2200
czangara@manniksmithgroup.com

DATES:

MANDATORY PRE-BID MEETING: April 8th, 2015 at 10am EST at Ypsilanti City Hall, One South Huron St. Ypsilanti, MI).

CONTRACTOR QUESTIONS DUE: April 10th, 2015 at 4:00pm EST. Questions should be submitted to Bonnie Wessler in writing at wesslerb@cityofypsilanti.com.

RESPONSE TO CONTRACTOR QUESTIONS: April 14th, 2015 by 4:00pm EST. The City of Ypsilanti or there agent will respond to written questions received by contractors. Responses will be posted on the City of Ypsilanti website.

BID DUE DATE: **April 17th, 2015 at 4pm EST** at the City Clerk's office on the first floor of Ypsilanti City Hall located at One South Huron St. in Ypsilanti, MI.

Electronic Copies of the Contract Documents (Drawings, Project Manual and Geotechnical Report) are available for viewing and printing online at the Public Plan Room of Arc Document Solutions in Ann Arbor (<http://www.e-arc.com/mi/annarbor>).

Work of this contract includes provision of all labor, materials, services and equipment necessary to complete the work indicated in the Contract Documents and is generally described as follows:

The project consists of the construction of a new prefabricated pedestrian bridge crossing the Huron River, construction of new cast-in-place abutments, two modular block overlooks, precast post-tension beam ramp, modular block ramp and stairs, earthen embankment approach ramp, and concrete approach ramp to connect to and continue the B2B trail along the Huron River.

INSTRUCTIONS TO BIDDERS

1. Bid Date and Time

Bids are due on **April 17th, 2015 at 4pm EST** at the office of the City Clerk located on the first floor of Ypsilanti City Hall at One South Huron St. in Ypsilanti, Michigan.

2. General Purpose and Intent

The Instructions to Bidders contains information and requirements applying specifically to this contract. The Instructions to Bidders supplements other parts of the Contract Documents, and in the case of any discrepancy between the requirements of the Instructions to Bidders and other parts of the Contract Documents, the provisions of the former shall govern.

No effort is made to emphasize any particular provision of the Contract Documents, but bidders must familiarize themselves with every provision and its effect.

3. The Contract Documents

The "Table of Contents" bound in the front of the Project Manual gives the code letters or numbers used to designate the pages in each individual part.

In the process of assembling and binding the Contract Documents, individual pages or drawings may have been inadvertently omitted. Each bidder shall carefully and thoroughly examine his/her copy of the Contract Documents for completeness. No claim of any bidder will be allowed on the basis that his/her copy of the Contract Documents was incomplete.

4. Interpretation of Contract Documents

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Should any prospective bidder be in doubt as to the true meaning of any portion of the Contract Documents, or should he/she find any patent ambiguity, inconsistency, or omission thereon, he/she shall request the Engineer, in writing, for an official interpretation or correction. Written requests may be delivered via email to wesslerb@cityofypsilanti.com

Every request for such interpretation should be in writing, and to be given consideration must be received at least five (5) calendar days prior to the date fixed for the opening of bids.

Any and all such interpretations will be made only in the form of a written Addenda which will be emailed to each person recorded as having received a copy of the Contract Documents, not later than three days prior to the date fixed for the opening of bids. Any Addenda issued by the Engineer shall become part of the Contract Documents and shall be taken into account by each bidder in preparing the bid.

Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted.

5. Bidder's Qualifications

Bids are solicited only from responsible bidders known to be skilled and regularly engaged in work of similar character and proportion to that covered by the Contract Documents. Bidders must comply with the provisions of the "General Conditions for the Contract for Construction," and the Supplemental General Conditions.

After the opening of bids, when so requested by the Owner, the bidder shall promptly submit a certified written statement setting forth such information as required concerning his/her prior experience and performance record, other work now under contract, financial condition, personnel and qualifications of his/her working organization, available equipment, schedule of values for the project, and the major parts of the works proposed to be sublet.

The Owner may make any such investigations it deems necessary to determine the ability of the bidder to perform the work. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

Conditional bids will not be accepted.

6. Bidder's Examinations and Investigations

Each bidder shall carefully and thoroughly examine all parts of the Contract Documents. This means that each subcontractor bidding the project must familiarize himself with all sheets of drawings and the entire Specifications book. The bidder shall make an inspection of the site of the proposed work, as well as its adjacent area, to determine all conditions under which the work will be performed.

The submission of a proposal shall, in itself, be conclusive evidence that the bidder has made all examinations and investigations he/she deemed necessary to properly prepare a proposal meeting all Contract requirements.

No plea of ignorance of conditions that may exist or that may hereafter exist, or of difficulties that may be encountered in the execution of the work under this Contract, as a result of the bidder's failure to make prudent examinations and investigations will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every detail all requirements of the Contract Documents, or will be accepted as a basis for a claim for extra compensation, damages, or for an extension of the time of completion.

7. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State and Federal laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of

the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

8. Prevailing Wage Rates and CUB Agreement

To the extent allowed by law, The Contractor agrees that all craftsmen, mechanics and laborers it employs to work on this project shall, at a minimum, receive the prevailing wages and fringe benefits of the Building Trade Department for corresponding classes of craftsmen, mechanics and laborers for the Washtenaw County area, as determined and published by the Davis-Bacon Division of the United States Department of Labor. Contractor agrees that all subcontracts entered into by the Contractor shall contain a similar provision covering any sub-contractor's employees who perform work on this project. Contractor further agrees to sign a project labor agreement as provided by the Construction Unity Board ("CUB Agreement"). A copy of the CUB Agreement is attached as an appendix to this Contract.

9. Materials

The specified time of completion is based upon the availability of the required materials. Each bidder is to make his/her own investigation and determination of the probable availability of the required materials in the amounts and at the times necessary to complete the work within the time allowed for completion.

10. Method of Bidding

The Owner. invites the following bid(s): Single, unit price bid for all work described in the Contract Documents. Make bids on the Bid Form provided.

In arriving at the price or prices bid, the bidder shall make his/her own estimates of the facilities and difficulties attending the performance of the proposed Contract, including local conditions, availability of materials, uncertainty of weather, and all other contingencies. It is the intent of the Contract Documents to provide for finished work and any miscellaneous items clearly necessary to this end shall be considered a Contract requirement whether or not specifically included in the Contract Documents.

11. Preparation of Proposals

Proposals shall be carefully prepared in strict accordance with the Contract requirements and these instructions, otherwise the bid may be rejected and not considered in the award of the Contract.

The blank form of Proposal supplied shall be used. No change shall be made in the wording of the form or in any of the items mentioned therein, nor shall any special conditions be made or included as part of the bidder's proposal. Proposals shall be filled out legibly in ink. Erasures or other changes in the bid shall be explained or noted over the signature of the bidder.

The price or prices bid shall be stated in figures and words. In case of discrepancy, words shall govern.

When the Proposal form so requires, certain information, in addition to the price bid, shall be furnished as part of the bidder's proposal. Failure of the bidder to submit the required information or the submission of information in an inaccurate or incomplete form may be cause for rejection of the entire proposal.

The bidder may submit such supplemental information as he/she may desire, describing equipment proposed to be furnished. However, the bidder is to completely fill out the Proposal form even though some of the information required to be stated in the Proposal may be contained in the supplemental information furnished.

Any stipulation or qualification contrary to the Contract requirements made by the bidder in or accompanying his proposal as a condition for the acceptance of the Contract will not be considered in the award of the Contract and may cause the rejection of the entire Proposal.

12. Time of Starting and Completing Work

Bidders must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the work within the period identified by the Bidder in his submitted Bid for Unit Price Contract form and agreed to by the Owner.

13. Submitting Bid

- A. Form: The Bid Documents containing the Proposal shall be securely sealed in a suitable envelope clearly labeled "Ypsilanti Heritage Bridge", and showing the bidder's name, so as to guard against premature opening.
- B. Place and Time: Bids will be received during regular business hours at the place and up to the time stated herein, or up to the time as extended by Addendum. Bids may be delivered in person or mailed, but their delivery is the bidder's entire responsibility. Any bid received after the stated time due, even through the mail, will be returned unopened to the bidder.
- C. Withdrawal: Bids received prior to the scheduled time for receipt of bids will be kept securely, unopened. No bid after being received by the Owner will be returned to a bidder prior to the opening of bids. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid before or after it has been opened.
- D. Modification and Number of Bids Submitted: No bid after being submitted may be modified or changed by letter, email, fax, or other means. No bidder will be permitted to submit more than one bid.
- E. **All proposals must be accompanied by a proposal bond or certified check of \$5,000, satisfactory to the City. Such bond must be executed by a surety company authorized to do business in the State of Michigan, by certified check, or otherwise secured in a manner satisfactory to the City.**

14. Rejection of Bids

The Owner reserves the right to reject any and all bids or to waive any irregularity in any bid should it be deemed in its best interest so to do. Without being limited thereto, a bid may be rejected if:

- A. The Proposal does not strictly conform to the requirements of the Contract Documents or law;
- B. The Proposal is conditional;
- C. The bidder mis-states or conceals any material fact in the bid;
- D. The bidder fails or refuses to promptly furnish the Owner information requested as to his/her qualifications and responsibility.
- E. A determination is made by the Owner that the bidder is not qualified or responsible to perform the work.

15. Method of Award - Lowest Qualified Bidder

If at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner to be available to finance this work, the contract will be awarded on the base bid only. If such bid exceeds such amounts, the Owner may reject all bids. If available funds allow, the Owner may select one or more additive bid alternates, in any order or combination.

16. Contract Execution

The bidder to whom the Contract is awarded, shall, within 10 calendar days after the Contract forms are presented to him/her, enter into written contract with the Owner by properly executing the Agreement and furnishing other information and affidavits as are required.

Any delay by the successful bidder beyond the ten calendar days stipulated for submitting to the Owner, in complete and acceptable form and number, the Agreement and other required information and affidavits, will cause a like number of calendar days being deducted from the total time stipulated for fully completing the work.

17. Work Review

The Owner, authorized representatives and agents, shall at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, and other relevant data and records pertaining to this contract.

18. General Guarantee

Neither the final certificate of payment nor any provision in the Contract Documents shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability with respect to any express warranties or responsibility for failure to comply with the terms of the Contract Documents.

19. Accident Prevention

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons and property, either on or off the site, which occur as a result of his/her fault or negligence in connection with the prosecution of the work. The safety provisions of all applicable laws and building and construction codes shall be observed.

20. Indemnification

The Contractor, Subcontractors, and Vendors agree to indemnify and hold harmless the Owner and the Engineer.

In the event any action or proceeding shall be brought against the Owner by reason of any claim covered hereunder, the Contractor, upon notice from the Owner will at its sole cost and expense resist or defend the same.

The Contractor agrees that it is its responsibility and not the responsibility of the Owner to safeguard the property and materials that any employees, consultants or subcontractors use or have in their possession while performing under this Contract. Further, the Contractor agrees to hold the Owner harmless for any loss of such property and materials used by the Employees pursuant to the Contractor's performance under the Contract or which is in their possession.

21. Performance and Payment Bond

The Contractor shall furnish the Owner with a performance and payment bond from an Insurance Company acceptable to the Owner, in a sum equal to 100% of the contract price of the work, guaranteeing the faithful performance of his Contract and against loss by reason of any lien. The cost of bond shall be part of the base bid.

ADDENDUM TO AGREEMENT FOR SERVICES

This Addendum shall be a part of a certain Agreement between the CITY OF YPSILANTI, a Michigan municipal Home-rule corporation of One South Huron Street, Ypsilanti, Michigan 48197 referred to as "CITY", and _____, of _____, Michigan, referred to as "CONTRACTOR", a _____. (sole proprietor, corporation, partnership, etc.).

1. This Addendum is an addition and amendment to the primary Contract between the parties. In an event of a conflict between the language of this Addendum and the primary Contract, the language and terms of this Addendum shall take precedence.

2. Standard of Performance. The CONTRACTOR shall perform the Contract faithfully and diligently and perform the services in a competent, professional, satisfactory and proper manner and during the Contract term or extensions thereof, use every best effort and endeavor to promote the interests of the CITY and devote such time, attention, skill, knowledge and ability as is necessary to most effectively and efficiently carry out and perform the Contract.

3. The parties understand and agree that the CITY may terminate this Contract at any time with or without notice. In such event the CONTRACTOR will be compensated for work already completed

4. This Contract is to be performed in Washtenaw County, Michigan, and all legal venue shall exclusively lie therein.

5. The parties agree that time is of the essence in the performance of this Contract by the CONTRACTOR.

6. Each provision of this Contract shall be separately enforceable and in the event that a court of competent jurisdiction determines or adjudges that any provision of this Contract is invalid or illegal, such decision shall not effect the rest of the Contract which shall remain in full force and effect.

7. This Agreement shall be governed by and construed in accordance with the laws of Michigan.

8. Independent Contractor. The relationship of the CONTRACTOR to the CITY is and shall continue to be that of an independent contractor and no liability or benefits such as worker's compensation, pension rights, or other rights or liabilities arising out of or related to a contract for hire or employer/employee relationship shall arise or accrue to either party as a result of the performance of this Contract.

9. Waiver of Liability. The CONTRACTOR hereby waives any claim against the CITY and agrees not to hold the CITY liable for any personal injury or damage incurred by

it, its employees or associates on this project which is not held by a court of competent jurisdiction to be directly attributable to the sole and/or gross negligence or malicious intentional conduct of any employee of the CITY acting within the scope of their employment. It further agrees to hold the CITY harmless from any such claim by its employees or associates.

10. For the purpose of the hold harmless indemnity and insurance provisions contained in this Contract, the term "CITY" shall be deemed to include the City of Ypsilanti and all other associated, affiliated, allied or subsidiary entities, or commissions, officers, agents, representatives and employees.

11. The following Indemnification Agreement shall be, and is hereby, a provision of the Contract and shall be endorsed on the reverse sides of all certificates of insurance:

"The CONTRACTOR agrees to protect, defend, indemnify and hold the CITY and its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this Agreement and/or the performance hereof. Without limiting the generality of the foregoing, any and all such claims, etc., relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged infringement of any patent, trademark, copy right (or application for any thereof) or any other tangible or intangible personal or property right, or any actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court, shall be included in the indemnity hereunder. The CONTRACTOR further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc., at his sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent."

12. Insurance.

a. The CONTRACTOR prior to commencing work shall provide at his own cost and expense the following insurance to the CITY in insurance companies licensed and/or approved in the State of Michigan, which insurance shall be evidenced by certificates and/or policies as determined by the CITY. All policies and certificates of insurance shall be approved by the Department of City Manager of the CITY prior to the inception of any work.

b. Each certificate or policy shall require that, thirty days prior to cancellation or material change in the policies, notice thereof shall be given to the CITY by

registered mail, return receipt requested, for all of the following stated insurance policies. All such notices shall name the CONTRACTOR and identify the contract number.

c. All property losses shall be made payable to and adjusted with the CITY.

d. In order to determine financial strength and reputation of insurance carriers, all companies providing the coverages required shall be licensed or approved by the Insurance Bureau of the State in which the work is performed and shall have a financial rating not lower than XI and a policyholder's service rating no lower than B+ as listed in A.M. Best's Key Rating Guide, current edition. Certificates of insurance shall note A.M. Best's Rating. Companies with ratings lower than B+:XI will be acceptable only upon written consent of the CITY.

e. All policies and certificates of insurance of the CONTRACTOR shall contain the following clauses:

(1) The clause "other insurance provision" in a policy in which the CITY is named as an insured, shall not apply to the CITY.

(2) The insurance companies issuing the policy or policies shall have no recourse against the CITY (including its agents and agencies as aforesaid) for payment of any premiums or for assessments under any form of policy.

(3) Any and all deductibles in the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of, the CONTRACTOR.

(4) The CITY (at its option) shall be listed as an Additional Named Insured on the following insurance coverages provided by the CONTRACTOR.

YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	1)	Comprehensive General Liability
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	2)	Automobile Liability
YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	3)	Owners Contractors Protective Liability

f. The CONTRACTOR shall maintain at its own expense during the term of this Contract the following insurance:

(1) Worker's Compensation insurance with Michigan statutory limits and employers' liability insurance with minimum limits of \$500,000 each accident.

(2) General Liability insurance with a minimum limit of liability per occurrence of \$1 Million Combined Single Limit (Bodily Injury/Property Damage), with no aggregate..

This insurance shall indicate on the Certificate of Insurance the following coverages:

- (a) Premises - Operations
- (b) Independent Contractor and Subcontractors
- (c) Products and Completed Operations
- (d) Broad Form Contractual
- (e) Broad Form Liability Endorsement

(3) Automobile Liability insurance with minimum limits of liability, per occurrence, of \$1 Million Combined Single Limit (Bodily Injury/Property Damage) unless otherwise indicated in the "Special Conditions" of the Contract specifications. This insurance shall include for bodily injury and property damage the following coverages:

- (a) Owned automobiles
- (b) Hired automobiles
- (c) Non-owned automobiles

(4) Protective Liability Insurance: Owners and Contractors. The CONTRACTOR shall provide the original and duplicate policy of insurance to the City Manager. This insurance contract shall name the CITY as the insured and remain in effect until the contract is accepted by the CITY.

The insurance shall provide minimum limits of liability per occurrence of \$500,000. Combined Single Limit. Said insurance shall provide that the term "Owner" or CITY shall be deemed to include all authorities, boards, bureaus, commissions, divisions, departments, districts and offices of the CITY and the individual members, employees and agents thereof in their official capacities.

(5) Construction Insurance: The CONTRACTOR at his own cost and expense shall provide and maintain the applicable construction insurance until the Contract is accepted by the CITY and/or its designee. This coverage shall be written for 100% of the completed value covering the CITY as the insured, with a deductible of not more than \$1,000. The CONTRACTOR shall provide the original and duplicate policy to the CITY (unless the CITY shall accept, in lieu thereof, all contained endorsements including all applicable provisions and coverages).

(6) Professional Services. CONTRACTOR shall provide professional liabilities (errors and omissions) insurance, with minimum limits of \$1 Million each occurrence.

(7) Disability Benefits: The CONTRACTOR shall provide proof of compliance with the Disability Benefits Law. (If applicable).

(8) Additional insurance may be required on an individual basis for extra hazardous contracts and specific service agreements. If such additional insurance is required for a specific contract, that requirement will be described in the "Special Conditions" of the contract specifications.

g. If any of the Property and Casualty insurance requirements are not complied with at their renewal dates, payments to the CONTRACTOR will be withheld until those requirements have been met, or at the option of the CITY the CITY may pay the Renewal Premium and withhold such payments from any monies due the CONTRACTOR.

h. In the event that claims in excess of the insured amounts provided herein, are filed by reason of any operations under the Contract, the amount of excess of such claims, or any portion thereof, may be withheld from payment due or to become due the CONTRACTOR until such time as the CONTRACTOR shall furnish such additional security covering such claims as may be determined by the CITY.

i. If at any time any of the foregoing policies shall be or become unsatisfactory to the CITY to form or substance, or if a company insuring any such policy shall be or become unsatisfactory to the CITY, the CONTRACTOR shall upon notice to that effect from the CITY promptly obtain a new policy, submit the same to the City Manager for approval and submit a certificate thereof as herein provided. Upon failure of the CONTRACTOR to furnish, deliver and maintain such insurance as above provided, this Contract, at the election of the CITY may be forthwith declared suspended, discontinued or terminated. Failure of the CONTRACTOR to take out and/or maintain or the taking out and/or maintenance of any required insurance, shall not relieve the CONTRACTOR from any liability under the Contract, nor shall the insurance requirements be construed to conflict with or otherwise limit the obligations of the CONTRACTOR concerning indemnification.

j. Certificate of Insurance; required language. The Certificate of Insurance obtained by the CONTRACTOR shall contain the following language: "The City of Ypsilanti, Michigan, its elected officials, officers, employees, boards, commission, authorities, voluntary associations, and any other units operating under the jurisdiction of the City and within appointment of its operating budget, including the City of Ypsilanti, are named as additional insured, and such coverage shall be considered to be the primary coverage rather than any policies and insurance or self insurance retention owned or maintained by the City of Ypsilanti."

13. Conflict of Interest. The CONTRACTOR covenants that the CONTRACTOR (individually, or if a corporation, trust, limited liability company or partnership, "the entity") nor any officer, principal, partner, agent or employee of the entity has any interest nor shall they acquire any interest, directly or indirectly, which would conflict in the manner or degree of performance with the Contract. Further that if any such conflict of interest develops and exists during the term of the contract that the CONTRACTOR shall, within 7

days of the existence of such conflict of interest, notify the CITY in writing of the existence and nature of the said conflict of interest.

