

INDEX TO SHEETS

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

OPERATIONAL CONSTRAINT NOTES

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

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

IT IS IMPORTANT TO NOTE THAT THE UPSTREAM WATER ELEVATIONS WITH THE COFFERDAM IN PLACE WILL BE GREATER THAN NORMAL BECAUSE OF THE REDUCED OVERALL SPILLWAY CAPACITY. THE FEMA BASE FLOOD ELEVATION FOR THE 100-YEAR FLOOD IN THIS AREA IS 760.0 WITH BOTH SPILLWAYS FUNCTIONAL.

PROJECT LOCATION

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

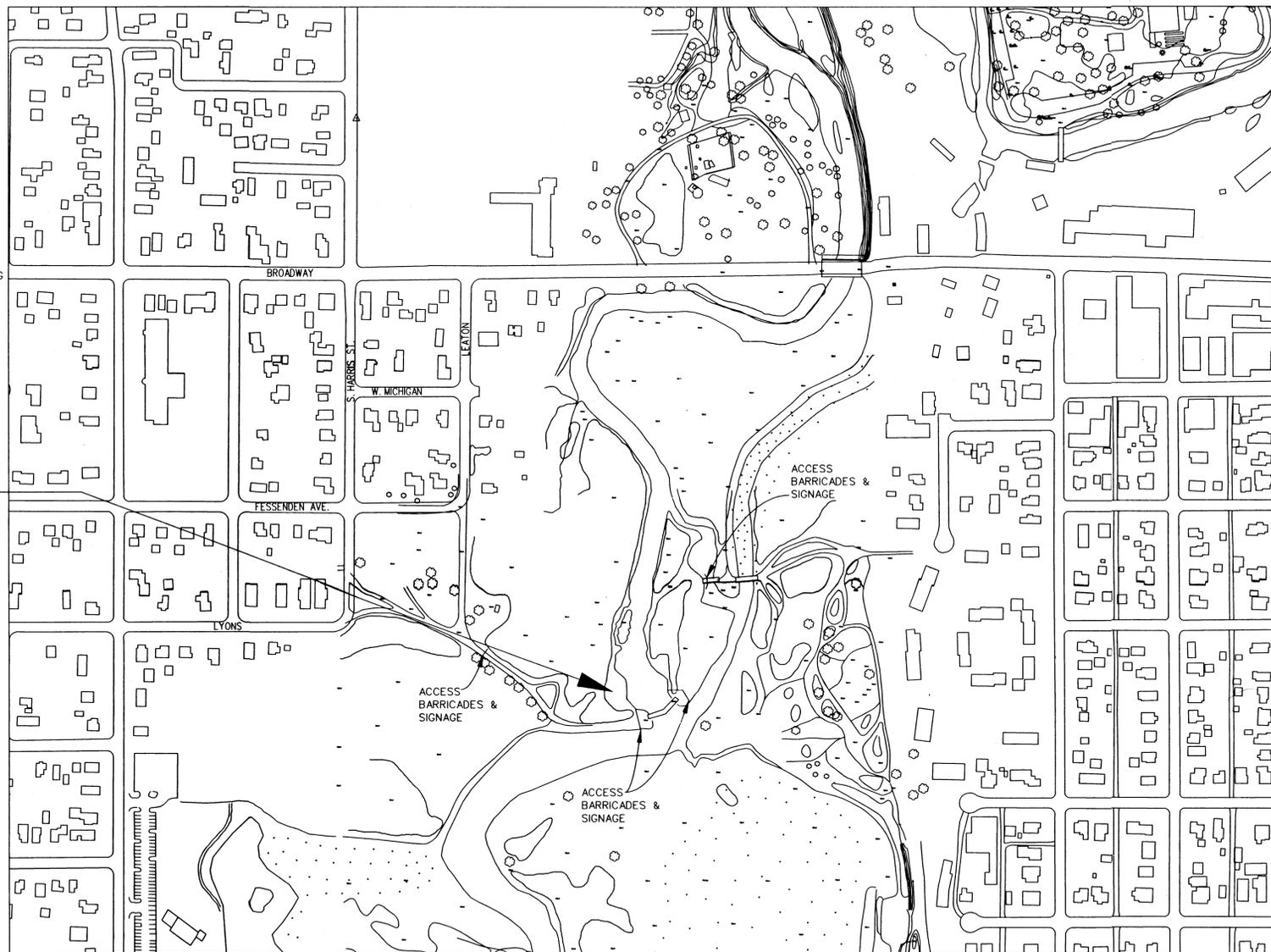
- | | |
|--|------------------|
| CONSUMERS ENERGY
1325 WRIGHT STREET
ALMA, MICHIGAN 48801
PHONE: (517) 466-4265
EMERGENCY - (800) 487-5050 | ELECTRIC |
| VERIZON
345 PINE STREET
ALMA, MICHIGAN 48801
PHONE: (517) 463-0224
EMERGENCY - (800) 483-1000 | TELEPHONE |
| CHARTER COMMUNICATIONS
915 E. BROOMFIELD
MT. PLEASANT, MI 48858
PHONE: (517) 772-0956 | CABLE TELEVISION |
| MICHIGAN CONSOLIDATED GAS CO.
609 BJORNSON ROAD
BIG RAPIDS, MI 49307
PHONE: (231) 592-3244
EMERGENCY: (800) 772-2800 | GAS |

CITY OF MT. PLEASANT, MI

PLAN OF PROPOSED CHIPPEWA RIVER RESTORATION PROJECT

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

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



VICINITY MAP
SCALE: 1" = 200'

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

GENERAL NOTES

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

CONCRETE:	F _c - 3000 psi
AIR ENTRAINMENT:	4.5% TO 6.5%
STEEL REINFORCEMENT:	F _y - 60,000 psi, EPOXY COATED
7. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING THE REINFORCING STEEL QUANTITIES AND LENGTHS AND SHALL SUBMIT SCHEDULE OF REINFORCING STEEL FOR APPROVAL PRIOR TO FABRICATION OF STEEL.
8. WHERE FIELD CUTTING OF STEEL IS REQUIRED, THE CONTRACTOR SHALL REPAIR THE COATING AT THE CUT END AS PROVIDED FOR IN MDOT STANDARD SPECIFICATION 706.03.E.8.
9. TOLERANCES IN CUTTING AND BENDING FOR REINFORCING STEEL ARE ESTABLISHED IN THE MANUAL OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE AND DETAIL MANUAL OF THE AMERICAN CONCRETE INSTITUTE.
10. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER FOR CLARIFICATION. "NTS" MEANS DRAWING NOT TO SCALE.
11. ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH MIN. 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.
12. DETAILS OTHER THAN THOSE SHOWN ON THESE PLANS, MAY BE USED IF APPROVED BY ENGINEER IN WRITING.

