
APPENDIX A

COST ENGINEERING REPORT

DRAFT

APPENDIX A
COST APPENDIX FOR DESIGN PROJECT REPORT
for
SHEBOYGAN HARBOR DMMP
SHEBOYGAN, WISCONSIN

prepared by the

**U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT**

1. GENERAL INFORMATION

1.1 Introduction

The purpose of this report is to present alternatives for Sheboygan Harbor DMMP project at the Sheboygan Harbor, Sheboygan, Wisconsin. This report supports the recommendations contained in the interim DMMP.

1.2 Background

This study is conducted under the guidance of the National Harbors Program, Dredged Material Management Plans, 21 July 1994 (EC 1165-2-200). The purpose of this Management Plan is to evaluate the existing conditions at Sheboygan Harbor and develop a base plan for routine strategic navigation dredging within the project area and appropriate disposal of the sediments. The base plan reflects the U.S. Army Corps of Engineers (USACE) policy to accomplish the disposal of dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner. Disposal is to be consistent with sound engineering practice and meet all Federal environmental standards including the environmental standards established by Section 404 of the Clean Water Act of 1972 or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended. Each management plan study must establish this "Base Plan¹". Management Plans are intended to cost effectively and expeditiously support environmentally acceptable channel and harbor maintenance.

For the Sheboygan Harbor project, the District will develop an Interim Dredged Material Management Plan (DMMP). The interim plan utilizes a single project-based approach in lieu of the continual 20-year management approach of the typical DMMP. The interim plan is reserved for projects with an advanced schedule and immediate need for implementation, and only when a standard DMMP does not exist for the project harbor.

1.3 Location

Sheboygan Harbor is located on the western shore of Lake Michigan at the mouth of the Sheboygan River, Sheboygan, Wisconsin. The City of Sheboygan is approximately 45 miles north of Milwaukee and about 55 miles southeast of Green Bay, Wisconsin. The Sheboygan River drains an area of roughly 400 square miles. The headwaters of the river begin near the southern tip of Lake Winnebago, and meander 80 miles before reaching Lake Michigan.

1.4 Dredging Depths and Volumes

1.4.1 Recreational Navigation Draft

The recreational navigation draft plan consists of dredging the Federal navigation channel from the mouth of the harbor to the 8th Street Bridge in two sections separated by depth. The first dredging section involves dredging to 15-16 feet below low water datum (LWD) from the mouth of the harbor (approx. sta. 2+19) upstream to Virginia Ave (approx. sta. 119+00). The second dredging section involves dredging to 11-12 feet below LWD from the first section (approx. sta. 119+00) upstream to the 8th Street Bridge (approx. sta. 134+00).

¹ ER 1105-2-100, App E-15-3

1.4.2 Federal Channel to Authorized Depth

The Federal Channel to Authorized Depth Plan also meets the EPA's goals and meets the locally identified water draft needs. The Federal Channel to Authorized Depth Plan depths would remove the contaminated sediment to a depth that would permit future dredging operations to meet the local water depth needs.

The Federal Channel to Authorized Depth Plan consists of dredging the Federal channel from the mouth of the harbor upstream to the 8th St. Bridge to the authorized depth, 21 feet below LWD.

2. **Alternative 1: No Action**

The No Action alternative assumes that no project is implemented at the Sheboygan Harbor. The No Action alternative is required to be evaluated as a base condition in all USACE studies. If no action is taken to address this problem, it is anticipated that the backlog of shoal material will continue to increase, continued suspension of maintenance dredging of the Federal navigation channels would occur, and only very shallow draft vessels would be capable of navigating the harbor. The Harbor would continue to contain contaminants and would continue to be an Area of Concern.

3. **PLACEMENT IN LOCALLY PROVIDED PLACEMENT FACILITY ALTERNATIVES**

All alternatives in this section utilize the locally provided Sheboygan Dredged Material Placement Facility (DMPF). The DMPF construction and operation and maintenance is the responsibility of the non-Federal partner.

3.1 **DMPF Description**

Since the disposal facility is at an airport, Federal Aviation Administration height restrictions limit the capacity of the DMPF. To accommodate the volume of the dredged material, the sediment will require a dewatering process allowing it to be placed in a dry state.

In order for the site to have future agricultural use, it is designed to have a 3-foot cover of native materials. The cover will be the responsibility of the local Partner. In addition to facilitating agricultural use, the cover would keep the sediment from interacting with rainwater, spreading via wind erosion, and restrict human and animal interaction.

The locally provided DMPF has naturally occurring clay with typical native clay berms to contain the sediment and prevent inaction with site groundwater.

The locals will provide the facility for this onetime routine dredging project and will be responsible for the operations and maintenance.

3.2 **Alternative 2 – Chemical Dewatering and Placement in the Locally Provided DMPF**

Alternative 2 represents the Base Plan alternative. For this alternative, the dredging would be performed by mechanically dredging the sediment to the Recreational Navigation Draft Plan dredging depth with an enclosed clamshell bucket, and placing the excavated material into the barge. Once the material is in the barge, a lime-reaction additive would be mixed in to dewater the material. The material will then be transported to the disposal facility or placed on a dewatering pad at the transfer site prior to transport and disposal as the situation dictates.

Over the course of the project, the in-cell sediment would require spreading . Upon completion of the disposal, the permanent cell would be covered with the stockpiled native material and the site allowed to return to a natural state.

3.3 Alternative 3 – Mechanical Dewatering and Placement in the Locally Provided DMPF

For this alternative, the dredging would be performed by hydraulically dredging the sediment to the Recreational Navigation Draft Plan dredging depth with a cutterhead dredge and transported to the transfer - dewatering site via hydraulic pipeline. The sediment is then stored in Geotubes® and the free water removed, filtered, and returned to the Sheboygan River. The dewatered material is then transferred to trucks and transported to the DMPF where it is placed.

Over the course of the project, the in-cell sediment would require spreading . Upon completion of the disposal, the permanent cell would be covered with the stockpiled native material and the site allowed to return to a natural state.

4. LICENSED LANDFILL ALTERNATIVES

All alternatives in this section utilize final placement of dredged material in a licensed landfill. Landfills will not accept material unless it is dewatered; therefore, the landfill alternatives include the dewatering options described in section 3.

4.1 Alternative 4 – Chemical Dewatering and Placement in a Licensed Landfill

For this alternative, the dredging would be performed to the Recreational Navigation Draft Plan dredging depth with an enclosed clamshell bucket and placed into the barge. Once the material is in the barge, a lime-reaction additive would be mixed with the sediment to dewater the material. The material will then be transported to a licensed landfill or placed on the dewatering pad at the transfer site prior to transport and disposal as the situation dictates.

4.2 Alternative 5 – Mechanical Dewatering and Placement in a Licensed Landfill

For this alternative, the dredging would be performed by hydraulically dredging the sediment to the Recreational Navigation Draft Plan dredging depth with a cutterhead dredge and transported to the transfer - dewatering site via hydraulic pipeline. The sediment is then stored in Geotubes® and the free water removed, filtered, and returned to the Sheboygan River. The dewatered material is then transferred to trucks and transported to a licensed landfill where it permanently disposed.

5. PURPOSE AND SCOPE OF COST ENGINEERING APPENDIX

5.1 Purpose of Cost Engineering Appendix

The purpose of this appendix is to present the cost estimates associated with the four alternative plans (2-5) identified in the preceding paragraphs. Excel summary spreadsheets are used to present the alternative cost estimates found in this appendix. O&M costs are not considered in the summary sheet and not included in the Total Project Cost Summary (TPCS).

5.2 Scope of Cost Engineering Appendix

The scope of this appendix is to present the construction cost of Alternative 2 – Chemical Dewatering and Placement in the Locally Provided DMPF. This appendix is prepared in accordance with the

guidance contained in ER 1110-2-1302, Civil Works Cost Engineering, and ETL 1110-2-573, Construction Cost Estimating Guide for Civil Works. The submitted cost estimate was prepared using Micro-Computer Aided Cost Estimating System (MCACES), Second Generation (MII) software for cost estimating, and cost estimates will be presented in the Civil Works Breakdown Structure (CWBS) format to the sub-feature level. The Cost and Schedule Risk Analysis is provided in this appendix. The project Construction Schedule shows activities to project completion. The Total Project Cost Summary and the MII cost estimate and quantities are also included in this appendix.

6. ALTERNATIVE COST ESTIMATES

Dredging/Construction quantities shown in the engineering technical appendix are used in the cost estimates presented in this appendix. Additional quantities and features that should be considered for the chosen alternative have been computed by the cost engineering personnel and included in the cost estimate. The quantities are therefore substantially complete from the standpoint of biddability, constructibility, and operability of the chosen alternative.

7. SCHEDULE

The duration of alternative 2 is expected to last 1 construction season. A MS Project schedule is included in this appendix.

8. COST AND SCHEDULE RISK ANALYSIS

The informal cost and schedule risk analysis was prepared by Detroit District. The analysis was held to determine the contingency placed on the cost estimate of alternative 2. The cost estimate reflects the findings of the risk analysis; contingency was determined to be 24.65%. The informal risk register used for this process is attached to this appendix.

8.1 Methodology/Process

A risk identification meeting was held providing qualitative analysis from the project team to produce a risk register that served as the framework for the risk analysis. The risk analysis process for this study is intended to determine the probability of various cost outcomes and quantify the required contingency needed in the cost estimate to achieve any desired level of cost confidence.

In simple terms, contingency is an amount added to an estimate to allow for items, conditions or events for which the occurrence or impact is uncertain and that experience suggests will likely result in additional costs being incurred or additional time being required.

8.2 Identify and Assess the Risk Factors

Identifying the risk factors via the Project Delivery Team (PDT) is considered a qualitative process that results in establishing a risk register that serves as the document for the quantitative study. Risk factors are events and conditions that may influence or drive uncertainty in project performance. They may be inherent characteristics or conditions of the project or external influences, events, or conditions such as weather or economic conditions. Risk factors may have either favorable or unfavorable impacts on project cost and schedule.

Checklists or historical databases of common risk factors were used to facilitate risk factor identification. However, key risk factors are often unique to a project and not readily derivable from historical information. Therefore, input from the entire PDT is obtained using creative processes such as brainstorming or other facilitated risk assessment meetings. In practice, a combination of professional judgment from the PDT and empirical data from similar projects is desirable and is considered. PDT meetings are held for the purposes of identifying and assessing risk factors. The meetings should include capable and qualified representatives from multiple project team disciplines and functions:

- Project Management/Chief of Plan Formulation – Terry Long
- Project Management/ Principal Planner –Jon Imbrunone
- Economist - Ashley Binion
- Contracting/acquisition – Later coordinated with Tom McKay
- Real Estate – Shawn Sanchez
- Environmental – Pam Horner, Amanda McCallister
- Civil Design – Kerry Williams
- Cost and schedule engineer – Sheetal Malhotra
- Geotechnical – Tina Kowitz
- Construction – Josh Hachey
- Grand Haven Area Office – Tom O'Bryan

The initial meeting focused primarily on risk factor identification using brainstorming techniques but also include some facilitated discussions based on risk factors common to projects of similar scope and geographic location. Additionally, conference calls and informal meetings will be conducted throughout the risk analysis process on an as-needed basis to further facilitate risk factor identification, market analysis, and risk assessment.

8.3 Quantify Risk Factor Impacts

Similar to the identification and assessment process, risk factor quantification involved multiple project team disciplines and functions. However, the quantification process relies more extensively on collaboration between cost engineering, designers, and risk analysis team members with lesser inputs from other functions and disciplines. The following is an example of the PDT quantifying risk factor impacts by using an iterative, consensus-building approach to estimate the elements of each risk factor:

- Maximum possible value for the risk factor
- Minimum possible value for the risk factor
- Most likely value (the statistical mode), if applicable
- Nature of the probability density function used to approximate risk factor uncertainty
- Mathematical correlations between risk factors
- Affected cost estimate and schedule elements

The resulting product from the PDT discussions is captured within a risk register as presented in this appendix for both cost and schedule risk concerns. Note that the risk register records the PDT's risk concerns, discussions related to those concerns, and potential impacts to the current cost and schedule estimates. The concerns and discussions are meant to support the team's decisions related to event likelihood, impact, and the resulting risk levels for each risk event.

9. ANNUAL LIFE CYCLE COST ANALYSIS AND COMPARISON OF ALTERNATIVES

Upon completion of the disposal, the placement facility will be covered (by the Locals) with the stockpiled native material and the site allowed to return to a natural state. There is no annual life cycle cost analysis or operations and maintenance (O&M) cost included as the site will be allowed to return to natural state.

DRAFT

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DISTRICT: Detroit District PREPARED: 12/8/2011
POC: CHIEF, COST & GENERAL ENGINEERING, William D. Merte, P

O&M OUTSIDE OF TOTAL PROJECT COST:

Filename: Sheboygan Harbor DMMP TPCS_Oct2011 V2 REVIEW BY JGN.xlsx
TPCS

**** TOTAL PROJECT COST SUMMARY ****

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**** CONTRACT COST SUMMARY ****

PROJECT: Sheboygan Harbor DMMP
LOCATION: Sheboygan , Wisconsin
This Estimate reflects the scope and schedule in report; Interim DMMP, Base Plan, Alternative 2

DISTRICT: Detroit District
POC: CHIEF, COST & GENERAL ENGINEERING, William D. Merte, P
PREPARED: 12/8/2011

Estimate Prepared: 8-Dec-11 Effective Price Level: 2012Q1						Program Year (Budget EC): 2012 Effective Price Level Date: 1 OCT 11				FULLY FUNDED PROJECT ESTIMATE				
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST (\$K)	CNTG (\$K)	CNTG (%)	TOTAL (\$K)	ESC (%)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)	Mid-Point Date	ESC (%)	COST (\$K)	CNTG (\$K)	FULL (\$K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
12	PHASE 1 NAVIGATION PORTS & HARBORS	\$7,804	\$1,951	25%	\$9,755		\$7,804	\$1,951	\$9,755	2012Q4	1.2%	\$7,899	\$1,975	\$9,874
CONSTRUCTION ESTIMATE TOTALS:		\$7,804	\$1,951	25%	\$9,755		\$7,804	\$1,951	\$9,755			\$7,899	\$1,975	\$9,874
01	LANDS AND DAMAGES	\$15	\$4	25%	\$19		\$15	\$4	\$19	2012Q2	0.3%	\$15	\$4	\$19
30	PLANNING, ENGINEERING & DESIGN													
	Project Management	\$50	\$3	5%	\$53		\$50	\$3	\$53	2012Q2	0.2%	\$50	\$3	\$53
	Planning & Environmental Compliance	\$25	\$3	11%	\$28		\$25	\$3	\$28	2012Q2	0.2%	\$25	\$3	\$28
	Engineering & Design	\$250	\$35	14%	\$285		\$250	\$35	\$285	2012Q2	0.2%	\$251	\$35	\$286
	Engineering Tech Review ITR & VE	\$10	\$2	15%	\$12		\$10	\$2	\$12	2012Q2	0.2%	\$10	\$2	\$12
	Contracting & Reprographics	\$20	\$4	19%	\$24		\$20	\$4	\$24	2012Q2	0.2%	\$20	\$4	\$24
	Engineering During Construction	\$45	\$8	17%	\$53		\$45	\$8	\$53	2012Q4	1.7%	\$46	\$8	\$54
	Planning During Construction	\$10			\$10		\$10		\$10	2012Q4	1.7%	\$10		\$10
31	CONSTRUCTION MANAGEMENT													
	Construction Management	\$582	\$58	10%	\$640		\$582	\$58	\$640	2012Q4	1.7%	\$592	\$59	\$651
	Monitoring (QA)	\$20			\$20		\$20		\$20	2012Q4	1.7%	\$20		\$20
	Project Management	\$50	\$6	12%	\$56		\$50	\$6	\$56	2012Q4	1.7%	\$51	\$6	\$57
CONTRACT COST TOTALS:		\$8,881	\$2,072		\$10,953		\$8,881	\$2,072	\$10,953			\$8,989	\$2,097	\$11,087

SHEBOYGAN HARBOR DMMP, WISCONSIN**PREFERRED ALTERNATIVE 2 - CHEMICAL DEWATERING AND PLACEMENT IN THE LOCALLY PROVIDED DMPF
MECHANICAL DREDGING AND PLACEMENT AT SHEBOYGAN COUNTY MEMORIAL****AIRPORT FACILITY**