14. Contingent Fees. The CONTRACTOR warrants it has not employed or retained any company or person other than bonafide employees working solely for the CONTRACTOR, to solicit or secure this Contract, and that it has not paid or agreed to pay any company, or person, other than a bonafide employee working solely for the CONTRACTOR, any fee, commission, percentage, brokerage fee, gift, or any other consideration contingent upon or resulting from the award of making this Contract. For breach or violation of this warranty, the CITY shall have the right to annul the Contract without liability or, at its discretion, to deduct from the fees due the CONTRACTOR, or otherwise, recover the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

15. The CONTRACTOR further agrees to perform this Contract in accord with all federal, state and local laws and will not discriminate against, or give preferential treatment to, any person on the basis of race, sex, sexual orientation, color, national origin, religion, handicap status, heights, weight, marital status, or other criteria which is not relevant to the particular job.

16. The CONTRACTOR further agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, national origin, disability as set forth in the American's With Disability Act, Michigan PWDA, age, height, weight, or marital status (except insofar as it relates to a bonafide or occupational qualification reasonably necessary to the normal operation of the business). Breach of this provision may be regarded as material breach of the Agreement.

17. Permits. The CONTRACTOR shall secure and bear the cost of any permits or licenses of a temporary nature necessary for the prosecution of the work. In particular, he shall secure and bear the cost of shutting off and turning on public services of every nature which may be required by his operations. Where such discontinuance of service affects consumers, due and sufficient notice shall be served upon those so affected.

18. Davis-Bacon Act. Pursuant to the Davis-Bacon Act (Title 29, 40 UCS Section 276A-276A-5), the rates of wages paid to employees of the CONTRACTOR on this work shall be no less than the prevailing wages for this locality to all class of workers employed by the CONTRACTOR on this improvement, as set forth in the Code and Act.

19. Improvement of Real Property or Performing Management Construction Services. In the event the contract provides for improvement of real property or performing management construction services as provided in MCLA 125.1591, the following provisions apply:

(A) A contract between CONTRACTOR and the CITY for an improvement as provided above shall contain the following provisions:

(a) That if a CONTRACTOR discovers one or both of the following physical conditions of the surface or subsurface at the improvement site, before disturbing the physical condition, the contractor shall promptly notify the CITY of the physical condition in writing:

(i) A subsurface or a latent physical condition at the site is differing materially from those indicated in the improvement contract.

(ii) An unknown physical condition at the site is of an unusual nature differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the improvement contract.

(b) That if the CITY receives a notice under subdivision (A), the CITY shall promptly investigate the physical condition.

(c) That if the CITY determines that the physical conditions do materially differ and will cause an increase or decrease in costs or additional time needed to perform the contract, the CITY's determination shall be made in writing and an equitable adjustment shall be made and the contract modified in writing accordingly.

(d) That the CONTRACTOR cannot make a claim for additional costs or time because of a physical condition unless the CONTRACTOR has complied with the notice requirements of subdivision (A). The CITY may extend the time required for notice under subdivision (A).

(e) The CONTRACTOR cannot make a claim for an adjustment under the contract after the CONTRACTOR has received the final payment under the contract.

(B) If the CONTRACTOR does not agree with the CITY's determination, with the CITY's consent the CONTRACTOR may complete performance on the contract.

(C) At the option of the CITY, the CONTRACTOR and the CITY shall arbitrate the CONTRACTOR's entitlement to recover the actual increase in contract time and costs incurred because of the physical condition of the improvement site. The arbitration shall be conducted in accordance with the rules of the American Arbitration Association and judgment rendered may be entered in any court having jurisdiction.

20. Living Wage.

A. (1) If this contract involves \$25,000, or more, Living Wages shall be paid according to the Ypsilanti Living Wage Ordinance No. 892 (The Ordinance) and City Code Section 2-298(8); and

(2) Suitable notices shall be posted in the work place; and

(3) Evidence of compliance including payroll records shall be provided to the Ypsilanti Personnel Department within 10 days of written request from the Ypsilanti Personnel Department.

B. In the event of violation of the provisions of The Ordinance or this contract this contract may be modified or terminated to comply with the provisions of The Ordinance, including withholding of moneys in amount equal to Living Wages not paid in accordance with The Ordinance and the City may also take action to recover the amount of the contract provided to any person found to have violated The ordinance.

C. Any employee shall have a separate cause of action to enforce the provisions of this contract and The Ordinance and any rights conferred under The Ordinance, in law and or equity, and any court of competent jurisdiction upon proper proof and the prevailing of the employee in such action, shall award actual damages, wage restitution, interest and actual attorney fees.

D. The City shall have the right to enforce this contract and The Ordinance in law or equity by court process including specific performance.

21. Construction Unity Board. Contractor agrees that they will sign a Construction Unity board ("CUB") Memorandum of Understanding (MOU) as a condition which must be fulfilled prior to receiving a contract with the City. Failure to sign a CUB MOU will result in the removal of your contract from the bid process. This applies to new construction or renovation work on capital facilities or improvement projects and the CUB agreement shall be enclosed with the request for proposal.

22. Not in Default to City. The CONTRACTOR hereby certifies that the CONTRACTOR is not in default to the CITY, and that there are no unpaid taxes, real or personal, owed to the CITY by the CONTRACTOR, and the CONTRACTOR has no other unfulfilled obligations to the CITY and is in compliance with all Ypsilanti City codes and ordinances. The parties understand that a breach of this provision is a material breach of the contract.

23. American's With Disabilities Act Compliance. If this contract alters or resurfaces any streets, intersections, sidewalks, or curb ramps, CONTRACTOR shall ensure that each portion of the project, to the maximum extent feasible, shall be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities. Each project shall comply with the American's With Disabilities Act requirements, including 28 C.F.R. §§ 35.151(b),(c),(e)(1) and (e)(2) and 28 C.F.R. Part 36, App. A, the ADAAG.

Note: The City of Ypsilanti has chosen to follow the ADAAG standards rather than the UFAS standards. See United States Department of Justice ADA Title II Technical Assistance Manual, Section II-6.2100)

As used in this Section, the term "resurface" shall have the definition given by the United States Department of Justice Title II Technical Assistance Manual § II-6.6000 "Resurfacing beyond normal maintenance is an alteration. Merely filling potholes is considered to be normal maintenance."

As used in this Section, the term "to the maximum extent feasible" shall have the meaning set forth at 28 C.F.R. § 36.402(c).

As used in this Section, the term "readily accessible to and usable by persons with disabilities" shall have the meaning set forth at Section II-6.1000 of the US Department of Justice ADA Title II Technical Assistance Manual, and set forth at 28 CFR Appendix B Section 36.401.

24. The Contract and its attachments, and this Addendum, are the sole Contract and Agreement between the parties. Any changes, additions or deletions shall not be effective or actionable unless they are in writing signed by the parties.

25. Except in amounts less than \$20 million, CONTRACTOR certifies that it, its successor, its parent company, or any of its subsidiaries or subunits does not engage in the practice of committing or contributing funds or property, extending credit, or contract for goods or services to develop petroleum resources, natural gas resources, or nuclear power in Iran.

IN WITNESS WHEREOF, the undersigned have set their hands this _____ day of _____, 2014.

In the presence of:

CONTRACTOR

CITY OF YPSILANTI, a Michigan
Municipal Home-rule City

BY: _____
Ralph Lange, City Manager

APPROVED AS TO FORM:

JOHN M. BARR P-10475
Ypsilanti City Attorney

BID FORM - BID FOR UNIT PRICE CONTRACT

TO: City of Ypsilanti
One South Huron St.
Ypsilanti, Michigan 48197

PROJECT: Ypsilanti Heritage Bridge
Michigan Ave.
Ypsilanti, Michigan

PROPOSAL OF: _____(hereinafter called
"Bidder"), organized and existing under the laws of the State of
_____, doing business as _____
(insert "a corporation," "a partnership," or "an individual" as applicable.

To Whom It May Concern:

The Bidder, having examined the plans, project manual, geotechnical report, and related documents as well as the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including site conditions and the availability of labor and materials, hereby proposes to furnish all labor, materials, and supplies, and 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 part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the work within the number of calendar days declared below.

The Bidder declares that he/she has had prior experience in the type of work required by the Contract Documents and that he/she has the necessary finances, personnel and working organization, and equipment available to execute the proposed work in accordance with the requirements of the Contract Documents. The Bidder further declares that he/she is prepared to and will promptly furnish a certified written statement regarding qualifications, including finances, upon request of the Owner.

The Bidder certifies that this Proposal is fair and genuine, and not collusive or sham, and that he/she has not in any manner, directly or indirectly agreed or colluded with any other person, firm, or association to submit a sham bid or to refrain from bidding, or in any way to fix the amount of this Proposal or that of any other bidder.

ACKNOWLEDGEMENT: Bidder acknowledges receipt of the following addenda:

BASE PROPOSAL:

Base proposal includes 2 separate parts. The contractor is to provide unit price and totals price for each bid item per part. The owner reserves the right to delete parts from the awarded contract.

PART A					
MDOT 2012	Description	Qty.	UOM	Unit Price	Total Price
2050010	Embankment, CIP	60	Cyd		
2050016	Excavation, Earth	99	Cyd		
2060002	Backfill, Structure, CIP	464	Cyd		
2060010	Excavation, Fdn	336	Cyd		
2080036	Erosion Control, Silt Fence	360	Ft		
3020016	Aggregate Base, 6 inch	336	Syd		
3027021	Porous Backfill with Filter Fabric	106	Cyd		
4040033	Underdrain, Fdn, 6 inch	331	Ft		
4040113	Underdrain, Outlet Ending, 6 inch	10	Ea		
5010031	HMA, 3C	22	Ton		
7050002	Pile Driving Equipment, Furn	1	LS		
7050039	Pile Point, Steel	11	Ea		
7057001	Pile, Steel, Furn and Driven, 10 inch	405	Ft		
7060020	Conc, Low Temperature Protection	121	Cyd		
7060092	Reinforcement, Steel, Epoxy Coated	15786	Lb		
7060100	Substructure Conc	37	Cyd		
7060110	Superstructure Conc	86	Cyd		
7060111	Superstructure Conc, Form, Finish, and Cure	1	LS		
7060140	Water Repellent Treatment, Penetrating	76	Syd		
7067010	Furnish and Install Stacked Block Wall	2080	Sft		
7077051	185'x10' Prefabricated Truss - Weathering Steel (Concrete Deck Not Inc.)	1	LS		
7077051	185' x 10' Ped Truss Installation	1	LS		
7100030	Substructure Horizontal Surface Sealer	4	Syd		
7117001	Decorative Railing	285	Ft		
8130005	Riprap, Heavy	50	Syd		
8157050	Interpretive Sign	1	Ea		
8157050	MNRTF Sign	1	Ea		
8160100	Slope Restoration, Type A *	3334	Syd		
PART A SUBTOTAL					

PART B					
MDOT 2012	Description	Qty.	UOM	Unit Price	Total Price
1500001	Mobilization, Max. ____	1	LS		
2010001	Clearing	4.57	Acre		
2020004	Tree, Rem, 6 inch to 18 inch	2	Ea		
2040025	Fence, Rem	565	Ft		
2040050	Pavt, Rem	249	Syd		
2047050	_Misc, Rem	19	Ea		
2050010	Embankment, CIP	655	Cyd		
2050016	Excavation, Earth	1093	Cyd		
2050040	Subgrade Undercutting, Type I *	40	Cyd		
2080016	Erosion Control, Gravel Access Approach	1	Ea		
2080020	Erosion Control, Inlet Protection, Fabric Drop	3	Ea		
2080036	Erosion Control, Silt Fence	6601	Ft		
3020016	Aggregate Base, 6 inch	3344	Syd		
3020026	Aggregate Base, 10 inch	445	Syd		
3080005	Geotextile, Separator	3645	Syd		
4020001	Sewer, CI A, 6 inch, Tr Det A	43	Ft		
4020004	Sewer, CI A, 12 inch, Tr Det A	32	Ft		
4020726	Sewer, CI II, 42 inch, Tr Det A	8	Ft		
4027050	_Sanitary Sewer Cover, Adj	1	Ea		
4030040	Dr Structure Cover, Type G	1	Ea		
4030200	Dr Structure, 24 inch dia	1	Ea		
4040033	Underdrain, Fdn, 6 inch	122	Ft		
4040113	Underdrain, Outlet Ending, 6 inch	1	Ea		
4047050	Outlet, Rem and Salv or Replace	1	Ea		
5010005	HMA Surface, Rem	810	Syd		
5010031	HMA, 3C	838	Ton		
6020186	Conc Pavt with Integral Curb, Reinf, 9 inch	98	Syd		
7047050	_Fishing Pier	2	Ea		
7060020	Conc, Low Temperature Protection	6	Cyd		
7060100	Substructure Conc	6	Cyd		
7117001	Decorative Railing	85	Ft		
8020038	Curb and Gutter, Conc, Det F4	55	Ft		
8080010	Fence, Chainlink, 42 inch	560	Ft		
8087050	_Gate, Bollard with Chain	1	Ea		
8130005	Riprap, Heavy	195	Syd		
8154168	Viburnum trilobum 'Compactum', #3 cont.	3	Ea		
8157050	_B2B Hoop Sign	5	Ea		
8157050	_Interpretive Sign	8	Ea		
8157050	_Kiosk	2	Ea		

8157050	_Bench	3	Ea		
8157050	_MNRTF Sign	1	Ea		
8157051	_Plaza	1	LS		
8160100	Slope Restoration, Type A	4488	Syd		
8167030	_Native Seed Mix	2	Lb		
PART B SUBTOTAL					
PART B – ALTERNATIVE BID ITEMS					
2040050	Pavt, Rem	134	Syd		
2040061	Structures, Rem Portions	1	LS		
7157051	_Painting, Misc	1	LS		
8153166	Rhus aromatica ' Gro-Low', #2 cont.	109	Ea		
8154168	Viburnum trilobum 'Compactum', #3 cont.	9	Ea		
8160025	Mulch	123	Syd		
8160066	Topsoil Surface, Furn, 8 inch	123	Syd		
PART B – ALTERNATIVE BID ITEMS SUBTOTAL					
PART A SUBTOTAL					
PART B SUBTOTAL					
PART B – ALTERNATIVE BID ITEMS SUBTOTAL					
OVERALL PROJECT TOTAL					

OTHER ALTERNATE BIDS:

Bidders may submit bid alternates for consideration by the Owner. The Bidder understands that the Owner reserves the right to reject any or all bid alternates. Bid alternate costs shall be clearly presented and shall include a written summary of all costs, including any permit fees, professional engineering fees or other professional fees related to implementation of the proposed alternate.

TIME: The Bidder agrees to perform all of the Ypsilanti Heritage Bridge work at Michigan Ave. in Ypsilanti, Michigan, as described in the Contract Documents within 180 calendar days from the date of the Notice to Proceed, issued by the Owner.

ADDITIONAL WORK: For additional work performed upon written instruction of the Owner by Subcontractors of the Undersigned, add to the Subcontractor's price for such additional work a fee of _____ percent, which fee includes all of the charges of the Undersigned for overhead and profit. For additional work performed upon written instructions of the Owner by persons other than Subcontractors, the charges shall be actual cost of all labor and materials (less all discounts) plus a fee of _____ percent, which fee includes all of the charges of the Undersigned for overhead and profit to which shall be added the actual cost of insurance and taxes.

The contract shall be awarded on the basis of the lowest qualified and responsible bid in accordance with the provisions of the Contract Documents. The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any formalities in the bidding.

The Bidder agrees that this bid shall be valid and may not be withdrawn for a period of forty-five (45) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, the Bidder will execute the formal contract within 10 days and deliver Surety Bonds as required by the Contract Documents.

Respectfully submitted

BY: _____(Name and title)

_____ (Email Address)

_____ (Business Name)

_____ (Business Address)

_____ (Business Phone and Fax)

SECTION 0100
SUMMARY OF WORK

1. DESCRIPTION OF PROJECT

- 1.1 The project consists of the construction of a new prefabricated pedestrian bridge crossing the Huron River. The project also includes construction of new cast-in-place abutments (pier), one modular block overlook, modular block ramp, earthen embankment approach ramp, and concrete approach ramp to connect to and continue the B2B trail along the Huron River.
- 1.2 Contractor responsibilities include, but are not limited to, demolition, excavation, site utilities, concrete foundations, driven pile foundations, bridge construction, ramp construction, backfill, paving, sidewalk construction, and site restoration as shown in the contract drawings, and as described in these specifications.

2. CONTRACT DOCUMENTS

- 2.1 The contract between Owner and Contractor shall include the following, as well as all referenced documents contained therein:
 - 2.1.1 Project manual dated **March 25, 2015**.
 - 2.1.2 Drawings: Sheets 1 thru **42** including Part A (TF11-120) and Part B (TF12-120) including alternative bid items.
 - 2.1.3 “Geotechnical Investigation - Michigan Avenue Pedestrian Bridge over the Huron River Ypsilanti, Michigan” Prepared by: The Mannik & Smith Group, Inc.

3. WORK SEQUENCE

- 3.1 Construction work is to begin within 10 days after the Owner issues the Notice to Proceed, or as otherwise indicated in the Specifications.**

END OF SECTION 0100

SECTION 0200
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. GENERAL

- 1.1 Submit shop drawings, product data and samples as required by the specification sections.

2. SHOP DRAWINGS

- 2.1 Original drawings, prepared by Contractor, subcontractor, supplier or distributor, which illustrate some portion of the Work, showing fabrication, layout, setting or erection details.
- 2.2 Identify details by reference to sheet and detail numbers shown on Contract Drawings.

3. PRODUCT DATA

- 3.1 Manufacturer's standard schematic drawings:
 - 3.1.1 Modify drawings to delete information that is not applicable to the project.
 - 3.1.2 Supplement standard information to provide additional information applicable to the project.
- 3.2 Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
 - 3.2.1 Clearly mark each copy to identify pertinent materials, products or models.
 - 3.2.2 Show dimensions and clearances required.
 - 3.2.3 Show performance characteristics and capacities.

4. SAMPLES

- 4.1 Physical examples to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged.
- 4.2 Office samples shall be of sufficient size and quantity to clearly illustrate:
 - 4.2.1 Functional characteristics of product or material with integrally related parts and attachment devices.
 - 4.2.2 Full range of color samples.

4.2.3 After review, samples will be retained by Engineer.

4.3 Field samples and mock-ups:

4.3.1 Erect at project site at location acceptable to Engineer.

4.3.2 Construct each sample or mock-up complete, including work of all trades required in finish work.

5. CONTRACTOR RESPONSIBILITIES

5.1 Review specifications and determine which trades/manufacturers must produce shop drawings. Contact those trades/manufacturer's to coordinate timely and complete submission of shop drawings, in the number of copies required below plus copies to be retained by the Contractor.

5.2 Review shop drawings, product data and samples prior to submission.

5.3 Verify field measurements, field construction criteria and catalog numbers and similar data.

5.4 Coordinate each submittal with requirements of work and of Contract Documents.

5.5 Contractor's responsibility for errors and omissions in submittals is not relieved by Engineer's and/or Owner's review of submittals.

5.6 Contractor's responsibility for deviations in submittals from requirements is not relieved by Engineer's and/or Owner's review of submittals, unless Owner gives written acceptance of specific deviations.

5.7 Notify Engineer, in writing at time of submission, of deviations in submittals from requirements of Contract Documents.

5.8 Begin no work that requires submittals until return of submittals with Engineer's stamp and initials or signature indicating review. Approval by the General Contractor does not constitute approval by the Engineer.

5.9 Contractor responsibilities include, but are not limited to: quantities; dimensions, which shall be confirmed and correlated at the job site prior to construction; fabrication processes and techniques of construction; coordination of his work with that of all other trades and between trades.

6. SUBMISSION REQUIREMENTS

6.1 Submittals from subcontractors and suppliers must go through and be reviewed by the General Contractor. Submittals without the stamped

approval of the General Contractor may be returned by the Engineer un-reviewed.

- 6.2 Schedule submissions at least 14 days before dates reviewed submittals will be needed.
- 6.3 Submit three (3) copies of Shop Drawings and Product Datum to Engineer. Engineer will retain one reviewed copy and return up to two (2) copies to Contractor.
- 6.4 Submit requested samples. Provide in triplicate, unless notified otherwise. Ship prepaid by Contractor. C.O.D. items will not be accepted by Engineer.
- 6.5 Accompany submittals with transmittal letter containing:
 - 6.5.1 Date.
 - 6.5.2 Project title and number.
 - 6.5.3 Contractor's name and address.
 - 6.5.4 The number of each Shop Drawing, product datum and sample submitted.
 - 6.5.5 Notification of deviations from Contract Documents.
 - 6.5.6 Other pertinent data.
- 6.6 Submittals shall include:
 - 6.6.1 Date and revision dates.
 - 6.6.2 Project title and number.
 - 6.6.3 The names of: Engineer, Contractor, Subcontractor, Supplier, Manufacturer and separate detailer when pertinent.
 - 6.6.4 Identification of product or material.
 - 6.6.5 Field dimensions, clearly identified as such.
 - 6.6.6 Specification Section number.
 - 6.6.7 Applicable standards, such as ASTM number or Federal Specification.
 - 6.6.8 A large blank space for the Engineer's stamp.