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

CITY OF MT. PLEASANT, MI

APPROVED BY:

Greg Haderschneider
GREG HADERSCHNEIDER DIR. OF PARKS, BLDGS & GROUNDS

4-12-02
DATE

PREPARED UNDER SUPERVISION OF

JAMES E. TIFFANY, P.E.
REGISTERED PROFESSIONAL ENGINEER

43942
REGISTRATION NO.

WILCOX ASSOCIATES, INC.
ORGANIZATION

ONE MADISON AVENUE, CADILLAC, MICHIGAN 49601
ADDRESS



DATE: 04/12/2002

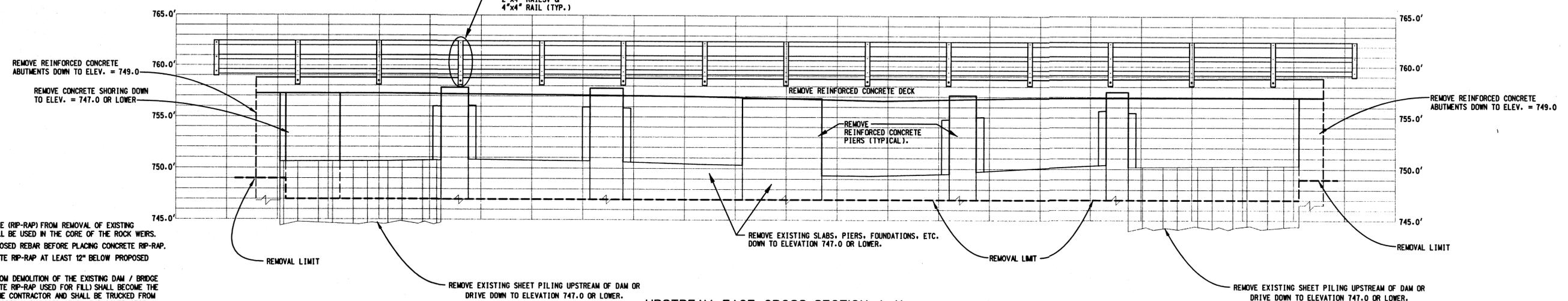
WORKED ON BY: KAW

DATE:

CHECKED BY:

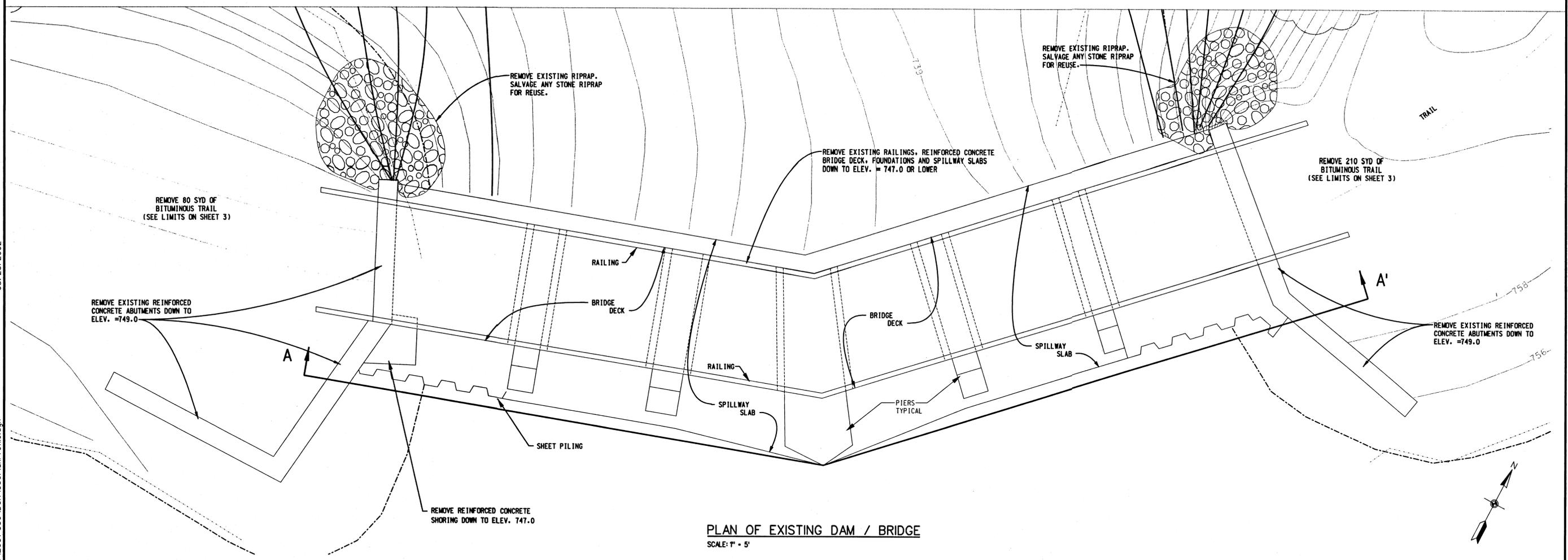
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NOTE: PROTECT AND PRESERVE EXISTING RAILING MATERIAL DURING REMOVAL AND DELIVER TO CITY OF MT. PLEASANT.



UPSTREAM FACE CROSS-SECTION A-A'
SCALE: 1" = 5'

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



PLAN OF EXISTING DAM / BRIDGE
SCALE: 1" = 5'

