



BIDDERS COMPANY NAME

# REQUEST FOR PROPOSAL

## #6683

### DRAPER-HOUSTON MEADOWS PRESERVE

### PEDESTRIAN BOARDWALK

### ALONG

### THE SALINE RIVER, YORK TOWNSHIP

for:

*Washtenaw County  
Parks and Recreation Commission  
Ann Arbor, Michigan*

Prepared by:

Washtenaw County  
Purchasing Division  
Administration Building  
220 N. Main B-35  
Ann Arbor, MI 48104

Angela O. Perry,  
Purchasing Manager  
(734-222-6768)





WASHTENAW COUNTY  
FINANCE DEPARTMENT  
Purchasing Division  
220 N. Main, Ann Arbor, MI 48104  
Phone (734) 222-6760, Fax (734) 222-6764

## REQUEST FOR PROPOSAL #6683

August 10, 2012

Washtenaw County Purchasing Division on behalf of the Washtenaw County Parks and Recreation Commission is issuing a Sealed Request for Proposal (RFP) #6683 for the construction of a pedestrian boardwalk within Draper-Houston Meadows Preserve in York Township.

**Sealed Proposals:** Contractor will deliver **one (1) original and three (3) copies** of the bid proposal to the following address:

Washtenaw County  
Administration Building  
Purchasing Division  
220 N. Main St. Room B-35  
Ann Arbor, MI 48104

**By 3:00 p.m. on August 30, 2012**

A mandatory pre-bid meeting and site walk scheduled for Thursday August 16, 2012 at 3 pm shall be attended by all General CONTRACTORS who will be submitting bids. The mandatory pre-bid meeting will take place on site at the parking area of the Draper-Houston Meadows Preserve located at the south side of Mooreville Road approximately 0.25 miles west of Platt Road in York Township, Michigan. This meeting will consist of a review of the bid documents and allow for a one time contractor pre-bid site inspection.

Proposals received after the above cited time will be considered a late bid and are not acceptable unless waived by the Purchasing Manager.

- The envelope should be clearly marked "**SEALED RFP #6683**".
- Please direct purchasing and procedural questions regarding this RFP to Angela O. Perry at 734-222-6768 or [perrya@ewashtenaw.org](mailto:perrya@ewashtenaw.org).
- Please direct technical questions regarding this RFP to Richard Kent, Park Planner at 734-971-6337, ext 319 or [kentr@ewashtenaw.org](mailto:kentr@ewashtenaw.org)

Thank you for your interest.

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**APPENDICES**

APPENDIX A - EXAMPLE CONTRACT

APPENDIX B - BID FORMS

    Bid Bond

    Bidder's Qualification & Experience Statement

    Labor & Material Payment Bond

    Performance Bond

APPENDIX C - PLAN DRAWINGS

APPENDIX D - SPECIAL PROVISIONS

    Errata to the 2012 Standard Specifications

    Slope Restoration

APPENDIX E - MDEQ-USACOE Joint Permit

**ATTACHMENTS**

Brauer Preserve Trail Map

Raymond F. Goodrich Preserve Trail Map

Leonard Preserve Trail Map

Albert J. Miller and Nancy Smith Preserve Trail Map

## DIVISION 0 – CONTRACT DOCUMENTS

### 1.0 PROPOSAL INFORMATION

#### 1.1 PROPOSAL DEFINITIONS

“Bidder”	An individual or business submitting a bid to Washtenaw County
“CONTRACTOR”	One who contracts to perform services in accordance with a contract
“County”	Washtenaw County in Michigan
“WCPARC”	Washtenaw County Parks and Recreation Commission
“WCRC”	Washtenaw County Road Commission
“WCPD”	Washtenaw County Purchasing Division

#### 1.2 TERMS

- A. Washtenaw County reserves the right to reject any and all proposals received as a result of this RFP. If a proposal is selected, it will be the most advantageous regarding price, quality of service, the CONTRACTORS qualifications and capabilities to provide the specified service, and other factors that the County may consider. The County does not intend to award a contract fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a contract would be awarded, and negotiations would be undertaken with that CONTRACTOR whose proposal is deemed to best meet the County's specifications and needs.
- B. The County reserves the right to reject any or all bids, to waive or not waive informalities or irregularities in bids or bidding procedures, and to accept or further negotiate cost, terms, or conditions of any bid determined by the County to be in the best interests of the County even though not the lowest bid.
- C. Proposals must be signed by an official authorized to bind the CONTRACTOR to its provisions for at least a period of 90 days. Failure of the successful bidder to accept the obligation of the contract may result in the cancellation of any award.
- D. In the event it becomes necessary to revise any part of the RFP, addenda will be provided. Deadlines for submission of RFP's may be adjusted to allow for revisions. To be considered, **Four copies (4)**, the **original and three (3) copies** (one copy unbound and suitable for photocopying) must be at the County on or before the date specified.
- E. Proposals should be prepared simply and economically providing a straight-forward, concise description of the CONTRACTOR'S ability to meet the requirements of the RFP. Proposals shall be typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed in ink by the person signing the proposal.

- F. In the event, the County receives two or more bids from responsive, responsible bidders, one or more of whom are Washtenaw County vendors and the bids are substantially equal in price, quality and service, the County shall award the contract to the most responsive, responsible Washtenaw County vendor. For purposes of this section, Washtenaw County vendor means a company which has maintained its principal office in Washtenaw County for at least six (6) months. Maintaining a Washtenaw County P.O. Box, is not, in and of itself, sufficient to establish a company as a Washtenaw County vendor. The County shall have sole discretion under this section to determine if a company qualifies as a Washtenaw County vendor and if two or more bids are substantially equal.

### 1.3 PROPOSAL SPECIFICS

#### A. GENERAL

##### I. Purpose of Proposal:

The purpose of this Request for Proposal (RFP) is to obtain bids from qualified CONTRACTORS to provide the labor, materials, and equipment necessary to construct a boardwalk located within Draper-Houston Meadows Preserve. Draper-Houston Meadows Preserve is located south of Mooreville Road approximately 0.25 miles west of Platt Road in York Township. This project shall include all material, labor and equipment necessary to construct the pedestrian boardwalk as shown in the project plans and shall include, but is not limited to mobilization, demobilization, site preparation and maintenance, installation and removal of erosion control measures, mechanized grading, construction of a timber pedestrian boardwalk, removal of excess trees, vegetation, debris and excavated materials not needed for the boardwalk construction, seeding, and site restoration.

Bidders must complete the Experience and Qualifications section of this RFP. A Lump Sum bid price is requested for construction services. Based on the response to this RFP, including a schedule for completion of work, experience, ability, financial standing and bid prices submitted, the County will select a CONTRACTOR to provide the required services.

The County would like this work to begin on or about September 19, 2012 with completion of all work, project area cleanup, and final restoration by October 31, 2012. All work shall be in accordance within the timeframe and restrictions of the MDEQ-USACOE joint permit included in Appendix E.

##### II. Issuing Office

The RFP is issued by the WCPD. Please direct purchasing and procedural questions regarding this RFP to Angela O. Perry at 734-222-6768 or [perrya@ewashtenaw.org](mailto:perrya@ewashtenaw.org).

Please direct technical questions regarding this RFP to Richard Kent, Park Planner at 734-971-6337, ext 319 or [kentr@ewashtenaw.org](mailto:kentr@ewashtenaw.org).

III. Proposals

Four (4) copies of the proposal shall be submitted (one unbound for copying). The total submittal shall not be more than 10 pages (letter size) with material on two sides. To be considered, each firm must submit a complete response to this RFP using the format provided in Proposal Specification (Section IV). No other distribution of proposals is to be made by the submitter. The proposal must be signed in ink by an official authorized to bind the submitter to its provisions.

IV. Changes in RFP

Should any prospective proposer be in doubt as to the true meaning of any portion of this Request for Proposals, or should the proposer find any patent ambiguity, inconsistency or omission therein, the proposer shall make a written request for an official interpretation or correction. Such requests shall be submitted to the issuing office not less than seven (7) days prior to the final date of submittal of the proposals.

Such interpretation or correction, as well as any additional RFP provisions that the WCPARC may decide to include, will be made only as an addendum, which will be posted and e-mailed to each firm recorded as having received a copy of the RFP. Any addendum issued by the WCPARC shall become a part of the RFP and shall be taken into account by each proposer in preparing his or her proposal.

V. Proposal Receipt

Proposals must arrive at Washtenaw County Purchasing, Administration Building, 220 N. Main, Ann Arbor, MI 48104 on or before **3:00 pm, Thursday, August 30, 2012**. Prospective firms are responsible for the timely delivery of their proposal.

VI. Disclosures

All information in a submitter's proposal is subject to disclosure under the provisions of Public Act No. 442 of 1976 known as the "Freedom of Information Act." This Act also provides for the complete disclosure of contracts and attachments thereto. All unsuccessful proposals will be retained for thirty (30) days after acceptance of the successful proposal.

VII. Type of Contract

A standard Washtenaw County Service Contract will be executed between the WCPARC and the CONTRACTOR (see Appendix A, Example Contract). The WCPARC reserves the right to award the total proposal, to reject any and all proposals in whole or in part, and to waive any informality or technical defects if, in the WCPARC's sole judgment, the best interests of Washtenaw County will be so served.

### VIII. Cost Liability

The WCPARC assumes no responsibility or liability for costs incurred by the bidder prior to the execution of a Service Contract. A copy of the service contract with WCPARC is provided herewith as Appendix A.

#### 1.4 PROPOSAL SPECIFICATIONS

The proposal should include all of the following information:

- Bidder's Qualifications, years of experience. Describe experience in providing the level and type of service specified in the proposal (form found in Appendix B, Forms).
- At least five (5) references covering similar services. Include company name, contact name, phone number.
- CONTRACTOR must complete the BIDDERS QUALIFICATION AND EXPERIENCE STATEMENT (Appendix B).
- Accompanying this Proposal must be a Bid Bond or Certified Check in the amount of 5% of the amount of the bid submitted, made payable to the WCPARC.

#### 1.5 PERFORMANCE SCHEDULE

The CONTRACTOR will complete the work, project area cleanup, and final restoration by October 31, 2012. All work shall be in accordance within the timeframe and restrictions of the MDNRE permit on file.

#### 1.6 SCOPE OF SERVICES

The following section summarizes the Scope of Services to be performed for WCPARC at the Draper-Houston Meadows Preserve.

##### **Draper-Houston Meadows Preserve Pedestrian Boardwalk:**

The CONTRACTOR will provide all the materials, labor, and equipment necessary to construct a pedestrian boardwalk within Draper-Houston Meadows Preserve. This project shall include all material, labor and equipment necessary to construct the pedestrian boardwalk as shown in the project plans and shall include, but is not limited to mobilization, demobilization, site preparation and maintenance, installation and removal of erosion control measures, mechanized grading, construction of a timber pedestrian boardwalk, removal of excess trees, vegetation, debris and excavated materials not needed for the boardwalk construction, seeding, and site restoration.

##### **A. Mobilization / Demobilizations / Site Preparation & Service**

1. Install silt fence along both sides of proposed boardwalk location.
2. Clear Trees, brush, vegetation as necessary within limits of work and dispose of off-site at suitable location.
3. Remove excess excavation from site to an upland area at the designated location shown in the plans.
4. Level ground to proposed elevation by mechanized grading.
5. Install pipe culverts as necessary at locations shown in project plans.

**B. Construct Treated Timber Boardwalk**

1. Furnish and construct pedestrian boardwalk as shown in the plans.
2. Provide all treated timber, fasteners, nails, screws, adhesives, metal connectors, rods, etc necessary to complete the boardwalk.

**C. Site Restoration**

1. Remove all construction debris from site.
2. Regrade. Add topsoil as necessary.
3. Seed all disturbed areas adjacent to the boardwalk.
4. Remove all temporary erosion control measures.

1.7 BID PRICES

Lump Sum Price  
Draper-Houston Meadows Preserve  
Pedestrian Boardwalk Construction  
Mooreville Road west of Platt Road  
York Township, Michigan

The contractor shall provide all labor, materials and equipment necessary to construct the boardwalk as shown in the project plans and here within the specifications for the Draper-Houston Meadows Preserve Pedestrian Boardwalk Construction.

Bid for Draper-Houston Meadows Preserve Pedestrian Boardwalk Construction

Project Mobilization & Start Up  
Mechanized Grading & Site Work  
Timber Pedestrian Boardwalk Construction  
Restoration of the Site  
Final Acceptance

\$ \_\_\_\_\_  
(Total Lump Sum Bid Amount)

1.8 SIGNATURE PAGE

The undersigned agrees to enter into an agreement with the County to provide the services required to construct the pedestrian boardwalk at Draper-Houston Meadows Preserve.

Total bid for Draper-Houston Meadows Preserve Pedestrian Boardwalk Construction:

\$ \_\_\_\_\_

ABOVE AMOUNT IN WORDS \_\_\_\_\_ dollars

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Telephone #

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

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

\_\_\_\_\_  
Federal Tax ID #

\_\_\_\_\_  
Purchase Order #

By checking this box we hereby certify that we are a Washtenaw County company. If proven otherwise you may be subject to Disbarment and/or Suspension of doing business with Washtenaw County.

The above individual is authorized to sign on behalf of the company submitting proposal. This bid is valid for 180 days from the date of the above signature.

**Include this signed sheet in your proposal.**

**Table 1  
BOARDWALKS FOR NATRUAL AREAS PRESERVATION PROGRAM PRESERVES**

PRESERVE NAME	LOCATION	LOCATION IN THE PRESERVE	DECRPTION/USE
1. Brauer	Parker Road Freedom Township	2000 feet from Parking Lot	Provide mower access
2. Raymond F. Goodrich	Dixboro Road Ann Arbor Township	2000 feet from Parking Lot	Creek crossing to complete trail loop
3. Leonard	End of Union Street Manchester Township	3000 feet from Parking Lot	Creek crossing
4. Albert J. Miler and Nancy Smith	Dexter-Chelsea Road Lima Township	1000 feet from Parking Lot	Wetland crossing

**Table 2  
BOARDWALK TYPES FOR NATURAL AREAS**

LOAD	OVERALL WIDTH (FEET)	CLEARANCE (BETWEEN CURBS)	REMARKS
Pedestrian Only	6	5'-5"	Employ in most sensitive areas
Pedestrian and Mower	7	6'-5"	STANDARD maximum utility
Pedestrian and Mower (with handrails)	8	7'-5"	Requires larger clearance than mower version
Pickup Truck (1/2 ton)	8	7'-5"	Requires greater structural members than mower version

**Table 3  
UNIT PRICES BOARDWALKS FOR NATRUAL AREAS PRESERVATION PROGRAM PRESERVES  
TO COMPLETE LAST COLUMN ON THE RIGHT**

PRESERVE NAME	LENGTH (FEET) approx.	WIDTH (FEET)	COST PER LINEAR FOOT (\$)
1. Brauer	50	7 feet	\$
2. Raymond F. Goodrich	A = 50 – 70 feet	7 feet	\$
3. Leonard	A = 100 feet B = 50 feet	A = 8 feet B = 7 feet	\$
4. Albert J. Miler and Nancy Smith	A = 100 – 200 feet B = 50 feet	A = 7 feet B = 7 feet	\$

Complete column 4 (Cost per Linear Foot) located in Table 3 and sign below.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Company Address

**Include this signed sheet in your proposal.**

1.9 INSTRUCTIONS TO BIDDERS

**PROPOSALS**

Each Proposal shall be made on a form prepared therefore by the ENGINEER and included as one of the Contract Documents and shall be submitted in a sealed envelope bound together with the other Contract Documents except the Plans, bearing the title of the Project and the name of the Bidder.