6.6.9 Identification of deviations from Contract Documents.

6.6.10 Contractor's stamp, signed, certifying to review of submittal, verification of field measurements and compliance with Contract Documents.

7. RESUBMISSION REQUIREMENTS

7.1 Shop Drawings:

7.1.1 Revise initial drawings as required and resubmit as specified for initial submittal.

7.1.2 Indicate on drawings any changes that have been made other than those requested by Engineer.

8. ENGINEER'S RESPONSIBILITIES

8.1 Review submittals with reasonable promptness.

8.2 Review for:

8.2.1 General conformance with the design concept of project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the drawings and specifications. Engineer's and/or Owner's review does not relieve the contractor from fully complying with the requirements of the contract documents.

8.3 Review of separate item does not constitute review of an assembly in which item functions.

8.4 Affix stamp and initials certifying to review of submittal.

8.5 Return submittals to Contractor for distribution.

END OF SECTION 0200

SECTION 0300
SUBSTITUTIONS AND PRODUCT OPTIONS

1. PRODUCTS LIST

- 1.1 Submit to the Engineer three (3) copies of complete list of all products that are proposed for installation.
- 1.2 Tabulate list by each specification section.
- 1.3 For products specified under reference standards, include with listing of each product:
 - 1.3.1 Name and address of manufacturer.
 - 1.3.2 Trade name.
 - 1.3.3 Model or catalog designation.
 - 1.3.4 Manufacturer's data.
 - 1.3.4.1 Performance and test data.
 - 1.3.4.2 Reference standards.

2. PRODUCT OPTIONS

- 2.1 For products specified only by reference standards, select any product meeting standards, by any manufacturer.
- 2.2 For products specified by naming several products or manufacturers, select any product and manufacturer named.
- 2.3 For products specified by naming only one product and manufacturer, substitution will be considered as outlined in paragraph 1.03 of this section.
- 2.4 For products specified with "no substitution" in specifications, or shown on the drawings as being the only acceptable product, there is no option, and no substitutions will be allowed.

3. SUBSTITUTIONS

- 3.1 During bidding, Engineer will consider written requests from prime bidders for substitutions, received at least 10 days prior to bid date; requests received after that time will not be considered. If specific

approval is not allowed before the bid, then the requested substitution shall be considered denied. Acceptable requests will be specifically allowed in a bid addendum issued prior to the bid.

- 3.2 Not later than 30 days after Contract date, Engineer will consider formal requests from Contractor for substitution of products in place of those specified.
- 3.3 Submit three (3) copies of request for substitution. Include in request:
 - 3.3.1 Complete data substantiating compliance of proposed substitution with Contract Documents.
 - 3.3.2 For products:
 - 3.3.2.1 Product identification, including manufacturer's name and address.
 - 3.3.2.2 Manufacturer's literature:
 - (1) Product description.
 - (2) Performance and test data.
 - (3) Reference standards.
 - 3.3.2.3 Samples.
 - 3.3.2.4 Name and address of similar projects on which product was used, and date of installation.
 - 3.3.3 Itemized comparison of proposed substitution with product specified, including, without limitation, warranty provided.
 - 3.3.4 Data relating to changes in construction schedule, if any.
 - 3.3.5 Accurate cost data on proposed substitution in comparison with product specified.
- 3.4 In making request for substitution, Contractor represents:
 - 3.4.1 He has personally investigated proposed product, and determined that it is equal or superior in all respects to that specified, unless noted otherwise.
 - 3.4.2 He will provide same warranty for substitution as for product specified.

- 3.4.3 He will coordinate installation of accepted substitution into Work, making such changes as may be required for Work to be complete in all respects.
- 3.4.4 He waives all claims for additional costs related to substitution that subsequently becomes apparent.
- 3.4.5 Cost data is complete and includes all related costs under his Contract, but excludes:
 - 3.4.5.1 Costs under separate contracts.
 - 3.4.5.2 Engineer redesign.
- 3.5 Substitutions will not be considered if:
 - 3.5.1 They are indicated or implied on shop drawings or product data submittals without formal request submitted in accord with Paragraph 1.03.
 - 3.5.2 Acceptance will require substantial revision of Contract Documents.
 - 3.5.3 Required information described in paragraph 1.03.C above is not submitted in its entirety or in a timely manner. Submission content and timeframe are the sole responsibilities of the Contractor.
- 3.6 The Engineer may reject any requested substitution should it be deemed in the best interest of the project.

END OF SECTION 0300

SECTION 0400
CLEANING

PART 1 GENERAL

1. GENERAL

- 1.1 Maintain all areas on site from accumulation of waste, debris, and rubbish, caused by Work operations. Supervision of cleaning activities is the responsibility of the Contractor.
- 1.2 At completion of Work of each subcontractor or trade, remove waste materials, rubbish, tools, equipment, and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.
- 1.3 All work of the contract under this section shall be part of the base bid—no additions to the contract will be allowed for cleaning activities.

2. SAFETY REQUIREMENTS

- 2.1 Standards: Maintain Project in accordance with all applicable safety and insurance standards.
- 2.2 Hazards Control:
 - 2.2.1 Prevent accumulation of wastes that create hazardous conditions.
- 2.3 Conduct cleaning and disposal operations to comply with State of Michigan and local ordinances and anti-pollution laws.
 - 2.3.1 Do not burn or bury rubbish and waste materials on project site.
 - 2.3.2 Do not dispose of wastes into streams, waterways, or sewers.
 - 2.3.3 Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

PART 2 PRODUCTS

1. MATERIALS

- 1.1 Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- 1.2 Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 EXECUTION

1. DURING CONSTRUCTION

- 1.1 Execute cleaning to ensure that grounds and public properties are maintained free from accumulations of waste materials and rubbish generated by each subcontractor or trade. This includes all locations.
- 1.2 At weekly intervals or more often if required by the Owner during progress of Work, clean site and dispose of waste materials, debris and rubbish.
- 1.3 Place waste materials, debris and rubbish in containers provided by General Contractor as part of base bid. Maintain dumpster on site as required to contain accumulated construction debris.
- 1.4 Handle materials in a controlled manner with as few handlings as possible.
- 1.5 Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

2. FINAL CLEANING

- 2.1 Broom clean paved exterior surfaces; rake clean other surfaces of grounds.
- 2.2 Maintain cleaning until project is occupied.

END OF SECTION 0400

SECTION 0500
PROJECT MEETINGS

1. GENERAL

- 1.1 Contractor: Schedule and administer project meetings.
 - 1.1.1 Prepare agendas.
 - 1.1.2 Make physical arrangements for meetings.
 - 1.1.3 Preside at meetings.
 - 1.1.4 Record minutes; include significant proceedings and decisions and distribute copies of minutes to participants.

2. PRE-CONSTRUCTION MEETING

- 2.1 Scheduled within 15 days after award of Contract, and before any construction commences.
- 2.2 Attendance may include the following:
 - 2.2.1 Owner's representative
 - 2.2.2 Engineer
 - 2.2.3 Contractor
 - 2.2.4 Major subcontractors
 - 2.2.5 Representative(s) of relevant governmental agencies, as required
 - 2.2.6 Other interested parties.
- 2.3 Minimum Agenda: The Contractor shall distribute and discuss the following items as they apply to this project:
 - 2.3.1 Tentative construction schedule.
 - 2.3.2 Critical work sequencing.
 - 2.3.3 Processing of field decisions and Change Orders.
 - 2.3.4 Submittal of shop drawings, product data and samples.

- 2.3.5 Use of premises:
 - 2.3.5.1 Office and storage areas.
 - 2.3.5.2 Owner's requirements.
- 2.3.6 Major equipment and/or material deliveries, procedures, and priorities.

3. PROGRESS MEETINGS

- 3.1 Schedule regular meetings, weekly or as agreed to by Owner, Contractor, and Engineer.
- 3.2 Hold additional progress meetings as progress of work dictates.
- 3.3 Location of meetings: At the worksite.
- 3.4 Attendance may include the following:
 - 3.4.1 Owner's representative.
 - 3.4.2 Engineer.
 - 3.4.3 Contractor.
 - 3.4.4 Representative(s) of relevant governmental agencies, as required
 - 3.4.5 Other interested parties
- 3.5 Minimum agenda as appropriate to the project may include the following:
 - 3.5.1 Review work progress since last meeting.
 - 3.5.2 Note field observations, problems and decisions.
 - 3.5.3 Identify problems that impede planned progress.
 - 3.5.4 Review off-site fabrication problems.
 - 3.5.5 Develop corrective measures and procedures to regain planned schedule.
 - 3.5.6 Revise construction schedule as indicated.

- 3.5.7 Plan progress during next work period.
- 3.5.8 Review submittal schedules, expedite as required to maintain schedule.
- 3.5.9 Review maintaining of quality of work standards.
- 3.5.10 Review proposed changes for:
 - 3.5.10.1 Effect on construction schedule.
 - 3.5.10.2 Effect on completion date.
- 3.5.11 Complete other current business.
- 3.5.12 Discuss new business

END OF SECTION 0500

SECTION 0600
CONSTRUCTION SCHEDULES

1. GENERAL

- 1.1 Contractor: Provide projected construction schedules for the entire Work as required by the Owner. Revise periodically as required to reflect progress of work. Note that the schedules shall be from beginning of construction to final completion. Tabulate list by each specification section.

2. FORM OF SCHEDULE

- 2.1 Prepare critical path schedule and a horizontal bar chart.
 - 2.1.1 Provide separate horizontal bar column for each trade or operation.
 - 2.1.2 Horizontal time scale: Identify first work day of each week.

3. CONTENT OF SCHEDULE

- 3.1 Provide complete sequence of construction by activity, including product procurement and delivery dates, dates for beginning and completion of each element of construction. Schedule should be based on realistic anticipated construction times, and should take into consideration delays caused by reasonable weather conditions.
- 3.2 Identify work of separate phases, or other logically grouped activities, if any.
- 3.3 Show projected percentage of completion of each item of work as of first day of each month.
- 3.4 Schedule should run from beginning of project through final completion, including punchlist and closeout phases.

4. UPDATING

- 4.1 Show all changes occurring since previous submission of updated schedule.
- 4.2 Indicate progress of each activity, show completion dates.

5. SUBMITTALS

- 5.1 Submit initial schedule to the Owner and the Engineer within 15 days of award of Contract. The Engineer will review the schedules for

completeness. Should the Engineer find the schedules incomplete, the Contractor shall review schedules and revise. The schedules shall be subject to the Owner's approval.

6. DISTRIBUTION

6.1 Following approval by Engineer and acceptance by Owner, distribute copies of schedules to:

6.1.1 Job site file.

6.1.2 Owner.

6.1.3 Engineer.

6.1.4 Representative(s) of relevant governmental agencies, as required.

6.1.5 Other interested parties.

END OF SECTION 0600

SECTION 0700
TEMPORARY FACILITIES, UTILITIES AND CONTROLS

PART 1 GENERAL

1. GENERAL

- 1.1 Install temporary facilities and utilities in conformance with Federal, State, and City of Ypsilanti requirements.
- 1.2 Obtain and pay for required applications, permits and inspections. **Note: Building Permit fees may be waived by the City of Ypsilanti for this project.**
- 1.3 Maintain temporary facilities and utilities in safe, proper operating condition.
- 1.4 Contractor: Provide projected construction schedules for the entire Work as required by the Owner. Revise periodically as required to reflect progress of work. Note that the schedules shall be from beginning of construction to final completion. Tabulate list by each specification section.

2. SAFETY

- 2.1 Provide necessary safety barricades, fencing, enclosures, railings and coverings as required by code and government regulation. This is the responsibility solely of the Contractor.
- 2.2 Provide and maintain guard lights, barricades and railings at obstructions in streets and sidewalks and at trenches and excavations in or adjacent to public streets and sidewalks. This is the responsibility solely of the Contractor.
- 2.3 During the entire construction process until final completion, secure the site during non-construction hours from unauthorized entry. Maintain secure exterior fencing. Lock exterior doors and gates during all non-construction hours.

3. TEMPORARY ACCESS AND PARKING

- 3.1 Provide and pay for police services for traffic control and coordination as required. Do not close or obstruct streets, walks and adjacent facilities without permission of authorities having jurisdiction.
- 3.2 Maintain adjacent public streets and sidewalks clear, clean and free of dirt and debris. Clean daily if required, *as part of base bid.*

PART 2 TEMPORARY FACILITIES, UTILITIES AND CONTROLS

4. WEATHER PROTECTION

- 4.1 Protect the Work and existing or adjacent property against weather damage and maintain the Work, materials, apparatus, and fixtures free from injury or damage during the entire construction period.
- 4.2 Replace at no cost to Owner any materials, apparatus, and fixtures damaged through failure to provide protection specified in paragraph 2.01 A. above.

5. BARRIERS AND ENCLOSURES

- 5.1 Provide signage to control routes of pedestrian and vehicular traffic during construction.
- 5.2 Provide "no trespassing" signs to meet OSHA requirements.
- 5.3 Erect fences, barriers and barricades as required to prevent non-construction personnel from entering construction areas. *Note that such fences, barriers and barricades may not be shown on Drawings, but still must be provided.*
- 5.4 Submit initial schedule to the Owner and the Engineer within 15 days of award of Contract. The Engineer will review the schedules for completeness. Should the Engineer find the schedules incomplete, the Contractor shall review schedules and revise. The schedules shall be subject to the Owner's approval.

6. SHORING AND BRACING

- 6.1 Provide and maintain shoring and bracing required for safety and proper execution of work and in strict accordance with government regulations. Remove these items when the work is complete.
- 6.2 Note that shoring and bracing may not be shown on the Drawings, but still must be provided as part of the work and base bid. Note also that it is solely the responsibility of the Contractor to ensure that proper and safe shoring and bracing is provided and maintained.

7. TEMPORARY SANITARY FACILITIES

- 7.1 Provide temporary portable chemical toilets, acceptable to public health authorities, equal to one toilet per 25 people present on job, or as directed

by public health authorities. Maintain in clean, sanitary condition.

- 7.2 Remove temporary sanitary facilities at completion of work.

TEMPORARY LIGHTING AND POWER

- 7.3 Provide necessary temporary electrical service and temporary wiring and outlets, as required to meet project needs for temporary lighting and power at the start of the project, as work progresses and until acceptance by Owner.
- 7.4 Extend temporary service from existing public utility service. Provide meter and extend service with disconnect to central location(s) on site.
- 7.5 Contractor shall be responsible for the proper use and maintenance of all temporary wiring systems until they are removed.
- 7.6 Installation, maintenance, operation and supervision for temporary lighting and power including cost of current consumed to be paid by Contractor.
- 7.7 Remove temporary service, light and power system when permanent service and systems are available for use. No temporary systems shall form a part of the permanent systems.
- 7.8 Electrical work for construction purposes shall conform to Federal and State requirements, as well as requirements of the NEC. Obtain and pay for required applications, permits and inspections pertaining to this work.
- 7.9 Install temporary lighting and receptacle circuits along a route determined by the Contractor.
- 7.10 Provide all lamps in wattage appropriate to space being illuminated. Replacement of lamps and fuses for whatever reason is Contractor's responsibility throughout life of project.
- 7.11 Note that temporary lighting is not shown on the Drawings, but still must be provided as described herein and as part of the base bid.

8. TEMPORARY STORAGE

- 8.1 Outdoor storage of materials shall be confined to the areas within the construction fence. Schedule material delivery to minimize on-site storage of materials.

- 8.2 Protect materials stored outdoors from damage from the weather and replace any damaged materials at no cost to Owner. The security of all stored materials is the responsibility of the Contractor.

END OF SECTION 0700

SECTION 0800
SCHEDULE OF VALUES

1. GENERAL

- 1.1 Submit Schedule of Values to the Engineer at least 10 days prior to submitting first Application for Payment. Schedule of Values is subject to the Owner's approval.
- 1.2 Upon request, support values given with data that will substantiate their correctness.
- 1.3 Submit quantities of designated materials.
- 1.4 Payment for materials stored on site will be limited to those materials listed in the Schedule of Unit Material Values. Payment is subject to Owner's requirements and the Contract Documents.
- 1.5 Use Schedule of Values only as a basis for Contractor's Application for Payment.

2. FORM OF SUBMITTAL

- 2.1 Submit typewritten Schedule of Values on 8-1/2 x 11 inch white paper.

3. PREPARING SCHEDULE OF VALUES

- 3.1 Itemize separate line item cost for work required by each Section of this Specification.
- 3.2 Make sum of total costs of all items listed in Schedule equal to total Contract Sum.

4. PREPARING SCHEDULE OF UNIT MATERIAL VALUES

- 4.1 Submit separate schedule of unit prices for materials to be stored on which progress payments will be made.
- 4.2 Make form of submittal parallel to Schedule of Values, with each line item identified same as line item in Schedule of Values.
- 4.3 Include in unit prices only:
 - 4.3.1 Cost of material.
 - 4.3.2 Delivery and unloading at site.

4.3.3 Applicable taxes.

4.4 Make sure that unit prices multiplied by quantities given equal material cost of that item in Schedule of Values.

5. REVIEW AND RESUBMITTAL

5.1 After review by Engineer and Owner, revise and resubmit schedule (and Schedule of Material Values) as required.

5.2 Resubmit revised schedule in the same manner.

5.3 Upon acceptance by the Engineer and approval of the Owner, the schedule of values shall be used throughout the project, with no changes, unless approved in advance and in writing by the Engineer and the Owner.

END OF SECTION 0800

SECTION 0900
ALLOWANCES

1. GENERAL

- 1.1 Designate, in Construction Schedule, delivery dates for products under each allowance.

2. ALLOWANCES FOR PRODUCTS

- 2.1 Include allowance amounts in Bid, for inclusion in Contract Sum. Refer to each section of the Specifications for allowance amounts, if any.

- 2.2 Amount of each allowance includes:

- 2.2.1 Net cost of product.

- 2.2.2 Delivery at site.

- 2.2.3 Applicable taxes.

- 2.3 In addition to amounts of allowances, include in Bid, for inclusion in Contract Sum, Contractor's costs for:

- 2.3.1 Handling at site, including unloading, uncrating and storage.

- 2.3.2 Protection from elements, damage, and theft.

- 2.3.3 Labor, installation, finishing, cleaning.

- 2.3.4 Other expenses, including miscellaneous items required to complete installation.

- 2.3.5 Overhead and profit.

3. SELECTION OF PRODUCTS

- 3.1 Engineer's Responsibilities:

- 3.1.1 Consult with Contractor in consideration of products and suppliers.

- 3.1.2 Make selection, designate products to be used.

- 3.1.3 Notify Contractor, in writing, designating:

3.1.3.1 Product, model and finish.

3.1.3.2 Accessories and attachments.

3.2 Contractor's Responsibilities:

3.2.1 Make appropriate recommendations for consideration of Engineer.

3.2.2 Determine qualified suppliers.

3.2.3 Obtain proposals from suppliers when requested.

3.2.4 Notify Engineer of any effect anticipated by selection of product or supplier under consideration on:

3.2.4.1 Construction schedule.

3.2.4.2 Contract Sum.

3.2.5 On notification of selection, enter into purchase agreement with designated supplier.

4. PRODUCT DELIVERY

4.1 Contractor's Responsibilities:

4.1.1 Arrange for delivery and unloading.

4.1.2 Promptly inspect products for damage or defects.

4.1.3 Submit claims for transportation damage, if any.

5. INSTALLATION

5.1 Comply with requirements of referenced specification section.

6. ADJUSTMENT OF COSTS

6.1 Should actual purchase cost be more or less than specified amount of allowance, Contract Sum will be adjusted by Change Order equal to amount of difference.

6.1.1 The Contractor shall submit detailed invoices to the Engineer for each item covered by allowances in the Specification in order to document their actual cost.

6.1.2 If the Contractor does not submit detailed invoices per paragraph 1.06.A.1 above, the Engineer shall determine and assign a cost, which shall be used on any subsequent change order.

6.2 For products specified under unit cost allowance:

6.2.1 Should quantity used be more or less than that listed in Schedule of Values, unit cost applies to quantity actually used.

6.2.2 Submit detailed invoices or other data to substantiate quantity actually used.

END OF SECTION 0900

SECTION 1000
CONTRACT CLOSEOUT

1. DESCRIPTION

1.1 Work included: Provide an orderly and efficient transfer of the completed work to the appropriate agent.

1.2 Related Requirements:

1.2.1 Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2.2 Substantial Completion as defined in the General Conditions.

2. QUALITY ASSURANCE

2.1 Prior to requesting inspection by the Engineer, use adequate means to assure that the work is completed in accordance with the specified requirements and is ready for the requested inspection.