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

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

Wilcox
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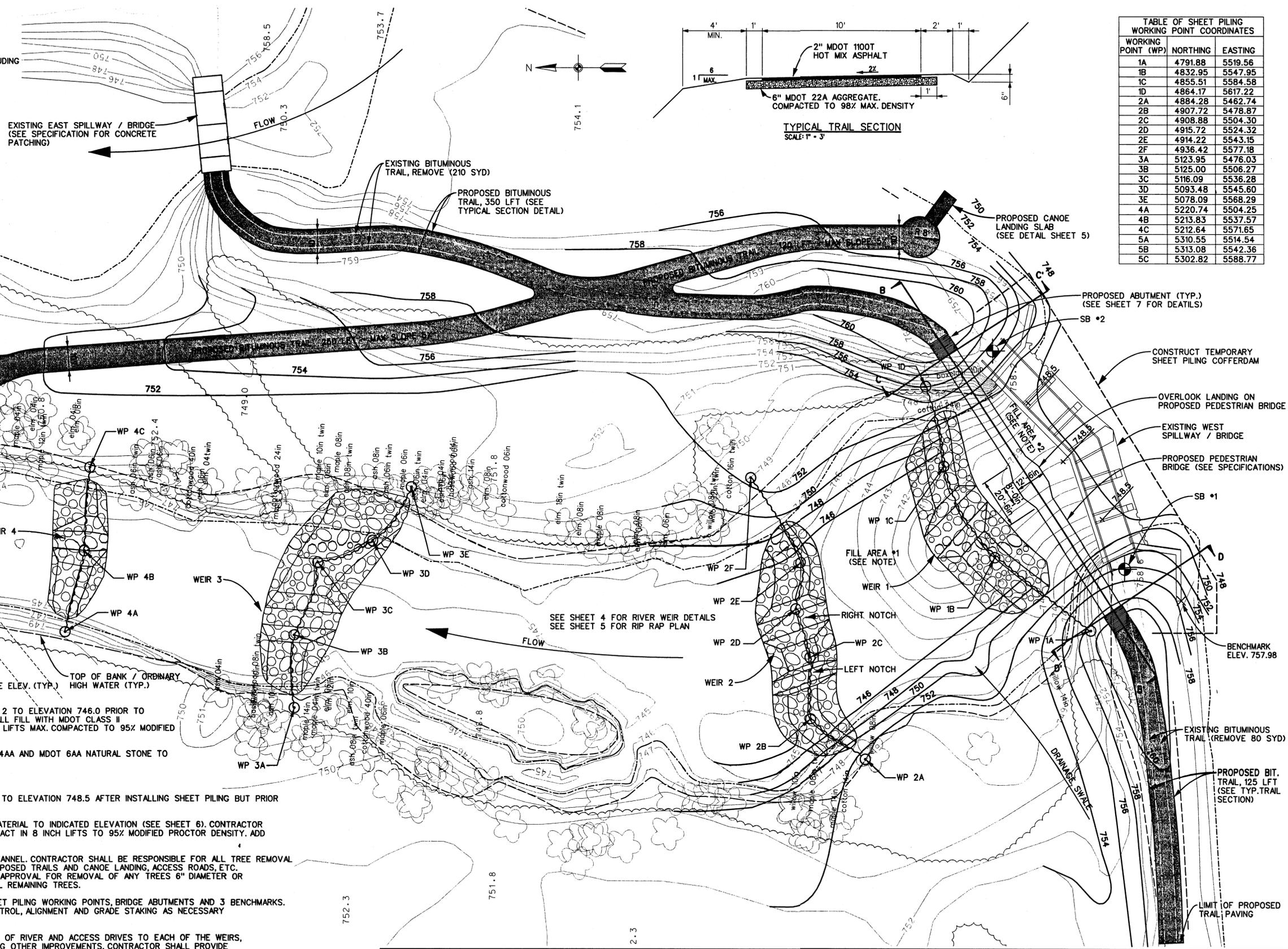
ENGINEER	JAMES E. TIFFANY P.E.
SURVEY	FB
DRAWN	KW 08/30/01
CHECKED	REL 03/09/02
APP'D	JET 03/15/02
SCALE	1" = 5'

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

PROJECT NUMBER: 2001-350

SHEET 2 OF 8

- LEGEND**
- +746** PROPOSED SPOT GRADE
 - 746 — EXISTING CONTOUR
 - 746** PROPOSED CONTOUR (FINISH GRADE, INCLUDING TOP OF RIP-RAP, OR RIP-RAP COVER)
 - C** SECTION LOCATION (SEE SHEET 6)
 - SB** SOIL BORING
 - PROPOSED SHEET PILE
 - WORKING POINT



- NOTES:**
- SPECIAL NOTES ON FILL:**
 - FILL AREA #1**
FILL AREA BETWEEN SHEET PILING LINES FOR WEIRS 1 AND 2 TO ELEVATION 746.0 PRIOR TO CONSTRUCTING ROCK PORTION OF WEIRS. CONTRACTOR SHALL FILL WITH MDOT CLASS II MATERIAL USING MINIMUM 10 TON VIBRATORY ROLLER IN 8" LIFTS MAX. COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
TOP 3" OF EXPOSED FILL SHALL BE 50/50 MIX OF MDOT 4AA AND MDOT 6AA NATURAL STONE TO PROTECT CHANNEL BOTTOM FROM SCOUR.
 - FILL AREA #2**
FILL AREA 2 UPSTREAM OF SHEET PILING LINE FOR WEIR 1 TO ELEVATION 748.5 AFTER INSTALLING SHEET PILING BUT PRIOR TO CONSTRUCTING ROCK PORTION OF WEIR.
 - REMOVE DEBRIS & FILL WITH COMPACTED MDOT CLASS II MATERIAL TO INDICATED ELEVATION (SEE SHEET 6). CONTRACTOR SHALL USE MINIMUM 10 TON VIBRATORY ROLLER AND COMPACT IN 8 INCH LIFTS TO 95% MODIFIED PROCTOR DENSITY. ADD RIP RAP AS PER PLAN, SHEET 5.
 - INDIVIDUAL TREES ARE SHOWN ONLY ALONG MAIN RIVER CHANNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TREE REMOVAL WHERE NECESSARY FOR GRADING, WEIR CONSTRUCTION, PROPOSED TRAILS AND CANOE LANDING, ACCESS ROADS, ETC. CONTRACTOR SHALL CLEARLY MARK AND OBTAIN OWNER'S APPROVAL FOR REMOVAL OF ANY TREES 6" DIAMETER OR GREATER. CONTRACTOR SHALL PROTECT AND PRESERVE ALL REMAINING TREES.
 - ENGINEER SHALL PROVIDE ONE-TIME STAKING OF WEIR SHEET PILING WORKING POINTS, BRIDGE ABUTMENTS AND 3 BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER CONTROL, ALIGNMENT AND GRADE STAKING AS NECESSARY AND ALL REPLACEMENT STAKING.
 - HAUL ROAD ALIGNMENT FROM PARKING AREA TO EAST SIDE OF RIVER AND ACCESS DRIVES TO EACH OF THE WEIRS, SHALL BE APPROVED PRIOR TO CLEARING TREES OR MAKING OTHER IMPROVEMENTS. CONTRACTOR SHALL PROVIDE MDOT CLASS II FILL AND ROAD GRAVEL AS NECESSARY. AT COMPLETION OF PROJECT, HAUL ROADS AND ACCESS DRIVE LOCATIONS SHALL BE RESTORED TO NATURAL GRADE AND NATURAL SOIL COVER. ALL WORK REQUIRED TO CONSTRUCT, MAINTAIN, AND RESTORE HAUL ROAD / ACCESS DRIVE AREAS (INCLUDING TOPSOIL, SEED, FERTILIZER, MULCH) SHALL BE INCLUDED UNDER "TEMPORARY HAUL ROAD" LINE ITEM.
 - CONTRACTOR SHALL CONSTRUCT PEDESTRIAN BRIDGE ABUTMENTS PER PLANS, SHEETS 6 & 7. CONTRACTOR SHALL CONTRACT WITH BRIDGE MANUFACTURER TO CONSTRUCT PEDESTRIAN BRIDGE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. CONTRACTOR SHALL ASSEMBLE SECTIONS AS REQUIRED AND INSTALL BRIDGE ON ABUTMENTS PER BRIDGE MANUFACTURER'S INSTRUCTIONS.