**DELIVERY OF PROPOSALS**

Proposals shall be delivered by the time and to the place stipulated in the Advertisement for Proposals. It is the sole responsibility of the Bidder to see that his Proposal is received in proper time. Any Proposal received after the bid date and time specified in the Advertisement shall be returned to the Bidder unopened.

**OPENING**

Proposals will be opened and publicly read aloud at the time and place set forth in the Advertisement.

**WITHDRAWAL BEFORE OPENING**

Any Bidder may withdraw his Proposal, either personally or by telephone or written request, at any time prior to the scheduled time for Opening of Proposals.

**DISCREPANCIES**

In case of a difference between the stipulated amounts in the Proposal written in words and the stipulated amounts written in figures, the stipulated amounts written in words shall govern.

**MODIFICATIONS**

Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless expressly requested. Oral proposals or modifications will not be considered. Conditional proposals of conditions attached to proposals shall have no force or effect.

**EXAMINATION OF CONTRACT DOCUMENTS**

Before submitting his Bid, each Bidder should:

- examine the Contract Documents thoroughly;
- visit the site to familiarize himself with local conditions that may in any matter affect performance of the work;
- familiarize himself with Federal, State, and local laws, ordinances, rules, and regulations affecting performance of the work; and
- carefully correlate his observations with the requirements of the Contract Documents.

Reference is made to the General Requirements (Division 1) of the Specifications for the identification of those surveys and investigation reports of subsurface or latent physical conditions at the site or otherwise affecting performance of the work which may have been relied upon by ENGINEER in preparing the Drawings and Specifications. WCPARC will make copies of such surveys and reports available to any Bidder requesting them. Before submitting his Bid, each Bidder will at his own expense make such additional survey and investigations as he may deem necessary to determine his Bid price for performance of the work within the terms of the Contract Documents.

The submission of a Bid will constitute an incontrovertible representation of the Bidder that he has complied with every requirement of this Article.

#### **COMPLETE WORK REQUIRED**

It is the intent of the Contract Documents to provide that the Product to be supplied under this proposal shall be complete and ready for use in every aspect.

#### **SUBCONTRACTORS: MATERIAL & EQUIPMENT QUOTATIONS**

The Bidder to whom an award is made will not be entitled to additional compensation or extension of time by reason of his failure to fully understand all subproposals or quotations.

The Bidder is responsible for all coordination between subcontractors and suppliers during the bidding and construction so that as complete project is furnished for the Contract Price and within and Contract Time. The completed project includes the furnishing of all equipment, accessories, and appurtenances necessary for the proper operation and maintenance of the Project.

#### **AWARD OF CONTRACT**

Washtenaw County reserves the right to reject any and all Bids and waive any and all informalities, and the right to disregard all nonconforming or conditional Bids or counter proposals.

In evaluating Bids, Washtenaw County shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternates and unit prices if requested in the bid forms. Washtenaw County may consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of subcontractors and other persons and organizations must be submitted as specified in the Supplementary Conditions or Specifications. Washtenaw County may conduct such investigations as they deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders, proposed subcontractors and other persons and organizations to do the work in accordance with the Contract Documents to Washtenaw County's satisfaction with the prescribed time. Washtenaw County reserves the right to reject the Bid or any Bidder who does not pass any such evaluation to Washtenaw County's satisfaction.

If a Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. However, Washtenaw County reserves the right to by-pass the low bidder and award a contract in the best interest of the Washtenaw County.

If the Contract is to be awarded, Washtenaw County will give the apparent successful Bidder a Notice of award.

Simultaneous with the delivery of the executed counterparts of the Agreement to Washtenaw County, the CONTRACTOR shall deliver to WCPARC the required Contract Security.

### **INTERPRETATIONS**

All questions about the meaning and intent of the Contract Documents shall be submitted to Washtenaw County in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by the ENGINEER as having received the Bidding Documents. Questions received less than seven (7) days prior to the date of Opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

### **ADDENDA**

Any Addenda issued during the time of bidding or forming a part of the Contract Documents shall be included in the Proposal and shall be made a part of the Contract Documents. Receipt of each Addendum shall be acknowledged in the Proposal.

### **BID SECURITY**

The amount and type of Bid Security is stated in the Invitation to Bid. The required security must be in the form of a certified or bank cashier's check made payable to WCPARC or a Bid bond issued by a surety licensed to conduct business in the state where the Project is located and named in the current list of "Surety Companies Acceptable to Federal Bonds" as published in the Federal Register by the Audit Staff Bureaus of Accounts, US Treasury Department. The Bid Security of the successful Bidder will be retained until he has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if he fails to execute and deliver the Agreement and furnish the required Contract Security within ten (10) days, Sundays and legal holidays excepted, of receipt of the Notice of Award, WCPARC may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom WCPARC believes to have a reasonable chance of receiving the Award may be retained by WCPARC until the earlier of the seventh day after the executed Agreement is delivered by WCPARC to CONTRACTOR and the required Contract Security is furnished. Bid Security of other Bidders will be returned within seven (7) days of the Bid Opening.

### **CONTRACT TIME**

The number of days for the Delivery of Work (the Contract Time) is set forth in the Bid Forms and will be included in the executed Agreement. Any provisions for liquidating damages are set forth in the Contract Documents.

### **REQUIREMENT FOR SIGNING PROPOSALS**

Proposals which are not signed by the individual making them shall have attached thereto a Power of Attorney evidencing authority to sign the Proposal in the name of the person for whom it is signed.

Proposals which are signed by a partnership shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-fact, there shall be attached to the Proposal a Power of Attorney evidencing authority to sign the Proposal, executed by the partners.

Proposals which are signed for a corporation shall have the correct corporate name thereof and the signatures by the president or other authorized officers of the corporation manually written below the corporate name following the word "By". If such a proposal is manually signed by an officer other than the president of the corporation, a certified copy of a resolution to the Board of directors evidencing the authority of such official to sign the Proposal shall be attached to it. Such a Proposal shall also bear the attested signature of the corporation and the impression of the corporate seal.

All Bidders shall complete the enclosed form entitled "Legal Status of Bidder".

#### **BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL**

No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Proposal in this Project, unless Alternate Proposals are called for.

A person, firm, or corporation who has submitted a subproposal to a Bidder, or has quoted prices on materials and/or equipment to a Bidder, is not hereby disqualified from submitting a subproposal or quoting Prices to other Bidders.

#### **EXECUTION OF AGREEMENT**

The Bidder to whom an Award is made will be required to enter into a written Agreement in the form hereto annexed, within ten (10) days, Sundays and legal holidays excepted, after being notified of the acceptance of his Proposal and receipt by him of copies of the Contract Documents to be executed.

In case of failure to comply with this requirement, he shall be considered to have abandoned all rights and interest in the Award, his Proposal Guarantee may be declared forfeited to the WCPARC and the Contract may be awarded to another.

#### **INSURANCE**

The successful Bidder shall be required to carry insurance in the amounts and kinds specified in the General Conditions. Such insurance must be with companies and in a form satisfactory to the WCPARC, and certificates of such insurance must be attached to each copy of the executed Contract Documents. These certifications shall contain a provision that coverages afforded under the policies will not be cancelled or materially changed unless at least thirty (30) days prior written notice is given to the WCPARC and ENGINEER, as evidenced by return receipt of certified mail.

#### **COMPLIANCE WITH PERMITS**

The successful Bidder shall comply with all required State and local construction permits and shall comply with all local building codes and inspection requirements.

#### **NONDISCRIMINATION**

Contracts for work under this Proposal will obligate the Contractors and Subcontractors not to discriminate in employment practices.

Bidders must, if required, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the Award of Contract.

Successful Bidders must, if required, submit a list of all subcontractors who will perform work on the Project and written signed statements from authorized agents of the labor pools with which they will or may deal with employees on the work, together with supporting information to the effect that said labor pools' practices and policies are in conformity with Executive Order No. 11246, as amended, and that said labor pools will affirmatively cooperate in, or offer no hindrance to, the recruitment, employment, and equal treatment of employees seeking employment and performing work under the Contract, or a certification as to what efforts have been made to ensure such statements when such agents or labor pools have failed or refused to furnish same prior to the Award of Contract.

Successful Bidders must be prepared to comply in all respects with the Labor Standards contract provisions regarding nondiscrimination.

#### **HEALTH AND SAFETY**

The successful Bidder shall comply with the Health and Safety Regulations, Chapter XVII of Title 29 CFR, Part 1926, as Promulgated by the Department of Labor and/or applicable State and local safety and health regulations. All questions regarding compliance and enforcement, as well as requests for the regulations should be directed to the Department of Labor and/or local agencies.

#### **SOIL EROSION AND SEDIMENTATION**

The successful Bidder shall comply with the provisions of the "Soil Erosion and Sedimentation Control Act" of 1972 (Michigan P.A. 347, as amended), the "Inland Lakes and Streams Act" of 1972 (Michigan P.A. 346, as amended), and be in accordance with all applicable regulations, standards, and specifications as adopted by the local enforcing agencies.

## DIVISION 1 – GENERAL REQUIREMENTS

### 1.0 SUMMARY OF WORK

#### 1.1 GENERAL PROJECT DESCRIPTION

The following scope of work is not intended to represent the full amount of the work required to complete construction of the pedestrian boardwalk within Draper-Houston Meadows Preserve located south of Mooreville and West of Pratt Road in York Township, Michigan. It is to serve as a general guideline. The successful bidder will assume responsibility to assure that all facets of the work are included in their proposal.

This project shall include all material, labor and equipment necessary to construct the pedestrian boardwalk as shown in the project plans and shall include, but is not limited to mobilization, demobilization, site preparation and maintenance, installation and removal of erosion control measures, mechanized grading, construction of a timber pedestrian boardwalk, removal of excess trees, vegetation, debris and excavated materials not needed for the boardwalk construction, seeding, and site restoration.

#### 1.2 SUMMARY

1.2.1 The following work items required to complete the project are summarized in Division 2:

- Mobilization / Demobilization / Site Preparation & Service
- Construct Treated Timber Boardwalk
- Site Restoration

#### 1.3 COORDINATION OF NOISE, DUST AND FUMES

1.3.1 Notify the ENGINEER at least 48 hours prior to performing any work within or near the project site. Work shall be performed in a manner that avoids the propagation of any dust or fumes. Comply with ENGINEER instructions.

### 2.0 SITE GENERAL PROVISIONS

#### 2.1 DESCRIPTION

2.1.1 The CONTRACTOR shall provide all labor, materials, tools and equipment necessary for the preparation and completion of the project.

#### 2.2 CLEARING AND GRUBBING

2.2.1 Trees and shrubs are not to be removed unless required by the project scope of work and/or with the express permission of the WCPARC. Where trees are to be removed, the CONTRACTOR shall remove such trees and stumps to a depth of at least one foot below the proposed finish grade. All stumps, logs, branches and debris shall be removed from the sites and disposed of by the CONTRACTOR.

2.3 WORK AREA AND STORAGE OF MATERIALS

- 2.3.1 The working area shall be organized in an orderly manner with storage and tool sheds, sanitary facilities, parking areas for employees, and all other necessary facilities developed and maintained by the CONTRACTOR.
- 2.3.2 Where the CONTRACTOR is required to do work within the right-of-ways, he shall obtain necessary permits and meet the requirements of all local governments for the work and storage within their jurisdiction.

2.4 EXISTING PUBLIC UTILITIES

- 2.4.1 The CONTRACTOR shall conduct operations so as not to damage any existing utility whether shown on work plans or not. The CONTRACTOR shall correct, at his own expense, any injury caused during the operations of his subcontractors or suppliers.
- 2.4.2 The CONTRACTOR shall make all the necessary arrangements for the provisions of all utility services, temporary or permanent, required under this contract. The CONTRACTOR shall pay all costs for such connections and services.

2.5 FINISH GRADING

- 2.5.1 After all backfilling and rough grading has been completed and thoroughly compacted, the entire disturbed area at the site shall be graded to smooth, even surfaces as shown by the proposed new contours shown on the Plans. The portion of the disturbed area where no new contours are shown shall be graded to smooth, even surfaces approximately the original surfaces.
- 2.5.2 All debris and large stones and sticks shall be removed from the work area and disposed of and the entire disturbed area made ready for the addition of topsoil and seeding.
- 2.5.3 After all construction has been completed, the CONTRACTOR shall spread 4 inches of approved top soil over all graded areas. The stockpiled material may be used for this purpose. If there is not sufficient top soil on the site, the CONTRACTOR shall secure and deliver to the site whatever amount is required at his own expense.

### 3.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENTSCHEDULE OF VALUES

- 3.1.1 Before the construction start the CONTRACTOR must submit a Schedule of Values to WCPARC for review and approval, of various tasks that must be performed to complete the work. The schedule must show each task and the corresponding value to complete each task including incidental cost. The aggregate total value for all tasks must be equal to the total Contract sum including approved alternate task values.
- 3.1.2 The method of measurement and the basis of payment for each item in the Proposal will be as specified in the schedule attached. The items are generally grouped by the section of the Specifications under which the particular unit of work is detailed. There will be no payment allowed for any unit for work not specifically mentioned in the Proposal as a bid item, and any such unit of work not mentioned in the Proposal, but necessary for the completion of the Project, will be considered as incidental to the construction of the Project.

### 3.2 MEASUREMENT

- 3.2.1 Quantities of work completed under the Contract will be measured by the ENGINEER according to the United States standard measures. When tons are specified, the unit shall be the ton of 2,000 pounds. When measurements are stated in miles, stations, acres, they will be horizontal measurements unless specified otherwise. Where measurements are specified to be "in place", they will be taken along the actual surface of the completed item to obtain lineal, area, or volume measurements. When work is completed on a "lump sum" bases, the work will be considered complete when all aspects of the task have been completed to the satisfaction of WCPARC and the ENGINEER.
- 3.2.2 Mobilization/Demobilization, site preparation and site service work task shall not exceed 10% of the base bid amount. Cost of required submittals, permitting fees, temporary facilities and project meetings are incidental cost to the Lump Sum total bid.

### 3.3 PAYMENT

- 3.3.1 Schedule for payment based on Lump Sum Bid Amount:
1. Project Mobilization and Start Up – 10%  
Items to be substantially completed prior to payment: Vegetation removal, tree removal, debris removal, installation of erosion control measures.
  2. Mechanized Grading & Site Work – 25%  
Items to be substantially completed prior to payment: Final grading of area along the proposed alignment to receive the boardwalk. Removal of all excess excavation not necessary for boardwalk construction to an upland area on site designated within the project plans. Installation of pipe culverts as directed by the project engineer.
  3. Timber Pedestrian Boardwalk Construction – 45%  
Items to be substantially completed prior to payment: Complete construction of the timber pedestrian boardwalk as shown in the project plans ready for use.
  4. Restoration of the Site – 10%

Items to be substantially completed prior to payment: Final grading, seeding, removal of all construction debris, and removal of soil erosion control measures.

5. Final Acceptance of Project – 10%  
Following final acceptance of the project by the owner the percentage of the Lump Sum bid for this project indicated here shall be paid.

#### 4.0 PROJECT MEETINGS

##### 4.1 PRE-CONSTRUCTION CONFERENCES

- 4.1.1 The WCPARC will schedule a pre-construction meeting with the ENGINEER and the CONTRACTOR. The CONTRACTOR shall attend and participate in a pre-construction meeting. The CONTRACTOR shall be prepared to discuss project procedures, identify any project issue that may arise, discuss any derivation from submitted plans.

##### 4.2 PROGRESS MEETINGS

- 4.1.2 The ENGINEER will schedule progress meetings to be held on the job site whenever needed to supply information necessary to prevent job interruptions, to observe the Work or to inspect completed Work. The CONTRACTOR must be represented at each progress meeting by persons with full authority to act for the CONTRACTOR in regard to all portions of the Work.
- 4.1.3 The CONTRACTOR shall provide and maintain a job trailer or sheltered facility and a portable lavatory to facilitate progress meetings and on-site coordination throughout the life of the project. Cost for this work is included with mobilization.