S. No.	Item Feature/Description	Quantities	Unit	Unit Cost	Alternative 2
CONSTRUCTION COST					
12	NAVIGATION PORTS & HARBORS				
1.0	Mobilization	1	LS	\$176,684.00	\$ 176,684.00
2.0	Transfer Site	1.00	LS	\$711,481.00	\$ 711,481.00
3.0	Water Treatment At Transfer Site	1.00	LS	\$566,057.00	\$ 566,057.00
4.0	Water Treatment At Airport Facility	1.00	LS	\$276,966.00	\$ 276,966.00
5.0	Dredging (Mechanical)	170000.00	CY	\$11.38	\$ 1,934,600.00
6.0	Drying Agent (Calciment)	20196.00	TN	\$76.98	\$ 1,554,700.00
7.0	Trucking to Disposal Facility (includes loading)	170000.00	CY	\$11.07	\$ 1,881,900.00
8.0	Placement Facility	1.00	LS	\$359,017.00	\$ 359,017.00
9.0	Site Restoration (transfer site)	1.00	LS	\$2,596.00	\$ 2,596.00
	SUB TOTAL				\$ 7,464,001.00
	CONTINGENCY 20%				\$ 1,492,800.00
	CONSTRUCTION COST				\$ 8,956,801.00
NON CONSTRUCTION COST					
30	PLANNING, ENGINEERING & DESIGN				
	Project Management				\$ 50,000.00
	Planning & Environmental Compliance				\$ 25,000.00
	Engineering & Design				\$ 250,000.00
	Engineering Tech Review ATR				\$ 10,000.00
	Contracting				\$ 20,000.00
	Planning During Construction				\$ 10,000.00
	LEERDS				\$ -
31	CONSTRUCTION MANAGEMENT				
6.5%	Construction Management				\$ 582,200.00
0.5%	Engineering During Construction				\$ 44,800.00
	Monitoring (QA)				\$ 20,000.00
	Project Management				\$ 50,000.00
	TOTAL NON CONSTRUCTION COST				\$ 1,062,000.00
	TOTAL CONSTRUCTION COST				\$ 10,018,801.00

SHEBOYGAN HARBOR DMMP, WISCONSIN**ALTERNATIVE 3 - MECHANICAL DEWATERING AND PLACEMENT IN LOCALLY PROVIDED DMPF**

S. No.	Item Feature/Description	Quantities	Unit	Unit Cost	Alternative 3
CONSTRUCTION COST					
12	NAVIGATION PORTS & HARBORS				
1.0	Mobilization	1	LS	\$60,300.00	\$ 60,300.00
2.0	Misc. Site Preparation (Transfer Site)	1.00	LS	\$200,000.00	\$ 200,000.00
3.0	Construct Staging/drying (8" base) (90'x200'+1 acre site)	6840.00	SY	\$11.00	\$ 75,240.00
4.0	Construct Staging/drying (4" asphalt) (90'x200'+1 acre site)	6840.00	SY	\$16.00	\$ 109,440.00
5.0	Containment Block Wall 5' high (90'x200'+1 acre site)	7060.00	SF	\$30.00	\$ 211,800.00
6.0	Fence (255'x93'x5' high + 207'x210' (1 acre site)	1530.00	LF	\$40.00	\$ 61,200.00
7.0	Dredging (Hydraulic)	170000.00	CY	\$12.60	\$ 2,142,000.00
8.0	Geotubes / Polymer Dewatering	170000.00	LS	\$15.00	\$ 2,550,000.00
9.0	Trucking to Upland Disposal Site (includes loading)	170000.00	CY	\$16.60	\$ 2,822,000.00
10.0	Treatment of Water	1.00	LS	\$400,000.00	\$ 400,000.00
11.0	Placement at Disposal Site	120.00	DAYS	\$1,000.00	\$ 120,000.00
12.0	Site Restoration	1.00	LS	\$200,000.00	\$ 200,000.00
	SUB TOTAL				\$ 8,951,980.00
	CONTINGENCY 20%				\$ 1,790,396.00
	CONSTRUCTION COST				\$ 10,742,376.00
NON CONSTRUCTION COST					
30	PLANNING, ENGINEERING & DESIGN				
	Project Management				\$ 50,000.00
	Planning & Environmental Compliance				\$ 25,000.00
	Engineering & Design				\$ 250,000.00
	Engineering Tech Review ATR				\$ 10,000.00
	Contracting				\$ 20,000.00
	Planning During Construction				\$ 10,000.00
	LEERDS				\$ -
31	CONSTRUCTION MANAGEMENT				
6.5%	Construction Management				\$ 698,300.00
0.5%	Engineering During Construction				\$ 53,700.00
	Monitoring (QA)				\$ 20,000.00
	Project Management				\$ 50,000.00
	TOTAL NON CONSTRUCTION COST				\$ 1,187,000.00
	TOTAL CONSTRUCTION COST				\$ 11,929,376.00

SHEBOYGAN HARBOR DMMP, WISCONSIN

ALTERNATIVE 4 - CHEMICAL DEWATERING AND PLACEMENT IN A LICENSED LANDFILL

S. No.	Item Feature/Description	Quantities	Unit	Unit Cost	Alternative 4
CONSTRUCTION COST					
12	NAVIGATION PORTS & HARBORS				
1.0	Mobilization	1	LS	\$186,500.00	\$ 186,500.00
2.0	Misc. Site Preparation (Transfer Site)	1.00	LS	\$200,000.00	\$ 200,000.00
3.0	Construct Staging/drying (8" base) (90'x200')	2000.00	SY	\$11.00	\$ 22,000.00
4.0	Construct Staging/drying (4" asphalt) (90'x200')	2000.00	SY	\$16.00	\$ 32,000.00
5.0	Containment Block Wall 5' high (90'x200')	2900.00	SF	\$30.00	\$ 87,000.00
6.0	Fence (255'x93'x5' high) (Transfer Site)	696.00	LF	\$40.00	\$ 27,840.00
7.0	Dredging (Mechanical)	170000.00	CY	\$8.30	\$ 1,411,000.00
8.0	Drying Agent (Calciment)	1.00	LS	\$2,000,000.00	\$ 2,000,000.00
9.0	Dewatering (discing or moving material at transfer site)	120.00	DAYS	\$2,000.00	\$ 240,000.00
10.0	Trucking to Disposal Site (includes loading)	170000.00	CY	\$6.45	\$ 1,096,500.00
11.0	Disposal Cost at Landfill (assume 1.0 tn/cy)	170000.00	TN	\$29.00	\$ 4,930,000.00
10.0	Disposal of Water	1.00	LS	\$200,000.00	\$ 200,000.00
12.0	Site Restoration	1.00	LS	\$200,000.00	\$ 200,000.00
	SUB TOTAL				\$ 10,632,840.00
	CONTINGENCY 20%				\$ 2,126,568.00
	CONSTRUCTION COST				\$ 12,759,408.00
NON CONSTRUCTION COST					
30	PLANNING, ENGINEERING & DESIGN				
	Project Management				\$ 50,000.00
	Planning & Environmental Compliance				\$ 25,000.00
	Engineering & Design				\$ 250,000.00
	Engineering Tech Review ATR				\$ 10,000.00
	Contracting				\$ 20,000.00
	Planning During Construction				\$ 10,000.00
	LEERDS				\$ -
31	CONSTRUCTION MANAGEMENT				
6.5%	Construction Management				\$ 829,400.00
0.5%	Engineering During Construction				\$ 63,800.00
	Monitoring (QA)				\$ 20,000.00
	Project Management				\$ 50,000.00
	TOTAL NON CONSTRUCTION COST				\$ 1,328,200.00
	TOTAL CONSTRUCTION COST				\$ 14,087,608.00

SHEBOYGAN HARBOR DMMP, WISCONSIN

ALTERNATIVE 5 - MECHANICAL DEWATERING AND PLACEMENT IN A LICENSED LANDFILL

S. No.	Item Feature/Description	Quantities	Unit	Unit Cost	Alternative 5
CONSTRUCTION COST					
12	NAVIGATION PORTS & HARBORS				
1.0	Mobilization	1	LS	\$60,300.00	\$ 60,300.00
2.0	Misc. Site Preparation (Transfer Site)	1.00	LS	\$200,000.00	\$ 200,000.00
3.0	Construct Staging/drying (8" base) (90'x200'+1 acre site)	6840.00	SY	\$11.00	\$ 75,240.00
4.0	Construct Staging/drying (4" asphalt) (90'x200'+1 acre site)	6840.00	SY	\$16.00	\$ 109,440.00
5.0	Containment Block Wall 5' high (90'x200'+1 acre site)	7060.00	SF	\$30.00	\$ 211,800.00
6.0	Fence (255'x93'x5' high + 207'x210' (1 acre site)	1530.00	LF	\$40.00	\$ 61,200.00
7.0	Dredging (Hydraulic)	170000.00	CY	\$12.60	\$ 2,142,000.00
8.0	Geotubes / Polymer Dewatering	170000.00	LS	\$15.00	\$ 2,550,000.00
9.0	Trucking to Upland Disposal Site (includes loading)	170000.00	CY	\$16.60	\$ 2,822,000.00
10.0	Disposal Cost at Landfill (assume 1.0 tn/cy)	170000.00	TN	\$29.00	\$ 4,930,000.00
10.0	Treatment of Water	1.00	LS	\$400,000.00	\$ 400,000.00
12.0	Site Restoration	1.00	LS	\$200,000.00	\$ 200,000.00
	SUB TOTAL				\$ 13,761,980.00
	CONTINGENCY 20%				\$ 2,752,396.00
	CONSTRUCTION COST				\$ 16,514,376.00
NON CONSTRUCTION COST					
30	PLANNING, ENGINEERING & DESIGN				
	Project Management				\$ 50,000.00
	Planning & Environmental Compliance				\$ 25,000.00
	Engineering & Design				\$ 250,000.00
	Engineering Tech Review ATR				\$ 10,000.00
	Contracting				\$ 20,000.00
	Planning During Construction				\$ 10,000.00
	LEERDS				\$ -
31	CONSTRUCTION MANAGEMENT				
6.5%	Construction Management				\$ 1,073,400.00
0.5%	Engineering During Construction				\$ 82,600.00
	Monitoring (QA)				\$ 20,000.00
	Project Management				\$ 50,000.00
	TOTAL NON CONSTRUCTION COST				\$ 1,591,000.00
	TOTAL CONSTRUCTION COST				\$ 18,105,376.00

Project Information

Project Name:
SHEBOYGAN HARBOR DMMP

Cost QC Reviewer:
JULIE UDELL

Lead Cost Engineer:
SHEETAL MALHOTRA

Lead Project Engineer:
Kerry Williams

Supporting Cost Engineers:

Project File Location:
Cost Share Drive

Estimate Type:
INTERIM DMMP

Procurement Type:

☐ Competitive Bidding, any contractor
☐ RFP
☐ Small Business Set Aside
☐ Unknown
☐ Other

Items for Consideration		Estimate Preparer				Estimate Reviewer		
		Yes	No	n/a	Comments	Yes	No	Comments
I. GENERAL								
1	Did the estimator visit the project site and have knowledge of site conditions?		X				X	
2	Have construction costs been prepared using MII?	X				X		along w/ CEDEP & an excel template
3	Have the construction costs been prepared to the appropriate level of detail?	X				X		
4	Does the estimator have a quantity takeoff sufficient to support the estimate?	X				X		estimator assumed some quantities; pm provided dredging q's.
5	Does the estimate contain a narrative that includes scope of work, estimating approach, significant assumptions, and other important general info?	X			Notes in MII individual items		X	but MII estimate contains several notes embedded w/in individual items
6	Do unit prices seem reasonable based on historical record?	x				X		
7	Is the estimate organized by the Civil Works Breakdown Structure to the appropriate level?	x				X		
8	Have the cost-sharing arrangements been addressed in the estimate summaries?	x				X		summary reflects 100% federally funded
9	Do estimate notes clearly identify and define assumptions upon which significant items of the cost estimate are based?	x				X		
10	Does estimate documentation clearly show the development of crews and productivities?	x				X		
11	Have the quantities been spot-checked by EC-TC as required (10% minimum)?	x				X		reviewer assumes this is true
12	Is material, supply, and quote information included and noted as appropriate in the cost estimate?	x				X		
13	Have shrink, swell, waste & loss, and other appropriate factors been identified and applied in the cost estimate?	x				X		
14	Have costs been included for mobilization, demobilization, and preparatory work?	x				X		
15	Has all backup data been filed and organized by bid item, CSI, or other appropriate system? This includes quotes, site visit notes, pictures, emails, phone conversations, etc.	x				X		

16	Were adjustments to labor cost for overtime or night differential included in the estimate to meet schedule constraints?	x				X		
17	Does the estimate address the excavation, hauling, and spoil associated with the project?	x				X		
18	Does the estimate address all applicable disposal fees?	x				X		
19	Does the estimate address special construction items such as bracing, dewatering, and testing?	x				X		
20	Are crews and productivities appropriate for the tasks? Do they reflect potential time and space constraints?	x				X		
21	Do the operators correspond to the equipment?	x				X		
22	Do labor rates reflect current wages for the project site geographical area and type of work? (Prenegotiated for IDC, Davis-Bacon otherwise)	x				X		
23	Have the appropriate equipment rates been used? (Prenegotiated for IDC, current MII library otherwise)	x				X		
24	Has the most current Costbook library been used in MII?	x				X		
25	Have appropriate payroll taxes and insurance been included for labor rates?	x				X		
26	Have foreman costs been accounted for?	x				X		
27	Has crew "show up time" been accounted for?	x				X		
28	Has equipment been adjusted for local site constraints, such as severe working conditions?	x				X		
29	Has liability insurance been included in overhead costs?		x				X	
30	Has appropriate sales tax been applied to material and/or supply costs?	x				X		
31	Has prime contractor home office been included?	x				X		
32	Has prime contractor field office been accounted for?	x				X		
33	Have appropriate local taxes been included (i.e., B&O, city and county fees, etc.)?	x				X		
34	Have bond costs been included?	x				X		
35	Has work to be subcontracted been identified and does it seem reasonable?	x				X		
36	Have the following markups been included for subcontract work:	x						
	sub's home office overhead?	x				X		
	sub's job office overhead?	x				X		
	sub's profit?	x				X		
	sub's bond?	x				X		
37	Have subcontractors been applied to the appropriate tasks in MII?	x				X		
38	Have subcontractors been tiered appropriately in MII?	x			Trucking Contractor was not directly applied under the prime. It is assumed that prime would have very little if any markups on the trucking contractor to make sure prime gets the bid. Double mark ups would increase cost. That is why only reasonable mark ups are applied to trucking contractor.		X	
39	Has the Chief, EC-TC, been briefed as to the status and value of the estimate?	x						don't know

~~Surface Area Report~~

Surface: sh0-11915'
Fence Mode: Ignore

True Area: 515375.7 sq ft
Planar Area: 515375.7 sq ft $\times 1.0' \text{ overdepth} \div 27 \text{ cf/cy} = 19087 \text{ cy}$

Surface Area Report

Surface: sh1111'
Fence Mode: Ignore

True Area: 210856.5 sq ft
Planar Area: 210856.5 sq ft $\times 1.0' \text{ overdepth} \div 27 \text{ cf/cy} = 7809 \text{ cy}$

DRAFT

Triangle Volume Report

Report Created: 11/22/2011

Time: 4:29pm

Mode: Entire Surface**Input Grid Factor:** 1.000000**Original Surface:** shfy12orig**Design Surface:** sh0-11915'

Cut Factor: 1.00

Fill Factor: 1.00

Cut: 2865442.6 cu ft

Fill: 1.0 cu ft

Net: 2865441.7 cu ft

Cut: 106127.5 cu yd

Fill: 0.0 cu yd

Net: 106127.5 cu yd

Original Surface: shfy12orig**Design Surface:** sh1111'

Cut Factor: 1.00

Fill Factor: 1.00

Cut: 709873.3 cu ft

Fill: 30457.8 cu ft

Net: 679415.5 cu ft

Cut: 26291.6 cu yd

Fill: 1128.1 cu yd

Net: 25163.5 cu yd

Triangle Volume Report

Report Created: 11/22/2011
Time: 5:25pm

Mode: Entire Surface

Input Grid Factor: 1.000000

Original Surface: shfy12orig

Design Surface: shfy1215'ss

Cut Factor: 1.00

Fill Factor: 1.00

Cut: 156087.6 cu ft

Fill: 4.4 cu ft

Net: 156083.2 cu ft

Cut: 5781.0 cu yd

Fill: 0.2 cu yd

Net: 5780.9 cu yd

Original Surface: shfy12orig

Design Surface: shfy1211'ss

Cut Factor: 1.00

Fill Factor: 1.00

Cut: 89631.5 cu ft

Fill: 10831.1 cu ft

Net: 78800.4 cu ft

Cut: 3319.7 cu yd

Fill: 401.2 cu yd

Net: 2918.5 cu yd

Alternative 2 - Chemical Dewatering and Placement in the Locally Provided DMPF. This is a base plan alternative.

