State of Michigan
Department of Environmental Quality

Dam Removal

Land and Water Management Division
503 North Euclid, Suite 1
Bay City MI, 48706
989-686-8025

File No. 02-37-0003-P

Date: April 30, 2002

PUBLIC NOTICE

City of Mt. Pleasant, 401 North Main, Mt. Pleasant, Michigan 48858, has applied to this office for a permit under authority of Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The applicant proposes to remove the existing West Mill Pond Spillway and pedestrian bridge, construct 5 rock weirs within the Chippewa River, install a new pedestrian bridge over the Chippewa River, and construct new canoe landings and pedestrian trails on an island area. The proposed work on the West Mill Pond Spillway will require the removal of 560 cubic yards of material. Approximately 225 linear feet of temporary sheet piling cofferdam will be installed to divert the water from the West Spillway to the East Spillway. Approximately 124.5 linear feet of sheet pile will be installed for Weir 1, 138 linear feet of sheet pile ill be installed for Weir 2, 109.5 linear feet of sheet pile will be installed for Weir 3, 71.5 linear feet of sheet pile will be installed for Weir 4, and 79.5 linear feet of sheet pile will be installed for weir 5. Fill area #2 will be filled with approximately 873 cubic yards of material prior to the construction of the rock portion of the weir. Fill area #2 will be filled with approximately 524 cubic yards of material prior to the construction of the rock portion of the weirs. Weir 1 will require approximately 265 cubic yards of field stone, Weir 2 will require 348 cubic yards of field stone, Weir 3 will require 330 cubic yards of field stone, Weir 4 will require 97 cubic yards of field stone, and Weir 5 will require 80 cubic yards of field stone. Three (3) 8' x 16' canoe landings will be installed on top of 12" of pea stone bedding material. The proposed pedestrian bridge will be a 125' span x 6' wide bridge with an observation area that will be a maximum of 12'-6" wide and 20'-6" long. The installation of the bridge will require 1,407 cubic yards of fill in the floodplain for the construction of the left abutment area and an additional 1,166 cubic yards of fill in the floodplain for the construction of the right abutment area. The purpose of the project is to restore the Chippewa River by removing an existing structure that is in risk of failure, to enhance fish migration, and to create a recreational area. The project is located in T14N, R4W, Section 15, City of Mt Pleasant, Isabella County, Michigan, in accordance with plans attached to this notice.

THIS NOTICE IS NOT A PERMIT

When an application is received for a permit to authorize work in or over inland waters of the State of Michigan, pursuant to PART 301, INLAND LAKES AND STREAMS, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED, provides that the department shall submit copies for review to the director of public health, the city, village or township, and the county where the project is to be located, the local soil conservation district, the local watershed council organized under Part 311, if any, the local port commission, if any. Additionally, notification is provided to certain persons as provided by statute or determined by the department.

Those persons wishing to make comments on the proposed project shall furnish this office with their comments in writing no later than 20 days from the date of submission for review of this notice. Unless a written request is filed with the department within 20 days after the submission of this notice, the department may grant the application without a public hearing. The determination as to whether a permit will be issued or a public hearing held will be based on an evaluation of all relevant factors including the effect of the proposed work on the public trust or interest, including navigation, fish and wildlife, pollution, and the general public interest. Written comments on these factors will be made part of the file and will be considered in determining if it is in the public interest to grant a permit. Objections must be factual and specific and fully describe the reasons upon which any objection is founded.

cc: DNR, Wildlife – Natural Heritage
DNR, Wildlife – Bay City
Isabella Co. Clerk
Isabella Co. Drain Comm.
MUCC
City of Mt. Pleasant, applicant
LWMD, Floodplains – Bay City
DNR, Fisheries – Bay City
Isabella Co. Health Dept.
City of Mt Pleasant Clerk
Isabella Soil Conservation Dist.
History Division
Wilcox Associates, Inc.
see attached for riparians

US Army Corps of Engineers (USACE) | Michigan Department of Environmental Quality (MDEQ) DEQ

AGENCY USE				
Previous USACE Permit or File Number	Date Received	RECEIVED FEB 22 2002 ENVIRONMENTAL QUALITY LAND & WATER MGMT-FCU	Land and Water Management Division, MDEQ File Number 02-37-0003-P	AGENCY USE
USACE File Number			*Marina* Operating Permit Number	
			Fee received $ 2000	

- **Print in black, blue, or red ink and complete all items in Sections 1 through 9 and those items in Sections 10 through 21 that apply to your proposed project.**

1 PROJECT LOCATION INFORMATION

- Refer to your property's legal description for the Township, Range, and Section information, and your property tax bill for your Property Tax Identification Number(s).

Address		Township Name(s)	Township(s)	Range(s)	Section(s)
			14N	4W	15
City/Village: Mt. Pleasant	County(ies): Isabella	Property Tax Identification Number(s)			
Name of Waterbody: Chippewa River	Project Name or Job Number: Chippewa River Restoration Project	Subdivision/Plat	Lot Number	Private Claim	

Project types (check all that apply): ☐ private ☒ public/government ☐ industrial ☐ commercial ☐ multi-family ☐ building addition ☒ new building or *structure* ☐ building renovation or restoration ☒ river restoration ☐ single-family ☒ other (explain) **Spillway and Pedestrian Bridge Removal, Construction of Rock Weirs, New Pedestrian Bridge**

The proposed project is on, within, or involves (check all that apply)

☐ a stream ☐ a pond (less than 5 acres) ☐ a legally established County Drain (date established)
☐ a Great Lake or *Section 10 Waters* ☐ a *natural river*
☒ a river ☐ a channel/canal ☐ a designated *high risk erosion area* ☒ a *dam* ☒ a *structure* removal
☐ a ditch or drain ☐ an *inland lake* (more than 5 acres) ☐ a designated *critical dune area* ☐ a wetland ☐ a utility crossing
☒ a *floodway* area ☒ a *100-year floodplain* ☐ a designated *environmental area* ☐ 500 feet of an existing waterbody

2 DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS

- Attach separate sheets, as needed, including necessary drawings, sketches, or plans.

This project has been designed for restoration of the Chippewa River. Enhancements to fish migration include removal of the existing West Mill Pond Spillway and pedestrian bridge, construction of rock weirs and new pedestrian bridge (See Wilcox Associates Inc. plans dated January 15, 2002).

3 APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER INFORMATION

- The applicant can be either the property owner or the person or company that proposes to undertake the activity.
- If the applicant is a corporation, both the corporation and it's owner must provide a written document authorizing the agent/contractor to act on their behalf.

Applicant (individual or corporate name)			Agent/Contractor (firm name and contact person)		
City of Mt. Pleasant			(Engineers) Wilcox Associates Inc.		
Mailing Address 401 N. Main			Address One Madison Avenue		
City: Mt. Pleasant	State: MI	Zip Code: 48858	City: Cadillac	State: MI	Zip Code: 49601
Daytime Telephone Number with Area Code: (989) 779-5329 (Greg Baderschneider)			Daytime Telephone Number with Area Code: (231) 775-7755 (Jim Tiffany)		
Fax: (989) 773-4691	E-mail: gbaders@mt-pleasant.org		Fax: (231) 775-3135	E-mail: jimt@wilcoxassociates.com	

Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ☐ No ☒ Yes
(**If No**, provide a letter signed by the property owner authorizing the agent/contractor to act on his or her behalf or a copy of easements or right-of-ways. If multiple owners, please **attach** all property owners' names, mailing addresses, and telephone numbers.)

Property Owner's Name (If different from applicant)	Mailing Address		
N/A			
Daytime Telephone Number with Area Code	City	State	Zip Code

4 PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use.
- Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; alternative locations; local land use regulations and infrastructure; and pertinent environmental and resource issues.
- For utility crossings, include both alternative routes and alternative construction methods.

The Mill Pond Park West Spillway/Pedestrian Bridge is in poor condition and in risk of failure during a flood event. This poses some serious concerns for the Mill Pond Park and the Chippewa River. A failure would result in the loss of a bridge that provides a critical link in the City's trail system. Also of great concern would be the downstream movement of a large quantity of sediment that has built up over the years upstream of the dam. The sediment load would have a serious negative impact on the quality of the stream and fish habitats downstream.

As a means of overcoming these problems associated with removal of the spillway, a series of weirs has been designed which will maintain the same upstream water surface elevation and will gently step the river down

over a distance of several hundred feet through the series of weirs. This will prevent the downstream migration of sediment, which would be so deleterious to the stream. In addition, this scheme will protect the upstream wetland habitat areas. The weirs will be designed to be aesthetically pleasing and will provide gentle rapids as the water passes over the weirs.The current spillway is a barrier to the movement of fish. Another important aspect of the weirs will be their accommodation of fish that are migrating upstream. The River's flow will be distributed between the west channel where the weirs will be located and the east channel where the East Spillway will remain in place. The fish will naturally migrate up the west channel because it will contain a majority of the flow. This will steer them away from migrating up the east channel where the East Spillway provides a barrier to their passage.

The weirs will have a notch somewhere near the center of the stream which will make the river navigable even during periods of low flow. The west channel with the proposed weirs has been designed to have a natural look. Overbank areas that have stone rip-rap protection will be covered with topsoil and seeded to hide the harsh look that is sometimes seen with large areas of exposed stone. The weirs will be constructed of river stone with irregular shapes and irregular surfaces to provide a natural look. Indigenous species of trees, shrubs and other plants will be provided in the overbank areas.

There are two alternative schemes. The first considered was replacement of the existing spillway with a new spillway. This alternative would have been very costly and would have required a fish ladder of limited effectiveness. The second alternative considered was complete removal of the two spillways. This would have created the need for an extensive sediment management program for sediments that have been deposited upstream of the spillway since the original construction. This alternative would also drain wetland areas upstream of the spillway.

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5 LOCATING YOUR PROJECT SITE

- Provide the requested information listed below that will help staff in locating your project site.
- Attach a copy of a map, such as a plat, county, or USGS topographic map, clearly showing the site location and include an arrow indicating the north direction.

Is there an access road to the project? ☐ No ☒ Yes (**If Yes,** type of road, **check all that apply**) ☐ private ☒ public ☒ improved ☒ unimproved

Name of roads at closest main intersection **Broadway** and **South Harris**

Directions from main intersection **Head S. on S. Harris. Turn left on gravel road just before road turns right onto Lyons. From parking area walk trail to the North (see vicinity map on plan cover sheet).**

Style of house or other building on site ☐ ranch ☐ 2-story ☐ cape cod ☐ bi-level ☐ cottage/cabin ☐ pole barn ☐ none ☐ other (describe)

Color Color of adjacent property house and/or buildings

House number Address is visible on ☐ house ☐ garage ☐ mailbox ☐ sign ☐ other

Street name Fire lane number Lot number

How can your site be identified if there is no visible address? **See vicinity map on plan cover sheet.**

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody **From parking area, walk trail to North**

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Does project cross boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.)
☒ No ☐ Yes (If Yes, list jurisdiction names.)

6 List all other federal, interstate, state, or local agencies authorizations required for the proposed activity, including all approvals or denials received.

Agency	Type approval	Identification number	Date applied	Date approved / denied	If denied, reason for denial
City of Mt. Pleasant	Soil Erosion	N/A	Contractor to apply	N/A	N/A

7 If a permit is issued, date activity will commence (M/D/Y) **March 15, 2002**

Proposed completion date (M/D/Y) **Dec. 31, 2002**

Has any construction activity commenced or been completed in a regulated area? ☒ No ☐ Yes
If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s) (M/D/Y)

Were the regulated activities conducted under a MDEQ permit? ☐ No ☐ Yes
If Yes, list the MDEQ permit number

Are you aware of any unresolved violations of environmental law or litigation involving the property? ☒ No ☐ Yes (**If Yes,** please explain)

8 PUBLIC NOTIFICATION (Attach additional sheets if necessary)

- Complete information for all *adjacent and impacted property owners* and the lake association or established lake board including the contact person's name.
- If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

Property Owner's Name	Mailing Address	City	State	Zip Code
See Attached List				

Name of ☐ Established Lake Board ☐ or Lake Association and the Contact Person's Name	Telephone Number	Mailing Address	City	State	Zip Code

9 APPLICANT'S CERTIFICATION **READ CAREFULLY BEFORE SIGNING**

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application, that it is true and accurate, and, to the best of my knowledge, is in compliance with the State *Coastal Zone Management Program* and the *National Flood Insurance Program*. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ and the USACE to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does **not** release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does **not** guarantee the issuance of a permit.

- All applicants must complete all the items in Sections 1 through 9 on pages 1 and 2 of this application.
- Complete those items in Sections 10 through 21 that apply to your project. It is necessary to submit only those pages where you have provided information.
- Please list here the application page numbers being submitted and a brief description of other attachments included with your application.

-Application page numbers 4,5,6,7
-Complete set of preliminary plans Sheets 1-7
-Hydraulic Report (hydraulic modeling, floodplain issues)
-List of adjacent property owners

☐ Property Owner
☐ Agent/Contractor
☒ Corporation – Title **City of Mt. Pleasant**

Printed Name **Greg Baderschneider, Director of Parks, Buildings and Grounds**

Signature

Date 2-18-02

10 PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE

- Check boxes A through N that may be applicable to your project and provide the requested information.
- If your project may affect wetlands, also complete Section 12. If your project may impact regulated *floodplains*, also complete Section 13.
- Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures*, land change activities and *soil erosion and sedimentation control measures*. Please review sample drawings for guidance in completing site-specific drawings for your project.
- On a Great Lake use *IGLD 85* ☐ surveyed ☐ converted from observed still water elevation. On inland waters, ☒ *NGVD 29* ☐ local datum ☐ other

Observed water elevation (ft) **751.5/747.5+-**, date of observation (M/D/Y) **Upstream/Downstream of Spillway 8/24/00**

☒ **A. PROJECTS REQUIRING FILL** (See All Sample Drawings)

- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Attach both plan and *cross-section* views to scale showing maximum and average fill dimensions.

(Check all that apply) ☒ *floodplain* fill ☐ wetland fill ☒ *riprap* ☐ *seawall, bulkhead*, or *revetment* ☒ bridge or culvert
☐ boat launch ☐ off-shore swim area ☐ beach sanding ☐ boatwell ☐ crib *dock* ☒ other **River Weirs**

Fill dimensions (ft)	Fill volume (cu yd)	Maximum water depth in fill area (ft)
Length **See Plans** width **See Plans** maximum depth **9.5'**	**6,100**	**See plans & Hydraulic Report**

Type of clean fill ☒ pea stone ☒ sand ☐ gravel ☐ wood chips ☒ other **Field Stone, Quarry Stone, Topsoil, Concrete Riprap [Filter fabric under rip rap Area R1 and under River Weirs (plan sht 3&5)]**

Will *filter fabric* be used under proposed fill? ☒ No ☒ Yes (**If Yes**, type) **Amoco Non-woven 4512**

Source of clean fill ☐ on-site, **If on-site,** show location on site plan ☒ commercial ☐ other, **If other,** attach description of location

Fill will extend **See Plans** feet into the water from the *shoreline* **and** *upland* **See Plans** feet out of the water.

☐ **B. PROJECTS REQUIRING DREDGING OR EXCAVATION** (See All Sample Drawings)

- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Attach both plan and *cross-section* views to scale showing maximum and average dredge or excavation dimensions.
- The applicant will be notified if sediment sampling will be required.

(Check all that apply) ☐ *floodplain* excavation ☐ wetland dredge or draining ☐ *seawall, bulkhead, or revetment*
☐ navigation ☐ *boat well* ☐ boat launch ☐ other

Dredge volume (cu yd) | Method and equipment for dredging

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Has proposed dredge material been tested for contaminants? ☐ No ☐ Yes (**If Yes,** attach testing results)

Has this same area been previously dredged? ☐ No ☐ Yes (**If Yes**, provide date and permit number, if available) (M/D/Y)
If Yes, are you proposing to enlarge the previously dredged area ☐ No ☐ Yes

Is long-term maintenance dredging planned? ☐ No ☐ Yes (**If Yes,** when and how much?)

☒ **C. PROJECTS REQUIRING RIPRAP** (See Sample Drawings 2, 3, 8, 12, 14, 17, 22, and 23. Others may apply)

	Dimensions (ft)	Volume (cu yd)
Riprap **waterward** of the ☒ *shoreline* **OR** ☐ *ordinary high water mark*	length **See Plans** width depth	**56.7**
Riprap **landward** of the ☒ *shoreline* **OR** ☐ *ordinary high water mark*	length **See Plans** width depth	**389**

Type of *riprap* ☒ field stone ☐ angular rock ☒ other **Quarry Stone**

Will *filter fabric* be used under proposed *riprap*? ☐ No ☒ Yes (**If Yes,** type) **Amoco Non-woven 4512 (only Area R1, plan sht 5)**

☐ **D. SHORE PROTECTION PROJECTS** (See Sample Drawings 2, 3, and 17)

(check all that apply) ☐ *riprap* ☐ *seawall/bulkhead* ☐ *revetment*

☐ **E. DOCK - PIER - MOORING PILINGS** (See Sample Drawing 10)

Type ☐ open pile ☐ filled ☐ crib | *Seasonal structure*? ☐ No ☐ Yes

Proposed *structure* dimensions (ft) length width | Dimensions of nearest adjacent *structures* (ft) length width

☐ **F. BOAT WELL** (No Sample Drawing available)

Type of bank stabilization ☐ wood ☐ steel ☐ concrete ☐ vinyl ☐ *riprap* ☐ other

Boat well dimensions (ft) Length width depth | Number of boats

Volume of backfill behind sidewall stabilization (cu yd) | Distances of *boat well* from adjacent property lines (ft)

☒ **G. BOAT LAUNCH** (No Sample Drawing available)

(check all that apply) ☒ new ☐ existing ☒ public ☐ private ☐ commercial | Type of material ☒ concrete ☐ wood ☐ stone ☐ other

Overall boat launch dimensions (ft) Length **16** width **8** depth **15" Min. Water** | Boat launch dimensions (ft) below *ordinary high water mark* length **See Plans** width depth

Distances of launch from both property lines (ft) **N/A** | Number of skid *piers* **N/A** | Skid *pier* dimensions (ft) width length

☐ **H. BOAT HOIST** (No Sample Drawing available)

(Check all that apply) ☐ *seasonal* ☐ permanent ☐ cradle ☐ side lifter ☐ other | located on ☐ *seawall* ☐ *dock* ☐ bottomlands

☐ **I. BOARDWALKS AND DECKS IN WETLANDS OR FLOODPLAINS** (See Sample Drawings 5 and 6)

(Check all that apply) ☐ boardwalk ☐ deck ☐ wetlands ☐ *floodplain* | Boardwalk or deck is on ☐ fill ☐ *piling*

10 Continued - PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE

☐ **J. INTAKE PIPES** (See Sample Drawing 16) ☐ **OUTLET PIPES** (See Sample Drawing 22)

Type ☐ headwall ☐ end section ☐ pipe ☐ other	If outlet pipe, discharge is to ☐ wetland ☐ *inland lake* ☐ stream, drain, or river ☐ Great Lake ☐ other
Dimensions of headwall **OR** end section (ft) length width depth	Number of pipes / Pipe diameters and invert elevations

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☐ **K. MOORING AND NAVIGATION BUOYS** (No Sample Drawing available)

- Provide an overall site plan showing the distances between each buoy, distances from the shore to each buoy, and depth of water at each buoy in feet.
- Provide cross-section drawing(s) showing anchoring system(s) and dimensions.