#### 5.0 SUBMITTALS

##### 5.1 APPLICABILITY

- 5.1.1 This section applies to all administrative and technical submittals described in this document.

##### 5.2 PRE-WORK SUBMITTALS

- 5.2.1 Within 10 working days following the Notice to Proceed, the CONTRACTOR shall submit three (3) copies of the following administrative submittals. The CONTRACTOR shall not initiate field activities until the ENGINEER has reviewed and accepted these submittals.
  - Construction Plan
  - Health and Safety Plan (HASP)
  - Schedule of Values
  - Project Schedule
  - SESC permit (to be completed by the ENGINEER and acquired by CONTRACTOR)

### 5.2.2 Health and Safety Plan (HASP)

The CONTRACTOR's HASP is provided to the ENGINEER for informational purposes only and for implementation by the CONTRACTOR. The State and the ENGINEER may review the HASP for completeness. Comments will be provided to the CONTRACTOR, but no approval of the HASP will be granted. Following inclusion of the comments, the ENGINEER will accept the HASP.

- A. The site-specific HASP shall meet the requirements, at a minimum, of the following:
  - I. 29 CFR 1904 – Record Keeping, United States Occupational Safety and Health Administration (OSHA), as amended.
  - II. 29 CFR 1910 – Safety and Health regulations for general Industry, OSHA, as amended.
  - III. 29 CFR 1926: Safety and Health Regulations for Construction, OSHA, as amended.
  - IV. 49 CFR 171.8 – Hazardous Materials in Transport, United States Department of Transportation (USDOT), as amended.
  - V. 40 CFR 261.3, 264, and 265, RCRA, USEPA, as amended.
  - VI. Standard Operating Safety Guides, USEPA, November 1984.
  - VII. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, NIOSH Publication No. 85-115, October 1985.
- B. The HASP is an enforceable document that shall guide the activities of the CONTRACTOR's and all subcontractor personnel. The HASP shall define site-specific safety provisions required for all project activities of the CONTRACTOR and subcontractors.
- C. Hazard Communication Program – A hazard communication program shall be used in accordance with 29 CFR Part 1926.59.

### 5.2.3 Schedule of Values

Before the construction start date the CONTRACTOR must submit a Schedule of Values to the ENGINEER for review and approval, of the various tasks that must be performed to complete all the Work. The schedule must show each task and the corresponding value of the task, including separate monies allocated for General Condition items and Project close-out. The aggregate total value for all tasks must be equal to the total Contract sum.

### 5.2.4 Daily Progress and Daily Site Safety Forms

The Daily Progress Forms shall outline the Work accomplished during the reporting period and Work to be accomplished during the subsequent reporting period, problems (real or anticipated) that should be brought to the attention of the ENGINEER. Forms should contain all pertinent job information including but not limited to: name, arrival/departure times of all on-site personnel, all equipment or materials (including type and quantities), copies of any weight or shipping tickets, arrival and departure times of any onsite personnel, and equipment or materials delivered site and notification of any significant deviation from previously agreed upon Work Plans. The Daily Site Safety Forms shall describe the safety meeting(s), any changes in protection, any safety incidents and results, and any changes to the HASP necessitated by site conditions.

#### 5.2.5 Project Schedule

The CONTRACTOR shall provide a Project Schedule that contains the following:

- Administrative and technical submittal dates and required approval dates
- Work activities and durations with expected start and finish dates
- Date of anticipated Substantial Completion
- Date of anticipated Final Completion

### 5.3 OTHER ADMINISTRATIVE SUBMITTALS

#### 5.3.1 Permits and Approvals

The CONTRACTOR shall provide the ENGINEER with copies of all permits, approvals, licenses, exemptions or other governmental documents or submittals obtained or submitted as part of the Work. These documents shall be provided to the ENGINEER in a timely manner and in advance of any payment request.

#### 5.3.2 Backfill Material Records

The CONTRACTOR shall provide documentation of the off-site source material soil type and non-impact (virgin material or analytical test results) prior to bringing the material on-site.

### 5.4 PROGRESS SCHEDULE:

5.4.1 Upon request, the CONTRACTOR must submit 2 copies of the Progress Schedule for the ENGINEER and WCPARC review. The Progress Schedule Submittals are intended to show: (a) the priority and sequencing by which the CONTRACTOR intends to execute the Work (or Work remaining) to comply with Contract Times, those sequences of Work indicated in or required by the Contract Documents; (b) how the CONTRACTOR anticipates foreseeable events, site conditions and all other general, local and prevailing conditions that may in any manner affect cost, progress, schedule, performance and furnishing of the Work; and (c) how the Means and Methods chosen by the CONTRACTOR translate into activities and sequencing; and (d) the actual timing and sequencing of completed Work.

5.4.2 Submittals will be returned to the CONTRACTOR within fifteen Calendar Days. CONTRACTOR must resolve the issues arising from the review by the ENGINEER and/or the WCPARC and submit Progress Schedule Revision. The review of the Progress Schedule by the ENGINEER or the WCPARC does not create or impose on the WCPARC or the ENGINEER any responsibility for the timing, planning, scheduling or execution of the Work or the correctness of any such Progress Schedule detail. The CONTRACTOR must update the schedule monthly. The correctness of Progress Schedule remains the sole responsibility of the CONTRACTOR. The CONTRACTOR is responsible for any time Delay and any cost incurred by the ENGINEER, CONTRACTOR or Subcontractors/Suppliers as a result of resubmissions and re-reviews of a particular Submittal.

## 6.0 REGULATORY REQUIREMENTS

### 6.1 LAWS:

6.1.1 The CONTRACTOR and its Subcontractors/Suppliers must comply with all Federal, State and local Laws applicable to the Work and site.

### 6.2 CODES:

6.2.1 All Works must be provided in accordance with the State Construction Code Act, 1972 PA 230, as amended, MCL 125.1501 et seq, International Building and Residential Codes and all applicable Michigan construction codes and fire safety including but not limited to: Michigan Building Code, Michigan Residential Code, Michigan Uniform Energy Code, Michigan Electrical Code, Michigan Rehabilitation Code for Existing Buildings, Michigan Mechanical Code, Michigan Elevator Code and Michigan Plumbing Code. If the CONTRACTOR observes that any Contract Document conflicts with any Laws or the State Construction Code or any permits in any respect, the CONTRACTOR must promptly notify the ENGINEER in writing. If the CONTRACTOR provides any Work knowing or having to reason to know of such conflict, the CONTRACTOR must be responsible for that performance.

### 6.3 PERMITS:

6.3.1 All required construction permits must be secured and their fees including inspection costs must be paid by the CONTRACTOR. The time incurred by the CONTRACTOR in obtaining construction permits must constitute time required to complete the Work and does not justify any increases to the Contract Time or Price, except when revisions to the Drawings and/or Specifications required by the permitting authority cause the Delays. The CONTRACTOR must pay all charges of Public Utilities for connections to the Work. The following permit fees will be paid by the CONTRACTOR:

- SESC Permit
- Washtenaw County Road Commission Drive Permit
- Local building / zoning permit
- Any other Permits that may be required

### 6.4 ENVIRONMENTAL REQUIREMENTS:

The CONTRACTOR and its Subcontractors/Suppliers must comply with all applicable Federal, State and local environmental Laws, standards, orders or requirements including but not limited to the National Environmental Policy Act of 1969, as amended, Michigan Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended, the Clean Air Act, as amended, the Clean Water Act, as amended, the Safe Drinking Water Act, as amended, Pollution Prevention Act, as amended, Resource Conservation and Recovery Act, as amended, National Historic Preservation Act, as amended and Energy Policy and Conservation Act and Energy Standards for Buildings Except Low-Rise Residential Buildings, ANSI/ASHRAE/IESNA Standard 90.1-1999.

\* The CONTRACTOR shall comply with all requirements pertaining to the approved MDEQ-USACOE joint permit for this project.

7.0 QUALITY CONTROL

7.1 PROJECT OVERSIGHT:

The ENGINEER will provide project oversight to document the project is completed in accordance with the specifications and approved plans. The CONTRACTOR will notify the WCPARC and the ENGINEER when each work task identified in the CONTRACTOR's schedule of values is completed the ENGINEER will inspect and certify the work has been completed satisfactorily or provide a punch list of items needed to correct any work deficiencies.

7.2 TESTING LABORATORY SERVICES:

All tests required by the WCPARC must fulfill ASTM, ANSI, Commercial and other Standards for testing. The CONTRACTOR must submit a minimum of three copies of each test report to the ENGINEER for evaluation and subsequent distribution. The following general classifications of Work require submission of test reports and/or certificates of inspection. Additional submissions may be requested by the ENGINEER at any time.

<u>Item of Work</u>	<u>Test Type</u>
Earthwork	Compaction and Density

1. Paid by CONTRACTOR: Density testing and disposal characterization sampling as required.

## DIVISION 2 – SITE WORK

### 1.0 GENERAL

#### 1.1 SUMMARY:

This project shall be constructed in accordance with The MDOT 2012 Standard Specifications for Construction.

### 2.0 EARTHWORK

#### 2.1 SUMMARY:

Perform earthwork including excavation, backfill, grading, and compaction in accordance with the MDOT 2012 Standard Specifications for Construction.

#### 2.2 MATERIALS

##### 2.2.1 Embankment Fill

Use In-situ material (cut) from the project area to construct embankment fill needed.

#### 2.3 EXECUTION:

2.3.1 Contractor shall balance site material as much as practicable to avoid excessive grading. A cuts and fill side slopes shall be shaped to a maximum grade of 2 horizontal to 1 vertical.

### 3.0 TREATED TIMBER BOARDWALK

#### 3.1 SUMMARY:

Provide all materials, equipment and labor to construct the timber treated boardwalk as shown in the project plans.

#### 3.2 MATERIALS:

3.2.1 Timber – Provide Treated timber of the nominal dimensions and grade provided in the project plans suitable for construction. Timber shall be straight and free of warping and excessive knots. Any timber provided deemed unsuitable for use by the project engineer will be replaced with new. Pressure-treat timber using a mixture of oxides of copper, chromium, and arsenic commonly referred to as CCA.

3.2.2 Fasteners & Connectors – Provide nails, screws, adhesives, metal connectors, rods, etc. suitable for exterior construction. All nails, screws, metal connectors, rods and other metallic fasteners shall be galvanized or stainless steel. Adhesives shall be of an exterior timber construction grade suitable for all weather conditions.

3.3 SUBMITTALS:

- 3.3.1 Shop Drawings – Provide shop drawings indicating the method of connection intended to be used showing the type, size of timber, connection type and frequency of use.

4.0 **SITE RESTORATION**

4.1 SUMMARY:

Final grade and restore the site to the line and grade shown on the plans. All areas outside of and adjacent to the work limits that are disturbed during construction shall be restored by grading, seeding, mulching and fertilizing. This work is considered incidental to the contractors Lump Sum Bid.

4.2 SUBMITTALS:

- 4.2.1 Seeding and Mulching – Use MDOT seed mix THM at a seeding rate of 300 lb/acre in accordance with MDOT section 816. Other seed mixes may be used as approved by the project engineer. Provide a minimum of 4 inches of topsoil over areas disturbed requiring seeding. Top soil may be salvaged from areas on site and re-used if approved by the project engineer. Provide mulch and mulch anchor as required in accordance with MDOT section 816. Mulch all areas that are seeded. Mulch shall be placed evenly and loose to allow sunlight penetration and air circulation, but thick enough to shade the ground, conserve soil moisture, and prevent water or wind erosion.



SERVICE CONTRACT  
NAME OF CONTRACTOR

AGREEMENT is made this \_\_\_\_\_ day of \_\_\_\_\_, 2012, by the COUNTY OF WASHTENAW, a municipal corporation, with offices located in the County Administration Building, 220 North Main Street, Ann Arbor, Michigan 48107("County") and CONTRACTOR located at XYZ STREET, ANYWHERE, USA 99999 ("Contractor").

In consideration of the promises below, the parties mutually agree as follows:

ARTICLE I - SCOPE OF SERVICES

The Contractor will provide construction services for ..... per Washtenaw County Formal Bid #XXXX. The Contractor will furnish all labor, materials, tools, equipment, transportation or other facilities and services necessary to perform and complete the project in accordance with Contract Documents.

ARTICLE II - COMPENSATION

Upon completion of the above services and submission of invoices the County will pay the Contractor, for full performance of the work, the amount of SPELL OUT DOLLAR AMOUNT (\$ XXX,XXX), subject to additions and deductions as documented through authorized change orders. The County shall make monthly progress payments to the Contractor on the basis of work performed and material suitably stored onsite during the preceding month of the Contract. To insure proper performance of the Contract, the County shall retain ten percent (10%) of the value of the work until final completion and acceptance of all work covered in the Contract.

ARTICLE III - REPORTING OF CONTRACTOR

Section 1 – The Contractor is to report to the Director of the Washtenaw County Parks and Recreation Commission and will cooperate and confer with him/her as necessary to insure satisfactory work progress.

Section 2 – All reports, estimates, memoranda and documents submitted by the Contractor must be dated and bear the Contractor's name.

Section 3 – All reports made in connection with these services are subject to review and final approval by the County Administrator.

Section 4 – The County may review and inspect the Contractor's activities during the term of this contract.

Section 5 – When applicable, the Contractor will submit a final, written report to the County Administrator.

Section 6 – After reasonable notice to the Contractor, the County may review any of the Contractor's internal records, reports, or insurance policies.

ARTICLE IV - TERM

This contract begins on XX/XX/XX and ends on XX/XX/XX according to the project essential completion schedule unless subsequently modified through authorized change orders.

ARTICLE V – PERSONNEL

Section 1 – The contractor will provide the required services and will not subcontract or assign the services without the County's written approval.

Section 2 – The Contractor will not hire any County employee for any of the required services without the County's written approval.

Section 3 – The parties agree that the Contractor is neither an employee nor an agent of the County for any purpose.

Section 4 – The parties agree that all work done under this contract shall be completed in the United States and that none of the work will be partially or fully completed by either an offshore subcontractor or offshore business interest either owned or affiliated with the contractor. For purposes of this contract, the term, "offshore" refers to any area outside the contiguous United States, Alaska or Hawaii.

ARTICLE VI – INDEMNIFICATION AGREEMENT

The contractor will protect, defend and indemnify Washtenaw County, its officers, agents, servants, volunteers and employees from any and all liabilities, claims, liens, fines, demands and costs, including legal fees, of whatsoever kind and nature which may result in injury or death to any persons, including the Contractor's own employees, and for loss or damage to any property, including property owned or in the care, custody or control of Washtenaw County in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or non-performance of work in connection with this contract resulting in whole or in part from negligent acts or omissions of contractor, any sub-contractor, or any employee, agent or representative of the contractor or any sub-contractor.

ARTICLE VII – INSURANCE REQUIREMENTS

The Contractor will maintain at its own expense during the term of this Contract, the following insurance:

Workers' Compensation Insurance with Michigan statutory limits and Employers Liability Insurance with a minimum limit of \$100,000 each accident for any employee.

Commercial General Liability Insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage. The County shall be added as "additional insured" on general liability policy with respect to the services provided under this contract.

Automobile Liability Insurance covering all owned, hired and nonowned vehicles with Personal Protection Insurance and Property Protection Insurance to comply with the provisions of the Michigan No Fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each accident for bodily injury and property damage.