3. SUBSTANTIAL COMPLETION

3.1 Contractor:

3.1.1 Submit written certification to Engineer that Project, or designated portion of Project, is substantially complete.

3.1.2 Submit major items to be completed or corrected.

3.2 Engineer will make an inspection within seven (7) days after receipt of certification. Note that without the written certification from the Contractor specified in paragraph 1.03.A.1 above, the Engineer will not make this inspection.

3.3 Should Engineer consider that work, or designated portion of work is substantially complete:

3.3.1 Engineer shall prepare and submit to Contractor a list of items to be completed or corrected as determined by the inspection described above.

3.3.2 Contractor to complete work listed for completion or correction, within designated time.

- 3.4 Should Engineer consider that work, or portion of work is not substantially complete:
 - 3.4.1 Engineer shall immediately notify Contractor, in writing, stating reasons.
 - 3.4.2 Contractor shall complete work, and send second written notice to Engineer, certifying that Project is substantially complete.

4. FINAL INSPECTION

- 4.1 Contractor shall submit written certification that:
 - 4.1.1 Contract Documents have been reviewed.
 - 4.1.2 Project has been inspected for compliance with Contract Documents.
 - 4.1.3 List of items described in 1.03 above has been completed.
 - 4.1.4 Work has been completed in accordance with Contract Documents, and is ready for final inspection.
- 4.2 Engineer will make final inspection within seven days after receipt of certification.
- 4.3 Should Engineer consider that work, or portion of work is finally complete in accordance with requirements of Contract Documents, he shall request Contractor to make Project Closeout submittals.
- 4.4 Should Engineer consider that work, or portion of work is not finally complete:
 - 4.4.1 Engineer shall notify Contractor, in writing, stating reasons.
 - 4.4.2 Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work, or portion of work is complete.
 - 4.4.3 Engineer will reinspect work, or portion of work.

5. EVIDENCE OF PAYMENTS, AND RELEASE OF LIENS

- 5.1 The following items shall be submitted as follows: One (1) copy to Engineer, one (1) copy to Owner.
- 5.2 Contractor's Affidavit of Payment of Debts and Claims: AIA G706.
- 5.3 Contractor's Affidavit of Release of Liens: AIA G706A, with:
 - 5.3.1 Consent of Surety to Final Payment: AIA G707.
 - 5.3.2 Contractor's full and unconditional release or waiver of liens.
 - 5.3.3 When required, separate releases of full and unconditional waivers of liens for subcontractors, suppliers, and others with lien rights against property of Owner, together with list of those parties.
- 5.4 All submittals shall be duly executed before delivery to Engineer and Owner.

6. FINAL ADJUSTMENT OF ACCOUNTS

- 6.1 Submit final statement of accounting to Engineer.
- 6.2 Statement shall reflect all adjustments.
- 6.3 Engineer will prepare final Change Order, if required, reflecting approved adjustments to Contract Sum not previously made by Change Orders.

7. FINAL APPLICATION FOR PAYMENT

- 7.1 Contractor shall submit final application in accordance with requirements of General and Supplementary Conditions.

END OF SECTION 0110

SECTION 01100
PROJECT RECORD DOCUMENTS

1. MAINTENANCE OF DOCUMENTS

- 1.1 The Contractor shall maintain at job site, one copy of:
 - 1.1.1 Contract Drawing and Specifications.
 - 1.1.2 Addenda.
 - 1.1.3 Change Orders.
 - 1.1.4 Reviewed Shop Drawings.
 - 1.1.5 Other Modifications to Contract.
 - 1.1.6 Field Test Records.
- 1.2 Maintain documents in clean, dry, legible condition.
- 1.3 Do not use record documents for construction purposes.
- 1.4 Make documents available at all times for inspection by Engineer, Owner, and governmental agents.
- 1.5 Store documents in temporary field office, apart from documents used for construction.
- 1.6 Provide files and racks for storage of documents.

2. RECORDING

- 2.1 The Contractor shall keep and record all information in the Project Record documents.
- 2.2 Label each document "PROJECT RECORD."
- 2.3 Keep record documents current.
- 2.4 Do not permanently conceal any work until required information has been recorded.
- 2.5 Contract Drawings: Legibly mark to record actual construction:

- 2.5.1 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
- 2.5.2 Field changes of dimension and detail.
- 2.5.3 Changes made by Change Order or Field Order.
- 2.5.4 Details not on original Contract Drawings.
- 2.5.5 Depths of various elements of foundations in relation to first floor level.
- 2.5.6 Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
- 2.6 Specifications and Addenda: Legibly mark up each section to record:
 - 2.6.1 Changes made by Change Order or Field Order.
 - 2.6.2 Other matters not originally specified.
 - 2.6.3 Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
- 2.7 Shop Drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.

3. SUBMITTAL

- 3.1 At completion of project, deliver record documents to Engineer. Note that it is *not* the responsibility of the Engineer to update, amend, add to or in any way change the record documents.
- 3.2 Accompany submittal with transmittal letter, in duplicate, containing:
 - 3.2.1 Date.
 - 3.2.2 Project title and number.
 - 3.2.3 Contractor's name and address.
 - 3.2.4 Title and number of each record document.
 - 3.2.5 Certification that each document as submitted is complete and

accurate.

3.2.6 Signature of Contractor, or his authorized representative.

END OF SECTION 0111

SECTION 01200
REFERENCE STANDARDS AND DEFINITIONS

1. DEFINITIONS

- 1.1 “Indicate” refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as “shown,” “noted,” “scheduled,” and “specified” are used to help the user locate the reference. Location is not limited.
- 1.2 “Directed,” “requested,” “authorized,” “selected,” “required,” and “permitted” mean directed by the Engineer, requested by the Engineer, and similar phrases.
- 1.3 “Approved,” when used in conjunction with the Engineer’s action on the Contractor’s submittals, applications, and requests, is limited to the Engineer’s duties and responsibilities as stated in the Conditions of the Contract.
- 1.4 “Regulations” includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- 1.5 “Furnish” means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- 1.6 “Install” describes operations at the Project site including the actual unloading, temporary secure storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- 1.7 “Provide” means to furnish and install, complete and ready for the intended use.
- 1.8 “Installer” is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required.
 - 1.8.1 The term “experienced,” when used with the term “installer,” means having successfully completed a minimum of five (5) previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

- 1.8.2 Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.”
- 1.9 “Project site” is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with other performing other work as part of the Project. The extent of the Project site or sites is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- 1.10 “Testing Agencies”: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

2. SPECIFICATION CONTENT

- 2.1 The Contractor shall keep and record all information in the Project Record. These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
- 2.1.1 Abbreviated Language: Language used in the Specifications may be abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
- 2.1.2 Streamlined language is generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by other when so noted.
- 2.1.2.1 The words “shall,” “shall be,” or “shall comply with,” depending on the context, are implied where a colon is used within a sentence or phrase.

3. APPLICABILITY OF STANDARDS

- 3.1 Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent

referenced. Such standards are made a part of the Contract Documents by reference.

- 3.2 Where there is an apparent conflict between construction industry standards the requirements of the Contract Documents, the latter shall always govern. The Engineer shall determine the requirements of the Contract Documents.

4. COPIES OF STANDARDS

- 4.1 Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available to the Owner and Engineer on request.

5. ABBREVIATIONS AND NAMES

- 5.1 Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-producing organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

6. PERMITS, LICENSES AND CERTIFICATES

- 6.1 For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

END OF SECTION 01200

SECTION 01270
UNIT PRICES

1. PART 1 - GENERAL

1.1 RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions, Special Provisions, MDOT 2012 Standard Specifications for Construction, and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY: This Section specifies administrative and procedural requirements for unit prices.

A. Unit prices are stated in Supplement Number 00411, attached to the Bid Form.

B. A unit price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services. This price will also be used in the event that Work is added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.

1. Unit prices include all necessary material, overhead, profit, and applicable taxes.

2. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices. Determinations of the Project Engineer will be final.

2. PART 2 - PRODUCTS (Not Applicable)

3. PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01270

SECTION 01400
QUALITY CONTROL SERVICES

1. PART 1 - GENERAL

1.1 RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions, Special Provisions, the MDOT 2012 Standard Specifications for Construction and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section specifies administrative and procedural requirements for quality control services.

1.2.2 Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Engineer.

1.2.3 Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

A. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.

B. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

C. Requirements for the Contractor to provide quality control services required by the Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 RESPONSIBILITIES

1.3.1 The Owner will pay for inspections, tests, and similar quality control services as specified and as required by governing authorities, except where they are specifically indicated to be the Contractor's responsibility, or are provided by another identified entity.

- A. The Owner will employ and pay an independent agency, acceptable to the Owner, to perform quality control testing.
- B. Retesting: The Contractor is responsible for paying for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements.
- C. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:
 - (1) Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
 - (2) Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
 - (3) Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
 - (4) Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 - (5) Security and protection of samples and test equipment at the Project site.

1.3.2 Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Engineer and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

- A. The agency shall notify the Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

B. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

C. The agency shall not perform any duties of the Contractor.

1.3.3 Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

A. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

1.4 SUBMITTALS

1.4.1 The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Engineer and to the Contractor who is responsible for the service. In addition, submit a certified written report of each inspection, test or similar service to the Owner.

A. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

B. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

- (1) Date of issue.
- (2) Project title and number.
- (3) Name, address and telephone number of testing agency.
- (4) Dates and locations of samples and tests or inspections.
- (5) Names of individuals making the inspection or test.
- (6) Designation of the Work and test method.
- (7) Identification of product and Specification Section.
- (8) Complete inspection or test data.

- (9) Test results and an interpretation of test results.
- (10) Ambient conditions at the time of sample-taking and testing.
- (11) Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
- (12) Name and signature of laboratory inspector.
- (13) Recommendations on retesting.

1.5 QUALITY ASSURANCE

- 1.5.1 Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

2. PART 2 - PRODUCTS (Not Applicable).

3. PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- 3.1.1 General: Upon completion of inspection, testing, sample-taking and similar services repair damaged construction and restore substrates and finishes to eliminate deficiencies.
- 3.1.2 Protect construction exposed by, or for quality control service activities and protect repaired construction.
- 3.1.3 Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for payment quality control testing.

END OF SECTION 01400

SECTION 01600
MATERIALS AND EQUIPMENT

1. PART 1 - GENERAL

1.1 RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions, Special Provisions, 2012 MDOT Standard Specifications for Construction and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section specifies administrative and procedural requirements governing Contractor's selection of products for use in the Project.

1.2.2 Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section "Substitutions Product Options."

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

1.3.1 Deliver, store, and handle products in accordance with manufacturer's instructions and recommendations using means and methods that will prevent damage, deterioration, and loss, including theft.

A. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

B. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

C. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

D. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that they are undamaged and properly protected.

E. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

F. Store heavy items in a manner that will not endanger the supporting construction.

G. Store products subject to damage by the elements above ground,

under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

- 1.4 SUBMITTALS: Deliver certifications of materials and products received from the manufacturer or other sources, directly to the Resident Project Engineer at the project site.

2. PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- 2.1.1 General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new and unused at the time of installation.

- A. Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and for the intended use and effect.
- B. Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- C. Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
- D. Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.
- E. When the Specifications list products or manufacturers that are available and may be incorporated in the Work but do not restrict the Contractor to use of these products only, Contractor may propose any available product that complies with Contract requirements. Secure approval of the Engineer prior to ordering materials.
- F. Where Specifications describe a product or assembly listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
- G. Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated. General overall performance of a product is

implied where the product is specified for a specific application.

- (1) Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.

H. Compliance with Standards, Codes, and Regulations: Select products that complies with applicable standards, codes, or regulations.

3. PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

3.1.1 Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

3.1.2 Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

SECTION 01770
PROJECT CLOSEOUT

1. PART 1 - GENERAL

1.1 RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

- A. Inspection procedures
- B. Project record document submittal
- C. Operating and maintenance manual submittal
- D. Submittal of warranties
- E. Final cleaning

1.3 COMPLETION

1.3.1 Preliminary Procedures: Before requesting inspection for certification of Project Completion, complete the following. List exceptions in the request.

- A. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
- B. Advise Owner of pending insurance change-over requirements.
- C. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
- D. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include operating certificates and similar releases.
- E. Submit record drawings and similar final record information.
- F. Deliver tools, spare parts, extra stock, and similar items.

- G. Complete test operation of modified systems and equipment, and instruction of the Owner's operating and maintenance personnel.
- H. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
- I. Complete final clean up requirements, including touch-up painting.

1.3.2 Inspection Procedures: On receipt of a request for inspection, Engineer will either proceed with inspection or advise the Contractor of unfulfilled requirements. The Engineer will certify that Project Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

- A. The Engineer will perform final inspection when requested and assured that the Work has been completed.
- B. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

1.4.1 Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following list of exceptions in the request.

- A. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include product certifications, operations manuals, and certificates of insurance for products and completed operations where required.
- B. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
- C. Submit a certified copy of Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Engineer.
- D. Submit consent of surety to final payment.
- E. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

- 1.4.2 Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed except items whose completion has been delayed because of circumstances acceptable to the Engineer.
- A. Upon completion of reinspection, Engineer will prepare a certificate of final acceptance or advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 - B. If necessary, reinspection will be repeated. The cost of reinspection will be borne by the Contractor.

1.5 RECORD DOCUMENT SUBMITTALS

- 1.5.1 General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for Engineer's reference during normal working hours.
- 1.5.2 Record Drawings: Maintain a clean, undamaged set of blue- or black-line white prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross reference at corresponding location on Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- A. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 - B. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
 - C. Note related Change Order (Recommendation) numbers where applicable.
 - D. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
 - E. Unless otherwise directed by the Owner, upon completion, submit record drawings to Engineer for delivery to Owner.

- 1.5.3 Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.
- A. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 - B. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 - C. Note related record drawing information and Product Data.
 - D. Upon completion of the work, submit record specifications to the Engineer for the Owner's records.
- 1.5.4 Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted.
- A. Include variations in products delivered to site, and from manufacturer's installation instructions and recommendations.
 - B. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation.
 - C. Note related Change Orders and mark-up of record drawings and Specifications.
 - D. Upon completion of mark-up, submit complete set of record Product Data to the Engineer for the Owner's records.
- 1.5.5 Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous recordkeeping and submittals in connection with actual performance of the Work.
- A. Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference.
 - B. Submit to Engineer for Owner's records.
- 1.5.6 Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in

individual heavy-duty 2-inch, 3-ring, vinyl-covered binders with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

- A. Emergency instructions
- B. Spare parts list
- C. Copies of warranties
- D. Wiring diagrams
- E. Recommended "turnaround" cycles
- F. Inspection procedures
- G. Shop Drawings and Product Data

2. PART 2 - PRODUCTS (Not Applicable)

3. PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

3.1.1 Operating and Maintenance Instructions: Where new existing equipment and/or systems are modified, arrange a meeting to provide the Owner's personnel instructions in proper operation and maintenance.

3.1.2 Include a detailed review of the following items:

- A. Maintenance manuals
- B. Record documents
- C. Spare parts and materials
- D. Tools
- E. Lubricants
- F. Hazards
- G. Cleaning
- H. Warranties

I. Maintenance agreements and similar continuing commitments.

3.2 FINAL CLEANING

- 3.2.1 Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial cleaning and maintenance program. Comply with manufacturer's instructions.
- A. Complete the following cleaning operations before requesting inspection for Project Completion.
- (1) Remove labels that are not permanent labels.
 - (2) Wipe surfaces of equipment. Remove excess lubrication and other substances.
 - (3) Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- 3.2.2 Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- 3.2.3 Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
- 3.2.4 Warranty Period: Cooperate with Owner's maintenance personnel to debug equipment or correct deficiencies in workmanship or materials under warranty.
- 3.2.5 Removal of Temporary Soil Erosion and Sedimentation Control Devices.

END OF SECTION 01770

SPECIAL PROVISION
FOR
Porous Backfill with Filter Fabric

MSG:CMZ

1 of 1

9/16/14

a. Description. This work consists of furnishing and placing open graded stone backfill contained by filter fabric, woven polypropylene fabric, at the locations shown on the plans in accordance with the 2012 MDOT Standard Specifications of Construction.

b. Materials.

Stone backfill – MDOT 34R per Section 902.06.

Filter Fabric – Shall consist of a geotextile separator per Section 910.03.C.

c. Construction. Wrap filter fabric beginning at the bottom of the wall by wrapping up the wall a minimum of 6". Encase all aggregate within filter fabric as backfilling progresses. Wrap filter over the top of the aggregate at the top of the backfill.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Porous Backfill with Filter Fabric	Cubic Yard

Porous Backfill with Filter Fabric includes all labor, equipment and materials necessary to provide and install open graded aggregate, and filter fabric.

SPECIAL PROVISION
FOR
Pile, Steel, Furn and Driven, 10 inch

MSG:CBJ

1 of 1

8/11/14

a. Description. This work consists of providing and driving 10 inch steel H-piles in accordance with the 2012 MDOT Standard Specifications for Construction. All criteria of section 705 shall apply except as amended herein.

b. Materials. Provide materials in accordance with section 705 of the Standard Specifications for Construction unless modified by this special provision or otherwise directed by the Engineer.

1. Piles shall consist of the size as designated in the plans, and conform to section 906, Grade 50.

c. Construction. Construction methods must be in accordance with section 705 of the Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Pile, Steel, Furn and Driven, 10 inch	Ft

Pile, Steel, Furn and Driven, 10 inch Includes all labor and materials required to install piles to the elevations shown on these plans.

SPECIAL PROVISION
FOR
Furnish & Install Stacked Block Wall

MSG:CBJ

1 of 1

8/11/14

a. Description. The work consists of furnishing and installing modular block wall as specified in these plans.

b. Materials. The modular block wall shall be prefabricated modular concrete units as manufactured by Redi-Rock or an approved equivalent. The exposed face shall be ledgestone finish.

1. Provide modular block cut sheets and other info to the Engineer for review prior to procuring. Contractor shall allow 10 business days for Engineers review and approval.
2. Contractor to provide drawings as needed for the type of modular block system proposed for review by the Engineer.
3. Color and texture shall be as indicated on project plans and/or as specified by the Owner.
4. Contractor must receive Engineer's approval before procuring and constructing modular block wall.

c. Construction. The modular block wall shall be installed in accordance with the manufacturer's recommendations and these plans.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Furnish & Install Stacked Block Wall.....	Sft

Furnish & Install Stacked Block Wall Includes all labor and equipment required to furnish and install the modular block concrete units.

SPECIAL PROVISION
FOR
PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE

MSG:CMZ

1 of 5

1/09/15

a. Description. This work consists of designing, fabricating, delivering, and erection of the prefabricated steel truss bridges to be used for a shared path.

This special provision is for a fully engineered clear span bridge of steel construction and is regarded as minimum standards for design and construction. The work must be done in accordance with the Standard Specifications for Construction.

1. Qualified Suppliers Experience Clause. Proposed suppliers must have at least 5 years' experience in the design and fabrication of these structure types and a minimum of 5 successful bridge projects, of similar construction, each of which has been in service at least 3 years. List the location, bridge size, Owner, and a contact for reference for each project.

Fabricators must be currently certified by the American Institute of Steel Construction (AISC) to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the AISC Major Steel Bridges certification and Fracture Critical Endorsement. Quality control must be in accordance with procedures outlined for AISC certification.

Final approval for the use of supplier shall be at the discretion of the engineer based on certificates, experience, and other documentation provided.

2. Design Requirements. Structural design of the bridge structure(s) will be performed by or under the direct supervision of a Professional Engineer licensed in the State of Michigan and done in accordance with recognized engineering practices and principles, current *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges* and using *LRFD Bridge Design Specifications* following *MDOT Road and Bridge Design Manual Standards*.

All welding must be in accordance with section 707 of the Standard Specifications for Construction and *AASHTO/AWS D1.5 Bridge Welding Code*. Gas metal arc welding is not permitted on fracture critical members.

3. Design Criteria.

A. Uniform Live Load. All structural members of the superstructure will be designed for a uniform pedestrian live load of 90 psf. The pedestrian live load will be applied to those areas of the walkway so as to produce maximum stress in the member being designed.

B. Vehicle Load. AASHTO H5 Loading in accordance with *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges*.

C. Wind Loads. The superstructure will be designed for a minimum wind load of 35 psf in accordance with AASHTO requirements on the full vertical surface area of the front elevation. In addition, a vertical uplift line load caused by a pressure of 20 psf (min.) over the full deck width will be applied at the windward quarter point of the deck.

Wind loads are to be considered fatigue live loading. The fatigue loading used for the fatigue and fracture limit state (Fatigue I) will be as specified in section 11 of the current *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*. The natural wind gust of that specification need only be considered.