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Number of buoys	Type of anchor system	Purpose of buoy ☐ mooring ☐ navigation
Dimensions of buoys (ft) width height		Do you own the property along the *shoreline*? ☐ No ☐ Yes (**If No,** you must provide an authorization letter from the property owner(s))

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☐ **L. GROINS** (No Sample Drawing available)

- Provide an overall site plan showing the distances (ft) of the outermost *groins* from the property lines, distances between *groins*, length and width of each *groin*, and the distance from the existing toe of the bluff to the lakeward end of the *groins*.
- If existing *groins* are located on adjacent properties, provide distances (ft) from closest neighboring *groin* to your property lines on the site plan. Provide *cross-section* views showing the length and height of each *groin* and the height of *groin* ends above the observed water level (date and time). If step down type, show the height of each section above the observed water level.

Number of *groins*	Type of *groin* ☐ steel ☐ wood ☐ other	Will *groin* be placed on a foundation? ☐ No ☐ Yes (**If Yes**, dimensions of foundation (ft)) length width height

☐ **M. FENCES IN WETLANDS, STREAMS, OR FLOODPLAINS** (No Sample Drawing available)

- Provide an overall site plan showing the proposed fencing through wetlands, streams, or *floodplains*.
- Provide drawing of fence profile showing the design, dimension, post spacing, board spacing, and distance from ground to bottom of fence (if in a *floodplain*).

(check all that apply) ☐ wetlands ☐ streams ☐ *floodplains*	Total length (ft) of fence through wetlands streams *floodplains*	Fence height (ft)	Fence type and material

☒ **N. OTHER** - e.g., *structure* removal, *marine railway*, *low sand trap wall*, *breakwater*, and structural foundations in wetlands or *floodplains*

Removal of existing pedestrian bridge/spillway.

11 CONSTRUCTION OF A NEW LAKE OR POND (See Sample Drawings 4 and 15)

Which best describes your proposed waterbody use **(check all that apply)**
☐ wildlife ☐ *stormwater retention basin* ☐ *stormwater detention basin* ☐ recreation ☐ wastewater basin ☐ other

Water source for lake/pond
☐ groundwater ☐ natural springs ☐ *Inland Lake or Stream* ☐ stormwater runoff ☐ pump ☐ sewage ☐ other

Will project involve construction of a *dam*, dike, outlet control *structure*, or *spillway*? ☐ No ☐ Yes (**If Yes,** complete Section 17)

12 ACTIVITIES THAT MAY IMPACT WETLANDS

- For information on the MDEQ's *Wetland Assessment* Program, please visit the LWMD website or call 517-241-8485.

(check all that apply) ☐ fill (Section 10A) ☐ dredge or excavation (Section 10B) ☐ boardwalk or deck (Section 10I) ☐ fences (Section 10M) ☐ bridges and culverts (Section 14) ☐ draining surface water ☐ other

Has a professional wetland delineation been conducted for this parcel? ☐ No ☐ Yes (**If Yes,** please provide a copy; if federal method was used, supply data sheets)	Applicant purchased property ☐ before **OR** ☐ after October 1, 1980.

Has the MDEQ conducted a *wetland assessment* for this parcel? ☐ No ☐ Yes (**If Yes,** please provide a copy)

Describe the wetland impacts, proposed use or development, and efforts to avoid/minimize impacts.

Is any grading or mechanized land clearing proposed? ☐ No ☐ Yes (**If Yes,** please show locations on site plan)	Has any of the proposed grading or mechanized land clearing been completed? ☐ No ☐ Yes (**If Yes,** please label and show locations on site plan)

- Complete the wetland dredge and wetland fill dimension information for each impacted wetland area. Attach additional sheets if necessary and label the impacted wetland areas on a site plan drawn to scale. Please attach at least one typical *cross-section* for each wetland dredge and/or fill area. (See Sample Drawings 8 & 9)
- Also complete Section 10A for fill and Section 10B for dredge or excavation activities.
- If dredge material will be disposed of on site, please show the location on site plan in an *upland* area and include *soil erosion and sedimentation control measures*.

Wetland dredge dimensions	maximum length (ft)	maximum width (ft)	dredge area ☐ acres ☐ sq ft	average depth (ft)	dredge volume(cu yd)
Wetland fill dimensions	maximum length (ft)	maximum width (ft)	fill area ☐ acres ☐ sq ft	average depth (ft)	fill volume(cu yd)

Total wetland dredge area ☐ acres ☐ sq ft	Total wetland dredge volume (cu yd)
Total wetland fill area ☐ acres ☐ sq ft	Total wetland fill volume (cu yd)

The proposed project will be serviced by ☐ public sewer ☐ private septic system (**If septic system,** show existing and new or expanded system on plans)	**If septic system,** has application been made to the County Health Department for a permit? ☐ No ☐ Yes	**If Yes,** has permit been issued? ☐ No ☐ Yes (**If Yes**, provide copy)

13 FLOODPLAIN ACTIVITIES (See Sample Drawing 5. Others may apply)

- Please attach additional sheets with the requested information when multiple *floodplain* activities are included in this application.

(check all that apply) ☒ fill ☐ dredge ☐ wetland impacts ☐ other

Site is **See Plans** feet above ☐ *ordinary high water mark* (OHWM) **OR** ☐ observed water level . Date of observation (M/D/Y)

Fill volume below the 100-year floodplain elevation (cu yd) **6068**	Compensating cut volume below the 100-year floodplain elevation (cu yd) **Approx. 500 CYD. Hydraulic model indicates a reduction in 100-Year floodplain elevations as a result of this project.**

14 BRIDGES AND CULVERTS (Including Foot and Cart Bridges)

- Provide detailed site-specific drawings of existing **and** proposed *Plan View* (Sample Drawing 14A), Elevation View (Sample Drawing 14B), Stream and *Floodplain Cross-Section* (Sample Drawing 14C), Stream Profile (Sample Drawing 14D) and *Floodplain* Fill (Sample Drawing 5) at a scale adequate for detailed review.
- Provide the requested information that applies to your project. If there is not an existing *structure*, leave the "Existing" column blank.
- If you choose to have a Licensed Professional Engineer "certify" that your project will not cause a "harmful interference" for a range of flood discharges up to and including the 100-year flood discharge then you must use the "Required Certification Language". A copy is available on our website under "Permit Application" or you may request a copy by phone, email, or mail. A hydraulic report supporting this certification may also be required.
- Please attach additional sheets with the requested information when multiple crossings are included in this application.

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		Existing	Proposed			Existing	Proposed
Culvert type (box, circular, arch) and material (corrugated metal, timber, concrete, etc.)		**N/A**	**N/A**	Bridge span (length perpendicular to stream) **OR** culvert ☐ width ☐ diameter (ft)		**Multi-span**	**125'**
Bridge type (concrete box beam, timber, concrete I-beam, etc.)		**Concrete**	**Steel**	Bridge width (parallel to stream) **OR** culvert length (ft)		**12'**	**6'**
Entrance design (projecting, mitered, wingwalls, etc.)		**Wingwalls**	**Sloped Embankm.**	Bridge rise (from bottom of beam to streambed) **OR** Culvert rise (from top of culvert to streambed) (ft)		**6.5'**	**11.5'**
Total structure waterway opening above streambed (sq ft)		**480**	**1248**				
☐ elevation of culvert crown ☒ bottom of bridge beam (ft)	Upstream	**757'**	**760'**	Higher elevation of ☐ culvert invert **OR** ☐ streambed within culvert (ft)	Upstream	**N/A**	**N/A**
	Downstream	**757'**	**760'**		Downstream	**N/A**	**N/A**
Elevation of road grade at structure (ft)		**758.75**	**761.5**	Distance from low point of road to mid-point of bridge crossing (ft)		**115'**	**115'**
Elevation of low point in road (ft)		**758**	**758**				

Cross-sectional area of primary channel (sq ft) (See Sample Drawing 14C) **390** | Average stream width at OHWM outside the influence of the structure (ft) **110'** upstream **125'** downstream

Reference datum used (show on plans with description) ☒ *NGVD 29* ☐ *IGLD 85* (Great Lakes coastal areas) ☐ local **(See benchmark-plans)**

High water elevation – describe reference point and highest known water level above or below reference point and date of observation.
The highest known water elevation resulted from the flood of 1986 with water surface elevation profile approx. equal to 100-year flood elevation profile (see hydraulic report).

5 STREAM, RIVER, OR DRAIN CONSTRUCTION ACTIVITIES (No sample drawing available)

- Complete Section 10A for fill, Section 10B for dredge or excavation, and Section10C for *riprap* activities.
- If side casting or other proposed activities will impact wetlands or *floodplains*, complete Sections 12 and 13, respectively.
- Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures* and land change activities. Provide *cross-section* (elevation) drawings necessary to clearly show existing and proposed conditions. Be sure to indicate drawing scales.
- **For activities on legally established county drains, provide original design and proposed dimensions and elevations.**

(check all that apply) ☐ maintenance ☒ improvement ☐ relocation ☐ enclosure ☐ new drain ☐ wetlands ☒ other **Rock Weirs**

Dimensions (ft) of existing stream/drain channel to be worked on. Length **600'** width **125'** depth **4'**

Dimensions (ft) of new, relocated, or enclosed stream/drain channel. Length **N/A** width **N/A** depth **N/A**

Existing channel average water depth in a normal year (ft) **3'-5'** | Proposed side *slopes* (vertical / horizontal) **1/2.5**

How will slopes and bottom be stabilized? **Vulnerable areas will be stabilized using Rip rap as per Sheet 5 of the plans.**

Will old/enclosed stream channel be backfilled to top of bank grade? ☒ No ☐ Yes

If an enclosed *structure* is proposed, check type? ☐ concrete ☐ corrugated metal ☐ plastic ☐ other **N/A**

Will spoils be disposed of on site? ☒ No ☐ Yes **(If Yes,** show location of spoils on site plan in an *upland* area.)

Reference datum used (show on plans with description) ☒ *NGVD 29* ☐ *IGLD 85* (Great Lakes coastal areas) ☐ local **(See benchmark on plans)**

16 DRAWDOWN OF AN IMPOUNDMENT

- If wetlands will be impacted, also complete Section 12.

Type of drawdown ☐ over winter ☐ temporary ☐ one-time event ☐ annual event ☐ permanent (*dam* removal) ☐ other.

Reason for drawdown

Has there been a previous drawdown? ☐ No ☐ Yes (**If Yes**, provide date (M/Y)) Previous permit number, if known

Does waterbody have established legal lake level? ☐ No ☐ Yes ☐ Not Sure		*Dam* ID Number, if known
Extent of vertical drawdown (ft)	*Impoundment* design head (ft)	Number of adjacent or impacted property owners
Date drawdown would start (M/D/Y)	Date drawdown would stop (M/D/Y)	Rate of drawdown(ft/day)
Date refilling would start (M/D/Y)	Date refill would end (M/D/Y)	Rate of refill(ft/day)
Type of outlet discharge *structure* to be used ☐ surface ☐ bottom ☐ mid-depth	*Impoundment* area at normal water level (acres)	Sediment depth behind *impoundment* discharge *structure* (ft)

17 DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES (See Sample Drawing 15)

- If wetlands will be impacted, also complete Section 12.
- Please attach site-specific conceptual plans for construction of a new *dam*, reconstruction of a *failed dam*, or enlargement of an existing *dam* for resource impact review. Detailed engineering plans are required once the activity has been determined to be permitable from an environmental standpoint.
- Please attach detailed engineering plans for a *dam* repair, *dam alteration*, *dam abandonment*, or *dam* removal.

Which one best describes your project? ☐ new *dam* construction ☐ reconstruction of a *failed dam* ☐ enlargement of an existing *dam* ☐ *dam repair* ☐ *dam alteration* ☐ *dam abandonment* ☒ *dam* removal ☒ other **Rock Weirs**

Dam ID Number If known **0119**	Type of outlet discharge *structure* ☒ surface ☐ bottom ☐ mid depth	Will proposed activities require a drawdown of the waterbody to complete the work? ☒ No ☐ Yes (**If Yes**, also complete Section 16)	
Riprap volume (cu yd) **(See 10C above)**	Dredging/excavation volume (cu yd)	Fill volume (cu yd) **See 10A & 13**	Does *structure* allow complete drainage of waterbody ☒ No ☐ Yes

Benchmark elevation (ft) **757.98** Datum used ☐ Local ☒ *NGVD 29* ☐ other

Describe benchmark and show on plans **A chiseled square set in southeast corner of southwest wing wall of existing spillway bridge (See Plan Sheet 3)**

Have you engaged the services of a Licensed Professional Engineer? ☐ No ☒ Yes (**If Yes**, name, registration number, and mailing address)
James E. Tiffany, P.E. #43942 Wilcox Associates Inc., One Madison Ave., Cadillac, MI 49601

Will a water diversion during construction be required? ☐ No ☒ Yes (**If Yes**, describe how the stream flow will be controlled through the *dam* construction area during the proposed project activities) **The right channel & East spillway will be used for diversion.**

- **The following additional information is required for a new dam, reconstruction of a failed dam, or enlargement of an existing dam.**

Describe the type of *dam* and how you will design the *dam* and embankment to control seepage through and underneath the *dam*.

Embankment top elevation (ft)	Streambed elevation at downstream embankment toe (ft)	Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)	
Embankment Length (ft)	Embankment top width (ft)	Embankment bottom width (ft)	Embankment *slopes* (vertical / horizontal) Upstream / Downstream /
Proposed normal pool elevation (ft)	*Impoundment* flood elevation (ft)	Maximum vertical drawdown capability (ft) (attach operational procedure of the proposed *structure* if available)	
Have soil borings been taken at *dam* location? ☐ No ☐ Yes (**If Yes**, submit results with permit application)	Will a cold water *underspill* be provided? ☐ No ☐ Yes (**If Yes**, invert elevation ft)	Do you have flowage rights to all proposed flooded property at the design flood elevation? ☐ No ☐ Yes	

18 UTILITY CROSSINGS (See Sample Drawings 12 and 13)

- If side casting is required, complete Subsections 10A and 10B. If spoils will be placed in wetlands or wetlands may be impacted, complete Section 12.
- Please attach additional sheets with the requested information as needed for multiple crossings.