<p>72 HOURS (3 WORKING DAYS) BEFORE YOU CALL MISS DIG 800-482-7171 (TOLL FREE)</p>	NO. REVISION	BY	CHKD	DATE	APP	APP	<p>Wilcox Professional Services ISO 9001 CERTIFIED</p>	ENGINEER	JAMES E. TIFFANY, P.E.	PROP. RIVER WEIR - PLAN VIEW CHIPPEWA RIVER RESTORATION PROJECT SECTION 15, T15N - R4W, MT. PLEASANT, MICHIGAN
	1 ADVERTISEMENT FOR BIDS	KAW	JET	03/20/2002					SURVEY	
								DRAWN	KW	08/30/01
								CHECKED	REL	03/09/02
								APP'D	JET	03/15/02
								SCALE	1" = 20'	
								PROJECT NUMBER	2001-350	SHEET 3 OF 8

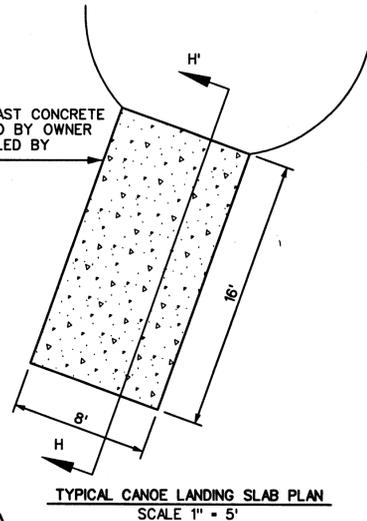
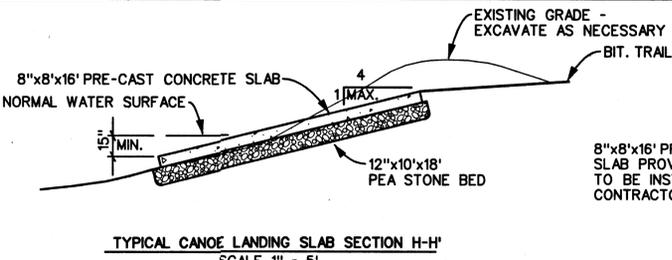
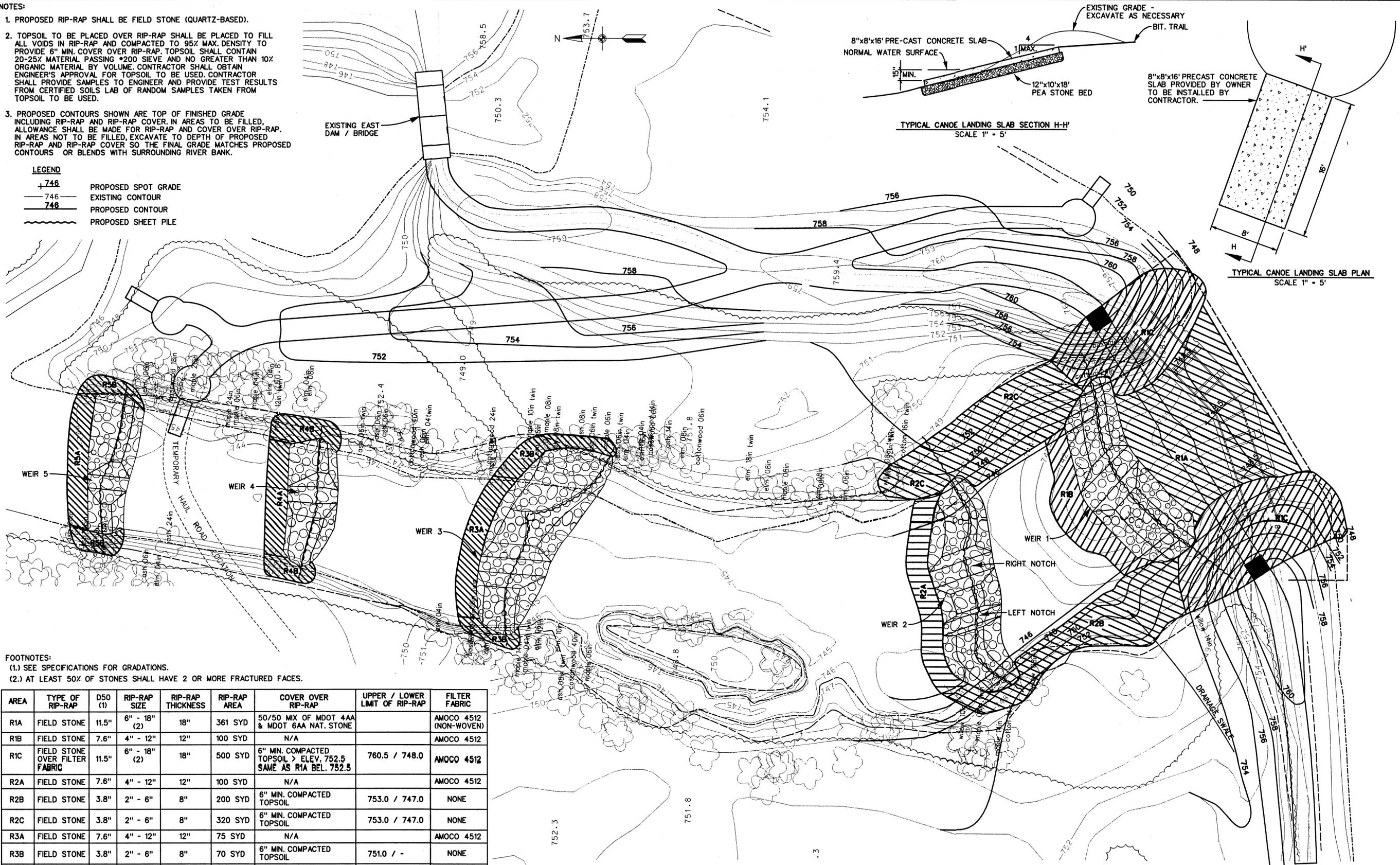
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NOTES:

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

LEGEND

	+746	PROPOSED SPOT GRADE
	746	EXISTING CONTOUR
	746	PROPOSED CONTOUR
		PROPOSED SHEET PILE



- FOOTNOTES:**
- (1.) SEE SPECIFICATIONS FOR GRADATIONS.
 - (2.) AT LEAST 50% OF STONES SHALL HAVE 2 OR MORE FRACTURED FACES.

AREA	TYPE OF RIP-RAP	D50 (1)	RIP-RAP SIZE	RIP-RAP THICKNESS	RIP-RAP AREA	COVER OVER RIP-RAP	UPPER / LOWER LIMIT OF RIP-RAP	FILTER FABRIC
R1A	FIELD STONE	11.5"	6" - 18" (2)	18"	361 SYD	50/50 MIX OF MDOT 4A4 & MDOT 6AA NAT. STONE		AMOCO 4512 (NON-WOVEN)
R1B	FIELD STONE	7.6"	4" - 12"	12"	100 SYD	N/A		AMOCO 4512
R1C	FIELD STONE OVER FILTER FABRIC	11.5"	6" - 18" (2)	18"	500 SYD	6" MIN. COMPACTED TOPSOIL > ELEV. 752.5 SAME AS R1A BEL. 752.5	760.5 / 748.0	AMOCO 4512
R2A	FIELD STONE	7.6"	4" - 12"	12"	100 SYD	N/A		AMOCO 4512
R2B	FIELD STONE	3.8"	2" - 6"	8"	200 SYD	6" MIN. COMPACTED TOPSOIL	753.0 / 747.0	NONE
R2C	FIELD STONE	3.8"	2" - 6"	8"	320 SYD	6" MIN. COMPACTED TOPSOIL	753.0 / 747.0	NONE
R3A	FIELD STONE	7.6"	4" - 12"	12"	75 SYD	N/A		AMOCO 4512
R3B	FIELD STONE	3.8"	2" - 6"	8"	70 SYD	6" MIN. COMPACTED TOPSOIL	751.0 / -	NONE
R4A	FIELD STONE	7.6"	4" - 12"	12"	55 SYD	N/A		AMOCO 4512
R4B	FIELD STONE	3.8"	2" - 6"	8"	55 SYD	6" MIN. COMPACTED TOPSOIL	750.0 / -	NONE
R5A	FIELD STONE	7.6"	4" - 12"	12"	67 SYD	N/A		AMOCO 4512
R5B	FIELD STONE	3.8"	2" - 6"	8"	50 SYD	6" MIN. COMPACTED TOPSOIL	749.0 / -	NONE