D. Dead loads will include self-weight plus weight of concrete deck and stay in place steel forms.

E. Flood Way Loads. The superstructure will be designed for hydraulic loads in conditions where the bridge cords are within the 100-year floodway elevation. Velocity of 10 feet per second will be used for flood loads.

F. Top Chord Loads. The top chord, truss verticals, and floor beams will be designed for the lateral wind loads above. In no case will the load be less than 50 plf or 200 lbs point load, whichever produces greater stresses, applied in any direction at any point along the top chord.

G. Stability. The vertical truss members and the floor beams and their connections in half through-truss spans will be proportioned to resist a lateral force of not less than 30 plf applied at the top panel points of each truss, considered as a permanent load for the Strength I Load Combination and factored accordingly. The top chord will be considered as a column with elastic lateral supports at the panel points.

H. Combinations of Loads. The truss will be designed for the load combinations and load factors specified in *AASHTO LRFD* Table 3.4.1-1. The load combinations to be examined are: Strength Limit States I & III, Service Limit States I & II, and Fatigue Limit State I. The load factor for Fatigue I load combination must be taken as 1.0.

I. Deflection. Deflections are to be investigated at the service limit state using load combination Service I in Table 3.4.1-1 of *AASHTO LRFD*. The deflection of the superstructure due to unfactored pedestrian live loading will not exceed 1/500 of the span length. Horizontal deflections under unfactored wind loading will not exceed 1/500 of the span length.

J. Minimum Thickness of Metal. The minimum thickness of all structural steel members will be 1/4 inch nominal and be in accordance with the *AISC Manual of Steel Construction "Standard Mill Practice Guidelines"*. For ASTM A 588 tubing, the section properties used for the design will be per the *Steel Tube Institute of North America's Hollow Structural Sections "Dimensions and Section Properties"*.

K. Permanent Metal Deck Forms. The design must follow subsection 706.03.D.4 of the Standard Specifications for Construction.

L. The distance from the low steel to the top of the deck measured at any point along the truss shall not exceed the dimension shown in the plans.

b. Materials.

1. Hardware. Hardware will meet the requirements of the Standard Specifications for Construction sections 906 and 908 and as stated herein. Provide all hardware and accessories required to properly and completely execute the carpentry for this project, including, but not limited to: screws, hangers, bolts, nuts, washers, anchors, and similar items, whether specifically mentioned herein or not.

2. High Strength Bolts and Anchor Bolts. High strength bolts must be ASTM A 325 or equal. High strength bolts, anchor bolts, nuts, washers, and deck screws are to be hot dipped galvanized in accordance with ASTM A 153.

3. Steel. Steel will meet the requirements of the Standard Specifications for Construction sections 707, 906 and 908. All steel must be unpainted high strength, low alloy, atmospheric corrosion resistant ASTM A 847 cold-formed welded square and rectangular tubing ($F_y = 50,000$ psi) and/or ASTM A 588, ASTM A 242 and ASTM A606 ($F_y = 50,000$ psi).

4. Permanent Metal Deck Forms. Use materials in accordance with subsection 706.03.D.4.a of the Standard Specifications for Construction.

5. Fabrication. The work must be done in accordance with sections 707 and 709 of the Standard Specifications for Construction, except as specifically noted, and the details shown on the plans. Furnish and install all carpentry work plumb, level and true to line and grade in a good quality workmanlike manner.

c. Construction.

1. Shop plans. Submit shop plans of the prefabricated bridge, foundations layout, and installation sequence for Engineer review and approval prior to the start of fabrication of the pedestrian bridge. Engineer will have 14 days to perform each review and multiple review cycles may be necessary. Engineer approval of all shop plans is a prerequisite to bridge fabrication, installation and acceptance.

2. Decking. Concrete deck capable of resisting all live and dead loads is required.

Continuous Side Dams must extend to 6 inches above the finished concrete deck surface to meet the bottom of the steel toe plate.

3. Structural Calculations. Structural calculations for the bridge superstructure must be submitted by the bridge manufacturer and reviewed and approved by the Engineer. All calculations must be signed and sealed by a Professional Engineer licensed in the State of Michigan.

The calculations must include all design information necessary to determine the structural adequacy of the bridge to conform to AASHTO specifications using LRFD methodology. The calculations must include the following:

- A. All limit state checks for axial, bending, and shear forces in the critical member of each.
- B. Checks for the critical connection failure modes for each truss member type (i.e. vertical, diagonal, floor beam, etc.). Special attention must be given to all welded tube on tube connections.
- C. All bolted splice connections.
- D. Main truss deflection checks.
- E. U-Frame stiffness checks (used to determine K factors for out-of-plane buckling of the top chord) for all half through or "pony" truss bridges.
- F. Deck design.

4. Shop Welder Qualifications. Welder qualification testing is required in accordance with subsection 707.03.C.9 of the Standard Specifications for Construction. Notify the Engineer, in writing, requesting welder qualification testing a minimum of 3 weeks prior to the start of fabrication. The Engineer will contact the Operations Field Services Division, Structural Fabrication Engineer at (517) 322-5709, to schedule the testing.

5. Bearing Devices. Bridge bearings must consist of a steel setting or slide plate placed on the abutment or grout pad. The bridge bearing plate which is welded to the bridge structure must bear on this setting plate.

One end of the bridge will be fixed by fully tightening the nuts on the anchor bolts at that end. The opposite end will have finger tight only nuts to allow movement under thermal expansion or contraction.

The bridge bearings must sit in a recessed pocket on the concrete abutment. The bearing seat will be a minimum of 14 inches wide. The step height (from bottom of bearing to top-of-deck) must be determined by the bridge manufacturer and clearly shown on the shop drawings.

The bridges must have teflon on teflon or stainless steel on teflon slide bearings placed between the bridge bearing plate and the setting plate in lieu of grease. The top slide plate must be large enough to cover the lower teflon slide surface at both temperature extremes.

6. Foundations and Anchor Bolts. Unless specified otherwise, the bridge manufacturer must determine the number, size, and minimum grade of all anchor bolts. The anchor bolts will be designed to resist all horizontal and vertical forces to be transferred by the superstructure to the supporting foundations and must be hot-dipped galvanized.

The Contractor must provide all materials for (including anchor bolts) and construction of the bridge supporting foundations. The Contractor must install the anchor bolts in accordance with the manufacturer's anchor bolt spacing dimensions. Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer after receipt of order and after the bridge design is complete.

d. Measurement and Payment. The completed work, as described, will be measured as a lump sum and paid for at the contract price using the following pay items:

Pay Item	Pay Unit
185' x 10' Prefabricated Truss Weathering Steel (Concrete Deck Not Inc.)	Lump Sum
185' x 10' Ped Truss Installation	Lump Sum

1. **185' x 10' Prefabricated Big R Truss Weathering Steel (Concrete Deck Not Inc.)** includes all equipment and labor to design, fabricate, and obtain the prefabricated bridge from the supplier and deliver it to the project location complete and ready for erection.

2. **185' x 10' Ped Truss Installation** includes all equipment, temporary structures and labor necessary for erecting, placing, repairing, and securing the prefabricated bridge onto its abutments. Abutments will be paid for separately.

SPECIAL PROVISION
FOR
Decorative Railing

MSG:CBJ

1 of 1

8/11/14

a. Description. This work consists of all labor, equipment and materials required to furnish and install decorative railing at the locations shown on the plans.

b. Materials. Decorative railing must be commercial grade, Monroe style fence. Railing material must be steel with a black powder coat paint system finish. Vinyl or wood rail is not acceptable. Sharp points must not project from any part of the railing. The railing height must be 54 inches above finish grade. The railing must be mounted to line posts. The railing and posts must be painted gloss black. All railing hardware must be stainless steel.

Submit fence specifications, color samples and shop drawings (in PDF format) to the Engineer for approval a minimum of 14 calendar days prior to ordering any materials. Do not order any materials until approval of specifications, color and shop drawings is received from the Engineer.

c. Construction. Install railing at the locations shown on the plans. Install railing plumb and level. Erect fence as recommended by the manufacturer and in accordance with section 808 of the Standard Specifications for Construction.

Manufacturer of the approved railing system must provide on-site technical assistance as necessary during installation.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Decorative Railing	Ft

SPECIAL PROVISION
FOR
B2B Hoop Sign

MSG:CBJ

1 of 1

8/19/14

a. Description. This work consists of furnishing and installing B2B hoop signs as specified in these plans.

b. Materials. All materials shall be in accordance with 2012 Standard Specifications for Construction unless modified by this special provision or otherwise directed by the Engineer.

1. Concrete shall be MDOT Substructure Concrete.
2. Miscellaneous metals and hardware shall meet requirements of Section 908.
3. Reinforcement shall be epoxy coated and shall meet requirements of Section 905.

c. Construction. Construction methods must be in accordance with the 2012 MDOT Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
B2B Hoop Sign.....	Ea

B2B Hoop Sign Includes all labor, equipment and materials required to install the sign. Excavation, backfill, substructure concrete, reinforcing steel, installation of anchor bolts, washers, and nuts will not be paid for separately but is included in the contract unit price for **B2B Hoop Sign**.

SPECIAL PROVISION
FOR
Interpretive Sign

MSG:CBJ

1 of 2

8/11/14

a. Description. This work consists of furnishing and installing signs, supports, and mounting hardware or foundations in accordance with the details on the plans and this special provision.

b. Materials. Provide materials in accordance with the plans and the standard specifications.

Sign Panel. Provide one 16 inch by 20 inch custom high pressure laminate panel with an exterior matte finish. Panel must be 0.500 inches thick, have a smooth black back and be self-supporting.

Sign Support. Provide a single, surface mount aluminum pedestal complete with mounting plates and hardware. Supply sign support and mounting assembly with a black, powder coat finish.

Furnish interpretive sign from one of the following manufacturers listed below, or approved equal.

iZone Imaging
2526 Charter Oak Drive, Suite 100
Temple, Texas 76502
888-464-9663
www.izoneimaging.com

Fossil Industries
44 Jefryn Boulevard
Deer Park, New York 11729
631-254-9200
www.Fossilgraphics.com

The furnished sign and all components must be from one manufacturer.

c. Construction. Complete this work in accordance with the details shown on the plans, this special provision and according to the manufacturer's specifications.

Assemble and install interpretive sign and components per the manufacturer's recommendations at the location shown on the plans.

Any painted surface that has been damaged during shipping or assembly must be repaired per the manufacturer's recommendations.

Submit shop drawings to the Engineer for review and approval, not less than 14 calendar days prior to fabrication. Do not begin fabrication until approval of the shop drawings is received from the Engineer.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Interpretive Sign	Each

Interpretive Sign includes all labor, equipment, and materials required to furnish and install signs at the locations shown on the plans.

SPECIAL PROVISION
FOR
MNRTF Sign

MSG:CBJ

1 of 1

6/30/14

a. Description. This work consists of furnishing and installing the 12" x 18" Michigan Natural Resources Trust Fund sign required on all MNRTF assisted sites.

b. Materials. The sign must be purchased from:

https://rmi-printing.presencehost.net/customer_portal/document_library.html

c. Construction. Contractor shall follow the installation procedures attached.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
MNRTF Sign.....	Ea

MNRTF Sign includes all labor, equipment and materials required to install the sign. Installation of anchor bolts, washers, and nuts which will not be paid for separately but is included in the contract unit price for **MNRTF Sign**.

RECREATION GRANT PROGRAM RECOGNITION SIGN PLACEMENT AND INSTALLATION PROCEDURES

Placement:

Grant program recognition signs must be located in a highly visible area that will experience a high level of visits from the public. The purpose of the sign is to assure that the public is aware of the grant program responsible for the acquisition and/or development of the Park and/or facility. Public awareness and recognition is vital to the future success and existence of these recreation grant programs and is a mandatory requirement of each program.

Installation:

Recognition signs are to be affixed to a structure or post and secured by two (2) self tapping Button Head Security stainless steel wood screws for all markers except the Land and Water medallions which require three (3) self tapping non-reversible stainless steel wood screws. (The screws and a special matching drill bit are supplied with the plaque or medallion for installation).

The signs are designed to be affixed to a 4" x 4" post or an existing structure on site. If a post is the desired method of displaying the sign, use an 8' foot 4" x 4" post this will allow for 36"- 48" insertion in the ground and leave approximately 4' of post above ground.

Using a post hole digger, dig a hole 10"- 12" in diameter and 36" to 48" deep. Place the post in the hole with one of the flat faces on the post facing the direction that the sign is to face. Place the post in the hole then plumb and brace it.

Fill the hole with concrete (sacrete works fine) to the top of the hole. You might cut the bottom out of a 5 gallon plastic bucket to use as a form. Slip the bucket down over the post so it is resting on the ground at the top of the hole. When you fill the hole with concrete, bring the concrete up about 4 - 6" above the ground inside the bucket. When hardened, cut the plastic form away and you have a nice curb around the post which will deter mowers and trimmers from damaging the post.

Place the sign on the post. Check it for alignment looking straight at the sign and then moving 90 degrees to view the edge of the sign. Secure the sign by tightening the supplied security screws.

Install takes less than an hour; allow 24 hours before removing the bracing.

** Required to install – cordless drill and special bit (supplied with screws and plaque/medallion)*

PLEASE NOTE: THE INSTALLATION AND MAINTENANCE OF THE SIGN IS THE RESPONSIBILITY OF THE GRANTEE. THE GRANTEE IS RESPONSIBLE TO REPLACE THE SIGN, AT THE GRANTEE'S EXPENSE, IF THE SIGN IS STOLEN OR DEFACED. THANK YOU.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SLOPE RESTORATION, NON-FREEWAY

C&T:DMG

1 of 3

C&T:APPR:TWK:DBP:04-25-12

a. Description. This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket and permanent turf reinforcement mat to those areas. Turf establishment must be in accordance with section 816 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

b. Materials. The materials and application rates specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. The following materials must be used on this project:

1. Seeding mixture as called for on the plans
2. Fertilizer, Chemical Nutrient, Class A
3. Topsoil Surface, Furnished or Salvaged, 4 inch. Remove any stones greater than 1/2 inch in diameter or other debris from all topsoil.
4. Mulch and Mulch Anchoring, Mulch Blanket and High Velocity Mulch Blanket
5. Permanent Turf Reinforcement Mat (TRM) must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of black UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

Property	Test Method	Requirement
Mass/Unit Area	ASTM D 6566	10 oz/syd
Ultraviolet Stability @ 1000 hrs	ASTM D 4355	80 percent
Tensile Strength (MD)	ASTM D 6818	165 lbs/ft

Acceptance. Supply a Test Data Certification for the permanent TRM from one of the following manufacturers:

Recyclex - American Excelsior Co., Arlington, TX (800) 777-7645
P300 - North American Green, Poseyville, IN (800) 772-2040
Landlok 450 - Propex, Inc., Chattanooga, TN (800) 621-1273
PP5-10 - Western Excelsior, Mancos, CO (800) 833-8573

c. Construction. Construction methods must be in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for slope restoration but no later than the maximum time frames stated in

subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact and assure all areas to be seeded are weed free prior to placing topsoil. Place topsoil to the minimum depth indicated above, to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, this additional depth must be filled using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work.

Topsoil must be weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2 inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface. Incorporate seed into top 1/2 inch of topsoil

Apply mulch at a rate of 2 tons per acre. Place Mulch Anchoring over the mulch at a rate specified in subsection 816.03.F of the Standard Specifications for Construction. Mulch Blanket and High Velocity Mulch Blanket must be placed in accordance with subsection 816.03.H of the Standard Specifications for Construction and as shown on Standard Plan R-100 Series.

Areas constructed with the TRM must be installed on prepared (seeded) grades as shown on the plans in strict accordance with the manufacturer's published installation guidelines. The top edge of the TRM must be anchored in a minimum 6 inch deep trench. Operation of equipment on the slope will not be allowed after placement of the TRM. No credit for splices, overlaps, tucks or wasted material will be made.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed and mulch. This replacement will be paid for as additional work using the applicable contract items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at the Contractor's expense.

The Engineer will inspect the seeded turf to ensure the end product is well established, weed free, in a vigorous growing condition, and contains the species called for in the seeding mixture.

If the seeded turf is not well established at the end of the first growing season, the Contractor is responsible to re-seed until the turf is well established and approved by the Engineer.

If weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, the Contractor must provide weed control in accordance with subsection 816.03.J of the Standard Specifications for Construction. Weed control will be at the Contractor's expense with no additional charges to the project.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Slope Restoration, Type _____	Square Yard

1. Place **Slope Restoration, Type A** in all areas not described in the other types of slope restoration and will be measured by area in square yards in place. **Slope Restoration, Type A**

includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch and Mulch Anchoring which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type A**.

2. Place **Slope Restoration, Type B** parallel (6 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope and in any ditch with a grade less than 1.5 percent, or as directed by the Engineer. **Slope Restoration, Type B** will be measured by area in square yards in place. **Slope Restoration, Type B** includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type B**.

3. Place **Slope Restoration, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent or as directed by the Engineer. **Slope Restoration, Type C** will be measured by area in square yards in place. **Slope Restoration, Type C** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and High Velocity Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type C**.

4. Place **Slope Restoration, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent or as directed by the Engineer. **Slope Restoration, Type D** will be measured by area in square yards in place. **Slope Restoration, Type D** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and TRM which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type D**.

SPECIAL PROVISION
FOR
Misc, Rem
2047050

MSG:CBJ

1 of 1

6/30/14

a. Description. This work consists of removing and disposing of fence posts, concrete blocks, and other miscellaneous objects specified in these plans.

b. Materials. None

c. Construction. Construction methods must be in accordance with subsection 204.03 of the Standard Specifications for Construction. Dispose of materials in accordance with section 204.03.B.

Backfill as needed in accordance with section 204.03.C.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Misc, Rem.....	Ea

Misc, Rem Includes all labor, equipment and materials required to remove and dispose of fence posts, concrete blocks, and other miscellaneous objects specified in these plans. Excavation and backfill will not be paid for separately but is included in the contract unit price for **Misc, Rem**

SPECIAL PROVISION
FOR
Aggregate, Rem and Salv
3057011

MSG:CBJ

1 of 1

8/11/14

a. Description. This work consists of removing and salvaging the existing aggregate pathway.

b. Materials. None

c. Construction. Aggregate shall be removed by mechanical means, cleaned of any foreign debris, stockpiled, and reused at the direction of the Engineer. The salvaged aggregate must be compacted...

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Aggregate, Rem and Salv.....	Syd

Aggregate, Rem and Salv Includes all labor, equipment and materials required to remove and salvage the existing aggregate pathway.

SPECIAL PROVISION
FOR
Sanitary Sewer Cover, Adj

MSG:CBJ

1 of 2

8/11/14

a. Description. This work consists of adjusting the existing sanitary sewer structure cover where indicated on the plans or as approved by the Engineer.

b. Materials. Provide materials in accordance with section 403 of the Standard Specifications for Construction and the following exceptions and additions:

1. Precast Concrete Adjusting Ring. Provide precast concrete manhole adjusting rings meeting the requirements of subsection 913.06 of the Standard Specifications for Construction. No other method of adjustment is permitted.

2. Butyl Rubber Sealant. Provide 3/4 inch diameter butyl rubber sealant from one of the following:

A. Conseal CS-202 by Concrete Sealants, Inc.

B. BN109 – Butyl-Nek Joint Sealant by the Henry Company

C. Kent Seal No. 2 Butyl Sealant by Hamilton Kent

3. Anchor Bolts. Provide 5/8 inch diameter stainless steel (SAE Type 304) threaded rod of sufficient length to anchor the casting and adjusting rings into the cone section of the existing sanitary manhole. The nuts and washers for the anchor bolts must be stainless steel (SAE Type 304).

4. Adhesive System. Provide an adhesive system for grouting of anchor bolts meeting the requirements of section 712 of the Standard Specifications for Construction.

c. Construction. All work must be in accordance with section 403 of the Standard Specifications for Construction and the following:

1. Place two rows of 3/4 inch diameter butyl rubber sealant between each of the following joints:

A. Between the top of the cone and the bottom adjusting ring

B. Between each adjusting ring

C. Between the bottom of the casting and the top adjusting ring

2. Mortar joints are prohibited. Metal or plastic shims may be used for fine adjustments of the frames.

3. Drill four holes through the precast adjusting rings to set the 5/8 inch diameter stainless steel anchor bolts for the manhole frame. The holes for the anchor bolts must extend a minimum of 6 inches into the cone of the manhole.

4. After drilling the holes, clean with a blast of oil-free compressed air.

5. After cleaning the holes, fill with adhesive system and insert the anchor bolts.

6. After the adhesive has cured sufficiently, secure the manhole frame to the anchor bolts with stainless steel washers and nuts.