DRAFT

Estimated by Kerry Williams / Sheetal Malhotra

Designed by Kerry Williams

Prepared by Sheetal Malhotra

Preparation Date 12/14/2011

Effective Date of Pricing 12/14/2011

Estimated Construction Time 160 Days

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Description	Quantity	UOM	ProjectCost
Direct Costs			7,803,828.37
1202 Harbors	1.0	EA	7,803,828.37
120201 Mob, Demob & Preparatory Work	1.0	EA	181,843.85
120215 Mechanical Dredging	170,000.0	CY	3,868,299.56
120299 Associated General Items	1.0	EA	3,753,684.97

DRAFT

Instructions:

General note: **Blue** text indicates items to be populated by the user.
Black text indicates items not to be altered by the user.

PDT Involvement Worksheet:

1. Fill in the appropriate team members names and office. The list is an example and is subject to change per project.
2. Input meeting date.

Input & Calculations Worksheet:

1. Per ER 1110-1-1300, 26 Mar 93, Section 9.d.(3): "...The cost engineer has the responsibility for application of contingencies to properly weight the uncertainties associated with each major construction cost item or feature in coordination with input with other members of the project development team." Therefore, the cost engineer shall be responsible for developing this worksheet.
2. Enter the **Project Name** in cell C2.
3. Enter the **Project Development Stage** in cell C3.
4. Enter the **Total Construction Contract Cost** in cell D6.
5. Create the **Potential Risk Areas** list based on appropriately selected items from the estimate's Work Breakdown Structure (WBS). Note that the 12th item (Remaining Items) in the list accounts for all WBS items not specifically selected for analysis. This value is calculated automatically by taking the total Contract Cost and subtracting the sum of the 11 previous Items. Up to 11 Items can be entered on the appropriate numbered lines without changing the formulas and structure of this workbook. Items 12, 13 and 14 are constants and are not to be modified.
4. Select the appropriate **WBS** number and description from the pull down menu in column B.
Note that there is no pull down tab for the Remaining Items since it likely includes items from multiple WBS items.
Note that the pull down tabs for Planning, Engineering, & Design and Construction Management are from the 30 & 31 accounts only.
5. Enter the corresponding **Contract Cost** for the WBS Items.

Risk Register Worksheet:

The Risk Register lists each **Risk Element** in the blue row. Each **Potential Risk Area** will be listed for each **Risk Element** in column B:D. A number in column A is designated to reflect each **Risk Element**.

1. Enter the **Concerns** for each **Potential Risk Area** for each **Risk Element** in column E:K.
2. Enter the **PDT Discussions & Conclusions** for each **Potential Risk Area** for each **Risk Element** in column L:P.
3. Select the **Likelihood** from the pull down menu in column Q:R.
4. Select the **Impact** for the pull down menu in column S:T.

WBS Risk Matrix Worksheet:

No action is needed on this worksheet. All values self-populate. The WBS Risk Matrix serves as a summary.

CWWBS Worksheet:

This worksheet is for reference only.

Input & Calculations Worksheet:

1. Return to this worksheet to see the calculated results.
No other input is needed on this sheet. All calculations occur from input values from other worksheets.
2. The **Total Weighted Construction Contingency** will be located in cell F26. This is the value to apply to the entire Construction Contract Cost.
3. The contingency rates for the 30 and 31 accounts are located in cell F27 and F28 respectively.

	<u>Term</u>	<u>Definition</u>
Terminology	Risk Analysis ER 1110-2-1302, 15 Sep 08, page 19	<p>a. Cost risk analysis is the process of identifying and measuring the cost impact of project uncertainties on the estimated TPC. It shall be accomplished as a joint analysis between the cost engineer and the designers or appropriate PDT members that have specific knowledge and expertise on all possible project risks.</p> <p>(1) PDTs are required to prepare a formal cost risk analysis for all decision documents requiring Congressional authorization for projects exceeding \$40 million (TPC)(see appendix B). Where cost risk analysis is required, it is anticipated that the cost risk analysis will be performed once the recommended plan is identified prior to the alternative formulation briefing milestone.</p>
	Typical Risk Elements	Factors that can introduce risk to items listed in the Selected Work Breakdown Structure Items. The ones listed are the most typical for Civil Works Projects. These Risk Elements should be reviewed and established for each project.
	Potential Risk Areas	<p>These are items from the estimate's Work Breakdown Structure, either broad or detailed, that are believed to contain some risk.</p> <p>The cost estimator defines the Work Breakdown Structure. It is recommended that the PDT select the appropriate Selected Work Breakdown Structure Items and considers all Features.</p> <p>Focus should be placed on the items with the significant risks. Appropriately identifying the Selected Work Breakdown Structure Items will lead to a more confident development of contingency.</p>
Typical Risk Elements	Project Scope	<ul style="list-style-type: none"> • Project accomplish intent? • Level of detail in design? • Investigations remain to finalize design? • Designer confidence in scope of work? • What are assumptions made? • Opportunities for scope to change (materials, details, etc.) during design?
	Acquisition Strategy	<ul style="list-style-type: none"> • Established contracting plan - unclear? • Accelerated schedule or harsh weather schedule? • 8a - Small Business contractor likely? • Affect on subcontracting? • Design-build?
	Construction Complexity	<ul style="list-style-type: none"> • Project constructible? • Unique methods of construction? • Special construction equipment?
	Volatile Commodities	<ul style="list-style-type: none"> • Materials or equipment subject to fluctuation?
	Quantities	<ul style="list-style-type: none"> • Level of confidence in the quantities? • Possibility for increase in quantities? • Appropriate method used to calculate quantities? • Enough information to calculate the quantities? • Calculated quantities check between designer and cost estimator?
	Fabrication & Project Installed Equipment	<ul style="list-style-type: none"> • Unusual parts, material or equipment be manufactured and/or installed? • Confidence in supplier's ability to produce equipment? • Confidence in contractor's ability to install equipment?
	Cost Estimating Method	<ul style="list-style-type: none"> • Reliability of quotes or Cost Book? • Assumptions made and affect on cost estimate? • Confidence of crews and production rates? • Site accessibility, delays? • Prime & Subcontractors appropriately identified? • Markups reasonable?
	External Project Risks	<ul style="list-style-type: none"> • Political influences and affect on project? • Adverse weather affect project? • What can impact project schedule? • Changes to project schedule affect quality?

Abbreviated Risk Analysis

Sheboygan Harbor DMMP, Wisconsin Interim DMMP Estimate Level

Meeting Date: 26-Oct-11

PDT Members

(Typical Recommended)

Project Management / Principal Planner:	Jon Imbrunone
Chief of Plan Formulation	Terry Long
Contracting:	Tom McKay
Real Estate:	Shawn Sanchez
Economist	Ashley Binion
Design Engineer:	Kerry Williams
Cost Engineer:	Sheetal Malhotra
Chief of Cost & General Engineering Branch	Bill Merte
Construction:	Josh Hachey
Environmental Specilist Contaminants:	Pam Horner (via Phone)
Environmental Specilist Contaminants:	Amanda McCallister
Lead Geotechnical Engineer:	Tina Kowitz

Abbreviated Risk Analysis

Project (less than \$40M): **Sheboygan Harbor DMMP, Wisconsin**
 Project Development Stage: **Interim DMMP Estimate Level**

Total Construction Contract Cost = **\$ 7,803,828**

	<u>WBS</u>	<u>Potential Risk Areas</u>	<u>Contract Cost</u>	<u>% Contingency</u>	<u>\$ Contingency</u>	<u>Total</u>
1	12 NAVIGATION, PORTS AND HARBORS	Mobilization	\$ 181,844	8.33%	\$ 15,154	\$ 196,998
2		Transfer Site	\$ 913,038	35.42%	\$ 323,368	\$ 1,236,406
3		Water Treatment at Transfer Site & Prep.	\$ 582,589	18.75%	\$ 109,235	\$ 691,824
4		Water Treatment at Airport Facility	\$ 285,054	22.92%	\$ 65,325	\$ 350,379
5		Dredging (Mechanical)	\$ 1,990,478	16.67%	\$ 331,746	\$ 2,322,224
6		Drying Agent (Calciment)	\$ 1,600,121	39.58%	\$ 633,381	\$ 2,233,502
7		Trucking to Disposal Facility (incl. Loading)	\$ 1,877,821	20.83%	\$ 391,213	\$ 2,269,034
8		Placement Facility	\$ 369,502	14.58%	\$ 53,886	\$ 423,388
9		Site Restoration	\$ 3,381	4.17%	\$ 141	\$ 3,522
10			\$ -	0.00%	\$ -	\$ -
11			\$ -	0.00%	\$ -	\$ -
12		Remaining Construction Items	\$ -	0.0%	\$ -	\$ -
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	\$ 410,000	0.00%	\$ -	\$ 410,000
14	31 CONSTRUCTION MANAGEMENT	Construction Management	\$ 652,000	0.00%	\$ -	\$ 652,000
Totals						
		Total Construction Estimate	\$ 7,803,828	24.65%	\$ 1,923,448	\$ 9,727,276
		Total Planning, Engineering & Design	\$ 410,000	0.00%	\$ -	\$ 410,000
		Total Construction Management	\$ 652,000	0.00%	\$ -	\$ 652,000
		Total	\$ 8,865,828		\$ 1,923,448	\$ 10,789,276

Sheboygan Harbor DMMP, Wisconsin
Interim DMMP Estimate Level
Abbreviated Risk Analysis

Meeting Date: 26-Oct-11

Risk Level					
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4
	Negligible	Marginal	Significant	Critical	Crisis

Risk Element	Potential Risk Areas	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
Project Scope						
PS-1	Mobilization	Concerns very unlikely. Typical mechanical dredging and mob/demob cost.	Mechanical Dredge, inexpensive mob/demob cost	Very Unlikely	Negligible	0
PS-2	Transfer Site	Concerns likely. NPDS 402 point discharge permit	NPDS 402 point discharge permit requirements could impact cost significantly.	LIKELY	Significant	4
PS-3	Water Treatment at Transfer Site & Prep.	Concerns likely. This is unknown. It is hard to estimate how much water will need to be treated at the transfer site and also how much prep. Work will be needed at the transfer site.	It is assumed that most of the water will be discharged into the river.	LIKELY	Marginal	2
PS-4	Water Treatment at Airport Facility	Concerns likely. This is unknown.	This is unknown. It is hard to estimate how much water will need to be treated at the Airport Facility. Sand filter and vegated swale will like be sufficient to treat.	LIKELY	Marginal	2
PS-5	Dredging (Mechanical)	Concerns likely. Weather could impact dredging.	Dredging is uncomplicated in general, could be impacted by weather.	LIKELY	Marginal	2
PS-6	Drying Agent (Calciment)	Concerns very likely. Drying agent quantities could vary.	This is unknown. It is hard to estimate how much drying agent (fly ash or bed ash will be needed to dry out the material. It is assumed in the estimate per quote form Mintek that approx. 8% would be sufficient however if more or less	Very LIKELY	Significant	4
PS-7	Trucking to Disposal Facility (incl. Loading)	Concerns unlikely as there should be several trucking contractors available.	If the proposed facility was to change, trucking cost could increase significantly depending on the distance.	Unlikely	Significant	3
PS-8	Placement Facility	Concerns likely. Weather could impact trucking.	It is assumed that placement facility will be usable with no preparation needed. If it rains then the facility would get very mucky and trucking, could stop project causing project completion delay.	LIKELY	Negligible	1
PS-9	Site Restoration	Concerns very unlikely. Minimum site clean-up will be required.	Minimal cost.	Very Unlikely	Negligible	0
PS-10	0			Very Unlikely	Negligible	0
PS-11	0			Very Unlikely	Negligible	0
PS-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
PS-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
PS-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

Acquisition Strategy						
AS-1	Mobilization	Acquisition strategy not well defined. This could affect competition.	This is very likely. Most likely this project will advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal site.	Very LIKELY	Marginal	3
AS-2	Transfer Site	Concerns unlikely but if real estate for transfer site fails then this could impact project.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal site. Real estate for the transfer site is being aquired. If this acquisition fails then this would cause delay and affect cost of the project.	Unlikely	Significant	3
AS-3	Water Treatment at Transfer Site & Prep.	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal site.	Unlikely	Marginal	1
AS-4	Water Treatment at Airport Facility	Concerns unlikely but if real estate for airport facility fails then this could impact project.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal facility. Real estate for the airport facility is being aquired. If this acquisition fails then this would cause delay and affect cost of the project since it directly relates to the transportation costs.	Unlikely	Significant	3
AS-5	Dredging (Mechanical)	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal site.	Unlikely	Marginal	1
AS-6	Drying Agent (Calciment)	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal site.	Unlikely	Marginal	1
AS-7	Trucking to Disposal Facility (incl. Loading)	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal facility.	Unlikely	Marginal	1
AS-8	Placement Facility	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal facility.	Unlikely	Marginal	1
AS-9	Site Restoration	Acquisition strategy not well defined. This could affect competition.	Most likely advertise unrestricted / sole source. Project is not design build and construction primarily consists of dredging, solidifying material and trucking I to disposal facility.	Unlikely	Marginal	1
AS-10	0			Very Unlikely	Negligible	0
AS-11	0			Very Unlikely	Negligible	0
AS-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
AS-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
AS-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

Construction Complexity						
CC-1	Mobilization	Concerns very unlikely. Typical mechanical dredging equipment.	Anticipate typical mechanical dredge equipment	Very Unlikely	Negligible	0
CC-2	Transfer Site	Concerns likely. NPDS 402 point discharge permit	NPDS 402 point discharge permit requirements could impact cost significantly.	LIKELY	Significant	4
CC-3	Water Treatment at Transfer Site & Prep.	Concerns unlikely as this only relates to water treatment at the transfer site.	This is unknown. It is hard to estimate how much water will need to be treated at the transfer site and also how much prep. Work will be needed at the transfer site.	Unlikely	Marginal	1
CC-4	Water Treatment at Airport Facility	Concerns unlikely as this only relates to water treatment at the placement facility.	This is unknown. It is hard to estimate how much water will need to be treated at the Airport facility.	Unlikely	Marginal	1
CC-5	Dredging (Mechanical)	Concerns unlikely as this is typical dredging.	Dredging is uncomplicated in general, could be impacted by weather.	Unlikely	Marginal	1
CC-6	Drying Agent (Calciment)	Concerns likely. Drying agent quantities could vary.	This is unknown. It is hard to estimate how much drying agent (fly ash or bed ash will be needed to dry out the material. It is assumed in the estimate per quote from Mintek that approx. 8% would be sufficient however if more or less	LIKELY	Significant	4
CC-7	Trucking to Disposal Facility (incl. Loading)	Concerns very unlikely as there should be several trucking contractors available.		Very Unlikely	Negligible	0
CC-8	Placement Facility	Concerns unlikely. Weather conditions could impact trucking.	It is assumed that placement facility will be usable with no preparation needed. But if the facility is not completed for us to use prior to project starting then this could cause delay in completing the project.	Unlikely	Significant	3
CC-9	Site Restoration	Concerns very unlikely. Minimum site clean-up will be required.		Very Unlikely	Negligible	0
CC-10	0			Very Unlikely	Negligible	0
CC-11	0			Very Unlikely	Negligible	0
CC-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
CC-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
CC-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

Volatile Commodities						
VC-1	Mobilization	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Fuel cost has risen significantly in recent months. Overseas oil producing regions have been politically unstable recently. It will have negligible impact as this project is scheduled for award next spring.	LIKELY	Negligible	1
VC-2	Transfer Site	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Fuel cost has risen significantly in recent months. Overseas oil producing regions have been politically unstable recently. It will have negligible impact as this project is scheduled for award next spring.	LIKELY	Negligible	1
VC-3	Water Treatment at Transfer Site & Prep.	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Marginal impact on cost if any.	LIKELY	Marginal	2
VC-4	Water Treatment at Airport Facility	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Marginal impact on cost if any.	LIKELY	Marginal	2
VC-5	Dredging (Mechanical)	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Fuel cost has risen significantly in recent months. Overseas oil producing regions have been politically unstable recently. It will have negligible impact as this project is scheduled for award next spring.	LIKELY	Negligible	1
VC-6	Drying Agent (Calciment)	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	This is rated unlikely as this mainly a drying agent cost item.	Unlikely	Marginal	1
VC-7	Trucking to Disposal Facility (incl. Loading)	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months. Quote for trucking was also obtained.	Fuel cost has risen significantly in recent months. Overseas oil producing regions have been politically unstable recently. It fluctuates and could impact cost significantly.	LIKELY	Significant	4
VC-8	Placement Facility	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	Small cost item.	LIKELY	Negligible	1
VC-9	Site Restoration	Concerns likely. Fuel price fluctuation applicable in some degree. It will have some impact but not greatly as this project is scheduled to be awarded in couple of months.	smaller cost item.	LIKELY	Negligible	1
VC-10	0			Very Unlikely	Negligible	0
VC-11	0			Very Unlikely	Negligible	0
VC-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
VC-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
VC-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