What method will be used to construct the crossings? ☐ *flume* ☐ *plow* ☐ open trench ☐ jack and bore ☐ directional drilling

Crossing of ☐ *Inland Lake or Stream* ☐ *floodplain* ☐ international waters ☐ wetlands (also complete Section 12)

Type	Number of wetland crossings	Number of inland lake or stream crossings	Pipe diameter (inches)	Pipe length per crossing (feet)	Distance below streambed or wetland (inches)
☐ sanitary sewer					
☐ storm sewer					
☐ watermain					
☐ cable					
☐ oil/gas pipeline					

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CITY OF MT. PLEASANT
CHIPPEWA RIVER RESTORATION PROJECT
ADJACENT PROPERTY OWNERS

Michigan Department of Transportation (Railroad R.O.W.)
425 W. Ottawa
P.O. Box 30050
Lansing, Michigan 48909

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Medrith McCarthy
805 W. Broadway St.
P.O. Box 264
Mt. Pleasant, MI 48804-0264
Leaton & Upton Add, Lots 1, 2 & 9, Block 1

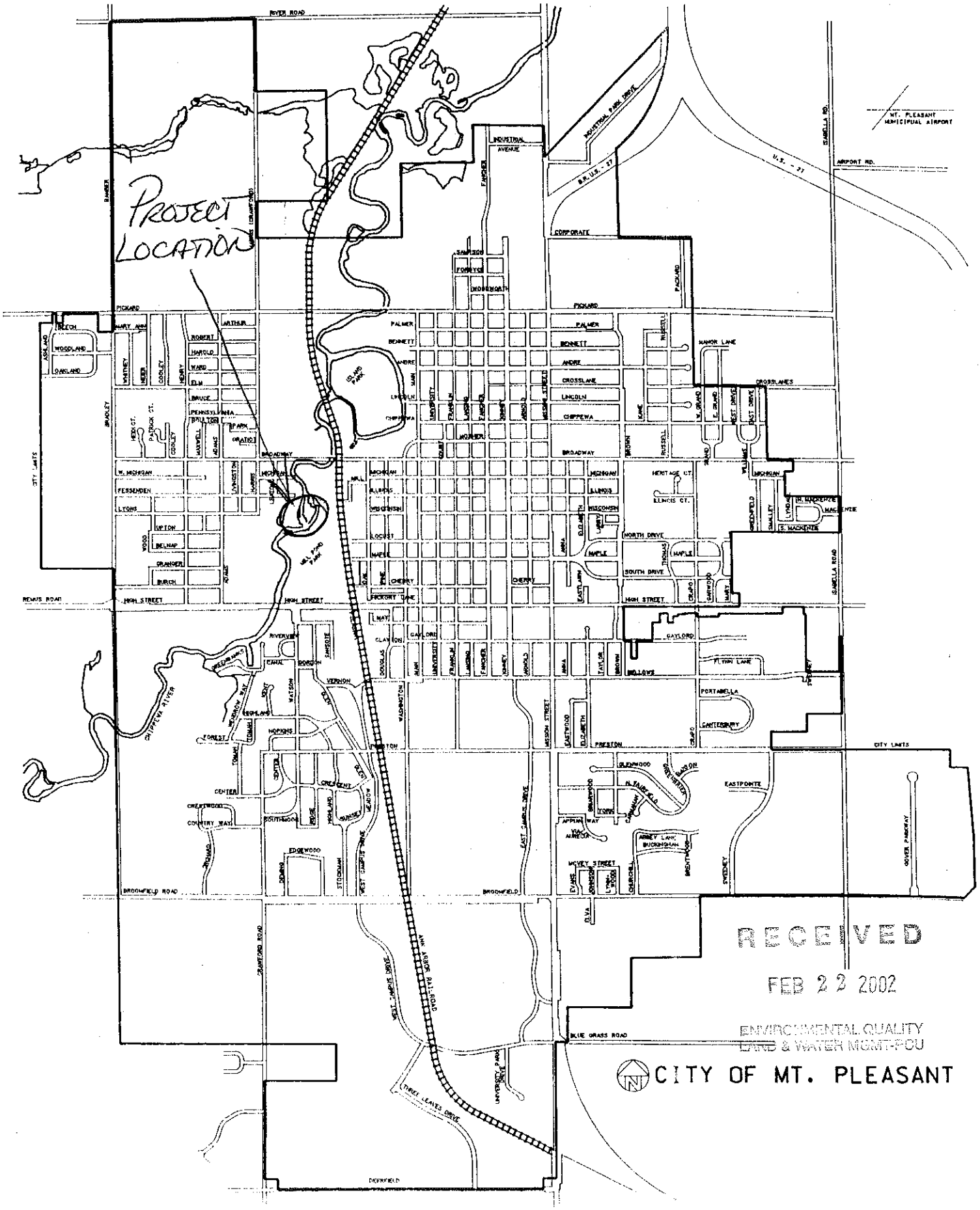
Jean Thrall
6 Fieldstone Drive
Winchester, MA 01890
Leaton & Upton Add, Lot 3 and E 36' Lot 4, Block 4 (815 W. Michigan)

Shiela Jarrell
221 Leaton
Mt. Pleasant, MI 48858
Leaton & Upton Add, Lot 6,7,8,9,10, Block 4

Alberta McBride
P.O. Box 387
Mt. Pleasant, MI 48804-0387
Hopkins & Lyons Add, Lots 7,8, Block 1 (1000 Lyons & 1002 Lyons)

Beverly Spear
13800 Lone Tree Rd
Milford, MI 48380
Hopkins & Lyons Add, Lot 3, Block 12 (1005 Lyons)

Robert & Elizabeth Goffnett
1007 Lyons
Mt. Pleasant, MI 48858
Hopkins & Lyons Add, Lot 4, Block 12



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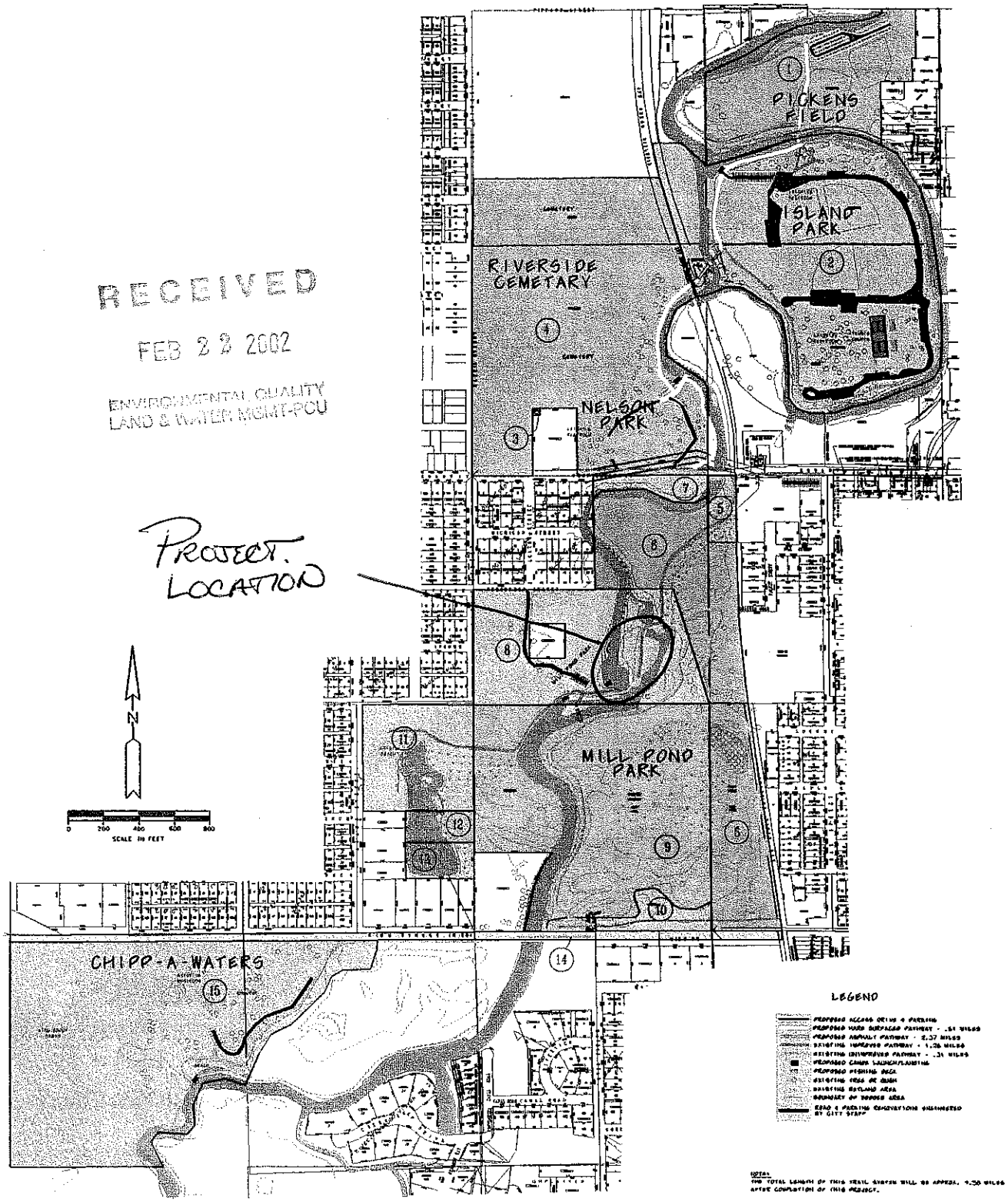

CITY OF MT. PLEASANT
RIVERWALK/TRAIL
PARK DEVELOPMENT PROJECT

PARK PARCEL MAP
SHEET 1

Wade-Trim, Inc.
P.O. Box 580
3933 Mission Drive
Bay City, Michigan 48707
517-686-3100

TAX DESCRIPTIONS

(1) 17-000-15802-00
COMMENCING 128.5 FEET WEST OF THE NORTHEAST CORNER OF THE NORTHWEST SECTION 15; THENCE SOUTH 17 RODS WEST 20 FEET, SOUTH 8 RODS, WEST 11 RODS SOUTH TO CENTER OF CHIPPEWA RIVER; THENCE NORTHWESTERLY ALONG CENTER OF RIVER TO WEST 1/8 LINE, SECTION 15 NORTH ON SAID 1/8 LINE TO CENTER OF CHIPPEWA RIVER; THENCE NORTHEASTERLY ALONG CENTER OF RIVER TO SECTION LINE; THENCE EAST ALONG SECTION LINE TO POINT OF BEGINNING
(PICKENS FIELD 08/16/1999)

(2) 17-000-15841-00
THAT PART OF NORTHWEST 1/4 OF SECTION 15 BOUNDED ON THE NORTHEAST AND SOUTH BY RIVER, ON WEST BY RIVER AND AA RR
(ISLAND PARK 08/06/1999)

(3) 17-000-15817-00
PART OF THE SOUTHWEST QUARTER (SW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 15, TOWN 14 NORTH, RANGE 4 WEST, COMMENCING AT A POINT WHICH IS N 89° 34' 30" E 343.20 FEET ALONG THE EAST AND WEST QUARTER LINE OF SECTION 15 AND N 00° 49' 10" E 363.03 FEET FROM THE WEST QUARTER CORNER OF SECTION 15; THENCE N 00° 49' 10" E 42.00 FEET, THENCE N 89° 48' 00" E 40.00 FEET, THENCE S 00° 49' 10" W 42.00 FEET, THENCE S 89° 48' 00 W 40.00 FEET TO THE POINT OF BEGINNING, CONTAINING 0.039 ACRES, MORE OR LESS.

(4) 17-000-15812-00
SECTION 15, TOWN 14 NORTH, RANGE 4 WEST, SOUTH 102 RODS OF WEST 1/2 OF NORTHWEST 1/4 WEST OF AA RR AND WEST OF RIVER, EXCEPT: COMMENCING 320 FEET EAST OF NORTHEAST CORNER BROADWAY AND HARRIS; THENCE NORTH 357.5 FEET, EAST 253.25 FEET, SOUTH 357.5 FEET, WEST TO POINT OF BEGINNING.
(RIVERSIDE CEMETERY AND NELSON PARK)
(714 WEST BROADWAY STREET 08/06/1999)

(5) 17-000-15894-00
COMMENCING AT THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4, THENCE S 89° 59' E, ALONG THE E-W 1/4 LINE 157.08 FEET TO THE CENTER OF THE ANN ARBOR RAILROAD TRACK, THENCE S 0° 48' 30" E, 396.04 FEET ALONG THE CENTER LINE OF THE ANN ARBOR RAILROAD TRACK, THENCE N 89° 59' W, 163.19 FEET TO THE WEST LINE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 15, THENCE N 0° 04' 23" E, 396.00 FEET TO THE POINT OF BEGINNING.

(6) 17-000-15894-00
COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHEAST OF SOUTHWEST OF SECTION 15; THENCE EAST ON 1/8 LINE 197 6/10 FEET TO THE RIGHT OF WAY OF AA RR; THENCE NORTHERLY ALONG SAID RIGHT OF WAY 929 FEET TO HARRIS BROTHERS MILL PROPERTY WEST 140 FEET TO 1/8 LINE; THENCE NORTH ON 1/8 LINE 399 4/10 FEET TO SECTION LINE WEST ON SECTION LINE 647 FEET TO LEATON & UPTON ADDITION SOUTH 660 FEET TO SOUTHEAST CORNER LEATON & UPTON ADDITION EAST 440 FEET TO EAST SIDE OF HEAD RACE; THENCE SOUTH AND SOUTHEASTERLY ALONG HEAD RACE AND MILL POND 716 FEET TO A PLACE OF BEGINNING EXCEPT ALL THAT PART OF NORTHEAST OF NORTHWEST OF SOUTHWEST OF SECTION 15 LYING NORTH OF CHIPPEWA RIVER AND SOUTH OF 1/4 LINE INCLUDED IN ABOVE DESCRIPTION PROPERTY CONTINUES COMMENCING AT NORTHWEST CORNER OF SOUTHEAST OF SOUTHWEST OF SECTION 15 EAST TO AA RR RIGHT OF WAY SOUTHERLEY ALONG SAID RIGHT OF WAY 80 RODS WEST 20 RODS NORTH 80 RODS TO POINT OF BEGINNING
(MILLPOND PARK 08/06/1999)

(7) 17-000-15889-00
PARCEL OF LAND NORTH OF AND WEST OF CHIPPEWA RIVER IN NORTHEAST 1/4 OF NORTHWEST 1/4 OF SOUTHWEST 1/4 SECTION 15.
(MILLPOND PARK 08/06/1999

MP (8) 17-000-15890-00
THAT PART OF SOUTH 1/2 OF NORTHWEST 1/4 OF SOUTHWEST 1/4, SECTION 15 LYING WEST OF EAST LINE OF HEAD RACE AND MILL POND, EXCEPT BEGINNING 200 FEET SOUTH OF CENTER FESSEDEN AND LEATON STREETS, EXTENDED, THENCE SOUTH 200 FEET, EAST 200 FEET, NORTH 200 FEET, WEST 200 FEET TO THE POINT OF BEGINNING.
(MILLPOND PARK 08/06/1999)

(9) 17-000-15891-00
SECTION 15, TOWN 14 NORTH, RANGE 4 WEST, PART OF SOUTHWEST 1/4 OF SOUTHWEST 1/4 EXCEPT THAT PART LYING SOUTH OF MILL POND IN SOUTHEAST 1/4 OF SOUTHWEST 1/4 OF SOUTHWEST 1/4 OF CITY
(MILLPOND PARK 08/06/1999)

(10) 17-000-15892-00
ALL OF SOUTHEAST 1/4 OF SOUTHWEST 1/4 OF SOUTHWEST 1/4 LYING SOUTH OF MILL POND SECTION 15
(MILLPOND PARK 08/06/1999)

(11) 17-000-16112-00
SECTION 16, TOWN 14 NORTH, RANGE 4 WEST, NORTH 621.8 FEET OF EAST 1/2 OF SOUTHEAST 1/4 OF SOUTHEAST 1/4 LYING WEST OF CHIPPEWA RIVER
(MILLPOND PARK 09/14/1999)

(12) 17-000-16111-00
SECTION 16, TOWN 14 NORTH, RANGE 4 WEST, EAST 1/2 OF EAST 1/2 OF SOUTHEAST OF SOUTHEAST 1/4 OF SECTION 16 LYING EAST OF HIGH WATER MARK OF MILL POND ON CHIPPEWA RIVER.

(13) 17-000-16121-00
THE NORTH 212.50 FEET OF THE SOUTH 520.70 FEET OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 SECTION 16, TOWN 14 NORTH, RANGE 4 WEST, EXCEPT THE NORTH 273 FEET THEREOF.

(14) M-20 RIGHT OF WAY

(15) 17-000-16502-00
NORTH 1/2 OF NORTHEAST OF SECTION 21 LYING NORTH AND WEST OF MILL POND
(CHIPP-A-WATERS PARK 08/06/1999)

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PARK PARCEL MAP
SHEET 2

Wade-Trim, Inc.
P.O. Box 369
3933 Monitor Road
Bay City, Michigan 48707
517-686-3100

CHIPPEWA RIVER RESTORATION PROJECT
CITY OF MT. PLEASANT, MICHIGAN
PERMIT APPLICATION SUPPLEMENTAL INFORMATION
MDEQ FILE NO. 02-37-0003-P
Prepared by Wilcox Professional Services, LLC, April 12, 2002

In this document, the Michigan Department of Environmental Quality, Permit Consolidation Unit Application Correction Request items are quoted here and for clarity are italicized. The responses are in regular font.

(1) *Please provide a detailed narrative for the proposed project (for all proposed activities) that includes the construction sequence, the volumes of stone, volumes of riprap, volumes of excavations and/or fills, volumes of floodplain fills, volumes of floodplain excavations, linear feet of sheet pile for weirs and above the dam, the date the sheet pile will be installed above the dam, the date it is proposed for removal, and any other information that may be of importance.*

An overview of the project is provided in narrative form under Item 4 of the application form. Critical construction sequence, as pertains to flow of the river, has been added to the final plans (enclosed). Non-critical construction sequence is left to the contractor. Non-critical means and methods are left to the contractor who will handle logistics in the most efficient way for his/her operation. Fill and excavation volumes are provided in the following table. The entire project is located within the floodplain with only negligible amounts of fill above the Base Flood Elevation.

MATERIAL	CUT (CYD)	FILL (CYD)	NET FILL (CYD)
General Fill (sand)	540	5051	4,511
Riprap	-0-	880	880
Field Stone for Weirs	-0-	1020	1020
Topsoil	-0-	220	220
Concrete (Riprap)	560 (dam/bridge)	100 (weirs)	(460)
Totals	1,100	7,271	6,171

Because of minor changes between the preliminary and final plans, these quantities differ slightly from those computed for the preliminary plans and submitted under part 13 of the permit application.

The total length of temporary cofferdam to be installed upstream of the spillway is 225 linear feet. It is anticipated that the cofferdam will be constructed during the month of June and removed during the month of September.

All other pertinent information about the project is contained in the plans and specifications.

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(3) a. project site plan that shows the floodplain boundaries and elevations (if known), and shows all area of proposed floodplain fill and floodplain excavation (cross hatched or shaded)

The areas of cuts and fills are shown in Attachment 1 along with base flood elevations. It is important to note that all project cuts and fills will be in the floodplain.

(3) d. provide an 8 ½" x 11" reduced copy of all revised plans and 4 full size copies of plans.

These are provided along with this supplemental information.