7. Apply a 1/2 inch thick coat of mortar to the outer and inner surface of the structure from the bottom of the casting to at least 3 inches below the limit of the adjustment. Completely fill in all gaps between the cone, adjusting rings and casting with mortar.

d. Measurement and Payment. The completed work, as described, will be measured as for Adjusting Drainage Structure in the standard specifications and paid for at the contract unit price using the following pay items:

Pay Item	Pay Unit
Sanitary Sewer Cover, Adj	Each

Sanitary Sewer Cover, Adj will be measured in accordance with Dr Structure Cover, Adj and paid for in accordance with the above pay item.

SPECIAL PROVISION
FOR
Outlet, Rem and Salv or Replace
4047050

MSG:CBJ

1 of 1

6/30/14

a. Description. This work consists of removing and salvaging the existing drainage outlet and reusing it if the outlet is in acceptable condition to be determined by the Engineer. If the outlet is not reusable the outlet must be replaced in kind.

b. Materials. The materials must be in accordance with subsection 404.02 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer.

c. Construction. Construction methods must be in accordance with subsection 404.03 of the Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Outlet, Rem and Salv or Replace.....	Ea

Outlet, Rem and Salv or Replace Includes all labor, equipment and materials required to removing and salvaging the existing drainage outlet and reusing it if the outlet is in acceptable condition to be determined by the Engineer. If the outlet is not reusable the outlet must be replaced in kind which will not be paid for separately but is included in the contract unit price for **Outlet, Rem and Salv or Replace**

SPECIAL PROVISION
FOR
Fishing Pier
7047050

MSG:CBJ

1 of 1

8/19/14

a. Description. This work consists of providing, fabricating, and placing structural timber, lumber, hardware, concrete foundations, reinforcing steel, and other accessories for construction of fishing piers as shown in contract drawings.

b. Materials. All materials shall be in accordance with 2012 Standard Specifications for Construction unless modified by this special provision or otherwise directed by the Engineer.

1. Provide shop drawing of fishing pier showing dimensions, member sizes, concrete foundation size, connections, and other pertinent information for review and approval by Engineer. Allow 14 days for review/
2. Timber shall meet the requirements of Section 912.
3. Concrete shall be MDOT Substructure Concrete.
4. Miscellaneous metals and hardware shall meet requirements of Section 908.
5. All timber shall be treated per Section 912.
6. Reinforcement shall be epoxy coated and shall meet requirements of Section 905.

c. Construction. Construction methods must be in accordance with subsection 709.03 of the Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Fishing Pier.....	Ea

Fishing Pier Includes all labor, equipment and materials required to construct the fishing piers including bolts, washers, nuts, connectors, connector plates, and foundations which will not be paid for separately but is included in the contract unit price for **Fishing Pier**.

SPECIAL PROVISION
FOR
Painting, Misc
7157051

MSG:CBJ

1 of 1

8/19/14

a. Description. This work consists of cleaning and coating the existing railings located on both ends of the existing pedestrian bridge, containing, storing, and disposing of spent material. Spent material includes paint chips, abrasive particles, dust and debris, resulting from cleaning operations. Provide painting containment during painting for spray applied painting operations.

b. Materials. The materials must be in accordance with subsection 715.02 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer.

c. Construction. Construction methods must be in accordance with subsection 715.03 of the Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Painting, Misc	Ea

Painting, Misc Includes all labor, equipment and materials required to clean and coat the existing railings located on both ends of the existing pedestrian bridge, containment, storage, and disposing of spent material. Spent material includes paint chips, abrasive particles, dust and debris, resulting from cleaning operations which will not be paid for separately but is included in the contract unit price for **Painting, Misc**

SPECIAL PROVISION
FOR
Gate, Bollard with Chain
8087050

MSG:CBJ

1 of 1

8/19/14

Description. This work consists of providing and erecting a gate consisting of bollards and chain.

Materials. The materials must be in accordance with subsection 808 of the Standard Specifications for Construction unless modified by this special provision or otherwise directed by the Engineer.

1. Concrete Filled Pipe Bollards.
 - A. Pipe to be 6" I.D. min schedule 40 steel pipe. 48" protrusion from ground surface.
 - B. Concrete – MDOT Substructure Concrete. Create dome surface at top of pipe.
 - C. Paint bollard surface with yellow or orange paint, as approved by the engineer.
 - D. Foundations shall be 42" below finished grade, 16" diameter, and constructed of MDOT substructure concrete.
2. Chain – Provide grade 30 Stainless steel proof coil
 - A. Contractor to provide chain clasp and lock as specified by Owner.
 - B. Contractor shall provide key to Owner.

Construction. Construction methods must be in accordance with subsection 808 of the Standard Specifications for Construction.

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

Pay Item	Pay Unit
Gate, Bollard with Chain	Ea

Gate, Bollard with Chain Includes all labor, equipment and materials required to provide and erect a gate consisting of bollards and chain.

SPECIAL PROVISION
FOR
Plaza
8157051

MSG:CBJ

1 of 1

8/19/14

a. Description. This work consists of labor, equipment, and material required to install the brick paver plaza along the mixed use pathway.

b. Materials. The contractor shall use brick pavers specified by the Owner.

c. Construction. The contractor shall uniformly grade the plaza area subgrade before compacting and installing the brick pavers in accordance with the manufacturer’s recommendations.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Plaza	LS

Plaza Includes all labor, equipment and materials required to install the brick paver plaza along the mixed use pathway.

SPECIAL PROVISION
FOR
B2B Hoop Sign
8157050

MSG:CBJ

1 of 1

8/19/14

a. Description. This work consists of furnishing and installing B2B hoop signs as specified in these plans.

b. Materials. All materials shall be in accordance with 2012 Standard Specifications for Construction unless modified by this special provision or otherwise directed by the Engineer.

1. Concrete shall be MDOT Substructure Concrete.
2. Miscellaneous metals and hardware shall meet requirements of Section 908.
3. Reinforcement shall be epoxy coated and shall meet requirements of Section 905.

c. Construction. Construction methods must be in accordance with the 2012 MDOT Standard Specifications for Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
B2B Hoop Sign.....	Ea

B2B Hoop Sign Includes all labor, equipment and materials required to install the sign. Excavation, backfill, substructure concrete, reinforcing steel, installation of anchor bolts, washers, and nuts will not be paid for separately but is included in the contract unit price for **B2B Hoop Sign**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
Interpretive Sign

MSG:CBJ

1 of 2

8/11/14

a. Description. This work consists of furnishing and installing signs, supports, and mounting hardware or foundations in accordance with the details on the plans and this special provision.

b. Materials. Provide materials in accordance with the plans and the standard specifications.

Sign Panel. Provide one 16 inch by 20 inch custom high pressure laminate panel with an exterior matte finish. Panel must be 0.500 inches thick, have a smooth black back and be self-supporting.

Sign Support. Provide a single, surface mount aluminum pedestal complete with mounting plates and hardware. Supply sign support and mounting assembly with a black, powder coat finish.

Furnish interpretive sign from one of the following manufacturers listed below, or approved equal.

iZone Imaging
2526 Charter Oak Drive, Suite 100
Temple, Texas 76502
888-464-9663
www.izoneimaging.com

Fossil Industries
44 Jefryn Boulevard
Deer Park, New York 11729
631-254-9200
www.Fossilgraphics.com

The furnished sign and all components must be from one manufacturer.

c. Construction. Complete this work in accordance with the details shown on the plans, this special provision and according to the manufacturer's specifications.

Assemble and install interpretive sign and components per the manufacturer's recommendations at the location shown on the plans.

Any painted surface that has been damaged during shipping or assembly must be repaired per the manufacturer's recommendations.

Submit shop drawings to the Engineer for review and approval, not less than 14 calendar days prior to fabrication. Do not begin fabrication until approval of the shop drawings is received from the Engineer.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item

Pay Unit

Interpretive SignEach

Interpretive Sign includes all labor, equipment, and materials required to furnish and install signs at the locations shown on the plans.

SPECIAL PROVISION
FOR
Kiosk
8157050

MSG:CBJ

1 of 1

6/30/14

a. Description. This work consists of furnishing and installing the kiosk as specified and shown in these plans.

b. Materials. The materials must be in accordance with MDOT 2012 Standard Specifications for Construction.

1. Provide shop drawings in accordance with details provided in the contract drawings for review and approval by Engineer. Allow 14 days for review.
2. Prefabricated Kiosk may be provided. Submit drawings, cut sheets or other information for review and approval by Engineer. Allow 14 days for review.

c. Construction. Construction methods must be in accordance with the manufacturer's specifications.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Kiosk.....	Ea

Kiosk Includes all labor, equipment and materials required to install the kiosk. Excavating, backfilling, installation of foundations, anchor bolts, washers, and nuts will not be paid for separately but is included in the contract unit price for **Kiosk**.

SPECIAL PROVISION
FOR
MNRTF Sign
8157050

MSG:CBJ

1 of 1

6/30/14

a. Description. This work consists of furnishing and installing the 12" x 18" Michigan Natural Resources Trust Fund sign required on all MNRTF assisted sites.

b. Materials. The sign must be purchased from:

https://rmi-printing.presencehost.net/customer_portal/document_library.html

c. Construction. Contractor shall follow the installation procedures attached.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
MNRTF Sign.....	Ea

MNRTF Sign includes all labor, equipment and materials required to install the sign. Installation of anchor bolts, washers, and nuts which will not be paid for separately but is included in the contract unit price for **MNRTF Sign**.

RECREATION GRANT PROGRAM RECOGNITION SIGN PLACEMENT AND INSTALLATION PROCEDURES

Placement:

Grant program recognition signs must be located in a highly visible area that will experience a high level of visits from the public. The purpose of the sign is to assure that the public is aware of the grant program responsible for the acquisition and/or development of the Park and/or facility. Public awareness and recognition is vital to the future success and existence of these recreation grant programs and is a mandatory requirement of each program.

Installation:

Recognition signs are to be affixed to a structure or post and secured by two (2) self tapping Button Head Security stainless steel wood screws for all markers except the Land and Water medallions which require three (3) self tapping non-reversible stainless steel wood screws. (The screws and a special matching drill bit are supplied with the plaque or medallion for installation).

The signs are designed to be affixed to a 4" x 4" post or an existing structure on site. If a post is the desired method of displaying the sign, use an 8' foot 4" x 4" post this will allow for 36"- 48" insertion in the ground and leave approximately 4' of post above ground.

Using a post hole digger, dig a hole 10"- 12" in diameter and 36" to 48" deep. Place the post in the hole with one of the flat faces on the post facing the direction that the sign is to face. Place the post in the hole then plumb and brace it.

Fill the hole with concrete (sacrete works fine) to the top of the hole. You might cut the bottom out of a 5 gallon plastic bucket to use as a form. Slip the bucket down over the post so it is resting on the ground at the top of the hole. When you fill the hole with concrete, bring the concrete up about 4 - 6" above the ground inside the bucket. When hardened, cut the plastic form away and you have a nice curb around the post which will deter mowers and trimmers from damaging the post.

Place the sign on the post. Check it for alignment looking straight at the sign and then moving 90 degrees to view the edge of the sign. Secure the sign by tightening the supplied security screws.

Install takes less than an hour; allow 24 hours before removing the bracing.

** Required to install – cordless drill and special bit (supplied with screws and plaque/medallion)*

PLEASE NOTE: THE INSTALLATION AND MAINTENANCE OF THE SIGN IS THE RESPONSIBILITY OF THE GRANTEE. THE GRANTEE IS RESPONSIBLE TO REPLACE THE SIGN, AT THE GRANTEE'S EXPENSE, IF THE SIGN IS STOLEN OR DEFACED. THANK YOU.

SPECIAL PROVISION
FOR
Site Furniture

MSG:CMZ

1 of 1

1/09/15

a. Description. This work consists of furnishing and installing Site Furniture as detailed on the plans, in accordance with the Standard Specifications for Construction, this special provision, and as directed by the Engineer. The site furniture includes:

- 1. Bench
- 2. ~~Waste Receptacle~~

b. Materials. Submit cut sheets for each site furniture type. Submit one sample unit for each type of site furniture for approval before the start of fabrication. Samples can be used as part of the project and will be used as a standard for all metal and finish work.

1. Bench. Plainwell, 6 foot with intermediate arm, surface mount, Ipe wood slats and aluminum extrusion structure. Verde Gris finish. Manufacturer: Landscape Forms, 431 Lawndale Ave. Kalamazoo, MI 49048, (800) 521-2546, or approved equal.

~~2. Waste Receptacle. Plainwell, trash receptacle cast aluminum, with cast aluminum slats. Verde Gris finish. Trash Receptacle top must be black. Manufacturer: Landscape Forms or approved equal.~~

c. Construction Methods. Coordinate installation procedures with sleeves, underground utilities, concrete paving, and other work affected by the site furniture installation.

- 1. Examine all work in place before installation of site furniture items.
- 2. Install site furniture in accordance with the contract and the manufacturer's instructions.

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

Pay Item	Pay Unit
Bench	Each
Waste Receptacle	Each

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SLOPE RESTORATION, NON-FREEWAY

C&T:DMG

1 of 3

C&T:APPR:TWK:DBP:04-25-12

a. Description. This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket and permanent turf reinforcement mat to those areas. Turf establishment must be in accordance with section 816 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

b. Materials. The materials and application rates specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. The following materials must be used on this project:

1. Seeding mixture as called for on the plans
2. Fertilizer, Chemical Nutrient, Class A
3. Topsoil Surface, Furnished or Salvaged, 4 inch. Remove any stones greater than 1/2 inch in diameter or other debris from all topsoil.
4. Mulch and Mulch Anchoring, Mulch Blanket and High Velocity Mulch Blanket
5. Permanent Turf Reinforcement Mat (TRM) must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of black UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

Property	Test Method	Requirement
Mass/Unit Area	ASTM D 6566	10 oz/syd
Ultraviolet Stability @ 1000 hrs	ASTM D 4355	80 percent
Tensile Strength (MD)	ASTM D 6818	165 lbs/ft

Acceptance. Supply a Test Data Certification for the permanent TRM from one of the following manufacturers:

Recyclex - American Excelsior Co., Arlington, TX (800) 777-7645
P300 - North American Green, Poseyville, IN (800) 772-2040
Landlok 450 - Propex, Inc., Chattanooga, TN (800) 621-1273
PP5-10 - Western Excelsior, Mancos, CO (800) 833-8573

c. Construction. Construction methods must be in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for slope restoration but no later than the maximum time frames stated in

subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact and assure all areas to be seeded are weed free prior to placing topsoil. Place topsoil to the minimum depth indicated above, to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, this additional depth must be filled using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work.

Topsoil must be weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2 inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface. Incorporate seed into top 1/2 inch of topsoil

Apply mulch at a rate of 2 tons per acre. Place Mulch Anchoring over the mulch at a rate specified in subsection 816.03.F of the Standard Specifications for Construction. Mulch Blanket and High Velocity Mulch Blanket must be placed in accordance with subsection 816.03.H of the Standard Specifications for Construction and as shown on Standard Plan R-100 Series.

Areas constructed with the TRM must be installed on prepared (seeded) grades as shown on the plans in strict accordance with the manufacturer's published installation guidelines. The top edge of the TRM must be anchored in a minimum 6 inch deep trench. Operation of equipment on the slope will not be allowed after placement of the TRM. No credit for splices, overlaps, tucks or wasted material will be made.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed and mulch. This replacement will be paid for as additional work using the applicable contract items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at the Contractor's expense.

The Engineer will inspect the seeded turf to ensure the end product is well established, weed free, in a vigorous growing condition, and contains the species called for in the seeding mixture.

If the seeded turf is not well established at the end of the first growing season, the Contractor is responsible to re-seed until the turf is well established and approved by the Engineer.

If weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, the Contractor must provide weed control in accordance with subsection 816.03.J of the Standard Specifications for Construction. Weed control will be at the Contractor's expense with no additional charges to the project.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Slope Restoration, Type _____	Square Yard

1. Place **Slope Restoration, Type A** in all areas not described in the other types of slope restoration and will be measured by area in square yards in place. **Slope Restoration, Type A**

includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch and Mulch Anchoring which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type A**.

2. Place **Slope Restoration, Type B** parallel (6 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope and in any ditch with a grade less than 1.5 percent, or as directed by the Engineer. **Slope Restoration, Type B** will be measured by area in square yards in place. **Slope Restoration, Type B** includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type B**.

3. Place **Slope Restoration, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent or as directed by the Engineer. **Slope Restoration, Type C** will be measured by area in square yards in place. **Slope Restoration, Type C** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and High Velocity Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type C**.

4. Place **Slope Restoration, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent or as directed by the Engineer. **Slope Restoration, Type D** will be measured by area in square yards in place. **Slope Restoration, Type D** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and TRM which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type D**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
Native Seeding

MSG:CBJ

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8/11/14

a. Description. This work consists of furnishing and installing native seeding mix as detailed on the plans, in accordance with section 815 of the Standard Specifications for Construction, this special provision, and as directed by the Engineer.

b. Materials. All materials must be as specified and detailed in these plans.

c. Construction Methods. Complete the work in accordance with section 815 of the Standard Specifications of Construction.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Native Seeding.....	Lb

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Page	Subsection	Errata
4	101.02	<p>Delete the following abbreviations and the long forms MDELEG MDNRE</p> <p>Add the following abbreviations and the long forms MDNR Michigan Department of Natural Resources MDEQ Michigan Department of Environmental Quality MDLARA Michigan Department of Licensing and Regulatory Affairs NESC National Electrical Safety Code</p>
27	103.02.B.2	Change the last sentence of the first paragraph to read "For decreases below 75 percent, the maximum allowable payment for work performed, including any adjustment, will not exceed an amount equal to 75 percent of the original contract quantity times the contract unit price."
34	104.05	The first sentence of this subsection should read "If the Contractor performs unauthorized work (work performed without the inspections required by the contract, extra work performed without Department approval, work performed contrary to the inspectors direction, or work performed while under suspension by the inspector), the Engineer may reject the unauthorized work."
46	104.12	Add the following to the end of the first paragraph "The use of right-of-way in wetlands and floodplains, or the crossing of water courses by construction equipment is prohibited."
53	105.09	Add the following to the end of the second paragraph "Any specifically produced material not purchased by the Department, will remain the Contractors and must be removed from the project prior to final acceptance."
56	107.02.B.2	This sentence should read "U.S.Army Corps of Engineers' Section 404, Dredge and Fill; and Section 10, Navigable Waterway."
56	107.02.B	<p>Add the subsection reading as follows: 3. U.S. Coast Guard Section 9, Navigable Waterway.</p> <p>Change "MDNRE" to "MDEQ" in this subsection.</p>

Page	Subsection	Errata
65	107.15.A	Change "MDNRE" to "MDEQ" in four instances in this subsection.
66	107.15.A.3	Add the following to the end of the paragraph "Note that a burn permit from the MDNR is required for any open burning whenever the ground is not snow covered. Any individuals that allow a fire to escape will be in violation of the Natural Resources and Environmental Protection Act and will be required to reimburse the costs of suppressing the wild fire."
67	107.16	<p>The third sentence should read "In State Forests, the Contractor must contact the local Unit Manager, Forest Management Division, MDNR, regarding the work to be performed within or adjacent to the forest land."</p> <p>Delete the last sentence of the first paragraph on this subsection.</p>
107	150.04	Change the following pay item reading "Mobilization, Max ___" to read "Mobilization, Max (dollar)" at nine locations throughout the subsection.
112	201.03.A.3.b	Change "MDNRE" to "MDNR" in three instances in this subsection.
150	208.01	Change "MDNRE" to "MDEQ" in this subsection.
188	401.03.H	Change the second sentence of the paragraph to read "Jack steel pipes in place in accordance with subsection 401.03.G".
189	401.03.N	<p>Add the following sentence to the end of the first paragraph "Where possible, maintain the stream flow thru a temporary channel or temporary culvert."</p> <p>The second sentence of the second paragraph should read "Direct water from the dewatering operations through a filter bag before discharging to an existing drainage facility."</p>
190	401.04	Change the fourth pay item from the end of the list to read as follows: Steel Casing Pipe, ___ inch, Tr Det ___.
201	402.04.H	Change the last sentence of the first paragraph to read "The Department will not make an adjustment in the pay items of Minor Traffic Devices or Traffic Regulator Control ."
223	406.03.G	Add the following after the first sentence of the second paragraph: Where possible, maintain the stream flow thru the existing channel, temporary channel, or temporary culvert.
224	406.03.G	Replace the fifth paragraph of this subsection with the following: The Contractor may use cast-in-place wing walls, headwalls, and aprons, as alternatives to precast wing walls, headwalls, and aprons. Attach cast-in-place wing walls or headwalls as shown on the shop drawings.