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

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1	ADVERTISEMENT FOR BIDS	JHS	JET	03/20/2002		

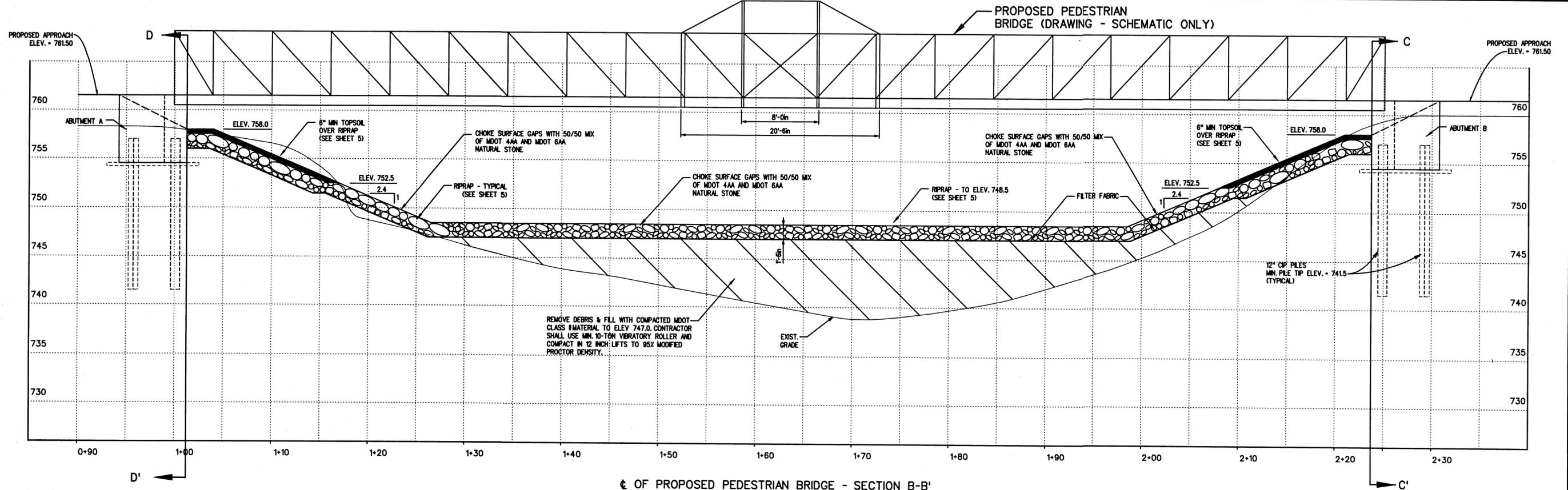
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ENGINEER	JAMES E. TIFFANY, P.E.
SURVEY	FB
DRAWN	KW 08/30/01
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APP'D	JET 03/15/02
SCALE	1" = 20'