Insurance companies, named insureds and policy forms may be subject to the approval of the Washtenaw County Administrator, if requested by the County Administrator. Such approval shall not be unreasonably withheld. Insurance policies shall not contain endorsements or policy conditions which reduce coverage provided to Washtenaw County. Contractor shall be responsible to Washtenaw County or insurance companies insuring Washtenaw County for all costs resulting from both financially unsound insurance companies selected by Contractor and their inadequate insurance coverage. Contractor shall furnish the Washtenaw County Administrator with satisfactory certificates of insurance or a certified copy of the policy, if requested by the County Administrator.

No payments will be made to the Contractor until the current certificates of insurance have been received and approved by the Administrator. If the insurance as evidenced by the certificates furnished by the Contractor expires or is canceled during the term of the contract, services and related payments will be suspended. Contractor shall furnish the County Administrator's Office with certification of insurance evidencing such coverage and endorsements at least ten (10) working days prior to commencement of services under this contract. Certificates shall be addressed to Washtenaw County c/o: Washtenaw County Parks & Recreation Commission & CR# \_\_\_\_\_, P. O. Box 8645, Ann Arbor, MI, 48107, and shall provide for 30 day written notice to the Certificate holder of cancellation of coverage.

#### ARTICLE VIII – COMPLIANCE WITH LAWS AND REGULATIONS

The Contractor will comply with all federal, state and local regulations, including but not limited to all applicable OSHA/MIOSHA requirements and the Americans with Disabilities Act.

#### ARTICLE IX – INTEREST OF CONTRACTOR AND COUNTY

The Contractor promises that it has no interest which would conflict with the performance of services required by this contract. The Contractor also promises that, in the performance of this contract, no officer, agent, employee of the County of Washtenaw, or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested or has any personal or pecuniary interest. However, this paragraph does not apply if there has been compliance with the provisions of Section 3 of Act No. 317 of the Public Acts of 1968 and/or Section 30 of Act No. 156 of Public Acts of 1851, as amended by Act No. 51 of the Public Acts of 1978, whichever is applicable.

#### ARTICLE X – CONTINGENT FEES

The Contractor promises that it has not employed or retained any company or person, other than bona fide 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 bona fide employees working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of

this contract. For breach of this promise, the County may cancel this contract without liability or, at its discretion, deduct the full amount of the fee, commission, percentage, brokerage fee, gift or contingent fee from the compensation due the Contractor.

#### ARTICLE XI – EQUAL EMPLOYMENT OPPORTUNITY

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief (except as it relates to a bona fide occupational qualification reasonably necessary to the normal operation of the business).

The Contractor will take affirmative action to eliminate discrimination based on sex, race, or a handicap in the hiring of applicant and the treatment of employees. Affirmative action will include, but not be limited to: Employment; upgrading, demotion or transfer; recruitment advertisement; layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship.

The Contractor agrees to post notices containing this policy against discrimination in conspicuous places available to applicants for employment and employees. All solicitations or advertisements for employees, placed by or on the behalf of the Contractor, will state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief.

#### ARTICLE XIII – EQUAL ACCESS

The Contractor shall provide the services set forth in Article I without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, physical handicap, or age.

#### ARTICLE XIV – OWNERSHIP OF DOCUMENTS AND PUBLICATION

All documents developed as a result of this contract will be freely available to the public. None may be copyrighted by the Contractor. During the performance of the services, the Contractor will be responsible for any loss of or damage to the documents while they are in its possession and must restore the loss or damage at its expense. Any use of the information and results of this contract by the Contractor must reference the project sponsorship by the County. Any publication of the information or results must be co-authored by the County.

ARTICLE XV – ASSIGNS AND SUCCESSORS

This contract is binding on the County and the Contractor, their successors and assigns. Neither the County nor the Contractor will assign or transfer its interest in this contract without the written consent of the other.

ARTICLE XVI – TERMINATION OF CONTRACT

Section 1 – Termination without cause. Either party may terminate the contract by giving thirty (30) days written notice to the other party.

ARTICLE XVII – PAYROLL TAXES

The Contractor is responsible for all applicable state and federal social security benefits and unemployment taxes and agrees to indemnify and protect the County against such liability.

ARTICLE XVIII – PRACTICE AND ETHICS

The parties will conform to the code of ethics of their respective national professional associations.

ARTICLE XIX – CHANGES IN SCOPE OR SCHEDULE OF SERVICES

Changes mutually agreed upon by the County and the Contractor, will be incorporated into this contract by written amendments signed by both parties.

ARTICLE XX – CHOICE OF LAW AND FORUM

This contract is to be interpreted by the laws of Michigan. The parties agree that the proper forum for litigation arising out of this contract is in Washtenaw County, Michigan.

ARTICLE XXI – EXTENT OF CONTRACT

This contract represents the entire agreement between the parties and supersedes all prior representations, negotiations or agreements whether written or oral.

ARTICLE XXII – ELECTRONIC SIGNATURES

All parties to this contract agree that either electronic or handwritten signatures are acceptable to execute this agreement.

RFP #6683 DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK

ATTESTED TO:

WASHTENAW COUNTY

By: \_\_\_\_\_  
Lawrence Kestenbaum (DATE)  
County Clerk/Register

By: \_\_\_\_\_  
Robert L. Tetens (DATE)  
Director, Parks & Recreation

APPROVED AS TO FORM:

CONTRACTOR

By: \_\_\_\_\_  
Curtis N. Hedger (DATE)  
Office of Corporation Counsel

By: \_\_\_\_\_  
CONTRACTOR (DATE)



**BID BOND**

Accompanying this Proposal must be a Bid Bond or Certified Check in the amount of 5% of the amount of the bid submitted, made payable to the WCPARC.

A (BID BOND or CERTIFIED CHECK) in the amount of \$\_\_\_\_\_ is included with this bid.

\_\_\_\_\_  
Authorized Agent Signature

\_\_\_\_\_  
Date

**BIDDER'S QUALIFICATION AND EXPERIENCE STATEMENT**

The OWNER will require supporting evidence regarding Bidder's Qualifications and competency. The Bidder will be required to furnish all of the applicable information listed below and must be submitted with the sealed bid at the time of the Bid Opening.

The Qualifications and Experience Statement (below) must be type written and signed in ink.

**QUALIFICATIONS AND EXPERIENCE**

The Undersigned certifies that the information provided herein is true and sufficiently complete to not be misleading.

Submitted By: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Email \_\_\_\_\_

Principal Office: \_\_\_\_\_

Corporation: \_\_\_\_\_ Joint Venture: \_\_\_\_\_

Partnership: \_\_\_\_\_ Other: \_\_\_\_\_

Individual: \_\_\_\_\_

Type of work and Number of Projects:

General: \_\_\_\_\_ Roadway: \_\_\_\_\_

Foundations: \_\_\_\_\_ Bridge: \_\_\_\_\_

Other: \_\_\_\_\_ (Please Specify)

**ORGANIZATION**

How many years has your organization been in business as a CONTRACTOR?

How many years has your organization been in business under its present business name?

Under what other or former names has your organization operated?

If your organization is a corporation, answer the following:

Date of Incorporation: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

President's Name: \_\_\_\_\_

Vice President's Name: \_\_\_\_\_

Secretary's Name: \_\_\_\_\_

Treasurer's Name: \_\_\_\_\_

If your organization is a partnership, answer the following:

Date of Organization: \_\_\_\_\_

Type of Partnership: \_\_\_\_\_

Name(s) of General Partner(s): \_\_\_\_\_

If your organization is individually owned, answer the following:

Date of Organization: \_\_\_\_\_

Name of owner: \_\_\_\_\_

If the form of your organization is other than those listed above describe it and name the principals:

#### LICENSING

List jurisdiction and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable:

EXPERIENCE

In the space below, (or on a separate sheet) list the major bridge, roadway and foundation projects your organization has completed in the past five (5) years, giving the name of the project, owner, architect/engineer, contract amount, and date of completion.

PROJECT	OWNER	ARCH/ENG	CONTRACT AMOUNT	DATE OF COMPLETION

CLAIMS AND SUITS (if the answer to any of the questions below is yes, attach details)

Has your organization ever failed to complete any work awarded to it?

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or officers?

REFERENCES

Trade References: \_\_\_\_\_

Bank References: \_\_\_\_\_

Dated at: \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

Name of Organization: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**IF THIS INFORMATION IS NOT SUBMITTED WITH THE SEALED BID AT THE TIME OF BID, THE BID WILL BE CONSIDERED INCOMPLETE.**

**LABOR AND MATERIAL PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS that \_\_\_\_\_

As Principal, hereinafter called CONTRACTOR, and \_\_\_\_\_  
As Surety, hereinafter called Surety, are held and firmly bound unto

WASHTENAW COUNTY PARKS & RECREATION

As Oblige, hereinafter called the OWNER for the use and benefit of claimants herein below defined, in the amount of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

For the Payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors administrators and assigns, jointly and severally, firmly by these presents.

WHEREAS, CONTRACTOR has, by a written Agreement dated \_\_\_\_\_  
Entered into a Contract with the OWNER for

DRAPER-HOUSTON MEADOWS PRESERVE PEDESTRIAN BOARDWALK

in accordance with Plans and Specifications prepared by THE MANNIK & SMITH GROUP, INC. which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the CONTRACTOR shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect, subject, however, to the following condition:

- A. A claimant is defined as one having a direct contract with the CONTRACTOR or with a subcontractor of the CONTRACTOR for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.
- B. The above named CONTRACTOR and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been Paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant.
  - 1. Unless claimant, other than one having a direct contract with the CONTRACTOR, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named within ninety (90) days after such claimant did or performed the last of the work or labor, or



PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS that \_\_\_\_\_

As Principal, hereinafter called CONTRACTOR, and \_\_\_\_\_

As Surety, hereinafter called Surety, are held and firmly bound unto

WASHTENAW COUNTY PARKS & RECREATION

As Oblige, hereinafter called the OWNER for the use and benefit of claimants herein below defined, in the amount of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

For the Payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors administrators and assigns, jointly and severally, firmly by these presents.

DRAPER-HOUSTON MEADOWS PRESERVE PEDESTRIAN BOARDWALK

In accordance with Plans and Specifications prepared by THE MANNIK & SMITH GROUP, INC. which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the CONTRACTOR shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise is shall remain in full force and effect, subject to, however, to the following conditions.

- A. The Surety hereby waives notice of any alteration or extension of time made by the OWNER.
- B. Whenever the CONTRACTOR shall be, and declared by the OWNER to be, in default under the Contract, the OWNER having performed OWNER's obligations there under, the Surety may promptly remedy the default, or shall promptly:
  - 1. Complete the Contract in accordance its terms and conditions,
  - 2. Obtain a bid or bids for submission to the OWNER from completing the Contract in accordance with its terms and conditions, and upon determination by the OWNER and Surety of the lowest responsible Bidder, arrange for a Contract between such Bidder and the Owner, and make available as work progresses (even through there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completions less the balance of the Contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in paragraph, shall mean the total amount payable by the OWNER to the CONTRACTOR under the Contract and any amendments thereto, less the amount property paid by the OWNER to the CONTRACTOR.

- C. Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.
- D. No right of action shall accrue on the bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of the OWNER.

In the Presence of:

WITNESS

\_\_\_\_\_

\_\_\_\_\_

WITNESS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Bond No.

(FILL IN CONTRACTOR'S NAME)