Page	Subsection	Errata
226	406.03.G.2	Change the first sentence of the second paragraph of this subsection to read: "Fill the space between the box culvert joints during placement of box sections with closed-cell rubber extrusion type gaskets in accordance with ASTM C 990."
226	406.04.A	Add the following paragraph after the last paragraph of the subsection: The Contractor must use approved MDOT service vendors qualified in Hydraulics, Geotechnical Engineering Services, and Short and Medium Span Bridges to perform the required design and plan modifications, as directed by the Engineer, if the Contractor selects a culvert shape different than shown on the plans.
227	406.04.B	Delete the first and second paragraphs following the list of items in this subsection and replace with the following: The Department will pay separately for cast-in-place concrete, other than for culvert segments, wing walls, and headwalls; excavation; protective coating; providing and placing backfill material; by plan quantity in accordance with subsection 109.01.A.
239	501.03.C.6	The first sentence of this subsection should read "Except as specified in subsection 501.03.C.4, removing HMA surface applies to removing HMA overlying a material designated for removal or that is required to remain in place."
247	501.03.O	Change footnote e in Table 501-5 to read: "Flushing severe enough to significantly affect surface friction (Friction Number <35)."
249	501.04.H	The first sentence of this subsection should read "The Engineer will measure, and the Department will pay for removing HMA surface, no greater than 12 inches thick, overlying a material designated for removal or that is required to remain in place, as HMA Surface, Rem. " The second paragraph of this subsection should read "The Engineer will measure, and the Department will pay for removing HMA surface, greater than 12 inches thick, overlying a material designated for removal or that is required to remain in place, as Pavt, Rem in accordance with subsection 204.04."
257	503.03.E	Delete this subsection in its entirety.
265	504.03.E.3	Delete this subsection in its entirety.
269	504.04.A	This subsection should read "The unit prices for Micro-Surface , regardless of the type required, include cleaning existing pavement; applying a bond coat; temporary pavement markings; stationing; corrective action; and traffic control to complete corrective action."

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308	602.03.F	Note c. in Table 602-1 should read "Refer to Section D6 of the Materials Quality Assurance Procedures Manual for inspection procedure."
320	602.04.C.3	The last paragraph in this subsection should read "If the Engineer approves a substitution of a higher concrete grade for a lesser grade (e.g., P1 for P2), the Department will pay for the higher grade of concrete using the original bid and pay items of the lesser grade."
327	603.02	Change the third material in the list to read: Base Course Aggregate, 4G, 21AA, 22A.....902
334	603.03.B.10	Change the last sentence of the second paragraph to read "Apply the required curing compound in two coats, at a rate of at least 1 gallon per 25 square yards for each coat."
342	603.04.G.3	Change "D1" to "W" in two instances in this subsection.
351	701.04	Replace Tables 701-1A and 701-1B with the Table 701-1 below.
372	705.03.C.1	Add the following sentence after the first paragraph of this subsection: Do not drive piles within a radius of 25 feet of newly placed concrete until the concrete attains at least 75 percent of its specified minimum strength.
374	705.03.C.2.c	Change the last sentence of the second paragraph to read "Drive test piles to the minimum pile length or practical refusal, whichever is greater".
379	705.04	Change the fifth item down the list to read: Pile, Galv (Structure No.)
380	705.04	Change the last item in the list to read: Pile Driving Equipment, Furn (Structure No.)
383	706.02	The fourth paragraph following the list of materials should read "Provide AASHTO M 270, Grade 36 steel, meeting the requirements of ASTM A 786, galvanized in accordance with section 707, for expansion joint cover plates. Provide plates at least 3/8 inch thick. Use plates with a slip resistance equal to or greater than those meeting the requirements of ASTM A 786 and must be approved by the Engineer. Provide ASTM F 593 (Type 304) stainless steel, 3/4-inch or 1/2-inch diameter, flathead countersunk screws with 3/4-inch or 1/2-inch diameter inserts for use in expansion joint cover plates."
389	706.03.D.4.b	Change the first sentence of the fourth paragraph to read "Design forms, form supports, and attachments to carry dead loads, and resultant horizontal loads due to forming of cantilever overhangs."

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391	706.03.E.8	Change the first sentence of the second paragraph of this subsection to read: "Patch sawed or sheared ends and visible defects in accordance with ASTM A 775."
392	706.03.E.8	Change the last sentence of the third paragraph of this subsection to read: "Coat mechanical splices after splice installation in accordance with ASTM A 775 for patching damaged epoxy coating."
414	707.01.B	Change the last sentence of the first paragraph to read "For horizontally curved or continuous span or cantilevered span girders the Engineer will consider intermediate cross frames and connection plates and stiffeners as primary members."
426	707.03.C.17	Change the second sentence in the first paragraph of this subsection to read: "Tap oversized galvanized nuts in accordance with ASTM A 563 or AASHTO M 292 and meet Supplementary Requirement S1 of ASTM A 563 or AASHTO M 292."
430*	707.03.D.7.b	Change the title of the Table 707-4 to read: "Minimum Bolt Tension for ASTM A 325 Bolts"
430	707.03.D.7.b	Change "104,000" to "103,000" in the last row under the column titled Minimum Bolt Tension.
431	707.03.D.7.c	Change the first sentence of the second paragraph to read: "Do not reuse ASTM A325 bolts and nuts."
441	708.03.A.11	Change the last sentence of the first paragraph to read "Cure concrete at temperatures from 70 °F to 150 °F until concrete attains the release strength shown on the shop plans".
441	708.03.A.11	Change the fourth sentence of the fourth paragraph to read "Do not exceed a maximum concrete temperature of 150 °F during the curing cycle."
461	711.04.F	The title of this subsection should read " Reflective Marker, Permanent Barrier. "
467	712.03.C	Add the following to the end of the third paragraph of the subsection: Notify the Engineer of any saw cuts in the top flange. Saw cuts equal to or less than 1/32 inch deep in steel beams must be repaired by grinding, to a surface roughness no greater than 125 micro-inches per inch rms, and tapering to the original surface using a 1:10 slope. Saw cuts in excess of 1/32 inch deep in steel beams require a welded repair to be submitted to the Engineer for approval. Weld in accordance with subsection 707.03.D.8 and provide adequate notice to allow the Engineer to witness the repair work. Inspect and test all

Page	Subsection	Errata
		saw cut repairs (including grinding repairs) using ultrasonic testing in accordance with 707.03.D.8.c at no additional cost to the Department.
471	712.03.J.1	Delete the first paragraph in this subsection and replace it with the following: Propose complete details of drilling, cleaning, and bonding systems for anchoring reinforcement and submit for the Engineer's approval before use. The minimum embedment depth must be nine times the anchor diameter for threaded rod or bolt and twelve times the anchor diameter for reinforcing bar. Propose a drilling method that does not cut or damage existing reinforcing steel. Prepare at least three proof tests per anchor diameter and type in the same orientation in which they will be installed on the existing structure, on a separate concrete block, in the presence of the Engineer. The Engineer will proof test the proposed systems. The Engineer will base approval of the anchoring system on the following criteria:
473	712.03.L.2	Change the first sentence in the second paragraph of this subsection to read: "If using epoxy coated steel reinforcement, epoxy coat mechanical reinforcement splices in accordance with ASTM A 775."
473	712.03.L.3	Delete the existing first sentence in the first paragraph.
473	712.03.L.3	Change the third sentence of the first paragraph to read "Provide two test splices on the largest bar size."
473	712.03.L.3	Change the sentence beginning "Demonstrate to the.... to read: "Demonstrate to the Engineer that splices have a tensile strength of 125 percent of the bar yield strength."
488	713.02	Add the following as subsection 713.02.C: "C. Structural Steel for Retrofitting and Welded Repairs. Structural steel material used for retrofitting and welded repairs of primary members as defined in subsection 707.01.B must meet longitudinal Charpy V-Notch impact test requirements."
519	716.04	Change the second sentence of the first paragraph of this subsection to read: "The unit price for Field Repair of Damaged Coating (Structure No.) includes the costs of making field repairs to the shop applied coating system; prime coat surfaces and exposed surfaces of bolts, nuts, and washers; and repairing stenciling."
521	717.04.B	This subsection should read "The unit price for Drain Casting Assembly includes the cost of providing and installing the downspout and, if necessary, the lower bracket to the drain casting."
522	718.02	Change the section number "906" in the third material in the list to read "919."

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533	718.04	Delete the following pay item from the list: Temp Casing.....Foot
533	718.04.B.2	Delete this subsection in its entirety.
533	718.04.B.3	Renumber this subsection as follows: 2. Permanent Casing.
540	802.04	Change "Non reinf" in the last pay item of the list with "Nonreinf".
545*	803.04.E	Change the second sentence of the second paragraph to read: The unit price for Railing for Steps includes the cost of providing, fabricating, installing, and grouting the railing.
567	808.04.C	Change the first paragraph of this subsection to read: "The Department will not pay separately for protective fence required in accordance with subsection 104.07."
569	809.04.A	Change the first sentence to read: The unit price for Field Office, CI ___ includes the cost of setup, providing access, grading, maintaining, plowing snow, and utility hook-up charges.
570	809.04.B	Delete the existing second and third sentences in the first paragraph and replace them with the following: The unit price for Field Office, Utility Fees includes the cost of monthly usage fees for electricity, gas, telephone service and charges, fuel for the stove, monthly water and sanitary service.
570	809.04.B	Change the existing fourth sentence in the first paragraph to read: The Department will reimburse the Contractor for monthly usage fees for electricity, gas, telephone, water and sanitary charges incurred by the Department.
575	810.03.K	Change the subsection to read "K. Drilled Piles for Cantilever and Truss Foundations. Construct drilled piles for cantilever and truss foundations in accordance with section 718."
578	810.03.N.2	Add the following sentence after the first sentence of the second paragraph on this page: "Mark each nut and bolt to reference the required rotation."
584	810.04	Delete the last pay item in the list: Truss Fdn Anchor Bolts, Replace.....Each
596	811.03.G	Delete this subsection in its entirety.
597*	811.03.H	Rename this subsection as follows: G. Raised Pavement Marker (RPM) Removal.

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597*	811.04	Change "Crosshatching" in the last pay item of the list on this page to "Cross Hatching".
598	811.04	<p>Delete the following pay items from the list: Pavt Mrkg, (material), 4 inch, SRSM, (color).....Foot Pavt Mrkg, (material), 4 inch, SRSM, 2nd Application, (color).....Foot</p> <p>Add the following pay items to the list: Pavt Mrkg, Polyurea, (legend).....Each Pavt Mrkg, Polyurea, (symbol).....Each</p> <p>Change the sixth item down the list to read: Pavt Mrkg, Polyurea, __ inch, Cross Hatching, (color)</p> <p>Change the eleventh item down the list to read: Rem Curing Compound, for Longit Mrkg, __ inch.....Foot</p> <p>Change the last item in the list to read: Witness, Log, Layout, \$1000.00</p>
599	811.04.B	Delete this subsection in its entirety.
599	811.04	Rename the following subsections as follows: B. Call Back. C. Pavement Marking Removal. D. Material Deficiency.
602	812.03.D	Change the first sentence to read "Provide and maintain traffic control devices meeting the requirements in the ATSSA Quality Guidelines for Work Zone Traffic Control Devices and Features."
603	812.03.D.1	The last sentence on this page should read "Lay the sign behind the guardrail, with the uprights pointing downstream from the traffic, and place the support stands and ballasts close to the guardrail."
604	812.03.D.2	The first sentence of the fourth paragraph should read "Do not use burlap or similar material to cover Department or Local Government owned signs."
604	812.03.D.5	The fifth sentence of the first paragraph should read "Do not mix drums and cones within a traffic channeling sequence."
605	812.03.D.6.b	Change the first sentence of the first paragraph to read: The Department will allow the nighttime use of 42-inch channelizing devices, in the tangent area only, on CPM and pavement marking of any duration where the use of plastic drums restricts proposed lane widths to less than 11 feet, including shy distance.

Page	Subsection	Errata
605	812.03.D.7	Add the following sentence after the first sentence of the first paragraph: Place a shoulder closure taper in advance of the lighted arrows placed on the shoulders.
607	812.03.D.9	Delete the second paragraph of this subsection and replace with the following: Link sections together to fully engage the connection between sections. Maintain the barrier with end-attachments engaged and within 2 inches of the alignment shown on the plans.
608	812.03.D.10.b	Add the following sentence after the first paragraph of this subsection: Use an NCHRP 350, Test Level 3, or MASH accepted attenuation system.
608	812.03.D.10.b	Delete the second sentence of the second paragraph of this subsection beginning with "Install sand module attenuators..."
608	812.03.D.10.b	Add the following sentence after the second paragraph of this subsection: Install impact attenuation devices as shown on the plans, as directed by the Engineer, or both.
609	812.03.D.10.d	Add the following sentence after the first paragraph of this subsection: Use an NCHRP 350, Test Level 3, or MASH accepted attenuation system.
610	812.03.D.11.a	Change "Type R tape" to read "Type R marking" in three locations in this subsection.
613	812.03.D.14.a.iii	Change the sentence in this subsection to read "Place an ET Type or SKT Type extruder guardrail ending on both blunt guardrail ends."
615	812.03.F	The second sentence of the second paragraph of this subsection should read "The Contractor may use a Type R temporary pavement marking cover, per subsection 812.03.D.12 when authorized by the Engineer."
616	812.03.F.2	The last sentence of the first paragraph should read "If the removal equipment cannot collect all removal debris, operate a self-propelled sweeper capable of continuously vacuuming up the removal debris immediately behind the removal equipment."
617	812.03.G.3	The first sentence of the second paragraph should read "Sweep the shoulder and remove debris prior to placing traffic on the shoulder and throughout the time the shoulder is used to maintain traffic."
617	812.03.G.4.a	Delete "48 inch by 48 inch" from the first sentence of this subsection.
618*	812.03.G.7	The first sentence of the first paragraph should read "Clean barrier reflectors, plastic drums, 42 inch channelizing devices, tubular

Page	Subsection	Errata
		markers, signs, barricades, and attached lights in operation on the project to ensure they meet required luminosity."
619	812.03.G.8	The second sentence of the third paragraph from the end of the subsection should read "Illuminate traffic regulator stations at night per subsection 812.03.H.
621	812.03.I.6	Delete "48 inch by 48 inch" from the second sentence of this subsection.
622*	812.03.J	The second paragraph should read "Apply one 2-inch wide horizontal stripe of red and white conspicuity tape along at least 50 percent of each side of, and across the full width of the rear of the vehicle or equipment."
622	812.04	Change the second item down the list to read: Traf Regulator Control
626	812.04.I	Change the reference "812.04.E" in the first sentence to "812.04.D".
628	812.04.M.4	Add the following as the first sentence of this subsection: The Engineer will not measure a temporary barrier ending move as Conc Barrier Ending, Temp, Relocated if it involves work defined in subsection 812.04.M.3.
629	812.04.N.1	Change the reference "811.04.D" in the second paragraph of this subsection to read "811.04.C".
630	812.04.S	Change the first sentence to read "The Department will not make additional payments for traffic regulating, signing, arrow boards, and lighting systems for traffic regulator stations operated at night due to a temporary PTS system failure."
634	813.03.C.3	Change the reference "903.07.A" in the paragraph of this subsection to read "907.07.B".
646	815.04	Change the first, third and fourth pay items in the list to read: Site Preparation, Max (dollar)Lump Sum Watering and Cultivating, First Season, Min (dollar).....Lump Sum Watering and Cultivating, Second Season, Min (dollar)Lump Sum
646	815.04.C.1	Change the following pay item reading "Watering and Cultivating, First Season, Min. (dollar)" to read "Watering and Cultivating, First Season, Min (dollar)" at two locations throughout the subsection.
646	815.04.C.2	Change the following pay item reading "Watering and Cultivating, Second Season, Min. (dollar)" to read "Watering and Cultivating, Second Season, Min (dollar)" at three locations throughout the subsection.

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650	816.03.B	Delete the first paragraph of this subsection and replace with the following: "Conduct soil tests when called for in the contract or when directed by the Engineer. Provide soils tests results to the Engineer when testing is required. Provide and place fertilizer as indicated below and as indicated in the soils tests, if required."
650	816.03.B.1	Change the sentence to read "For Class A fertilizer, evenly apply 176 pounds of chemical fertilizer nutrient per acre on a prepared seed bed."
650	816.03.B.2	Change the sentence to read "For Class B fertilizer, evenly apply 120 pounds of chemical fertilizer nutrient per acre on a prepared seed bed."
650*	816.03.B.3	Change the sentence to read "For Class C fertilizer, evenly apply 80 pounds of chemical fertilizer nutrient per acre on established turf."
673	819.03.G.4.b	Change the last sentence of the first paragraph to read: "Tighten the anchor bolts to a snug tight condition as described in the third paragraph of subsection 810.03.N.2 ensuring the lock washer is completely compressed."
673	819.03.G.4.b	Delete the first two sentences of the second paragraph and replace with the following: "Tighten bolts connecting the pole to the frangible base to a snug tight condition. Snug tight is the tightness attained by a few impacts of an impact wrench, or the full effort of a person using an ordinary spud wrench. The lock washers must be fully compressed."
678	819.04	Change the last item in the list on this page to read: DB Cable, in Conduit, 600 Volt, (number), 1/C# (size)Foot
688	820.03.C	Change the seventh paragraph of this subsection to read: Tighten top anchor bolt nuts, snug, in accordance with the first four paragraphs of subsection 810.03.N.2, except beeswax will not be required.
696	820.04	Add the following pay items to the list: Pedestal, Pushbutton, Alum.....Each Pedestal, Pushbutton, Rem.....Each
698	820.04.B	Delete the second paragraph of this subsection found on this page.
698	820.04.C	Change " Fdns " to read " Fdn " in four instances in this subsection.
701	820.04.J.3	Change the sentence to read "Installing wires in the saw slots and to the handholes;"
701.	820.04.J	Add the following as a new subsection:

Page	Subsection	Errata
		7. A 3/4 inch minimum flexible conduit (non-metallic and rated for underground use) from the pavement to the handhole.
706	821.01.B	Change the website address listed after the second paragraph on this page to read: http://www.ngs.noaa.gov/heightmod/GuidelinesPublications.shtml
711	822.03.B	Change the second paragraph to read: If corrugations are required on concrete shoulders and the method of installation is not shown on the plans or directed by the Engineer, construct corrugations by grinding, or cutting.
720	823.04	Change the pay item seventh from the bottom of the list to read: Water Shutoff, Adj, Temp, Case __
732	824.04	Change the first sentence of the first paragraph following the list of pay items to read: If the Engineer determines the Contractor will perform staking as extra work, the Department will pay for staking in accordance with section 103.
739	902.02	Change the last aggregate testing description to read: Determining Specific Gravity and Absorption of Fine Aggregates.....MTM 321
742	902.03.C.1.a	Change the sentence to read: Coarse aggregate includes all aggregate particles greater than or retained on the 3/4-inch sieve.
742	902.03.C.2.a	Change the sentence to read: Intermediate aggregate includes all aggregate particles passing the 3/4-inch sieve through those retained on the No. 4 sieve.
746*	902.11	Change the Item of Work by Section Number column in Table 902-1 for the 6AA row to read "406, 601, 602, 706, 708, 806". Change the Item of Work by Section Number column in Table 902-1 for the 6A row to read "206, 401, 402, 406, 601, 602, 603, 706, 806". Change the Item of Work by Section Number column in Table 902-1 for the 34R row to read "401, 404, 406".
751	902.11	Replace Table 902-6 with the Table 902-6 below.
751	Table 902-7	Under the Material column in the fourth row change the "FA2" to read "2FA".
751	Table 902-7	Under the Material column in the fifth row change the "FA3" to read "3FA".