(6) Volume (in cubic yards) of fill for each river weir, volume of fill for fill area #1, volume of fill for fill area #2, Volume of riprap (scour protection) proposed for around the weirs.

The requested net fill volumes are provided in the following table:

LOCATIONS	VOLUMES (CYD)
Weir 1	265
Weir 2	348
Weir 3	330
Weir 4	97
Weir 5	80
Subtotal	1120
Left Abutment Area	1,407
Fill Area 1	524
Fill Area 2	873
Right Abutment Area	1,166
Trail Area	541
Subtotal	4,511
Riprap	880
Total	7,053

Note: Dam/bridge concrete and topsoil are accounted for in the previous table above.

(7) Linear feet of sheet pile proposed for above the existing dam, and for each of the weirs.

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The linear feet of sheet pile walls are provided in the following table:

WALL DESIGNATION	LINEAR FEET OF WALL
Weir 1	124.5
Weir 2	138
Weir 3	109.5
Weir 4	71.5
Weir 5	79.5
Cofferdam	225
Total	748

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FILL AREA

CUT AREA

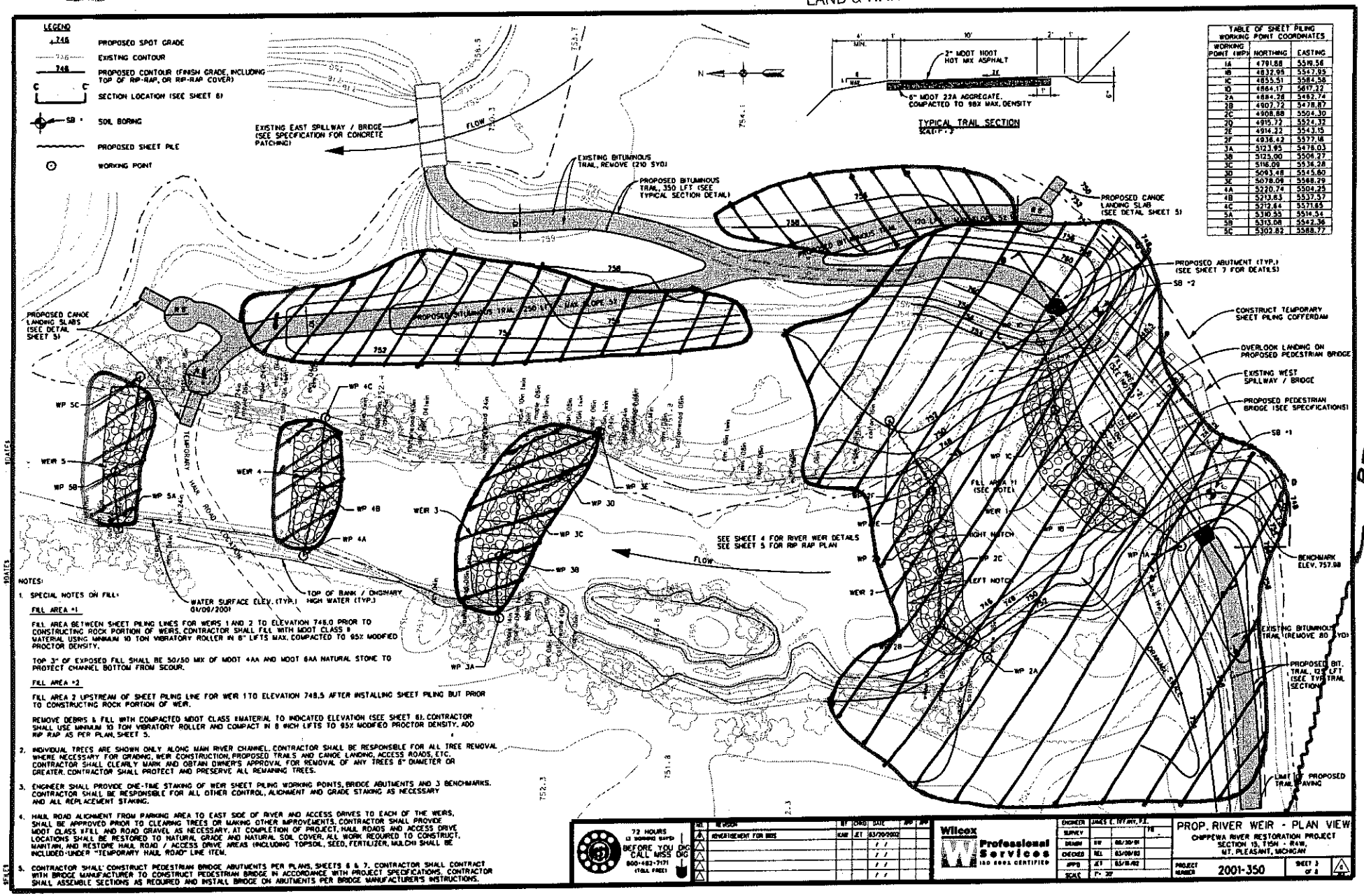

TABLE OF SHEET PILING WORKING POINT COORDINATES		
WORKING POINT (WP)	NORTHING	EASTING
1A	4791.88	5516.56
1B	4832.95	5547.95
1C	4855.51	5584.58
1D	4864.17	5617.22
2A	4884.28	5482.74
2B	4907.72	5478.87
2C	4908.88	5504.30
2D	4915.72	5524.32
2E	4914.22	5543.15
2F	4936.42	5577.16
3A	5123.95	5478.03
3B	5125.00	5506.27
3C	5116.09	5536.28
3D	5093.48	5545.80
3E	5078.09	5568.29
4A	5220.74	5504.25
4B	5213.83	5537.57
4C	5212.64	5571.85
5A	5310.35	5514.34
5B	5313.08	5542.36
5C	5302.82	5588.77

NOTES:

1. SPECIAL NOTES ON FILL:

FILL AREA #1

FILL AREA BETWEEN SHEET PILING LINES FOR WEIRS 1 AND 2 TO ELEVATION 748.0 PRIOR TO CONSTRUCTING ROCK PORTION OF WEIRS. CONTRACTOR SHALL FILL WITH MDOT CLASS II MATERIAL USING MINIMUM 10 TON VIBRATORY ROLLER IN 6" LIFTS MAX. COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

TOP 3" OF EXPOSED FILL SHALL BE 50/50 MIX OF MDOT 4AA AND MDOT 6AA NATURAL STONE TO PROTECT CHANNEL BOTTOM FROM SCOUR.

FILL AREA #2

FILL AREA 2 UPSTREAM OF SHEET PILING LINE FOR WEIR 1 TO ELEVATION 748.5 AFTER INSTALLING SHEET PILING BUT PRIOR TO CONSTRUCTING ROCK PORTION OF WEIR.

REMOVE DEBRIS & FILL WITH COMPACTED MDOT CLASS II MATERIAL TO INDICATED ELEVATION (SEE SHEET 6). CONTRACTOR SHALL USE MINIMUM 10 TON VIBRATORY ROLLER AND COMPACT IN 8 INCH LIFTS TO 95% MODIFIED PROCTOR DENSITY. ADD RIP RAP AS PER PLAN, SHEET 5.

2. INDIVIDUAL TREES ARE SHOWN ONLY ALONG MAIN RIVER CHANNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TREE REMOVAL WHERE NECESSARY FOR GRADING, WEIR CONSTRUCTION, PROPOSED TRAILS AND CANOE LANDING, ACCESS ROADS, ETC. CONTRACTOR SHALL CLEARLY MARK AND OBTAIN OWNER'S APPROVAL FOR REMOVAL OF ANY TREES 6" DIAMETER OR GREATER. CONTRACTOR SHALL PROTECT AND PRESERVE ALL REMAINING TREES.

3. ENGINEER SHALL PROVIDE ONE-TIME STAKING OF WEIR SHEET PILING WORKING POINTS, BRIDGE ABUTMENTS AND 3 BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER CONTROL, ALIGNMENT AND GRADE STAKING AS NECESSARY AND ALL REPLACEMENT STAKING.

4. HAUL ROAD ALIGNMENT FROM PARKING AREA TO EAST SIDE OF RIVER AND ACCESS DRIVES TO EACH OF THE WEIRS, SHALL BE APPROVED PRIOR TO CLEARING TREES OR MAKING OTHER IMPROVEMENTS. CONTRACTOR SHALL PROVIDE MDOT CLASS II FILL AND ROAD GRAVEL AS NECESSARY. AT COMPLETION OF PROJECT, HAUL ROADS AND ACCESS DRIVE LOCATIONS SHALL BE RESTORED TO NATURAL GRADE AND NATURAL SOIL COVER. ALL WORK REQUIRED TO CONSTRUCT, MAINTAIN, AND RESTORE HAUL ROAD / ACCESS DRIVE AREAS (INCLUDING TOPSOIL, SEED, FERTILIZER, MULCH) SHALL BE INCLUDED UNDER "TEMPORARY HAUL ROAD" LINE ITEM.

5. CONTRACTOR SHALL CONSTRUCT PEDESTRIAN BRIDGE ABUTMENTS PER PLANS, SHEETS 6 & 7. CONTRACTOR SHALL CONTRACT WITH BRIDGE MANUFACTURER TO CONSTRUCT PEDESTRIAN BRIDGE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. CONTRACTOR SHALL ASSEMBLE SECTIONS AS REQUIRED AND INSTALL BRIDGE ON ABUTMENTS PER BRIDGE MANUFACTURER'S INSTRUCTIONS.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
1	REVISEMENT FOR WRS	KAM	JET	03/20/2002		
2				/ /		
3				/ /		
4				/ /		
5				/ /		

Wilcox Professional Services ISO 9001 CERTIFIED

ENGINEER	JAMES E. TETART, P.E.		
SURVEY			
DRAWN	KW	08/30/01	
CHECKED	NEL	03/08/02	
APPD	JET	03/8/02	
SCALE	1" = 30'		

PROP. RIVER WEIR - PLAN VIEW

CHIPPEWA RIVER RESTORATION PROJECT
SECTION 13, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 | SHEET 3 OF 8 | 4

ATTACHMENT 1

CITY OF MT. PLEASANT, MI

PLAN OF PROPOSED
CHIPPEWA RIVER RESTORATION PROJECT

MILL POND PARK WEST SPILLWAY REMOVAL, CONSTRUCTION OF RIVER WEIRS AND PEDESTRIAN BRIDGE

COUNTY	CITY	SHEET NO.	TOTAL SHEETS
ISABELLA	MT. PLEASANT	1	8

EXCEPT WHERE OTHERWISE INDICATED ON THE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 INTERIM EDITION.

INDEX TO SHEETS

1. TITLE SHEET
2. REMOVAL - PLAN & PROFILE
3. PROP. RIVER WEIR - PLAN VIEW
4. GENERAL WEIR PLAN & SECTION
5. PROP. RIP RAP PLAN
6. PROPOSED BRIDGE PROFILE & SECTIONS
7. BRIDGE ABUTMENTS
8. SOIL EROSION CONTROL

OPERATIONAL CONSTRAINT NOTES

1. CONTRACTOR SHALL PATCH CONCRETE SURFACES OF EAST DAM AS PART OF "SITE PREPARATION" LINE ITEM PRIOR TO PLACING TEMPORARY SHEET PILING COFFERDAM (SEE SPECIFICATIONS).
2. CONTRACTOR SHALL INSTALL AND MAINTAIN SAFETY FENCING, BARRICADES AND SIGNS TO PREVENT ALL PEDESTRIAN AND NON-CONSTRUCTION VEHICLE ACCESS TO THE SITE AT ALL TIMES (SEE VICINITY MAP, THIS SHEET). SIGNS (4 EACH) SHALL BE SIMILAR IN SIZE AND STYLE TO MDOT R3-3 WITH THE FOLLOWING TEXT: "DANGER! CONSTRUCTION AREA- CLOSED TO PUBLIC"
3. CONTRACTOR SHALL INSTALL TEMPORARY SHEET PILING COFFERDAM AND SHEET PILING FOR WIER 5 BEFORE COMMENCING OTHER WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF THE COFFERDAM IN ACCORDANCE WITH MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 INTERIM EDITION, SECTION 704 AND SUBSECTION 104.02.
4. CONTRACTOR SHALL DEWATER AS REQUIRED TO COMPLETE THE WORK (DEMOLITION, COMPACTION OF EXISTING SOILS AND FILL MATERIAL, PLACEMENT OF FILTER FABRIC, ETC.) INCLUDING A WELLPOINT SYSTEM IF NECESSARY. PUMPED WATER SHALL BE DISCHARGED INTO A GEOTEXTILE FILTER BAG AT LEAST 50' FROM THE RIVER DOWNSTREAM OF THE PROJECT.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTING, PRESERVING, AND RELEASING TO THE RIVER, ALL FISH TRAPPED BY DEWATERING OPERATIONS.
6. TEMPORARY SHEET PILING COFFERDAM SHALL BE LEFT IN PLACE UNTIL REMOVAL IS APPROVED BY THE ENGINEER. SHEET PILING SHALL BE REMOVED SLOWLY ENOUGH TO PREVENT DISTURBANCE OF UPSTREAM RIVER BOTTOM SEDIMENTS AND DOWNSTREAM CONSTRUCTION.

WARNING:
CONTRACTOR SHALL TAKE STEPS TO MITIGATE THE EFFECTS OF POTENTIAL OVERTOPPING. THESE SHALL INCLUDE BUT NOT BE LIMITED TO STORING MATERIALS AND EQUIPMENT ON HIGH GROUND AND OBTAINING APPROPRIATE INSURANCE INCLUDING BUILDERS RISK INSURANCE. THE CONTRACTOR SHALL MAKE NO CLAIMS FOR ADDITIONAL PAYMENT FROM THE OWNER AS A RESULT OF DAMAGE OR ADDITIONAL WORK REQUIRED BECAUSE OF OVERTOPPING OR FAILURE OF THE TEMPORARY SHEET PILING.

IT IS IMPORTANT TO NOTE THAT THE UPSTREAM WATER ELEVATIONS WITH THE COFFERDAM IN PLACE WILL BE GREATER THAN NORMAL BECAUSE OF THE REDUCED OVERALL SPILLWAY CAPACITY. THE FEMA BASE FLOOD ELEVATION FOR THE 100-YEAR FLOOD IN THIS AREA IS 780.0 WITH BOTH SPILLWAYS FUNCTIONAL.

THE FOLLOWING UTILITIES MAY BE LOCATED WITHIN OR NEAR THE PROJECT.

CONSUMERS ENERGY — ELECTRIC
1325 WRIGHT STREET
ALMA, MICHIGAN 48801
PHONE: (517) 466-4265
EMERGENCY - (800) 487-5050

VERIZON — TELEPHONE
345 PINE STREET
ALMA, MICHIGAN 48801
PHONE: (517) 463-0224
EMERGENCY - (800) 483-1000

CHARTER COMMUNICATIONS — CABLE TELEVISION
915 E. BROOMFIELD
MT. PLEASANT, MI 48858
PHONE: (517) 772-0956

MICHIGAN CONSOLIDATED GAS CO. — GAS
609 BJORNSON ROAD
BIG RAPIDS, MI 49307
PHONE: (231) 592-3244
EMERGENCY: (800) 772-2800

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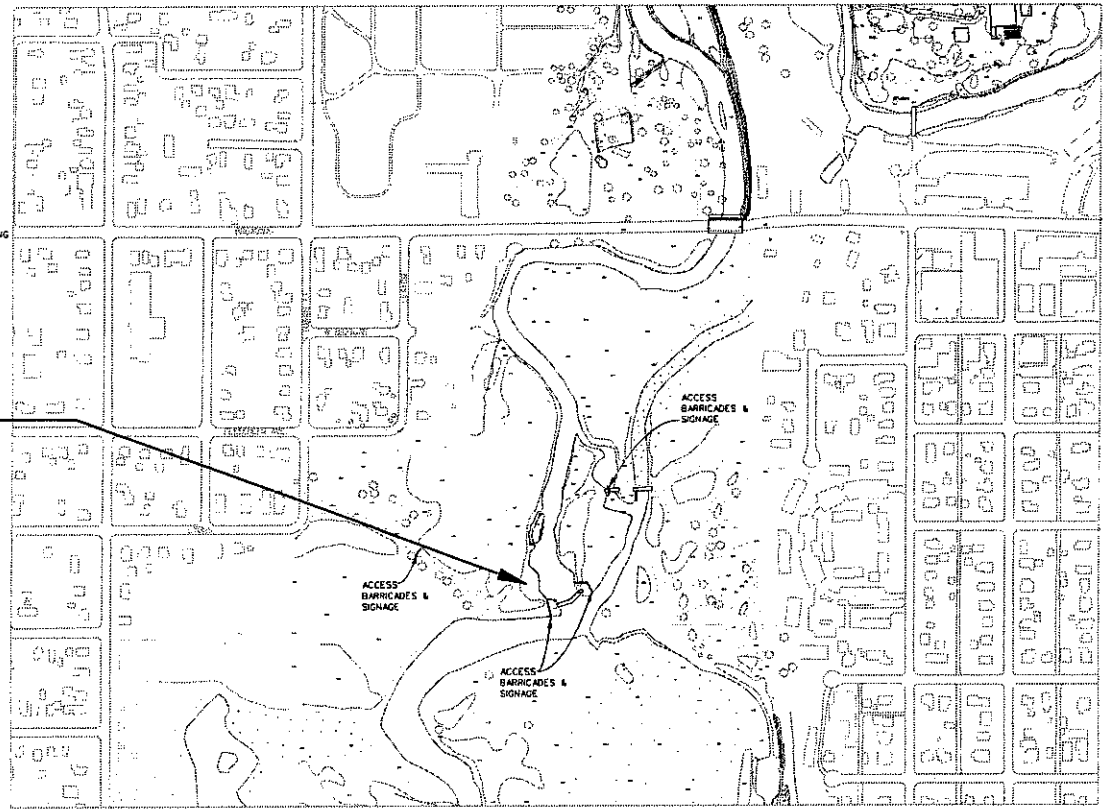