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Title

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address of Surety

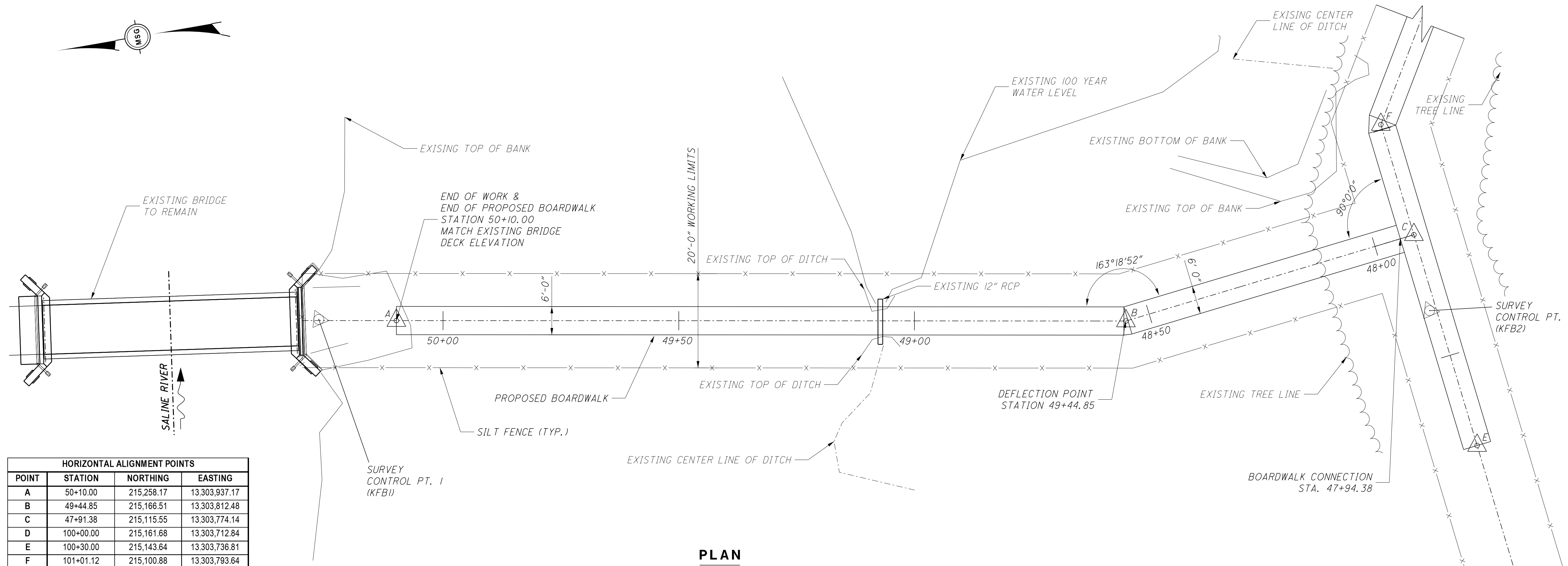
\_\_\_\_\_  
City, State

\_\_\_\_\_  
Zip Code

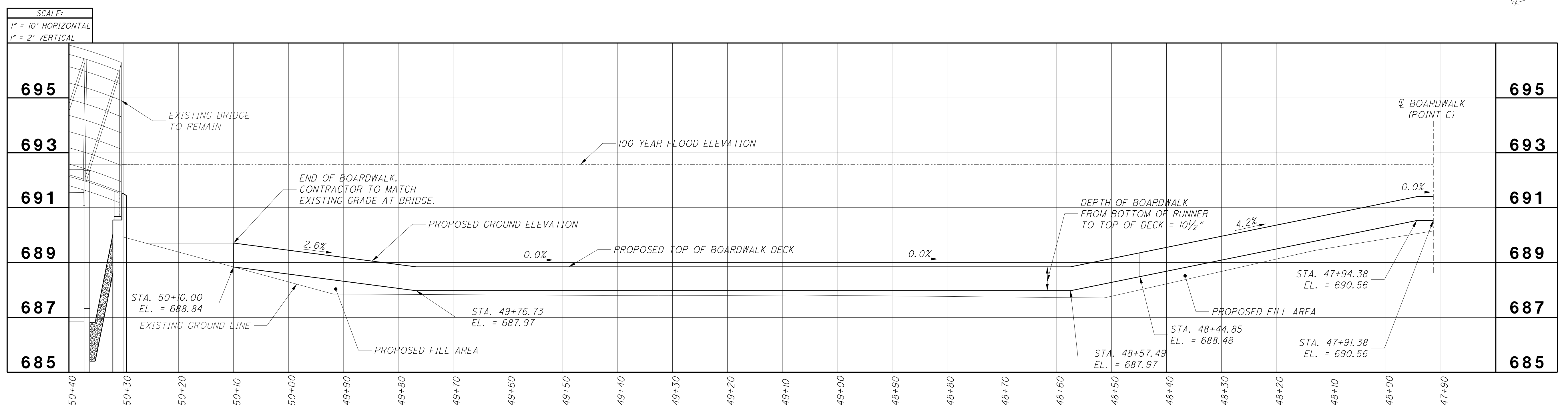


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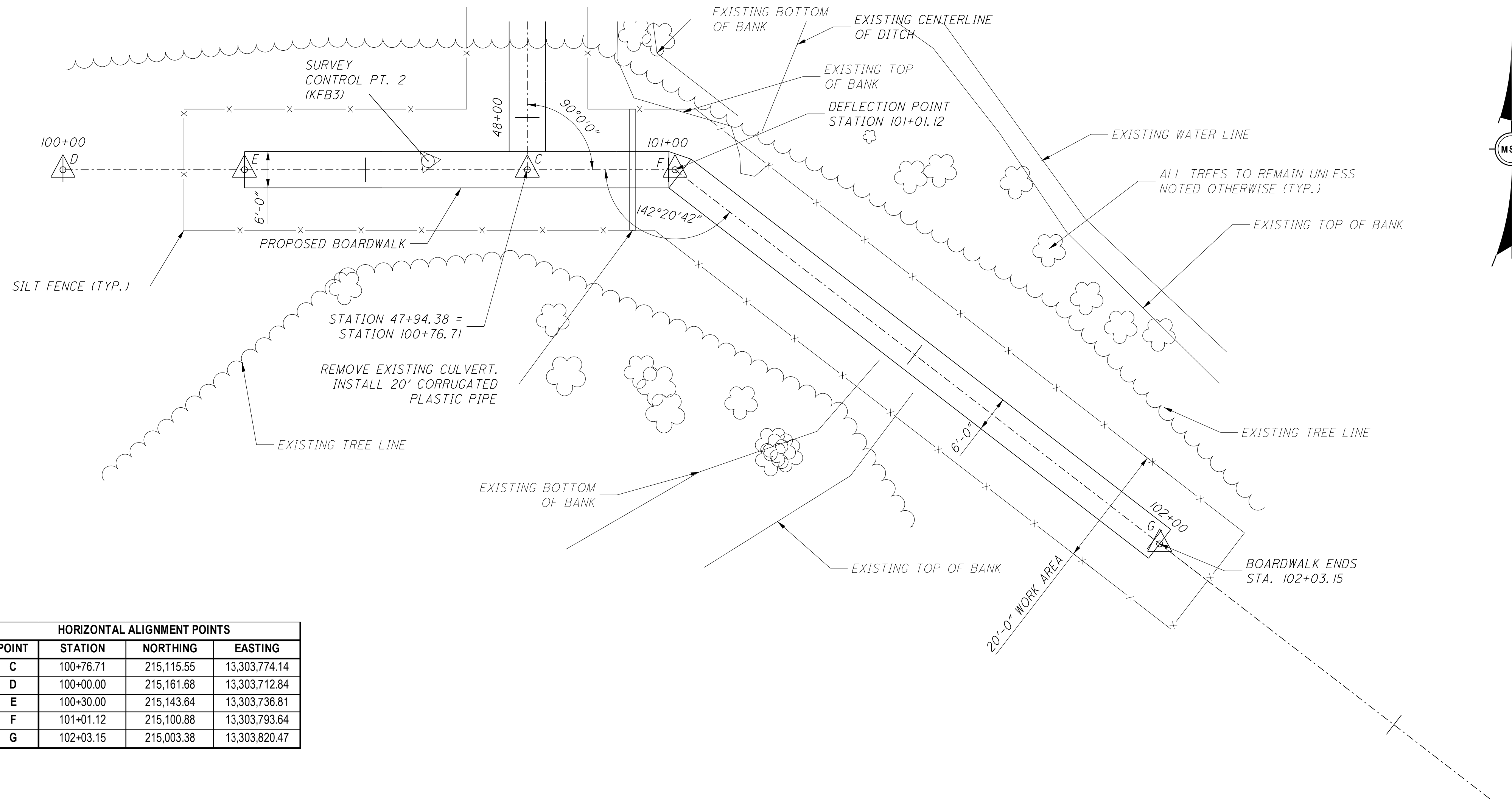


**PLAN**  
SCALE: 1/2"=1'



**PROFILE**  
SCALE: 1"=1'-0"

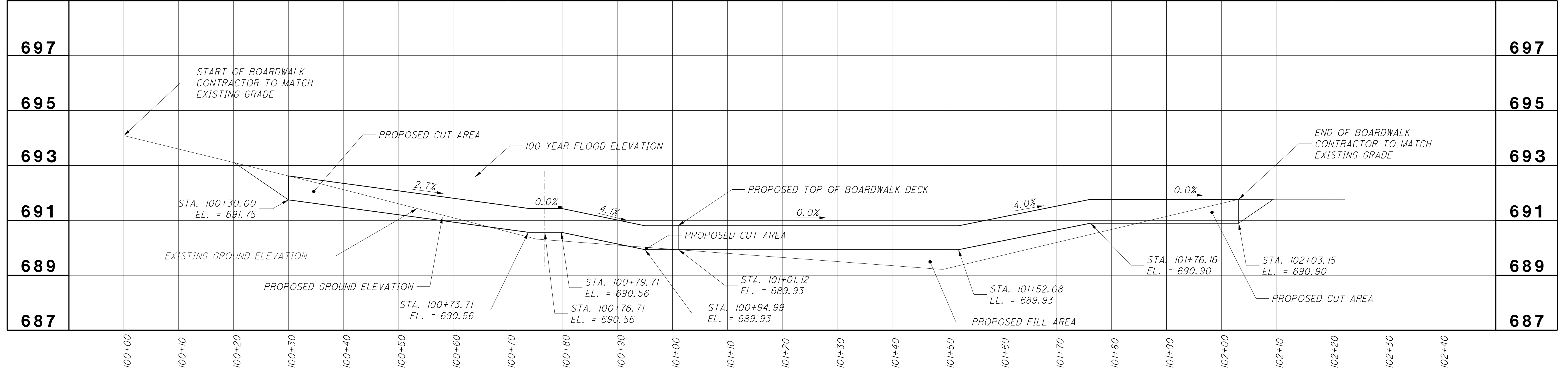
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1	6/07/12	CBU	REVIEW SET
<b>CLIENT</b> <b>WASHTENAW COUNTY</b> <b>PARKS &amp; RECREATION</b> <b>COMMISSION</b>			
<b>PROJECT</b> <b>DRAPER-HOUSTON MEADOWS</b> <b>PRESERVE BOARDWALK</b>			
<b>PLAN &amp; PROFILE</b>			
4	7		



HORIZONTAL ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
C	100+76.71	215,115.55	13,303,774.14
D	100+00.00	215,161.68	13,303,712.84
E	100+30.00	215,143.64	13,303,736.81
F	101+01.12	215,100.88	13,303,793.64
G	102+03.15	215,003.38	13,303,820.47

**PLAN**  
SCALE: 12:1

SCALE:  
1" = 10' HORIZONTAL  
1" = 2' VERTICAL



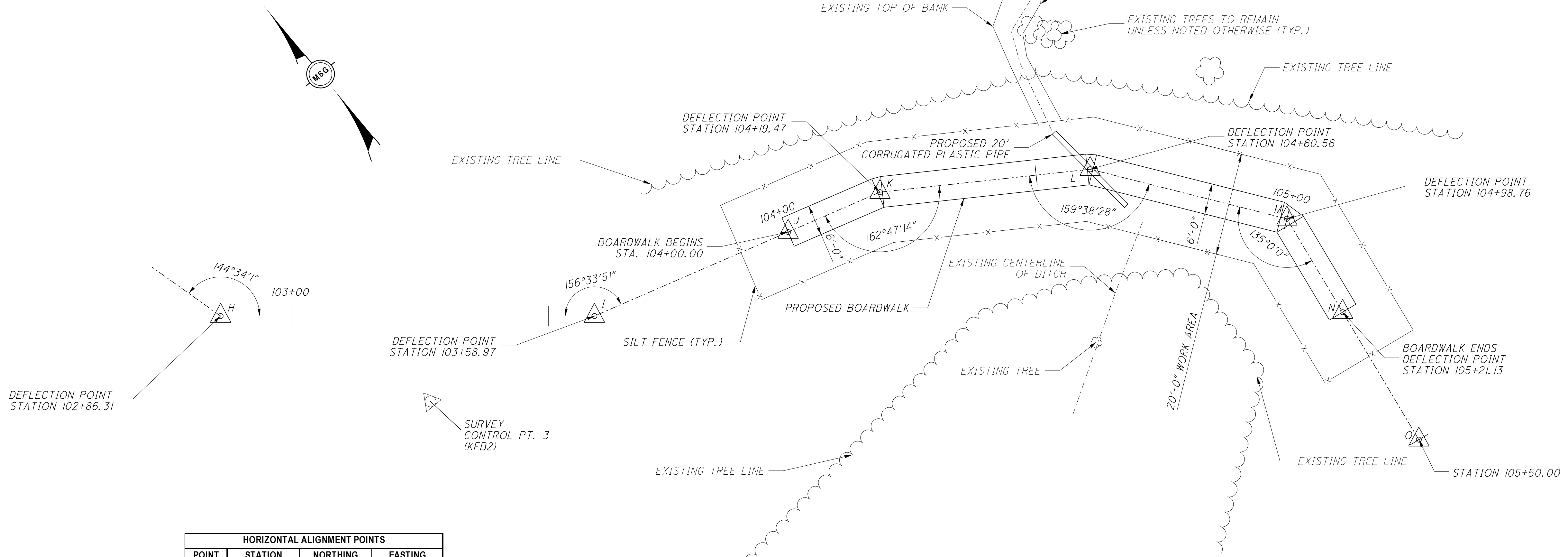
**PROFILE**  
SCALE: 1" = 1'-0"

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NO.	DATE	BY	DESCRIPTION
1	6/07/12	CBU	REVIEW SET
 <b>Mannik &amp; Smith</b> Group, Inc. Civil Engineering, Surveying and Environmental Consulting			
CLIENT <b>WASHTENAW COUNTY          PARKS &amp; RECREATION          COMMISSION</b>			
PROJECT <b>DRAPER-HOUSTON MEADOWS          PRESERVE BOARDWALK</b>			
<b>PLAN &amp; PROFILE</b>			
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7			

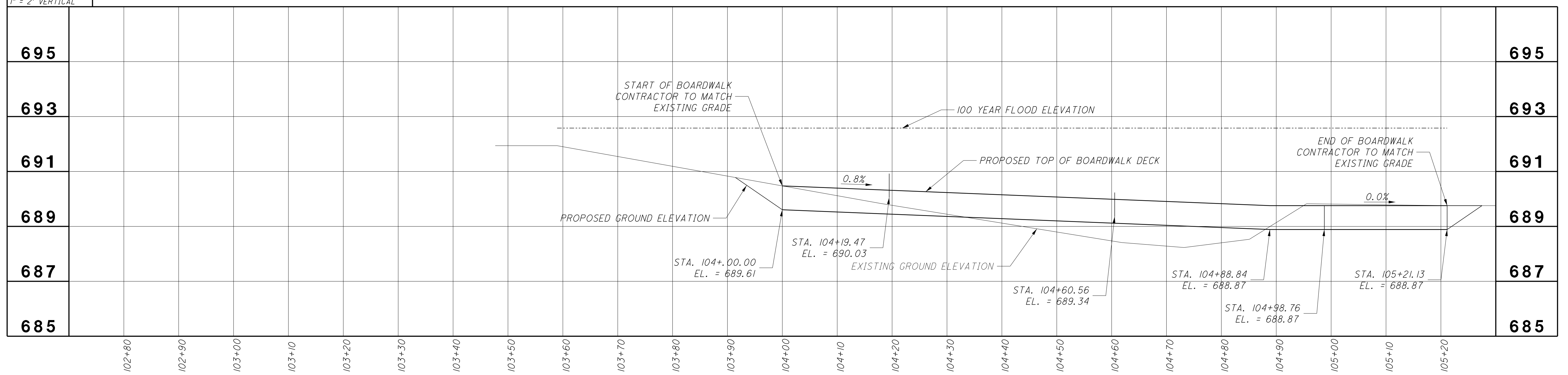
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HORIZONTAL ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
H	102+86.31	214,921.24	13,303,843.07
I	103+58.97	214,875.34	13,303,899.40
J	104+00.00	214,864.20	13,303,938.89
K	104+19.47	214,858.92	13,303,957.63
L	104+60.56	214,836.57	13,303,992.10
M	104+98.76	214,804.94	13,304,015.66
N	105+21.13	214,784.03	13,304,012.61
O	105+50.00	214,755.46	13,304,008.43

SCALE:  
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 1" = 2' VERTICAL

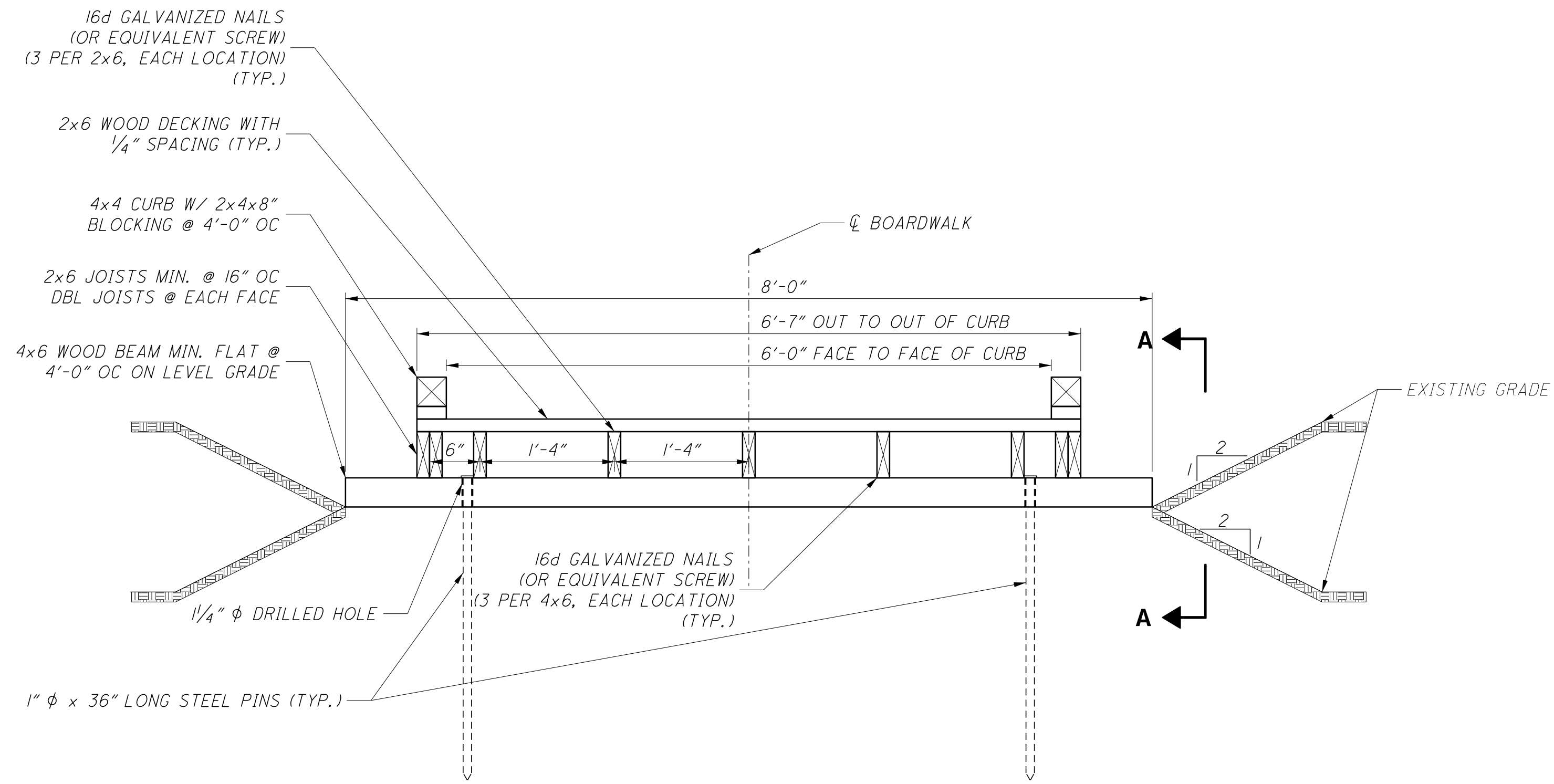


NO.	1	DATE	6/07/12	BY	CBJ	DESCRIPTION	REVIEW SET
	7						
<p>CLIENT: <b>WASHTENAW COUNTY PARKS &amp; RECREATION COMMISSION</b></p> <p>PROJECT: <b>DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK</b></p> <p>PLANNING &amp; PROFILE</p>							
<p>6/7</p>							