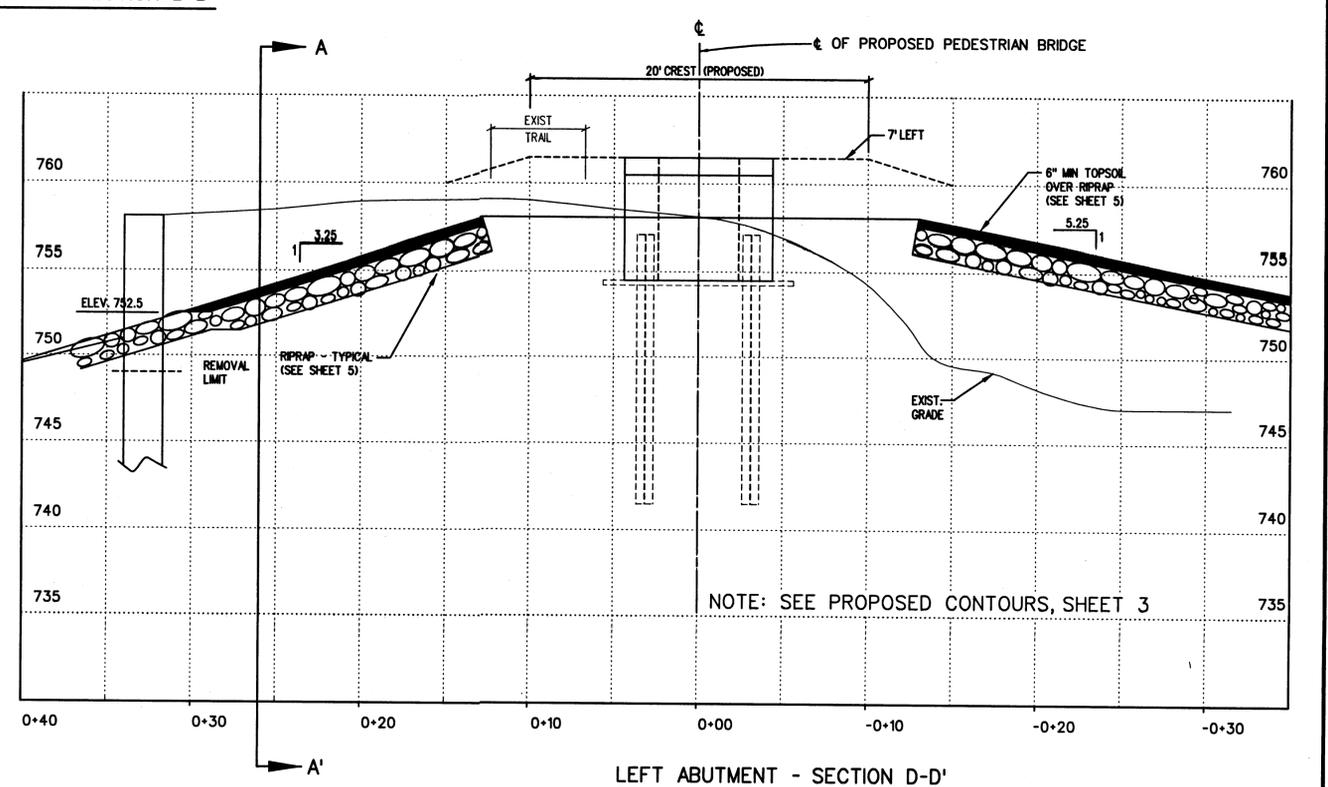
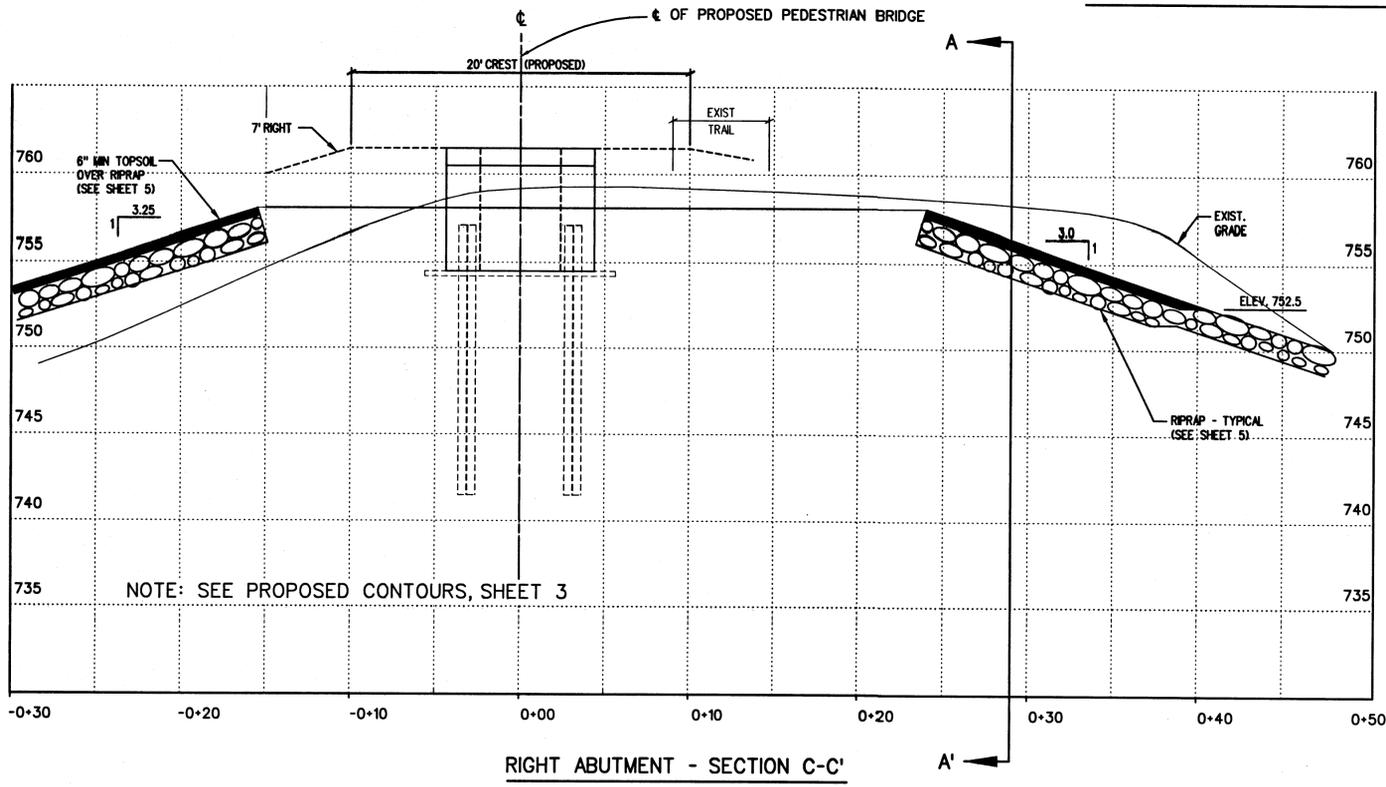
PROP. RIP RAP PLAN
CHIPPEWA RIVER RESTORATION PROJECT
SECTION 15, T15N - R4W,
MT. PLEASANT, MICHIGAN

PROJECT NUMBER: 2001-350
SHEET 5 OF 8

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CL OF PROPOSED PEDESTRIAN BRIDGE - SECTION B-B'



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1	72 HOURS (3 WORKING DAYS) BEFORE YOU CALL MISS DIG 800-482-7171 (TOLL FREE)	KAW	JET	03/20/2002		
2	ADVERTISEMENT FOR BIDS			/ /		
3				/ /		
4				/ /		



ENGINEER	JAMES E. TIFFANY, P.E.	FB
SURVEY		
DRAWN	KW 08/30/01	
CHECKED	REL 03/09/02	
APPD	JET 03/15/02	
SCALE	1" = 5'	

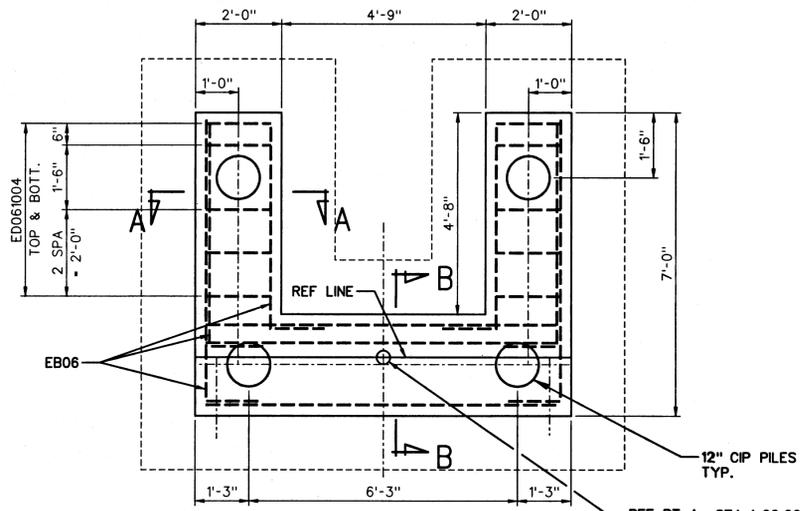
PROP. BRIDGE PROFILE & SECTIONS
 CHIPPEWA RIVER RESTORATION PROJECT
 SECTION 15, T15N - R4W,
 MT. PLEASANT, MICHIGAN

PROJECT NUMBER 2001-350

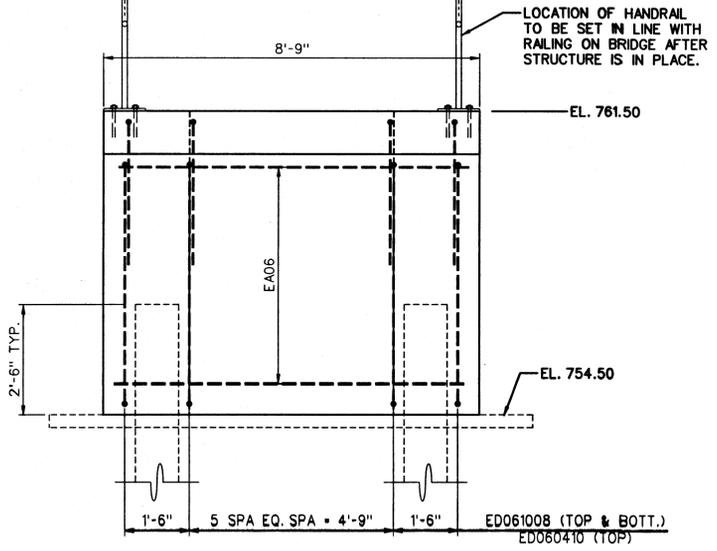
SHEET 6 OF 8

03/25/2002

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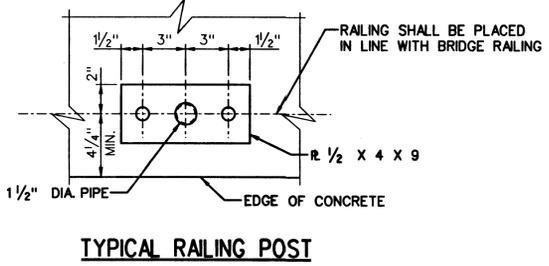