VICINITY MAP
SCALE: 1" = 200'

GENERAL NOTES

1. FOR PROTECTION OF UNDERGROUND UTILITIES, CONTRACTOR SHALL CALL (800) 482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL NOTE THAT ALL EXISTING UTILITIES AND STRUCTURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. THIS IN NO WAY IMPLIES THAT THERE COULD NOT BE OTHER STRUCTURES OR UTILITIES LOCATED IN THE AREA.
2. AVOID UNNECESSARY DISTURBANCE OR REMOVAL OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR SOIL EROSION AND SEDIMENTATION CONTROL PERMITS (ACT 347) PRIOR TO CONSTRUCTION. EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF MDEQ AND LOCAL AGENCIES HAVING JURISDICTION FOR SOIL EROSION & SEDIMENTATION CONTROL.
4. ANY REQUIRED FILL SHALL BE MDOT CLASS II GRANULAR MATERIAL FROM SITE OR BORROW AS REQUIRED. ALL FILL MATERIAL SHALL BE COMPACTED IN 8" MAXIMUM LIFTS TO 95% DENSITY UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL PROVIDE CLASS 1 SEEDING MIXTURE AS PER THE SPECIFICATIONS - 200 #/ACRE, CHEMICAL FERTILIZER NUTRIENTS - 300 #/ACRE, MULCH - 2 TONS/ACRE AND TOPSOIL SURFACE - 3". CONTRACTOR SHALL SEED ALL DISTURBED SURFACES AS DIRECTED BY THE ENGINEER.
6. THE DESIGN OF THE CONCRETE STRUCTURES IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE:	F'c = 3000 psi
AIR ENTRAINMENT:	4.5% TO 6.5%
STEEL REINFORCEMENT:	Fy = 60,000 psi, EPOXY COATED

7. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING THE REINFORCING STEEL QUANTITIES AND LENGTHS AND SHALL SUBMIT SCHEDULE OF REINFORCING STEEL FOR APPROVAL PRIOR TO FABRICATION OF STEEL.
8. WHERE FIELD CUTTING OF STEEL IS REQUIRED, THE CONTRACTOR SHALL REPAIR THE COATING AT THE CUT END AS PROVIDED FOR IN MDOT STANDARD SPECIFICATION 706.03.E.8.
9. TOLERANCES IN CUTTING AND BENDING FOR REINFORCING STEEL ARE ESTABLISHED IN THE MANUAL OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE AND DETAIL MANUAL OF THE AMERICAN CONCRETE INSTITUTE.
10. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER FOR CLARIFICATION. "NTS" MEANS DRAWING NOT TO SCALE.
11. ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH MIN. 3/4" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.
12. DETAILS OTHER THAN THOSE SHOWN ON THESE PLANS, MAY BE USED IF APPROVED BY ENGINEER IN WRITING.

CONTRACT FOR: SPILLWAY REMOVAL & CONSTRUCTION OF RIVER WEIRS AND PEDESTRIAN BRIDGE

CITY OF MT. PLEASANT, MI

APPROVED BY:

GREG BADERSCHNEIDER — DIR. OF PARKS, BLDGS & GROUNDS — DATE

PREPARED UNDER SUPERVISION OF

JAMES E. TIFFANY, P.E. — 43942
REGISTERED PROFESSIONAL ENGINEER — REGISTRATION NO.

WILCOX ASSOCIATES, INC.
ORGANIZATION

ONE MADISON AVENUE, CADILLAC, MICHIGAN 49601
ADDRESS

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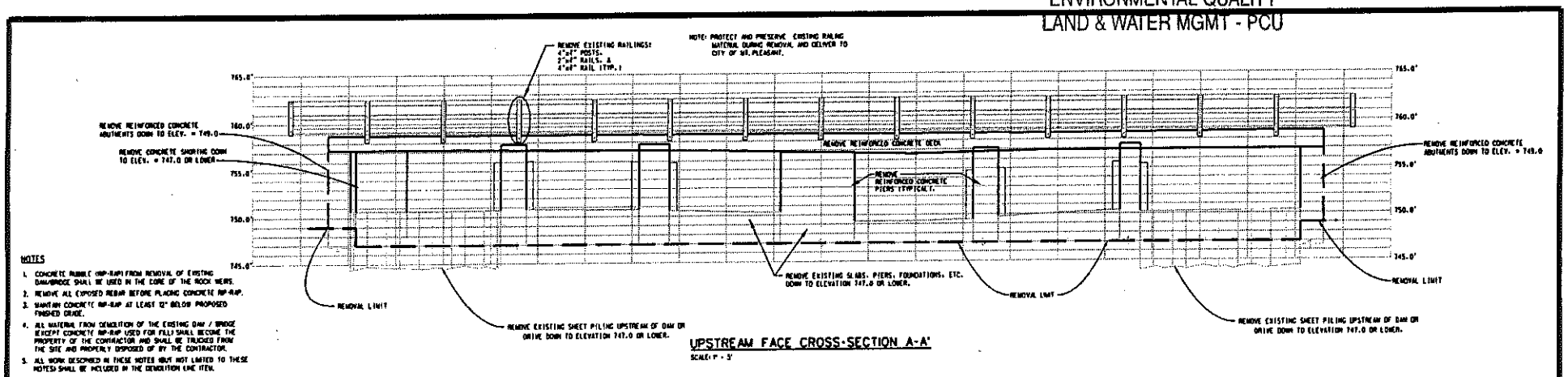
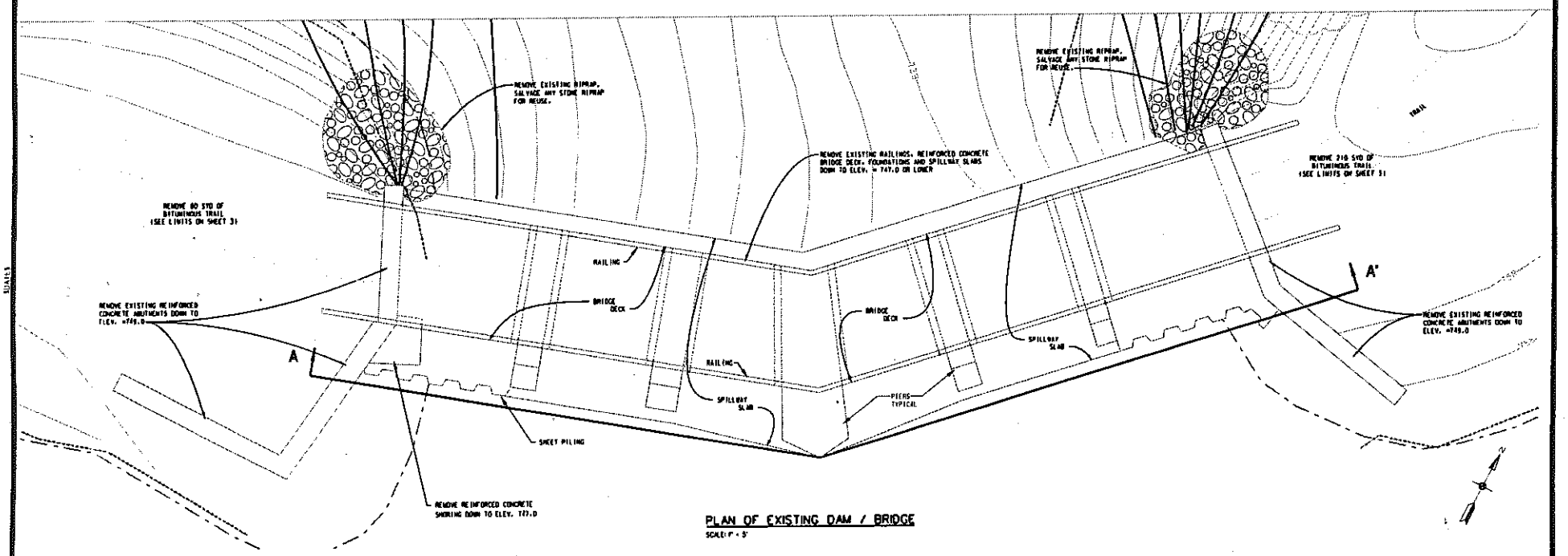


UPSTREAM FACE CROSS-SECTION A-A'

SCALE: 1" = 5'

NOTES

1. CONCRETE RUBBLE (RIP-RAP) FROM REMOVAL OF EXISTING DAM/BRIDGE SHALL BE USED IN THE CORE OF THE ROCK WEIRS.
2. REMOVE ALL EXPOSED REBAR BEFORE PLACING CONCRETE RIP-RAP.
3. MAINTAIN CONCRETE RIP-RAP AT LEAST 12" BELOW PROPOSED FINISHED GRADE.
4. ALL MATERIAL FROM DEMOLITION OF THE EXISTING DAM / BRIDGE (EXCEPT CONCRETE RIP-RAP USED FOR FILL) SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE TRUCKED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
5. ALL WORK DESCRIBED IN THESE NOTES (BUT NOT LIMITED TO THESE NOTES) SHALL BE INCLUDED IN THE DEMOLITION LINE ITEM.



PLAN OF EXISTING DAM / BRIDGE

SCALE: 1" = 5'

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

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0	ADVERTISEMENT FOR BIDS	KAW	JET	03/20/2002		
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				/ /		

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ENGINEER	JAMES E. TIFFANY P.E.	
SURVEY		
DRAWN	KW	08/30/01
CHECKED	REL	03/08/02
APP'D	JET	03/15/02
SCALE	1" = 5'	

REMOVAL PLAN AND PROFILE
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 SHEET 2 OF 8

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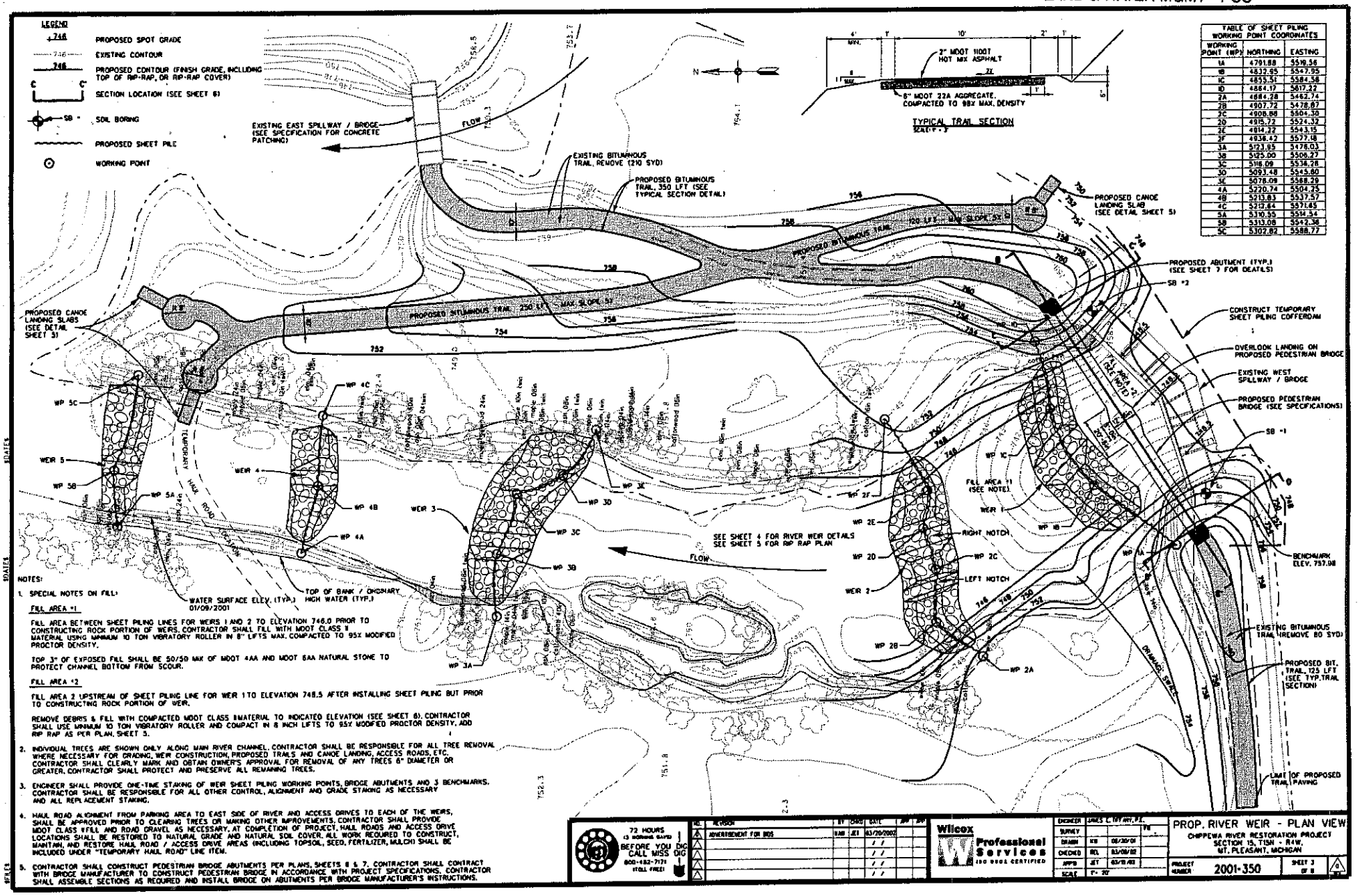

TABLE OF SHEET PILING WORKING POINT COORDINATES

WORKING POINT (WP)	NORTHING	EASTING
1A	4791.88	5519.36
1B	4832.85	5547.95
1C	4855.51	5584.58
1D	4864.17	5617.22
2A	4884.28	5462.74
2B	4907.72	5478.87
2C	4908.88	5504.30
2D	4915.72	5524.32
2E	4914.22	5543.15
2F	4936.42	5577.18
3A	5121.85	5478.03
3B	5125.00	5506.27
3C	5116.09	5534.28
3D	5093.48	5545.80
3E	5076.09	5588.29
4A	5220.74	5504.25
4B	5213.83	5537.57
4C	5212.64	5571.45
5A	5310.55	5514.54
5B	5313.08	5542.36
5C	5302.82	5588.77

NOTES:

1. SPECIAL NOTES ON FILL:

FILL AREA #1

FILL AREA BETWEEN SHEET PILING LINES FOR WEIRS 1 AND 2 TO ELEVATION 746.0 PRIOR TO CONSTRUCTING ROCK PORTION OF WEIRS. CONTRACTOR SHALL FILL WITH MDOT CLASS II MATERIAL USING MINIMUM 10 TON VIBRATORY ROLLER IN 8" LIFTS MAX. COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

TOP 3" OF EXPOSED FILL SHALL BE 50/50 MIX OF MDOT 4AA AND MDOT 6AA NATURAL STONE TO PROTECT CHANNEL BOTTOM FROM SCOUR.

FILL AREA #2

FILL AREA 2 UPSTREAM OF SHEET PILING LINE FOR WEIR 1 TO ELEVATION 748.5 AFTER INSTALLING SHEET PILING BUT PRIOR TO CONSTRUCTING ROCK PORTION OF WEIR.

REMOVE DEBRIS & FILL WITH COMPACTED MDOT CLASS II MATERIAL TO INDICATED ELEVATION (SEE SHEET 6). CONTRACTOR SHALL USE MINIMUM 10 TON VIBRATORY ROLLER AND COMPACT IN 8 INCH LIFTS TO 95% MODIFIED PROCTOR DENSITY. ADD RIP RAP AS PER PLAN, SHEET 5.

2. INDIVIDUAL TREES ARE SHOWN ONLY ALONG MAIN RIVER CHANNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TREE REMOVAL WHERE NECESSARY FOR GRADING, WEIR CONSTRUCTION, PROPOSED TRAILS AND CANOE LANDING, ACCESS ROADS, ETC. CONTRACTOR SHALL CLEARLY MARK AND OBTAIN OWNER'S APPROVAL FOR REMOVAL OF ANY TREES 6" DIAMETER OR GREATER. CONTRACTOR SHALL PROTECT AND PRESERVE ALL REMAINING TREES.

3. ENGINEER SHALL PROVIDE ONE-TIME STAKING OF WEIR SHEET PILING WORKING POINTS, BRIDGE ABUTMENTS AND 3 BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER CONTROL, ALIGNMENT AND GRADE STAKING AS NECESSARY AND ALL REPLACEMENT STAKING.

4. HAUL ROAD ALIGNMENT FROM PARKING AREA TO EAST SIDE OF RIVER AND ACCESS DRIVES TO EACH OF THE WEIRS, SHALL BE APPROVED PRIOR TO CLEARING TREES OR MAKING OTHER IMPROVEMENTS. CONTRACTOR SHALL PROVIDE MDOT CLASS II FILL AND ROAD GRAVEL AS NECESSARY, AT COMPLETION OF PROJECT, HAUL ROADS AND ACCESS DRIVE LOCATIONS SHALL BE RESTORED TO NATURAL GRADE AND NATURAL SOIL COVER. ALL WORK REQUIRED TO CONSTRUCT, MAINTAIN, AND RESTORE HAUL ROAD / ACCESS DRIVE AREAS (INCLUDING TOPSOIL, SEED, FERTILIZER, MULCH) SHALL BE INCLUDED UNDER "TEMPORARY HAUL ROAD" LINE ITEM.