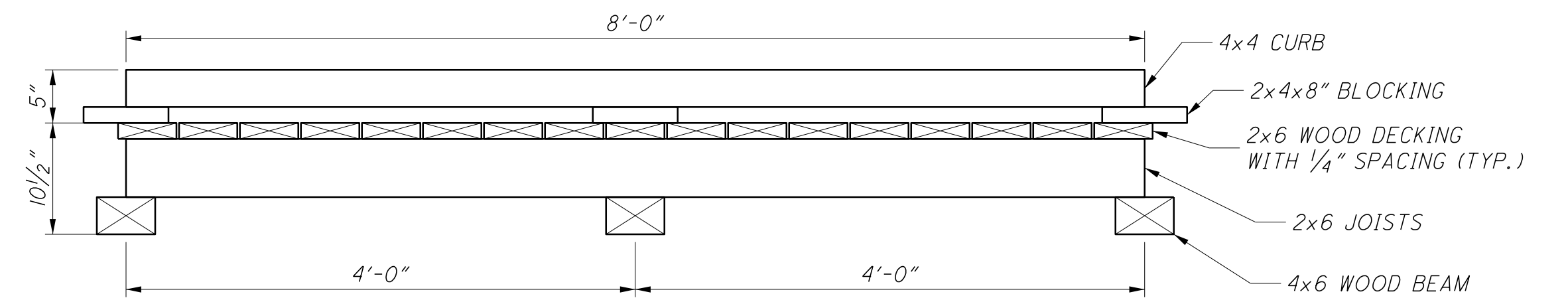
The **Mannik & Smith** Group, Inc.  
 Civil Engineering, Surveying and Environmental Consulting

6/15/2012

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**TYPICAL BOARDWALK SECTION**



**ELEVATION VIEW A-A**

NO.	DATE	BY	DESCRIPTION
1	6/07/12	CBJ	REVIEW SET
<b>The Mannik &amp; Smith Group, Inc.</b> Civil Engineering, Surveying and Environmental Consulting			
<b>CLIENT</b> WASHTENAW COUNTY PARKS & RECREATION COMMISSION			
<b>PROJECT</b> DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK			
<b>BOARDWALK DETAILS</b>			
7			
7			



MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**SLOPE RESTORATION, NON-FREEWAY**

C&amp;T:DMG

1 of 3

C&amp;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:

<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
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:

<b>Pay Item</b>	<b>Pay Unit</b>
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  
  
SUPPLEMENTAL SPECIFICATION  
FOR  
**ERRATA TO THE 2012 STANDARD SPECIFICATIONS**

1 of 16

04-30-12

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>
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>
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

Page	Subsection	Errata
		and will be required to reimburse the costs of suppressing the wild fire."
67	107.16	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."  Delete the last sentence of the first paragraph on this 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.
189	401.03.N	Add the following sentence to the end of the first paragraph "Where possible, maintain the stream flow thru a temporary channel or temporary culvert."  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."
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 <b>Minor Traffic Devices</b> or <b>Traffic Regulator Control</b> ."
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.
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;

Page	Subsection	Errata
		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."
249	501.04.H	<p>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 <b>HMA Surface, Rem.</b>"</p> <p>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 <b>Pavt, Rem</b> in accordance with subsection 204.04."</p>
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 <b>Micro-Surface</b> , 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."
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."
351	701.04	Replace Tables 701-1A and 701-1B with the Table 701-1 below.
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.

Page	Subsection	Errata
		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."
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."
430	707.03.D.7.b	Change "ASTM" to "AASHTO" in the title of the Table 707-4.
430	707.03.D.7.b	Change "104,000" to "103,000" in the last row under the column titled Minimum Bolt Tension.
461	711.04.F	The title of this subsection should read " <b>Reflective Marker, Permanent Barrier.</b> "
488	713.02	Add the following as subsection 713.02.C: "C. <b>Structural Steel for Retrofitting and Welded Repairs.</b> 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."
521	717.04.B	This subsection should read "The unit price for <b>Drain Casting Assembly</b> 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."
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	Rename this subsection as follows: <b>2. Permanent Casing.</b>
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.

Page	Subsection	Errata
569	809.04.A	Change the first sentence to read: The unit price for <b>Field Office, CI</b> __ 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 <b>Field Office, Utility Fees</b> 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 <b>"K. Drilled Piles for Cantilever and Truss Foundations.</b> Construct drilled piles for cantilever and truss foundations in accordance with section 718."
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: <b>G. Raised Pavement Marker (RPM) Removal.</b>
597*	811.04	Change "Crosshatching" in the last pay item of the list on this page to "Cross Hatching".
598	811.04	Delete the following pay items from the list: Pavt Mrkg, (material), 4 inch, SRSM, (color).....Foot Pavt Mrkg, (material), 4 inch, SRSM, 2 <sup>nd</sup> Application, (color).....Foot  Add the following pay items to the list: Pavt Mrkg, Polyurea, (legend).....Each Pavt Mrkg, Polyurea, (symbol).....Each  Change the sixth item down the list to read: Pavt Mrkg, Polyurea, __ inch, Cross Hatching, (color)  Change the last item in the list to read: Witness, Log, Layout, \$1000.00
599	811.04.B	Delete this subsection in its entirety.
599	811.04	Rename the following subsections as follows: <b>B. Call Back.</b>

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

Page	Subsection	Errata
		<p><b>C. Pavement Marking Removal.</b> <b>D. Material Deficiency.</b></p>
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.
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.
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."

Page	Subsection	Errata
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 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 on 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."
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 <b>Conc Barrier Ending, Temp, Relocated</b> 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."

Page	Subsection	Errata
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 top read "For Class C fertilizer, evenly apply 80 pounds of chemical fertilizer nutrient per acre on established turf."
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 " <b>Fdns</b> " to read " <b>Fdn</b> " 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: 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: <a href="http://www.ngs.noaa.gov/heightmod/GuidelinesPublications.shtml">http://www.ngs.noaa.gov/heightmod/GuidelinesPublications.shtml</a>
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 __

<b>Page</b>	<b>Subsection</b>	<b>Errata</b>
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.
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 "205, 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.
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 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 by ¼ inch or nominal 2 inch by 2 inch <sup>3</sup> / <sub>16</sub> inch.
787	908.14.C	Change the reference "908.15.B" in the second sentence of the first paragraph to read "908.14.B".
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 11.
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.
837	914.04	Add the following as subsection 914.04.C:

Page	Subsection	Errata
		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.
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".
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. <b>Class A.</b> 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 soils 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.
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:

Page	Subsection	Errata
		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	Change the first sentence of this subsection to read: Provide anchor bolts and associated nuts, studs, and couplings meeting the requirements of subsection 908.14.
903	921.03.D	Delete the last three sentences of the first paragraph of this subsection.
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".
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 <sup>nd</sup> 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
965	Pay Item Index	Change the following pay item in the list to read: Steel Casing Pipe, __ inch, Tr Det __
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

<b>Page</b>	<b>Subsection</b>	<b>Errata</b>
968	Pay item Index	Change the following pay item in the list to read: Water Shutoff, Adj, Temp, Case ___
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.

<b>Table 912-10 Minimum Retention Requirements</b>				
<b>Preservative</b>	<b>Minimum Retention, (pcf)</b>			<b>AWPA Standard</b>
	<b>Guardrail Posts</b>	<b>Sign Posts</b>	<b>Blocks</b>	
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 <sub>2</sub> O <sub>5</sub> /1000 ft. <sup>2</sup> )	Recommendation (lbs. P <sub>2</sub> O <sub>5</sub> /1000 ft. <sup>2</sup> )	Recommendation (lbs. P <sub>2</sub> O <sub>5</sub> /1000 ft. <sup>2</sup> )	Recommendation (lbs. P <sub>2</sub> O <sub>5</sub> /1000 ft. <sup>2</sup> )
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](http://www.turf.msu.edu) or [www.bephosphorusmart.msu.edu](http://www.bephosphorusmart.msu.edu)





**DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER RESOURCES DIVISION  
PERMIT**

Walt  
rlk

Permit No.	12-81-0005-P
Issued	April 18, 2012
Extended	
Revised	
Expires	April 18, 2017

an Department of Environmental Quality (MDEQ) under the provisions of  
Water Resources Protection Act, 1994 PA 451, as amended (NREPA), and specifically:

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

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

**Permitted Activity:**

**Excavate 124 cubic yards of material and place 75 cubic yards of fill (of which 71 cubic yards is to be placed in 0.11 acre of wetland) within the 100-year floodplain of the Saline River to facilitate construction of a 7 feet wide by 552 feet long at-grade boardwalk. Stabilize the excavated material in upland areas on-site. All work shall be completed in accordance with the attached plans and specifications of this permit.**

**Water Course Affected:** Saline River

**Property Location:** Washtenaw County, York Township, Section 34

Subdivision, Lot      Town/Range 4S, 6E      Property Tax No. S-19-34-400-015

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

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


- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31, and wetland).
- M. In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee or employees, agents, or representatives of the permittee undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from the MDEQ. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to the MDEQ to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent.
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the waterbody are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the MDNR, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

\*\*\*\*\*

- 1) All work shall be completed in accordance with the attached plans and the terms and conditions of this permit.
- 2) Prior to initiating construction, authorized by this permit, the permittee is required to provide a copy of the permit to the contractor(s) for review.
- 3) The property owner, contractor(s), and any agent involved in exercising this permit are held responsible to ensure the project is constructed in accordance with all drawings and specifications contained in this permit. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by this permit.

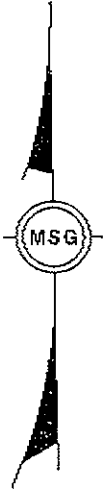
- 4) Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the office of the Washtenaw County Water Resources Commissioner, 705 North Zeeb Road, Ann Arbor, Michigan 48107. Telephone 734-222-3978.
- 5) Prior to the initiation of any permitted construction activities, a siltation barrier shall be constructed along the perimeter of the construction area. Siltation barriers shall be specifically designed to handle the sediment type, load, water depth, and flow conditions of each construction site throughout the anticipated time of construction and unstable site conditions. The siltation barrier shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an upland (non-wetland, non-floodplain) site. The siltation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
- 6) All raw areas resulting from the permitted construction activity shall be promptly and effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands.
- 7) All excavated spoils including organic and inorganic soils, vegetation, and other material removed shall be placed on upland (non-wetland, non-floodplain or non-bottomland), prepared for stabilization, and stabilized with sod and/or seed and mulch in such a manner to prevent and ensure against erosion of any material into any waterbody, wetland, or floodplain.
- 8) All fill shall consist of clean inert material that will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be CONTAINED in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be STABILIZED with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.
- 9) The boardwalk shall be firmly anchored to prevent flotation or lateral movement.
- 10) The design flood or 100-year floodplain elevation at this location on the Saline River is approximately 693 feet N.A.V. Datum of 1998.
- 11) This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
- 12) No fill, excess soil, or other material shall be placed in any wetland or surface water area not specifically authorized by this permit, its plans, and specifications.
- 13) In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- 14) The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval or authorization, necessary to conduct the activity.

- 15) The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representatives of the permittee, undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- 16) This permit placard shall be kept posted at the work site, in a prominent location at all times for the duration of the project, or until permit expiration.
- 17) If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- 18) This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to accept transfer of the permit. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.
- 19) This permit is being issued for the maximum time allowed under the Floodplain Regulatory Authority found in Part 31, Water Resources Protection, and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, including all permit extensions allowed under the administrative rule and R 281.923. Therefore, no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance.

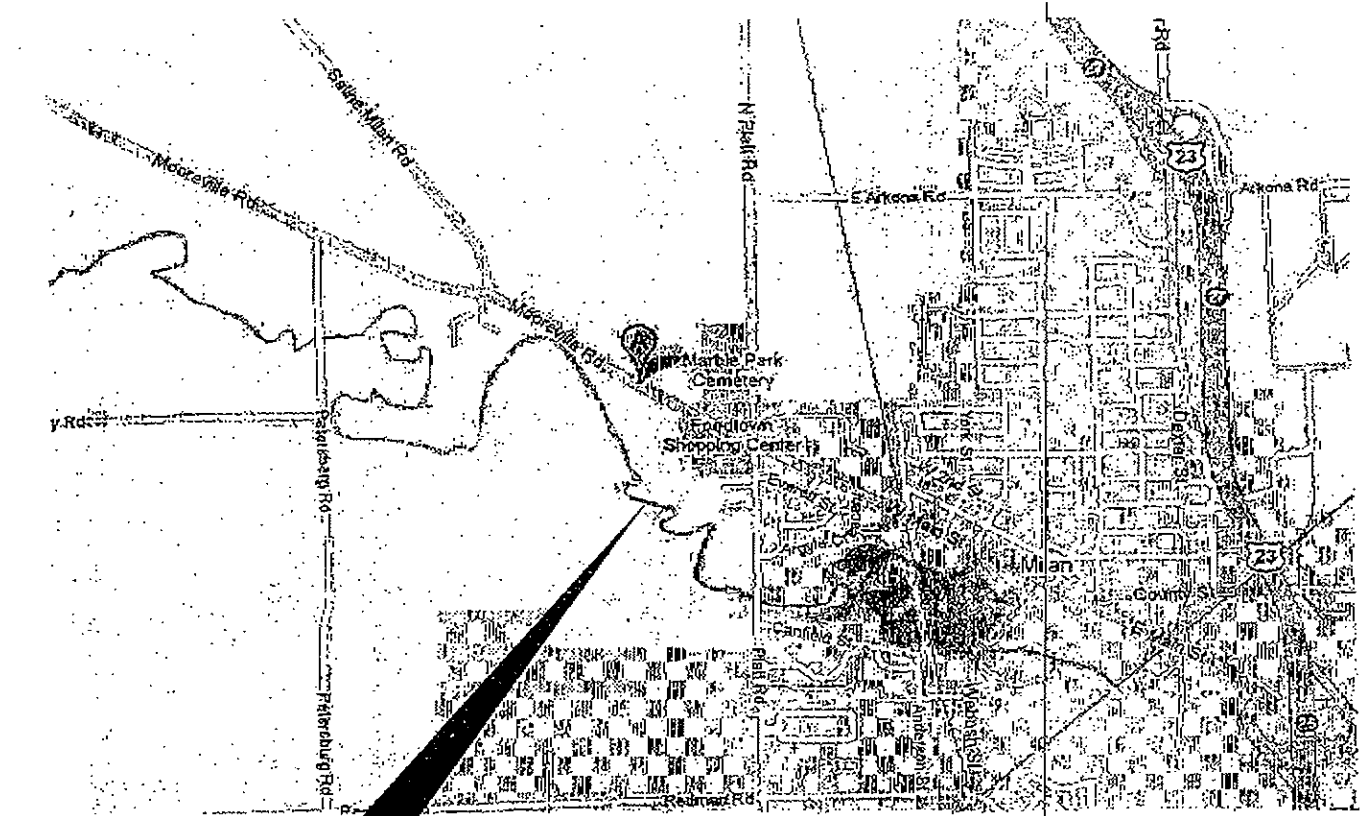
By:   
James Sallee  
Water Resources Division  
517-780-7690

cc: York Township Clerk  
Washtenaw County Water Resources Commissioner

PROJECT LOCATION	PROJECT	PROJECT	PROJECT
AWM LOCATION MAP SITE	DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK	WASHTENAW COUNTY PARKS & RECREATION COMMISSION	MANNIK & SMITH CONSULTANTS