PLAN

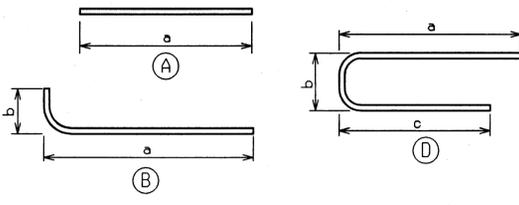


ELEVATION

BAR	DIMENSIONS			NO. REQ'D	TOTAL WT.
	a	b	c		
ED061008	4'-5"	1'-10"	4'-5"	32	512.7
ED061004	4'-5"	1'-6"	4'-5"	40	620.8
EA060803	8'-3"			30	371.7
ED060410	3'-4"	0'-6"	1'-0"	16	116.2
EB060511	4'-8"	1'-3"		28	248.8
EB060605	5'-2"	1'-3"		4	38.6
EB060709	6'-6"	1'-3"		24	279.4
TOTAL					2188.2

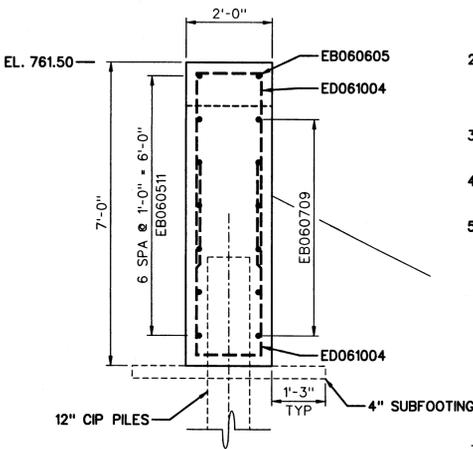


TYPICAL RAILING POST

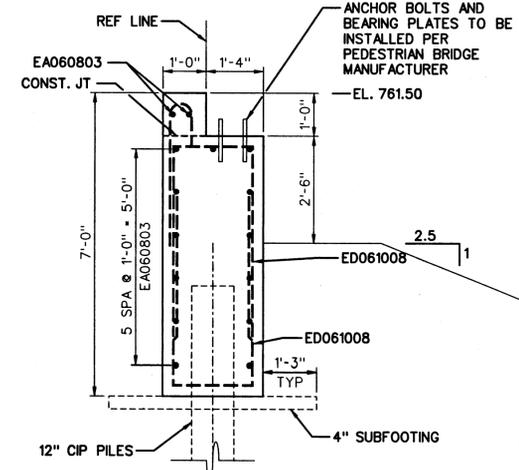


EPOXY COATED BAR SIZE
BAR LENGTH (FT)
BAR LENGTH (IN)
EA064700
BAR SHAPE

BAR LEGEND

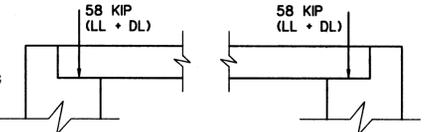


SECTION A-A

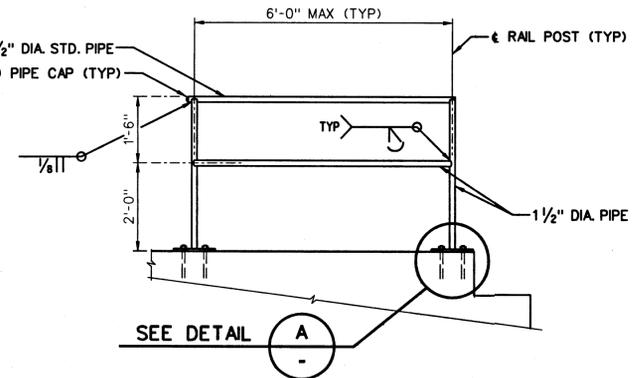


SECTION B-B

- NOTES:
- 1) PRIOR TO START OF FOUNDATION CONSTRUCTION CONTRACTOR SHALL VERIFY THAT THE ENGINEER HAS REVIEWED THE BRIDGE SHOP DRAWINGS WITH REGARDS TO THE PRECISE LOCATION OF ABUTMENTS.
 - 2) ALL MATERIALS AND WORKMANSHIP SHOWN HERE SHALL BE IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION 2003 INTERIM STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 - 3) ALL PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 17 TONS.
 - 4) ESTIMATED PILE PENETRATIONS HAVE BEEN DETERMINED BY USE OF STATIC FORMULA.
 - 5) PILE SHELLS SHALL BE A MINIMUM OF 0.230" NOMINAL WALL THICKNESS (3 GAUGE), 12" O.D.