5. CONTRACTOR SHALL CONSTRUCT PEDESTRIAN BRIDGE ABUTMENTS PER PLANS, SHEETS 6 & 7. CONTRACTOR SHALL CONTRACT WITH BRIDGE MANUFACTURER TO CONSTRUCT PEDESTRIAN BRIDGE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. CONTRACTOR SHALL ASSEMBLE SECTIONS AS REQUIRED AND INSTALL BRIDGE ON ABUTMENTS PER BRIDGE MANUFACTURER'S INSTRUCTIONS.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

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ENGINEER	JAMES C. IVY REG. P.E.		PE
SURVEY			
DRAWN	KW	08/30/01	
CHECKED	MDL	03/08/02	
APP'D	JEI	03/15/03	
SCALE	1" = 20'		

PROP. RIVER WEIR - PLAN VIEW
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 | SHEET 3 OF 8 | 4

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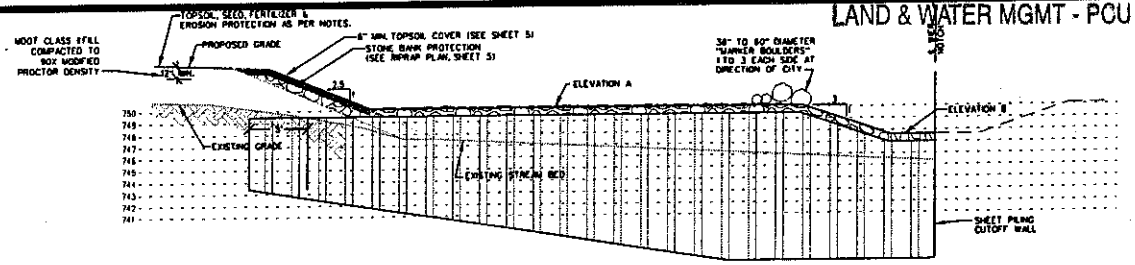
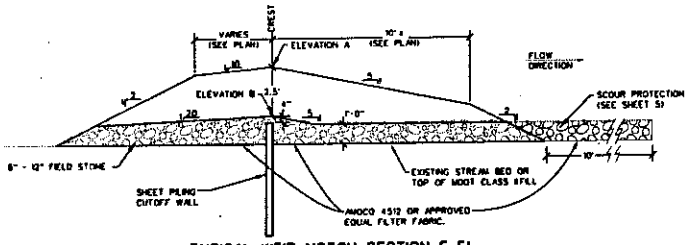
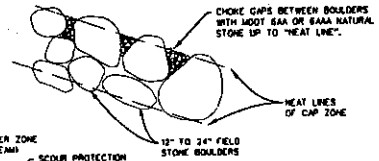


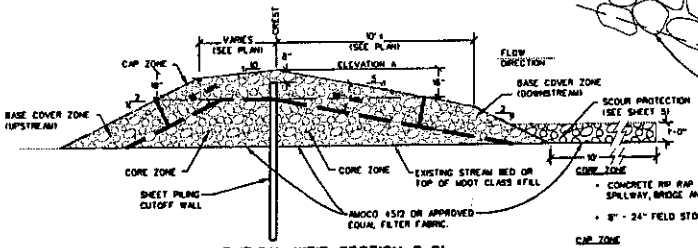
TYPICAL WEIR HALF SECTION E-E'



TYPICAL WEIR NOTCH SECTION F-F'



CAP ZONE DETAIL



TYPICAL WEIR SECTION G-G'

CORE ZONE

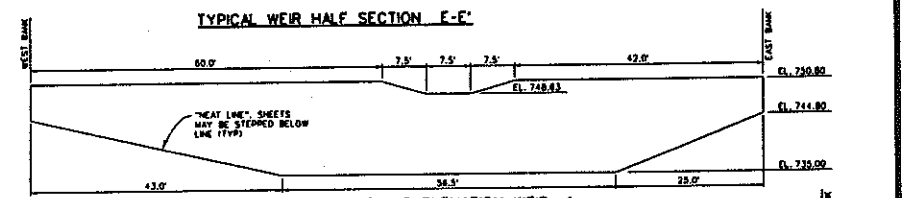
- CONCRETE RIP RAP AS AVAILABLE FROM REMOVAL OF CONCRETE SPILLWAY, BRIDGE AND ABUTMENTS.
- 8" - 24" FIELD STONE

CAP ZONE

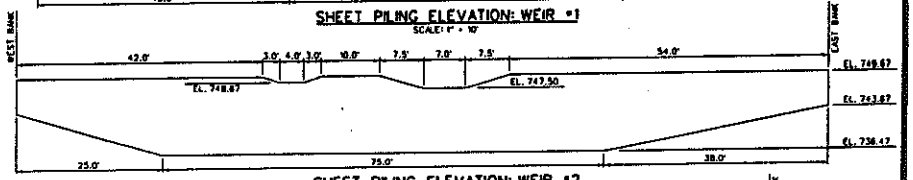
- 12" - 24" UNBROKEN FIELD STONE BOULDERS WITH SPACES BETWEEN BOULDERS CHOKED WITH MDOT 6AA OR 6AAA NATURAL STONE (SEE DETAIL).

BASE COVER ZONES

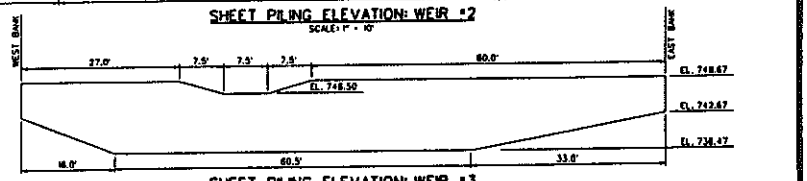
- 8" - 24" FIELD STONE (D_{50} = 15") SEE SPECIFICATIONS FOR GRADATIONS



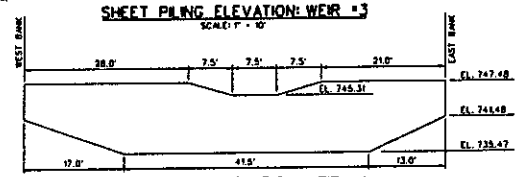
SHEET PILING ELEVATION: WEIR #1
SCALE: 1" = 10'



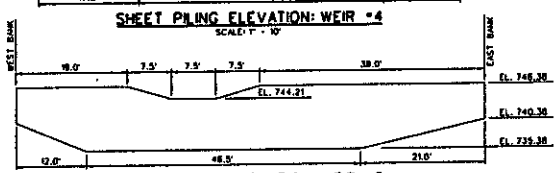
SHEET PILING ELEVATION: WEIR #2
SCALE: 1" = 10'



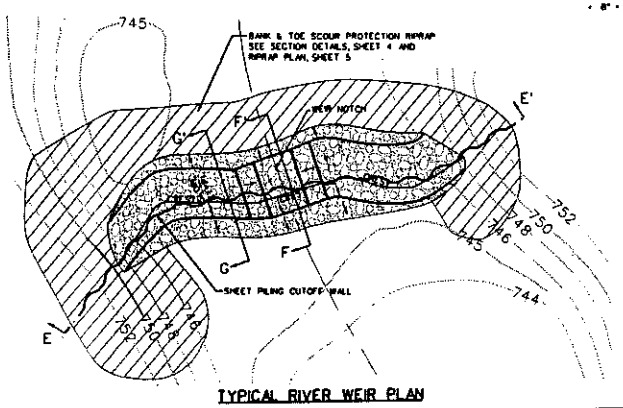
SHEET PILING ELEVATION: WEIR #3
SCALE: 1" = 10'



SHEET PILING ELEVATION: WEIR #4
SCALE: 1" = 10'



SHEET PILING ELEVATION: WEIR #5
SCALE: 1" = 10'



TYPICAL RIVER WEIR PLAN

SHEET PILE NOTES:

1) PERMANENT STEEL (NON-GALVANIZED) SHEET PILING FOR WEIR CUTOFF WALLS SHALL CONSIST OF HOT-ROLLED STEEL MEETING ASTM A328. SHEET PILING SHALL BE NEW WITH THE FOLLOWING MINIMUM PROPERTIES:

   WEB THICKNESS = 0.375 inch
   FLANGE THICKNESS = 0.375 inch
   MOMENT OF INERTIA = 84.4 in^4/ft OF WALL
   SECTION MODULUS = 18.1 in^3

2) CONTRACTOR SHALL SUBMIT TO ENGINEER SHOP DRAWINGS FOR PROPOSED SHEET PILING CUTOFF WALLS. SPECIAL SHEETS SHALL BE REQUIRED WHERE STANDARD INTERLOCKS DO NOT ALLOW DEFLECTIONS SHOWN ON THE PLANS. CONTRACTOR SHALL NOT BEGIN INSTALLATION OF SHEET PILINGS PRIOR TO ENGINEER'S APPROVAL OF SHOP DRAWINGS.

3) SOIL BORINGS SB-1 AND SB-2 INDICATE VARY HARD SILT TO SILTY CLAY WHICH COULD POSSIBLY BE WITHIN 1&8FT OF THE PROPOSED SHEET PILING LENGTH. SHEETS SHALL BE INSTALLED TO A MINIMUM OF ELEVATIONS SHOWN OR ABSOLUTE REFUSAL OF THE SHEETS WHEN USING EXCAVATOR MOUNTED SHEET PILING VIBRATOR EQUIPMENT, HOWEVER, IN NO CASE SHALL SHEETING BE INSTALLED TO LESS THAN 3 FEET BELOW EXISTING GRADE. CARE SHOULD BE TAKEN TO NOT DAMAGE SHEET PILING DURING INSTALLATION.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

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ENGINEER	JAMES E. TOFFANIN, P.E.		
SURVEY			
DRAWN	KRP	08/30/01	
CHECKED	MEL	03/06/02	
APPD	JET	03/06/02	
SCALE	1" = NTS		

GENERAL WEIR PLAN & SECTION
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 | SHEET 4 OF 8

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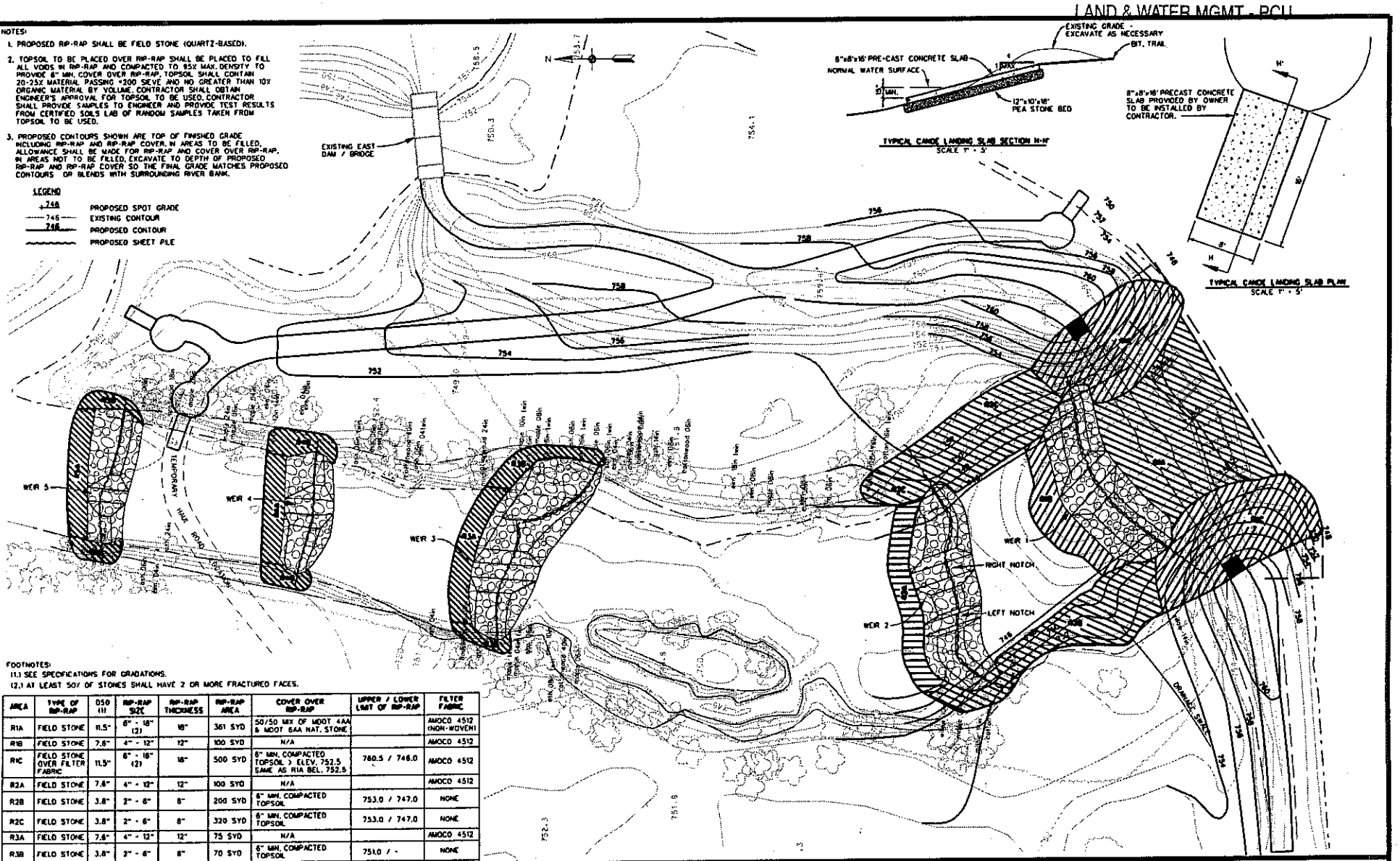
NOTES:

1. PROPOSED RIP-RAP SHALL BE FIELD STONE (QUARTZ-BASED).
2. TOPSOIL TO BE PLACED OVER RIP-RAP SHALL BE PLACED TO FILL ALL VOIDS IN RIP-RAP AND COMPACTED TO 95% MAX. DENSITY TO PROVIDE 6" MIN. COVER OVER RIP-RAP. TOPSOIL SHALL CONTAIN 20-25% MATERIAL PASSING #200 SIEVE AND NO GREATER THAN 10% ORGANIC MATERIAL BY VOLUME. CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR TOPSOIL TO BE USED. CONTRACTOR SHALL PROVIDE SAMPLES TO ENGINEER AND PROVIDE TEST RESULTS FROM CERTIFIED SOILS LAB OF RANDOM SAMPLES TAKEN FROM TOPSOIL TO BE USED.
3. PROPOSED CONTOURS SHOWN ARE TOP OF FINISHED GRADE INCLUDING RIP-RAP AND RIP-RAP COVER. IN AREAS TO BE FILLED, ALLOWANCE SHALL BE MADE FOR RIP-RAP AND COVER OVER RIP-RAP. IN AREAS NOT TO BE FILLED, EXCAVATE TO DEPTH OF PROPOSED RIP-RAP AND RIP-RAP COVER SO THE FINAL GRADE MATCHES PROPOSED CONTOURS OR BLENDS WITH SURROUNDING RIVER BANK.

LEGEND

- 746 — PROPOSED SPOT GRADE
- 746 — EXISTING CONTOUR
- 746 — PROPOSED CONTOUR
- PROPOSED SHEET PILE



FOOTNOTES:

(1.) SEE SPECIFICATIONS FOR GRADATIONS.

(2.) AT LEAST 50% OF STONES SHALL HAVE 2 OR MORE FRACTURED FACES.