Quantities						
Q-1	Mobilization	Concerns very unlikely . Typical dredging project.	Negligible impact if any.	Very Unlikely	Negligible	0
Q-2	Transfer Site	Concerns unlikely.	Marginal impact on cost if any issues come up.	Unlikely	Marginal	1
Q-3	Water Treatment at Transfer Site & Prep.	Concerns unlikely.	This is unknown. It is hard to estimate how much water will need to be treated at the transfer site. It will have marginal impact on cost if any.	Unlikely	Marginal	1
Q-4	Water Treatment at Airport Facility	Concerns unlikely.	This is unknown. It is hard to estimate how much water will need to be treated at the Airport facility. It will have marginal impact on cost if any.	Unlikely	Marginal	1
Q-5	Dredging (Mechanical)	Concern unlikely.	Assumed small variance in quantities. Most recent sounding of September 2010 was used. Marginal impact if any.	Unlikely	Marginal	1
Q-6	Drying Agent (Calciment)	Concerns likely. Quantity could vary depending on the product used.	ash will be needed to dry out the material. It is assumed in the estimate per quote from Mintek that approx. 8% would be sufficient however if more or less is needed then the cost could increase or decrease quite a bit. Could have significant impact on cost.	LIKELY	Significant	4
Q-7	Trucking to Disposal Facility (incl. Loading)	Concerns unlikely.	Most recent sounding of September 2010 was used. Negligible impact.	Unlikely	Negligible	0
Q-8	Placement Facility	Concerns unlikely.	Negligible impact if any.	Unlikely	Negligible	0
Q-9	Site Restoration	Concerns very unlikely.	Negligible impact if any.	Very Unlikely	Negligible	0
Q-10	0			Very Unlikely	Negligible	0
Q-11	0			Very Unlikely	Negligible	0
Q-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
Q-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
Q-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0














Fabrication & Project Installed Equipment						
FI-1	Mobilization	N/A	There is no special fabricated equipment in this project.	Very Unlikely	Negligible	0
FI-2	Transfer Site	N/A	N/A	Very Unlikely	Negligible	0
FI-3	Water Treatment at Transfer Site & Prep.	N/A	N/A	Very Unlikely	Negligible	0
FI-4	Water Treatment at Airport Facility	N/A	N/A	Very Unlikely	Negligible	0
FI-5	Dredging (Mechanical)	N/A	N/A	Very Unlikely	Negligible	0
FI-6	Drying Agent (Calciment)	N/A	N/A	Very Unlikely	Negligible	0
FI-7	Trucking to Disposal Facility (incl. Loading)	N/A	N/A	Very Unlikely	Negligible	0
FI-8	Placement Facility	N/A	N/A	Very Unlikely	Negligible	0
FI-9	Site Restoration	N/A	N/A	Very Unlikely	Negligible	0
FI-10	0			Very Unlikely	Negligible	0
FI-11	0			Very Unlikely	Negligible	0
FI-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
FI-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
FI-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

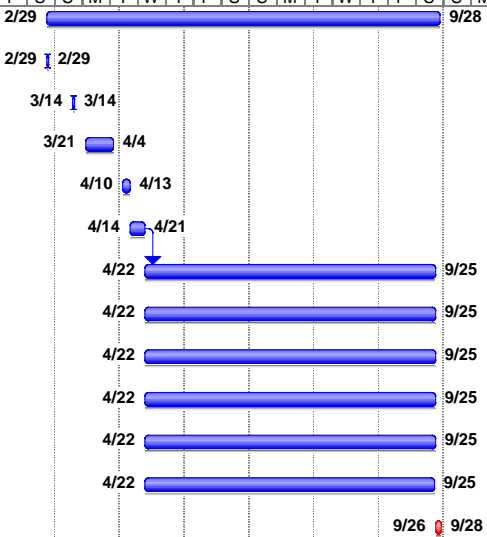
Cost Estimating Method						
CE-1	Mobilization	Concerns unlikely. Typical dredging Mob & Demob.	Low cost for marine equipment for dredging.	Unlikely	Negligible	0
CE-2	Transfer Site	Concerns likely. NPDS 402 point discharge permit	NPDS 402 point discharge permit requirements could impact cost significantly.	LIKELY	Significant	4
CE-3	Water Treatment at Transfer Site & Prep.	Concerns unlikely. Adequate water treatment is accounted for in the estimate.	This is unknown. It is hard to estimate how much water will need to be treated at the transfer site.	Unlikely	Marginal	1
CE-4	Water Treatment at Airport Facility	Concerns unlikely. Adequate rain water treatment is accounted for in the estimate.	This is unknown. It is hard to estimate how much water will need to be treated at the Airport facility. NOAA website was used for average rainfall.	Unlikely	Marginal	1
CE-5	Dredging (Mechanical)	Concerns unlikely.	Testing has been done to soil. Assumed small variance in quantities if any most recent survey of september 2010 was used.	Unlikely	Marginal	1
CE-6	Drying Agent (Calciment)	Concerns unlikely as quote was obtained for the material.	This unknown. It is hard to estimate how much drying agent (fly ash or bed ash will be needed to dry out the material. It is assumed in the estimate per quote from Mintek that approximately 8% would be sufficient however if more or less is needed then the cost could either increase or decrease quite a bit. If another product is used to solidify the material the cost could vary.	Unlikely	Marginal	1
CE-7	Trucking to Disposal Facility (incl. Loading)	None	It was assumed there will be enough trucks available and later confirmed with local trucking contractor to complete the work.	Unlikely	Marginal	1
CE-8	Placement Facility	Concerns unlikely.	It is assumed that placement facility will be usable with no preparation needed.	Unlikely	Marginal	1
CE-9	Site Restoration	Concerns unlikely.	Typical. Minor site clean up will be required.	Unlikely	Negligible	0
CE-10	0			Very Unlikely	Negligible	0
CE-11	0			Very Unlikely	Negligible	0
CE-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
CE-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0
CE-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0

External Project Risks						
EX-1	Mobilization	Weather	Any risk identified in this category is weather related.	Very Unlikely	Negligible	0
EX-2	Transfer Site	N/A	There are no anticipated external issues with the transfer site.	Unlikely	Negligible	0
EX-3	Water Treatment at Transfer Site & Prep.	Weather	Any risk identified in this category is weather related.	Unlikely	Marginal	1
EX-4	Water Treatment at Airport Facility	Weather	Any risk identified in this category is weather related.	Unlikely	Marginal	1
EX-5	Dredging (Mechanical)	Weather	Any risk identified in this category is weather related.	Unlikely	Marginal	1
EX-6	Drying Agent (Calciment)	Unexperienced contractor not familiar with drying agent.	Contractor normally not familiar with this type of drying material procedures.	LIKELY	Significant	4
EX-7	Trucking to Disposal Facility (incl. Loading)	Weather	Any risk identified in this category is weather related.	Unlikely	Marginal	1
EX-8	Placement Facility	N/A	Minimal pushing material at placement facility.	Unlikely	Negligible	0
EX-9	Site Restoration	N/A	Minimal site restoration is required.	Unlikely	Negligible	0
EX-10	0			Very Unlikely	Negligible	0
EX-11	0			Very Unlikely	Negligible	0
EX-12	Remaining Construction Items	All construction items accounted for above.		Very Unlikely	Negligible	0
EX-13	Planning, Engineering, & Design	None	These values were obtained separately from each office.	Unlikely	Negligible	0
EX-14	Construction Management	None	These values were obtained separately from each office.	Very Unlikely	Negligible	0















Sheboygan Harbor DMMP, Wisconsin
Interim DMMP Estimate Level
Abbreviated Risk Analysis

		Potential Risk Areas													
		Mobilization	Transfer Site	Water Treatment at Transfer Site & Pipeline	Water Treatment at Airport Facility	Dredging (Mechanical)	Drying Agent (Calciment)	Trucking to Disposal Facility (Incl. Loading)	Placement Facility	Site Restoration	0	0	Remaining Construction Items	Planning, Engineering, & Design	Construction Management
Typical Risk Elements	Project Scope	-	4	2	2	2	4	3	1	-	-	-	-	-	-
	Acquisition Strategy	3	3	1	3	1	1	1	1	1	-	-	-	-	-
	Construction Complexity	-	4	1	1	1	4	-	3	-	-	-	-	-	-
	Volatile Commodities	1	1	2	2	1	1	4	1	1	-	-	-	-	-
	Quantities	-	1	1	1	1	4	-	-	-	-	-	-	-	-
	Fabrication & Project Installed Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost Estimating Method	-	4	1	1	1	1	1	1	-	-	-	-	-	-
	External Project Risks	-	-	1	1	1	4	1	-	-	-	-	-	-	-

ID	Task Name	Quantity	U of M	Cost	Duration	Start	Finish	Aug 22	Sep 26	Oct 31	Dec 5	Jan 9	Feb 13	Mar 20	Apr 24	May 29	Jul 3	Aug 7	Sep 11	Oct 16	Nov 20	Dec 25	Jan 29	Mar 4	Apr 8	May 13	Jun 17	Jul 22	Aug 26	Sep 30			
								T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M
1	 SHEBOYGAN HARBOR DMMP, BASE PLAN, ALT 2	1	EA	\$7,464,027.00	2132 hrs	Wed 2/29/12	Fri 9/28/12																										
2	 Award	0		\$0.00	0 hrs	Wed 2/29/12	Wed 2/29/12																										
3	 NTP	0		\$0.00	0 hrs	Wed 3/14/12	Wed 3/14/12																										
4	 Submittal Preparation	0		\$0.00	80 hrs	Wed 3/21/12	Wed 4/4/12																										
5	 MOBILIZATION, DEMOBILIZATION	1	LS	\$176,684.00	48 hrs	Tue 4/10/12	Fri 4/13/12																										
6	 TRANSFER SITE	1	LS	\$711,481.00	96 hrs	Sat 4/14/12	Sat 4/21/12																										
7	 WATER TREATMENT AT TRANSFER SITE	1	LS	\$566,057.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
8	 WATER TREATMENT AT AIRPORT FACILITY	1	LS	\$276,966.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
9	 DREDGING (MECHANICAL)	170000	CY	\$1,933,996.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
10	 DRYING AGENT (CALCIMENT)	20196	TN	\$1,554,715.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
11	 TRUCKING TO DISPOSAL FACILITY	170000	CY	\$1,882,515.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
12	 PLACEMENT FACILITY	1	LS	\$359,017.00	1884 hrs	Sun 4/22/12	Tue 9/25/12																										
13	 SITE RESTORATION (TRANSFER SITE)	1	LS	\$2,596.00	24 hrs	Wed 9/26/12	Fri 9/28/12																										



DRAFT

Project: Schedule Upper Rouge Sec 1 Date: Fri 12/23/11	Task		Progress		Summary		Rolled Up Critical Task		Rolled Up Progress		External Tasks		Group By Summary		Deadline
	Critical Task		Milestone				Rolled Up Milestone		Split		Project Summary		Deadline		

APPENDIX B

REAL ESTATE PLAN

DRAFT

**REAL ESTATE PLAN
SHEBOYGAN HARBOR, WISCONSIN
INTERIM DREDGED MATERIAL MANAGEMENT PLAN**

DRAFT

Prepared by the

**U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT**

1. GENERAL

1.1 AUTHORITIES

The Federal Navigation Project at Sheboygan Harbor, Wisconsin, was initially authorized by the River and Harbor Acts of June 23, 1866, while being modified on March 3, 1873, March 3, 1881, August 18, 1894, March 3, 1899, June 13, 1902, March 2, 1907, January 27, 1927, August 10, 1935, and September 3, 1954. The navigation project provides for a breakwater and pier forming an outer basin; an entrance channel through the outer basin 450 feet wide and 25 feet deep at the entrance decreasing to 21 feet deep; a channel in the Sheboygan River 21 feet deep at Maryland Avenue; then 15 feet to Jefferson Avenue, and a turning basin in the outer basin 20 feet deep. Navigational Servitude is being used for the portions of this project that lie below or waterward of the ordinary high water mark of the Sheboygan River within the area of the proposed mechanical dredging activities that would occur within the Federal Navigation Channel.

1.2 PURPOSE

This project is being funded by the United States Environmental Protection Agency's Great Lakes Restoration Initiative Program, and is being conducted under the guidance of the National Harbors Program, Dredged Material Management Plan. The purpose of this Management Plan is to evaluate the existing conditions at the Sheboygan Harbor and to develop a base plan for routine dredging within the project area and dispose of the sediments. The base plan is the Corps of Engineers policy to accomplish the disposal of dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner. The disposal is to be consistent with sound engineering practices and would meet all Federal environmental standards including the environmental standards established by Section 404 of the Clean Water Act of 1972. This constitutes the base disposal plan for the navigational purposes. Each management plan study must establish this Base Plan. Management Plans are intended to be cost effective and to expeditiously support environmentally acceptable channel and harbor maintenance.

For the Sheboygan Harbor project, the District will develop an Interim Dredged Material Management Plan (DMMP). The interim plan utilizes a single project-based approach in lieu of the continual management approach of the typical DMMP. The interim plan is reserved for projects with an advanced schedule and immediate need for implementation, and only when a standard DMMP does not exist for the project harbor.

1.3 PLAN SELECTION

Alternative 2: Chemical Dewatering and Placement in the Locally Provided Dredge Material Placement Facility

For this alternative, the dredging would be performed by mechanically dredging the sediment to the EPA/City Plan dredging depth with an enclosed clamshell bucket with placement into a barge. Once the material is in the barge, a lime-reaction additive would be added and mixed to dewater the material. The material will then be transported to the disposal facility or placed on a dewatering pad at the transfer site prior to transport and disposal as the situation dictates.

Over the course of the project, the in-cell sediment would require spreading to prepare for placement of a final cover. Upon completion of the disposal, the permanent cell would be covered with the stockpiled native material and the site allowed to re-establish to a natural state.

1.4 DESCRIPTION OF THE DREDGE MATERIAL PLACEMENT FACILITY

Sheboygan Harbor is located on the western shore of Lake Michigan at the mouth of the Sheboygan River, in the City of Sheboygan, Sheboygan County, Wisconsin. The City of Sheboygan is approximately 45 miles north of Milwaukee, Wisconsin, and about 55 miles southeast of Green Bay, Wisconsin. The proposed Dredge Material Placement Facility to be utilized for this project consists of property owned by Sheboygan County, which is located on property owned by the Sheboygan County Memorial Airport in Sheboygan Falls, Wisconsin. The Dredge Material Placement Facility construction, operation, and maintenance would be the responsibility of Sheboygan County. Since the disposal facility is located at an airport, height restrictions limit the capacity of the Dredge Material Placement Facility. To accommodate the volume of the dredged material, the sediment will require a dewatering process allowing it to be placed in a dry and compactable state. Since the sediment to be disposed has known contaminants, the permanent cell will be covered with native topsoil and returned to the vegetated state. The placement of the cover will be the responsibility of Sheboygan County. The cover will keep the sediment from interacting with rain water, spreading via wind erosion, and restrict human and animal interaction. Sheboygan County will provide the facility for this one time routine dredging project and will be responsible for the operations and maintenance. The facility is designed to have a 3 foot cover of native topsoil enabling future agricultural use at the site. A temporary access road would be constructed by Sheboygan County on property that Sheboygan County owns. This access road would start at the existing public County Road O extending along the east side of Highland Road into the Dredge Material Placement Facility.

2. LERRDs REQUIRED FOR CONSTRUCTION, OPERATION, AND MAINTENANCE

Sheboygan County and the Redevelopment Authority of the City of Sheboygan own the Lands, Easements, Right of Ways, Relocations, and Disposals (LERRDs) required for the project. The LERRDs are being provided at no cost to the project. No additional LERRDs are required or anticipated for acquisition by the Corps of Engineers for the project. Sheboygan County will attest to their fee ownership of the disposal site and access road by providing a Right of Entry to utilize the Dredge Material Placement Facility and the access road. The County will provide all LERRDs at no cost in the form of a Right of Entry signed and certified by an authorized County official. The Redevelopment Authority of the City of Sheboygan will attest to their fee ownership of the dredge material transfer site by providing a Right of Entry to utilize the transfer site. The Redevelopment Authority of the City will provide all LERRDs at no cost in the form of a Right of Entry signed and certified by an authorized City official.

The Dredge Material Placement Facility to be utilized for this project consists of property fee owned by Sheboygan County, which is on Sheboygan County Memorial Airport property located in Sheboygan Falls, Wisconsin.

The temporary access road to be utilized for this project would connect the existing public road named County Road O, extending along the east side of Highland Road leading into the Dredge Material Placement Site. This access road would be located on property fee owned by Sheboygan County.

The dredge material transfer site being utilized for this project consists of property fee owned by the Redevelopment Authority of the City of Sheboygan. The transfer site is located on a parcel of land on the south side of the Sheboygan River, east of the South 8th Street, and north of South Pier Drive.

2.1 ESTATES

Fee: The fee simple title to the land described in Schedule A, subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines, would apply to the Dredge Material Disposal Site.

Road Easement: A perpetual and assignable easement and right-of-way in, on, over and across the land described below for the location, construction, operation, maintenance, alteration and replacement of road(s) and appurtenances together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the owners, their heirs and assigns, the right to cross over or under the right-of-way as access to their adjoining land; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines, would apply to the temporary access road.