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752	Table 902-8	Under the Material column in the fourth row change the "FA2" to read "2FA".
752	Table 902-8	Under the Material column in the fifth row change the "FA3" to read "3FA".
761	Table 904-2	Delete the footnote f and any other reference to footnote f from the table.
767	905.03	Change the first sentence of the first paragraph to read "Deformed bars, must meet the requirements of ASTM A 706, ASTM A 615, or ASTM A 996 (Type R or Type A only) for Grade 60 steel bars, unless otherwise required".
767*	905.03	Change the first sentence of the second paragraph to read "Unless otherwise specified, spiral reinforcement must meet the requirements of plain or deformed Grade 40 steel bars of ASTM A 615, ASTM A 996 (Type A), or the requirements of cold-drawn wire of ASTM A 1064".
767	905.03	Change the first sentence of the third paragraph to read "Bar reinforcement for prestressed concrete beams must meet the requirements of ASTM A 996 (Type R) for Grade 60 steel bars, except the Engineer will allow bar reinforcement that meets the requirements of ASTM A 615 or ASTM A 996 (Type A) for Grade 40 steel bars for stirrups in prestressed concrete beams".
768	905.03.C	Change the first sentence in the subsection to read: "Epoxy coated steel reinforcement, if required, must be coated in accordance with ASTM A 775, with the following exceptions and additions."
768	905.03.C.3	Change the first sentence of this subsection to read: "Include written certification that the coated reinforcing bars were cleaned, coated, and tested in accordance with ASTM A 775 with the coating applicator."
768	905.05	Change the first sentence of the first paragraph to read "Deformed steel bars must meet the requirements of ASTM A 706 or the requirements for Grade 40, Grade 50, or Grade 60 of ASTM A 615 or ASTM A 996 (Type R or Type A only)".
768	905.06	Delete this subsection in its entirety and replace it with the following: "Deformed wire fabric for prestressed concrete and fabric for concrete pavement reinforcement must meet the requirements of ASTM A 1064 and fabricated as required."
772	906.07	Change the first paragraph to read: "High-strength bolt fasteners for structural joints must meet the requirements of ASTM A 325 Type 1 bolts. High-strength nuts for structural joints must meet the requirements of ASTM A 563 Grade DH

Page	Subsection	Errata
		or AASHTO M 292 Grade 2H. High-strength washers for structural joints must meet the requirements of ASTM F 436 Type 1 for circular, beveled, clipped circular, and clipped beveled washers."
		Change the second sentence of the second paragraph of this subsection to read: "Galvanized nuts must be tapped oversize in accordance with ASTM A 563 and meet Supplementary Requirements S1, Lubricant and Rotational Capacity Test for Coated Nuts and S2, Lubricant Dye."
772	906.08	Change the last sentence of the first paragraph to read "Washers must be made from austenitic stainless steel ASTM A 276 UNS designation S31600 or S31603."
777*	907.03.D.2.a	Change the first sentence of the second paragraph to read: Angle sections must be nominal 2½ inch by 2½ inch by ¼ inch.
777*	907.03.D.2.b	Change the first sentence of the first paragraph to read: Angle section braces must be nominal 1¾ inch by 1¾ inch by ¼ inch or nominal 2 inch by 2 inch ³ / ₁₆ inch.
782	908.04	Change the first sentence of the first paragraph of this subsection to read: "Steel castings for steel construction must meet the requirements of ASTM A 148 for Grade 60/90 carbon steel castings, as shown on the plans, unless the Engineer approves an alternate in writing."
783	908.09.A	Change the title of this subsection and the first sentence to read "A. Base Plates, Angle, and Non-Tubular Post Elements. Galvanized base plates, angle, rail splice elements, and non-tubular post elements must meet the requirements of ASTM A 36 and ASTM A 123".
783	908.09.B	Change the title of this subsection and the first sentence to read "B. Rail Elements and Tubular Post Elements. Rail elements and tubular post elements must meet the requirements of ASTM A 500, for Grade B and subsection 908.09.B and be galvanized in accordance with ASTM A 123".
784	908.09.C	Change the second sentence to read: "Heavy hex nuts must meet the requirements of ASTM A 563." Change the third sentence to read: "Bolts, used as rail fasteners, washers and nuts must meet the requirements of ASTM A 325, Type 1." Change the sixth sentence to read: "All flat washers must meet the requirements of ASTM F 436." Add the following sentence to the end of the subsection:

Page	Subsection	Errata
		"Bolts, nuts, washers and other hardware must be hot-dip galvanized in accordance with AASHTO M 232."
785	908.11.B	<p>Change the second paragraph to read: "Bolts, nuts, and round washers for guardrail, other than at bridge barrier railings, must meet the requirements of ASTM A 307, ASTM A 563 (Grade A with Supplementary Requirements S1 of ASTM A 563), and ASTM F 436, respectively."</p> <p>Change the third paragraph to read: "Washers, other than round washers, for guardrail must meet the requirements for circular washers in ASTM F 436 except that the dimensions must be as shown on the plans."</p> <p>Change the fifth paragraph to read: "Bolts, nuts, and washers for connections at bridge barrier railings must conform to ASTM A 325 Type 1 galvanized high-strength structural bolts with suitable nuts and hardened washers."</p>
787	908.14.B	<p>Add the following sentence to the end of the third paragraph of this subsection: "Exposed threaded ends of anchor bolts must be galvanized a minimum of 20 inches."</p> <p>Change the sixth paragraph in this subsection to read: "Provide washers meeting the requirements of ASTM F 436 for circular washers."</p>
787	908.14.B	Change the second sentence of the fourth paragraph to read "After coating, the maximum limit of pitch and major diameter for bolts with a diameter no greater than 1 inch may exceed the Class 2A limit by no greater than 0.021 inch, and by no greater than 0.031 inch for bolts greater than 1 inch in diameter".
787*	908.14.C	Change the first paragraph to read "Provide either four or six high strength anchor bolts per the contract plans, meeting the mechanical requirements of ASTM F 1554, for Grade 105, with each standard. Anchor bolts for traffic signal strain poles must meet the requirements of subsection 908.14.B with the following exceptions and additions:
789	909.03	<p>Change the second sentence of the second paragraph to read: "As an alternative to the AASHTO M 36 requirements for metal pipe, the Contractor may use gasket material meeting the low temperature flexibility and elevated temperature flow test requirements of ASTM C 990, excluding the requirements for softening point, flashpoint and fire point."</p>
793	909.06	Change the first sentence of the second paragraph of this subsection to read:

Page	Subsection	Errata
		"Provide Corrugated Polyvinyl Chloride Pipe (CPV) and required fittings meeting the requirements of AASHTO M 304."
793*	909.05.D	Change the second sentence of the paragraph to read "Provide a continuous welded joint to create a watertight casing that is capable of withstanding handling and installation stresses. Perform field welding by the SMAW process using E7018 electrodes.
794*	909.08.A	Change the first sentence to read: Provide bridge deck downspouts of PE pipe meeting the requirements of ASTM F 714, PE 4710, DR 26.
811	910.04	Add the following sentence to the end of this subsection: Fabricate silt fence according to subsection 916.02.
829*	912.08.K	Replace Table 912-10 with the Table 912-10 below.
833	913.03.B	Change the first sentence of the first paragraph to read: "Clay brick, to construct manholes, catch basins, and similar structures, must meet the requirements of ASTM C32, for Grade MS."
837	914.04	Add the following as subsection 914.04.C: C. Lubricant-Adhesive for Neoprene Joint Seals. The lubricant-adhesive must be a single-component moisture-curing polyurethane and aromatic hydrocarbon solvent mixture meeting ASTM D 2835, Type I. Ship in containers plainly marked with the lot or batch number of the material and date of manufacture. Store at temperatures between 58 and 80°F. Do not exceed 12 months shelf-life prior to use.
840	914.08	Change the first sentence of the second paragraph to read "Straight tie bars for end-of-pour joints must consist of bars of the diameter and length shown on the plans meeting the requirements of ASTM A 615, ASTM A 706, or ASTM A 996 (Type R or Type A only)".
840	914.09.A	Change the first sentence of the first paragraph to read "Straight tie bars for longitudinal pavement joints must consist of bars of the diameter and length shown on the plans meeting the requirements of ASTM A 615, ASTM A706, or ASTM A 996 (Type R or Type A only)".
840	914.09.B	Change the first sentence of the first paragraph to read "Bent tie bars for bulkhead joints must consist of bars of the diameter and length shown on the plans.
841	914.12	In the first sentence of this subsection change "AASHTO Division II" to read "AASHTO LRFD Bridge Construction Specifications".
841*	914.13	In the first sentence of this subsection change "ASTM D 1248, for Type III, Class B" to read "ASTM D 4976, Group 2, Class 4, Grade 4".

Page	Subsection	Errata
844	916.01.A	Change the first sentence to read "Cobblestone must consist of rounded or semi-rounded rock fragments with an average dimension from 3 inches to 10 inches."
845	916.01.D.1	Change the second sentence to read "Checkdams for ditch grades 2 percent or greater must be constructed using cobblestone or broken concrete ranging from 3 inches to 10 inches in size."
851*	917.10.B.1	Delete the paragraph and replace it with the following: 1. Class A. Provide and apply Class A chemical nutrient fertilizer either according to MSU Soil Testing Lab Recommendations for Phosphorus Applications to Turfgrass, except the maximum single application rate of nutrient will be 48 pounds per acre, when soil tests are required or as indicated in subsections 917.10.B.1.a and 917.10.B.1.b.
851	917.10.B.1	Add the MSU Soil Testing Lab Recommendations for Phosphorus Applications to Turfgrass, found below, after the first paragraph of this subsection.
853	917.15.B.1	Change the second sentence of the subsection to read: The net must meet the requirements of subsection 917.15.D and be capable of reinforcing the blanket to prevent damage during shipping, handling, and installation.
863	918.06.F.1	Delete the third paragraph in this subsection in its entirety and replace it with the following: "Provide smooth or deformed welded wire fabric in accordance with ASTM A 1064."
864	918.07.C	Change the first sentence of the first paragraph to read: Provide anchor bolts, nuts, and washers meeting the requirements of subsection 908.14.A and subsection 908.14.B.
864	918.07.C	Delete the second sentence of the second paragraph.
864	918.07.C	Change the third sentence to read: Provide anchor bolts threaded 4 inches beyond the anchor bolt projection shown on the plans.
867	918.08.C	Change the last sentence of the first paragraph on this page to read: Galvanize bolts, nuts, washers, and lock washers as specified in subsection 908.14.B.
867	918.08.C	Change the last sentence of the subsection to read: Provide each frangible base with manufacturer access covers as shown on the plans.
867*	918.08.D	Delete this subsection in its entirety and replace with the following:

Page	Subsection	Errata
		"Provide galvanized anchor bolts, studs, nuts, couplings, and washers in accordance with subsection 908.14."
879	918.10.J	Change the third sentence of the second paragraph of this subsection to read: "Provide anchor bolts and associated nuts, washers, and hardware meeting the requirements of subsection 908.14."
903	921.03.D	Delete the last three sentences of the first paragraph of this subsection.
914	921.05.D	Change the first sentence of this subsection to read: "Provide anchor bolts meeting the requirements of subsection 908.14.C, including elongation and reduction of area requirements."
916	921.07	Change the first sentence of the first paragraph to read "Provide LED case signs internally illuminated by LEDs and changeable message case signs internally illuminated with LED light sources."
936	922.04.B	In the first sentence of the first paragraph change the "R-52" to "R-126".
936	922.04.B	Add the following to the end of the first paragraph: Hardware used to connect the end section to the barrier must meet the requirements of NCHRP 350 or MASH (Test Level 3 or higher).
936	922.04.B	In the first sentence of the second paragraph delete "R-52".
953	Pay Item Index	Change the following pay item to read: DB Cable, in Conduit, 600 Volt, (number), 1/C# (size) 678 819
960	Pay Item Index	Change the following pay item to read: Mobilization, Max (dollar) 107 150
961	Pay item Index	Delete the following pay items from the list: Pavt Mrkg, (material), 4 inch, SRSM, (color).....598.....811 Pavt Mrkg, (material), 4 inch, SRSM, 2 nd Application, (color).....598.....811
961	Pay Item Index	Change the following pay items in the list to read: Pavt Mrkg, Ovly Cold Plastic, 12 inch, Cross Hatching, (color) Pavt Mrkg, Polyurea, __ inch, Cross Hatching, (color) Add the following pay items to the list: Pavt Mrkg, Polyurea, (legend).....598.....811 Pavt Mrkg, Polyurea, (symbol).....598.....811 Pedestal, Pushbutton, Alum.....696.....820 Pedestal, Pushbutton, Rem.....696.....820
962	Pay Item Index	Change the following pay items in the list to read:

Page	Subsection	Errata		
		Pile Driving Equipment, Furn (Structure No.) Pile, Galv (Structure No.)		
963	Pay Item Index	Change the following pay item to read: Rem Curing Compound, for Longit Mrkg, ___ inch	598	811
965	Pay Item Index	Change the following pay item in the list to read: Steel Casing Pipe, ___ inch, Tr Det ___ Site Preparation, Max (dollar)	646	815
966	Pay Item Index	Delete the following pay item form the list; Temp Casing.....	533.....	718
967	Pay Item Index	Delete the following pay item form the list; Truss Fdn Anchor Bolts, Replace.....	584.....	810
967	Pay Item Index	Change the following pay item in the list to read: Traf Regulator Control		
968	Pay item Index	Change the following pay item in the list to read: Water Shutoff, Adj, Temp, Case ___ Watering and Cultivating, First Season, Min (dollar)..... Watering and Cultivating, Second Season, Min (dollar)	646 646	815 815
969	Pay item Index	Change the following pay item in the list to read: Witness, Log, Layout, \$1000.00		

Table 701-1 Concrete Structure Mixtures													
				Slump (inches)				Minimum Strength of Concrete (f)					
Concrete Grade (e,h)	Section Number Reference (i)	Cement Content per cyd (b,c)		Type A, D or no Admixture	Type MR, F, or G Admixtures (g)			Flexural (psi)			Compressive (psi)		
		lb	sack		Before Admixture	After Admixture (Type MR)	After Admixture (Type F or G)	7 Day	14 Day	28 Day (Class Design Strength)	7 Day	14 Day	28 Day (Class Design Strength)
D (a)	706, 711, 712	658 (d)	7.0	0 - 3	0 - 3	0 - 6	0 - 7	625	700	725	3,200	4,000	4,500
S1	705	611	6.5	3 - 5	0 - 3	3 - 6	3 - 7	600	650	700	3,000	3,500	4,000
T	705, 706	611	6.5	3 - 7	0 - 4	3 - 7	3 - 8	550	600	650	2,600	3,000	3,500
S2 (a)	401, 705, 706, 712, 713, 801, 802, 803, 810	564	6.0	0 - 3	0 - 3	0 - 6	0 - 7	550	600	650	2,600	3,000	3,500
		526 (d)	5.6										
S3	402, 403, 803, 804, 806	517	5.5	0 - 3	0 - 3	0 - 6	0 - 7	500	550	600	2,200	2,600	3,000
		489 (d)	5.2										

a. Unless otherwise required, use Coarse Aggregate 6AA or 17A for exposed structural concrete in bridges, retaining walls, and pump stations.

b. Do not place concrete mixtures containing supplemental cementitious materials unless the local average minimum temperature for the next 10 consecutive days is forecast to be above 40 °F. Adjustments to the time required for opening to construction or vehicular traffic may be necessary. Cold weather protection may be required, as described in the quality control plan. The restriction does not apply to Grade S1 concrete in foundation piling below ground level or Grade T concrete in tremie construction.

c. Type III cement is not permitted

d. Use admixture quantities specified by the Qualified Products Lists to reduce mixing water. Admixture use is required for Grade D, Grade S2, and Grade S3, concrete with a reduced cement content. Use a water-reducing retarding admixture at the required dosage for Grade D concrete to provide the setting retardation required. When the maximum air temperature is not forecast to exceed 60 °F for the day, the Contractor may use a water-reducing admixture or a water-reducing retarding admixture. Ensure Grade D concrete in concrete diaphragms contains a water-reducing admixture, or a water-reducing retarding admixture. For night casting, the Contractor may use a water-reducing admixture in lieu of water-reducing retarding admixture, provided that the concrete can be placed and finished prior to initial set.

e. The mix design basis for bulk volume (dry, loose) of coarse aggregate per unit volume of concrete is 68% for Grade S1, and 70% for Grade D, Grade S2, Grade T, and Grade S3.

f. The Contractor may use flexural strength to determine form removal. Use compressive strength for acceptance in other situations.

g. MR = Mid-range.

h. The Engineer will allow the use of an optimized aggregate gradation as specified in section 604.

i. Section Number Reference:

401	Culverts	711	Bridge Railings	803	Concrete Sidewalk, Sidewalk Ramps, and Steps
402	Storm Sewers	712	Bridge Rehabilitation-Concrete	804	Concrete Barriers and Glare Screens
403	Drainage Structures	713	Bridge Rehabilitation-Steel	806	Bicycle Paths
705	Foundation Piling	801	Concrete Driveways	810	Permanent Traffic Signs and Supports
706	Structural Concrete Construction	802	Concrete Curb, Gutter and Dividers		

An asterisk (*) indicates an entry which has been revised from an earlier version of this Supplemental Specification.

Table 902-6 Superpave Final Aggregate Blend Physical Requirements													
Est. Traffic (million ESAL)	Mix Type	Percent Crushed Minimum Criteria		Fine Aggregate Angularity Minimum Criteria		% Sand Equivalent Minimum Criteria		Los Angeles Abrasion % Loss Minimum Criteria		% Soft Particles Maximum Criteria (b)		% Flat and Elongated Particles Maximum Criteria (c)	
		Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course
< 0.3	LVSP	55/—	—	—	—	40	40	45	45	10	10	—	—
< 0.3	E03	55/—	—	—	—	40	40	45	45	10	10	—	—
≥0.3 -<1.0	E1	65/—	—	40	—	40	40	40	45	10	10	—	—
≥1.0 - <3	E3	75/—	50/—	40(a)	40(a)	40	40	35	40	5	5	10	10
≥3 - <10	E10	85/80	60/—	45	40	45	45	35	40	5	5	10	10
≥10 - <30	E30	95/90	80/75	45	40	45	45	35	35	3	4.5	10	10
≥30 - <100	E50	100/10 0	95/90	45	45	50	50	35	35	3	4.5	10	10

(a) For an E3 mixture type that enters the restricted zone as defined in Table 902-5, the minimum is 43. If these criteria are satisfied, acceptance criteria and associated incentive/disincentive or pay adjustment tied to this gradation restricted zone requirement included in contract, do not apply. Otherwise, final gradation blend must be outside of the restricted zone.

(b) Soft particles maximum is the sum of the shale, siltstone, ochre, coal, clay-ironstone and particles that are structurally weak or are non-durable in service.

(c) Maximum by weight with a 1 to 5 aspect ratio.

Note: "85/80" denotes that 85 percent of the coarse aggregate has one fractured face and 80 percent has at least two fractured faces.

An asterisk (*) indicates an entry which has been revised from an earlier version of this Supplemental Specification.

Table 912-10 Minimum Retention Requirements				
Preservative	Minimum Retention, (pcf)			AWPA Standard
	Guardrail Posts	Sign Posts	Blocks	
Pentachlorophenol	0.60	0.50	0.40	A6
CCA, ACZA	0.60	0.50	0.40	A11
ACQ (a)	0.60	Not Allowed	0.40	A11
CA-B (a)	0.31	Not Allowed	0.21	A11
CA-A (a)	0.31	Not Allowed	0.15	A11
Other Waterborne preservatives	AWPA Commodity Specification A, Table 3.0, Use Category 4B	Not Allowed	AWPA Commodity Specification A, Table 3.0, Use Category 4A	A11
a. Non-Metallic washers or spacers are required for timber and lumber treated with ACQ or CA placed in direct contact with aluminum. Do not use with sign posts.				

MSU Soil Testing Lab Recommendations for Phosphorus Applications to Turfgrass
3/8/2012

		Sand based rootzone establishment	Golf greens and tees est. or mature; Kentucky bluegrass or perennial ryegrass athletic fields est. or mature; sand based rootzone mature	Lawns, golf course fairways; establishment or mature	Establishment without soil test
Bray P1, Mehlich 3 Soil Test Value (ppm): pH<7.4	Olsen Soil Test Value (ppm) pH>7.4	Recommendation (lbs. P ₂ O ₅ /1000 ft. ²)	Recommendation (lbs. P ₂ O ₅ /1000 ft. ²)	Recommendation (lbs. P ₂ O ₅ /1000 ft. ²)	Recommendation (lbs. P ₂ O ₅ /1000 ft. ²)
0	0	4.4	3.4	2.5	2.5 lbs. year (Maximum single application of 1.5 lbs.)
2	1.3	4.1	3.1	2.2	
4	2.7	3.9	2.7	1.9	
6	4	3.6	2.4	1.6	
8	5.3	3.4	2.0	1.3	
10	6.7	3.1	1.7	1.0	
12	8	2.8	1.4	0.7	
14	9.3	2.6	1.0	0.4	
16	10.7	2.3	0.7	0.1	
18	12	2.1	0.3	0.0	
20	13.3	1.8	0.0		
22	14.7	1.5			
24	16	1.3			
26	17.3	1.0			
28	18.7	0.8			
30	20	0.5			
32	21.3	0.2			
34	22.7	0.0			

Web resources: www.turf.msu.edu or www.bephosphorusmart.msu.edu

**NOTICE TO BIDDERS
UTILITY COORDINATION**

J.N. 115517A

1 of 1

08-19-2014

a. Description. The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.08 of the 2012 MDOT Standard Specifications for Construction. In addition, for the protection of underground utilities, the contractor shall follow the requirements in Section 107.12 of the 2012 MDOT Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 108.09 of the 2012 MDOT Standard Specifications for Construction.

b. Utilities. The following Public/Private Utilities have facilities located within the project area:

1. All locations.

Ypsilanti Community Utility Authority
2777 State St.
Ypsilanti, MI 48198

Bob Fry
(734) 484-4600
bfry@ycua.org

The owners of the existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the Right-of-Way. Owners of the public utilities will not be required by the County 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 structure constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operation.