AREA	TYPE OF RIP-RAP	D50 (1)	RIP-RAP SIZE	RIP-RAP THICKNESS	RIP-RAP AREA	COVER OVER RIP-RAP	UPPER / LOWER LIMIT OF RIP-RAP	FILTER FABRIC
R1A	FIELD STONE	11.5"	6" - 18" (2)	18"	361 SYD	50/50 MIX OF MDOT 4AA & MDOT 6AA NAT. STONE		AMOCO 4512 (NON-WOVEN)
R1B	FIELD STONE	7.6"	4" - 12"	12"	100 SYD	N/A		AMOCO 4512
R1C	FIELD STONE OVER FILTER FABRIC	11.5"	6" - 18" (2)	18"	500 SYD	6" MIN. COMPACTED TOPSOIL > ELEV. 752.5 SAME AS R1A BEL. 752.5	760.5 / 746.0	AMOCO 4512
R2A	FIELD STONE	7.6"	4" - 12"	12"	100 SYD	N/A		AMOCO 4512
R2B	FIELD STONE	3.8"	2" - 6"	8"	200 SYD	6" MIN. COMPACTED TOPSOIL	753.0 / 747.0	NONE
R2C	FIELD STONE	3.8"	2" - 6"	8"	320 SYD	6" MIN. COMPACTED TOPSOIL	753.0 / 747.0	NONE
R3A	FIELD STONE	7.6"	4" - 12"	12"	75 SYD	N/A		AMOCO 4512
R3B	FIELD STONE	3.8"	2" - 6"	8"	70 SYD	6" MIN. COMPACTED TOPSOIL	751.0 / -	NONE
R4A	FIELD STONE	7.6"	4" - 12"	12"	55 SYD	N/A		AMOCO 4512
R4B	FIELD STONE	3.8"	2" - 6"	8"	55 SYD	6" MIN. COMPACTED TOPSOIL	750.0 / -	NONE
R5A	FIELD STONE	7.6"	4" - 12"	12"	67 SYD	N/A		AMOCO 4512
R5B	FIELD STONE	3.8"	2" - 6"	8"	50 SYD	6" MIN. COMPACTED TOPSOIL	749.0 / -	NONE

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
0	ADVERTISEMENT FOR BIDS	JAS	JET	03/20/2002		
				/ /		
				/ /		
				/ /		

Wilcox Professional Services
ISO 9001 CERTIFIED

ENGINEER	JAMES L. TEFFANY, P.E.	
SURVEY		FB -
DRAWN	RHP	08/30/01
CHECKED	NEL	03/08/02
APPD	JET	03/15/02
SCALE	1" = 20'	

PROP. RIP RAP PLAN

CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350

SHEET 3 OF 8

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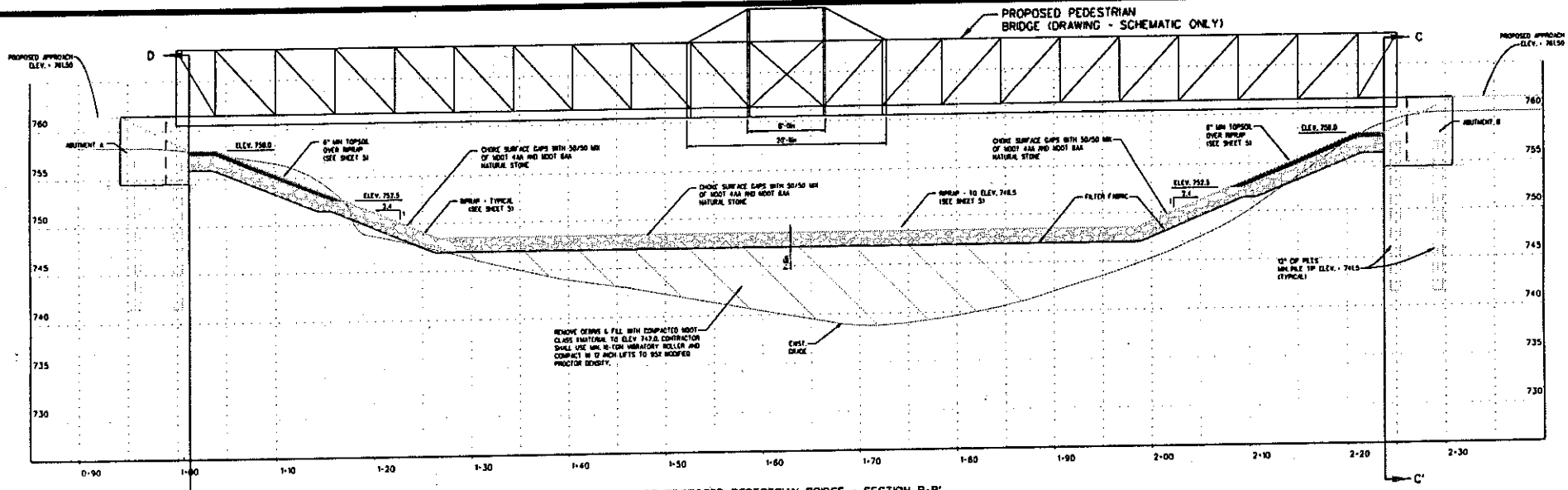
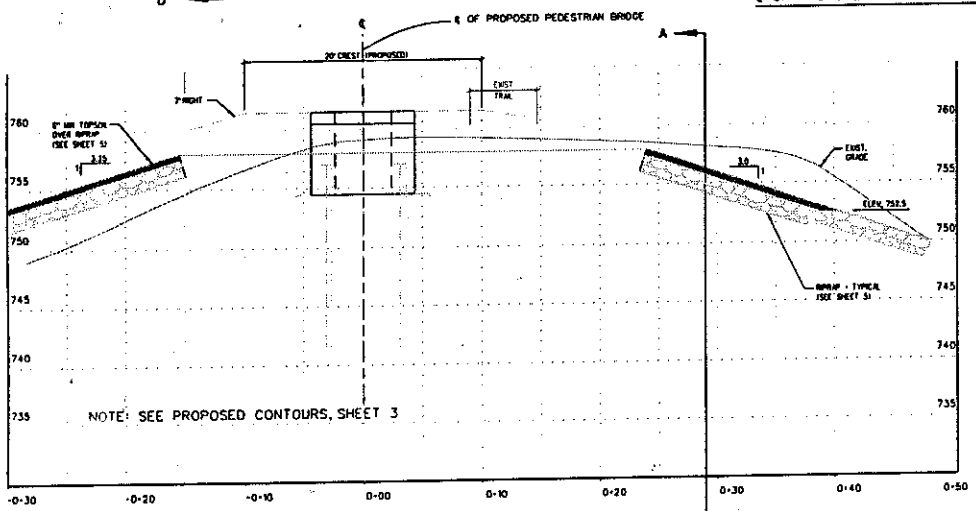
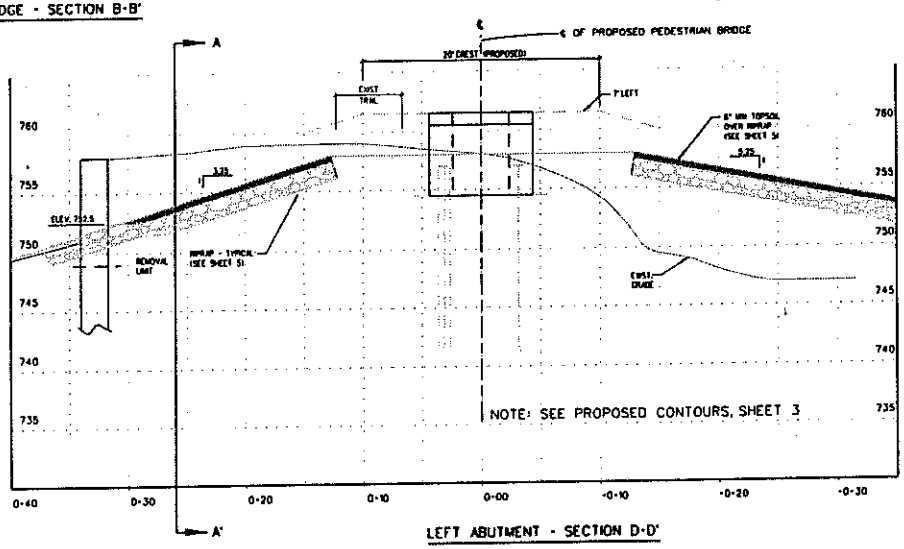
LAND & WATER MGMT - POU



℄ OF PROPOSED PEDESTRIAN BRIDGE - SECTION B-B'



RIGHT ABUTMENT - SECTION C-C'



LEFT ABUTMENT - SECTION D-D'

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
0	ADVERTISEMENT FOR BIDS	KAW	JET	03/20/2002		
				/ /		
				/ /		
				/ /		
				/ /		

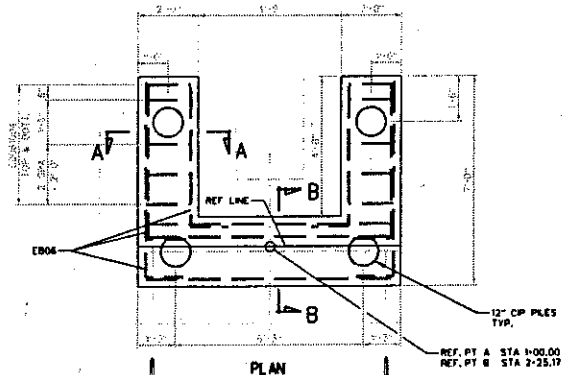
Wilcox Professional Services ISO 9001 CERTIFIED

ENGINEER	JAMES E. TIFFANY, P.E.	
SURVEY		
DRAWN	KW	08/30/01
CHECKED	REL	03/08/02
APP'D	JET	03/15/02
SCALE	1" = 5'	

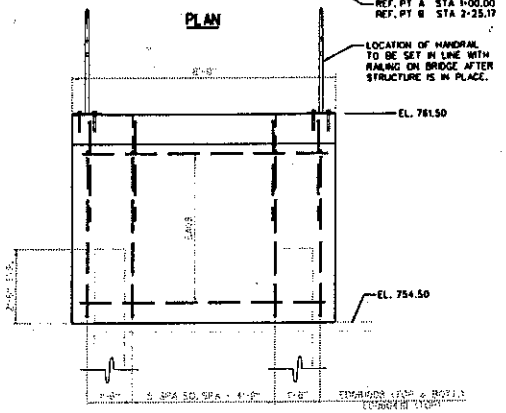
PROP. BRIDGE PROFILE & SECTIONS
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 SHEET 6 OF 6

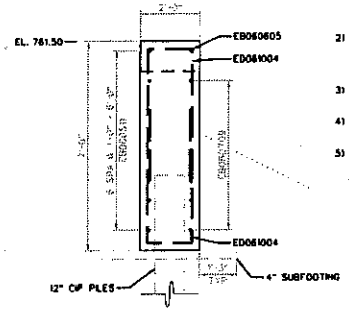
RECEIVED
APR 25 2002
ENVIRONMENTAL QUALITY
LAND & WATER MGMT - PCU



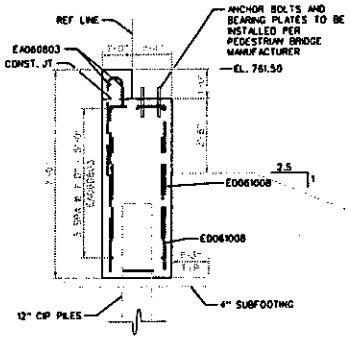
PLAN



ELEVATION



SECTION A-A



SECTION B-B

NOTES:

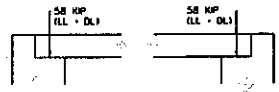
1) PRIOR TO START OF FOUNDATION CONSTRUCTION CONTRACTOR SHALL VERIFY THAT THE ENGINEER HAS REVIEWED THE BRIDGE SHOP DRAWINGS WITH REGARDS TO THE PRECISE LOCATION OF ABUTMENTS.

2) ALL MATERIALS AND WORKMANSHIP SHOWN HERE SHALL BE IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION 2003 INTERIM STANDARD SPECIFICATIONS FOR CONSTRUCTION.

3) ALL PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 17 TONS.

4) ESTIMATED PILE PENETRATIONS HAVE BEEN DETERMINED BY USE OF STATIC FORMULA.

5) PILE SHELLS SHALL BE A MINIMUM OF 0.230" NOMINAL WALL THICKNESS (3 GUAGE), 12" O.D.



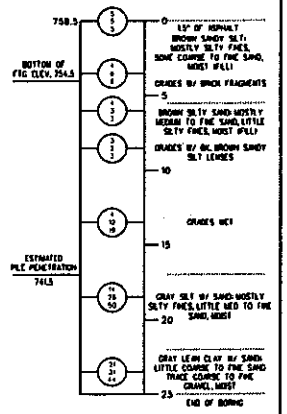
DESIGN LOADING DIAGRAM

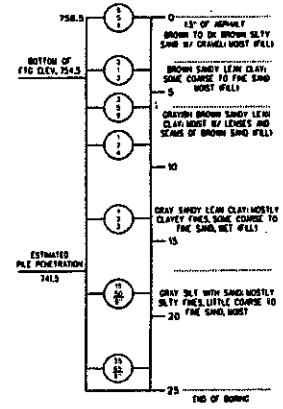
SOIL BORING NO. 1

ELEV.	LOCATION	STATION
758.5	6 FEET LT.	STA. 0+94

SOIL BORING NO. 2

ELEV.	LOCATION	STATION
758.5	6 FEET RT.	STA. 2+31





SOIL BORINGS

PERFORMED BY MATERIALS TESTING CONSULTANTS, INC. ON 3/26/01

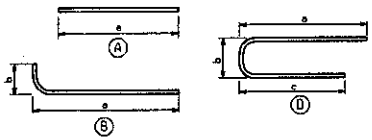
1st 6 inches
2nd 6 inches
3rd 6 inches

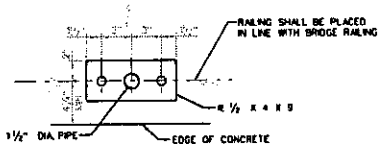
NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 6" INCREMENTS USING A 140 LBS. HAMMER FALLING 30".

CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOILS RESISTANCE TO DRILLING TOOLS.

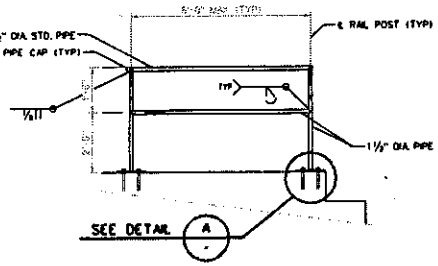
THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

BAR	DIMENSIONS a	b	c	NO. REQ'D	TOTAL WT.
ED061008	4'-5"	7'-10"	4'-5"	32	512.7
ED061004	4'-5"	7'-6"	4'-5"	40	620.8
EA060803	8'-3"			30	371.7
ED060410	3'-4"	0'-6"	7'-0"	16	116.2
EB060511	4'-8"	7'-3"		28	248.8
EB060605	5'-2"	7'-3"		4	38.6
EB060709	6'-6"	7'-3"		24	279.4
			TOTAL		2188.2

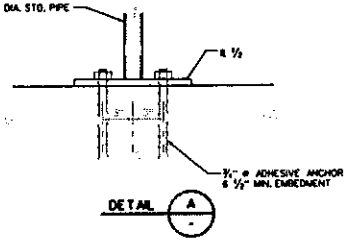




TYPICAL RAILING POST



TYPICAL ELEVATION FOR RAILING DETAIL
(2 REQUIRED)
NOTE:
ALL PIPE SHALL BE ASTM A53 GRADE B STD. WALL THICKNESS.
ALL RAILING STEEL SHALL BE PAINTED YELLOW



EPOXY COATED
BAR SIZE
BAR LENGTH (FT.)
BAR LENGTH (IN.)
EA064700
BAR SHAPE
BAR LEGEND

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
1	ADVERTISEMENT FOR BIDS	SWP	JCT	03/20/2002		
2				/ /		
3				/ /		
4				/ /		
5				/ /		

Wilcox Professional Services ISO 9001 CERTIFIED

ENGINEER	REL		
SURVEY			FB
DRAWN	CRS	03/30/01	
CHECKED	REL	03/09/02	
APPD	JCT	03/18/02	
SCALE	1" =		

BRIDGE ABUTMENTS
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350 SHEET 7 OF 8

RECEIVED

APR 2 5 2002

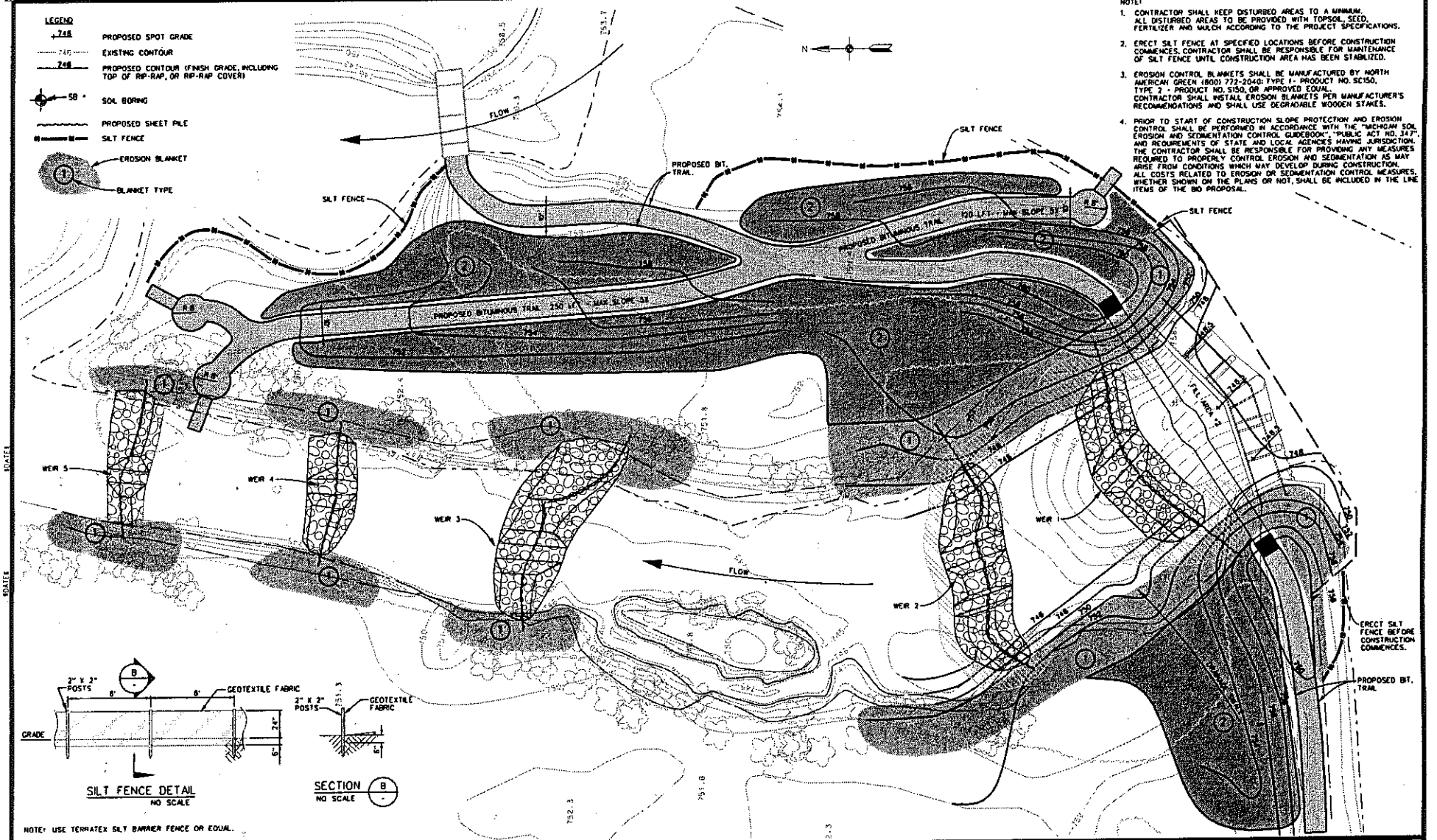
ENVIRONMENTAL QUALITY
LAND & WATER MGMT - PCU

LEGEND

- 748 PROPOSED SPOT GRADE
- 748 EXISTING CONTOUR
- 748 PROPOSED CONTOUR (FINISH GRADE, INCLUDING TOP OF RIP-RAP, OR RIP-RAP COVER)
- 58 SOIL BORING
- PROPOSED SHEET PILE
- SILT FENCE
- EROSION BLANKET
- BLANKET TYPE

NOTE:

1. CONTRACTOR SHALL KEEP DISTURBED AREAS TO A MINIMUM. ALL DISTURBED AREAS TO BE PROVIDED WITH TOPSOIL, SEED, FERTILIZER AND MULCH ACCORDING TO THE PROJECT SPECIFICATIONS.
2. ERECT SILT FENCE AT SPECIFIED LOCATIONS BEFORE CONSTRUCTION COMMENCES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF SILT FENCE UNTIL CONSTRUCTION AREA HAS BEEN STABILIZED.
3. EROSION CONTROL BLANKETS SHALL BE MANUFACTURED BY NORTH AMERICAN GREEN (800) 772-2040: TYPE 1 - PRODUCT NO. SC150, TYPE 2 - PRODUCT NO. S150, OR APPROVED EQUAL. CONTRACTOR SHALL INSTALL EROSION BLANKETS PER MANUFACTURER'S RECOMMENDATIONS AND SHALL USE DEGRADABLE WOODEN STAKES.
4. PRIOR TO START OF CONSTRUCTION SLOPE PROTECTION AND EROSION CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE "MICHIGAN SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK", "PUBLIC ACT NO. 347", AND REQUIREMENTS OF STATE AND LOCAL AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY MEASURES REQUIRED TO PROPERLY CONTROL EROSION AND SEDIMENTATION AS MAY ARISE FROM CONDITIONS WHICH MAY DEVELOP DURING CONSTRUCTION. ALL COSTS RELATED TO EROSION OR SEDIMENTATION CONTROL MEASURES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE INCLUDED IN THE LINE ITEMS OF THE BID PROPOSAL.