Temporary Work and Storage Area: A temporary easement and right-of-way in, on, over, and across tract Nos. __, __ and __ for a period not to exceed one year, beginning with the date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as a work area, including the right to deposit fill, move, store and remove equipment and supplies and erect and remove temporary structures on the land and to perform any other work necessary and incident to the Sheboygan Harbor Dredging Project, together with the right to trim, cut, fell, and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easements hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines, would apply to the dredge material transfer site.

3. LERRDs - ALREADY OWNED IN PART AND TO BE ACQUIRED IN PART

Sheboygan County and the Redevelopment Authority of the City of Sheboygan own the LERRDs required for the project in fee.

4. LERRDs ACQUIRED FOR, OR WITH THE USE OF FUNDS FROM ANOTHER FEDERAL PROGRAM OR PROJECT

This is not applicable to the proposed project.

5. NON-STANDARD ESTATES

This is not applicable to the proposed project.

6. EXISTING FEDERAL PROJECTS

In conjunction with the Corps' proposed dredging project, the U.S. Environmental Protection Agency (EPA) is providing funding with the overall goal to remove the contaminated sediments from the Sheboygan Harbor to that extent that when project dredging is complete, the Sheboygan Harbor will be eligible for de-listing from being classified by the EPA as an Area of Concern.

7. FEDERAL LAND

This is not applicable to the proposed project.

8. NAVIGATIONAL SERVITUDE

Navigational Servitude is being used for the portions of this project that lie below or waterward of the ordinary high water mark of the Sheboygan River within the area of the proposed mechanical dredging activities that would occur within the Federal Navigation Channel.

9. PROJECT MAP

Drawings depicting the project area are depicted within the Dredge Material Management Plan.

10. INDUCED FLOODING

Flooding would not be expected to occur as a result of the project.

11. BASELINE COST ESTIMATE

The estimated value of the Federal administration Real Estate costs required for the proposed project is ten thousand dollars (\$10,000.00).

12. RELOCATION ASSISTANCE

There are no known Public Law 91-646 relocations necessary for the project. The project will not require displacement of persons or businesses.

13. MINERALS

No present or anticipated mineral activity is within the project areas.

14. CAPABILITY ASSESSMENT

The local government entities (i.e. Sheboygan County and the Redevelopment Authority of the City of Sheboygan) own the LERRDs required for the project, and are capable of providing all required LERRDs necessary for project construction, operation, and maintenance. No additional LERRDs are required or anticipated for acquisition by the Corps of Engineers or any other entities for the project. However, if necessary in the future, the local government entities are also fully capable to perform the duties required for any potential acquisition associated with this project and management of the sites. Accordingly, the local government entities have the capability to complete its portions of the project within the designated time frames. The local government entities are legally constituted public bodies with the full power, authority, and capability to perform as a viable partner on this project, and also have the power of eminent domain. There are no lands or interests in land required for the project located outside of the political boundaries of the local government entities, or lands required for the project owned by an entity whose property the sponsor cannot condemn. The legal departments of the local government entities are fully capable of handling acquisitions and condemnations.

15. ZONING

The enactment of zoning ordinances will not be required for this project.

16. FACILITY OR UTILITY RELOCATIONS

No facility or utility relocations will be performed as a result of the project construction.

17. ENVIRONMENTAL

All environmental related items associated with the project will be addressed by the Corps' Environmental Analysis Branch. In addition, Sheboygan County will need to secure a Low Hazard Waste Exemption from the State of Wisconsin Department of Natural Resources.

18. PROJECT SUPPORT

There is no known opposition from the public with regard to this proposed project.

19. RISK NOTIFICATION FOR ADVANCE NOTIFICATION

Sheboygan County and the Redevelopment Authority of the City of Sheboygan have been given detailed information regarding the requirements for any additional LERRDs which may be necessary for completion of the project and fully anticipate meeting the current District schedule.

The Corps' Real Estate Division will monitor and assist Sheboygan County and the Redevelopment Authority of the City of Sheboygan with all acquisition activities which will assure that the acquisition process complies with Federal and State laws.

The Corps' Real Estate Division will further assess real estate requirements for the recommended plan, as well as, provide detailed information regarding LERRDs identified as necessary for the project. In addition, the Corps' Real Estate Division will coordinate, monitor, and assist with any and all acquisition activities undertaken by Sheboygan County and the Redevelopment Authority of the City of Sheboygan. This will assure that the acquisition process complies with Federal and State laws, specifically including the requirements under the Federal Uniform Relocation and Acquisition Act (P.L. 91-646). The Corps' Real Estate Division will also attend District team meetings, review and provide input into draft and final reports prepared by the team, and participate in the internal technical review.

20. OTHER RELEVANT REAL ESTATE ISSUES

- (a) There are no proposed impacts to any special aquatic sites or wetlands by the proposed project.
- (b) There are no cemeteries or public facilities within the project areas requiring relocation.
- (c) Plans and specifications do not identify any relocation of public utilities or roadways.

EXHIBIT "A"

**DETROIT DISTRICT REAL ESTATE ASSESSMENT OF
SHEBOYGAN COUNTY AND THE REDEVELOPMENT AUTHORITY OF THE CITY OF SHEBOYGAN
REAL ESTATE ACQUISITION CAPABILITY**

PROJECT: Interim Dredged Material Management Plan (DMMP) for Sheboygan Harbor, Sheboygan County, Wisconsin.

I. LEGAL AUTHORITY

a. Does Sheboygan County and the Redevelopment Authority of the City of Sheboygan have legal authority to acquire and hold title to real property for project purposes?

☒ Yes

☐ No.

Initials SSS Date: October 26, 2011

b. Does Sheboygan County and the Redevelopment Authority of the City of Sheboygan have the power of eminent domain for this project?

☒ Yes

☐ No.

Initials SSS Date: October 26, 2011

c. Does Sheboygan County and the Redevelopment Authority of the City of Sheboygan have "quick take" authority for this project?

☒ Yes

☐ No.

Initials SSS Date: October 26, 2011

d. Are any of the lands/interests in land required for the project located outside the political boundaries of Sheboygan County and the Redevelopment Authority of the City of Sheboygan?

☐ Yes

☒ No

Initials SSS Date: October 26, 2011

e. Are any of the lands/interests in land required for the project owned by an entity whose property Sheboygan County and the Redevelopment Authority of the City of Sheboygan cannot condemn?

☐ Yes.

☒ No

Initials SSS Date: October 26, 2011

II. HUMAN RESOURCE REQUIREMENTS

a. Will the Sheboygan County's and the Redevelopment Authority of the City of Sheboygan's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended?

☐ Yes

☒ No

Initials SSS Date: October 26, 2011

b. If the answer to II.a. is "yes", has a reasonable plan been developed to provide such training?

☒ Not Applicable

Initials SSS Date: October 26, 2011

c. Does Sheboygan County's and the Redevelopment Authority of the City of Sheboygan's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project?

☒ Yes

☐ No

Initials SSS Date: October 26, 2011

d. Is Sheboygan County's and the Redevelopment Authority of the City of Sheboygan's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule?

☒ Yes

☐ No

Initials SSS Date: October 26, 2011

e. Can Sheboygan County and the Redevelopment Authority of the Redevelopment Authority of the City of Sheboygan obtain contractor support, if required in a timely fashion?

☒ Yes

☐ No

Initials SSS Date: October 26, 2011

f. Will Sheboygan County and the Redevelopment Authority of the City of Sheboygan likely request USACE assistance in acquiring real estate?

☐ Yes

☒ No

Initials SSS Date: October 26, 2011

III. OTHER PROJECT VARIABLES

a. Will Sheboygan County's and the Redevelopment Authority of the City of Sheboygan's staff be located within reasonable proximity to the project site?

(X) Yes

() No

Initials SSS Date: October 26, 2011

b. Has Sheboygan County and the Redevelopment Authority of the City of Sheboygan approved the project/real estate schedule/milestones?

(X) Yes

() No

Initials SSS Date: October 26, 2011

c. With regard to this project, Sheboygan County and the Redevelopment Authority of the City of Sheboygan is anticipated to be highly capable.

(X) Yes Sheboygan County and the Redevelopment Authority of the City of Sheboygan has Real Estate Staff performing Real Estate functions.

() No

Initials SSS Date: October 26, 2011

Prepared by:

Reviewed by:

Original signed by

Original signed by

Shawn Sanchez
Realty Specialist
Real Estate Division

Robert Jameson
Realty Specialist
Real Estate Division

Reviewed and approved by:

Original signed by

Victor L. Kotwicki
Real Estate Contracting Officer
Detroit, Buffalo, and Chicago Districts

APPENDIX C

DRAFT DREDGING PLAN

DRAFT

SCOPE OF WORK:

Mobilize mechanical dredge (hydraulic dredging and hydraulic disposal are prohibited) to Sheboygan Harbor, WI and dredge the harbor between the mouth of the Sheboygan River and the Eighth Street bridge. The required depths are 11.0' and 15.0' below Low Water Datum (LWD), as noted on the plans. An additional one-foot allowable overdepth will be authorized. The authorized depth in the areas to be dredged is 21.0' below LWD. An estimated 170,000cy of shoaled material will be removed.

DREDGING:

The Contractor shall use a closed top production bucket in good repair with tight fitting bottom lips and sealing baffles on the top to expel air and water - in order to prevent loss of material as it is lifted through the water column. The intent of requiring the use of this bucket is to minimize the re-suspension of dredged material into the water column. During dredging operations, USACE will conduct upstream and downstream in-situ turbidity monitoring. The upstream (background) monitoring station shall be located approximately 500 feet upstream of the dredging area. The exact location shall be representative of the water that shall pass through the dredge area. The downstream monitoring station shall be located approximately 500 feet downstream of the dredging operation.

If a turbidity level corresponding to 80 nephelometric turbidity unit (NTU) above background is measured, the Contracting Officer will determine if any adjustments are necessary.

The Contractor shall conduct routine visual observations of water quality to identify potential turbidity plumes that may not be detected or accurately measured by regularly scheduled turbidity monitoring, as set forth above. If such a plume is visually identified, notify the COR immediately.

Any materials in the allowable overdepth prism and allowable side slopes are not required to be removed. Rocks, cobbles (3 to 12 inches) and boulders (over 12 inch) may be encountered near breakwaters, revetments and pier heads and shall not be removed if they are part of the harbor structures nor shall toe stones be undermined. During actual dredging operations, the Contractor shall take extra care to prevent any releases of material. Overflow from scows during dredging operations is not permitted. All vessels must be seaworthy. Overflow and spillage is prohibited between the point of pick-up and the point of deposition of dredge materials in the disposal area.

To cover inaccuracies of the dredging process, materials actually removed from within the channel lines to a depth of not more than one (1) foot below the required pay prism line will be measured and paid for at the contract unit price. However, the maximum quantity of overdepth materials to be paid for will be equivalent to that quantity present within the one (1) foot overdepth prism immediately below the required materials to be removed as determined from the prior to dredging soundings. Any dredging below the allowed one (1) foot will be considered as excessive dredging and for which payment will not be made

Materials actually removed, within limits shown on the drawings, to provide for final side slopes not flatter than one vertical (1V) on two horizontal (2H), perpendicular to the channel line or dredge limit line, whichever is applicable, but not in excess of the amount originally lying above the side slope payment limit line will be calculated and paid for. The provisions of this Subparagraph also apply to end slopes at the upstream and downstream dredging limits of the channel.

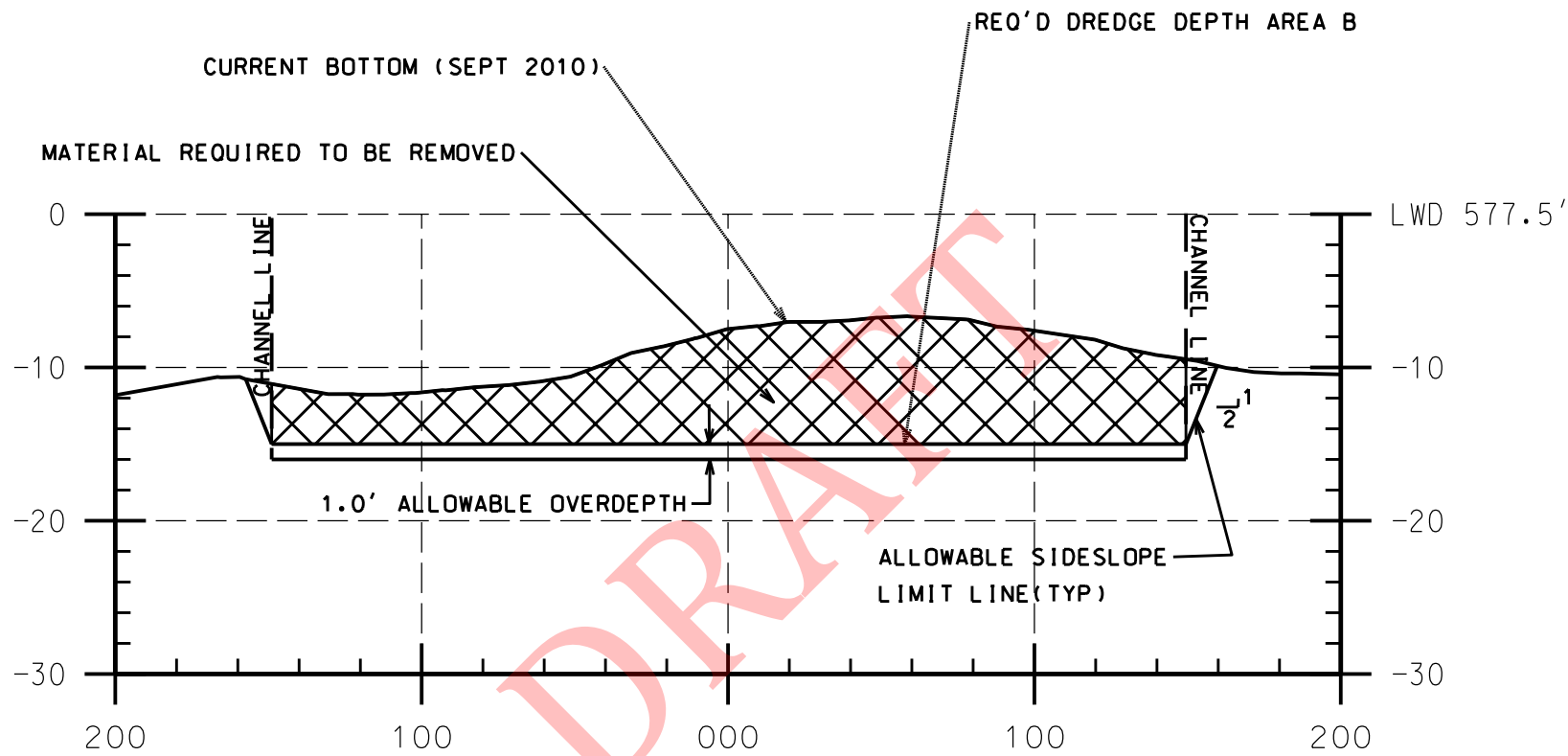
TRANSFER AND CONVEYANCE

Property for access to the river's edge and placement of equipment for transferring dredged materials from scows or other marine hauling equipment to land hauling equipment is provided by the Government. The Contractor will be required to treat the dredged material with a drying agent to remove excess water prior to hauling material to the disposal area. If material is stockpiled at the transfer site a barrier will be installed at the transfer site by the Contractor to assure all dredged material is removed from the transfer site at the conclusion of operations. Water accumulated in the scows will be treated to remove suspended solids not to exceed 100mg/L prior to discharge into the river. All contractor activities shall be confined to the area delineated on the plans.

All nautical vessels, and land based transport and conveyance systems shall be operated, loaded and unloaded in such manner as to prevent overflow, spills, leaks, waste, or other loss of dredged materials between the point of pick-up and point of deposition within the disposal area. Dredged materials that are conveyed into the Government-furnished disposal area via vehicle shall have leak tight cargo bodies or compartments with spill and splash preventing devices as well as necessary sidewall height. Vehicles shall not be loaded over their capacity, nor shall any loads exceed the limits of the thoroughfare over which the vehicles are operated. If the dredged materials are transferred from vessels to vehicles by bucket type equipment or any device that may leak or spill, provisions shall be made to prevent water and materials from escaping into the waterways. In addition, the Contractor shall insure that materials that are splashed around vehicles during loading or unloading operations are cleaned up prior to the vehicle leaving the site so as to prevent materials from being tracked on to public thoroughfares or escaping into the waterways. The Contractor shall immediately clean up any materials spilled on the public thoroughfares. In addition, the Contractor shall maintain the transfer site in a neat and orderly condition. Hauling routes and procedures shall be coordinated with the City of Sheboygan. Conveyance of materials into or within the Government-furnished disposal areas by hydraulic or pipeline pumping is prohibited.