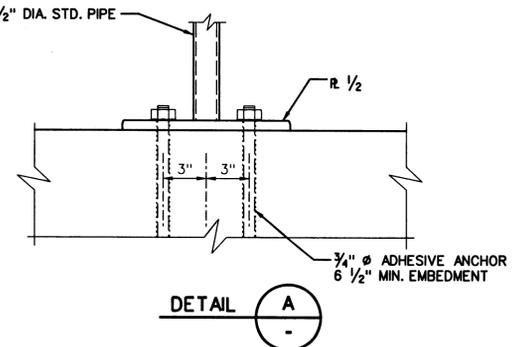


DESIGN LOADING DIAGRAM



TYPICAL ELEVATION FOR RAILING DETAIL

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

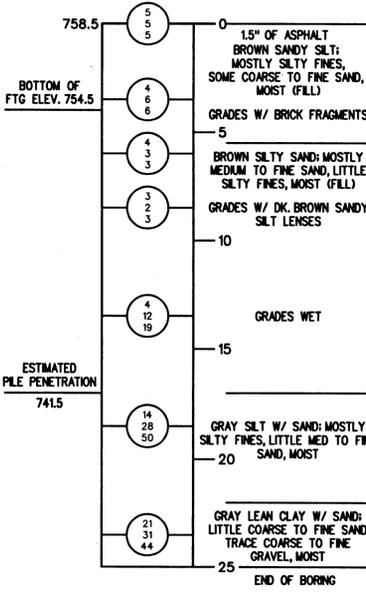


DETAIL A

SOIL BORING NO. 1

ELEV.	LOCATION	STATION
758.5	6 FEET LT.	STA. 0+84

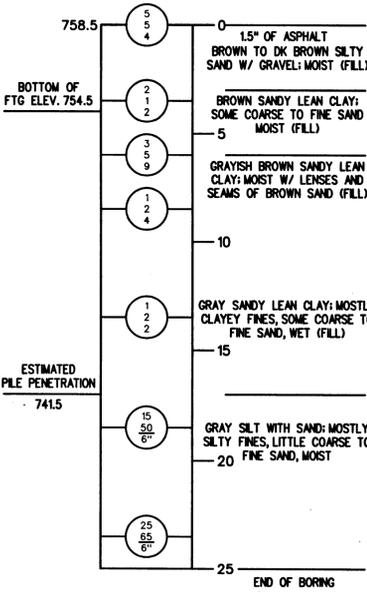
ABUTMENT A



SOIL BORING NO. 2

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

ABUTMENT B



SOIL BORINGS

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

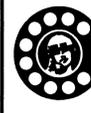
1st 6 inches
2nd 6 inches
3rd 6 inches

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

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

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

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



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

Wilcox Professional Services
ISO 9001 CERTIFIED

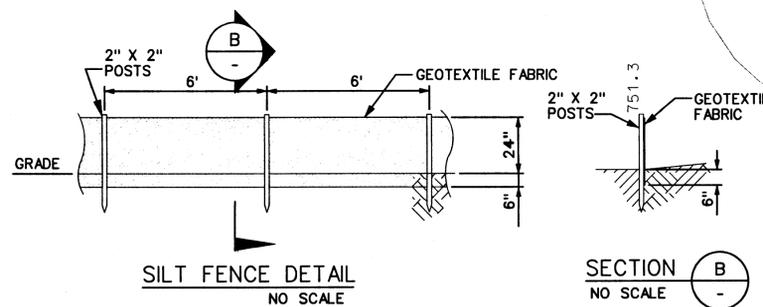
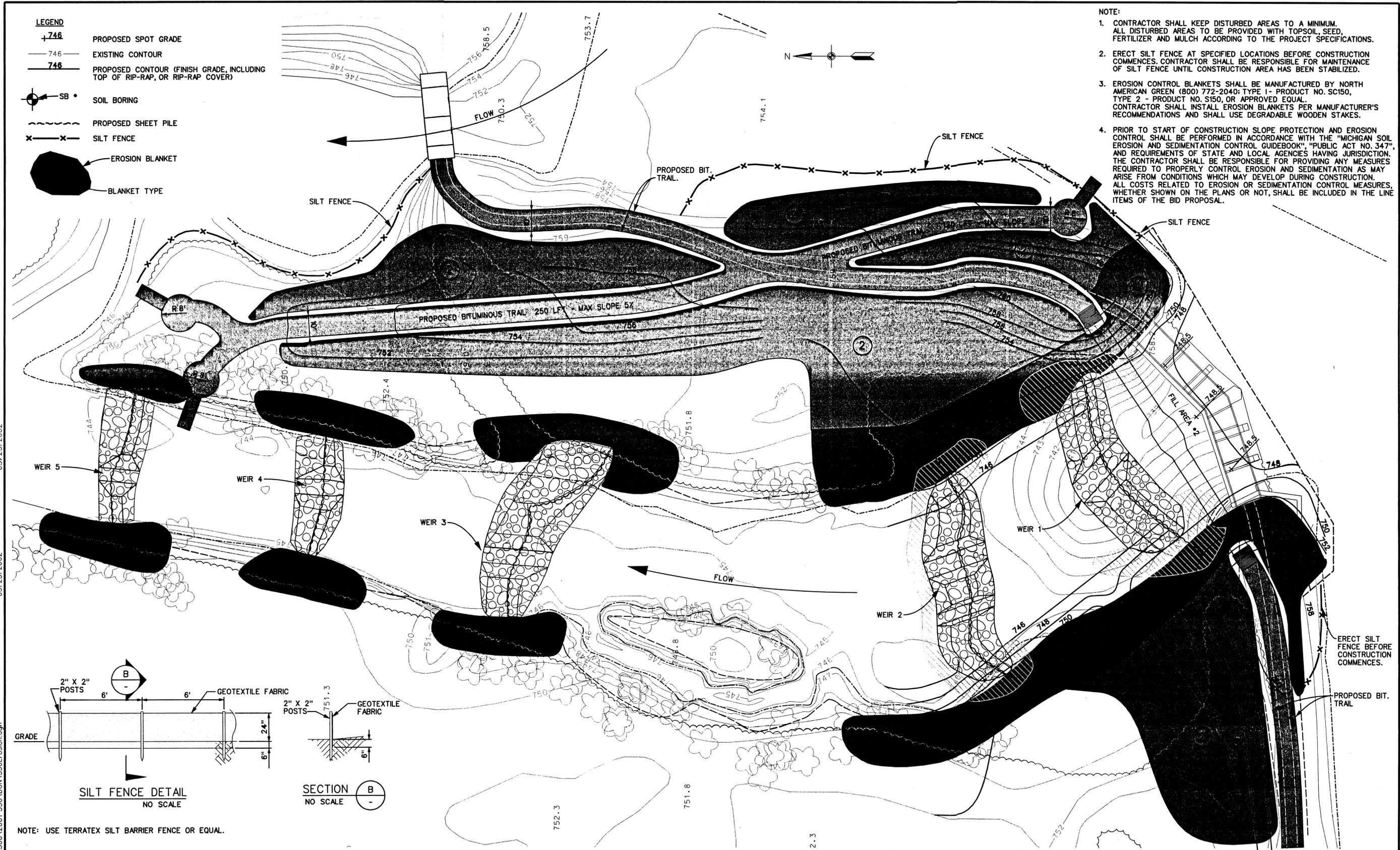
ENGINEER	REL	DATE
DRWN	CRS	08/31/01
CHEK	REL	03/09/02
APPD	JET	03/15/02
SCALE	1"=	

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

PROJECT NUMBER 2001-350 SHEET 7 OF 8

- LEGEND**
- +746** PROPOSED SPOT GRADE
 - 746 — EXISTING CONTOUR
 - 746** PROPOSED CONTOUR (FINISH GRADE, INCLUDING TOP OF RIP-RAP, OR RIP-RAP COVER)
 - SB • SOIL BORING
 - — — PROPOSED SHEET PILE
 - x — x — SILT FENCE
 - EROSION BLANKET
 - BLANKET TYPE

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



NOTE: USE TERRATEX SILT BARRIER FENCE OR EQUAL.

p:\projects\2001\300\2001-350\2001-350.DGN\350Erosion.dgn 03/25/2002 03/25/2002

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

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

Wilcox
Professional Services
ISO 9001 CERTIFIED

ENGINEER	JAMES E. TIFFANY, P.E.	FB
SURVEY		
DRAWN	KW	08/30/01
CHECKED	REL	03/09/02
APP'D	JET	03/15/02
SCALE	1" = 20'	

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

PROJECT NUMBER: 2001-350

SHEET 8 OF 8