NOTE: USE TERRATEX SILT BARRIER FENCE OR EQUAL.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
0	ADVERTISEMENT FOR BIDS	NAW	JET	03/20/2002		
1				/ /		
2				/ /		
3				/ /		
4				/ /		

Wilcox Professional Services ISO 9001 CERTIFIED

ENGINEER	JAMES E. TAYLOR, P.E.		
SURVEY			
DRAWN	KCB	08/30/01	
CHECKED	REL	03/08/02	
APPD	JET	03/18/02	
SCALE	1" = 30'		

EROSION CONTROL PLAN
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350

SHEET 6 OF 8

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
Land & Water Management Division

RECEIVED
MAR 29 2002
MT. PLEASANT
PARKS & RECREATION

APPLICATION CORRECTION REQUEST

Required by Part 301, Inland Lakes and Streams; Part 303, Wetland Protection; Part 31, Water Resources Protection; or Part 325, Great Lakes Submerged Lands of Act 451, P.A. 1994, as amended.

Failure to supply the required information will result in the withdrawal of your application.

This acknowledges receipt of your application recently submitted to this office. The application is incomplete as received, lacking one or more of the item(s) checked below. Please submit those items as checked below. If you have any questions, contact the Land & Water Management Division at **(517) 373-9244.**

City of Mt Pleasant
401 North Main
Mt Pleasant, MI 48858

Date: March 25, 2002
File No.: **02-37-0003-P**
County: Isabella
Project Name: Mill Pond Park West spillway removal, river weir construction, and bridge

☒ (1) Please provide a detailed narrative for the proposed project (for all proposed activities) that includes the construction sequence, the volumes of stone, volumes of riprap, volumes of excavations and/or fills, volumes of floodplain fills, volumes of floodplain excavations, linear feet of sheet pile for weirs and above the dam, the date the sheet pile will be installed above the dam, the date it is proposed for removal, and any other information that may be of importance.

☐ (2) A detailed vicinity map showing the project's exact location from a major highway, road, street, etc. Also, indicate major landmarks or buildings near the project site. Include written directions.

☒ (3) Project plans as checked below.

- ☒ a. project site plan that shows the floodplain boundaries and elevations (if known), and shows all area of proposed floodplain fill and floodplain excavation (cross hatched or shaded)
- ☐ b. cross section(s) of
- ☐ c. profile(s) of
- ☒ d. provide an 8 1/2" x 11" reduced copy of all revised plans and 4 full size copies of plans.

☐ (4) Applicant's signature on the attached application.

☐ (5) A letter from the applicant authorizing the agent to sign the application.

☒ (6) Volume (in cubic yards) of fill for each river weir, volume of fill for fill area #1, volume of fill for fill area #2, Volume of riprap (scour protection) proposed for around the weirs.

☒ (7) Linear feet of sheet pile proposed for above the existing dam, and for each of the weirs.

☐ (8) Adjacent property owner(s)' name(s) and mailing address(es) for our public noticing purposes.

Your application will be placed on hold pending receipt of the indicated item(s). **PLEASE INCLUDE THE ABOVE FILE NUMBER IN YOUR RESPONSE.** Upon receipt of the indicated item(s), we will begin processing your application. Should we receive no response from you within 30 days of this letter, we will consider your application as withdrawn, and we will close your file. Return your response to:

PERMIT CONSOLIDATION UNIT

LAND & WATER MANAGEMENT DIVISION
P.O. BOX 30204
LANSING, MI 48909-7704

Sincerely,

cc: Wilcox Associates Inc.

Cimmeron McRae

CHIPPEWA RIVER RESTORATION PROJECT
CITY OF MT. PLEASANT, MICHIGAN
PERMIT APPLICATION SUPPLEMENTAL INFORMATION
MDEQ FILE NO. 02-37-0003-P
Prepared by Wilcox Professional Services, LLC, April 12, 2002

In this document, the Michigan Department of Environmental Quality, Permit Consolidation Unit Application Correction Request items are quoted here and for clarity are italicized. The responses are in regular font.

(1) *Please provide a detailed narrative for the proposed project (for all proposed activities) that includes the construction sequence, the volumes of stone, volumes of riprap, volumes of excavations and/or fills, volumes of floodplain fills, volumes of floodplain excavations, linear feet of sheet pile for weirs and above the dam, the date the sheet pile will be installed above the dam, the date it is proposed for removal, and any other information that may be of importance.*

An overview of the project is provided in narrative form under Item 4 of the application form. Critical construction sequence, as pertains to flow of the river, has been added to the final plans (enclosed). Non-critical construction sequence is left to the contractor. Non-critical means and methods are left to the contractor who will handle logistics in the most efficient way for his/her operation. Fill and excavation volumes are provided in the following table. The entire project is located within the floodplain with only negligible amounts of fill above the Base Flood Elevation.

MATERIAL	CUT (CYD)	FILL (CYD)	NET FILL (CYD)
General Fill (sand)	540	5051	4,511
Riprap	-0-	880	880
Field Stone for Weirs	-0-	1020	1020
Topsoil	-0-	220	220
Concrete (Riprap)	560 (dam/bridge)	100 (weirs)	(460)
Totals	1,100	7,271	6,171

Because of minor changes between the preliminary and final plans, these quantities differ slightly from those computed for the preliminary plans and submitted under part 13 of the permit application.

The total length of temporary cofferdam to be installed upstream of the spillway is 225 linear feet. It is anticipated that the cofferdam will be constructed during the month of June and removed during the month of September.

All other pertinent information about the project is contained in the plans and specifications.

(3) a. project site plan that shows the floodplain boundaries and elevations (if known), and shows all area of proposed floodplain fill and floodplain excavation (cross hatched or shaded)

The areas of cuts and fills are shown in Attachment 1 along with base flood elevations. It is important to note that all project cuts and fills will be in the floodplain.

(3) d. provide an 8 ½" x 11" reduced copy of all revised plans and 4 full size copies of plans.

These are provided along with this supplemental information.

(6) Volume (in cubic yards) of fill for each river weir, volume of fill for fill area #1, volume of fill for fill area #2, Volume of riprap (scour protection) proposed for around the weirs.

The requested net fill volumes are provided in the following table:

LOCATIONS	VOLUMES (CYD)
Weir 1	265
Weir 2	348
Weir 3	330
Weir 4	97
Weir 5	80
Subtotal	1120
Left Abutment Area	1,407
Fill Area 1	524
Fill Area 2	873
Right Abutment Area	1,166
Trail Area	541
Subtotal	4,511
Riprap	880
Total	7,053

Note: Dam/bridge concrete and topsoil are accounted for in the previous table above.

(7) Linear feet of sheet pile proposed for above the existing dam, and for each of the weirs.

The linear feet of sheet pile walls are provided in the following table:

WALL DESIGNATION	LINEAR FEET OF WALL
Weir 1	124.5
Weir 2	138
Weir 3	109.5
Weir 4	71.5
Weir 5	79.5
Cofferdam	225
Total	748

FILL AREA

CUT AREA

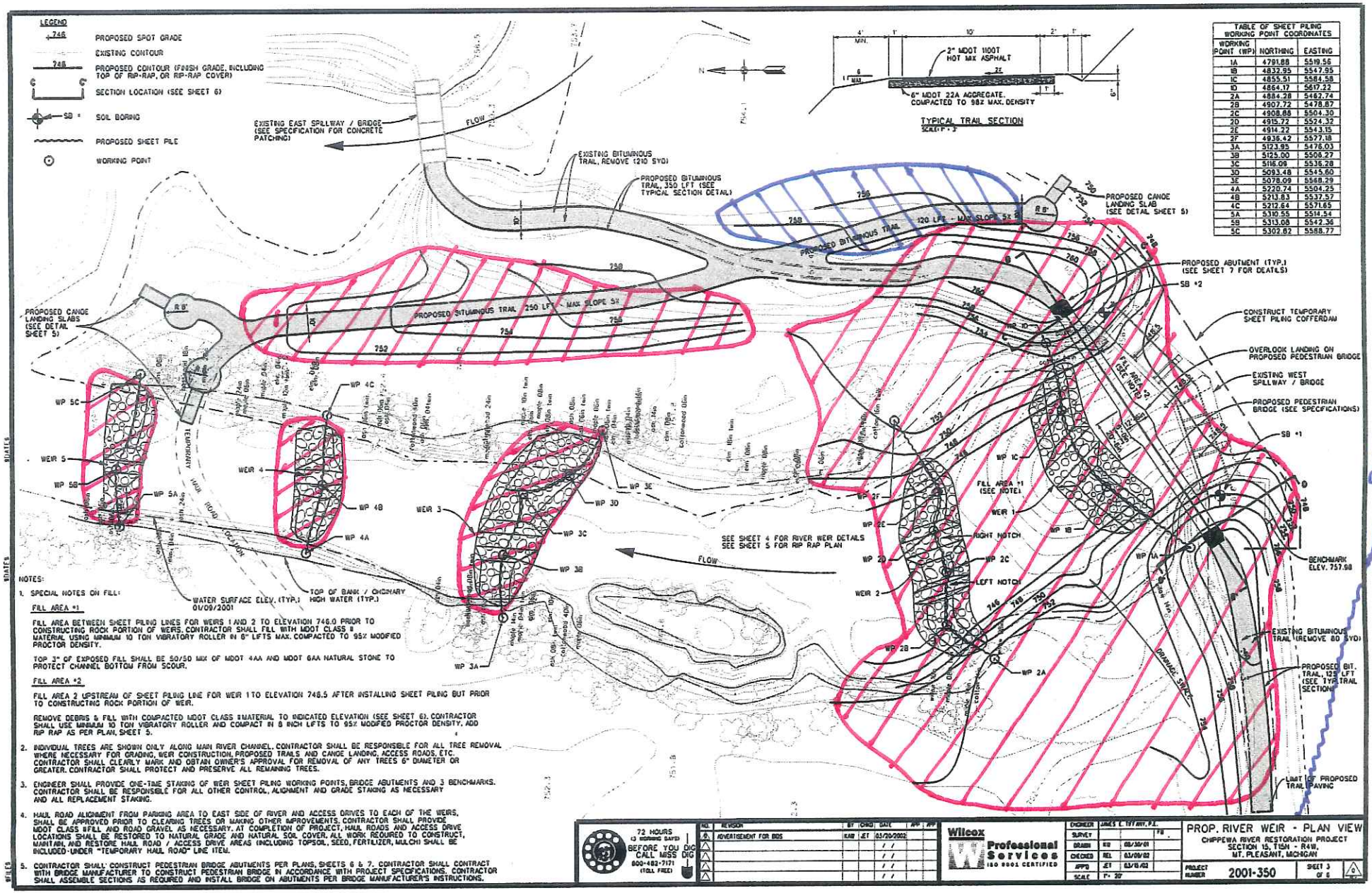


TABLE OF SHEET PILING WORKING POINT COORDINATES

WORKING POINT (WP)	NORTHING	EASTING
1A	4791.88	5519.56
1B	4832.95	5547.95
1C	4855.51	5564.58
1D	4864.17	5617.22
2A	4884.28	5462.74
2B	4907.72	5478.87
2C	4908.88	5504.30
2D	4915.72	5524.32
2E	4914.22	5543.15
2F	4936.42	5557.18
3A	5123.95	5476.03
3B	5125.00	5506.27
3C	5116.09	5536.28
3D	5093.48	5545.60
3E	5078.09	5568.29
4A	5220.74	5504.25
4B	5213.83	5537.57
4C	5212.64	5571.65
5A	5310.55	5514.54
5B	5313.08	5542.36
5C	5302.82	5588.77

NOTES:

1. SPECIAL NOTES ON FILL:

FILL AREA #1

FILL AREA BETWEEN SHEET PILING LINES FOR WEIRS 1 AND 2 TO ELEVATION 748.0 PRIOR TO CONSTRUCTING ROCK PORTION OF WEIRS. CONTRACTOR SHALL FILL WITH MDOT CLASS II MATERIAL USING MINIMUM 10 TON VIBRATORY ROLLER IN 8" LIFTS MAX. COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

TOP 3" OF EXPOSED FILL SHALL BE 50/50 MIX OF MDOT 4AA AND MDOT 6AA NATURAL STONE TO PROTECT CHANNEL BOTTOM FROM SCOUR.

FILL AREA #2

FILL AREA 2 UPSTREAM OF SHEET PILING LINE FOR WEIR 1 TO ELEVATION 748.5 AFTER INSTALLING SHEET PILING BUT PRIOR TO CONSTRUCTING ROCK PORTION OF WEIR.

REMOVE DEBRIS & FILL WITH COMPACTED MDOT CLASS II MATERIAL TO INDICATED ELEVATION (SEE SHEET 6). CONTRACTOR SHALL USE MINIMUM 10 TON VIBRATORY ROLLER AND COMPACT IN 8 INCH LIFTS TO 95% MODIFIED PROCTOR DENSITY. ADD RIP RAP AS PER PLAN, SHEET 5.

2. INDIVIDUAL TREES ARE SHOWN ONLY ALONG MAIN RIVER CHANNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TREE REMOVAL WHERE NECESSARY FOR GRADING, WEIR CONSTRUCTION, PROPOSED TRAILS AND CANOE LANDING, ACCESS ROADS, ETC. CONTRACTOR SHALL CLEARLY MARK AND OBTAIN OWNER'S APPROVAL FOR REMOVAL OF ANY TREES 6" DIAMETER OR GREATER. CONTRACTOR SHALL PROTECT AND PRESERVE ALL REMAINING TREES.

3. ENGINEER SHALL PROVIDE ONE-TIME STAKING OF WEIR SHEET PILING WORKING POINTS, BRIDGE ABUTMENTS AND 3 BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER CONTROL, ALIGNMENT AND GRADE STAKING AS NECESSARY AND ALL REPLACEMENT STAKING.

4. HAUL ROAD ALIGNMENT FROM PARKING AREA TO EAST SIDE OF RIVER AND ACCESS DRIVES TO EACH OF THE WEIRS, SHALL BE APPROVED PRIOR TO CLEARING TREES OR MAKING OTHER IMPROVEMENTS. CONTRACTOR SHALL PROVIDE MDOT CLASS II FILL AND ROAD GRAVEL AS NECESSARY. AT COMPLETION OF PROJECT, HAUL ROADS AND ACCESS DRIVE LOCATIONS SHALL BE RESTORED TO NATURAL GRADE AND NATURAL SOIL COVER. ALL WORK REQUIRED TO CONSTRUCT, MAINTAIN, AND RESTORE HAUL ROAD / ACCESS DRIVE AREAS (INCLUDING TOPSOIL, SEED, FERTILIZER, MULCH) SHALL BE INCLUDED UNDER "TEMPORARY HAUL ROAD" LINE ITEM.

5. CONTRACTOR SHALL CONSTRUCT PEDESTRIAN BRIDGE ABUTMENTS PER PLANS, SHEETS 6 & 7. CONTRACTOR SHALL CONTRACT WITH BRIDGE MANUFACTURER TO CONSTRUCT PEDESTRIAN BRIDGE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. CONTRACTOR SHALL ASSEMBLE SECTIONS AS REQUIRED AND INSTALL BRIDGE ON ABUTMENTS PER BRIDGE MANUFACTURER'S INSTRUCTIONS.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

NO.	REVISION	BY	CHKD	DATE	APP	APP
0	ADVERTISEMENT FOR BIDS	KAB	JET	03/20/2002		

Wilcox Professional Services (ISO 9001 CERTIFIED)

ENGINEER	JAMES E. TITTANSKI, P.E.	
SURVEY		FB
DRAWN	KB	08/30/01
CHECKED	REL	03/08/02
APP'D	JET	03/15/02
SCALE	1" = 30'	

PROP. RIVER WEIR - PLAN VIEW

CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350

SHEET 3 OF 6

ATTACHMENT 1