DISPOSAL:

The dredged material shall be transported and placed at the Sheboygan County Memorial Airport in the cell constructed on the Northeast portion of the property. The cell is considered the Government-furnished disposal area. Access to the disposal area will be from County Road O on the existing gravel road on the airport property. The Sheboygan County Airport will place a cover of stockpiled material and stockpiled topsoil will be placed over the entire cell. The material shall be placed such that upon completion the placement area will drain toward the west perimeter of the area used. Only dredged materials taken from within the limits of this contract and as otherwise required shall be placed in the Government-furnished disposal area. The Contractor shall coordinate its disposal operations with others who may be simultaneously utilizing the Sheboygan County Memorial Airport.



TYPICAL SECTION A
D-1

US Army Corps of Engineers

SHEET NO. DRAWN BY CHECKED BY DATE	PROJECT NO. CONTRACT NO. FILE NUMBER	SHEET TITLE SHEET NO.
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT DETROIT, MI	PROJECT NO. CONTRACT NO. FILE NUMBER	SHEET TITLE SHEET NO.
SHEBOTGAN HARBOR, WISC. DREDGE MATERIAL MANAGEMENT PLAN TYPICAL SECTION		
SHEET IDENTIFICATION D-02 OF 1		

APPENDIX D

SEPTEMBER 2010 CONDITION SURVEY

DRAFT



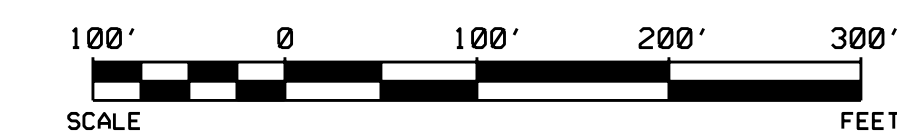
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6	DO.	645682.516 2577612.628
7	DO.	645781.034 2577599.459
8	DO.	646637.236 2577236.842
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14	DO.	645884.765 2575271.303
16	DO.	645858.456 2574787.389
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18	DO.	645826.088 2573970.308
19	DO.	645402.585 2573783.743
A	CENTERLINE PT.	645685.290 2578358.003
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C	DO.	645798.576 2575529.511
0+00	DO.	645784.921 2575276.735
0	DO.	645764.567 2574902.118

LEGEND:

PROJECT LIMITS
PROJECT DEPTHS 20, 21, 21-25, & 25 FEET
20.0 FT. CONTOUR
21.0 FT. CONTOUR
21.0-25.0 FT. CONTOUR
25.0 FT. CONTOUR

- GPS CONTROL MONUMENTS
- BRONZE DISK SET IN CONCRETE
- PROJECT LIMIT POINT

THE SURVEY SHOWN WAS CONDUCTED BY THE LAKE MICHIGAN AREA OFFICE, KEWAUNEE SUB OFFICE SURVEY PARTY ON 05 AUGUST 2010 (0+00-31+12) AND 16 SEPTEMBER 2010 (100+00-105+00), USING GPS POSITIONING, AN INSPERCA 448 SOUNDER AND A HYPACK HYDROGRAPHIC SURVEY SYSTEM.



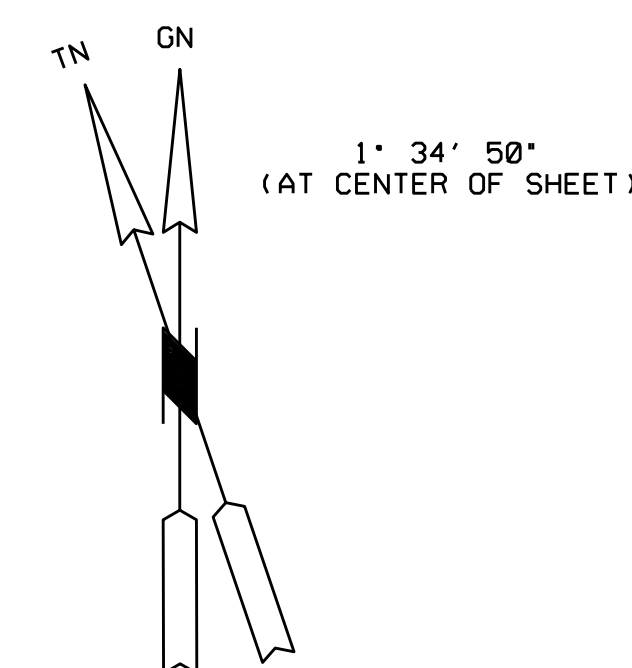
NOTES:

SURVEY CONTROL AND BENCH MARK DATA IS AVAILABLE FROM THE DETROIT DISTRICT, ENGINEERING & TECHNICAL SERVICES, OPERATIONS TECHNICAL SUPPORT BRANCH, LAKE MICHIGAN AREA OFFICE, KEWAUNEE SUB OFFICE.

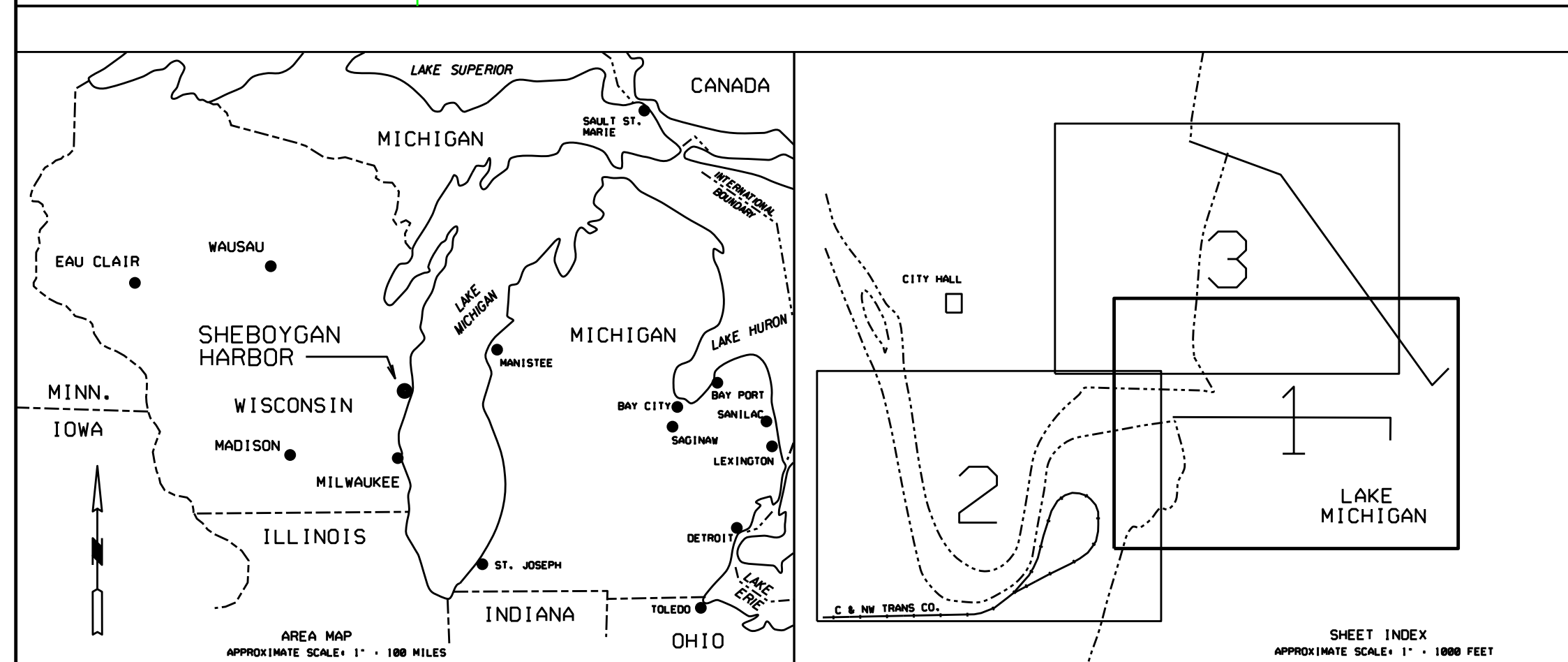
GRID SYSTEM IS ON LAMBERT PROJECTION, WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, 1983 NORTH AMERICAN DATUM.

SOUNDINGS ARE IN FEET AND ARE REFERRED TO LOW WATER DATUM, 577.5 FEET ABOVE MEAN WATER LEVEL AT RIMOUSKI, QUEBEC (INTERNATIONAL GREAT LAKES DATUM 1985).

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME.

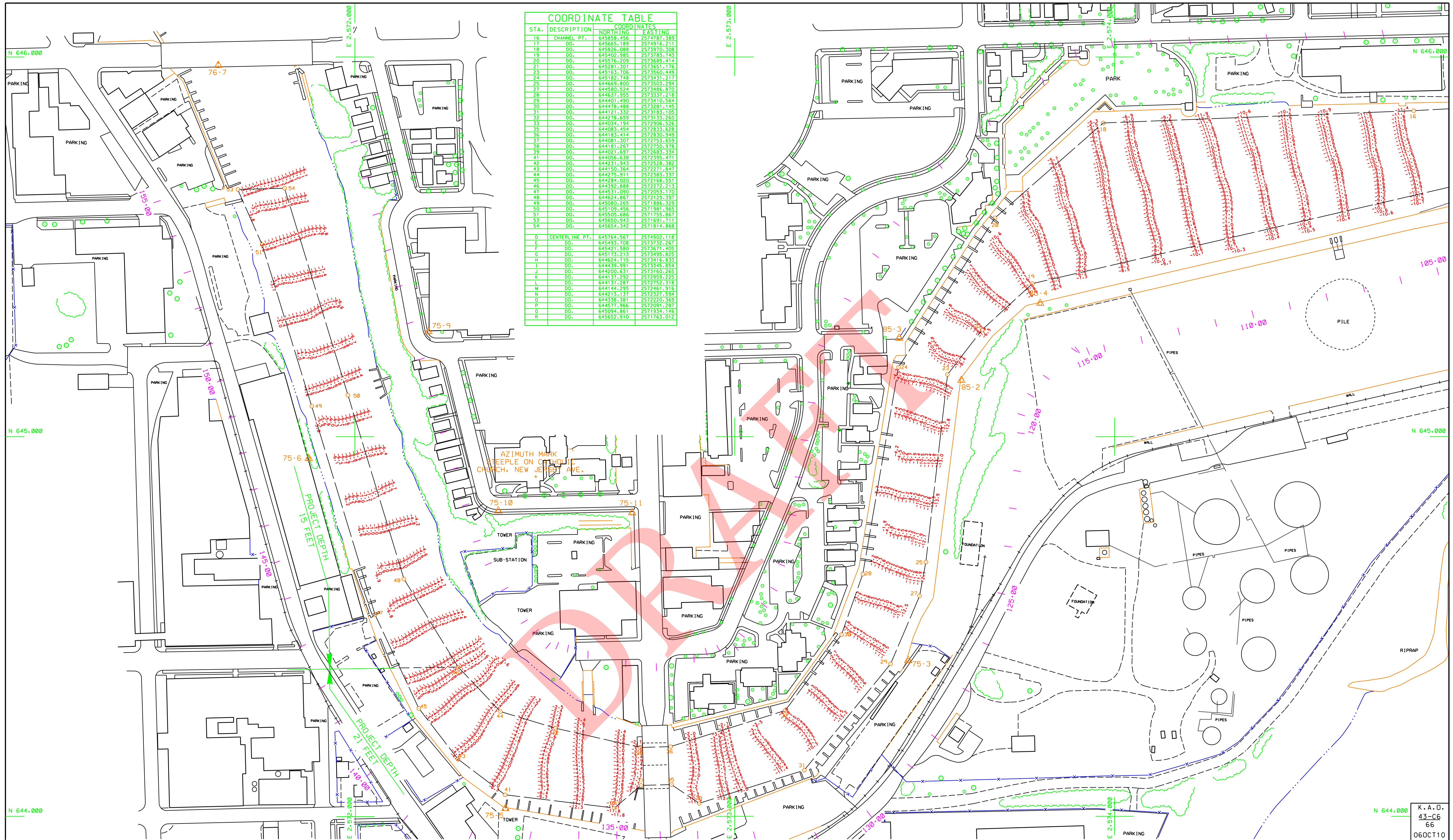


GRID SCALE FACTOR = .99992795
GRID DIST. DIVIDED BY GRID SCALE FACTOR = GROUND DIST.



NO.		DATE		REVISION		BY	
U.S. ARMY ENGINEER DISTRICT, DETROIT CORPS OF ENGINEERS DETROIT, MICHIGAN							
DRAWN BY K.J.K.				SHEBOYGAN HARBOR, WISCONSIN			
REVIEWED BY R.D.M.				CONDITION OF CHANNEL - SEP 2010			
CHECKED BY A.R.M.				LAKE MICHIGAN AREA OFFICE			
REVIEWED:				DATE			
CHIEF, LAKE MICHIGAN AREA OFFICE				APPROVAL RECOMMENDED:			
SUBMITTED:				CHIEF, DTS BRANCH			
APPROVED				SCALE 1" = 100'			
CHIEF, ENGINEERING & TECHNICAL SERVICES				DRAWING NUMBER			
SHEET 1 OF 2							

K.A.O.
43-C6
65
060CT10



COORDINATE TABLE		
STA. DESCRIPTION		COORDINATES
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L	DO.	644131.287 2572752.318
M	DO.	644144.295 2572461.916
N	DO.	644213.137 2572327.594
O	DO.	644338.381 2572220.369
P	DO.	644577.966 2572091.287
Q	DO.	645094.861 2571934.146
R	DO.	645652.910 2571763.012

LEGEND:

PROJECT LIMITS
PROJECT DEPTHS 15 & 21 FEET
21.0 FT. CONTOUR
15.0 FT. CONTOUR

△ GPS CONTROL MONUMENT
▲ BRONZE DISK SET IN CONCRETE
○ PROJECT LIMIT POINT

THE SURVEY SHOWN WAS CONDUCTED BY THE LAKE MICHIGAN AREA OFFICE, KEWAUNEE SUB OFFICE SURVEY PARTY ON 16 SEPTEMBER 2010, USING GPS POSITIONING, AN INNERSPACE 448 SOUNDER, AND A HYPACK HYDROGRAPHIC SURVEY SYSTEM.

100' 0 100' 200' 300'
SCALE FEET

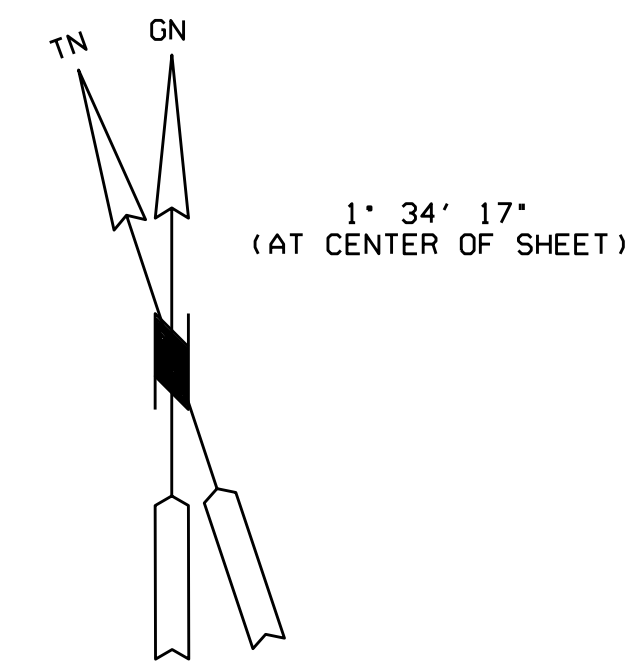
NOTES:

SURVEY CONTROL AND BENCH MARK DATA IS AVAILABLE FROM THE DETROIT DISTRICT, ENGINEERING & TECHNICAL SERVICES, OPERATIONS TECHNICAL SUPPORT BRANCH, LAKE MICHIGAN AREA OFFICE, KEWAUNEE SUB OFFICE.