Revised

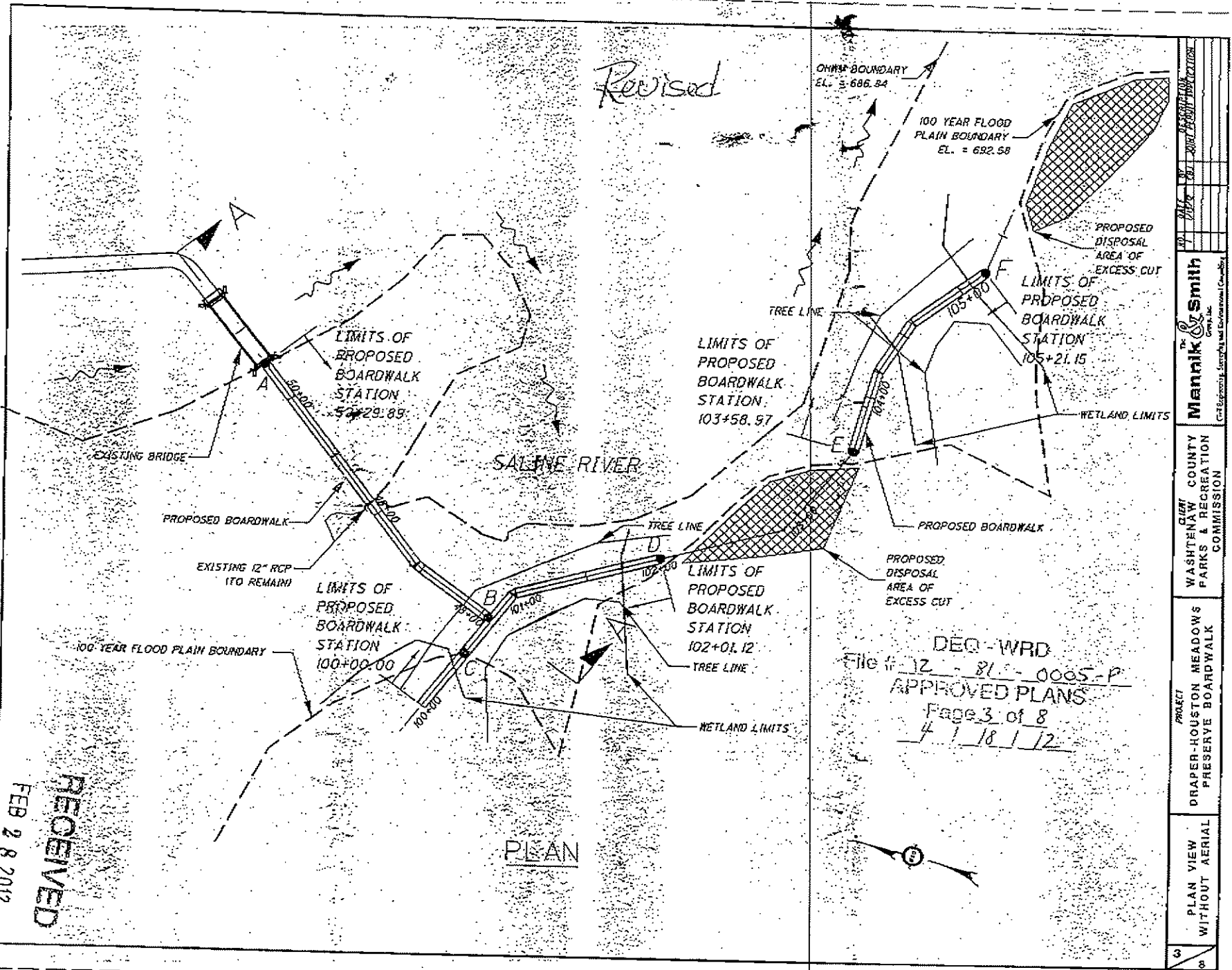


**PROJECT LOCATION**

DEC-WRD  
 File # 12-81-0005-P  
**APPROVED PLANS**  
 Page 1 of 8  
4/18/12

**RECEIVED**  
 FEB 28 2012  
 DNR&WRD  
 PERMIT CONSOLIDATION UNIT

Revised



DEQ-WRD  
 File # 12-81-0005-P  
 APPROVED PLANS  
 Page 3 of 8  
 4/18/12

PLAN



3	PLAN VIEW WITHOUT AERIAL	PROJECT DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK	CLIENT WASHTENAW COUNTY PARKS & RECREATION COMMISSION	The <b>Mannick &amp; Smith</b> Group, Inc. <small>City &amp; Regional Planning and Environmental Consultants</small>
	10' SCALE DATE: 4/18/12 DRAWN BY: JLD CHECKED BY: JLD			

RECEIVED  
 FEB 28 2012  
 DNR/EMWRD  
 PERMIT/008/SOLIDATION UNIT

27/27/2012 10:53:00 AM 040005WALDRON\100857472-0 1310141519000000







# Notice of Authorization

Permit Number 12-81-0005-P

Issued: 4/18/2012

Expiration Date: 4/18/2017

The Michigan Department of Environmental Quality, Water Resources Division,  
P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and  
Environmental Protection Act, 1994 PA 451, as amended, and specifically:

- Part 31, Floodplain Regulatory Authority of the Water Resources Protection.
  - Part 301, Inland Lakes and Streams.
  - Part 303, Wetlands Protection.
  - Part 315, Dam Safety.
- 
- Part 323, Shorelands Protection and Management.
  - Part 325, Great Lakes Submerged Lands.
  - Part 353, Sand Dunes Protection and Management.

Authorized activity:

Excavate 124 cubic yards of material and place 75 cubic-yards of fill (of which 71 cubic yards is to be placed in 0.11 acre of wetland) within the 100-year floodplain of the Saline River to facilitate construction of a 7 feet wide by 552 feet long at-grade boardwalk. Stabilize the excavated material in upland areas on-site.

To be conducted at property located in: Washtenaw County, Waterbody: Saline River  
Section 34 , Town 4S, Range 6E, York Township.

Permittee: Washtenaw County Parks and Recreation  
attn: Richard Kent  
P.O. Box 8645  
Ann Arbor, MI 48107

James Sallee  
Water Resources Division  
517-780-7690

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

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

# WETLAND IMPACT CALCULATIONS

## EARTH CUT & FILL AREAS & VOLUMES

WIDTH OF AREA AFFECTED = 10 FT  
 TOTAL LENGTH OF AREA AFFECTED = 493.06 FT  
 WETLAND AREA AFFECTED = 10 FT \* 493.06 FT = 4930.6 SFT  
 AVERAGE CUT DEPTH = 0.68 FT  
 AVERAGE FILL DEPTH = 0.14 FT  
 MAXIMUM CUT VOLUME = 123.77 CYDS  
 MAXIMUM FILL VOLUME = 70.95 CYDS (INCLUDES BOARDWALK FILL VOLUME)

**RECEIVED**

JAN 31 2012

DNRE/WRD  
PERMIT CONSOLIDATION UNIT

DEQ - WRD  
 File # 12 - 81 - 0005-P  
 APPROVED PLANS  
 Page 8 of 8  
4/18/12

## BOARDWALK FILL VOLUMES


LABEL	STATION
A	50+29.89
B	47+94.67
C	100+00.00
D	101+85.60
E	104+16.96
F	104+89.20

TOTAL VOLUME PER 8' SECTION = 0.5437 CYDS  
 CYD/LF = 0.5437 CYDS / 8' = 0.0680 CYDS/LF

SECTION	LENGTH (LF)	VOLUME IN WETLANDS
A - B	235.22	235.22 LF * 0.0680 CYDS/LF = 15.99 CYDS
C - D	185.60	185.60 LF * 0.0680 CYDS/LF = 12.62 CYDS
E - F	72.24	72.24 LF * 0.0680 CYDS/LF = 4.91 CYDS
	493.06	

FILL FROM WOOD PORTION OF BOARDWALK = 15.99 CYDS + 12.62 CYDS + 4.91 CYDS = 33.52 CYDS

M:\projects\p\0616 UZ\WASPO045-CAD\WASPO045\_A060\_Exc08.dwg 1/13/12

DATE 1/31/12	BY EBJ	DESCRIPTION JOINT PERMIT APPLICATION			
			WASHINGTON COUNTY PARKS & RECREATION COMMISSION		
PROJECT DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK			WETLANDS CALCULATIONS		

Apr. 25, 2012 12:17PM Washnetaw Co. Parks and Rec No. 2376 P. 1/4

# EARTH VOLUMES FOR CONSTRUCTION OF BOARDWALK

POINT A TO POINT B	WIDTH = 10 FT
	TOTAL CUT AREA = 18.70 SFT + 0.45 SFT = 19.15 SFT
	TOTAL FILL AREA = 14.49 SFT + 0.69 SFT + 38.33 SFT = 53.51 SFT
	TOTAL CUT VOLUME = (19.15 SFT * 10 FT) / 27 = 7.09 CYDS
TOTAL FILL VOLUME = (53.51 SFT * 10 FT) / 27 = 19.82 CYDS	
POINT C TO POINT D	WIDTH = 10 FT
	TOTAL CUT AREA = 105.07 SFT + 11.30 SFT + 42.59 SFT = 158.96 SFT
	TOTAL FILL AREA = 22.54 SFT
	TOTAL CUT VOLUME = (158.96 SFT * 10 FT) / 27 = 58.87 CYDS
TOTAL FILL VOLUME = (22.54 SFT * 10 FT) / 27 = 8.35 CYDS	
POINT E TO POINT F	WIDTH = 10 FT
	TOTAL CUT AREA = 69.16 SFT + 86.93 SFT = 156.09 SFT
	TOTAL FILL AREA = 25.01 SFT = 25.01 SFT
	TOTAL CUT VOLUME = (156.09 SFT * 10 FT) / 27 = 57.81 CYDS
TOTAL FILL VOLUME = (25.01 SFT * 10 FT) / 27 = 9.26 CYDS	
TOTAL CUT VOLUME = 7.09 + 58.87 + 57.81 = 123.77 CYDS	
TOTAL FILL VOLUME = 19.82 + 8.35 + 9.26 = 37.43 CYDS	
NET = 123.77 CUT - 37.43 FILL = 86.34 CYDS CUT *	

\* TO BE DISPOSED OF ON SITE IN UPLAND AREA ABOVE 100 YEAR FLOOD PLAIN ELEVATION.

## TOTALS

SECTION 10A: TOTAL FILL VOLUME = 37.43 CYDS + 37.52 CYDS = 74.95 CYDS  
 FILL VOLUME BELOW OHWM = 0 CYDS

SECTION 10B: TOTAL DREDGE/EXCAVATION VOLUME = 123.77 CYDS  
 DREDGE/EXCAVATION VOLUME BELOW OHWM = 0 CYDS

SECTION 13:  
 FILL VOLUME BELOW 100 YEAR FLOOD PLAIN ELEVATION = 37.43 CYDS + 37.52 CYDS = 74.95 CYDS  
 COMPENSATING CUT VOLUME BELOW THE 100 YEAR FLOOD PLAIN ELEVATION = 123.77 CYDS


**RECEIVED**

JAN 31 2012

DNRE/WRD  
 PERMIT CONSOLIDATION UNIT

U/3/2012

W:\Projects\Permits\_U-2\WASP0051\CD\WASP0051\_0005-0005-P

 Mannik & Smith Environmental Consultants	CLARK COUNTY WASHTEENAW PARKS & RECREATION COMMISSION	PROJECT DRAPER-HOUSTON MEADOWS PRESERVE BOARDWALK	CUT & FILL CALCULATIONS
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Apr. 25, 2012 12:17PM  
 Washtenaw Co. Parks and Rec  
 No. 2376 P. 2/4



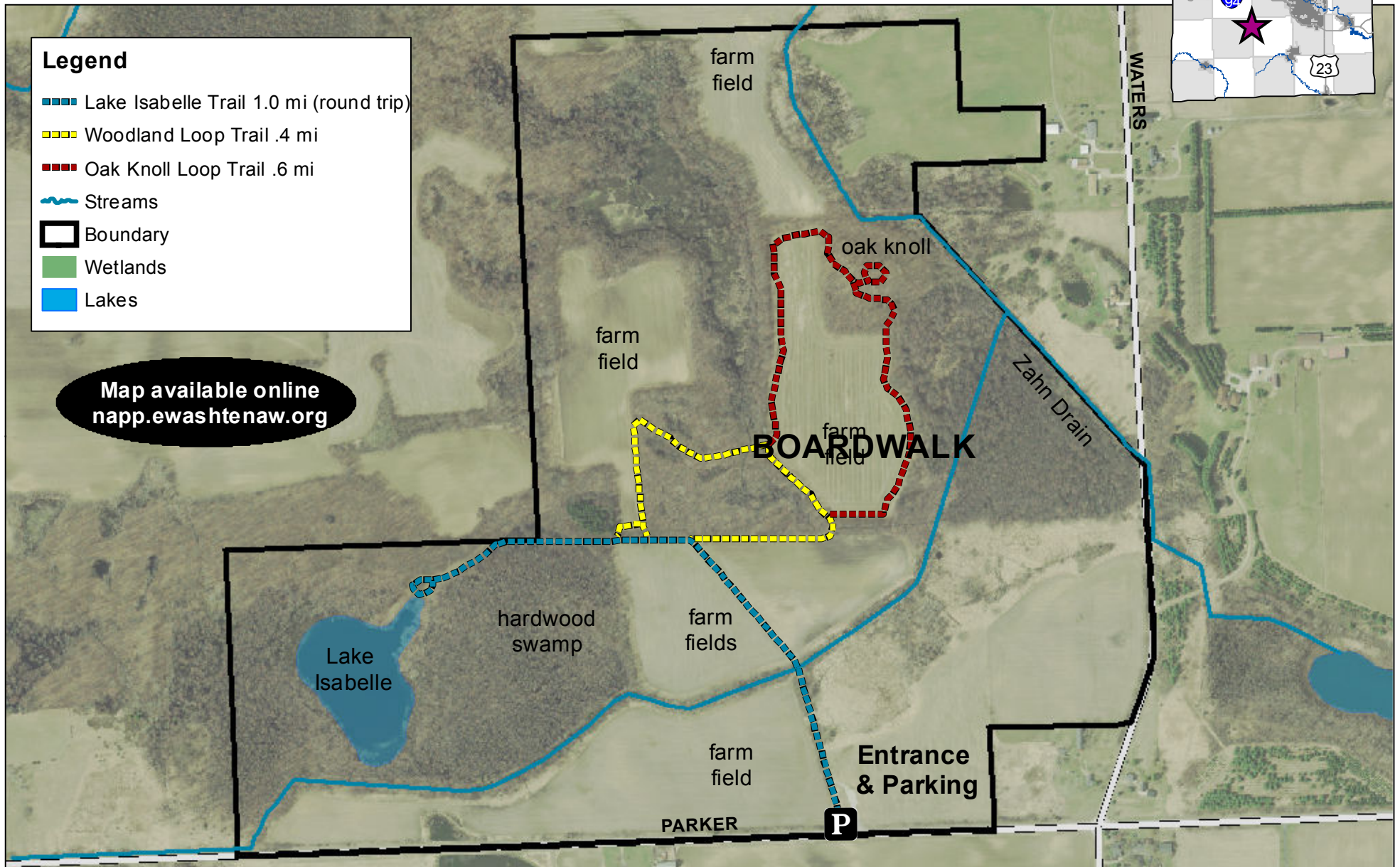
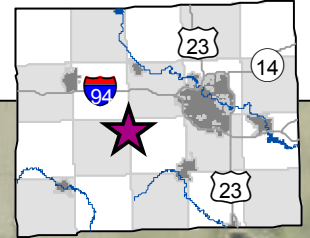