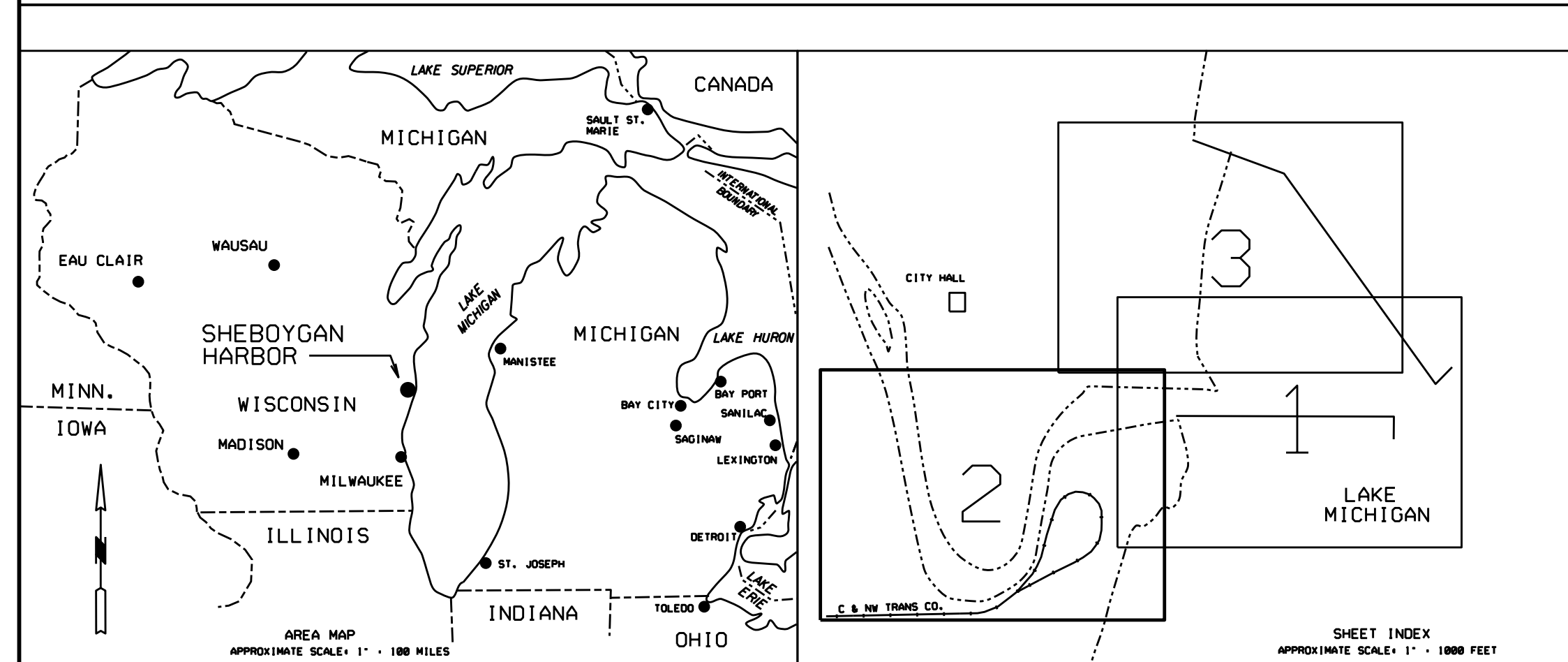
GRID SYSTEM IS ON LAMBERT PROJECTION, WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, 1983 NORTH AMERICAN DATUM.

SOUNDINGS ARE IN FEET AND ARE REFERRED TO LOW WATER DATUM, 577.5 FEET ABOVE MEAN WATER LEVEL AT RIMOUSKI, QUEBEC (INTERNATIONAL GREAT LAKES DATUM 1985).

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME.



GRID SCALE FACTOR = .99992772
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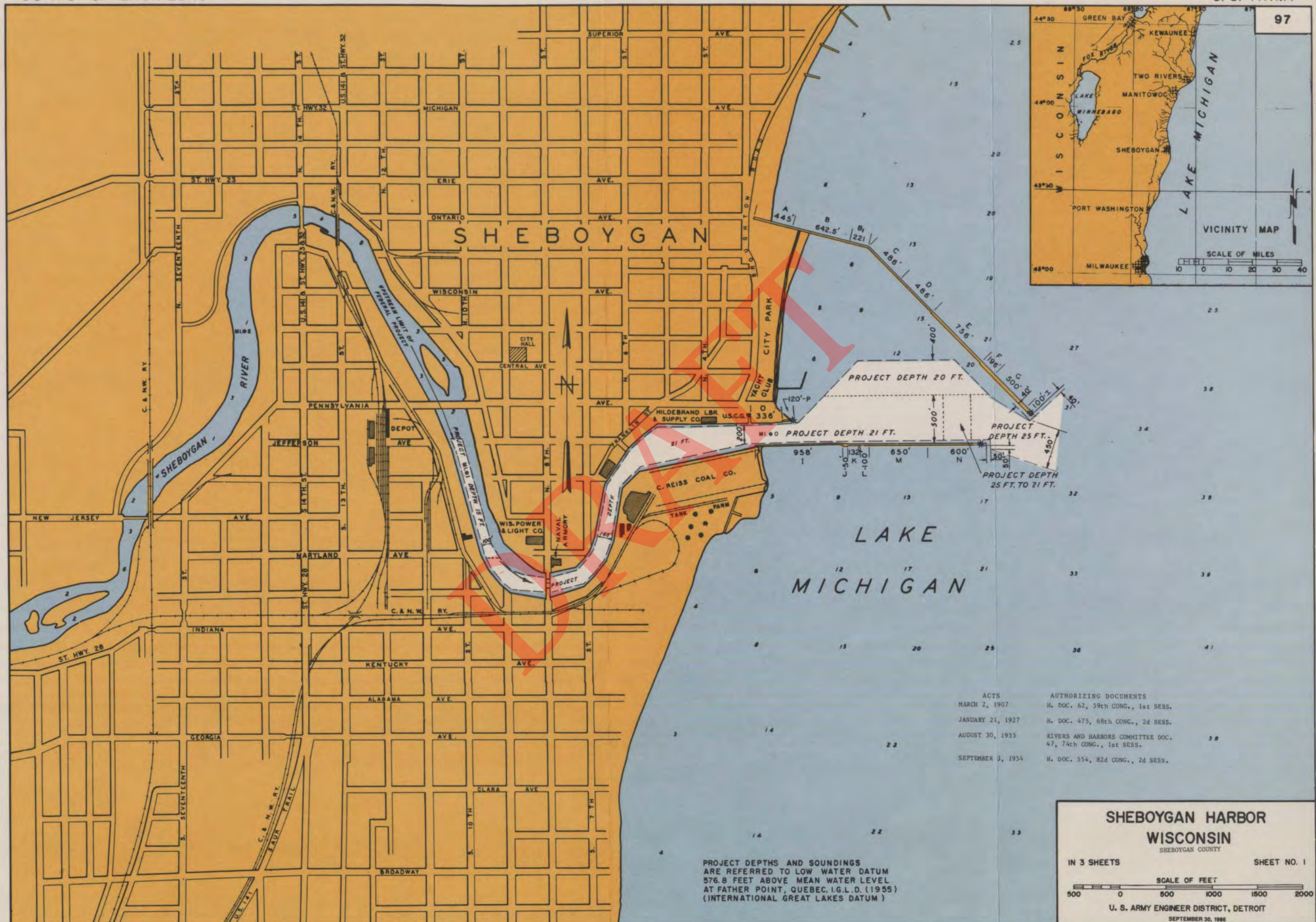


NO.	DATE	REVISION	BY
U.S. ARMY ENGINEER DISTRICT, DETROIT CORPS OF ENGINEERS DETROIT, MICHIGAN			
DRAWN BY K.J.K.		REVIEWED BY R.D.M.	
CHECKED BY A.R.M.		REVIEWED BY CHIEF, LAKE MICHIGAN AREA OFFICE	
SUBMITTED BY CHIEF, PROJ. OPS. SECTION		APPROVAL RECOMMENDED BY CHIEF, OPS. BRANCH	
APPROVED		DATE	
P.E. CHIEF, ENGINEERING & TECHNICAL SERVICES		SCALE 1" = 100'	
SHEET 2 OF 2		DRAWING NUMBER	

APPENDIX E

FEDERAL NAVIGATION PROJECT MAP

DRAFT



APPENDIX F

LETTERS OF INTENT AND SUPPORT

DRAFT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

December 15, 2011

REPLY TO THE ATTENTION OF

Lt. Col. Michael C. Derosier
U.S. Army District Engineer
U.S. Army Corps of Engineers, Detroit District
477 Michigan Avenue
Detroit, Michigan 48226

Re: Strategic Navigation Dredging Project at the Sheboygan River

Dear Lt. Col. Derosier:

I wish to convey the strong support of U.S. Environmental Protection Agency's (EPA's) Great Lakes National Program Office (GLNPO) for the proposed 2012 U.S. Army Corps of Engineers (ACE) strategic navigation dredging project at the Sheboygan River. As I understand it, approximately 170,000 cubic yards of sediment would be dredged from the federal channel within the inner harbor of the Sheboygan River, (i.e., from the 8th Street Bridge to the mouth of the inner harbor). This work would be conducted using Great Lakes Restoration Initiative (GLRI) funds, and, in order to meet the federal Interagency Task Force's (IATF's) goal, clean-up must be completed by September 30, 2012.

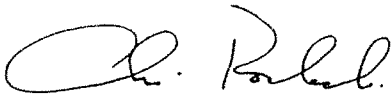
I understand that the ACE Detroit District is finalizing the Dredge Material Management Plan (DMMP) for the Sheboygan cleanup project. Your staff engineers have worked closely with local and state agencies in evaluating dredging alternatives and project requirements. Importantly, there is strong local support for this project: the City of Sheboygan is providing a sediment off-loading site for the project within the congested downtown river reach of this project. Sheboygan County is providing and developing an upland placement site for the dredged material. Finally, the Wisconsin Department of Natural Resources (WDNR) and the City of Sheboygan are contributing substantially to the cost of development of the upland placement site.

As your staff knows, incorporating the cost of dewatering the dredged sediment is an important element of this GLRI project. Because of circumstances unique to this type of dredging project, the least-cost and preferred alternative requires dewatering of the dredged material prior to transport and placement. This dewatering component is supported by the City of Sheboygan, Sheboygan County, WDNR and by USEPA/GLNPO. Dewatering of the dredged material at the off-loading site is required for this project to proceed, and is essential to the accomplishment of the clean-up by the end of September, 2012. Moreover, it is my understanding that the cost of the sediment dewatering component of the project will be fully covered by GLRI funding provided to the Corps as part of the preferred alternative.

In conclusion, I am writing to confirm that the U.S. Army Corps of Engineers (ACE) will fully fund sediment dewatering as part of the Sheboygan River and Harbor Area of Concern (AOC) cleanup. While I understand that the ACE may not typically pay for the cost of sediment dewatering, in this case such costs are appropriate given that dewatering is in fact part of the least-cost and preferred alternative.

Thank you so much for your attention to this matter and this request. If you have any questions, please feel free to contact me directly at (312) 353-8320, or Ms. Heather Williams of my staff, at (312) 886-5993.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Korleski".

Chris Korleski, Director
Great Lakes National Program Office

DRAFT



SHEBOYGAN COUNTY

Michael J. Vandersteen
Chairman of the Board

Adam N. Payne
County Administrator

December 9, 2011

Lieutenant Colonel Michael C. Derosier
U.S. Army Corps of Engineers-Detroit District
477 Michigan Avenue
Detroit, MI 48226-2550

RE: Sheboygan Harbor, WI Strategic Navigation Dredging

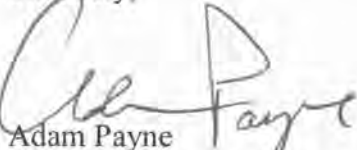
Dear LTC Derosier,

This letter is in regards to the potential Strategic Navigation Dredging project described in the Sheboygan Harbor, WI Interim Dredged Material Management Plan. The County of Sheboygan fully supports this project in which low level contaminated sediment will be dredged from the harbor, dewatered, and placed in a County provided placement site.

In support of the project, the County of Sheboygan will provide the necessary land, obtain required permits and approvals, and prepare the disposal site for project use. The County of Sheboygan understands that the estimated cost for this is in a range of approximately \$1,100,000 to \$1,800,000. The County, also, will sign the Corps' standard Right of Entry, which will allow the Corps of Engineers and its contractor access to the placement site for disposal of the sediment removed from the harbor. The County will be able to begin preparing the site and provide the right of entry by the scheduled contract advertising date of 01 February 2012.

To facilitate the project, the County of Sheboygan will apply for, with Corps technical support, a Low Hazard Waste Exemption permit from the Wisconsin Department of Natural Resources. Preliminary coordination with the Department of Natural Resources indicates it supports the project. It is anticipated that this permit will be approved in February of 2012.

Sincerely,


Adam Payne
County Administrator

cc: Michael Vandersteen, County Board Chairman
Aaron Brault, Director of Planning & Conservation
Greg Schnell, Highway Commissioner
Chuck Mayer, Airport Manager
Terry Long, US Army Corps of Engineers

Telephone (920) 459-3103
Facsimile (920) 459-3144

Administration Building
508 New York Avenue - Room 311
Sheboygan, WI 53081-4126

vandemjv@co.sheboygan.wi.us
payneanp@co.sheboygan.wi.us
www.co.sheboygan.wi.us



December 12, 2011

Lieutenant Colonel Michael C. Derosier
U.S. Army Corps of Engineers-Detroit District
477 Michigan Avenue
Detroit, MI 48226-2550

RE: Sheboygan Harbor, WI Strategic Navigation Dredging;
Letter of Intent

Dear Lieutenant Colonel Derosier:

This letter is in regards to the potential Strategic Navigation Dredging project described in the Sheboygan Harbor, WI Interim Dredged Material Management Plan. The City of Sheboygan ("City") and Redevelopment Authority of the City of Sheboygan, Wisconsin ("RDA") fully support this project in which low level contaminated sediment will be dredged from the harbor, dewatered, and placed in a County-provided placement site.

In support of the project, the RDA will provide the necessary land to be used as a transfer site for the subject project. The RDA, also, intends to sign a Right of Entry, which will allow the Corps of Engineers and its contractor access to the transfer site for transfer and dewatering of the sediment removed from the harbor. The RDA will be able to provide the right of entry by the scheduled contract advertising date of February 1, 2012.

Sincerely,

Robert Ryan
Mayor
City of Sheboygan

Roberta Filicky-Peneski
Chairperson
Redevelopment Authority of
the City of Sheboygan, WI

SGM/kah

DEPARTMENT OF
CITY DEVELOPMENT

828 CENTER AVE., STE. #104
SHEBOYGAN, WI
53081-4442

920/459-3377
FAX 920/459-7302
EMAIL: development@ci.sheboygan.wi.us
WEBSITE: ci.sheboygan.wi.us

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



December 15, 2011

Town of Sheboygan Falls
W3860 CTH O
Sheboygan Falls, WI 53085

Dear Town of Sheboygan Falls Plan Commission Members & Town Board Members,

Over the past 30 plus years the Wisconsin Department of Natural Resources has been involved in discussions about cleaning up and dredging the Sheboygan River. By partnering with the US Environmental Protection Agency (EPA), the US Army Corp of Engineers (Corps), Sheboygan County, the City of Sheboygan, the US Fish & Wildlife Service, the US Geological Service, and a host of other public and private entities, the time is here where we can see a clean and navigable Sheboygan River. Through hard work and the opportunities provided by the EPA via the Great Lakes Restoration Initiative (GLRI) we can finally meet our shared goal of delisting the Sheboygan Area of Concern.

As you are aware, the Corps project aims to dredge the non-hazardous sediment from the stretch of the Sheboygan River that lies between the harbor entrance and the 8th Street Bridge. This Corps Strategic Navigation Dredging project is only available through the GLRI in concert with EPA Legacy projects for the purpose of taking actions that will lead to delisting Area of Concerns. Coupling this project with the EPA Legacy project upriver of this area will lead to delisting the Sheboygan River as an Area of Concern. Sheboygan County will only be the second community to attain this feat. The amount of teamwork, energy, and resources working to make this happen is extraordinary.

A thorough review of the proposed airport site for the placement of the Corp dredging material will be conducted by our DNR solid waste program as part of the low hazard exemption request. DNR solid waste staff have been providing input during project development and are available to help explain the process and answer questions. Please contact me at (608) 266-1956 or any of our team members to help answer any questions that may arise from the proposed work.

Sincerely,

Stephen G. Galarneau
Director
Office of the Great Lakes

C: Bob Grefe
Frank Schultz
Vic Pappas

Aaron C. Brault

From: Williams.Heather@epamail.epa.gov
Sent: Thursday, December 15, 2011 1:50 PM
To: sandrbar@excel.net; townshebfalls@yahoo.com
Cc: Aaron C. Brault; Adam N. Payne
Subject: EPA Airport Facility Support

Steve and Jenny,

If you could please forward or distribute this email to other Sheboygan Falls Plan Commission Members and Town Board Members, I would be most grateful.

Thanks,
Heather

Town of Sheboygan Falls Plan Commission Members and Town Board Members,

U.S. Environmental Protection Agency's (EPA's) Great Lakes National Program Office (GLNPO) strongly supports the proposed 2012 U.S. Army Corps of Engineers (Corps) strategic navigation dredging project at the Sheboygan River.

EPA support for this project includes placement of the material at the airport facility. EPA and the Corps have teamed with Sheboygan County, the City of Sheboygan, and the Wisconsin Department of Natural Resources on development toward this effort.

Based on the substantial investigation of the airport site, the suitable condition of the facility as a placement site, the nature of the sediment to be dredged, and the support of the Corps and WDNR during this planning and design process, we strongly support the airport site for placement of the material.

There has been considerable local support for the Sheboygan River dredging restoration projects as a whole and the EPA recognizes the substantial support provided by Sheboygan County and the City of Sheboygan. The Corps dredging project would be conducted using Great Lakes Restoration Initiative funds. Availability of funding beyond this time is unknown.

Thank you for your support in this matter. If you have any questions, please feel free to contact me directly.

Heather

Heather Williams
US Environmental Protection Agency
Great Lakes National Program Office
77 West Jackson Boulevard
Chicago, Illinois 60604
Mail Code: G-17J
williams.heather@epa.gov
(312) 886-5993



3120 South Business Drive, Sheboygan, WI 53081, Tele 920 254 8777

December 13, 2011

Town of Sheboygan Falls Plan Commission
And Town Board members

Dear Town of Sheboygan Falls plan Commission and Town Board members,

Wisconsin naval Ship Association, Inc. (WINSA) is an organization comprised of men and women working very hard to bring the USS Canon PG-90 to Sheboygan, Wisconsin.

The USS Canon is an Asheville class Patrol Gunboat, built in response to the Cuban Missile Crisis. Five of Canon's sister ships were built at Peterson Builders in Sturgeon Bay, Wisconsin. The Canon was deployed to Vietnam in 1971 as part of operation Market Time. She was decommissioned in January 1977 and is the only surviving ship of her class in the United States.

The Canon will serve as the centerpiece of the Military Heritage Museum and Education Center. The museum will highlight Sheboygan's maritime and patriotic heritage. It will include a museum to honor combatants and veterans of all services and Wisconsin Naval Heritage.

Based on estimates from the Wisconsin Department of Tourism, the Canon and the museum will provide an impressive \$3 million impact to the county's economy.

It is essential the Sheboygan Harbor be dredged to allow berthing of the Canon. The Wisconsin naval Ship Association fully supports the County's efforts to complete the dredging of the harbor by working with the Army Corps of Engineers. Your Support of Sheboygan County's conditional use permit request is critical to our success and future.

Yours Truly,

Larry Hinkelman – President
Wisconsin Naval Ship Association



SHEBOYGAN COUNTY

ECONOMIC DEVELOPMENT CORPORATION

20 December 2011

Town of Sheboygan Falls
W3860 County Road O
Sheboygan Falls, WI 53085

Town of Sheboygan Falls Planning Commission & Town Board Members,

The Sheboygan County Economic Development Corporation (SCEDC) is writing this letter in support of Sheboygan County's application for a conditional use permit regarding the US Army Corps of Engineers Strategic Navigational Dredge Project. The SCEDC works with existing and future Sheboygan County employers, from large to small, to make our area a better place to conduct business. Our board consists of individuals representing many of the area's largest employers.

The economic benefits of the Army Corps project are extraordinary. Tourism in Wisconsin is the third largest sector of Wisconsin's economy behind manufacturing and agriculture. Sheboygan County's tourism economy has grown significantly over the past decade, especially along Sheboygan's lake and riverfront. A navigable, robust riverfront will not only provide opportunities for additional tourism development, but will help our area attract and retain professional employees who are critical to the success of so many local businesses. In addition, having usable natural resources is "must have" to attract the investment we will need to compete in the emerging global economy.

The SCEDC recognizes that redevelopment and economic opportunities have been limited in the Sheboygan River area due to the contamination present between the 14th Street Bridge and 8th Street Bridge as well as the lack of depth from the 8th Street Bridge to the mouth of the river. Solving these issues ultimately helps spur increased tax-base, jobs, and world-class amenities for the entire County.

As we understand, the County is looking to store non-hazardous dredging material at the Sheboygan County Memorial Airport. Your support of Sheboygan County's conditional use application will be beneficial to the success of the entire County.

Sincerely,

Patrick Drinan, Executive Director
Sheboygan County Economic Development Corporation



621 S. 8th Street
Sheboygan, WI 53081
(920) 457-9491
sheboygan.org

December 12, 2011

Dear Town of Sheboygan Falls Officials:

The Sheboygan County Chamber of Commerce represents the interests of 840 member businesses across Sheboygan County. These businesses believe in the guiding principles of economic development that generally call for them to act in partnership for the greater good. Even competitors can find common ground for collaboration when the outcomes are vital to the whole.

We are so fortunate that the funding and the interest in this major Sheboygan River project have come together at the perfect time. The window is now open; the short and long term benefits are significant. This is yet another opportunity to ensure personal quality of life, build business success in our county, and attract more visitors.

Our county, with all of its unique voices, is like a symphony – dependent on the careful tuning of each of its sections into a larger arrangement. Each community – indeed, each individual – practices and plays its part to ensure harmony and a successful finale that resonates with the whole audience.

The dredging of the Sheboygan River will bring nothing but positive benefits to our entire county. Admittedly it will be a challenge, particularly to those businesses directly on the riverfront. Fortunately they are willing to endure the short term hardship for the long term gain. Imagine a time, just months from now, when cruise ships on the Great Lakes will visit and their passengers will be shuttled to towns throughout the county. Consider the much improved quality of water and the recreation it will generate as it winds its way up the Sheboygan River.

As a direct result of this project more visitors will stay in hotels, dine, shop and visit attractions throughout our county. New employees will be drawn to the recreational and business opportunities that will be enhanced by this project.

Perhaps most importantly, this project is a gift to us, our children and our grandchildren. It means we are willing to make a very important investment in the vitality of our region even if we face some inconvenience.

In your role with the Town of Sheboygan Falls we urge you to vote yes on this important matter.

Yours truly,

Betsy Alles
Executive Director

Matt Quasius
Board President



Harbor Centre Marina

OPERATED BY **SkipperBuds**

Town of Sheboygan Falls
W3860 County Road O
Sheboygan Falls, WI 53085

12/14/11

Town of Sheboygan Falls Planning Commission and Town Board Members:

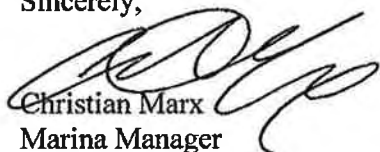
I understand there is a meeting coming up on Dec. 20, addressing the approval of conditional use permit for the placement of dredged materials from the Sheboygan River Dredging Project. As the operator of the Harbor Centre Marina and the South Pier Mega Yacht facility along the Sheboygan River, I want to express my concern and unwavering support for this project and recommend that the permit be granted.

Having the Sheboygan River sufficiently dredged and accessible is fundamentally necessary for ALL boating activities in Sheboygan. Healthy water depths are critical because the Sheboygan River and Harbor Centre represent the main access points to Lake Michigan for all of Sheboygan County users, the majority of which are Sheboygan County residents. There are no other viable or established Lake Michigan access points and boating support facilities in the County.

With the current water depths along the River, the ability to conduct many boating services and activities is limited. There are valuable boating support facilities (boat yards, boat storage warehousing, boat service and repair facilities, boat clubs, recreational dockage areas, and launch ramps) that are currently hindered or inaccessible. As a result, we are seeing boat traffic move out of our community to other port towns like Manitowoc or Port Washington to obtain these services. For the first time since the days of steamships, there is the very real prospect of seeing large cruise ships visiting the Sheboygan Harbor. Please understand that this opportunity, and the opportunity to lure other segments of the large boat market to Sheboygan will be lost if this dredging project does not proceed.

Boating activities in and along the Sheboygan River and at Harbor Centre, represent a large portion of the overall recreational and tourism dollars being spent in Sheboygan County each year. It is important to keep our waterways accessible and keep this industry vibrant and thriving. I would strongly urge you to grant this conditional use permit and move forward with this dredging project. Thank you for your consideration.

Sincerely,


Christian Marx
Marina Manager



December 12, 2011

Town of Sheboygan
Planning Commission
W3860 Cty. Rd. O
Sheboygan Falls, WI 53085

Dear Members of the Town of Sheboygan Planning Commission:

Sheboygan County Chamber Tourism would like to offer its support and recommendation to approve a conditional use permit to place dredged materials onto the Airport property in the Town of Sheboygan Falls from the U.S. Army Corp of Engineers Strategic Dredging Project. The success of this project is vital to the future growth and robustness of the entire Sheboygan County tourism economy.

We know that tourism is a \$12.3 billion industry in Wisconsin, and it's the state's third largest industry preceded only by manufacturing and agriculture. Along the eastern border of our great county lies one of the most valuable natural resources and tourism assets in the Midwest—Lake Michigan. All Wisconsin counties gracing the Lake Michigan shores capture \$3.4 billion in traveler expenditures each year—equivalent to 28 percent of total annual traveler expenditures realized by the entire State of Wisconsin. Sheboygan County ranks number four among those counties, capturing more than \$294 million in traveler expenditures each year. A navigable, robust Sheboygan River will only serve to increase Sheboygan County's competitiveness in the tourism market, which has a profound economic impact on the entire community through a multiplier effect. As businesses gain more in tourism spending, demand for goods and services desired by tourists increases, which results in higher earnings overall, and therefore, higher discretionary spending among county residents. Finally, higher discretionary spending by county residents feeds right back into local community businesses across the county.

We know that between Memorial Day weekend and Labor Day weekend, the Sheboygan waterfront is worth \$9 million in initial economic impact without a multiplier effect. However, developing and maintaining Sheboygan's waterway as another entrance into Sheboygan County is crucial. The waterway holds great promise for expansion of current revenue sources, and creating new revenue sources also increases the propensity for further economic development related to other industries countywide.

The enclosed report, *Estimated Economic Impact of the Sheboygan Waterfront*, explains the most salient benefactors of traveler expenditures flowing through the local economy during peak tourism season. However, what's more important is what you will *not* find in the report. For example, revenues from Great Lakes cruise ships, large yacht fee revenues, tall ship tours and waterfront motorized and non-motorized events are not listed because creation and expansion of these revenue sources is dependent upon the successful completion the Sheboygan River Dredging project. In other words, unless the dredging project is successfully completed, the limited navigability of the Sheboygan River will hinder future tourism growth and the county's ability to compete in the state's tourism market. Remember, Sheboygan's waterfront is Sheboygan County's marine gateway into a countywide experience for visitors.

Please know that Sheboygan County Chamber Tourism supports the successful completion of the river dredging project, and we would be happy to review with you and any interested parties, our future marketing strategy for tourism growth related to the waterfront and its post-dredging potential.

Sincerely,

A handwritten signature in cursive script that reads "Amy L. Wilson".

Amy L. Wilson
Tourism Director
Sheboygan County Chamber Tourism

Enc

Estimated Economic Impact of Sheboygan Waterfront

Estimates are for one seasonal duration, which, in general, is Memorial Day weekend through Labor Day weekend, unless a longer shoulder season was considered to comprise one entire seasonal duration (i.e. boating season runs May through September).
This report does not consider a multiplier effect.

Harbor Centre Marina (<i>Season=171.43 Days or 1200 Boat Nights</i>)	\$406,717.27
Boating (<i>Non-Marina, Based on Boat Launch Ramp Fees for City of Sheboygan</i>)	\$347,510.88
Charter Fishing (<i>Seasonal Based on Annual Average for Season</i>)	\$1,953,411.04
Commercial Fishing (<i>Schwarz Fish Company</i>)	\$1,000,000.00
Sheboygan Yacht Club	\$400,000.00
Sail Sheboygan	\$250,000.00
Sheboygan Youth Sailing Club	\$90,783.00
Retail Rentals (<i>EOS Season Memorial Day to Labor Day</i>)	\$41,514.10
Beachfront Activities (<i>Waterfront Leisure Travel, Seasonal</i>)	\$4,281,541.52
Total	\$8,771,477.80

Harbor Centre Marina economic impact does not include haul-in, haul-out, storage, maintenance, repairs or other craft spending. It also does not include wages, salaries, tips, operating cost of marina or other marina revenues, all of which would increase total economic impact.

Boating economic impact reported at \$347K is based on number of boats that paid a boat launch ramp to the City of Sheboygan in 2010. Boaters launching from another Great Lakes port and stopping in Sheboygan for a day trip were not considered in the estimate. The number of boaters visiting Sheboygan who do not rent a slip from the marina or pay a launch ramp fee would increase the total economic impact. For this report, a market share measurement of non-marina, non-city launch ramp boaters was not developed.

Charter fishing economic impact reported at \$1.9M does not include salaries, wages, fees (i.e. licensing) and tips or operating costs for boat owners, all of which would increase total economic impact.

D&B's Manta reports Schwarz Fish Co. Commercial Fish annual sales at \$1M. Amount does not include wages, salaries, tips, operating costs or any expenditures or costs associated with commercial fishermen harvesting off the Sheboygan shores or resale of processed fish through retail outlets, all of which would increase total economic impact. NOTE: The DNR reports 7 commercial fishing boats registered in Sheboygan.

Sheboygan Yacht Club reported gross sales of which 250K is food and beverage. Approximately \$150K is membership fees including slip fees and other club fees. Membership is reciprocal with any other U.S. Yacht Club. Estimated economic impact does not include salaries, wages, tips or operating costs of facility, all of which would increase total economic impact.

Sail Sheboygan reported gross income including sponsorships, income from sailing events, training and clinics, membership dues and other income recorded in its operating budget.

Sheboygan Youth Sailing Club reported gross income including income from training and sailing lessons and classes, sponsorships, endowments and donations.

Retail Rental economic impact reported at \$41.5K does not include salaries, wages and tips, operating costs for retail owner, or retail sales resulting from visiting Sheboygan, all of which would increase total economic impact.

Beachfront activities economic impact reported includes leisure traveler expenditures per person, per day occupying waterfront properties. Leisure traveler expenditures include monies spent on lodging, entertainment, dining, recreation, fees, shopping, etc. It does not include travel expenses to and from a destination. Estimated economic impact does not include salaries, wages, tips or operating costs of hotel properties or any other business that might receive revenues from leisure travelers; nor does it include operating costs for businesses serving leisure travelers--all of which would increase total economic impact.

NOTE: With the exception of the following: 1) Sheboygan Yacht Club membership fees, 2) A portion of Sheboygan Yacht Club food and beverage sales, 3) Sail Sheboygan estimated membership dues, 4) A portion of Schwarz Fish Company retail and wholesale sales; this study does not include the impact of local resident spending on waterfront activities and related services or products. Income from membership and training/lesson fees from Sheboygan Youth Sailing Club is not included in this report.



December 14, 2011

Town of Sheboygan Falls
W3860 County Road O
Sheboygan Falls, WI 53085

Re: Conditional Use Permit Application from Sheboygan County

Dear Town of Sheboygan Fall's Planning Commission and Town Board Members:

I am writing this letter regarding the Sheboygan River dredging scheduled in Sheboygan, especially at the mouth of the river within the Harbor Centre.

Over the years Sheboygan has developed as a tourist destination which has brought new consumer vitality to the Harbor Centre Business Improvement District, downtown, riverfront and south pier. As events in the district have brought visitors it has enhanced the charter fishing business, retail sales and room nights in the community. The Harbor Centre BID is centered around bringing new businesses to the district as well as consumers to support this growth. The Sheboygan river has been the center point of the district which prides itself in being "far from ordinary, yet close to home."

With more events being planned for the district as well as cruise ship visits coming in 2012 it is vital to have the river dredged and cleaned so we can continue to grow business. The Harbor Centre BID is counting on the dredging to bring the depth to the river to a point where more visitors can use the river for recreation and ships and boats of all sizes can come up the river all the way to 14th Street. The cleaning of the river will help to enhance the quality of fishing in the river and on Lake Michigan, which again will have great financial impact to Sheboygan County.

It is vital that this dredging happens next year and I ask the Town of Sheboygan Falls to help and assist bring additional business and tourism opportunities to Sheboygan County including the City of Sheboygan Harbor Centre Business Improvement District.

Thank you for your consideration,

Randy Schwoerer
Harbor Centre BID Manager

P.O. BOX 791
SHEBOYGAN, WISCONSIN 53082-0791
TELEPHONE (920) 452-6921
www.harborcentre.com



December 20, 2011

Dear Town of Sheboygan Falls Plan Commission Members & Town Board Members,

The dredging of the Sheboygan Harbor proves essential to the development opportunities along the Sheboygan River. Not only will our business be directly affected through increased boat traffic, but redevelopment opportunities will abound once the river is finally back to its full potential.

For decades, redevelopment along the river has been stymied by lack of depth and the contamination present between the 14th Street Bridge and the 8th Street Bridge. Dredging the harbor area, will allow development like the award winning Blue Harbor area to move up river and provide increased tax-base for the City and County and much need jobs.

We fully support the County and City's efforts to make this once in a lifetime opportunity come to fruition. Your support of Sheboygan County's conditional use request is critical to our success and future.

Best regards,



Steven J. Schmitt
Owner – Highland House & Jos. Schmitt Construction