# Brauer Preserve Trail Map

226 acres

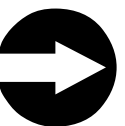
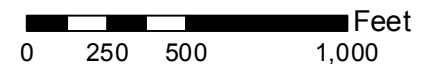
Washtenaw County  
Locator Map



Washtenaw County  
Natural Areas Preservation Program

(734) 971-6337  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)

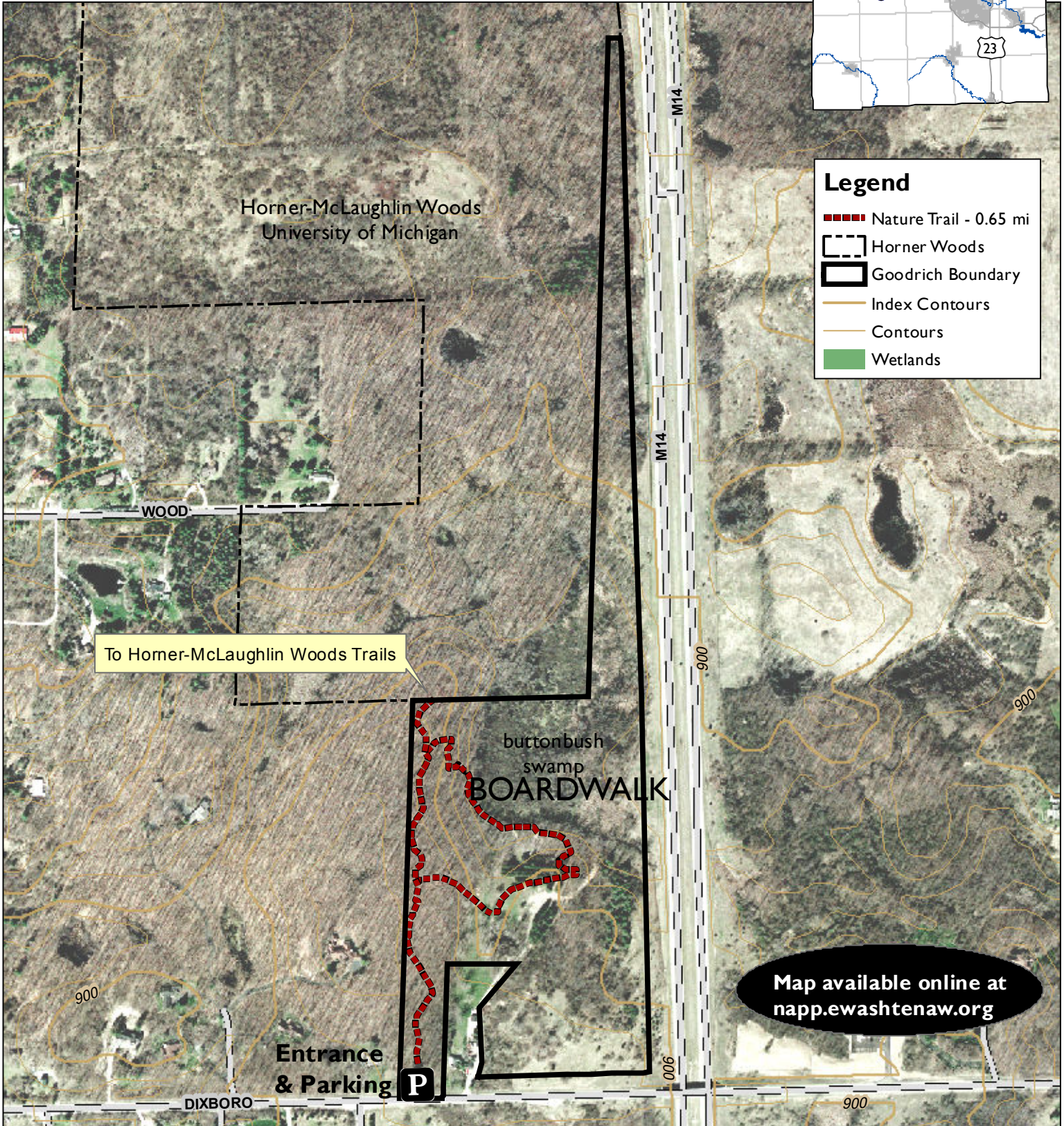
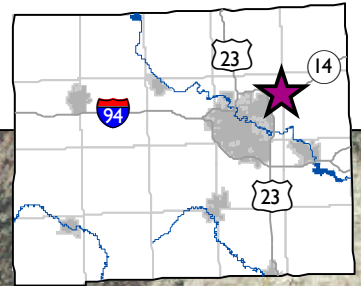
Prepared by Washtenaw County Parks & Recreation Commission  
Washtenaw County 2010 Aerial



# Raymond F. Goodrich Preserve Trail Map

36 acres

Washtenaw County  
Locator Map



**Legend**

- Nature Trail - 0.65 mi
- Horner Woods
- Goodrich Boundary
- Index Contours
- Contours
- Wetlands

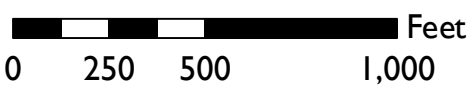
Map available online at  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)



Washtenaw County  
Natural Areas Preservation Program

(734) 971-6337  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)

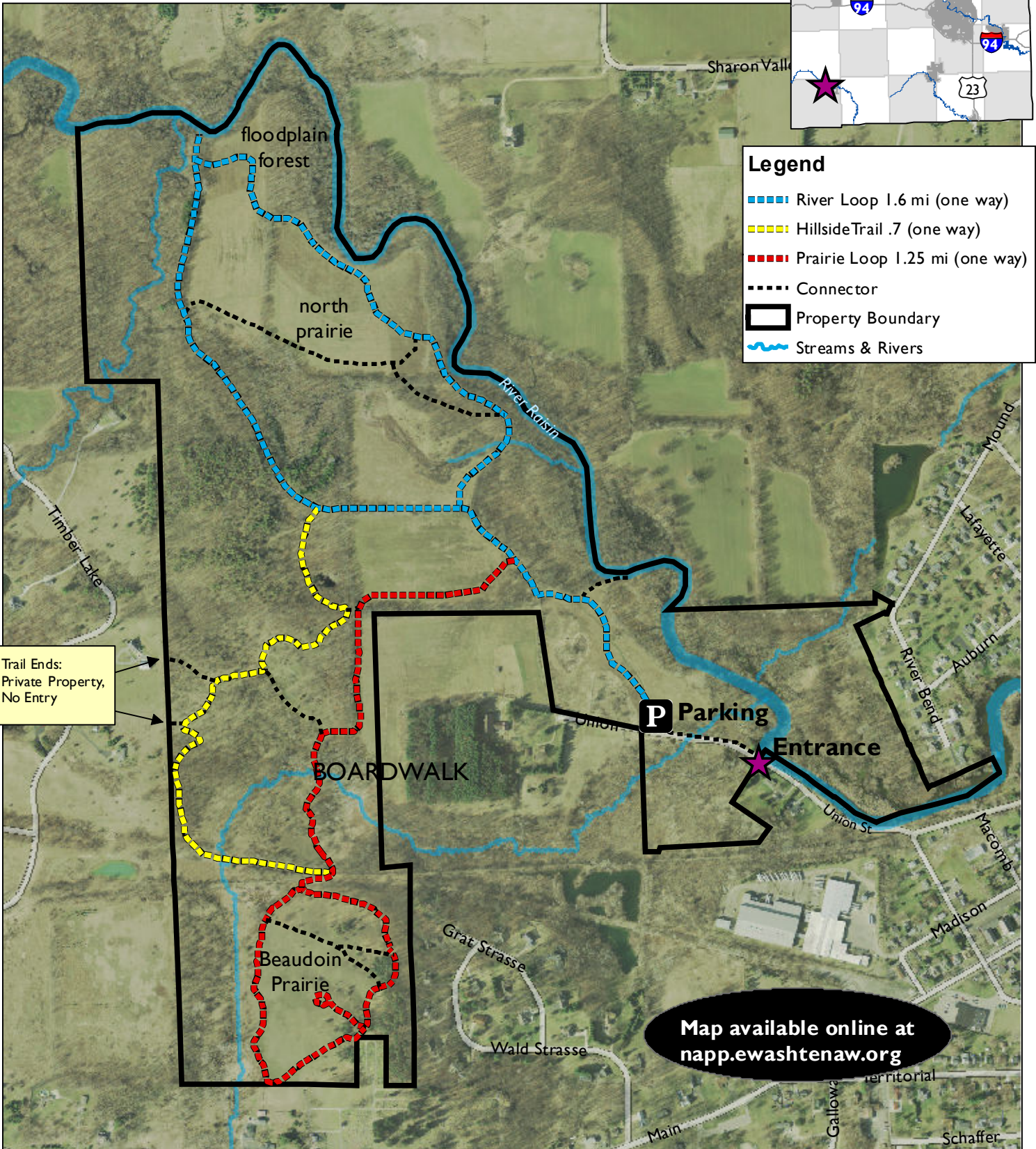
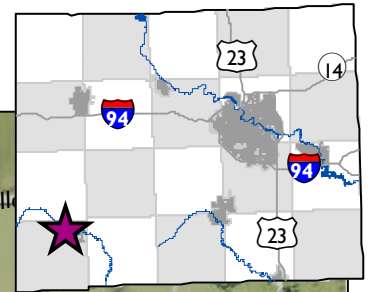
Prepared by Washtenaw County Parks & Recreation Commission  
August 6, 2010  
USGS Topographic Contours (1:24,000)  
Washtenaw County 2007 Aerial



# Leonard Preserve Trail Map

259 acres

Washtenaw County  
Locator Map



**Legend**

- River Loop 1.6 mi (one way)
- Hillside Trail .7 (one way)
- Prairie Loop 1.25 mi (one way)
- Connector
- Property Boundary
- Streams & Rivers

Trail Ends:  
Private Property,  
No Entry

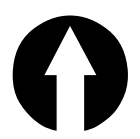
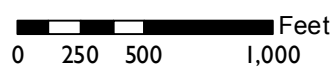
Map available online at  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)



Washtenaw County  
Natural Areas Preservation Program

(734) 971-6337  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)

Prepared by Washtenaw County Parks & Recreation Commission  
Washtenaw County 2010 Aerial



# Albert J. Miller Preserve and Robert & Nancy Smith Preserve Trail Map 29 acres

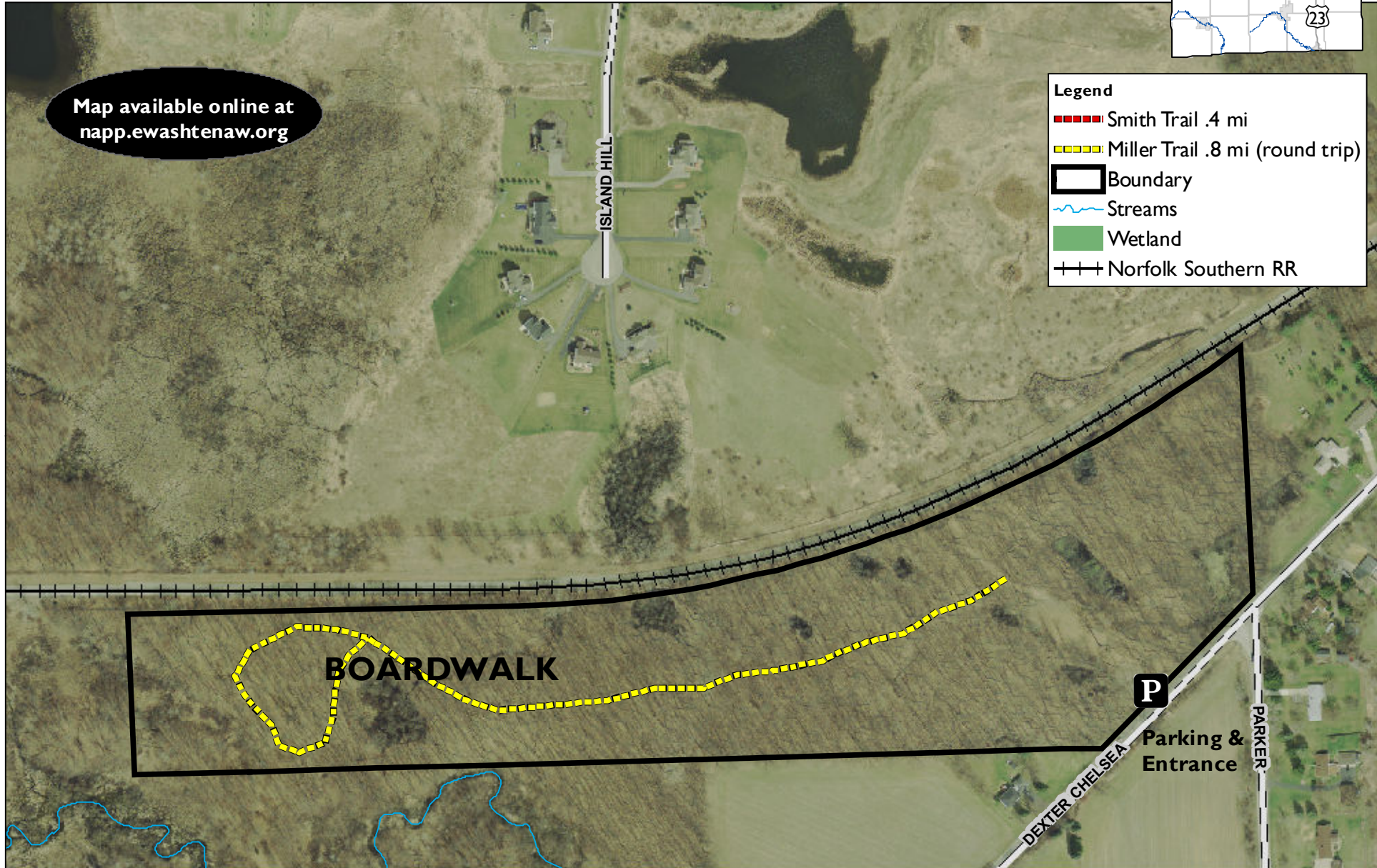
Washtenaw County  
Locator Map



Map available online at  
[napp.ewashtenaw.org](http://napp.ewashtenaw.org)

**Legend**

- Smith Trail .4 mi
- Miller Trail .8 mi (round trip)
- Boundary
- Streams
- Wetland
- Norfolk Southern RR



Washtenaw County  
Natural Areas Preservation Program  
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[napp.ewashtenaw.org](http://napp.ewashtenaw.org)

Prepared by Washtenaw County Parks & Recreation Commission  
Washtenaw County 2010 Aerial

